Terms of Supply

Property: 6/46 CARLOS DRIVE FLAT BUSH AUCKLAND

Information Supplied: COUNCIL PROPERTY FILE

By accepting the information above from Five AM Realty Ltd, or an authorised licensee in conjunction with Five AM Realty Ltd, I acknowledge I have read, understood and accepted the terms on which the information is made available.

Terms upon which the information is supplied:

1. Where information is supplied by Five AM Realty Ltd to customers, the information is information in the possession of the Vendor(s) that the Vendor(s) are making available to the customer without endorsement

2. No representation is made by Five AM Realty Ltd or by the Vendor(s) as to the accuracy, or to the reliability, of any information made available to the customers.

3. The customer will seek such advice and explanation the customer may require from an independent specialist of their choosing.

4. Should the purchaser decide not to obtain their own specialist advice they are deemed to have satisfied themselves on all aspects of the property and are buying solely in reliance on their own judgment and contrary to the recommendation of Five AM Realty Ltd or its agents.

BUILDING INSPECTIONS

Purchasers are strongly advised to secure their own Building Inspection Report regardless of construction type, to ensure that they are fully informed as to the standard of the property they intend to invest in.

QUERIES OR REQUESTS

It will be a pleasure to assist you further should you require any additional information, or have any queries regarding the property or content of this booklet, please do not hesitate to contact us.

Regards
Clare Nicholson
Five AM Realty Ltd
RayWhite Howick
0212 900 505

5

AUCKLAND COUNCIL
10 JUN 2017
CBD - ALBERT ST

ASSETCARE

AUCKLAND COUNCIL
01 JUN 2017
CBD - ALBERT ST

P O Box 24-343, Royal Oak
45 Fairfax Ave, Penrose
Auckland, 1061
Phone: 09 633 0830 Fax: 09 633 0266

30 May 2017

Sulu Enosa
Auckland Council - Southern
Central Building Control - BWOF
Private Bag 92 300
Auckland, 1142

RECEIVED
06 JUN 2017
AUCKLAND COUNCIL

Dear Sulu

Re: Building Warrant of Fitness

Please find enclosed a copy of the renewed Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush, Auckland, 2016 **3909**

If you have any queries please do not hesitate to contact us.

Regards

AssetCare Limited

Gale Ward
Director

ASSETCARE

BUILDING WARRANT OF FITNESS

FORM 12 Section 108, Building Act 2004

Form **12**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2018
Building Name:		**Fire Hazard Category:**	1
Location of Building within site/block number:		**Intended Life** (if <50yrs) **:**	
Level / Unit #:	Unit 1 to Unit 22	**Used as:**	Residential Apartments
Maximum Occupancy:	132	**Year Of Construction:**	2007
		Purpose Group:	SR

OWNER

Name of Owner:	Body Corporate 400961	**Telephone:**	(09) 633 0830
Contact Person:		**E-mail:**	gale@assetcare.co.nz
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163		

SPECIFIED SYSTEMS

- **Emergency Warning System for Fire or Other Dangers**
- **Signs Relating to Specified Systems 1-13**
- **Final Exits**
- **Fire Separations - Protecting the Means of Escape**
- **Signs for Communicating Information for Evacuation**

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**
The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **12 months** prior to the date stated below.

Gale Ward.	**Gale Ward**	
Signature of Owner's Agent	***AssetCare Limited*** **09 633 0830**	**30 May 2017**

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2018
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Emergency Warning System for Fire or Other Dangers
Type 5 - Pertronic F100

Signed: Liam Moss **Name of IQP:** Liam Moss **IQP Number:** 110182

Company: AssetCare Limited **Date:** 24 May 2017

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2018
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

- **Signs Relating to Specified Systems 1-13**
- **Final Exits**
- **Fire Separations - Protecting the Means of Escape**
- **Signs for Communicating Information for Evacuation**

Signed: _____ **Name of IQP:** Peter Clark **IQP Number:** 110184

Company: AssetCare Limited **Date:** 24 May 2017

Building

Geotech Services Ltd
Ref. 2532 dtd. 30/6/04
SP 8840

Environmental Services

16 December 2004

Carlos Concepts Ltd
C/- Working Concepts Ltd
P.O. Box 58-395
Greenmount

Attention: Sandy Heard

Dear Madam

DECISION ON AN APPLICATION FOR SUBDIVISION RESOURCE CONSENT AND ASSOCIATED LAND USE RESOURCE CONSENT FOR LAND MODIFICATION AND TREE REMOVAL.

Applicant: Carlos Concepts Ltd

Application: **Part A - Land Use Consent (Manukau Operative District Plan 2002)**

Restricted Discretionary Activity for land modification works being a total of 3300m^3 cut and fill.

Discretionary Activity for removal of 12 protected trees being:

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- 2 x Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
- Two Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- English Oak (*Quercus Robur*)
- 2 x Pohutukawa (*Metrosideros excelsa*)

Part B - Subdivision Consent

Manukau Operative District Plan 2002

Non-Complying Activity for 2 lot subdivision (with road to vest) in the Rural 3 Zone contravening Rule 12.15.3.

Restricted Discretionary Activity for subdivision of a site with road frontage to the Primary Road Network (Stancombe Road).

Restricted Discretionary Activity for provision of Public Utility Services (stormwater, wastewater, roading, and water supply) in conjunction with subdivision.

Variation 13 to the Manukau Operative District Plan 2002

Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.1 Movement Network by exceeding the maximum 250m block length by 63 metres.
Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.6 for Proposed Lot 10 by infringing the required 25% front boundary requirement by 1.5%.
Restricted Discretionary Activity under Rule 17.10.12.13 for investigation of Asbestos Containing Materials on this site.

Location:	124 Stancombe Road, Flat Bush (and 122 Stancombe Road, Flat Bush for some land modification works and tree removal)
Legal Description:	Lot 3 DP 78859 (and land modification works and tree removal on Lot 2 DP 78859)
MCC Reference:	SP8840
Proposal No:	27046
Zone:	Rural 3 - Manukau Operative District Plan 2002 Flat Bush Residential 1 – General and Arterial Precincts (Special Policy Area Boundary: Flat Bush Buffer Area) – Proposed Variation 13.

DECISION

PART A – LAND USE CONSENT

I wish to advise that consent for the above application was granted on 16 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104C and 108 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046** by Council except where amended by the following conditions of consent.

Tree Removal

3. That the removal of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 shall be limited to the following trees on the following sites:

124 Stancombe Road, Flat Bush

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
- Pin Oak (*Quercus palustris*)

The above trees being those numbered 16-22 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated September 2004.

Advice Note: Tree 23 identified within the Specimen Tree Company Report dated September 2004 is not a Pin Oak and does not exceed 6 metres in height. Accordingly, it is not protected under the Manukau Operative District Plan 2002.

122 Stancombe Road, Flat Bush

- Indian Cedar (*Cedrus deodara*)
- English Oak (*Quercus Robur*)
- Two Pohutukawa (*Metrosideros excelsa*)

The above trees being those numbered 1-4 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated 23 November 2004.

Advice Note:

During consultation between the applicant and Ngai Tai Umupuia Te Waka Totara it has been requested that any native trees removed as part of the earthworks (which are less than 6 metres in height and are, therefore, not subject of this resource consent, or the two Pohutukawa on the 122 Stancombe Road property) be donated to the iwi - Ngai Tai Umupuia. Arrangements can be made with Jaroz Adams (Phone: (09) 292-9020 or email: tewakatotara@xtra.co.nz should the consent holder choose to make this donation.

4. The trees identified for removal under condition (3) above shall be clearly marked and identified by a suitably qualified arborist prior to their removal being undertaken.

5. All tree removals shall be in accordance with accepted arboricultural practice.

6. Tree removal operations shall be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

Earthworks

7. The earthworks construction shall be undertaken in accordance with:

   (a) The erosion and sediment control plan as detailed in the approved plans referenced E7/27046 by Council

   (b) Auckland Regional Council Technical Publication 90 - TP90 Erosion and Sediment Control.

(c) The recommendations of the geotechnical report from Geotek Services Ltd (Ref 2532, dated 30 June 2004).

8. The works shall be undertaken in such a manner as to ensure that beyond the boundary of the site there should be no 'dust' or 'soil erosion / siltation', which in the opinion of the Manager - Resource Consents & Compliance, is objectionable, offensive or has the potential to create an adverse effect on the receiving environment.

9. The consent holder shall be responsible to ensure that the land within the above site and the land on adjoining properties remains stable at all times in respect to the approved works.

10. The septic tank on this site shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

11. Control measures shall be in place to ensure that any trucks leaving the site do not deposit soil or other debris on public roads. Any such material deposited on any public road shall be cleaned up immediately at the consent holder's expense.

12. Prior to development commencing, the consent holder shall provide Council's Manager - Environmental Health and Compliance with details of the level of communication with neighbouring property owners/occupiers and identification of the liaison person. The consent holder shall ensure that, before commencement of the development, the owners of all adjoining properties are notified in writing of the development in general, its expected duration, the times at which it will be undertaken, and the name of a responsible person with whom neighbours can liaise if the need arises. (Any queries in the foregoing should be referred to the Manager - Environmental Health and Compliance).

Environmental Health

13. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

14. Prior to commencement of any land modification works, or tree removal on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to

extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Although the proposed location of the earthworks do not contain any known archaeological sites, it is possible that unrecorded sites may exist. Under the Historic Places Act 1993, it is unlawful for any person to destroy, damage or modify an archaeological site unless the relevant consents have been obtained from the New Zealand Historic Places Trust. In the event of archaeological features being uncovered (e.g. shell midden, hangi or oven stones, pit depressions, defensive ditches, artefact material or human bones) work is to cease in the vicinity of the discovery and the New Zealand Historic Places Trust and appropriate iwi authorities shall be contacted so that the appropriate action can be taken. This includes such persons being given reasonable time to record and recover archaeological features discovered before work may recommence.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B, and 104C of the Resource Management Act 1991 and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002. .

2. Proposed Variation 13 to the Manukau Operative District Plan envisages that this site be available for residential development of a medium / high density. Whilst this requires removal of a number of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 and land modification works it is considered these works are necessary to fulfil the ultimate intention of residential development of the site provided under Variation 13 to the Manukau Operative District Plan.

PART B – SUBDIVISION CONSENT

I wish to advise that consent for the above application was granted on 16 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104C,104D and 220 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046 (SP8840)** by Council except where amended by the following conditions of consent.

Engineering

3. The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

   (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

   (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

   (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

   (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

   (v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

4. A satisfactory foundation completion report for the site shall be submitted to Council for approval upon completion of the land modification works (approved under Part A – Land Use Consent). Should the Land Transfer Plan differ from the approved subdivision plan then the Foundation report shall be amended accordingly.

   Unless the foundation completion report states that a building constructed in compliance with NZS 3604: 1999 does not need specific design for the building foundations, a record will be placed on Council's Land Information Register requiring that the recommendations of that report be complied with.

   If 'Extremely Expansive Soils' [AS 2870 (1996) Class E or equivalent] or 'Specific Design Requirements' are indicated, a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 will also be required.

5. Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment area with individual connection points in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

6. Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

Roading

7. The proposed new road shall be constructed in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

8. Street lighting facilities shall be supplied and in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

9. Road upgrading is required along the full frontage (on one half of the road only) to increase the width of Stancombe Road to that of a District Arterial Road with cycle lanes as detailed in Proposed Variation 13 Table 2 and Figure 17.10.3 Standard as defined in Rule 9.14.5.5.2 and appendix 2 of the Manukau Operative District Plan 2002. This work shall include:

   (a) The vesting as Road of 3.64 metres of land being in general one half of the additional extra legal road width required.

   Manukau City Council will pay compensation for the land required in excess of a collector road for Stancombe Road. (See rule 9.9.2.11(a)(viii) of the Manukau Operative District Plan 2002.) The quantum of this compensation shall be agreed with the Manager Transportation, Manukau City Council. (Chris Freke, Phone 262 5799, email cfreke@manukau.govt.nz.)

   (b) The construction of a footpath along Stancombe Road as detailed on the approved engineering plans referenced E7/27046 (sheets 1-21) by Council.

10. Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed lots.

    The consent holder shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts.

11. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

Financial Contributions

12. A Comprehensive **Stormwater Discharge** Levy of $447.00 including GST shall be paid to Manukau City Council.

The consent holder is advised that this levy (FC45) has been calculated at $490.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

13. A **Stormwater** contribution of $70,002.23 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC259 – Flat Bus Stormwater) has been calculated at $76,820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

14. A **Wastewater** contribution of $5,816.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution is made up of the following elements:

    - $747.00 including GST. This contribution (FC223 – Accent Drive Embankment) is assessed at $820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

    - $5,069.00 including GST. This contribution (FC260 – Stancombe Road Wastewater) is assessed at $5,563.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

15. A **Water Supply** Contribution of $18,799.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC231 – Flat Bush Water Supply) has been assessed at $20,630.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

16. A **Roading Upgrade** contribution of $88,200.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC266 – Stancombe Road) has been assessed at $1400 /metre road frontage plus GST for a frontage of 56 m.

17. All contribution rates shall be reassessed in accordance with the current Statistics NZ Capital Goods Price Index for Other Construction-S2GC (for the previous year) if payment is not made within 12 months of date of this consent.

Septic Tank

18. The septic tank on this site (Lot 3 DP78859) shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

Street Trees

19. That tree planting at the site frontage along the front berm of the roads shall be in accordance with the Robin Duncan Landscape Architect plan referenced 27046 by Council attached to and forming part of this consent.

20. Street tree planting shall be undertaken in accordance with the requirements of Rule 17.10.11.8 of Proposed Variation 13 to the Manukau Operative District Plan 2002 with these relevant requirements restated below and forming conditions of consent:

    - Street tree planting shall be undertaken in new developments once formation of the street has been completed;

- Street trees shall be planted in the front berm between the kerb and footpath. The front berm for street planting shall have a minimum width of 1.4 metres.
- Street trees are to be provided on both sides of the street at a minimum average spacing of 15 metres.
- Clear visibility of bus stops, pedestrian crossings, sign posts and road intersections (where they are known) are to be maintained.
- The consent holder shall be responsible for the routine maintenance and replacement of any street planting they provide including deadwooding, weed control, mulching and watering for a minimum period of 12 months from the time of planting.
- Trees that are vandalised or dead, or that are not of a suitable specimen form shall be replaced immediately at the cost of the consent holder.

21. The street tree species on Stancombe Road shall be London Plane (Platanus acerifolia). The street tree species on "Proposed Road 1 and 2" shall be Sweet Gum (Liquidamber styraciflua).

22. The street trees shall be suitably positioned so as not to obstruct intersection line of sight in accordance with MCC Quality Assurance Manual and shall be positioned 3.0m away from driveways at all times in accordance with MCC Quality Assurance Manual. This shall be the responsibility of the consent holder up to the time of 224 certification or the final inspection agreement.

Road to Vest

23. Lot 1000 shall vest in the Manukau City Council as legal road at no cost to Council.

Financial Contribution for Proposed Road 1

24. Within three months of the commencement of this resource consent and prior to certification pursuant to the requirements of section 224 of the Resource Management Act 1991 the consent holder shall:

    (a) Submit to the Council an assessment, undertaken by a suitably qualified engineer, of the cost of altering that length of "Proposed Road 1" (identified on Airey Consultants Plan ref: A9861/5 Drawing 6, Rev.4) to comply with the "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards) for that part of this "Proposed Road 1" within the legal boundary of 124 Stancombe Road (Lot 3 DP 78859).

    (b) This assessment shall include consideration of the cost of relocating the footpath, service berms (and any associated services to comply with the provisions of the Manukau Operative District Plan 2002), street planting ,all kerb and channel works, street light and signage replacement or repositioning, road markings, design, construction and supervision works (as well as any necessary contingency) associated with alteration of this road to achieve compliance with Council's Engineering Quality Standards and the provisions of the Manukau Operative District Plan 2002 for alteration of "Proposed Road 1" to local road standard (7.8 metre carriageway and 18.2 metre legal width).

    (c) Allow the Council sufficient time to arrange and complete a peer review of the costs identified under (a) and (b) above, to be undertaken by a suitably qualified engineer, appointed by the Council and at the sole discretion of the Council, to certify the costs submitted under (b) above.

    (d) Following the completion of the peer review required under (c) certifying all costs required under (b) above pay the Council as a financial contribution the cost of

all works identified under (b), together with all costs incurred by the Council in review.

Road Marking – Proposed Road 1 and 2 ("Carlos Drive")

25. That the following traffic signage and road markings be installed, to the extent practicable, in accordance with the Transit NZ Manual of Traffic Signs and Markings, as part of the road construction.

    (a) A "Give Way " sign (RG-6) at the intersection with Stancombe Road.
    (b) Two chevron boards (RC- 5) at the future bend in Carlos Drive,
    (c) A 100mm wide continuous reflectorised white centreline around the bend extending 30 metres from the tangent points.(See MOTSAM Fig.2.1[a]) "
    (d) "No Stopping At All Times" from the western side of the vehicle crossing of 122 Stancombe Road, around the corner, and along the western side of Carlos Drive to the northern most extent of this road.

    An engineering drawing shall be submitted and approved by the Manager Resource Consents and Compliance demonstrating the location and form of this signage prior to installation

Reserve Contribution

26. (a) A reserves contribution of **$32,400** including 12.5% GST being 6% (plus GST) of the market value of Lot 10 (as a single household unit site), shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.

    Note: The Reserve contribution payable specified above has been derived as follows:

Market value of Lot 1 as a single household site	$480,000.00 (including GST)
Contribution: $480,000.00 x 6% + GST	**$32,400.00 (including GST)**

    Note: The above calculations reflect the number of underlying allotment (1) and the number of additional allotments created at this stage of the subdivision (1)

    (b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

Existing House

27. The existing house on the site shall be removed prior to Council's certification pursuant to Section 224(c) of the Resource Management Act 1991.

Section 224

28. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and

the Land Transfer Plan number and a copy of the survey plan (showing co-ordinates) are supplied to the Council.

29. Prior to commencement of any works to install public network utility services on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Each allotment is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. Clause 6.B.6.1 of Council's Engineering Quality Standards manual (carriageway acceptance) in respect to Council carrying out Benklemann Beam tests at no cost to the developer has been amended to the extent that the cost of this work shall now be borne by the consent holder.

6. New roads are to be vested in Council as part of subsequent consents relating to this site. Please ensure that an application is made for preferred 'road names' to, the Team Leader Resource Compliance, for approval at time of, or prior to, application for section 223 release.

7. Pursuant to section 37(1) of the Resource Management Act 1991 (RMA) the time limit for notification of this decision under Section 115 of the RMA has been extended.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B, 104C and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002.

2. It is considered that the proposed subdivision will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.

3. It is considered that any adverse effects of the subdivision on the surrounding environment is no more than minor and will be mitigated by the conditions of consent.

4. The affected party at 122 Stancombe Road, Flat Bush has given their written approval to the proposed subdivision. In imposing condition (24) of this consent it is expected that, at

the time the 122 Stancombe Road is developed for more intensive residential purposes, that Proposed Road 2 will be extended to a legal width of 18.2 metres, and carriageway of 7.8 metres by the 122 Stancombe Road developer. Correspondingly, that part of the road on the 124 Stancombe Road property will also be upgraded to local road standard in "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards).

This shall be recorded on Council's Land Information Register (LIR) for both properties at 122 Stancombe Road, and 124 Stancombe Road, Flat Bush.

COSTS

1. In addition to the consent charge for this consent, and pursuant to Section 36(1)(c) of the Resource Management Act 1991, an engineering administration and inspection charge, relating to the engineering conditions of the Resource Consent will be applicable (together with administration charges relating to the release of the subdivision) by determining all reasonable and actual costs incurred by Council. The actual charges incurred in the Council's field monitoring of the engineering works will be determined at the completion of works and will be payable prior to release. The consent holder will be advised of the charges as they fall due.

2. The aforementioned fee is in addition to the normal fees and requirements as imposed by the Manager - Building Consents & Compliance to the Building Consent.

RIGHT OF OBJECTION

Within 15 working days of receipt of this decision (commencement date stamped below) you may lodge an objection to the decision pursuant to Section 357(2) of the Resource Management Act 1991. Any such objection shall be made by notice in writing to the Council setting out the reasons for the objection and the relief sought.

Please note that from 1 October 1999 the Council requires a deposit fee of $450 (inclusive GST) to accompany any objection relating to valuation figures, financial contributions and the provision of works associated with the provision of infrastructure. (Minute No. 1455/99).

Any such objection may incur the reasonable costs of processing the objection above and beyond the deposit fee (Sec 36(3) of the Act).

Should you wish to enter into any future correspondence, building consent applications, or enquiries relating to this consent, could you please ensure that you include the file reference at the foot of page one of this letter.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

Date _____
Commencement of 15 Working Days
RE : S 357 RM Act 1991

27046

STANCOMBE ESTATE — *DRAFT* STREET TREE PLAN

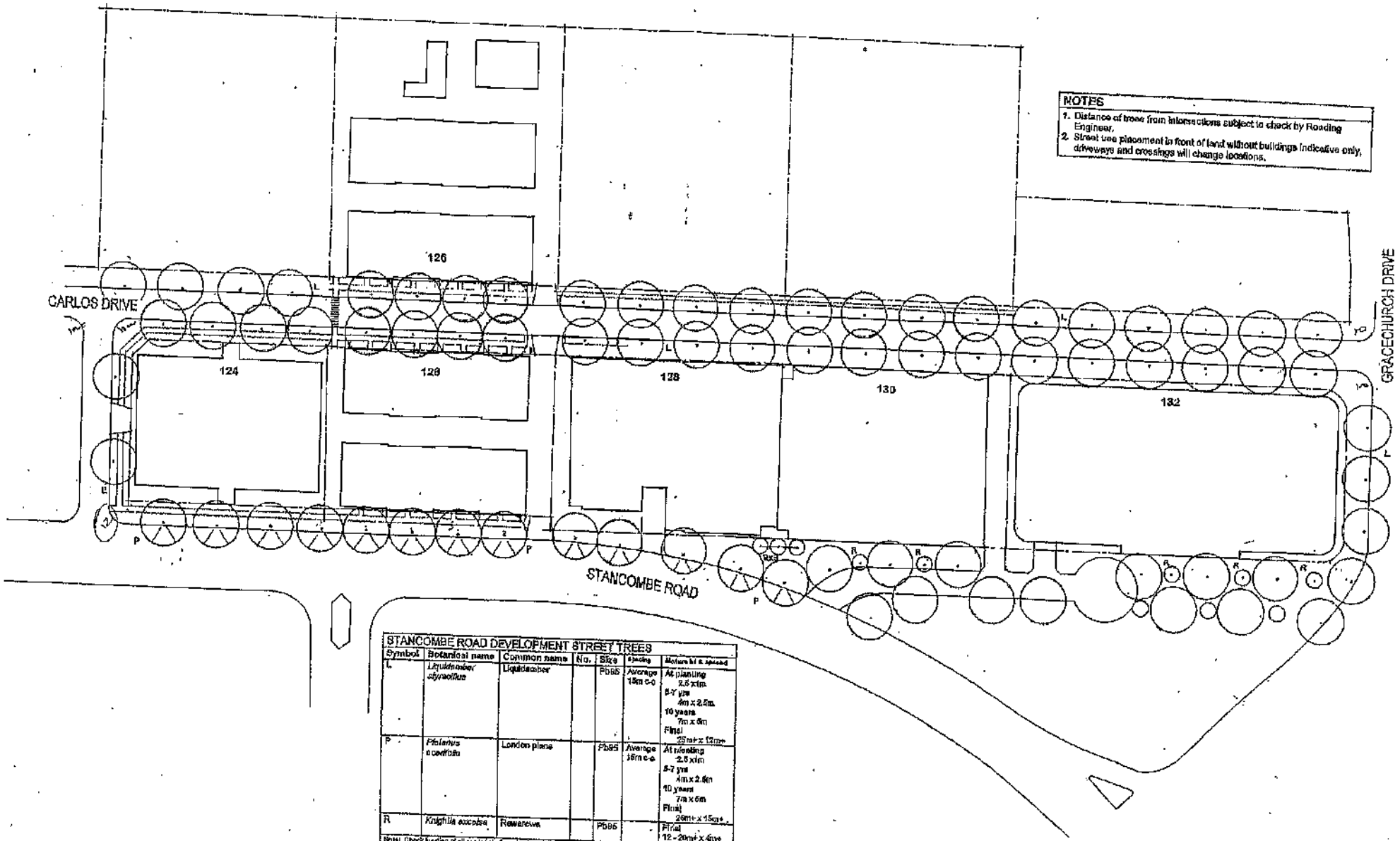
1:500 @ A1

1:1000 @ A3

August 2004

NOTES

1. Distance of trees from intersections subject to check by Roading Engineer.
2. Street tree placement in front of land without buildings indicative only, driveways and crossings will change locations.



STANCOMBE ROAD DEVELOPMENT STREET TREES

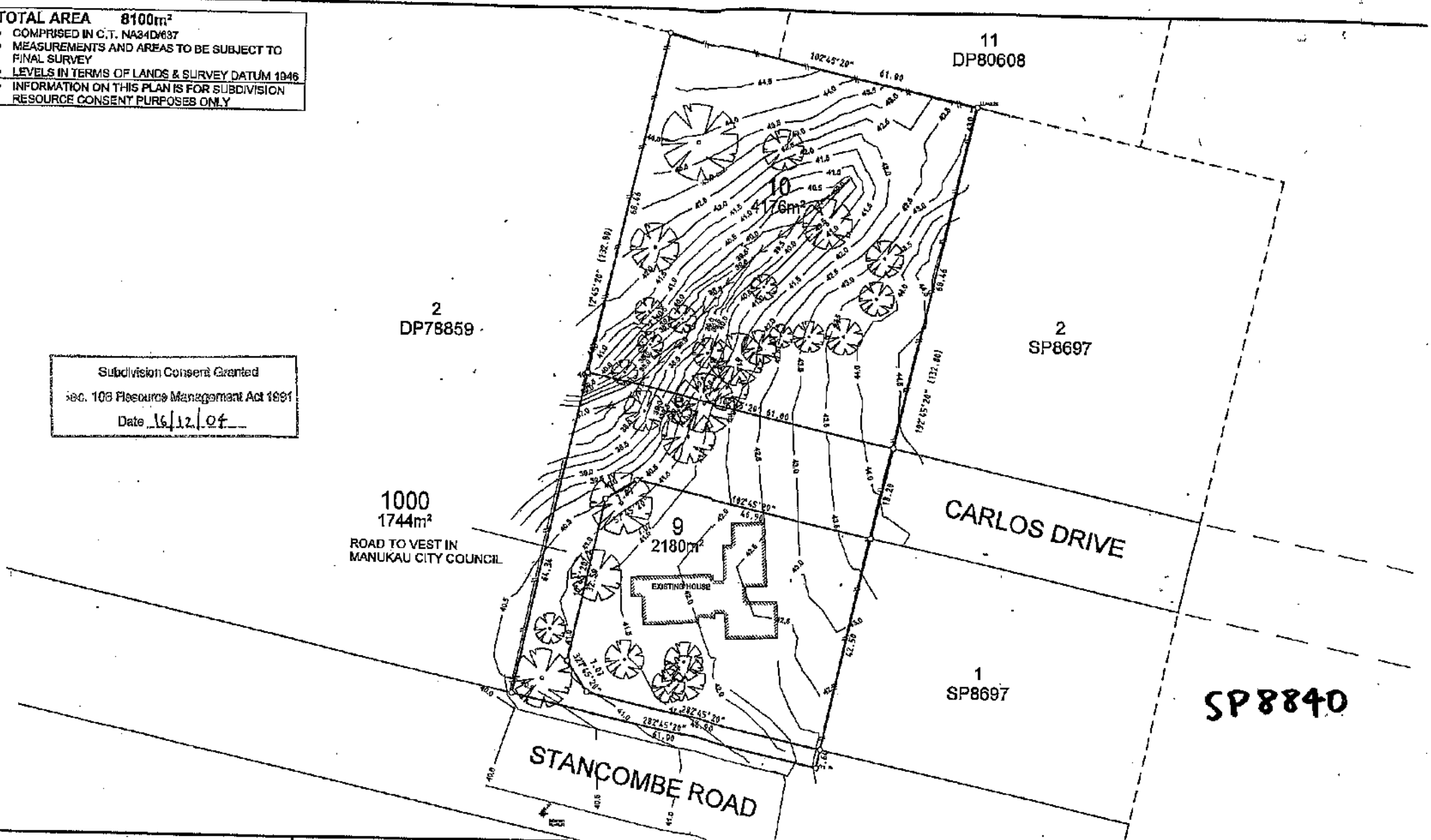
Symbol	Botanical name	Common name	No.	Size	Spacing	Mature ht & spread
L	*Liquidamber styraciflua*	Liquidamber		Pb95	Average 18m c-c	At planting 2.5 x1m 5-7 yrs 4m x 2.5m 10 years 7m x 6m Final 25m+ x 12m+
P	*Platanus x acerifolia*	London plane		Pb95	Average 16m c-c	At planting 2.5 x1m 5-7 yrs 4m x 2.5m 10 years 7m x 6m Final 25m+ x 15m+
R	*Knightia excelsa*	Rewarewa		Pb95		Final 12 - 20m+ x 4m+

Note: Check location of all services before planting.
Preparation and tree planting of trees to be to Detail 1, Hamilton Parks Tree Planting Manual.

TOTAL AREA 8100m²

- COMPRISED IN C.T. NA34D/637
- MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
- LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946
- INFORMATION ON THIS PLAN IS FOR SUBDIVISION RESOURCE CONSENT PURPOSES ONLY

Subdivision Consent Granted
Sec. 108 Resource Management Act 1991
Date 16/12/04



Easdale Surveyors Ltd
REGISTERED SURVEYORS - LAND DEVELOPMENT CONSULTANTS
39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 537 5754
e-mail: surveyors@easdales.co.nz

PROPOSED SUBDIVISION
124 STANCOMBE ROAD, FLAT BUSH
LOT 3 DP78859

FILE:	7576
SCALE:	1:500
DATE:	September 2004
SURVEYOR	MSL
REVISION	SCHEME 1

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

RECEIVED
10 DEC 2004
M.C.C.
ENVIRONMENTAL SERVICES

ET/27046
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER .....
MCC BUILDING & RESOURCE SERVICES

STAGE 1
SUBDIVISION

JOB No A9861/5

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

ISSUED 10.12.04

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 1
SUBDIVISION

E1/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES

DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
	COVER
	INDEX
1	SITE PLAN, 1:1000
2	EARTHWORKS PLAN 1:500 SILT FENCE DETAIL
3	SITE PLAN - SS DRAINAGE, SHEET 1, 1:500
4	SITE PLAN - SW DRAINAGE, 1:500
5	SITE PLAN - WATERMAIN, 1:500
6	PROPOSED ROAD PLAN - FINISHED LEVELS, STREET LIGHTING & PLANTING, 1:250
7	TYPICAL ROAD CROSS SECTION, 1:100
11	PROPOSED ROAD 1 LONGSECTION
12	PROPOSED ROAD 2 LONGSECTION PART 1
13	CROSS SECTION AT 20m, 40m, 60m PROP ROAD 1 CROSS SECTION AT 0m, 20m, 40m PROP ROAD 2
14	CROSS SECTION AT 60m PROP ROAD 2
21	SW LONGSECTION 1
22	SW LONGSECTION 2 & 3
31	SS LONGSECTION 1 & 2
32	SS LONGSECTION 3 & 4
33	SS LONGSECTION 5
	APPENDIX
A1	STANDARD DETAILS - SHEET 1
A2	STANDARD DETAILS - SHEET 2
A6	PROPOSED ROAD 2 LONGSECTION PART 2
A7	PROPOSED ROAD 2 LONGSECTION PART 3
A8	PROPOSED ROAD 2 LONGSECTION PART 4

JOB No A9861/5

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

ISSUED 10.12.04

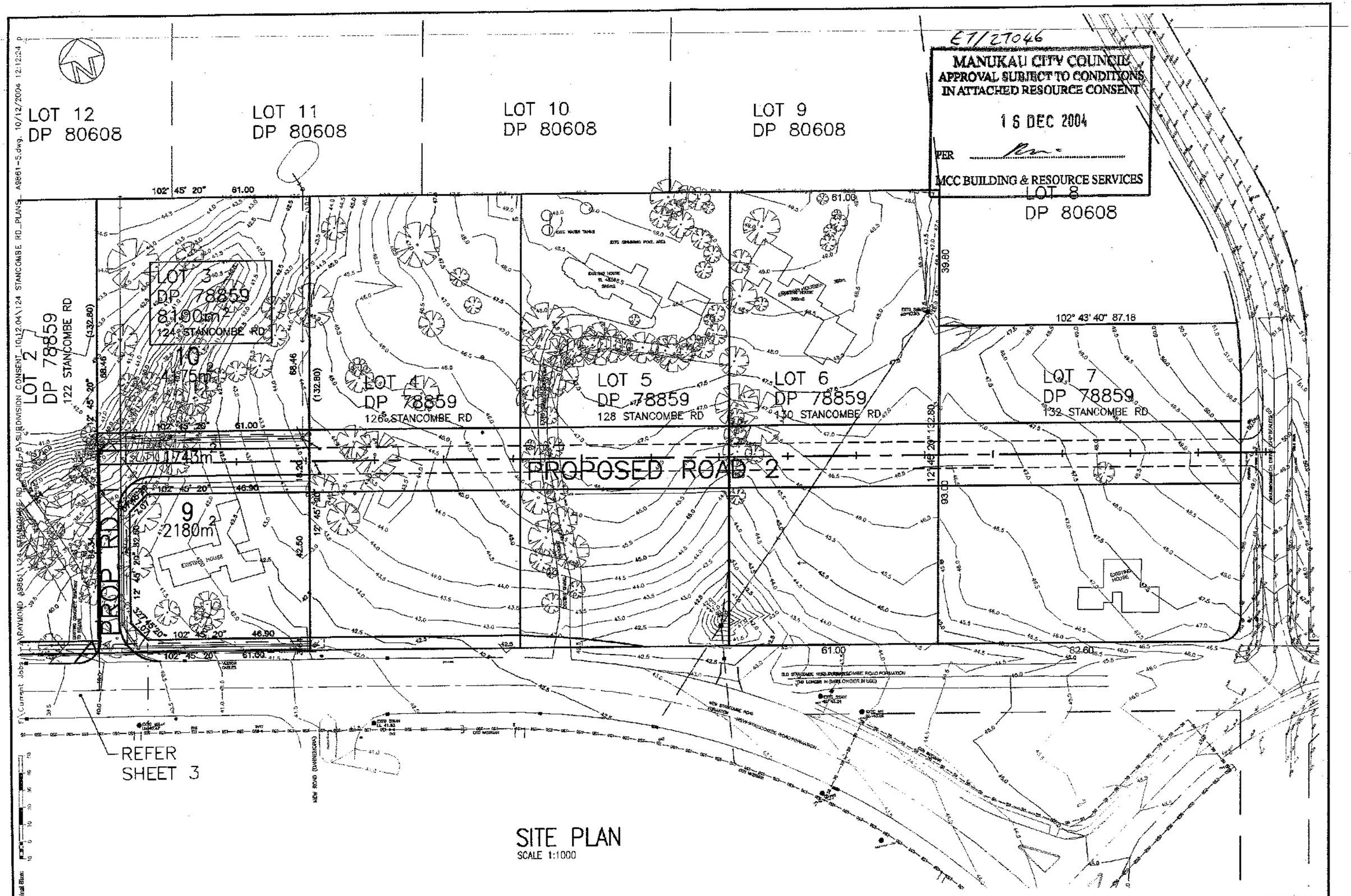
ET/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES



SITE PLAN
SCALE 1:1000

No.	Revision Details	Date	No.	Revision Details	Date
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2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: IH GIBSON (HOWICK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: IHG
Date: SEPT '04
Scale: A3 1:1000
CAD Filename:

CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

Drawing Title.
SITE PLAN

File No.	Rev.	Dwg. No.
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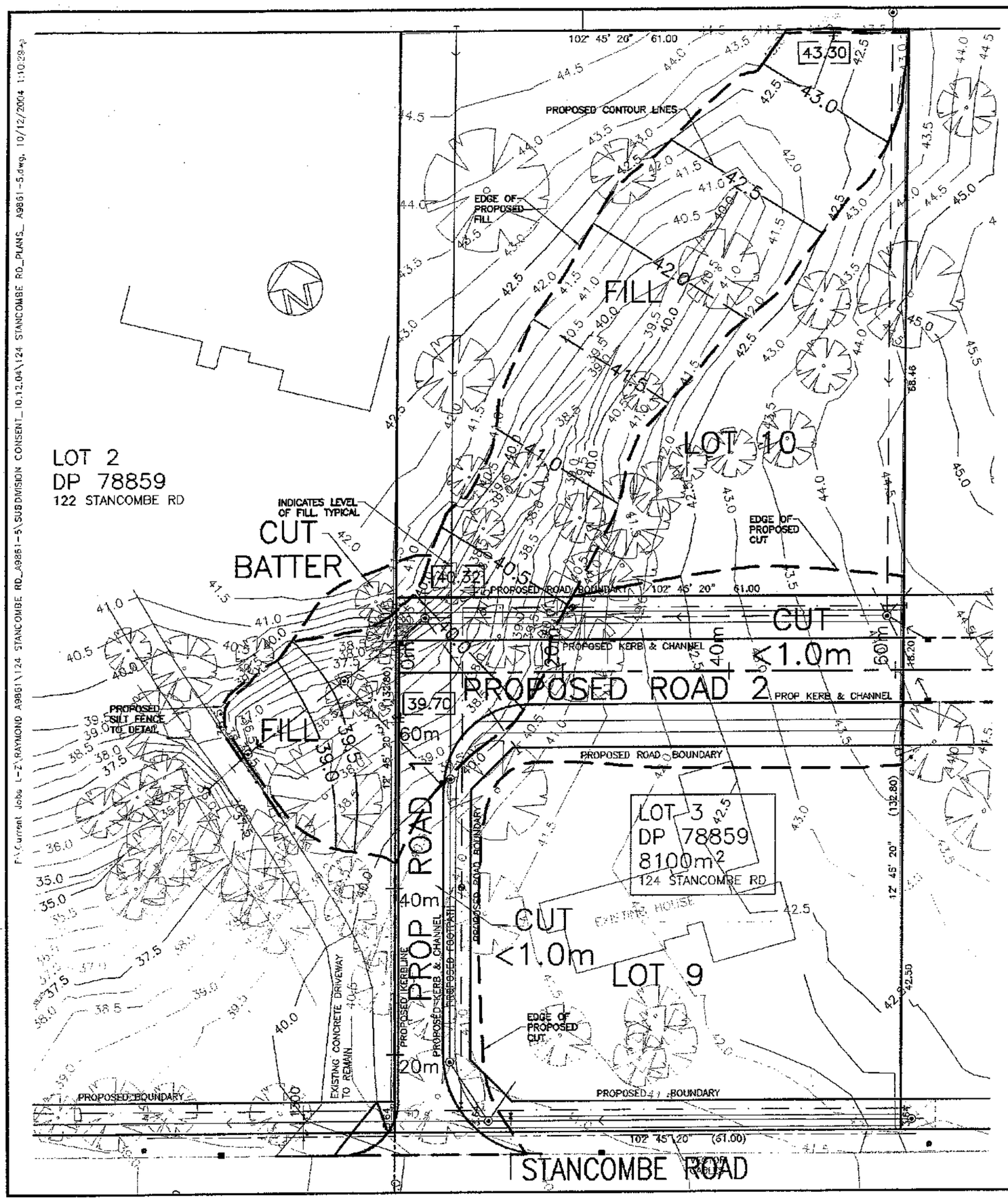
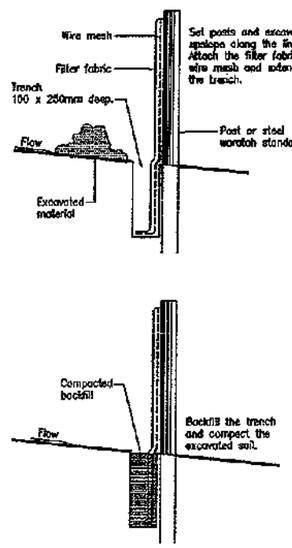


LEGEND

42.0 ISOPECS

CUT EXTENT

SILT FENCE



SILT FENCE DETAIL
NTS

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

PART SITE PLAN

1:500

No.	Revision Details	Date
3	SEWER LINE MOVED	10/12/04
2	SEWER DESIGN REVISED CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

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Drawing Title.
EARTHWORKS PLAN
SILT FENCE DETAIL

Job Title.
PROPOSED ENGINEERING WORK – STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pakatoa, Howick, Waiuku, Orewa

Design I H GIBSON (ph534 6523)
Survey EASDALE SURVEYORS LTD
Drawn LFP
Checked IHG
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CONSENT

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NOTES

ALL WORK TO BE CARRIED OUT TO M.C.C ENGINEERING STANDARDS.

CONTRACTOR TO LOCATE ALL SERVICES PRIOR TO COMMENCEMENT OF WORK.

STORMWATER, SANITARY SEWER AND WATERMAIN CONNECTIONS SHALL BE INSTALLED BY A M.C.C APPROVED LICENSED CONTRACTOR AT THE APPLICANTS EXPENSE.

CONTRACTOR TO CONFIRM ALL DIMENSIONS ON SITE.

ALL PVC PIPES AND CONNECTIONS TO BE HEAVY WALL SEWER GRADE.

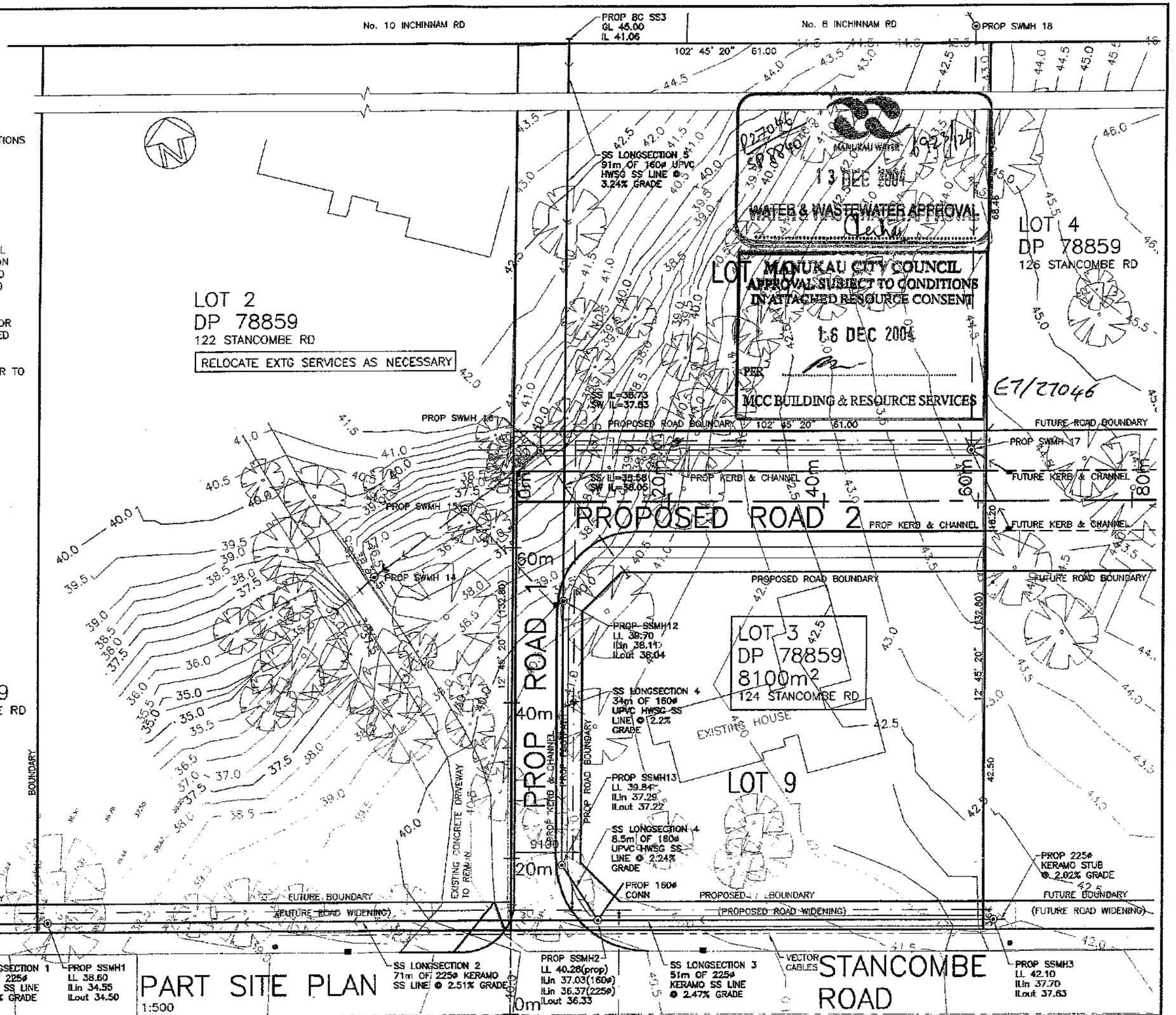
BOTH CONTRACTORS AND CONSULTANTS ARE TO TAKE ALL NECESSARY CARE AND PRECAUTION AT THE CONSTRUCTION SITE TO AVOID ACCIDENT AND INJURY FROM FALLING INTO EXCAVATIONS, CRUSHING BY SUBSIDING EXCAVATIONS AND THE MOVEMENT OF PLANT AND MATERIALS ON THE SITE.

CONTOURS AND MEASUREMENTS HAVE BEEN PROVIDED FOR ENGINEERING PURPOSES ONLY AND SHOULD NOT BE USED FOR TOWN PLANNING PURPOSES.

PILOT ALL SERVICES AND EXISTING DRAINAGE LINES PRIOR TO INSTALLATION OF NEW DRAINAGE LINES.

LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946.

FOR SW DRAINAGE REFER DWG 4
FOR WATERMAINS REFER DWG 5



PART SITE PLAN
1:500

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2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design IH GIBSON (HOWICK 534 6523)
Survey EASDALE SURVEYORS LTD
Drawn LFP
Checked
Date SEPT 04
Scale A3 1:500
CAD Filename

CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Drewe

Drawing Title.
SITE PLAN
- SS DRAINAGE

File No.	Rev.	Dwg. No.
A9861/5	3	3

Original Size:

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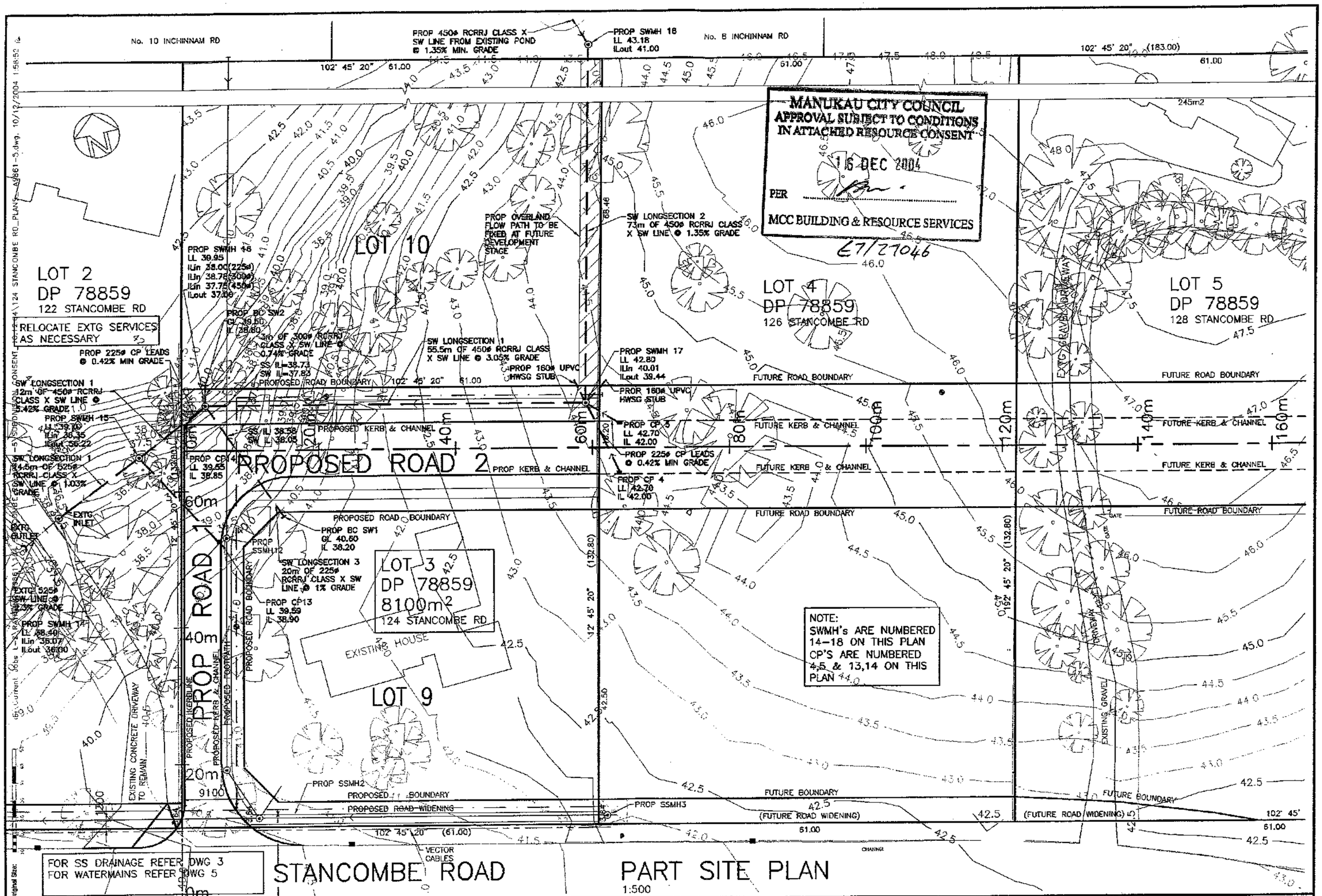

No.	Revision Details	Date	No.	Revision Details	Date
3	SS LINE MOVED, SW LS 1&3 REVISED	10/12/04			
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

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Survey: EASDALE SURVEYORS LTD
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Date: SEPT '04
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CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Panmure, Howick, Waiuku, Otaiwa

Drawing Title.
SITE PLAN
- SW DRAINAGE

File No.	Rev.	Dwg. No.
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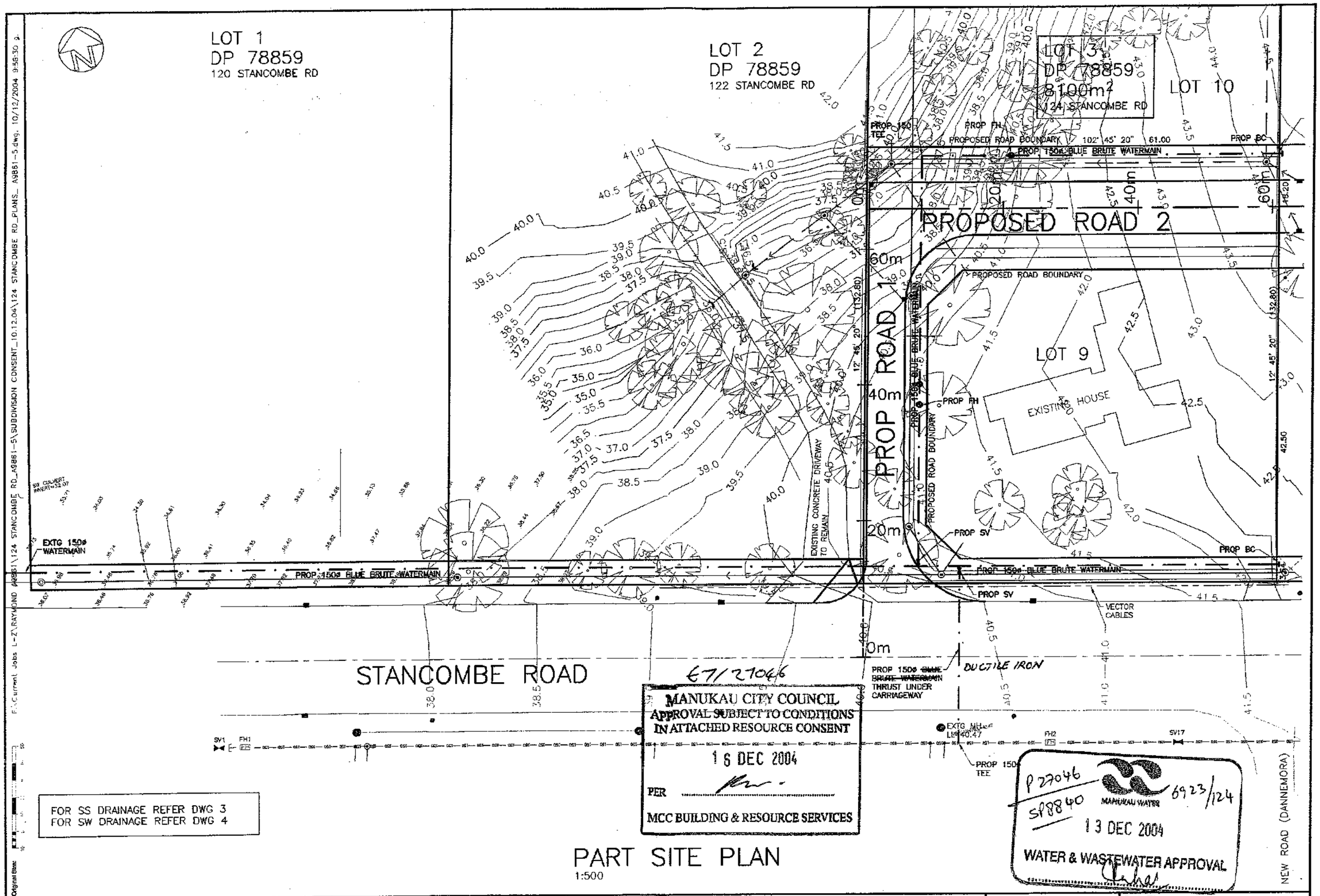

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

P 27046
SP8840
MANUKAU WATER
6923/124
13 DEC 2004
WATER & WASTEWATER APPROVAL

FOR SS DRAINAGE REFER DWG 3
FOR SW DRAINAGE REFER DWG 4

PART SITE PLAN

1:500

No.	Revision Details	Date	No.	Revision Details	Date
3	NEW WATERMAIN ADDED ACROSS STANCOMBE RD	10/12/04			
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design I H GIBSON (HOWICK 534 6523)
Survey EASDALE SURVEYORS LTD
Drawn LFP
Checked
Date SEPT '04
Scale A3 1:500
CAD Filename

CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Onewa

Drawing Title.
SITE PLAN
- WATERMAIN

File No. A9861/5 | Rev. 3 | Dwg. No. 5

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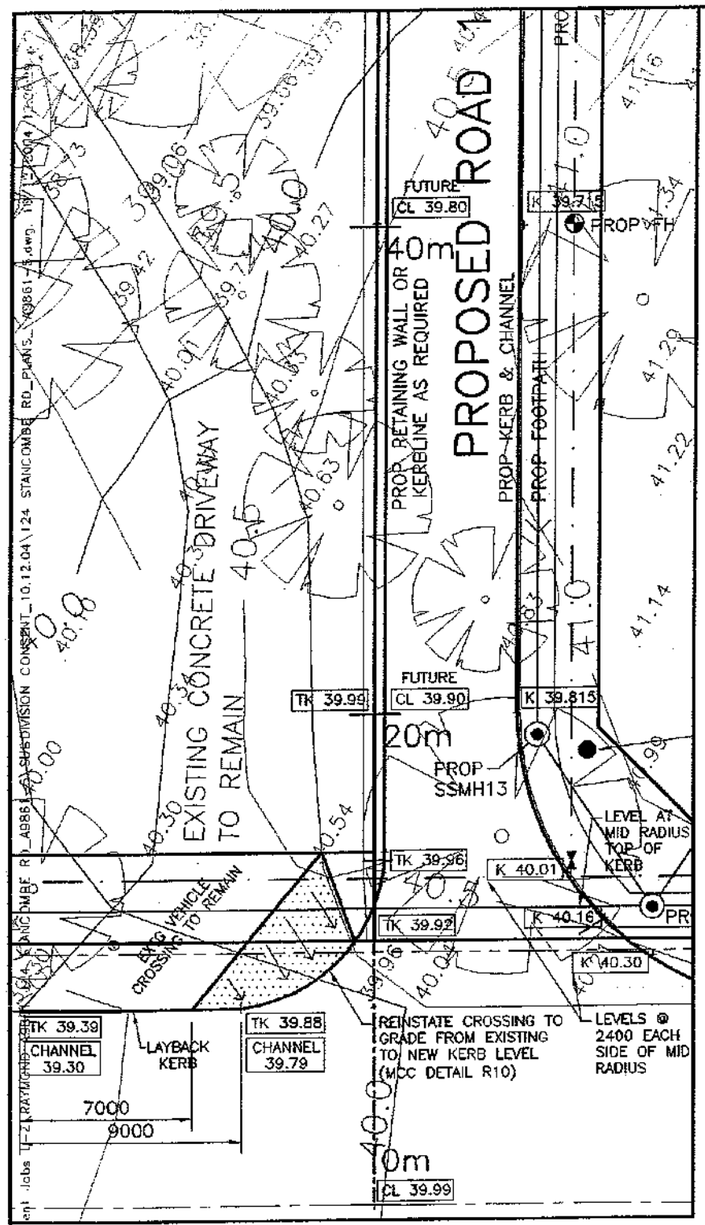

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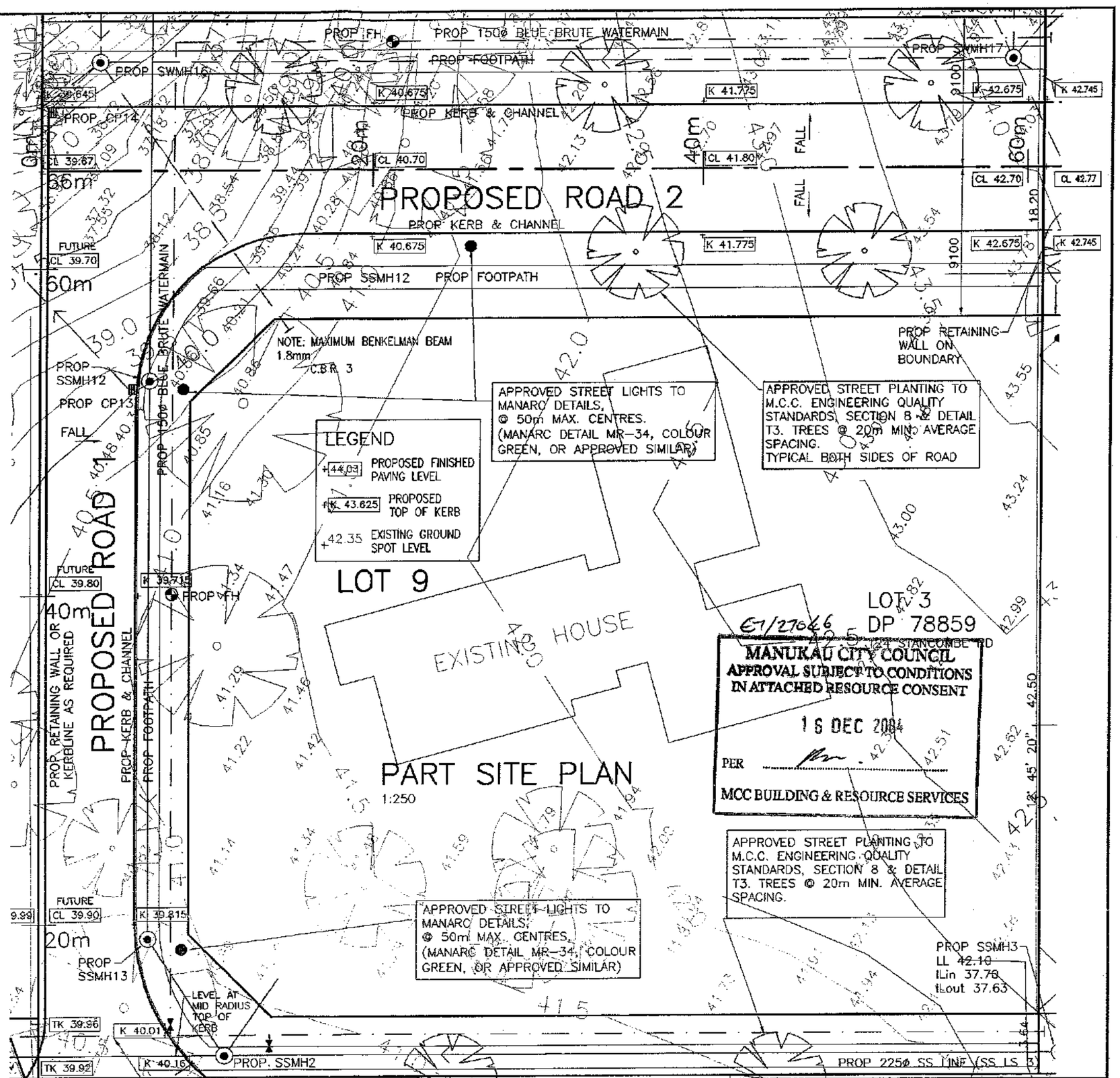

PART SITE PLAN
1:250

No.	Revision Details	Date	No.	Revision Details	Date
4	KERB LEVELS TO RADIUS BY STANCOMBE RD ADDED	10/12/04			
3	DRIVEWAY ACCESS FOR No. 122 REVISED	3/12/04			
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: IHG
Date: SEPT 04
Scale: A3 1:250
CAD Filename:

CONSENT

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Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

Drawing Title:
PROPOSED ROAD PLAN
FINISHED LEVELS
STREET LIGHTING & PLANTING

File No.	Rev.	Dwg. No.
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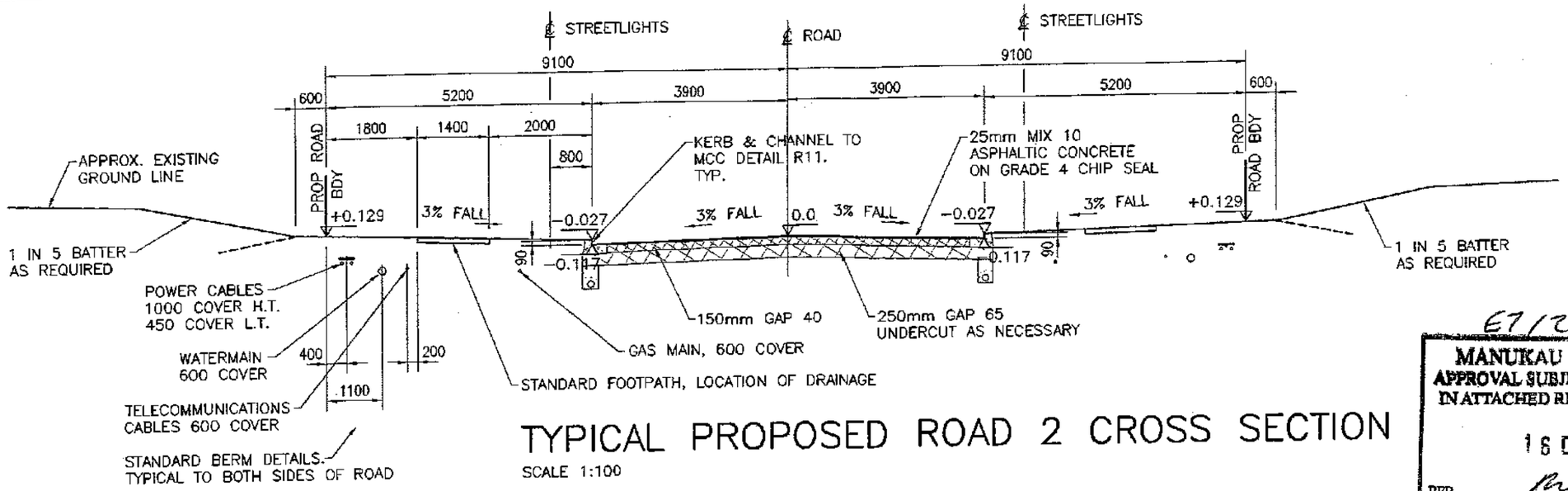


TYPICAL PROPOSED ROAD 2 CROSS SECTION

SCALE 1:100

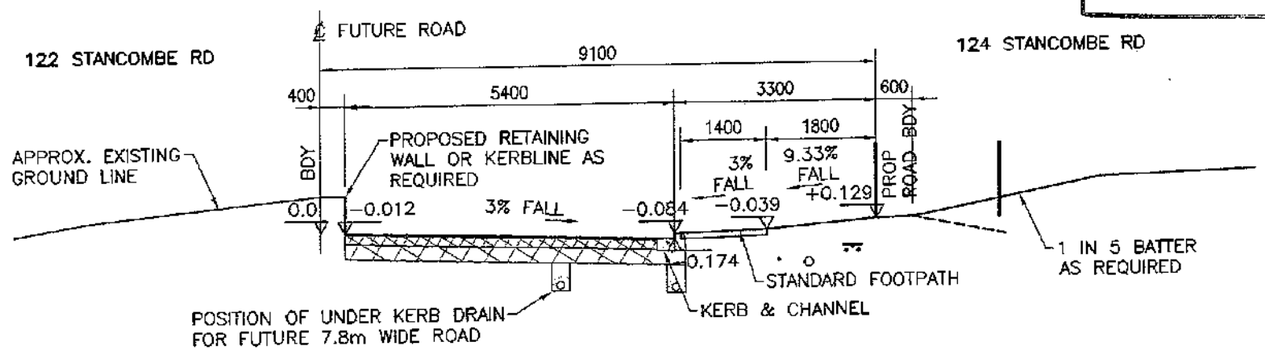
E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

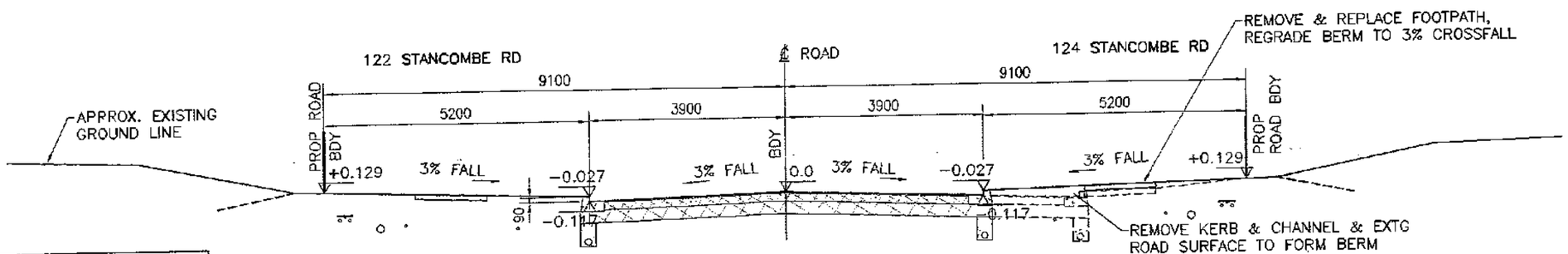
MCC BUILDING & RESOURCE SERVICES



NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100



NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL FUTURE PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100

Original Size:

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (HOWICK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04
Scale: A3 1:100
CAD Filename:

CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pakuranga, Howick, Waiuku, Orewa

Drawing Title.
TYPICAL ROAD CROSS SECTIONS

File No.	Rev.	Dwg. No.
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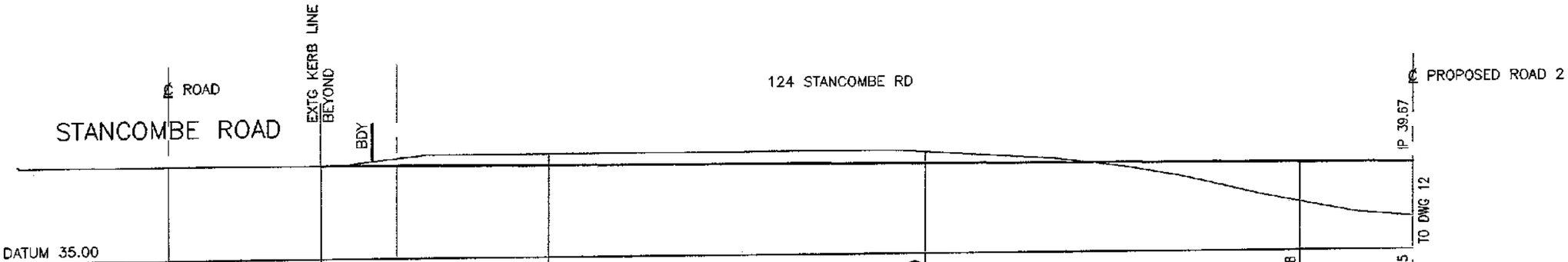

DATUM 35.00

EXISTING LEVEL	39.99	39.96	40.50	40.40	37.58	36.75
FINISHED LEVEL	39.99	39.96	39.90	39.80	39.70	39.67
CUT-/FILL+	0.00	0.00	-0.60	-0.60	+2.12	+2.92
DISTANCE	0.00	8.00	20.00	40.00	60.00	66.00
GRADIENT		0.5%				

LONGSECTION ON FUTURE CENTRELINE OF PROPOSED ROAD 1

VERT 1:250
HORIZ 1:250

ET 120446

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES

Original Size:

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design IH GIBSON (HOWICK 534 6523)
Survey EASDALE SURVEYORS LTD
Drawn GL
Checked IHG
Date SEPT '04
Scale A3 AS SHOWN
CAD Filename

CONSENT

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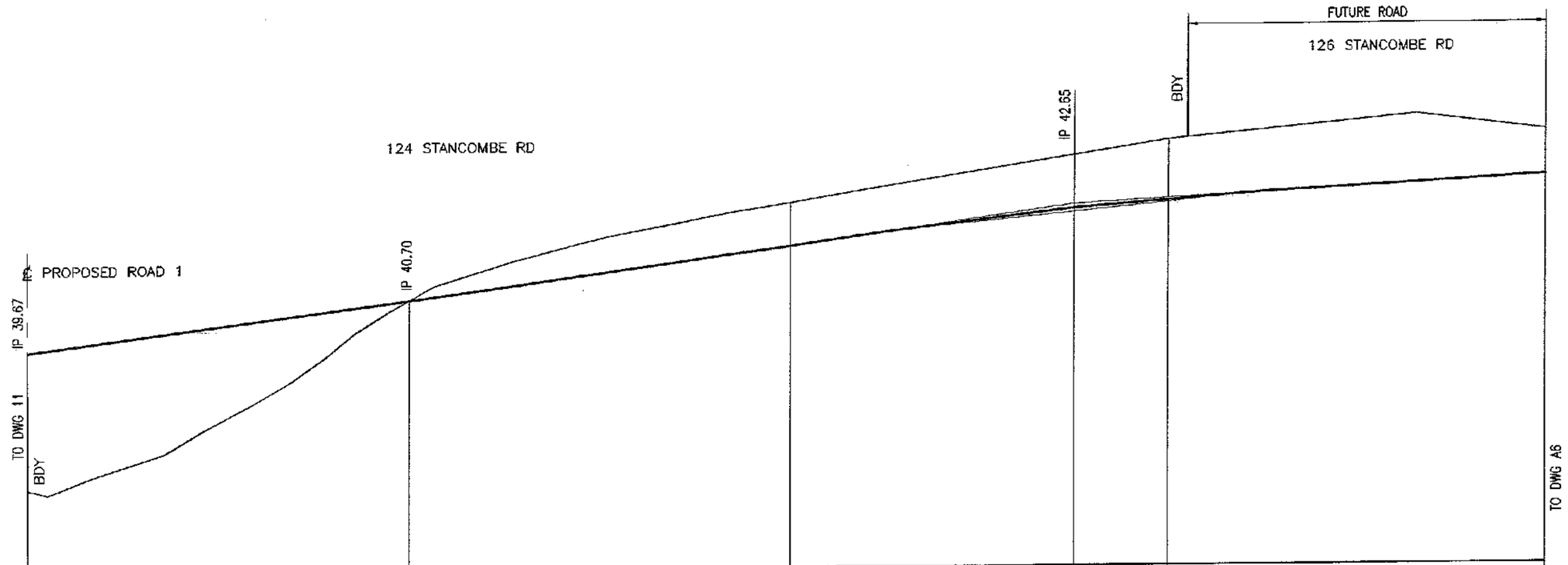
Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

Drawing Title.
PROPOSED ROAD 1
LONGSECTION

File No.	Rev.	Dwg. No.
A9861/5	2	11



EXISTING LEVEL	36.75	40.70	42.70	43.68	44.00	44.16
FINISHED LEVEL	39.67	40.70	41.80	42.55	42.70	43.15
CUT-/FILL+	+2.92	0.0	-0.90	-1.13	-1.30	-1.01
DISTANCE	0.00	20.00	40.00	55.00	60.00	80.00
GRADIENT	5.15%		5.57%	20m V.C.	2.24%	

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES

61/27046

Original Size:

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design I H GIBSON (HOWICK 534 6523)
Survey EASDALE SURVEYORS LTD
Drawn GL
Checked IHG
Date SEPT 04
Scale A3 AS SHOWN
CAD Filename

CONSENT

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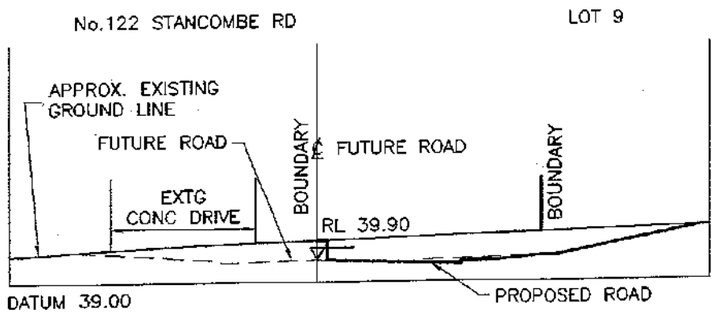
Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waitoki, Orewa

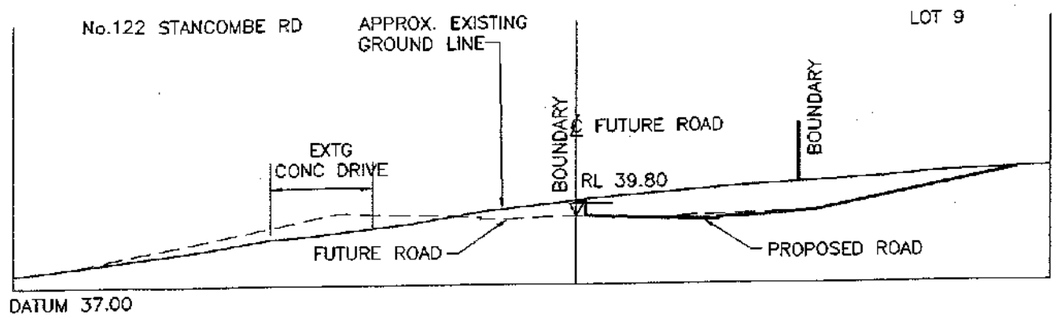
Drawing Title.
PROPOSED ROAD 2
LONGSECTION PART 1

File No. A9861/5 | Rev. 1 | Dwg. No. 12



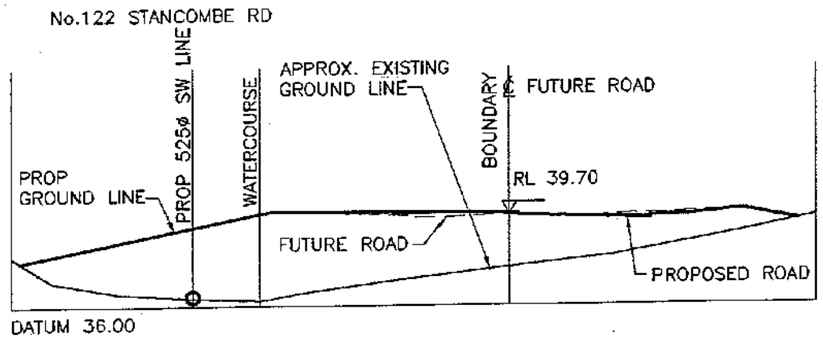
CROSS SECTION AT 20m PROPOSED ROAD 1

SCALE 1:250



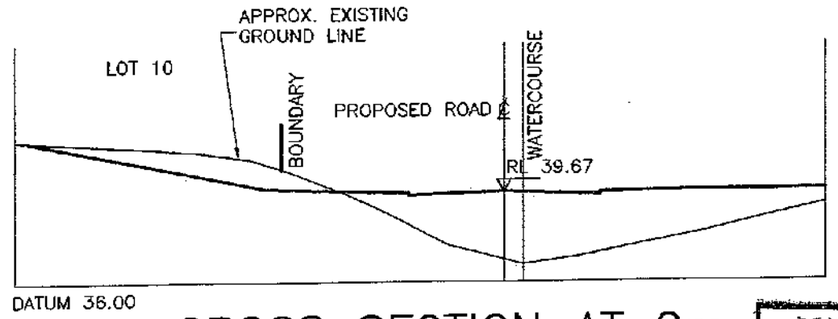
CROSS SECTION AT 40m PROPOSED ROAD 1

SCALE 1:250



CROSS SECTION AT 60m PROPOSED ROAD 1

SCALE 1:250



CROSS SECTION AT 0m PROPOSED ROAD 2

SCALE 1:250

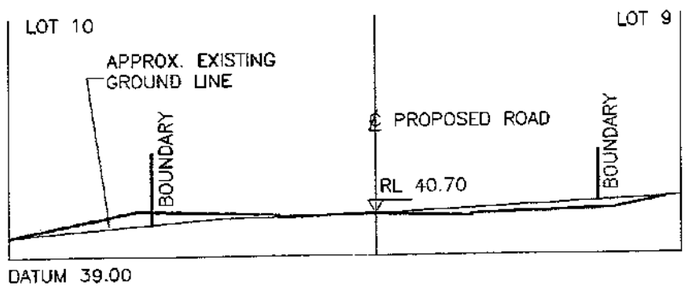
E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

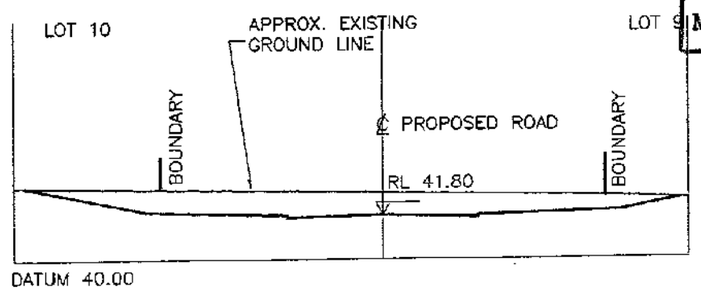
PER .....

MCC BUILDING & RESOURCE SERVICES



CROSS SECTION AT 20m PROPOSED ROAD 2

SCALE 1:250



CROSS SECTION AT 40m PROPOSED ROAD 2

SCALE 1:250

Original Size:

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: IHG
Date: SEPT '04
Scale: A3 1:250
CAD Filename:

CONSENT

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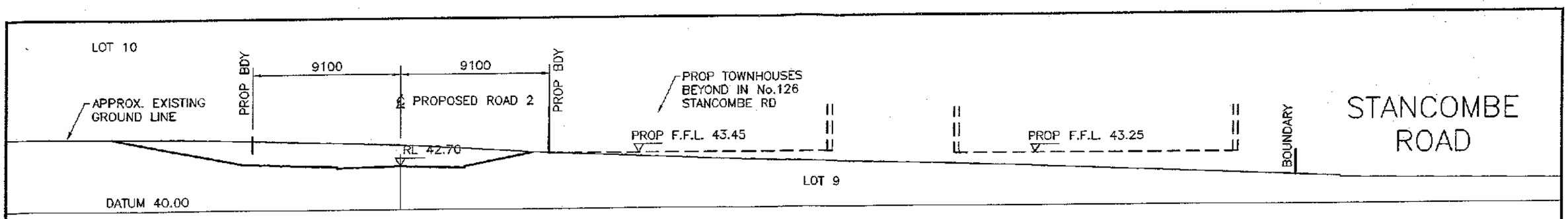
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

Drawing Title:
CROSS SECTIONS
AT 20m, 40m & 60m PROP ROAD 1
AT 0m, 20m & 40m PROP ROAD 2

File No.	Rev.	Dwg. No.
A9861/5	2	13



CROSS SECTION AT 60m PROPOSED ROAD 2

SCALE 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES

Original Size:

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (HOWICK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: GULFP
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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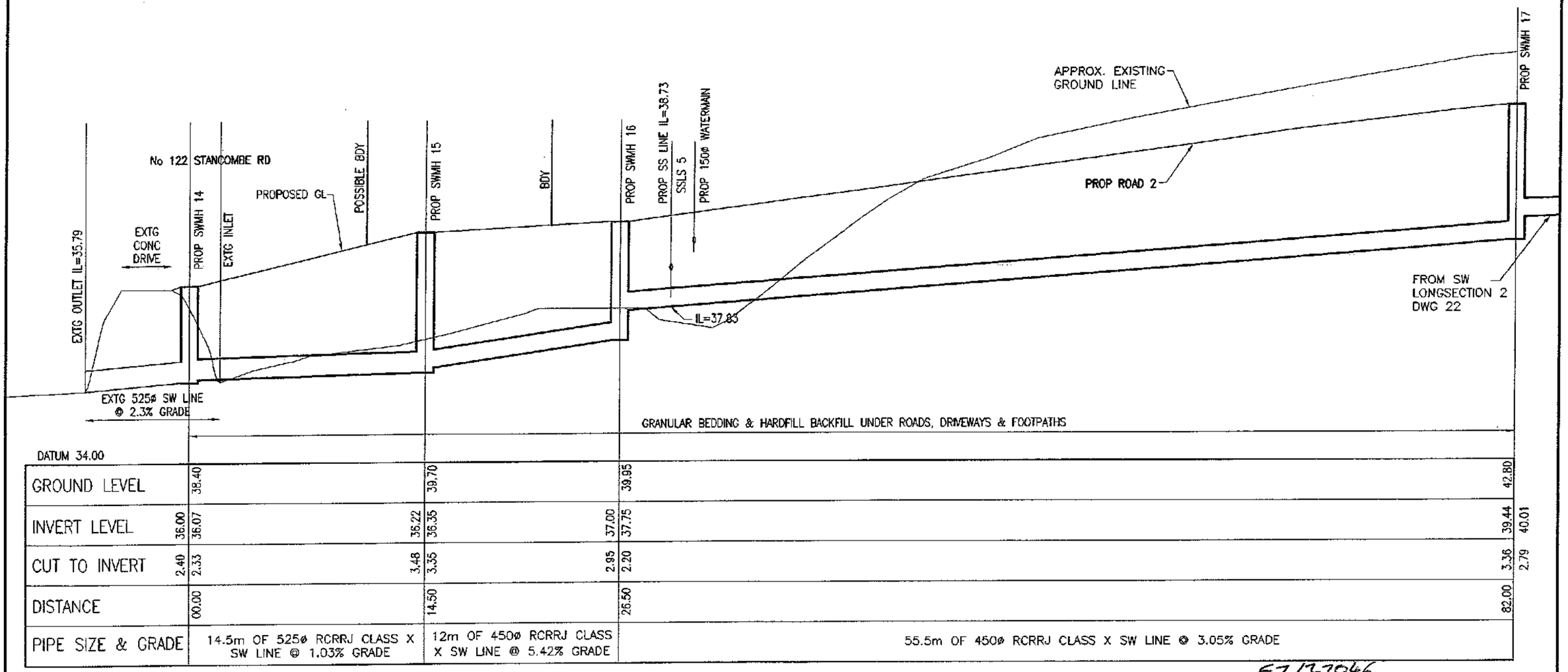
Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tauranga, Pukekohe, Howick, Waiuku, Orewa

Drawing Title.
CROSS SECTION AT 60m - PROP ROAD 2

File No. A9861/5 | Rev. 2 | Dwg. No. 14



DATUM 34.00

GROUND LEVEL		38.40							39.70						39.95									42.80
INVERT LEVEL	36.00	36.07					36.22		36.35				37.00		37.75								39.44	40.01
CUT TO INVERT	2.40	2.33					3.48		3.35				2.95		2.20								3.36	2.79
DISTANCE		00.00							14.50						26.50								82.00	
PIPE SIZE & GRADE		14.5m OF 525ø RCRRJ CLASS X SW LINE @ 1.03% GRADE							12m OF 450ø RCRRJ CLASS X SW LINE @ 5.42% GRADE						55.5m OF 450ø RCRRJ CLASS X SW LINE @ 3.05% GRADE									

SW LONGSECTION 1

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES

Original Size: A1

No.	Revision Details	Date	No.	Revision Details	Date
3	SW LS 1 REVISED, SS LINE MOVED	10/12/04			
2	SW LS 1 REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: IHG
Date: SEPT '04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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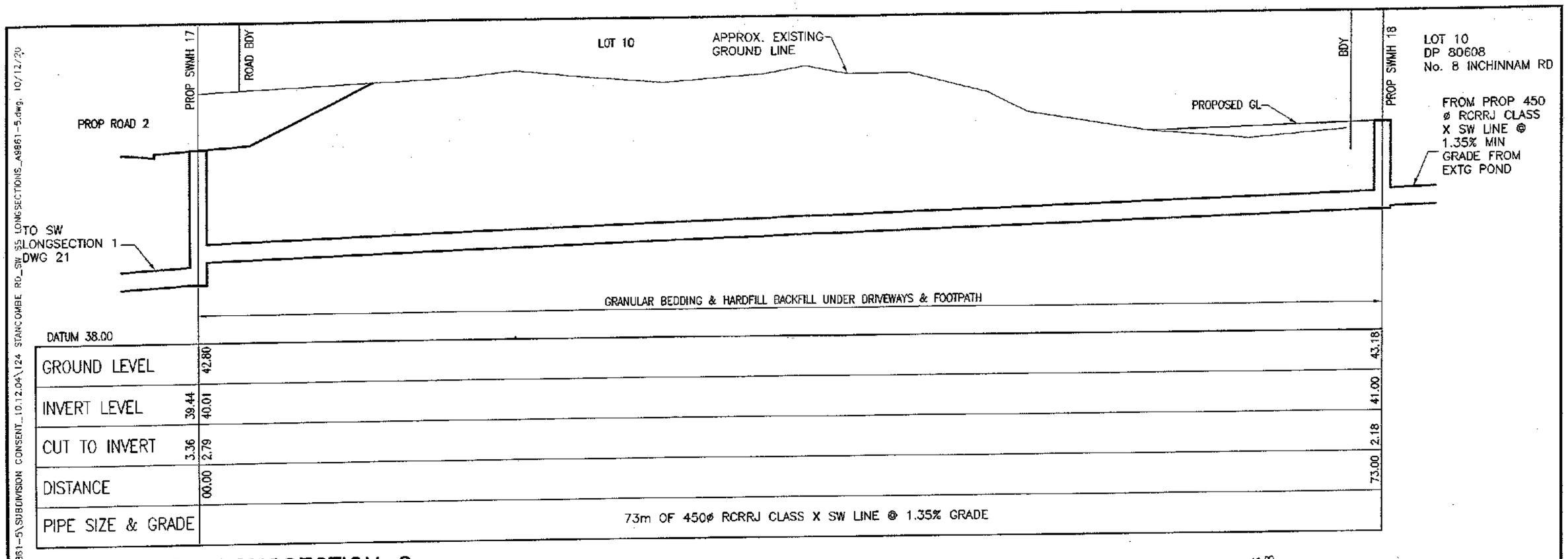
Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

Drawing Title.
SW LONGSECTION 1

File No.	Rev.	Dwg. No.
A9861/5	3	21



DATUM 38.00

GROUND LEVEL		42.80	43.18
INVERT LEVEL	39.44	40.01	41.00
CUT TO INVERT	3.36	2.79	2.18
DISTANCE		00.00	73.00
PIPE SIZE & GRADE	73m OF 450ø RCRRJ CLASS X SW LINE @ 1.35% GRADE		

SW LONGSECTION 2

VERT 1:100
HORIZ 1:250

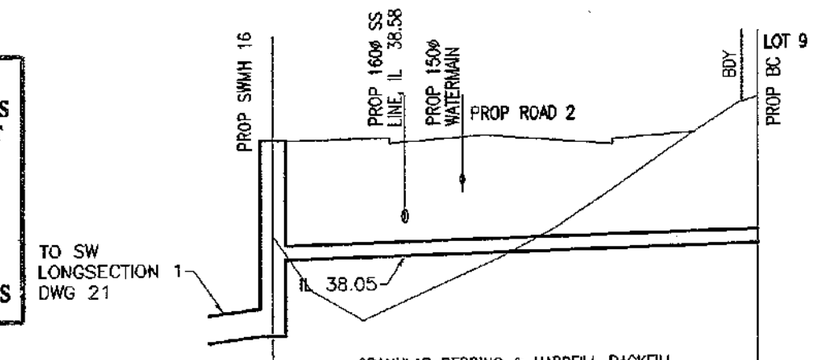
E1/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES



DATUM 35.00

GROUND LEVEL		39.95	40.60
INVERT LEVEL	37.00	38.00	38.20
CUT TO INVERT	2.95	1.95	2.40
DISTANCE		00.00	20.00
PIPE SIZE & GRADE	20m OF 225ø RCRRJ CLASS X SW LINE @ 1% GRADE		

SW LONGSECTION 3

VERT 1:100
HORIZ 1:250

No.	Revision Details	Date	No.	Revision Details	Date
3	SW LS 3 REVISED, SS LINE MOVED	10/12/04			
2	SW LS 3 REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design IH GIBSON (HOWICK 534 6523)
Survey EASDALE SURVEYORS LTD
Drawn LFP
Checked IHG
Date SEPT '04
Scale A3 AS SHOWN
CAD Filename

CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

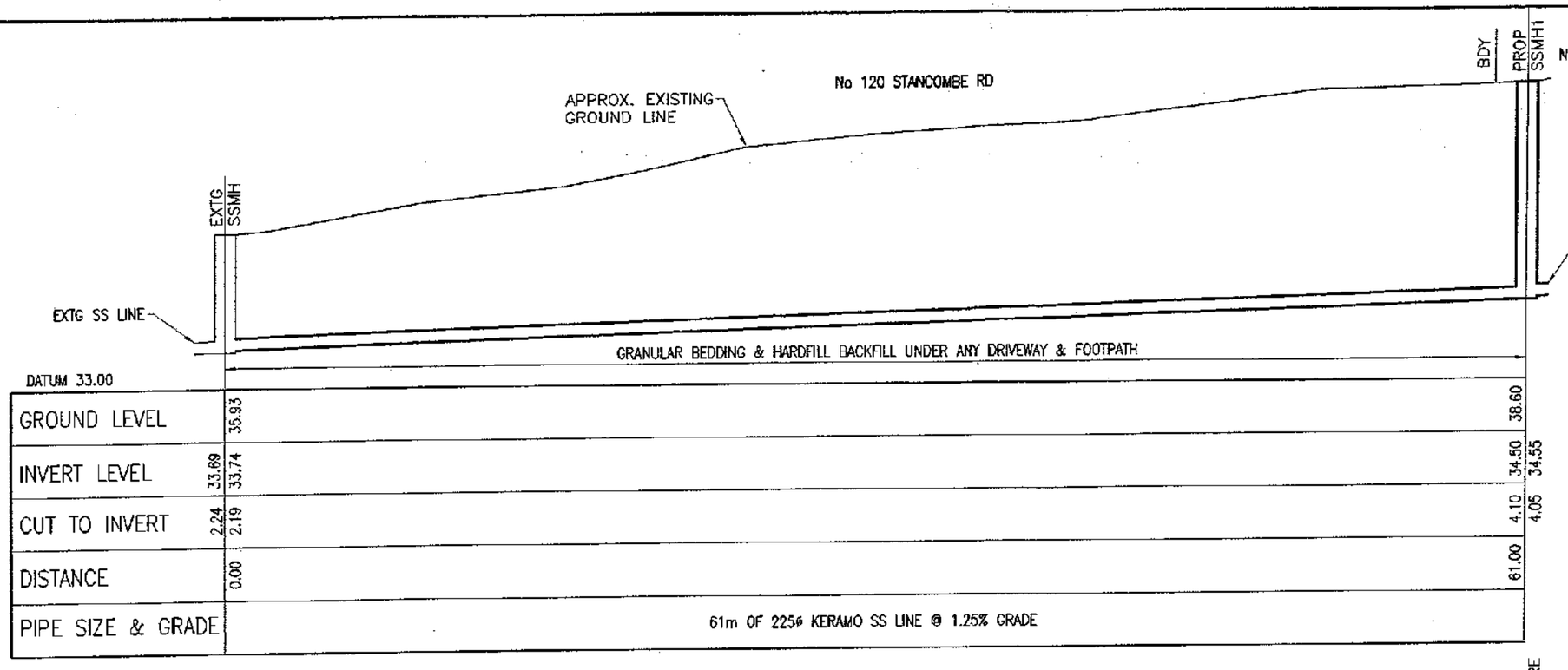
AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takanini, Pukekohe, Howick, Waiuku, Orewa

Drawing Title.
SW LONGSECTION 2 & 3

File No. A9861/5 | Rev. 3 | Dwg. No. 22

Original Size:

F:\Current Jobs L-Z\RAYMOND A9861\124 STANCOMBE RD_SW SS LONGSECTIONS_A9861-5.dwg, 10/12/20

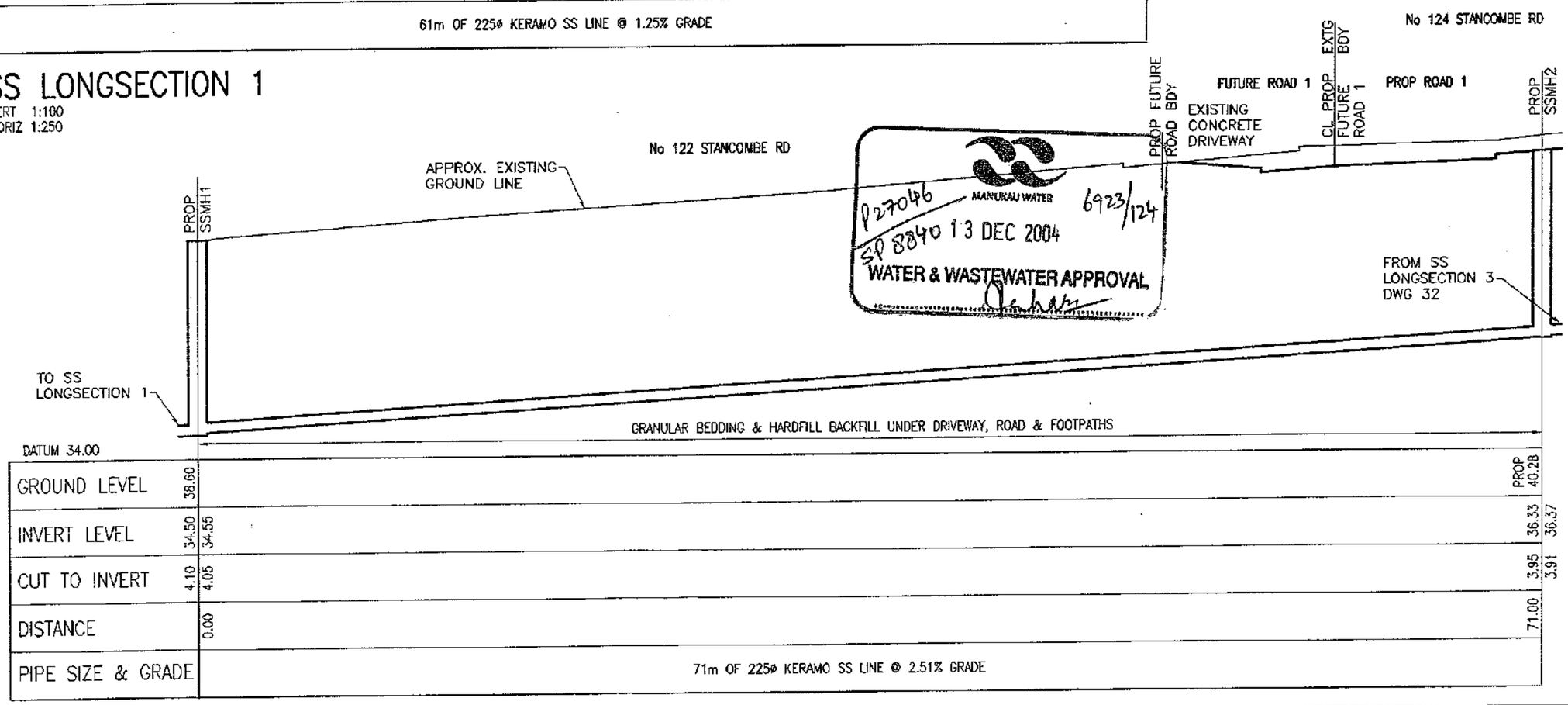


E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER .....
MCC BUILDING & RESOURCE SERVICES

SS LONGSECTION 1

VERT 1:100
HORIZ 1:250



MANUKAU WATER
P27046 6923/124
SP 8840 13 DEC 2004
WATER & WASTEWATER APPROVAL

SS LONGSECTION 2

VERT 1:100
HORIZ 1:250

No.	Revision Details	Date	No.	Revision Details	Date
3	SS LS 2 REVISED	10/12/04			
2	SS LS 2 REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design IH GIBSON (HOWICK 534 6523)
Survey EASDALE SURVEYORS LTD
Drawn GL
Checked IHG
Date SEPT 04
Scale A3 AS SHOWN
CAD Filename

CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

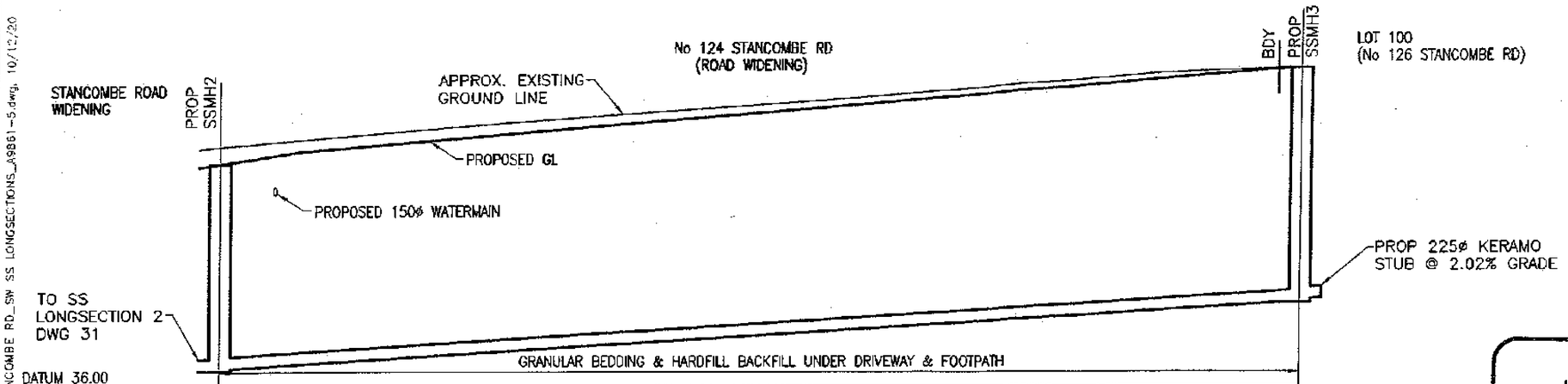
AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Otaua

Drawing Title.
SS LONGSECTIONS 1 & 2

File No.	Rev.	Dwg. No.
A9861/5	3	31

F:\Current Jobs L-Z\RAYMOND A9861\124 STANCOMBE RD_A9861-5\SUBDIVISION CONSENT_10.12.04\124 STANCOMBE RD_SW SS LONGSECTIONS_A9861-5.dwg, 10/12/04

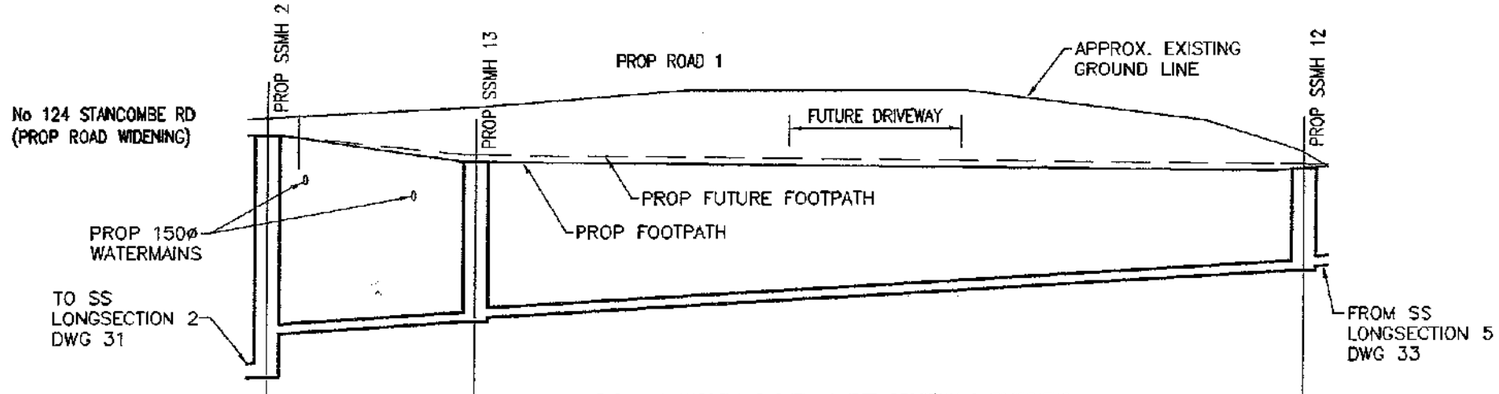
Original Size



GROUND LEVEL	PROP 40.28		42.10	
INVERT LEVEL	36.33	36.37	37.63	37.70
CUT TO INVERT	3.95	3.91	4.47	4.40
DISTANCE	0.00		51.00	
PIPE SIZE & GRADE	51m OF 225ø KERAMO SS LINE @ 2.47% GRADE			

SS LONGSECTION 3

VERT 1:100
HORIZ 1:250



GROUND LEVEL	PROP 40.28		PROP 39.84		39.70	
INVERT LEVEL	36.33	37.03	37.22	37.29	38.04	38.11
CUT TO INVERT	3.95	3.25	2.62	2.55	1.66	1.59
DISTANCE		00.00	8.50		42.5	
PIPE SIZE & GRADE		8.5m OF 160ø UPVC HWSG SS LINE @ 2.24% GRADE		34m OF 160ø UPVC HWSG SS LINE @ 2.2% GRADE		

SS LONGSECTION 4

VERT 1:100
HORIZ 1:250

ET/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

27046
MANUKAU WATER
13 DEC 2004
WATER & WASTEWATER APPROVAL

No.	Revision Details	Date	No.	Revision Details	Date
3	SS LS 3 & 4 REVISED	10/12/04			
2	SS LS 3 REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GU/LFP
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
CONSENT
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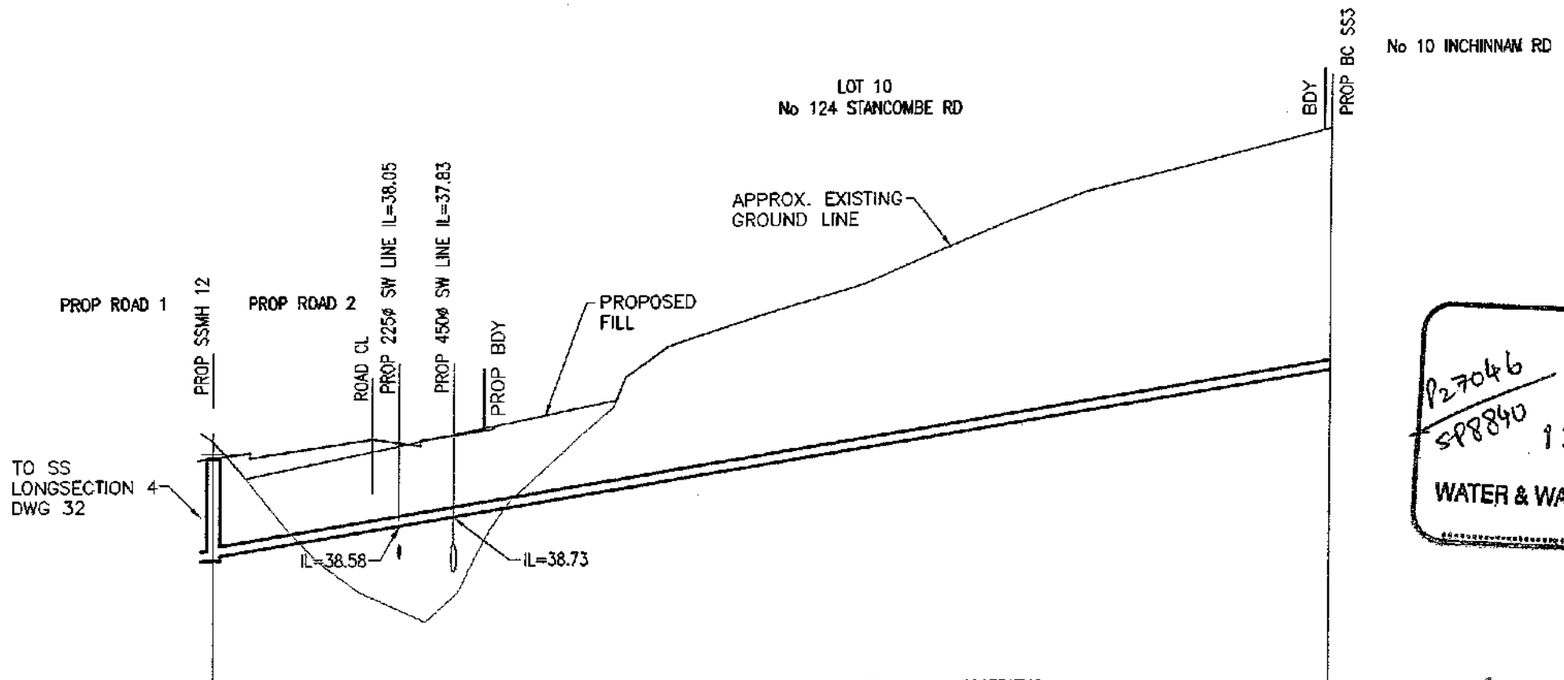
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH
SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

Drawing Title:
SS LONGSECTION 3 & 4

File No. A9861/5 | Rev. 3 | Dwg. No. 32

Original Size: A1



GROUND LEVEL	PROP 39.70		45.00
INVERT LEVEL	38.04	38.11	41.06
CUT TO INVERT	1.66	1.59	3.94
DISTANCE		00.00	91.00
PIPE SIZE & GRADE		91m OF 160ø UPVC HWSG SS LINE @ 3.24% GRADE	

SS LONGSECTION 5

VERT 1:100
HORIZ 1:500

P27046
SP8840
MANUKAU WATER 6923/124
13 DEC 2004
WATER & WASTEWATER APPROVAL

E7127046
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	SS LS 5 REVISED	10/12/04			

Design: I H GIBSON (HOWICK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT '04
Scale: A3 AS SHOWN
CAD Filename:
CONSENT
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Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH
SUBDIVISION

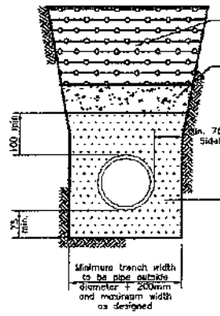
AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waitaku, Orewa

Drawing Title:
SS LONGSECTION 5

File No. A9861/5 | Rev. 1 | Dwg. No. 33

Original Size:

SECTION 3

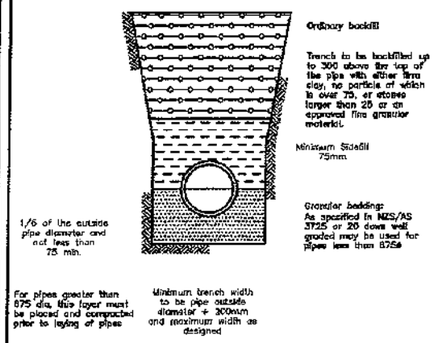


DESIGN FACTORS FOR USE WITH AS 2566

Bedding constant, R = 0.100
Deflection lag factor, L = 1.40
50 year tensile creep modulus, E_c = 690 N/mm²
Modulus of soil reaction, E' = Y/(0m/0N)N/mm²
Y factor = 6.3 N/mm

MANUKAU City Council | TYPICAL P.V.C PIPE BEDDING DETAIL | D1 | MANUKAU WATER | MAY 1995

SECTION 3

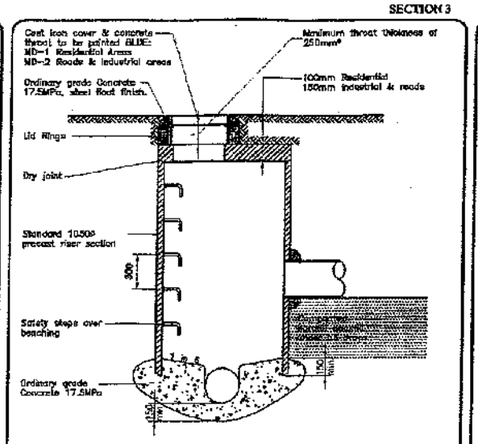


DESIGN FACTORS TO USE WITH NZS/AS 3725

Load factor for wide and narrow trench condition Ft = 1.9
Settlement ratio for wide trench condition Rs = +0.5.
Projection ratio for wide trench condition p = 1.15

MANUKAU City Council | TYPICAL GRANULAR BEDDING DETAIL | D8 | MANUKAU WATER | MAY 1995

SECTION 3

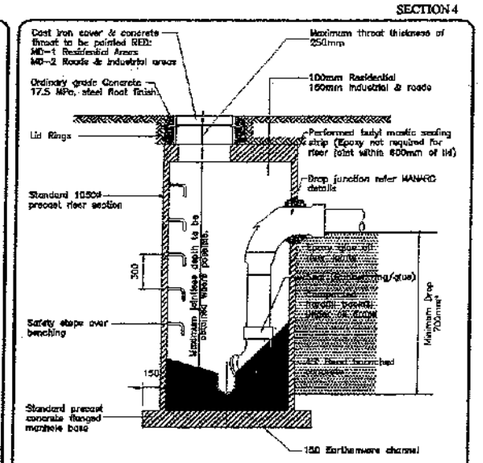


Note:

For pipes greater than 600mm dia., manholes are to be specifically designed.
For pipes 1200 dia. and greater, manholes to be factory fabricated bends with steel off-taker
* May increase to 350 with heavy duty lids when fixed surface levels are to be matched.

MANUKAU City Council | STORMWATER MANHOLE DETAIL | D5 | MANUKAU WATER | OCT 1993

SECTION 4



Note:

1. MANARC approved invert connectors to be epoxy glued/cement mortar in place
2. Galvanised M.S. strap to be used to secure pipe to manhole wall if drop is greater than 1800mm.

* For depth less than 750mm, incoming line must join the manhole at the spring line.

MANUKAU City Council | SEWER MANHOLE DETAILS | S2 | MANUKAU WATER | FEB 2001

E1/27066

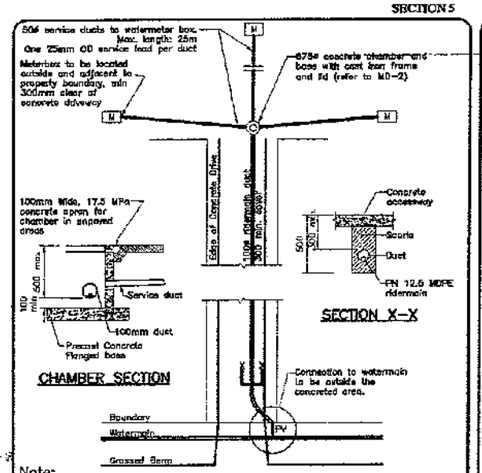
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES

SECTION 5

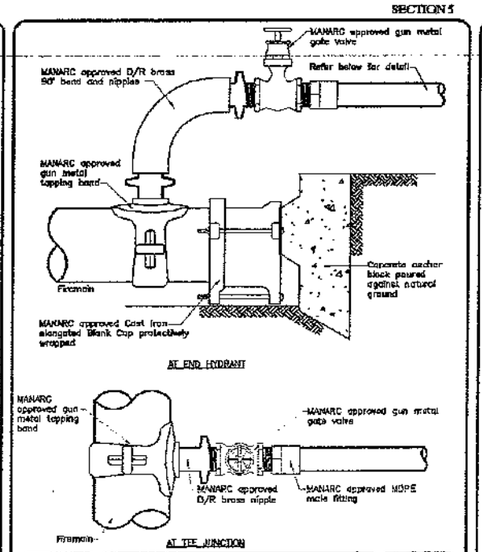


Note:

1. Meter to be installed by Manukau Water or ALC, at applicant's expense.
2. Tapping bands, service ducts and service leads up to the gate valve in the meter box shall be installed at time of subdivision.
3. Ridermain and service lead to be MDPE to AS/NZS 4130: (PE308, PN 12.5, SDR11, blue).
4. Service ducts to be PVC to AS/NZS 1260 (SN 6 for 100ø; plain wall for 50ø) or MDPE to AS/NZS 4130, SDR 17.

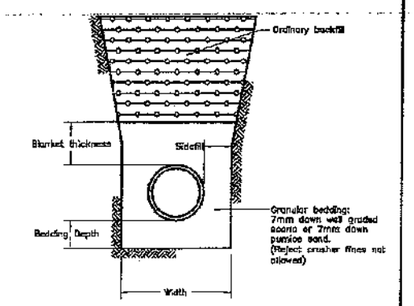
MANUKAU City Council | DUCTING FOR PRIVATE WAYS | W1 | MANUKAU WATER A Business Unit of Manukau City Council | MAR 2002

SECTION 5



MANUKAU City Council | TAPPING BAND RIDER MAIN CONNECTION | W3 | MANUKAU WATER | NOV 1999

SECTION 5

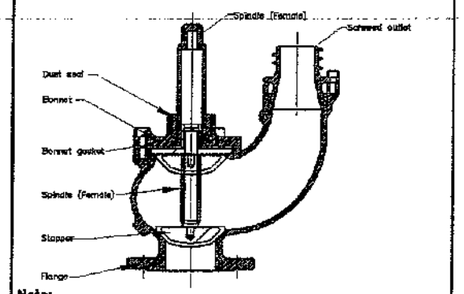


	Diameter >100	Diameter <100	50mm MDPE
Trench width minimum	OD+200	OD+100	100
Blanket thickness minimum	100	50	40
Bedding depth minimum	75	50	0 or 50*
Minimum Side fill	75	50	10 – 20

* 50mm required in rock

MANUKAU City Council | WATERMAIN PIPE BEDDING DETAIL | W4 | MANUKAU WATER | NOV 1999

SECTION 5



Note:

1. Fire hydrants valves shall comply to BS 750:1984 and in addition ;
   (a) The valve stopper shall be EPDM or Nitrile rubber resilient seated type.
   (b) Hydrant body and bonnet shall be constructed from Ductile iron complying with AS 1831 grade 400/12 or 500/7.
   (c) All valve shall be rated to 16 bar working pressure.
   (d) Flange connection shall be 80mm DN raised face & drilled with 4 holes to suit M16 on a 165 PCD generally in accordance with AS 4087, PN16.
   (e) Valves shall be clockwise closing with a non rising spindle.
   (f) Stem seals shall be Nitrile or compatible approved rubber 'O' ring.
   (g) Valve body & bonnet components shall be completely encapsulated in a thermally bonded coating system complying with AS/NZS 4158 Part 1.
   (h) The round threaded outlet shall be gunmetal and comply with BS 750.
   (i) Hydrants shall be Tall or Squat type as specified.
   (j) Hydrants shall be supplied with a outlet cap which is connected to the hydrant body.
   (k) The hydrant flow performance shall comply with BS 750 as a minimum requirement.
   (l) Drain plugs are not a requirement.
   (m) Where required spindle caps shall be supplied secured with a set screw.
   (n) Where the hydrant stopper is a encapsulated rubber resilient seated type and the hydrant is coated in accordance with AS/NZS 4158 part 1 the seat requirements of BS 750 are not required.

MANARC | FIRE HYDRANTS | MW-9 | MANUKAU WATER

Original Size:

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	16/11/04			
1	PROP ROAD 1 REPOSITIONED	22/09/04			

Design: TH GIBSON (NZWATER 534 6524)
Survey: EASTDALE SURVEYORS LTD
Drawn: GL
Checked:
Date: SEPT '04
Scale: AS NTS
CAD Filename:

CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

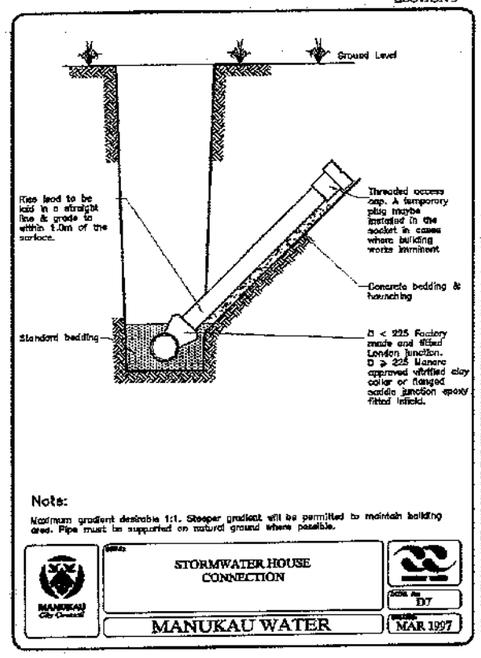
SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Telephone, Pukekohe, Howick, Waiuku, Orewa

Drawing Title.
STANDARD DETAILS - SHEET 1
(D1, D5, D8, S2, W1, W3, W4, MW9)

File No. A9861/5 | Rev. 2 | Dwg. No. A1

SECTION 3



Note:

Maximum gradient desirable 1:1. Steeper gradient will be permitted to maintain building area. Pipe must be supported on natural ground where possible.

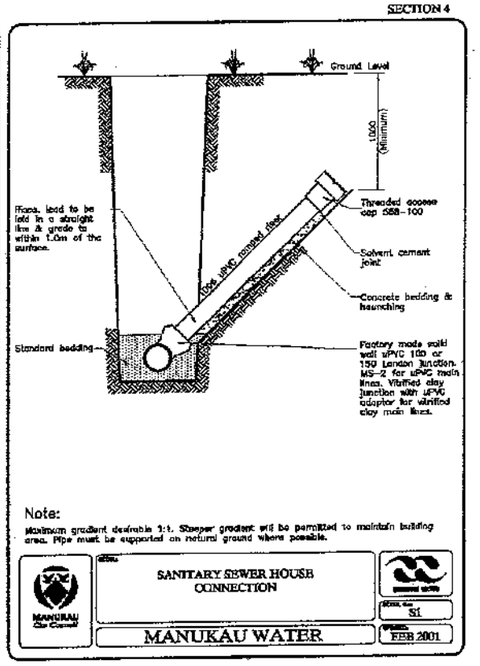
STORMWATER HOUSE CONNECTION

MANUKAU WATER

D7

MAR 1997

SECTION 4



Note:

Maximum gradient desirable 1:1. Steeper gradient will be permitted to maintain building area. Pipe must be supported on natural ground where possible.

SANITARY SEWER HOUSE CONNECTION

MANUKAU WATER

S1

FEB 2001

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

Original Size: A1

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: F H GIBSON (HOWRY)(C5946227)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked:
Date: SEPTEMBER 04
Scale: A3 NTS
CAD Filename:

CONSENT

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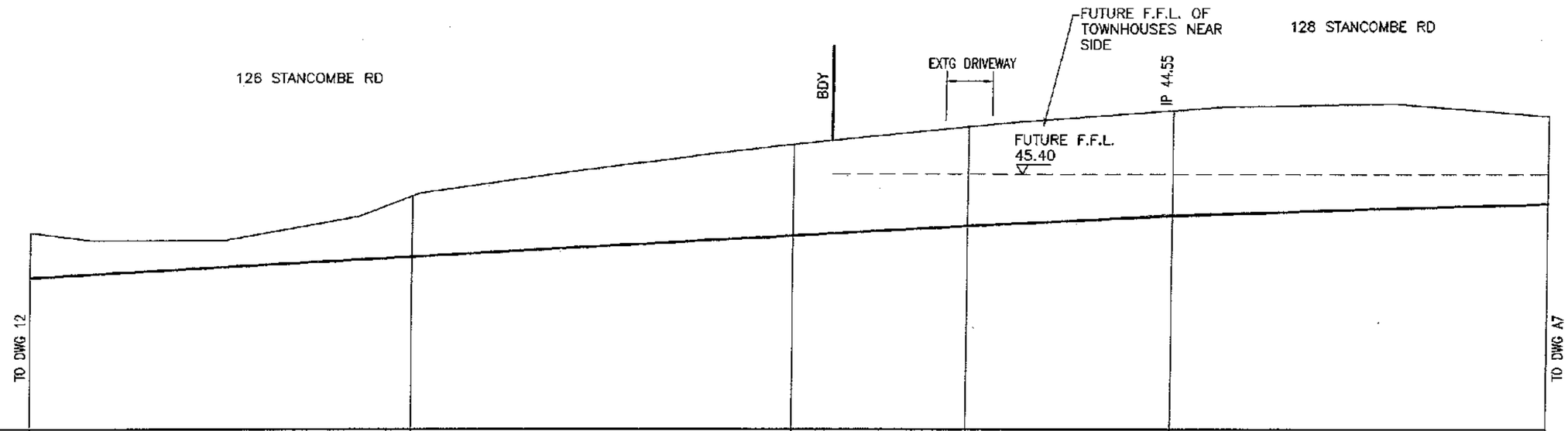
Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

Drawing Title.
STANDARD DETAILS - SHEET 2
(D7 & S1)

File No.	Rev.	Dwg. No.
A9861/5	1	A2



DATUM 40.00

EXISTING LEVEL	44.16	44.94	46.04	46.41	46.75	46.63	
FINISHED LEVEL	43.15	43.55	44.15	44.33	44.52	44.78	
CUT-/FILL+	-1.01	-1.39	-1.89	-2.08	-2.23	-1.85	
DISTANCE	80.00	100.00	120.00	129.20	140.00	160.00	
GRADIENT	2.24%				20m V.C.	1.12%	

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES

Original Size:

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT '04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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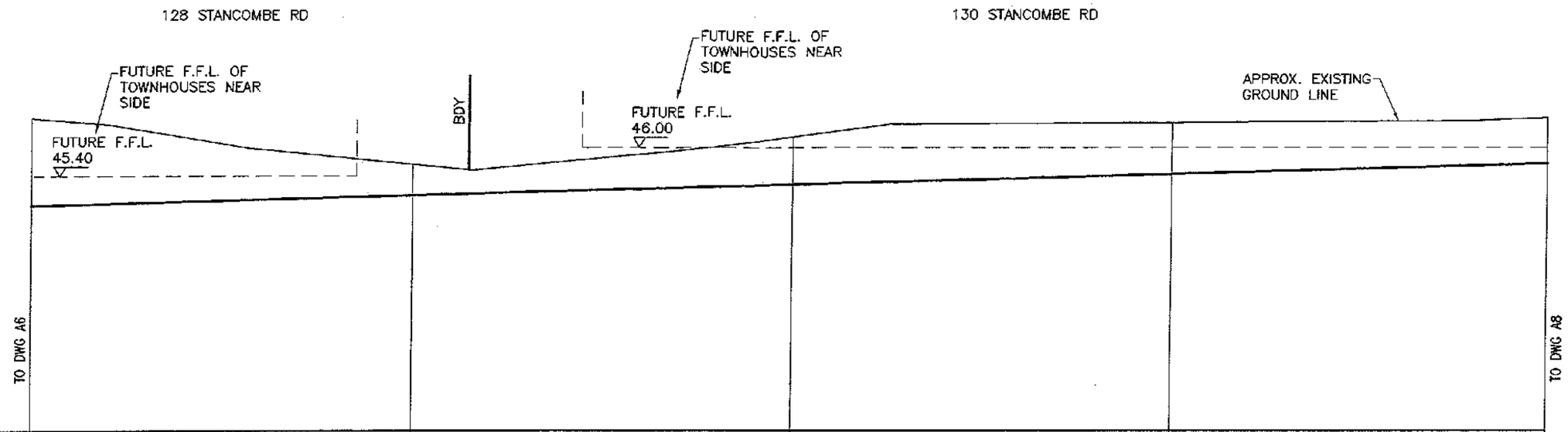
Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Winiko, Cowes

Drawing Title.
PROPOSED ROAD 2
LONGSECTION PART 2

File No.	Rev.	Dwg. No.
A9861/5	1	A6



DATUM 40.00

EXISTING LEVEL	46.63	45.65	46.23	45.54	46.63
FINISHED LEVEL	44.78	45.00	45.23	45.45	45.68
CUT-/FILL+	-1.85	-0.65	-1.00	-1.09	-0.95
DISTANCE	160.00	180.00	200.00	220.00	240.00
GRADIENT	1.12%				

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES

Original Size:

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design IH GIBSON (HOWICK 534 6523)
Survey EASDALE SURVEYORS LTD
Drawn GL
Checked IHG
Date SEPT '04
Scale A3 AS SHOWN
CAD Filename

CONSENT

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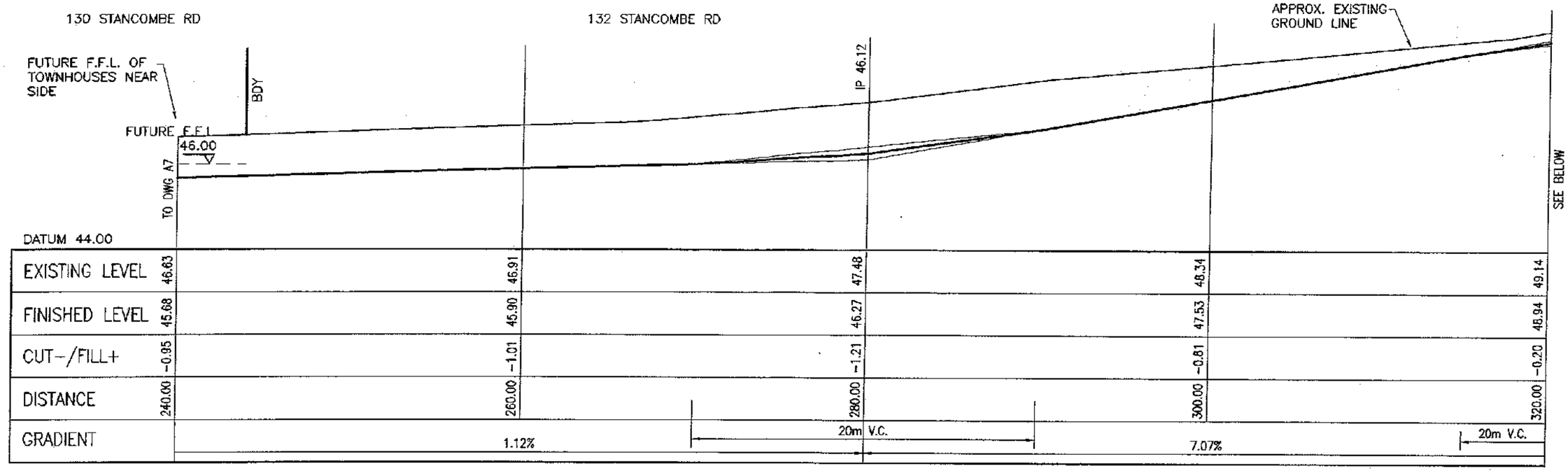
Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pakenham, Howick, Waiuku, Orewa

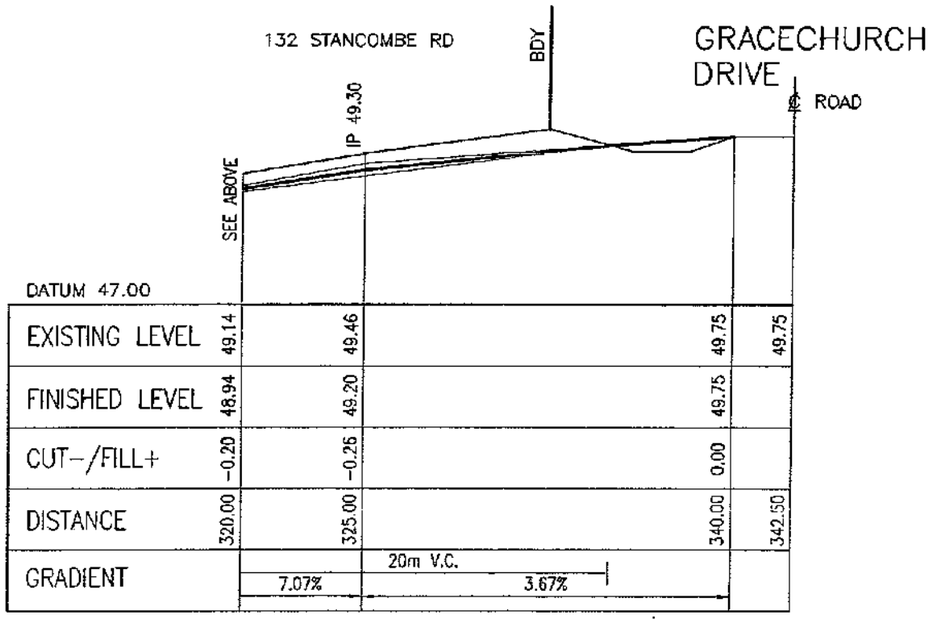
Drawing Title.
PROPOSED ROAD 2
LONGSECTION PART 3

File No. A9861/5 | Rev. 1 | Dwg. No. A7



PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250



PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design IH GIBSON (HOWICK 534 8523)
Survey EASDALE SURVEYORS LTD
Drawn GL
Checked IHG
Date SEPT 04
Scale A3 AS SHOWN
CAD Filename

CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

Drawing Title.
PROPOSED ROAD 2
LONGSECTION PART 4

File No. A9861/5
Rev. 1
Dwg. No. A8

Original Size:

LAND INFORMATION REGISTER

8840

Te Kaunihera o
MANUKAU

Applicant	Carlos Concepts Ltd	**Proposal Number**	27046
Lots	9 and 10	**DP**	352580
Road	Stancombe Road	**Ward**	Clevedon
File Reference	SP8840	**File Reg Number**	c.6366
Development Contribution Paid on the following Lots:	N/A		

Existing Notation

Flood Levels – Lots 9 and 10 DP352580 Detail reference: 44101

Sites may be subject to Flood Hazard in heavy rainfall events. Any Land modification activity within the flood hazard area is likely to require resource consent. For more details refer to the East Tamaki Catchment Management Plan,May 2000 prepared by Beca Carter,Hollings and Ferner Ltd.and District Plan and Variation 13. Prior to any subdivision or building consent the Council may require any or all of the following: 1 Detailed Flood assessment by a registered engineer. 2 Specific Floor Level Design. 3 The creation of an overland flowpath easement in favour of the Council. 4 The issue of a Section 36 (2) certificate in terms of the Building Act. 5 Specific design of any proposed site works. The above requirements may preclude the placement of earth-fill or additional buildings on the site or the resource consent for subdivision or cross-lease. For more information seek advice from the Council.

Redevelopment – Lots 9 and 10 DP352580 Detail reference: 63100

NOT OPERATIVE,REFER TO THE MANUKAU OPERATIVE DISTRICT PLAN 2002,FOR DETAILS.

Site Contamination – Lots 9 and 10 DP352580 Detail reference: 77727

SITE SUITABLE FOR RESIDENTIAL USE;||THIS SITE HAS BEEN SUBJECT TO INVESTIGATIONS BY AN INDEPENDENT CONSULTANT AND BASED ON AN INDEPENDENT REVIEW OF INVESTIGATIONS,THIS SITE IS DEEMED TO BE SUITABLE FOR RESIDENTIAL USE AND THERE ARE NO ADDITIONAL OR SPECIAL RESTRICTIONS ON ITS USE.THE RESTRICTIONS IMPOSED BY RULE 17.10.12.14 INVARIATION NO.13 FLAT BUSH SHALL NO LONGER APPLY TO THIS SITE IN ACCORDANCE WITH RULE 17.10.12.14 (F).RELEVANT REPORTS ARE AVAILABLE FROM THE CITIZEN & CUSTOMER CENTRE,KOTUKU HOUSE,MANUKAU CITY.||

New Notation

Foundation – Lots 9 and 10 DP352580

Foundation soils on the site lie in Site Class S (slightly expansive) as defined in AS2870:1996, with expected characteristic surface ground movements in the order of 0 to 20mm. For the design of all foundations, these should extend to a minimum depth of 0.3 metres below the final cleared ground level.

- ref: Geotechnical Investigation/ Earthworks Completion Report prepared by Geotek Services Ltd dated 2 August 2005 referenced 2704

Restricted development – Lots 9 and 10 DP352580
In accordance with the limitations imposed by NZS3604:1999, fills greater than 0.6 metres that have not been reviewed and approved herein, should not be undertaken on this site without the further review and express approval in writing of the Manukau City Council and that of a Chartered Professional Engineer experienced in geomechanics and familiar with the contents of this Geotechnical report, since such works may, in certain circumstances, disturb existing equilibrium conditions. In a like fashion, cuts should be restricted to no more than 0.6 metres.
-ref: Geotechnical Investigation/ Earthworks Completion Report prepared by Geotek Services Ltd dated 2 August 2005 referenced 2704

Restricted development – Lots 9 and 10 DP352580
Specific design zones have been designed primarily on the basis of two criteria, viz those areas not containing at least 2 metres depth of engineered fill or stiff natural crust over known soft ground, and those with slopes steeper than 1V:4H or near vertical and greater than 0.6m high, which might present concerns with regard to slope stability. These areas are listed below:

(a) Steep cut batters in the northwestern area. These batters are up to 1.5m high and have gradients of up to 1V:2H. While these slopes are considered stable while undeveloped, any foundations on, or within a horizontal distance of 4m above the crest of the slope, should be designed to allow for lateral creep extending to a depth of 1.0m, and acting over a width of 3 pile diameters, unless the land is adequately retained by suitably designed and constructed retaining walls.
(b) Steep fill batter in the southeastern corner, is up to 1.5m high and is considered unstable in its present form, therefore this batter should be adequately supported at the time of any building development closer than 4 metres from the crest.
(c) Areas of stormwater inlet in the northeastern corner of the site were still to be tidied up at the time of preparation of this report. Any foundations in the vicinity should be specifically designed to mitigate the effects of remaining depressions, steep batters and trench backfills.
(d) The soueastern corner of the site has underlying soft deposits as identified in our boreholes 7 and 9. These are expected to have been rendered closer to the surface by removal of up to around 1.5m depth of cut during the earthworks. Therefore we recommend that for all shallow strip and pad foundations on proposed lots 3 and 4, the foundation depths should be limited to no deeper than 0.45m below the as-built levels, and the ultimate bearing pressures should be limited to no greater than 200 kPa, to which figure should be applied an appropriate factor of safety, such as 2.0 for Factored Load Design and 3.0 for Working Strength Design.

For any foundation loads which cannot be accommodated in the above constraints. We recommend the use of specifically designed piles.

-ref: Geotechnical Investigation/ Earthworks Completion Report prepared by Geotek Services Ltd dated 2 August 2005 referenced 2704

Te Kaunihera o
MANUKAU

Miscellaneous – Lots 9 and 10 DP352580
At the time of future development and/or subdivision of 122 Stancombe Road (DP78859). Carlos Drive shall be extended to a legal width of 18.2 metres, and carriageway of 7.8 metres. Correspondingly, that part of the road on the 124 Stancombe Road property will also be upgraded to local road standard in "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards).

- ref: Resource Consent Proposal 27046

Overland Flowpath – Lot 10 DP352580
At the time of future development/ subdivision of Lot 10 DP352580 provision shall be made for the protection of any overland flowpath that is present within the property.

Team Leader Resource Compliance		Date	9.12.05
Entered on database		Date	
Plotted		Date	

Toitu te Land whenua Information New Zealand

Digital Title Plan - LT 352580

Private Bag 76917
Manukau City
New Zealand
DX EP75537
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

Survey Number	LT 352580
Surveyor Reference	7576 124 Stancombe
Surveyor	Michael Stuart Lucas
Survey Firm	Easdale Surveyors Ltd
Surveyor Declaration	I Michael Stuart Lucas, being a person entitled to practise as a licensed cadastral surveyor, certify that - (a) The surveys to which this dataset relates are accurate, and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Surveyor-General's Rules for Cadastral Survey 2002/2; (b) This dataset is accurate, and has been created in accordance with that Act and those Rules. Declared on 14/09/2005.

Survey Details

Dataset Description	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859		
Status	Approved as to Survey		
Land District	North Auckland	**Survey Class**	Class I Cadastral Survey
Submitted Date	14/09/2005	**Survey Approval Date**	16/09/2005
		Deposit Date	

Territorial Authorities

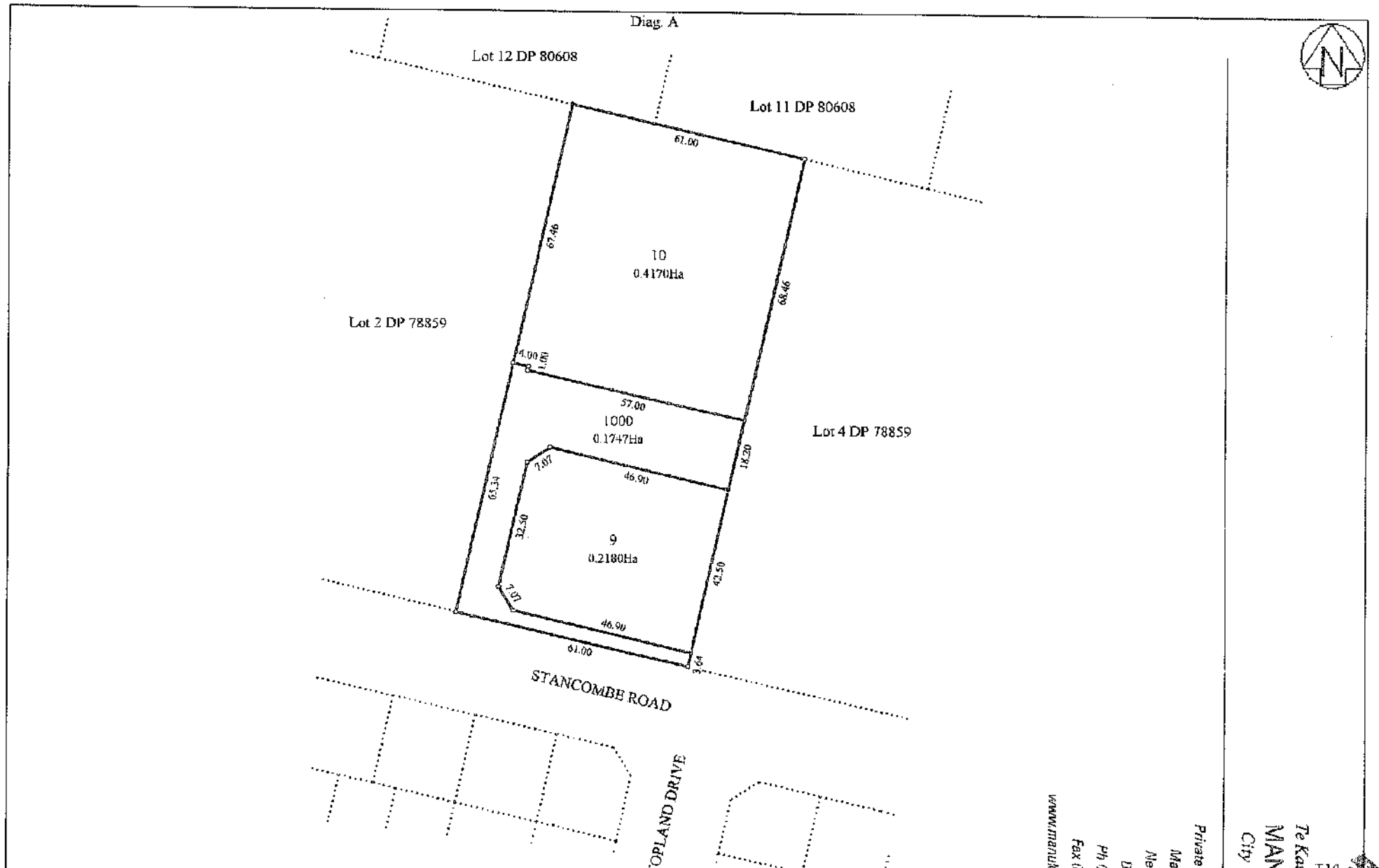
Manukau City

Comprised In

CT NA34D/637

Created Parcels

Parcels	Parcel Intent	Area	CT Reference
Lot 9 Deposited Plan 352580	Fee Simple Title	0.2180 ha	215614
Lot 10 Deposited Plan 352580	Fee Simple Title	0.4170 ha	215615
Lot 1000 Deposited Plan 352580	Vesting on Deposit for Road	0.1747 ha	
Total Area		0.8097 ha	



Land District: North Auckland

Digitally Generated Plan
Generated on: 16/09/2005 09:09am Page 2 of 2

LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859

Surveyor: Michael Stuart Lucas
Firm: Easdale Surveyors Ltd

Digital Title Plan
LT 352580
Approved on: 16/09/2005

Te Kaunihera o
MANUKAU
City Council

Private Bag
Manukau City
New Zealand
DX EP75557

Ph 09 263 7100
Fax 09 262 5151
www.manukau.gov.nz

T1/1

GEOTEK SERVICES LIMITED

Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland 0274 735 712
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

GEOTECHNICAL INVESTIGATION/ EARTHWORKS COMPLETION REPORT

ON

LOT 10

AT

124 STANCOMBE ROAD,
FLAT BUSH

FOR

CARLOS CONCEPTS LIMITED

Ref No. 2704

August 2, 2005

CONTENTS

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Geology 3

Previous Reports 4

Site Description Ante-Earthworks 6

Site Classification 6

Site Investigation 7

Findings 7

Earthworks Operations 8

Earthworks Specification and Control 9

Conclusions and Recommendations 10

Statement of Professional Opinion as to Suitability of Land for Building Development 13

Appendices

Pre-Earthworks Borehole Location and Specific Design Zones Plan-GSL Drawing No. 1 of 3
Pre-Earthworks Borehole Records (18 sheets)
As Built Final Contours and Isopachs- Airey Consultants Ltd, drawing no. A9861/5, dated 4/7/05
Earthworks Test Locations and RL's - GSL Drawing No. 2 of 3
Earthworks Test Results - Summary Sheets
Diary Notes
Post-Earthworks topsoil depths and shrink-swell sample location plan- GSL Drawing No.3 of 3
Shrink Swell Test Results (3 sheets)

Introduction

This report covers both the geotechnical investigation and the earthworks construction monitoring carried out on the above property for Carlos Concepts Limited, in accordance with the appended Airey Consultants Limited 'As-Built' Contour Plan, numbered A9861/5, dated 04 July 2005.

Presented herein, are the results of our observations, geological appraisal, hand auger borehole investigation, including insitu testing, together with general comments, conclusions and recommendations pertaining to the satisfactory development of the land in accordance with accepted quality standards.

This report has been commissioned for the benefit of our client, Carlos Concepts Limited specifically in relation to the project and to the limit of our brief, as described herein. No liability is accepted by this firm or any of its directors, servants or agents, in respect of any other geotechnical aspects of this site, nor for its use by any other person, and any other person who relies upon any information contained herein does so entirely at their own risk, with the exception that the local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent. Where other parties may wish to rely on it, this permission may be extended, subject to our satisfactory review of their interpretation of the report. Moreover, any variations from the development proposals forming the basis of this appraisal should be referred back to us for further evaluation.

Although this report may be submitted to a local authority in connection with an application for a consent, permission, approval, or pursuant to any other requirement of law, this disclaimer shall still apply and require all other parties to use due diligence where necessary, and does not remove the necessity for the normal inspection of site conditions and the design of foundations as would be made under all normal circumstances.

Geology

Reference to the New Zealand Geological Survey, Geological Map Of New Zealand, 1:50000, sheet R11, indicates that the subject site is typical of a significant part of the Auckland Metropolitan area, in that it contains strata of the Puketoka Formation, which are a part of the Tauranga Group sedimentary lithology (Late Pliocene to Late Pleistocene age). Unconformably underlying these are weathered materials derived from strata of the East Coast Bays Formation (also known as Waitemata Formation), which are a part of the Waitemata Group sedimentary lithology (Miocene Epoch).

According to Searle, "City of Volcanoes", in those earlier times, the seas encroached upon the central Auckland area, and thick beds of sedimentary rocks were laid down in alternating sandstone, siltstone and mudstone sequences according to the prevailing eddies and currents at the time and place.

Over the centuries following the retreat of the seas, the normally dark-grey bedrock has weathered in most locations, to produce an overburden made up of clays, silts and sands, being predominantly orange brown in colour at the ground surface, and generally becoming more grey and more coarse grained with increasing depth and less transition from the bedrock. Interspersed within these weathering products, it is not unusual to find bands of hard dark-brown iron oxide (limonitic) concentrations.

Fluctuating sea levels which occurred throughout the Pleistocene period, eventually flooded valleys to form the Waitemata and Manukau Harbours, and it is likely that during these fluctuations, the upper Residual Waitemata Group Soils were partially eroded away, and these, together with pumiceous deposits from the Taupo district, began to fill the subsiding lowlands of Manukau Harbour and Hauraki Gulf. As a result, the lowlands were covered by swamps, volcanic derived alluvium, and coastal deposits (Tauranga Group).

These sediments were deposited in predominantly fluvial and lacustrine settings, but some older deposits were formed in estuarine and shallow conditions. As a result, they can often contain layers and/or lenses of quite peaty materials within the predominantly silty and clayey, but sometimes organic alluvium.

Previous Reports

A Desktop Study was prepared in July 2003 by Geotek Services Limited (GSL) reference number 2532, dated 30 June 2004, as a first pass appraisal of the suitability of the overall general area including the subject land, for residential development generally in terms of NZS 3604 type buildings. The study comprised a review of local geology and inspection of other geotechnical investigation reports conducted on nearby sites.

The conclusions and recommendations of that report were as follows:

> *"On the basis of our observations, research and local knowledge as described herein, we are of the opinion that the subject site is generally suitable for the proposed development, however the following discussion should be noted.*
>
> *The relatively flat topography of the site with respect to the adjacent land, coupled with the two small gullies requiring filling, suggests that to completely fill these gullies with locally cut materials would produce a shallowly south-southwest-sloping subdivision.*

However, given that soft horizons may be present at depths of several metres or more in possible areas of cut, and that it is preferable to maximise the depth of suitable materials over these deposits, a cut/fill budget deficit may occur if designing to completely fill all gullies.

It is our recommendation that an extensive field investigation be carried out prior to finalising any proposed project designs, and the commencement of development works. The aim of this investigation would be to establish a more detailed assessment of the nature of the materials present, and the extent of possible unsuitables across the site, allowing a more accurate quantification of locally available filling.

All subsequent earthworks should be subject to the appropriate standards and tests as specified by the Manukau City Council, under the control of a Chartered Professional Engineer experienced in geotechnical engineering practices, with a Geotechnical Completion Report being prepared at the completion of those works.

Subject to as-built contours, acceptable test results and existing/final ground conditions, we expect the completed development to be suitable for the construction of NZS 3604 type buildings.

This opinion does not, however, remove the necessity for the inspection of site conditions and design of foundations that should be made under all normal circumstances.

The Professional Opinion expressed within this report is furnished to the Stancombe Concepts Limited for their purposes alone, on the express condition that it will not be relied upon by any other person, with the exception that the Local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent."

The site subject to this report was originally part of a large 8100m^2 property (DP78859), identified as number 124 (Lot 3), along the northern side of Stancombe Road in Flat Bush. The site has since been subdivided into two, (Lots 9 and 10) by a proposed through road, Carlos Drive, separating them into northern and southern lots. The southern, lot 9 was the subject of a recent Geotechnical Investigation Report undertaken by GSL (dated 17 November 2004, ref 2635) for a proposed multi-storey dwelling, which report identified some weak underlying natural materials that would be exposed by the proposed basement level of the development. With this in mind, we have tried to target such potentially problematic materials in our investigation, as discussed below.

Site Description Ante-Earthworks

Prior to the recent earthworks, the subject site's main topographical feature was a relatively deep and steep sided gully trending from the northeast to the southwest, around 100 metres in length. The gully head in the northeast corner of the site, was a shallow bowl-like depression, which steepened to the southwest with its invert around 3 metres below the crest of its flanks. The gully broadened out near the southwestern corner and crossed into the adjacent property. The gully flows were channelled below the neighbour's driveway through a small culvert before again continuing southwest as open channel flows. The ground either side of the gully, to the northwest and southeast, was gently sloping towards the invert. The earthworks proposal was to fill the gully and create a near level site.

Site Classification

Seasonal moisture variations and associated swelling and shrinking of the soil mass is a characteristic of the type of surface clay soils believed to exist in the area under consideration and hence, such movement could occur. Even well constructed houses on clay soils are likely to show minor cracking of plaster walls and ceilings, and in masonry. In extreme cases, distortion of building frames may cause doors and windows to jam, but, these effects usually only occur after a long dry summer, and commonly under the extra drying influences of nearby trees. Without considerable expenditure on the part of the individual responsible for building or financing any particular residential construction, it is generally not possible to entirely eliminate such troubles. In the past, the code for residential dwellings, NZS3604, has attempted to make provision for any such influences to be minimised by requiring a minimum foundation depth of 450 millimetres below final cleared ground level, although some shrinking and swelling of the soil under seasonal influences would probably continue to occur and may affect such residential construction.

The current issue of NZS3604:1999, recognises that while expansive clay soils can damage buildings on light strip footings or unstiffened rafts, that not all clays are expansive to the degree which will cause damage to buildings. Although 3604 also nominates liquid limit and linear shrinkage testing as a means of detecting the presence of reactive (expansive) clays, it acknowledges that reactive clays cannot be clearly evaluated by these engineering index properties on their own, which we surmise, may be due to the effects of certain types of clay minerals which may contain high quantities of adsorbed water. Therefore, NZS3604 nominates the Australian code, AS2870:1996, as a guide, whereby section 2 can be adopted for classifying the soils into class A, S, M, H or E, following which, the standard details of section 3, or the engineering principles according to section 4, can be used for foundation design.

The relevant sections of AS2870 are discussed in the Appendix hereto, and in light of the various options available, the basis for our site classification is provided later in this report.

Site Investigation

Our site investigation fieldwork involved the drilling of twelve, 50 millimetre diameter hand auger boreholes to depths of up to 5.2 metres, at the positions indicated on the attached site plan.

The purpose of the fieldwork has been twofold. Firstly, boreholes were drilled along the stripped invert of the gully to check the nature and consistency of the natural soils before filling could take place and to determine if any further undercutting might be needed. Secondly, boreholes have been drilled at the crest of the gully flanks and the adjacent level ground to check the nature and consistency of the natural soils.

As each borehole progressed, careful inspections were made of the materials observed, and soil shear strength and remould tests were performed insitu, at selected depths, using a hand-held shear vane. The materials identified are described in detail on the appended records, together with the results of the various tests undertaken, plus the groundwater conditions as determined during our time on site.

In addition, two cross sections were measured across the flanks and invert of the gully using a tape and electronic level.

Findings

Boreholes along the gully invert

Boreholes 1, 2, 3 and 4 were drilled along the gully invert. Borehole 1 was drilled outside of the property boundary to the southwest. Apart from a soft surficial crust, predominantly stiff sandy silts were encountered throughout the borehole. Boreholes 2 and 3 were drilled in the southwestern corner and near the centre respectively, and both encountered highly variable deposits consisting of clays, silts and sands with intermixed peat and organics. The material strengths were mostly marginally firm with some layers being softer or firmer. Borehole 4 encountered soft materials down to 1.5 metres depth, overlying very stiff uniform silts.

The groundwater was measured at depths of between 0.4 to 1.1 metres below the surface in all four boreholes.

Boreholes above and along the flanks of the gully - cut areas

Boreholes 5, 6, 11, 12 and 13 were drilled on the northwestern side of the gully, while boreholes 7, 8, 9 and 10 were located to the southeast. Generally, a firm to stiff crust was encountered extending to at least 1.2 metres depth below the surface in all boreholes. Below this crust, the materials became weaker and wetter with some layers becoming soft to marginally firm (22 to 50 kPa undrained shear strength). In all except boreholes 9 and 10, dense sandy materials were encountered near the end of the boreholes. The tables below summarise these findings of cut area boreholes:

Boreholes on the northwestern side of the gully:

Borehole No.	5	6	11	12	13
Ground RL	43.0	42.0	44.0	45.0	44.0
Firm to Stiff Crust	0.0 to 2.5m	0.0 to 2.5m	0.0 to 3.0m	0.0 to 2.9m	0.0 to 1.6m
Interbedded Soft Layer	2.5 to 3.3m	-	-	2.9 to 3.9m	1.6 to 2.3m
Dense Basement Layer	3.7m+	3.1m+	3.0m+	3.9m+	2.7m+

Boreholes on the southeastern side of the gully:

Borehole No.	7	8	9	10
Ground RL	43.5	41.5	44.0	43.5
Firm to Stiff Crust	0.0 to 1.6m	0.0 to 1.6m	0.0 to 1.5m	0.0 to 2.0m
Interbedded Soft Layer	1.6 to 3.3m	1.6 to 3.6m	1.5 to 5.0m	2.9 to 2.9m
Dense Basement Layer	3.3m+	3.6m+	-	-

Earthworks Operations

General earthworks construction over the site was carried out in accordance with part 2 of NZS4404:2004, "Code of Practice for Urban Land Subdivision" and its companion document, NZS4431:1989, "Code of Practice for Earth Fill for Residential Development."

Topsoil and unsuitables were stripped and initially stockpiled for later removal from the site. Where further unsuitable and/or weak materials were identified in the gully invert and along its flanks, they were undercut until suitable materials were exposed or, where their depth below the proposed finished fill was deemed to be greater than 3 metres, so as to be beyond the influence depth of shallow foundations, they were left in place.

Once the gully and its flanks had been cleaned as directed, a pad of hardfill consisting of run-of-pit rock, was placed along its invert up to a level that was slightly higher than its lowest outlet level, where a manhole had been placed adjacent to the existing culvert beneath the neighbour's driveway. Once this pad had been tamped down, a 160mm dia. perforated novacoil was laid along the invert and covered with SAP 50 scoria. Where seepages were encountered, they were tapped in a similar fashion and the area covered with scoria blanket.

The earthfill was then progressively placed and compacted under engineering monitoring, to the design subgrade levels, using material cut from the gully flanks and neighbouring site to the east.

Earthworks Specification and Control

General earthworks procedures and compaction testing were carried out in accordance with NZS4404:2004, part 2 and NZS4431:1989, where appropriate.

In order to provide the most flexibility for variations in soil types, the earthworks compaction criteria used for control were the maximum allowable air voids/minimum allowable shear strength figures, as follows:-

Air Voids and Shear Vane (for cohesive soils only)

	Air Voids Percentage (as defined in NZS 4402:1986)		Undrained Shear Strength (Measured insitu by IANZ calibrated vane)	
	Maximum Average Value %	Maximum Single Value %	Minimum Average Value kPa	Minimum Single Value kPa
General Fill	10	12	140	110
Within 500 mm of carriageway subgrade	8	10	150	120

Note: The average value was to be determined over any ten consecutive tests.

During the filling operations, Civil Lab Limited staff carried out Nuclear Densometer Testing of Field Dry Density to NZS 4407:1991; Test 4.2.1, and Field Water Content in accordance with NZS 4402:1986; Test 2.1, together with Vane Shear Strength Tests using a method based on NZGS2001.

Some tests failed to meet the required criteria, in which case the fill was reworked and retested until satisfactory results were obtained.

The final test results are summarised in the appendices, together with a copy of the cut/fill as-built plan, showing test locations, and the inspection diary notes.

Conclusions and Recommendations

On the basis of our borehole investigation, inspections, observations, earthworks monitoring, laboratory and insitu testing as described herein, it is our Professional Opinion, that the subject site, lot 10, 124 Stancombe Road, Flatbush, is generally suitable in terms of section 106 of the Resource Management Act, and Section 2.B.4.8 of the Manukau City Council's Engineering Quality Standards, for the development of conventional residential dwellings, constructed in accordance with the relevant portions of NZS3604:1999, subject to the following overall general recommendations, and provided that building in any of the identified zones on the appended plan (whether "non-specific design", "specific design", or "not for construction") should be subject to the specific requirements of that zone as given below:

A) General Requirements:

(a) There were stockpiles of topsoil and other unsuitable materials still lying near the northern boundary of the site, at the time of preparation of this report. We anticipate that these will be moved before or during building development.

(b) As discussed in the foregoing section on site classification, there are a number of ways of classifying the site soils. In this instance, we have adopted the AS2870 third method, using laboratory tests for soil reactivity and a knowledge of the soil profile. On this basis, foundation soils on this site are considered unlikely to lie outside the definition of 'good ground' as given in NZS3604:1999. We consider that they would lie in Site Class S (slightly expansive) as defined in AS2870:1996, with expected characteristic surface ground movements in the order of 0 to 20 mm, which movement is still within the allowable bounds of 'good ground'. However, this movement is closer to the upper limit of Class S range, therefore, as a precaution, care should be taken to mitigate against the potential seasonal shrinkage and swelling effects of expansive foundation soils on both superstructures and concrete slab-on-grade floors, as follows.

For the design of all foundations, these should extend to a minimum depth of 0.3 metres below the final cleared ground level.

Because of the importance of this issue, especially with regard to controlling potential for cracking in concrete slabs, we consider that when constructing slabs, and especially after the removal of a desiccated surface crust, the exposed subgrade should be covered with 100mm of basecourse as soon as possible, to avoid allowing underlying damp soils to dry out and shrink if they are likely to regain some of their moisture and swell again following pouring of the concrete. If this cannot be avoided and shrinkage cracks occur in the subgrade to the cumulative width of 15mm per metre distance, then prior to the placement of the under-slab hardfill, the subgrade should be hosed down to allow the cracks to close to at least that degree.

Future owners should also be aware of the detrimental effects that large trees can have by way of inducing differential consolidation settlements beneath foundations, through localised soil water deprivation. Accordingly, care should be taken to avoid having large trees positioned where their roots could migrate beneath the building foundations.

(c) All foundations located within the 45 degree envelope of influence rising from the invert of service trenches, should be extended to below that envelope, to avoid surcharging pipes and/or poorly compacted trench backfill.

(d) In accordance with the limitations imposed by NZS3604:1999, fills greater than 0.6 metres that have not been reviewed and approved herein, should not be undertaken on this site without the further review and express approval in writing of the Manukau City Council and that of a Chartered Professional Engineer experienced in geomechanics and familiar with the contents of this report, since such works may, in certain circumstances, disturb existing equilibrium conditions. In a like fashion, cuts should be restricted to no more than 0.6 metres.

(e) All stormwater runoff from roofs and paved areas, plus any water tank overflows, should be collected in sealed pipes and be disposed of into Council's reticulation system. Likewise, overland flows should be directed away from the building footprint.

Under no circumstances should concentrated flows from any source discharge into or onto the ground in an uncontrolled fashion.

(f) All excavations, including those for bulk earthworks, shallow foundations and any piles, should be inspected by a Geotechnical Engineer during construction to check

that the conditions encountered are consistent with those revealed by our isolated boreholes and to provide any additional advice that might be needed. In the event of unacceptable inconsistencies, we should then be in a position to provide appropriate recommendations in support of an application to Council to modify the Building Consent, or to issue an appropriate Producer Statement - Construction Review.

It is in all parties' interests that we be engaged to inspect all such excavations prior to the installation of any foundation materials to maintain continuity of knowledge. Where we are required to carry out inspections during construction and to provide certification or supply a Producer Statement Construction Review, we request that:

(i) Prior to commencement of the building work the Owner or Developer ensures that we are supplied with a copy of both Resource and/or Building Consent Conditions (as appropriate) which request our involvement during construction.

(ii) The Owner or Developer provides us with the appropriate siteworks plans at least 48 hours prior to our inspections, so that we can confirm that all works relevant to our engagement are carried out.

(iii) The Owner, Builder or Contractor makes arrangements for us to visit the site no less than 24 hours before inspections are required. In order for us to provide Producer Statements, where these are required, it is the owner's responsibility to ensure that we are advised when inspections are due.

It should be noted that inspections during construction and associated certification will result in additional costs to the client over and above those associated with the preparation of this report.

B) Non-specific Design Zone:

This area is considered to be generally suitable for any development works carried out in accordance with NZS3604:1999, subject to the general recommendations given above, and is defined as any area on site that is outside the Specific Design Zone. Any building proposals outside NZS3604 might require specific site investigation.

C) Specific Design Zones:

Specific design zones have been designated primarily on the basis of two criteria, viz those areas not containing at least 2 metres depth of engineered fill or stiff natural crust over known soft ground, and those with slopes steeper than 1V:4H or near vertical and greater than 0.6m high, which might present concerns with regard to slope stability. These areas are listed below:

(a) Steep cut batters in the northwestern area. These batters are up to 1.5m high and have gradients of up to 1V:2H. While these slopes are considered stable while undeveloped, any foundations on, or within a horizontal distance of 4m above the crest of the slope, should be designed to allow for lateral creep extending to a depth of 1.0m, and acting over a width of 3 pile diameters, unless the land is adequately retained by suitably designed and constructed retaining walls.

(b) Steep fill batter in the southwestern corner, is up to 1.5m high and is considered unstable in its present form, therefore this batter should be adequately supported at the time of any building development closer than 4 metres from the crest.

(c) Areas of stormwater inlet in the northeastern corner of the site were still to be tidied up at the time of preparation of this report. Any foundations in the vicinity should be specifically designed to mitigate the effects of remaining depressions, steep batters and trench backfills.

(d) The southeastern corner of the site has underlying soft deposits as identified in our boreholes 7 and 9. These are expected to have been rendered closer to the surface by removal of up to around 1.5m depth of cut during the earthworks. Therefore we recommend that for all shallow strip and pad foundations on proposed lots 3 and 4, the foundation depths should be limited to no deeper than 0.45m below the as-built levels, and the ultimate bearing pressures should be limited to no greater than 200 kPa, to which figure should be applied an appropriate factor of safety, such as 2.0 for Factored Load Design and 3.0 for Working Strength Design.

For any foundation loads which cannot be accommodated in the above constraints, we recommend the use of specifically designed piles.

Statement of Professional Opinion as to Suitability of Land for Building Development

Owner/Developer: Carlos Concepts Limited.

Location: Lot 10, 124 Stancombe Road, Flat Bush

Development: Residential Development.

I, S.J. Woodward of Geotek Services Limited, P.O. Box 39-015, Howick, hereby confirm that:

1. I am a Chartered Professional Engineer experienced in the field of geotechnical engineering and was retained by the Owner/Developer as the Geotechnical Engineer on the above development.

2. The extent of our desktop study is described in our Report number 2532, dated 30 June, 2004, and the conclusions and recommendations of that document have been re-evaluated in the preparation of this report. The results of our initial borehole investigation and all tests carried our during the works are also enclosed.

3. In my professional opinion, not to be construed as a guarantee, I consider that:

   (a) The earth fills placed where shown on the attached Airey Consultants plan, numbered A9861/5 dated 4 July, 2005, have been generally placed in compliance with NZS4431:1989.

   (b) The completed works give due regard to land slope and foundation stability considerations, subject to the provisions of the "Conclusions and Recommendations" section above, with regards to the steep batters left in the specific design zone.

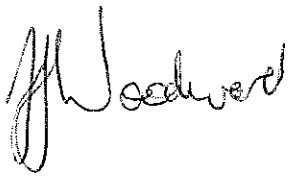
   (c) The areas of filled ground as shown on the attached plan are suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and related documents subject to the provisions of the "Conclusions and Recommendations" section above.

   (d) The original ground not affected by filling is suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and

related documents, subject to the provisions of the "Conclusions and Recommendations" section above.

4. This Professional Opinion is furnished to the local Territorial Authority and the current owner/developer, for their purposes alone, on the express condition that it will not be relied upon by any other person, and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any structure.

GEOTEK SERVICES LIMITED.



S.J. Woodward,
M.E., MIPENZ(Geotechnical), CPEng, IntPE.

Report prepared by
Bevan Marr
B.A. (Geography)

CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 1 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.1
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Legend | GL(m) 37.33 | Depth (m) | Water Level | Shear Vane Dial (kPa) | Residual Strength (kPa) | Sensitivity | Probe Blows | Comments Samples Other Tests

Tauranga Group Materials

NATURAL: Soft, slightly plastic, dark grey with occasional black specks slightly clayey SILT: very moist, frequent rootlets

-becoming stiff

0.5 — Shear Vane Dial: 92; Residual Strength: 31; Sensitivity: 3.0

Stiff, non plastic, light grey with orange specks, silty SAND, trace clay: wet

Shear Vane Dial: 49; Residual Strength: 15; Sensitivity: 3.3

Firm, non plastic, grey, slightly clayey, slightly sandy SILT

1.0 — Water Level 18/01/04

Shear Vane Dial: 108; Residual Strength: 32; Sensitivity: 3.4

-becoming stiff

-becoming slightly plastic, greenish grey, slightly clayey, sandy SILT: saturated, fibrous wood and carbonaceous inclusions

1.5 — Shear Vane Dial: 138+

-@ 1.5: becoming very stiff, bluish green, root inclusions

Shear Vane Dial: 138+

2.0

-becoming sandy SILT

Shear Vane Dial: 120; Residual Strength: 40; Sensitivity: 3.0

-becoming stiff

2.5

Shear Vane Dial: 138++; Sensitivity: UTP

-becoming very stiff, non plastic greenish grey, very sandy SILT: saturated

Very poor sample recovery

3.0

Shear Vane Dial: 100; Residual Strength: 68

End of Borehole @ 3.1 metres.
Groundwater encountered @ 1.4 metres depth during drilling. Standing groundwater @ 1.1 metres depth upon completion.

3.5

4.0

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Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 2 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 2
	WEIGHT 30 kg	DATE	PROBE No.

GL(m) 37.22

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Stratigraphy	Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Firm, non-plastic, dark grey with orange brown and light grey streaks, sandy SILT: wet.			46	12	3.8		
	-becoming soft, dark blackish grey, some carbonaceous material. -becoming grey, saturated @ 0.4m. -becoming light greyish brown.	0.5	18/1/05	28	7	4.0		
	Loose, non-plastic, light greyish brown, silty SAND: saturated.	1.0		25	7	3.6		
	-becoming coarse. -becoming very dense, white, pumiceous, silty SAND.			138++		UTP		
	Soft, non-plastic, black, amorphous, PEAT: saturated.	1.5		44	19	2.3		Poor material recovery.
	Firm, non-plastic, dark blackish brown, organic stained, SILT: saturated. -becoming medium brown, SILT. -some clay. -minor woody organic material	2.0		54	28	1.9		
		2.5		50	20	2.5		
	-becoming slightly plastic, greyish black, organic stained, clayey SILT: abundant fibrous and woody organic material			42	18	2.3		
		3.0						
	End of Borehole @ 3.2 metres. Groundwater encountered @ 0.4 metres depth during drilling. Standing groundwater @ 0.9 metres depth upon completion.	3.5		38	16	2.4		
		4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 3 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.3
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 39.25

Stratigraphy	Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Soft, non plastic to very slightly plastic, grey with orange veins, slightly sandy SILT, trace clay: slightly wet							
	-becoming saturated			46	14	3.3		
	-becoming firm	0.5	18/01/04	108	58	1.9		
	-becoming stiff, slightly plastic, purple brown with bright orange mottles occasionally, slightly clayey, slightly sandy SILT	1.0		40	28	1.4		
	Soft to firm, moderately plastic, purplish grey with occasional orange mottles, very slightly sandy, very slightly silty CLAY: saturated, occasional fibrous organic inclusions of decaying vegetation	1.5		60	38	1.6		
	-becoming firm	2.0		52	34	1.5		
	-becoming light brownish, CLAY, trace sand, no organic inclusions							
	-becoming purple grey			40	22	1.8		
	-becoming soft to firm	2.5						
	-becoming firm, fibrous organic inclusions			70	40	1.8		
		3.0		54	26			
	End of Borehole @ 3.1 metres. Groundwater encountered @ .4 metres depth during drilling. Standing groundwater @ .9 metres depth upon completion.	3.5						
		4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 4 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 4
Flat Bush	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 39.62

Water Level: 18/1/05

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Firm, non-plastic, streaked bluish grey, yellowish brown, SILT: moist.						
	-becoming soft.						
	-becoming wet.						
	-becoming firm, light grey with orange brown streaks, slightly sandy SILT: wet.	0.5	30	9	3.3		
	-becoming saturated.		56	23	2.4		
	-some clay.	1.0					
	-becoming moderately plastic, streaked light grey, orange brown, clayey SILT: trace sand.		40	24	1.7		
		1.5					
	Very stiff, non-plastic, light grey with yellowish brown and orange brown streaks, SILT: some sand.		138+				
	-becoming bluish grey, slightly sandy SILT.	2.0	138+				
	-lens of dark green, sandy SILT.						
	-becoming greenish grey, SILT: trace clay.	2.5	138+				
			138+				
	End of Borehole @ 3.0 metres.	3.0					
	Groundwater encountered @ 0.7 metres depth during drilling.						
	Standing groundwater @ 0.4 metres depth upon completion.	3.5					
		4.0					

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 5 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.5
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 42.75

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Comments Samples Other Tests
	NATURAL: TOPSOIL					
	Stiff, non plastic, brown, SILT: dry, friable					
Tauranga Group Materials	Stiff, slightly plastic, tan brown with orange and grey specks, slightly clayey SILT: very slightly moist		130	64	2.0	Approx SGL
	-becoming siff, slightly plastic, grey with orange brown streaks, clayey SILT, trace sand: very slightly moist	0.5	106	70	1.5	
	-becoming stiff, slightly plastic, grey with occasional orange brown streaks, very clayey SILT, trace sand: slightly moist	1.0	118	72	1.6	
	-becoming slightly clayey SILT, trace sand Non plastic, brown and grey mottles, very slightly clayey SILT, trace sand, slightly moist	1.5	58	46	1.3	
	-becoming moderately plastic, grey, moist, slightly sandy					
	-becoming bright orange brown streaks in greyish brown, very clayey SILT, trace sand: moist	2.0	50	26	1.9	
	Firm, moderately plastic, greyish brown, silty CLAY: moist					
	Firm, slightly plastic, creamy grey, slightly sandy, slightly clayey SILT: moist	2.5	56	44		
	Firm, moderately plastic, slightly purple brown, slightly silty CLAY: moist		48	38	1.3	
		3.0				
			38	28	1.4	
	Slightly plastic, firm, dark blackish brown, organic SILT: very wet, no organic odour, rootlet inclusions	3.5 (Water Level 18/01/05)	64	35	1.8	
	-becoming brownish black, saturated					
	Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated		138++		UTP	Poor sample recovery
		4.0				
	Continued on next page.					

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 6 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 5
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 42.75

Legend	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated			138++		UTP		Very difficult to penetrate
Unable to penetrate with hand auger End of Borehole @ 4.3 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.	4.5						
	5.0						
	5.5						
	6.0						
	6.5						
	7.0						
	7.5						
	8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 7 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Stratigraphy	Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, non-plastic, light brown, SILT: friable, dry.							Approx SGL
	-becoming yellowish brown.							
	-becoming light grey with orange brown and yellowish brown streaks.	0.5		138+				
	-becoming slightly to moderately plastic, clayey SILT: trace sand, moist.			138+				
		1.0						
				138+				
	-becoming non-plastic, slightly purplish grey with orange brown and yellowish brown streaks, slightly clayey SILT.	1.5						
	-becoming very dense, SILT: friable.			138++		UTP		
	-becoming non-plastic to slightly plastic, grey with orange brown and yellow brown streaks, trace clay.	2.0		102	60	1.7		
	Stiff, highly plastic, streaked grey, purplish grey, orange brown, silty CLAY: moist.	2.5						
	-becoming firm, purplish brown.			66	36	1.8		
				62	36	1.7		
		3.0						
	Very dense, non-plastic, streaked brown, yellowish brown, light grey, pumiceous, slightly silty SAND: moist.			138++		UTP		
		3.5						
	-becoming whitish grey, very fine SAND: trace silt			138++		UTP		
		4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 8 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy	SOIL DESCRIPTION (Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock)	Legend	GL(m) 42.33 / Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very dense, non-plastic, whitish grey, very fine, SAND: trace silt, moist.			▽ 18/1/05	138++		UTP		
	-becoming moderately silty SAND.								
	-becoming wet @ 4.2m.		4.5		138++		UTP		
	End of Borehole @ 4.6 metres, unable to penetrate further.								
	Groundwater not encountered during drilling.								
	Standing groundwater @ 4.1 metres upon completion.		5.0						
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 9 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.7
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 43.57

Stratigraphy	SOIL DESCRIPTION	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, non plastic, tan brown, very slightly clayey SILT: dry							
	-becoming tan brown with grey and orange brown streaks, slightly clayey SILT			115	64	1.8		
	-becoming grey with occasional orange brown streaks	0.5						
	-developing trace sand, slightly moist			88	70	1.3		Approx SGL
	Stiff, slightly plastic, grey with orange brown streaks, slightly sandy, very clayey SILT: slightly moist	1.0		116	72	1.6		
	Stiff, slightly plastic, purplish grey with occasional orange brown streaks, sandy, clayey SILT: slightly moist	1.5		73	46	1.6		
	-becoming firm, slightly plastic to moderately plastic, creamy white, very slightly clayey SILT, trace sand							
	-becoming soft	2.0		36	18	2.0		
	Non plastic, soft, slightly pink white, SILT: wet							
	-becoming slightly yellow white	2.5		25	18			
				28	20	1.4		
	-becoming very wet	3.0						
	Very stiff, non plastic, greyish white, fine silty SAND: very wet			138+				
		3.5		138++		UTP		
		4.0		138++		UTP		
	Continued on next page.							

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 10 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 7
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Description	Legend	GL(m) 43.57 Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Non plastic, very stiff, greyish white, silty SAND: very wet			19/01/04	60	36	1.7		
-becoming firm								
		4.5		138++		UTP		
-becoming very stiff, saturated				138++		UTP		
Unable to penetrate with hand auger End of Borehole @ 4.7 metres. Groundwater encountered @ 4.7 metres depth during drilling. Standing groundwater @ 4.4 metres depth upon completion.		5.0						
		5.5						
		6.0						
		6.5						
		7.0						
		7.5						
		8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 11 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 8
Flat Bush	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 41.8

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, slightly plastic, brown with orange brown and greyish brown streaks, slightly clayey SILT: damp.						Cut to road SGL
	-becoming moderately to highly plastic, streaked light grey, orange brown, very clayey SILT: trace sand.	0.5	112	70	1.6		
	-becoming whitish grey with some light brown streaks.		98	62	1.6		
	-becoming firm, yellowish white with some light orange and yellow streaks.	1.0	60	28	2.1		
	Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, wet.	1.5	50	20	2.5		Poor material recovery.
		2.0	32	16	2.0		
		2.5	26	16	1.6		
			28	18	1.6		
		3.0	28	18	1.6		
		3.5					
	Very dense, non-plastic, light grey, pumiceous, fine, silty SAND: wet.		138++		UTP		
	End of Borehole @ 4.1 metres. Unable to penetrate further. Standing groundwater @ 3.4 metres depth upon completion.	4.0	138++		UTP		

Water Level: 18/1/05

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 12 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No.9
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Stratigraphy	Soil Description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Comments Samples Other Tests
Tauranga Group Materials	Stiff, slightly plastic, grey, brown and orange brown streaked, clayey SILT, trace sand: slightly moist		85	60	1.4	Major surface cracking
	Stiff, slightly plastic, grey with orange brown streaks, very clayey SILT: slightly moist	0.5				
	Stiff, moderately plastic, grey with occasional orange streaks, slightly sandy, clayey SILT: slightly moist		97	71	1.4	
	Firm, moderately plastic, creamy white, very slightly sandy, clayey SILT: moist	1.0	77	60	1.3	Approx SGL
	Firm, non plastic, creamy white, SILT: very moist	1.5	56	28	2.0	
	-becoming wet					
	-becoming soft	2.0	39	22	1.8	
			22	19	1.2	
		2.5				
			28	21	1.3	
		3.0	58	27		
	-becoming firm					
		3.5	48	22	2.2	
			32	28	1.1	
		4.0				

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 13 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 9
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Stratigraphy	Legend	GL(m) 42.9 Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Soft, non plastic, yellowish white, SILT: wet								
		4.5		52	25	2.1		
-becoming firm								
Very stiff, non plastic, white, fine silty SAND								
Soft, non plastic, black organic SILT: saturated				32	28	1.1		
		5.0						
-becoming firm				68	32	2.1		
End of Borehole @ 5.1 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.		5.5						
		6.0						
		6.5						
		7.0						
		7.5						
		8.0						

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CLIENT: Concepts Limited	LOGGED/ CHECKED: MK	SHEET 14 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 42.9

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, slightly to moderately plastic, light grey with orange brown streaks, very silty CLAY: trace sand, damp.		138++		UTP		Sun baked crust. Approx SGL
	-becoming stiff, moist.	0.5	105	54	1.9		
			88	49	1.8		
	-becoming brownish grey.	1.0					
	-becoming firm, brownish grey.		58	33	1.8		
	-becoming stiff, moderately plastic, greyish brown with grey streaks, very clayey SILT: some sand.	1.5	93	37	2.5		
	-becoming non-plastic, grey, SILT.	2.0	108	37	2.9		
	-becoming firm, highly plastic, yellowish brown with some grey and dark purplish brown streaks, very clayey SILT: some sand.	2.5	44	20	2.2		
			50	26	1.9		
	-becoming moderately clayey SILT.	3.0	78	30	2.6		
		3.5	77	39	2.0		
	-becoming moderately plastic, blueish grey to greyish brown, slightly clayey SILT: some sand.	4.0					

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 15 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
Flat Bush	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Stratigraphy	Soil Description	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4802	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
			GL(m) 42.9						
Tauranga Group Materials	NATURAL: Stiff, blueish grey to greyish brown with occasional dark purplish brown streaks, slightly clayey SILT: some sand, moist.				98	46	2.1		
			4.5		76	35	2.2		
					84	48	1.8		
	End of Borehole @ 5.0 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.		5.0						
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 16 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 11
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Stratigraphy	Description	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	GL(m) ~~43.1~~ 44.19								
Tauranga Group Materials	NATURAL: TOPSOIL								
	Stiff, non plastic, medium brown, SILT: damp, friable								
	Stiff, slightly plastic, orange brown, slightly clayey SILT: slightly moist		0.5		89	44	2.0		Approx SGL
	Stiff, slightly plastic, grey, orange brown and brown streaked, very clayey SILT, trace sand: slightly moist		1.0		96	64	1.5		
	-becoming predominantly grey with brown and orange brown streaks		1.5		114	68	1.7		
	-becoming very stiff				138+				
	-becoming grey		2.0		138+				
	-becoming slightly sandy				93	58	1.6		
	-becoming stiff, slightly to moderately plastic, grey, very clayey SILT: moist		2.5						
	-developing trace sand, very moist to slightly wet				138+				
	-becoming very stiff		3.0						
	Very stiff, non plastic, purplish grey, sandy SILT: very moist				138+				
	End of Borehole @ 3.2 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.		3.5						
			4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 17 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 12
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Stratigraphy	Soil Description	Legend	GL(m) ~~45.48~~ 44.3 / Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	TOPSOIL.								Approx SGL
Tauranga Group Materials	NATURAL: Firm, slightly plastic, streaked orange brown, greyish brown, slightly clayey SILT: moist. -becoming stiff @ 0.4m.		0.5		98	50	2.0		
	Stiff, highly plastic, streaked orange brown, greyish brown, moderately silty CLAY: trace sand moist.		1.0		94	50	1.9		
	-becoming streaked light grey, light orange, silty CLAY: some sand.		1.5		86	56	1.5		
	-becoming very clayey SILT: some sand.		2.0		110	86	1.3		
	-becoming light grey with light orange streaks.		2.5		92	68	1.4		
	-becoming firm.				78	48	1.6		
	Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, moist.		3.0		52	28	1.9		
	-becoming wet.		3.5		22	15	1.5		
	Very dense, non-plastic, greyish white, pumiceous, silty SAND: moist.								
	End of Borehole @ 4.2 metres. Unable to penetrate further. Groundwater not encountered during drilling. No standing groundwater identified upon completion.		4.0		138++		UTP		

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 18 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No.13
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Legend | GL(m) 44.87 | Depth (m) | Water Level | Shear Vane Dial (kPa) | Residual Strength (kPa) | Sensitivity | Probe Blows | Comments Samples Other Tests

Approx SGL

Tauranga Group Materials

Stiff, non plastic, friable, SILT: dry

Stiff, slightly plastic, orange brown and grey brown streaked, slightly clayey SILT: moist

Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity
	121	60	2.0

0.5

-becoming moderately plastic, light grey and light orange streaked, moderately clayey SILT, trace sand

Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity
	116	66	1.8

1.0

-becoming light brown grey with thin light orange veins

-becoming slightly plastic, slightly clayey SILT, some sand

Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity
	132	94	1.4

1.5

-becoming moderately plastic, moderately clayey SILT

Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity
	58	44	1.3

Soft, non plastic, yellow white, SILT (pumicite): very moist, poor recovery

Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity
2.0	28	18	1.6
	58	32	1.8

2.5

Very stiff, non plastic, yellow white, silty SAND: very moist, very dense

Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity
	138++		UTP

-becoming wet

Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity
3.0	138++		UTP

End of Borehole @ 3.0 metres.
Groundwater not encountered during drilling.
No standing groundwater identified upon completion.

3.5

4.0

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Report No: 21 5257 00
Page: 2 of 3

FILL SUMMARY SHEET

Job Name : **Stancombe Road**

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m^3)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m^3)	SOLID DENSITY (t/m^3) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH in kPa				NOTES
1	GC	24.1.05	See plan	1.90	24.6	1.52	2.7	6.1	199++	199++	199++	199++	
2				1.89	28.6	1.47	2.7	3.4	199++	199++	199++	199++	
3				1.78	34.4	1.32	2.7	5.5	153	199+	199+	199+	
4	CA & WF	25.1.05	See plan	1.87	34.6	1.39	2.7	0.5	179	199+	199+	199++	
5				1.82	38.8	1.31	2.7	0.7	182	188	199+	199+	
6				1.73	31.0	1.32	2.7	10	134	131	122	182	
7	CA	26.1.05	See plan	1.96	32.8	1.47	2.7	-2.9	171	199+	199++	199++	
8				1.98	25.7	1.57	2.7	1.3	199+	199+	199+	199+	
9				1.87	33.0	1.40	2.7	1.8	199+	199+	199+	199+	
10	CA	27.1.05am	See plan	1.94	24.2	1.56	2.7	4.3	188	185	199+	199+	
11				1.90	19.6	1.59	2.7	10	148	179	199+	199+	
12				1.87	33.9	1.40	2.7	0.8	199+	199++	199++	199++	
13	CA	27.1.05pm	See plan	1.93	20.5	1.60	2.7	7.8	199++	199++	199++	199++	
14				1.93	25.7	1.53	2.7	3.8	199++	199++	UTP	UTP	

Transpositions Checked By : TB Date: 03.03.05
Approved Signatory : Date: 02.03.05

Please see page 1 of this report for test standard information

FILL SUMMARY SHEET

Job Name : 124 Stancombe Road

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m³)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m³)	SOLID DENSITY (t/m³) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH in kPa				NOTES
15	CA & RP	20.4.05	See plan	1.84	24.5	1.48	2.7	9.0	236++	236++	236++	236++	
16				1.82	20.4	1.51	27	13	236++	236++	236++	236++	
17	CA & RP	22.4.05	See plan	1.89	27.2	1.48	2.7	4.7	236+	236++	236++	236++	
18				1.92	29.8	1.48	27	1.2	236++	236++	236++	236++	

Transpositions Checked By : JM Date: 3.5.05
Approved Signatory : Date: 5.5.05

Please see page 1 of this report for test standard information

Ref: 2704

DIARY NOTES

North of Carlos Drive, 124 Stancombe Road, East Tamaki

Date: 17/1/05 GSL Staff

Ian Gibson (Aireys) rang for GSL to visit site and inspect gully cleanout. I (EC) visited site with knowledge that our initial site investigation was for the proposed apartments at the front of the site only (refer phone conversation note with Graham Raymond). We therefore needed to undertake site investigation for the remainder of the site. Gully had surficial materials mullocked out and flanks stripped of topsoil. Deep stormwater line trenches had been dug along the eastern boundary and to the south along the proposed road alignment. Very soft pumiceous materials, saturated the trench invert. Organise return visit to site next day with guys to drill holes.

Date: 18/1/05 GSL Staff

Site investigation/gully cleanout: I (EC) met Peter from Sharpe Civil. Discussed objectives of GSL and plan of attack for gully. Drill holes in current invert to ascertain depth of undercut. Some more materials need to be mucked out. Also noted heavy seepages along northwest back of gully.

Date: 19/1/05 GSL Staff

More gully muckout in invert.

Date: 26/1/05 GSL Staff

I (ML) and EC attended the site at approximately midday on a hot, dry day. We returned on the basis of Civil Lab fill testing from 25.1.05 showing a failure in one area of the gully infill. The results in this area showed 10% air voids and shear strengths as low as 122kPa by comparison to strengths well upward of 180kPa in most other parts. The location of this failure is marked on the attached plan.

At the surface, shear vane readings were all 138+. However, the gumspear highlighted soft spots about .5 metres deep in the otherwise well compacted fill. Eugene had the site guys dig up the fill to a depth of approx 0.5 metres in one part of the area of concern. This revealed an area of poor quality fill with limited compaction. Eugene advised the contractor that the fill above the soft region should be moved temporarily while the substandard fill was removed and discharged. This would then allow the replacement of the fill and continued compaction. Beyond this region of concern, the fill was all very stiff and well compacted, with a large sheepsfoot roller providing more than adequate compaction, with no signs of ground movement beneath its weight.

Date: 19/4/05 GSL Staff

I (PJ) visited the site and spoke to Brendon. They recommended placing the fill some two days ago after several months stand-down. I was told that more than a metre was already placed in the southwest corner but much less at the back. Informed Civil Lab to begin testing as soon as possible. Arranged with James to drill handaugers to test the new fill where it is deep.

Date: 24/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard, although some soft spots were observed and the contractor informed. Very little fill has been placed. One dozer, one compactor and two dump trucks at work on the site.

Date: 25/01/05 Civil Lab Staff

One compactor and one dozer at work. Material is a firm to stiff, highly plastic, silty clay.

Date: 26/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard. One digger and one compactor on site.

Date: 27/01/05 Civil Lab Staff

Morning: fill appears to be of a satisfactory standard. One dozer and one compactor at work. Material is firm to stiff, highly plastic, light grey and yellow/brown mixed, slightly silty clay and moist.

Date: 27/01/05 Civil Lab Staff

Afternoon: Fill appears to be of a satisfactory standard. One digger on site.

Date: 20/04/05 Civil Lab Staff

One compactor and one digger on site. Material is firm, highly plastic, light grey, cream, orange brown and yellow brown mixed slightly silty clay and moist.

Date: 22/04/05 Civil Lab Staff

Fill appears to be of a satisfactory standard. One compactor on site. Fill is firm, highly plastic, light grey orange brown and yellow brown mixed silty clay and moist.

FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	**Job Number:**	2704
Date Sampled:	20.06.2005	**Date Tested:**	21.06.2005
Sample Number:	1	**Tested By:**	MK
Sampling Depth (m):	0.5	**Checked By:**	
Sample Condition:	Good		
Sample Description:	Highly plastic, light grey with orange mottles, silty CLAY		
Inert Inclusions (%):	0		
Cracking (%):	5		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%):	30.9
Final Water content (%):	34.3
ε_{sw} = Magnitude of Swelling Strain (%) :	0.05

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%):	26.2
ε_{sh} = Magnitude of Shrinkage Strain (%) :	3.54

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 2.0
strain per ΔpF

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37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	**Job Number:**	2704
Date Sampled:	20.06.2005	**Date Tested:**	22.06.2005
Sample Number:	2	**Tested By:**	MK
Sampling Depth (m):	0.5	**Checked By:**	
Sample Condition:	Good		
Sample Description:	FILL: Moderately plastic, mottled orange brown, grey, dark purple, silty CLAY: white silt and topsoil inclusions.		
Inert Inclusions (%):	3		
Cracking (%):	2		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%):	28.9
Final Water content (%):	34.2
ε_{sw} = Magnitude of Swelling Strain (%) :	0.54

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%):	26.7
ε_{sh} = Magnitude of Shrinkage Strain (%) :	3.21

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 1.9
strain per ΔpF

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FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	**Job Number:**	2704
Date Sampled:	20.06.2005	**Date Tested:**	21.06.2005
Sample Number:	3	**Tested By:**	MK
Sampling Depth (m):	0.5	**Checked By:**	
Sample Condition:	Good		
Sample Description:	Moderately plastic, light grey with orange mottles, very clayey SILT: trace sand.		
Inert Inclusions (%):	0		
Cracking (%):	0		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%): 23.3

Final Water content (%): 25.6

ε_{sw} = Magnitude of Swelling Strain (%) : 0.00

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%): 23.6

ε_{sh} = Magnitude of Shrinkage Strain (%) : 2.60

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 1.4

strain per ΔpF

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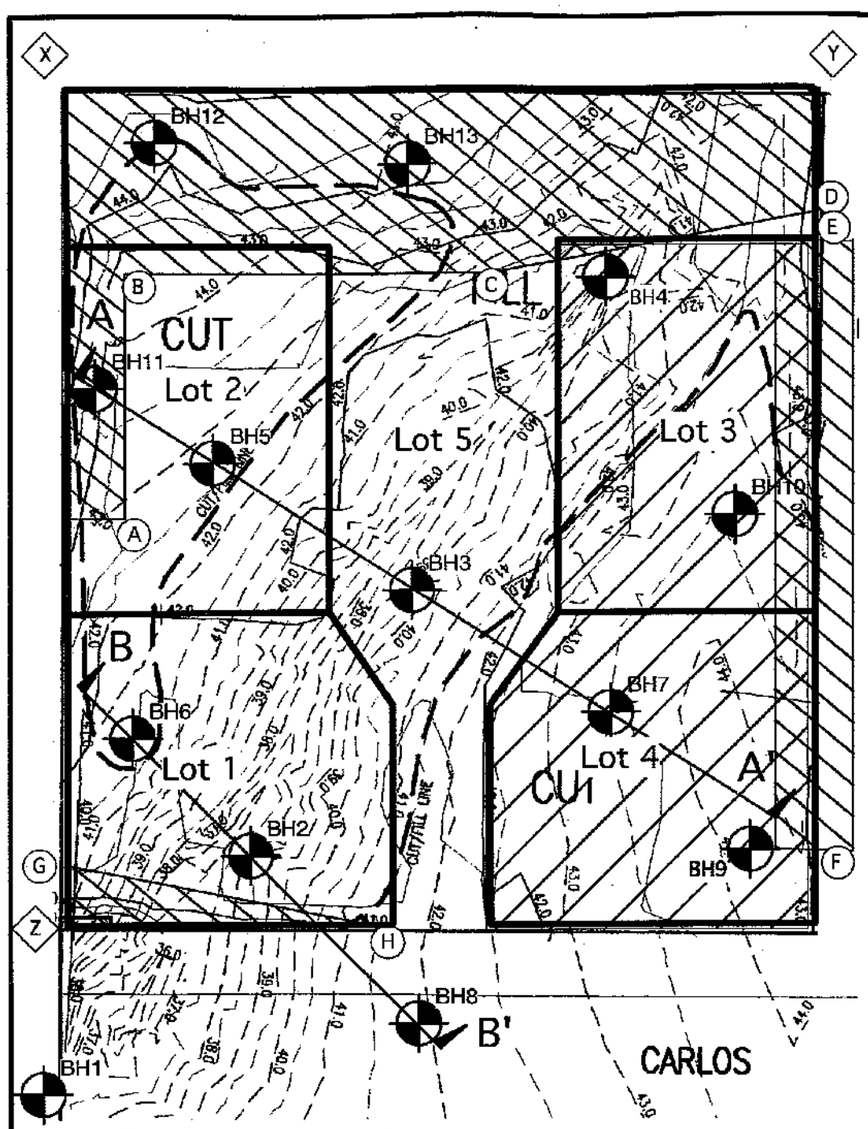
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243



Site Plan- Contours

KEY

BH1 — Hand augured borehole

Cross section

Specific Design Zone -Slopes steeper than 1V4:H.

Specific Design Zone -Soft Subsoils.

Specific Design Zone Triangulation. (m)

	A	B	C	D	E	F	G	H
X	35	16	38	62.5	63	87.5	63.5	73.5
Y	67	58	31	10	12.5	62.5	88	77
Z	34.5	54.5	65	85	83.5	61.5	5.0	25

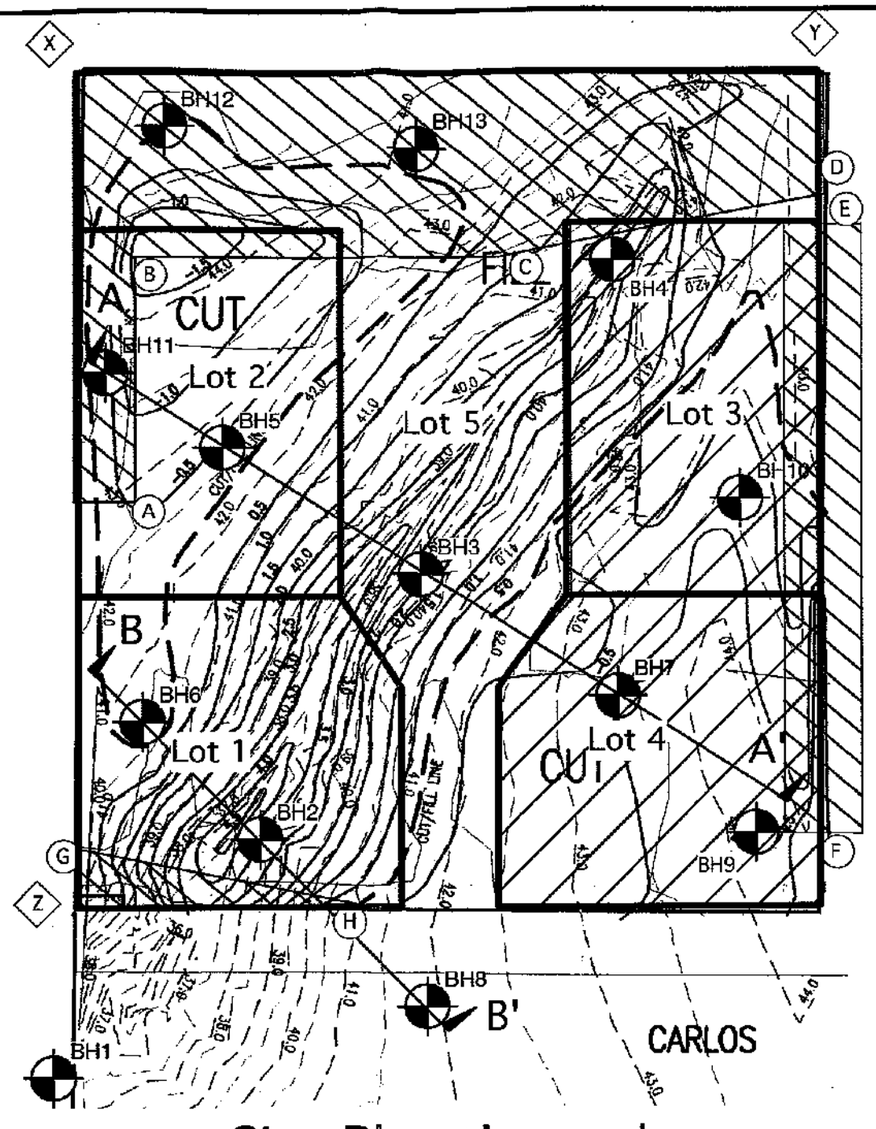
LEGEND

41.0 — EXISTING CONTOURS

43.0 — 'AS BUILT' CONTOURS

-1.5 — ISOPACH

EXTENT OF CUT/FILL



Site Plan- Isopachs

Pre-Earthworks Borehole Locations, Proposed Subdivisional Scheme Plan and Specific Design Zone.

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

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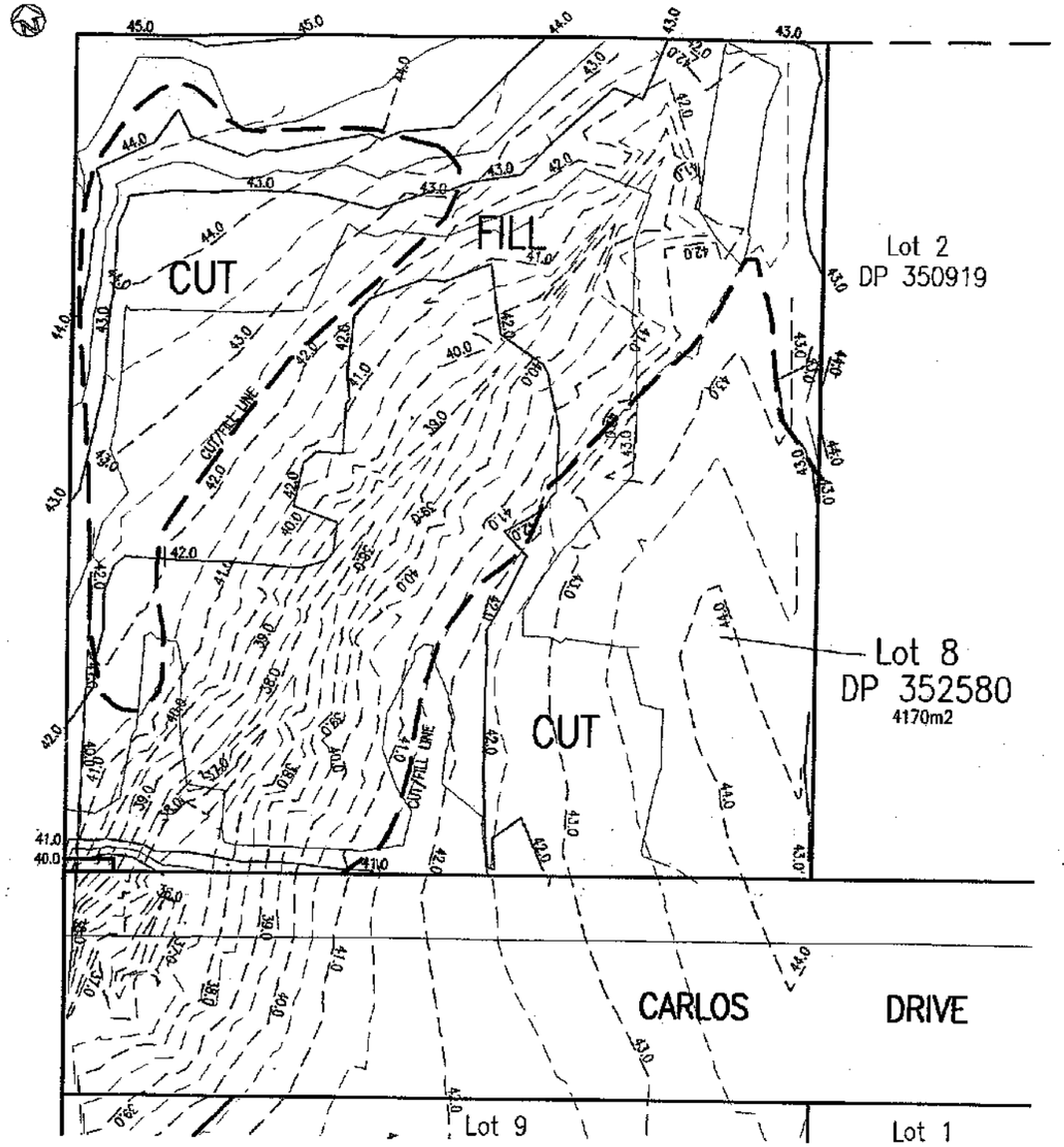
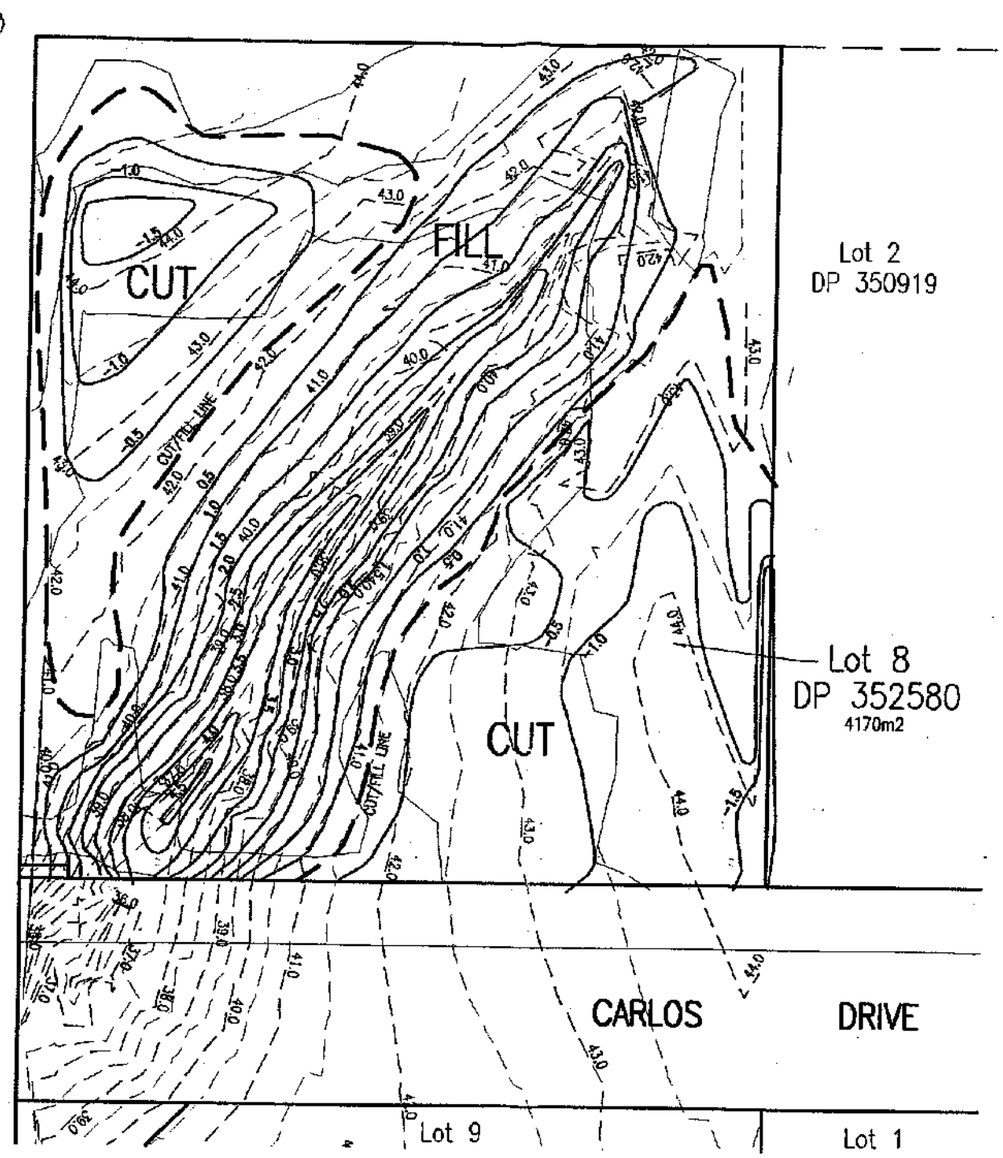
37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	1 OF 3



SITE PLAN–FINAL CONTOURS
1:500



SITE PLAN–ISOPACHS
1:500

LEGEND

44.0	EXISTING CONTOURS
43.0	'AS BUILT' CONTOURS
-0.5	ISOPACH
	EXTENT OF CUT/FILL

F:\Current Jobs L-Z\RAYMOND A9861\124 STANCOMBE RD_A9861-5\STAGE 2\AS BUILT CONTOURS\124 AS BUILT CONTOURS.dwg, 19/07/2005 1:14:57 p.

Original Size:

No.	Revision Details	Date	No.	Revision Details	Date

Design I H GIBSON (HOWICK 614 8523)
Survey EASDALE SURVEYORS LTD
Drawn LFF
Checked IHO
Date 4/8/05
Scale A3 1:500
CAD Filename

FINAL

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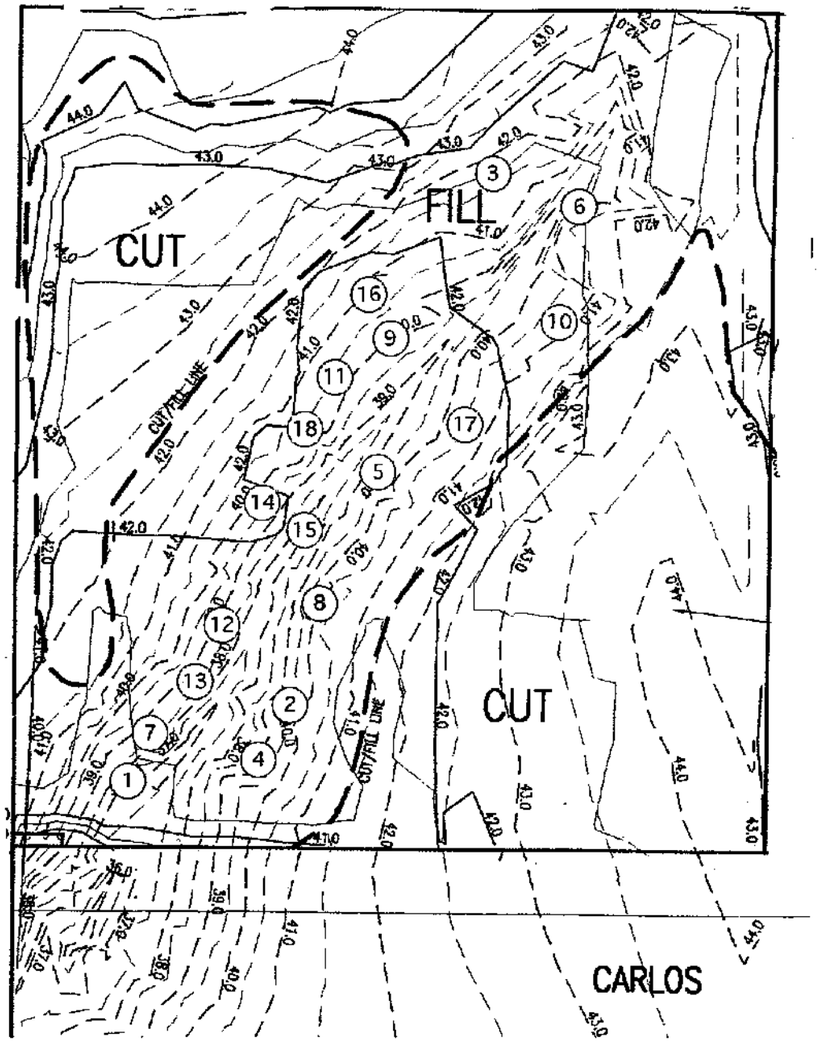
Job Title.
'AS BUILT' CONTOUR PLAN
FOR
CARLOS CONCEPTS
124 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

Drawing Title.
SITE PLAN

File No. A9861/5 | Rev. - | Dwg. No. 1-1

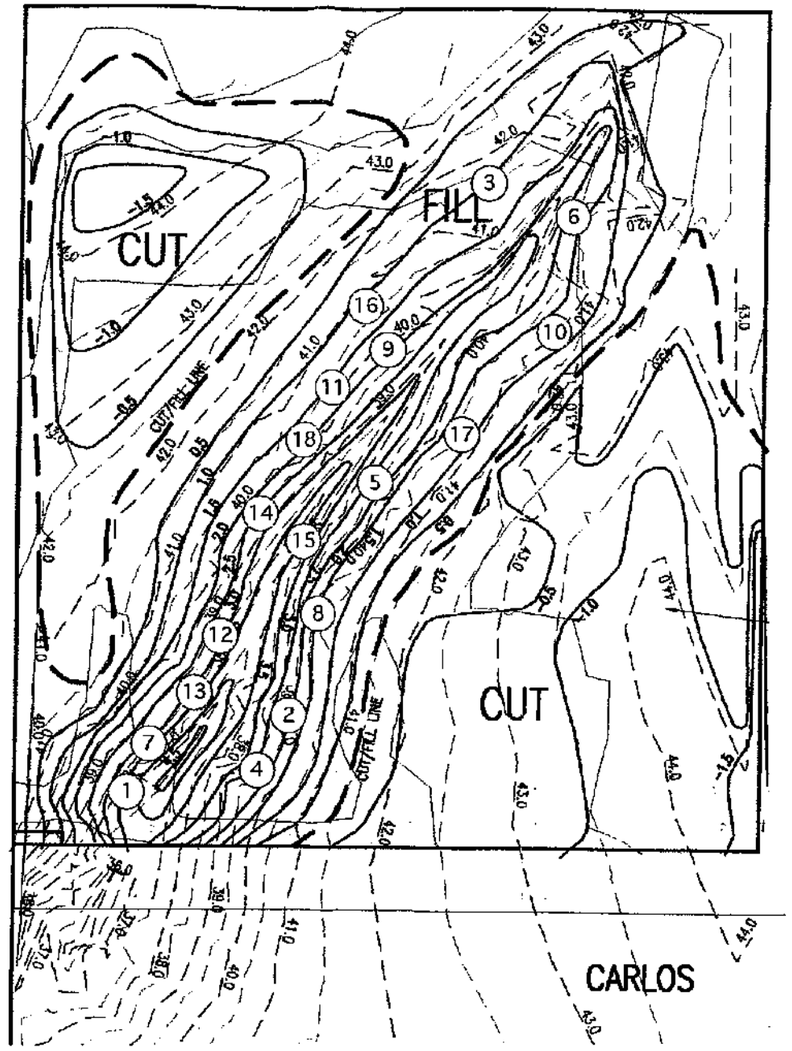


Site Plan- Contours

LEGEND

(1) Location of Compaction Test.

	Northing	Easting	RL
1	6469568	2681626	37.985
2	6469575	2681636	38.850
3	6469603	2681669	41.125
4	6469565	2681629	38.195
5	6469590	2681642	39.010
6	6469596	2681661	39.960
7	6469552	2681612	38.350
8	6469569	2681632	39.005
9	6469599	2681657	40.140
10	6469606	2681668	40.950
11	6469590	2681654	40.335
12	6469555	2681628	39.230
13	6469563	2681616	38.460
14	6469581	2681637	39.690
15	6469576	2681636	FL
16	6469586	2681636	FL
17	6469599	2681641	SGL
18	6469596	2681636	SGL



Site Plan- Isopachs

Location of Earthworks Tests.

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

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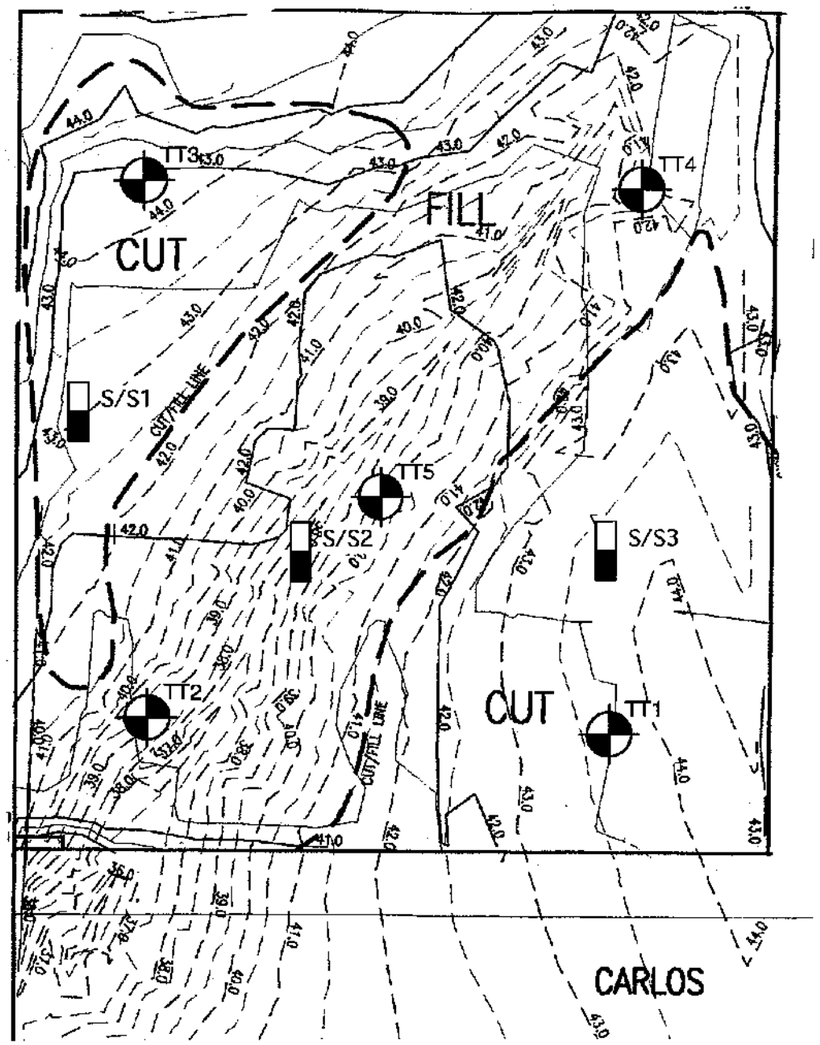
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

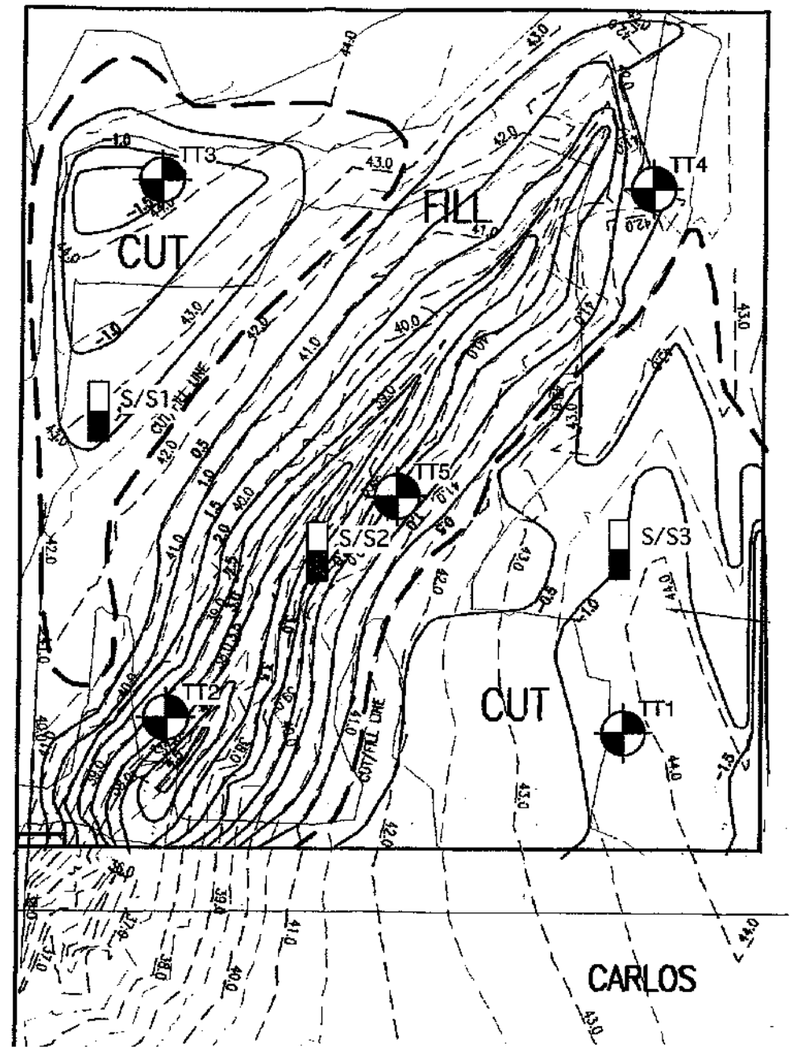
SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	2 OF 3



Site Plan- Contours

LEGEND

- S/S1 — Location of Shrink-Swell tests.
- TT1 — Depth of topsoil = 0.1metres
- TT2 — Depth of topsoil = 0.1metres
- TT3 — Depth of topsoil = 0.1metres
- TT4 — Depth of topsoil = 0.1metres
- TT5 — Depth of topsoil = 0.1metres



Site Plan- Isopachs

Post-Earthworks Topsoil Depths and Shrink-Swell Samples Location Plan

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

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CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1: 500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	3 OF 3

STREET ADDRESS:	
124 Stancombe Rd Flat Bush	
SCHEME PLAN NO:	SP8840
PROPOSAL NO:	P27046
STAGE:	1
ROAD NAME:	GIS ROAD CODE NO:
Carlos Dr	1176

27046R

SP 8840

✓ Asbuilt
✓ Location map
✓ RAMM
✓ Surfacing details
✓ Vector certificate
✓ Completion "
✓ Bonded works
✓ Street lights
✓ DP

Carlos Dr

124 Stancombe Rd

P27046

Stg 1

Environmental Management

20 December 2005

Mark Faulkner
Opus International Consultants
PO Box
MANUKAU CITY

Dear Mark

ROADING NETWORK MANAGEMENT CONTRACT 1250 CN-
Subdivision Information for RAMM Inventory and Maintenance

We advise that the streets, services and reserves in the subdivision being carried out at 124 Stancombe Road on the attached land transfer and GIS plans have been accepted by Council.

Road Name: SP8840	Stage 1
Carlos Dr	
Legal description of the (road) accessway:	

Attachments are:

		Sheets
New Road Drawing (223 cert)		
QAM RAMM sheets	Basecourse Surfacing	1 1
Deposited Plan	DP	LT 352580
Drawings	A9861/5/6 A9861/5/1-1 A9861/2/2-2 A9861/2/1-2 A9861/2/2-2 A9861/2/1-2 A9861/5/1/A6-A8	A9861/5/3/1 A9861/5/4/6 A9861/5/2/7 A9861/5/2/11 A9861/5/1/12 A9861/5/2/13-14

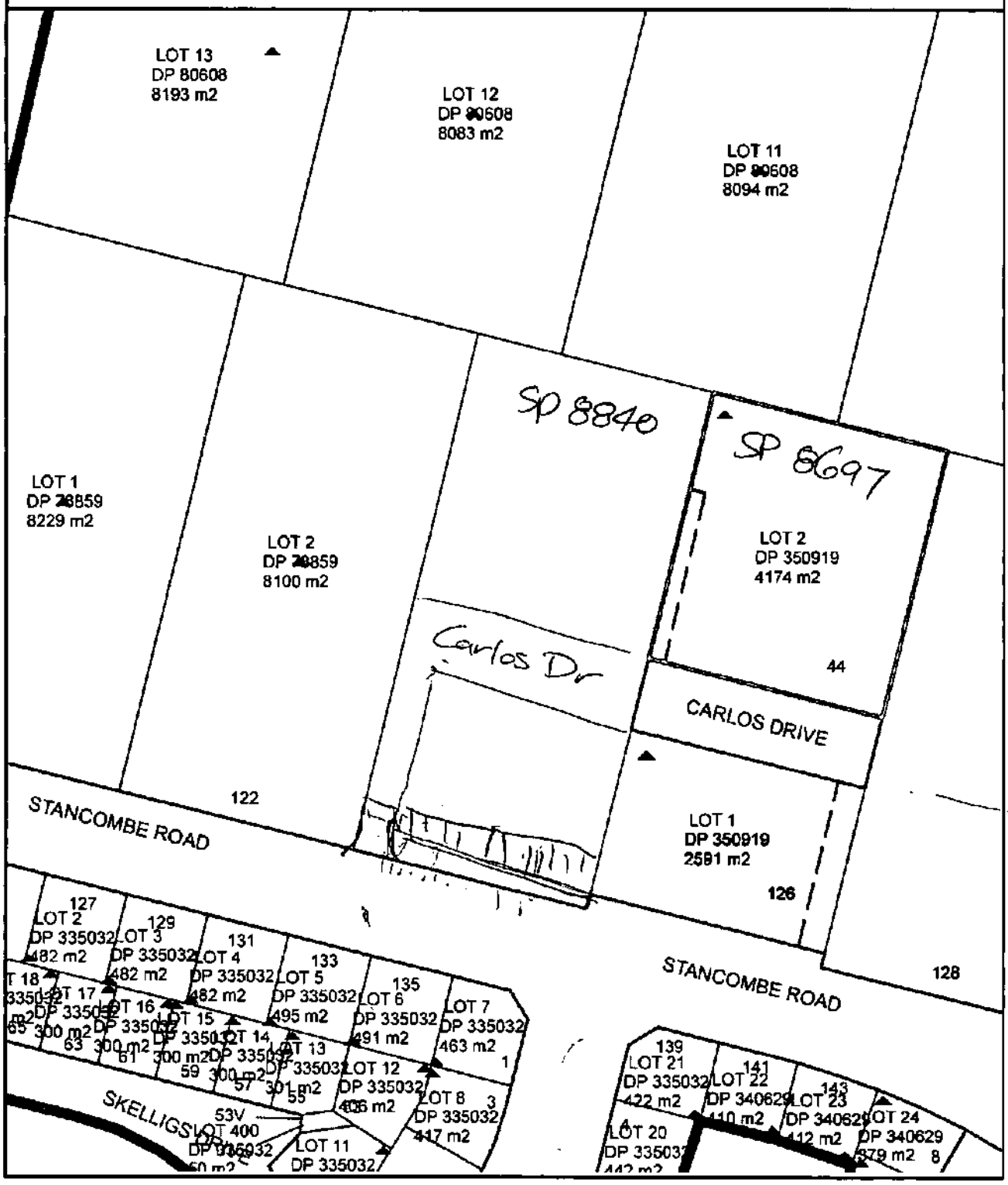
Yours faithfully

Hugh Townsend
SENIOR ROADING ENGINEER

Direct Dial/Extension: 09 262 8900 Ext 5878
Direct Facsimile: 09 262 5166

Te Kaunihera o
MANUKAU
City Council

NOTE ▲
Properties containing this symbol are recorded on the Land Information Register. You are advised to clarify its relevance at the Kotuku Customer Centre, in Kotuku House, Manukau City



0.18 km 1 : 1455

This plan is suitable for information only. The Council accepts no liability for any error whatsoever.

Produced by 10.1.31.36 at 08:52 21/12/2005

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Memorandum

Te Kaunihera o
MANUKAU
City Council

Environmental Services

To	Manukau Water, Goodman Fielder House Simon Porter – Operations Manager
	Facilities & Parks Management, Kotuku 3 Johan Ferreria – Parks Development Team Leader
	Transportation, Civic 8 Hugh Townsend – Senior Roading Engineer
	Property & Assets Group, Civic 9 Tasi Fakafanua – Property Manager Statutory Processes
	City Design & Planning, Civic 9 Leonie Osborne – District Plan
	Water Services, GHD, PO Box 76477, Manukau City Attention: Murray Stirling
	Corporate Finance, Civic 6 Timhela Wong – Financial Accountant
	Waste Management – Civic 9 Patricia Facenfield

From: Resource Compliance

Site Address: 124 Stancombe Road

File Reference: SP8840

Applicant : Carlos Concepts Ltd

Maintenance Responsibility for Streets, Services and Reserves

This memorandum is to advise that streets and services in the above subdivision as shown on the attached land transfer have been accepted by Council. The applicant is vesting 1747m^2 in Council, as a new legal road.

Value of assets as per attached Barter Tax invoice.

Date 9 December 2005

Team Leader Resource Compliance
Environmental Services

APPENDIX 7 2/

SURFACING DETAILS - SUBDIVISIONS

ASPHALTIC CONCRETE & BITUMEN MACADAM

Membrane Seal

Road Name CARLOS DR.

Chainage Start ROAD 1 0 Description Start Carlos/Stancombe Intersection

End ROAD 2; 61 Description End Carlos East End 124 Stancombe

Date 9-5-05 Material GRADE 4 MEMBRANE

Width ..... Aggregate Size GRADE 4

Area Sealed 1137 m² Aggregate Source STEVENSON QUARRY (Company & Quarry)

Binder Type & Grade 180/200

Cutter Type N/A Quantity N/A pph

Spray Temp 175 °C Litres at spray temperature 1.2 L/m²

Residual Appl. Rate 1.0 l/m²

Sealing Notes NO CUTTER

Surfacing

Date 17-5-05 Material TN2 MIX 10

Binder Type & Grade CAT 70 80/100 BITUMEN

Binder Rate 7 %

Aggregate Size 10 mm

Aggregate Source WINSTONE HUNNA QUARRY (Company & Quarry)

Contractor HEB BITUMEN

Mix Temp in Material 150 °C

Surfacing Notes

APPENDIX 7 1

RAMM - **SUBDIVISIONAL ROADS**

- To Be Completed For Each Road

ROAD NO CARLOS DR.

SUBDIVISION .....

SP NO .....

Start Reference .....

End Reference .....

Length .....

Width .....

BASECOURSE LAYER (LAYER 1)

Date Completed 6-5-05

Depth 160

Metal Grading Manaro GAP 40

Quarry Stevensons Drury Quarry.

Metal Type Basalt/Greywacke

SUB-BASE LAYER (LAYER 2)

Date Completed 14-4-05

Depth 250

Metal Grading GAP 65

Quarry Winstones Hunua Quarry.

Metal Type Basalt/Greywacke

SUBGRADE (LAYER 3)

UNDERCUT

Test Date .....

CBR .....

Type .....

Stabilised Yes/No

Method (Agent) .....

Depth .....

GAP 65

Winstones Hunua Quarry

(as per plan)

UNDERCUT (LAYER 4)

Location .....

Length .....

Width .....

Depth .....

Backfill Material .....

PROVISIONAL results
Subject to validation

Fax: 2432995 - Peter

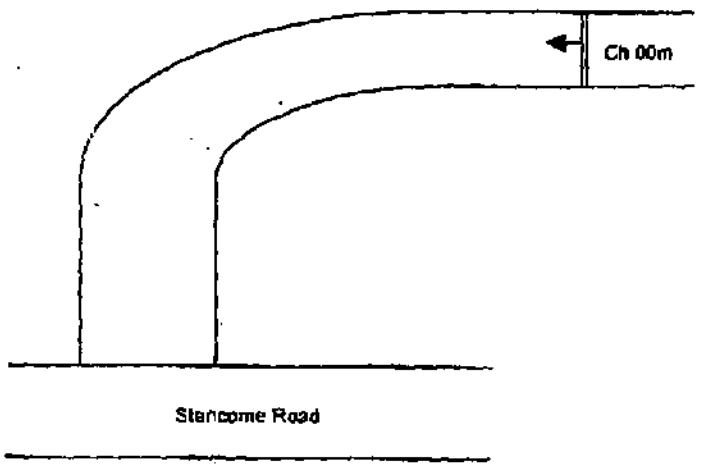
LPS-07F1
Revision:7

BENKELMAN BEAM PAVEMENT DEFLECTION
TEST STANDARD - NRB T1 1977

JOB OR SUB-DIVISION NAME: 124 Stancombe Road
SUB-DIVISION STAGE: -
JOB No. - STREET NAME OR No. -
TYRE PRESSURE 130 psi REPORT 21 5166 00
TYRE SIZE mm: 1000x200 AXLE LOAD: 8.2 tonnes PAGE 1
DATE OF ORDER: 20.05.05

Please note dial gauge has been modified to read directly

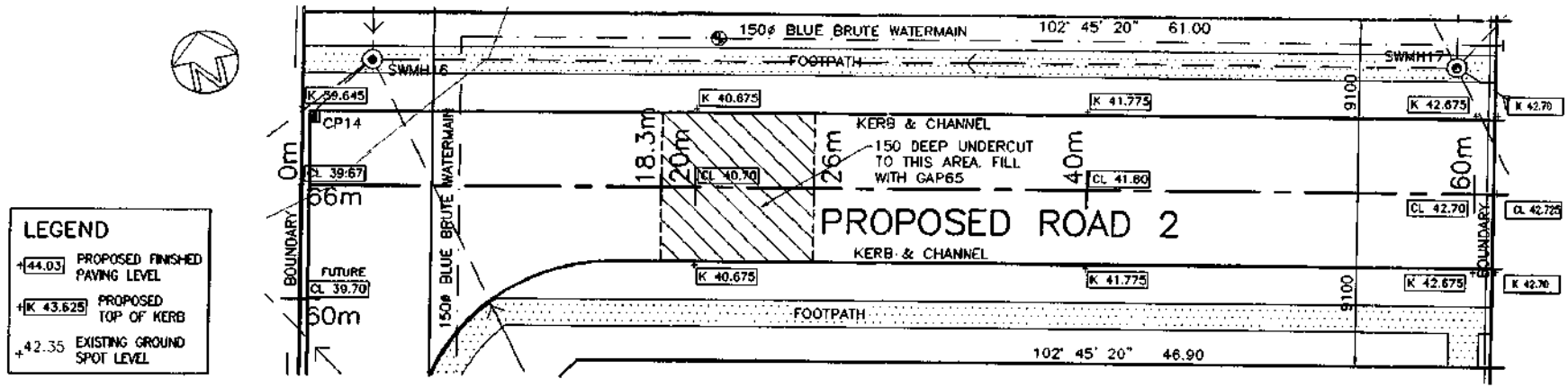
Distance / Chainage (m)	Lane	[All Readings in mm x 10-²] Start S	Inter I	Final F	Rebound Deflection mm	Distance From (m) Centreline	Remarks
20	Left	66	284	288	2.02	0.5	
40	Left	92	246	248	1.56	2.5	
60	Left	88	164	170	0.82	0.5	
80	Left	88	194	194	1.06	2.5	
100	Left	98	152	156	0.60	0.5	
120	Left	70	258	260	1.90	2.5	
140	Left	78	234	238	1.62	0.5	
140	Right	80	276	278	1.98	2.5	
120	Right	88	244	248	1.60	0.5	
100	Right	90	160	162	0.72	2.5	
80	Right	98	192	194	0.98	0.5	
60	Right	96	210	212	1.16	2.5	
40	Right	76	242	246	1.70	0.5	
20	Right	78	226	228	1.60	2.5	



NOT TO SCALE

MEASUREMENT STARTS: Edge of seal
TYPE OF SURFACE: Asphaltic concrete
TEMPERATURE CORRECTION: N/A
START TIME: 8.20am
COMMENTS: Weather - raining

TESTED BY: CA and JM DATE: 21.06.05
CALCULATED BY: JM DATE: 21.06.05
CHECKED BY: DATE:
APPROVED SIGNATORY: DATE:



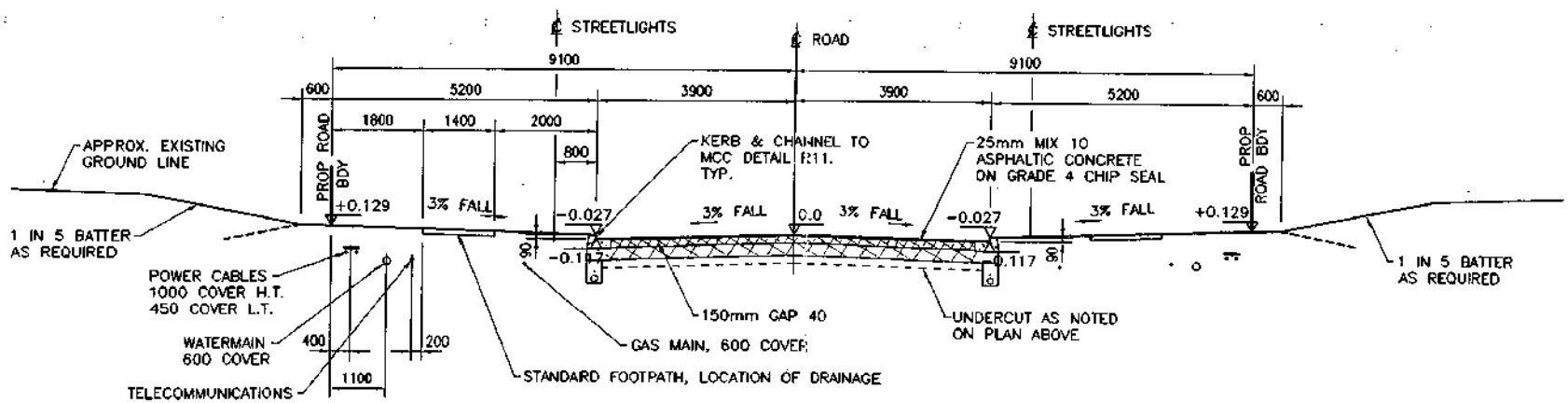
LEGEND

- +44.03 PROPOSED FINISHED PAVING LEVEL
- +K 43.625 PROPOSED TOP OF KERB
- +42.35 EXISTING GROUND SPOT LEVEL

NOTE: MAXIMUM BENKELMAN BEAM 1.8mm
C.B.R. 3

PART SITE PLAN

1:250



TYPICAL ROAD CROSS SECTION

SCALE 1:100

No.	Revision Details	Date	No.	Revision Details	Date

Design: I N GIBSON (HOWICK 534 6525)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: ING
Date: SEPT 04
Scale: A3 1:250
CAD Filename:

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

ROAD AS BUILT

AIREY CONSULTANTS LTD.

Drawing Title.
PROPOSED ROAD PLAN
FINISHED LEVELS
TYPICAL CROSS SECTION

File No. A9861/5 | Rev. - | Dwg. No. 6

F:\Current Jobs 1-2\RAYMOND A9861\124 STANCOMBE RD_A9861-5\STAGE 1\AS BUILTS\124 STANCOMBE RD_CARLOS DR_ A9861-5.dwg, 22/09/2

Digital Title Plan - LT 352580

Survey Number	LT 352580
Surveyor Reference	7576 124 Stancombe
Surveyor	Michael Stuart Lucas
Survey Firm	Easdale Surveyors Ltd
Surveyor Declaration	I Michael Stuart Lucas, being a person entitled to practise as a licensed cadastral surveyor, certify that - (a) The surveys to which this dataset relates are accurate, and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Surveyor-General's Rules for Cadastral Survey 2002/2; (b) This dataset is accurate, and has been created in accordance with that Act and those Rules. Declared on 14/09/2005.

Survey Details

Dataset Description	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859		
Status	Approved as to Survey		
Land District	North Auckland	**Survey Class**	Class I Cadastral Survey
Submitted Date	14/09/2005	**Survey Approval Date**	16/09/2005
		Deposit Date	

Territorial Authorities

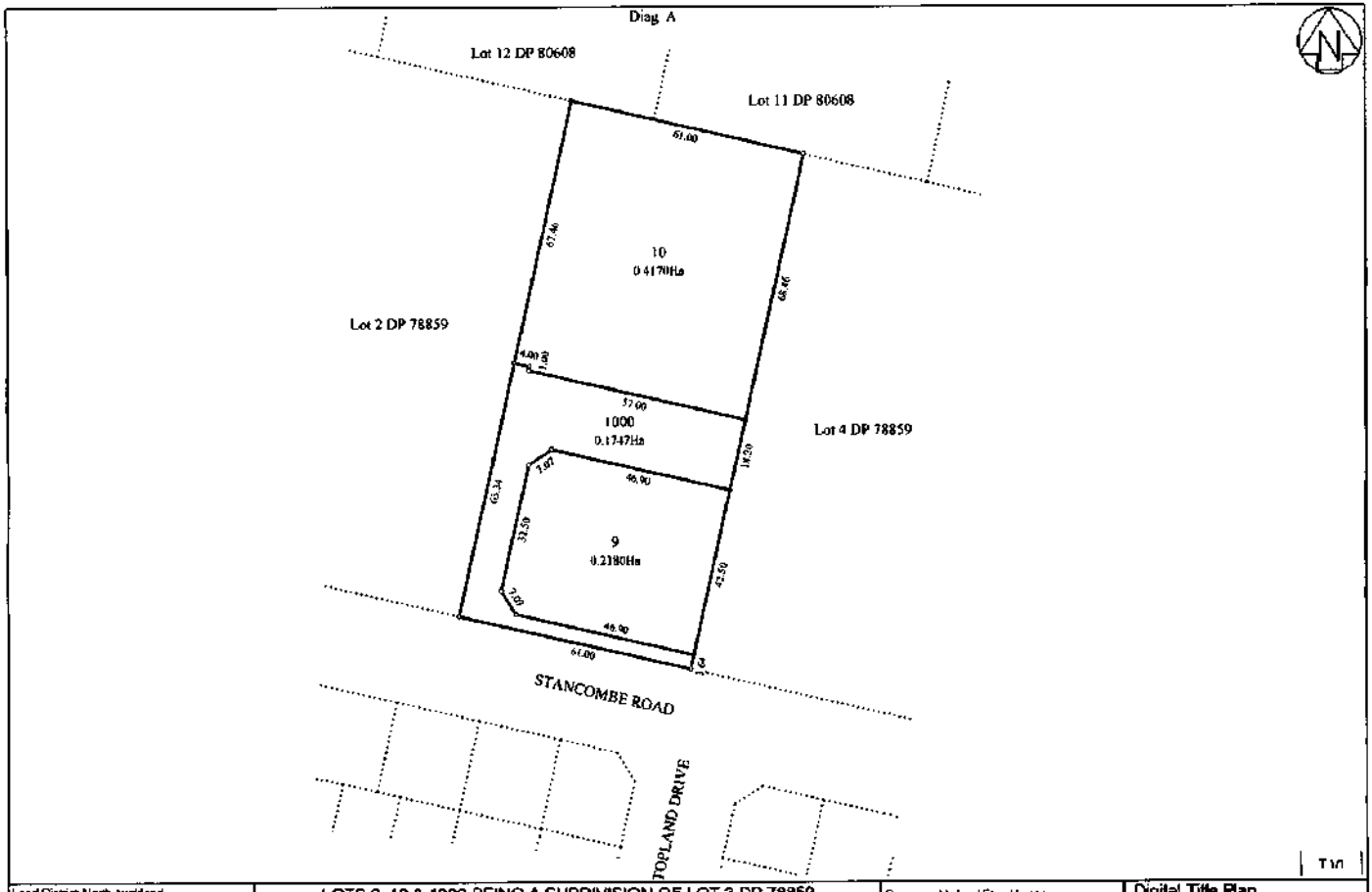
Manukau City

Comprised In

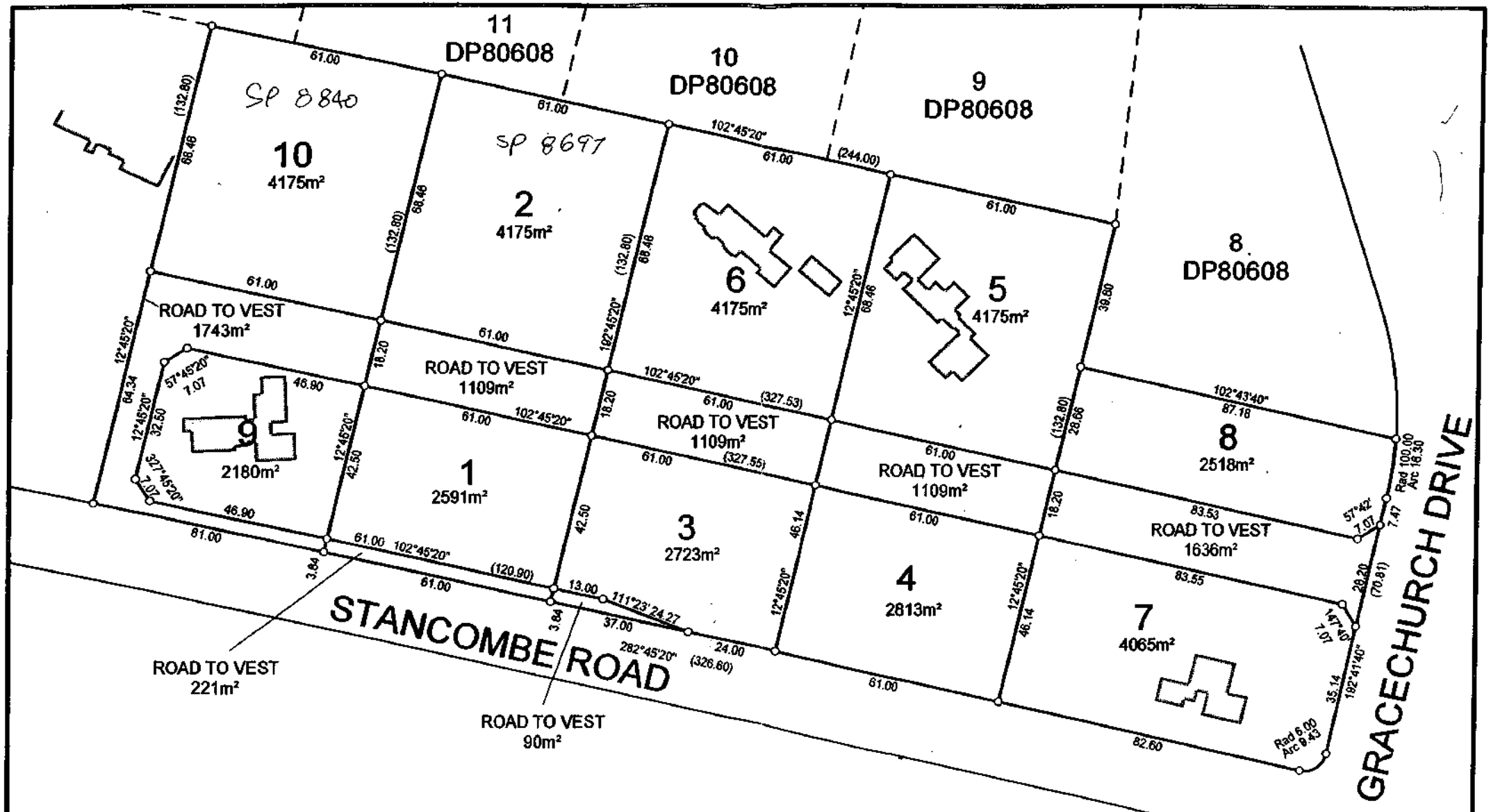
CT NA34D/637

Created Parcels

Parcels	Parcel Intent	Area	CT Reference
Lot 9 Deposited Plan 352580	Fee Simple Title	0.2180 ha	215614
Lot 10 Deposited Plan 352580	Fee Simple Title	0.4170 ha	215615
Lot 1000 Deposited Plan 352580	Vesting on Deposit for Road	0.1747 ha	
Total Area		0.8097 ha	



Land District North Auckland Digitally Generated Plan Generated on: 16/09/2005 09:09am Page 2 of 2	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859	Surveyor: Michael Stuart Lucas Firm: Eastdale Surveyors Ltd	Digital Title Plan LT 352580 Approved on: 16/09/2005



Easdale Surveyors Ltd

39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 5375754
e-mail: surveyors@easdales.co.nz

SUBDIVISION BOUNDARIES
124 - 132 STANCOMBE ROAD, FLAT BUSH
(LOTS 3 - 7 DP78859)

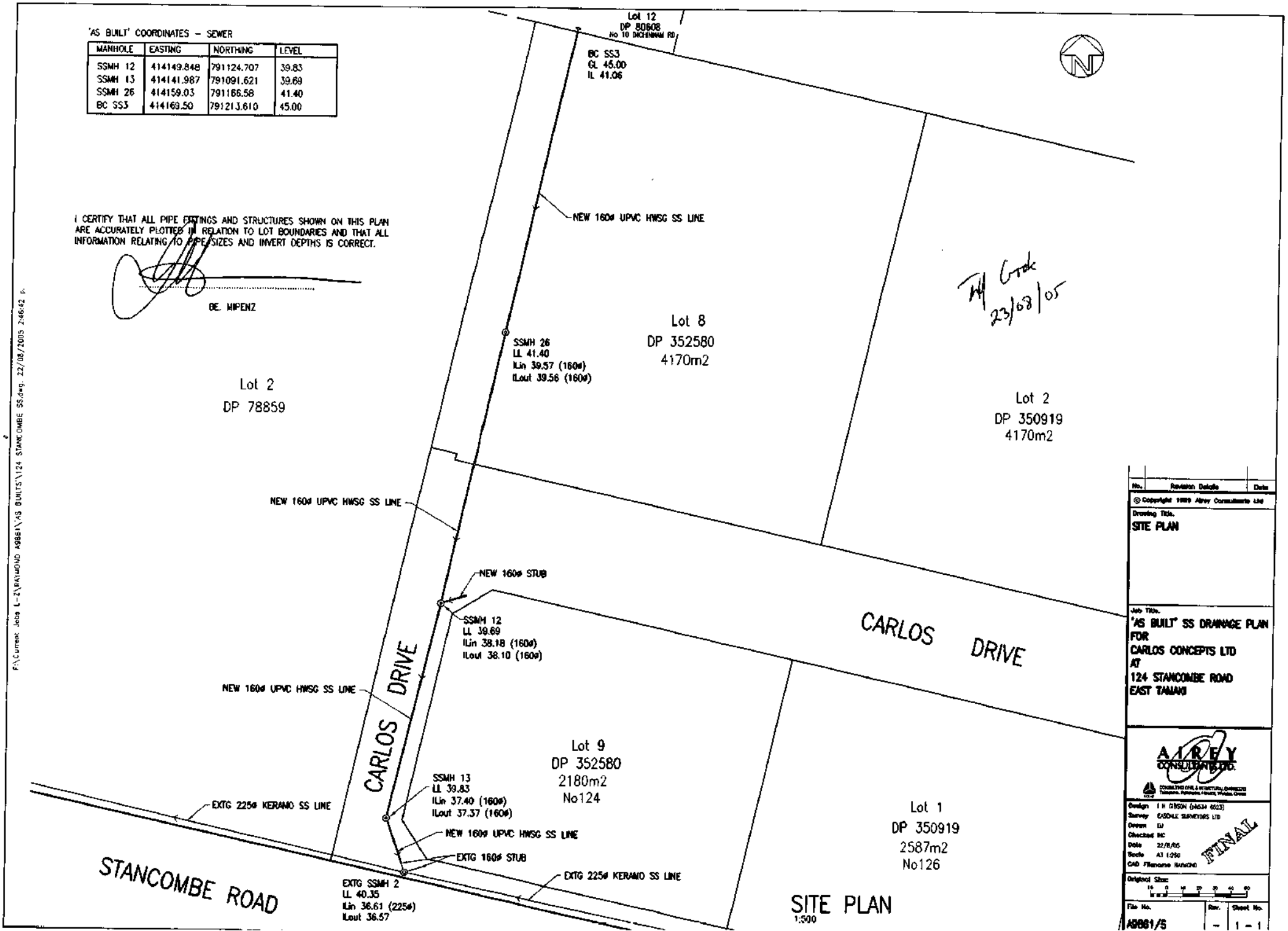
FILE	7483a
SCALE	1:1000
DATE	September 2004
SURVEYOR	MSL
REVISION	124 - 132 PLAN (3)

'AS BUILT' COORDINATES – SEWER

MANHOLE	EASTING	NORTHING	LEVEL
SSMH 12	414149.848	791124.707	39.83
SSMH 13	414141.987	791091.621	39.69
SSMH 26	414159.03	791166.58	41.40
BC SS3	414169.50	791213.610	45.00

I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. MIPENZ



23/08/05

No.	Revision Details	Date

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Drawing Title.
SITE PLAN

Job Title.
'AS BUILT' SS DRAINAGE PLAN
FOR
CARLOS CONCEPTS LTD
AT
124 STANCOMBE ROAD
EAST TAMAKI

AIREY CONSULTANTS LTD.

Design I H GIBSON (AA534 6523)
Survey EASDALE SURVEYORS LTD
Drawn DJ
Checked MC
Date 22/8/05
Scale A3 1:250
CAD Filename RAYMOND

FINAL

Original Size:

File No. A9861/5 | Rev. – | Sheet No. 1 – 1

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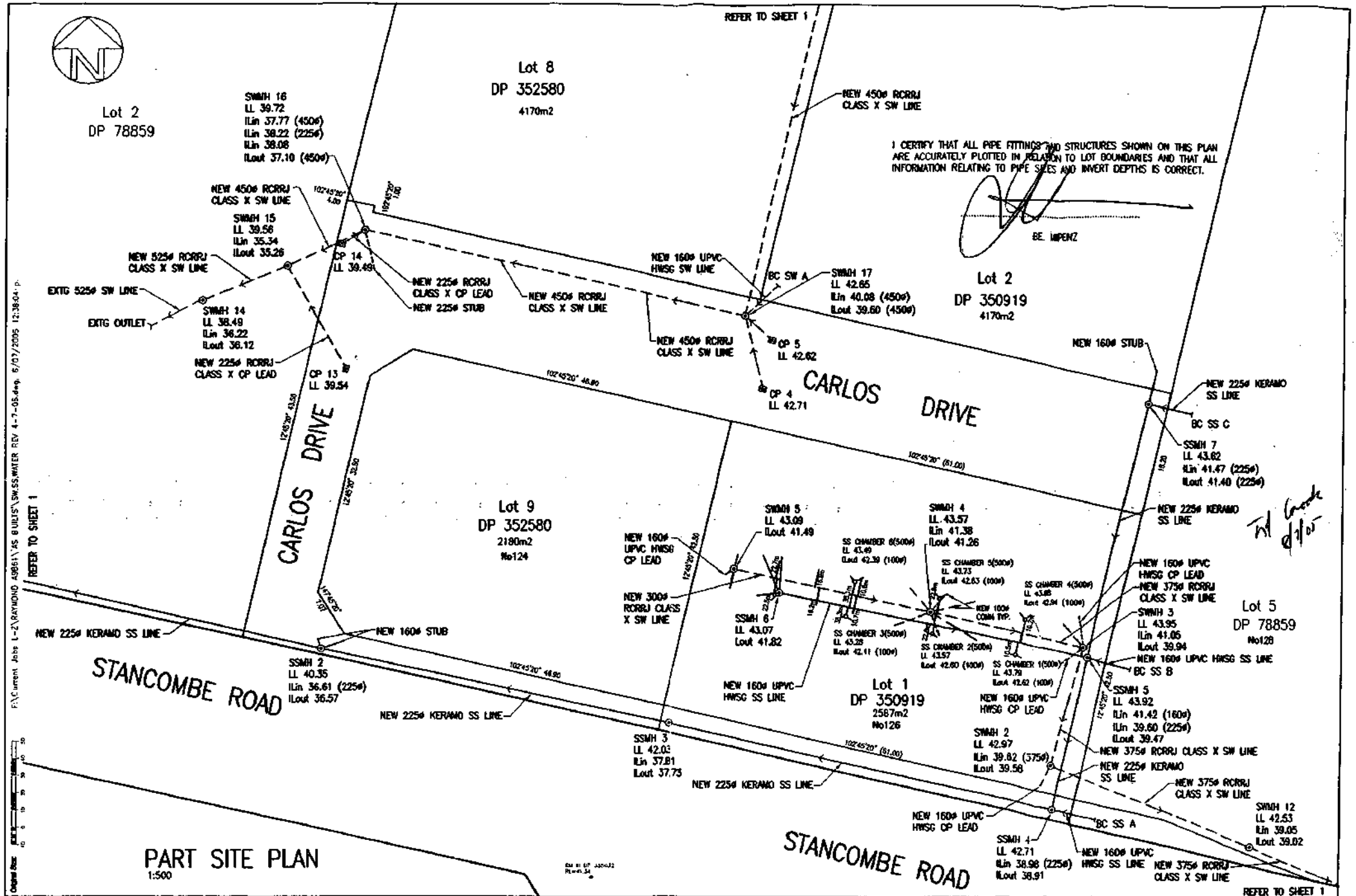

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Design	H HODSON (HOWITH CH 6323)
Survey	EASDALE SURVEYORS LTD
Drawn	DM
Checked	HO
Date	27-6-05
Scale	1:500
CAD Filename	

FINAL

Job Title: 'AS BUILT' SW & SS DRAINAGE PLAN

124-132 STANCOMBE ROAD

AIREY CONSULTANTS LTD.

Drawing Title: PART SITE PLAN

'AS BUILT' COORDINATES – STORMWATER

MANHOLE	EASTING	NORTHING	LEVEL
SWMH 1	414306.450	791043.470	42.95
SWMH 2	414250.026	791066.433	42.97
SWMH 3	414254.442	791083.641	43.95
SWMH 4	414232.212	791088.748	43.57
SWMH 5	414203.871	791094.909	43.09
SWMH 12	414279.049	791054.764	42.53
SWMH 14	414127.838	791134.027	38.49
SWMH 15	414139.726	791139.057	39.56
SWMH 16	414150.702	791144.299	39.72
SWMH 17	414205.126	791131.881	42.65
SWMH 18	414218.534	791193.501	42.76
INLET	414216.517	791200.268	41.66
BC SW A	414209.930	791136.260	

'AS BUILT' COORDINATES – SEWER

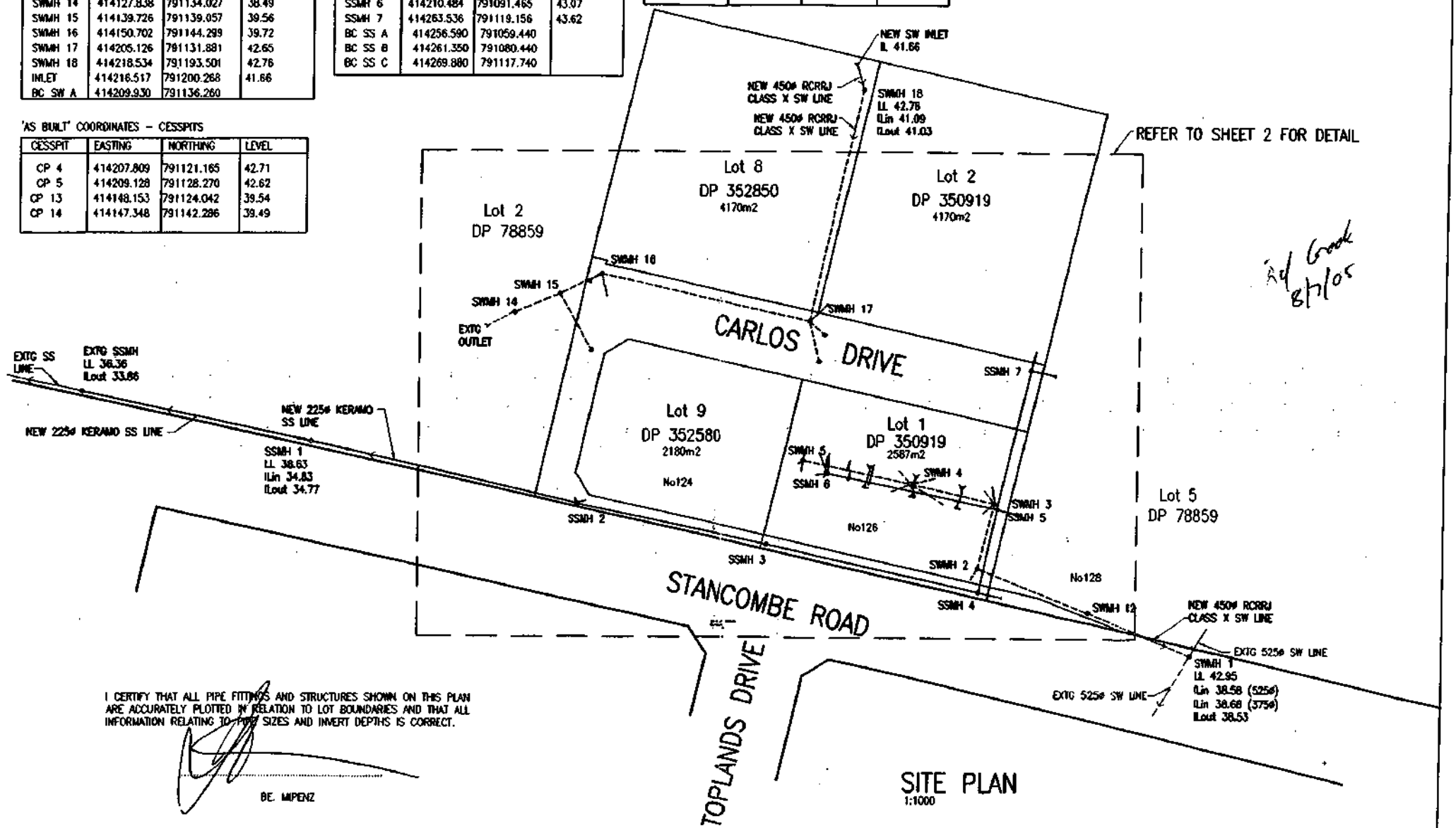
MANHOLE	EASTING	NORTHING	LEVEL
EXTG SSMH	414016.311	791112.731	36.36
SSMH 1	414075.374	791099.546	38.63
SSMH 2	414144.839	791083.271	40.35
SSMH 3	414194.674	791072.492	42.03
SSMH 4	414250.280	791060.068	42.71
SSMH 5	414255.085	791082.193	43.92
SSMH 6	414210.484	791091.465	43.07
SSMH 7	414263.536	791119.156	43.62
BC SS A	414256.590	791059.440	
BC SS B	414261.350	791080.440	
BC SS C	414269.880	791117.740	

'AS BUILT' COORDINATES – 500ø SS CHAMBERS

MANHOLE	EASTING	NORTHING	LEVEL
SS CHAMBER 1	414244.42	791082.58	43.79
SS CHAMBER 2	414232.52	791085.58	43.57
SS CHAMBER 3	414220.21	791088.06	43.28
SS CHAMBER 4	414245.78	791087.69	43.98
SS CHAMBER 5	414233.52	791090.72	43.73
SS CHAMBER 6	414221.47	791093.11	43.49

'AS BUILT' COORDINATES – CESSPITS

CESSPIT	EASTING	NORTHING	LEVEL
CP 4	414207.809	791121.165	42.71
CP 5	414209.128	791128.270	42.62
CP 13	414148.153	791124.042	39.54
CP 14	414147.348	791142.286	39.49



Ad Grook 8/7/05

I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. MIPENZ

SITE PLAN
1:1000

F:\Current Jobs L-Z\RAYMOND A9861\'AS BUILTS'\SW,SS,WATER REV 4-7-05.dwg, 6/07/2005 12:13:04 p.

No.	Revision Details	Date	No.	Revision Details	Date
1	SS & SW BC's ADDED	6/7/05			

Design: I HIGBSON (NOVUS) (SN 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: DJ
Checked: HG
Date: 27/6/05
Scale: A3 1:1000
CAD Filename:

FINAL

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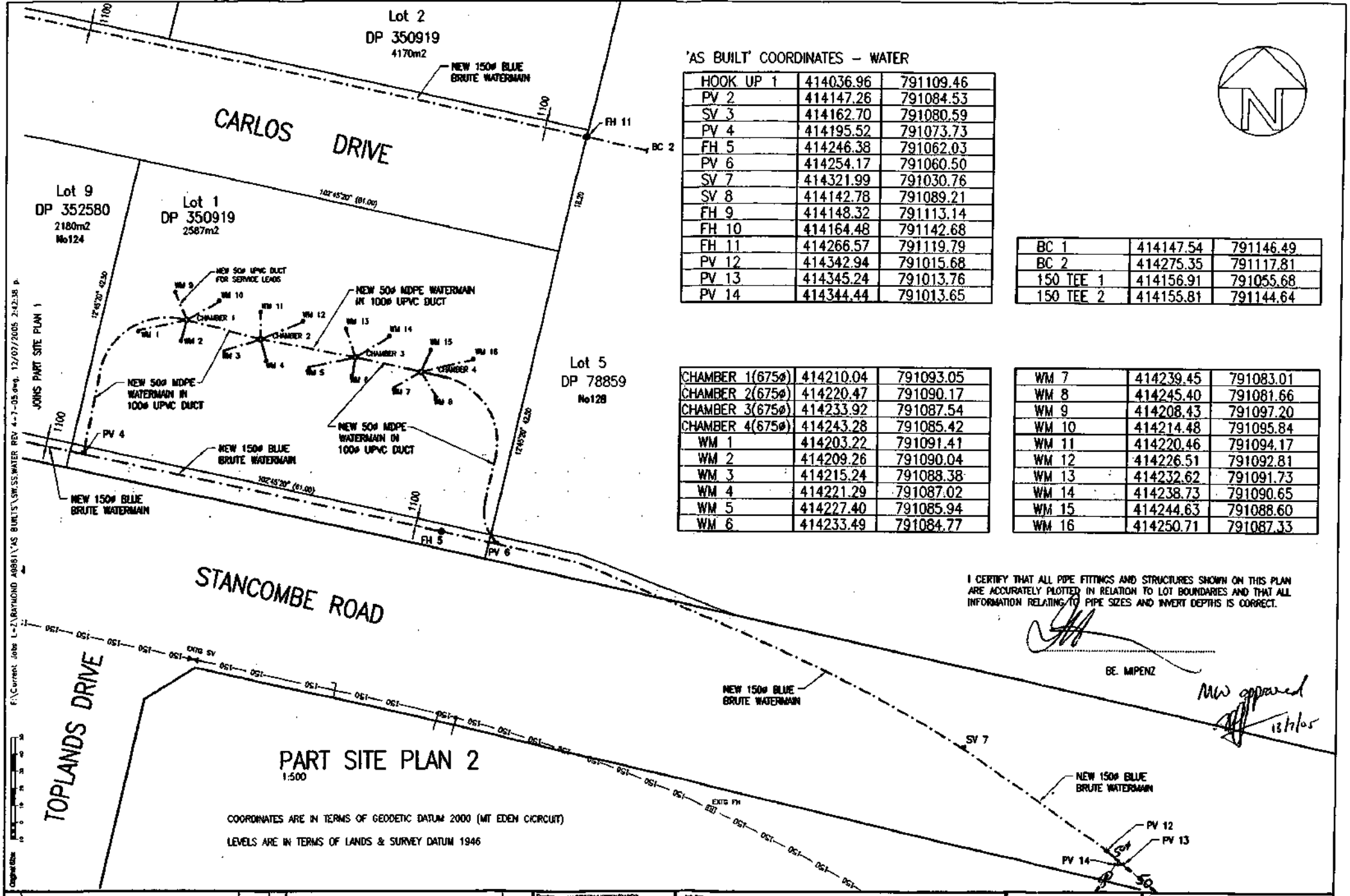
Job Title:
'AS BUILT' SW & SS DRAINAGE PLAN

124-132 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

Drawing Title:
SITE PLAN

File No. A9861/2 | Rev. - | Dwg. No. 1-2



PART SITE PLAN 2

1:500

COORDINATES ARE IN TERMS OF GEODETIC DATUM 2000 (MT EDEN CIRCUIT)

LEVELS ARE IN TERMS OF LANDS & SURVEY DATUM 1946

'AS BUILT' COORDINATES – WATER

HOOK UP 1	414036.96	791109.46
PV 2	414147.26	791084.53
SV 3	414162.70	791080.59
PV 4	414195.52	791073.73
FH 5	414246.38	791062.03
PV 6	414254.17	791060.50
SV 7	414321.99	791030.76
SV 8	414142.78	791089.21
FH 9	414148.32	791113.14
FH 10	414164.48	791142.68
FH 11	414266.57	791119.79
PV 12	414342.94	791015.68
PV 13	414345.24	791013.76
PV 14	414344.44	791013.65

BC 1	414147.54	791146.49
BC 2	414275.35	791117.81
150 TEE 1	414156.91	791055.68
150 TEE 2	414155.81	791144.64

CHAMBER 1(675ø)	414210.04	791093.05
CHAMBER 2(675ø)	414220.47	791090.17
CHAMBER 3(675ø)	414233.92	791087.54
CHAMBER 4(675ø)	414243.28	791085.42
WM 1	414203.22	791091.41
WM 2	414209.26	791090.04
WM 3	414215.24	791088.38
WM 4	414221.29	791087.02
WM 5	414227.40	791085.94
WM 6	414233.49	791084.77

WM 7	414239.45	791083.01
WM 8	414245.40	791081.66
WM 9	414208.43	791097.20
WM 10	414214.48	791095.84
WM 11	414220.46	791094.17
WM 12	414226.51	791092.81
WM 13	414232.62	791091.73
WM 14	414238.73	791090.65
WM 15	414244.63	791088.60
WM 16	414250.71	791087.33

I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. MIPENZ

MW approved 13/7/05

No.	Revision Details	Date	No.	Revision Details	Date
2	PV's 13 & 14 DETAILED	12/7/05			
1	PIPE MATERIAL REVISED, PV's 2 & BC2 ADDED, COORDS REVISED	6/7/05			

Design: H HOBSON (HOBKOM RDS)
Survey: SADDLE SURVEYORS LTD
Drawn: DJ
Checked: HO
Date: 22/6/05
Scale: A1 1:500
CAD Filename:
FINAL

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Job Title: 'AS BUILT' WATERMAIN PLAN

124-132 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD

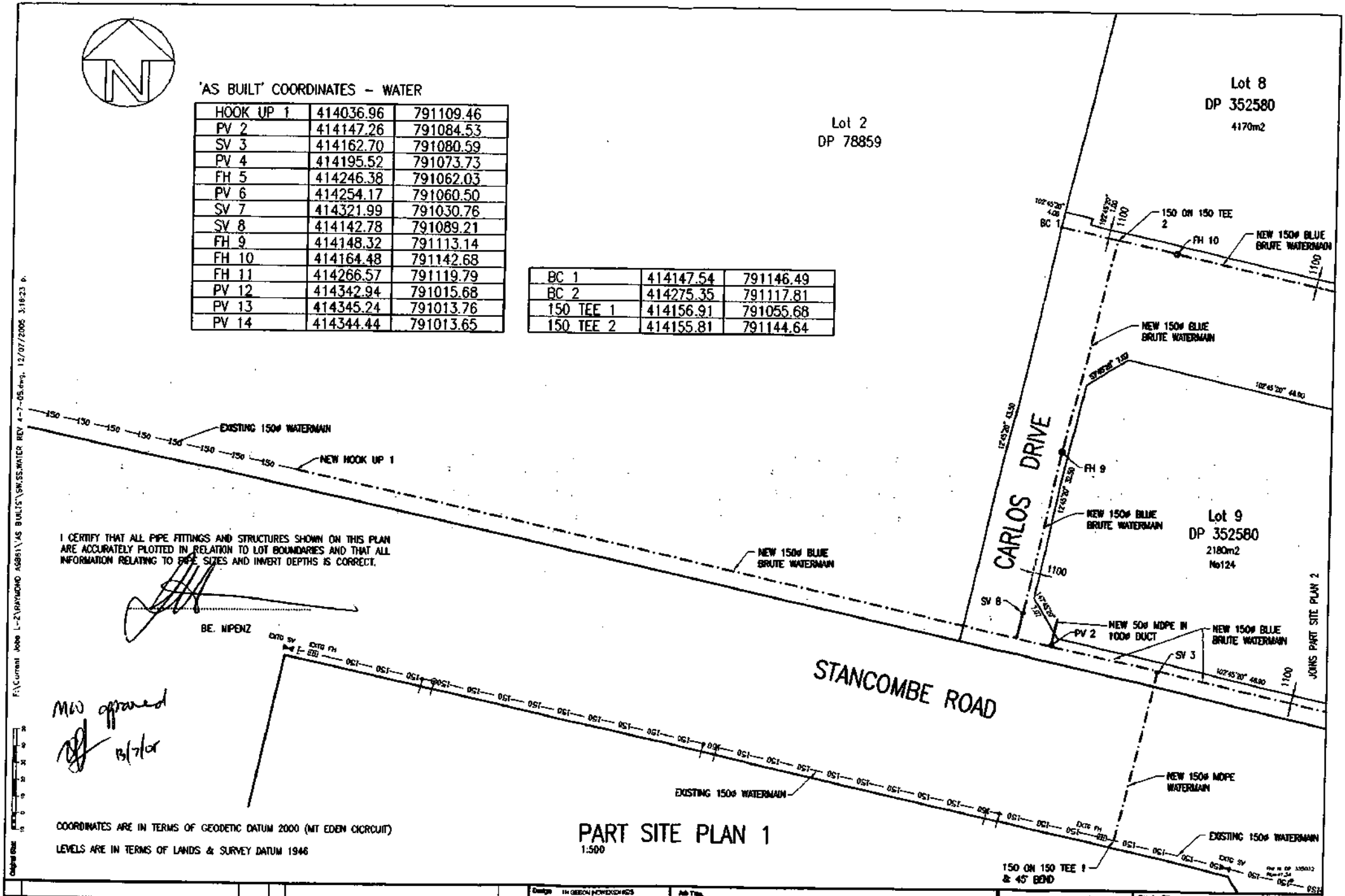
Drawing Title: PART SITE PLAN 2

File No. A9861/2 | Rev. - | Dwg. No. 2-2

'AS BUILT' COORDINATES – WATER

HOOK UP 1	414036.96	791109.46
PV 2	414147.26	791084.53
SV 3	414162.70	791080.59
PV 4	414195.52	791073.73
FH 5	414246.38	791062.03
PV 6	414254.17	791060.50
SV 7	414321.99	791030.76
SV 8	414142.78	791089.21
FH 9	414148.32	791113.14
FH 10	414164.48	791142.68
FH 11	414266.57	791119.79
PV 12	414342.94	791015.68
PV 13	414345.24	791013.76
PV 14	414344.44	791013.65

BC 1	414147.54	791146.49
BC 2	414275.35	791117.81
150 TEE 1	414156.91	791055.68
150 TEE 2	414155.81	791144.64



I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. NIPENZ

MW approved 13/7/05

COORDINATES ARE IN TERMS OF GEODETIC DATUM 2000 (MT EDEN CIRCUIT)

LEVELS ARE IN TERMS OF LANDS & SURVEY DATUM 1946

PART SITE PLAN 1

1:500

No.	Revision Details	Date
2	PV's 13 & 14 DETAILED	12/7/05
1	PIPE MATERIAL REVISED, PV12 & BC2 ADDED COORD'S REVISED	6/05

Design: IN GREEN NOWEDSKI NZS
Survey: ENSDALE SURVEYORS LTD
Drawn: DJ
Checked: PD
Date: 22/6/05
Scale: AS 1:500
CAD Filename:

FINAL

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Job Title: 'AS BUILT' WATERMAIN PLAN

124-132 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

Drawing Title: PART SITE PLAN 1

File No.: A68812

F:\Current Jobs L-Z\RAYMOND A68812\'AS BUILTS'\SW,SS,WATER REV 4-7-05.dwg, 12/07/2005 3:18:23 p.

Application for Minor Bond for Uncompleted Works

The City Manager
Manukau City Council
PO Box 76917
Manukau City

Attention: Resource Compliance

Proposal P27046 SP 8840

Address 124 Stancombe Rd Flat Bush.

I, Bob Cummins wish to apply to bond for a period of 3 months (maximum 24 months) for the following conditions of the above consent:

Condition	Detail	$
3,8	Footpath, Topsoil berms & batters, Streetlight	18761-00
9,22	Street planting, Reinstatement clearance	
23		
	Total:	$18,761.00 (minimum $2000)

Terms & Conditions

(1) A bond factor will be added to the total cost of the bond excluding GST.

(2) The bond shall be further secured by cash deposit to the Council of the bond sum.

(3) At the time of processing the release of this bond, the time taken to certify that the above works have been completed will be invoiced and will be payable prior to the refunding the further cash security and may be deducted by the Council from those monies.

(4) A copy of the receipt showing payment of the further security cash deposit will be required when applying for release of the Bond.

(5) In the event those works are not completed and certified acceptable to the Council within the time allowed, the further security deposited in cash with the Council shall be taken in full to be applied by the Council for those purposes.

(6) The bond will be invoiced and refunded to the name shown above.

I agree to the conditions above:

Signed _____ Date 25/11/05

Application for Minor Bond for Uncompleted Works

The City Manager
Manukau City Council
PO Box 76917
Manukau City

Attention: Resource Compliance

Proposal P8046 SP 8840

Address 124 Stancombe Rd, Flat Bush.

I, Bob Cummins, wish to apply to bond for a period of 3 months (maximum 24 months) for the following conditions of the above consent:

Condition	Detail	$
3	Road Reseal following completion	25,000-00
	of building works.	
		Total: $25,000-00 (minimum $2000)

Terms & Conditions

(1) A bond factor will be added to the total cost of the bond excluding GST.

(2) The bond shall be further secured by cash deposit to the Council of the bond sum.

(3) At the time of processing the release of this bond, the time taken to certify that the above works have been completed will be invoiced and will be payable prior to the refunding the further cash security and may be deducted by the Council from those monies.

(4) A copy of the receipt showing payment of the further security cash deposit will be required when applying for release of the Bond.

(5) In the event those works are not completed and certified acceptable to the Council within the time allowed, the further security deposited in cash with the Council shall be taken in full to be applied by the Council for those purposes.

(6) The bond will be invoiced and refunded to the name shown above.

I agree to the conditions above:

Signed _____ **Date** 25/11/05

Bond List

124 Stancombe Road

Flat Bush

Footpath Northern Side Carlos Drive	condition 9b	$798.00
Topsoil Berms & Batters North Side Carlos Drive	3	$1,064.00
Topsoil Berms & Batters around Front Site	3	$2,719.00
Footpath Front Site	condition 9b	$7,980.00
Streetlights (12 of)	condition 8	$3,200.00
Street Planting	condition 9	$2,500.00
Reinstatement Clearance 122 Stancombe Rd	20 21, 22 cont	$500.00
Roading Reseal	condition 3	$25,000.00

Bond No 1
$18761.00
Including GST

Bond No 2

Including GST

Subtotal	$43,761.00
GST	$5,470.13
Total	$49,231.13

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers Pukekohe Takapuna Howick Orewa	CLIENT:	SHEET No.:
	JOB:	JOB No.:
	CALCS. BY: PHONE:	DATE:

Footpath NTH Carlos.

15m x 1.4 @ \$38/m² = \$798-00

Topsoil Berms & Batters

(61 − 5) x (5.2 − 1.4) x \$5 = \$1064-00

Topsoil Berms & batters

Front site Carlos & Stancombe

Carlos	53 x (5.2 − 1.4) @	\$5.00	= 1007
Carlos Rd	1.8 x 43 @	\$5.00	= 387
Stancombe	53 x (6.4 − 1.4) @	5.00	= 1325
			2719

Footpath Stancombe/Carlos Front site

150 x 1.4 @ \$38 = \$7980-00

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz

Members of ACENZ

AIREY CONSULTANTS LTD.

0274 581 290

CERTIFICATION UPON COMPLETION OF SUBDIVISIONAL WORK

ISSUED BY:	Ian Harold Gibson
TO:	Carlos Concepts Ltd
TO BE SUPPLIED TO:	Manukau City Council
IN RESPECT OF:	Subdivisional Development
AT:	124 Stancombe Road, Flat Bush

Airey Consultants Ltd has been engaged by Carlos Concepts Ltd to provide construction observation, review and certification services in respect of the above subdivisional work which is described in the specification and shown on the drawings numbered 27046 and approved by Manukau City Council.

I have sighted the Manukau City Council consent and conditions of consent to the subdivisional works and the approved specification and drawings.

As an independent professional I, or personnel under my control, have carried out periodic reviews of the subdivisional work appropriate to the engagement and based upon these reviews and information supplied by the contractor during the course of the subdivisional works **I BELIEVE ON REASONABLE GROUNDS** that the subdivisional works have been completed in accordance with the above consent and sound engineering practice.

Date 23/8/05

I.H.GIBSON
BE (CIVIL) CPENG MIPENZ

Airey Consultants Ltd
PO Box 39 101
HOWICK

Outstanding Works – See bonded items list

Vector
electricity network

Acceptance by VECTOR as ELECTRICITY OPERATOR

Subdivision: 124 Stancombe Road, Flatbush, Auckland

Ref:

Date:- 17/8/05

1. I on behalf of VECTOR confirm that this company will be the Electricity Operator of the electrical reticulation in the existing public roads for the 124 Stancombe Road, Flatbush The reticulation, inclusive of streetlight cables will be installed in accordance, with Council's Requirements and Standards, with VECTOR's Standards, with the Electricity Act 1992 and with the Electricity Regulations 1997.
2. The actual point of connection for a Low Voltage Point of Supply to the private subdivision will be established with a service pit on the road frontage boundary or a transformer on the site, that is suitable to provide a service. You are required to approach VECTOR to discuss your requirement.
3. The reticulation will be installed by Vector to our satisfaction.
4. Connection status to the existing distribution network will be made once a request for a supply has been made and the quotation has been paid to Vector.
5. VECTOR will be the owner operator and maintainer of the reticulation in public vested roads.
6. The Electricity Operator of the distribution system which will provide Line Function Services at the Point of Supply to this subdivision.
7. The Electricity Retailer of the Customers choice will be available to supply energy for the reticulation being connected .

Signed:

Name: Phillipa Fischer

Representative For Vector

Airey Consultants Ltd

PO Box 39 101

Howick

Auckland ATTN: Ian Gibson

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

RECEIVED
10 DEC 2004
M.C.C.
ENVIRONMENTAL SERVICES

E1/27046
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
15 DEC 2004
PER .....
MCC BUILDING & RESOURCE SERVICES

STAGE 1
SUBDIVISION

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

JOB No A9861/5

ISSUED 10.12.04

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 1
SUBDIVISION

ET/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

15 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

DRAWING INDEX

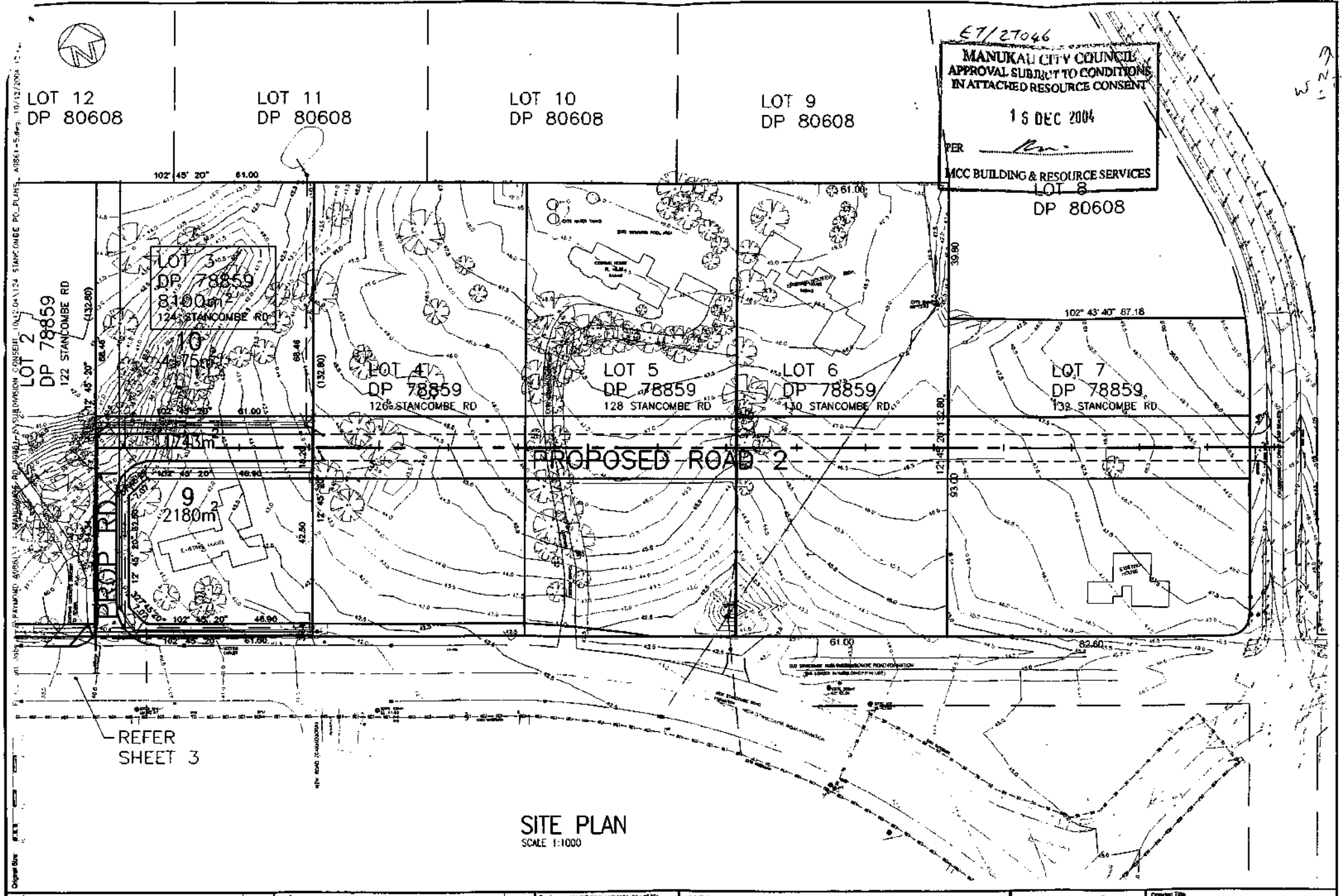
DRAWING NUMBER	DRAWING TITLE
	COVER
	INDEX
1	SITE PLAN, 1:1000
2	EARTHWORKS PLAN 1:500 SILT FENCE DETAIL
3	SITE PLAN - SS DRAINAGE, SHEET 1, 1:500
4	SITE PLAN - SW DRAINAGE, 1:500
5	SITE PLAN - WATERMAIN, 1:500
6	PROPOSED ROAD PLAN - FINISHED LEVELS, STREET LIGHTING & PLANTING, 1:250
7	TYPICAL ROAD CROSS SECTION, 1:100
11	PROPOSED ROAD 1 LONGSECTION
12	PROPOSED ROAD 2 LONGSECTION PART 1
13	CROSS SECTION AT 20m, 40m, 60m PROP ROAD 1 CROSS SECTION AT 0m, 20m, 40m PROP ROAD 2
14	CROSS SECTION AT 60m PROP ROAD 2
21	SW LONGSECTION 1
22	SW LONGSECTION 2 & 3
31	SS LONGSECTION 1 & 2
32	SS LONGSECTION 3 & 4
33	SS LONGSECTION 5
	APPENDIX
A1	STANDARD DETAILS - SHEET 1
A2	STANDARD DETAILS - SHEET 2
A6	PROPOSED ROAD 2 LONGSECTION PART 2
A7	PROPOSED ROAD 2 LONGSECTION PART 3
A8	PROPOSED ROAD 2 LONGSECTION PART 4

AIREY CONSULTANTS LTD.
ACENZ

CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

JOB No A9861/5

ISSUED 10.12.04



E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

SITE PLAN
SCALE 1:1000

No.	Revision Details	Date
3	SEWER LINE MOVED	10/12/04
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

No.	Revision Details	Date

Design: HH GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: IHG
Date: SEPT '04
Scale: AS 1:1000
CAD Filename:
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CONSENT

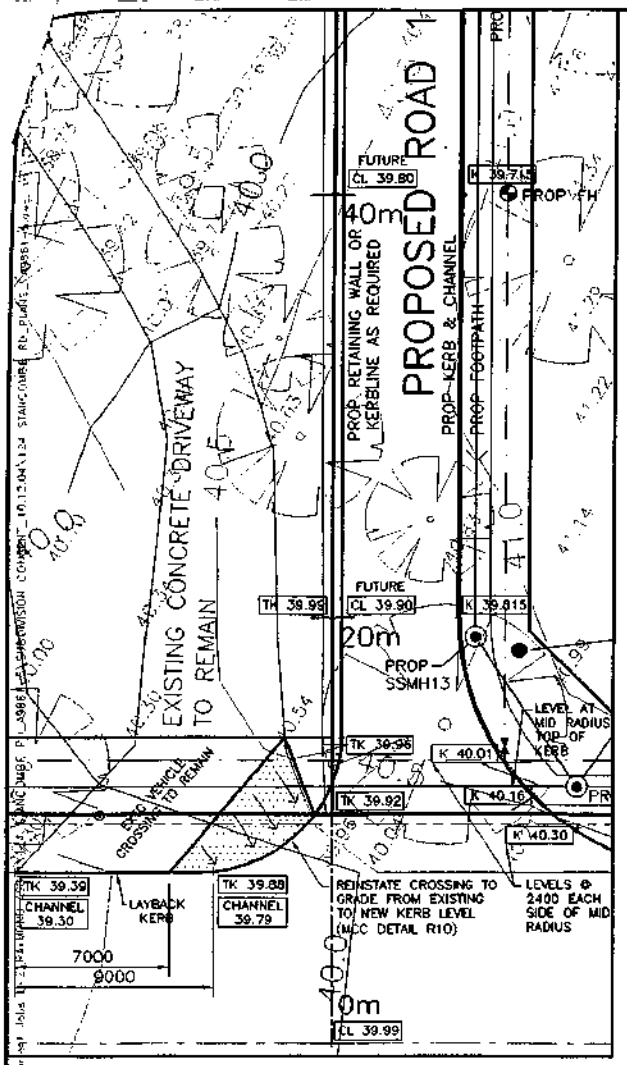
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

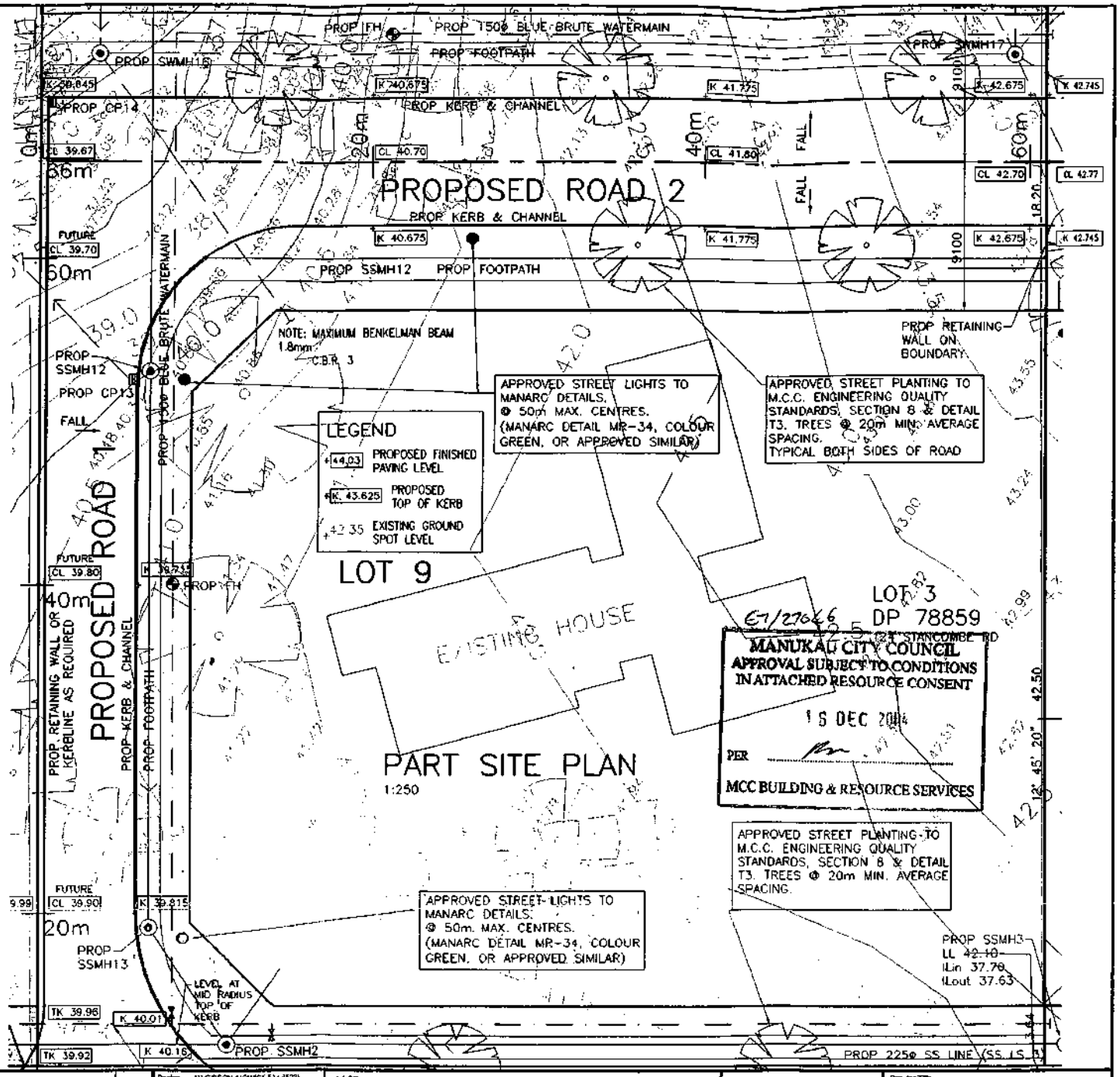
AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takanini, Pukekohe, Howick, Waikato, Otawa

Drawing Title:
SITE PLAN

File No. A9861/5 | Rev. 3 | Dwg. No. 1



PART SITE PLAN
1:250



No.	Revision Details	Date	No.	Revision Details
4	KERB LEVELS TO RADIUS BY STANCOMBE RD ADDED	16/12/04		
3	DRIVEWAY ACCESS FOR No. 122 REVISED	3/12/04		
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04		
1	PROP ROAD 1 REPOSITIONED	22/10/04		

Original Size:

Design: FH GIBSON (HOWICK 534 8529)
Survey: EASDALE SURVEYORS LTD
Drawn: EFP
Checked: HG
Date: SEPT 04
Scale: A3 1:250
CAD Filename:

CONSENT

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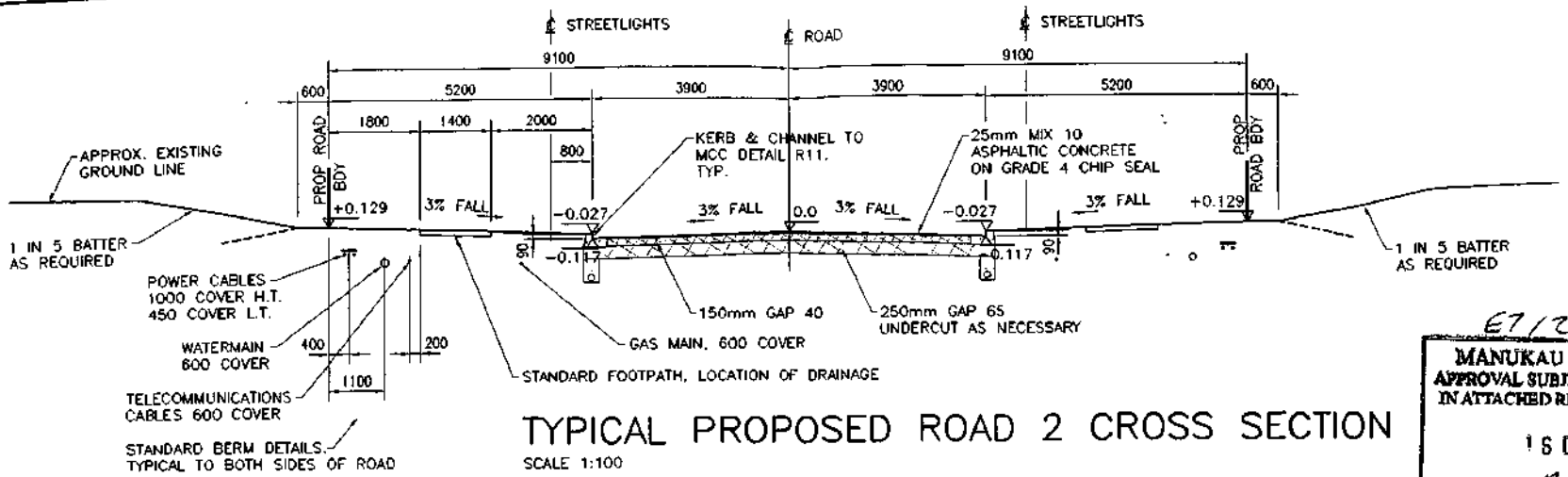
Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Gisborne

Drawing Title
PROPOSED ROAD PLAN
FINISHED LEVELS
STREET LIGHTING & PLANTING

File No.	Rev.	Dwg. No.
A9881/5	4	6



TYPICAL PROPOSED ROAD 2 CROSS SECTION

SCALE 1:100

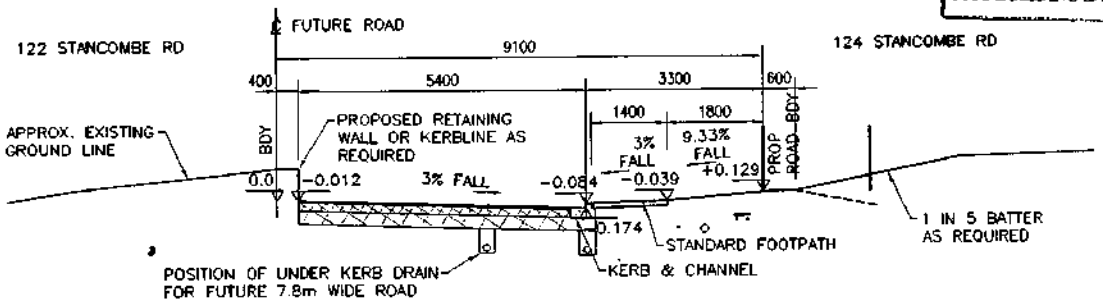
E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

15 DEC 2004

PER

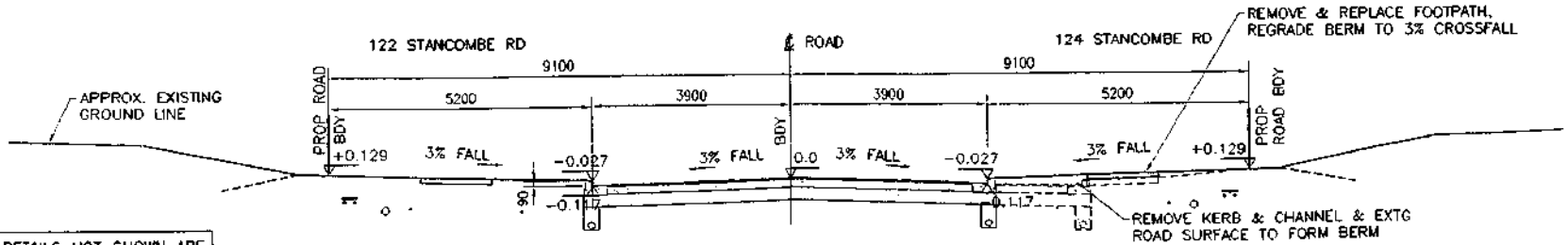
MCC BUILDING & RESOURCE SERVICES



NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100



NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL FUTURE PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100

No.	Revision Details	Date
2	CUEMT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Original Size: A1

Design: I H GIBSON (KIWIMCK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: DL
Checked: IHG
Date: SEPT 04
Scale: 1:100
CAD Filename
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CONSENT

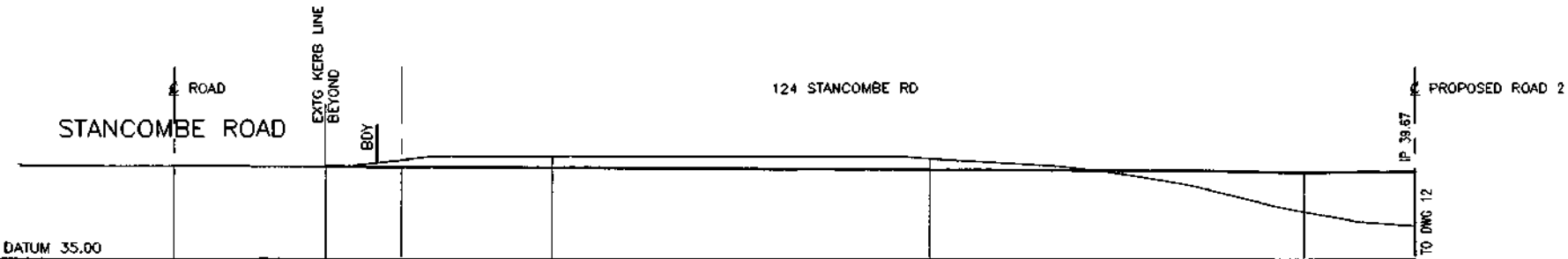
Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

CONSULTATION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Waitemata Realty, Wilkins, Ormsby

Drawing Title
TYPICAL ROAD CROSS SECTIONS

File No. A9861/5 | Rev. 2 | Dwg. No. 7



DATUM 35.00

EXISTING LEVEL	39.99	39.96	40.50	40.40	37.58	36.75
FINISHED LEVEL	39.99	39.96	39.90	39.80	39.70	39.67
CUT-/FILL+	0.00	0.00	-0.60	-0.60	+2.12	+2.92
DISTANCE	0.00	8.00	20.00	40.00	60.00	66.00
GRADIENT			0.5%			

LONGSECTION ON FUTURE CENTRELINE OF PROPOSED ROAD 1

VERT 1:250
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (HOWICK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
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CONSENT

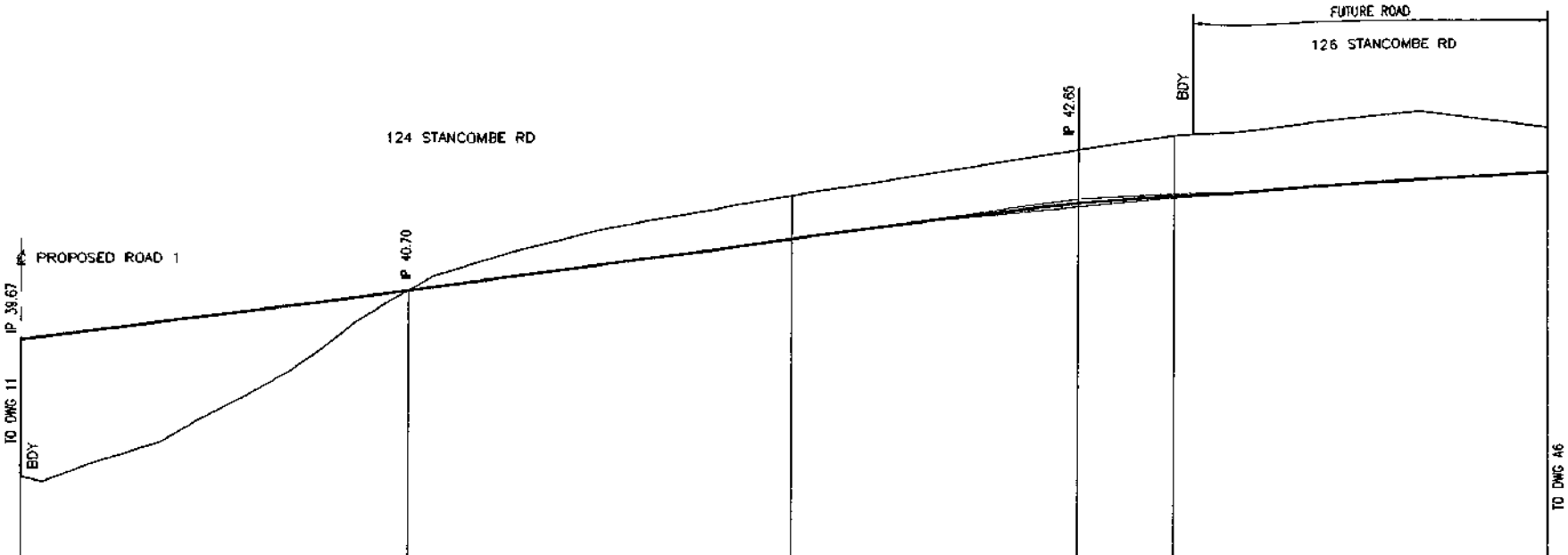
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUPERVISOR

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Telephone, Pakistan, Hyderabad, Wajiha, Orissa

Drawing Title:
PROPOSED ROAD 1
LONGSECTION

File No. A9861/5 | Rev. 2 | Dwg. No. 11



DATUM 35.00

EXISTING LEVEL	36.75	40.70	42.70	43.68	44.00	44.16
FINISHED LEVEL	39.67	40.70	41.80	42.55	42.70	43.15
CUT-/FILL+	+2.92	0.0	-0.90	-1.13	-1.30	-1.01
DISTANCE	0.00	20.00	40.00	55.00	60.00	80.00
GRADIENT	5.15%		5.57%	20m V.C.		2.24%

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

15 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

61/27046

No.	Revision Details	Date
1	CLIENT REVISED	16/11/04

Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GI
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
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CONSENT

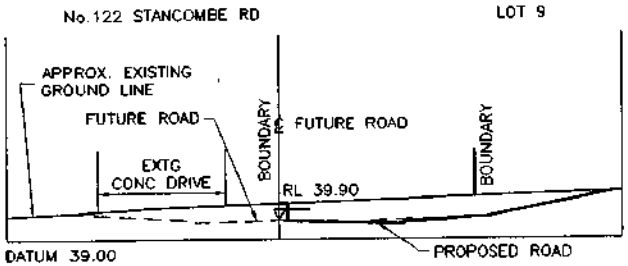
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

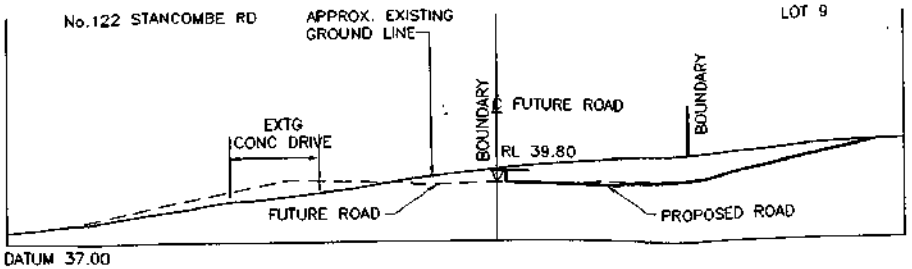
AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 1

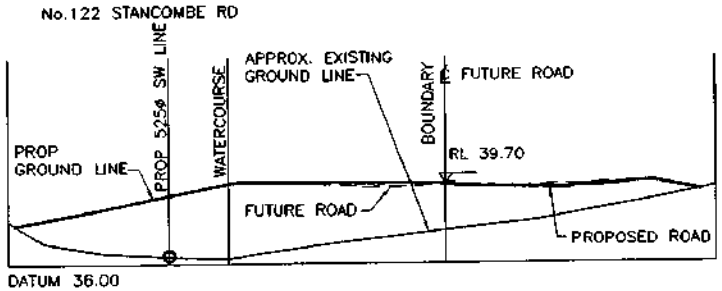
File No. A9861/5 | Rev. 1 | Dwg. No. 12



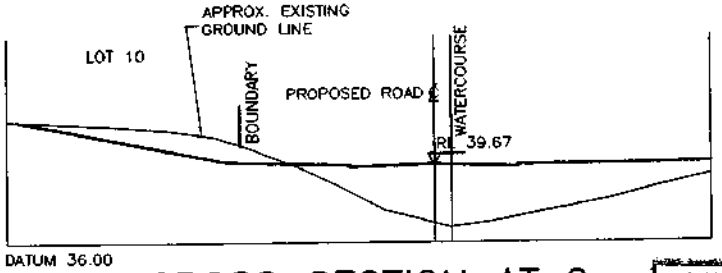
CROSS SECTION AT 20m
PROPOSED ROAD 1
SCALE 1:250



CROSS SECTION AT 40m
PROPOSED ROAD 1
SCALE 1:250



CROSS SECTION AT 60m
PROPOSED ROAD 1
SCALE 1:250



CROSS SECTION AT 0m
PROPOSED ROAD 2
SCALE 1:250

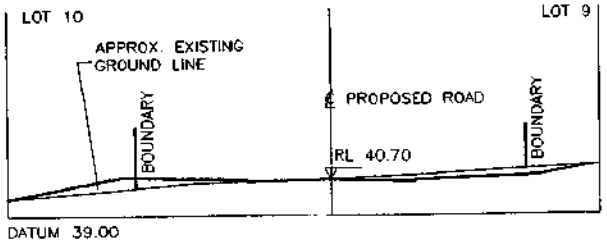
E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

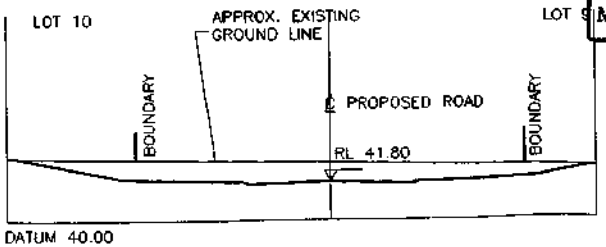
16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES



CROSS SECTION AT 20m
PROPOSED ROAD 2
SCALE 1:250



CROSS SECTION AT 40m
PROPOSED ROAD 2
SCALE 1:250

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: IHG
Date: SEPT '04
Scale: A3 1:250
CAD Filename:
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CONSENT

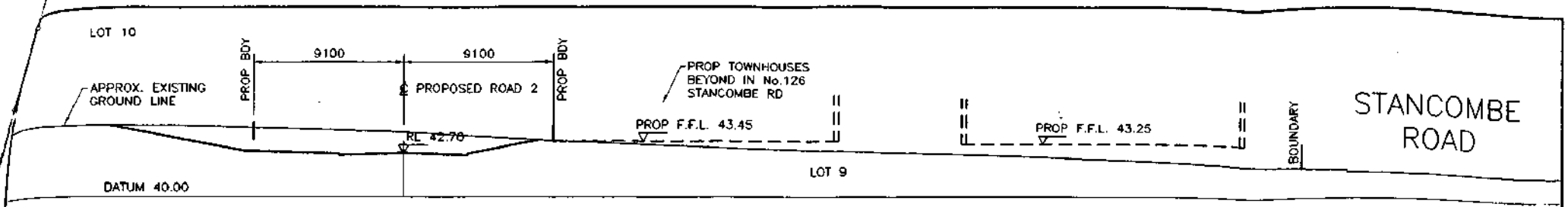
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Telephone, Palmerston, Hawkes, Waikato, Oman

Drawing Title:
CROSS SECTIONS
AT 20m, 40m & 60m PROP ROAD 1
AT 0m, 20m & 40m PROP ROAD 2

File No. A9861/5 | Rev. 2 | Dwg. No. 13



CROSS SECTION AT 60m
PROPOSED ROAD 2

SCALE 1:250

E 7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

No	Revision Details	Date	No	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	23/10/04			

Design: HH GIBSON (HOWICK 534 4573)
Survey: EASDALE SURVEYORS LTD
Drawn: GULFP
Checked: HG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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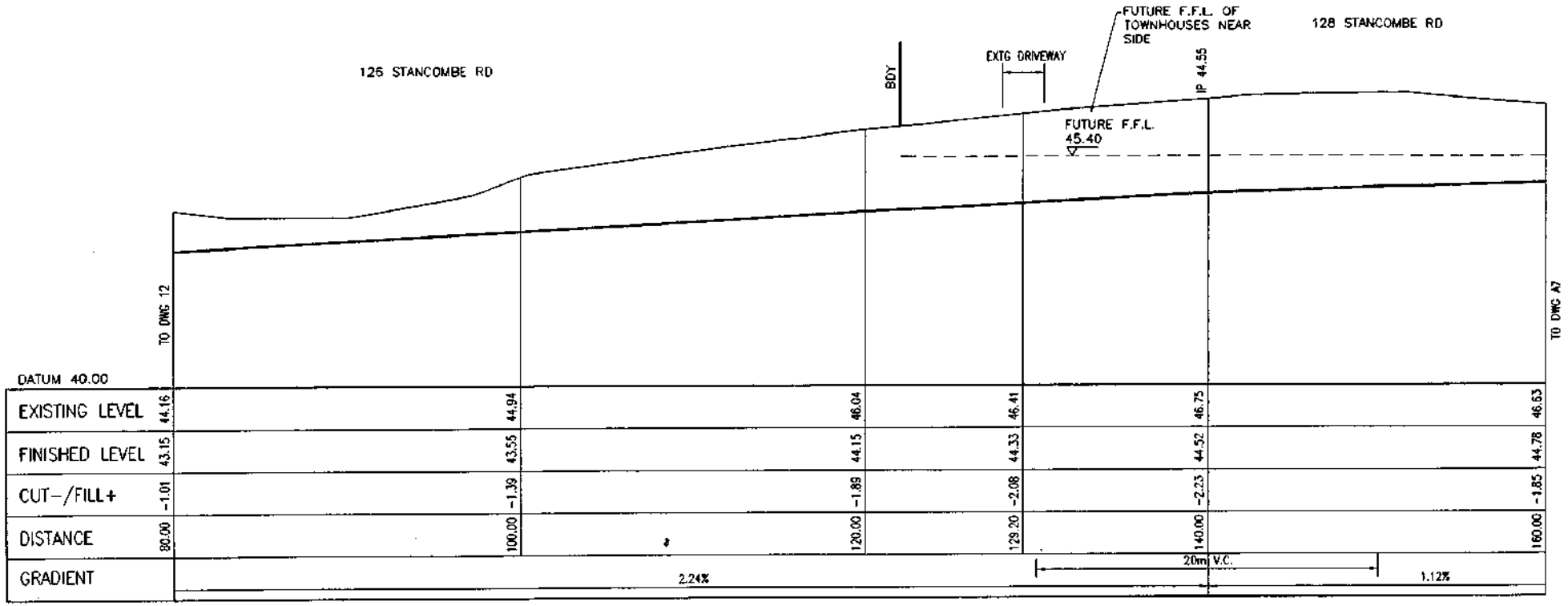
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
CROSS SECTION AT 60m
- PROP ROAD 2

File No. A9861/5 | Rev. 2 | Dwg. No. 14



PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: I.H. GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
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CONSENT

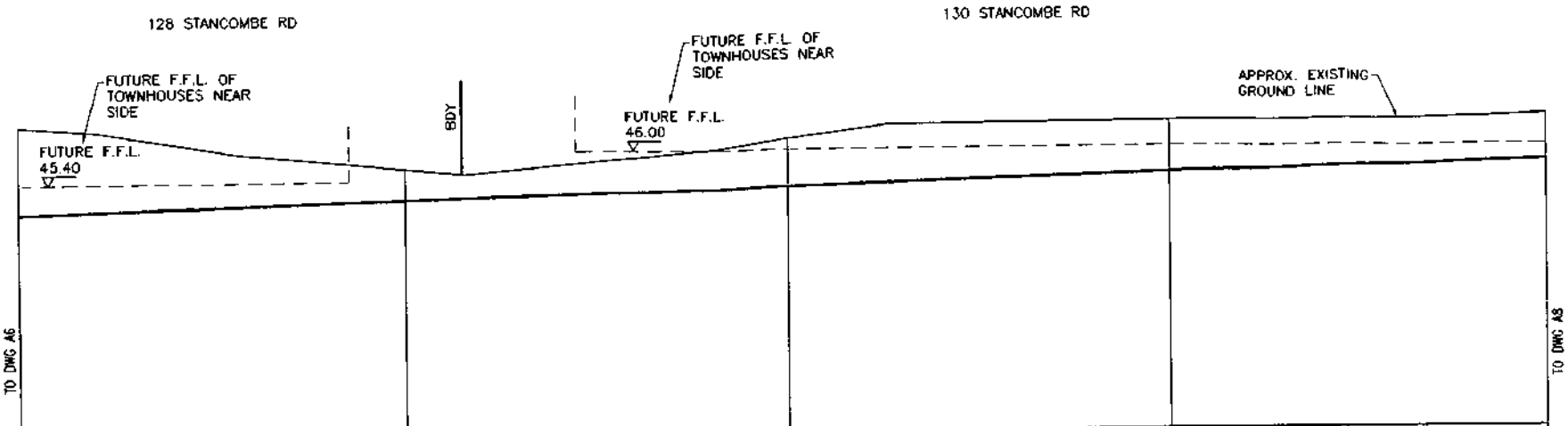
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 2

File No. A9861/5 | Rev. 1 | Dwg. No. A6



DATUM 40.00

EXISTING LEVEL	46.63	45.65	46.23	46.54	46.63
FINISHED LEVEL	44.78	45.00	45.23	45.45	45.68
CUT-/FILL+	-1.85	-0.65	-1.00	-1.09	-0.95
DISTANCE	160.00	180.00	200.00	220.00	240.00
GRADIENT	1.12%				

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: I H GIBSON (HOWICK 534 6520)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04
Scale: AS AS SHOWN
CAD Filename:
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CONSENT

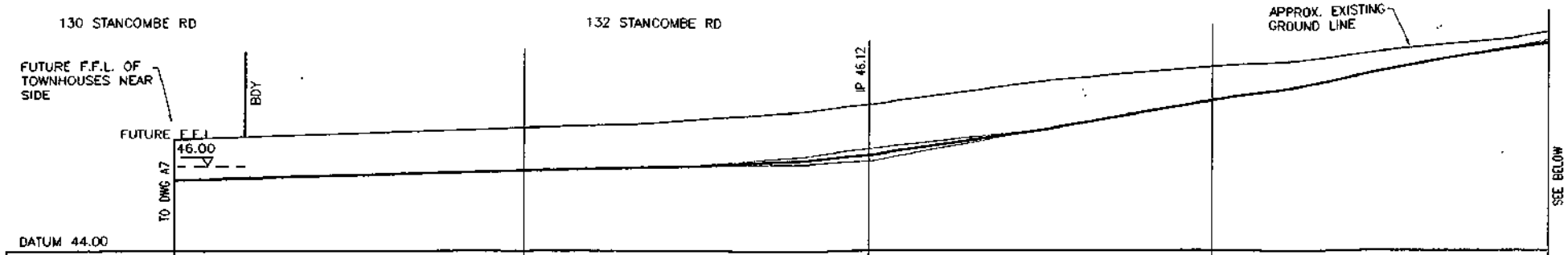
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Telephone, Pensions, Hawks, Waiuku, Orewa

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 3

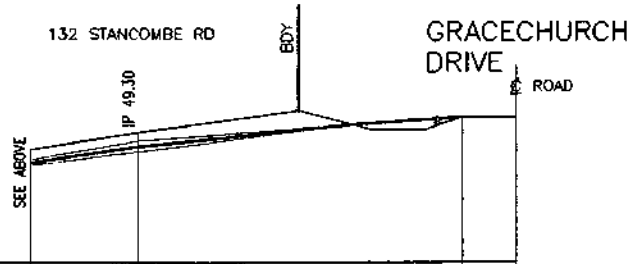
File No. A9861/5 | Rev. 1 | Dwg. No. A7



EXISTING LEVEL	46.63	46.91	47.48	48.34	49.14
FINISHED LEVEL	45.68	45.90	46.27	47.53	48.94
CUT-/FILL+	-0.95	-1.01	-1.21	-0.81	-0.20
DISTANCE	240.00	260.00	280.00	300.00	320.00
GRADIENT	1.12%	20m V.C.		7.07%	20m V.C.

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250



EXISTING LEVEL	49.14	49.46	49.75	49.75
FINISHED LEVEL	48.94	49.20	49.75	
CUT-/FILL+	-0.20	-0.26	0.00	
DISTANCE	320.00	325.00	340.00	342.50
GRADIENT	7.07%	20m V.C. 3.67%		

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	5/11/04			

Design: I.H. GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
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CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 4

File No. A9861/5 | Rev. 1 | Dwg. No. A8

PROJECT CHECKLIST

27046 SP8840
124 STANCOMBE RD FLAT BUSH
CLEVEDON 02/11/04

CARLOS CONCEPTS LTD
PO BOX 27029 6923/124
WELLINGTON $562.50
Att: Mr R J Cummins Subdivision

TWO LOT FEE SIMPLE SUBDIVISION WITH ROAD TO VEST

BRYCE POMFRETT

CROSS REFERENCE
Previous / Associated Files

Deposit Paid: _____ **Receipt No:** _____ **Date:** _____
Plan Sealing Fee: _____ **Receipt No:** _____ **Date:** _____

BONDS

Type	A/C No	Receipt No	Date	$	Expires	Discharged
Formal, with cash	0999-8124					
In-house	0999-8124					
In-house	0999-8124					
Refundable deposit	0999-8124 #1	259943	08.03.06	18,761.00		
Refundable deposit	0999-8124 #2	"	"	25,000.00		

RC008738

UPGRADING CONTRIBUTIONS

Account	A/C No	Receipt No	Date	$
Roading	0999-9832	259943	08.03.06	78,381.13
Land drainage	0999-9822	259943	"	70,002.23
Sanitary drainage	0999-9834	"	"	5816.00
Waer supply	0999-9844	"	"	18,799.00
Water quality	0999-9846			
Comprehensive wtater right	0999-9817	259943	"	447.00
Reserve contribution RC008734	0999-9430 C250 020	"	"	32,400.00
RC008732		"	"	1711.64
Barter Tax RC008736 &				
Road Signs RC008735		259943.	"	364.63

52155.0
27226.1

LT TITLE PLANS / STAGES

Lots	Sealed	Released
Lots 9, 10, 1000 P27046		30.08.05

27046R

Release Procedure Completed ☐

FILE
SHEET 1

Landonline

Toitu te Land whenua Information New Zealand

TA Approvals

Territorial Authority	Manukau City Council TA Certification Division	**TA Reference**	SP8840 P27046 124 Stanco
Survey Number	LT 352580	**Survey Purpose**	LT Subdivision
Surveyor Reference	7576 124 Stancombe	**Land District**	North Auckland
Surveyor	Michael Stuart Lucas		
Surveyor Firm	Easdale Surveyors Ltd		
Dataset Description	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859		

TA Certificates

Pursuant to Section 224(c) Resource Management Act 1991 I hereby certify that all the conditions of the subdivision consent have been complied with to the satisfaction of the Manukau City Council. Dated this 11th day of April 2006. ☑

Signature

Signed by Roger Hamish Low, Authorised Officer, on 11/04/2006 05:33 PM

Receipt Information

Transaction Receipt Number	2154292
Signing Certificate (Distinguished Name)	Low, Roger Hamish
Signing Certificate (Serial Number)	1019176153
Signature Date	11/04/2006

***** End of Report *****

11/4/2006.

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MANUKAU CITY COUNCIL

MINOR WORKS BOND (2)

File reference **SP8840**
Site **124 Stancombe Road**
Applicant **Carlos Concepts Ltd**

In order to satisfy the requirements of section 224(c) of the Resource Management Act 1991 a refundable deposit has been taken in respect to the following uncompleted conditions of consent.

Works to be Completed:

Condition 3 - The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements.

- Roading Reseal

Condition 25 - That the following traffic signage and road markings be installed, to the extent practicable, in accordance with the Transit NZ Manual of Traffic Signs and Markings, as part of the road construction.

(a) A "Give Way " sign (RG-6) at the intersection with Stancombe Road.

(b) Two chevron boards (RC- 5) at the future bend in Carlos Drive,

(c) A 100mm wide continuous reflectorised white centreline around the bend extending 30 metres from the tangent points.(See MOTSAM Fig.2.1[a]) "

(d) "No Stopping At All Times" from the western side of the vehicle crossing of 122 Stancombe Road, around the corner, and along the western side of Carlos Drive to the northern most extent of this road.

Term	3 months
Value	$25,000.00

The time taken to certify that the above works have been completed will be invoiced and will be payable prior to the refunding of the above deposit. Please keep a copy of the receipt and provide it when applying for release to avoid any delays in processing.

_____ Date November 2005

ENVIRONMENTAL SERVICES

RC008738

MANUKAU CITY COUNCIL

MINOR WORKS BOND (1)

File reference **SP8840**
Site **124 Stancombe Road**
Applicant **Carlos Concepts Ltd**

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Condition 3 - The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements.

- Topsoil Berms and Batters North Side Carlos Drive
- Topsoil Berms and Batters around Front Site

Condition 8 - Street lighting facilities shall be supplied and in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

Condition 9(b) - Road upgrading is required along the full frontage (on one half of the road only) to increase the width of Stancombe Road to that of a District Arterial Road with cycle lanes as detailed in Proposed Variation 13 Table 2 and Figure 17.10.3 Standard as defined in Rule 9.14.5.5.2 and appendix 2 of the Manukau Operative District Plan 2002. This work shall include:

The construction of a footpath along Stancombe Road as detailed on the approved engineering plans referenced E7/27046 (sheets 1-21) by Council.

- Footpath Northern Side Carlos Drive
- Footpath Front Site

Condition	19 - That tree planting at the site frontage along the front berm of the roads shall be in accordance with the Robin Duncan Landscape Architect plan referenced 27046 by Council attached to and forming part of this consent.
Condition	20 - Street tree planting shall be undertaken in accordance with the requirements of Rule 17.10.11.8 of Proposed Variation 13 to the Manukau Operative District Plan 2002 with these relevant requirements restated below and forming conditions of consent:

- Street tree planting shall be undertaken in new developments once formation of the street has been completed;
- Street trees shall be planted in the front berm between the kerb and footpath. The front berm for street planting shall have a minimum width of 1.4 metres.
- Street trees are to be provided on both sides of the street at a minimum average spacing of 15 metres.
- Clear visibility of bus stops, pedestrian crossings, sign posts and road intersections (where they are known) are to be maintained.
- The consent holder shall be responsible for the routine maintenance and replacement of any street planting they provide including deadwooding, weed control, mulching and watering for a minimum period of 12 months from the time of planting.
- Trees that are vandalised or dead, or that are not of a suitable specimen form shall be replaced immediately at the cost of the consent holder.

Condition	21 - The street tree species on Stancombe Road shall be London Plane (Platanus acerifolia). The street tree species on "Proposed Road 1 and 2" shall be Sweet Gum (Liquidamber styraciflua).
Condition	22 - The street trees shall be suitably positioned so as not to obstruct intersection line of sight in accordance with MCC Quality Assurance Manual and shall be positioned 3.0m away from driveways at all times in accordance with MCC Quality Assurance Manual.
Term	3 months
Value	$18,761.00

The time taken to certify that the above works have been completed will be invoiced and will be payable prior to the refunding of the above deposit. Please keep a copy of the receipt and provide it when applying for release to avoid any delays in processing.

Date 30th November 2005

ENVIRONMENTAL SERVICES

RL008738

MANUKAU CITY COUNCIL

MINOR WORKS BOND (2)

File reference **SP8840**
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(d) "No Stopping At All Times" from the western side of the vehicle crossing of 122 Stancombe Road, around the corner, and along the western side of Carlos Drive to the northern most extent of this road.

Term	3 months
Value	$25,000.00

The time taken to certify that the above works have been completed will be invoiced and will be payable prior to the refunding of the above deposit. Please keep a copy of the receipt and provide it when applying for release to avoid any delays in processing.

Date 30 November 2005

ENVIRONMENTAL SERVICES

Te Kaunihera o
MANUKAU

LAND INFORMATION REGISTER

Applicant	Carlos Concepts Ltd	**Proposal Number**	27046
Lots	9 and 10	**DP**	352580
Road	Stancombe Road	**Ward**	Clevedon
File Reference	SP8840	**File Reg Number**	c.6366
Development Contribution Paid on the following Lots:	N/A		

Existing Notation

Flood Levels – Lots 9 and 10 DP352580 Detail reference: 44101

Sites may be subject to Flood Hazard in heavy rainfall events. Any Land modification activity within the flood hazard area is likely to require resource consent. For more details refer to the East Tamaki Catchment Management Plan,May 2000 prepared by Beca Carter,Hollings and Ferner Ltd.and District Plan and Variation 13. Prior to any subdivision or building consent the Council may require any or all of the following: 1 Detailed Flood assessment by a registered engineer. 2 Specific Floor Level Design. 3 The creation of an overland flowpath easement in favour of the Council. 4 The issue of a Section 36 (2) certificate in terms of the Building Act. 5 Specific design of any proposed site works. The above requirements may preclude the placement of earth-fill or additional buildings on the site or the resource consent for subdivision or cross-lease. For more information seek advice from the Council.

Redevelopment – Lots 9 and 10 DP352580 Detail reference: 63100

NOT OPERATIVE,REFER TO THE MANUKAU OPERATIVE DISTRICT PLAN 2002,FOR DETAILS.

Site Contamination – Lots 9 and 10 DP352580 Detail reference: 77727

SITE SUITABLE FOR RESIDENTIAL USE;||THIS SITE HAS BEEN SUBJECT TO INVESTIGATIONS BY AN INDEPENDENT CONSULTANT AND BASED ON AN INDEPENDENT REVIEW OF INVESTIGATIONS,THIS SITE IS DEEMED TO BE SUITABLE FOR RESIDENTIAL USE AND THERE ARE NO ADDITIONAL OR SPECIAL RESTRICTIONS ON ITS USE.THE RESTRICTIONS IMPOSED BY RULE 17.10.12.14 INVARIATION NO.13 FLAT BUSH SHALL NO LONGER APPLY TO THIS SITE IN ACCORDANCE WITH RULE 17.10.12.14 (F).RELEVANT REPORTS ARE AVAILABLE FROM THE CITIZEN & CUSTOMER CENTRE,KOTUKU HOUSE,MANUKAU CITY.||

New Notation

Foundation – Lots 9 and 10 DP352580

Foundation soils on the site lie in Site Class S (slightly expansive) as defined in AS2870:1996, with expected characteristic surface ground movements in the order of 0 to 20mm. For the design of all foundations, these should extend to a minimum depth of 0.3 metres below the final cleared ground level.

- ref: Geotechnical Investigation/ Earthworks Completion Report prepared by Geotek Services Ltd dated 2 August 2005 referenced 2704

Restricted development – Lots 9 and 10 DP352580
In accordance with the limitations imposed by NZS3604:1999, fills greater than 0.6 metres that have not been reviewed and approved herein, should not be undertaken on this site without the further review and express approval in writing of the Manukau City Council and that of a Chartered Professional Engineer experienced in geomechanics and familiar with the contents of this Geotechnical report, since such works may, in certain circumstances, disturb existing equilibrium conditions. In a like fashion, cuts should be restricted to no more than 0.6 metres.
-ref: Geotechnical Investigation/ Earthworks Completion Report prepared by Geotek Services Ltd dated 2 August 2005 referenced 2704

Restricted development – Lots 9 and 10 DP352580
Specific design zones have been designed primarily on the basis of two criteria, viz those areas not containing at least 2 metres depth of engineered fill or stiff natural crust over known soft ground, and those with slopes steeper than 1V:4H or near vertical and greater than 0.6m high, which might present concerns with regard to slope stability. These areas are listed below:

(a) Steep cut batters in the northwestern area. These batters are up to 1.5m high and have gradients of up to 1V:2H. While these slopes are considered stable while undeveloped, any foundations on, or within a horizontal distance of 4m above the crest of the slope, should be designed to allow for lateral creep extending to a depth of 1.0m, and acting over a width of 3 pile diameters, unless the land is adequately retained by suitably designed and constructed retaining walls.
(b) Steep fill batter in the southeastern corner, is up to 1.5m high and is considered unstable in its present form, therefore this batter should be adequately supported at the time of any building development closer than 4 metres from the crest.
(c) Areas of stormwater inlet in the northeastern corner of the site were still to be tidied up at the time of preparation of this report. Any foundations in the vicinity should be specifically designed to mitigate the effects of remaining depressions, steep batters and trench backfills.
(d) The soueastern corner of the site has underlying soft deposits as identified in our boreholes 7 and 9. These are expected to have been rendered closer to the surface by removal of up to around 1.5m depth of cut during the earthworks. Therefore we recommend that for all shallow strip and pad foundations on proposed lots 3 and 4, the foundation depths should be limited to no deeper than 0.45m below the as-built levels, and the ultimate bearing pressures should be limited to no greater than 200 kPa, to which figure should be applied an appropriate factor of safety, such as 2.0 for Factored Load Design and 3.0 for Working Strength Design.

For any foundation loads which cannot be accommodated in the above constraints. We recommend the use of specifically designed piles.

-ref: Geotechnical Investigation/ Earthworks Completion Report prepared by Geotek Services Ltd dated 2 August 2005 referenced 2704

Te Kauniheru o
MANUKAU

Miscellaneous – Lots 9 and 10 DP352580
At the time of future development and/or subdivision of 122 Stancombe Road (DP78859). Carlos Drive shall be extended to a legal width of 18.2 metres, and carriageway of 7.8 metres. Correspondingly, that part of the road on the 124 Stancombe Road property will also be upgraded to local road standard in "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards).

- ref: Resource Consent Proposal 27046

Overland Flowpath – Lot 10 DP352580
At the time of future development/ subdivision of Lot 10 DP352580 provision shall be made for the protection of any overland flowpath that is present within the property.

Team Leader Resource Compliance		Date	9.12.05
Entered on database		Date	
Plotted		Date	

Landonline

Toitu te Land whenua Information New Zealand

TA Approvals

Territorial Authority	Manukau City Council TA Certification Division	**TA Reference**	SP8840 P27046 124 Stanco
Survey Number	LT 352580	**Survey Purpose**	LT Subdivision
Surveyor Reference	7576 124 Stancombe	**Land District**	North Auckland
Surveyor	Michael Stuart Lucas		
Surveyor Firm	Easdale Surveyors Ltd		
Dataset Description	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859		

TA Certificates

I hereby certify that plan DP 352580 was approved by the The Manukau City Council pursuant to section 223 of the Resource Management Act 1991 on the 30th day of August 2005. ☑

Signature

Signed by Roger Hamish Low, Authorised Officer, on 30/08/2005 02:29 PM

Receipt Information

Transaction Receipt Number	2076059
Signing Certificate (Distinguished Name)	Low, Roger Hamish
Signing Certificate (Serial Number)	1019176153
Signature Date	30/08/2005

***** End of Report *****

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Environmental Services

Te Kaunihera o MANUKAU City Council

Resource Compliance- Documentation Release

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5163
Email ntaylor@manukau.govt.nz

To Ian Gibson
Company Alney Consultants Ltd
Fax No 5375754
From Nicola Taylor **Phone** 2628900 extension 5877
Date 07·12·05 **No of Pages** 5

Your application for the following is ready for collection:

File reference: SP 8840 P27046 invoices only
Site: 124 Stancombe Road.
Applicant Carlos Concept Ltd.

Land Transfer Plan	Section 224c documentation	Bond documentation
Legal Documents		

The documents can be collected from the Citizen & Customer Centre, Ground Floor, Kotuku House, upon payment of the amount set out below. The customer centre is open weekdays 8.30 am to 5.00 pm except Wednesdays 8.30am to 4.00 pm. Alternatively, the payment may be forwarded to Resource Compliance, Manukau City Council, Private Bag 76917, Manukau City. We will then forward the documents to your office.

CRM 0078476

	Invoice Number	Amount $(incl GST)
Resource Compliance Fee	RC008732	1711.64
Reserve Contribution		32,400.00
Development Contribution		
Roading Contribution		(1) 52155.00 (2) 27826.13
Wastewater Contribution	RC008734	5816.00
Stormwater Contribution		70,002.23
Water Supply Contribution		18,799.00
Water Quality Contribution		
Discharge Levy		447.00
Bonds/Refundable Deposits	RC008738	(1) 18,761.00 (2) 25,000.00
Plan Certification Fee		
Other: Road Sign	RC008735	364.64
Total to pay by cash or Bank Cheque or EFTPOST (GST inclusive)		252,682.63

Faxed 07.12.05

Please note that the documentation will not be released until full payment has been received and cleared. If there are any queries [illegible] the fees/contributions please contact the administrator noted above.

Environmental Services

MANUKAU City Council

Resource Compliance- Documentation Release

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5163
Email ntaylor@manukau.govt.nz

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Please note [illegible] will not be released until full payment has been received and cleared [illegible] the administrator noted above.

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

08/03/2006 11:10 Trn 259943
Cashier NTEREORA

SUNDRY INVOICES Invoice Number RC008738	$43761.00
SUNDRY INVOICES Invoice Number RC008732	$1711.64
SUNDRY INVOICES Invoice Number RC008734	$206845.35
SUNDRY INVOICES Invoice Number RC008735	$364.64

Subtotal	$252682.63
Total	**$252682.63**

Payer: CARLOS CONCEPTS LTD

Received CHEQUE	$252682.63
Cheque # 392550	
Change	**$0.00**

All charges are GST inclusive. Please
retain this receipt for your records

From: Ross Brackebush
To: iang@aireys.co.nz
Subject: Seal damage 124 Stancombe Rd Flatbush

Ian,
Further to our site inspection at the above mentioned address, on Wednesday 8 February 2006,to observe the extent of surface defects, that have been caused by machinery working in conjunction with the recently completed multi storey development.
Council currently holds a 25k cash bond, for damage to the road surface sealing which was paid by the developer,so the 224c certification could be issued.
It was evident at the time of the inspection, that there were many isolated defects,which gave the surface a badly worn look.Although this is probably more cosmetic than structural, there is no doubt the life of the asphaltic surfacing has been reduced prematuarley.I have spoken to representatives from both Fulton Hogan and Works Infrastructures sealing departments who have stated that the only known and proven method to resurface asphaltic concrete, is by conventional chip sealing, and in this case a two coat grade 5 over 3.With the proposed neighbouring developments accessing off the damaged road it would be stupid to undertake this method of rectification as it would be destroyed in no time making a bigger mess than currently there.
With this in mind I propose to charge the developer half the current square metre rate for a two coat chip seal that being $8.00/2 =$4.00 exc GST for the total area in question,this money would be forwarded to the road maintenance coffers for use in the near future when all development has been completed in the immediate area.The road would be RAMM rated each year by MCC'S Network Manager which would be the method to determine when the sealing should be undertaken.
Can you please forward the exact dimensions of the road surface in question along with your thoughts on my proposal
Please ring to discuss,
Regards Ross Brackebush
Resource Compliance Engineer
Manukau City Council.
Ph 262 8900 ext 5794
mob 0274 513 583

SP 8840
27046

27046 SP8840

124 STANCOMBE RD FLAT BUSH
CLEVEDON 02/11/04

CARLOS CONCEPTS LTD
PO BOX 27029 6923/124
WELLINGTON $562.50
Att: Mr R J Cummins Subdivision

TWO LOT FEE SIMPLE SUBDIVISION WITH ROAD TO VEST

BRYCE POMFRETT

Resource Compliance Checklist

223 application received 30.08.05

224f application received

51g application received

224 application received 31/08/5

Found associated files

Entered into *Reflections* 30.08.05

Compliance officer ~~Fiji Tang~~ Bryce Digital

Receipted cheques

224c

RCO Vetting Name & Completion Date N/A

Allocated to Engineer (date) Ross 31/8/5 6/

Engineer Start Date & Name 6/09/05

Finish Date 17/11/05

DIGITAL APPROVAL

223 / 224c

LT: 352580

Info requested & date Objection P27404 Date info rec'd

Info requested & date Roading Contribution as per condition 24 17/11/05 Date info rec'd 17/11 ATTACHED

Info requested & date Date info rec'd

Informal cash bond details are to be sent to Ian Gibson for client signature.

Draft invoice requested (date) 21/11/05 Update *Reflections* 223 30.08.05

Draft invoice received back (date) Update *Reflections* 224c 21/11/05

Legal Documents (Delete if not applicable) 0274 581 290

☐ Overland flowpath easement ☐ Water main easement ☐ Covenants ☐ Bond

Instructions sent to Brookfields [date] Draft received, checked and approved [date]

Clearance received from Brookfields [date]

Release Sign off (Documents not to be released unless signed)

Section 223		Section 224	
RCO Completion Date	30.08.05 FT	RCO Completion Date	21/11/05 Bryce
Peer Review & Date	30/8/2005	Peer Review & Date	25/11/05
Team Leader		Team Leader	

224(c) N/A

(i) amend Barter tax. – land = $20/m² ✓ BY

(ii) fund 24? have $$ been assessed and been paid. ✓ Ross Bry.

(iii) bill for road sign ✓ Bry.

(iv) power letter to be amended. ✓ Ross BY

(v) amend UR + memos ✓ BY.

Resource Consent	**Ok**	**Not Ok**	**N/a**
Check LT plans against supplied consent plans	☑	☐	☐
Check valuation	☑	☐	☐
Date req _____ Date rcvd _____	☐	☐	☑
Check conditions	☑	☐	☐
Amalgamation & Easments			
Check wording & Check DLR number	☐	☐	☑
Check wording of conditional easement memorandum	☐	☐	☑
Easements in gross checked	☐	☐	☑
Right to drain water easements checked Engineer _____ initials	☐	☐	☑
Right to convey water easements checked Engineer _____ initials	☐	☐	☑
Notation includes reference to easements and amalgamation	☐	☐	☑
Width of right of way checked against resource consent plan	☐	☐	☑
Titles limited as to parcels			
Checked by senior subdivision officer	☐	☐	☑
Removal of limitations notations	☐	☐	☑
Roads			
Road boundaries checked	☐	☐	☑
Road to vest sent to GIS to plot	☐	☐	☑
Plot received from GIS and filed	☐	☐	☑
Road names approved	☐	☐	☑
Road names ordered	☐	☐	☑
Lot access			
Lot access frontage checked against resource consent plan	☑	☐	☐
Buildings			
224f check - Unit Title Development – Peer review required date sent to AC Consulting_____ date received back _____	☐	☐	☐
Updates			
Copy in file	☐	☐	☐
No conditions imposed — on plan	☐	☐	☑
Details written on file	☑	☐	☐
Reflections updated / WIP Updated :	☑	☐	☐

DP number 325580 Completed by Fish Tang

224c Subdivision Release Processing	Ok	Not ok	N/a
• S221 consent notice	☐	☐	☒
• S221 (5) for cancellation or variation of consent notice	☐	☐	☒
• S222 completion certificate [for bonds where works are on private property]	☑	☐	☐
• S321(3) (c) for legal road frontage	☐	☐	☒
• S243 for surrendering easements in part or whole	☐	☐	☒
• S241 for cancelling amalgamation conditions	☐	☐	☒
• S108 for cancellation of a covenant	☐	☐	☒
• discharge of encumbrance or caveat in whole or part	☐	☐	☒
• Form 18 for esplanade strips [not reserves]	☐	☐	☒
Bonds			
Bond document [under $25,000 in house]	☑	☐	☐
in house minor bond	☑	☐	☐
in house formal bond	☐	☐	☒
Bond document [over $25,000 legal Brookfields]	☐	☐	☒
Memos			
Memo to LIR with notations to be removed or added [pink and blue]	☑	☐	☐
attach all relevant supporting documentation	☑	☐	☐
memo to buildings [yellow]	☑	☐	☐
attach copy of notations on LIR memo	☑	☐	☐
attach copy of LT plan and survey sheet	☑	☐	☐
Barter tax invoice	☑	☐	☐
Asset register updated	☑	☐	☐
Memo to Roadnet	☑	☐	☐
attach RAMMS information	☑	☐	☐
attached copy of LT plan	☑	☐	☐
road name plan	☑	☐	☐
Memo to Parks and Waste Management	☑	☐	☒
attach copy of LT plan	☑	☐	☒
Memos to other departments	☑	☐	☐

Legal Documentation

	Ok	Not Ok	N/A
Bond	☐	☐	☐

For consent conditions

_____ _____ _____ _____

Value of bond

refundable deposit _____

in house bond [under $25,000] _____ [bank guaranteed]

solicitor bond [over $25,000] _____ [bank guaranteed]

bond period _____ expiry date _____

Section 222 [completion certificate for engineering works on private property]

Required for lots

_____ _____ _____ _____

Prepared	☑	☐	☐

Contributions

Reserve Contribution (copy to Doc release Memo)	☐	☐	☐
Financial Contribution (copy to Doc release Memo)			
Were the contributions set more than 12 months ago?	☐	☐	☐
If yes, is there condition of consent allowing for them to be increased?	☐	☐	☐
Development Contribution (copy to Doc release Memo)	☐	☐	☐

Section 224c application and release of subdivision

Engineering vetting

Check the file for the following documents:

	Ok	Not Ok	N/A
Foundation Completion Report [four copies]	☑	☐	☐
copy sent to Building [date] _____			
QAM documentation	☑	☐	☐
wastewater	☑	☐	☐
stormwater	☑	☐	☐
water reticulation	☑	☐	☐
reserves	☐	☐	☑
As-builts	☑	☐	☐
wastewater	☑	☐	☐
stormwater	☑	☐	☐
water reticulation	☑	☐	☐
overland flow path	☐	☐	☑
ALC forms	☐	☐	☐
wastewater	☑	☐	☐
stormwater	☑	☐	☐
water reticulation	☑	☐	☐
RAMMS forms	☑	☐	☐
Completion Certificate	☑	☐	☐
Barter Tax	☑	☐	☐

Information requested

_____ date _____ received [date] _____

_____ date _____ received [date] _____

_____ date _____ received [date] _____

_____ date _____ received [date] _____

Earthworks

There is a separate checklist for the Foundation Completion Report

Right of entry clearances granted	☑	☐	☐
Copy of foundation completion statement received	☑	☐	☐
Copy of FCR given to building consents co-ordinator	☑	☐	☐
[stamped with disclaimer stamp] date _____			

Copy of FCR checked for:

	Ok	Not Ok	N/a
coverage of all areas shown on LT [including reserves to vest]	☑	☐	☐
coverage of any matters identified during construction	☑	☐	☐
further Geotech advice needed	☐	☐	☑
copy to _____ for comment date _____			
clearance memo received _____ for comment date _____			
FCR checklist form filed in QAM folder [Section 5]	☑	☐	☐

Distribute FCR [after annotation and checking]:

one copy to file	☑	☐	☐
one copy to Building	☑	☐	☐
one copy for LIR [relevant sections annotated]	☑	☐	☐

Waste water [sanitary sewer drainage]

QAM inspection form completed and signed off	☑	☐	☐
uncompleted items quantified	☐	☐	☑
Agreement for connection to proceed [ALC forms]	☑	☐	☐
Agreement for new connections to be installed	☑	☐	☐
Certified copy of as-builts and plans for sanitary sewers	☑	☐	☐
Right of entry clearance granted	☐	☐	☑
Floor level restriction plan	☐	☐	☑
received	☐	☐	☑
benchmark provided	☐	☐	☑
accepted	☐	☐	☑

Land drainage

	Ok	Not Ok	N/A
QAM inspection form completed and signed off	☑	☐	☐
uncompleted items quantified	☐	☐	☑
Right of entry clearances granted	☐	☐	☑
Agreement for hook up to proceed and new connections to proceed	☑	☐	☐
Certified copy of as-builts for stormwater sewers	☑	☐	☐
Floor level restriction plan	☐	☐	☑
received	☐	☐	☑
benchmark provided	☐	☐	☑
accepted	☐	☐	☑
Overland flowpaths	☐	☐	☑
as-built plan	☐	☐	☑
check levels against design [if not ok then forward to consent engineer for validation]	☐	☐	☑
benchmark provided	☐	☐	☑
check floor levels	☐	☐	☑
Easements	☐	☐	☑
alignment of LT to as-built	☐	☐	☑
alignment of as-built to approved plans	☐	☐	☑
copy of AB for easement – signed, stamped and dated	☐	☐	☑
final inspection completed [date] _____			
Private drainage			
as-built plan received and CCC issued for redirection	☐	☐	☑

Water reticulation

QAM inspection form completed and signed off	☑	☐	☐
uncompleted items quantified	☐	☐	☑
Agreement for hook up to proceed	☑	☐	☐
Agreement for meters to be relocated and installed	☐	☐	☑
Certified copy of as-builts for water mains	☑	☐	☐
Certified copy of as-builts for water mains	☑	☐	☐
Water main duct boundary dimensions [islands or median strips]	☐	☐	☑
Check water main meter installed if applicable [islands or median strips]	☐	☐	☑

Roading

QAM inspection forms completed and signed off	☒	☐	☐
Final inspection held	☒	☐	☐
Beam test compliance confirmed	☒	☐	☐
Uncompleted items quantified	☐	☐	☒
Lots with access constraints to go to LIR identified and plan provided	☒	☐	☐
Completed RAMMS forms [x2]	☒	☐	☐
Roading details	☒	☐	☐
check forms complete for each road	☒	☐	☐
sealing details	☒	☐	☐
street lighting Bonded	☒	☐	☐
Copy of all RAMM forms and approved roading plans assembled for Roadnet	☒	☐	☐

See attached sheet [*Memo to Transportation re road asset update*]

Street planting

	Ok	Not Ok	N/A
As built certification from consultant	☐	☐	☐
Validation of locations	☐	☐	☐
Confirmation of species and planting by Parks	☐	☐	☐
request issued [date] _____	☐	☐	☐
confirmation received [date] _____	☐	☐	☐
	☐	☐	☐
Street planting water meter arranged [where isolated by roads]	☐	☐	☐

Bonded

Reserves

QAM inspection forms completed and signed off	☐	☐	☒
Final inspection held	☐	☐	☒
Uncompleted items identified	☐	☐	☒
Alignment to LTs confirmed	☐	☐	☒
Foreshore reserve clearance	☐	☐	☒
FCR coverage checked and confirmed	☐	☐	☒
Bonded items	☐	☐	☒

Final release

Scheme plan engineering conditions checked and confirmed for coverage	☐	☐	☑
QAM inspection forms completed and signed off	☑	☐	☐
If common access way only [no roading] inspection completed	☐	☐	☑
Engineering completion certificate	☑	☐	☐
check certificate for common access way	☐	☐	☑
Breakdown of assets to be vested	☑	☐	☐
Collate uncompleted items for bonding	☑	☐	☐
Bonding arrangements in place:			
refundable deposit x 2	☑	☐	☐
in house bond	☐	☐	☑
formal bond	☐	☐	☑
bond figure and condition numbers confirmed to RCO	☐	☐	☑
Section 222 completion certificate lots _____	☐	☐	☑
Duration of bond _____	OK	MST OK	N/A
Detailed list of bonded items in file	☑	☐	☐
Resource consent conditions covered by bond	☐	☐	☐
Condition numbers _____ _____ _____ _____ _____			
Lots placed on LIR noted on release			
foundations SEE ATTACHED.	☑	☐	☐
overland flow	☐	☐	☐
limited SW servicing	☐	☐	☐
limited SS servicing	☐	☐	☐
restricted access	☐	☐	☐
scheme plan advice note	☐	☐	☐

New Consent Notices

_____

_____

_____

_____

_____

_____

_____

_____

New LIR notations FUTURE ~~DO~~ ROAD DEVELOPMENT

CONDITION 4 OF "REASONS FOR THE DECISION" AS HIGHLIGHTED IN YELLOW IN THE RESOURCE CONSENT

GEOTECHNICAL L.I.R NOTATIONS AS ATTACHED HIGHLIGHTED IN YELLOW

Existing LIR notation

~~spec for design~~

~~S. sect~~

~~bond Trus~~

~~- rd marking~~ ~~$18 [illegible]~~

~~[illegible] $15000~~

~~rd alocation~~

~~[illegible] stuff~~

~~[illegible] for [illegible] 10. [illegible]~~

~~[illegible]~~

bill for road sign

~~[illegible] sect~~

~~[illegible]~~

~~cond 8, 9(5), 22, 25~~ 19-

cond 24 = $8 [illegible]?

From: Ben Yu
To: Iang@aireys.co.nz
Date: 12/9/05 12:35p.m.
Subject: 124 Stancombe Road

P27046

Hi Ian,

Please find the attached invoices for the above subdivision. Upon confirmation that all contributions and fees are paid, Council will issue digital approval of 224c certificate through Land Information New Zealand. Pleas make the payment available by Bank Cheque.

* Please confirm this email and the payment either via email or fax (262 5163).

Regards

Ben Yu
Resource Compliance Officer
Manukau City Council
Ph: 262 8900 Ext 8443
Fax: 262 5163

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC008732

Invoice Date: 07 Dec 2005
Customer No: 0078476
Charge Ref: PRC27538
Order No:

Carlos Concepts Limited
PO Box 27029
Wellington 6015

COPY

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5877*

Description	Quantity	Unit Price	Amount
PRC27046 124 Stancombe Rd, Clevedon			
Administration Fee	1.00 Each	93.33	93.33
Authorisation	0.30 Hours	105.00	31.50
Engineering Release	4.50 Hours	109.25	491.63
LT Plan Checking	1.50 Hours	70.00	105.00
Pre-Construction Meeting	2.00 Hours	90.00	180.00
Subdivision Release	6.00 Hours	70.00	420.00
LT Plan Certfication	1.00 Each	200.00	200.00

SP 8840 - Resource compliance fees

Sub Total $1,521.46
GST $190.18

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Jan 2006	AMOUNT DUE	$1,711.64

Carlos Concepts Limited
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Customer No: 0078476
Invoice No: RC008732
Charge Ref: PRC27538

DUE DATE	20 Jan 2006
AMOUNT DUE	$1,711.64

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC008734

Invoice Date: 07 Dec 2005
Customer No: 0078476
Charge Ref: PRC27046
Order No:

Carlos Concepts Limited
PO Box 27029
Wellington 6015

COPY

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone 262 6900 ext. 5877

Description	Quantity	Unit Price	Amount
PRC27046			
Discharge Levy	1.00 Each	397.33	397.33
Reserve Contribution	1.00 Each	28,800.00	28,800.00
Roading Contribution	1.00 Each	70,561.00	70,561.00
$52,155.00 + 2$27,226.13			
Stormwater Contribution	1.00 Each	62,224.20	62,224.20
Water Supply Contribution	1.00 Each	16,710.22	16,710.22
Wastewater Contribution	1.00 Each	5,169.78	5,169.78

SP 8840 - Resource compliance contributions

Sub Total $183,862.53
GST $22,982.82

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Jan 2006	AMOUNT DUE	$206,845.35

Carlos Concepts Limited
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Customer No: 0078476
Invoice No: RC008734
Charge Ref: PRC27046

DUE DATE	20 Jan 2006
AMOUNT DUE	$206,845.35

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-983-660

Tax Invoice No	RC008738

Invoice Date: 07 Dec 2005
Customer No: 0078476
Charge Ref: PRC27046
Order No:

Carlos Concepts Limited
PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone 262 8900 ext. 5877

COPY

Description	Quantity	Unit Price	Amount
PRC27046 124 Stancombe Rd, Clevedon			
Bonds/Refundable Deposit	1.00 Each	43,761.00	43,761.00
Bond 1 $18761.00 & Bond 2 $25,000.00			

SP 8840 - Refundable bonds

Sub Total $43,761.00
GST $0.00

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Jan 2006	AMOUNT DUE	$43,761.00

Carlos Concepts Limited
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Customer No: 0078476
Invoice No: RC008738
Charge Ref: PRC27046

DUE DATE	20 Jan 2006
AMOUNT DUE	$43,761.00

Please note any change of postal address below:

_____

_____

_____

Telephone: _____

AMOUNT PAID $_____

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC008735

Invoice Date:	07 Dec 2005
Customer No:	0078476
Charge Ref:	PRC27046
Order No:	

Carlos Concepts Limited
PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5877*

COPY

Description	Quantity	Unit Price	Amount
PRC27046 124 Stancombe Rd, Clevedon			
Road Signs	1.00 Hours	324.12	324.12

SP B840

Sub Total	$324.12
GST	$40.52

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Jan 2006	AMOUNT DUE	$364.64

Carlos Concepts Limited
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Customer No:	0078476
Invoice No:	RC008735
Charge Ref:	PRC27046

DUE DATE	20 Jan 2006
AMOUNT DUE	$364.64

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

RL008736. & Cr.

APPENDIX 8

SUBDIVIDER / DEVELOPER TAX INVOICE
GST REGISTERED APPLICANT

Company name: Carlos Concepts LTD.

Address: PoBox 27029
Wellington

GST No: 89-281-946 Date: 23/8/05.

Issued to **Manukau City Council**

Dr to: Carlos Concepts LTD (Subdivider / Developer*)

For barter with **Manukau City Council** of roading, reserve, drainage, watermain included in SP 8840 subdivision / development* located at 124 Stancombe Rd, Flat Bush.

LT Plan No(s): 352580

$20 - $25 max

39307.50.

Land to vest as road, accessway &/or service lane:
047 m² @ $ ~~$125.495~~ m² ~~$245,671.88~~ (incl GST)

Land to vest as reserves:
~~m² @ $ m² (incl GST)~~

Construction cost:	Carriageway	$ 56179.07 plus GST	68201.45	(incl GST)
	Concrete works	$ 18802.50 plus GST	21152.81	(incl GST)
	Sanitary sewer	$ 90176-00 plus GST	101448.00	(incl GST)
	Stormwater	$ 76812.50 plus GST	86414.06	(incl GST)
	Water reticulation	$ 53895.00 plus GST	60631.88	(incl GST)
		Total	~~578,520.08~~	(incl GST)

372,155.70

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC008736

Invoice Date: 07 Dec 2005
Customer No: 0078476
Charge Ref: PRC27046
Order No:

Carlos Concepts Limited
PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone 262 8900 ext. 5877

COPY

Description	Quantity	Unit Price	Amount
PRC27046 124 Stancombe Rd, Clevedon			
Carriageway	1.00 Each	56,179.07	56,179.07
Concrete Works	1.00 Each	18,802.50	18,802.50
Land to Vest as Roads	1.00 Each	34,940.00	34,940.00
Sanitary Sewer	1.00 Each	90,176.00	90,176.00
Stormwater	1.00 Each	76,812.50	76,812.50
Water Reticulation	1.00 Each	53,895.00	53,895.00

SP 8840 - BARTER TAX INVOICE - only

Sub Total $330,805.07
GST $41,350.63

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Jan 2006	AMOUNT DUE	$372,155.70

Carlos Concepts Limited
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Customer No: 0078476
Invoice No: RC008736
Charge Ref: PRC27046

DUE DATE	20 Jan 2006
AMOUNT DUE	$372,155.70

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Credit Note

GST Reg. No. 51-983-660

Tax Credit Note No	RC008736CR

Invoice Date: 07 Dec 2005
Customer No: 0078476
Charge Ref: PRC27046
Order No:

Carlos Concepts Limited
PO Box 27029
Wellington 6015

COPY

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5877*

Description	Quantity	Unit Price	Amount
PRC27046 124 Stancombe Rd, Clevedon			
Carriageway	-1.00 Each	56,179.07	-56,179.07
Concrete Works	-1.00 Each	18,802.50	-18,802.50
Land to Vest as Roads	-1.00 Each	34,940.00	-34,940.00
Sanitary Sewer	-1.00 Each	90,176.00	-90,176.00
Stormwater	-1.00 Each	76,812.50	-76,812.50
Water Reticulation	-1.00 Each	53,895.00	-53,895.00

SP 8840 - BARTER TAX INVOICE only - credit

Sub Total	-$330,805.07
GST	-$41,350.63

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Jan 2006	AMOUNT DUE	-$372,155.70

Carlos Concepts Limited
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Customer No: 0078476
Invoice No: RC008736CR
Charge Ref: PRC27046

DUE DATE	20 Jan 2006
AMOUNT DUE	-$372,155.70

Please note any change of postal address below:

Telephone:

AIREY CONSULTANTS LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
39 MEADOWLAND DRIVE,
P. O. BOX 39 101, HOWICK
PH: 09 534 6523 FAX: 09 537 5754
EMAIL:iang@aireys.co.nz

AIREY CONSULTANTS LTD.

FACSIMILE TRANSMISSION HEADER SHEET

To	Telecom		
Attn	Graeme Norton		
Re.	124 Stancombe completion certificate	Date	28\11\05
		Pages	3
From	Ian	File	9861\4
Fax No.	3581273		
CC:		CC:	

Dear Graeme
Enclosed is the cert you gave us which has been rejected by council ,and the model which they will accept. Can you please modify to keep them happy
Regards
Ian

Attn
Ross

IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CONTACT US IMMEDIATELY.

The information contained in this fax is confidential between Airey Consultants Ltd and the intended recipient. Any other person receiving this fax is required to respect the confidentiality and may not disclose, copy or make use of its contents. If this fax has been received in error, would the recipient please notify Airey Consultants Ltd immediately and return it by mail. Airey Consultants will reimburse the cost incurred.

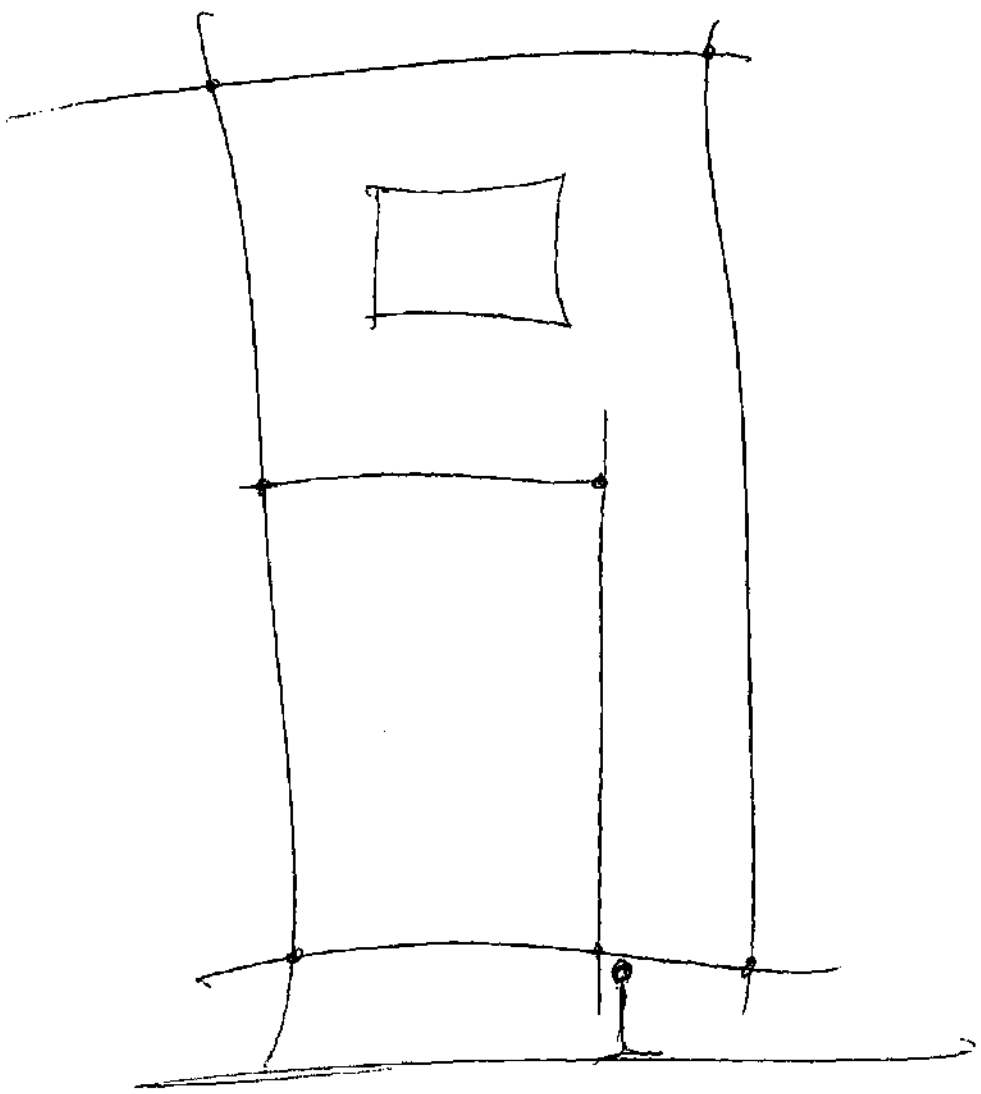
• 9.27 PETER GRAHAM 0274 347895
OTAKI MOUNTAIN ROAD

• 9.55 SEAN FOWLER 0274 925 359 ✓

• 11.57 15 PAUL THOMAS 09 4864542 0274 865002

• 1.43 4 KERRY ✓
• 3.51 ALISON HIRESTONE 0274 820947 ✓

• 4.27 ELTON ✓



Telecom

Telecom New Zealand Limited
Network Delivery
Level 1 Zespri House
9 Hopetoun Street
PO Box 92 028
Auckland

Our Ref: AS103466
Your Ref:

Telephone: 09 357 7038
Facsimile: 09 358 1273

Carlos Concepts Ltd
C/o Airey Consultants Ltd
39 Meadowland Dve
PO Box 39 101
Howick
Attention: Ian Gibson

Date: 18/08/2005

RE: Proposed Subdivision Carlos Concepts Ltd
124 Stancombe Rd, Stage 1
Lots 9, 10 & 1000 DP 352580 being a subdivision of Lot 3 DP 78859

TELEPHONE NETWORK PROVISIONING
SUBDIVISION SIGN OFF

The above subdivision has been reticulated to the standards of Telecom New Zealand Ltd.

It should be noted that this certificate does not cover service lead-ins to individual lots.

Yours faithfully

Graeme Norton
Network Deployment Specialist

What you gave us

From: Ben Yu
To: paul.cammons@opus.co.nz
Date: 11/28/05 11:18a.m.
Subject: 124 Stancombe Road

P27046
SP8840

Hi Paul,

Please find the attached RAMM informations and Land Transfer Plan for the above subdivision.

Regards

Ben Yu
Resource Compliance Officer
Manukau City Council
Ph: 262 8900 Ext 8443
Fax: 262 5163

From: Ben Yu
To: Iang@aireys.co.nz
Date: 11/26/05 1:11p.m.
Subject: 124 Stancombe Road

P27046
SP8840

Hi Ian,

The above job has been peer reviewed. However, we need you to re-submit the power and telephone certificate again. Base on we have to make sure services have been connected to all new lots. (Lots 9 and 10 in this case). So, please arrange the certificates and we need service providers to demonstrate services have been provided for Lots 9 and 10. The attached template certificates are for your reference.

Regards

Ben Yu
Resource Compliance Officer
Manukau City Council
Ph: 262 8900 Ext 8443
Fax: 262 5163

Environmental Services

16 December 2004

Resource Consent

Marked up for engineering review

Carlos Concepts Ltd
C/- Working Concepts Ltd
P.O. Box 58-395
Greenmount

Attention: Sandy Heard

Dear Madam

DECISION ON AN APPLICATION FOR SUBDIVISION RESOURCE CONSENT AND ASSOCIATED LAND USE RESOURCE CONSENT FOR LAND MODIFICATION AND TREE REMOVAL.

Applicant: Carlos Concepts Ltd

Application: **Part A - Land Use Consent (Manukau Operative District Plan 2002)**

Restricted Discretionary Activity for land modification works being a total of 3300m^3 cut and fill.

Discretionary Activity for removal of 12 protected trees being:

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- 2 x Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
- Two Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- English Oak (*Quercus Robur*)
- 2 x Pohutukawa (*Metrosideros excelsa*)

Part B - Subdivision Consent

Manukau Operative District Plan 2002

Non-Complying Activity for 2 lot subdivision (with road to vest) in the Rural 3 Zone contravening Rule 12.15.3.

Restricted Discretionary Activity for subdivision of a site with road frontage to the Primary Road Network (Stancombe Road).

Restricted Discretionary Activity for provision of Public Utility Services (stormwater, wastewater, roading, and water supply) in conjunction with subdivision.

Variation 13 to the Manukau Operative District Plan 2002

Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.1 Movement Network by exceeding the maximum 250m block length by 63 metres.
Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.6 for Proposed Lot 10 by infringing the required 25% front boundary requirement by 1.5%.
Restricted Discretionary Activity under Rule 17.10.12.13 for investigation of Asbestos Containing Materials on this site.

Location:	124 Stancombe Road, Flat Bush (and 122 Stancombe Road, Flat Bush for some land modification works and tree removal)
Legal Description:	Lot 3 DP 78859 (and land modification works and tree removal on Lot 2 DP 78859)
MCC Reference:	SP8840
Proposal No:	27046
Zone:	Rural 3 - Manukau Operative District Plan 2002 Flat Bush Residential 1 – General and Arterial Precincts (Special Policy Area Boundary: Flat Bush Buffer Area) – Proposed Variation 13.

DECISION

PART A – LAND USE CONSENT

I wish to advise that consent for the above application was granted on 16 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104C and 108 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046** by Council except where amended by the following conditions of consent.

Tree Removal

3. That the removal of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 shall be limited to the following trees on the following sites:

124 Stancombe Road, Flat Bush

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
- Pin Oak (*Quercus palustris*)

The above trees being those numbered 16-22 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated September 2004.

Advice Note: Tree 23 identified within the Specimen Tree Company Report dated September 2004 is not a Pin Oak and does not exceed 6 metres in height. Accordingly, it is not protected under the Manukau Operative District Plan 2002.

122 Stancombe Road, Flat Bush

- Indian Cedar (*Cedrus deodara*)
- English Oak (*Quercus Robur*)
- Two Pohutukawa (*Metrosideros excelsa*)

The above trees being those numbered 1-4 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated 23 November 2004.

Advice Note:

During consultation between the applicant and Ngai Tai Umupuia Te Waka Totara it has been requested that any native trees removed as part of the earthworks (which are less than 6 metres in height and are, therefore, not subject of this resource consent, or the two Pohutukawa on the 122 Stancombe Road property) be donated to the iwi - Ngai Tai Umupuia. Arrangements can be made with Jaroz Adams (Phone: (09) 292-9020 or email: tewakatotara@xtra.co.nz should the consent holder choose to make this donation.

4. The trees identified for removal under condition (3) above shall be clearly marked and identified by a suitably qualified arborist prior to their removal being undertaken.

5. All tree removals shall be in accordance with accepted arboricultural practice.

6. Tree removal operations shall be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

Earthworks

7. The earthworks construction shall be undertaken in accordance with:

   (a) The erosion and sediment control plan as detailed in the approved plans referenced E7/27046 by Council

   (b) Auckland Regional Council Technical Publication 90 - TP90 Erosion and Sediment Control.

(c) The recommendations of the geotechnical report from Geotek Services Ltd (Ref 2532, dated 30 June 2004).

8. The works shall be undertaken in such a manner as to ensure that beyond the boundary of the site there should be no 'dust' or 'soil erosion / siltation', which in the opinion of the Manager - Resource Consents & Compliance, is objectionable, offensive or has the potential to create an adverse effect on the receiving environment.

9. The consent holder shall be responsible to ensure that the land within the above site and the land on adjoining properties remains stable at all times in respect to the approved works.

10. The septic tank on this site shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

11. Control measures shall be in place to ensure that any trucks leaving the site do not deposit soil or other debris on public roads. Any such material deposited on any public road shall be cleaned up immediately at the consent holder's expense.

12. Prior to development commencing, the consent holder shall provide Council's Manager - Environmental Health and Compliance with details of the level of communication with neighbouring property owners/occupiers and identification of the liaison person. The consent holder shall ensure that, before commencement of the development, the owners of all adjoining properties are notified in writing of the development in general, its expected duration, the times at which it will be undertaken, and the name of a responsible person with whom neighbours can liaise if the need arises. (Any queries in the foregoing should be referred to the Manager - Environmental Health and Compliance).

Environmental Health

13. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

14. Prior to commencement of any land modification works, or tree removal on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to

extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Although the proposed location of the earthworks do not contain any known archaeological sites, it is possible that unrecorded sites may exist. Under the Historic Places Act 1993, it is unlawful for any person to destroy, damage or modify an archaeological site unless the relevant consents have been obtained from the New Zealand Historic Places Trust. In the event of archaeological features being uncovered (e.g. shell midden, hangi or oven stones, pit depressions, defensive ditches, artefact material or human bones) work is to cease in the vicinity of the discovery and the New Zealand Historic Places Trust and appropriate iwi authorities shall be contacted so that the appropriate action can be taken. This includes such persons being given reasonable time to record and recover archaeological features discovered before work may recommence.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B, and 104C of the Resource Management Act 1991 and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002. .

2. Proposed Variation 13 to the Manukau Operative District Plan envisages that this site be available for residential development of a medium / high density. Whilst this requires removal of a number of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 and land modification works it is considered these works are necessary to fulfil the ultimate intention of residential development of the site provided under Variation 13 to the Manukau Operative District Plan.

PART B – SUBDIVISION CONSENT BONDED ITEMS ARE HIGHLIGHTED [redacted]

I wish to advise that consent for the above application was granted on 16 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104C,104D and 220 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full. ✓

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046 (SP8840)** by Council except where amended by the following conditions of consent. ✓

Engineering

3. The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

   (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

   (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

   (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

   (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

   (v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

4. A satisfactory foundation completion report for the site shall be submitted to Council for approval upon completion of the land modification works (approved under Part A – Land Use Consent). Should the Land Transfer Plan differ from the approved subdivision plan then the Foundation report shall be amended accordingly.

   Unless the foundation completion report states that a building constructed in compliance with NZS 3604: 1999 does not need specific design for the building foundations, a record will be placed on Council's Land Information Register requiring that the recommendations of that report be complied with.

   If 'Extremely Expansive Soils' [AS 2870 (1996) Class E or equivalent] or 'Specific Design Requirements' are indicated, a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 will also be required.

   [illegible] RELATIONS ARE ON CHECKLIST.

5. Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment area with individual connection points in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

6. Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

Roading

7. The proposed new road shall be constructed in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

8. Street lighting facilities shall be supplied and in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

9. Road upgrading is required along the full frontage (on one half of the road only) to increase the width of Stancombe Road to that of a District Arterial Road with cycle lanes as detailed in Proposed Variation 13 Table 2 and Figure 17.10.3 Standard as defined in Rule 9.14.5.5.2 and appendix 2 of the Manukau Operative District Plan 2002. This work shall include:

   (a) The vesting as Road of 3.64 metres of land being in general one half of the additional extra legal road width required.

   Manukau City Council will pay compensation for the land required in excess of a collector road for Stancombe Road. (See rule 9.9.2.11(a)(viii) of the Manukau Operative District Plan 2002.) The quantum of this compensation shall be agreed with the Manager Transportation, Manukau City Council. (Chris Freke, Phone 262 5799, email cfreke@manukau.govt.nz.)

   (b) The construction of a footpath along Stancombe Road as detailed on the approved engineering plans referenced E7/27046 (sheets 1-21) by Council.

10. Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed lots.

    The consent holder shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts.

11. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

Financial Contributions

12. A Comprehensive **Stormwater Discharge** Levy of $447.00 including GST shall be paid to Manukau City Council.

The consent holder is advised that this levy (FC45) has been calculated at $490.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

13. A **Stormwater** contribution of $70,002.23 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC259 – Flat Bus Stormwater) has been calculated at $76,820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

14. A **Wastewater** contribution of $5,816.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution is made up of the following elements:

    - $747.00 including GST. This contribution (FC223 – Accent Drive Embankment) is assessed at $820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.
    - $5,069.00 including GST. This contribution (FC260 – Stancombe Road Wastewater) is assessed at $5,563.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

15. A **Water Supply** Contribution of $18,799.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC231 – Flat Bush Water Supply) has been assessed at $20,630.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

16. A **Roading Upgrade** contribution of ~~$88,200.00~~ including GST shall be paid to Manukau City Council. $52155-00 see obj.

    The consent holder is advised that this contribution (FC266 – Stancombe Road) has been assessed at $1400 /metre road frontage plus GST for a frontage of 56 m.

17. All contribution rates shall be reassessed in accordance with the current Statistics NZ Capital Goods Price Index for Other Construction-S2GC (for the previous year) if payment is not made within 12 months of date of this consent.

todz paid.

Septic Tank

18. The septic tank on this site (Lot 3 DP78859) shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

Street Trees ALL STREET TREE CONDITIONS ARE TO BE BONDED

19. That tree planting at the site frontage along the front berm of the roads shall be in accordance with the Robin Duncan Landscape Architect plan referenced 27046 by Council attached to and forming part of this consent.

20. Street tree planting shall be undertaken in accordance with the requirements of Rule 17.10.11.8 of Proposed Variation 13 to the Manukau Operative District Plan 2002 with these relevant requirements restated below and forming conditions of consent:

    - Street tree planting shall be undertaken in new developments once formation of the street has been completed;

- Street trees shall be planted in the front berm between the kerb and footpath. The front berm for street planting shall have a minimum width of 1.4 metres.
- Street trees are to be provided on both sides of the street at a minimum average spacing of 15 metres.
- Clear visibility of bus stops, pedestrian crossings, sign posts and road intersections (where they are known) are to be maintained.
- The consent holder shall be responsible for the routine maintenance and replacement of any street planting they provide including deadwooding, weed control, mulching and watering for a minimum period of 12 months from the time of planting.
- Trees that are vandalised or dead, or that are not of a suitable specimen form shall be replaced immediately at the cost of the consent holder.

21. The street tree species on Stancombe Road shall be London Plane (Platanus acerifolia). The street tree species on "Proposed Road 1 and 2" shall be Sweet Gum (Liquidamber styraciflua).

22. The street trees shall be suitably positioned so as not to obstruct intersection line of sight in accordance with MCC Quality Assurance Manual and shall be positioned 3.0m away from driveways at all times in accordance with MCC Quality Assurance Manual. This shall be the responsibility of the consent holder up to the time of 224 certification or the final inspection agreement.

Road to Vest

23. Lot 1000 shall vest in the Manukau City Council as legal road at no cost to Council.

Financial Contribution for Proposed Road 1

24. Within three months of the commencement of this resource consent and prior to certification pursuant to the requirements of section 224 of the Resource Management Act 1991 the consent holder shall:

(a) Submit to the Council an assessment, undertaken by a suitably qualified engineer, of the cost of altering that length of "Proposed Road 1" (identified on Airey Consultants Plan ref: A9861/5 Drawing 6, Rev.4) to comply with the "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards) for that part of this "Proposed Road 1" within the legal boundary of 124 Stancombe Road (Lot 3 DP 78859).

(b) This assessment shall include consideration of the cost of relocating the footpath, service berms (and any associated services to comply with the provisions of the Manukau Operative District Plan 2002), street planting ,all kerb and channel works, street light and signage replacement or repositioning, road markings, design, construction and supervision works (as well as any necessary contingency) associated with alteration of this road to achieve compliance with Council's Engineering Quality Standards and the provisions of the Manukau Operative District Plan 2002 for alteration of "Proposed Road 1" to local road standard (7.8 metre carriageway and 18.2 metre legal width).

(c) Allow the Council sufficient time to arrange and complete a peer review of the costs identified under (a) and (b) above, to be undertaken by a suitably qualified engineer, appointed by the Council and at the sole discretion of the Council, to certify the costs submitted under (b) above.

(d) Following the completion of the peer review required under (c) certifying all costs required under (b) above pay the Council as a financial contribution the cost of

all works identified under (b), together with all costs incurred by the Council in review.

Road Marking – Proposed Road 1 and 2 ("Carlos Drive")

25. That the following traffic signage and road markings be installed, to the extent practicable, in accordance with the Transit NZ Manual of Traffic Signs and Markings, as part of the road construction.

(a) A "Give Way " sign (RG-6) at the intersection with Stancombe Road.
(b) Two chevron boards (RC- 5) at the future bend in Carlos Drive,
(c) A 100mm wide continuous reflectorised white centreline around the bend extending 30 metres from the tangent points.(See MOTSAM Fig.2.1[a]) "
(d) "No Stopping At All Times" from the western side of the vehicle crossing of 122 Stancombe Road, around the corner, and along the western side of Carlos Drive to the northern most extent of this road.

An engineering drawing shall be submitted and approved by the Manager Resource Consents and Compliance demonstrating the location and form of this signage prior to installation

Reserve Contribution

26. (a) A reserves contribution of **$32,400** including 12.5% GST being 6% (plus GST) of the market value of Lot 10 (as a single household unit site), shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.

Note: The Reserve contribution payable specified above has been derived as follows:

Market value of Lot 1 as a single household site	$480,000.00 (including GST)
Contribution: $480,000.00 x 6% + GST	**$32,400.00 (including GST)**

Note: The above calculations reflect the number of underlying allotment (1) and the number of additional allotments created at this stage of the subdivision (1)

(b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

Existing House

27. The existing house on the site shall be removed prior to Council's certification pursuant to Section 224(c) of the Resource Management Act 1991.

Section 224

28. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and

the Land Transfer Plan number and a copy of the survey plan (showing co-ordinates) are supplied to the Council.

29. Prior to commencement of any works to install public network utility services on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Each allotment is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. Clause 6.B.6.1 of Council's Engineering Quality Standards manual (carriageway acceptance) in respect to Council carrying out Benklemann Beam tests at no cost to the developer has been amended to the extent that the cost of this work shall now be borne by the consent holder.

6. New roads are to be vested in Council as part of subsequent consents relating to this site. Please ensure that an application is made for preferred 'road names' to, the Team Leader Resource Compliance, for approval at time of, or prior to, application for section 223 release.

7. Pursuant to section 37(1) of the Resource Management Act 1991 (RMA) the time limit for notification of this decision under Section 115 of the RMA has been extended.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B, 104C and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002.

2. It is considered that the proposed subdivision will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.

3. It is considered that any adverse effects of the subdivision on the surrounding environment is no more than minor and will be mitigated by the conditions of consent.

4. The affected party at 122 Stancombe Road, Flat Bush has given their written approval to the proposed subdivision. In imposing condition (24) of this consent it is expected that, at

the time the 122 Stancombe Road is developed for more intensive residential purposes, that Proposed Road 2 will be extended to a legal width of 18.2 metres, and carriageway of 7.8 metres by the 122 Stancombe Road developer. Correspondingly, that part of the road on the 124 Stancombe Road property will also be upgraded to local road standard in "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards).

This shall be recorded on Council's Land Information Register (LIR) for both properties at 122 Stancombe Road, and 124 Stancombe Road, Flat Bush.

COSTS

1. In addition to the consent charge for this consent, and pursuant to Section 36(1)(c) of the Resource Management Act 1991, an engineering administration and inspection charge, relating to the engineering conditions of the Resource Consent will be applicable (together with administration charges relating to the release of the subdivision) by determining all reasonable and actual costs incurred by Council. The actual charges incurred in the Council's field monitoring of the engineering works will be determined at the completion of works and will be payable prior to release. The consent holder will be advised of the charges as they fall due.

2. The aforementioned fee is in addition to the normal fees and requirements as imposed by the Manager - Building Consents & Compliance to the Building Consent.

RIGHT OF OBJECTION

Within 15 working days of receipt of this decision (commencement date stamped below) you may lodge an objection to the decision pursuant to Section 357(2) of the Resource Management Act 1991. Any such objection shall be made by notice in writing to the Council setting out the reasons for the objection and the relief sought.

Please note that from 1 October 1999 the Council requires a deposit fee of $450 (inclusive GST) to accompany any objection relating to valuation figures, financial contributions and the provision of works associated with the provision of infrastructure. (Minute No. 1455/99).

Any such objection may incur the reasonable costs of processing the objection above and beyond the deposit fee (Sec 36(3) of the Act).

Should you wish to enter into any future correspondence, building consent applications, or enquiries relating to this consent, could you please ensure that you include the file reference at the foot of page one of this letter.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

Some tests failed to meet the required criteria, in which case the fill was reworked and retested until satisfactory results were obtained.

The final test results are summarised in the appendices, together with a copy of the cut/fill as-built plan, showing test locations, and the inspection diary notes.

Conclusions and Recommendations

On the basis of our borehole investigation, inspections, observations, earthworks monitoring, laboratory and insitu testing as described herein, it is our Professional Opinion, that the subject site, lot 10, 124 Stancombe Road, Flatbush, is generally suitable in terms of section 106 of the Resource Management Act, and Section 2.B.4.8 of the Manukau City Council's Engineering Quality Standards, for the development of conventional residential dwellings, constructed in accordance with the relevant portions of NZS3604:1999, subject to the following overall general recommendations, and provided that building in any of the identified zones on the appended plan (whether "non-specific design", "specific design", or "not for construction") should be subject to the specific requirements of that zone as given below:

A) General Requirements:

(a) There were stockpiles of topsoil and other unsuitable materials still lying near the northern boundary of the site, at the time of preparation of this report. We anticipate that these will be moved before or during building development.

(1) Soil CLASIFICATION

~~(b)~~ ~~As discussed in the foregoing section on site classification, there are a number of ways of classifying the site soils. In this instance, we have adopted the AS2870 third method, using laboratory tests for soil reactivity and a knowledge of the soil profile. On this basis~~, foundation soils on this site ~~are considered unlikely to lie outside the definition of 'good ground' as given in NZS3604:1999. We consider that they would~~ lie in Site Class S (slightly expansive) as defined in AS2870:1996, with expected characteristic surface ground movements in the order of 0 to 20 mm, ~~which movement is still within the allowable bounds of 'good ground'. However, this movement is closer to the upper limit of Class S range, therefore, as a precaution, care should be taken to mitigate against the potential seasonal shrinkage and swelling effects of expansive foundation soils on both superstructures and concrete slab on grade floors, as follows~~.

For the design of all foundations, these should extend to a minimum depth of 0.3 metres below the final cleared ground level.

Because of the importance of this issue, especially with regard to controlling potential for cracking in concrete slabs, we consider that when constructing slabs, and especially after the removal of a desiccated surface crust, the exposed subgrade should be covered with 100mm of basecourse as soon as possible, to avoid allowing underlying damp soils to dry out and shrink if they are likely to regain some of their moisture and swell again following pouring of the concrete. If this cannot be avoided and shrinkage cracks occur in the subgrade to the cumulative width of 15mm per metre distance, then prior to the placement of the under-slab hardfill, the subgrade should be hosed down to allow the cracks to close to at least that degree.

Future owners should also be aware of the detrimental effects that large trees can have by way of inducing differential consolidation settlements beneath foundations, through localised soil water deprivation. Accordingly, care should be taken to avoid having large trees positioned where their roots could migrate beneath the building foundations.

(c) All foundations located within the 45 degree envelope of influence rising from the invert of service trenches, should be extended to below that envelope, to avoid ~~surcharging pipes and/or poorly compacted trench backfill.~~

(2) Fill Retaining

(d) In accordance with the limitations imposed by NZS3604:1999, fills greater than 0.6 metres that have not been reviewed and approved herein, should not be undertaken on this site without the further review and express approval in writing of the Manukau City Council and that of a Chartered Professional Engineer experienced in geomechanics and familiar with the contents of this report, since such works may, in certain circumstances, disturb existing equilibrium conditions. In a like fashion, cuts should be restricted to no more than 0.6 metres.

~~(e) All stormwater runoff from roofs and paved areas, plus any water tank overflows, should be collected in sealed pipes and be disposed of into Council's reticulation system. Likewise, overland flows should be directed away from the building footprint.~~

~~Under no circumstances should concentrated flows from any source discharge into or onto the ground in an uncontrolled fashion.~~

(f) All excavations, including those for bulk earthworks, shallow foundations and any piles, should be inspected by a Geotechnical Engineer during construction to check

ENTIRE PAGE ON L.I.R

6)3 Specific Design Zones:

Specific design zones have been designated primarily on the basis of two criteria, viz those areas not containing at least 2 metres depth of engineered fill or stiff natural crust over known soft ground, and those with slopes steeper than 1V:4H or near vertical and greater than 0.6m high, which might present concerns with regard to slope stability. These areas are listed below:

(a) Steep cut batters in the northwestern area. These batters are up to 1.5m high and have gradients of up to 1V:2H. While these slopes are considered stable while undeveloped, any foundations on, or within a horizontal distance of 4m above the crest of the slope, should be designed to allow for lateral creep extending to a depth of 1.0m, and acting over a width of 3 pile diameters, unless the land is adequately retained by suitably designed and constructed retaining walls.

(b) Steep fill batter in the southwestern corner, is up to 1.5m high and is considered unstable in its present form, therefore this batter should be adequately supported at the time of any building development closer than 4 metres from the crest.

(c) Areas of stormwater inlet in the northeastern corner of the site were still to be tidied up at the time of preparation of this report. Any foundations in the vicinity should be specifically designed to mitigate the effects of remaining depressions, steep batters and trench backfills.

(d) The southeastern corner of the site has underlying soft deposits as identified in our boreholes 7 and 9. These are expected to have been rendered closer to the surface by removal of up to around 1.5m depth of cut during the earthworks. Therefore we recommend that for all shallow strip and pad foundations on proposed lots 3 and 4, the foundation depths should be limited to no deeper than 0.45m below the as-built levels, and the ultimate bearing pressures should be limited to no greater than 200 kPa, to which figure should be applied an appropriate factor of safety, such as 2.0 for Factored Load Design and 3.0 for Working Strength Design.

For any foundation loads which cannot be accommodated in the above constraints, we recommend the use of specifically designed piles.

From: Ben Yu
To: Kim.ball@works.co.nz
Date: 11/22/05 10:38a.m.
Subject: 124 Stancombe Road

P27046
SP8840

Hi Kim,

Could you please arrange for the following road sign(s) to be installed at 124 Stancombe Road as per the attached map

the new name is: Carlos Drive

Regards

Ben Yu
Resource Compliance Officer
Manukau City Council
Ph: 262 8900 Ext 8443
Fax: 262 5163

From: Ben Yu
To: Iang@aireys.co.nz
Date: 11/22/05 9:08a.m.
Subject: 124 Stancobe Road

P27046
SP8840

Hi Ian,

Can you please complete the enclosed minor bond form, sign and return to Compliance team. Please do two separate form, 1st one for Roading reseal with $25,000 incl GST and the other for planting and footpath with $18,761.00 incl GST.

Regards

CONSENT DECISIONS

RESOURCE CONSENT	TYPE (Concept / Land Mod / Xlease etc)	DECISION DATE
Prop No _____	_____	____ / ____ / ____
SP / XL /.BRS _____ (delete 2)		
DLR letter sent ____ / ____ / ____	Received	____ / ____ / ____
VNZ letter sent ____ / ____ / ____	Received	____ / ____ / ____

AMENDMENTS
(Objections / change of conditions / extension of time)

_____	____ / ____ / ____
_____	____ / ____ / ____
_____	____ / ____ / ____
_____	____ / ____ / ____
_____	____ / ____ / ____
_____	____ / ____ / ____

Please:

File Consents, Amendments, DLR and VNZ letters hereafter in **date** order (latest first)

Include approved plans with each consent

For resource consents granted on subsequent stages, the consent decision must be filed between new yellow cards
(Stages to follow in sequence)

File prepared by _____

FILE SHEET 4

Te Kaunihera o
MANUKAU
City Council

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

22 November 2005

Alrey Consultants Ltd
PO Box 39101
Howick
Auckland

Attention Ian Gibson

Your Reference 9861/5

Dear Sir

Proposal 27046

Site 124 Stancombe Road

Applicant Carlos Concepts Ltd

Please find enclosed is the cheque for Brookfield Solicitors and is now returned, the above 224 application is no longer required formal bond process.

Yours faithfully

Ben Yu
Resource Compliance Officer
RESOURCE CONSENTS AND COMPLIANCE

From: Benedict Ferguson
To: graeme@workingconcepts.co.nz
Date: 15/11/2005 7:24a.m.
Subject: 124 Stancombe Road P27406

Graeme,
I have received your fax re the geotech report. I will pass this onto our engineers for their sign off.
I will email you once it has been signed off by our engineers. The turn around time from engineering sign off to releasing the 224c is approximately 2 weeks.
Thanks

Benedict Ferguson
Case Management Officer
Manukau City Council
Ph (09) 262 8900 ext 5865
Fax (09) 262 5163
email: bferguso@manukau.govt.nz
Web: www.manukau.govt.nz

Ph: (09) 271-3007
Fax: (09) 271-4037

WORKING CONCEPTS LTD

Fax

To:	Benedict Ferguson	**From:**	Jessica
Fax:	09 2625163	**Pages:**	3
Phone:	09 262 8900-5865	**Date:**	14 Nov 2005
Re:	124 Stancombe Road, p27046	**CC:**	

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Dear Benedict,

There is the foundation completion report prepared by Geotek Services.

Benedict trusting the information supplied is satisfactory to address the issue. If you have any further queries, please feel free to contact me.

Graeme wonders if he can pick up the 224c for 124 Stancombe Road tomorrow.

Thank you Benedict for your help much appreciated.

Regards,

Jessica

64 9 2714037

GEOTEK SERVICES LIMITED

Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

Ref: 2635

STATEMENT OF PROFESSIONAL OPINION AS TO SUITABILITY OF LAND FOR BUILDING DEVELOPMENT

Owner/Developer: **Carlos Concepts Ltd**

Location: **124 Stancombe Road (South of Carlos Drive), Flat Bush**

Development: **Residential Apartments**

I, S.J. Woodward of Geotek Services Limited, P.O. Box 39-015, Howick, hereby confirm that:

1. I am a Chartered Professional Engineer experienced in the field of geotechnical engineering and was retained by the Owner/Developer as the Geotechnical Engineer on the above development.

2. The extent of our preliminary investigations are described in our Report number 2635, dated 17 November 2004, and the conclusions and recommendations of that document have been re-evaluated in the preparation of this report.

3. In my professional opinion, not to be construed as a guarantee, I consider that:

   (a) To the best of my knowledge no earth fills were placed beneath the building platform on this site while the basement excavation for the proposed building involved cut depths of between 1.0 and 3.4 metres, which I understand were supported by engineer designed retaining structures in accordance with the recommendations of the above report, and were to be certified by others.

   (b) Subject to clause 3(a) above the completed works give due regard to land slope and foundation stability considerations.

   (c) Subject to clauses 3(a) and 3(b) above, the original ground not affected by filling is suitable for the erection thereon of structures designed and built in accordance with the Building Act 1991, and related documents, and subject to the conclusions and recommendations of our above report.

4. This professional opinion is furnished to the local Territorial Authority and the current owner/developer, for their purposes alone, on the express condition that it will not be relied upon by any other person, and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any structure.

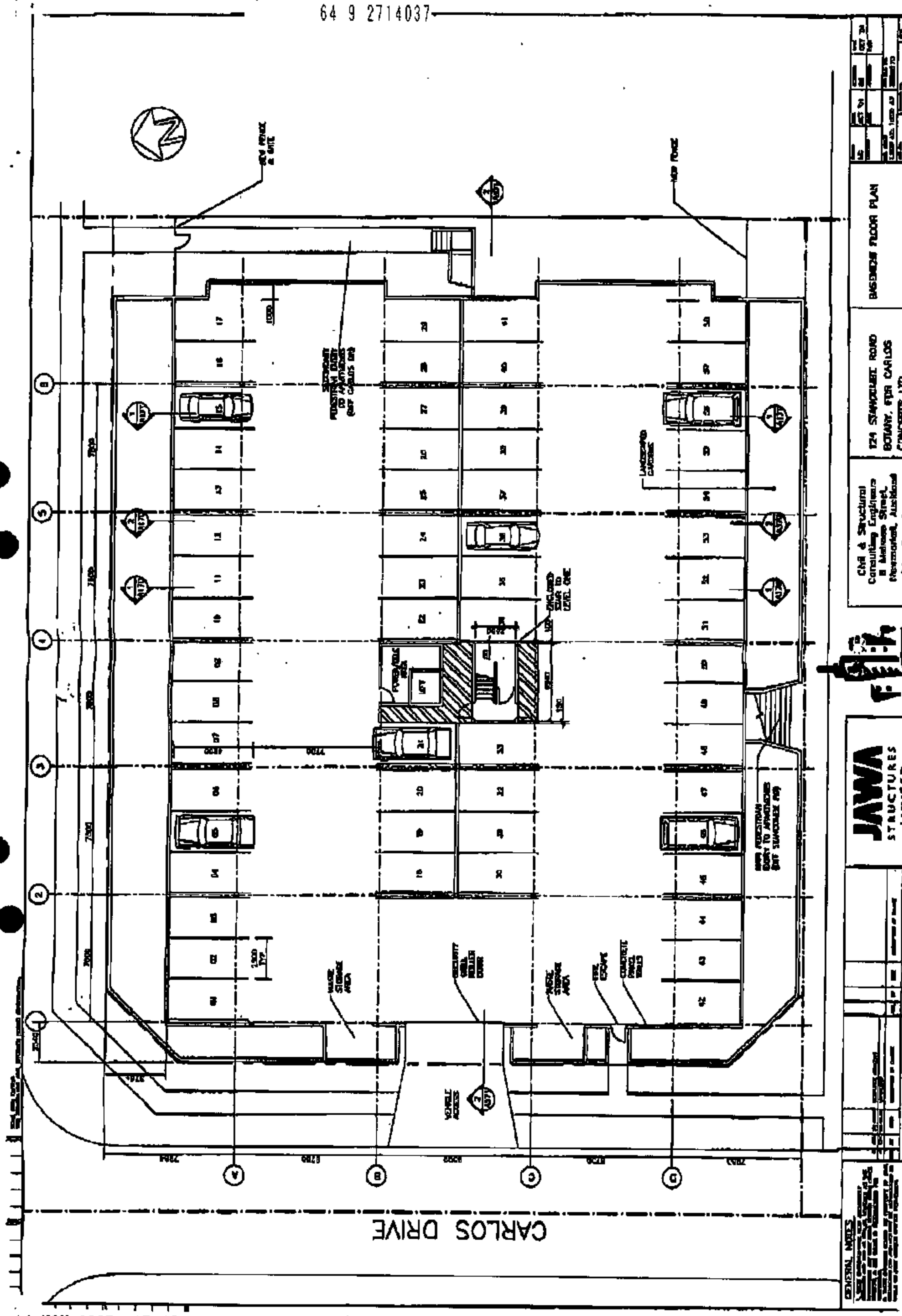
Signed.....
Chartered Professional Engineer

Date 14 November 2005

Encl: **Plan

*2005 16:23 FROM WORKING CONCEPTS LTD 092625163 P.03

64 9 2714037



14-NOV-2005 15:46 64 9 5357243 98% P.02

TOTAL P.03

From: Ross Brackebush
To: iang@aireys.co.nz
Date: 9/6/05 12:55p.m.
Subject: 124 Stancombe Rd 224c Release

Ian,
Further to our telephone convo this morning,can you please arrange for asbuilts for Power and Telecom plinth positions to be forwarded to me.Secondly do you want a formal bond for all the items as listed if so can you fill out the attached form,or we can do two informal bonds,so payment can be made back to you more easily,informal bond info attached also, hear from you soon.
Regards Rossb

From: Ross Brackebush
To: iang@aireys.co.nz
Date: 9/6/05 4:43p.m.
Subject: 124 Stancombe 224c release Foundation completion report

Ian,
Have had a good look through the FCR,just need a couple of additions,firstly **specific, and non specific design zones**,I think it prudent that we get a plan identifying the areas as described,under this heading, detailed on page 13 of the report.
Secondly **Statement of Professional opinion** needs a comment on the suitability of the site for NZS 3604 construction.
Regards Rossb

CC: Irwin, Lorelle

BEN

Roading conditions for 124 Stancombe Re condition 24

From: "Ian Gibson" <iang@aireys.co.nz>
To: "'Ross Brackebush'" <RBrackeb@manukau.govt.nz>
Date: 11/17/05 3:33p.m.
Subject: FW: 124 Stancombe Rd SP 8840 Condition 24

Dear Ross
Enclosed is your revision which I agreed to
Regards
Ian

-----Original Message-----
From: Ross Brackebush [mailto:RBrackeb@manukau.govt.nz]
Sent: Tuesday, 30 August 2005 11:28 a.m.
To: iang@aireys.co.nz
Subject: 124 Stancombe Rd SP 8840 Condition 24

Ian,
I have had a look through your submission for the financial contribution,on the abovementioned site and have made a few adjustments to rates that I think are a little low,my revised total figure equates to $24,201.00 exc gst.
The rates I have adjusted are as follows,item 1.2 $25/m, item 1.4 $25/m, item 1.6 $25/m,item 1.7 $950.00,item 1.8 $25.00/m,item 1.12 $600.00/ each,item 1.14 $12.00/m2 assuming the topsoil has to be supplied,item 1.19 roadmarking give way $300.00.
Can you give me a call to discuss
Regards Rossb

_____ NOD32 1.1204 (20050829) Information _____

This message was checked by NOD32 antivirus system.
http://www.eset.com

P27046 SP 8840

Landonline

Toitu te Land whenua Information New Zealand

Digital Title Plan - LT 352580

Survey Number	LT 352580
Surveyor Reference	7576 124 Stancombe
Surveyor	Michael Stuart Lucas
Survey Firm	Easdale Surveyors Ltd
Surveyor Declaration	

Survey Details

Dataset Description	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859		
Status	Initiated		
Land District	North Auckland	**Survey Class**	Class I Cadastral Survey
Submitted Date		**Survey Approval Date**	
		Deposit Date	

Territorial Authorities

Manukau City

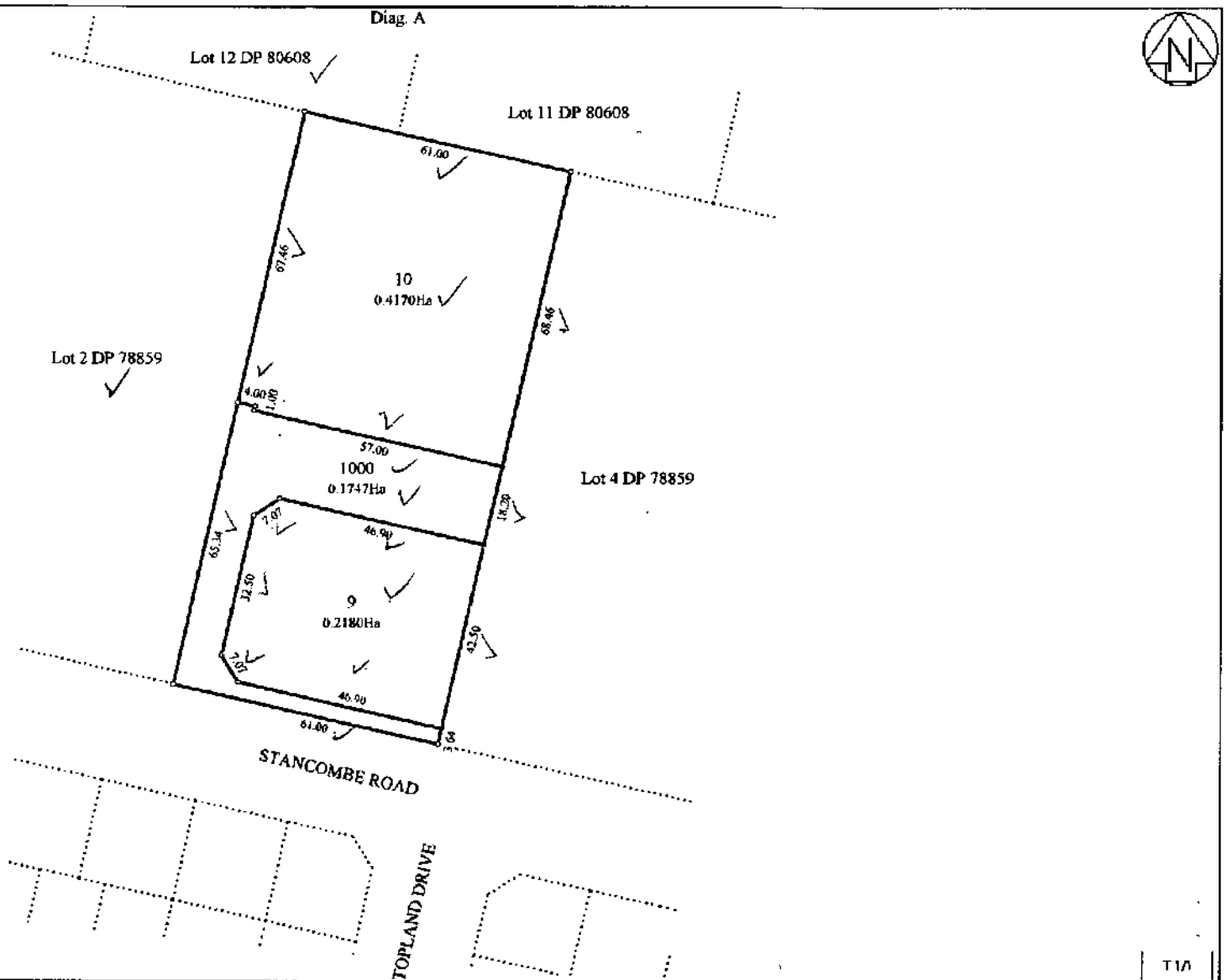
Comprised In

CT NA34D/637

Created Parcels

Parcels	Parcel Intent	Area	CT Reference
Lot 9 Deposited Plan 352580	Fee Simple Title	0.2180 ha	215614
Lot 10 Deposited Plan 352580	Fee Simple Title	0.4170 ha	215615
Lot 1000 Deposited Plan 352580	Vesting on Deposit for Road	0.1747 ha	
Total Area		0.8097 ha	

Diag. A



T1/1

Land District: North Auckland Digitally Generated Plan Generated on: 26/07/2005 3:54pm Page 2 of 2	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859	Surveyor: Michael Stuart Lucas Firm: Easdale Surveyors Ltd	Digital Title Plan LT 352580 DRAFT

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz

AIREY CONSULTANTS LTD.

Members of ACENZ

23 August 2005

In all correspondence please quote our ref: 9861/5

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

Ross - There is an objection lodged for this P27400 - Do you want to look at this or should I give it to consents?

Attn: Ross Brackebush

Dear Ross,

Re: SP8840, P27046 – Condition 24
Subdivision of 124 Stancombe Road, Flat Bush

We enclose an assessment of the costs for the future relocation of the Road 1 within 124 Stancombe Road to relocate the centre of the carriageway upon development of 122 Stancombe Road.

We see the process as follows:-
Removal of existing kerb and channel and footpath
Relocation of cesspit and streetlights
Sawcutting of seal and concrete works to minimise damage to remaining formation.
Excavation of existing metal and reshaping of berm
Installation of kerb and channel, crossing and footpath.
Sawcutting of seal to form clean edge prior to sealing
Sealing of 0.5m strip at edge of new kerb and channel
Topsoil and grassing of berms and batters
Adjustment of two manhole lids
Relocation of give way sign and removal of existing road marking.

We believe that all services within the road are suitably located and do not need relocation. We have not allowed for any costs along the boundary of 120/122 as we believe these should be borne by the developer of 122 Stancombe Road.

We request that you undertake a peer review of our assessment as indicated by that condition so that the contribution figure can be agreed.

Please contact the writer if you wish to discuss the matter.

Yours faithfully
AIREY CONSULTANTS LTD

I H GIBSON

Assessment of Costs
For
Relocation of Kerb Line &
Associated Works
124 Stancombe Road
Flat Bush

Job No. 9861/5 – 124 Stancombe Road, Flat Bush

1.0 ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1.1	Preliminary & General, Establishment	L.S.			$1,000.00
1.2	Remove existing kerb line.	m	70	10	$700.00
1.3	Sawcut footpath & crossing.	m	20	20	$400.00
1.4	Remove existing footpath	m^2	80	5	$400.00
1.5	Sawcut existing seal at demolition and at pre-seal stage.	m	130	5	$650.00
1.6	Excavate and dispose of seal and metal to form kerb and channel over existing under-channel.	m^3	30	15	$450.00
1.7	Relocate cesspit.	No	1	500.00	$500.00
1.8	Earthworks to berm to form 3% standard berm.	m^3	30	15	$450.00
1.9	Install kerb and channel.	m	75	38	$2,850.00
1.10	Install footpath.	m^2	82	38	$3,116.00
1.11	Install crossing.	m^2	38	75	$2,850.00
1.12	Relocate streetlights	No	2	300.00	$600.00
1.13	Sealing Chip Seal (66 x .5) Hotmix (66 x .5)	 m^2 m^2	 33 33	 10 25	 $330.00 $825.00
1.14	Topsoil & grass berms	m^2	220	2.00	$440.00

1.15	Adjust manhole lids.	No	2	200.00	$400.00
1.16	Traffic control.	L.S.			$500.00
1.17	Relocation of Give Way sign.	L.S.		300.00	$300.00
1.18	Street planting.	L.S.		400.00	$400.00
1.19	Road marking removal.	m	3	80.00	$240.00
					$17,161.00

Estimated Cost	$17,161.00
GST	2,145.13
	$19,306.13

- Street trees shall be planted in the front berm between the kerb and footpath. The front berm for street planting shall have a minimum width of 1.4 metres.
- Street trees are to be provided on both sides of the street at a minimum average spacing of 15 metres.
- Clear visibility of bus stops, pedestrian crossings, sign posts and road intersections (where they are known) are to be maintained.
- The consent holder shall be responsible for the routine maintenance and replacement of any street planting they provide including deadwooding, weed control, mulching and watering for a minimum period of 12 months from the time of planting.
- Trees that are vandalised or dead, or that are not of a suitable specimen form shall be replaced immediately at the cost of the consent holder.

21. The street tree species on Stancombe Road shall be London Plane (Platanus acerifolia). The street tree species on "Proposed Road 1 and 2" shall be Sweet Gum (Liquidamber styraciflua).

22. The street trees shall be suitably positioned so as not to obstruct intersection line of sight in accordance with MCC Quality Assurance Manual and shall be positioned 3.0m away from driveways at all times in accordance with MCC Quality Assurance Manual. This shall be the responsibility of the consent holder up to the time of 224 certification or the final inspection agreement.

Road to Vest

23. Lot 1000 shall vest in the Manukau City Council as legal road at no cost to Council.

Financial Contribution for Proposed Road 1

24. Within three months of the commencement of this resource consent and prior to certification pursuant to the requirements of section 224 of the Resource Management Act 1991 the consent holder shall:

    (a) Submit to the Council an assessment, undertaken by a suitably qualified engineer, of the cost of altering that length of "Proposed Road 1" (identified on Airey Consultants Plan ref: A9861/5 Drawing 6, Rev.4) to comply with the "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards) for that part of this "Proposed Road 1" within the legal boundary of 124 Stancombe Road (Lot 3 DP 78859).

    (b) This assessment shall include consideration of the cost of relocating the footpath, service berms (and any associated services to comply with the provisions of the Manukau Operative District Plan 2002), street planting ,all kerb and channel works, street light and signage replacement or repositioning, road markings, design, construction and supervision works (as well as any necessary contingency) associated with alteration of this road to achieve compliance with Council's Engineering Quality Standards and the provisions of the Manukau Operative District Plan 2002 for alteration of "Proposed Road 1" to local road standard (7.8 metre carriageway and 18.2 metre legal width).

    (c) Allow the Council sufficient time to arrange and complete a peer review of the costs identified under (a) and (b) above, to be undertaken by a suitably qualified engineer, appointed by the Council and at the sole discretion of the Council, to certify the costs submitted under (b) above.

    (d) Following the completion of the peer review required under (c) certifying all costs required under (b) above pay the Council as a financial contribution the cost of

all works identified under (b), together with all costs incurred by the Council in review.

Road Marking – Proposed Road 1 and 2 ("Carlos Drive")

25. That the following traffic signage and road markings be installed, to the extent practicable, in accordance with the Transit NZ Manual of Traffic Signs and Markings, as part of the road construction.

    (a) A "Give Way " sign (RG-6) at the intersection with Stancombe Road.
    (b) Two chevron boards (RC- 5) at the future bend in Carlos Drive,
    (c) A 100mm wide continuous reflectorised white centreline around the bend extending 30 metres from the tangent points.(See MOTSAM Fig.2.1[a]) "
    (d) "No Stopping At All Times" from the western side of the vehicle crossing of 122 Stancombe Road, around the corner, and along the western side of Carlos Drive to the northern most extent of this road.

    An engineering drawing shall be submitted and approved by the Manager Resource Consents and Compliance demonstrating the location and form of this signage prior to installation

Reserve Contribution

26. (a) A reserves contribution of **$32,400** including 12.5% GST being 6% (plus GST) of the market value of Lot 10 (as a single household unit site), shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.

    Note: The Reserve contribution payable specified above has been derived as follows:

Market value of Lot 1 as a single household site	$480,000.00 (including GST)
Contribution: $480,000.00 x 6% + GST	**$32,400.00 (including GST)**

    Note: The above calculations reflect the number of underlying allotment (1) and the number of additional allotments created at this stage of the subdivision (1)

    (b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

Existing House

27. The existing house on the site shall be removed prior to Council's certification pursuant to Section 224(c) of the Resource Management Act 1991.

Section 224

28. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and

Digital Survey Plan - LT 352580

Survey Number	LT 352580
Surveyor Reference	7576 124 Stancombe
Surveyor	Michael Stuart Lucas
Survey Firm	Easdale Surveyors Ltd
Surveyor Declaration	

Survey Details

Dataset Description	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859		
Purpose	LT Subdivision		
Status	Initiated	**Type**	Survey
Land District	North Auckland	**Survey Class**	Class I Cadastral Survey
Coordinate System	Mount Eden 2000		

Survey Dates

Surveyed Date	26/07/2005	**Certified Date**	
Submitted Date		**Survey Approval Date**	
Deposit Date			

Referenced Surveys

Survey Number	Land District	Bearing Correction
DP 78859	North Auckland	0°00'00"
DP 337880	North Auckland	0°00'00"
LT 350919	North Auckland	0°00'00"

Territorial Authorities

Manukau City

Comprised In

CT NA34D/637

Created Parcels

Parcels	Parcel Intent	Area	CT Reference
Lot 9 Deposited Plan 352580	Fee Simple Title	0.2180 ha	215614
Lot 10 Deposited Plan 352580	Fee Simple Title	0.4170 ha	215615
Lot 1000 Deposited Plan 352580	Vesting on Deposit for Road	0.1747 ha	
Total Area		0.8097 ha	

Toitu te Land whenua Information New Zealand

Mark and Observation

Survey Number DP 352580
Coordinate System Mount Eden 2000

From	To	Code	Bearing		Adpt Surv	Distance		Adpt Surv
RM XIII DP 335032	ALP XXII DP 337880	ob0	287°18'50"	M		257.23	M	
ALP XXII DP 337880	IS 1 DP 352580	ob3	107°14'30"	M		199.84	M	
IS 1 DP 352580	RM XIII DP 335032	ob6	107°34'20"	M		57.39	M	
ALP XXII DP 337880	LP IX DP 337880	ob4	33°07'10"	M		146.81	M	
LP IX DP 337880	RM X DP 337880	ob42	193°56'00"	M		92.20	M	
RM X DP 337880	ALP XXII DP 337880	ob46	240°00'00"	M		66.97	M	
RM XIII DP 335032	ALP 3 DP 352580	ob1	15°28'00"	M		82.02	M	
ALP 3 DP 352580	ALP 2 DP 352580	ob31	282°43'30"	M		55.87	M	
ALP 2 DP 352580	IS 1 DP 352580	ob34	196°37'00"	M		77.25	M	
ALP 2 DP 352580	IS 4 DP 352580	ob35	70°12'20"	M		96.03	M	
IS 4 DP 352580	ALP 3 DP 352580	ob41	218°39'20"	M		57.40	M	
RM XIII DP 335032	ALP 1 DP 350919	ob2	98°53'30"	M		62.24	M	
ALP 1 DP 350919	IS 7 DP 350919	ob47	13°21'20"	A	LT 350919	148.57	A	LT 350919
IS 7 DP 350919	IS 4 DP 352580	ob49	253°49'30"	M		39.66	M	
IS 7 DP 350919	IS 6 DP 350919	ob50	259°02'20"	A	LT 350919	57.10	A	LT 350919
IS 6 DP 350919	RM XIII DP 335032	ob9	197°46'00"	A	LT 350919	130.30	A	LT 350919
IS 6 DP 350919	IT VI DP 78859	ob10	61°08'00"	A	LT 350919	27.58	A	LT 350919
IT VI DP 78859	PEG DP 78859	ob11	298°14'00"	A	DP 78859	28.48	A	DP 78859
PEG DP 78859	PEG 11 DP 350919	ob12	192°45'20"	C		68.46	C	
PEG 11 DP 350919	IS 6 DP 350919	ob13	21°52'00"	A	DP 78859	43.08	A	DP 78859
ALP 1 DP 350919	PEG 9 DP 350919	ob48	304°00'00"	M		61.73	M	
PEG 9 DP 350919	PEG 10 DP 350919	ob14	12°45'20"	C		42.50	C	
PEG 10 DP 350919	IS 6 DP 350919	ob16	19°09'40"	A	LT 350919	61.12	A	LT 350919
PEG 10 DP 350919	PEG 11 DP 350919	ob17	12°45'20"	C		18.20	C	
ALP XXII DP 337880	PEG BK DP 337880	ob5	98°18'00"	A	DP 337880	78.18	A	DP 337880
PEG BK DP 337880	PEG SO 57169	ob18	191°55'00"	A	DP 337880	3.64	A	DP 337880
PEG SO 57169	PEG DP 78859	ob19	102°45'20"	A	DP 78859	122.00	A	DP 78859
PEG DP 78859	PEG DP 78859	ob20	102°45'20"	A	DP 78859	61.00	A	DP 78859
PEG DP 78859	PEG 9 DP 350919	ob22	12°45'20"	C		3.64	C	
LP IX DP 337880	ALP 5 DP 352580	ob43	191°49'00"	M		22.81	M	
ALP 5 DP 352580	RM X DP 337880	ob25	194°37'40"	M		69.41	M	
LP IX DP 337880	IS 6 DP 352580	ob44	123°35'00"	M		50.38	M	
IS 6 DP 352580	ALP 5 DP 352580	ob23	276°46'30"	M		46.97	M	
LP IX DP 337880	IS XI DP 78859	ob45	138°52'20"	M		36.43	M	
IS XI DP 78859	ALP 5 DP 352580	ob26	280°08'30"	M		29.08	M	
IS 6 DP 352580	IS IX DP 78859	ob24	113°56'00"	M		10.42	M	
IS IX DP 78859	IS XI DP 78859	ob27	279°35'00"	A	DP 78859	27.92	A	DP 78859
IS IX DP 78859	IT VII DP 78859	ob28	99°35'00"	A	DP 78859	70.12	A	DP 78859
IT VII DP 78859	IT VI DP 78859	ob29	99°35'00"	A	DP 78859	110.20	A	DP 78859
IT VII DP 78859	PEG DP 78859	ob30	70°23'00"	A	DP 78859	25.56	A	DP 78859
PEG DP 78859	PEG DP 78859	ob51	102°45'20"	C		61.00	C	
PEG DP 78859	PEG 10 DP 352580	ob21	12°45'20"	C		65.34	C	
PEG 10 DP 352580	PEG DP 78859	ob52	12°45'20"	C		67.46	C	

Mark and Observation

Survey Number DP 352580
Coordinate System Mount Eden 2000

From	To	Code	Bearing		Adpt Surv	Distance		Adpt Surv
PEG 10 DP 352580	PEG 11 DP 352580	ob53	102°45'20"	C		4.00	C	
PEG 11 DP 352580	PEG 12 DP 352580	ob54	192°45'20"	C		1.00	C	
PEG 12 DP 352580	PEG 11 DP 350919	ob55	102°45'20"	C		57.00	C	
PEG 9 DP 350919	PEG 13 DP 352580	ob15	282°45'20"	C		46.90	C	
PEG 13 DP 352580	PEG 14 DP 352580	ob56	327°45'20"	C		7.07	C	
PEG 14 DP 352580	PEG 15 DP 352580	ob57	12°45'20"	C		32.50	C	
PEG 15 DP 352580	PEG 16 DP 352580	ob58	57°45'20"	C		7.07	C	
PEG 16 DP 352580	PEG 10 DP 350919	ob59	102°45'20"	C		46.90	C	
ALP 2 DP 352580	PEG 10 DP 352580	ob36	337°46'00"	M		7.75	M	
ALP 2 DP 352580	PEG 11 DP 352580	ob37	8°44'00"	M		6.37	M	
ALP 2 DP 352580	PEG 12 DP 352580	ob38	7°59'00"	M		5.37	M	
ALP 2 DP 352580	PEG 16 DP 352580	ob39	155°49'00"	M		16.07	M	
ALP 2 DP 352580	PEG 15 DP 352580	ob40	178°08'00"	M		18.44	M	
ALP 3 DP 352580	PEG 11 DP 350919	ob32	20°02'00"	M		5.37	M	
ALP 3 DP 352580	PEG 10 DP 350919	ob33	189°43'00"	M		12.89	M	
IS 1 DP 352580	PEG 13 DP 352580	ob7	47°06'00"	M		26.33	M	
IS 1 DP 352580	PEG 14 DP 352580	ob8	32°59'00"	M		28.49	M	

Mark Name	Description
ALP 1 DP 350919	OALP 1 DP 350919
ALP 2 DP 352580	ALP 2
ALP 3 DP 352580	ALP 3
ALP 5 DP 352580	ALP 5
ALP XXII DP 337880	ALP XXII DP 337880
IS 1 DP 352580	IS 1
IS 4 DP 352580	IS 4
IS 6 DP 350919	IS 7 DP 350919
IS 6 DP 352580	IS 6
IS 7 DP 350919	OIS 7 DP 350919
IS IX DP 78859	OIS IX DP 78859
IS XI DP 78859	OIS XI DP 78859
IT VI DP 78859	IT VI DP 78859
IT VII DP 78859	IT VII DP 78859
LP IX DP 337880	OLP IX DP 337880
PEG 10 DP 350919	PEG 10 DP 350919
PEG 10 DP 352580	PEG 10
PEG 11 DP 350919	PEG 11 DP 350919
PEG 11 DP 352580	PEG 11
PEG 12 DP 352580	PEG 12

Toitu te Land whenua Information New Zealand

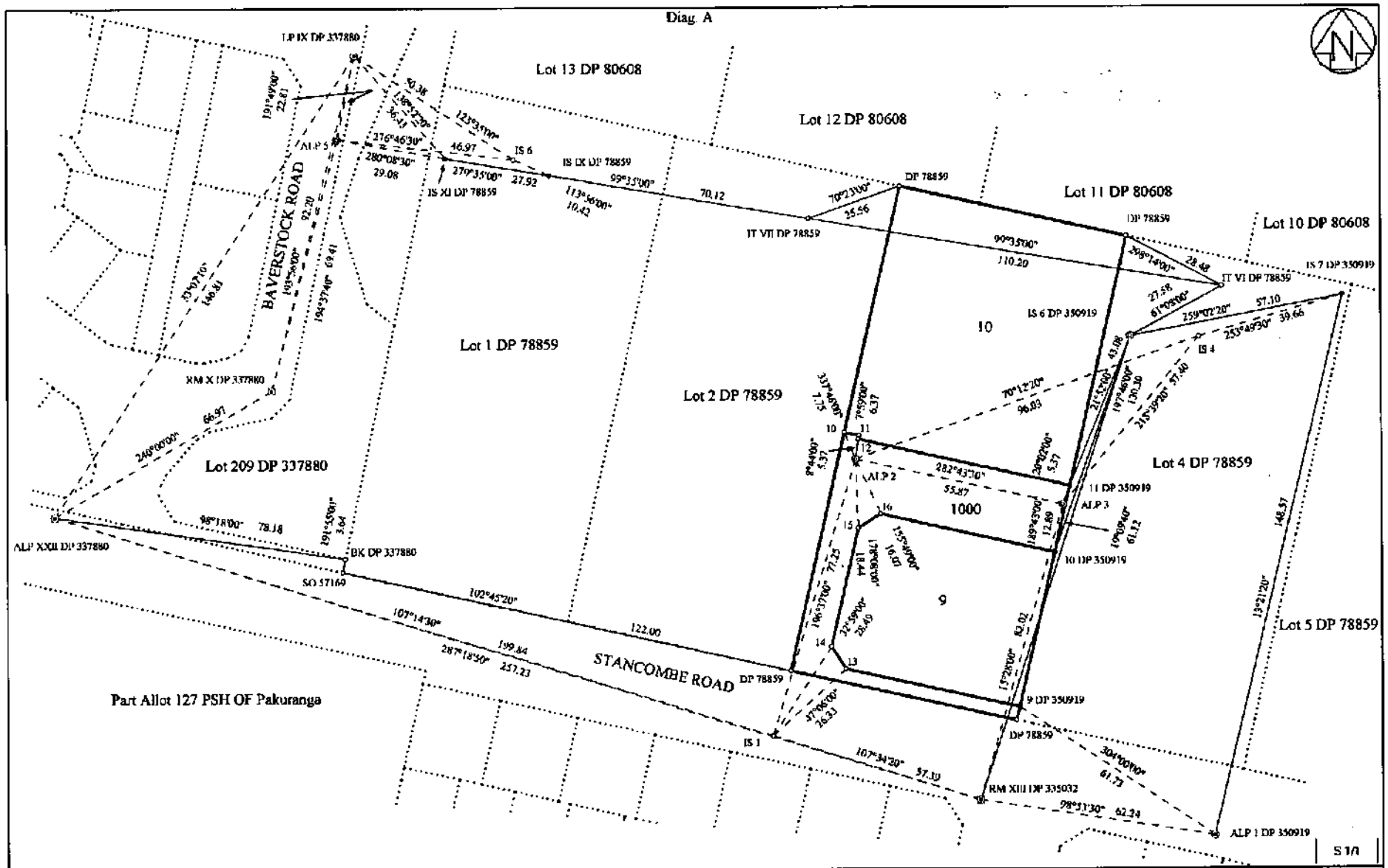
Mark and Observation

Survey Number DP 352580
Coordinate System Mount Eden 2000

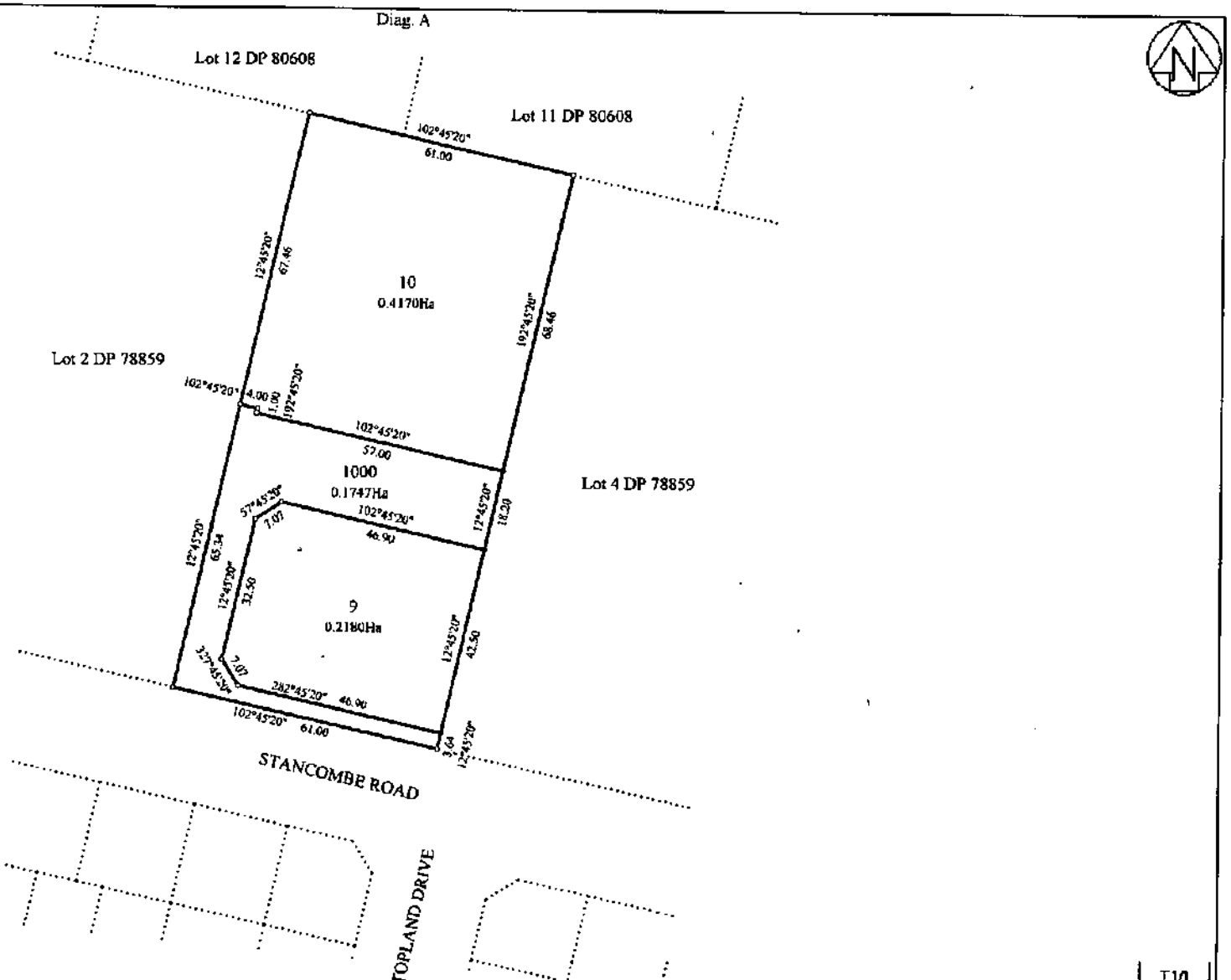
Mark Name	Description
PEG 13 DP 352580	PEG 13
PEG 14 DP 352580	PEG 14
PEG 15 DP 352580	PEG 15
PEG 16 DP 352580	PEG 16
PEG 9 DP 350919	PEG 9 DP 350919
PEG BK DP 337880	PEG BK DP 337880
PEG DP 78859	PEG DP 78859
PEG DP 78859	PEG XX DP 78859
PEG DP 78859	PEG xxx DP 78859
PEG SO 57169	PEG XX SO 57169
RM X DP 337880	ORM X DP 337880
RM XIII DP 335032	RM XIII DP 335032

***** End of Report *****

Diag. A



Land District North Auckland Digitally Generated Plan Generated on: 26/07/2005 3:54pm Page 5 of 6	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859	Surveyor: Michael Stuart Lucas Firm: Eastdale Surveyors Ltd Survey Date: 26/07/2005	Digital Survey Plan LT 352580 DRAFT



T1/1

Land District North Auckland Digitally Generated Plan Generated on: 26/07/2005 3:54pm Page 6 of 6	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859	Surveyor: Michael Stuart Lucas Firm: Eastdale Surveyors Ltd Survey Date: 26/07/2005	Digital Survey Plan LT 352580 DRAFT

ENVIRONMENTAL SERVICES

RESOURCE CONSENT COMPLETION REVIEW

27404 SP8840

124 STANCOMBE RD FLAT BUSH
CLEVEDON 05/01/05

CARLOS CONCEPTS LTD
PO BOX 27029
WELLINGTON
Att:Mr R J Cummins

6923/124
$450.00
Objection

OBJECTION TO PROPOSAL 27046

BRYCE POMFRETT

	Yes	No	N/A
Site visit undertaken:	☑	☐	☐
Section 93, 94 , 94A to 94D analysis completed:	☑	☐	☐
Approval from affected persons obtained:	☐	☐	☑
Recommendation and conditions checked:	☑	☐	☐
Report signed and dated:	☑	☐	☐

site visit conducted under original proposal.

Team Leader [signature]
(or nominee)
Date: 15 / 9 / 05

Decision recorded on Reflections ✓ [illegible] ...tor: Bryce Pomfrett
Decision saved on N-drive ☑ RCA's records updated: [signature] 22 / 9 / 5
Accredited Agent application ☐

...credited Agent application **DISTRIBUTION** (highlight applicable boxes)	Consent	Consent Plans (where applicable)	Engineering Plans (where applicable)	Notes	Date Sent
When decision completed					
Applicant (or agent)	1				../../..
File Copy	1				../../..
Digitising (plans only)					../../..
Site Plans for Subdivision or Multi-Units to Dept (K2 ~~Shirley Treneary~~) N. Smith					../../..
Building Consents (K4 Mike Davies / ~~Josie [illegible]ia~~)	1			✓	22/9/5
Date file sent to RC					../../..
When consent collected					
Customer Centre (KO .....)	1			Provide A4 plans ✓	22/9/5
Resource Compliance (K4 Nicola Taylor)					
Manukau Water					../../..
Opus International Consultants Ltd Attention: Network Manager PO Box 76-725 MANUKAU CITY				(if roadworks involved)	../../..
Watercare Services Private Bag 92802 PENROSE				(if works affect their services))	../../..
TOTAL COPIES REQUIRED	3				

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC007818

Invoice Date:	22 Sep 2005
Customer No:	0078476
Charge Ref:	RC27404
Order No:	

Carlos Concepts Limited
Attn: R J Cummins
PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5455*

Description	Quantity		Unit Price	Amount
PRC27404 124 Stancombe Rd, Clevedon				
Documentation	0.10	Hours	90.00	9.00
Authorisation	0.50	Hours	115.00	57.50

OBJECTION TO P27046 - SP8840 NIL BALANCE

Sub Total	$0.00
GST	$0.00

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Oct 2005	AMOUNT DUE	$0.00

Carlos Concepts Limited
Attn: R J Cummins
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Te Kaunihera o
MANUKAU
City Council

Customer No:	0078476
Invoice No:	RC007818
Charge Ref:	RC27404

DUE DATE	20 Oct 2005
AMOUNT DUE	$0.00

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

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PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone 262 8900 ext. 5455

Description	Quantity		Unit Price	Amount
PRC27404 124 Stancombe Rd, Clevedon				
Deposit	-1.00	Each	400.00	-400.00
Administration Fee	1.00	Each	105.00	105.00
Vetting	0.10	Hours	95.00	9.50
Professional Assess.	0.10	Hours	90.00	9.00
Customer Liaison	1.20	Hours	90.00	108.00
Staff Co-ordination	0.60	Hours	95.00	57.00
Report Formulation	0.20	Hours	90.00	18.00
Final Decision	0.30	Hours	90.00	27.00

Te Kaunihera o
MANUKAU
City Council

Environmental Services

15 September 2005

Carlos Concepts Ltd
C/- Working Concepts Ltd
P.O. Box 58-395
Greenmount

Attention: Graeme Raymond

Dear Sir

DECISION ON AN OBJECTION TO A CONDITION OF SUBDIVISON RESOURCE CONSENT MADE PURSUANT TO SECTION 357 OF THE RESOURCE MANAGEMENT ACT 1991

Applicant:	Carlos Concepts Ltd
Application:	Two lot fee simple subdivision with road to vest (Previous Proposal No: 27046)
Site:	124 Stancombe Road, Flat Bush
Legal Description:	Lot 3 DP 78859
Zone:	Flat Bush Residential 1 (General and Arterial Precincts) – Variation 13
Proposal:	27404
ES Ref:	6923/124

DECISION

I wish to advise that the objection dated 24 December 2004 to Condition (16) of Part B - Subdivision Resource Consent granted on 16 December 2004 (Proposal No. 27046) has been considered under delegated authority and that the objection has been upheld pursuant to Section 357 of the Resource Management Act 1991.

That condition (16) be amended to read (changes shown underlined, deletions shown struck through):

A **Roading Upgrade** contribution of ~~$88,200.00~~ 52,155.00 including GST shall be paid to Manukau City Council.

The consent holder is advised that this contribution (FC266 – Stancombe Road) has been assessed at ~~$1400~~ 760 /metre road frontage plus GST for a frontage of 56m.

ES 6923/124
Carlos Concepts Ltd
5 July 2005

In accordance with Section 357(8) of the Resource Management Act 1991, this decision shall be read in conjunction with Resource Consent numbered 27046 by the Council and dated 16 December 2004.

REASON FOR THE DECISION

(1) A review of the financial contribution applying to the Stancombe Road upgrading of the site by Council's Senior Transportation Engineer – Environmental Management has identified a miscalculation in the rate of contribution applied. An amendment to this rate is, therefore, considered justified.

COSTS

The deposit you have paid of $450.00 including GST will be accepted as full payment for consideration of this objection.

RIGHT OF APPEAL

Within 15 working days of receipt of this decision (commencement date stamped below) you may lodge an appeal against the Council's decision to:

The Environment Court
PO Box 7147
Wellesley Street
AUCKLAND

Any appeal must be in the prescribed form and be accompanied by the required filing fee. Please note that failure to follow the procedures prescribed in Sections 120 and 121 of the Resource Management Act 1991 may invalidate any appeal.

Should you have to enter into any future correspondence, building consent applications, or enquiries relating to this application, could you please ensure that you include the file reference at the foot of page one of this letter.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

REPORT ON AN OBJECTION CONSIDERED UNDER DELEGATED AUTHORITY – SECTION 357 OF THE RESOURCE MANAGEMENT ACT 1991.

(a) REFERENCES:

Applicant:	Carlos Concepts Ltd
Application:	Two lot fee simple subdivision with road to vest (Previous Proposal No: 27046)
Site:	124 Stancombe Road, Flat Bush
Legal Description:	Lot 3 DP 78859
Zone:	Flat Bush Residential 1 (General and Arterial Precincts) – Variation 13
Proposal:	27404
ES Ref:	6923/124

Decision Granted: 20 December 2004
Objection Received: 29 December 2004
No. of Working Days: 0

1.0 The Objection

The applicant initially objected to conditions (12) to (16) of resource consent granted on 16 December 2004 (collected on 20 December 2004) pertaining to financial contributions imposed on this subdivision. Since the lodgement of the objection the applicant has advised that they no longer wish to proceed with their objection as it relates to stormwater provision, water supply and wastewater contributions (12)-(15) and pursue only their objection as it relates to road upgrading contributions.

The level of contribution applying to this site has been reviewed by Council's Senior Roading Engineer and a revised figure for the site now applies. The amendment to the contribution is necessary given a miscalculation in the rate as it applies to the actual frontage of the site. Accordingly, a revised rate of $760.00 + GST per lineal metre has been finalised.

Relief sought:

The applicant has objected to the condition as the wrong rate has been applied.

3.0 Evaluation

On the basis of advice received from Council's Senior Roading Engineer – Environmental Management a revised rate has been finalised. The applicant has been advised of the revised rate and has confirmed their acceptance of this rate.

4.0 Officer's recommendation on an objection pursuant to Section 357 of the Resource Management Act 1991 to be determined under Delegated Authority.

I wish to advise that the objection dated 24 December 2004 to Condition (16) of Part B - Subdivision Resource Consent granted on 16 December 2004 (Proposal No. 27046) has been considered under delegated authority and that the objection has been upheld pursuant to Section 357 of the Resource Management Act 1991.

That condition (16) be amended to read (changes shown underlined, deletions shown struck through):

A **Roading Upgrade** contribution of ~~$88,200.00~~ 52,155.00 including GST shall be paid to Manukau City Council.

The consent holder is advised that this contribution (FC266 – Stancombe Road) has been assessed at ~~$1400~~ 760 /metre road frontage plus GST for a frontage of 56m.

In accordance with Section 357(8) of the Resource Management Act 1991, this decision shall be read in conjunction with Resource Consent numbered 27046 by the Council and dated 16 December 2004.

REASON FOR THE DECISION

(1) A review of the financial contribution applying to the Stancombe Road upgrading of the site by Council's Senior Transportation Engineer – Environmental Management has identified a miscalculation in the rate of contribution applied. An amendment to this rate is, therefore, considered justified.

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AUCKLAND

Any appeal must be in the prescribed form and be accompanied by the required filing fee. Please note that failure to follow the procedures prescribed in Sections 120 and 121 of the Resource Management Act 1991 may invalidate any appeal.

Should you have to enter into any future correspondence, building consent applications, or enquiries relating to this application, could you please ensure that you include the file reference at the foot of page one of this letter.

Bryce Pomfrett

Date: 15 September 2005.

DECISION

That the above recommendation is adopted under Delegated Authority and that the objection is hereby upheld pursuant to Section 357(7) of the Resource Management Act 1991.

SIGNED

Team Leader – Resource Consents

Date: 15 September 2005

Proposal No: **27404**

File Ref: **SP8840**

SITE ADDRESS **124 STANCOMBE RD FLAT BUSH**

WARD **CLEVEDON**

LEGAL DESCRIPTION **LOT 3 DP 78859**

APPLICATION: **OBJECTION TO PROPOSAL 27046**

Applicant: Address: CARLOS CONCEPTS LTD
PO BOX 27029
WELLINGTON
Att:Mr R J Cummins

Contact: SANDY 2713007

Agent: Address: WORKING CONCEPTS LTD
PO BOX 59395
GREENMOUNT

Consent Type	**Objection**	Consent Co-ordinator	**BRYCE POMFRETT**
Operative Zone	**RURAL 3**	Proposed Zone	
Cadastral Map	**8/61;7/72**	District Plan Map	

Discipline	**Does not require vetting (tick ✓)**	**Vetting comments. Please select option and if necessary provide details over leaf**				
		NFA	Have taken copy and will provide written conditions	Comments (more space over leaf)	**Signed**	**Date**
Planning				Refer to Urban Design - Yes/No Refer to Transportation - Yes/No		
Subdivision						
Engineering				Financial contributions - Yes/No		
Manukau Water			✓		Skofg	7/1/05
Environmental Health		✓	Send copy to Environmental Health - Genesis 3 - Yes/No		TC	11/2/05
Transportation				Refer to Roading - Yes/No		
Urban Design						

Received 05/01/05 **Twenty days** _____ **Fast Track** Yes/No **Ten days** _____

Section 94 assessment Notified/ Non-notified **Five days** _____ **Site inspection** _____

Section 92 requests	⇨	**Information received**	**Internal referrals to**	⇨	**Response**

Decision status	Granted/Refused/Withdrawn	**District Plan**	**Activity Type**
Decision date	_____	**Operative**	PE/CA/DA/RD/NC/PR
		Proposed	PE/CA/DA/RD/NC/PR

NOTES

64 9 2714037

Ph: (09) 271-3007
Fax: (09) 271-4037

WORKING CONCEPTS LTD

Fax

To:	Bryce Pomfrett	**From:**	Jessica
Fax:	09 262 5168	**Pages:**	1
Phone:	09 262 5109	**Date:**	15 Sep 2005
Re:	124 Stancombe Road	**CC:**	

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Re *Objection to financial contributions – 124 Stancombe Road subdivision, SP8840*

Dear Bryce

On the 7th Sep we sent a fax to Euan Williams withdrawing our objection for 124 Stancombe Road SP8840 & 126 Stancombe Road 224 release in relation to:

- Stormwater Contribution
- Water Supply Contribution
- Wastewater Contribution

RECEIVED
15 SEP 2005
M.C.C.
ENVIRONMENTAL SERVICES

Sorry we should have sent you a copy.

If you require any further information please contact me.

Regards,

Jessica Zhang

From: "Ian Gibson" <iang@aireys.co.nz>
To: '"Bryce Pomfrett"' <BPomfret@manukau.govt.nz>
Date: 9/6/05 2:48p.m.
Subject: 126 Stancombe rd 224 Release

Dear Bryce,

Can you please revise the invoice as quickly as possible with the new Roading Contribution rate of $760.00 per lineal m which has been accepted by our client so we can pick up the 224c certificate

Regards

Ian

CC: "Gary James" <gary@jawa.co.nz>, "Graeme Raymond" <enquiries@workingconcepts.co.nz>, "Bob Cummins" <rjcummins@xtra.co.nz>

From: Hugh Townsend
To: Gibson, Ian
Date: 9/8/05 1:21p.m.
Subject: RE: Road Upgrading Stancombe Road

Ian
No 305 Murphys has the same $760 rate, plus a contribution to the intersection of $15,380 as well as a contribution of $630/m under contribution R290 for the Jeffs Rd Frontage .

Regards
Hugh

Hugh Townsend
Environmental Management ph 64 9 262 8900
Manukau City Council mobile 0274 356 619
Private Bag 76917 fax 64 9 262 5166
Manukau City htownsen@manukau.govt.nz
New Zealand

>>> "Ian Gibson" <iang@aireys.co.nz> 06/09/2005 14:42:44 >>>
Dear Hugh
On behalf of Working Concepts we wish to accept the new figure of $760.00 plus gst per lineal m as the rate for the Stancombe Rd frontage. We trust that this rate will apply to 124,126,128,130,and 132 Stancombe rd and will be fixed for a period of 12 months from todays date. Can you please confirm that this rate also applies to 305 Murphys rd, which our client has a financial interest in
Regards
Ian

-----Original Message-----
From: Hugh Townsend [mailto:HTownsen@manukau.govt.nz]
Sent: Tuesday, 6 September 2005 1:33 p.m.
To: iang@aireys.co.nz
Cc: Bryce Pomfrett; enquiries@workingconcepts.co.nz
Subject: Re: Road Upgrading Stancombe Road

Dear Ian and Graeme
We confirm that the rate per metre to be applied to Stancombe road frontage is $700.52 (at 1/1/04)
The current(1/9/05) rate is $760.00 per metre Excluding GST.
Reference SP8840

Please confirm, with copy to Bryce Pomfrett, your acceptance of this in order that the objection can be withdrawn.

Regards
Hugh

Hugh Townsend
Environmental Management ph 64 9 262 8900
Manukau City Council mobile 0274 356 619
Private Bag 76917 fax 64 9 262 5166
Manukau City htownsen@manukau.govt.nz
New Zealand

>>> "Ian Gibson" <iang@aireys.co.nz> 23/08/2005 08:40:32 >>>

Dear Hugh,

We urgently require a meeting with you and Chris Freke to resolve the level of road upgrading you have requested for Working Concepts for their Stancombe Rd projects. The $1360 per m seems high to us given that Clayton Mckenzie of Wood and Partners has indicated that the cost of the 1 km of upgrade was 2.2 million, with a likely share of $800 per m for the property owners and $600 for the council middle section

Any day any time would suit us

Regards

Ian

_____ NOD32 1.1209 (20050905) Information _____

This message was checked by NOD32 antivirus system.
http://www.eset.com

CC: Cummins, Bob; enquiries@workingconcepts.co.nz; James, Gary; Pomfrett, Bryce

From: "Ian Gibson" <iang@aireys.co.nz>
To: '"Hugh Townsend"' <HTownsen@manukau.govt.nz>
Date: 9/6/05 2:43p.m.
Subject: RE: Road Upgrading Stancombe Road

Dear Hugh
On behalf of Working Concepts we wish to accept the new figure of $760.00 plus gst per lineal m as the rate for the Stancombe Rd frontage. We trust that this rate will apply to 124,126,128,130,and 132 Stancombe rd and will be fixed for a period of 12 months from todays date. Can you please confirm that this rate also applies to 305 Murphys rd, which our client has a financial interest in
Regards
Ian

-----Original Message-----
From: Hugh Townsend [mailto:HTownsen@manukau.govt.nz]
Sent: Tuesday, 6 September 2005 1:33 p.m.
To: iang@aireys.co.nz
Cc: Bryce Pomfrett; enquiries@workingconcepts.co.nz
Subject: Re: Road Upgrading Stancombe Road

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We confirm that the rate per metre to be applied to Stancombe road frontage is $700.52 (at 1/1/04)
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Hugh Townsend
Environmental Management ph 64 9 262 8900
Manukau City Council mobile 0274 356 619
Private Bag 76917 fax 64 9 262 5166
Manukau City htownsen@manukau.govt.nz
New Zealand

>>> "Ian Gibson" <iang@aireys.co.nz> 23/08/2005 08:40:32 >>>
Dear Hugh,

We urgently require a meeting with you and Chris Freke to resolve the level of road upgrading you have requested for Working Concepts for their Stancombe Rd projects. The $1360 per m seems high to us given that Clayton Mckenzie of Wood and Partners has indicated that the cost of the 1 km of upgrade was 2.2 million, with a likely share of $800 per m for the property owners and $600 for the council middle section

Any day any time would suit us

Regards

Ian

_____ NOD32 1.1209 (20050905) Information _____

This message was checked by NOD32 antivirus system.
http://www.eset.com

CC: "'Bryce Pomfrett'" <BPomfret@manukau.govt.nz>, <enquiries@workingconcepts.co.nz>, "Bob Cummins" <rjcummins@xtra.co.nz>, "Gary James" <gary@jawa.co.nz>

From: Hugh Townsend
To: Gibson, Ian
Date: 9/6/05 1:32p.m.
Subject: Re: Road Upgrading Stancombe Road

Dear Ian and Graeme
We confirm that the rate per metre to be applied to Stancombe road frontage is $700.52 (at 1/1/04)
The current(1/9/05) rate is $760.00 per metre Excluding GST.
'Reference SP8840

Please confirm, with copy to Bryce Pomfrett, your acceptance of this in order that the objection can be withdrawn.

Regards
Hugh

Hugh Townsend
Environmental Management ph 64 9 262 8900
Manukau City Council mobile 0274 356 619
Private Bag 76917 fax 64 9 262 5166
Manukau City htownsen@manukau.govt.nz
New Zealand

>>> "Ian Gibson" <iang@aireys.co.nz> 23/08/2005 08:40:32 >>>
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Any day any time would suit us

Regards

Ian

CC: Pomfrett, Bryce; Raymond, Graeme

FINANCIAL CONTRIBUTIONS RATES LIST

Ennis

	Reference	Project Name	Defined Area or Zoning	Status	Current rate (exc GST)	Unit	FC Coverage				
							Bulk	Loc	Ext	Water quality	Flood
	R 266	No120,122,124,126,128,130,132 Stancombe Road & No 290,305 Murphys Road, No1 Gracechurch Dr	No120 Stancombe Road, Lot 1 DP 78859	Receive contribution	$760	Road Frontage m					
			No122 Stancombe Road, Lot 2 DP 78859	Receive contribution	$760	Road Frontage m					
			No124 Stancombe Road, Lot 3 DP 78859	Receive contribution	$760	Road Frontage m					
			No126 Stancombe Road, Lot 4 DP 78859	Receive contribution	$760	Road Frontage m					
			No128 Stancombe Road, Lot 5 DP 78859	Receive contribution	$760	Road Frontage m					
			No130 Stancombe Road, Lot 6 DP 78859	Receive contribution	$760	Road Frontage m					
			No132 Stancombe Road, Lot 7 DP 78859	Receive contribution	$11,070	Road Frontage m					
			No1 Gracechurch Drive, Lot 10 DP 78859	Receive contribution	$26,900	Road Frontage m					
			No290 Murphys Rd, Pt 1 DP 52879 (SO336560)	Receive contribution	$760	Road Frontage m					
			No305 Murphys Rd, Lot 2 DP 192770	Receive contribution	$760	Road Frontage m					
			No305 Murphys Road, Lot 2 DP 192770	Receive contribution	$16,700	Road Frontage m					
			No136 Stancombe Road, Lot 250 DP 340629	Receive contribution	$760	Road Frontage m					
			No142 Stancombe Road, Lot 251 DP 340629	Receive contribution	$760	Road Frontage m					

Memorandum

Te Kaunihera o
MANUKAU
City Council

Environmental Services

To : Melaina Voss – Development Team – Manukau Water

Copies :

From : Bryce Pomfrett – Resource Management Planner – Kotuku 1

File : 27046 (SP8840) – Proposed Two Lot Subdivision – 124 Stancombe Road, Flat Bush

Date : 6/05/05

SUBJECT: **OBJECTION – 124 STANCOMBE ROAD, FLAT BUSH. PROPOSAL NO: 27046, SP8840**

Melaina,

Veer Khar has requested that I forward you a copy of an objection to the above resource consent. I attach a copy of the objection, together with the original memo from Veer on this objection.

Regards,

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Encl. Objection Letter – Working Concepts Ltd
Manukau Water Memo – Veer Khar

Environmental Services

3 March 2005

R.J. Cummins
Director
Working Concepts Ltd
P.O. Box 27-029
Wellington

Dear Sir

OBJECTION TO RESOURCE CONSENT FOR SUBDIVISION GRANTED 16 DECEMBER 2004.
COUNCIL'S REF: RESOURCE CONSENT PROPOSAL NO: 27046 (SP8840)

I refer to your letter of objection dated 29 December 2004 received to conditions 12-15 and condition 16 which apply to the above-mentioned subdivision consent. These conditions relate to financial contributions and road upgrading requirements associated with infrastructure servicing the proposed subdivision.

I note that you have indicated you consider these contributions have been incorrectly calculated, or wrongly applied. As a first step to resolving this objection it would be appreciated if you could supply further clarification of the relief you seek, including what you consider to be the correct contributions in all instances, by 16 March 2005.

Following receipt of this clarification it is proposed to convene a meeting with the appropriate Council staff to discuss a program for resolving this objection.

Yours faithfully

Bryce Pomfrett
Resource Management Planner - Resource Consents
ENVIRONMENTAL SERVICES

CC: Working Concepts Ltd
P.O. Box 58-395
Greenmount
AUCKLAND

Attention: Sandy Heard

Te Kaunihera o
MANUKAU
City Council

ENVIRONMENTAL SERVICES

Record of Telephone Conversation ☐
Record of Personal Interview ☐
Officer
Customer
Site

Site Ref No
Date
Time
Page
Phone

Action

(1) Write to objector - note recorded objection - reasons - not supplied already, can begin with urgency by end next week.
- call meeting of parties during following week advise of availability.

(2) Mohammed Hassan - Yasmko Copy of objection - copy of conditions / M. Water.
Chris Foyle Set up meeting on xx tell them prior to meeting will have remedies sought by applicant.

(3) Meeting
1st call - matter subdivision can't proceed without being resolved or alternative
Agree on timeframe to resolve or for matter to be reported to Hearings Committee. One month to 6 weeks.
Any extension agreed by both parties.
In absence of agreement scheduling hearing and officers from depts will need to provide reports.

Refer to

MEMO-PAD.DOC 1022

MANUKAU WATER

Manukau Water

INTER-OFFICE MEMO

MANUKAU
City Council

To:	Environmental Services	**Attention:**	Bryce Pomfrett
From:	Veer Khar	**Date:**	10 January 2005
Site Address:	124 STANCOMBE ROAD, FLATBUSH		
Site REF:	6923/124	**Proposal No:**	27404

The objection raised by the applicant with regards to Water and wastewater contribution has been send for advice from the appropriate authorities. I shall provide the revised figures soon after the required decision is received in our office.

OB.

RECEIVED
29 DEC 2004
M.C.C. (E)
MAIL ROOM

Working Concepts Limited

24 December 2004

Mr Robert Chieng,
Team Leader – Resource Consents,
Manukau City Council,
P.O. Box 76917,
MANUKAU CITY

SP. 8840.

Dear Sir,

DECISION ON APPLICATION FOR SUBDIVISION CONSENT AND ASSOCIATED LAND USE CONSENT FOR LAND MODIFICATION AND TREE REMOVAL – 124 STANCOMBE ROAD FLAT BUSH.

I refer to the decision dated 16 December 2004, uplifted by the applicant on the 17 December 2004 (your reference ES 6923/124 Proposal 27046).

I wish to object to the decision pursuant to s357(2) of the Resource Management Act 1991 and enclose the relevant deposit ($450.00).

The parts of the decision I wish to object to are in Part B and are as follows:

Paragraphs 12-15. (Various financial contributions). The contributions are calculated incorrectly.

Para 16 (roading upgrade). The wrong rate has been applied.

I reserve the right to make submissions in pursuit of this objection, and amplify the reasons for the objection, in due course.

Sincerely,

R.J.CUMMINS
Director
for CARLOS CONCEPTS LTD.

PHONE +64 4 801 6830
FAX +64 4 801 6870
EMAIL rjcummins@xtra.co.nz

Sixth Floor, 195-201 Willis Street
PO Box 27-029
Wellington, New Zealand

"Property Development and Financing Concepts that work..."

Facsimile

Te Kaunihera o
MANUKAU
City Council

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5168
(09) 262-5109
Email: .....@manukau.govt.nz

To: Sandy Heard

Company: Working Concepts

Fax No: 271-4037

From: Bryce Pomfrett

Date: 23/03/05 No of Pages: 2

Subject: Copy of R.J. Cummins objection. 24/12/04.

Sandy

Copy attached as requested.

Regards - Bryce.

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied.

OB

RECEIVED
29 DEC 2004
M.C.C. (E)
MAIL ROOM

Working Concepts Limited

SP. 8840

24 December 2004

Mr Robert Chieng,
Team Leader – Resource Consents,
Manukau City Council,
P.O. Box 76917,
MANUKAU CITY

Dear Sir,

DECISION ON APPLICATION FOR SUBDIVISION CONSENT AND ASSOCIATED LAND USE CONSENT FOR LAND MODIFICATION AND TREE REMOVAL – 124 STANCOMBE ROAD FLAT BUSH.

I refer to the decision dated 16 December 2004, uplifted by the applicant on the 17 December 2004 (your reference ES 6923/124 Proposal 27046).

I wish to object to the decision pursuant to s357(2) of the Resource Management Act 1991 and enclose the relevant deposit ($450.00).

The parts of the decision I wish to object to are in Part B and are as follows:

Paragraphs 12-15. (Various financial contributions). The contributions are calculated incorrectly.

Para 16 (roading upgrade). The wrong rate has been applied.

I reserve the right to make submissions in pursuit of this objection, and amplify the reasons for the objection, in due course.

Sincerely,

R.J.CUMMINS
Director
for CARLUS CONCEPTS LTD.

PHONE +64 4 801 6830
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EMAIL rjcummins@xtra.co.nz

Sixth Floor, 195-201 Willis Street
PO Box 27-029
Wellington, New Zealand

"Property Development and Financing Concepts that work..."

Te Kaunihera o
MANUKAU
City Council

With compliments

Joe

Address: 124 Stancombe Road, Flat Bush.
Proposal: 27047.
Response to your Section 92 request. If acceptable can you complete conditions ASAP.

Thanks - Bryce.

Private Bag 76917
Manukau City
New Zealand
Ph 09 263 7100
www.manukau.govt.nz

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC004818

Invoice Date: 18 Jan 2005
Customer No: 0078476
Charge Ref: 27373
Order No

Carlos Concepts Limited
PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5455*

Description	Quantity	Unit Price	Amount
PRC27373 124 Stancombe Rd, Clevedon			
Deposit	-1.00 Each	500.00	-500.00
Payment for this DEPOSIT has been received			
Admin Fee	1.00 Each	100.00	100.00
Site Visit	1.00 Hours	90.00	90.00
Report Formulation	2.00 Hours	90.00	180.00
Final Decision	1.00 Hours	90.00	90.00
Documentation	1.00 Hours	90.00	90.00
Authorisation	0.50 Hours	115.00	57.50

LAND USE 6923/124 SP 8840

Sub Total	$107.50
GST	$13.44

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Feb 2005	AMOUNT DUE	$120.94

Carlos Concepts Limited
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Te Kaunihera o
MANUKAU
City Council

Customer No: 0078476
Invoice No: RC004818
Charge Ref: 27373

DUE DATE	20 Feb 2005
AMOUNT DUE	$120.94

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

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Deposit	-1.00 Each	500.00	-500.00
Payment for this DEPOSIT has been received			
Admin Fee	1.00 Each	100.00	100.00
Site Visit	1.00 Hours	90.00	90.00
Report Formulation	2.00 Hours	90.00	180.00
Final Decision	1.00 Hours	90.00	90.00
Documentation	1.00 Hours	90.00	90.00
Authorisation	0.50 Hours	115.00	57.50

LAND USE 6923/124

Sub Total	$107.50
GST	$13.44

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DUE DATE	20 Feb 2005	AMOUNT DUE	$120.94

Carlos Concepts Limited
PO Box 27029
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Te Kaunihera o
MANUKAU
City Council

Customer No: 0078476
Invoice No: RC004818
Charge Ref: 27373

DUE DATE	20 Feb 2005
AMOUNT DUE	$120.94

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

PeopleSoft.

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- Set Up Financials/Supply Chain
- Background Processes
- Worklist
- Application Diagnostics
- Tree Manager
- Reporting Tools
- PeopleTools
- My Personalizations

New Window | Help

6923/124 M.
27373
Bryce

Item Maintain | Item Activity

Unit: MCCRC **Customer:** 0078476 0078476 **Status:** Closed

Item ID: RC004818 **Name:** Carlos Concepts Limited **Days Late:** 72

Balance: 0.00 **Currency:** NZD **Display:** 0.000 **Currency:**

Item Activities Find | View All First 1-2 of 2 Last

Sequence: 1 **Acctg Date:** 18/01/2005 **Posted Date:** 19/01/2005
Entry Type IN **Reason:** SUND **Reason Code:** **Voucher ID:** **Unpost Reason:**
Document: **Amount:** 120.94 **Currency:** NZD
Group Unit: MCCRC **Group ID:** 4979 Billing
Display Amount: 0.000 **Currency:**

Sequence: 2 **Acctg Date:** 29/04/2005 **Posted Date:** 04/05/2005
Entry Type PY **Reason:** **Reason Code:** **Voucher ID:** **Unpost Reason:**
Document: **Amount:** -120.94 **Currency:** NZD
Group Unit: MCCSS **Group ID:** 120645 Payment
Deposit Unit: MCCSS **Deposit ID:** 8028 **Payment ID:** 100019 **Display Amount:** 0.000 **Currency:**

Carlos Concepts.

OK | Cancel | Apply

Item Maintain | Item Activity

Tree Removal
Other Reason same.
Size

MANUKAU CITY COUNCIL RESOURCE CONSENT APPLICATION SITE VISIT RECORD NON-NOTIFICATION/ NOTIFICATION REPORT AND ASSESSMENT REPORT

1. REFERENCES:

Applicant: Carlos Concepts Ltd

Application: Discretionary Activity for removal of 8 protected trees from the site at **122 Stancombe Road**, Flat Bush being:

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

Restricted Discretionary Activity for works with the potential to impact on the root system of an Elm tree, and Chestnut Tree.

Discretionary Activity for removal of 4 protected trees from the site at **124 Stancombe Road**, Flat Bush being:

- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)
- Moreton Bay Fig (*Ficus macrophylla*) – consent given retrospectively

And a group of inextricably linked protected trees including species of Karaka, Totara, Puriri, Ti Kouka, Kauri, Kahikatea, Rewarewa, Taraire, and Kohehohe.

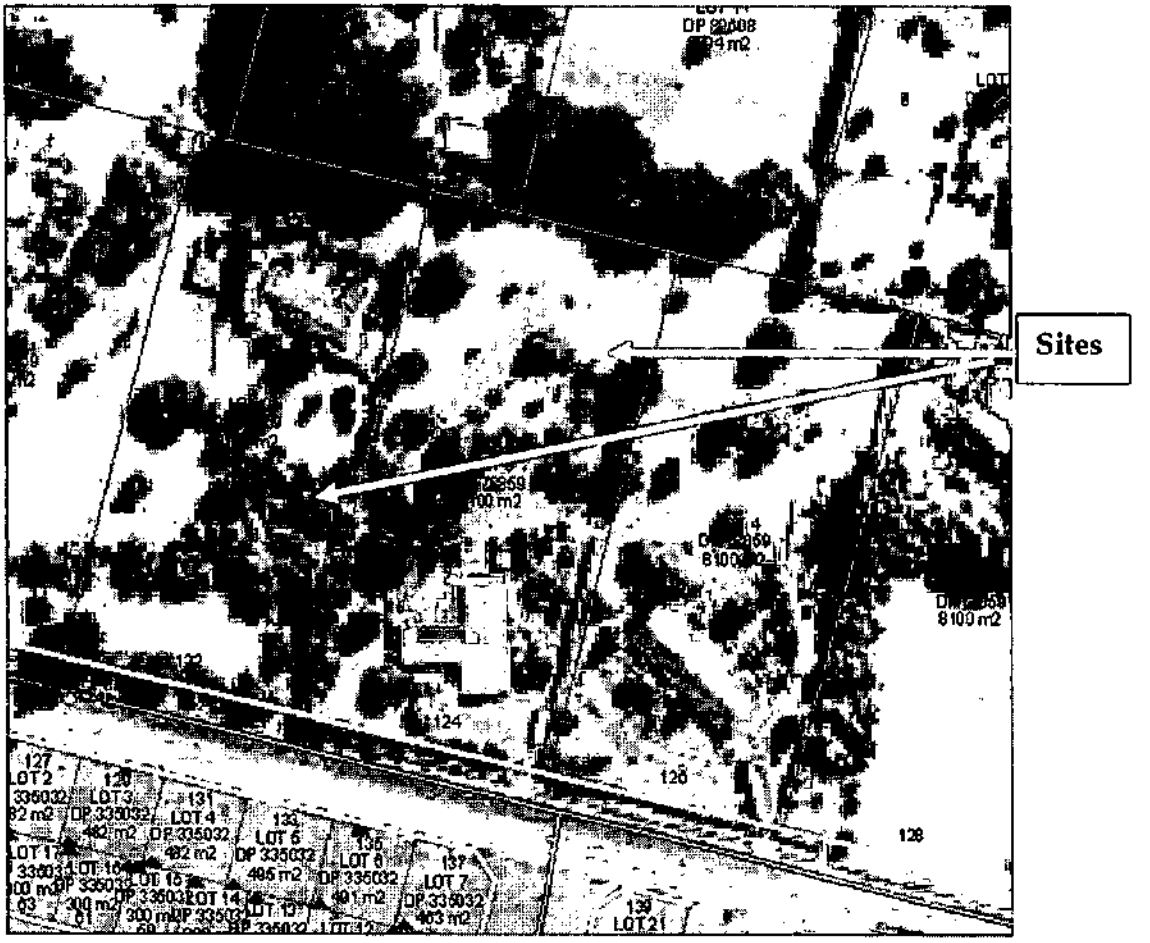
Site: 122 and 124 Stancombe Road, Flat Bush

Legal Description: Lots 2 and 3 DP 78859

Zoning: Flat Bush Residential 1 (General Precinct) – Proposed Variation 13 to the Manukau Operative District Plan 2002.
Future Development (Stage One) (Manukau Operative District Plan 2002)

Proposal No: 27373

LOCATION



2. SITE VISIT RECORD:

Topography /Site features (eg, trees, fencing, roading, existing buildings etc):

The site at 124 Stancombe Road has a substantial dwelling located on the Stancombe Road frontage and has a number of established trees planted throughout the property. The site is gently undulating with a gully running through the centre of the site in a south-west to north-east alignment. At least part of the site has been used for livestock grazing in the past. The site at 122 Stancombe Road is utilised for a childcare facility within a converted dwelling located to the north of a gully on the site. A formed carparking area surrounds this building, with a formed vehicle access providing vehicle access/egress in conjunction with associated with the childcare centre. This site also has a number of well established trees.

Character of the site, surrounding amenity and heritage values:

The sites have a semi urban amenity afforded by the spacious nature of the sites, and the established trees. Many sites in the vicinity are in the process of being developed for residential purposes (to the south) and land modification works are proceeding on the site to the east (126 Stancombe Road, Flat Bush). Several large established trees have been removed from the sites under previous resource consent granted (Proposal 27046).

Development Standards /Multiple household Provisions (eg, storage, parking, etc):

N/A

Surrounding Property (adjacent, in the vicinity, including across the road):

The sites are two of 7 similar size blocks located in a row on the northern side of Stancombe Road. Sites to the south across Stancombe Road have been prepared for residential

development (medium density/suburban). Sites to the north are utilised for rural lifestyle purposes.

Persons who may be affected:

The site owner of 122 Stancombe Road, Flat Bush has previously approved the land modification and road construction works proposed on the site at 124 Stancombe Road, and where they encroach into 122 Stancombe Road. As the tree removal works are necessary in conjunction with these land modification works it is considered that the consent of the owner of 122 Stancombe Road, Flat Bush previously obtained (this having been included within the consent previously obtained) encompasses the works proposed by this consent. Site discussions with the Manager of the childcare centre at 122 Stancombe Road on 22 December 2004 indicate that the necessity for tree removal at 122 Stancombe Road Flat Bush are well understood.

Additional Comments:

View of 122 Stancombe Road from Stancombe Road frontage.

122 Stancombe Road trees in gully to be removed

Elm Tree not to be removed but protected during land modification and tree removal works.

Chestnut Tree not to be removed but protected during land modification and tree removal works.

122 Stancombe Road trees in gully to be removed

Trees on 124 Stancombe Road, Flat Bush

Signed: _____ **Date of Visit: 22 December 2004**

Consent Co-ordinator

DETERMINATION AS TO WHETHER A RESOURCE CONSENT APPLICATION SHOULD BE NOTIFIED UNDER SECTION 93 OR NOTICE SERVED UNDER SECTION 94 (INCORPORATING SECTIONS 94 AND 94A TO D) OF THE RESOURCE MANAGEMENT ACT 1991

(a) REFERENCE

Applicant: Carlos Concepts Ltd

Application: Discretionary Activity for removal of 8 protected trees from the site at **122 Stancombe Road**, Flat Bush being:

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

Restricted Discretionary Activity for works with the potential to impact on the root system of an Elm tree, and Chestnut Tree.

Discretionary Activity for removal of 4 protected trees from the site at **124 Stancombe Road**, Flat Bush being:

- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)
- Moreton Bay Fig (*Ficus macrophylla*) – consent given retrospectively

And a group of inextricably linked protected trees including species of Karaka, Totara, Puriri, Ti Kouka, Kauri, Kahikatea, Rewarewa, Taraire, and Kohehohe.

Site: 122 and 124 Stancombe Road, Flat Bush

Legal Description: Lots 2 and 3 DP 78859

Zoning: Flat Bush Residential 1 (General Precinct) – Proposed Variation 13 to the Manukau Operative District Plan 2002.
Future Development (Stage One) (Manukau Operative District Plan 2002)

Proposal No: 27373

(b) DESCRIPTION OF PROPOSAL

The applicant has recently been granted resource consent for subdivision, land modification works, tree removal and public utility network provision including road construction (Proposal No: 27046, SP8840) on the sites subject of this application. Four separate reports have been undertaken by the Specimen Tree Company Ltd on the presence of protected trees on 122, 124 and 126 Stancombe Road, Flat Bush as part of the overall development of these sites. Only two of these reports were submitted for resource consent (Proposal No: 27047, SP8840), and accordingly the necessary application for removal of all protected trees identified by the Specimen Tree Company on 122 and 124 Stancombe Road, Flat Bush was not sufficiently comprehensive to cover all trees needing to be removed.

This application seeks resource consent to remove a number of additional trees protected under Schedule 6C of the Manukau Operative District Plan 2002 the species of which are identified above. One of these trees (Tree 23 in June 2004 Specimen Tree Company Report) has already been removed due to inadvertent actions of the contractor engaged to remove trees from the site at 124 Stancombe Road Flat Bush under previous resource consent 27047.

(c) ACTIVITY STATUS

Manukau Operative District Plan 2002

Discretionary Activity for removal of 8 protected trees from the site at **122 Stancombe Road**, Flat Bush being:

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

Restricted Discretionary Activity for works with the potential to impact on the root system of an Elm tree, and Chestnut Tree.

Discretionary Activity for removal of 3 protected trees from the site at **124 Stancombe Road**, Flat Bush being:

- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)

And a group of inextricably linked protected trees including species of Karaka, Totara, Puriri, Ti Kouka, Kauri, Kahikatea, Rewarewa, Taraire, and Kohehohe.

Note: A resource consent application must be notified unless:

(a) the application is for a controlled activity; **OR**

(b) the consent authority is satisfied that the adverse effects of the activity on the environment are minor.

(d) **ADVERSE EFFECTS ARE MINOR OR MORE THAN MINOR (Section 94A)**

Application of the permitted baseline has not been utilised in this instance pursuant to section 94A(a) of the RMA. With respect to consideration of section 94A(b) of the RMA the proposal is considered as a Discretionary Activity Assessment of the effects of the proposal is, therefore, not restricted.

(e) **DETAILED ASSESSMENT OF THE EFFECTS OF THE PROPOSED ACTIVITIES (OVERALL CONSIDERED AS A DISCRETIONARY ACTIVITY)**

Possible Effects	Scale of Effect / Mitigation/Neighbours' Consent/Other Comments
Flora and fauna	The proposed works will result in removal of a number of established trees on the sites, many of which are located within the small gully which runs across the properties. Having regard to the zoning of the site (which facilitates intensive residential development) it is considered that the scale of this vegetation removal will have minor effects and will be necessary to fulfil the zone objectives. It is considered that loss of these trees will serve to be mitigated, in the long term, by the structured landscape, and street planting proposed in conjunction with development of the site at 124 Stancombe Road. It is not considered that replacement planting be required beyond this as further development objectives of the northern portion of 124 Stancombe Road and 122 Stancombe Road are unknown. Requiring replacement planting in areas which may be proposed for future development is considered to be counterproductive as such trees may be affected by further development works.
Landscape	Nil – Assessed under resource consent Proposal No:27046
Water bodies	Nil
Site stability	Nil.
Shadowing/Sunlight	Nil
Privacy	Nil

Visual	The effects of alteration to vegetation patterns on the site will be noticeable, however, given the residential zoning of the site the loss of such visual qualities is implicit in the zoning provisions and is, therefore, considered acceptable.
Amenity/Character	The amenity values created by the works will be consistent in facilitating the ultimate urban development of the land and consistent with development that has already occurred in the vicinity.
Noise	Noise will be recognised during tree works on the site and will be subject to compliance with construction noise requirements.
Smell	Nil
Pollution	Nil
Infrastructure	
Traffic and Parking	
Cultural	
Socio-economic	Nil
Open space	Nil
Reverse sensitivity	Nil
Other (specify)	Nil

Overall the adverse effects are considered no more than minor.

(f) **FORMING OPINION AS TO WHO MAY BE ADVERSELY AFFECTED (Section 94B)** (All Activities)

(i) No statutory acknowledgement applies in Manukau City under section 94B(2) of the RMA.

(g) **LIMITED NOTIFICATION** (Refer Section 94)

Owner / Occupier	Address	Consent Obtained
Farm Cove Holdings Ltd	122 Stancombe Road, Otara	Yes

This party is considered adversely affected by the proposed tree removal works as the works are proposed within the 122 Stancombe Road site (by Developers of 124 Stancombe Road). This landowner has not given explicit approval to the tree removal works proposed, however, consent to the works is considered to be implicit in the land modification and fill works on the site at 122 Stancombe Road, Flat Bush for which written consent has been obtained from Farm Cove Holdings. The area of such works has also been approved by Farm Cove Holdings on the engineering plans which identify this work. Given the implicit nature of this previous consent, it has not been considered necessary that this neighbouring landowner be approached again.

(h) **PUBLIC NOTIFICATION OF PROPOSAL IF REQUESTED BY APPLICANT OR IF SPECIAL CIRCUMSTANCES EXIST** (Refer Section 94C)

(i) The applicant has not sought public notification of the application.

(ii) Special circumstances requiring notification are not considered to exist.

(i) **CONCLUSION**

- Taking into account the effects of the proposal, the adverse effects on the environment of the activity for which consent is sought will be no more than minor.
- All affected persons have given their written approval to the activity.
- Special circumstances requiring notification do not exist.
- The applicant has not requested public notification of the proposal.

SIGNED:

Date: 22/12/04

(Consent Co-ordinator)

DECISION:

Pursuant to Section 8.4.2 of the Delegations Register (Minute No 2203/01) the above application has been considered under delegated authority and has been determined to be processed as a Restricted Discretionary and Discretionary Activity:

With no public notification (s.93) and no Service of Notice (s.94)

Reasons:

(i) Effects are minor (s.93); and

(ii) All persons who may be adversely affected have given consent (s.94); and

(iii) There are no special circumstances [s.94C(2]; and

(iv) The applicant has not requested public notification [s.94C(1)]

Date: 22/12/04

(Team Leader - Resource Consents)

APPLICATION FOR RESOURCE CONSENT NOT REQUIRING NOTIFICATION CONSIDERED UNDER DELEGATED AUTHORITY

Applicant: Carlos Concepts Ltd

Application: Discretionary Activity for removal of 8 protected trees from the site at **122 Stancombe Road**, Flat Bush being:

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

Restricted Discretionary Activity for works with the potential to impact on the root system of an Elm tree, and Chestnut Tree.

Discretionary Activity for removal of 3 protected trees from the site at **124 Stancombe Road**, Flat Bush being:

- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)
- Moreton Bay Fig (*Ficus macrophylla*) – consent given retrospectively

And a group of inextricably linked protected trees including species of Karaka, Totara, Puriri, Ti Kouka, Kauri, Kahikatea, Rewarewa, Taraire, and Kohehohe.

Site: 122 and 124 Stancombe Road, Flat Bush

Legal Description: Lots 2 and 3 DP 78859

Zoning: Flat Bush Residential 1 (General Precinct) – Proposed Variation 13 to the Manukau Operative District Plan 2002.
Future Development (Stage One) (Manukau Operative District Plan 2002)

Proposal No: 27373

(b) **DESCRIPTION OF PROPOSAL**

The applicant has recently been granted resource consent for subdivision, land modification works, tree removal and public utility network provision including road construction (Proposal No: 27046, SP8840) on the sites subject of this application. Four separate reports have been undertaken by the Specimen Tree Company Ltd on the presence of protected trees on 122, 124 and 126 Stancombe Road, Flat Bush as part of the overall development of these sites. Only two of these reports were submitted for resource consent (Proposal No: 27047, SP8840), and accordingly the necessary application for removal of all protected trees identified by the Specimen Tree Company on 122 and 124 Stancombe Road, Flat Bush was not sufficiently comprehensive to cover all trees needing to be removed.

This application seeks resource consent to remove a number of additional trees protected under Schedule 6C of the Manukau Operative District Plan 2002 the species of which are identified above. One of these trees (Tree 23 in June 2004 Specimen Tree Company Report) has already been removed due to inadvertent actions of the contractor engaged to remove trees from the site at 124 Stancombe Road Flat Bush under previous resource consent 27047.

3.0 PLAN PROVISIONS

(a) Relevant Provisions (include objectives and policies).

Manukau Operative District Plan

Objectives: 6.3.1

Policies: 6.4.1, 6.4.2

Rules: Rule 6.9.2 (Removal of any scheduled tree or works which may impact on the root system of such tree – as identified in Schedule 6C

Assessment Criteria: 6.12.1 and 6.12.2.4-Protected Tree Removal, and 6.11 – Works Within The Dripline of Any Protected Tree.

(b) Conditions the Plan requires to be imposed.

There are not conditions the Operative District Plan 2002 requires be imposed.

4.0 STATUTORY CONSIDERATIONS (Note: Permitted baseline is discretionary)

Sections 104, 104B and 104D of the Resource Management Act 1991, and the Purpose and Principles of the Act (Part II).

5.0 AFFECTED PERSONS' APPROVALS

The preceding section 93 and 94 report identifies that the consent of those persons considered adversely affected by the proposed tree removal works have been obtained.

6.0 ASSESSMENT OF THE APPLICATION

6.1 Manukau Operative District Plan 2002

Removal of Protected Trees

The applicant has submitted reports prepared by the Specimen Tree Company dated 30 June 2004 and 14 December 2004 respectively, and requested consent to remove a total of 11 protected together with an additional group of inextricably linked and generally protected trees under Schedule 6C of the Operative District Plan 2002 from the site. These reports have identified that the majority of trees proposed to be removed are of poor-fair form and health and would not be able to be retained given development objectives for the site.

The removal of 3 trees together with an additional group of inextricably linked trees on the site at 124 Stancombe Road, Flat Bush is justified as being necessary for filling of a gully on the property, and road construction. Given the ultimate development opportunities provided by the zoning of the site (for medium/high intensity residential development) and the current topography of the site removal of these trees is considered unavoidable. Structured street planting will serve to mitigate the effects resulting from removal of these trees.

In addition, the removal of 8 protected trees (under Schedule 6C of the Manukau Operative District Plan 2002) from 122 Stancombe Road is also requested. The proposed filling of a gully on the site is considered necessary in conjunction with the land modification and road construction works on 124 Stancombe Road, Flat Bush. Again, the Arborist's report submitted identifies these trees as being of low quality. On this evidence it is considered appropriate that these trees be removed and that compensatory landscaping be provided in development of 124 Stancombe Road, Flat Bush site.

Removal of Tree 23 on 124 Stancombe Road (identified in 30 June 2004 Specimen Tree Company report), has occurred due to miscommunication between the contractor and the consent holder. It is likely that removal of this tree would have been necessary in the future, and consequently, retrospective approval is afforded to this tree removal.

Chapter 6 (Cultural Heritage)

Maintenance and protection of scheduled trees on the site is not able to be achieved by the development proposed. Whilst this is considered to be consistent with the ultimate development of the site provided for within the zoning which applies it is considered to be contrary to the objectives and policies which apply in Chapter 6 – Cultural Heritage.

6.3 Section 104, 104B and 104C of the Act

Pursuant to Section 104B and 104C of the Resource Management Act 1991 (RMA) the application has been considered to merit granting of consent. Whilst the proposal is considered to be contrary to some objectives and policies provided within Chapter 6 – Heritage of the Manukau Operative District Plan 2002, on balance it is considered that the tree removal proposed is necessary to give effect to the intention of the Flat Bush Residential 1 Zone.

6.4 Part II of the Act

It is considered that the proposal is consistent with the purpose and principles of the Resource Management Act 1991. With reference to Section 5 and 7, it is considered that the proposal provides for an efficient use of the land and through the imposition of conditions, any adverse effects of the activity can be avoided or mitigated and the amenity values and quality of the environment will be maintained. It is considered that the proposal will not affect any matters of national importance and is not contrary to the provisions of the Treaty of Waitangi.

7.0 RECOMMENDATION

That resource consent for the above proposal has been granted under delegated authority as a Non-Complying Activity pursuant to the provisions of the Operative District Plan 2002, Proposed Variation 13 and Sections 104, 104B, 104C and 108 of the Resource Management Act 1991, subject to the following conditions being complied with to the satisfaction of, and at no cost to the Council.

8.0 CONDITIONS & ADVICE NOTES

8.1 Conditions

I wish to advise that consent for the above application was granted on 22 December 2004 under delegated authority and pursuant to Sections 104, 104B and 104C of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

(1) That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

(2) That the removal of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 shall be limited to the following trees on the following sites:

<u>122 Stancombe Road, Flat Bush</u>

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

The above trees being those identified in the Arboricultural Report submitted with the application by the Specimen Tree Company dated 14 December 2004.

<u>124 Stancombe Road, Flat Bush</u>

- Moreton Bay Fig (*Ficus macrophylla*)
- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)

The above trees being those numbered 23-27 as detailed in the Arboricultural Report submitted with the application by the Specimen Tree Company dated 30 June 2003.

(3) Prior to any land modification works, tree removal, or works proximate to protected trees on the site (for trees not approved for removal by this consent) a suitably qualified arborist shall clearly identify to all contractors, and sub-contractors who are to be working on the site those trees which are approved for removal by this consent, and those trees which shall be protected during all land modification and construction works.

(4) A copy of this resource consent shall be retained on site at all times during all land modification and tree removal works.

(5) Prior to any tree removal a temporary protective fence shall be erected to protect the Elm tree, and Chestnut Tree identified on the plans submitted and numbered 27373 by the Council (attached to and forming part of this consent) and any other protected trees proximate to the area of land modification and tree removal works. The extent and location of this temporary protective fencing shall be overseen by a suitably qualified arborist. These trees being identified in the Arboricultural Report submitted with this application by the Specimen Tree Company Ltd dated 14 December 2004.

(6) The area within the dripline of trees identified in condition (5) above shall be treated as a total exclusion zone which requires:
- No entry into the protected areas unless approved by a suitably qualified arborist appointed by the consent holder;
- No storage of diesel, cement, building materials, site offices, or topsoil or any other construction materials within the protected areas;
- No spillages of any substances within the protected areas;
- No alteration of the extent of the protective fencing unless prior approval is given by a suitably qualified arborist;

(7) The temporary protective fencing referred to in condition (5) above should be constructed from a rigid material (e.g. plywood or corrugated iron) attached to a sturdy framework of freestanding scaffolding or posts. This fencing shall be maintained at all times during all land modification and tree removal works.

(8) Any pruning works necessary to any protected trees on the site in conjunction with any land modification or tree removal works shall be undertaken by a suitably qualified arborist in accordance with accepted arboricultural practice.

(9) Tree removal operations shall be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

(10) Prior to commencement of any tree removal on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

(1) In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date of commencement of the consent, unless the consent is given effect to before the end of that period. However, the Council does have the power to extend this period in certain cases where an application under Section 125 is made prior to the consent lapsing.

REASONS FOR THE DECISION

1. The conditions imposed on this consent are in accordance with the recommendations of the Specimen Tree Company Ltd reports dated 30 June 2004 and 14 December 2004.

2. Removal of all trees identified in this resource consent are necessary for either road construction works on Lot 124 Stancombe Road, Flat Bush, or for land modification works necessary in association with the construction of this road, or any network utility service provision in conjunction with construction of this road.

3. Proposed Variation 13 to the Manukau Operative District Plan envisages that this site be available for residential development of a medium / high density. Whilst this requires removal of a number of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 it is considered these works are necessary to fulfil the ultimate intention of residential development of the site provided under Variation 13 to the Manukau Operative District Plan.

Date: 22/12/04 _____
Consent Co-ordinator

Date: 22/12/04 _____
Team Leader - Resource Consents

Pursuant to Section 8.4.2 of the Delegations Register (Minute 2203/01), the above application has been considered under Delegated Authority and has been determined as a non-notified Restricted Discretionary and Discretionary Activity application.

Consent is hereby granted in accordance with Part II and sections 104, 104B and 104D of the Resource Management Act 1991.

SIGNED

_____ Date: 22/12/04.
Consent Co-ordinator

DECISION

Recommendation adopted under Delegated Authority

_____ Date: 22/12/04
Team Leader - Resource Consents

KO

Environmental Services

16 December 2004

Carlos Concepts Ltd
C/- Working Concepts Ltd
P.O. Box 58-395
Greenmount

Attention: Sandy Heard

Dear Madam

DECISION ON AN APPLICATION FOR SUBDIVISION RESOURCE CONSENT AND ASSOCIATED LAND USE RESOURCE CONSENT FOR LAND MODIFICATION AND TREE REMOVAL.

Applicant: Carlos Concepts Ltd

Application: **Part A - Land Use Consent (Manukau Operative District Plan 2002)**

Restricted Discretionary Activity for land modification works being a total of 3300m^3 cut and fill.

Discretionary Activity for removal of 12 protected trees being:

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- 2 x Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
- Two Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- English Oak (*Quercus Robur*)
- 2 x Pohutukawa (*Metrosideros excelsa*)

Part B - Subdivision Consent

Manukau Operative District Plan 2002

Non-Complying Activity for 2 lot subdivision (with road to vest) in the Rural 3 Zone contravening Rule 12.15.3.

Restricted Discretionary Activity for subdivision of a site with road frontage to the Primary Road Network (Stancombe Road).

Restricted Discretionary Activity for provision of Public Utility Services (stormwater, wastewater, roading, and water supply) in conjunction with subdivision.

Variation 13 to the Manukau Operative District Plan 2002

Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.1 Movement Network by exceeding the maximum 250m block length by 63 metres.
Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.6 for Proposed Lot 10 by infringing the required 25% front boundary requirement by 1.5%.
Restricted Discretionary Activity under Rule 17.10.12.13 for investigation of Asbestos Containing Materials on this site.

Location:	124 Stancombe Road, Flat Bush (and 122 Stancombe Road, Flat Bush for some land modification works and tree removal)
Legal Description:	Lot 3 DP 78859 (and land modification works and tree removal on Lot 2 DP 78859)
MCC Reference:	SP8840
Proposal No:	27046
Zone:	Rural 3 - Manukau Operative District Plan 2002 Flat Bush Residential 1 – General and Arterial Precincts (Special Policy Area Boundary: Flat Bush Buffer Area) – Proposed Variation 13.

DECISION

PART A – LAND USE CONSENT

I wish to advise that consent for the above application was granted on 16 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104C and 108 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046** by Council except where amended by the following conditions of consent.

Tree Removal

3. That the removal of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 shall be limited to the following trees on the following sites:

124 Stancombe Road, Flat Bush

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
- Pin Oak (*Quercus palustris*)

The above trees being those numbered 16-22 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated September 2004.

Advice Note: Tree 23 identified within the Specimen Tree Company Report dated September 2004 is not a Pin Oak and does not exceed 6 metres in height. Accordingly, it is not protected under the Manukau Operative District Plan 2002.

122 Stancombe Road, Flat Bush

- Indian Cedar (*Cedrus deodara*)
- English Oak (*Quercus Robur*)
- Two Pohutukawa (*Metrosideros excelsa*)

The above trees being those numbered 1-4 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated 23 November 2004.

Advice Note:

During consultation between the applicant and Ngai Tai Umupuia Te Waka Totara it has been requested that any native trees removed as part of the earthworks (which are less than 6 metres in height and are, therefore, not subject of this resource consent, or the two Pohutukawa on the 122 Stancombe Road property) be donated to the iwi - Ngai Tai Umupuia. Arrangements can be made with Jaroz Adams (Phone: (09) 292-9020 or email: tewakatotara@xtra.co.nz should the consent holder choose to make this donation.

4. The trees identified for removal under condition (3) above shall be clearly marked and identified by a suitably qualified arborist prior to their removal being undertaken.

5. All tree removals shall be in accordance with accepted arboricultural practice.

6. Tree removal operations shall be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

Earthworks

7. The earthworks construction shall be undertaken in accordance with:

   (a) The erosion and sediment control plan as detailed in the approved plans referenced E7/27046 by Council

   (b) Auckland Regional Council Technical Publication 90 - TP90 Erosion and Sediment Control.

(c) The recommendations of the geotechnical report from Geotek Services Ltd (Ref 2532, dated 30 June 2004).

8. The works shall be undertaken in such a manner as to ensure that beyond the boundary of the site there should be no 'dust' or 'soil erosion / siltation', which in the opinion of the Manager - Resource Consents & Compliance, is objectionable, offensive or has the potential to create an adverse effect on the receiving environment.

9. The consent holder shall be responsible to ensure that the land within the above site and the land on adjoining properties remains stable at all times in respect to the approved works.

10. The septic tank on this site shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

11. Control measures shall be in place to ensure that any trucks leaving the site do not deposit soil or other debris on public roads. Any such material deposited on any public road shall be cleaned up immediately at the consent holder's expense.

12. Prior to development commencing, the consent holder shall provide Council's Manager - Environmental Health and Compliance with details of the level of communication with neighbouring property owners/occupiers and identification of the liaison person. The consent holder shall ensure that, before commencement of the development, the owners of all adjoining properties are notified in writing of the development in general, its expected duration, the times at which it will be undertaken, and the name of a responsible person with whom neighbours can liaise if the need arises. (Any queries in the foregoing should be referred to the Manager - Environmental Health and Compliance).

Environmental Health

13. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

14. Prior to commencement of any land modification works, or tree removal on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to

extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Although the proposed location of the earthworks do not contain any known archaeological sites, it is possible that unrecorded sites may exist. Under the Historic Places Act 1993, it is unlawful for any person to destroy, damage or modify an archaeological site unless the relevant consents have been obtained from the New Zealand Historic Places Trust. In the event of archaeological features being uncovered (e.g. shell midden, hangi or oven stones, pit depressions, defensive ditches, artefact material or human bones) work is to cease in the vicinity of the discovery and the New Zealand Historic Places Trust and appropriate iwi authorities shall be contacted so that the appropriate action can be taken. This includes such persons being given reasonable time to record and recover archaeological features discovered before work may recommence.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B, and 104C of the Resource Management Act 1991 and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002. .

2. Proposed Variation 13 to the Manukau Operative District Plan envisages that this site be available for residential development of a medium / high density. Whilst this requires removal of a number of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 and land modification works it is considered these works are necessary to fulfil the ultimate intention of residential development of the site provided under Variation 13 to the Manukau Operative District Plan.

PART B – SUBDIVISION CONSENT

I wish to advise that consent for the above application was granted on 16 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104C,104D and 220 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046 (SP8840)** by Council except where amended by the following conditions of consent.

Engineering

3. The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

   (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

   (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

   (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

   (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

   (v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

4. A satisfactory foundation completion report for the site shall be submitted to Council for approval upon completion of the land modification works (approved under Part A – Land Use Consent). Should the Land Transfer Plan differ from the approved subdivision plan then the Foundation report shall be amended accordingly.

   Unless the foundation completion report states that a building constructed in compliance with NZS 3604: 1999 does not need specific design for the building foundations, a record will be placed on Council's Land Information Register requiring that the recommendations of that report be complied with.

   If 'Extremely Expansive Soils' [AS 2870 (1996) Class E or equivalent] or 'Specific Design Requirements' are indicated, a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 will also be required.

5. Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment area with individual connection points in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

6. Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

Roading

7. The proposed new road shall be constructed in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

8. Street lighting facilities shall be supplied and in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

9. Road upgrading is required along the full frontage (on one half of the road only) to increase the width of Stancombe Road to that of a District Arterial Road with cycle lanes as detailed in Proposed Variation 13 Table 2 and Figure 17.10.3 Standard as defined in Rule 9.14.5.5.2 and appendix 2 of the Manukau Operative District Plan 2002. This work shall include:

   (a) The vesting as Road of 3.64 metres of land being in general one half of the additional extra legal road width required.

   Manukau City Council will pay compensation for the land required in excess of a collector road for Stancombe Road. (See rule 9.9.2.11(a)(viii) of the Manukau Operative District Plan 2002.) The quantum of this compensation shall be agreed with the Manager Transportation, Manukau City Council. (Chris Freke, Phone 262 5799, email cfreke@manukau.govt.nz.)

   (b) The construction of a footpath along Stancombe Road as detailed on the approved engineering plans referenced E7/27046 (sheets 1-21) by Council.

10. Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed lots.

    The consent holder shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts.

11. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

Financial Contributions

12. A Comprehensive **Stormwater Discharge** Levy of $447.00 including GST shall be paid to Manukau City Council.

The consent holder is advised that this levy (FC45) has been calculated at $490.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

13. A **Stormwater** contribution of $70,002.23 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC259 – Flat Bus Stormwater) has been calculated at $76,820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

14. A **Wastewater** contribution of $5,816.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution is made up of the following elements:

    - $747.00 including GST. This contribution (FC223 – Accent Drive Embankment) is assessed at $820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

    - $5,069.00 including GST. This contribution (FC260 – Stancombe Road Wastewater) is assessed at $5,563.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

15. A **Water Supply** Contribution of $18,799.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC231 – Flat Bush Water Supply) has been assessed at $20,630.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

16. A **Roading Upgrade** contribution of $88,200.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC266 – Stancombe Road) has been assessed at $1400 /metre road frontage plus GST for a frontage of 56 m.

17. All contribution rates shall be reassessed in accordance with the current Statistics NZ Capital Goods Price Index for Other Construction-S2GC (for the previous year) if payment is not made within 12 months of date of this consent.

Septic Tank

18. The septic tank on this site (Lot 3 DP78859) shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

Street Trees

19. That tree planting at the site frontage along the front berm of the roads shall be in accordance with the Robin Duncan Landscape Architect plan referenced 27046 by Council attached to and forming part of this consent.

20. Street tree planting shall be undertaken in accordance with the requirements of Rule 17.10.11.8 of Proposed Variation 13 to the Manukau Operative District Plan 2002 with these relevant requirements restated below and forming conditions of consent:

    - Street tree planting shall be undertaken in new developments once formation of the street has been completed;

- Street trees shall be planted in the front berm between the kerb and footpath. The front berm for street planting shall have a minimum width of 1.4 metres.
- Street trees are to be provided on both sides of the street at a minimum average spacing of 15 metres.
- Clear visibility of bus stops, pedestrian crossings, sign posts and road intersections (where they are known) are to be maintained.
- The consent holder shall be responsible for the routine maintenance and replacement of any street planting they provide including deadwooding, weed control, mulching and watering for a minimum period of 12 months from the time of planting.
- Trees that are vandalised or dead, or that are not of a suitable specimen form shall be replaced immediately at the cost of the consent holder.

21. The street tree species on Stancombe Road shall be London Plane (Platanus acerifolia). The street tree species on "Proposed Road 1 and 2" shall be Sweet Gum (Liquidamber styraciflua).

22. The street trees shall be suitably positioned so as not to obstruct intersection line of sight in accordance with MCC Quality Assurance Manual and shall be positioned 3.0m away from driveways at all times in accordance with MCC Quality Assurance Manual. This shall be the responsibility of the consent holder up to the time of 224 certification or the final inspection agreement.

Road to Vest

23. Lot 1000 shall vest in the Manukau City Council as legal road at no cost to Council.

Financial Contribution for Proposed Road 1

24. Within three months of the commencement of this resource consent and prior to certification pursuant to the requirements of section 224 of the Resource Management Act 1991 the consent holder shall:

    (a) Submit to the Council an assessment, undertaken by a suitably qualified engineer, of the cost of altering that length of "Proposed Road 1" (identified on Airey Consultants Plan ref: A9861/5 Drawing 6, Rev.4) to comply with the "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards) for that part of this "Proposed Road 1" within the legal boundary of 124 Stancombe Road (Lot 3 DP 78859).

    (b) This assessment shall include consideration of the cost of relocating the footpath, service berms (and any associated services to comply with the provisions of the Manukau Operative District Plan 2002), street planting ,all kerb and channel works, street light and signage replacement or repositioning, road markings, design, construction and supervision works (as well as any necessary contingency) associated with alteration of this road to achieve compliance with Council's Engineering Quality Standards and the provisions of the Manukau Operative District Plan 2002 for alteration of "Proposed Road 1" to local road standard (7.8 metre carriageway and 18.2 metre legal width).

    (c) Allow the Council sufficient time to arrange and complete a peer review of the costs identified under (a) and (b) above, to be undertaken by a suitably qualified engineer, appointed by the Council and at the sole discretion of the Council, to certify the costs submitted under (b) above.

    (d) Following the completion of the peer review required under (c) certifying all costs required under (b) above pay the Council as a financial contribution the cost of

all works identified under (b), together with all costs incurred by the Council in review.

Road Marking – Proposed Road 1 and 2 ("Carlos Drive")

25. That the following traffic signage and road markings be installed, to the extent practicable, in accordance with the Transit NZ Manual of Traffic Signs and Markings, as part of the road construction.

    (a) A "Give Way " sign (RG-6) at the intersection with Stancombe Road.
    (b) Two chevron boards (RC- 5) at the future bend in Carlos Drive,
    (c) A 100mm wide continuous reflectorised white centreline around the bend extending 30 metres from the tangent points.(See MOTSAM Fig.2.1[a]) "
    (d) "No Stopping At All Times" from the western side of the vehicle crossing of 122 Stancombe Road, around the corner, and along the western side of Carlos Drive to the northern most extent of this road.

    An engineering drawing shall be submitted and approved by the Manager Resource Consents and Compliance demonstrating the location and form of this signage prior to installation

Reserve Contribution

26. (a) A reserves contribution of **$32,400** including 12.5% GST being 6% (plus GST) of the market value of Lot 10 (as a single household unit site), shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.

    Note: The Reserve contribution payable specified above has been derived as follows:

Market value of Lot 1 as a single household site	$480,000.00 (including GST)
Contribution: $480,000.00 x 6% + GST	**$32,400.00 (including GST)**

    Note: The above calculations reflect the number of underlying allotment (1) and the number of additional allotments created at this stage of the subdivision (1)

    (b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

Existing House

27. The existing house on the site shall be removed prior to Council's certification pursuant to Section 224(c) of the Resource Management Act 1991.

Section 224

28. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and

the Land Transfer Plan number and a copy of the survey plan (showing co-ordinates) are supplied to the Council.

29. Prior to commencement of any works to install public network utility services on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Each allotment is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. Clause 6.B.6.1 of Council's Engineering Quality Standards manual (carriageway acceptance) in respect to Council carrying out Benklemann Beam tests at no cost to the developer has been amended to the extent that the cost of this work shall now be borne by the consent holder.

6. New roads are to be vested in Council as part of subsequent consents relating to this site. Please ensure that an application is made for preferred 'road names' to, the Team Leader Resource Compliance, for approval at time of, or prior to, application for section 223 release.

7. Pursuant to section 37(1) of the Resource Management Act 1991 (RMA) the time limit for notification of this decision under Section 115 of the RMA has been extended.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B, 104C and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002.

2. It is considered that the proposed subdivision will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.

3. It is considered that any adverse effects of the subdivision on the surrounding environment is no more than minor and will be mitigated by the conditions of consent.

4. The affected party at 122 Stancombe Road, Flat Bush has given their written approval to the proposed subdivision. In imposing condition (24) of this consent it is expected that, at

the time the 122 Stancombe Road is developed for more intensive residential purposes, that Proposed Road 2 will be extended to a legal width of 18.2 metres, and carriageway of 7.8 metres by the 122 Stancombe Road developer. Correspondingly, that part of the road on the 124 Stancombe Road property will also be upgraded to local road standard in "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards).

This shall be recorded on Council's Land Information Register (LIR) for both properties at 122 Stancombe Road, and 124 Stancombe Road, Flat Bush.

COSTS

1. In addition to the consent charge for this consent, and pursuant to Section 36(1)(c) of the Resource Management Act 1991, an engineering administration and inspection charge, relating to the engineering conditions of the Resource Consent will be applicable (together with administration charges relating to the release of the subdivision) by determining all reasonable and actual costs incurred by Council. The actual charges incurred in the Council's field monitoring of the engineering works will be determined at the completion of works and will be payable prior to release. The consent holder will be advised of the charges as they fall due.

2. The aforementioned fee is in addition to the normal fees and requirements as imposed by the Manager - Building Consents & Compliance to the Building Consent.

RIGHT OF OBJECTION

Within 15 working days of receipt of this decision (commencement date stamped below) you may lodge an objection to the decision pursuant to Section 357(2) of the Resource Management Act 1991. Any such objection shall be made by notice in writing to the Council setting out the reasons for the objection and the relief sought.

Please note that from 1 October 1999 the Council requires a deposit fee of $450 (inclusive GST) to accompany any objection relating to valuation figures, financial contributions and the provision of works associated with the provision of infrastructure. (Minute No. 1455/99).

Any such objection may incur the reasonable costs of processing the objection above and beyond the deposit fee (Sec 36(3) of the Act).

Should you wish to enter into any future correspondence, building consent applications, or enquiries relating to this consent, could you please ensure that you include the file reference at the foot of page one of this letter.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

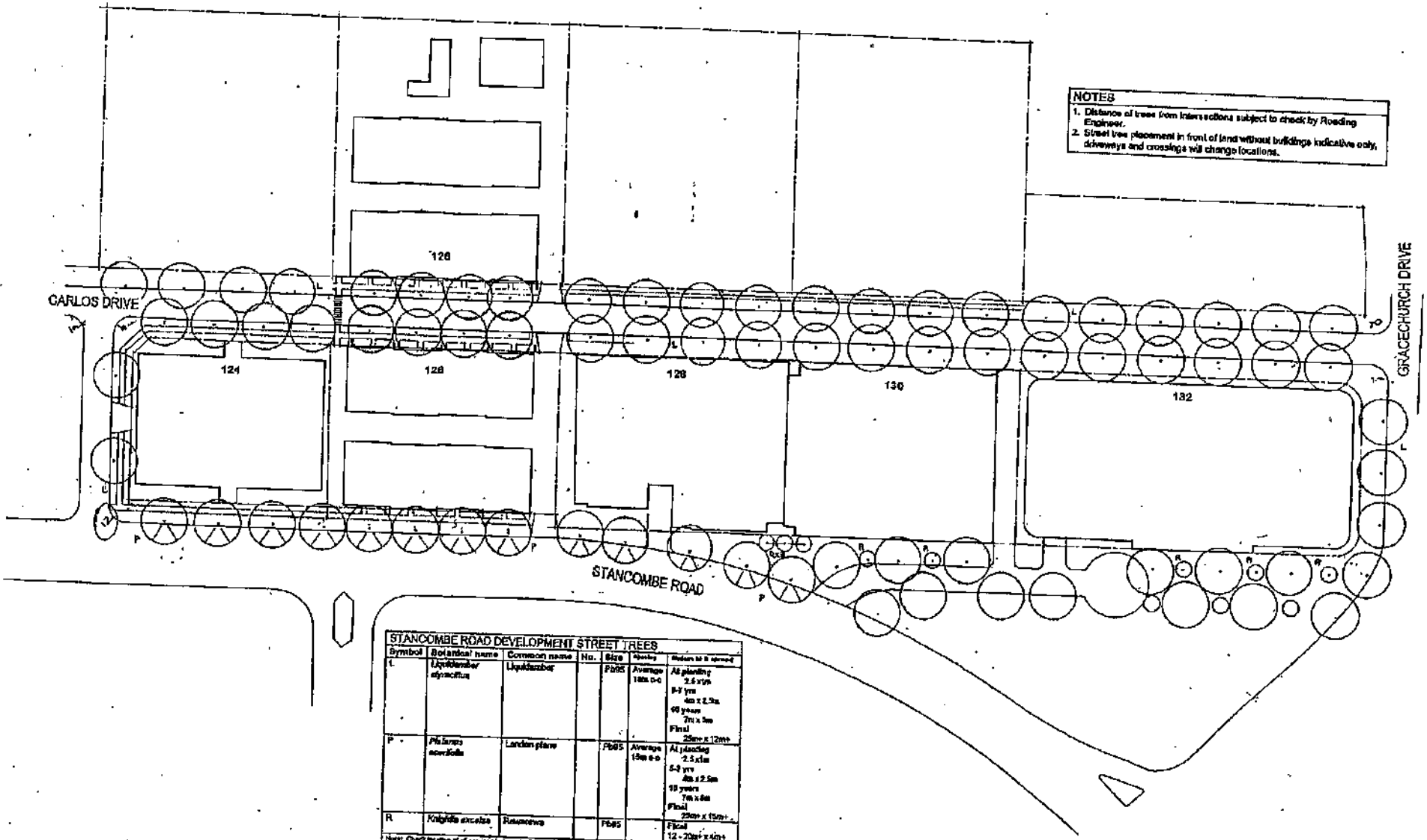
Date 17-12-04.
Commencement of 15 Working Days
RE : S 357 RM Act 1991

27046

STANCOMBE ESTATE — *DRAFT* STREET TREE PLAN

1:500 @ A1 — August 2004

1:1000 @ A3



NOTES

1. Distance of trees from intersections subject to check by Roading Engineer.
2. Street tree placement in front of land without buildings indicative only, driveways and crossings will change locations.

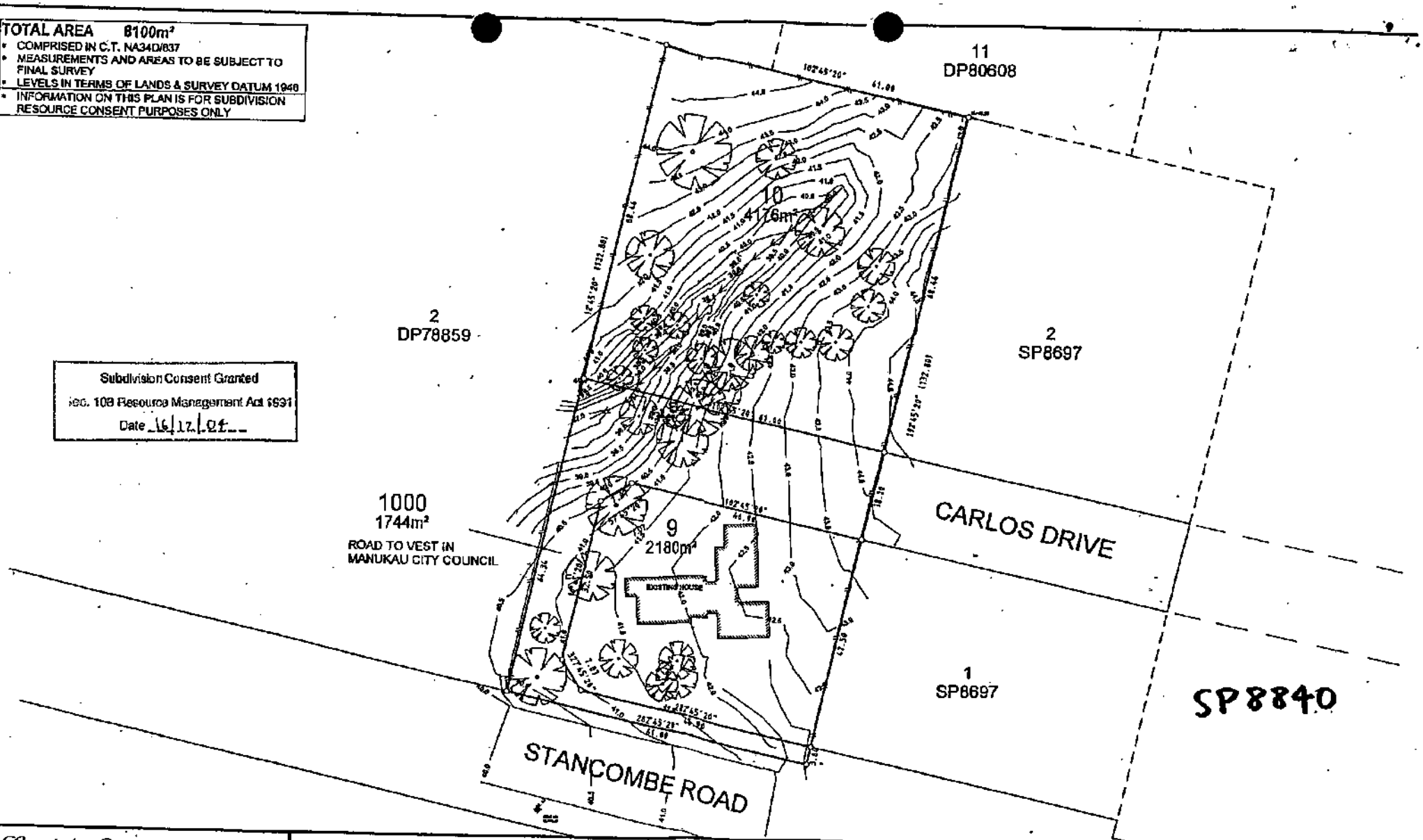
STANCOMBE ROAD DEVELOPMENT STREET TREES

Symbol	Botanical name	Common name	No.	Size	Spacing	Medium to be spaced
L	*Liquidamber styraciflua*	Liquidamber		Pb95	Average 18m c-c	At planting 2.5 x1m 5-7 yrs 4m x 2.5m 10 years 7m x 5m Final 25m+ x 12m+
P	*Platanus acerifolia*	London plane		Pb95	Average 15m c-c	At planting 2.5 x1m 5-7 yrs 4m x 2.5m 10 years 7m x 6m Final 20m+ x 15m+
R	*Knightia excelsa*	Rewarewa		Pb95		Final 12 - 20m+ x 4m+

Note: Check location of all services before planting.
Preparation and tree planting of trees to be to Detail 1, Manukau Public Tree Planting Manual.

TOTAL AREA 8100m²
- COMPRISED IN C.T. NA34D/837
- MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
- LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946
- INFORMATION ON THIS PLAN IS FOR SUBDIVISION RESOURCE CONSENT PURPOSES ONLY

Subdivision Consent Granted
Sec. 108 Resource Management Act 1991
Date 16/12/04



Easdale Surveyors Ltd
REGISTERED SURVEYORS • LAND DEVELOPMENT CONSULTANTS
39 Meadowland Drive, Howick
Phone 09 534 6452
Fax 09 537 5754

PROPOSED SUBDIVISION
124 STANCOMBE ROAD, FLAT BUSH
LOT 3 DP78859

FILE:	7576
SCALE:	1:500
DATE:	September 2004
SURVEYOR	MSL
REVISION	SCHEME 1

MANUKAU CITY COUNCIL RESOURCE CONSENT APPLICATION SITE VISIT RECORD NON-NOTIFICATION/ NOTIFICATION REPORT AND ASSESSMENT REPORT

1. REFERENCES:

Applicant: Carlos Concepts Ltd

Application: Resource Consent application to subdivide a site into two allotments (with additional road to vest in Council), associated land modification works and tree removal in preparation of the site for residential development. The application requires consent for the following:

Manukau Operative District Plan 2002

Non-Complying Activity for 2 lot subdivision (with additional road to vest in Council) in the Rural 3 Zone contravening Rule 12.15.3.

Restricted Discretionary Activity for subdivision of a site with road frontage to the Primary Road Network (Stancombe Road).

Restricted Discretionary Activity for land modification works being a total of 3300m^3 cut and fill.

Restricted Discretionary Activity for provision of Public Utility Services in conjunction with subdivision of the land.

Discretionary Activity for removal of 12 protected trees being:

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- 2 x Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
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- Sweet Gum (*Liquidamber styraciflua*)
- English Oak (*Quercus Robur*)
- 2 x Pohutukawa (*Metrosideros excelsa*)

Variation 13 to the Manukau Operative District Plan 2002

Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.1 Movement Network by exceeding the maximum 250m block length by 63 metres.
Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.6 for Proposed Lot 10 by infringing the required 25% front boundary requirement by 1.5%.
Restricted Discretionary Activity under Rule 17.10.12.13 for investigation of Asbestos Containing Materials (ACM) on this site.

Location: 124 Stancombe Road, Flat Bush (and 122 Stancombe Road, Flat Bush for some land modification works and tree removal)

Legal Description: Lot 3 DP 78859 and land modification works and tree removal on Lot 2 DP 78859

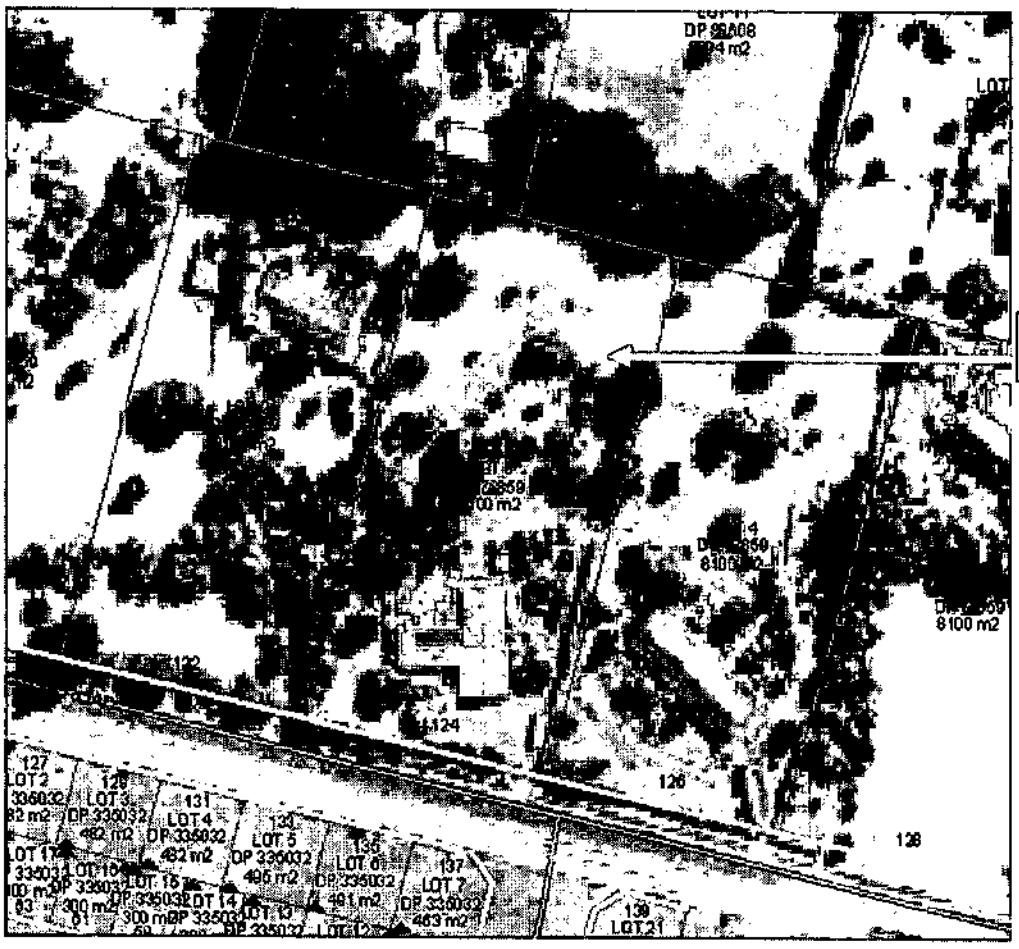
MCC Reference: SP8840

Proposal No: 27046

Zone: Rural 3 - Manukau Operative District Plan 2002

Flat Bush Residential 1 – General and Arterial Precincts (Special Policy Area Boundary: Flat Bush Buffer Area) – Proposed Variation 13.

LOCATION



2. SITE VISIT RECORD:

Topography /Site features (eg, trees, fencing, roading, existing buildings etc):

The site has a substantial dwelling located on the Stancombe Road frontage and has a number of established trees planted throughout the property. The site is gently undulating with a gully running through the centre of the site in a south-west to north-east alignment. At least part of the site has been used for livestock grazing in the past.

Character of the site, surrounding amenity and heritage values:

The site has a semi urban amenity afforded by the spacious nature of the site, and the established trees. Many sites in the vicinity are in the process of being developed for residential purposes (to the south) and land modification works are proceeding on the site to the east (126 Stancombe Road, Flat Bush).

Development Standards /Multiple household Provisions (eg, storage, parking, etc):

N/A

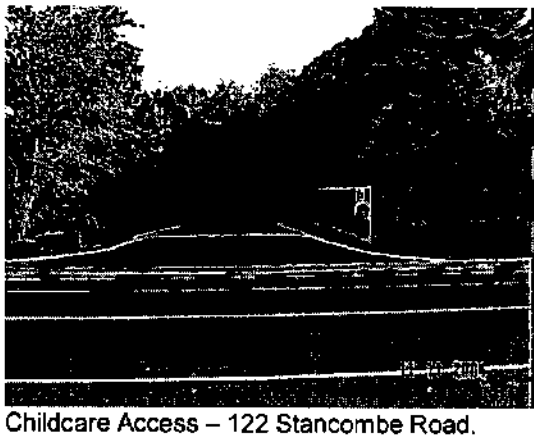
Surrounding Property (adjacent, in the vicinity, including across the road):

The site is one of 7 similar size blocks located in a row on the northern side of Stancombe Road. Sites to the south across Stancombe Road have been prepared for residential development (medium density/suburban). Sites to the north are utilised for rural lifestyle purposes. A childcare centre is located on the site to the west, with a formed access located on the eastern boundary of this adjoining property.

Persons who may be affected:

Given the proposed road alignment the neighbour / site owner to the west of the site may be considered adversely affected.

Additional Comments:



Childcare Access – 122 Stancombe Road.

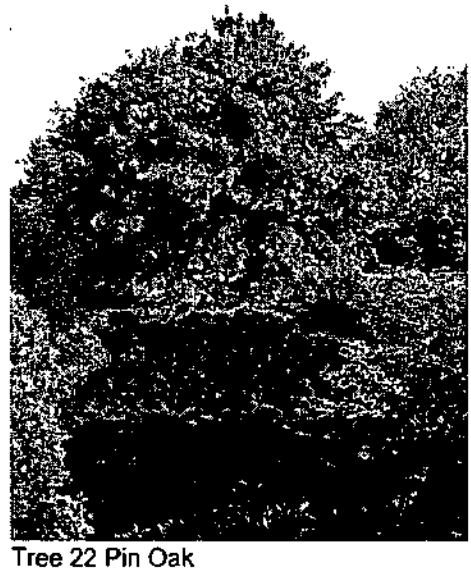
Dwelling on 124 Stancombe Road.

Tree 18 Wych Elm

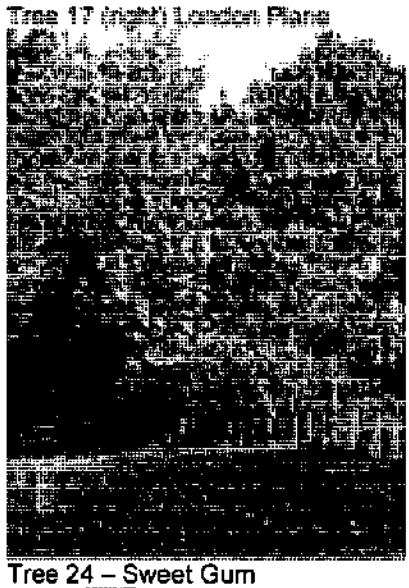
Tree 19 – Norfolk Island Pine

Tree 18(left) Indian Cedar

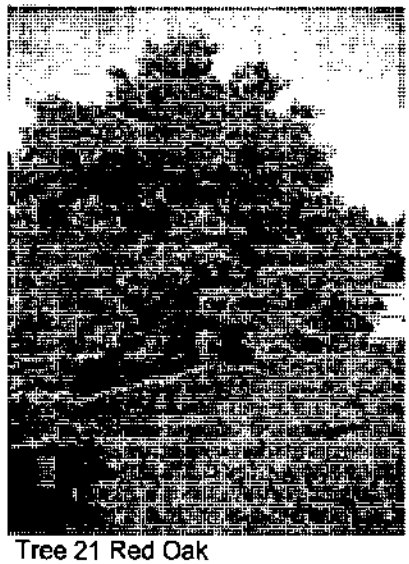
Tree 17 (right) London Plane



Tree 22 Pin Oak

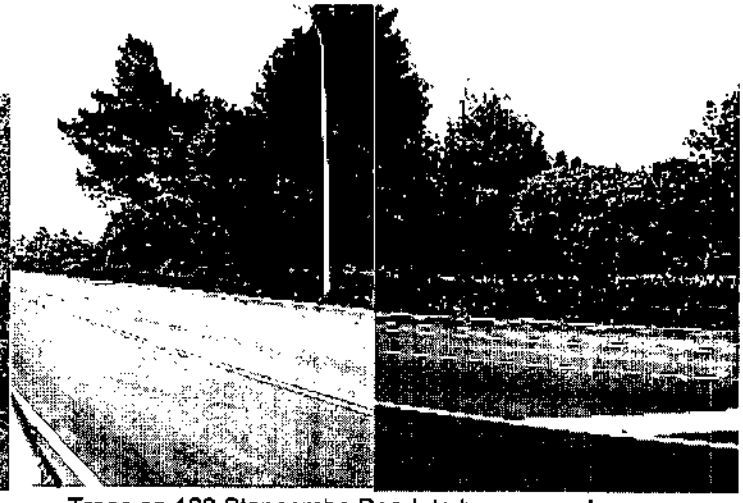


Tree 24 – Sweet Gum



Tree 21 Red Oak

Tree 20 – Tulip Tree



Trees on 122 Stancombe Road, to be removed.

Signed: _____

Consent Co-ordinator

Date of Visit: 11 November 2004

DETERMINATION AS TO WHETHER A RESOURCE CONSENT APPLICATION SHOULD BE NOTIFIED UNDER SECTION 93 OR NOTICE SERVED UNDER SECTION 94 (INCORPORATING SECTIONS 94 AND 94A TO D) OF THE RESOURCE MANAGEMENT ACT 1991

(a) **REFERENCE**

Applicant: Carlos Concepts Ltd

Application: Resource Consent application to subdivide a site into two allotments (with additional road to vest in Council), associated land modification works and tree removal in preparation of the site for residential development. The application requires consent for the following:

Manukau Operative District Plan 2002

Non-Complying Activity for 2 lot subdivision (with additional road to vest in Council) in the Rural 3 Zone contravening Rule 12.15.3.

Restricted Discretionary Activity for subdivision of a site with road frontage to the Primary Road Network (Stancombe Road).

Restricted Discretionary Activity for land modification works being a total of 3300m^3 cut and fill.

Restricted Discretionary Activity for provision of Public Utility Services in conjunction with subdivision of the land.

Discretionary Activity for removal of 12 protected trees being:

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- 2 x Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
- Two Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- English Oak (*Quercus Robur*)
- 2 x Pohutukawa (*Metrosideros excelsa*)

Variation 13 to the Manukau Operative District Plan 2002

Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.1 Movement Network by exceeding the maximum 250m block length by 63 metres.
Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.6 for Proposed Lot 10 by infringing the required 25% front boundary requirement by 1.5%.
Restricted Discretionary Activity under Rule 17.10.12.13 for investigation of Asbestos Containing Materials (ACM) on this site.

Location: 124 Stancombe Road, Flat Bush (and 122 Stancombe Road, Flat Bush for some land modification works and tree removal)

Legal Description: Lot 3 DP 78859 and land modification works and tree removal on Lot 2 DP 78859

MCC Reference: SP8840

Proposal No: 27046

Zone: Rural 3 - Manukau Operative District Plan 2002

Flat Bush Residential 1 – General and Arterial Precincts (Special Policy Area Boundary: Flat Bush Buffer Area) – Proposed Variation 13.

(b) DESCRIPTION OF PROPOSAL

The applicant proposes a two lot subdivision of the site, which will create two allotments of $4175m^2$ in area (Lot 10), and $2180m^2$ in area (Lot 9), together with the vesting of road in the Council necessary for vehicle servicing of the Lots 9 and 10 and further development and roading connections to land to the east (126-132 Stancombe Road) providing an eventual connection to Gracechurch Drive. A total area of $1743m^2$ is proposed to be vested as road in the Council in conjunction with the proposed subdivision.

In addition, a total of $3,300m^3$ of land modification works, and removal of 12 protected trees is proposed to prepare the land for further residential development. Of the volume of land modification works proposed $1800m^3$ will be cut and $1500m^3$ is to be fill. This land modification works extends into the 122 Stancombe Road property.

(c) ACTIVITY STATUS

Manukau Operative District Plan 2002

Non-Complying Activity for 2 lot subdivision in the Rural 3 Zone contravening Rule 12.5.3.

Restricted Discretionary Activity for land modification works being a total of $3300m^3$ cut and fill.

Restricted Discretionary Activity for provision of Public Utility Services (stormwater, wastewater, and water supply).

Discretionary Activity for removal of 12 protected trees being:

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- 2 x Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
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Variation 13 to the Manukau Operative District Plan 2002

Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.1 Movement network by exceeding the maximum 250m block length by 63 metres.

Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.6 for Proposed Lot 10 by infringing the required 25% front boundary requirement by 1.5%.

Restricted Discretionary Activity under Rule 17.10.12.13 for investigation of Asbestos Containing Materials on this site.

Note: A resource consent application must be notified unless:

(a) the application is for a controlled activity; **OR**

(b) the consent authority is satisfied that the adverse effects of the activity on the environment are minor.

(d) ADVERSE EFFECTS ARE MINOR OR MORE THAN MINOR (Section 94A)

Application of the permitted baseline has not been utilised in this instance pursuant to section 94A(a) of the RMA. With respect to consideration of section 94A(b) of the RMA the proposal is considered as a Non-Complying Activity Assessment of the effects of the proposal is, therefore, not restricted.

(e) **DETAILED ASSESSMENT OF THE EFFECTS OF THE PROPOSED ACTIVITIES (OVERALL CONSIDERED AS A NON-COMPLYING ACTIVITY)**

Possible Effects	Scale of Effect / Mitigation/Neighbours' Consent/Other Comments
Flora and fauna	The proposed works will result in removal of a number of established trees on the site, many of which are located within the small gully which runs across the property. Having regard to the zoning of the site ((which facilitates intensive residential development) it is considered that the scale of this vegetation removal will have minor effects and will be necessary to fulfil the zone objectives.
Landscape	The proposal involves re-contouring of the site to make provision for a road through the site, and to make the site topography suitable for eventual residential development.
Water bodies	Existing drainage patterns will be amended to align with the public infrastructure proposed to be provided on the site. No significant effects to water bodies are considered to result as a consequence of the works proposed. Moreover, silt mitigation measures proposed in conjunction with the land modification works on the site are considered sufficient to control the effects of siltation to downstream water bodies.
Site stability	Nil.
Shadowing/Sunlight	Nil
Privacy	Nil
Visual	The effects of alteration to landform and vegetation removal will be noticeable, however, given the residential zoning of the site the loss of such visual qualities is implicit in the zoning provisions and is considered acceptable.
Amenity/Character	The amenity values created by the works will be consistent in facilitating the ultimate urban development of the land and with development that has already occurred in the vicinity.
Noise	Noise will be recognised during construction on the site and will be subject to compliance with construction noise requirements.
Smell	Nil
Pollution	Nil
Infrastructure	Engineering solutions proposed are considered to adequately provide for both upstream and downstream infrastructural capacities.
Traffic and Parking	The proposed subdivision and development will vest land in the Council for inclusion within the roading network. The design and construction of this roading is in accordance with Council's engineering standards and with the traffic servicing intentions of Variation 13 to the Manukau Operative District Plan 2002.
Cultural	The applicant has consulted with Ngai Tai Umupuia te Waka Totara who have given support in principle to the proposal.
Socio-economic	Nil
Open space	Nil
Reverse sensitivity	Nil
Other (specify)	Nil

Overall the adverse effects are considered no more than minor.

(f) **FORMING OPINION AS TO WHO MAY BE ADVERSELY AFFECTED (Section 94B)** (All Activities)

(i) No statutory acknowledgement applies in Manukau City under section 94B(2) of the RMA.

(ii) In respect of the proposed land modification, and public utility service provision proposed in conjunction with the development of this site and for subdivision under the provisions of Proposed Variation 13 to the Manukau Operative District Plan 2002 (considered to be the dominant planning document) Rule 9.8.1.4 of the Manukau Operative District Plan states:

Unless special circumstances exist, applications for resource consent under Rule 9.8 as controlled or restricted discretionary activities shall not be notified, and the written approval of affected persons need not be obtained.

The permitted baseline has not been applied under section 94B(3) of the RMA.

(g) **LIMITED NOTIFICATION** (Refer Section 94)

Owner / Occupier	Address	Consent Obtained
Farm Cove Holdings Ltd	122 Stancombe Road, Otara	Yes

This party is considered adversely affected by the proposed subdivision works as positioning and construction detail of a proposed road on this boundary will impact on future development requirements for this land, and earthworks proposed in conjunction with the development will occur on the site at 122 Stancombe Road, Flat Bush (affected by this proposal).

(h) **PUBLIC NOTIFICATION OF PROPOSAL IF REQUESTED BY APPLICANT OR IF SPECIAL CIRCUMSTANCES EXIST** (Refer Section 94C)

(i) The applicant has not sought public notification of the application.

(ii) Special circumstances requiring notification are not considered to exist.

(i) **CONCLUSION**

- Taking into account the effects of the proposal, the adverse effects on the environment of the activity for which consent is sought will be no more than minor.
- All affected persons have given their written approval to the activity.
- Special circumstances requiring notification do not exist.
- The applicant has not requested public notification of the proposal.

SIGNED:

Date: 16.12.04

(Consent Co-ordinator)

DECISION:

Pursuant to Section 8.4.2 of the Delegations Register (Minute No 2203/01) the above application has been considered under delegated authority and has been determined to be processed as a Non-Complying Activity:

With no public notification (s.93) and no Service of Notice (s.94)

Reasons:

(i) Effects are minor (s.93); and

(ii) All persons who may be adversely affected have given consent (s.94); and

(iii) There are no special circumstances [s.94C(2]; and

(iv) The applicant has not requested public notification [s.94C(1)]

Date: 16/12/04

(Team Leader - Resource Consents)

APPLICATION FOR RESOURCE CONSENT NOT REQUIRING NOTIFICATION CONSIDERED UNDER DELEGATED AUTHORITY

Applicant: Carlos Concepts Ltd

Application: Resource Consent application to subdivide a site into two allotments (with additional road to vest in Council), associated land modification works and tree removal in preparation of the site for residential development. The application requires consent for the following:

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Location: 124 Stancombe Road, Flat Bush (and 122 Stancombe Road, Flat Bush for some land modification works and tree removal)

Legal Description: Lot 3 DP 78859 and land modification works and tree removal on Lot 2 DP 78859

MCC Reference: SP8840

Proposal No: 27046

Zone: Rural 3 - Manukau Operative District Plan 2002

Flat Bush Residential 1 – General and Arterial Precincts (Special Policy Area Boundary: Flat Bush Buffer Area) – Proposed Variation 13.

(b) **DESCRIPTION OF PROPOSAL**

The applicant proposes a two lot subdivision of the site, which will create two allotments of 4175m^2 in area (Lot 10), and 2180m^2 in area (Lot 9), together with the vesting of road in the Council necessary for vehicle servicing of the Lots 9 and 10 and further development and roading connections to land to the east (126-132 Stancombe Road) providing an eventual

connection to Gracechurch Drive. A total area of 1743m^2 is proposed to be vested as road in the Council in conjunction with the proposed subdivision.

In addition, a total of 3,300m^3 of land modification works, and removal of 9 protected trees is proposed to prepare the land for further residential development. Of the volume of land modification works proposed 1800m^3 will be cut and 1500m^3 is proposed to be fill.

Whilst all reasons for requiring resource consent identified above have not been specified within the application, pursuant to section 104(5) of the RMA a consent authority may grant a resource consent on the basis that the activity is a Non-Complying Activity regardless of what type of activity the application was expressed to be for.

3.0 PLAN PROVISIONS

(a) Relevant Provisions (include objectives and policies).

Manukau Operative District Plan

Objectives: 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 6.3.1, 8.3.1, 8.3.2, 8.3.3, 12.3.1, 12.3.3, 15.3.1, 15.3.2

Policies: 9.4.1, 9.4.2, 9.4.4, 6.4.2, 6.4.5, 8.4.1, 8.4.2, 8.4.3, 15.4.1, 12.4.1, 12.4.6.

Rules: 9.8.2 (Land Modification, Development and Subdivision Activity Table) – for subdivision, land modification and public utility service provision. Rule 12.10.3.3 and 12.15.3 (Subdivision in the Rural 3 Zone0, Rule 6.9.2 (Removal of any scheduled tree), Rule 15.15.2.3.3.1 (Reserves Contribution)

Assessment Criteria: 9.11 and 9.12 for Land Modification Subdivision and Development (including public utility service provision). 12.15.3.2 – Matters for Control and Assessment Criteria (Rural 3 Zone), 6.12.1 and 6.12.2.4-Protected Tree Removal.

Proposed Variation 13 to the Manukau Operative District Plan 2002

Objectives: 17.10.3.1, 17.10.3.2, 17.10.3.3, 17.10.3.4, 17.10.3.6, and 17.10.9.3.1.

Policies: 17.10.4.1, 17.10.4.2, 17.10.4.3, 17.10.4.5, 17.10.4.6, 17.10.4.11, 17.10.9.3.2.

Rules: 17.10.11.1 (Movement Network) – being a 250m max. block length and 800m max. block perimeter distance. 17.10.11.3 (Cycleways) Stancombe Road = District Arterial with Cycleway, 17.10.11.4(b) (Lot Sizes), 17.10.11.8 (Street Trees and Street Garden Planting).

Assessment Criteria:

Overall the application is considered as a Non-Complying Activity. However, matters and assessment criteria under the provisions of Variation 13 have been utilised to assess the proposed application, given the advanced stage that the provisions of Variation 13 have reached.

These relevant assessment criteria include:

Rule 17.10.14.1 Rules – Matters for Discretion: Restricted Discretionary Activity – Land Modification Development and Subdivision which relates to matters identified in Chapter 9 – Land Modification and Development, and conditions such as road standards, provision of back lanes and staging.

Rule 17.10.14.6.11 – Asbestos Containing Materials with conditions able to be imposed in respect of site assessment, means of remediation, management of remediation, validation, management plan, and monitoring.

Rule 17.10.15.1.1(a) – Road standards for local roads;

Rule 17.10.15.1.1(b) – Road standards: Carriageway

Rule 17.10.15.1.1(c) – Road standards: Orientation

Rule 17.10.15.1.1(d) – Provision of Back Lanes

Rule 17.10.16.1 Assessment Criteria – Discretionary Activities: Land Modification, Development and Subdivision.

Weighting Applied to the Operative Plan and Variation 13

Given that a structure plan has been released for the area of Flat Bush, namely, under proposed Variation 13, it is considered that the relevant provisions of this document are more appropriate to assess the effects of the proposed development due to its more prescriptive criteria for the future growth of the area. Given the stage which the Proposed Variation 13 has reached in the statutory process (submissions heard, decisions released and outstanding references progressing towards resolution) primary consideration has been afforded to the provisions therein.

(c) Conditions the Plan requires to be imposed.

Rule 15.15.2.3.3.1 – Reserves Contribution.

4.0 STATUTORY CONSIDERATIONS (Note: Permitted baseline is discretionary)

Sections 104, 104B and 104D of the Resource Management Act 1991, and the Purpose and Principles of the Act (Part II).

5.0 AFFECTED PERSONS' APPROVALS

The preceding section 93 and 94 report identifies that the consent of those persons considered adversely affected by the proposed subdivision land modification and public network utility service works have been obtained.

6.0 ASSESSMENT OF THE APPLICATION

6.1 Manukau Operative District Plan 2002

Removal of Protected Trees

The applicant has submitted reports prepared by the Specimen Tree Company dated 20 September 2004 and 23 November 2004 respectively, and requested consent to remove a total of 12 generally protected trees under Schedule 6C of the Operative District Plan 2002 from the site. These reports have identified that the majority of trees proposed to be removed are of poor-fair form and health with the exception of a Norfolk Pine identified as a significant tree.

The removal of 8 trees on the site at 124 Stancombe Road, Flat Bush is justified as being necessary for filling of a gully on the property, and road construction. Given the ultimate development opportunities provided by the zoning of the site (for medium/high intensity residential development) and the current topography of the site removal of these trees is considered unavoidable. Structured street planting will serve to mitigate the effects resulting from removal of these trees.

In addition, the removal of four protected trees (under Schedule 6C of the Manukau Operative District Plan 2002) from 122 Stancombe Road is also requested given the proposal to connect public wastewater and water along the Stancombe Road frontage. Again, the Arborist's report submitted identifies these trees as being of low quality. On this evidence it is considered appropriate that these trees be removed and that compensatory landscaping be provided in development of 124 Stancombe Road, Flat Bush site.

General Subdivision, Servicing and Land Modification Criteria

The proposed development will fill an existing gully on the site which runs in a north-east to south-west direction with the extent of fill extending onto the adjoining site at 122 Stancombe Road, together with the formation and construction of "Proposed Road 1 and 2" and associated street lighting and street tree provision. The proposed development is generally considered to conform with the existing topography (with modifications) and will have suitable access to legal road.

Council's Engineer have assessed the wastewater and stormwater disposal methods proposed is to the public system which has been demonstrated to have sufficient capacity to service the proposed allotments, subject to the payment of financial contributions to mitigate the effects of the proposed development on the wider infrastructure network (including stormwater, water supply and wastewater servicing).

Council's Engineer has also assessed the proposed land modification works and considers the works proposed will not adversely affect site stability and subject to conditions requiring silt mitigation control will not result in adverse sedimentation effects.

Reserves Contribution

In accordance with Rule 15.15.2.3.3.1 of the Manukau Operative District Plan 2002 a reserves contribution has been required based on 6% + GST of the value of Proposed Lot 10 for single household unit development.

Financial Contributions

Pursuant to section 9.15.5 (Financial Contributions for Public Utility Services), financial contributions payment have been required as conditions of resource consent in accordance with Council's schedules and catchments which define financial contributions requirements.

When the 122 Stancombe Road, Flat Bush site is developed it will likely be accessed from "Proposed Road 1". As part of the development of the site at 122 Stancombe Road – "Proposed Road 1" will be required to be widened from a 5.4m carriageway width to a 7.8 metre carriageway width. Accordingly, the configuration of berms and footpaths (and associated amendments), and roading construction will need to be amended on the 124 Stancombe Road site (subject of this consent) to conform with the Council standards for a 7.8 metre carriageway (including necessary increased legal width). In view of this it is considered that the best means of achieving this reconstruction is for the Council to require a financial contribution for the costs of amending the "Proposed Road 1" configuration to comply with Council's Engineering Quality Standards for a road with 7.8 metre carriageway. A financial contribution is the best means of addressing this to ensure the effects of such future works can be mitigated at prior to section 224(c) certification being given.

Roading Design and Construction

Council's Senior Transportation Advisor has reviewed the proposed roading arrangements and is satisfied, subject to the imposition of conditions, that the configuration of roading will serve to provide a suitable interim traffic movement arrangement in regard to development of the subject site, and the site at 122 Stancombe Road, Flat Bush. A small triangular portion of land is required from the site at 122 Stancombe Road to achieve required turning tangent into "Proposed Road 2". The consent of the affected party at 122 Stancombe Road has been obtained, however, to the works proposed.

6.2 Proposed Variation 13 to the Manukau Operative District Plan 2002 ("Variation 13")

General

Overall, the application is considered as a Discretionary Activity under the Variation 13 provisions. Whilst the development site and the sites to the west (shown linked by a proposed road connection to Gracechurch Drive) exceed the maximum block length requirements this is considered acceptable for the following reasons:

- Given the stormwater management area identified to the west of 122 Stancombe Road it is logical that sites 122-132 Stancombe Road be serviced by a single road.
- 122-132 Stancombe Road sites are also constrained by the Special Policy Area Boundary to the north which separates these sites from the Rural 3 Zone beyond.

In addition, proposed Lot 10 does not comply with required site frontage length (as a percentage of the site perimeter). This is considered acceptable given constraints posed by the width of the existing site and the need for "Proposed Road 1 and 2" to follow the route identified given the site constraints identified under the above two bullet points.

Street Trees

The applicant has identified street tree planting although this is below the minimum 15 metre average minimum spacing required by Rule 17.10.11.8 (the plans submitted show trees at 20 metre centres). It is proposed to require compliance with Rule 17.10.11.8 by imposing a condition on resource consent to give effect to this rule.

Asbestos Containing Materials Investigation

The applicants have submitted a report prepared by Tonkin and Taylor Ltd which has been reviewed by Council's Environmental Health Monitoring Officer. These reports are considered to adequately confirm acceptability of the site for development for both Asbestos Containing Materials and other contaminants under the Ministry for the Environments document *Land Management Guidelines No. 1 – Reporting on Contaminated Sites in New Zealand (November 2003)* for the purposes of the Stage 1 – Site Investigation Report specified within this document.

6.2 Objectives and Policies

Manukau Operative District Plan 2002

Chapter 9 (Land Modification Development and Subdivision)

The proposed subdivision is consistent with the objectives and policies of Chapter 9 which seek to enable subdivision provided that the environmental qualities and character of the area are preserved, and any adverse effects are avoided, remedied or mitigated.

Chapter 15 (Public Open Space – Reserves Contribution)

Facilitation of the objectives and policies of Chapter 15 is afforded by payment of reserves contribution required as a condition of consent.

Chapter 6 (Cultural Heritage)

Maintenance and protection of scheduled trees on the site is not able to be achieved by the development proposed. Whilst this is considered to be consistent with the ultimate development of the site provided for within the zoning which applies it is considered to be contrary to the objectives and policies which apply in Chapter 6 – Cultural Heritage.

Chapter 12 (Rural Areas)

The proposed development is considered to conflict with the objectives and policies of the Rural Zones given the effects of the land modification and subdivisional works proposed. Given the stage Variation 13 has reached application of these objectives and policies is considered superfluous.

Variation 13

The objectives relevant to this proposal in Variation 13 are as follows:

"Objective 17.10.3.1: To create a diversity of living and working environments of high environmental quality within Flat Bush with an emphasis on the sustainable use of a scarce regional and district land resource."

"Objective 17.10.3.2: To facilitate the urbanisation of the area in a manner and at a rate which takes account of the demand for such urbanisation while ensuring the efficient use of the diminishing land resources commensurate with the provision of appropriate levels of amenity for residents in the area."

"Objective 17.10.3.3: To facilitate the development of an appropriate range of densities of development and living and working environments of good amenity within Flat Bush."

"Objective 17.10.3.4: To achieve a well connected, adaptable, safe, attractive, healthy and pleasant environment for living and working and travelling with an emphasis on the importance of the public realm including parks, streets, civic areas, roads and the natural environment."

"Objective 17.10.3.6: To ensure the establishment of an appropriate range of physical and social infrastructure and facilities required to enhance the resulting urban environment and address any adverse effects of urbanisation within Flat Bush."

"Objective 17.10.3.7: To protect, sustain, restore and enhance where practicable the remaining terrestrial and aquatic ecology of remnant native vegetation and waterways."

It is considered that the proposal meets the relevant objectives of Variation 13 for the following reasons:

- The proposal will promote the development of large allotments that will in the near future cater for a range of living environments, including apartment living.
- The proposed two lot subdivision will be completed in a single stage which takes account of the current rates of urbanisation, while providing appropriate levels of amenity for residents in the area.
- The proposal will result in the vesting of road widening and the creation of one additional road to vest with Council that will assist with connectivity of the roading network. The future roading network will also cater for a range of travel modes, including pedestrians, cyclists and vehicles.
- The proposal involves the establishment of an appropriate range of physical infrastructure and facilities that will address any adverse effects of this proposal on urbanisation in Flat Bush including a new road.
- The proposal will facilitate the development of a medium/higher density residential environment, with a high level of amenity and allow for a wide range of living opportunities.

The policies relevant to this proposal in Variation 13 are as follows:

"Policy 17.10.4.1: Subdivision and settlement should be of a type, density and design that does not detract from, and is supportive of, the specific environmental outcomes identified for each zone as well as an integrated transport system which provides a choice of travel modes."

"Policy 17.10.4.2: Urbanisation in the area should occur in a staged manner based on proximity to existing development in the north of the catchment so as to minimise adverse effects on the environment and to ensure an appropriate transition between the various forms of development within and immediately outside the Flat Bush Structure Plan Area and by:

- *providing through the Flat Bush Structure Plan, the land use framework for development of the future urban area including provision of the Town Centre, smaller commercial centres, schools and conveniently located public open space areas*
- *establishing targets for overall average densities of development throughout the Flat Bush Structure Plan Area, with greater density of development being enabled for those areas closest to the Town Centre, Neighbourhood Centres and selected major transportation routes, consistent with the Auckland Regional Policy Statement*
- *allowing higher densities of development throughout the area than are provided for in the Main Residential zone."*

"Policy 17.10.4.3: Zoning within the Flat Bush Structure Plan area shall be orientated primarily towards business, residential and open space activities and shall provide a gradation of residential activity density by;

- *focusing the highest allowable densities around the Town Centre, Neighbourhood Centres, the perimeter of Barry Curtis Park and along arterial roads,*
- *allowing medium/higher densities within the remaining residential areas,*

- *locating less intensive residential areas at the extremities of the Flat Bush Structure Plan area,*

- *providing a transition precinct at the northern reaches of the Flat Bush Structure Plan area to enable an appropriate transition between the Main Residential zone immediately to the north and the more intensive development allowed for within the Flat Bush Structure Plan area as a whole."*

"Policy 17.10.4.4: A generous extent of integrated open space should be achieved as part of the urbanisation of the East Tamaki area, including provision of additional public open space, and fair and reasonable financial contributions."

"Policy 17.10.4.5 Subdivision and development should incorporate urban design and sustainable management principles as part of the land modification process so as to:

- *retain significant landscape elements*

- *work with the natural characteristics of sites, (Amended by Decision No. 1.3-2 July 2002)*

- *protect and enhance existing remnants of native vegetation and wetlands*

- *pursue opportunities to improve biodiversity*

- *incorporate stormwater and sediment management options that protect water quality and ensure the rate of run-off throughout the development cycle is similar to pre development levels*

- *comply with safe practices in the identification, assessment, treatment and/or remediation of asbestos containing materials*

(Reference RMA 880/02 seeks the addition of further principals)

"Policy 17.10.4.6: Subdivision and development activity should achieve urban design and sustainable management principles by:

- *encouraging a sense of place and identity,*

- *providing a high degree of 'connectivity' through well connected road networks based on block designs,*

- *promoting social interaction through attention to the placement of buildings on sites,*

- *facilitating safe walking and cycling, including through the identification of cycle routes,*

- *supporting or enabling opportunities for passenger transport services to establish,*

- *reducing travel distances, providing access to amenities, and supporting an integrated transport system that provides a choice of travel modes,*

- *maintaining contact between communities,*

- *being compatible with the part of the roading hierarchy on which it is located in terms of the type and level of traffic generation,*

- *designing local roads to ensure a safe and low traffic speed environment,*

- *relating to the streetscape so as to enhance perceptions of safety, providing separation buffers between incompatible activities, promoting biodiversity."*

"Policy 17.10.4.7: Public Open Spaces should:

- *be able to be developed for public use with only minimal earth works*

- *incorporate existing mature trees where possible*
- *be accessible and useable*
- *be well overlooked*
- *be bounded by trees whenever possible*

"Policy 17.10.4.10: Management measures shall be applied to protect the viability of remnant native vegetation or waterways."

"Policy 17.10.4.11: An integrated transport system shall be promoted by guiding the design and layout of subdivision and developments so that it provides 'connectivity' and the opportunity for a variety of travel modes."

It is considered that the proposal meets the relevant policies of Variation 13 for the following reasons:

- The proposal has been designed in such as way that it will not detract from the environmental outcomes identified for the Flat Bush Residential 1 zone.
- The proposal shall occur in a manner that is appropriate with other forms of development both in and around Flat Bush.
- The proposal allows for a range of future living densities throughout the subdivision.
- The proposal will include the payment of financial contributions that will go towards the integrated green space of the Flat Bush area.
- The proposal has been designed to be generally in keeping with the existing and future contours of the site.
- The development provides a high degree of connectivity with the road networks, including local roads, ensuring a low traffic speed environment, and the opportunity for a variety of travel modes.

6.3 Section 104 of the Act

All actual or potential effects have been considered, as have all relevant regulations. All relevant provisions of the Plans have been considered as outlined above, and there are no designations or heritage orders affecting the site.

The land is zoned Rural 3 in the Operative District Plan 2002. The land in this zone is designed to concentrate part-time lifestyle small holdings farming in order to protect the resources and values of the wider rural area.

The Flat Bush Residential 1 zone has therefore been given considerable weight. The intended lot sizes and configuration are generally in accordance with the subdivisional rules of the Flat Bush Residential 1 zone of Variation 13.

It is noted that the proposal does generally comply with the subdivision rules of Variation 13, and the proposed subdivision will achieve a positive environmental outcome in terms of Section 104 of the Act.

Given the above assessment it is considered that the adverse effects of the proposal will be no more than minor and that the proposal is compatible with the character and amenity values of the surrounding area. The proposal is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13.

Conclusions reached in determining the application are:

- Section 104(1)(a) - Actual / Potential effects on the environment will be no more than minor.
- Section 104(1)(b) - Relevant provisions of the plan are met

- Section 104(1)(c) - No other matters are necessary to determine the application
- Section 104(3)(d) - Section 94 assessment concluded that non-notification is justifiable for determining consent.

Pursuant to Section 104D of the Resource Management Act 1991 (RMA) the application is considered to meet the first limb of the threshold test required under Section 104D(1)(a) of the RMA. Given the analysis against the objectives and policies of the Rural Zones under the Manukau Operative District Plan 2002 it is considered that the proposal does not meet the second limb of the threshold test under Section 104D(b) of the RMA. On balance of consideration under the provisions of Section 104 of the RMA the application is considered to merit granting of consent.

6.4 Part II of the Act

The proposed subdivision is consistent with the Act's purpose of sustainable management, and does not compromise any of the matters described in Section 5(2). The proposed subdivision also recognises and provides for the listed matters of national importance and the subdivision is not considered to be inappropriate for the same reason. It is considered that the proposal provides for an efficient use of the land and through the imposition of conditions, any adverse effects of the activity can be avoided or mitigated and the amenity values and quality of the environment will be maintained.

The proposed subdivision does not compromise any of the other matters listed in Section 7, and the Treaty of Waitangi has been taken into account in determining the application

Although the proposal does not comply with the zoning of the Operative District Plan, case law indicates that primacy is to be given to the fulfilment of Part II matters. Consequently considerable weight has been given to the achievement of those objectives and policies in the statutory instruments that require the provision of an adequate supply of vacant residential land.

7.0 RECOMMENDATION

That resource consent for the above proposal has been granted under delegated authority as a Non-Complying Activity pursuant to the provisions of the Operative District Plan 2002, Proposed Variation 13 and Sections 104, 104B, 104D and 108 of the Resource Management Act 1991, subject to the following conditions being complied with to the satisfaction of, and at no cost to the Council. The consent has been effectively compartmentalised into two consents being land use components (Part A) and subdivision components (Part B).

8.0 CONDITIONS & ADVICE NOTES

DECISION

PART A – LAND USE CONSENT

I wish to advise that consent for the above application was granted on 16 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104C and 108 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046** by Council except where amended by the following conditions of consent.

Tree Removal

3. That the removal of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 shall be limited to the following trees on the following sites:

   124 Stancombe Road, Flat Bush

   - Golden Wych Elm (*Ulmus glabra*)
   - London Plane (*Platanus x acerfolia*)
   - Indian Cedar (*Cedrus deodara*)
   - Norfolk Island Pine (*Araucaria heterophylla*)
   - Tulip Tree (*Liriodendrum tulipfera*)
   - Red Oak (*Quercus rubra*)
   - Pin Oak (*Quercus palustris*)

   The above trees being those numbered 16-22 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated September 2004.

   Advice Note: Tree 23 identified within the Specimen Tree Company Report dated September 2004 is not a Pin Oak and does not exceed 6 metres in height. Accordingly, it is not protected under the Manukau Operative District Plan 2002.

   122 Stancombe Road, Flat Bush

   - Indian Cedar (*Cedrus deodara*)
   - English Oak (*Quercus Robur*)
   - Two Pohutukawa (*Metrosideros excelsa*)

   The above trees being those numbered 1-4 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated 23 November 2004.

   Advice Note:

   During consultation between the applicant and Ngai Tai Umupuia Te Waka Totara it has been requested that any native trees removed as part of the earthworks (which are less than 6 metres in height and are, therefore, not subject of this resource consent, or the two Pohutukawa on the 122 Stancombe Road property) be donated to the iwi - Ngai Tai Umupuia. Arrangements can be made with Jaroz Adams (Phone: (09) 292-9020 or email: tewakatotara@xtra.co.nz should the consent holder choose to make this donation.

4. The trees identified for removal under condition (3) above shall be clearly marked and identified by a suitably qualified arborist prior to their removal being undertaken.

5. All tree removals shall be in accordance with accepted arboricultural practice.

6. Tree removal operations shall be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

Earthworks

7. The earthworks construction shall be undertaken in accordance with:

   (a) The erosion and sediment control plan as detailed in the approved plans referenced E7/27046 by Council

   (b) Auckland Regional Council Technical Publication 90 - TP90 Erosion and Sediment Control.

   (c) The recommendations of the geotechnical report from Geotek Services Ltd (Ref 2532, dated 30 June 2004).

8. The works shall be undertaken in such a manner as to ensure that beyond the boundary of the site there should be no 'dust' or 'soil erosion / siltation', which in the opinion of the Manager - Resource Consents & Compliance, is objectionable, offensive or has the potential to create an adverse effect on the receiving environment.

9. The consent holder shall be responsible to ensure that the land within the above site and the land on adjoining properties remains stable at all times in respect to the approved works.

10. The septic tank on this site shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

11. Control measures shall be in place to ensure that any trucks leaving the site do not deposit soil or other debris on public roads. Any such material deposited on any public road shall be cleaned up immediately at the consent holder's expense.

12. Prior to development commencing, the consent holder shall provide Council's Manager - Environmental Health and Compliance with details of the level of communication with neighbouring property owners/occupiers and identification of the liaison person. The consent holder shall ensure that, before commencement of the development, the owners of all adjoining properties are notified in writing of the development in general, its expected duration, the times at which it will be undertaken, and the name of a responsible person with whom neighbours can liaise if the need arises. (Any queries in the foregoing should be referred to the Manager - Environmental Health and Compliance).

Environmental Health

13. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

14. Prior to commencement of any land modification works, or tree removal on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Although the proposed location of the earthworks do not contain any known archaeological sites, it is possible that unrecorded sites may exist. Under the Historic Places Act 1993, it is unlawful for any person to destroy, damage or modify an archaeological site unless the relevant consents have been obtained from the New Zealand Historic Places Trust. In the event of archaeological features being uncovered (e.g. shell midden, hangi or oven stones, pit depressions, defensive ditches, artefact material or human bones) work is to cease in the vicinity of the discovery and the New Zealand Historic Places Trust and appropriate iwi authorities shall be contacted so that the

appropriate action can be taken. This includes such persons being given reasonable time to record and recover archaeological features discovered before work may recommence.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B, and 104C of the Resource Management Act 1991 and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002. .

2. Proposed Variation 13 to the Manukau Operative District Plan envisages that this site be available for residential development of a medium / high density. Whilst this requires removal of a number of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 and land modification works it is considered these works are necessary to fulfil the ultimate intention of residential development of the site provided under Variation 13 to the Manukau Operative District Plan.

PART B – SUBDIVISION CONSENT

I wish to advise that consent for the above application was granted on 16 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104C,104D and 220 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046 (SP8840)** by Council except where amended by the following conditions of consent.

Engineering

3. The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

   (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

   (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

   (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

   (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

   (v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

4. A satisfactory foundation completion report for the site shall be submitted to Council for approval upon completion of the land modification works (approved under Part A – Land Use Consent). Should the Land Transfer Plan differ from the approved subdivision plan then the Foundation report shall be amended accordingly.

Unless the foundation completion report states that a building constructed in compliance with NZS 3604: 1999 does not need specific design for the building foundations, a record will be placed on Council's Land Information Register requiring that the recommendations of that report be complied with.

If 'Extremely Expansive Soils' [AS 2870 (1996) Class E or equivalent] or 'Specific Design Requirements' are indicated, a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 will also be required.

5. Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment area with individual connection points in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

6. Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

Roading

7. The proposed new road shall be constructed in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

8. Street lighting facilities shall be supplied and in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

9. Road upgrading is required along the full frontage (on one half of the road only) to increase the width of Stancombe Road to that of a District Arterial Road with cycle lanes as detailed in Proposed Variation 13 Table 2 and Figure 17.10.3 Standard as defined in Rule 9.14.5.5.2 and appendix 2 of the Manukau Operative District Plan 2002. This work shall include:

   (a) The vesting as Road of 3.64 metres of land being in general one half of the additional extra legal road width required.

   Manukau City Council will pay compensation for the land required in excess of a collector road for Stancombe Road. (See rule 9.9.2.11(a)(viii) of the Manukau Operative District Plan 2002.) The quantum of this compensation shall be agreed with the Manager Transportation, Manukau City Council. (Chris Freke, Phone 262 5799, email cfreke@manukau.govt.nz.)

   (b) The construction of a footpath along Stancombe Road as detailed on the approved engineering plans referenced E7/27046 (sheets 1-21) by Council.

10. Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed lots.

    The consent holder shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts.

11. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones			
Time period	**Weekdays**	**Saturdays**	**Sundays and Public Holidays**

	(dBA)		(dBA)		(dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

Financial Contributions

12. A Comprehensive **Stormwater Discharge** Levy of $447.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this levy (FC45) has been calculated at $490.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

13. A **Stormwater** contribution of $70,002.23 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC259 – Flat Bus Stormwater) has been calculated at $76,820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

14. A **Wastewater** contribution of $5,816.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution is made up of the following elements:

    - $747.00 including GST. This contribution (FC223 – Accent Drive Embankment) is assessed at $820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

    - $5,069.00 including GST. This contribution (FC260 – Stancombe Road Wastewater) is assessed at $5,563.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

15. A **Water Supply** Contribution of $18,799.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC231 – Flat Bush Water Supply) has been assessed at $20,630.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

16. A **Roading Upgrade** contribution of $88,200.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC266 – Stancombe Road) has been assessed at $1400 /metre road frontage plus GST for a frontage of 56 m.

17. All contribution rates shall be reassessed in accordance with the current Statistics NZ Capital Goods Price Index for Other Construction-S2GC (for the previous year) if payment is not made within 12 months of date of this consent.

Septic Tank

18. The septic tank on this site (Lot 3 DP78859) shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

Street Trees

19. That tree planting at the site frontage along the front berm of the roads shall be in accordance with the Robin Duncan Landscape Architect plan referenced 27046 by Council attached to and forming part of this consent.

20. Street tree planting shall be undertaken in accordance with the requirements of Rule 17.10.11.8 of Proposed Variation 13 to the Manukau Operative District Plan 2002 with these relevant requirements restated below and forming conditions of consent:

    - Street tree planting shall be undertaken in new developments once formation of the street has been completed;
    - Street trees shall be planted in the front berm between the kerb and footpath. The front berm for street planting shall have a minimum width of 1.4 metres.

- Street trees are to be provided on both sides of the street at a minimum average spacing of 15 metres.
- Clear visibility of bus stops, pedestrian crossings, sign posts and road intersections (where they are known) are to be maintained.
- The consent holder shall be responsible for the routine maintenance and replacement of any street planting they provide including deadwooding, weed control, mulching and watering for a minimum period of 12 months from the time of planting.
- Trees that are vandalised or dead, or that are not of a suitable specimen form shall be replaced immediately at the cost of the consent holder.

21. The street tree species on Stancombe Road shall be London Plane (Platanus acerifolia). The street tree species on "Proposed Road 1 and 2" shall be Sweet Gum (Liquidamber styraciflua).

22. The street trees shall be suitably positioned so as not to obstruct intersection line of sight in accordance with MCC Quality Assurance Manual and shall be positioned 3.0m away from driveways at all times in accordance with MCC Quality Assurance Manual. This shall be the responsibility of the consent holder up to the time of 224 certification or the final inspection agreement.

Road to Vest

23. Lot 1000 shall vest in the Manukau City Council as legal road at no cost to Council.

Financial Contribution for Proposed Road 1

24. Within three months of the commencement of this resource consent and prior to certification pursuant to the requirements of section 224 of the Resource Management Act 1991 the consent holder shall:

    (a) Submit to the Council an assessment, undertaken by a suitably qualified engineer, of the cost of altering that length of "Proposed Road 1" (identified on Airey Consultants Plan ref: A9861/5 Drawing 6, Rev.4) to comply with the "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards) for that part of this "Proposed Road 1" within the legal boundary of 124 Stancombe Road (Lot 3 DP 78859).
    (b) This assessment shall include consideration of the cost of relocating the footpath, service berms (and any associated services to comply with the provisions of the Manukau Operative District Plan 2002), street planting ,all kerb and channel works, street light and signage replacement or repositioning, road markings, design, construction and supervision works (as well as any necessary contingency) associated with alteration of this road to achieve compliance with Council's Engineering Quality Standards and the provisions of the Manukau Operative District Plan 2002 for alteration of "Proposed Road 1" to local road standard (7.8 metre carriageway and 18.2 metre legal width).
    (c) Allow the Council sufficient time to arrange and complete a peer review of the costs identified under (a) and (b) above, to be undertaken by a suitably qualified engineer, appointed by the Council and at the sole discretion of the Council, to certify the costs submitted under (b) above.
    (d) Following the completion of the peer review required under (c) certifying all costs required under (b) above pay the Council as a financial contribution the cost of all works identified under (b), together with all costs incurred by the Council in review.

Road Marking – Proposed Road 1 and 2 ("Carlos Drive")

25. That the following traffic signage and road markings be installed, to the extent practicable, in accordance with the Transit NZ Manual of Traffic Signs and Markings, as part of the road construction.

    (a) A "Give Way " sign (RG-6) at the intersection with Stancombe Road.
    (b) Two chevron boards (RC- 5) at the future bend in Carlos Drive,
    (c) A 100mm wide continuous reflectorised white centreline around the bend extending 30 metres from the tangent points.(See MOTSAM Fig.2.1[a]) "
    (d) "No Stopping At All Times" from the western side of the vehicle crossing of 122 Stancombe Road, around the corner, and along the western side of Carlos Drive to the northern most extent of this road.

An engineering drawing shall be submitted and approved by the Manager Resource Consents and Compliance demonstrating the location and form of this signage prior to installation

Reserve Contribution

26. (a) A reserves contribution of **$32,400** including 12.5% GST being 6% (plus GST) of the market value of Lot 10 (as a single household unit site), shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.

Note: The Reserve contribution payable specified above has been derived as follows:

Market value of Lot 1 as a single household site	$480,000.00 (including GST)
Contribution: $480,000.00 x 6% + GST	**$32,400.00 (including GST)**

Note: The above calculations reflect the number of underlying allotment (1) and the number of additional allotments created at this stage of the subdivision (1)

(b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

Existing House

27. The existing house on the site shall be removed prior to Council's certification pursuant to Section 224(c) of the Resource Management Act 1991.

Section 224

28. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and the Land Transfer Plan number and a copy of the survey plan (showing co-ordinates) are supplied to the Council.

29. Prior to commencement of any works to install public network utility services on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Each allotment is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. Clause 6.B.6.1 of Council's Engineering Quality Standards manual (carriageway acceptance) in respect to Council carrying out Benklemann Beam tests at no cost to the developer has been amended to the extent that the cost of this work shall now be borne by the consent holder.

6. New roads are to be vested in Council as part of subsequent consents relating to this site. Please ensure that an application is made for preferred 'road names' to, the Team Leader Resource Compliance, for approval at time of, or prior to, application for section 223 release.

7. Pursuant to section 37(1) of the Resource Management Act 1991 (RMA) the time limit for notification of this decision under Section 115 of the RMA has been extended.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B, 104C and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002.

2. It is considered that the proposed subdivision will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.

3. It is considered that any adverse effects of the subdivision on the surrounding environment is no more than minor and will be mitigated by the conditions of consent.

4. The affected party at 122 Stancombe Road, Flat Bush has given their written approval to the proposed subdivision. In imposing condition (24) of this consent it is expected that, at the time the 122 Stancombe Road is developed for more intensive residential purposes, that Proposed Road 2 will be extended to a legal width of 18.2 metres, and carriageway of 7.8 metres by the 122 Stancombe Road developer. Correspondingly, that part of the road on the 124 Stancombe Road property will also be upgraded to local road standard in "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards).

   This shall be recorded on Council's Land Information Register (LIR) for both properties at 122 Stancombe Road, and 124 Stancombe Road, Flat Bush.

Date: 16/12/04 _____ Consent Co-ordinator

Date: 16/12/04 _____ Team Leader - Resource Consents

Pursuant to Section 8.4.2 of the Delegations Register (Minute 2203/01), the above application has been considered under Delegated Authority and has been determined as a non-notified non-complying activity application.

Consent is hereby granted in accordance with Part II and sections 104, 104B and 104D of the Resource Management Act 1991.

SIGNED

_____ Date: 16/12/04
Consent Co-ordinator

DECISION

Recommendation adopted under Delegated Authority

_____ Date: 16/12/04
Team Leader, Resource Consents

Environmental Services

22 December 2004

Carlos Concepts Ltd
C/- Working Concepts Ltd
P.O. Box 58-395
Greenmount

Attention: Sandy Heard

Dear Madam

DECISION ON APPLICATION FOR LAND USE RESOURCE CONSENT

Applicant: Carlos Concepts Ltd

Application: Discretionary Activity for removal of 8 protected trees from the site at **122 Stancombe Road**, Flat Bush being:

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

Restricted Discretionary Activity for works with the potential to impact onthe root system of an Elm tree, and Chestnut Tree.

Discretionary Activity for removal of 4 protected trees from the site at **124 Stancombe Road**, Flat Bush being:

- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)
- Moreton Bay Fig (*Ficus macrophylla*) – consent given retrospectively

And a group of inextricably linked protected trees including species of Karaka, Totara, Puriri, Ti Kouka, Kauri, Kahikatea, Rewarewa, Taraire, and Kohehohe.

Site: 122 and 124 Stancombe Road, Flat Bush

Legal Description: Lots 2 and 3 DP 78859

122 and 124 Stancombe Road
Flat Bush
Proposal No: 27373

Zoning: Flat Bush Residential 1 (General Precinct) – Proposed Variation 13 to the Manukau Operative District Plan 2002.
Future Development (Stage One) (Manukau Operative District Plan 2002)

Proposal No: 27373

DECISION

I wish to advise that consent for the above application was granted on 22 December 2004 under delegated authority and pursuant to Sections 104, 104B and 104C of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

(1) That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

(2) That the removal of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 shall be limited to the following trees on the following sites:.

122 Stancombe Road, Flat Bush

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

The above trees being those identified in the Arboricultural Report submitted with the application by the Specimen Tree Company dated 14 December 2004.

124 Stancombe Road, Flat Bush

- Moreton Bay Fig (*Ficus macrophylla*)
- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)

The above trees being those numbered 23-27 as detailed in the Arboricultural Report submitted with the application by the Specimen Tree Company dated 30 June 2003.

(3) Prior to any land modification works, tree removal, or works proximate to protected trees on the site (for trees not approved for removal by this consent) a suitably qualified arborist shall clearly identify to all contractors, and sub-contractors who are to be working on the site those trees which are approved for removal by this consent, and those trees which shall be protected during all land modification and construction works.

(4) A copy of this resource consent shall be retained on site at all times during all land modification and tree removal works.

(5) Prior to any tree removal a temporary protective fence shall be erected to protect the Elm tree, and Chestnut Tree identified on the plans submitted and numbered 27373 by the Council (attached to and forming part of this consent) and any other protected trees proximate to the area of land modification and tree removal works. The extent and location of this temporary protective fencing shall be overseen by a suitably qualified arborist. These trees being identified in the Arboricultural Report submitted with this application by the Specimen Tree Company Ltd dated 14 December 2004.

(6) The area within the dripline of trees identified in condition (5) above shall be treated as a total exclusion zone which requires:

- No entry into the protected areas unless approved by a suitably qualified arborist appointed by the consent holder;
- No storage of diesel, cement, building materials, site offices, or topsoil or any other construction materials within the protected areas;
- No spillages of any substances within the protected areas;
- No alteration of the extent of the protective fencing unless prior approval is given by a suitably qualified arborist;

(7) The temporary protective fencing referred to in condition (5) above should be constructed from a rigid material (e.g. plywood or corrugated iron) attached to a sturdy framework of freestanding scaffolding or posts. This fencing shall be maintained at all times during all land modification and tree removal works.

(8) Any pruning works necessary to any protected trees on the site in conjunction with any land modification or tree removal works shall be undertaken by a suitably qualified arborist in accordance with accepted arboricultural practice.

(9) Tree removal operations shall be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

(10) Prior to commencement of any tree removal on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

(1) In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date of commencement of the consent, unless the consent is given effect to before the end of that period. However, the Council does have the power to extend this period in certain cases where an application under Section 125 is made prior to the consent lapsing.

REASONS FOR THE DECISION

1. The conditions imposed on this consent are in accordance with the recommendations of the Specimen Tree Company Ltd reports dated 30 June 2004 and 14 December 2004.

2. Removal of all trees identified in this resource consent are necessary for either road construction works on the site at 124 Stancombe Road, Flat Bush, or for land modification works necessary in association with the construction of this road, or any network utility service provision in conjunction with construction of this road.

3. Proposed Variation 13 to the Manukau Operative District Plan envisages that this site be available for residential development of a medium / high density. Whilst this requires removal of a number of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 it is considered these works are necessary to fulfil the ultimate intention of residential development of the site provided under Variation 13 to the Manukau Operative District Plan.

COSTS

1. Your deposit of $562.50 already paid has been deducted from the total costs.

2. The aforementioned fee is in addition to the normal fees and requirements as imposed by the Manager - Building Consents for the Building Consent.

RIGHT OF OBJECTION

Within 15 working days of receipt of this decision (commencement date stamped below) you may lodge an objection to the decision pursuant to Section 357(2) of the Resource Management Act 1991. Any such objection shall be made by notice in writing to the Council setting out the reasons for the objection and the relief sought.

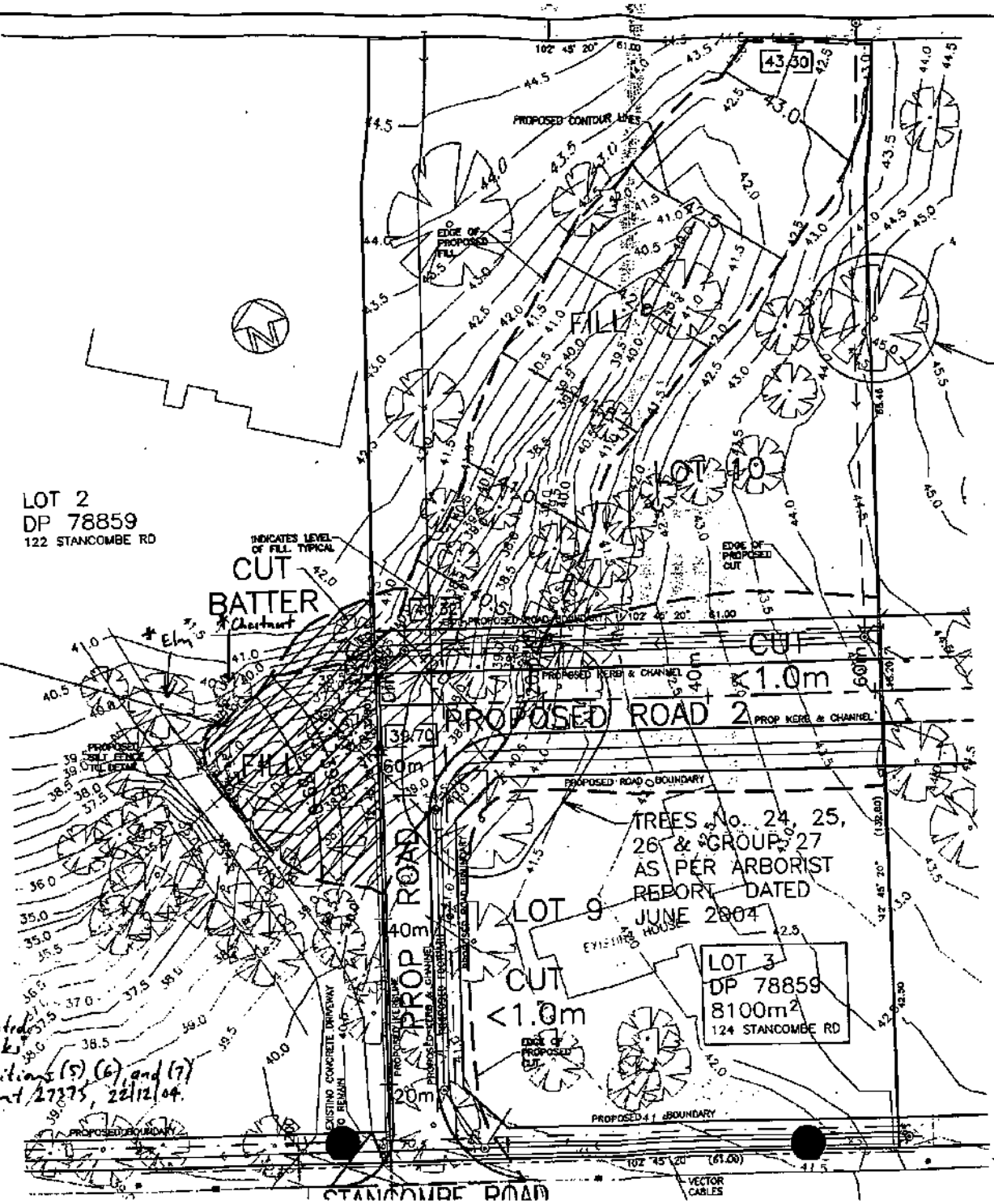
Should you have to enter into any future correspondence, building consent applications, or enquiries relating to this consent, could you please ensure that you include the file reference at the foot of page one of this letter.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

Date 23/12/2004
Commencement of 15 Working Days
RE : S 357 RM Act 1991

27373



TREE No. 23

NOTE: EXISTING RESOURCE CONSENT SP8840 ALLOWS REMOVAL OF TREES No. 16-22 AS PER ARBORIST REPORT DATED SEPTEMBER 2004

* Trees to be protected during site works. Refer to Conditions (5), (6), and (7) of resource consent 27373, 22/12/04.

No.	Revision Details	Date

© Copyright 1999 Airey Consultants Ltd

Drawing Title: PART SITE PLAN

Job Title: PROPOSED TREE REMOVAL FOR CARLOS CONCEPTS LTD 124 STANCOMBE ROAD FLAT BUSH

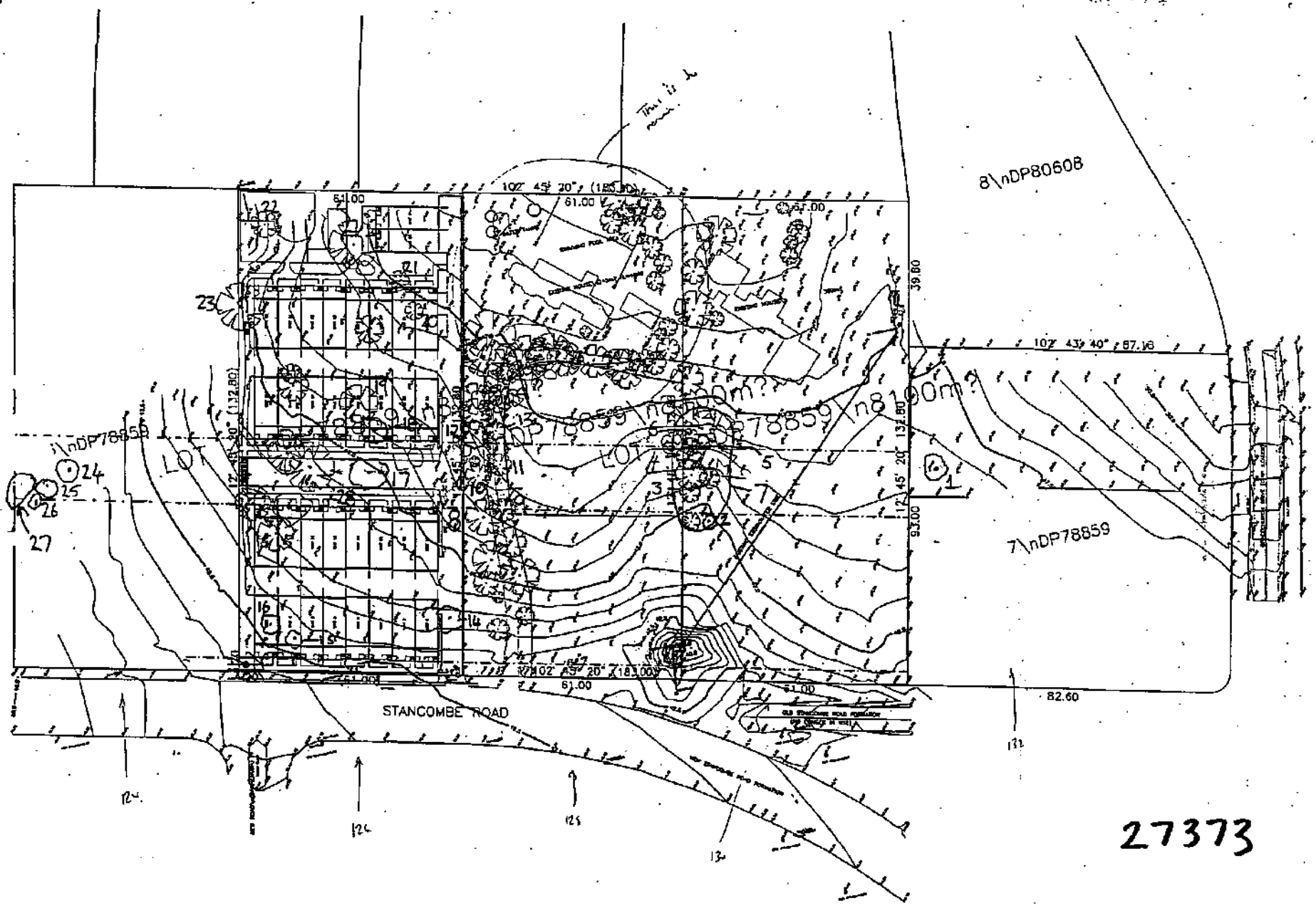
AIREY CONSULTANTS LTD.

Design: I H GREEN (ph534 6523)
Survey: DIZDALE SURVEYORS LTD
Drawn: LFP
Checked: HG
Date: DEC '04
Scale: A3 1:500
CAD Filename:

CONSENT

Original Size:

File No.	Rev.	Sheet No.
A9861/5	–	1A



REPORT DATED

61 A Wellington Street
Freemans Bay
PO Box 91602
Auckland Mail Centre
Auckland

Quotable Value Limited
www.quotable.co.nz

Your ref: SP8840 P27046
Our ref: 36400/9603

10 November 2004

Fee: $285.00 (excl GST)

The City Manager
Manukau City Council
Private Bag
MANUKAU CITY

Attention: Mr Bryce Pomfrett

re: **RESERVE CONTRIBUTION VALUATION – WORKING CONCEPTS, 124 STANCOMBE ROAD, FLAT BUSH**

Further to your instructions of the 4 November 2004, I have inspected the above property to assess a current market value for reserve contribution purposes in accordance with the subdivision consent provisions of the Resource Management Act 1991, and report as follows.

LEGAL DESCRIPTION Lot 3 DP 78859

ZONING Rural 3 in Manukau City's Operative District Plan 2002. Flat Bush Residential 1 Zone – Arterial and General Precinct in Variation 13.

DATE OF VALUATION 10 November 2004

VALUATION SP8840 P27046

Assessed market value of Lot 10 (as a single household unit site)

$480,000
(FOUR HUNDRED AND EIGHTY THOUSAND DOLLARS)

In accordance with your instructions this abbreviated report has been prepared for reserve contribution purposes only.

The value is inclusive of G.S.T., if any.

$\frac{480000}{100} \times 6\%$
+ GST
= 32,400

S.H. Lee
Senior Valuer

Environmental Services

4 November 2004

The Area Valuer
Quotable Value NZ Ltd
Registered Valuers
P.O. Box 91-602
AUCKLAND MAIL CENTRE

Dear Sir

APPLICATION FOR TWO LOT FEE SIMPLE SUBDIVISION (WITH ROAD TO VEST) AT 132 STANCOMBE ROAD, FLAT BUSH. PROPOSAL NO: 27046 (SP 8840). WORKING CONCEPTS.

The attached plan SP 8840 shows a proposed subdivision of the above land.

Would you please supply for reserve contribution assessment purposes a current value for proposed Lot 10 as if this proposed site is for a single household unit.

The land is zoned Flat Bush Residential 1 under Proposed Variation 13 to the Manukau Operative District Plan 2002, and Rural 3 under the Manukau Operative District Plan 2002.

The proposed allotment is serviced to normal urban standards.

Please quote Purchase Order No. 35973 in your account.

Yours faithfully

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

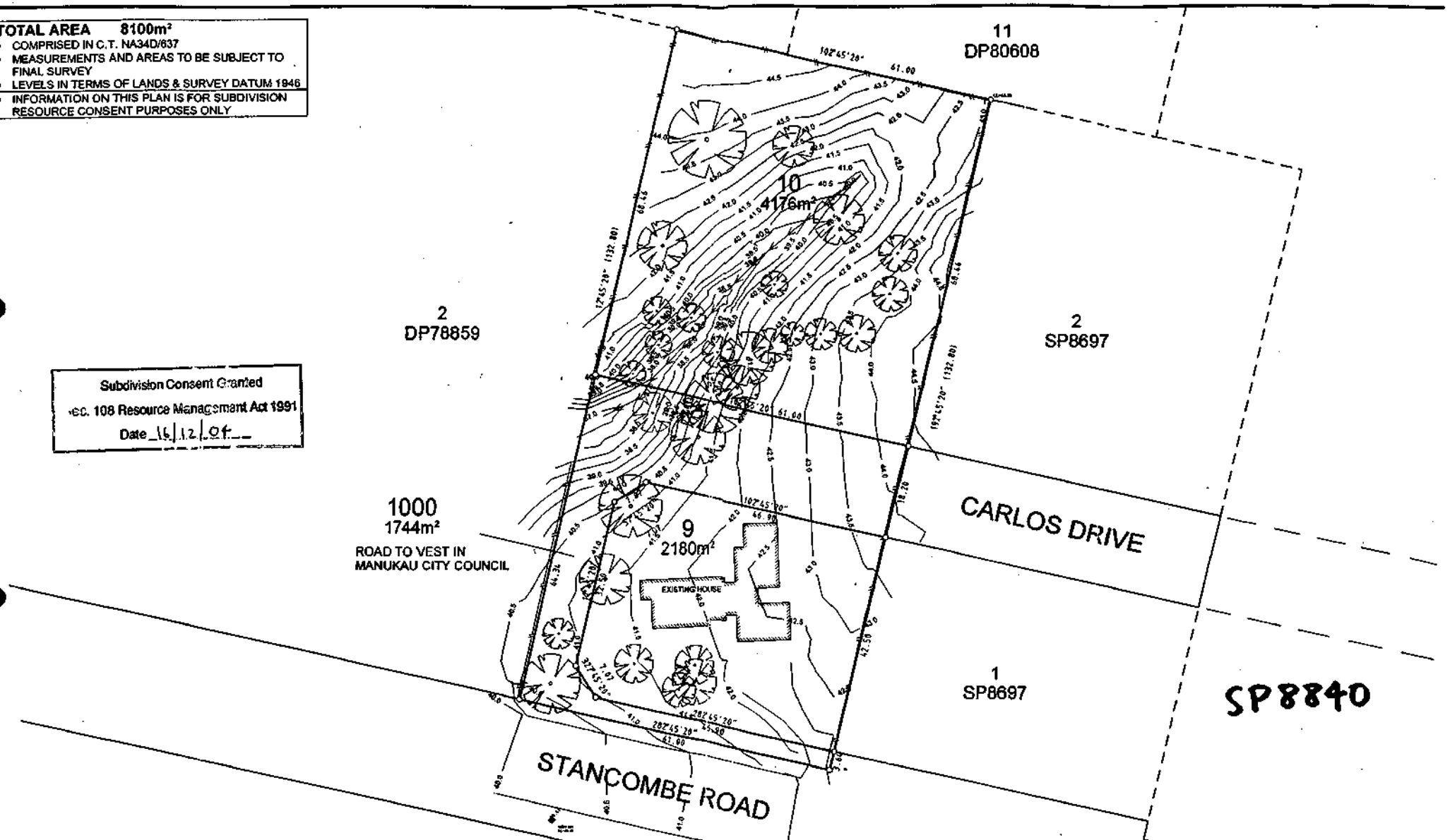
Reference: SP 8840 P 27046
Direct Dial: 262-8900, extn 5856

Enquiries to: Bryce Pomfrett
Direct Facsimile: 262-5168

TOTAL AREA 8100m²

- COMPRISED IN C.T. NA34D/637
- MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
- LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946
- INFORMATION ON THIS PLAN IS FOR SUBDIVISION RESOURCE CONSENT PURPOSES ONLY

Subdivision Consent Granted
Sec. 108 Resource Management Act 1991
Date 16/12/04



Easdale Surveyors Ltd
REGISTERED SURVEYORS - LAND DEVELOPMENT CONSULTANTS
39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 537 5754
e-mail: surveyors@easdales.co.nz

PROPOSED SUBDIVISION
124 STANCOMBE ROAD, FLAT BUSH
LOT 3 DP78859

FILE:	7576
SCALE:	1:500
DATE:	September 2004
SURVEYOR	MSL
REVISION	SCHEME 1

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-983-660

Tax Invoice No	RC004547

Invoice Date: 17 Dec 2004
Customer No: 0078476
Charge Ref: 27046
Order No

Carlos Concepts Limited
PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5455*

Description	Quantity		Unit Price	Amount
PRC27046 124 Stancombe Rd, Clevedon				
Staff Co-ordination	0.50	Hours	90.00	45.00
Report Formulation	7.50	Hours	90.00	675.00
Final Decision	2.00	Hours	90.00	180.00
Documentation	2.10	Hours	90.24	189.50
Authorisation	1.00	Hours	115.00	115.00
Manukau Water - Plan Checking	6.10	Hours	79.69	486.13
Valuation NZ - OC	1.00	Each	285.00	285.00
Miscellaneous	0.25	Each	90.00	22.50

SUBDIVISION - SP8840

Sub Total $3,578.63
GST $447.33

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Jan 2005	AMOUNT DUE	$4,025.96

Carlos Concepts Limited
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Te Kaunihera o
MANUKAU
City Council

Customer No: 0078476
Invoice No: RC004547
Charge Ref: 27046

DUE DATE	20 Jan 2005
AMOUNT DUE	$4,025.96

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC004547

Invoice Date: 17 Dec 2004
Customer No: 0078476
Charge Ref: 27046
Order No

Carlos Concepts Limited
PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5455*

Description	Quantity	Unit Price	Amount
PRC27046 124 Stancombe Rd, Clevedon			
Deposit	-1.00 Each	500.00	-500.00
Payment for this DEPOSIT has been received			
Administration Fee	1.00 Each	100.00	100.00
Compliance Deposit	1.00 Each	200.00	200.00
Lodgement Meeting	1.50 Hours	90.00	135.00
Site Visit	1.40 Hours	90.00	126.00
Professional Assess.	11.80 Hours	90.64	1,069.50
Amendments	1.50 Hours	90.00	135.00
Customer Liaison	3.50 Hours	90.00	315.00

Te Kaunihera o
MANUKAU
City Council

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

20/12/2004 10:16 Trn 136610
Cashier RBELL

SUNDRY INVOICES
Invoice Number RC004547 $4025.96

124 STANCOMBE RD

Subtotal $4025.96
Total $4025.96

Payer: SHUTTLEWORTH PROPERTIES LTD
Received CHEQUE $4025.96
Cheque # 456364
Change $0.00

All charges are GST inclusive. Please
retain this receipt for your records

LIS255.v2.1 RC1 - Resource Consent Application Maintenance 03.11.04

Proposal No. 27046 Internal ID 28598
01) Desc TWO LOT FEE SIMPLE SUBDIVISION WITH ROAD TO VEST
02) Applicant Name CARLOS CONCEPTS LTD
03) Address 1 PO BOX 27029
2 WELLINGTON
3 Att: Mr R J Cummins
04) Agent Name WORKING CONCEPTS LTD
05) Address 1 PO BOX 58395
2 GREENMOUNT
06) Agent Address Flag Y
07) Monthly Billing
08) Contact SANDY 2713007
09) Date Received 02.11.04
10) Consent Type SD Subdivision
11) Deposit Fee $562.50
12) Misc.
13) Involved Properties
14) File/SP RefNo SP8840
1 6923/124 124 STANCOMBE RD
16) Meeting Date
17) Meeting Time
* More Property Details of 6923/124
18) Team No 3 Team 3
Legal Description
Zone
Ward
LOT 3 DP 78859
RURAL 3
CLEVEDON

Enter screen-ref(nn) to modify, FI to file, HCOPY, DELETE, RCn, or EX : .....

CRM Number: 0078476

CRM Client: Carlos Concepts Limited

Project: ☑ tick Ref 12 #: ☐ tick

DEPOSIT RC #: 004148

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

05/[illegible]/2004 10:56 Trn 124117
Cashier MSCOTT

SUNDRY INVOICES
Invoice Number RC004148 $562.50

copy

Subtotal $562.50
Total $562.50

Payer: SHUTTLEWORTH PROPERTIES
Received CHEQUE $562.50
Cheque # 456325
Change $0.00

All charges are GST inclusive. Please
retain this receipt for your records

Te Kaunihera o
MANUKAU
City Council

PRIVATE BAG 76917
MANUKAU CITY
DX EP 75557

PHONE 263–7100

G.S.T. Reg. No. 51–963–660

OFFICIAL RECEIPT

Shuttleworth Properties Ltd
C/- Working Concepts Ltd
Po Box 58395
Greenmount Att: Sandy Heard

PROPERTY No:	27046 SP8840
LOT	D.P.
RATES/WATER RATES	
SUNDRY A/C	
RENT A/C	
CREDIT A/C	
	$

Resource Consent Deposit
124 Stancombe Rd, Clevedon

ASB BANK

ASB BANK LIMITED
BUSINESS BANKING

Date 2-11-04

Pay Manukau City Council or bearer

The sum of Five hundred and sixty two dollars fifty cents only $ 562-50

NOT TRANSFERABLE

SHUTTLEWORTH PROPERTIES LTD

.3209 CHEQUE DUTY PAID

⑈456325 ⑈123030⑆ 0642577⑈00 ⑈

From: Tony O'Connor
To: Pomfrett, Bryce
Date: 12/16/04 6:27pm
Subject: 124 Stancombe

Bryce please add to Condition 25 the following

(d) " No Stopping At All Times " from the western side of the vehicle crossing of 122 Stancombe Road around the corner and along the western side of Carlos Drive to the northernmost extent of the road.

From: Tony O'Connor
To: Pomfrett, Bryce
Date: 12/15/04 1:20pm
Subject: 124 Stancombe Rd

Condition re Traffic Signs and Markings.

" That the following traffic signage and road markings be installed, to the extent practicable, in accordance with the Transit NZ Manual of Traffic Signs and Markings, as part of the road construction. An engineering drawing shall be submitted and approved by the Manager Resource Consents and Compliance prior to installation:
(a) A "Give Way " sign (RG-6) at the intersection with Stancombe Road.
(b) Two chevron boards (RC- 5) at the future bend in Carlos Drive,
(c) A 100mm wide continuous reflectorised white centreline around the bend extending 30 metres from the tangent points.(See MOTSAM Fig.2.1[a]) "

John,
Any comments espc (b)

CC: Neill, John

From: "Sandy Heard" <sandy@workingconcepts.co.nz>
To: <bpomfret@manukau.govt.nz>
Date: 12/15/04 3:50pm
Subject: 124 STANCOMBE DRAFT CONDITIONS

Hi Bryce

Appreciate you sending through the Draft Conditions for our viewing.
The following 2 conditions require re-wording please:

General

1. Clause 3 (page 2):

The existing house on site will not be removed prior to commencement of earthworks on the property - the back earthworks will be commencing before house is removed

2. Clause 4 (page 3)

Reference underlined refers to 126 Stancombe Road, should read 124 Stancombe Road.

These are the only 2 clauses that we require changing.

Thanks in anticipation of your assistance with this, your help is greatly appreciated.

Regards

Sandy Heard
Sales & Development Manager
Working Concepts Ltd
Ph: (09) 271 3007
Fax (09) 271 4037
Mobile 0275 869 019

change date to
16/12/04.

Facsimile

FAXED

Te Kaunihera o
MANUKAU
City Council

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5168
(09) 262-5109
Email: .....@manukau.govt.nz

To: Sandy Heard

Company: Working Concepts

Fax No: 271-4037

From: Bryce Pomfrett

Date: 15.12.04 No of Pages: 13

Subject: 124 Stancombe Road, Flat Bush.

WITHOUT PREJUDICE

Sandy,

As discussed I attach a draft consent for this job. Of particular note, is proposed condition 24 of the subdivision consent.

This condition has been written in this manner to avoid the need to assess this cost now, which would cause further delay.

Please let me know of any concerns as soon as you have a chance to review this.

Regards, Bryce Pomfrett.

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied.

Environmental Services

17 December 2004

Carlos Concepts Ltd
C/- Working Concepts Ltd
P.O. Box 58-395
Greenmount

Attention: Sandy Heard

Dear Sandy

DECISION ON AN APPLICATION FOR SUBDIVISION RESOURCE CONSENT AND ASSOCIATED LAND USE RESOURCE CONSENT FOR LAND MODIFICATION AND TREE REMOVAL.

Applicant: Carlos Concepts Ltd

Application: **Part A - Land Use Consent (Manukau Operative District Plan 2002)**

Restricted Discretionary Activity for land modification works being a total of 3300m^3 cut and fill.

Discretionary Activity for removal of 12 protected trees being:

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- 2 x Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
- Two Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- English Oak (*Quercus Robur*)
- 2 x Pohutukawa (*Metrosideros excelsa*)

Part B - Subdivision Consent

Manukau Operative District Plan 2002

Non-Complying Activity for 2 lot subdivision (with road to vest) in the Rural 3 Zone contravening Rule 12.15.3.

Restricted Discretionary Activity for subdivision of a site with road frontage to the Primary Road Network (Stancombe Road).

Restricted Discretionary Activity for provision of Public Utility Services (stormwater, wastewater, roading, and water supply) in conjunction with subdivision.

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Variation 13 to the Manukau Operative District Plan 2002

Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.1 Movement Network by exceeding the maximum 250m block length by 63 metres.
Discretionary Activity for subdivision infringing the requirements of Rule 17.10.11.6 for Proposed Lot 10 by infringing the required 25% front boundary requirement by 1.5%.
Restricted Discretionary Activity under Rule 17.10.12.13 for investigation of Asbestos Containing Materials on this site.

Location:	124 Stancombe Road, Flat Bush (and 122 Stancombe Road, Flat Bush for some land modification works and tree removal)
Legal Description:	Lot 3 DP 78859 (and land modification works and tree removal on Lot 2 DP 78859)
MCC Reference:	SP8840
Proposal No:	27046
Zone:	Rural 3 - Manukau Operative District Plan 2002 Flat Bush Residential 1 – General and Arterial Precincts (Special Policy Area Boundary: Flat Bush Buffer Area) – Proposed Variation 13.

DECISION

PART A – LAND USE CONSENT

I wish to advise that consent for the above application was granted on 17 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104D and 108 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046** by Council except where amended by the following conditions of consent.

3. That the existing house on the site shall be removed prior to commencement of earthworks on the property.

Tree Removal

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4. That the removal of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 shall be limited to the following trees on the following sites:

126 Stancombe Road, Flat Bush

- Golden Wych Elm (*Ulmus glabra*)
- London Plane (*Platanus x acerfolia*)
- Indian Cedar (*Cedrus deodara*)
- Norfolk Island Pine (*Araucaria heterophylla*)
- Tulip Tree (*Liriodendrum tulipfera*)
- Red Oak (*Quercus rubra*)
- Pin Oak (*Quercus palustris*)

The above trees being those numbered 16-22 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated September 2004.

Advice Note: Tree 23 identified within the Specimen Tree Company Report dated September 2004 is not a Pin Oak and does not exceed 6 metres in height. Accordingly, it is not protected under the Manukau Operative District Plan 2002.

122 Stancombe Road, Flat Bush

- Indian Cedar (*Cedrus deodara*)
- English Oak (*Quercus Robur*)
- Two Pohutukawa (*Metrosideros excelsa*)

The above trees being those numbered 1-4 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated 23 November 2004.

Advice Note:

During consultation between the applicant and Ngai Tai Umupuia Te Waka Totara it has been requested that any native trees removed as part of the earthworks (which are less than 6 metres in height and are, therefore, not subject of this resource consent, or the two Pohutukawa on the 122 Stancombe Road property) be donated to the iwi - Ngai Tai Umupuia. Arrangements can be made with Jaroz Adams (Phone: (09) 292-9020 or email: tewakatotara@xtra.co.nz should the consent holder choose to make this donation.

5. The trees identified for removal under condition (4) above shall be clearly marked and identified by a suitably qualified arborist prior to their removal being undertaken.

6. All tree removals shall be in accordance with accepted arboricultural practice.

7. Tree removal operations shall be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

Earthworks

8. The earthworks construction shall be undertaken in accordance with:

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(a) The erosion and sediment control plan as detailed in the approved plans referenced E7/27046 by Council

(b) Auckland Regional Council Technical Publication 90 - TP90 Erosion and Sediment Control.

(c) The recommendations of the geotechnical report from Geotek Services Ltd (Ref 2532, dated 30 June 2004).

9. The works shall be undertaken in such a manner as to ensure that beyond the boundary of the site there should be no 'dust' or 'soil erosion / siltation', which in the opinion of the Manager - Resource Consents & Compliance, is objectionable, offensive or has the potential to create an adverse effect on the receiving environment.

10. The consent holder shall be responsible to ensure that the land within the above site and the land on adjoining properties remains stable at all times in respect to the approved works.

11. The septic tank on this site shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

12. Control measures shall be in place to ensure that any trucks leaving the site do not deposit soil or other debris on public roads. Any such material deposited on any public road shall be cleaned up immediately at the consent holder's expense.

13. Prior to development commencing, the consent holder shall provide Council's Manager - Environmental Health and Compliance with details of the level of communication with neighbouring property owners/occupiers and identification of the liaison person. The consent holder shall ensure that, before commencement of the development, the owners of all adjoining properties are notified in writing of the development in general, its expected duration, the times at which it will be undertaken, and the name of a responsible person with whom neighbours can liaise if the need arises. (Any queries in the foregoing should be referred to the Manager - Environmental Health and Compliance).

Environmental Health

14. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Although the proposed location of the earthworks do not contain any known archaeological sites, it is possible that unrecorded sites may exist. Under the Historic Places Act 1993, it is unlawful for any person to destroy, damage or modify an archaeological site unless the relevant consents have been obtained from the New Zealand Historic Places Trust. In the event of archaeological features being uncovered (e.g. shell midden, hangi or oven stones, pit depressions, defensive ditches, artefact material or human bones) work is to cease in the vicinity of the discovery and the New Zealand Historic Places Trust and appropriate iwi authorities shall be contacted so that the appropriate action can be taken. This includes such persons being given reasonable time to record and recover archaeological features discovered before work may recommence.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B, and 104D of the Resource Management Act 1991 and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002. .

2. It is considered that the proposed subdivision will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.

3. Proposed Variation 13 to the Manukau Operative District Plan envisages that this site be available for residential development of a medium / high density. Whilst this requires removal of a number of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 it is considered this tree removal is necessary to fulfil the ultimate intention of residential development of the site provided under Variation 13 to the Manukau Operative District Plan.

PART B – SUBDIVISION CONSENT

I wish to advise that consent for the above application was granted on 17 December 2004 under delegated authority and pursuant to Sections 104, 104B, 104D and 220 of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

2. That the development shall be in general accordance with the plans and information submitted with the application, and numbered **27046 (SP8840)** by Council except where amended by the following conditions of consent.

Engineering

3. The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

   (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

   (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

   (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

   (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

   (v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

4. A satisfactory foundation completion report for the site shall be submitted to Council for approval upon completion of the land modification works (approved under Part A – Land Use Consent). Should the Land Transfer Plan differ from the approved subdivision plan then the Foundation report shall be amended accordingly.

   Unless the foundation completion report states that a building constructed in compliance with NZS 3604: 1999 does not need specific design for the building foundations, a record will be placed on Council's Land Information Register requiring that the recommendations of that report be complied with.

   If 'Extremely Expansive Soils' [AS 2870 (1996) Class E or equivalent] or 'Specific Design Requirements' are indicated, a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 will also be required.

5. Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment area with individual connection points in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

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6. Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

Roading

7. The proposed new road shall be constructed in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

8. Street lighting facilities shall be supplied and in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

9. Road upgrading is required along the full frontage (on one half of the road only) to increase the width of Stancombe Road to that of a District Arterial Road with cycle lanes as detailed in Proposed Variation 13 Table 2 and Figure 17.10.3 Standard as defined in Rule 9.14.5.5.2 and appendix 2 of the Manukau Operative District Plan 2002. This work shall include:

   (a) The vesting as Road of 3.64 metres of land being in general one half of the additional extra legal road width required.

   Manukau City Council will pay compensation for the land required in excess of a collector road for Stancombe Road. (See rule 9.9.2.11(a)(viii) of the Manukau Operative District Plan 2002.) The quantum of this compensation shall be agreed with the Manager Transportation, Manukau City Council. (Chris Freke, Phone 262 5799, email cfreke@manukau.govt.nz.)

   (b) The construction of a footpath along Stancombe Road as detailed on the approved engineering plans referenced E7/27046 (sheets 1-21) by Council.

10. Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed lots.

    The consent holder shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts.

11. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}

0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

Financial Contributions

12. A Comprehensive **Stormwater Discharge** Levy of $447.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this levy (FC45) has been calculated at $490.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

13. A **Stormwater** contribution of $70,002.23 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC259 – Flat Bus Stormwater) has been calculated at $76,820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

14. A **Wastewater** contribution of $5,816.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution is made up of the following elements:

    - $747.00 including GST. This contribution (FC223 – Accent Drive Embankment) is assessed at $820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

    - $5,069.00 including GST. This contribution (FC260 – Stancombe Road Wastewater) is assessed at $5,563.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

15. A **Water Supply** Contribution of $18,799.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC231 – Flat Bush Water Supply) has been assessed at $20,630.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

16. A **Roading Upgrade** contribution of $88,200.00 including GST shall be paid to Manukau City Council.

    The consent holder is advised that this contribution (FC266 – Stancombe Road) has been assessed at $1400 /metre road frontage plus GST for a frontage of 56 m.

17. All contribution rates shall be reassessed in accordance with the current Statistics NZ Capital Goods Price Index for Other Construction-S2GC (for the previous year) if payment is not made within 12 months of date of this consent.

Septic Tank

18. The septic tank on this site shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

Street Trees

19. That tree planting at the site frontage along the front berm of the roads shall be in accordance with the Robin Duncan Landscape Architect plan referenced 27046 by Council attached to and forming part of this consent.

20. Street tree planting shall be undertaken in accordance with the requirements of Rule 17.10.11.8 of Proposed Variation 13 to the Manukau Operative District Plan 2002 with these relevant requirements restated below and forming conditions of consent:

    - Street tree planting shall be undertaken in new developments once formation of the street has been completed;
    - Street trees shall be planted in the front berm between the kerb and footpath. The front berm for street planting shall have a minimum width of 1.4 metres.
    - Street trees are to be provided on both sides of the street at a minimum average spacing of 15 metres.
    - Clear visibility of bus stops, pedestrian crossings, sign posts and road intersections (where they are known) are to be maintained.
    - The consent holder shall be responsible for the routine maintenance and replacement of any street planting they provide including deadwooding, weed control, mulching and watering for a minimum period of 12 months from the time of planting.
    - Trees that are vandalised or dead, or that are not of a suitable specimen form shall be replaced immediately at the cost of the consent holder.

21. The street tree species on Stancombe Road shall be London Plane (Platanus acerifolia). The street tree species on "Proposed Road 1 and 2" shall be Sweet Gum (Liquidamber styraciflua).

22. The street trees shall be suitably positioned so as not to obstruct intersection line of sight in accordance with MCC Quality Assurance Manual and shall be positioned 3.0m away from driveways at all times in accordance with MCC Quality Assurance Manual. This shall be the responsibility of the consent holder up to the time of 224 certification or the final inspection agreement.

Road to Vest

23. Lot 1000 shall vest in the Manukau City Council as legal road at no cost to Council.

Financial Contribution for Proposed Road 1

24. Within three months of the commencement of this resource consent and prior to certification pursuant to the requirements of section 224 of the Resource Management Act 1991 the consent holder shall:

    (a) Submit to the Council an assessment, undertaken by a suitably qualified engineer, of the cost of altering that length of "Proposed Road 1" (identified on Airey Consultants Plan ref: A9861/5 Drawing 6, Rev.4) to comply with the "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards) for that part of this "Proposed Road 1" within the legal boundary of 124 Stancombe Road (Lot 3 DP 78859).

    (b) This assessment shall include consideration of the cost of relocating the footpath, service berms (and any associated services to comply with the provisions of the Manukau Operative District Plan 2002), street planting ,all kerb and channel works, street light and signage replacement or repositioning, road

markings, design, construction and supervision works (as well as any necessary contingency) associated with alteration of this road to achieve compliance with Council's Engineering Quality Standards and the provisions of the Manukau Operative District Plan 2002 for alteration of "Proposed Road 1" to local road standard (7.8 metre carriageway and 18.2 metre legal width).

(c) Allow the Council sufficient time to arrange and complete a peer review of the costs identified under (a) and (b) above, to be undertaken by a suitably qualified engineer, appointed by the Council and at the sole discretion of the Council, to certify the costs submitted under (b) above.

(d) Following the completion of the peer review required under (c) certifying all costs required under (b) above pay the Council as a financial contribution the cost of all works identified under (b), together with all costs incurred by the Council in review.

Road Marking – Proposed Road 1 and 2 ("Carlos Drive")

25. That the following traffic signage and road markings be installed, to the extent practicable, in accordance with the Transit NZ Manual of Traffic Signs and Markings, as part of the road construction.

(a) A "Give Way " sign (RG-6) at the intersection with Stancombe Road.
(b) Two chevron boards (RC- 5) at the future bend in Carlos Drive,
(c) A 100mm wide continuous reflectorised white centreline around the bend extending 30 metres from the tangent points.(See MOTSAM Fig.2.1[a]) "

An engineering drawing shall be submitted and approved by the Manager Resource Consents and Compliance demonstrating the location and form of this signage prior to installation

Reserve Contribution

26. (a) A reserves contribution of **$32,400** including 12.5% GST being 6% (plus GST) of the market value of Lot 10 (as a single household unit site), shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.

Note: The Reserve contribution payable specified above has been derived as follows:

Market value of Lot 1 as a single household site	$480,000.00 (including GST)
Contribution: $480,000.00 x 6% + GST	**$32,400.00 (including GST)**

Note: The above calculations reflect the number of underlying allotment (1) and the number of additional allotments created at this stage of the subdivision (1)

(b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

DRAFT

Section 224

27. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and the Land Transfer Plan number and a copy of the survey plan (showing co-ordinates) are supplied to the Council.

ADVICE NOTES

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where a further application is made within three months of the date of expiry.

2. This consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Each allotment is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. Clause 6.B.6.1 of Council's Engineering Quality Standards manual (carriageway acceptance) in respect to Council carrying out Benklemann Beam tests at no cost to the developer has been amended to the extent that the cost of this work shall now be borne by the consent holder.

6. New roads are to be vested in Council as part of subsequent consents relating to this site. Please ensure that an application is made for preferred 'road names' to, the Team Leader Resource Compliance, for approval at time of, or prior to, application for section 223 release.

7. Pursuant to section 37(1) of the Resource Management Act 1991 (RMA) the time limit for notification of this decision under Section 115 of the RMA has been extended.

REASONS FOR THE DECISION

1. The proposal merits consent pursuant to Section 104, 104B and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan 2002 and Proposed Variation 13 to the Manukau Operative District Plan 2002. .

2. It is considered that the proposed subdivision will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.

3. It is considered that any adverse effects of the subdivision on the surrounding environment is no more than minor and will be mitigated by the conditions of consent.

DRAFT

4. The affected party at 122 Stancombe Road, Flat Bush has given their written approval to the proposed subdivision. In imposing condition (24) of this consent it is expected that, at the time the 122 Stancombe Road is developed for more intensive residential purposes, that Proposed Road 2 will be extended to a legal width of 18.2 metres, and carriageway of 7.8 metres by the 122 Stancombe Road developer. Correspondingly, that part of the road on the 124 Stancombe Road property will also be upgraded to local road standard in "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2 and Council's Engineering Quality Standards).

   This shall be recorded on Council's Land Information Register (LIR) for both properties at 122 Stancombe Road, and 124 Stancombe Road, Flat Bush.

COSTS

1. In addition to the consent charge for this consent, and pursuant to Section 36(1)(c) of the Resource Management Act 1991, an engineering administration and inspection charge, relating to the engineering conditions of the Resource Consent will be applicable (together with administration charges relating to the release of the subdivision) by determining all reasonable and actual costs incurred by Council. The actual charges incurred in the Council's field monitoring of the engineering works will be determined at the completion of works and will be payable prior to release. The consent holder will be advised of the charges as they fall due.

2. The aforementioned fee is in addition to the normal fees and requirements as imposed by the Manager - Building Consents & Compliance to the Building Consent.

RIGHT OF OBJECTION

Within 15 working days of receipt of this decision (commencement date stamped below) you may lodge an objection to the decision pursuant to Section 357(2) of the Resource Management Act 1991. Any such objection shall be made by notice in writing to the Council setting out the reasons for the objection and the relief sought.

Please note that from 1 October 1999 the Council requires a deposit fee of $450 (inclusive GST) to accompany any objection relating to valuation figures, financial contributions and the provision of works associated with the provision of infrastructure. (Minute No. 1455/99).

Any such objection may incur the reasonable costs of processing the objection above and beyond the deposit fee (Sec 36(3) of the Act).

Should you wish to enter into any future correspondence, building consent applications, or enquiries relating to this consent, could you please ensure that you include the file reference at the foot of page one of this letter.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

DRAFT

TRANSMISSION VERIFICATION REPORT

TIME : 15/12/2004 14:00

DATE,TIME	15/12 13:57
FAX NO./NAME	12714037
DURATION	00:02:45
PAGE(S)	13
RESULT	OK
MODE	STANDARD ECM

TRANSMISSION VERIFICATION REPORT

TIME : 15/12/2004 14:39

DATE,TIME	15/12 14:32
FAX NO./NAME	12714037
DURATION	00:07:18
PAGE(S)	13
RESULT	OK
MODE	STANDARD ECM

MANUKAU WATER

Manukau Water

INTER-OFFICE MEMO

MANUKAU
City Council

To:	Environmental Services	**Attention:**	Bryce Pomfrett
From:	Veer Khar	**Date:**	13 December 2004
Site Address:	124 STANCOMBE ROAD, FLATBUSH		
Site Ref:	6923/124 SP8840	**Proposal No:**	27046
Consent:	Subdivision	**Number of buildings / lots:**	3

Job Description:

NOTES TO CONSENT CO-ORDINATOR

1. If any condition or advice note requested herein is deemed to require amendment that will either change the intent or value of the requirement then please consult with the other prior to amendment.

SUBDIVISION CONSENT

The following conditions shall be completed prior to the issue of a Section 224(c) certificate for the subdivision unless otherwise stated.

ENGINEERING PLANS

- The works detailed on the accompanying approved plans referenced _____ (sheets ___) by Council, shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

  (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

  (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

  (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

  (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact the Council's Resource Consent Compliance Team - attention _____

  (v) All works on existing public wastewater drains and watermains, shall be carried out by a Manukau City Council approved licensed contractor, at the applicant's expense.

WASTEWATER DRAINAGE

- Adequate provision shall be made for the disposal of wastewater.

  This will include the extension of the existing public system to / and within the site to provide each lot with individual connection points and provision for the upstream catchment. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and/or approved engineering drawings referenced _____ by Council, to the satisfaction of the Manager - Consents & Compliance, within six months of the commencement of these works **and/or** prior to the issue of the Section 224(c) certificate for the subdivision

- Adequate provision shall be made to protect wastewater lines that will be crossed over by a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled. Where clearance is less than 150mm, then 50mm thick high-density polystyrene packing shall be placed against the underside of the stormwater line. Where the clearance between the two lines is less that 300mm and bell jointed stormwater pipes shall be utilised, there shall be no bell joints placed directly over the wastewater lines.

- Adequate provision shall be made to protect wastewater lines that will cross over the top of a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled.

WATER SUPPLY

- Adequate provision shall be made for the supply of water.

  This will include the extension of the existing public system to and within the site to provide each Lot with individual connection points and provision for the upstream catchment. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and/or approved engineering drawings referenced _____ by Council, to the satisfaction of the Manager - Consents & Compliance, within six months of the commencement of these works **and/or** prior to the issue of the Section 224(c) certificate for the subdivision.

FINANCIAL CONTRIBUTION

- A wastewater contribution of $774.00 including GST shall be paid to Council prior to release of the 224 Certificate.

  The applicant is advised that this contribution (FC223) (Accent Drive Embankment) has been assessed at $820 plus GST per hectare for the total area of this development of 0.8100 hectares.

- A wastewater contribution of $5069.00 including GST shall be paid to Council prior to release of the 224 Certificate.

  The applicant is advised that this contribution (FC260) (Stancombe Wastewater) has been assessed at $5,563 plus GST per hectare for the total area of this development of 0.8100 hectares.

- A water supply contribution of $18,799 including GST shall be paid to Council prior to release of the 224 Certificate.

  The applicant is advised that the contribution (FC231) (Flat Bush Water Supply) has been assessed at $20,630 plus GST per hectare for the total area of this development of 0.8100 hectares

ADVICE NOTES

- Note that an application for a water meter is a separate application to Manukau Water.

Financial Contribution for Proposed Road 1

15. Within ~~two~~ three months of the commencement of this resource consent and Prior to certification pursuant to the requirements of section 224 of the Resource Management Act 1991 the consent holder shall:

(a) Submit to the Council an assessment, undertaken by a suitably qualified ~~traffic~~ engineer, of the cost of altering that length of "Proposed Road 1" (identified on Airey Consultants Plan ref: A9861/5 Drawing ~~6~~ Rev.2) to comply with the "Typical Future Proposed Road 1 Cross Section" (identified on Airey Consultants Plan ref: A9861/5 Drawing 7, Rev.2) for that part of this "Proposed Road 1" within the legal boundary of 124 Stancombe Road (Lot 3 DP 78859). to EQS

(b) This assessment shall include consideration of the cost of relocating the footpath, service berms (and any associated services to comply with the provisions of the Manukau Operative District Plan 2002),street planting ,all kerb and channel works, street light and signage replacement or repositioning, ~~alterations of~~ road markings, design, construction and supervision works (as well as any necessary contingency) associated with alteration of this road to achieve compliance with Council's Engineering Quality Standards and the provisions of the Manukau Operative District Plan 2002 for alteration of "Proposed Road 1" to local road standard (7.8 metre carriageway and 18.2 metre legal width).

(c) ~~Provide~~ the Council ~~with~~ sufficient time to arrange and complete a peer review of the costs identified under (a) and (b) above, to be undertaken by a suitably qualified ~~traffic~~ engineer, appointed by the Council and at the sole discretion of the Council, to confirm ~~the correctness of~~ the costs submitted under (b) above.

(d) Following the completion of the peer review required under (c) certifying ~~the correctness of~~ all costs required under (b) above pay the Council as a financial contribution the cost of all works identified under (b), together with all costs incurred by the Council in peer review and ~~assessment of the correctness of~~ review these costs.

Tony 13/12/04

Could you please peruse the above condition re: 124 Stancombe Road subdivision and roading arrangements.

P.S. Have you spoken to John Neal about this yet?

Thanks - Bryce.

* No stopping on driveway outside childcare centre, western side of vehicle crossing along "Proposed Road 1" western side.

* Check small triangular piece on 122 Stancombe land.

13/12/04 * Roger Low - His preference is that we get a dollar amount for this. -

* T O'Connor - want a breakdown of costs so we can impose this requirement as a financial contribution of consent.

Memorandum

Te Kaunihera o
MANUKAU
City Council

Environmental Services

To : Veer Khar – Manukau Water

Copies :

From : Bryce Pomfrett – Resource Management Planner – Kotuku 1

File : 27046 (SP8840) – Proposed Two Lot Subdivision – 124 Stancombe Road, Flat Bush

Date : 10/12/04

SUBJECT: **REVISED ENGINEERING DRAWINGS – 124 STANCOMBE ROAD, FLAT BUSH.**

Veer,

I attach the latest plans received for this job today.

Regards,

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Encl. Plans – Proposed Engineering Works – Carlos Concepts

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz

AIREY CONSULTANTS LTD.

Members of ACENZ

3 December 2004

In all correspondence please quote our ref: 9861/5

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

RECEIVED
- 6 DEC 2004
M.C.C. (J)
CENTRAL REGISTRY

Attn: Bryce Pomfrett

Dear Sir,

Re: Section 92 request for further information
Resource Consent Application for Subdivision at
124 Stancombe Road, Flat Bush
Council's Ref: Proposal No. 27046 SP8840

Please find enclosed amended engineering plans addressing the issues in your request dated 2/12/04.

Drawing No. 6 has been amended to show the proposed vehicle crossing details. It is envisaged that the concrete driveway for No. 122 will be readily identified as the access to the childcare facility.

Please contact the writer if you wish to discuss the matter.

Yours faithfully
AIREY CONSULTANTS LTD

pp IHGibson.

I H GIBSON

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz

AIREY CONSULTANTS LTD.

Members of ACENZ

25 November 2004

In all correspondence please quote our ref: 9861/5

RECEIVED
- 6 DEC 2004
M.C.C.
ENVIRONMENTAL SERVICES

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

Attn: B Pomfrett

Dear Sir,

Re: Subdivision Resource Consent for 124 Stancombe Road, Flat Bush

We enclose revised plans for the engineering works for the above site. As requested, we have shown a sewer lead extending through to the rear site and have confirmed acceptance of the works within No. 122 with the owner, as detailed on the signed documentation.

One other issue we wish to have included in this Resource Consent is the removal of 4 protected trees along the frontage of 122 Stancombe Road. We have approval, under the Resource Consent for 126 Stancombe Road, to install the main public sewer and water supply along the frontage of 120, 122, 124 & 126, within the future 3.64m road widening strip. There are 4 protected trees within this future 3.64m widening which will need to be removed to enable the sewer line and water supply to be installed, and to form the standard 3° berm arrangement.

We believed we had approval to remove these but have been advised that these 4 trees was not specifically addressed in previous applications. Regrettably, we see no option but to remove these trees and plant in mitigation. We enclose an arborist's report and request that the removal of these trees become part of the subdivisional Resource Consent for 124 Stancombe Road.

We look forward to approval of the consent.

Please contact the writer if you wish to discuss the matter.

Yours faithfully
AIREY CONSULTANTS LTD

I H GIBSON

THE SPECIMEN T·R·E·E COMPANY

23 November 2004

Airey Consultants Ltd
P.O.Box 39 101
Howick
Manukau City
Attn: Ian Gibson

Dear Ian,

Re 120 –122 Stancombe Road, Dannemora – Sewer and Watermain Tree Issues.

Further to your fax dated 15 November 2004 I can report as follows.

1.0 Introduction.

1.1 It is proposed that the sewer and watermain is to be installed within the road take on the front boundary of 120 and 122 Stancombe Road, Dannemora.

2.0 General.

2.1 The installation of the sewer and watermain will require the removal of four Generally Protected trees. The excavation for the trench will be approximately 1.0m from the trunk of these trees.

2.2 The four trees are part of a mixed planting of mature trees not protected under the Manukau City Council District Scheme. The approximate positions have been marked on the attached plan.

2.3 The trees to be removed are as follows:

Tree 1

Species:	English Oak
Form:	Poor
Health:	Poor
Comment:	Not a significant tree.

Tree 2

Species:	Pohutukawa
Form:	Poor
Health:	Average
Comment:	Not a significant tree.

Tree 3

Species:	Indian Cedar
Form:	Average
Health:	Average
Comment:	Not a significant tree.

Tree 4

Species:	Pohutukawa
Form:	Average
Health:	Average
Comment:	Not a significant tree.

2.4 In meeting the requirements of the Resource Management Act 1991 and the Manukau City District Plan, it is proposed that a minimum of four PB95 grade trees are planted as mitigation for the removal of the four protected trees.

If the recommendations contained within this report are adhered to, I am able to support this application for Resource Consent to install a sewer and watermain within the proposed road take at 120 and 122 Stancombe Road, Dannemora, Manukau City.

I trust this is of assistance. Please do not hesitate to contact me if you require further information.

Yours sincerely
For **THE SPECIMEN TREE COMPANY LTD**

Stuart Barton
General Manager
Cert. in Arboriculture, Dip. Hort.,
Dip. P&G. Tech., N.C.H. (Amenity)

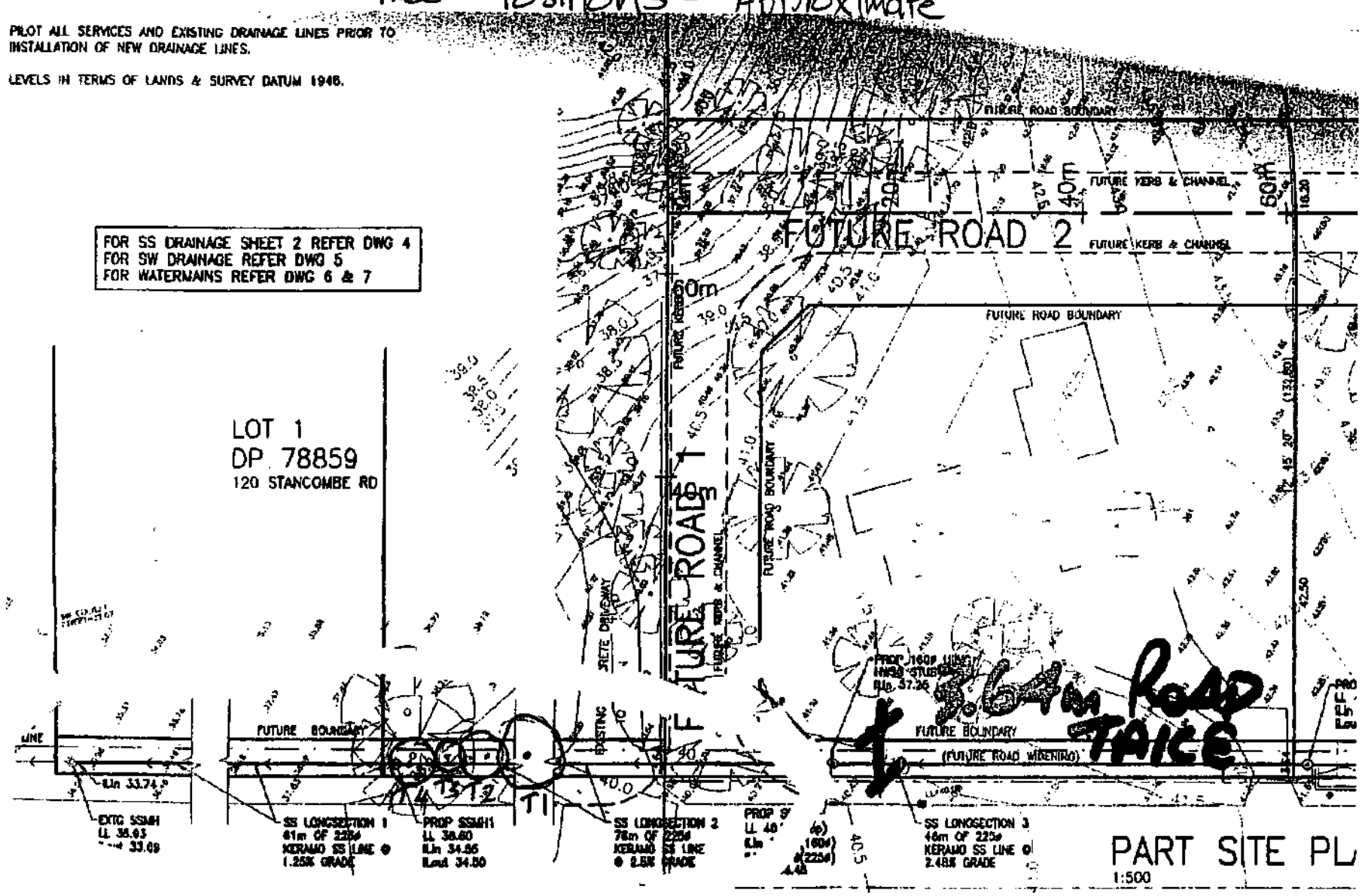
Attached: Tree Positions

Tree Positions - Approximate

PILOT ALL SERVICES AND EXISTING DRAINAGE LINES PRIOR TO INSTALLATION OF NEW DRAINAGE LINES.

LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946.

FOR SS DRAINAGE SHEET 2 REFER DWG 4
FOR SW DRAINAGE REFER DWG 5
FOR WATERMAINS REFER DWG 6 & 7



Design	TH GIBSON (NOWICK 034 4523)			
Survey	EASDALE SURVEYORS LTD			
Drawn	GI			
Checked	BHG			
Date	JULY 04			
Scale	A3 1:500			
CAD Filename				
(C)	...ight 2004 Airey Consultants Ltd			

CONSENT

Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
FLATBUSH LIMITED
132 STANCOMBE ROAD
FLAT BUSH

LAND USE CO

Ngai Tai Umupuia Te Waka Totara Trust

Ko Taikehu te Tipuna	Taikehu the Ancestor
Ko Rangitoto te Maungarui	Rangitoto the Mountain
Ko Wairoa te Awarua	Wairoa the River
Ko Tikapa te Moanarui	Tikapa the Sea
Ko Ngai Tai te Iwi	Ngai Tai the People
Ko Umupuia te Marae	Umupuia the Marae
Ko Tainui te Waka	Tainui the Canoe

2 December 2004

39 Meadowland Drive
Howick
Auckland

Attention: **Mr M S Lucas**

Re: **Bishop Lenihan Concepts ltd - 124 Stancombe Rd, Flatbush Lot 3 DP78859**

Tena koe

Ngai Tai would like to thank you for the site visit on the 24 November 2004 regarding the above subdivision consent. Ngai Tai are the tangata whenua who hold mana whenua within the area known as Flatbush therefore Te Waka Totara Trust representing Ngai Tai at Umupuia have an interest in this particular resource consent application

Job Name:	**124 Stancombe Rd, Flatbush**
TWT Kaitiaki:	Jaroz Adams
Applicant Ref:	7576
TWT File Ref #:	mS02/04

This communication is to **formally register the Ngai Tai Te Waka Totara Trust's position statement** to the proposed subdivision consent application and does not take into regard future consent conditions which will be placed on future development of the rural/ lifestyle lots.

The formally mandated and recognised Ngai Tai ki Umupuia Iwi Authority, The Ngai Tai Umupuia Te Waka Totara Trust register this formal Ngai Tai position statement on behalf of and for the benefit of, the following Ngai Tai entities:

Ngai Tai Umupuia Te Waka Totara Trust,
Ngai Tai ki Umupuia Marae
Ngai Tai ki Umupuia Kaumatua, Kuia and Whaea
Maraetai 3b Lot2 Ture Whenua Trust

C/- Umupuia Marae, North Road, Clevedon, RD2 Papakura. Phone 09 2929020
Fax 2929020, email: tewakototara@xtra.co.nz

In the interim the Trust as always, provides for the following legislative statutory obligations namely the Resource Management Act, RMA 1991, Local Government Act, LGA 2002, commitments that remind both applicants and decision making Authorities of their responsibilities to Manawhenua, Tangata Whenua in particular that of considering applications that impact on the natural, physical and cultural heritage of Ngai Tai Umupuia and their respective environs.

RMA 1991

Section 6 **Matters of national importance**

(b) - The protection of outstanding natural features and landscapes from inappropriate sub division use, and development:

(e) - The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:

Section 7 **Other matters**

(a) - Kaitiakitanga: (Maori guardianship and stewardship recognition and practise)

(e) - Recognition and protection of the heritage values of sites, buildings, places, or areas:

Section 8 **Treaty of Waitangi**

- In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi)

LGA 2002

- Local authorities must establish and maintain processes to provide opportunities for Maori to contribute to local authority decision making processes:
- Consider ways in which it may foster development of Maori capacity to contribute to the local authority's decision making:
- Local authorities must provide relevant information to Maori for the purposes of these two requirements
- Local authorities must take into account any Iwi Environmental Management Plans as described in section 18 of the LGA200

Address for services in this particular regard is to be to the attention of the Te Waka Totara Trusts, appointed Kaitiaki, Jaroz Adams.

Ngai Tai Kaitiakitanga Statement

Cultural Heritage

Cultural Heritage is that which is passed on from one generation to the next. Ngai Tai cultural heritage is about whom we are as a people, hapu, iwi, and how we have shaped the environment and how the environment has shaped us.

Cultural Heritage includes our language, intellectual property rights, traditional knowledge and use, our social organisations and arts. It also relates to the physical markers and sacred places that are embedded in the whenua and give meaning and content to our lives and identify as Ngai Tai.

C/- Umupuia Marae, North Road, Clevedon, RD2 Papakura. Phone 09 2929020
Fax 2929020, email: tewakatotara@xtra.co.nz

The whenua plays a central role in maintaining our cultural heritage because it is our storybook, our wananga, our food basket and reaffirms our identity, relationship and dependency to our turangawaewae on a daily basis.

Places valued by Ngai Tai for their natural resources such as mahinga kai, mataitai areas, rongoa, places to collect materials for weaving and waka building, all form part of our cultural heritage.

Restoring the native plant resources once found in forests, wetlands and other communities is a necessary and positive factor in the development of a sustainable resource to allow for continued Cultural Practises.

The Rivers and Streams provided Ngai Tai a home, a food source and migration pathway to and from the sea for native fish, it provided people with water and was used and valued for its physical and spiritual qualities. Ngai Tai still depend on these freshwater resources as a major food source. These rivers, streams and wetlands were buffered from land use impacts through forested margins and populations of tuna, kokopu, inanga and other native fish and bountiful bird life.

An important food source for Ngai Tai was Tuna (Eel) and Inanga (Whitebait), which were particularly abundant in the Wairoa and Tamaki river systems.

Ngai Tai have the following concerns

The resource consent application is to subdivide the property into two lots for future development and road to vest in Manukau City Council. Earthworks proposed for the site is 1,800m^3 of cut and 1,500m^3 of fill. A gully was also identified on this property with minimal water flow at the time of the site visit, the gully will be filled as part of the development with the gully extending into 122 Stancombe Road.

During the site visit it was noted that there were some trees that would be removed as a result of excavation, these trees included Nikau, Totara and Ti Kouka. We do not advocate the removal of native trees and in cases like this the Trust recommend translocating of native trees and/or designing a planting plan that would include eco sourcing of native plants from the local vicinity. However after further discussion with Easdale Surveyors Ltd it is understood that translocating these trees is not a preferred option therefore we recommend that a planting plan that includes native trees be drafted by the applicants when development is proposed and that the trees identified for felling be donated to the Iwi, Ngai Tai Umupuia.

Kaitiaki Monitoring

In accordance to our role as kaitiaki Te Waka Totara Trust recommend that Ngai Tai representatives are able and their convenience to monitor earthworks on site as part of this consent application. Particular monitoring interest would be associated with the filling of the gully areas where water was present during the site visit.

C/- Umupuia Marae, North Road, Clevedon, RD2 Papakura. Phone 09 2929020
Fax 2929020, email: tewakatotara@xtra.co.nz

Submission to the authority for approval as a consent condition
The TWT Trust, request that the following submissions are for authority consideration and approval to have inserted into a 'consent condition' should the authority approve the above consent application.

1. Koiwi / Taonga / Waahi Tapu discovery
   1.1 Immediately cease all earthworks
   1.2 A buffer zone of at least 25 metres be placed around the site

   1.3 Immediately notify Ngai Tai Umupuia Kaumatua
   Nora Kingi (09) 528 9344
   Abe Turei (09) 263 7100 AND

   James Brown (Trust CEO) 021 051 8312
   Jaroz Adams (Kaitiaki) (09) 292 9020
   1.4 Any Taonga is to be recorded by the Ngai Tai Kaitiaki, Jaroz Adams
   1.5 Work is not to recommence until the Kaumatua have given permission to do so.

Thank you for the dialogue and discussions to date. Providing that the above recommendations and conditions are undertaken by the applicant Ngai Tai Umupuia give consent to this application. An invoice for consultation service will be forwarded to you following this letter. Should you have any enquiries regarding the above please do not hesitate to contact the Kaitiaki Jaroz Adams.

Naku noa, naa

Jaroz Adams MSc (Hon)
Kaitiaki

C/- Umupuia Marae, North Road, Clevedon, RD2 Papakura. Phone 09 2929020
Fax 2929020, email: tewakatotara@xtra.co.nz

Easdale Surveyors Ltd
REGISTERED LAND SURVEYORS

DIRECTOR:
M.S. LUCAS, B.Surv., M.N.Z.I.S.

39 Meadowland Drive,
Howick, Auckland.
Phone: 0-9-534-8452
Fax: 0-9-537 5754
e-mail: easdales@clear.net.nz

7 September, 2004

In all correspondence please quote our ref: 7576

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

RECEIVED
- 6 DEC 2004
M.C.C.
ENVIRONMENTAL SERVICES

Attn Bryce Pomfrett

Dear Sir,

Re : 124 STANCOMBE ROAD, FLAT BUSH

Please find enclosed the result of the liaison with the Ngai Tai Umupuia Te Waka Totara trust for this proposed development.

We also enclose a letter from Airey Consultants regarding the inclusion of several trees to be removed on 120 & 122 Stancombe Road on the line of the sewer and future road widening into the current Resource Consent application.

Yours faithfully,
EASDALE SURVEYORS LTD

M S LUCAS

Facsimile

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5168
(09) 262-5109
Email:bpomfret@manukau.govt.nz

To: Sandy Heard
Working Concepts Ltd

Company:

Fax No: 271-4037

From: Bryce Pomfrett

Date: 2 December 2004 No of Pages: 5

Subject: **Further Information Requests – 124 Stancombe Road, Flat Bush.**

Sandy,

Please refer to attached letters.

I would be happy to clarify these requests should you have any further queries.

Regards

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied.

TRANSMISSION VERIFICATION REPORT

TIME : 02/12/2004 11:46

DATE,TIME	02/12 11:44
FAX NO./NAME	12714037
DURATION	00:02:17
PAGE(S)	05
RESULT	OK
MODE	STANDARD ECM

Te Kaunihera o
MANUKAU
City Council

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

2 December 2004

Working Concepts Ltd
P.O. Box 58-395
Greenmount
AUCKLAND

Attention: Sandy Heard

Dear Sandy

SECTION 92 REQUEST FOR FURTHER INFORMATION - RESOURCE CONSENT APPLICATION FOR SUBDIVISION AT 124 STANCOMBE ROAD, FLAT BUSH. COUNCIL'S REF: PROPOSAL NO: 27046 SP8840

The following information is requested pursuant to Section 92 of the Resource Management Act 1991 to assist in the processing of this application.

Treatment of Proposed Road 1 and Existing Concrete Driveway Access for the 122 Stancombe Road Property.

Please provide a detailed drawing which demonstrates a solution for the proposed kerbline treatment of "Proposed Road 1" where it is shown on Airey Consultants Drawing A9861/5 (Drawing No: 5) to intersect with the access/egress associated with the childcare centre at 122 Stancombe Road, Flat Bush. A copy of this plan with the identified area of concern is attached. Naturally, any solution proposed will need to ensure access and egress from the existing childcare facility is not impeded, whilst ensuring that drivers can readily identify "Proposed Road 1" from the access to 122 Stancombe Road, Flat Bush.

It is recognised that this treatment may need to be an interim solution, which applies until such time as the site 122 Stancombe Road, Flat Bush is developed.

All additional information should be sent in the first place to Bryce Pomfrett who will if required circulate the information to the appropriate Council Officer.

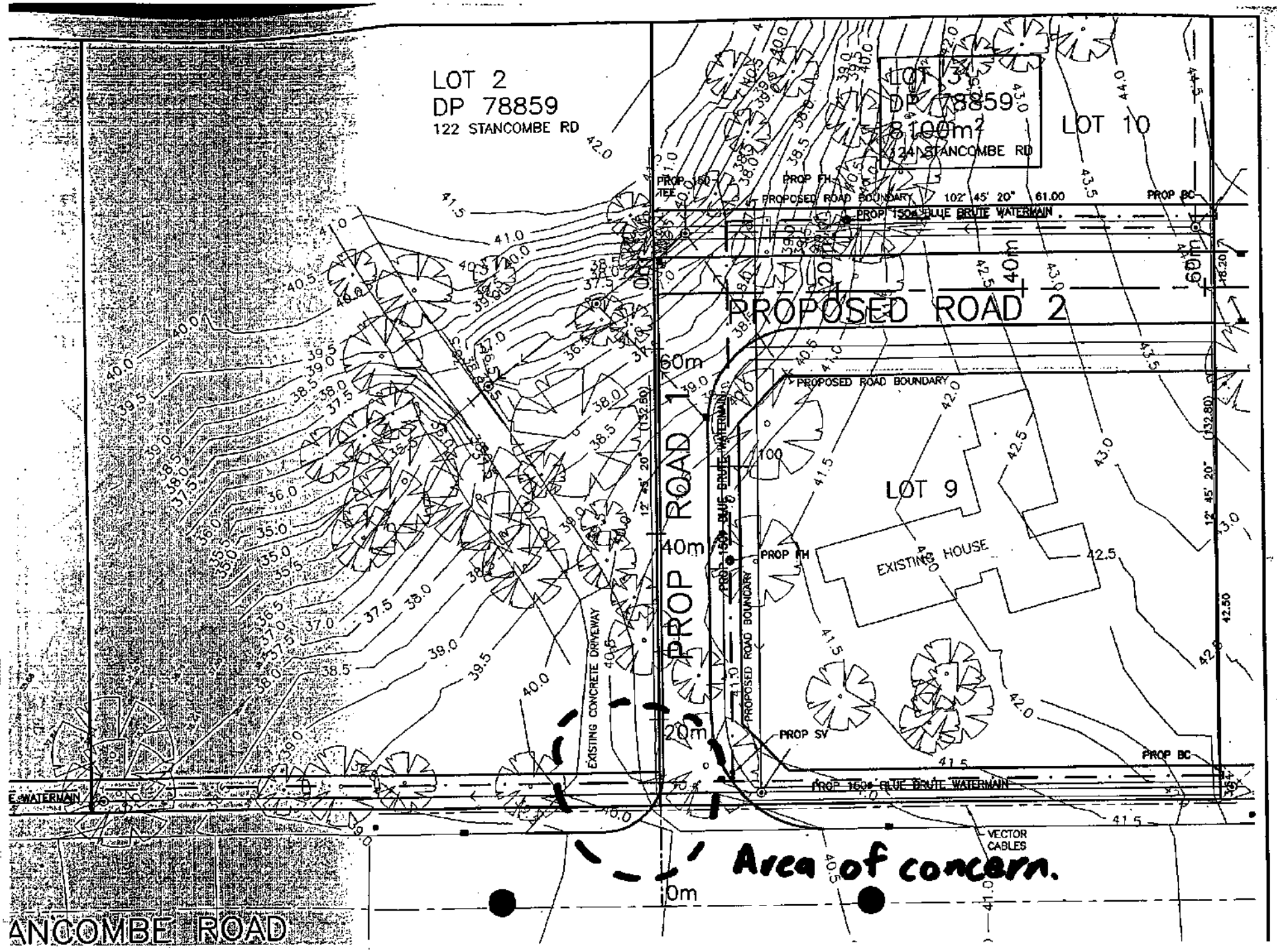
Please note the processing of the application will only be continued upon receipt of all the requested information to the Council's satisfaction.

Yours faithfully

pp Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

Reference: Proposal No: 27046 SP8840
Enquiries to: Bryce Pomfrett (Consent Co-ordinator)

Facsimile 262-5109
Extension 5856


LOT 2
DP 78859
122 STANCOMBE RD
LOT 3
DP 78859
8100m²
124 STANCOMBE RD
LOT 10
PROPOSED ROAD 2
PROPOSED ROAD 1
PROP ROAD 1
LOT 9
EXISTING HOUSE
PROPOSED ROAD BOUNDARY
PROP 150ø BLUE BRUTE WATERMAIN
PROP FH
PROP SV
PROP BC
PROP 150 TEE
EXISTING CONCRETE DRIVEWAY
VECTOR CABLES
102° 45' 20" 61.00
12° 45' 20" (132.80)
60m
40m
20m
0m
Area of concern.
ANCOMBE ROAD

Memorandum

Te Kaunihera o
MANUKAU
City Council

Environmental Services

To : John Neal – Opus Consultants Ltd

Copies :

From : Bryce Pomfrett – Resource Management Planner – Kotuku 1

File : 27046 (SP8840) – Proposed Two Lot Subdivision – 124 Stancombe Road, Flat Bush

Date : 2/12/04

SUBJECT: **PROPOSED ROAD ASSOCIATED WITH SUBDIVISION AT 124 STANCOMBE ROAD, FLAT BUSH.**

John,

Attached is copy of the engineering plans submitted for a road to be provided in conjunction with a proposed subdivision. In negotiations with Tony O'Connor (Senior Transportation Advisor) the applicant is to form a public road with 5.4 carriageway (see cross section of Proposed Road 1). This road is to be upgraded to a standard 7.8 carriageway at such time as the site to the west is developed. The applicant for this consent will be bonded for the works necessary to change footpath locations as identified in the cross section – "Typical Future Proposed Road 1 Cross Section" and all other works required.

I look forward to your feedback on this proposal.

Regards,

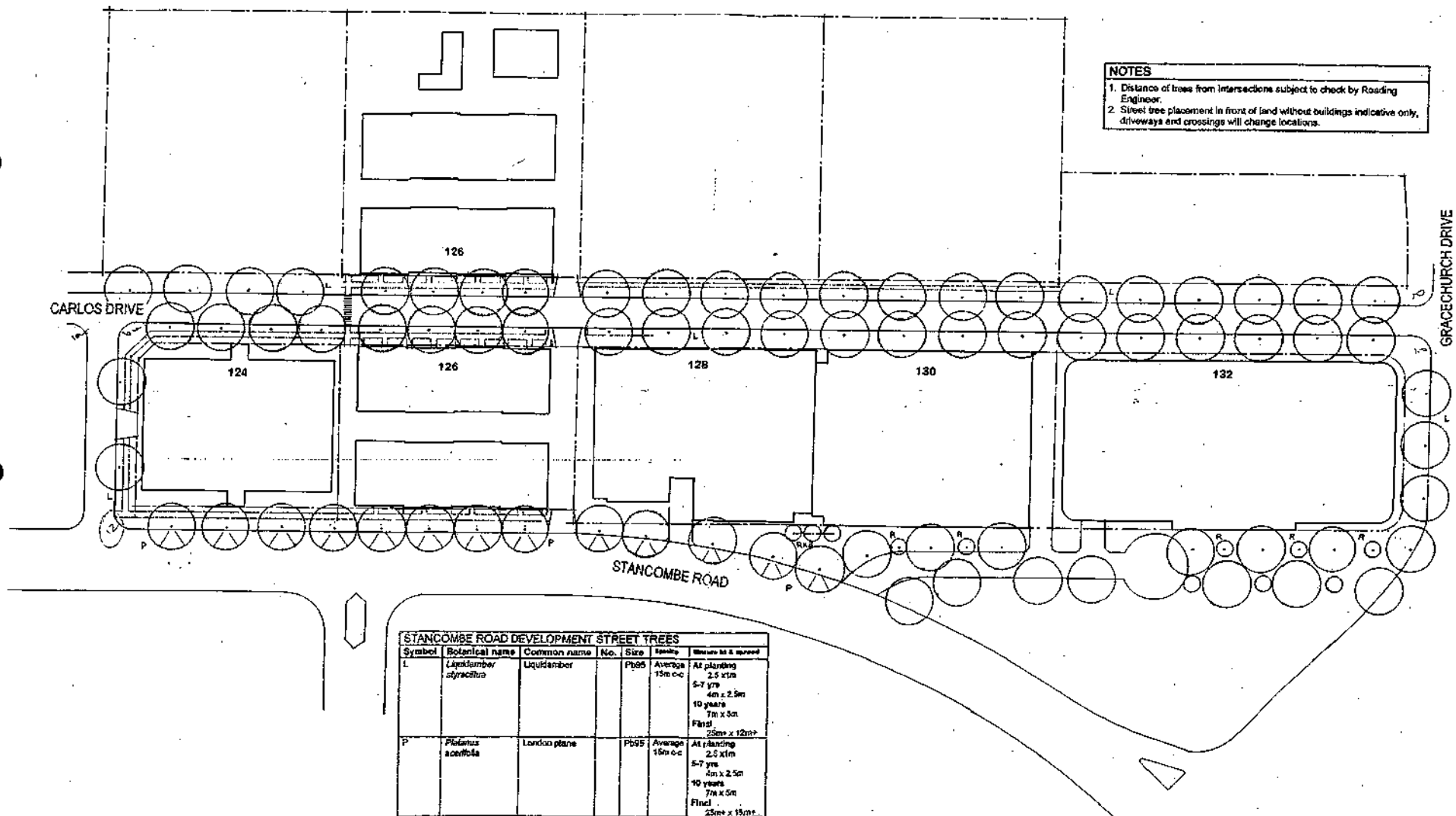
Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Encl. Plans – Proposed Engineering Works – Carlos Concepts

STANCOMBE ESTATE — ***DRAFT* STREET TREE PLAN**

1:500 @ A1 — **August 2004**

1:1000 @ A3



NOTES

1. Distance of trees from intersections subject to check by Roading Engineer.
2. Street tree placement in front of land without buildings indicative only, driveways and crossings will change locations.

STANCOMBE ROAD DEVELOPMENT STREET TREES

Symbol	Botanical name	Common name	No.	Size	Spacing	Mature ht & spread
L	*Liquidamber styraciflua*	Liquidamber		Pb95	Average 15m c-c	At planting 2.5 x1m 5-7 yrs 4m x 2.5m 10 years 7m x 5m Final 25m+ x 12m+
P	*Platanus acerifolia*	London plane		Pb95	Average 15m c-c	At planting 2.5 x1m 5-7 yrs 4m x 2.5m 10 years 7m x 5m Final 25m+ x 15m+
R	*Knightia excelsa*	Rewarewa		Pb95		Final 12 - 20m+ x 4m+

Note: Check location of all services before planting.
Preparation and tree planting of trees to be to Detail 1, Manukau Parks Tree Planting Manual.

THE SPECIMEN T·R·E·E COMPANY

RECEIVED
25 NOV 2004
M.C.C.
ENVIRONMENTAL SERVICES

23 November 2004

Airey Consultants Ltd
P.O.Box 39 101
Howick
Manukau City
Attn: Ian Gibson

Dear Ian,

Re 120 –122 Stancombe Road, Dannemora – Sewer and Watermain Tree Issues.

Further to your fax dated 15 November 2004 I can report as follows.

1.0 Introduction.

1.1 It is proposed that the sewer and watermain is to be installed within the road take on the front boundary of 120 and 122 Stancombe Road, Dannemora.

2.0 General.

2.1 The installation of the sewer and watermain will require the removal of four Generally Protected trees. The excavation for the trench will be approximately 1.0m from the trunk of these trees.

2.2 The four trees are part of a mixed planting of mature trees not protected under the Manukau City Council District Scheme. The approximate positions have been marked on the attached plan.

The Specimen Tree Company Ltd. 180 Princes St. East, Otahuhu, Auckland.
P.O. Box 22-606, Auckland 1133, New Zealand. Ph 09-276 1041. Fax 09-276 1042. www.specimentree.co.nz
Arborists and horticulturists specialising in: Tree surgery • Tree moving • Landscaping • Specimen & semi-mature tree nursery • Consultancy

2.3 The trees to be removed are as follows:

Tree 1

Species:	English Oak
Form:	Poor
Health:	Poor
Comment:	Not a significant tree.

Tree 2

Species:	Pohutukawa
Form:	Poor
Health:	Average
Comment:	Not a significant tree.

Tree 3

Species:	Indian Cedar
Form:	Average
Health:	Average
Comment:	Not a significant tree.

Tree 4

Species:	Pohutukawa
Form:	Average
Health:	Average
Comment:	Not a significant tree.

2.4 In meeting the requirements of the Resource Management Act 1991 and the Manukau City District Plan, it is proposed that a minimum of four PB95 grade trees are planted as mitigation for the removal of the four protected trees.

If the recommendations contained within this report are adhered to, I am able to support this application for Resource Consent to install a sewer and watermain within the proposed road take at 120 and 122 Stancombe Road, Dannemora, Manukau City.

I trust this is of assistance. Please do not hesitate to contact me if you require further information.

Yours sincerely
For **THE SPECIMEN TREE COMPANY LTD**

Stuart Barton
General Manager
Cert. in Arboriculture, Dip. Hort.,
Dip. P&G. Tech., N.C.H. (Amenity)

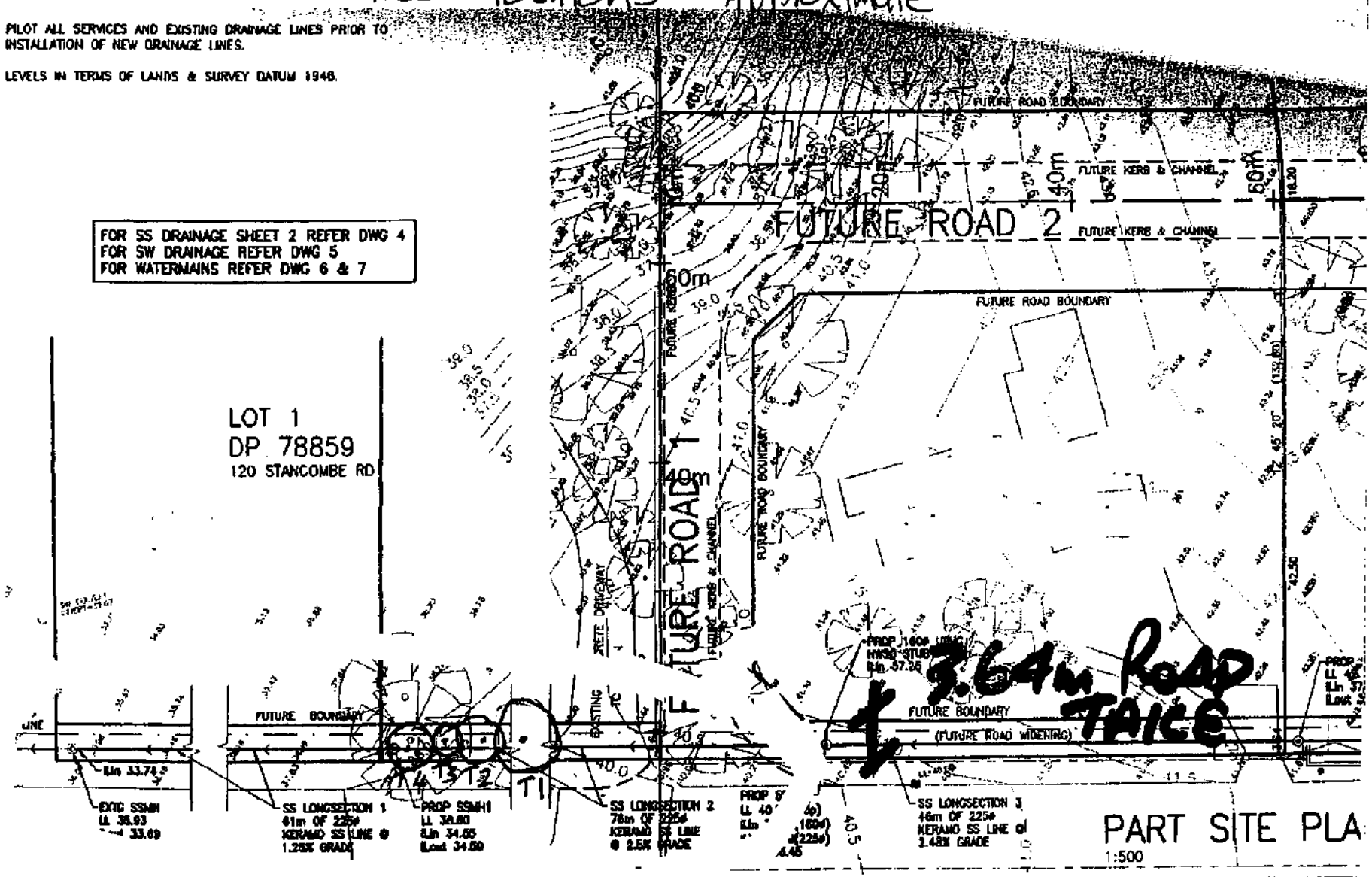
Attached: Tree Positions

Tree Positions - Approximate

PILOT ALL SERVICES AND EXISTING DRAINAGE LINES PRIOR TO INSTALLATION OF NEW DRAINAGE LINES.

LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946.

FOR SS DRAINAGE SHEET 2 REFER DWG 4
FOR SW DRAINAGE REFER DWG 5
FOR WATERMAINS REFER DWG 6 & 7



No.	Revision Details	No.	Revision Details	Date

Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GS
Checked: IHG
Date: JULY '04
Scale: A3 1:500
CAD Filename:
(C) Copyright 2004 Alloy Consultants Ltd

CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
FLATBUSH LIMITED
132 STANCOMBE ROAD
FLAT BUSH

LAND USE CO

ENVIRONMENTAL SERVICES

Internal Memo

TO : Bryce Pomfrett, Resource Management Planner

FROM : Tara Linkhorn, Environmental Monitoring Officer

DATE : 26 November 2004

SUBJECT : **124 and 132 Stancombe Road, Flat Bush – Proposal Numbers 27046 and 27047 respectively**

Hi Bryce

I have reviewed the additional information that was provided in response to the section 92 request dated 11 November 2004 regarding site contamination at the above-mentioned properties.

The asbestos investigation report prepared by Tonkin & Taylor Ltd dated 9 August 2004 for these two sites that has been resubmitted in order to address contamination reviewed aerial photographs of the site since 1960 which revealed stock grazing as the historical use of the sites prior to being used as rural residential lifestyle properties. Property records were inspected which revealed only residential building activity consents and no evidence of horticultural use of the land. The site inspection that was conducted revealed no orcharding or any other use that would have led to contamination of the properties by hazardous materials.

Manukau City Council accepts the conclusion of Tonkin & Taylor Ltd's report that although the investigation was for asbestos, the analysis of the sites is relevant to all types of contamination from the historical use of the site and that there is no evidence of any activity for which further investigation is warranted. The report also meets the requirements for a Stage 1 Site Investigation Report as outlined in the Ministry for the Environment's guideline document *Contaminated Land Management Guidelines No.1 - Reporting on Contaminated Sites in New Zealand (November 2003)* and to that effect meets the information requirements of Manukau City Council

Therefore based on this report, the sites are accepted as suitable for the proposed development and the consents can be issued for the properties subject to compliance with all other relevant building and development controls.

Regards

Tara Linkhorn
Environmental Monitoring Officer
ENVIRONMENTAL SERVICES

Memorandum

Te Kaunihera o
MANUKAU
City Council

Environmental Services

To : Veer Khar – Manukau Water

Copies :

From : Bryce Pomfrett – Resource Management Planner – Kotuku 1

File : 27046 (SP8840) – Proposed Two Lot Subdivision – 124 Stancombe Road, Flat Bush

Date : 26/11/04

SUBJECT: **AMENDED ENGINEERING PLANS – SECTION 92 RESPONSE**

Veer,

Further to your memo of 5 November 2004 I attach updated engineering plans submitted by the applicant's consultant for your review.

Regards,

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Encl. Engineering Plans 124 Stancombe Road, Flat Bush – Carlos Concepts Ltd.

Memorandum

Te Kaunihera o
MANUKAU
City Council

Environmental Services

To : Tara Linkhorn - Environmental Monitoring Officer - Genesis - Level 3

Copies :

From : Bryce Pomfrett – Resource Management Planner – Kotuku 1

File : 27046 (SP8840) – Proposed Two Lot Subdivision – 124 Stancombe Road, Flat Bush
27047 (SP8841) – Proposed Two Lot Subdivision – 132 Stancombe Road, Flat Bush

Date : 10/11/04

SUBJECT: **SITE CONTAMINATION INVESTIGATIONS (STAGE ONE)**

Tara,

Further to your memos of 11 November 2004 I attach a response received from the applicants' consultant (Michael Lucas – Easdale Surveyors). He has resubmitted the asbestos investigation report undertaken by Tonkin and Taylor for a number of sites including 124 and 132 Stancombe Road, Flat Bush.

Could you confirm whether the information is acceptable.

Additionally, I attach a copy of the vetting sheet for 130 Stancombe Road, Flat Bush which has been granted consent.

Regards,

B Pomfrett

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Encl. Letters from Michael Lucas (two copies with attachments)

Easdale Surveyors Ltd
REGISTERED LAND SURVEYORS

DIRECTOR:
M.S. LUCAS, B.Surv., M.N.Z.I.S.

39 Meadowland Drive,
Howick, Auckland.
Phone: 0-9-534-8452
Fax: 0-9-537 5754
e-mail: easdales@clear.net.nz

RECEIVED
16 NOV 2004
CITIZEN & CUSTOMER SERVICES

15 November 2004

In all correspondence please quote our ref: 7576

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

Attn: B Pomfrett

Dear Sir,

Re: P27046 – 124 Stancombe Road, Flat Bush

Further to your request for further information we are able to address the Site Contamination History Investigation issue.

The site has been analysed for historical land uses in the asbestos investigation carried out by Tonkin & Taylor which was submitted to and accepted by Council as part of the Resource Consent applications for subdivision and land use for 126, 128 & 130 Stancombe Road. A copy of the asbestos investigation report is enclosed. This investigation reviewed aerial photographs of the site since 1960 which revealed stock grazing as the historical use of the site before being used as 'rural residential' lifestyle properties. The property records were inspected which revealed only residential building activity consents and no evidence of horticultural use of the land. Site inspection shows no orcharding or any other use that would have led to contamination of the property by hazardous materials.

It is considered that although the investigation was for asbestos, the site analysis is relevant to all types of contamination from the historical use of the site. There is no evidence of any activity for which further investigation is warranted.

Yours faithfully
EASDALE SURVEYORS LTD

M S LUCAS

Tonkin & Taylor

RECEIVED 11-8-04

T&T job no: 21940
9 August 2004

Bishop Lenihan Concepts
C/- Easdale Surveyors Ltd
39 Meadowland Drive
Howick
Auckland

Attention: Michael Lucas

Dear Michael

Asbestos Investigation - 124, 130 and 132 Stancombe Road

Tonkin & Taylor Ltd (T&T) is pleased to present the findings of a desktop and site inspection asbestos investigation carried out for 124, 130 and 132 Stancombe Road, East Tamaki (Figure 1). This investigation was undertaken in accordance with our proposal dated 9 July 2004.

1 Introduction and Scope of Works

It is understood that Bishop Lenihan Concepts Ltd propose to redevelop the above sites, as well as that at 128 Stancombe Road. The latter property has been the subject of a previous asbestos investigation by T&T (Dempsey and Wood Civil Contractors Ltd, T&T ref. 20154, August 2004). The sites are located within the area covered under Variation No. 13 of the Proposed District Plan, Manukau City Council (MCC). In accordance with the variation, an investigation to identify the potential for the presence of any asbestos containing material (ACM) on the property is required, if the land is to be developed.

The objective of this investigation was to make an assessment of the potential presence of any ACM on site. The scope of investigations included;

- A review of the records held by MCC on the property;
- A review of historical aerial photographs held by Tonkin & Taylor to identify potential filling areas;
- A walkover inspection of the property and surface ground conditions; and
- Preparation of this report on the findings of the investigation.

The investigation has been undertaken in accordance with the MCC *Guide to Protocol for Site Investigation, Reports for Subdivision/Development and the Flat Bush Area*. The MCC *Attachment*

15-NOV-2004 11:53 FROM WORKING CONCEPTS LTD TO 93793794 P.02

A Master Aerial Map – Analysis of Features (Potential Bulk ACM) has been reviewed as part of this assessment.

2 Site Location and Legal Description

The properties are located at 124, 130 and 132) Stancombe Road in East Tamaki, Auckland (Figure 1). The legal descriptions for the properties are as follows;

124 Stancombe Road: Lot 3, DP 78859.

130 Stancombe Road: Lot 6, DP78859.

132 Stancombe Road: Lot 7, DP78859.

3 Site Layout and Features

124 Stancombe Road (Figure 2) is rectangular in shape and covers an area of 8,100 m². The site contains an existing dwelling with a swimming pool on the northern side and an asphalted driveway on the southern side. The northern part of the property consists of a gully that runs in a north-east to south-west direction. The gully is grassed and contains a variety of large trees and small bushes. The rear portion of the property appears to be used for grazing and is gently sloping down to the north-west and generally steepens towards the gully.

130 Stancombe Road (Figure 2) is also rectangular in shape with an area of 8,100 m². A tree lined gravel driveway leads to an existing dwelling near the centre of the property. The land north, east and south of the dwelling is largely flat and consists of pasture used for grazing. A steep bank along the south-west boundary is overgrown and slopes down into the neighbouring property to the west. At the south-west corner a culvert releases water into a culverted gully onto the neighbouring property. The gully culvert extends out from the neighbouring property under Stancombe Road. An intake culvert is located upstream at the north-eastern corner of the property. Water flows into the culvert from a small gully located on the property north of the site. Along the eastern boundary the surface slopes steeply down into the neighbouring property to the east. A sewer manhole is located on the steep slope along the eastern boundary.

132 Stancombe Road (Figure 2) has an area of 8,221 m² and is roughly square in shape. An existing dwelling is located towards the southern boundary near Stancombe Road. The area south and west of the dwelling contains a gravel driveway and a car parking area. The area surrounding the house especially to the north has been landscaped. The northern portion of land and a strip running to the east of the dwelling consists of paddocks and is used for grazing. Pugging of the ground surface is evident in the paddock north east of the dwelling. The property surface slopes gently to the west.

4 Site History

The site history of the properties was established through the review of historical aerial photographs and MCC records.

The following aerial photographs were used to establish the site history: 1922/39 (1960), 4604/22 (1972), SN5783 Q/18 (1980), SN8772 P/9 (1988) and 449096 (1996).

A summary of the key details for each property is provided below:

An aerial photo taken in 1960 shows that the sites are part of a larger property used for stock grazing. Stancombe Road is present. Several buildings are located on what is now 132 Stancombe Road and one is probably the farm house. No buildings are evident at 124 and 130 Stancombe Road.

A gully in the south-west corner of 130 Stancombe Road is evident and extends upstream in a north-east direction diagonally across the property. The gully appears to fork into two with one gully travelling north on to the neighbouring property the other north-east onto the neighbouring property to the east. A gully is also evident that would extent in a north-east direction across the northern part of the 130 Stancombe Road property.

The 1972 aerial photograph is similar to the 1960 photograph, in that the site was used for stock grazing. No evidence of filling of the gully on either of the subject sites was observed.

MCC records from the early 1970s show that the sites would have been part of the Chapel Road Subdivision undertaken by Broadlands Properties Ltd.

At 124 Stancombe Road building permits were applied for in 1979 for a new one-story dwelling and for a septic tank. An additional building permit was applied for in 1984 for a swimming and spa pool. A building permit was applied for in 1977 at 130 Stancombe Road and later a pool in 1980. At 132 Stancombe Road a building permit for building extensions and alterations was applied for in 1981.

The 1981 aerial photograph shows that the land has been subdivided from a single property into lifestyle blocks including the subject sites and buildings and driveways are evident on all three subject sites. There is also evidence of infilling of the gully that runs diagonally across 130 Stancombe Road.

A review of the MCC Attachment A Master Aerial Map indicates that 132 Stancombe Road contains a feature observed on 1967 aerial photography that has the potential to contain ACM and should be considered in asbestos site investigations. This was not evident in any of the aerial photographs.

15-NOV-2004 11:54 FROM WORKING CONCEPTS LTD TO 5375754 P.04

5 Field Investigations and Findings

Site walkover inspections were undertaken on 19 July 2004. The walkover comprised inspections of the three properties for features such as building material, driveways, tracks, depression areas and potential fill areas that my contain ACM.

The area of the gully at 130 Stancombe Road thought to be filled (as identified in the 1981 aerial photo) was closely inspected. Several shallow pits were dug along the steep bank by the culvert that released water by the south-eastern corner of the property. No ACM material was visually identified in any of the holes or any of the exposures within the gully. The fill material was found to be a mixture of clay and gravels ranging in size from fine through to coarse. The area at 132 Stancombe Road indicated on the MCC Attachment A Master Aerial Map, was also closely inspected for ACM containing material. Several shallow pits were dug in the area of the driveway and no ACM material was visually identified at these locations.

The published geology is described by Kermode (1992) as Pleistocene aged Tauranga Group sediments comprised of clays, silts and sand. Evidence of these soils was confirmed during the study.

6 Conclusion

The historical aerial photographs and investigations on adjacent properties indicate that there is a low probability that ACM has been deposited on any of the subject sites or in fill areas. No ACM was identified at any of the properties during the site walkover inspection or minor intrusive investigations in suspect areas and the land can be considered suitable for further development. However, this does not preclude the possibility that some ACM may be present and due care needs to be exercised during any earthworks.

7 Applicability

This report has been prepared for the benefit of (Bishop Lenihan Concepts) with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

TONKIN & TAYLOR LTD

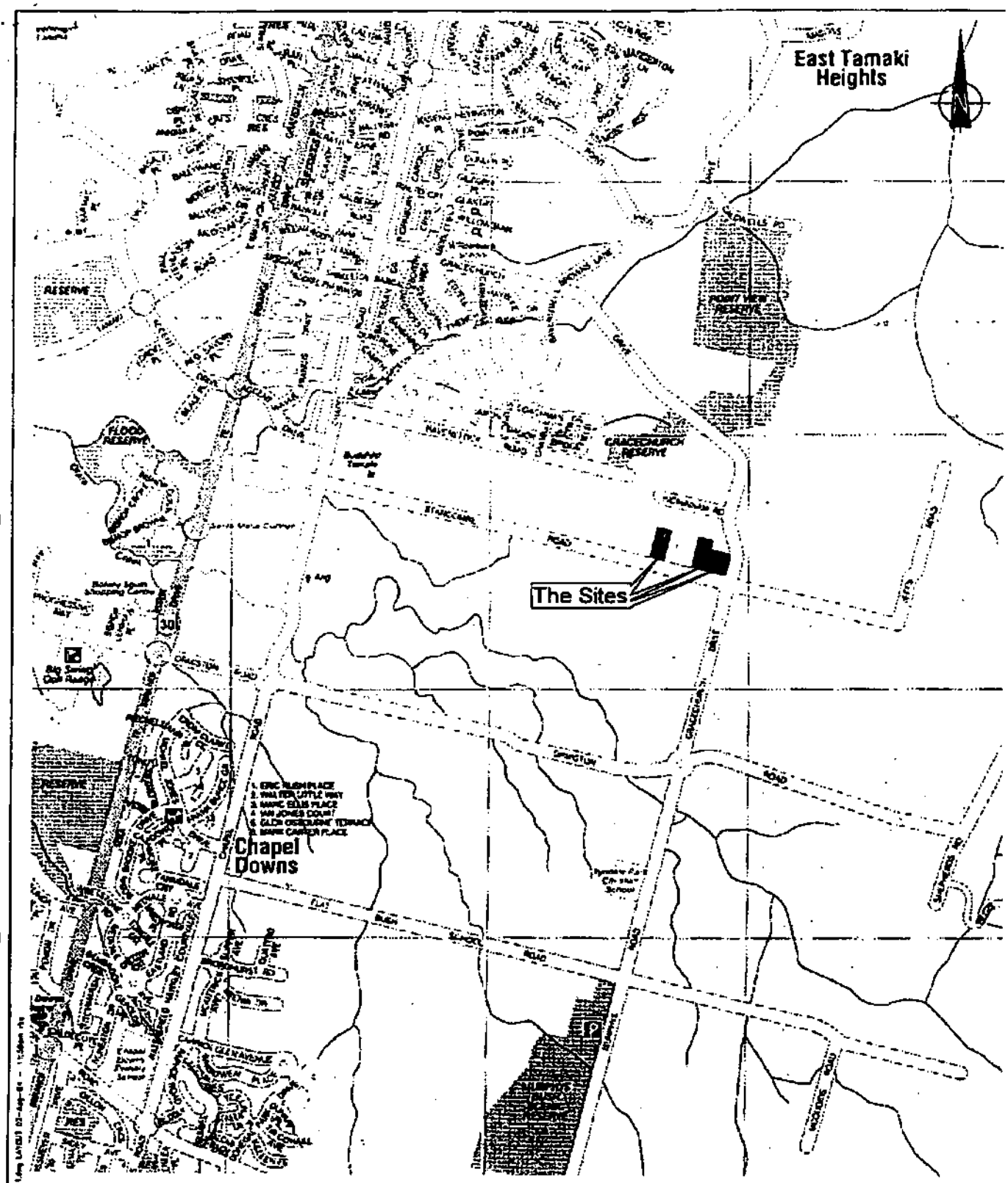
Environmental and Engineering Consultants

Report prepared by:	Authorised for Tonkin & Taylor by:
RStandish	
Rachael Standish	Gerard Bird
Environmental Geologist	Environmental Group Manager

cc: MCC

URS

9-Aug-04
j:\21940\rmsskriamend-asbestosinvest.doc



Location map courtesy of Wises Publications Ltd

DRAWN	RBS	Aug.04	BISHOP LENIHAN CONCEPTS
DRAFTING CHECKED			POTENTIAL ASBESTOS CONTAMINATION ASSESSMEN
APPROVED			124–132 STANCOMBE RD, FLAT BUSH
CADFILE : L\2 1940\2 1940-S-F 1			Location Plan
SCALES (AT A4 SIZE) 1:20,000			
PROJECT No. 2 1940	FIG. No. Figure 1		REV. 0

Tonkin & Taylor
Environmental & Engineering Consultants
Auckland
Hamilton Christchurch
Nelson Wellington Whangarei

REFERENCE:
Aerial photo taken by
Precision Aerial Survey (2004)

SCALE 1:1,250
0 10 20 30 40 50 60 70 80 (m)

Tonkin & Taylor
Environmental & Engineering Consultants
Auckland

DRAWN	RBS 12/04
DRAWING CHECKED	
APPROVED	
DATE	2/1904\21904-S-F2
SCALE	1:1500
PROJECT NO	21943

BISHOP LENIHAN CONCEPTS
POTENTIAL ASBESTOS CONTAMINATION ASSESSME
124-132 STANCOMBE RD, FLAT BUSH
Site Plan

Figure 2

ENVIRONMENTAL SERVICES

Internal Memo

TO : Bryce Pomfrett, Resource Management Planner

FROM : Tara Linkhorn, Environmental Monitoring Officer

DATE : 11 November 2004

SUBJECT : **124 Stancombe Road, Flat Bush – Proposal Number 27046**

Hi Bryce

I have reviewed the above proposal with regard to site contamination. Additional information is required in order to assess this application. Would you please request for the following further information under Section 92 of the RMA:

In regards to actual or potential site contamination:-

The land use history of the site is required in order to assess the likelihood of the presence of hazardous contaminants, such as asbestos or pesticides etc due to historical land uses that may have resulted in contamination at this location. In order to adequately assess the likelihood of contamination of the site the following information is required:

1. A Stage 1 Preliminary Site Investigation report, prepared in accordance with the Ministry for the Environment's guideline document *Contaminated Land Management Guidelines No.1- Reporting on Contaminated Sites in New Zealand (November 2003).*

Further assessment of the application will be made upon receipt of this information.

Regards

Tara Linkhorn
Environmental Monitoring Officer
ENVIRONMENTAL SERVICES

Te Kaunihera o
MANUKAU
City Council

With compliments

Att: Jarod Adams 15/11/04

Attached is application for 124 Stancombe Road, Flat Bush, proposed subdivision plan, and earthworks plan.

I understand we are to make files available for you to peruse, however, on this occassion I have posted this information as per our telephone discussion.

Regards - Bryce Pomfrett.

Private Bag 76917
Manukau City
New Zealand
Ph 09 263 7100
www.manukau.govt.nz

Attn: J Batty

Dear Madam,

Re: Bishop Lenihan Concepts Ltd – Proposed Subdivision
124 Stancombe Road, Flat Bush, Lot 3 DP78859

Enclosed is an application for Resource Consent for the subdivision of the above property under the Resource Management Act 1991.

The property comprises 8100m of land in the Flat Bush Residential 1 Zone.

The land contains a gulley formation which crosses diagonally across the rear of the site. There is an existing house on the site to be removed.

The proposal is to subdivide the property into two lots for future development and road to vest in Manukau City Council. The land to vest includes the road widening of 3.64m. The extension of Carlos Drive and a link from Stancombe Road to Carlos Drive. The alignment of Carlos Drive and the link to Stancombe Road has been determined in discussions with Council's traffic engineer.

The position of Carlos Drive is consistent with that approved under SP8697. The link between the roads runs up the boundary between 122 and 124 Stancombe Road.

The owner of 122 Stancombe Road does not wish to develop at this point in time. We have had discussions with Tony O'Connor of Manukau City Council and have agreed to construct part of the road with 124 Stancombe Road in such a manner that at the time of subdivision of No. 122 the road can be completed to its full width.

We enclose engineering plans prepared by Airey Consultants for the construction of the roads and servicing of the subdivision.

The volume of earthworks associated with the proposal is 1,800m³ of cut and 1,500m³ of fill including the filling of the gulley at the rear of the property and the extension of the gulley into 122 Stancombe in order to construct the whole width of the link road.

Environmental Services

12 November 2004

Working Concepts Ltd
P.O. Box 58-395
Greenmount
AUCKLAND

Attention: Sandy Heard

Dear Sandy

SECTION 92 REQUEST FOR FURTHER INFORMATION - RESOURCE CONSENT APPLICATION FOR SUBDIVISION AT 124 STANCOMBE ROAD, FLAT BUSH. COUNCIL'S REF: PROPOSAL NO: 27046 SP8840

Further to receipt of the above-mentioned application on 2 November 2004 it has been determined that the following additional information is required pursuant to Section 92 of the Resource Management Act 1991 (RMA) in order to better understand the nature of the application:

Affected Party Consent

Please provide the unconditional consent of the owner of the adjoining property at 122 Stancombe Road, Flat Bush (in fulfilment of the requirements of section 94 of the RMA) on Council's "Consent of Affected Persons Form" attached. Please also ensure that the owner of the property at 122 Stancombe Road, Flat Bush has signed and dated the plan of subdivision for the property, and the earthworks plan for the site (which identifies fill on the property at 122 Stancombe Road, Flat Bush) which has Airey Consultants file ref: A9861/5.

Please note that this is separate from the right of entry approval you have submitted previously.

Manukau Water

The proposed wastewater design does not provide service to the upstream catchment (north of 124 Stancombe Road, Flat Bush). Please amend the engineering plans submitted to include an extension across the northern boundary of the site.

Site Contamination History Investigation

Please provide a report on the land use history of the site in order to assess the likelihood of hazardous contaminants (e.g. pesticides) due to historical land use of the site This report should follow the form identified under a Stage 1 – Preliminary Site Investigation Report in accordance with the Ministry for the Environment's guideline document *"Contaminated Land Management Guidelines No.1 – Reporting on Contaminated Sites in New Zealand (November 2003).*

All additional information should be sent in the first place to Bryce Pomfrett who will if required circulate the information to the appropriate Council Officer.

Please note the processing of the application will only be commenced upon receipt of all the requested information to the Council's satisfaction.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

MANUKAU WATER

Manukau Water

INTER-OFFICE MEMO

MANUKAU
City Council

To:	Environmental Services	**Attention:**	Bryce Pomfrett
From:	Veer Khar	**Date:**	05 November 2004
Site Address:	124 STANCOMBE ROAD, FLATBUSH		
Site REF:	6923/124 SP8840	**Proposal No:**	27046

FURTHER INFORMATION AND AMENDMENT REQUEST

The following information/amendments are requested prior to Network Extensions Approval being granted by Manukau Water.

The proposed wastewater design does not provide service to the upstream catchment (north of 124 Stancombe Road). Please redesign and include extension across the northern boundary as discussed with the applicant earlier.

From: Tara Linkhorn
To: Bryce Pomfrett
Date: 11/11/04 10:10am
Subject: 124 and 132 Stancombe Road, Flat Bush - Proposal Nos 27046 and 27047 respectively

Hi Bryce

I tried calling you but no answer so I have left a message re the above-mentioned proposals.

In regards to the asbestos information that you forwarded to me, the report by T&T was supplied to Council (pre-application) back in September and URS have already done the peer review. I sent a memo through to Euan on the 22 September informing him of the asbestos clearance - attached is a copy of the memo.

Also, in your memo to me you have said that enclosed is a copy of the wastewater disposal report. This report doesn't appear to be attached and I was just wondering if you could please send it through to me for a look.

It is likely that a Stage 1 Preliminary Site Investigation regarding potential contamination at these sites will be required but I will let you know in due course via a memo.

Cheers

Tara

11/11/04
Discussed with Tara. There is no wastewater disposal report as it will be serviced to public standard.
The Stage 1 Preliminary Site Investigation will be required and she will confirm with a memo.

ENVIRONMENTAL SERVICES

Kotuku House

TO	:	Building & Resource Services
ATTENTION	:	Euan Williams - Resource Management Planner
FROM	:	Tara Linkhorn - Environmental Monitoring Officer
DATE	:	22 September 2004
REF	:	

SUBJECT: ASBESTOS INVESTIGATION REPORT

ADDRESS: 124, 130 and 132 Stancombe Road, Flat Bush Lot 3, 6 and 7 DP 78859

A report prepared by Tonkin and Taylor Ltd dated 9 August 2004 and a subsequent letter report dated 15 September 2004 for the investigation of possible asbestos contamination at **124, 130 and 132 Stancombe Road, Flat Bush, Lot 3, 6 and 7 DP 78859** respectively were received by Environmental Services in August and September 2004.

The report and additional information has been reviewed by URS on behalf of Manukau City Council. It was recommended the conclusion by Tonkin and Taylor Ltd that the sites are suitable for the land use intended be accepted for the following properties:

124, 130 and 132 Stancombe Road, Flat Bush, Lot 3, 6 and 7 DP 78859

Based on this report, consent can be issued for these properties, subject to compliance with all other relevant building and development controls.

Tara Linkhorn
Environmental Monitoring Officer
ENVIRONMENTAL SERVICES

Memorandum

Te Kaunihera o
MANUKAU
City Council

Environmental Services

To : Tara Linkhorn - Environmental Monitoring Officer - Genesis - Level 3

Copies :

From : Bryce Pomfrett – Resource Management Planner – Kotuku 1

File : 27046 (SP8840) – Proposed Two Lot Subdivision – 124 Stancombe Road, Flat Bush
27047 (SP8841) – Proposed Two Lot Subdivision – 132 Stancombe Road, Flat Bush

Date : 10/11/04

SUBJECT: **ASSESSMENT OF ASBESTOS INVESTIGATION REPORT**

Tara,

An application has recently been received to subdivide properties at 124 and 132 Stancombe Road, Flat Bush. Submitted with this application is a report on potential asbestos contamination of these sites. I attach this report for your comments.

Regards,

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Encl. Asbestos Investigation Report

for
07 125

Rural 3 - Op Plan
FB Res 1. - Gen + Arterial.
- Special Policy Bdy

Plan.

for 2 lot subdivision in the Rural
Rule 12.15.3.

* ... ary Activity for land modification works
in volu...

* RDA for prov... of Public Utility Services (water, sewer, stw).

* DA

Variation 13 to MCC 2002 Operatin Plan.

Restricted Discentionary Activity for subdivision with frontage onto the Primary Road Network (Stancombe Road).

Also see below.

→ for removal of 9 protected trees being:

16	*	Golden Wych Elm	Ulmus glabra
17		London Plane	Platanus × acerfolia
18		Indian Cedar	Cedrus deodara
19		Norfolk Island Pine	- Arborist records as significant Araucaria heterophylla
20		Tulip Tree	Liriodendron tulipifera
21		Red Oak	Quercus rubra
22		2x Pin Oak	Quercus palustris
23			" "
24		Sweet Gum	Liquidamber styraciflua.

Variation 13 - Subdivision.

Rule 17.10.11.1 Movement Network. - 213m block length (Discentionary)
- 707.69m perimeter

District Arterial for Stancombe Road frontage. - requires upgrade.

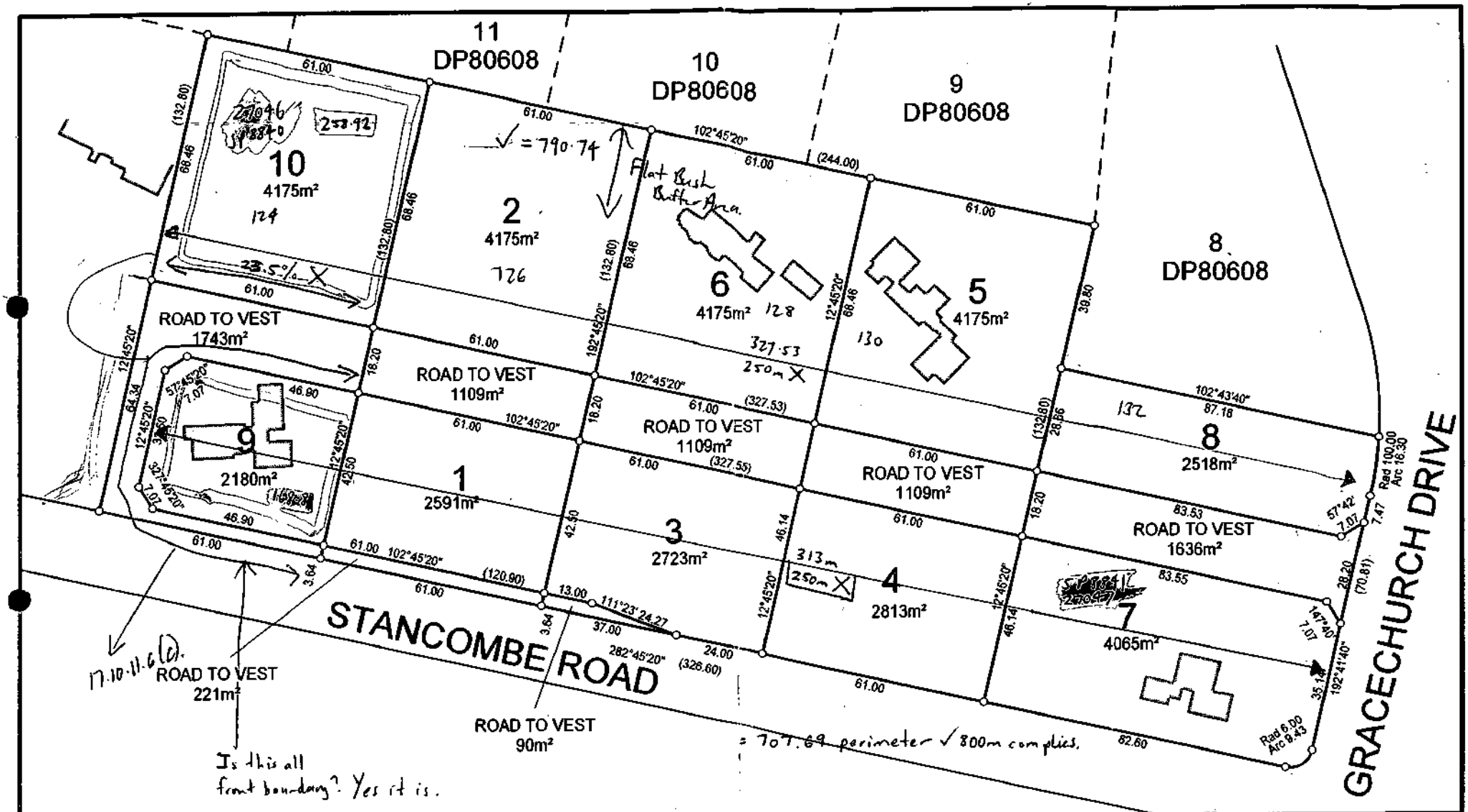
(2)

17.10.11.4(b) sites exceed 2000m².

17.10.11.6(b) Lot 9 - 168.8m = 23.55% - infringes front boundary?
Lot 10 = 258.92m =

17.10.11.8 Street Trees, - Required.

Pcan
5219007



Easdale Surveyors Ltd
39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 5375754
e-mail: surveyors@easdales.co.nz

SUBDIVISION BOUNDARIES
124 - 132 STANCOMBE ROAD, FLAT BUSH
(LOTS 3 - 7 DP78859)

FILE	7483a
SCALE	1:1000
DATE	September 2004
SURVEYOR	MSL
REVISION	124 - 132 PLAN (3)

ENGINEERING FILE

Proposal No. _____ **RM Engineer** _____

Site Address: _____

INPUT REQUIRED	Yes	No	Actions/Results
Planning			
Survey			
Transportation			
RAWS			
Manukau Water			
Manukau Parks			
Environmental Health			
Building Control			
Policy			
CONSIDERATIONS			
Site Visit			
Stability (Geotech Report)			
Overland Flow			
Min. Floor Levels			
Protected Streams			
Comprehensive Discharge			
Stormwater Calculations			
-Upstream Provision			
-Downstream Assessment			
ARC Consents			
-Discharge			
-Earthworks			
Right of Entry			
Network Utilities			
-Power			
-Streetlighting			
-Gas			
-Telephone			
Financial Contributions			

ENGINEERING CORRESPONDENCE FOLLOWS

In date order

latest first

NB: Suitably endorse all superseded plans and reports

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

RECEIVED
10 DEC 2004
M.C.C.
ENVIRONMENTAL SERVICES

CT/27046
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

STAGE 1
SUBDIVISION

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waituku, Orewa

JOB No A9861/5

ISSUED 10.12.04

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 1
SUBDIVISION

ET/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

FER

MCC BUILDING & RESOURCE SERVICES

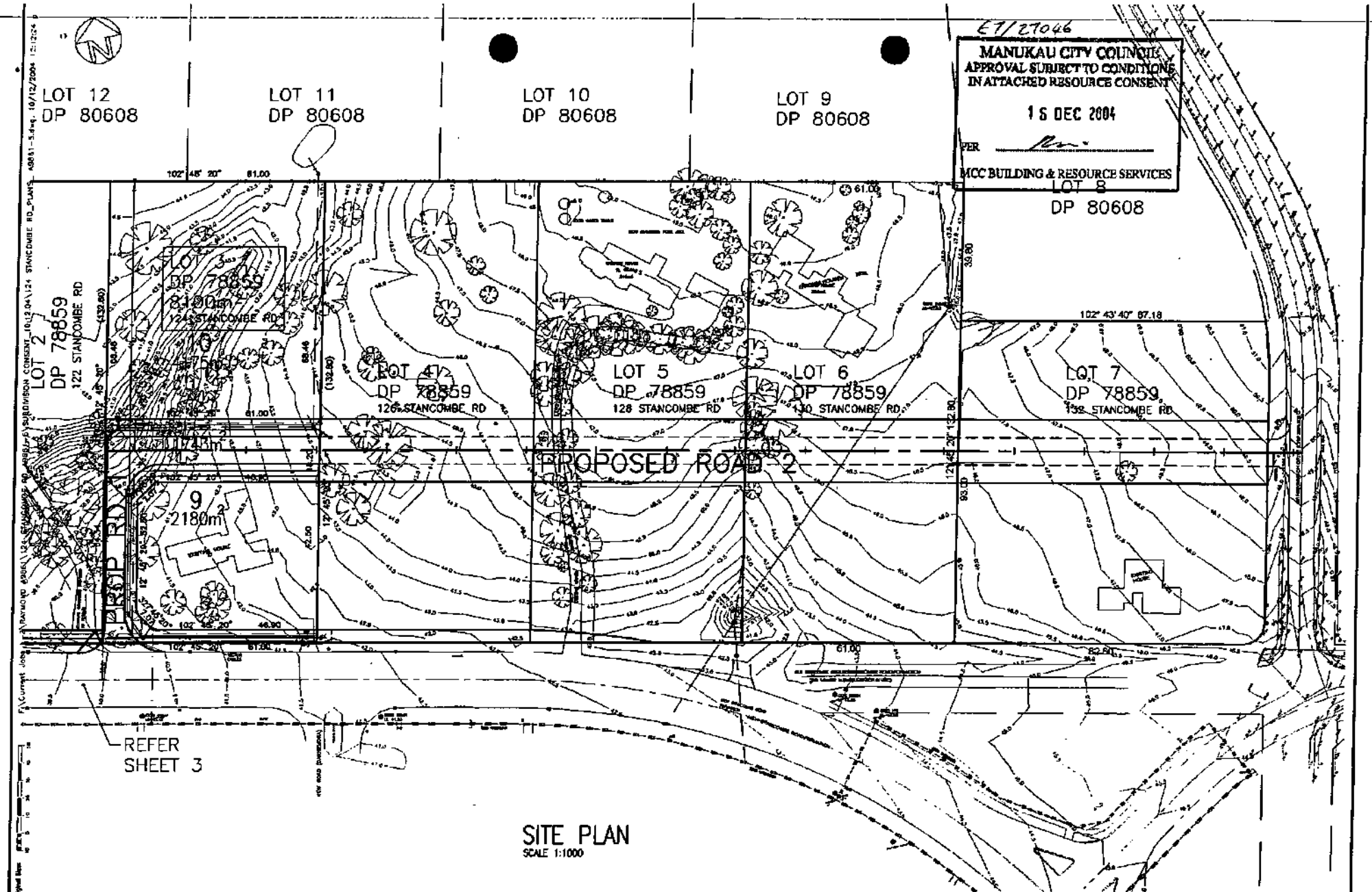
DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
	COVER
	INDEX
1	SITE PLAN, 1:1000
2	EARTHWORKS PLAN 1:500 SILT FENCE DETAIL
3	SITE PLAN - SS DRAINAGE, SHEET 1, 1:500
4	SITE PLAN - SW DRAINAGE, 1:500
5	SITE PLAN - WATERMAIN, 1:500
6	PROPOSED ROAD PLAN - FINISHED LEVELS, STREET LIGHTING & PLANTING, 1:250
7	TYPICAL ROAD CROSS SECTION, 1:100
11	PROPOSED ROAD 1 LONGSECTION
12	PROPOSED ROAD 2 LONGSECTION PART 1
13	CROSS SECTION AT 20m, 40m, 60m PROP ROAD 1 CROSS SECTION AT 0m, 20m, 40m PROP ROAD 2
14	CROSS SECTION AT 60m PROP ROAD 2
21	SW LONGSECTION 1
22	SW LONGSECTION 2 & 3
31	SS LONGSECTION 1 & 2
32	SS LONGSECTION 3 & 4
33	SS LONGSECTION 5
	APPENDIX
A1	STANDARD DETAILS - SHEET 1
A2	STANDARD DETAILS - SHEET 2
A6	PROPOSED ROAD 2 LONGSECTION PART 2
A7	PROPOSED ROAD 2 LONGSECTION PART 3
A8	PROPOSED ROAD 2 LONGSECTION PART 4

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

JOB No A9861/5

ISSUED 10.12.04



E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

SITE PLAN
SCALE 1:1000

No.	Revision Details	Date
3	SEWER LINE MOVED	10/12/04
2	SEWER DESIGN REVISED/ CLIENT REVISED	13/11/04
1	PROP ROAD 1 REPOSITIONED	22/00/04

Design: IN GIBSON (NOTICE 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: MG
Date: SEPT 04
Scale: AS 1:1000
CAD Filename:
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CONSENT

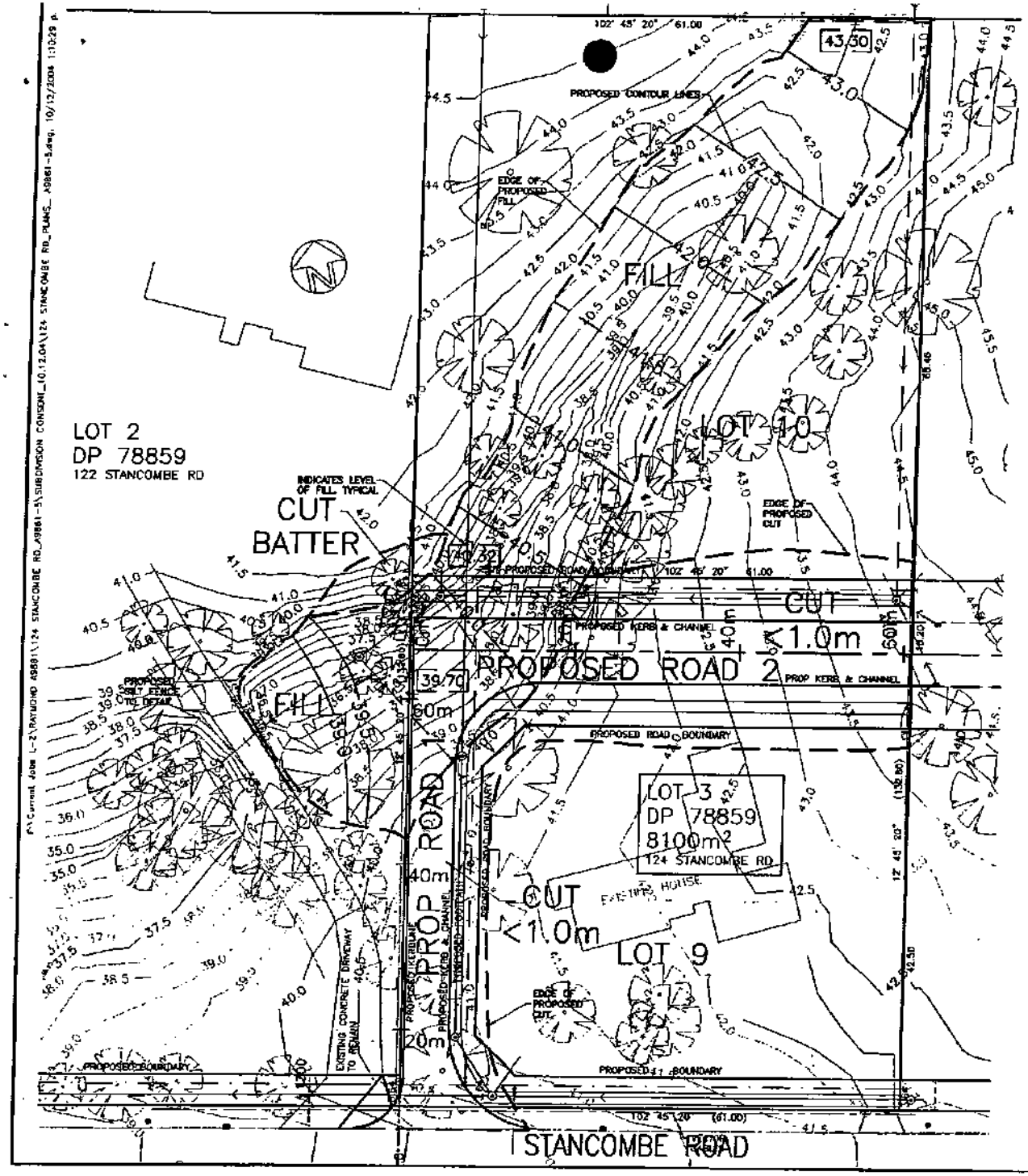
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

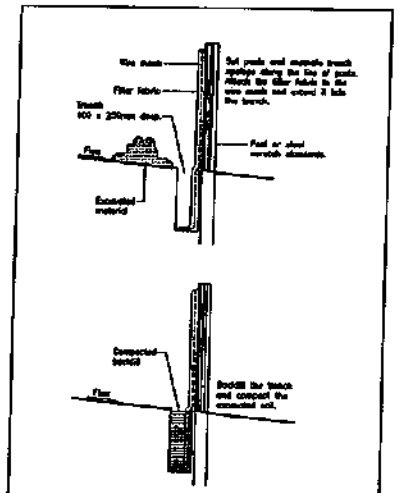
Drawing Title:
SITE PLAN

File No. A9861/5 | Rev. 3 | Dwg. No. 1



LEGEND

42.0	ISOPECS
— — —	CUT EXTENT
— . . —	SILT FENCE



SILT FENCE DETAIL
NTS

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

PART SITE PLAN

1:500

No.	Revision Details	Date
3	SEWER LINE MOVED	10/12/04
2	SEWER DESIGN REVISED CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

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Drawing Title:
EARTHWORKS PLAN
SILT FENCE DETAIL

Job Title:
PROPOSED ENGINEERING WORK – STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Design: I H GIBBON (ME34 4325)
Survey: EXCELLE SURVEYORS LTD
Drawn: LP
Checked: HG
Date: SEPT '04
Scale: A3 1:500
CAD Filename:

CONSENT

Original Size:

File No.: A9861/5
Rev.: 3
Sheet No.: 2

NOTES

ALL WORK TO BE CARRIED OUT TO M.C.C ENGINEERING STANDARDS.

CONTRACTOR TO LOCATE ALL SERVICES PRIOR TO COMMENCEMENT OF WORK.

STORMWATER, SANITARY SEWER AND WATERMAIN CONNECTIONS SHALL BE INSTALLED BY A M.C.C APPROVED LICENSED CONTRACTOR AT THE APPLICANTS EXPENSE.

CONTRACTOR TO CONFIRM ALL DIMENSIONS ON SITE.

ALL PVC PIPES AND CONNECTIONS TO BE HEAVY WALL SEWER GRADE.

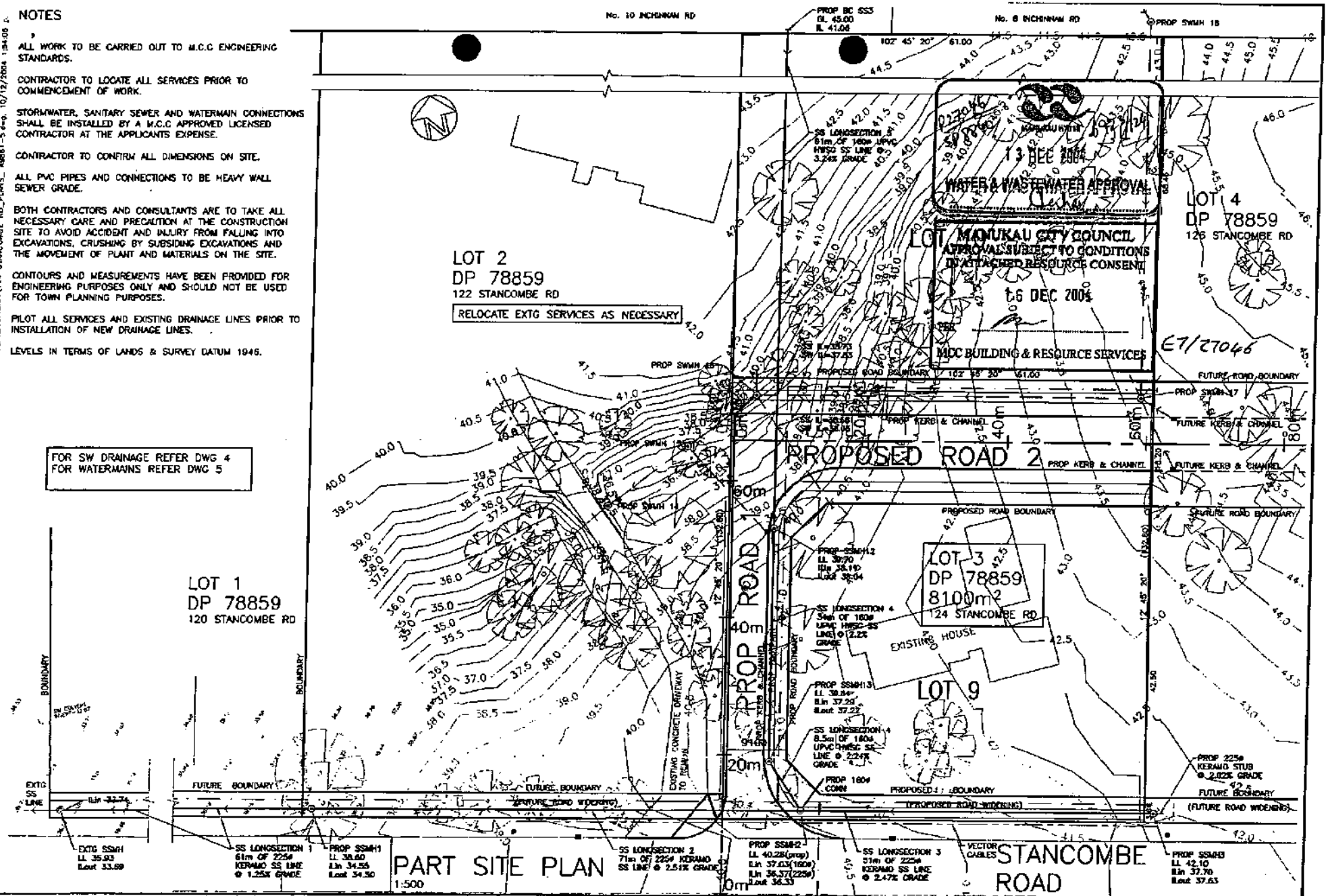
BOTH CONTRACTORS AND CONSULTANTS ARE TO TAKE ALL NECESSARY CARE AND PRECAUTION AT THE CONSTRUCTION SITE TO AVOID ACCIDENT AND INJURY FROM FALLING INTO EXCAVATIONS, CRUSHING BY SUBSIDING EXCAVATIONS AND THE MOVEMENT OF PLANT AND MATERIALS ON THE SITE.

CONTOURS AND MEASUREMENTS HAVE BEEN PROVIDED FOR ENGINEERING PURPOSES ONLY AND SHOULD NOT BE USED FOR TOWN PLANNING PURPOSES.

PILOT ALL SERVICES AND EXISTING DRAINAGE LINES PRIOR TO INSTALLATION OF NEW DRAINAGE LINES.

LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946.

FOR SW DRAINAGE REFER DWG 4
FOR WATERMAINS REFER DWG 5



3	SEWER LINE MOVED, SSMH13 ADDED	16/12/04	
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04	
1	PROP ROAD 1 REPOSITIONED	23/08/04	
No.	Revision Details	Date	No. Revision Details Date

Design: H GIBSON (NOVICE EH 8628)
Survey: EASDALE SURVEYORS LTD
Drawn: UPP
Checked:
Date: SEPT 04
Scale: A3 1:500
CAD Filename:

CONSENT

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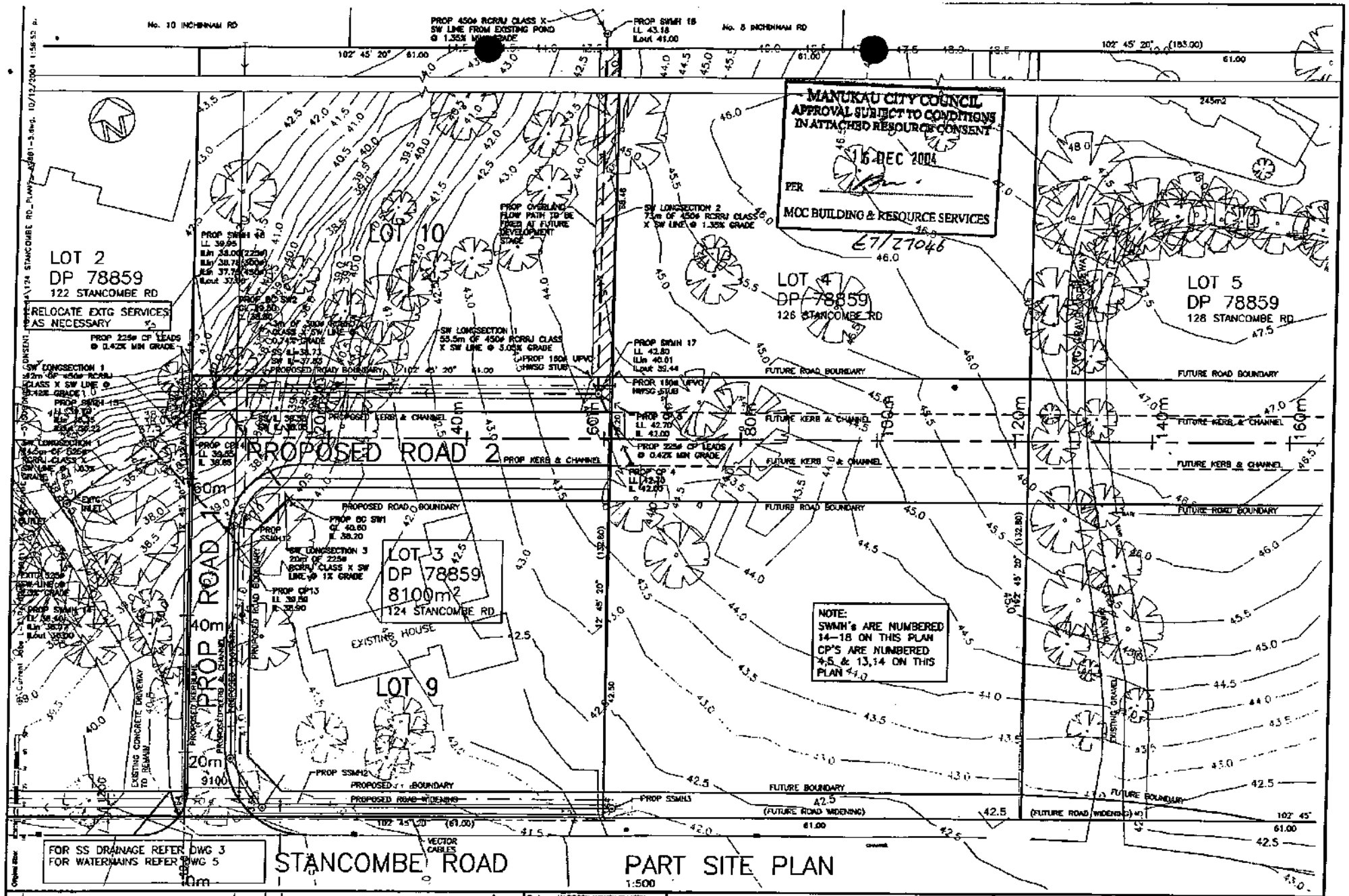
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tasman Pakuranga House, Mitchell Drive

Drawing Title:
SITE PLAN
- SS DRAINAGE

File No. A9861/5 | Rev. 3 | Dwg. No. 3



No.	Revision Details	Date	No.	Revision Details	Date
3	SS LINE MOVED, SW LS 1&3 REVISED	10/12/04			
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: J N GIBSON (NOMICK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked:
Date: SEPT 04
Scale: A3 1:500
CAD Filename:
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Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
SITE PLAN
- SW DRAINAGE

File No. A8861/5 | Rev. 3 | Dwg. No. 4

LOT 1
DP 78859
120 STANCOMBE RD

LOT 2
DP 78859
122 STANCOMBE RD

LOT 3
DP 78859
3100m²
124 STANCOMBE RD

LOT 10

PROPOSED ROAD 2

PROP ROAD 1

LOT 9

EXISTING HOUSE

STANCOMBE ROAD

NEW ROAD (DANNEMORA)

PROP 150ø BLUE BRUTE WATERMAIN

EXTG 150ø WATERMAIN

EXISTING CONCRETE DRIVEWAY TO REMAIN

PROPOSED ROAD BOUNDARY

VECTOR CABLES

PROP 150ø BLUE BRUTE WATERMAIN THRUST UNDER CARRIAGEWAY

DUCTILE IRON

E71/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

P27046
SP8840
6923/124
MANUKAU WATER
13 DEC 2004
WATER & WASTEWATER APPROVAL

FOR SS DRAINAGE REFER DWG 3
FOR SW DRAINAGE REFER DWG 4

PART SITE PLAN
1:500

No.	Revision Details	Date
3	NEW WATERMAIN ADDED ACROSS STANCOMBE RD	10/12/04
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Design: I H GIBSON (NZICE & SM (ECZ))
Survey: EASDALE SURVEYORS LTD
Drawn: LPP
Checked:
Date: SEPT 04
Scale: A3 1:500
CAD Filename:

CONSENT

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Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

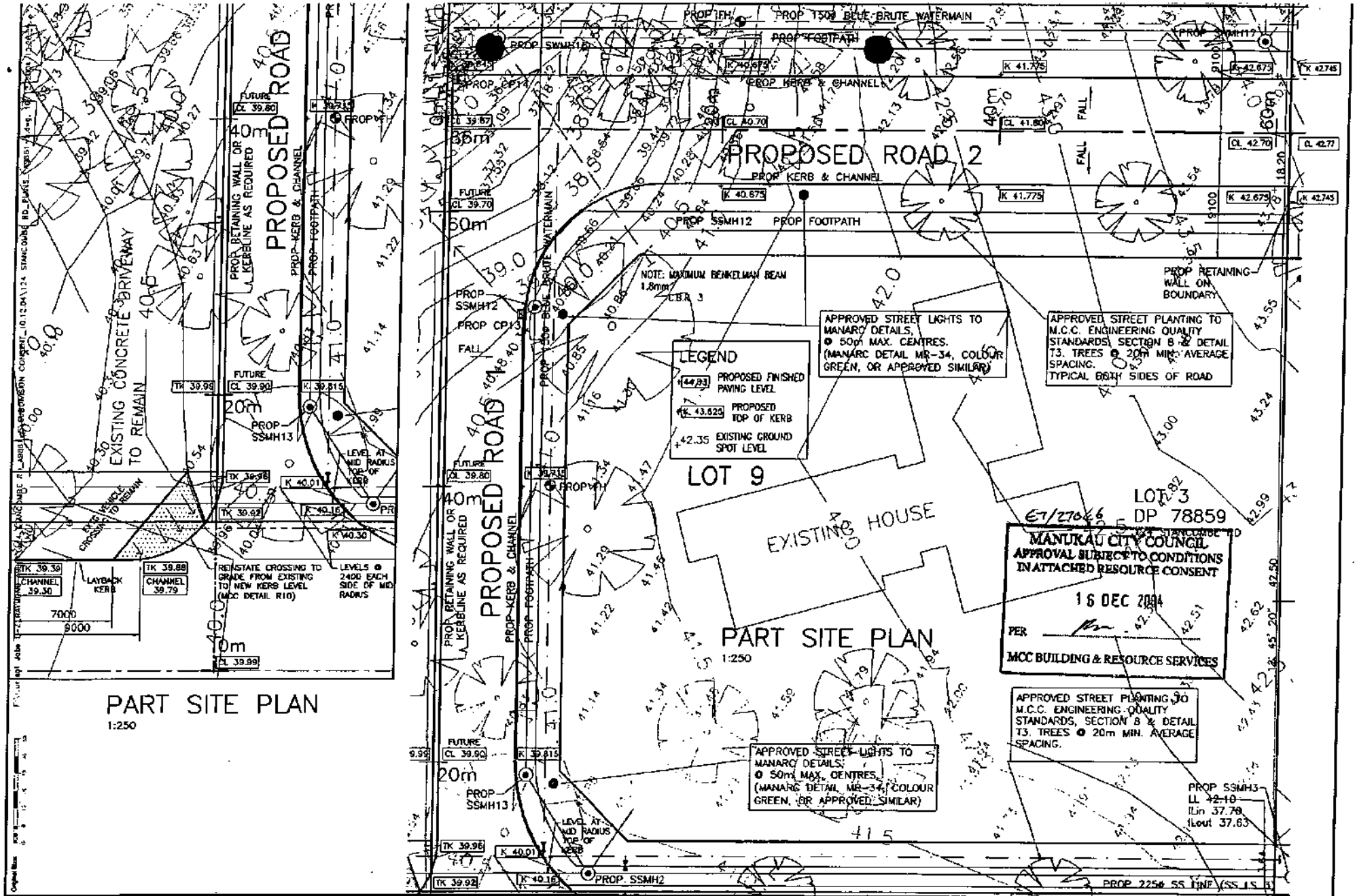
AIREY CONSULTANTS LTD.

Drawing Title:
SITE PLAN
- WATERMAIN

File No. A9861/5 | Rev. 3 | Dwg No. 5

Original Size:

F:\Current Jobs L-Z\RAYMOND HUBB\124 STANCOMBE RD_A9861-B\SUBDIVISION CONSENT_10.12.04\124 STANCOMBE RD_PLANS_ A9861-3.dwg, 10/12/2004 9:58:30 a.



No.	Revision Details	Date
4	KERB LEVELS TO RADIUS BY STANCOMBE RD ADDED	16/12/04
3	DRIVEWAY ACCESS FOR No. 122 REVISED	3/12/04
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/9/04

Design: EN-GERSON (NZ) WICK & SJ (0520)
Survey: EARTHLINE SURVEYORS LTD
Drawn: LFF
Checked: HG
Date: SEPT 04
Scale: A3 1:250
CAD Filename:

CONSENT

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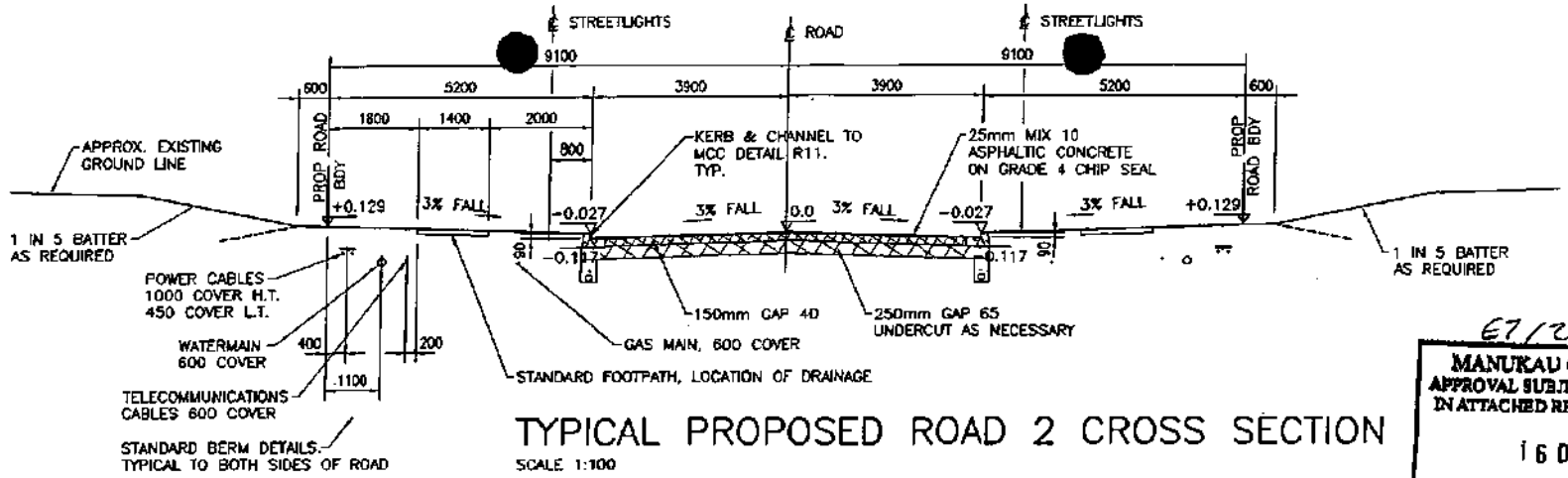
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD PLAN
FINISHED LEVELS
STREET LIGHTING & PLANTING

File No. A9861/5 | Rev. 4 | Dwg. No. 6

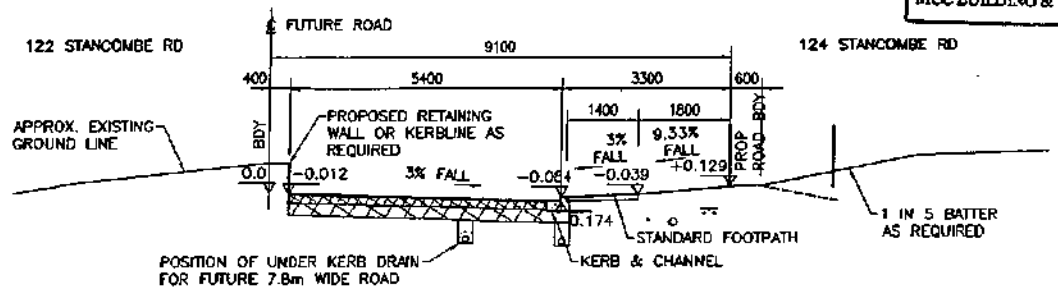


TYPICAL PROPOSED ROAD 2 CROSS SECTION

SCALE 1:100

E7/27046

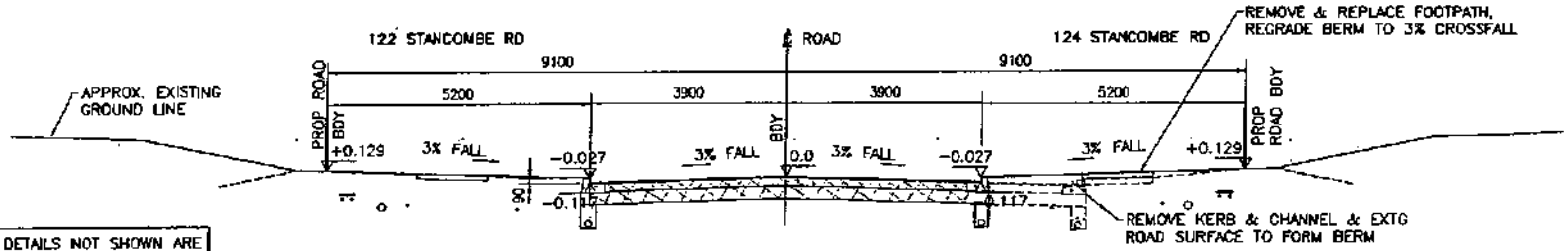
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES



NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100



NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL FUTURE PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (NOVICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: DL
Checked: ING
Date: SEPT '04
Scale: A3 1:100
CAD Filename:

CONSENT

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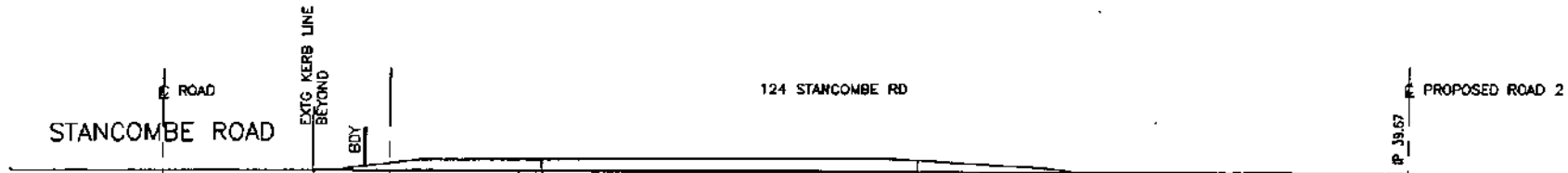
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
TYPICAL ROAD CROSS SECTIONS

File No. A9861/5 | Rev. 2 | Dwg. No. 7



DATUM 35.00

EXISTING LEVEL	39.99	39.96	40.50	40.40	37.58	36.75	
FINISHED LEVEL	39.99	39.96	39.90	39.80	39.70	39.67	
CUT-/FILL+	0.00	0.00	-0.60	-0.60	+2.12	+2.92	
DISTANCE	0.00	8.00	20.00	40.00	60.00	66.00	
GRADIENT		0.5%					

LONGSECTION ON FUTURE CENTRELINE OF PROPOSED ROAD 1

VERT 1:250
HORIZ 1:250

ET/270446

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	Rev.	Revision Details	Date
2	CLIENT REVISED	6/11/04			
1	PROP ROAD 1 REPOSITIONED	29/10/04			

Design: I H GIBSON [illegible]
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
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CONSENT

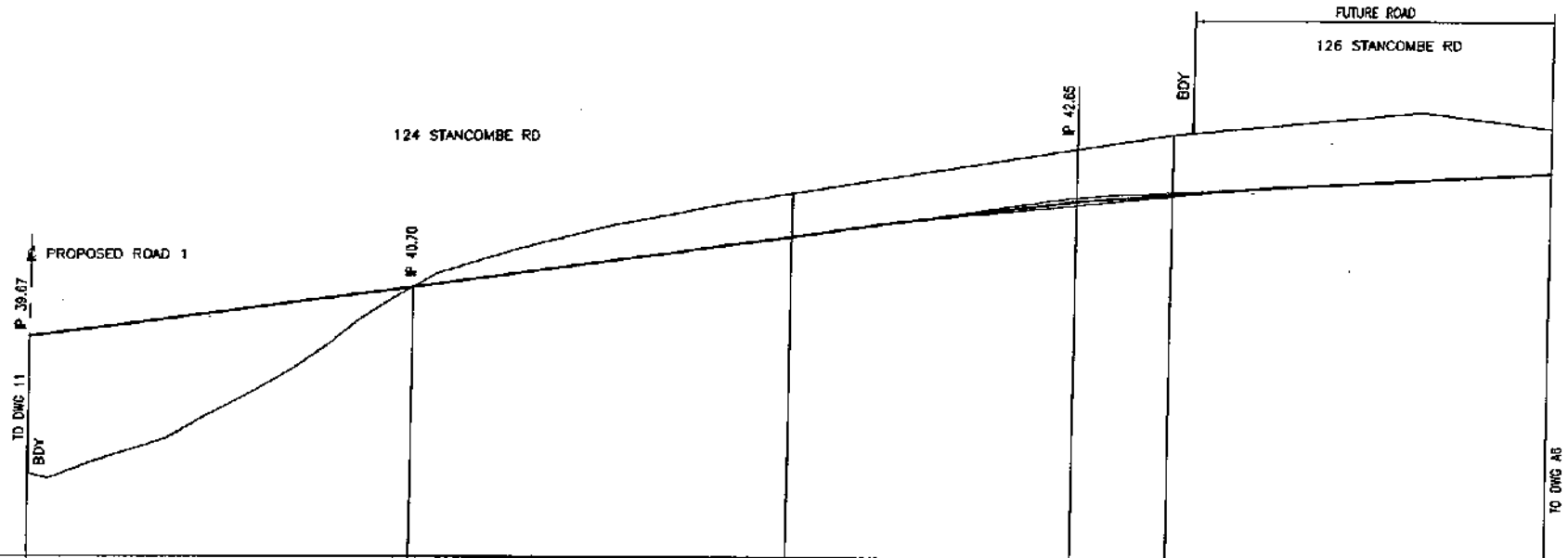
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
Consultants Civil, Civil & Structural, Geotechnical, Environmental, Transport, Planning, Health, Waste, Green

Drawing Title:
PROPOSED ROAD 1
LONGSECTION

File No. A985115 | Rev. 2 | Dwg. No. 11



DATUM 35.00

EXISTING LEVEL	36.75	40.70	42.70	43.68	44.00	44.16
FINISHED LEVEL	39.67	40.70	41.80	42.55	42.70	43.15
CUT-/FILL+	+2.92	0.0	-0.90	-1.13	-1.30	-1.01
DISTANCE	0.00	20.00	40.00	55.00	60.00	80.00
GRADIENT	5.15%	5.57%	20m V.C.		2.24%	

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

E1/27046

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	5/11/04			

Design: I H GIBSON (NCWCK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: SHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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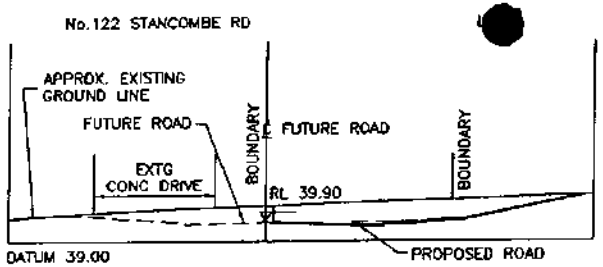
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

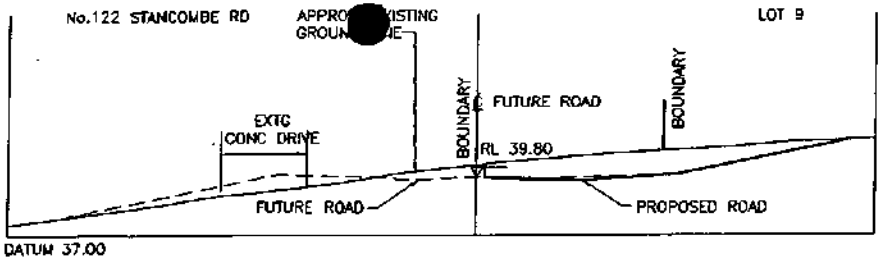
AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 1

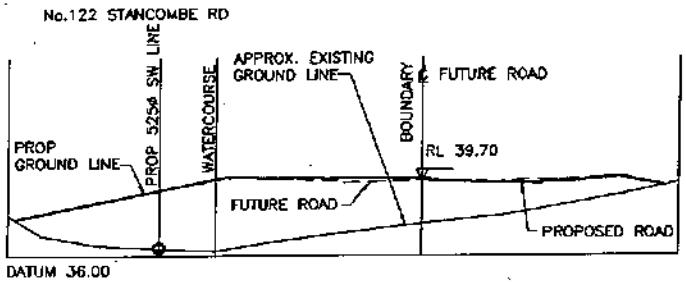
File No. A9861/5 | Rev. 1 | Dwg No. 12



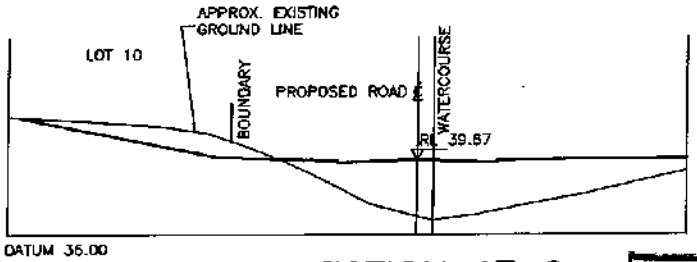
CROSS SECTION AT 20m
PROPOSED ROAD 1
SCALE 1:250



CROSS SECTION AT 40m
PROPOSED ROAD 1
SCALE 1:250



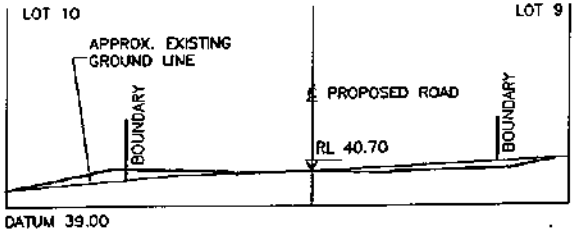
CROSS SECTION AT 60m
PROPOSED ROAD 1
SCALE 1:250



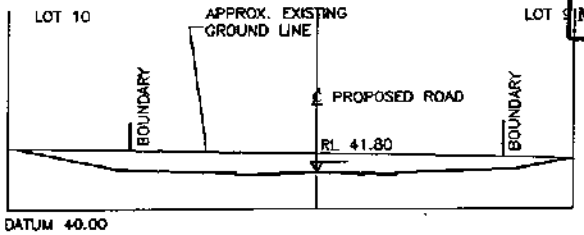
CROSS SECTION AT 0m
PROPOSED ROAD 2
SCALE 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES



CROSS SECTION AT 20m
PROPOSED ROAD 2
SCALE 1:250



CROSS SECTION AT 40m
PROPOSED ROAD 2
SCALE 1:250

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	23/10/04			

Design: I H GIBSON (NOWICK SH 6520)
Survey: EASDALE SURVEYORS LTD
Drawn: LPF
Checked: IHG
Date: SEPT '04
Scale: A3 1:250
CAD Filename:
(E) Copyright 2004 Airey Consultants Ltd

CONSENT

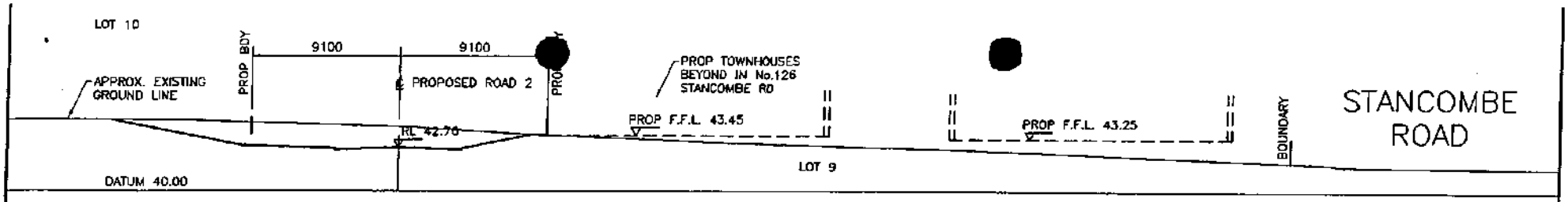
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
CROSS SECTIONS
AT 20m, 40m & 60m PROP ROAD 1
AT 0m, 20m & 40m PROP ROAD 2

File No. A5861/5 | Rev. 2 | Dwg. No. 13



CROSS SECTION AT 60m
PROPOSED ROAD 2

SCALE 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I H GIBSON (HOWICK SM 4525)
Survey: EASDALE SURVEYORS LTD
Drawn: GL/LFP
Checked: IHG
Date: SEPT '04
Scale: A3 AS SHOWN
CAD Filename

CONSENT

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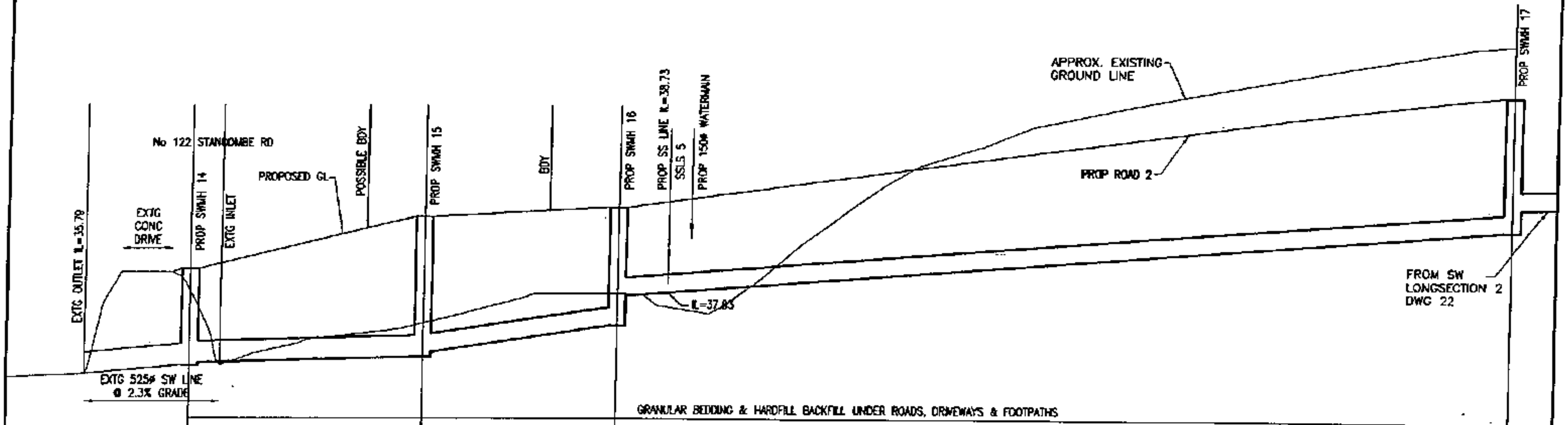
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
CROSS SECTION AT 60m - PROP ROAD 2

File No. A9861/5 | Rev. 2 | Dwg. No. 14



DATUM 34.00

GROUND LEVEL	38.40	39.70	39.95	42.80
INVERT LEVEL	36.00 / 36.07	36.22 / 36.35	37.00 / 37.75	39.44 / 40.01
CUT TO INVERT	2.40 / 2.33	3.48 / 3.35	2.95 / 2.20	3.36 / 2.79
DISTANCE	00.00	14.50	26.50	82.00
PIPE SIZE & GRADE	14.5m OF 525ø RCRRJ CLASS X SW LINE @ 1.03% GRADE	12m OF 450ø RCRRJ CLASS X SW LINE @ 5.42% GRADE	55.5m OF 450ø RCRRJ CLASS X SW LINE @ 3.05% GRADE	

SW LONGSECTION 1

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date
3	SW LS 1 REVISED, SS LINE MOVED	10/12/04
2	SW LS 1 REVISED/ CULVERT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	23/10/04

Design: SH GIBSON · Survey: BASDALE SURVEYORS LTD · Drawn: LFP · Checked: MG · Date: SEPT 04 · Scale: A3 AS SHOWN · CAD Filename
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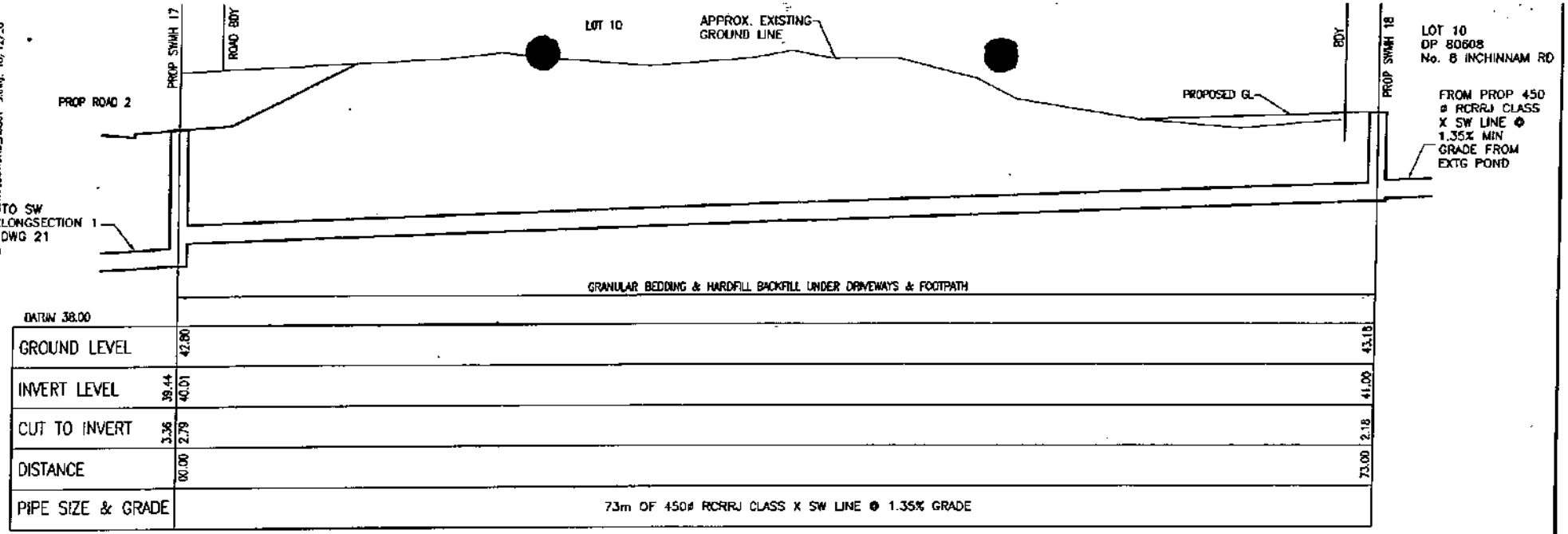
CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title: SW LONGSECTION 1
File No. A9861/5 · Rev. 3 · Dwg No. 21



DATUM 38.00

GROUND LEVEL		42.80		43.18
INVERT LEVEL	39.44	40.01		41.09
CUT TO INVERT	3.36	2.79		2.18
DISTANCE		00.00		73.00
PIPE SIZE & GRADE	73m OF 450ø RCRRJ CLASS X SW LINE @ 1.35% GRADE			

SW LONGSECTION 2

VERT 1:100
HORIZ 1:250

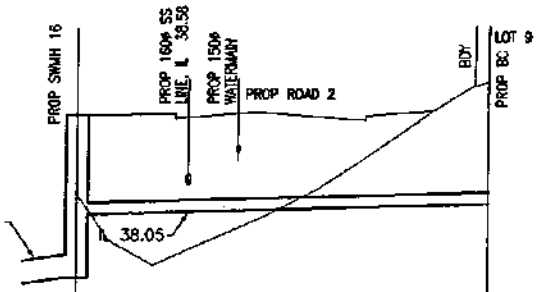
E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES



DATUM 35.00

GROUND LEVEL		39.95		40.60
INVERT LEVEL	37.00	38.00		38.20
CUT TO INVERT	2.95	1.95		2.40
DISTANCE		00.00		20.00
PIPE SIZE & GRADE	20m OF 225ø RCRRJ CLASS X SW LINE @ 1% GRADE			

SW LONGSECTION 3

VERT 1:100
HORIZ 1:250

No.	Revision Details	Date	Ch.	Revision Details	Date
3	SW LS 3 REVISED, SS LINE MOVED	10/12/04			
2	SW LS 3 REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	23/10/04			

Design: CH GIBSON BOWRICK, 524 4823
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: BRG
Date: SEPT 04
Scale: AS AR SHOWN
CAD Filename:

CONSENT

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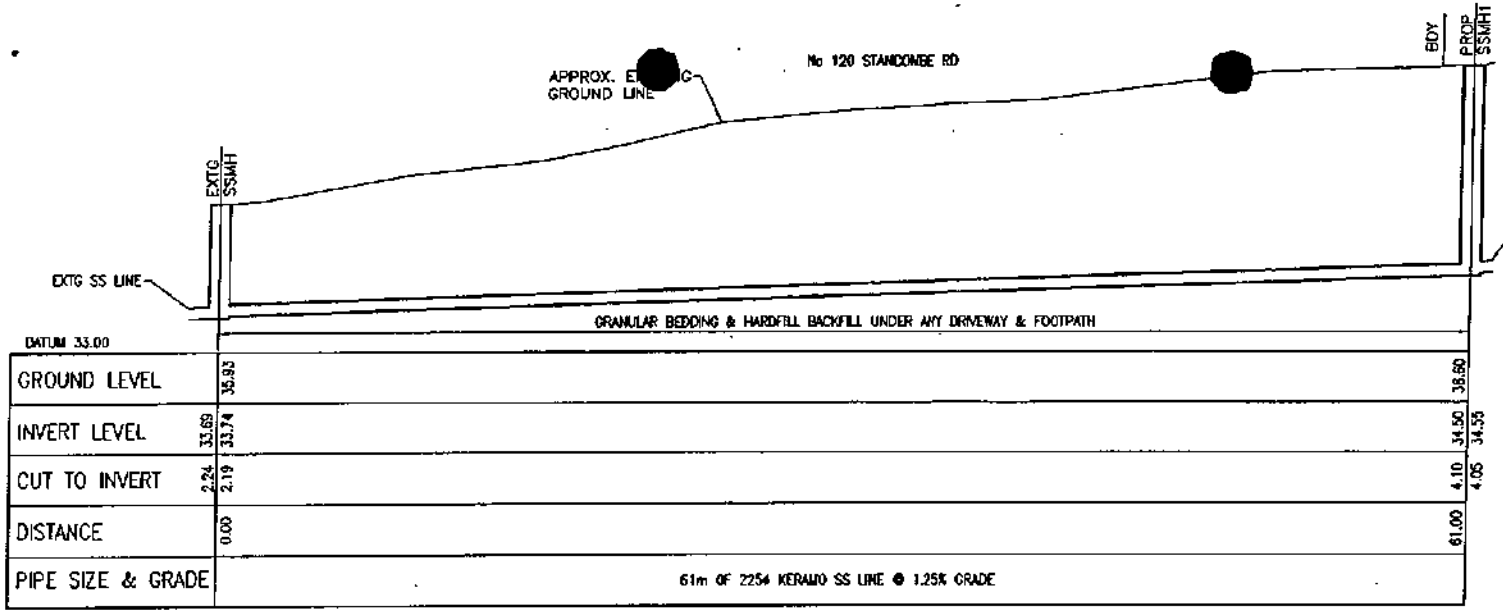
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD

Drawing Title:
SW LONGSECTION 2 & 3

File No. A9861/5 | Rev. 3 | Drwg. No. 22



DATUM 33.00

GROUND LEVEL	35.93	38.60	
INVERT LEVEL	33.69 33.74	34.50	34.55
CUT TO INVERT	2.24 2.19	4.10	4.05
DISTANCE	0.00	61.00	
PIPE SIZE & GRADE	61m OF 225ø KERAMO SS LINE @ 1.25% GRADE		

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

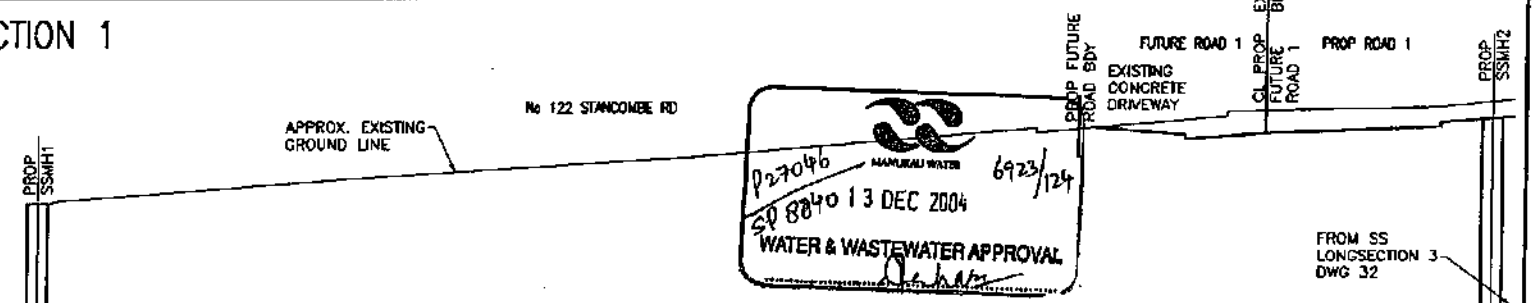
16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

SS LONGSECTION 1

VERT 1:100
HORIZ 1:250



P270446 MANUKAU WATER 6923/124
SP 8840 13 DEC 2004
WATER & WASTEWATER APPROVAL

DATUM 34.00

GROUND LEVEL	38.60		PROP 40.28	
INVERT LEVEL	34.50	34.55	36.33	36.37
CUT TO INVERT	4.10	4.05	3.95	3.91
DISTANCE	0.00		71.00	
PIPE SIZE & GRADE	71m OF 225ø KERAMO SS LINE @ 2.51% GRADE			

SS LONGSECTION 2

VERT 1:100
HORIZ 1:250

No.	Revision Details	Date	No.	Revision Details	Date
3	SS LS 2 REVISED	16/12/04			
2	SS LS 2 REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	27/10/04			

Design: TH GIBSON (HONG K 534 6532)
Survey: EASDALE SURVEYORS LTD
Drawn: HL
Checked: BHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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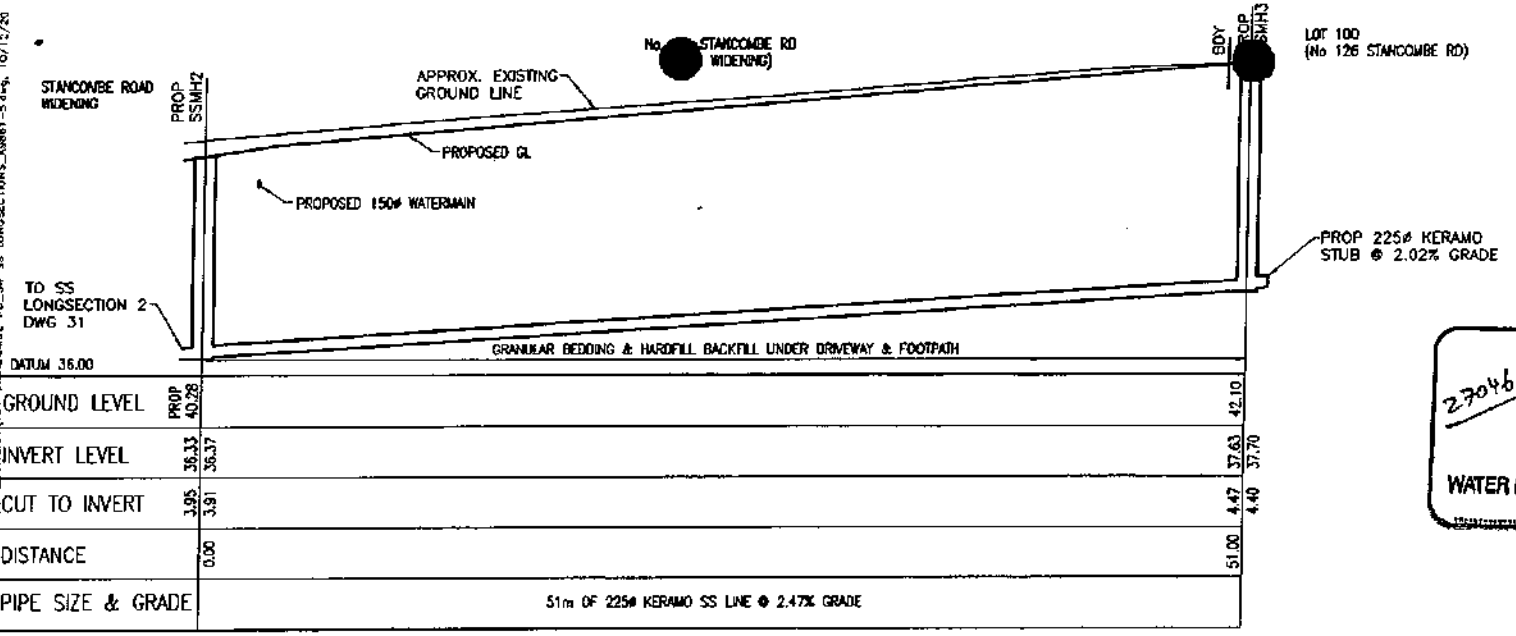
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

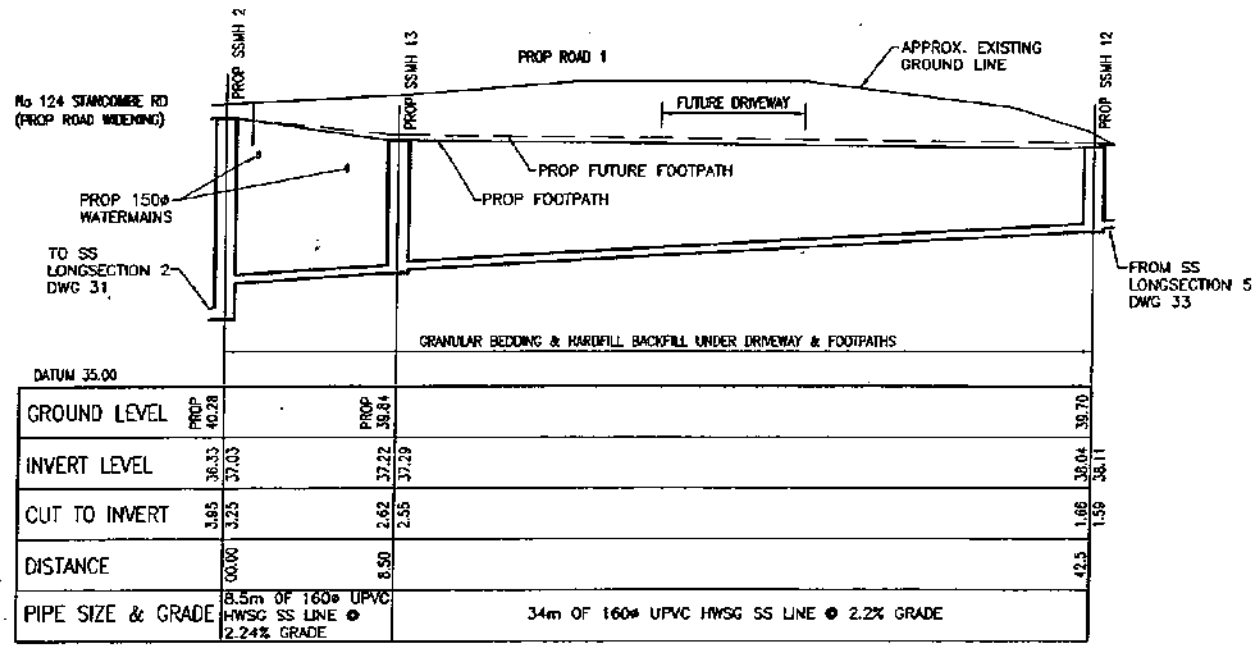
Drawing Title:
SS LONGSECTIONS 1 & 2

File No. A5861/5 | Rev. 3 | Dwg. No. 31



SS LONGSECTION 3

VERT 1:100
HORIZ 1:250



SS LONGSECTION 4

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

27046
MANUKAU WATER
13 DEC 2004
WATER & WASTEWATER APPROVAL

No.	Revision Details	Date
3	SS LS 3 & 4 REVISED	10/12/04
2	SS LS 3 REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	23/08/04

CONSENT

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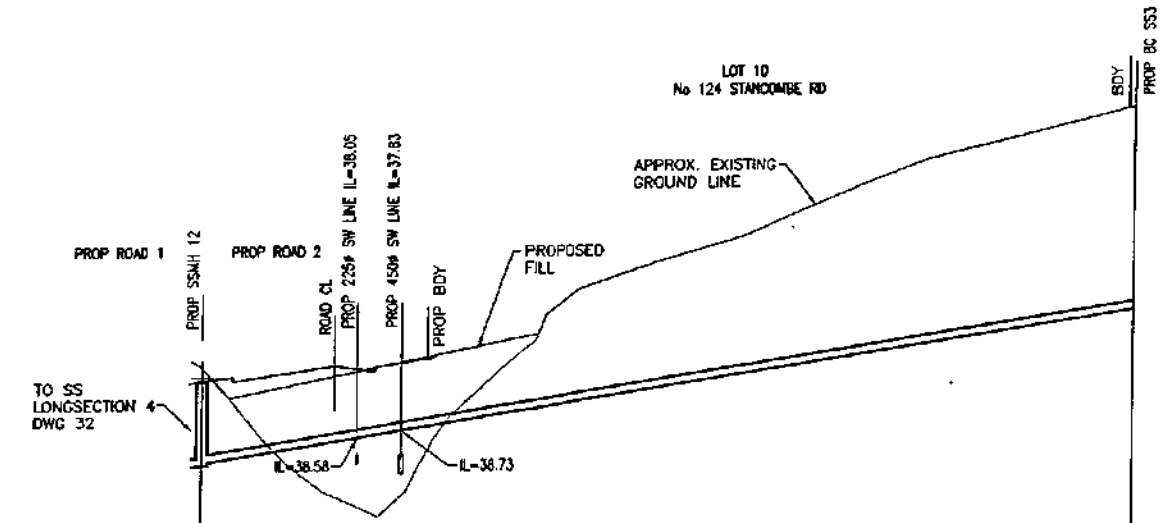
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

SS LONGSECTION 3 & 4

File No. A9361/5 | Rev. 3 | Drg. No. 32



DATUM 35.00

GROUND LEVEL	PROP 39.70		45.00
INVERT LEVEL	38.04	38.11	41.06
CUT TO INVERT	1.66	1.59	3.94
DISTANCE	00.00		91.00
PIPE SIZE & GRADE	91m OF 160ø UPVC HWSG SS LINE @ 3.24% GRADE		

SS LONGSECTION 5

VERT 1:100
HORIZ 1:500

P27046
SP8840
MANUKAU WATER 6923/124
13 DEC 2004
WATER & WASTEWATER APPROVAL

E7127046
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	SS LS 5 REVISED	10/12/04			

Design: HR GIBSON BSHONS 504 6620
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: HRG
Date: SEPT 04
Scale: AS AS SHOWN
CAD Filename
CONSENT
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Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

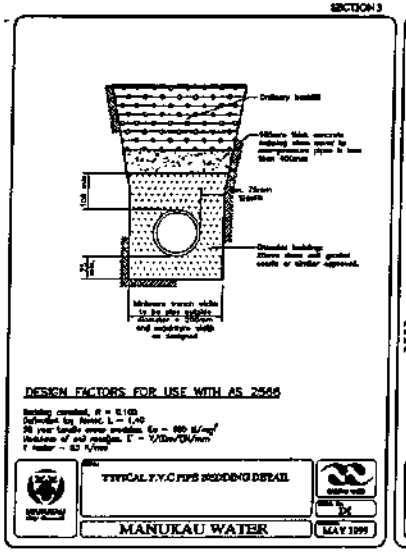
SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title
SS LONGSECTION 5

File No. A9861/5 | Rev. 1 | Dwg. No. 33

SECTION 3



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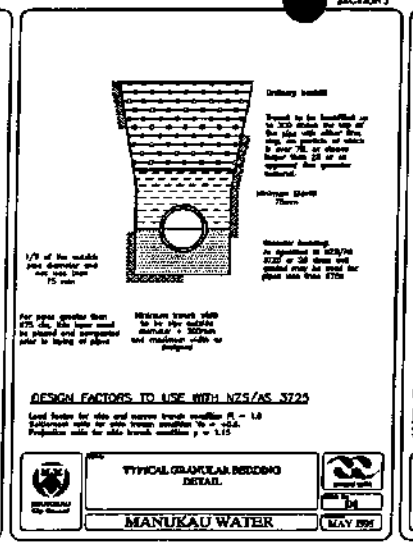

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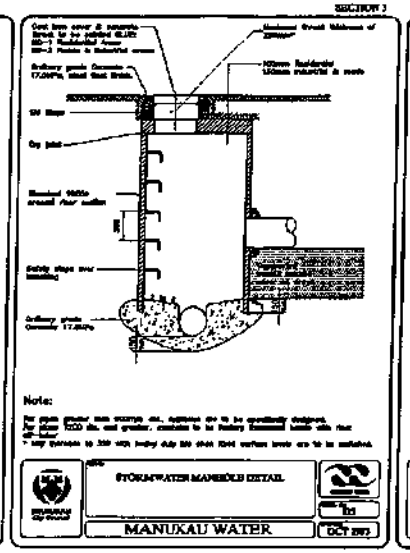
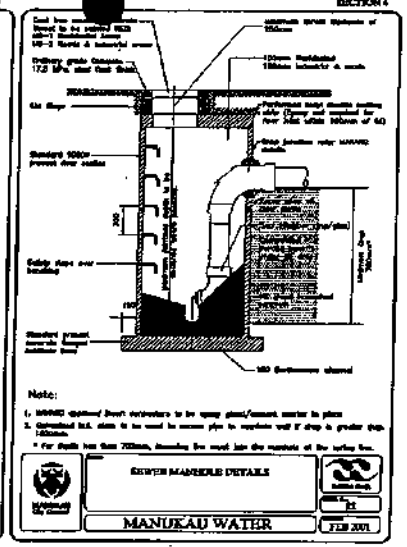


SECTION 4



E1/270/66

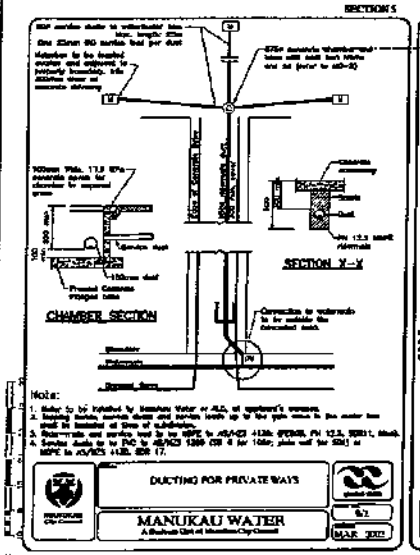
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

SECTION 5



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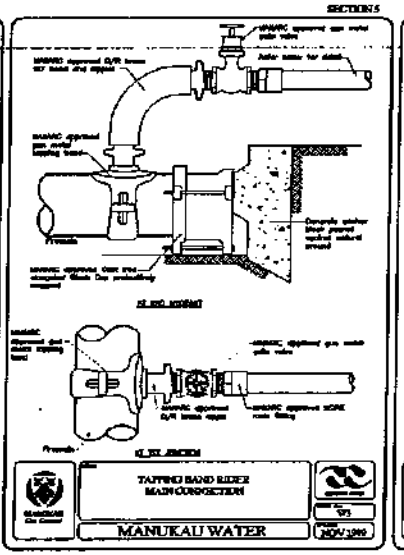
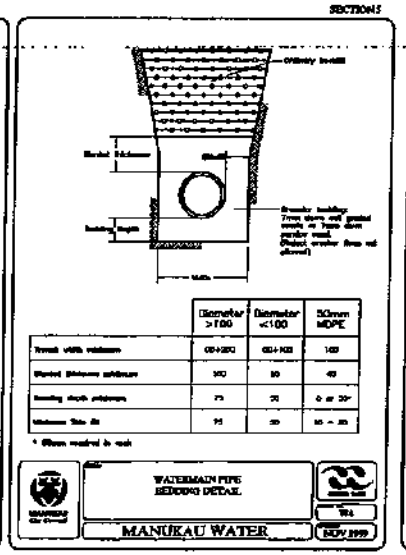
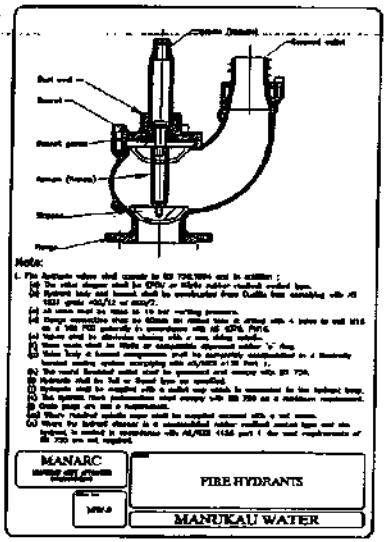


SECTION 5



	Diameter >100	Diameter <100	50mm MDPE
Trench width minimum	600+DN	600+DN	400
Shaded Bedding minimum	300	50	40
Bedding depth minimum	75	75	0 or 20*
Minimum Side fill	75	50	50 – 80

* Where required in rock



No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	5/11/04			
1	HOP NGO I REPRINTED	13/08/			

Design
Survey
Drawn
Checked
Date
Scale
CAD Filename

CONSENT

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Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

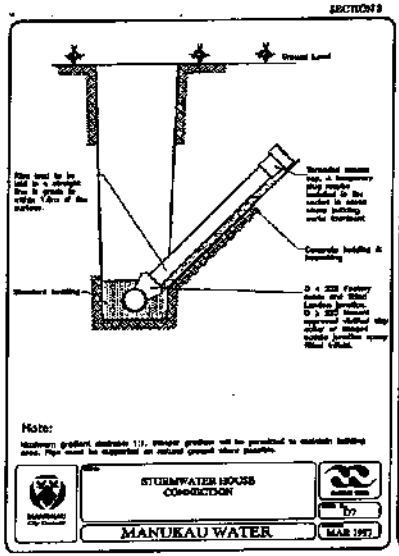
SUBDIVISION

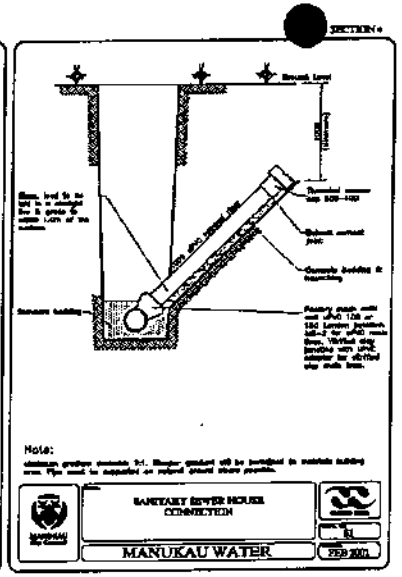
AIREY CONSULTANTS LTD.

Drawing Title.
STANDARD DETAILS - SHEET 1
(D1, D5, D8, S2, W1, W3, W4, MW9)

File No. A9881/5 | Rev. 2 | Dwg. No. A1

Original Size





E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	5/11/04			

Design: [illegible]
Survey: [illegible]
Drawn: [illegible]
Checked:
Date: [illegible]
Scale: [illegible]
CAD Filename:

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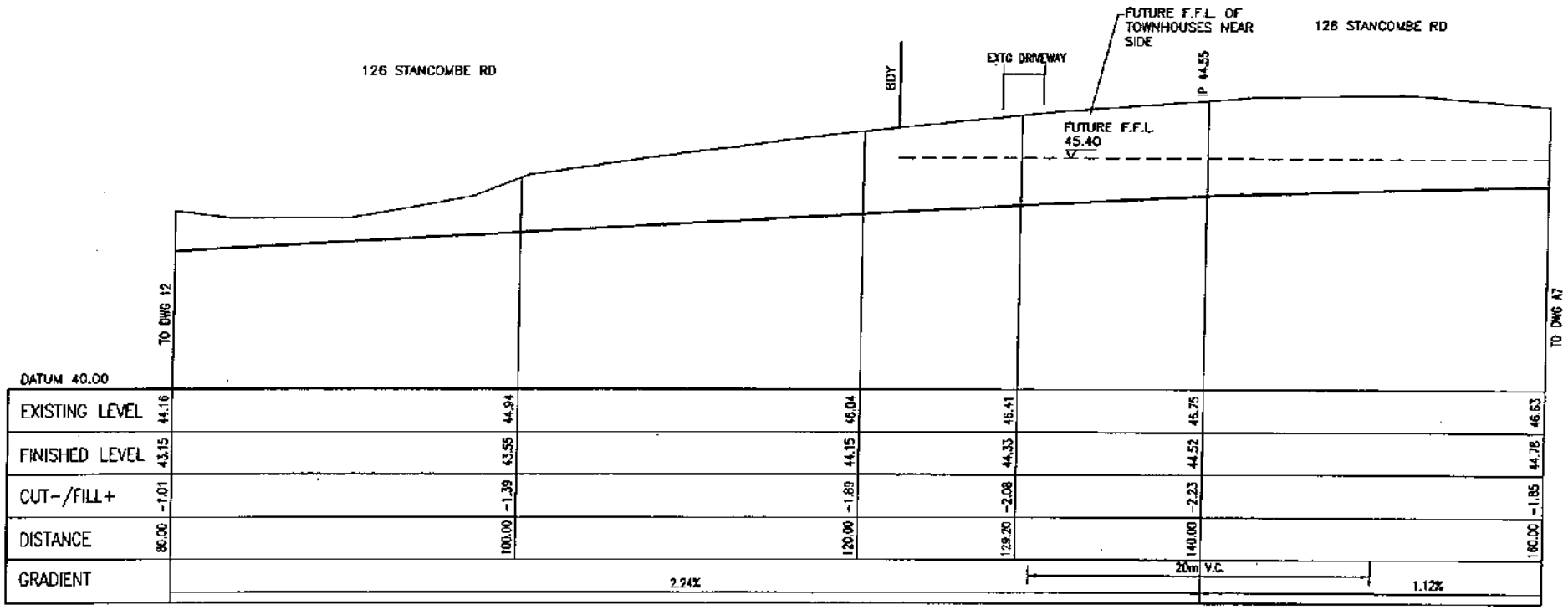
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
STANDARD DETAILS - SHEET 2
(D7 & S1)

File No. A9861/5 | Rev. 1 | Dwg. No. A2



PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: I H GIBSON (NOVICK 634 6333)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: RGI
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
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CONSENT

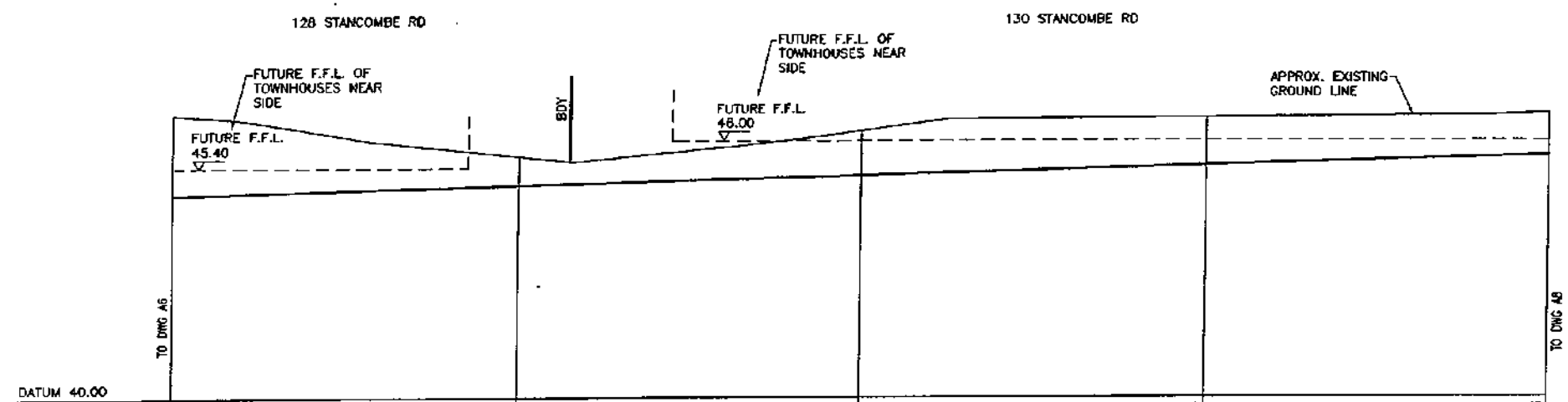
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 2

File No. A9861/5 | Rev. 1 | Dwg. No. A5



EXISTING LEVEL	46.63	45.65	46.23	46.54	46.63
FINISHED LEVEL	44.78	45.00	45.23	45.45	45.68
CUT-/FILL+	-1.85	-0.65	-1.00	-1.09	-0.95
DISTANCE	160.00	180.00	200.00	220.00	240.00
GRADIENT	1.12%				

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: I H GIBSON (HONICK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04
Scale: AS AS SHOWN
CAD Filename:
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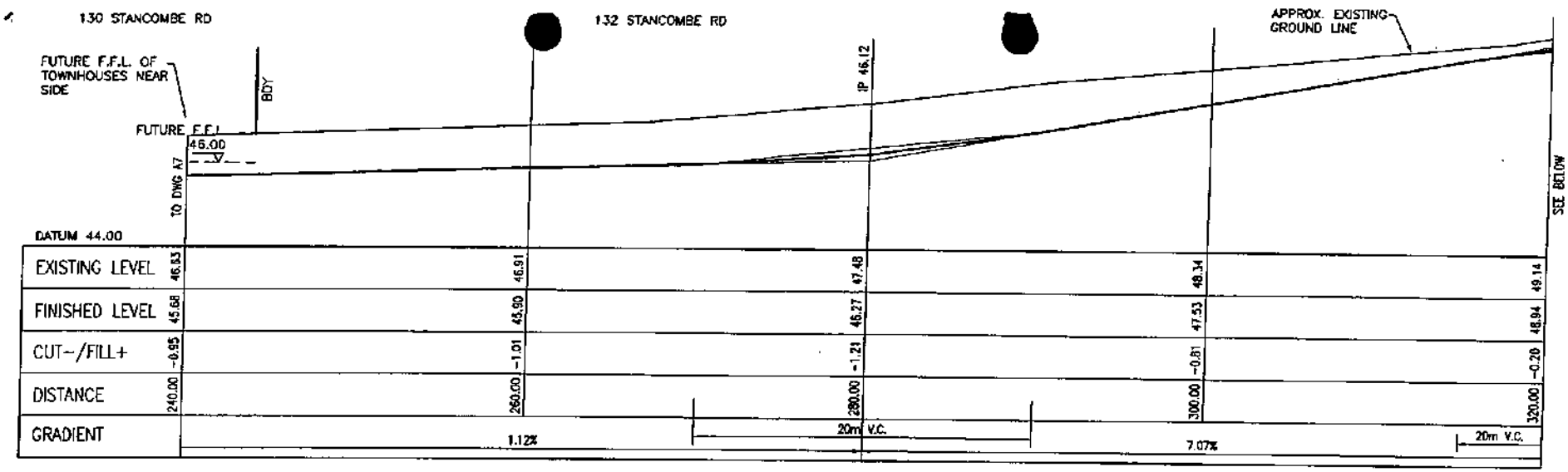
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

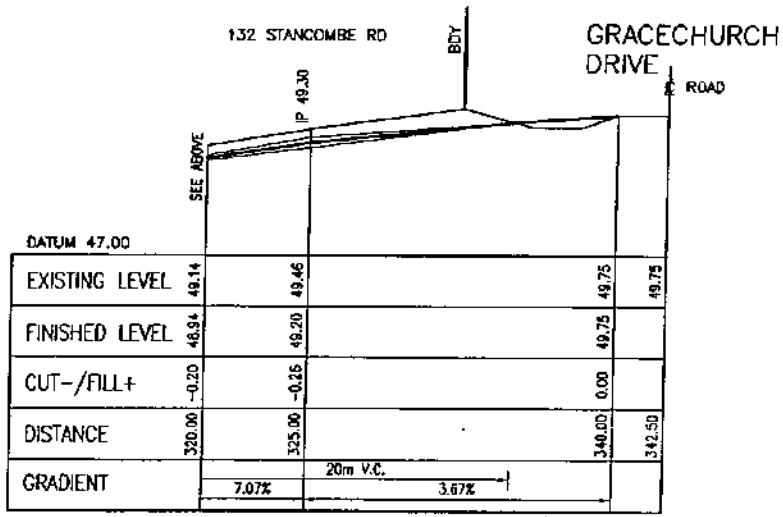
Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 3

File No. A9861/5 | Rev. 1 | Dwg. No. A7



PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250



PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	5/11/04			

Design: I.H. GIBSON/JACKMAN SSA RCEN
Survey: EASTGATE SURVEYORS LTD
Drawn: GK
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 4

File No. A9861/5 | Rev. 1 | Dwg. No. A8

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

RECEIVED
10 DEC 2004
M.C.C.
ENVIRONMENTAL SERVICES

67/27046
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER .....
MCC BUILDING & RESOURCE SERVICES

STAGE 1
SUBDIVISION

JOB No A9861/5

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

ISSUED 10.12.04

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 1
SUBDIVISION

E1/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

15 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

DRAWING INDEX

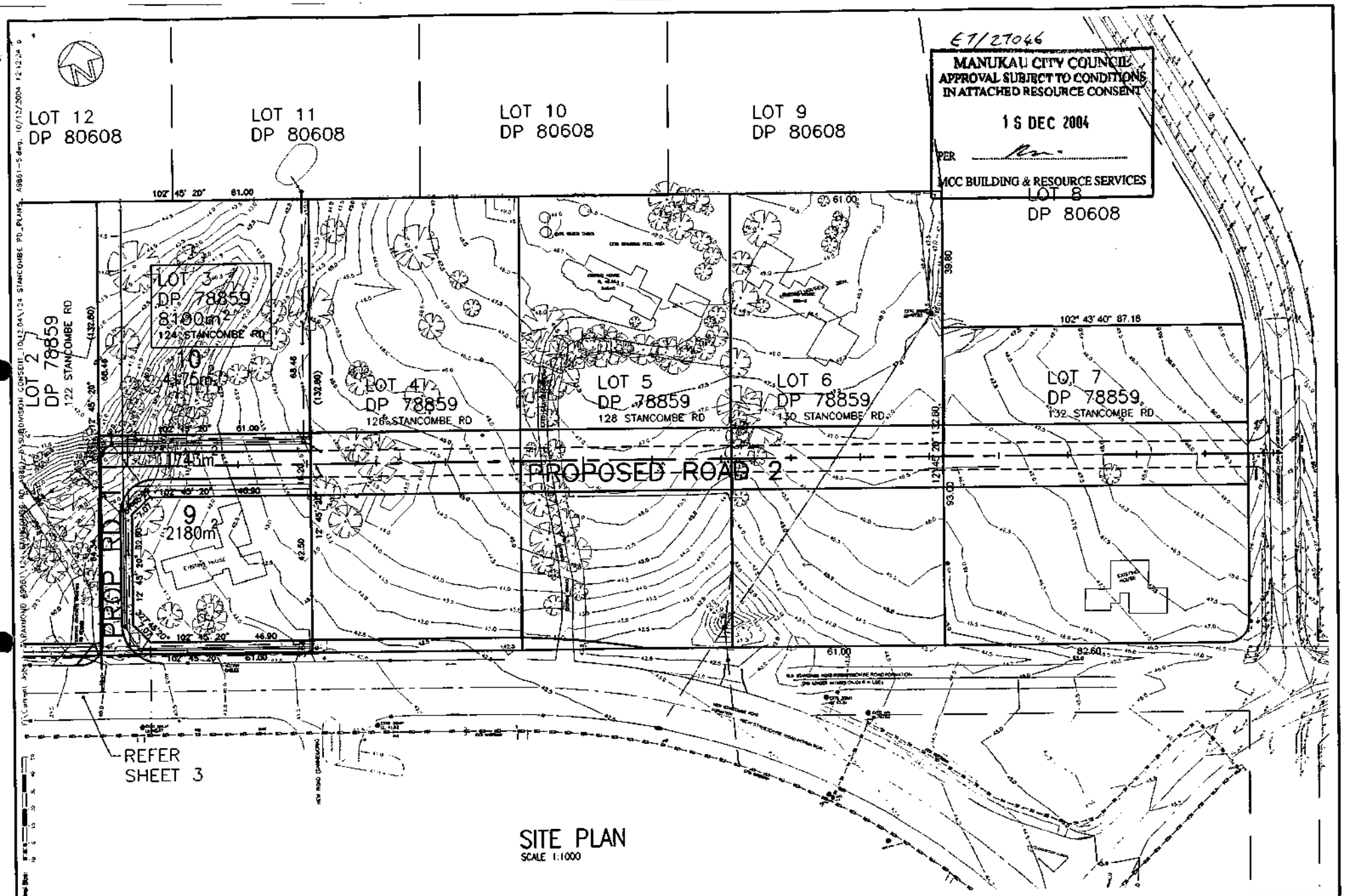
DRAWING NUMBER	DRAWING TITLE
	COVER
	INDEX
1	SITE PLAN, 1:1000
2	EARTHWORKS PLAN 1:500 SILT FENCE DETAIL
3	SITE PLAN - SS DRAINAGE, SHEET 1, 1:500
4	SITE PLAN - SW DRAINAGE, 1:500
5	SITE PLAN - WATERMAIN, 1:500
6	PROPOSED ROAD PLAN - FINISHED LEVELS, STREET LIGHTING & PLANTING, 1:250
7	TYPICAL ROAD CROSS SECTION, 1:100
11	PROPOSED ROAD 1 LONGSECTION
12	PROPOSED ROAD 2 LONGSECTION PART 1
13	CROSS SECTION AT 20m, 40m, 60m PROP ROAD 1 CROSS SECTION AT 0m, 20m, 40m PROP ROAD 2
14	CROSS SECTION AT 60m PROP ROAD 2
21	SW LONGSECTION 1
22	SW LONGSECTION 2 & 3
31	SS LONGSECTION 1 & 2
32	SS LONGSECTION 3 & 4
33	SS LONGSECTION 5
	APPENDIX
A1	STANDARD DETAILS - SHEET 1
A2	STANDARD DETAILS - SHEET 2
A6	PROPOSED ROAD 2 LONGSECTION PART 2
A7	PROPOSED ROAD 2 LONGSECTION PART 3
A8	PROPOSED ROAD 2 LONGSECTION PART 4

AIREY CONSULTANTS LTD.
ACENZ

CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

JOB No A9861/5

ISSUED 10.12.04



SITE PLAN
SCALE 1:1000

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
15 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date
3	SEWER LINE MOVED	10/12/04
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Design: I.H. GIBSON (HOMICK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: IHG
Date: SEPT '04
Scale: A3 1:1000
CAD Filename:

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CONSENT

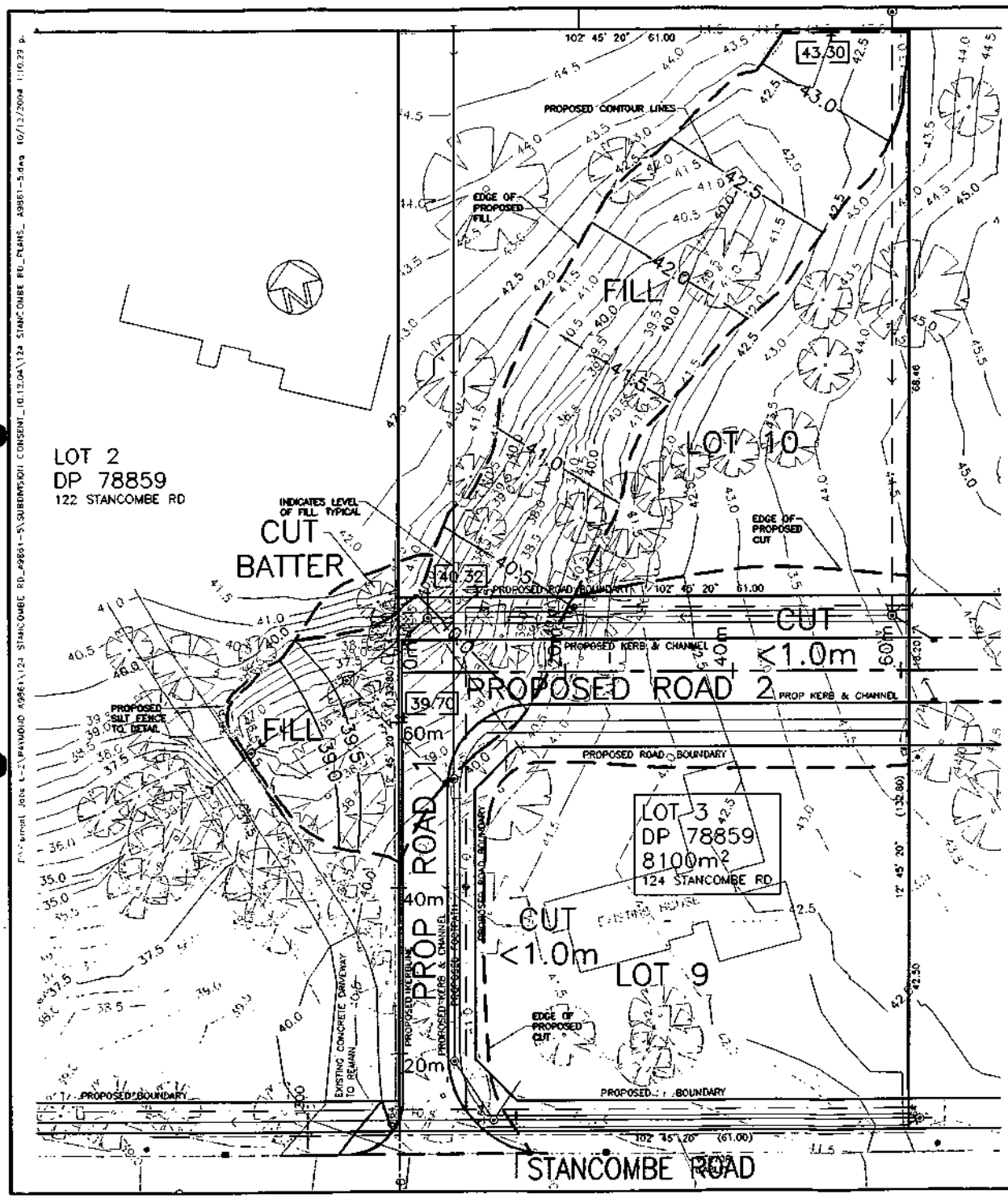
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tasmania, Pukekohe, Hawaii, Waikato, Orewa

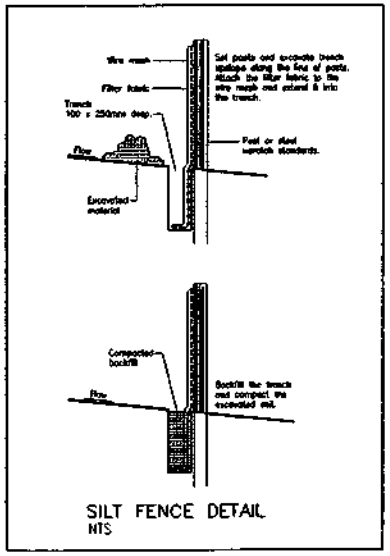
Drawing Title:
SITE PLAN

File No. A9861/5 | Rev. 3 | Dwg. No. 1



LEGEND

— 42.0 —	ISOPECS
— — —	CUT EXTENT
— · · —	SILT FENCE



SILT FENCE DETAIL
NTS

E7/ 27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

PART SITE PLAN
1:500

No.	Revision Details	Date
3	SEWER LINE MOVED	10/12/04
2	SEWER DESIGN REVISED CUCHT REVISED	15/11/04
1	PROP. ROAD 1 REPOSITIONED	22/10/04

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Drawing Title.
EARTHWORKS PLAN
SILT FENCE DETAIL

Job Title.
PROPOSED ENGINEERING WORK
– STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CIVIL ENGINEERS & STRUCTURAL ENGINEERS
Telephone Pukekohe, Hamilton, Auckland, Tauranga

Design I H GIBSON (09534 6523)
Survey EASDALE SURVEYORS LTD
Drawn LTP
Checked HG
Date SEPT 04
Scale AS 1:500
CAD Filename

CONSENT

Original Size:

File No.	Rev.	Sheet No.
A9861/5	3	2

NOTES

ALL WORK TO BE CARRIED OUT TO M.C.C ENGINEERING STANDARDS.

CONTRACTOR TO LOCATE ALL SERVICES PRIOR TO COMMENCEMENT OF WORK.

STORMWATER, SANITARY SEWER AND WATERMAIN CONNECTIONS SHALL BE INSTALLED BY A M.C.C APPROVED LICENSED CONTRACTOR AT THE APPLICANTS EXPENSE.

CONTRACTOR TO CONFIRM ALL DIMENSIONS ON SITE.

ALL PVC PIPES AND CONNECTIONS TO BE HEAVY WALL SEWER GRADE.

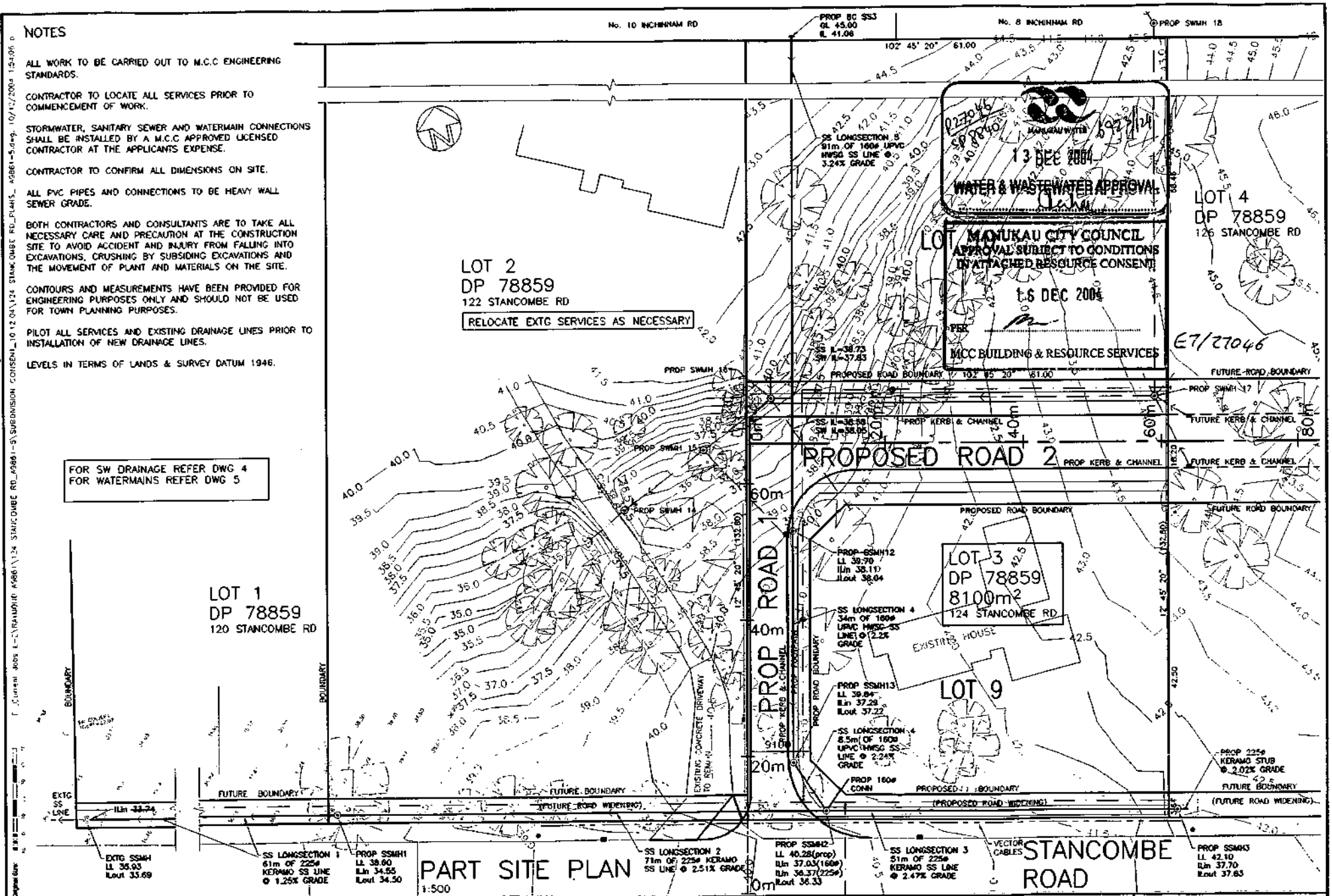
BOTH CONTRACTORS AND CONSULTANTS ARE TO TAKE ALL NECESSARY CARE AND PRECAUTION AT THE CONSTRUCTION SITE TO AVOID ACCIDENT AND INJURY FROM FALLING INTO EXCAVATIONS, CRUSHING BY SUBSIDING EXCAVATIONS AND THE MOVEMENT OF PLANT AND MATERIALS ON THE SITE.

CONTOURS AND MEASUREMENTS HAVE BEEN PROVIDED FOR ENGINEERING PURPOSES ONLY AND SHOULD NOT BE USED FOR TOWN PLANNING PURPOSES.

PILOT ALL SERVICES AND EXISTING DRAINAGE LINES PRIOR TO INSTALLATION OF NEW DRAINAGE LINES.

LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946.

FOR SW DRAINAGE REFER DWG 4
FOR WATERMAINS REFER DWG 5



MANUKAU WATER
13 DEC 2004
WATER & WASTEWATER APPROVAL

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

E7/27046

No.	Revision Details	Date
3	SEWER LINE MOVED, SSMH13 ADDED	10/12/04
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	23/10/04

Design: IN GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked:
Date: SEPT 04
Scale: A3 1:500
CAD Filename:

CONSENT

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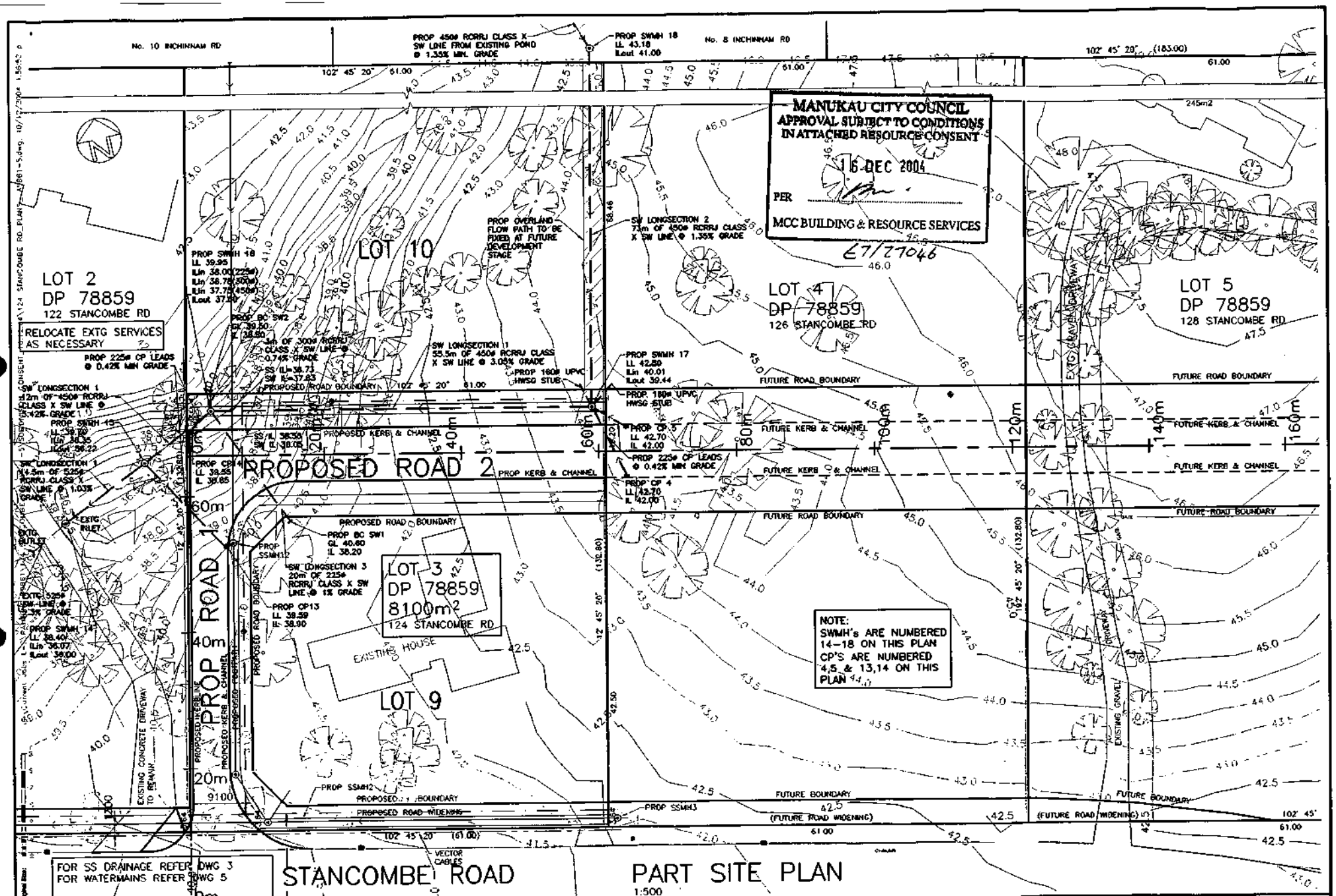
Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tokoroa, Pukekohe, Hawke, Waikato, Otawa

Drawing Title
SITE PLAN
- SS DRAINAGE

File No. A9861/5 | Rev. 3 | Dwg. No. 3



No.	Revision Details	Date
3	SS LINE MOVED, SW LS 1&3 REVISED	10/12/04
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Design: J H GIBSON (HOWICK 634 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked:
Date: SEPT '04
Scale: A3 1:500
CAD Filename:

CONSENT

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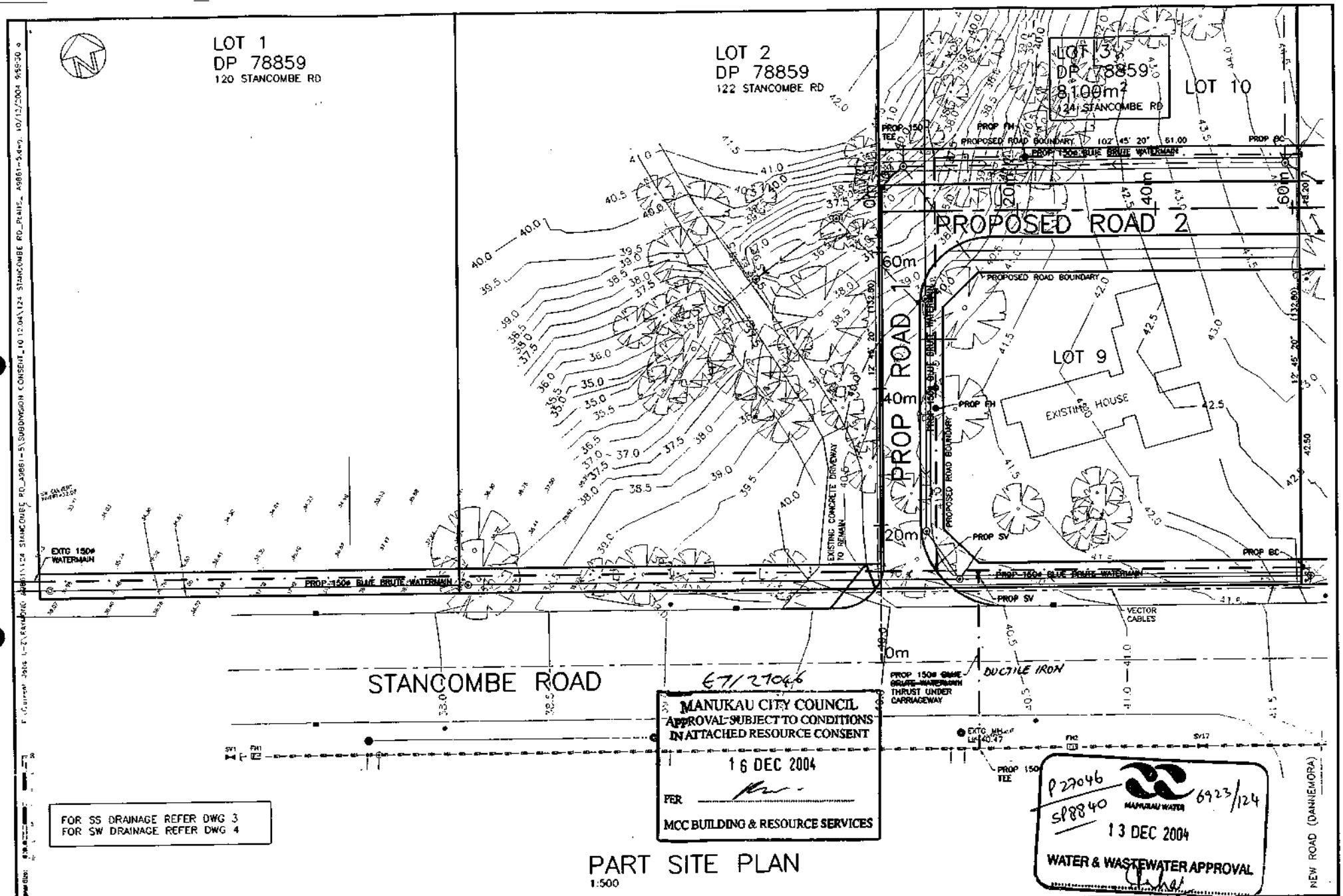
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tauranga, Palmerston, Howick, Nelson, Greece

Drawing Title:
SITE PLAN
- SW DRAINAGE

File No. A9861/5 | Rev. 3 | Dwg. No. 4



E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

P27046
SP8840
MANUKAU WATER
6923/124
13 DEC 2004
WATER & WASTEWATER APPROVAL

PART SITE PLAN

1:500

No.	Revision Details	Date
3	NEW WATERMAIN ADDED ACROSS STANCOMBE RD	10/12/04
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Design: FH GIBSON (NOMICK 534 0523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked:
Date: SEPT '04
Scale: AS 1:500
CAD Filename:

CONSENT

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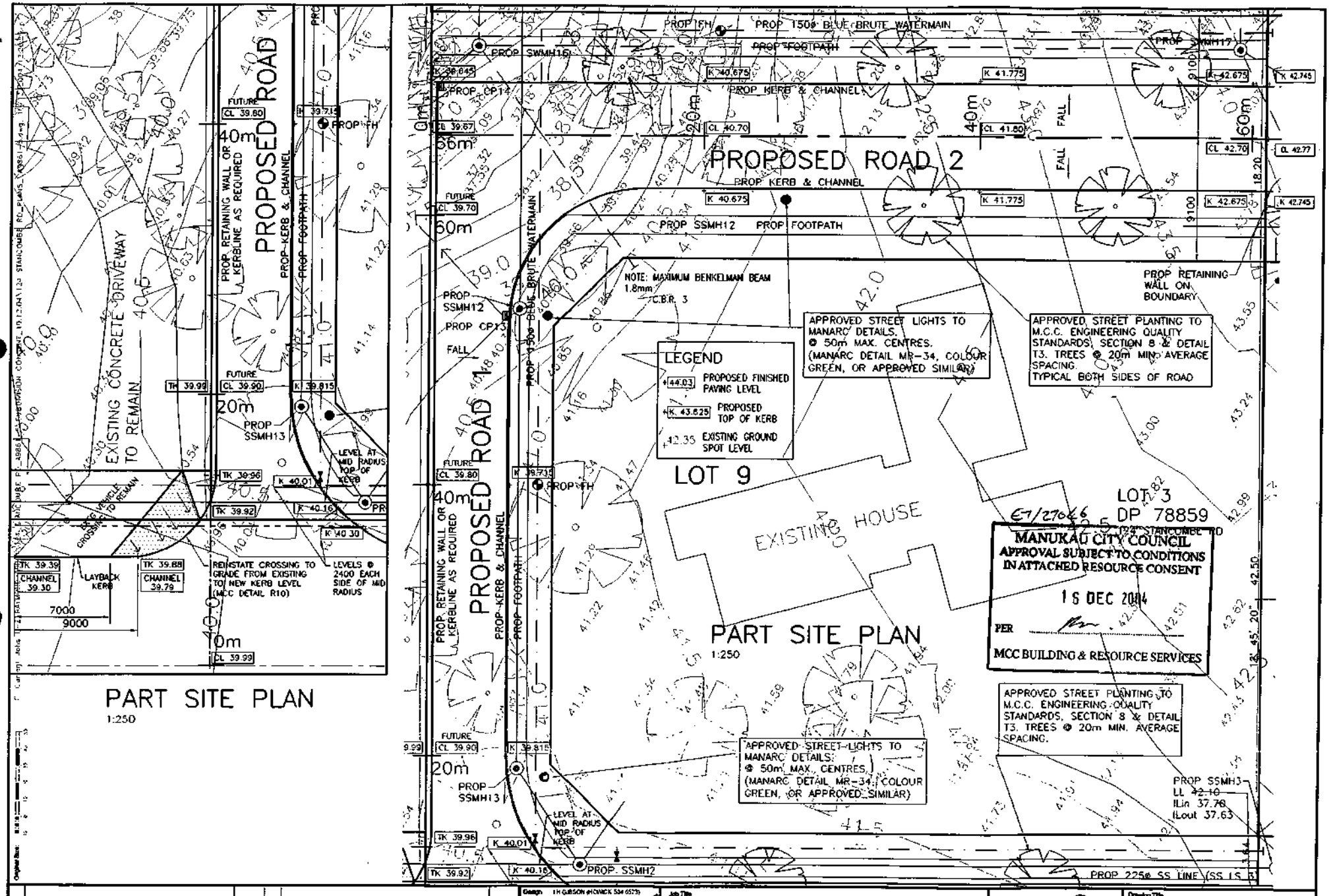
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Hawaii, Waiuku, Orewa

Drawing Title:
SITE PLAN
- WATERMAIN

File No. A9861/5 | Rev. 3 | Dwg. No. 5



No.	Revision Details	Date
4	KERB LEVELS TO RADIUS BY STANCOMBE RD ADDED	10/12/04
3	DRIVEWAY ACCESS FOR No. 122 REVISED	3/12/04
2	SEWER DESIGN REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: IHG
Date: SEPT 04
Scale: 1:250
CAD Filename:
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CONSENT

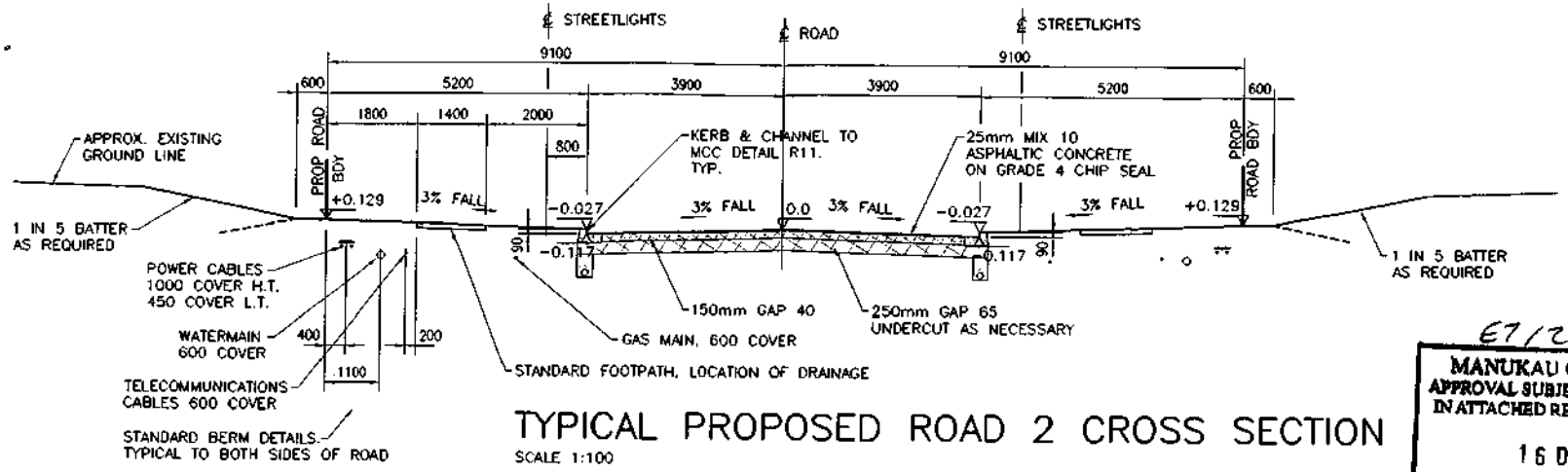
Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tauranga, Pukekohe, Hamilton, Wellington, Oamaru

Drawing Title
PROPOSED ROAD PLAN
FINISHED LEVELS
STREET LIGHTING & PLANTING

File No. A9861/5 | Rev. 4 | Dwg. No. 6

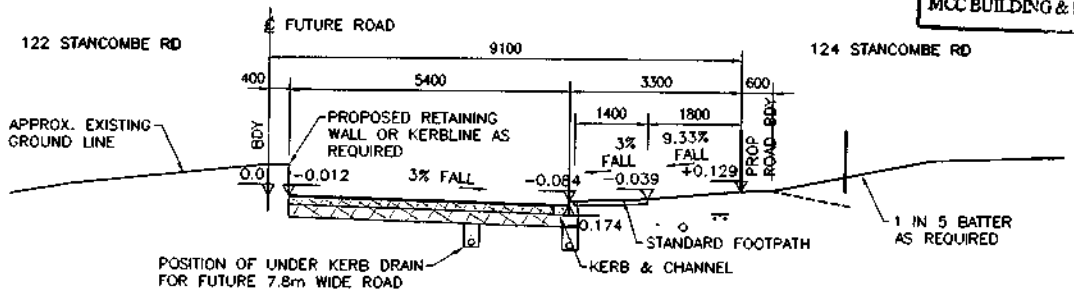


TYPICAL PROPOSED ROAD 2 CROSS SECTION

SCALE 1:100

E7/27046

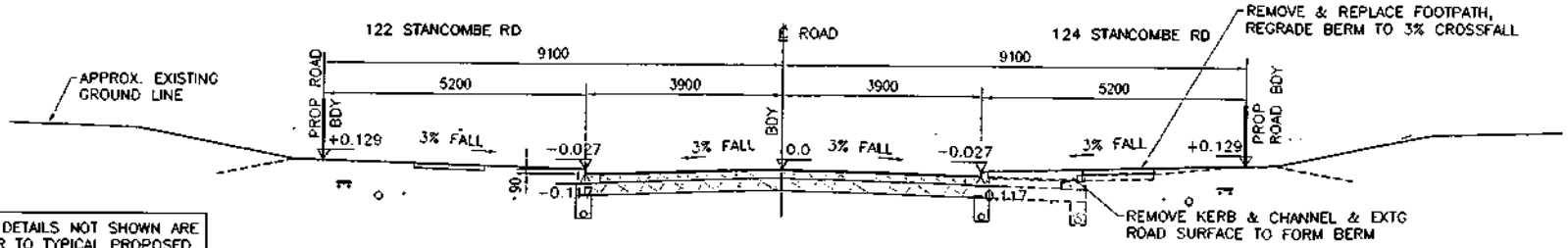
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES



NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100



NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL FUTURE PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: I.H. GIBSON (HOWICK 534 6633)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: MG
Date: SEPT 04
Scale: A3 1:100
CAD Filename:

CONSENT

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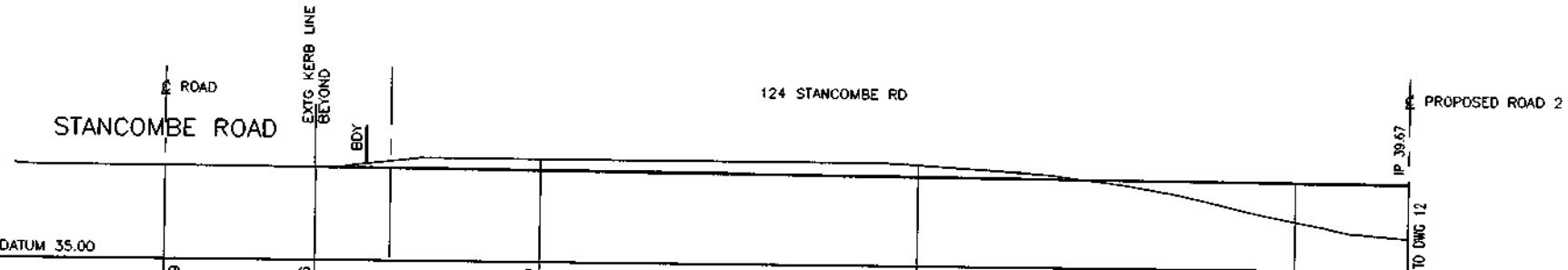
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tuhiawai, Palmerston, Hawaiki, Wanaka, Otago

Drawing Title:
TYPICAL ROAD CROSS SECTIONS

File No. A9861/5 | Rev. 2 | Dwg. No. 7



DATUM 35.00

EXISTING LEVEL	39.99	39.96	40.50	40.40	37.58	36.75
FINISHED LEVEL	39.99	39.96	39.90	39.80	39.70	39.67
CUT-/FILL+	0.00	0.00	-0.60	-0.60	+2.12	+2.92
DISTANCE	0.00	8.00	20.00	40.00	60.00	66.00
GRADIENT			0.5%			

LONGSECTION ON FUTURE CENTRELINE OF PROPOSED ROAD 1

VERT 1:250
HORIZ 1:250

ET/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER .....

MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: TH GIBSON SHOWICK 534 6520
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: HG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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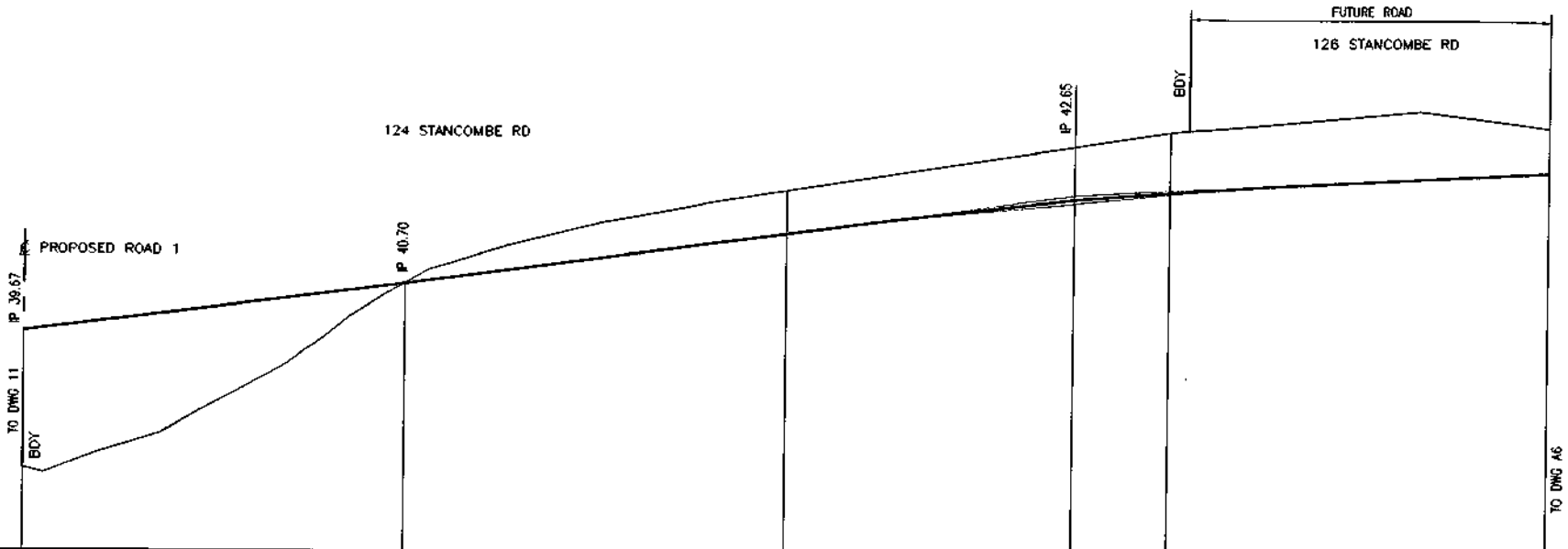
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 1
LONGSECTION

File No. A9861/5 | Rev. 2 | Dwg. No. 11



EXISTING LEVEL	36.75	40.70	42.70	43.68	44.00	44.16
FINISHED LEVEL	39.67	40.70	41.80	42.55	42.70	43.15
CUT-/FILL+	+2.92	0.0	-0.90	-1.13	-1.30	-1.01
DISTANCE	0.00	20.00	40.00	55.00	60.00	80.00
GRADIENT	5.15%	5.57%	20m V.C.		2.24%	

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

61/27046

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: I H GIBSON (HOWICK 534 8523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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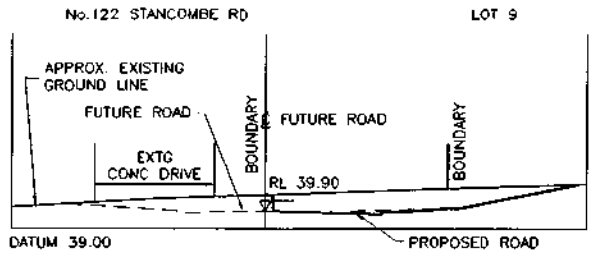
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

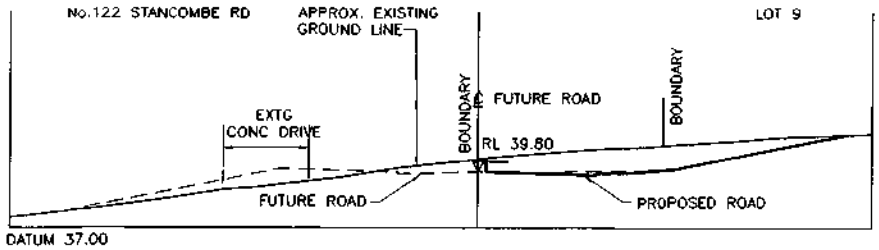
AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tuakapuna, Pasadena, Hawaii, Manukau, Ottawa

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 1

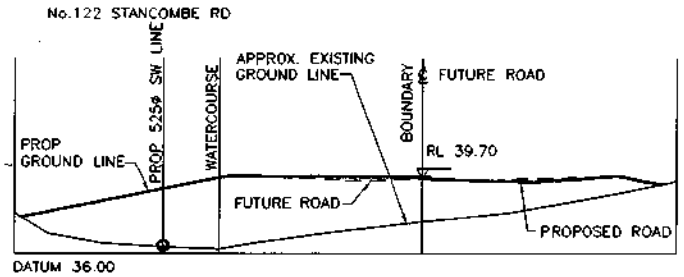
File No. A9861/5 | Rev. 1 | Dwg. No. 12



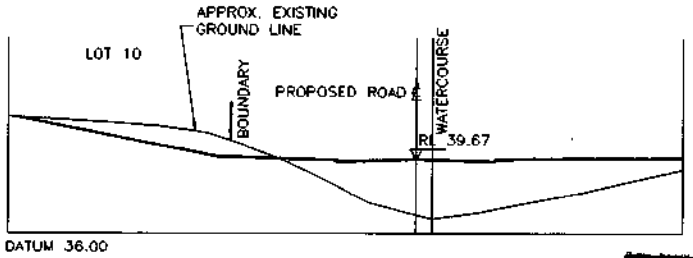
CROSS SECTION AT 20m
PROPOSED ROAD 1
SCALE 1:250



CROSS SECTION AT 40m
PROPOSED ROAD 1
SCALE 1:250



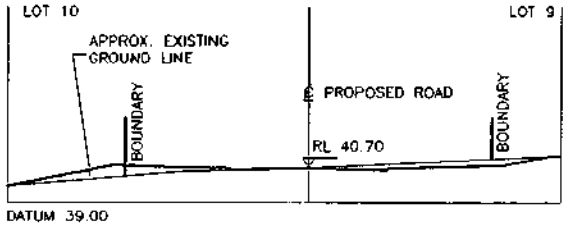
CROSS SECTION AT 60m
PROPOSED ROAD 1
SCALE 1:250



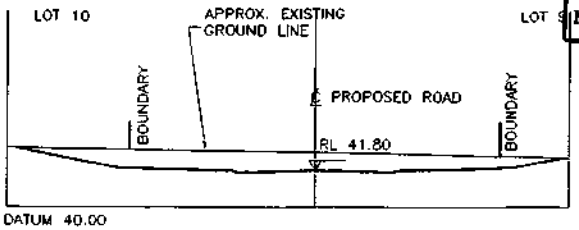
CROSS SECTION AT 0m
PROPOSED ROAD 2
SCALE 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES



CROSS SECTION AT 20m
PROPOSED ROAD 2
SCALE 1:250



CROSS SECTION AT 40m
PROPOSED ROAD 2
SCALE 1:250

No.	Revision Details	Date
2	CUON REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Design: T.H. GIBSON (HOWICK 534 6573)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: PHJ
Date: SEPT 04
Scale: AS 1:250
CAD Filename:

CONSENT

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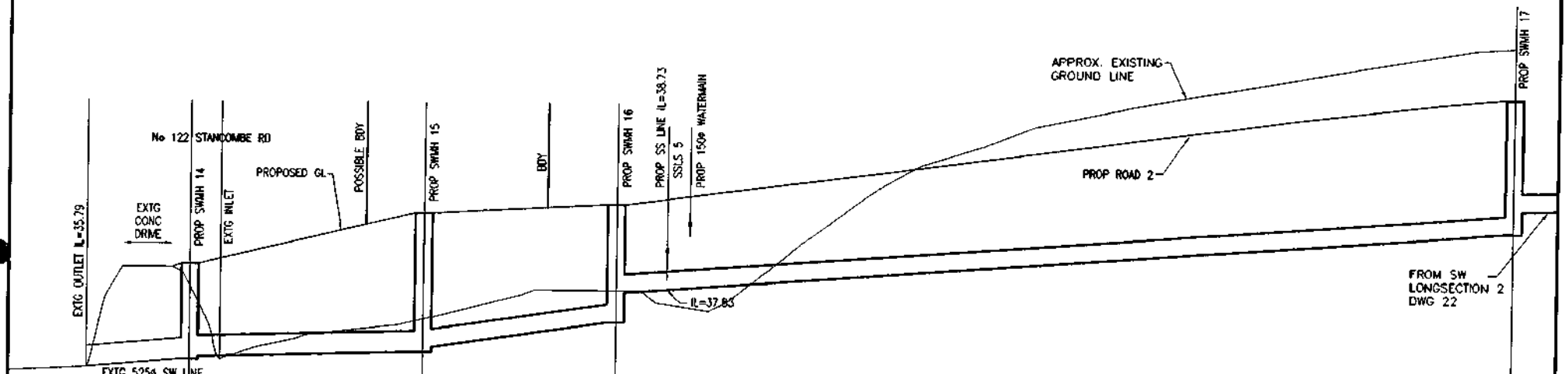
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
CROSS SECTIONS
AT 20m, 40m & 60m PROP ROAD 1
AT 0m, 20m & 40m PROP ROAD 2

File No. A9861/5 | Rev. 2 | Dwg. No. 13



DATUM 34.00

GROUND LEVEL		38.40				39.70				39.95												42.80		
INVERT LEVEL	36.00	36.07			36.22	36.35			37.00	37.75											39.44	40.01		
CUT TO INVERT	2.40	2.33			3.48	3.35			2.95	2.20											3.36	2.79		
DISTANCE		00.00				14.50				26.50											82.00			
PIPE SIZE & GRADE		14.5m OF 525ø RCRRJ CLASS X SW LINE @ 1.03% GRADE				12m OF 450ø RCRRJ CLASS X SW LINE @ 5.42% GRADE				55.5m OF 450ø RCRRJ CLASS X SW LINE @ 3.05% GRADE														

SW LONGSECTION 1

VERT 1:100
HORIZ 1:250

E7/97046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date
3	SW LS 1 REVISED, SS LINE MOVED	09/12/04
2	SW LS 1 REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/09/04

Design: I H GIBSON (HONICK 53-1 (6.75))
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: HKJ
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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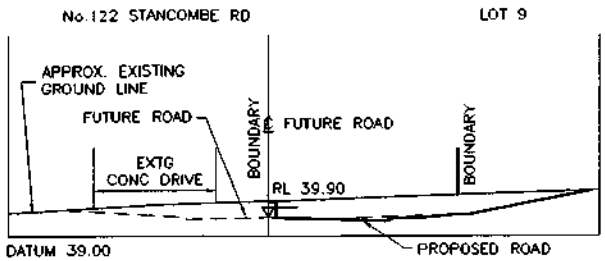
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CIVIL & ENVIRONMENTAL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Whakatane, Gisborne

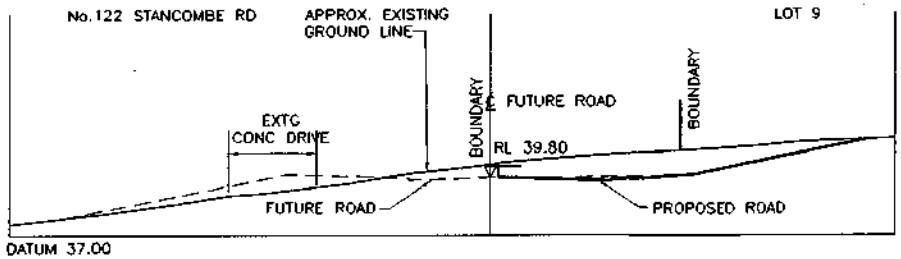
Drawing Title:
SW LONGSECTION 1

File No. A9861/5 | Rev. 3 | Dwg. No. 21



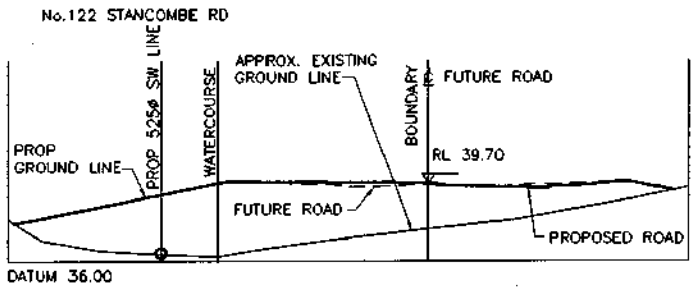
CROSS SECTION AT 20m PROPOSED ROAD 1

SCALE 1:250



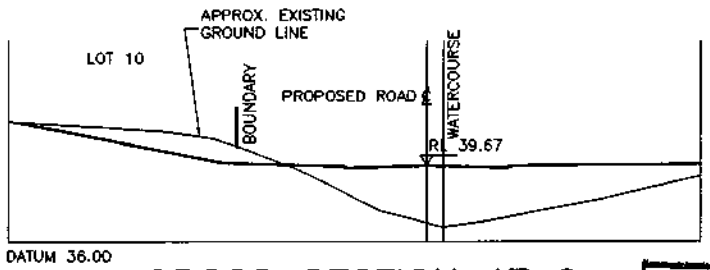
CROSS SECTION AT 40m PROPOSED ROAD 1

SCALE 1:250



CROSS SECTION AT 60m PROPOSED ROAD 1

SCALE 1:250



CROSS SECTION AT 0m PROPOSED ROAD 2

SCALE 1:250

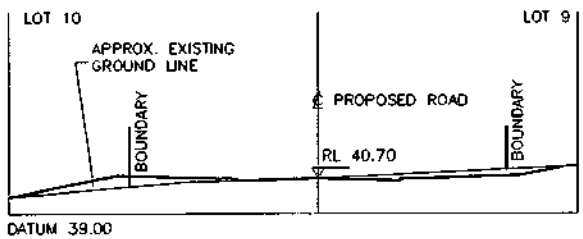
E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

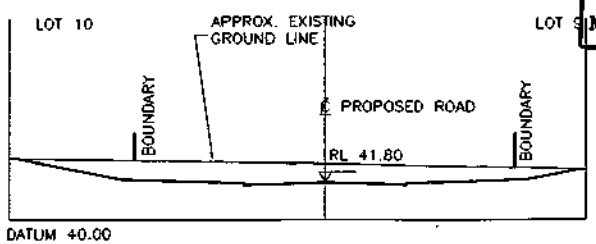
PER .....

MCC BUILDING & RESOURCE SERVICES



CROSS SECTION AT 20m PROPOSED ROAD 2

SCALE 1:250



CROSS SECTION AT 40m PROPOSED ROAD 2

SCALE 1:250

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: H GIBSON (NZIWCT 534 85/3)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: WC
Date: SEPT '04
Scale: A3 1:250
CAD Filename:

CONSENT

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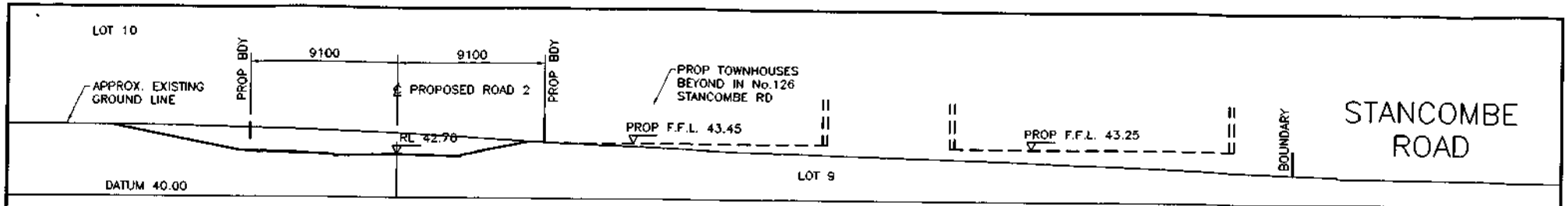
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pakuranga, Howick, Waiuku, Orewa

Drawing Title:
CROSS SECTIONS
AT 20m, 40m & 60m PROP ROAD 1
AT 0m, 20m & 40m PROP ROAD 2

File No. A9861/5 | Rev. 2 | Dwg. No. 13



CROSS SECTION AT 60m
PROPOSED ROAD 2

SCALE 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	23/10/04			

Design: I H GIBSON (HOWICK 534 6573)
Survey: EASDALE SURVEYORS LTD
Drawn: GIL/FP
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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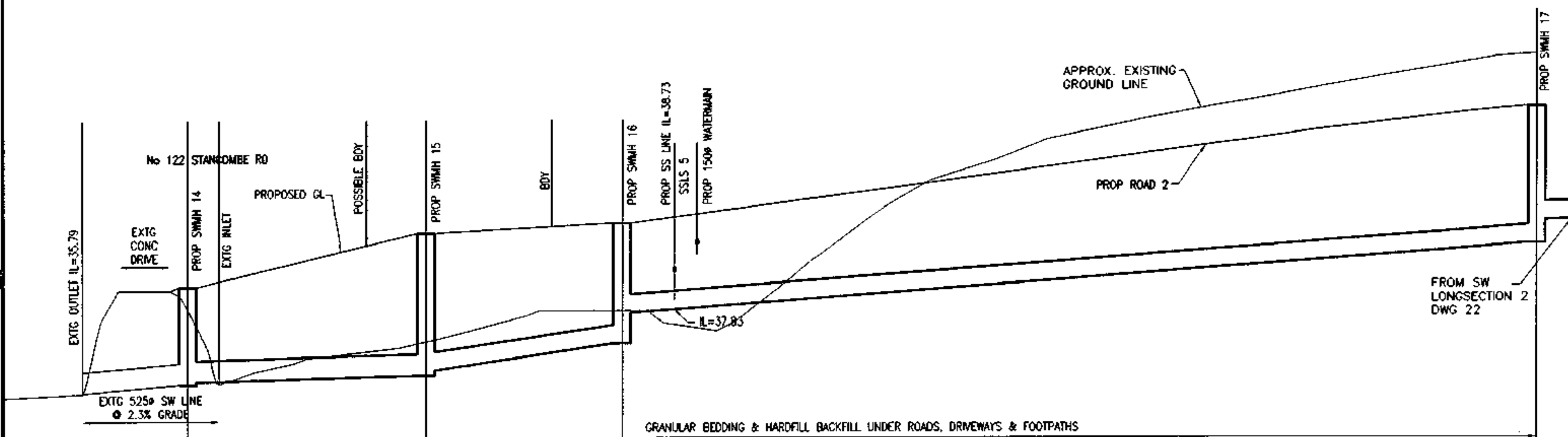
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

Drawing Title:
CROSS SECTION AT 60m
- PROP ROAD 2

File No. A9861/5 | Rev. 2 | Dwg. No. 14



DATUM 34.00

		PROP SWMH 14			PROP SWMH 15		PROP SWMH 16		PROP SWMH 17	
GROUND LEVEL		38.40			39.70		39.95		42.80	
INVERT LEVEL	36.00	36.07		36.22	36.35	37.00	37.75		39.44	40.01
CUT TO INVERT	2.40	2.33		3.48	3.35	2.95	2.20		3.36	2.79
DISTANCE		00.00			14.50		26.50		82.00	
PIPE SIZE & GRADE		14.5m OF 525ø RCRRJ CLASS X SW LINE @ 1.03% GRADE			12m OF 450ø RCRRJ CLASS X SW LINE @ 5.42% GRADE		55.5m OF 450ø RCRRJ CLASS X SW LINE @ 3.05% GRADE			

SW LONGSECTION 1

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date
3	SW LS 1 REVISED, SS LINE MOVED	10/12/04
2	SW LS 1 REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Design: IH GIBSON (HOWICK 534 6573)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: WG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
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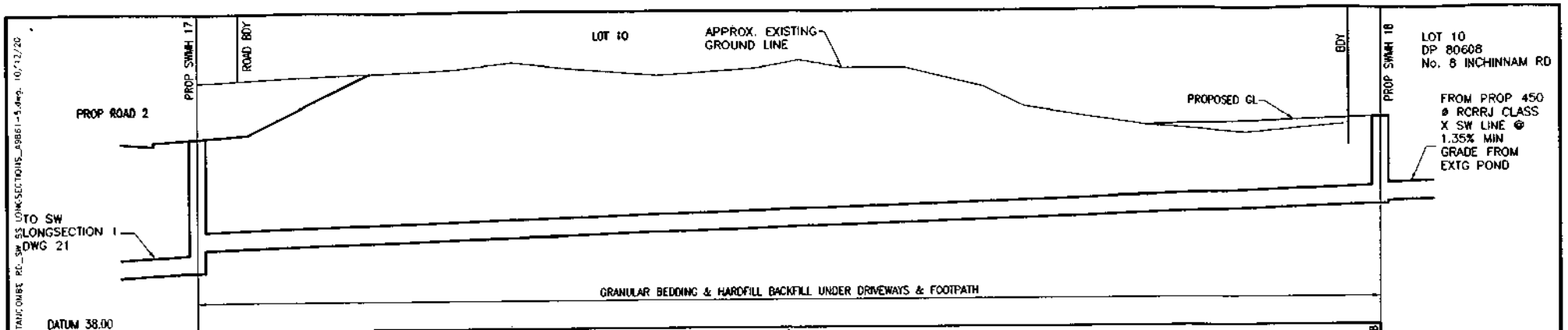
CONSENT

Job Title: PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS

Drawing Title: SW LONGSECTION 1
File No. A9861/5
Rev. 3
Dwg. No. 21



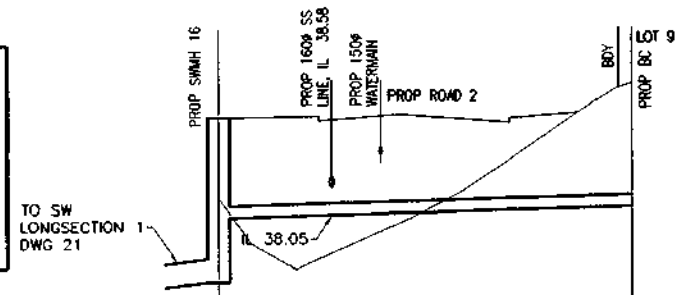
GROUND LEVEL		42.80	43.18
INVERT LEVEL	39.44	40.01	41.00
CUT TO INVERT	3.36	2.79	2.18
DISTANCE		00.00	73.00
PIPE SIZE & GRADE		73m OF 450ø RCRRJ CLASS X SW LINE @ 1.35% GRADE	

SW LONGSECTION 2

VERT 1:100
HORIZ 1:250

E1/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES



GROUND LEVEL		39.95	40.60
INVERT LEVEL	37.00	38.00	38.20
CUT TO INVERT	2.95	1.95	2.40
DISTANCE		00.00	20.00
PIPE SIZE & GRADE		20m OF 225ø RCRRJ CLASS X SW LINE @ 1% GRADE	

SW LONGSECTION 3

VERT 1:100
HORIZ 1:250

No.	Revision Details	Date
3	SW LS 3 REVISED, SS LINE MOVED	10/12/04
2	SW LS 3 REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Design: H GIBSON (NOVICK 534 5523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: WG
Date: SEPT 04
Scale: AS AS SHOWN
CAD Filename:

CONSENT

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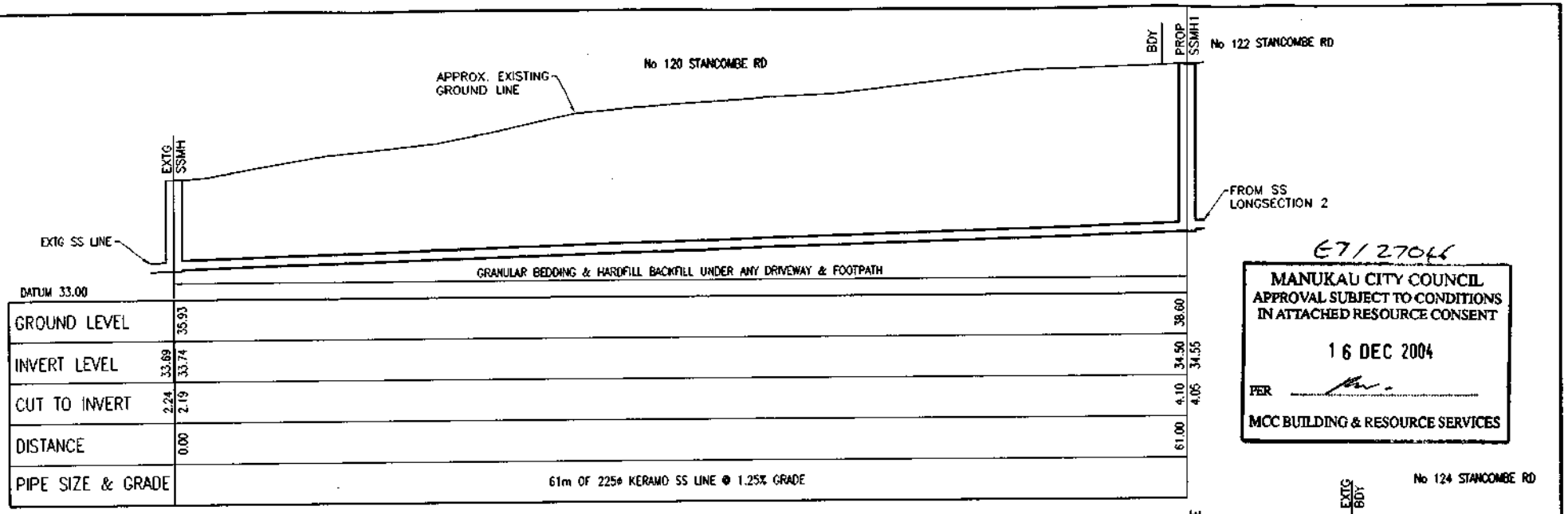
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title: SW LONGSECTION 2 & 3

File No. A9861/5 | Rev. 3 | Dwg. No. 22

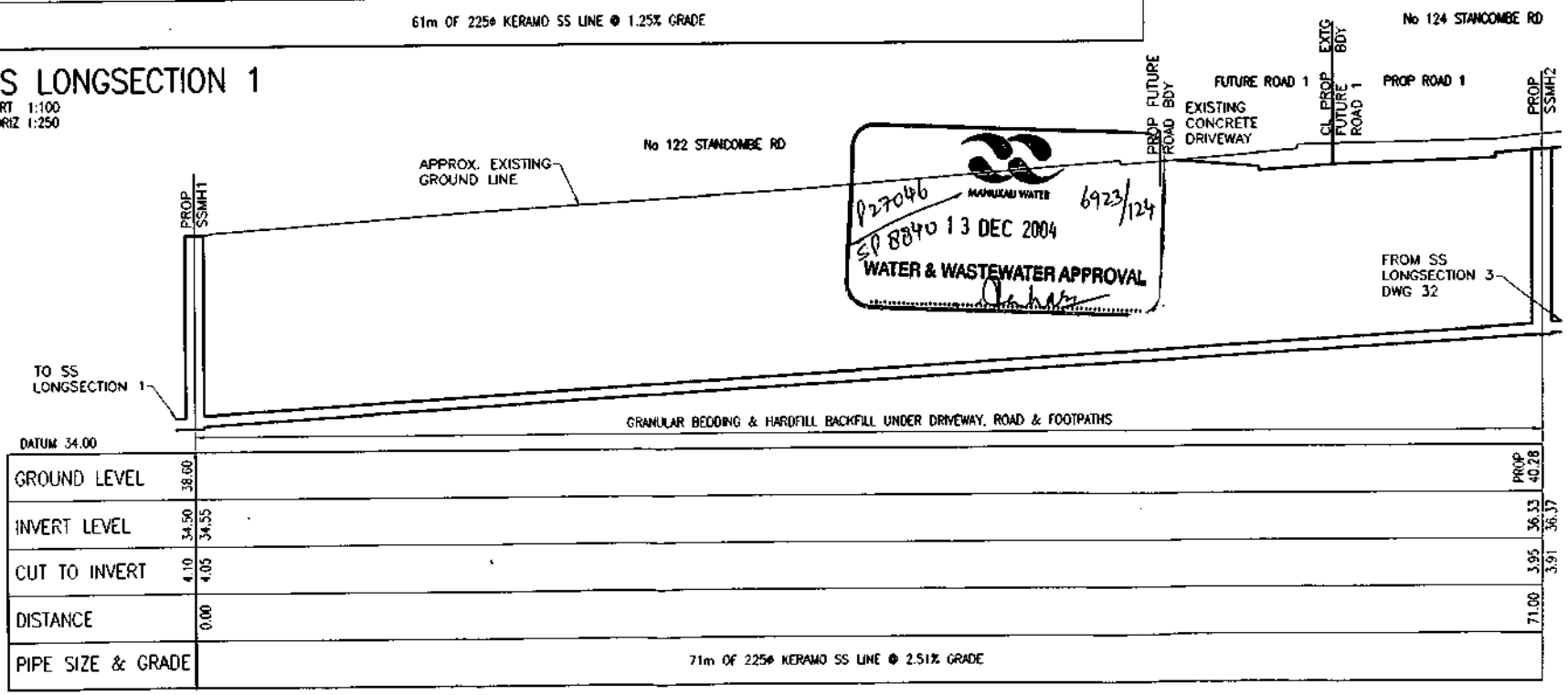


E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

SS LONGSECTION 1

VERT 1:100
HORIZ 1:250



MANUKAU WATER
P27046 6923/124
SP 8840 13 DEC 2004
WATER & WASTEWATER APPROVAL

SS LONGSECTION 2

VERT 1:100
HORIZ 1:250

No.	Revision Details	Date
3	SS LS 2 REVISED	10/12/04
2	SS LS 2 REVISED/ CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

Design: I H GIBSON (HOWICK SS4 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: HG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
CONSENT
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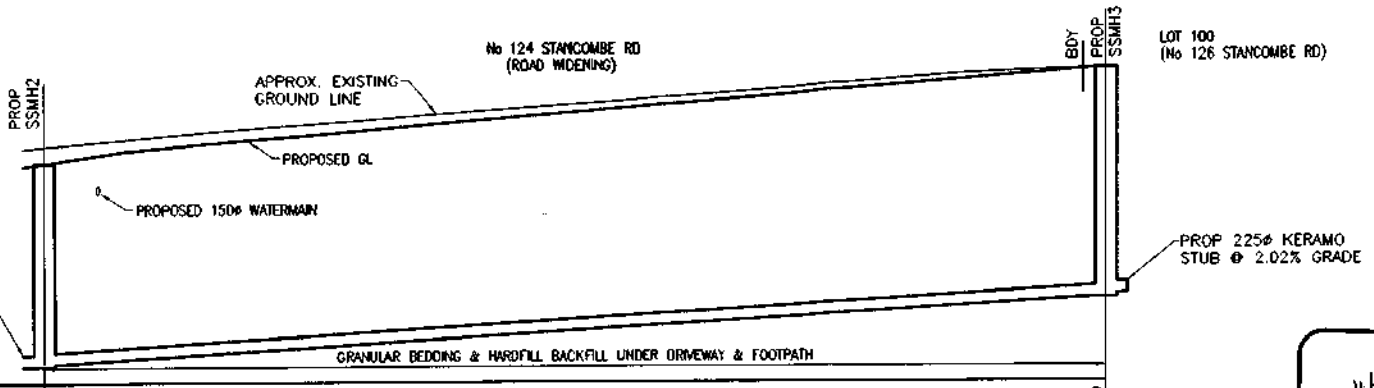
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tokoroa, Putaruru, Hawick, Hamilton, Otawa

Drawing Title:
SS LONGSECTIONS 1 & 2

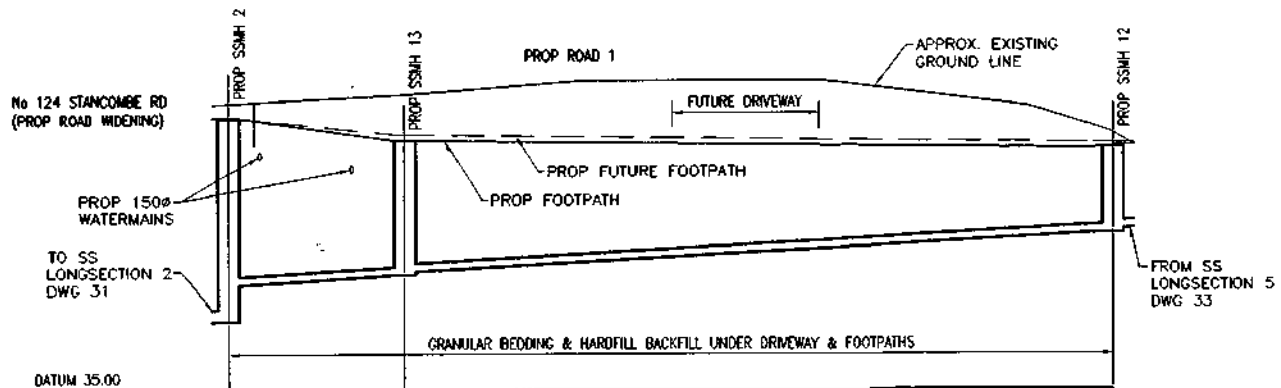
File No. A9861/5 | Rev. 3 | Dwg. No. 31



GROUND LEVEL	PROP 40.28		42.10	
INVERT LEVEL	36.33	36.37	37.63	37.70
CUT TO INVERT	3.95	3.91	4.47	4.40
DISTANCE	0.00		51.00	
PIPE SIZE & GRADE	51m OF 225ø KERAMO SS LINE @ 2.47% GRADE			

SS LONGSECTION 3

VERT 1:100
HORIZ 1:250



GROUND LEVEL	PROP 40.28		PROP 39.84		39.70	
INVERT LEVEL	36.33	37.03	37.22	37.29	38.04	38.11
CUT TO INVERT	3.95	3.25	2.62	2.55	1.66	1.59
DISTANCE	00.00		8.50		42.5	
PIPE SIZE & GRADE	8.5m OF 160ø UPVC HWSG SS LINE @ 2.24% GRADE		34m OF 160ø UPVC HWSG SS LINE @ 2.2% GRADE			

SS LONGSECTION 4

VERT 1:100
HORIZ 1:250

ET/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

27046
MANUKAU WATER
13 DEC 2004
WATER & WASTEWATER APPROVAL

No.	Revision Details	Date	No.	Revision Details	Date
3	SS LS 3 & 4 REVISED	10/12/04			
2	SS LS 3 REVISED/ CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	22/10/04			

Design: H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GLAFP
Checked: DIG
Date: SEPT 04
Scale: AS AS SHOWN
CAD Filename:
CONSENT
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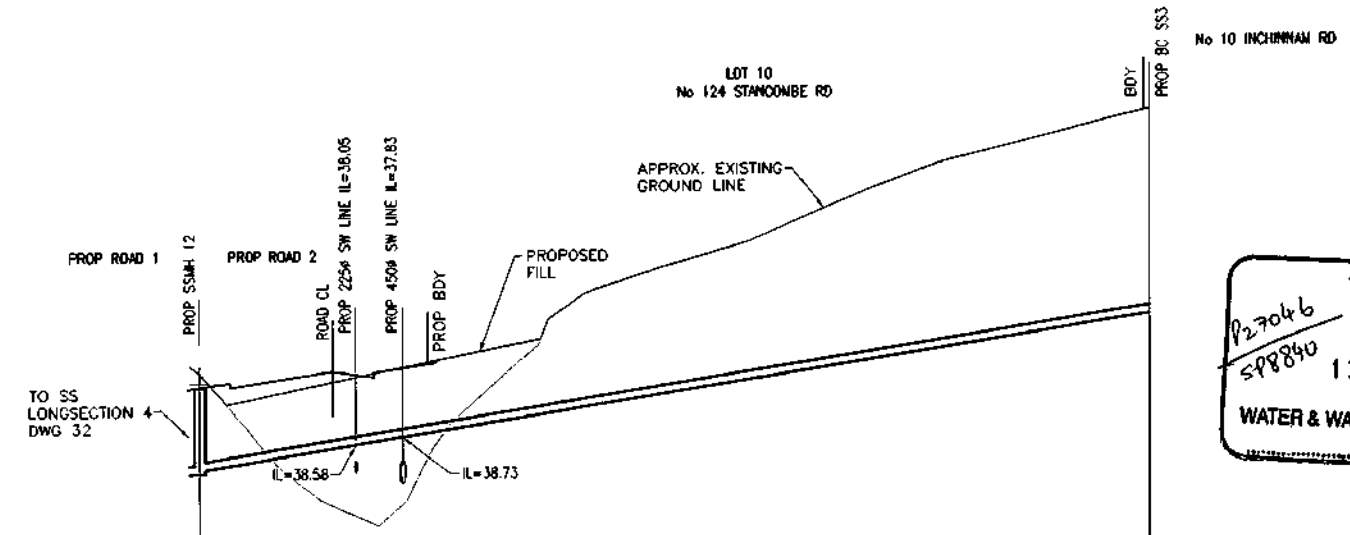
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
SS LONGSECTION 3 & 4

File No. A9861/5 | Rev. 3 | Dwg. No. 32



GRANULAR BEDDING & HARDFILL BACKFILL UNDER ROAD & FOOTPATHS

DATUM 35.00

GROUND LEVEL	PROP 39.70		45.00
INVERT LEVEL	38.04	38.11	41.06
CUT TO INVERT	1.66	1.59	3.94
DISTANCE		00.00	91.00
PIPE SIZE & GRADE		91m OF 160ø UPVC HWSG SS LINE @ 3.24% GRADE	

SS LONGSECTION 5

VERT 1:100
HORIZ 1:500

P27046
SP8840
MANUKAU WATER 6923/124
13 DEC 2004
WATER & WASTEWATER APPROVAL

E7127046
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No	Revision Details	Date	No.	Revision Details	Date
1	SS LS 5 REVISED	10/12/04			

Design: H GIBSON (BOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: HG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:
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CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

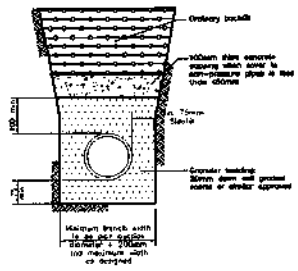
SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tauranga, Palmerston, Hamilton, Kaikoura, Oregon

Drawing Title:
SS LONGSECTION 5

File No. A9861/5 | Rev. 1 | Dwg. No. 33

SECTION 3



DESIGN FACTORS FOR USE WITH AS 2566

Bedding constant, B = 0.100
Deflection lag factor, L = 1.40
50 year tensile stress resection, f_{50} = 690 N/mm²
Modulus of soil reaction, E' = 1/(Dm/δh/em)
Y factor = 83 N/mm

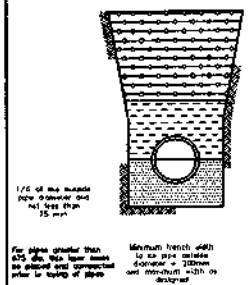
TYPICAL P.V.C PIPE BEDDING DETAIL

D1

MANUKAU WATER

MAY 1995

SECTION 3



DESIGN FACTORS TO USE WITH NZS/AS 3725

Load factor for side and narrow trench condition P_L = 1.9
Settlement ratio for wide trench condition r_s = 40.5
Projection ratio for wide trench condition p = 1.15

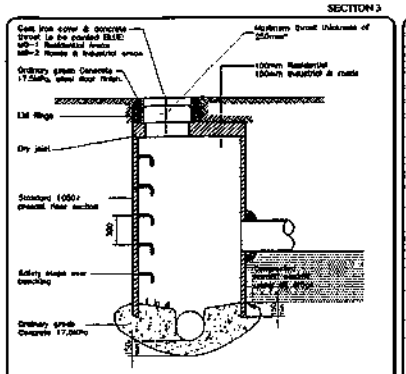
TYPICAL GRANULAR BEDDING DETAIL

D6

MANUKAU WATER

MAY 1995

SECTION 3



Note:

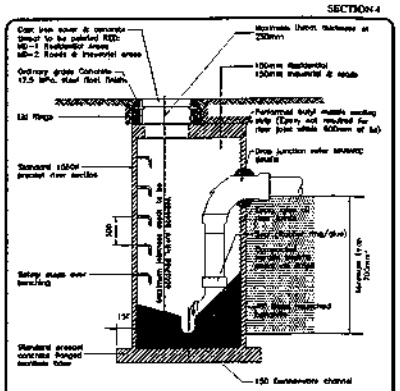
STORMWATER MANHOLE DETAIL

D5

MANUKAU WATER

OCT 1995

SECTION 4



Note:

SEWER MANHOLE DETAILS

S2

MANUKAU WATER

FEB 2001

E7/27046

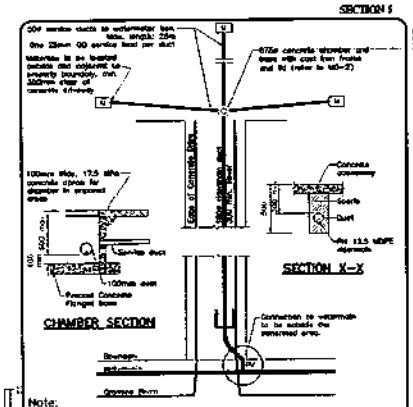
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

SECTION 5



Note:

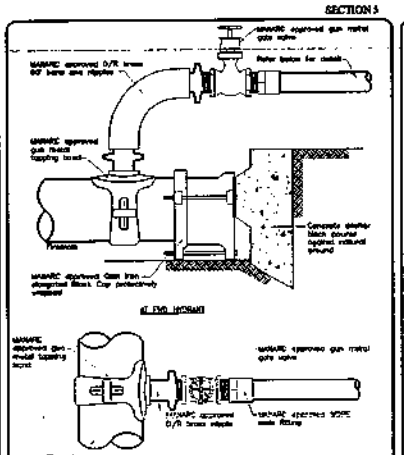
DUCTING FOR PRIVATE WAYS

W1

MANUKAU WATER

MAR 2002

SECTION 3



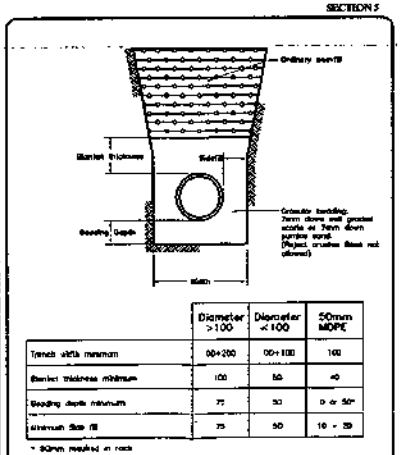
TAPPING BAND RIDER MAIN CONNECTION

W3

MANUKAU WATER

NOV 1999

SECTION 5



	Diameter >100	Diameter <100	50mm MDPE
Trench width minimum	00+200	00+100	100
Blanket thickness minimum	100	50	40
Bedding depth minimum	75	50	0 or 50*
Minimum Side fill	75	50	10 + 50

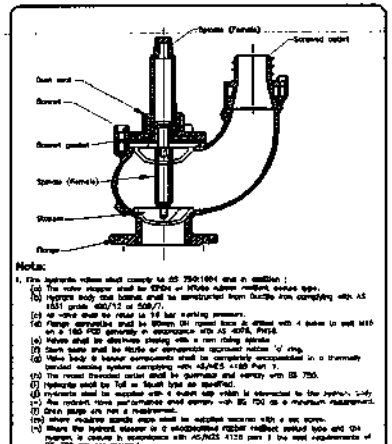
* 50mm required in rock

WATERMAIN PIPE BEDDING DETAIL

W4

MANUKAU WATER

NOV 1999



Note:

MANARC

FIRE HYDRANTS

NW9

MANUKAU WATER

No.	Revision Details	Date	No.	Revision Details	Date
2	CLIENT REVISED	15/11/04			
1	PROP ROAD 1 REPOSITIONED	27/09/04			

Design: LH DESIGN ENGINEERS SURVEYORS
Survey: FARDWIE SURVEYORS LTD
Drawn: CI
Checked:
Date: MAR 04
Scale: AS NOTED
CAD Filename:

CONSENT

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Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

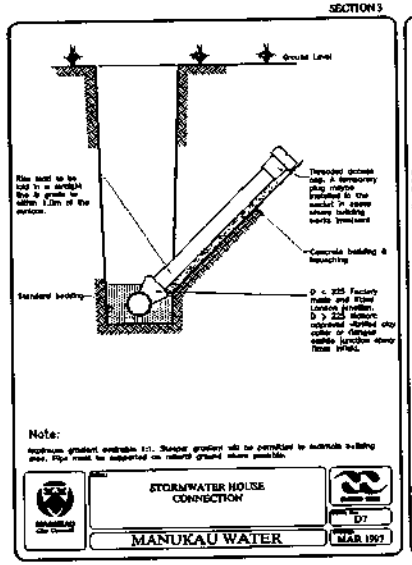
SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Telephone, Palmerston, Hawera, Wanganui

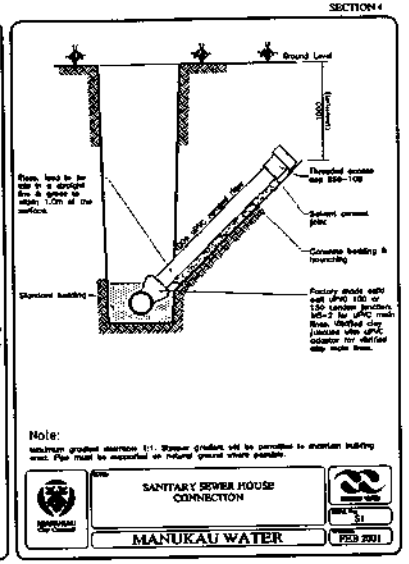
Drawing Title:
STANDARD DETAILS - SHEET 1
(D1, D5, D8, S2, W1, W3, W4, NW9)

File No. A9361/5 | Rev. 2 | Dwg. No. A1

SECTION 3



SECTION 4



E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date
1	CLIENT REVISED	05/11/04

Design
Survey
Drawn
Checked
Date
Scale
CAD Filename

CONSENT

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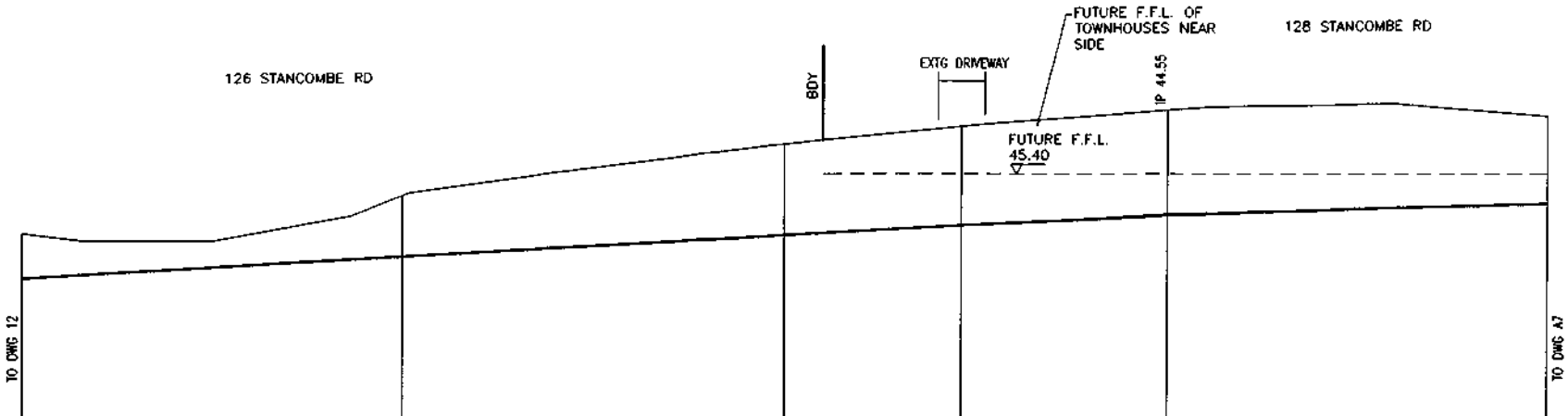
Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title.
STANDARD DETAILS - SHEET 2
(D7 & S1)

File No. A9861/5 | Rev. 1 | Dwg. No. A2



DATUM 40.00

EXISTING LEVEL	44.16	44.94	46.04	46.41	46.75	46.63
FINISHED LEVEL	43.15	43.55	44.15	44.33	44.52	44.78
CUT-/FILL+	-1.01	-1.39	-1.89	-2.08	-2.23	-1.85
DISTANCE	80.00	100.00	120.00	129.20	140.00	160.00
GRADIENT		2.24%		20m V.C.		1.12%

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT

16 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: I N GIBSON
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

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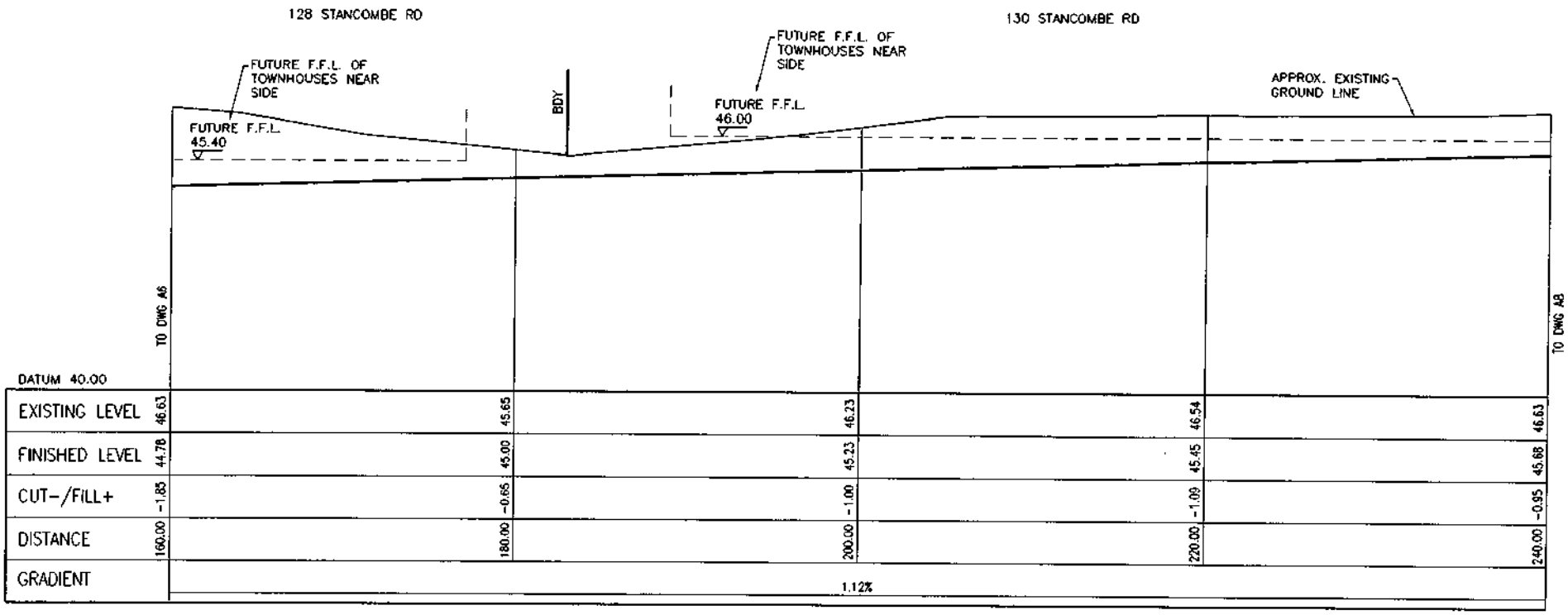
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 2

File No.	Rev	Dwg. No.
A9861/5	1	A6



PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: I H GIBSON (HOVICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT '04
Scale: AS SHOWN
CAD Filename:

CONSENT

(C) Copyright 2004 Airey Consultants Ltd

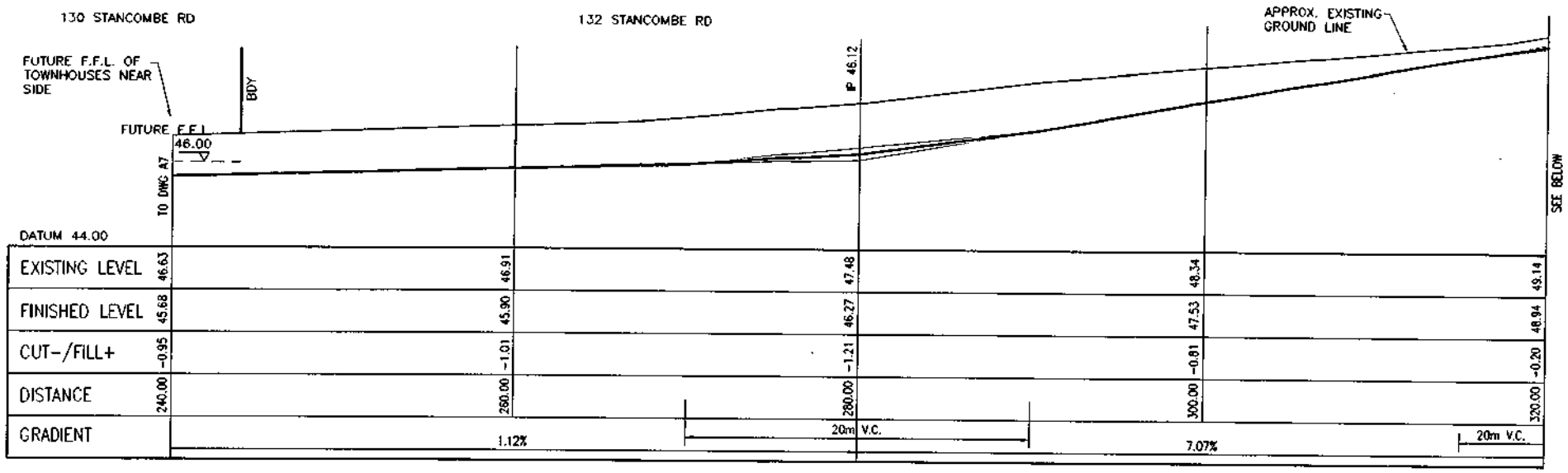
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tokoroa, Putaruru, Hamilton, Waikato, Otorohanga

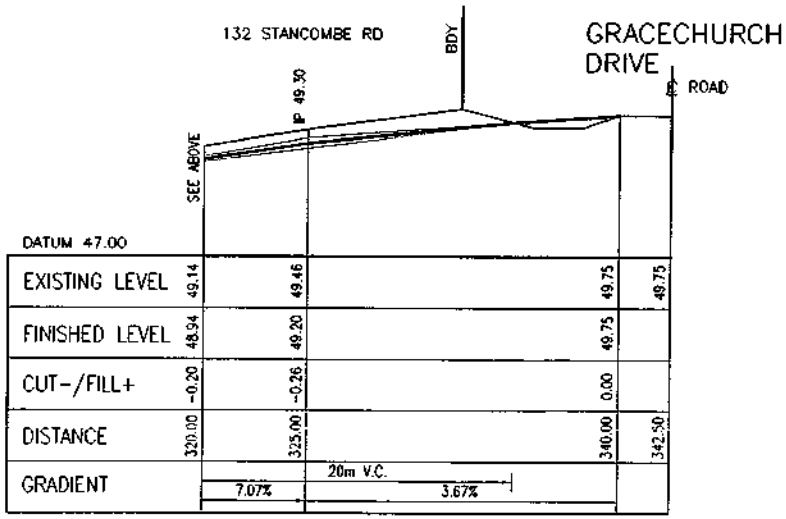
Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 3

File No. A9861/5 | Rev. 1 | Dwg. No. A7



PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250



PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

No.	Revision Details	Date	No.	Revision Details	Date
1	CLIENT REVISED	15/11/04			

Design: I H GIBSON (NOVICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: DHG
Date: SEPT 04
Scale: A3 AS SHOWN
CAD Filename:

CONSENT

(C) Copyright 2004 Airey Consultants Ltd

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 4

File No. A9861/5 | Rev. 1 | Dwg. No. A8

[redacted] [redacted]

[redacted] [redacted]

ENVIRONMENTAL SERVICES

Internal Memo

TO : **Bryce Pomfrett**

FROM : **Ryan Rose**

DATE : **14 December 2004**

REF : **P27046**

Te Kaunihera o
MANUKAU
City Council

124 Stancombe Road

*The following engineering conditions relating to the above Resource Consent application are to be carried out to the satisfaction of and at no cost to the Council. (filed G:\data\wpdata\Ryan Rose*27046 memo to CC.doc*)

Conditions

1 The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

(i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

(ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

(iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

(iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

(v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the applicant's expense.

2 The earthwork construction shall be undertaken in accordance with:

(a) The erosion and sediment control plan as detailed in the approved plans referenced E7/27046 by Council

(b) Auckland Regional Council Technical Publication 90 - TP90 Erosion and Sediment Control.

(c) The recommendations of the geotechnical report from Geotek Services Ltd (Ref 2532, dated 30 June 2004.

3 The works shall be undertaken in such a manner as to ensure that beyond the boundary of the site there should be no 'dust' or 'soil erosion / siltation', which in the opinion of the

Manager - Resource Consents & Compliance, is objectionable, offensive or has the potential to create an adverse effect on the receiving environment.

4 The applicant shall be responsible to ensure that the land within the above site and the land on adjoining properties remains stable at all times in respect to the approved works.

5 The septic tank on this site shall be removed, and the area backfilled with engineered fill to the satisfaction of the Manager – Resource Consents & Compliance.

6 Control measures shall be in place to ensure that any trucks leaving the site do not deposit soil or other debris on public roads. Any such material deposited on any public road shall be cleaned up immediately at the applicant's expense.

7 Prior to development commencing, the applicant shall provide Council's Manager - Environmental Health and Compliance with details of the level of communication with neighbouring property owners/occupiers and identification of the liaison person. The applicant shall ensure that, before commencement of the development, the owners of all adjoining properties are notified in writing of the development in general, its expected duration, the times at which it will be undertaken, and the name of a responsible person with whom neighbours can liaise if the need arises. (Any queries in the foregoing should be referred to the Manager - Environmental Health and Compliance).

8 A satisfactory foundation completion report for the site shall be submitted to Council for approval upon completion of the land modification works. Should the Land Transfer plan differ from the approved subdivision plan then the Foundation report shall be amended accordingly.

Unless the foundation completion report states that a building constructed in compliance with NZS 3604: 1999 does not need specific design for the building foundations, a record will be placed on Council's Land Information Register requiring that the recommendations of that report be complied with.

If 'Extremely Expansive Soils' [AS 2870 (1996) Class E or equivalent] or 'Specific Design Requirements' are indicated, a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 will also be required.

9 Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment area with individual connection points in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

10 Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

11 The proposed new road and accessway shall be in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

12 Street lighting facilities shall be supplied and in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

13 Road upgrading is required along the full frontage (on one half of the road only) to increase the width of Stancombe Road to that of a District Arterial Road with cycle lanes as detailed in Proposed Variation 13 Table 2 and Figure 17.10.3 Standard as defined in Rule 9.14.5.5.2 and appendix 2 of the Manukau Operative District Plan 2002. This work shall include:

(a) The vesting as Road of 3.64 metres of land being in general one half of the additional extra legal road width required.

Manukau City Council will pay compensation for the land required in excess of a collector road for Stancombe Road. (See rule 9.9.2.11(a)(viii) of the Manukau Operative District Plan 2002.) The quantum of this compensation shall be agreed with the Manager Transportation, Manukau City Council. (Chris Freke, Phone 262 5799, email cfreke@manukau.govt.nz.)

(b) The construction of a footpath along Stancombe Road as detailed on the approved engineering plans referenced E7/27046 (sheets 1-21) by Council.

14 The street trees shall be planted in accordance with the approved planting plan and maintained by the applicant for a period of one year from the date of the Section 224 certificate for the subdivision

15 Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed lots.

The applicant shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts.

16 The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

17 A Comprehensive **Stormwater Discharge** Levy of $447.00 including GST shall be paid to Manukau City Council.

The applicant is advised that this levy (FC45) has been calculated at $490.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

18 A **Stormwater** contribution of $70,002.23 including GST shall be paid to Manukau City Council.

The applicant is advised that this contribution (FC259 – Flat Bus Stormwater) has been calculated at $76,820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

19 A **Wastewater** contribution of $5,816.00 including GST shall be paid to Manukau City Council.

The applicant is advised that this contribution is made up of the following elements:

- $747.00 including GST. This contribution (FC223 – Accent Drive Embankment) is assessed at $820.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

- $5,069.00 including GST. This contribution (FC260 – Stancombe Road Wastewater) is assessed at $5,563.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

20 A **Water Supply** Contribution of $18,799.00 including GST shall be paid to Manukau City Council.

The applicant is advised that this contribution (FC231 – Flat Bush Water Supply) has been assessed at $20,630.00 plus GST per hectare for the total area of this development of 0.8100 hectares.

21 A **Roading Upgrade** contribution of $88,200.00 including GST shall be paid to Manukau City Council.

The applicant is advised that this contribution (FC266 – Stancombe Road) has been assessed at $1400 /metre road frontage plus GST for a frontage of 56 m.

22 All contribution rates shall be reassessed in accordance with the current Statistics NZ Capital Goods Price Index for Other Construction-S2GC (for the previous year) if payment is not made within 12 months of date of this consent.

Advice Notes

1 This consent does not constitute authority to build or undertake private drainage works. If you have not already done so it will be necessary for you to apply for a Project Information Memorandum and Building Consent for any proposed buildings or private drainage.

2 A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

3 The payment of the financial contributions for this site under another resource consent will satisfy the requirements of conditions 17 to 21 of this consent.

4 Each allotment is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and is not part of this consent.

5 Clause 6.B.6.1 of Council's Engineering Quality Standards manual (carriageway acceptance) in respect to Council carrying out Benklemann Beam tests at no cost to the developer has been amended to the extent that the cost of this work shall now be borne by the applicant.

6 A new road is to be vested in Council as part of this consent. Please ensure that an application is made for preferred 'road names' to, the Team Leader Resource – Compliance, for approval at time of, or prior to, application for section 223 release.

7 Although the proposed location of the earthworks do not contain any known archaeological sites, it is possible that unrecorded sites may exist. Under the Historic Places Act 1993, it is unlawful for any person to destroy, damage or modify an archaeological site unless the relevant consents have been obtained from the New Zealand Historic Places Trust. In the event of archaeological features being uncovered

(e.g. shell midden, hangi or oven stones, pit depressions, defensive ditches, artefact material or human bones) work is to cease in the vicinity of the discovery and the New Zealand Historic Places Trust and appropriate iwi authorities shall be contacted so that the appropriate action can be taken. This includes such persons being given reasonable time to record and recover archaeological features discovered before work may recommence.

Costs

1 In addition to the consent charge for this consent, and pursuant to Section 36(1)(c) of the Resource Management Act 1991, an engineering administration and inspection charge, relating to the engineering conditions of the Resource Consent will be applicable (together with administration charges relating to the release of the subdivision) by determining all reasonable and actual costs incurred by Council. The actual charges incurred in the Council's field monitoring of the engineering works will be determined at the completion of works and will be payable prior to release. The applicant will be advised of the charges as they fall due.

The aforementioned fee is in addition to the normal fees and requirements as imposed by the Manager - Building Consents & Compliance to the Building Consent.

Ryan Rose
Resource Management Engineer (Consultant)
ENVIRONMENTAL SERVICES

FINANCIAL CONTRIBUTIONS RATES LIST

Ennis

	Reference	Project Name	Defined Area or Zoning	Status	Current rate (exc GST)	Unit	FC Coverage				
							Bulk	Loc	Ext	Water quality	Flood
	FC45	Comprehensive discharge levy	Citywide	Receive Contribution	$490	/Hectare					
	FC223	Accent Drive Embankment - Wastewater		Receive Contribution	$530	/ha + connection to services					
	FC231	Flat Bush - Water supply	Residential 1 (includes transition, arterial, general, local centre and central)	Receive contributions	$20,890	/ha + connection to services MINUS agreed cost of installing watermains in existing roads					
			Residential 1 (Park edge)	Receive contributions	$40,720	/ha + connection to services MINUS agreed cost of installing watermains in existing roads					
			Residential 2	Receive contributions	$20,890	/ha + connection to services MINUS agreed cost of installing watermains in existing roads					
			Countryside Transition Zone	Receive contributions	$3,480	/ building or building site + connection to services MINUS agreed cost of installing watermains in existing roads					
			Neighbourhood centre and business	Receive contributions	$34,820	/ha + connection to services MINUS agreed cost of installing watermains in existing roads					
			Town Centre	Receive contributions	$34,820	/ha + connection to services MINUS agreed cost of installing watermains in existing roads					
			Reserve, Stormwater Managementd, conservation management	Receive contributions		on application					
	FC259	FLAT BUSH stormwater	Residential 1	Receive contribution	$75,820	/Hectare					
	FC259	FLAT BUSH stormwater	Residential 2 + Main Residential	Receive contribution	$67,730	/Hectare					
	FC259	FLAT BUSH stormwater	Flat Bush Town Centre + Neighbouring Centre+ Business	Receive contribution	$84,910	/Hectare					
	FC259	FLAT BUSH stormwater	Country Side Transition + Gracechurch Drive Special Area	Receive contribution	$14,150	/Hectare					
	R 266	No120,122,124,126,128,130,132 Stancombe Road & No 290,305 Murphys Road, No1 Gracechurch Dr	No120 Stancombe Road, Lot 1 DP 78859	Receive contribution	$1,400	Road Frontage m					
			No122 Stancombe Road, Lot 2 DP 78859	Receive contribution	$1,400	Road Frontage m					
			No124 Stancombe Road, Lot 3 DP 78859	Receive contribution	$1,400	Road Frontage m					
			No126 Stancombe Road, Lot 4 DP 78859	Receive contribution	$1,400	Road Frontage m					
			No128 Stancombe Road, Lot 5 DP 78859	Receive contribution	$1,400	Road Frontage m					
			No130 Stancombe Road, Lot 6 DP 78859	Receive contribution	$1,400	Road Frontage m					
			No132 Stancombe Road, Lot 7 DP 78859	Receive contribution	$10,610	Road Frontage m					
			No1 Gracechurch Drive, Lot 10 DP 78859	Receive contribution	$25,790	Road Frontage m					
			No290 Murphys Rd, Pt 1 DP 52878 (SO336560)	Receive contribution	$1,400	Road Frontage m					
			No305 Murphys Rd, Lot 2 DP 192770	Receive contribution	$1,400	Road Frontage m					
			No305 Murphys Road, Lot 2 DP 192770	Receive contribution	$16,010	Road Frontage m					

MANUKAU WATER

Manukau Water

INTER-OFFICE MEMO

MANUKAU
City Council

To:	Environmental Services	**Attention:**	Bryce Pomfrett
From:	Veer Khar	**Date:**	13 December 2004
Site Address:	124 STANCOMBE ROAD, FLATBUSH		
Site Ref:	6923/124 SP8840	**Proposal No:**	27046
Consent:	Subdivision	**Number of buildings / lots:**	3

Job Description:

NOTES TO CONSENT CO-ORDINATOR

1 If any condition or advice note requested herein is deemed to require amendment **that will either change the intent or value of the requirement** then please consult with the writer prior to amendment.

SUBDIVISION CONSENT

The following conditions shall be completed prior to the issue of a Section 224(c) certificate for the subdivision unless otherwise stated.

Engineering Plans

- The works detailed on the accompanying approved plans referenced _____ (sheets ___) by Council, shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

  (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

(ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

(iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

(iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact the Council's Resource Consent Compliance Team - attention _____

(v) All works on existing public wastewater drains and watermains, shall be carried out by a Manukau City Council approved licensed contractor, at the applicant's expense.

Wastewater Drainage

- Adequate provision shall be made for the disposal of wastewater.

  This will include the extension of the existing public system to / and within the site to provide each lot with individual connection points and provision for the upstream catchment. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and/or approved engineering drawings referenced _____ by Council, to the satisfaction of the Manager - Consents & Compliance, within six months of the commencement of these works **and/or** prior to the issue of the Section 224(c) certificate for the subdivision

- Adequate provision shall be made to protect wastewater lines that will be crossed over by a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled. Where clearance is less than 150mm, then 50mm thick high-density polystyrene packing shall be placed against the underside of the stormwater line. Where the clearance between the two lines is less that 300mm and bell jointed stormwater pipes shall be utilised, there shall be no bell joints placed directly over the wastewater lines.

- Adequate provision shall be made to protect wastewater lines that will cross over the top of a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled.

Water Supply

- Adequate provision shall be made for the supply of water.

  This will include the extension of the existing public system to and within the site to provide each Lot with individual connection points and provision for the upstream catchment. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and/or approved engineering drawings referenced _____ by Council, to the satisfaction of the Manager - Consents & Compliance, within six months of the commencement of these works **and/or** prior to the issue of the Section 224(c) certificate for the subdivision.

Financial Contribution

- A wastewater contribution of $774.00 including GST shall be paid to Council prior to release of the 224 Certificate.

  The applicant is advised that this contribution (FC223) (Accent Drive Embankment) has been assessed at $820 plus GST per hectare for the total area of this development of 0.8100 hectares.

- A wastewater contribution of $5069.00 including GST shall be paid to Council prior to release of the 224 Certificate.

  The applicant is advised that this contribution (FC260) (Stancombe Wastewater) has been assessed at $5,563 plus GST per hectare for the total area of this development

of 0.8100 hectares.

- A water supply contribution of $18,799 including GST shall be paid to Council prior to release of the 224 Certificate.

  The applicant is advised that the contribution (FC231) (Flat Bush Water Supply) has been assessed at $20,630 plus GST per hectare for the total area of this development of 0.8100 hectares

Advice Notes

- Note that an application for a water meter is a separate application to Manukau Water.

Land information register (1 features found)

Lirflag	Lirtype	Notice	Address	Legaldesc	Id
Y	1	FLOOD, CONTAM, DEVCON, CONTAM	124 STANCOMBE RD FLAT BUSH 1730	LOT 3 DP 78859	39310

Parcels bdy (1 features found)

Address	Owners	Legal	Share	Legal area	Cert of title	Rates acct no	Valuation	Land value	Capital value	Winc
124 STANCOMBE RD FLAT BUSH 1730	YING-TSUNG LIN, WEN-I LIN	LOT 3 DP 78859		8100	34D/637	60066281	3640009603	200000	600000	HIGH

Fc sewer (1 features found)

Fndcodeno	Id
W223	12

Fc storm (1 features found)

Fndcodeno1	Fndcodeno2	Fndcodeno3	Fndcodeno4	Id
S259				184

Fc water (1 features found)

Fndcodeno1	Fndcodeno2	Id
T231		11

Fc road (1 features found)

Fndcodeno1	Fndcodeno2	Id
R266		43

Cdc (1 features found)

Fndcodeno	Id
S45	1

Ward na (1 features found)

Wardname	Ward
Botany-Clevedon	9

MANUKAU WATER

Manukau Water

INTER-OFFICE MEMO

MANUKAU
City Council

To:	Environmental Services	**Attention:**	Bryce Pomfrett
From:	Veer Khar	**Date:**	13 December 2004
Site Address:	124 STANCOMBE ROAD, FLATBUSH		
Site Ref:	6923/124 SP8840	**Proposal No:**	27046
Consent:	Subdivision	**Number of buildings / lots:**	3

Job Description:

NOTES TO CONSENT CO-ORDINATOR

1 If any condition or advice note requested herein is deemed to require amendment that will either change the intent or value of the requirement then please consult with the writer prior to amendment.

SUBDIVISION CONSENT

The following conditions shall be completed prior to the issue of a Section 224(c) certificate for the subdivision unless otherwise stated.

ENGINEERING PLANS

- The works detailed on the accompanying approved plans referenced _____ (sheets ___) by Council, shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

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  (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

  (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

  (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact the Council's Resource Consent Compliance Team - attention _____

  (v) All works on existing public wastewater drains and watermains, shall be carried out by a Manukau City Council approved licensed contractor, at the applicant's expense.

WASTEWATER DRAINAGE

- Adequate provision shall be made for the disposal of wastewater.

  This will include the extension of the existing public system to / and within the site to provide each lot with individual connection points and provision for the upstream catchment. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and/or approved engineering drawings referenced _____ by Council, to the satisfaction of the Manager - Consents & Compliance, within six months of the commencement of these works **and/or** prior to the issue of the Section 224(c) certificate for the subdivision

- Adequate provision shall be made to protect wastewater lines that will be crossed over by a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled. Where clearance is less than 150mm, then 50mm thick high-density polystyrene packing shall be placed against the underside of the stormwater line. Where the clearance between the two lines is less that 300mm and bell jointed stormwater pipes shall be utilised, there shall be no bell joints placed directly over the wastewater lines.

- Adequate provision shall be made to protect wastewater lines that will cross over the top of a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled.

WATER SUPPLY

- Adequate provision shall be made for the supply of water.

  This will include the extension of the existing public system to and within the site to provide each Lot with individual connection points and provision for the upstream catchment. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and/or approved engineering drawings referenced _____ by Council, to the satisfaction of the Manager - Consents & Compliance, within six months of the commencement of these works **and/or** prior to the issue of the Section 224(c) certificate for the subdivision.

FINANCIAL CONTRIBUTION

- A wastewater contribution of $774.00 including GST shall be paid to Council prior to release of the 224 Certificate.

  The applicant is advised that this contribution (FC223) (Accent Drive Embankment) has been assessed at $820 plus GST per hectare for the total area of this development of 0.8100 hectares.

- A wastewater contribution of $5069.00 including GST shall be paid to Council prior to release of the 224 Certificate.

  The applicant is advised that this contribution (FC260) (Stancombe Wastewater) has been assessed at $5,563 plus GST per hectare for the total area of this development of 0.8100 hectares.

- A water supply contribution of $18,799 including GST shall be paid to Council prior to release of the 224 Certificate.

  The applicant is advised that the contribution (FC231) (Flat Bush Water Supply) has been assessed at $20,630 plus GST per hectare for the total area of this development of 0.8100 hectares

ADVICE NOTES

- Note that an application for a water meter is a separate application to Manukau Water.

The Chief Engineer
Manukau City Council
c/- Airey Consultants Ltd
PO Box 39 101
HOWICK

Attn: Building Resource Services

Dear Sir/Madam

We are writing to confirm that we grant Right of Entry to Working Concrete Ltd so that the public drainage works depicted on Airey Consultants Ltd Plan Number 9861/2 and dated 22/10/04 can be completed.

Our conditions of Right of Entry are:

1. The work programme is agreed
2. Agreed rectification works are carried out
3. Water/sewage connections provided to our property

Yours faithfully

..... (Signature) Date 4/11/2004

M. Chandler (Name)

Box 12728 (Address)

Penrose

.....

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **NA55B/978**
Land Registration District **North Auckland**
Date Issued 27 November 1984

Prior References
NA34D/636

Estate	Fee Simple
Area	8100 square metres more or less
Legal Description	Lot 2 Deposited Plan 78859

Proprietors
Team Rallysport Limited

Interests
345381.1 Encumbrance to The Manukau City Council - 14.6.1976 at 2.19 pm

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers

Pukekohe Takapuna Howick Orewa

CLIENT:	SHEET No.: 0
JOB:	JOB No.: A 9861/5
CALS. BY: 534523	DATE: 18/8/04

Stormwater Drainage
for
124 Stancombe Rd,
East Tamaki

Contents

	Page
Desig	1-2
Catchment Plan	3
Front / Rear site design	4

deedprint.co.nz 32577

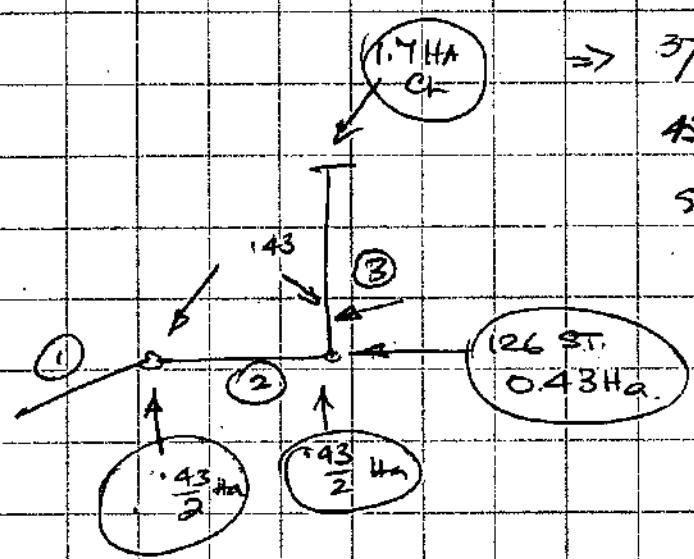
Stormwater Design.

(1) Area 3.05 Ha.

$Q_p = .235 \times C \times 3.05$ Ha.

— Country living 1.7 Ha. C = 0.40
— High Intensity 1.35 C = 0.9

$Q_p = .235 \times .4 \times 1.7 = 160$
$+ .9 \times .235 \times 1.35 = 286$
446 l/s



⇒ 375 ø @ 5.8%
450 ø @ 2.3% (v = 2.77)
525 ø @ 1% (v = 1.95 m/s)

(2) Catchment 1.7 H CL ; 1.2 HI

deedprint.co.nz 32577

$Q_p = .235 \times .4 \times 1.7 = 160$

$+ .235 \times .9 \times 1.2 = 254$

414 l/s.

$\Rightarrow$ 375ϕ @ 5%

450ϕ @ 1.95%

(3) Catchment 1.7 H CL = 160 l/s.

+ .43 HI + .43 Hh = 91 l/s

$= .235 \times .9 \times .43 = 91$

251 l/s

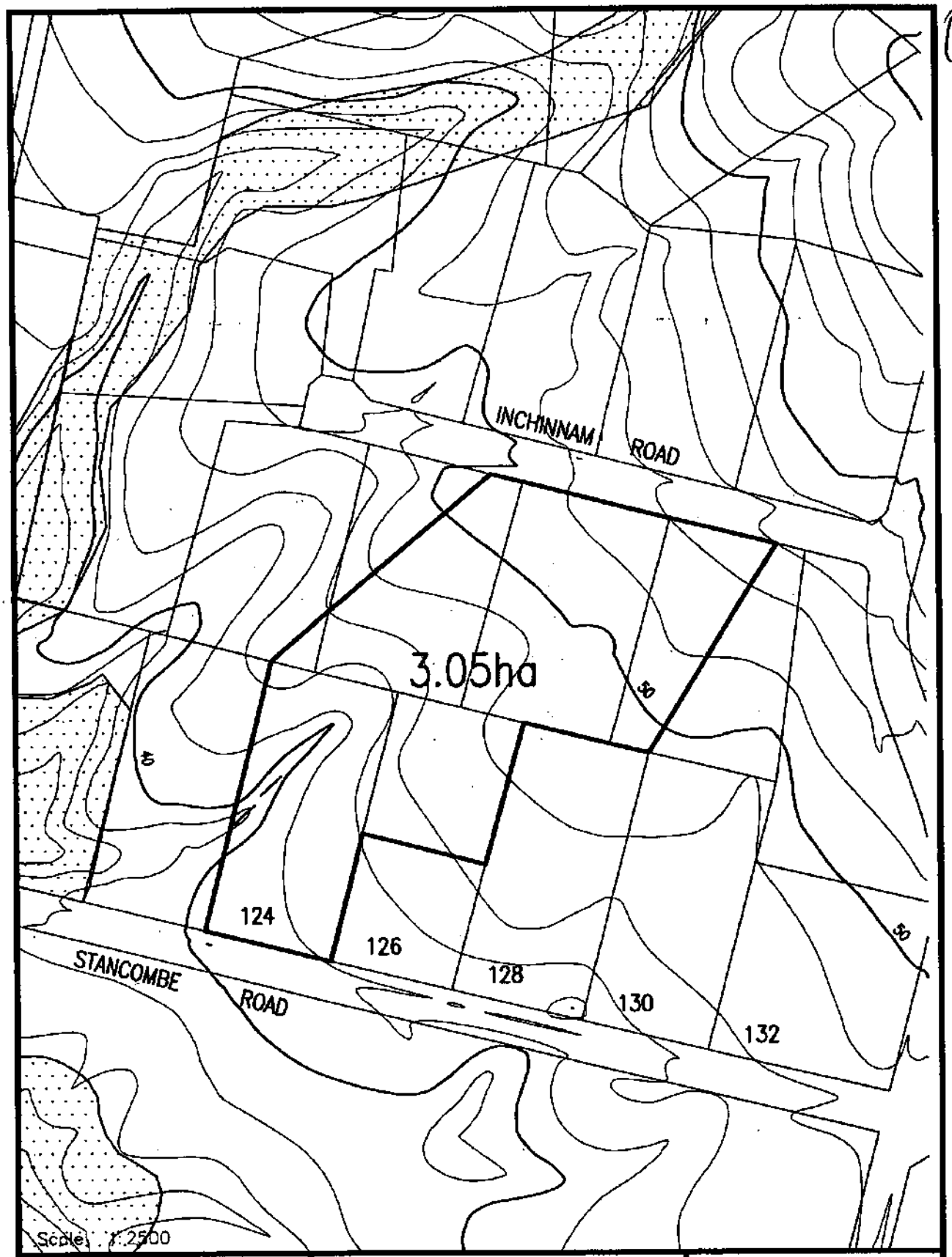
+ 91

342 l/s

$\Rightarrow$

375ϕ @ 3.5%

450ϕ @ 1.35%



AIREY CONSULTANTS LTD

Member of the D.N. BOAK CONSULTANT GROUP

ACENZ

CONSULTING CIVIL & STRUCTURAL ENGINEERS
Pukekohe, Takapuna, Hewlok, Waiuku, Orewa

CATCHMENT PLAN

124 STANCOMBE ROAD
EAST TAMAKI

File No.	Sht. No.
A9861/5	1 – 1

CAD Filename: RAYMOND

Stormwater Design

(1) Front site Area 52.5 x 43
= 2260

Qp = .235 x .9 x .2260
= 47.80
⇒ 225ϕ @ 1%

(2) Rear site Area = 68.5 x 61 = 4179

Qp = .235 x .9 x .4179 = 88.3 l/s

⇒ 300ϕ @ .74%
225ϕ @ 3.4%

dataprint.co.nz.32577

Customer Centre.

Environmental Services

22 December 2004

Carlos Concepts Ltd
C/- Working Concepts Ltd
P.O. Box 58-395
Greenmount

Attention: Sandy Heard

Dear Madam

DECISION ON APPLICATION FOR LAND USE RESOURCE CONSENT

Applicant: Carlos Concepts Ltd

Application: Discretionary Activity for removal of 8 protected trees from the site at **122 Stancombe Road**, Flat Bush being:

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

Restricted Discretionary Activity for works with the potential to impact onthe root system of an Elm tree, and Chestnut Tree.

Discretionary Activity for removal of 4 protected trees from the site at **124 Stancombe Road**, Flat Bush being:

- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)
- Moreton Bay Fig (*Ficus macrophylla*) – consent given retrospectively

And a group of inextricably linked protected trees including species of Karaka, Totara, Puriri, Ti Kouka, Kauri, Kahikatea, Rewarewa, Taraire, and Kohehohe.

Site: 122 and 124 Stancombe Road, Flat Bush

Legal Description: Lots 2 and 3 DP 78859

---

122 and 124 Stancombe Road
Flat Bush
Proposal No: 27373

Zoning: Flat Bush Residential 1 (General Precinct) – Proposed Variation 13 to the Manukau Operative District Plan 2002.
Future Development (Stage One) (Manukau Operative District Plan 2002)

Proposal No: 27373

DECISION

I wish to advise that consent for the above application was granted on 22 December 2004 under delegated authority and pursuant to Sections 104, 104B and 104C of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

(1) That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

(2) That the removal of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 shall be limited to the following trees on the following sites:

122 Stancombe Road, Flat Bush

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

The above trees being those identified in the Arboricultural Report submitted with the application by the Specimen Tree Company dated 14 December 2004.

124 Stancombe Road, Flat Bush

- Moreton Bay Fig (*Ficus macrophylla*)
- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)

The above trees being those numbered 23-27 as detailed in the Arboricultural Report submitted with the application by the Specimen Tree Company dated 30 June 2003.

(3) Prior to any land modification works, tree removal, or works proximate to protected trees on the site (for trees not approved for removal by this consent) a suitably qualified arborist shall clearly identify to all contractors, and sub-contractors who are to be working on the site those trees which are approved for removal by this consent, and those trees which shall be protected during all land modification and construction works.

(4) A copy of this resource consent shall be retained on site at all times during all land modification and tree removal works.

(5) Prior to any tree removal a temporary protective fence shall be erected to protect the Elm tree, and Chestnut Tree identified on the plans submitted and numbered 27373 by the Council (attached to and forming part of this consent) and any other protected trees proximate to the area of land modification and tree removal works. The extent and location of this temporary protective fencing shall be overseen by a suitably qualified arborist. These trees being identified in the Arboricultural Report submitted with this application by the Specimen Tree Company Ltd dated 14 December 2004.

(6) The area within the dripline of trees identified in condition (5) above shall be treated as a total exclusion zone which requires:

- No entry into the protected areas unless approved by a suitably qualified arborist appointed by the consent holder;
- No storage of diesel, cement, building materials, site offices, or topsoil or any other construction materials within the protected areas;
- No spillages of any substances within the protected areas;
- No alteration of the extent of the protective fencing unless prior approval is given by a suitably qualified arborist;

(7) The temporary protective fencing referred to in condition (5) above should be constructed from a rigid material (e.g. plywood or corrugated iron) attached to a sturdy framework of freestanding scaffolding or posts. This fencing shall be maintained at all times during all land modification and tree removal works.

(8) Any pruning works necessary to any protected trees on the site in conjunction with any land modification or tree removal works shall be undertaken by a suitably qualified arborist in accordance with accepted arboricultural practice.

(9) Tree removal operations shall be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

(10) Prior to commencement of any tree removal on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

(1) In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date of commencement of the consent, unless the consent is given effect to before the end of that period. However, the Council does have the power to extend this period in certain cases where an application under Section 125 is made prior to the consent lapsing.

REASONS FOR THE DECISION

1. The conditions imposed on this consent are in accordance with the recommendations of the Specimen Tree Company Ltd reports dated 30 June 2004 and 14 December 2004.

2. Removal of all trees identified in this resource consent are necessary for either road construction works on the site at 124 Stancombe Road, Flat Bush, or for land modification works necessary in association with the construction of this road, or any network utility service provision in conjunction with construction of this road.

3. Proposed Variation 13 to the Manukau Operative District Plan envisages that this site be available for residential development of a medium / high density. Whilst this requires removal of a number of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 it is considered these works are necessary to fulfil the ultimate intention of residential development of the site provided under Variation 13 to the Manukau Operative District Plan.

COSTS

1. Your deposit of $562.50 already paid has been deducted from the total costs.

2. The aforementioned fee is in addition to the normal fees and requirements as imposed by the Manager - Building Consents for the Building Consent.

RIGHT OF OBJECTION

Within 15 working days of receipt of this decision (commencement date stamped below) you may lodge an objection to the decision pursuant to Section 357(2) of the Resource Management Act 1991. Any such objection shall be made by notice in writing to the Council setting out the reasons for the objection and the relief sought.

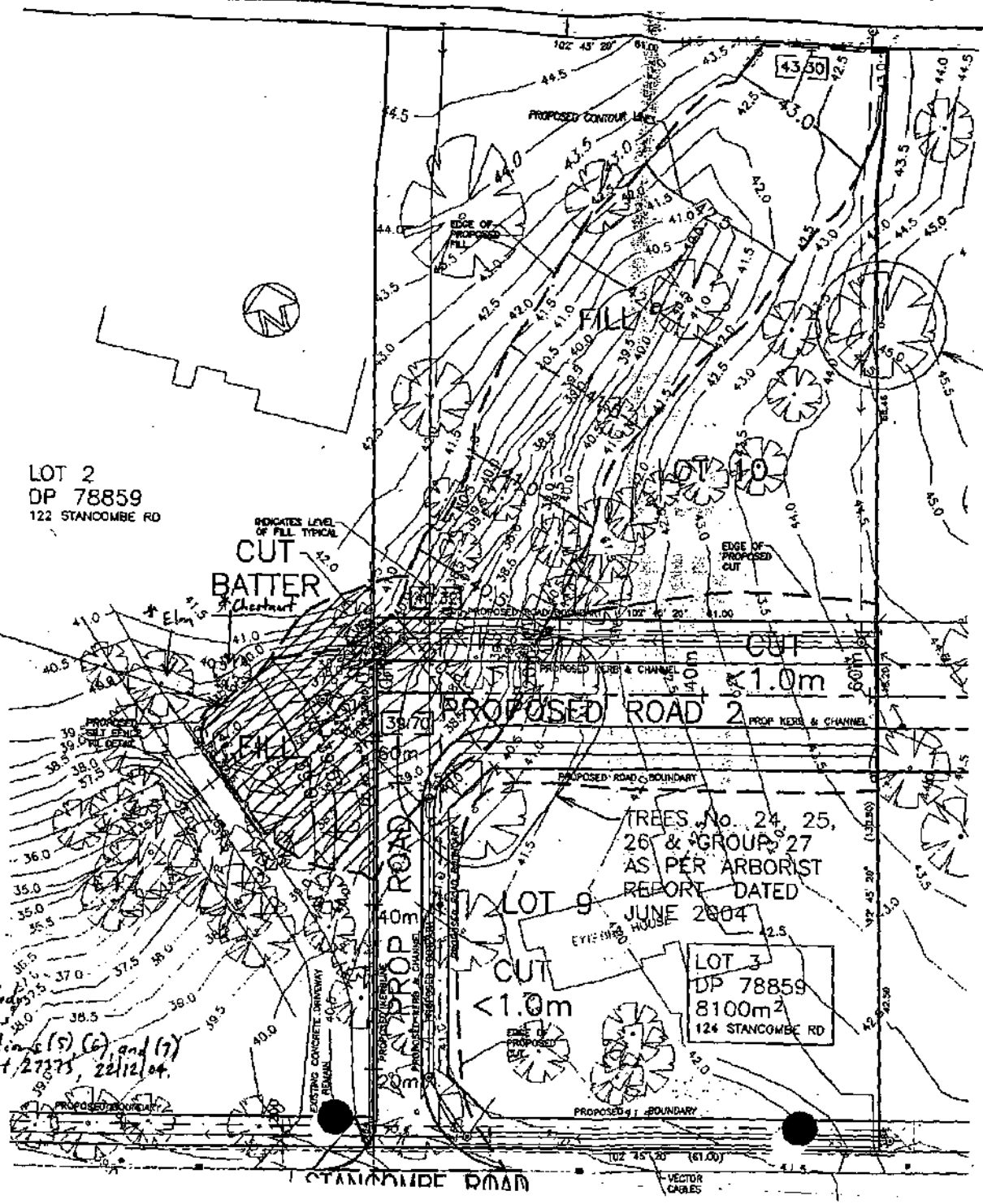
Should you have to enter into any future correspondence, building consent applications, or enquiries relating to this consent, could you please ensure that you include the file reference at the foot of page one of this letter.

Yours faithfully

Date 23/12/2004
Commencement of 15 Working Days
RE : S 357 RM Act 1991

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

27373



TREE No. 23

NOTE: EXISTING RESOURCE CONSENT SP8840 ALLOWS REMOVAL OF TREES No. 16–22 AS PER ARBORIST REPORT DATED SEPTEMBER 2004

* Trees to be protected during site works. Refer to Conditions (5), (6), and (7) of resource consent 27373, 22/12/04.

No.	Revision Details	Date

© Copyright 1989 Airey Consultants Ltd

Drawing Title:
PART SITE PLAN

Job Title:
PROPOSED TREE REMOVAL FOR CARLOS CONCEPTS LTD 124 STANCOMBE ROAD FLAT BUSH

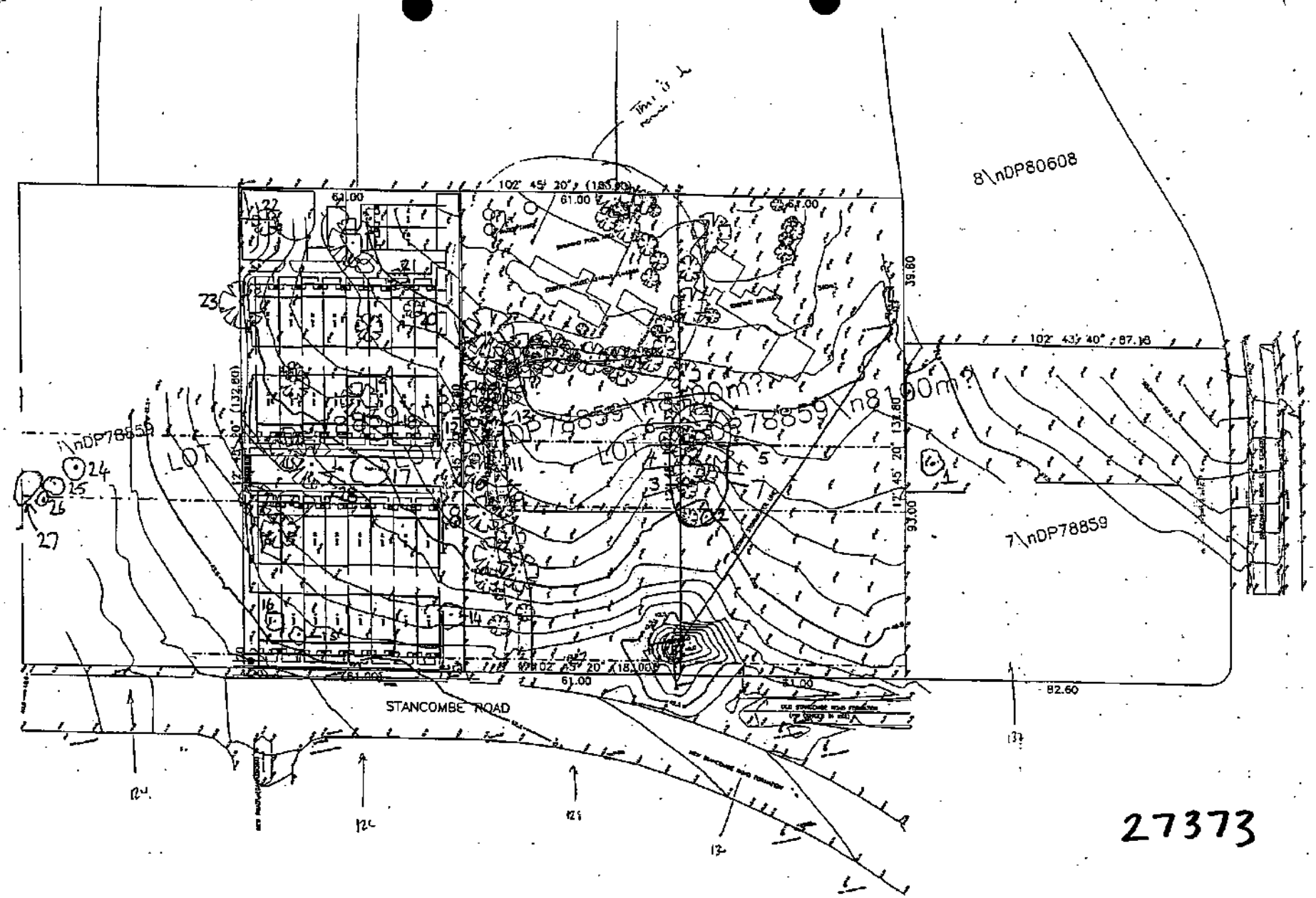
AIREY CONSULTANTS LTD.

Design: I H GIBSON
Survey: EASTALE SURVEYORS LTD
Drawn: UIF
Checked: HG
Date: NOV '04
Scale: AS 1:500
CAD Filename:

CONSENT

Original Size:

File No.	Rev.	Sheet No.
A9861/5	–	1A



27373

Report Dated

LIS255.v2.1 RC1 - Resource Consent Application Maintenance 21.12.04

Proposal No. 27373 Internal ID 28925

01) Desc TREE REMOVAL
02) Applicant Name CARLOS CONCEPTS LTD
03) Address 1 PO BOX 27029
2 WELLINGTON
3 Att: Mr Robert Cummins
04) Agent Name WORKING CONCEPTS LTD
05) Address 1 PO BOX 58395
2 GREENMOUNT
06) Agent Address Flag Y
07) Monthly Billing
08) Contact sandy 2713007
09) Date Received 21.12.04
10) Consent Type LU Land Use
11) Deposit Fee $562.50
12) Misc.
13) Involved Properties
14) File/SP RefNo 6923/124
1 6923/124 124 STANCOMBE RD
16) Meeting Date
2 6923/122 122 STANCOMBE RD
17) Meeting Time
* More Property Details of 6923/124
18) Team No 3 Team 3
Legal Description
Zone Ward
LOT 3 DP 78859
RURAL 3 CLEVEDON

Enter screen-ref(nn) to modify, FI to file, HCOPY, DELETE, RCn, or EX : .....

CRM Number: 0078476

CRM Client: Carlos Concepts Ltd

Project: ☑ tick Ref 12 #: ☐ tick

DEPOSIT RC #: 004609

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

22/12/2004 10:04 Trn 137358
Cashier RBELL

SUNDRY-INVOICES
Invoice Number RC004609 $562.50

124 STANCOMBE RD

Subtotal $562.50
Total $562.50

Payer: SHUTTLEWORTH PROPERTIES LTD
Received CHEQUE $562.50
Cheque # 456365
Change $0.00

All charges are GST inclusive. Please retain this receipt for your records

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC004609

Invoice Date: 21 Dec 2004
Customer No: 0078476
Charge Ref: RC27373
Order No

Carlos Concepts Limited
PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5455*

Description	Quantity	Unit Price	Amount
PRC27373 124 Stancombe Rd, Clevedon			
Deposit	1.00 Each	500.00	500.00

Sub Total	$500.00
GST	$62.50
AMOUNT DUE	**$562.50**

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE 20 Jan 2005

ASB BANK

ASB BANK LIMITED
BUSINESS BANKING

Date 21-12-04

Pay Manukau City Council or ~~bearer~~

The sum of Five Hundred sixty two dollars fifty cents $562-50

SHUTTLEWORTH PROPERTIES LTD

3209 CHEQUE DUTY PAID

your payment by
CITY. Payment
USE, MANUKAU

0078476
RC004609
RC27373

0 Jan 2005
$562.50

⑈456365 ⑈123030⑆ 0642577⑈00 ⑈

LIS255.v2.1 RC1 - Resource Consent Application Maintenance 21.12.04

Proposal No. 27373 Internal ID 28925

01) Desc TREE REMOVAL
02) Applicant Name CARLOS CONCEPTS LTD
03) Address 1 PO BOX 27029
2 WELLINGTON
3 Att: Mr Robert Cummins
04) Agent Name WORKING CONCEPTS LTD
05) Address 1 PO BOX 58395
2 GREENMOUNT
06) Agent Address Flag Y
07) Monthly Billing
08) Contact sandy 2713007
09) Date Received 21.12.04
10) Consent Type LU Land Use
11) Deposit Fee $562.50
12) Misc.
13) Involved Properties
14) File/SP RefNo 6923/124
1 6923/124 124 STANCOMBE RD
16) Meeting Date
2 6923/122 122 STANCOMBE RD
17) Meeting Time
* More Property Details of 6923/124
18) Team No 3 Team 3
Legal Description
Zone
Ward
LOT 3 DP 78859
RURAL 3
CLEVEDON

Enter screen-ref(nn) to modify, FI to file, HCOPY, DELETE, RCn, or EX : .....

CRM Number: 0078476

CRM Client: Carlos Concepts Ltd

Project: ☑ tick Ref 12 #: ☐ tick

DEPOSIT RC #: 004609

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

copy

22/12/2004 10:04 Trn 137358
Cashier RBELL

SUNDRY INVOICES
Invoice Number RC004609 $562.50

124 STANCOMBE RD

Subtotal $562.50
Total $562.50

Payer: SHUTTLEWORTH PROPERTIES LTD
Received CHEQUE $562.50
Cheque # 456365
Change $0.00

All charges are GST inclusive. Please retain this receipt for your records

PeopleSoft.

6923/124 27373

Item Maintain | Item Activity

Unit: MCCRC **Customer:** 0078476 0078476 **Status:** Closed

Item ID: RC004818 **Name:** Carlos Concepts Limited **Days Late:** 72

Balance: 0.00 **Currency:** NZD **Display:** 0.000 **Currency:**

Item Activities Find | View All First 1-2 of 2 Last

Sequence: 1 **Acctg Date:** 18/01/2005 **Posted Date:** 19/01/2005

Entry Type IN **Reason:** SUND **Reason Code:** **Voucher ID:** **Unpost Reason:**

Document: **Amount:** 120.94 **Currency:** NZD

Group Unit: MCCRC **Group ID:** 4979 Billing **Display Amount:** 0.000 **Currency:**

Sequence: 2 **Acctg Date:** 29/04/2005 **Posted Date:** 04/05/2005

Entry Type PY **Reason:** **Reason Code:** **Voucher ID:** **Unpost Reason:**

Document: **Amount:** -120.94 **Currency:** NZD

Group Unit: MCCSS **Group ID:** 120645 Payment

Deposit Unit: MCCSS **Deposit ID:** 8028 **Payment ID:** 100019 **Display Amount:** 0.000 **Currency:**

OK | Cancel | Apply

Item Maintain | Item Activity

Proposal No: **27046** File Ref: **SP8840**

SITE ADDRESS **124 STANCOMBE RD FLAT BUSH**
WARD **CLEVEDON**

LEGAL DESCRIPTION
LOT 3 DP 78859

APPLICATION: **TWO LOT FEE SIMPLE SUBDIVISION WITH ROAD TO VEST**

Applicant:	CARLOS CONCEPTS LTD	**Agent:**	WORKING CONCEPTS LTD
Address:	PO BOX 27029 WELLINGTON Att: Mr R J Cummins	**Address:**	PO BOX 58395 GREENMOUNT Att: Mrs Sandy Heard
Contact:	SANDY 2713007		

Consent Type	**Subdivision**	Consent Co-ordinator	**BRYCE POMFRETT**
Operative Zone	**RURAL 3**	Proposed Zone	
Cadastral Map	**8/61;7/72**	District Plan Map	

Discipline	**Does not require vetting (tick ✓)**	**Vetting comments. Please select option and if necessary provide details over leaf**				
		NFA	Have taken copy and will provide written conditions	Comments (more space over leaf)	Signed	Date
Planning				Refer to Urban Design - Yes/No Refer to Transportation - Yes/No		
Subdivision						
Engineering			✓	Financial contributions - Yes/No	RPL	[illegible]
Manukau Water			✓		GK	4/11
Environmental Health			Copy sent to E/H 10/11/04. Send copy to Environmental Health - Genesis 3 - Yes/No			
Transportation				Refer to Roading - Yes/No		
Urban Design						

Received 02/11/04 **Twenty days** _____ **Fast Track** Yes/No **Ten days** _____

Section 94 assessment Notified/ Non-notified **Five days** _____ **Site inspection** _____

Section 92 requests		**Information received**	**Internal referrals to**		**Response**
12/11/2004	⇨	26/11/04		⇨	

Decision status	Granted/Refused/Withdrawn	**District Plan**	**Activity Type**
Decision date	_____	**Operative**	PE/CA/DA/RD/NC/PR
		Proposed	PE/CA/DA/RD/NC/PR

NOTES

Comments

Planning

Subdivision

Engineering

Manukau Water

Transportation

Urban Design

Environmental Health

LIS255.v2.1 RC1 - Resource Consent Application Maintenance 05.01.05

Internal ID 28956

Proposal No. 27404
01) Desc OBJECTION TO PROPOSAL 27046
02) Applicant Name CARLOS CONCEPTS LTD
03) Address 1 PO BOX 27029
2 WELLINGTON
3 Att:Mr R J Cummins
04) Agent Name WORKING CONCEPTS LTD
05) Address 1 PO BOX 58395
2 GREENMOUNT
06) Agent Address Flag Y
08) Contact SANDY 2713007
10) Consent Type OB Objection
12) Misc.
13) Involved Properties
1 6923/124 124 STANCOMBE RD

* More Property Details of 6923/124
Legal Description
LOT 3 DP 78859

07) Monthly Billing N
09) Date Received 05.01.05
11) Deposit Fee $450.00

14) File/SP RefNo SP8840
16) Meeting Date
17) Meeting Time
18) Team No 3 Team 3
Zone RURAL 3
Ward CLEVEDON

Enter screen-ref(nn) to modify, FI to file, HCOPY, DELETE, RCn, or EX : .....

CRM Number: 0078476

CRM Client: Carlos Concepts Limited

Project: ☑ tick Ref 12 #: ☑ tick

DEPOSIT RC #: 004716

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Carlos Concepts Limited
Attn: RJ Cummins
PO Box 27029
Wellington 6015

Description	Quantit
PRC27404 124 Stancombe Rd, Clevedon	
Deposit	1.0(

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

07/01/2005 11:13 Trn 139326
Cashier SPULINI

SUNDRY INVOICES
Invoice Number RC004716 $450.00

Subtotal $450.00
Total $450.00

Payer: CARLOS CONCEPTS LTD
Received CHEQUE $450.00
Cheque # 100008
Change $0.00

All charges are GST inclusive. Please retain this receipt for your records

SP 8840 - Objection to Proposal 27046

Sub Total	$400.00
GST	$50.00

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Feb 2005	AMOUNT DUE	$450.00

Carlos Concepts Limited
Attn: RJ Cummins
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Customer No:	0078476
Invoice No:	RC004716
Charge Ref:	RC27404

DUE DATE	20 Feb 2005
AMOUNT DUE	$450.00

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

OB

RECEIVED
29 DEC 2004
M.C.C. (E)
MAIL ROOM

Working Concepts Limited
P. 27404: OB

SP. 8840

24 December 2004

Mr Robert Chieng,
Team Leader – Resource Consents,
Manukau City Council,
P.O. Box 76917,
MANUKAU CITY

Dear Sir,

DECISION ON APPLICATION FOR SUBDIVISION CONSENT AND ASSOCIATED LAND USE CONSENT FOR LAND MODIFICATION AND TREE REMOVAL – 124 STANCOMBE ROAD FLAT BUSH.

I refer to the decision dated 16 December 2004, uplifted by the applicant on the 17 December 2004 (your reference ES 6923/124 Proposal 27046).

I wish to object to the decision pursuant to s357(2) of the Resource Management Act 1991 and enclose the relevant deposit ($450.00).

The parts of the decision I wish to object to are in Part B and are as follows:

Paragraphs 12-15. (Various financial contributions). The contributions are calculated incorrectly.

Para 16 (roading upgrade). The wrong rate has been applied.

I reserve the right to make submissions in pursuit of this objection, and amplify the reasons for the objection, in due course.

Sincerely,

R.J.CUMMINS
Director

Westpac
79 Queen Street
Auckland, NZ

DATE 24/12/04

PAY MANUKAU CITY COUNCIL or bearer

THE SUM OF Four hundred and fifty dollars

$450.00

CARLOS CONCEPTS LIMITED

10 NOT TRANSFERABLE
A/C MANUKAU CITY COUNCIL
Only at
BNZ MANUKAU 02-0191-0190004

⑈100008 ⑈030104: 0786060⑈00 ⑈

Westpac Banking Corporation (New Zealand division) Stamp Duty Paid
UNCHEQUE DUTY PAID

30
0
ra.co.nz

5-201 Willis Street
)
w Zealand

ENVIRONMENTAL SERVICES RESOURCE CONSENT LODGEMENT MEETINGS

Proposal Number (Resource Consent Administrator to fill in)					
Meeting date & time	Date	02.11.04	(dd/mm/yy) Time	1515	AM/PM
Meeting room					
What is the name of the person attending the meeting?		Sandy Heard			
What is the contact phone?		Bus/Res	2713007	Cellphone	0275869019
What is the site address? [no. and street]		124 Stancombe Road			
What is the legal description of the property?		**Lot**	3	**DP**	78859
Ward (from screen)		Clevedon			

Previous meetings		
Has there been a pre-application meeting?	**Yes/No**	No
Have you already received advice from Council officers about this project?	**Yes/No**	No
If yes, can you tell me their names so we can try to liaise with them before the meeting:		
Are there any specific Council officers you would like to attend?	**Yes/No**	
If yes, who are they?		
How many people will you bring to the meeting?		2

What type of Resource Consent are you applying for? X

Brief description of proposal (compulsory):

~~Building 42 individual apartments.~~

Two lot fee simple subdivision with road to vest.

Preapplic 26812 Evan W Jan has no preapplic notes

Air Discharge Consent	27046 SP8840	
Integrated Consent (includes both subdivision and land use)		
Land Use Consent		

Further detail required for land use consent - Put X in all appropriate boxes.

Building Infringement		
Land Modification		
Air noise Area / Airport Outer Control		
Tree Removal		
Outline Plan of Works		
Are there engineering works?		

Subdivision Consent — x

Further detail for subdivision consent

Concept (Sub Division)		
Crosslease		
Fee Simple		
Unit Title		
Boundary Adjustment		
Number of lots *(entry required)*		
Are there any engineering works? *(enter Yes or No)*	Yes	

Manukau City Council - LIS Internal Property Report generated at 02:20pm 01/11/200 PRM REF 6923/124

!!! NOTE: For complete & up-to-date details see Hansen

CLEVEDON Ward

Owner/Ratepayer	YING-TSUNG LIN AND WEN-I LIN
Address	124 STANCOMBE RD, FLAT BUSH
	(CHAPEL ROAD TO JEFFS ROAD)
Legal description	LOT 3 DP 78859

District Plan Details (incl. Public Works)

Operative	RURAL 3	Area	8100 Sq Metres
		MCC Map	8/61;7/72
		Dist. Plan	39D

Rates Account Number	60066281
Valuation number	36400-096-03

Household refuse collection day : Friday

Water account number **NOT ON SUPPLY** Meter last read

Miscellaneous Notes

Health	None known
Pool fencing	Registered on 13 MAR 1990, , Complies as at 02 APR 2001
	Registered on 02 APR 2001, , Complies as at 02 APR 2001

Manhole
Fire hydrant
Cesspit
Land Information Register

Sanitary Sewer
Stormwater
Water Main

This Plan is supplied for information only. The Council accepts no liability for any error whatsoever.

MANUKAU
City Council

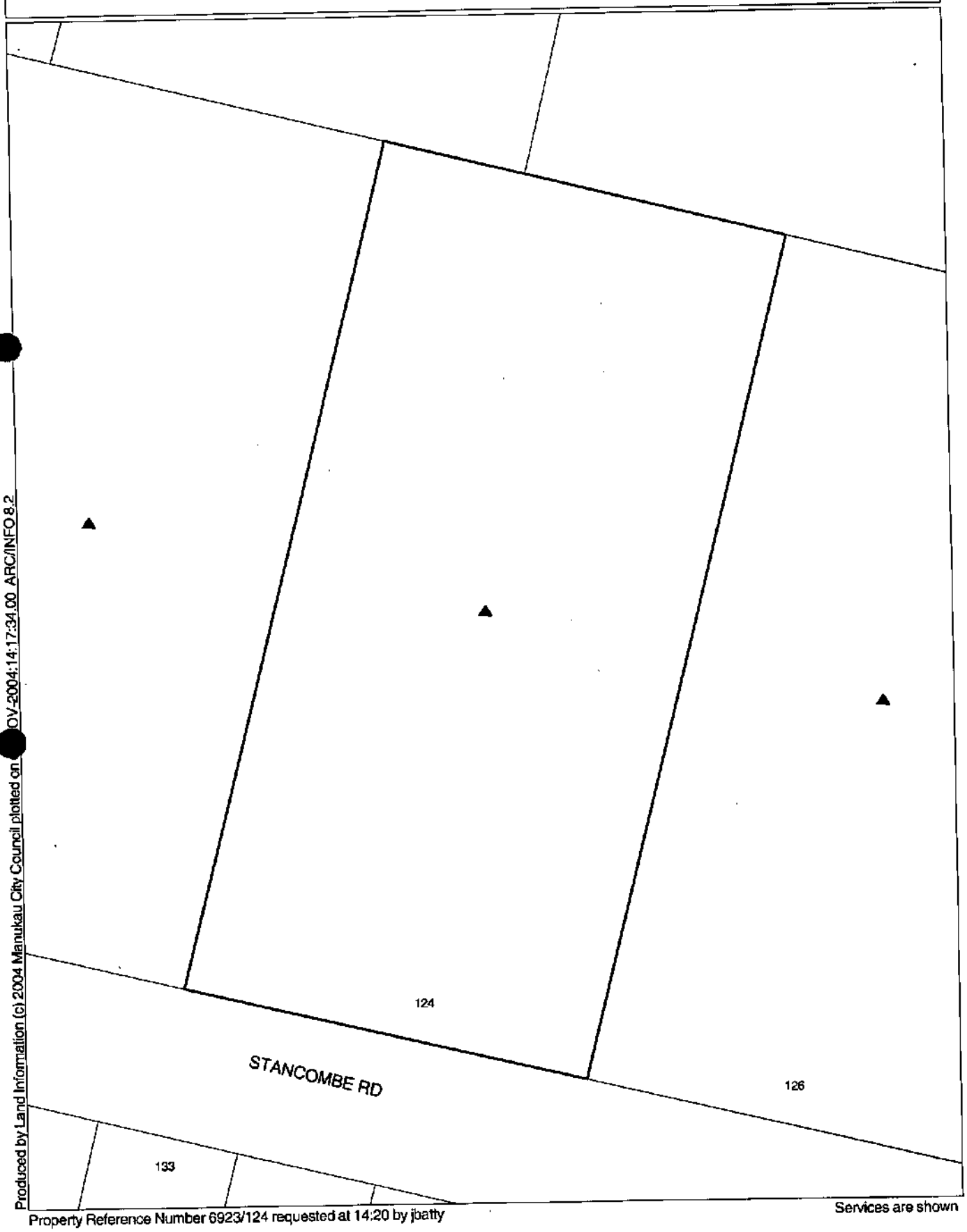
HEIGHT RESTRICTIONS APPLY - Contact Transpower (07) 936 0677
Main Overhead Powerlines
Outer Limit Restrictions
PYLON

WORK WITHIN EASEMENT OR WITHIN 10m REQUIRES PERMIT/APPROVAL
WSL — Contact Watercare Services Limited (09) 634 7940
HDG — Contact Natural Gas Corp (0800) 734 567
HOIL — Contact Natural Gas Corp (0800) 734 567
LPG — Contact Liquigas (09) 277 7042

Scale 1:750
Area 8100 sq m
LOT 3 DP 78859

124 STANCOMBE ROAD
FLAT BUSH

01 NOVEMBER 2004



Produced by Land Information (c) 2004 Manukau City Council plotted on [redacted]OV-2004:14:17:34.00 ARC/INFO 8.2

Property Reference Number 6923/124 requested at 14:20 by jbatty

Services are shown

Following consents effect the whole site.

Resource Consents issued under Resource Management Act.

Decision Date	Description	Applicant	Decision Type	Status	As at Date	See Note
	PREAPPLICATION 124 STANCOMBE R	C/O WORKING CONCEPTS		Unknown		1
17/04/98	BUDDHIST TEMPLE & ASSOC BUILDI	INTERNATIONAL BUDDHI	Withdrawn	Not Applicable		2
31/05/01	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
25/01/02	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
25/01/02	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3

Notes

1) As this consent was issued prior to 1 July 1996, Council is not in a position to state whether building or activity on the property comply with conditions of the Resource Consent.
2) There may be conditions at this resource consent that require compliance before the commencement of the use, or on an ongoing basis. Details of such conditions are embodied in the original consent.
3) No Compliance checks have been undertaken by MCC due to either, MCC have not been formally advised of compliance, or the proposed use has not commenced. As Compliance is a condition of Consent approval, you are required to check the current activity and determine whether the original conditions have been complied with.

Building Consents/PIM's/Permits issued. CCC = Code Compliance Certificate

Issued	Work Description	Status	CCC	Details	Area
19/12/79	Dwellings,Plumbing,Drainage	Finalised	n/a	DWELLING / GARAGE / WORKSHOP	326 m2
16/05/84	Swimming Pools,Plumbing	Finalised	n/a	SWIMMING POOL & SPA POOL	50 m2
	Drainage	Finalised			

Land Information Register Report.

Information Category: FLOOD LEVELS/FLOODIN File Ref: * Register: C.2313
Consultant: YASENKO KRPO
Report: inter-office memo Ref: *
Instructions:

Sites may be subject to Flood Hazard in heavy rainfall events. Any Land modification activity within the flood hazard area is likely to require resource consent. For more details refer to the East Tamaki Catchment Management Plan,May 2000 prepared by Beca Carter,Hollings and Ferner Ltd.and District Plan and Variation 13. Prior to any subdivision or building consent the Council may require any or all of the following: 1 Detailed Flood assessment by a registered engineer. 2 Specific Floor Level Design. 3 The creation of an overland flowpath easement in favour of the

.../3

Council. 4 The issue of a Section 36 (2) certificate in terms of the Building Act. 5 Specific design of any proposed site works. The above requirements may preclude the placement of earth-fill or additional buildings on the site or the resource consent for subdivision or cross-lease. For more information seek advice from the Council.

Information Category: REDEVELOPMENT/DEVELO File Ref: * Register: C.4660
Consultant: S.HEALY
Report: MEMO RE APPEALS & VAR.13 DISTRICT PLAN Ref: *
Instructions:
NOT OPERATIVE,REFER TO THE MANUKAU OPERATIVE DISTRICT PLAN 2002,FOR DETAILS.

Information Category: SITE CONTAMINATION File Ref: Register: C.2328
Consultant: L.FRANKS
Report: SITE CONTAMINATION REPORTS Ref:
Instructions:
SITE SUITABLE FOR RESIDENTIAL USE;||THIS SITE HAS BEEN SUBJECT TO INVESTIGATIONS BY AN INDEPENDENT CONSULTANT AND BASED ON AN INDEPENDENT REVIEW OF INVESTIGATIONS,THIS SITE IS DEEMED TO BE SUITABLE FOR RESIDENTIAL USE AND THERE ARE NO ADDITIONAL OR SPECIAL RESTRICTIONS ON ITS USE.THE RESTRICTIONS IMPOSED BY RULE 17.10.12.14 INVARIATION NO.13 FLAT BUSH SHALL NO LONGER APPLY TO THIS SITE IN ACCORDANCE WITH RULE 17.10.12.14 (F).RELEVANT REPORTS ARE AVAILABLE FROM THE CITIZEN & CUSTOMER CENTRE,KOTUKU HOUSE,MANUKAU CITY.||
Property Remarks : none present.

Manukau City Council - LIS Internal Property Report generated at 02:20pm 01/11/200 PRM REF 6923/124

!!! NOTE: For complete & up-to-date details see Hansen

CLEVEDON Ward

Owner/Ratepayer	YING-TSUNG LIN AND WEN-I LIN
Address	124 STANCOMBE RD, FLAT BUSH
	(CHAPEL ROAD TO JEFFS ROAD)
Legal description	LOT 3 DP 78859

District Plan Details (incl. Public Works)

Operative RURAL 3

Area 8100 Sq Metres

MCC Map 8/61;7/72

Dist. Plan 39D

Rates Account Number 60066281

Valuation number 36400-096-03

Household refuse collection day : Friday

Water account number **NOT ON SUPPLY** Meter last read

Miscellaneous Notes

Health	None known
Pool fencing	Registered on 13 MAR 1990, , Complies as at 02 APR 2001
	Registered on 02 APR 2001, , Complies as at 02 APR 2001

Following consents effect the whole site.

Resource Consents issued under Resource Management Act.

Decision Date	Description	Applicant	Decision Type	Status	As at Date	See Note
	PREAPPLICATION 124 STANCOMBE R	C/O WORKING CONCEPTS	.	Unknown		1
17/04/98	BUDDHIST TEMPLE & ASSOC BUILDI	INTERNATIONAL BUDDHI	Withdrawn	Not Applicable		2
31/05/01	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
25/01/02	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
25/01/02	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3

Notes

1) As this consent was issued prior to 1 July 1996, Council is not in a position to state whether building or activity on the property comply with conditions of the Resource Consent.
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Building Consents/PIM's/Permits issued. CCC = Code Compliance Certificate

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	Drainage	Finalised			

Land Information Register Report.

Information Category: FLOOD LEVELS/FLOODIN File Ref: * Register: C.2313
Consultant: YASENKO KRPO
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Council. 4 The issue of a Section 36 (2) certificate in terms of the Building Act. 5 Specific design of any proposed site works. The above requirements may preclude the placement of earth-fill or additional buildings on the site or the resource consent for subdivision or cross-lease. For more information seek advice from the Council.

Information Category: REDEVELOPMENT/DEVELO File Ref: * Register: C.4660
Consultant: S.HEALY
Report: MEMO RE APPEALS & VAR.13 DISTRICT PLAN Ref: *
Instructions:
NOT OPERATIVE,REFER TO THE MANUKAU OPERATIVE DISTRICT PLAN 2002,FOR DETAILS.

Information Category: SITE CONTAMINATION File Ref: Register: C.2328
Consultant: L.FRANKS
Report: SITE CONTAMINATION REPORTS Ref:
Instructions:
SITE SUITABLE FOR RESIDENTIAL USE;||THIS SITE HAS BEEN SUBJECT TO INVESTIGATIONS BY AN INDEPENDENT CONSULTANT AND BASED ON AN INDEPENDENT REVIEW OF INVESTIGATIONS,THIS SITE IS DEEMED TO BE SUITABLE FOR RESIDENTIAL USE AND THERE ARE NO ADDITIONAL OR SPECIAL RESTRICTIONS ON ITS USE.THE RESTRICTIONS IMPOSED BY RULE 17.10.12.14 INVARIATION NO.13 FLAT BUSH SHALL NO LONGER APPLY TO THIS SITE IN ACCORDANCE WITH RULE 17.10.12.14 (F).RELEVANT REPORTS ARE AVAILABLE FROM THE CITIZEN & CUSTOMER CENTRE,KOTUKU HOUSE,MANUKAU CITY.||
Property Remarks : none present.

Jan - Need new proposal # for subdivision

Te Kaunihera o
MANUKAU
City Council

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

2 November 2004

Centre Concept Ltd
c/o Worley Concept Ltd
P.O. Box 58-395
Greenmount

Attention: Sandy Heard

Dear Sandy

ACKNOWLEDGEMENT OF RESOURCE CONSENT APPLICATION FOR 2 LOT SUBDIVISION WITH ROAD TO VEST

AT 124 STANCOMBE ROAD, FLAT BUSH

Council acknowledges receipt of your above application received on 2-11-04

Your Consent Co-ordinator for this application is Ethan Williams

Your application has been allocated the reference numbers noted at the bottom of this letter. Please quote these numbers when making enquiries.

Should clarification or more detailed information be required, in accordance with Section 92 of the Resource Management Act 1991 you will be contacted within five (5) working days. Otherwise you are advised that the statutory time-frames for processing of non-notified resource consent applications require a written decision to be released no later than 20 working days after receipt of the application; or of any further information pursuant to the Section 92; or the date on which the approval of all affected persons (if any) have been obtained under Section 94, whichever is the later.

As advised above, it is important to note that assessment of this application can only commence once all the requested information has been provided.

~~Attached is a receipt for~~ $562.50 being your application deposit. has been received

Yours faithfully

FORM 3A
ATTACH BUSINESS CARD AND RECEIPT HERE

Note: ROE required from 122 Stancombe.

Consent Co-ordinator
Otara / Clevedon Team
ENVIRONMENTAL SERVICES

Customer Copy ☐
File Copy ☐

~~[illegible]~~ 27046

Reference: ~~$S~~ P 8840 Proposal 78A
Enquiries to Ethan Williams

Facsimile 262-5109
Extension 5806

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT LODGEMENT MEETING

PRELIMINARY ASSESSMENT OF INFORMATION

Lodgement meeting date: 02/11/04 **Proposal No:** TBA. **ES** _____

Site Address: 124 Stanmore Road **Applicant's e-mail:** _____

Consent Co-ordinator: E Williams **Applicant/Agent Attending:** Sandy Heard

	YES	N/A	NO	Comments
GENERAL				
1. Is Form 5 completed correctly and signed by the applicant?	☑	☐	☐	
2. Is the deposit attached?	☑	☐	☐	
3. Are affected parties' consents attached? (Section 94 RMA)	☐	☐	☑	? consent of 122
4. Have written rights of entry from affected parties been provided?	☐	☐	☑	required for new
5. If 'no', summary of approaches made and results of consultation	☐	☐	☑	alignment?
6. Certificate of Title (CT) required? (current < than 1 month old)?	☐	☐	☑	new title
7. Detail of any covenants/consent notices on CT	☐	☑	☐	ROE required
8. Have items on the IPS been addressed?	☑	☐	☐	
An assessment of the environmental effects included?	☑	☐	☐	
10. Details of iwi consultation provided	☐	☑	☐	
11. Copy of relevant previous resource consents	☐	☑	☐	
12. Asbestos/contaminated site (e.g. residual petroleum, pesticides, or other hazardous substances) report provided	☑	☐	☐	asbestos only
13. Compliance details provided for Air Noise Zone	☐	☑	☐	
14. Full explanation of application provided	☑	☐	☐	
PLANS				
15. For Land Use - 1 x A1or A2 and 3 x A3 required	☑	☐	☐	
16. Are the plans to scale? (1:50, 1:100 or 1:200 only)	☑	☐	☐	
17. For Subdivision - 4 x A3 + 1A4	☑	☐	☐	
18. For Engineering - 4 sets of A3 required at appropriate scales	☑	☐	☐	
19. Are the plans legible; are all existing structures shown; north point?	☑	☐	☐	
20. Are scheduled tree and tree species identified (height over 3.0m)?	☑	☐	☐	
21. Are any landscaping plans required?	☐	☐	☑	
22. Are building floor plans required?	☐	☐	☑	
PLANNING				
23. Are all elevations with relevant HIRB recession planes shown incl levels?	☐	☐	☑	
24. Are any infringements shown? (development and performance standards)	☐	☑	☐	
25. Is parking provision indicated?	☐	☑	☐	
26. Is vehicle access/egress shown?	☑	☐	☐	
SUBDIVISION				
27. The net site area of the existing and proposed sites?	☑	☐	☐	
28. The site coverage of all buildings shown on the new sites?	☑	☐	☐	
29. Areas and dimensions of all proposed allotments?	☑	☐	☐	
30. Positions of all new boundaries including unit and covenant boundaries?	☑	☐	☐	
31. Location and areas of all proposed reserves with improvements?	☐	☑	☐	
32. MHW Spring Tides shown ? and areas below this?	☐	☑	☐	
33. Locations and areas of land to be set aside as new road?	☑	☐	☐	
34. Location and areas of any existing or proposed easements?	☐	☑	☐	
35. All watercourses with an average width greater than 3 metres?	☐	☑	☐	
36. Proposed staging of the subdivision (if any)?	☐	☑	☐	
37. Area and dimensions of all privateways and common areas?	☐	☑	☐	
38. The height in relation to boundary details for all new boundaries?	☐	☑	☐	
39. The position of any eaves in relation to a privateway or driveway?	☐	☑	☐	

270446
SP8840

MANUKAU CITY COUNCIL

APPLICATION FOR RESOURCE CONSENT

UNDER SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991

TO: The City Manager
Manukau City Council
Private Bag
MANUKAU CITY

ATTENTION: Environmental Services

FOR OFFICE USE ONLY:
File Ref:
Ward
Deposit Paid
Plans A1 ( ) A3 ( )
Cheque Details
Receipt No.

DETAILS TO BE COMPLETED BY THE APPLICANT

Mr/Mrs/Miss/Ms:
Full Name:
Trading Name: Gaslos Concepts Ltd
Limited Liability Company Name:
Street Address:
Postal Address: Po Box 27029, Wellington
Daytime Telephone Number: (09) 271-3007
Fax Number: (09) 271-4037.
E-mail address:

DETAILS TO BE COMPLETED BY THE AGENT (where applicable)

Mr/Mrs/Miss/Ms: Mrs
Full Name: Sandy Heard
Trading Name:
Limited Liability Company Name: ~~Gaslos Concepts Ltd~~ Working Concepts Ltd
Street Address:
Postal Address: Po Box 58-395, Greenmount, Auckland.
Daytime Telephone Number: (09) 271-3007
Fax Number: (09) 271-4037.
E-mail address: Sandy@workingconcepts.co.nz.

ADDRESS FOR SERVICE:

Mr/Mrs/Miss/Ms: Mrs
Full Name: Sandy Heard
Street Address:
Postal Address: Po Box 58-395, Greenmount, Auckland.

APPLICATION FOR RESOURCE CONSENT

FORM 9

MANUKAU CITY COUNCIL

APPLICATION FOR RESOURCE CONSENT
UNDER SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991

This form is to be completed as part of your Resource Consent application.

We request that you provide all details relevant to your application.

Should you require assistance to complete this form, staff are available at the Council Citizen and Customer Centre, Kotuku House, Manukau City, and the Howick Ward Centre.

To accompany your application for Resource Consent we require the written information requested in the enclosed Checklists and Form 9.

Providing all required information when you submit your application will minimise delays when the Council considers your application.

PLEASE PHONE 262.5227 TO ARRANGE AN APPOINTMENT TIME FOR A LODGEMENT MEETING TO BE HELD AT THE COUNCIL CITIZEN & CUSTOMER CENTRE, MANUKAU CITY.

NOTE: If an Air Discharge Permit is required in conjunction with this application, please request an Air Discharge Information and Effects List

(8) *[Where the application is for a subdivision consent]*

As this is an application for a subdivision consent, I attach information that is sufficient to adequately define:

(a) The position of all new boundaries; and
(b) The areas of new allotments *[Not required for cross-leases, company leases or unit plans]*; and
(c) The locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips; and
(d) The locations and areas of any existing esplanade reserves, esplanade strips, and access strips; and
(e) The locations and areas of land below mean high water springs of the sea or of any part of the bed or a river or lake to be vested in the Crown or local authority under section 237A of the Act; and
(f) The locations and areas of land to be set aside as new roads.

(9) *[Where the application is for a coastal permit for reclamation]*

As this is an application for a resource for reclamation, I attach information to show the area proposed to be reclaimed, including its location, the position of all new boundaries, and the portion of that area (if any) to be set apart as an esplanade reserve or esplanade strip.

TERMS AND CONDITIONS OF THE APPLICATION AND CHARGES

(1) **A deposit must accompany this application:** The deposit is in accordance with the Manukau City Schedule of Administrative Charges in terms of Section 36 of the Resource Management Act 1991. Confirmed by Special Order by the Council on 30 September 1999 (Minute No 1455/99). The schedule of administrative charges can be viewed at the Kotuku Customer Centre. **Further charges may be imposed for processing the application and for compliance and supervision.**

(2) Should this form be incomplete or further information is required, you will be advised as we cannot accept this application until all the required information is supplied. You will receive an acceptance letter to confirm your application has met all the requirements

(3) At the completion of processing your application (whether consent is granted or not) all outstanding fees are payable prior to the issuing of the resource consent decision.

THE PERSON RESPONSIBLE FOR THE CHARGES INCURRED MUST SIGN THIS FORM

I/we accept the Terms of our Resource Consent application and understand that at the completion of processing our application, I/we are liable for additional charges incurred by the Council in accordance with Section 36 of the Resource Management Act 1991.

Signature: _____

Name: R J Cummins (Director) Date: 01 Nov 2004

Street Address: 6th Floor, 195-201 Willis Street, Wellington

Postal Address: PO Box 27-029, Wellington

ATTACHMENTS

(a) Information provided in respect of Items (6), (7), (8) and (9) above
(b) Written consent of affected persons *[Where required for a resource consent]*

PLEASE COMPLETE THE FOLLOWING DETAILS

(1) The description of the activity to which the application relates is:

Subdivision resource consent - fee Simple.
To build 42 apartments

(2) The type of resource consents(s) sought is/are: *[place ✓ in appropriate box]*

Land Use Consent	☐	Subdivision Consent	
Discharge Permit (Air)	☐	- Crosslease/unit title	☐
Coastal Permit	☐	- Fee simple	☑ ✓
Other	☐		

For other please specify: _____

(3) The location to which this application relates is:

No: 124 Street/Road: Stancombe Road
Locality: Flat Bush, Botany South.
Legal Description: Lot 3, DP 78859

[Describe the location in a manner which will allow it to be readily identified - e.g. the street address, the legal description, the name of any relevant stream, river or water body to which the application may relate, proximity to any well known landmark, the grid reference (if known) etc]

(4) The names and addresses of the owner and occupier (other than the applicant) of any land to which the application relates are as follows:

Owner: Carlos Concepts Ltd Occupier: _____

(5) The following additional resource consents are required in relation to the proposal and have OR have not been applied for: *[place ✓ in appropriate box]*

Land Use Consent	☐	Applied for	☐
Subdivision Consent	☐	Applied for	☐
Coastal Permit	☐	Applied for	☐
Water Permit	☐	Applied for	☐
Discharge Permit (Air)	☐	Applied for	☐

(6) I attach, in accordance with the Fourth Schedule of the Resource Management Act 1991, an assessment of environmental effects in the detail that corresponds with the scale and significance of the effects that the proposed activity may have on the environment.

(7) I attach any information required to be included in this application by the District Plan, Regional Plan, the Resource Management Act 1991 or any regulations made under that Act.

LIS255.v2.1 RC1 - Resource Consent Application Maintenance 03.11.04

Proposal No. 27046 Internal ID 28598

01) Desc TWO LOT FEE SIMPLE SUBDIVISION WITH ROAD TO VEST
02) Applicant Name CARLOS CONCEPTS LTD
03) Address 1 PO BOX 27029
2 WELLINGTON
3 Att: Mr R J Cummins
04) Agent Name WORKING CONCEPTS LTD
05) Address 1 PO BOX 58395
2 GREENMOUNT
06) Agent Address Flag Y
07) Monthly Billing
08) Contact SANDY 2713007
09) Date Received 02.11.04
10) Consent Type SD Subdivision
11) Deposit Fee $562.50
12) Misc.
13) Involved Properties
1 6923/124 124 STANCOMBE RD
14) File/SP RefNo SP8840
16) Meeting Date
17) Meeting Time
18) Team No 3 Team 3

* More Property Details of 6923/124
Legal Description
LOT 3 DP 78859

Zone
RURAL 3

Ward
CLEVEDON

Enter screen-ref(nn) to modify, FI to file, HCOPY, DELETE, RCn, or EX : .....

CRM Number: 0078476

CRM Client: Carlos Concepts Limited

Project: ☑ tick Ref 12 #: ☐ tick

DEPOSIT RC #: 004148

Te Kaunihera o
MANUKAU
City Council

PRIVATE BAG 76917
MANUKAU CITY
DX EP 75557

PHONE 263–7100

G.S.T. Reg. No. 51–963–660

OFFICIAL RECEIPT

Shuttleworth Properties Ltd
C/- Working Concepts Ltd
PO Box 58395
Greenmount att: Sandy Heard

PROPERTY No.	27046 SP88440
LOT 3	D.P. 78859
RATES/WATER RATES	
SUNDRY A/C	
RENT A/C	
CREDIT A/C	RC:004148
CRM:0078476	$ 562 .50

Resource Consent Deposit
124 Stancombe Rd, Clevedon

ASB BANK

ASB BANK LIMITED
BUSINESS BANKING

Pay Manukau City Council

Date 2-11-04

or bearer

The sum of five hundred and sixty two dollars fifty cents only

$ 562-50

NOT TRANSFERABLE

SHUTTLEWORTH PROPERTIES LTD

3209 CHEQUE DUTY PAID

⑈456325⑈123030⑆0642577⑈00⑈

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

5/11/4

:/2004 10:56 Trn 124117
Cashier MSCOTT

SUNDRY INVOICES
Invoice Number RC004148 $562.50

Subtotal $562.50
Total $562.50

Payer: SHUTTLEWORTH PROPERTIES
Received CHEQUE $562.50
Cheque # 456325
Change $0.00

All charges are GST inclusive. Please
retain this receipt for your records

Easdale Surveyors Ltd
REGISTERED LAND SURVEYORS

DIRECTOR:
M.S. LUCAS, B.Surv., M.N.Z.I.S.

39 Meadowland Drive,
Howick, Auckland.
Phone: 0-9-534-8452
Fax: 0-9-537 5754
e-mail: easdales@clear.net.nz

15 October 2004

27046
SP8840

In all correspondence please quote our ref: 7576

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

Attn: J Batty

Dear Madam,

Re: Bishop Lenihan Concepts Ltd – Proposed Subdivision
124 Stancombe Road, Flat Bush, Lot 3 DP78859

Enclosed is an application for Resource Consent for the subdivision of the above property under the Resource Management Act 1991.

The property comprises 8100m of land in the Flat Bush Residential 1 Zone.

The land contains a gulley formation which crosses diagonally across the rear of the site. There is an existing house on the site to be removed.

The proposal is to subdivide the property into two lots for future development and road to vest in Manukau City Council. The land to vest includes the road widening of 3.64m. The extension of Carlos Drive and a link from Stancombe Road to Carlos Drive. The alignment of Carlos Drive and the link to Stancombe Road has been determined in discussions with Council's traffic engineer.

The position of Carlos Drive is consistent with that approved under SP8697. The link between the roads runs up the boundary between 122 and 124 Stancombe Road.

The owner of 122 Stancombe Road does not wish to develop at this point in time. We have had discussions with Tony O'Connor of Manukau City Council and have agreed to construct part of the road with 124 Stancombe Road in such a manner that at the time of subdivision of No. 122 the road can be completed to its full width.

We enclose engineering plans prepared by Airey Consultants for the construction of the roads and servicing of the subdivision.

The volume of earthworks associated with the proposal is 1,800m³ of cut and 1,500m³ of fill including the filling of the gulley at the rear of the property and the extension of the gulley into 122 Stancombe in order to construct the whole width of the link road.

We enclose an arborist's report on the trees located on 124 & 128 - 132 Stancombe Road. Trees identified as 16 - 24 in the report relate to the development of 124 Stancombe Road. The trees are generally in poor condition and generally regarded as insignificant. All of the trees will need to be removed to enable development of the site especially for earthworks and filling of the gully.

There will be landscaping associated with the development of Lots 9 & 10 in the future as well as tree planting within the road reserve in accordance with the planting plan provided for the road.

Environmental Assessment

The proposal creates two lots for future high density development. The effects of that future development will be assessed at the time of application for those developments. The effects from this application come from the construction of the new road and other associated earthworks.

The alignment of the road has been determined through discussions with Council and this application is consistent with the other applications that have been made and approved. The construction methodology and earthworks silt control are shown in the engineering plans and conform with current accepted practice.

The removal of the trees to enable the road to be constructed and the gulley to be filled are mitigated through planting of street trees as detailed in the street planting plan. In addition the future development of the lots will involve landscaping elements.

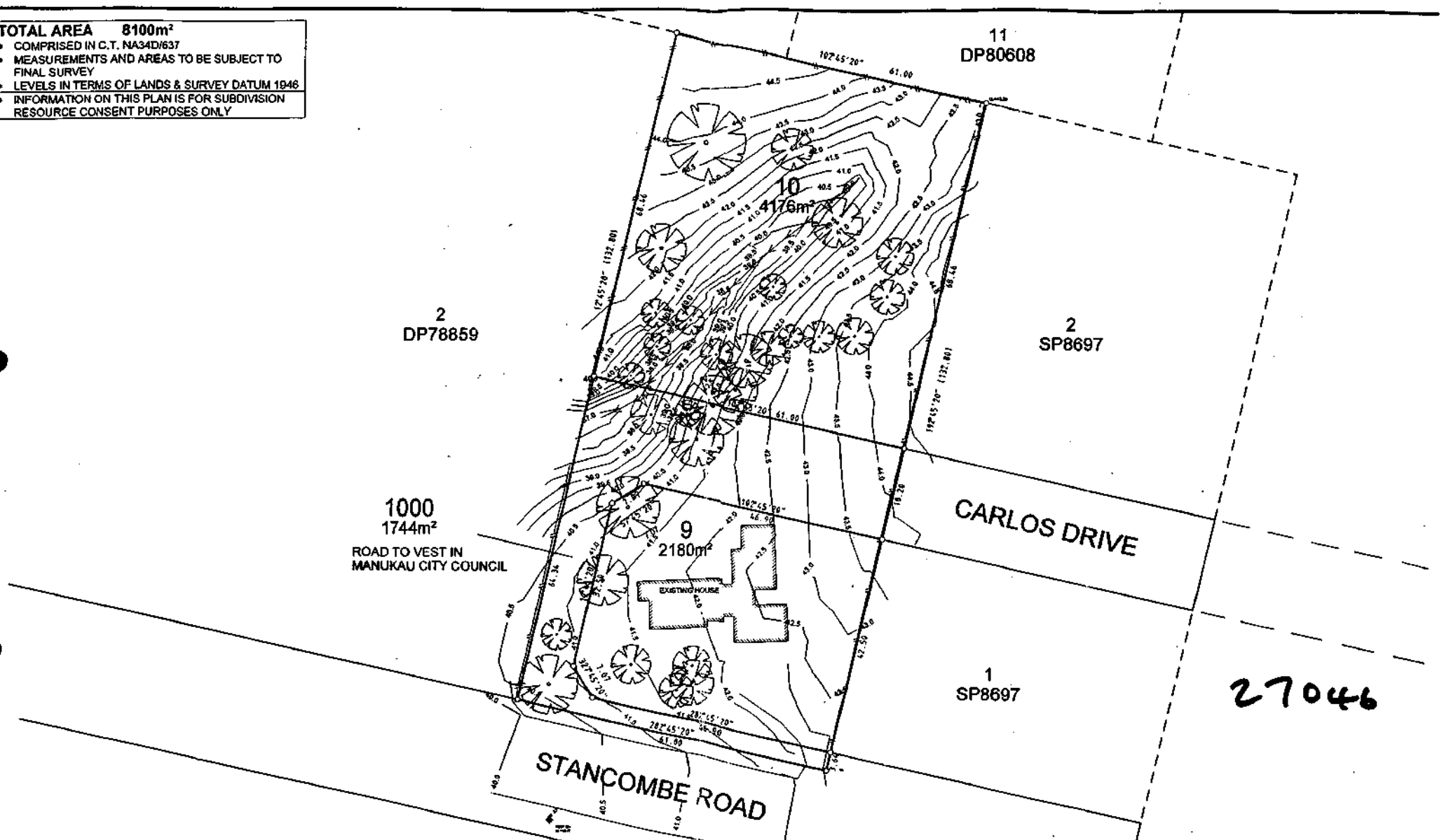
Enclosed are four copies of the plan, copy of the certificate of title, Form 9 certificate and cheque for the inspection deposit ($562.50).

Yours faithfully
EASDALE SURVEYORS LTD

M S LUCAS

TOTAL AREA 8100m²

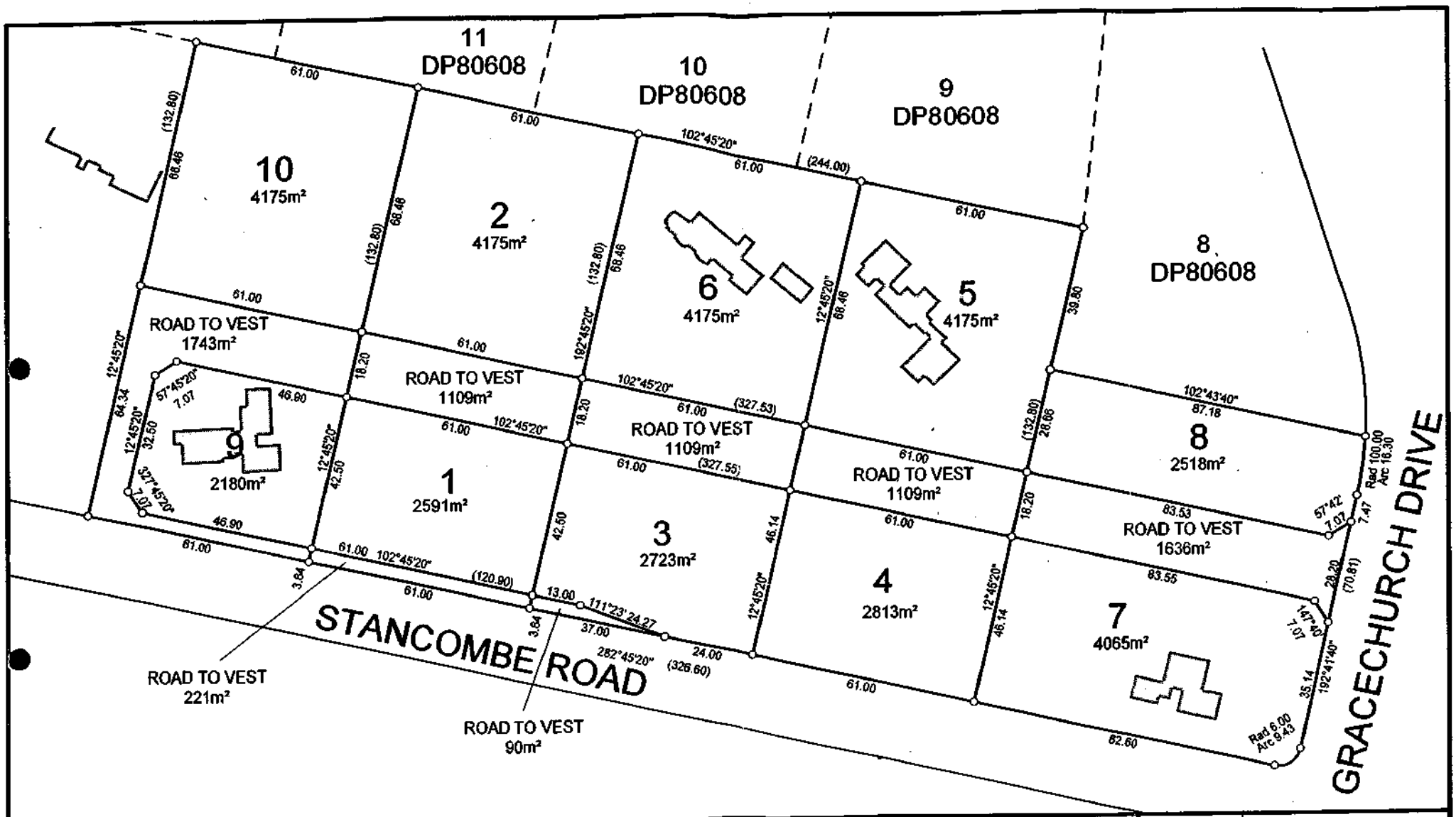
- COMPRISED IN C.T. NA34D/637
- MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
- LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946
- INFORMATION ON THIS PLAN IS FOR SUBDIVISION RESOURCE CONSENT PURPOSES ONLY



Easdale Surveyors Ltd
REGISTERED SURVEYORS - LAND DEVELOPMENT CONSULTANTS
39 Meadowland Drive, Howick
Phone 09 534 6452
Fax 09 537 5754

PROPOSED SUBDIVISION
124 STANCOMBE ROAD, FLAT BUSH
LOT 3 DP78859

FILE:	7576
SCALE:	1:500
DATE:	September 2004
SURVEYOR	MSL
REVISION	SCHEME 1



Easdale Surveyors Ltd

39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 5375754
e-mail: surveyors@easdales.co.nz

SUBDIVISION BOUNDARIES
124 - 132 STANCOMBE ROAD, FLAT BUSH
(LOTS 3 - 7 DP78859)

FILE	7483a
SCALE	1:1000
DATE	September 2004
SURVEYOR	MSL
REVISION	124 - 132 PLAN (3)

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

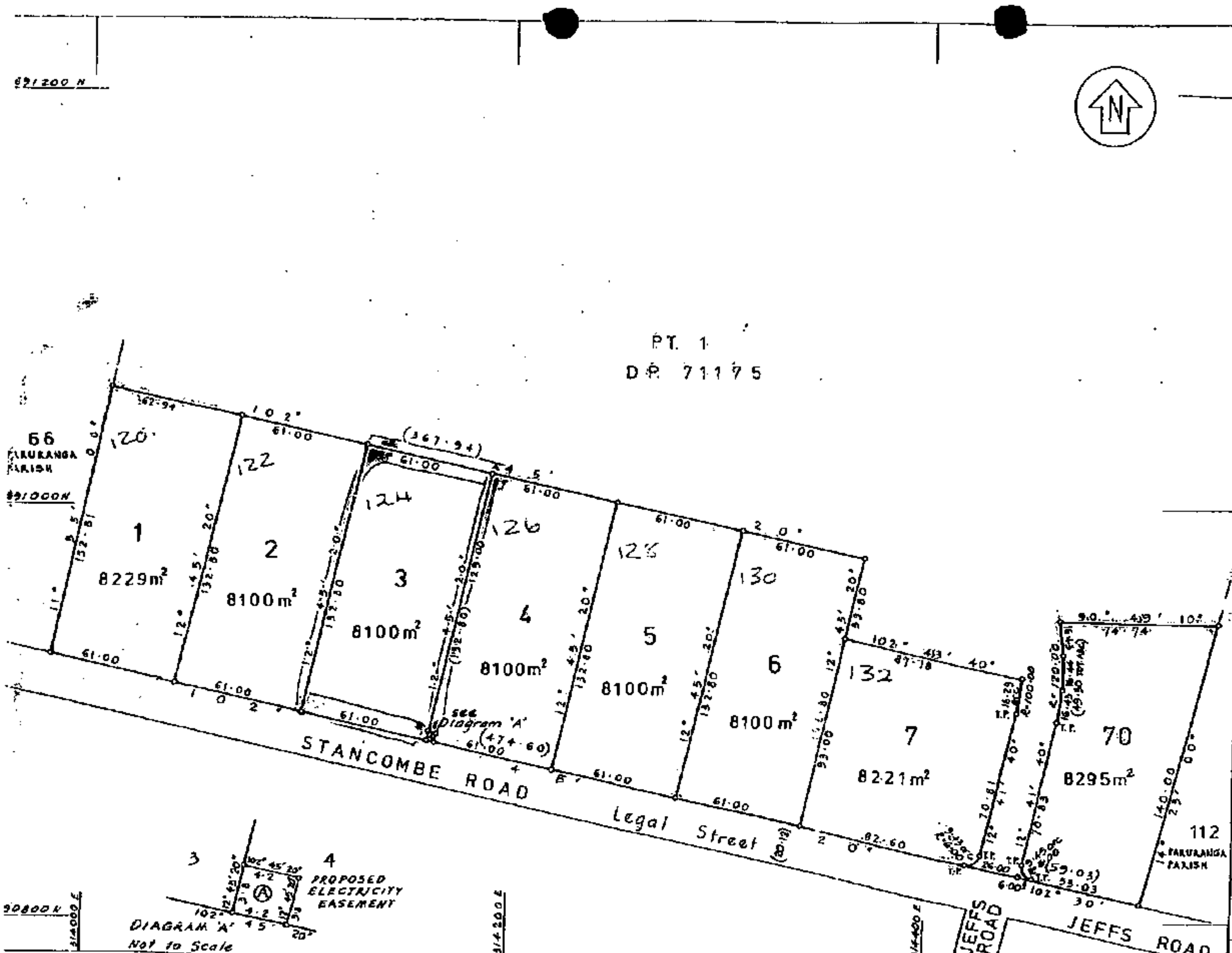
Identifier	**NA34D/637**
Land Registration District	**North Auckland**
Date Issued	14 May 1976

Prior References
NA27C/784

Estate	Fee Simple
Area	8100 square metres more or less
Legal Description	Lot 3 Deposited Plan 78859

Proprietors
Ying Tsung Lin and Wen I Lin

Interests



Pursuant to a resolution dated 11th December 1975 the Manukau City Council in accordance with Section 351 of the Municipal Corporations Act 1954 approves this plan of subdivision and certifies that it complies with the requirements of Section 33 (4) of the Town and Country Planning Act 1953. The Common Seal of the Body Corporate called the Mayor Councillors and Citizens of the City of Manukau was hereto affixed in the presence of:

MAYOR

CITY MANAGER

11th December 1975 DATE

The Common Seal of BROADLANDS PROPERTIES was hereto affixed in the presence of:

Director

Director

PROPOSED EASEMENTS

PURPOSE	SHOWN	SERV. TEN.	GRANTEE
ELECTRICITY	Ⓐ	PT. LOT 4	A.E.P.B.

NEW CT'S ALLOCATED:

Lot	CT	Lot	CT
1	54D/685	6	54D/640
2	686	7	641
3	687	70	642
4	688		

Total Area 6·5245 ha

Comprised in C.T. 27C/784 PT.

I, GEORGE WILLIAM SATCHELL of AUCKLAND Registered Surveyor and holder of an annual practising certificate hereby certify that this plan has been made from Surveys executed by me or under my direction; that both plan and Survey are correct and have been made in accordance with the regulations under the Surveyors Act 1938.

Dated at Auckland this 4th day of November 1975 Signature

Field Book ... p. ... Traverse Book ... p. ...

Reference Plans DP 63458 DP 71175 DP 52879

Examined E. F. SCHWARZ

Approved as to Survey

28.4.76

Assistant Chief Surveyor

Deposited this ... day of May 1976

District Land Registrar

File
Received
Instructions

LAND DISTRICT NORTH AUCKLAND
SURVEY BLK.& DIST. VII OTAHUHU
SHEET No.

LOTS 1-7 & 70 BEING SUBDIVISION OF
PT. LOT 1 DP 71175

LOCAL AUTHORITY MANUKAU CITY
Surveyed by LOGAN SATCHELL & ASSOCIATES
Scale 1:1250 Date OCT. 1975

Tonkin & Taylor

RECEIVED 11-8-04

T&T job no: 21940
9 August 2004

Bishop Lenihan Concepts
C/- Easdale Surveyors Ltd
39 Meadowland Drive
Howick
Auckland

Attention: Michael Lucas

Dear Michael

Asbestos Investigation - 124, 130 and 132 Stancombe Road

Tonkin & Taylor Ltd (T&T) is pleased to present the findings of a desktop and site inspection asbestos investigation carried out for 124, 130 and 132 Stancombe Road, East Tamaki (Figure 1). This investigation was undertaken in accordance with our proposal dated 9 July 2004.

1 Introduction and Scope of Works

It is understood that Bishop Lenihan Concepts Ltd propose to redevelop the above sites, as well as that at 128 Stancombe Road. The latter property has been the subject of a previous asbestos investigation by T&T (Dempsey and Wood Civil Contractors Ltd, T&T ref. 20154, August 2004). The sites are located within the area covered under Variation No. 13 of the Proposed District Plan, Manukau City Council (MCC). In accordance with the variation, an investigation to identify the potential for the presence of any asbestos containing material (ACM) on the property is required, if the land is to be developed.

The objective of this investigation was to make an assessment of the potential presence of any ACM on site. The scope of investigations included;

- A review of the records held by MCC on the property;
- A review of historical aerial photographs held by Tonkin & Taylor to identify potential filling areas;
- A walkover inspection of the property and surface ground conditions; and
- Preparation of this report on the findings of the investigation.

The investigation has been undertaken in accordance with the MCC *Guide to Protocol for Site Investigation, Reports for Subdivision/Development and the Flat Bush Area*. The MCC *Attachment*

A Master Aerial Map – Analysis of Features (Potential Bulk ACM) has been reviewed as part of this assessment.

2 Site Location and Legal Description

The properties are located at 124, 130 and 132) Stancombe Road in East Tamaki, Auckland (Figure 1). The legal descriptions for the properties are as follows;

124 Stancombe Road: Lot 3, DP 78859.

130 Stancombe Road: Lot 6, DP78859.

132 Stancombe Road: Lot 7, DP78859.

3 Site Layout and Features

124 Stancombe Road (Figure 2) is rectangular in shape and covers an area of 8,100 m². The site contains an existing dwelling with a swimming pool on the northern side and an asphalted driveway on the southern side. The northern part of the property consists of a gully that runs in a north-east to south-west direction. The gully is grassed and contains a variety of large trees and small bushes. The rear portion of the property appears to be used for grazing and is gently sloping down to the north-west and generally steepens towards the gully.

130 Stancombe Road (Figure 2) is also rectangular in shape with an area of 8,100 m². A tree lined gravel driveway leads to an existing dwelling near the centre of the property. The land north, east and south of the dwelling is largely flat and consists of pasture used for grazing. A steep bank along the south-west boundary is overgrown and slopes down into the neighbouring property to the west. At the south-west corner a culvert releases water into a culverted gully onto the neighbouring property. The gully culvert extends out from the neighbouring property under Stancombe Road. An intake culvert is located upstream at the north-eastern corner of the property. Water flows into the culvert from a small gully located on the property north of the site. Along the eastern boundary the surface slopes steeply down into the neighbouring property to the east. A sewer manhole is located on the steep slope along the eastern boundary.

132 Stancombe Road (Figure 2) has an area of 8,221 m² and is roughly square in shape. An existing dwelling is located towards the southern boundary near Stancombe Road. The area south and west of the dwelling contains a gravel driveway and a car parking area. The area surrounding the house especially to the north has been landscaped. The northern portion of land and a strip running to the east of the dwelling consists of paddocks and is used for grazing. Pugging of the ground surface is evident in the paddock north east of the dwelling. The property surface slopes gently to the west.

4 Site History

The site history of the properties was established through the review of historical aerial photographs and MCC records.

The following aerial photographs were used to establish the site history: 1922/39 (1960), 4604/22 (1972), SN5783 Q/18 (1980), SN8772 P/9 (1988) and 449096 (1996).

A summary of the key details for each property is provided below:

An aerial photo taken in 1960 shows that the sites are part of a larger property used for stock grazing. Stancombe Road is present. Several buildings are located on what is now 132 Stancombe Road and one is probably the farm house. No buildings are evident at 124 and 130 Stancombe Road.

A gully in the south-west corner of 130 Stancombe Road is evident and extends upstream in a north-east direction diagonally across the property. The gully appears to fork into two with one gully travelling north on to the neighbouring property the other north-east onto the neighbouring property to the east. A gully is also evident that would extent in a north-east direction across the northern part of the 130 Stancombe Road property.

The 1972 aerial photograph is similar to the 1960 photograph, in that the site was used for stock grazing. No evidence of filling of the gully on either of the subject sites was observed.

MCC records from the early 1970s show that the sites would have been part of the Chapel Road Subdivision undertaken by Broadlands Properties Ltd.

At 124 Stancombe Road building permits were applied for in 1979 for a new one-story dwelling and for a septic tank. An additional building permit was applied for in 1984 for a swimming and spa pool. A building permit was applied for in 1977 at 130 Stancombe Road and later a pool in 1980. At 132 Stancombe Road a building permit for building extensions and alterations was applied for in 1981.

The 1981 aerial photograph shows that the land has been subdivided from a single property into lifestyle blocks including the subject sites and buildings and driveways are evident on all three subject sites. There is also evidence of infilling of the gully that runs diagonally across 130 Stancombe Road.

A review of the MCC Attachment A Master Aerial Map indicates that 132 Stancombe Road contains a feature observed on 1967 aerial photography that has the potential to contain ACM and should be considered in asbestos site investigations. This was not evident in any of the aerial photographs.

5 Field Investigations and Findings

Site walkover inspections were undertaken on 19 July 2004. The walkover comprised inspections of the three properties for features such as building material, driveways, tracks, depression areas and potential fill areas that my contain ACM.

The area of the gully at 130 Stancombe Road thought to be filled (as identified in the 1981 aerial photo) was closely inspected. Several shallow pits were dug along the steep bank by the culvert that released water by the south-eastern corner of the property. No ACM material was visually identified in any of the holes or any of the exposures within the gully. The fill material was found to be a mixture of clay and gravels ranging in size from fine through to coarse. The area at 132 Stancombe Road indicated on the MCC Attachment A Master Aerial Map, was also closely inspected for ACM containing material. Several shallow pits were dug in the area of the driveway and no ACM material was visually identified at these locations.

The published geology is described by Kermode (1992) as Pleistocene aged Tauranga Group sediments comprised of clays, silts and sand. Evidence of these soils was confirmed during the study.

6 Conclusion

The historical aerial photographs and investigations on adjacent properties indicate that there is a low probability that ACM has been deposited on any of the subject sites or in fill areas. No ACM was identified at any of the properties during the site walkover inspection or minor intrusive investigations in suspect areas and the land can be considered suitable for further development. However, this does not preclude the possibility that some ACM may be present and due care needs to be exercised during any earthworks.

7 Applicability

This report has been prepared for the benefit of (Bishop Lenihan Concepts) with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

TONKIN & TAYLOR LTD

Environmental and Engineering Consultants

Report prepared by: Authorised for Tonkin & Taylor by:

Rachael Standish	Gerard Bird
Environmental Geologist	Environmental Group Manager

cc: MCC

URS

9-Aug-04
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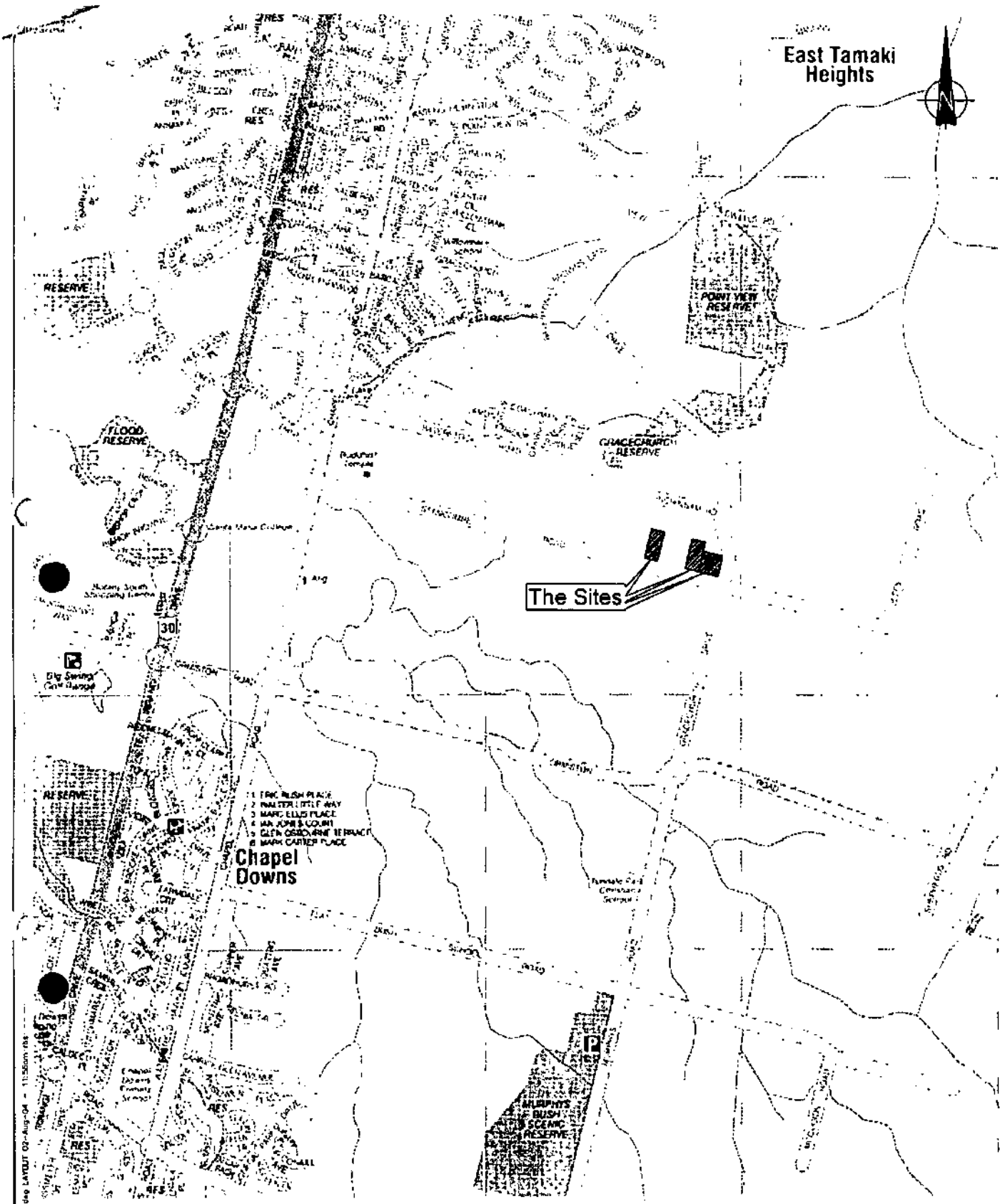


Location map courtesy of Wises Publications Ltd

DRAWN	RBS	Aug 04	BISHOP LENIHAN CONCEPTS
DRAFTING CHECKED		8/04	POTENTIAL ASBESTOS CONTAMINATION ASSESSMENT
APPROVED		5/04	124– 132 STANCOMBE RD, FLAT BUSH
CADFILE : L\21940\21940-S-F1			Location Plan
SCALES (AT A4 SIZE) 1:20,000			
PROJECT No. 21940	FIG. No. Figure 1		REV. 0

Tonkin & Taylor
Environmental & Engineering Consultants
Auckland
Hamilton, Christchurch, Nelson, Wellington, Whangarei

REFERENCE:
Aerial photo taken by
Precision Aerial Survey (2001)

SCALE 1:1,250
0 10 20 30 40 50 60 70 80 (m)

Tonkin & Taylor
Environmental & Engineering Consultants

DRAWN	RBS	Jul 04
DRAFTING CHECKED		
APPROVED		
PROFILE	L\21904\21904-S-F2	
SCALES (AT A3 SIZE)		
REV		

BISHOP LENIHAN CONCEPTS
POTENTIAL ASBESTOS CONTAMINATION ASSESSMENT
124-132 STANCOMBE RD, FLAT BUSH
Site Plan

FIG. No. Figure 2 REV. 0

THE SPECIMEN T·R·E·E COMPANY

2 1 SEP 2004

AN ARBORICULTURAL IMPLICATION REPORT ON THE PROPOSED SUBDIVISION AT 124, 128 - 132 STANCOMBE ROAD, DANNEMORA.

THE SPECIMEN TREE COMPANY LTD
SEPTEMBER 2004

The Specimen Tree Company Ltd. 180 Princes St. East, Otahuhu, Auckland.
P.O. Box 22-606, Auckland 1133, New Zealand. Ph 09-276 1041. Fax 09-276 1042. www.specimentree.co.nz
Arborists and horticulturists specialising in: Tree surgery • Tree moving

THE SPECIMEN T·R·E·E COMPANY

AN ARBORICULTURAL IMPLICATION REPORT ON THE PROPOSED SUBDIVISION AT 124, 128 - 132 STANCOMBE ROAD, DANNEMORA.

1.0 Introduction.

1.1 I received instruction from Gary James, Director from Jawa Structures Ltd, on 31 August 2004 to prepare an arboricultural implication report on the proposed subdivision at 124, 128, 130 and 132 Stancombe Road, Dannemora. I subsequently undertook a site visit on 16 September to collect data.

1.2 This report deals only with the trees that have been specified. It takes no account of any other trees or shrubs that have not been listed.

1.3 This report is to be used for the purpose of a Resource Consent Application.

1.4 All assessments were made from ground level and while the tree dimensions were measured they should be viewed as approximate only.

1.5 I have viewed the following documentation on which I have based this assessment:

- Untitled and undated site plan showing tree positions and another overlaid with proposed subdivision.

1.6 The trees implicated in the subdivision of 126 Stancombe Road and the road that bisects 124 – 132 Stancombe Road have been dealt with in The Specimen Tree Company report dated 30 June 2004 and are not within the scope of this report.

The Specimen Tree Company Ltd. 180 Princes St. East, Otahuhu, Auckland.
P.O. Box 22-606, Auckland 1133, New Zealand. Ph 09-276 1041. Fax 09-276 1042. www.specimentree.co.nz
Arborists and horticulturists specialising in: Tree surgery • Tree moving • Landscaping • Specimen & semi-mature tree nursery • Consultancy

2.0 The Proposal.

2.1 It is proposed that properties of 124, 128 - 132 Stancombe Road are to be extensively subdivided.

3.0 The Schedule of Implicated Vegetation.

3.1

Tree / Group No.	Species	Height (m)	Form	Health	Detail
1	Coastal Redwood	7	Poor	Poor	Insignificant tree. Die back apparent at growing tip.
2	Group planting of Ti Kouka and Golden Totara	6 – 8	Fair	Fair	Insignificant group planting.
3	Liquidambar	11	Poor	Fair	Insignificant tree.
4	Golden Totara	6.5	Fair	Good	Insignificant tree.
5	Camphor Laurel	8	Poor	Fair	Insignificant tree.
6	Liquidambar	12	Fair	Good	Significant tree.
7	Liquidambar	10	Fair	Poor	Insignificant tree. Evidence of Basal decay.
8	Norfolk Island Pine	15+	Fair	Good	Has significance when viewed as a group.
9	Norfolk Island Pine	15+	Fair	Fair	Has significance when viewed as a group.
10	Norfolk Island Pine	15+	Fair	Good	Has significance when viewed as a group.
11	Norfolk Island Pine	15+	Good	Good	Has significance when viewed as a group.
12					Mature group of trees not protected under the District Plan. Comprises of Weeping Willow, Silver Dollar Gum, Poplar and Grevillea.
13					Mature group of Casuarina, Poplar and Grevillea not protected under the District plan. Significant when viewed as a group, however form and health generally poor to fair.
14	London Plane	12	Poor	Fair	Insignificant tree. Suppressed by adjacent Poplar. Forms part of a significant Avenue of trees up a driveway.
15	London Plane	11	Poor	Fair	Insignificant tree. Forms part of a significant Avenue of trees up a driveway.
16	Golden Wych Elm	6	Fair	Fair	Insignificant tree with a group of two other smaller Elms.
17	London Plane	9	Poor	Poor	Insignificant tree.
18	Indian Cedar	10	Poor	Fair	Insignificant tree.
19	Norfolk Island Pine	15+	Good	Good	Significant tree.
20	Tulip tree	13	Poop	Fair	Insignificant tree.
21	Red Oak	10	Poor	Fair	Insignificant tree.
22	Pin Oak	15	Poor	Fair	Significant tree due to its size, poor specimen over all.
23	Pin Oak	6	Poor	Poor	Insignificant tree.
24	Liquidambar	12	Fair	Fair	Insignificant tree.

3.2 All of the trees listed will be required to be removed for the proposed subdivisions. Of the trees listed, three individually are considered significant, one of which has poor form, and two groups are considered significant, one of which does not include any generally protected trees.

4.0 Tree Removal Specifications And Methodology.

4.1 Prior to the tree removals being undertaken, the trees to be removed should be identified.

4.2 All tree removals should be in accordance with modern arboricultural practices.

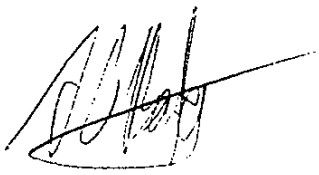
4.3 Tree removal operations should be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

4.4 Tree removal operations should comply with current Manukau City Council rules and bylaw regulations.

4.5 All generated debris should be safely removed and disposed of immediately following the tree removal operation. The site should be left tidy and safe at the end of each day.

If the recommendations contained within this report are adhered to, I am able to support this application for Resource Consent to subdivide at 124, 128, 130 and 132 Stancombe Road, Dannemora, Manukau City.

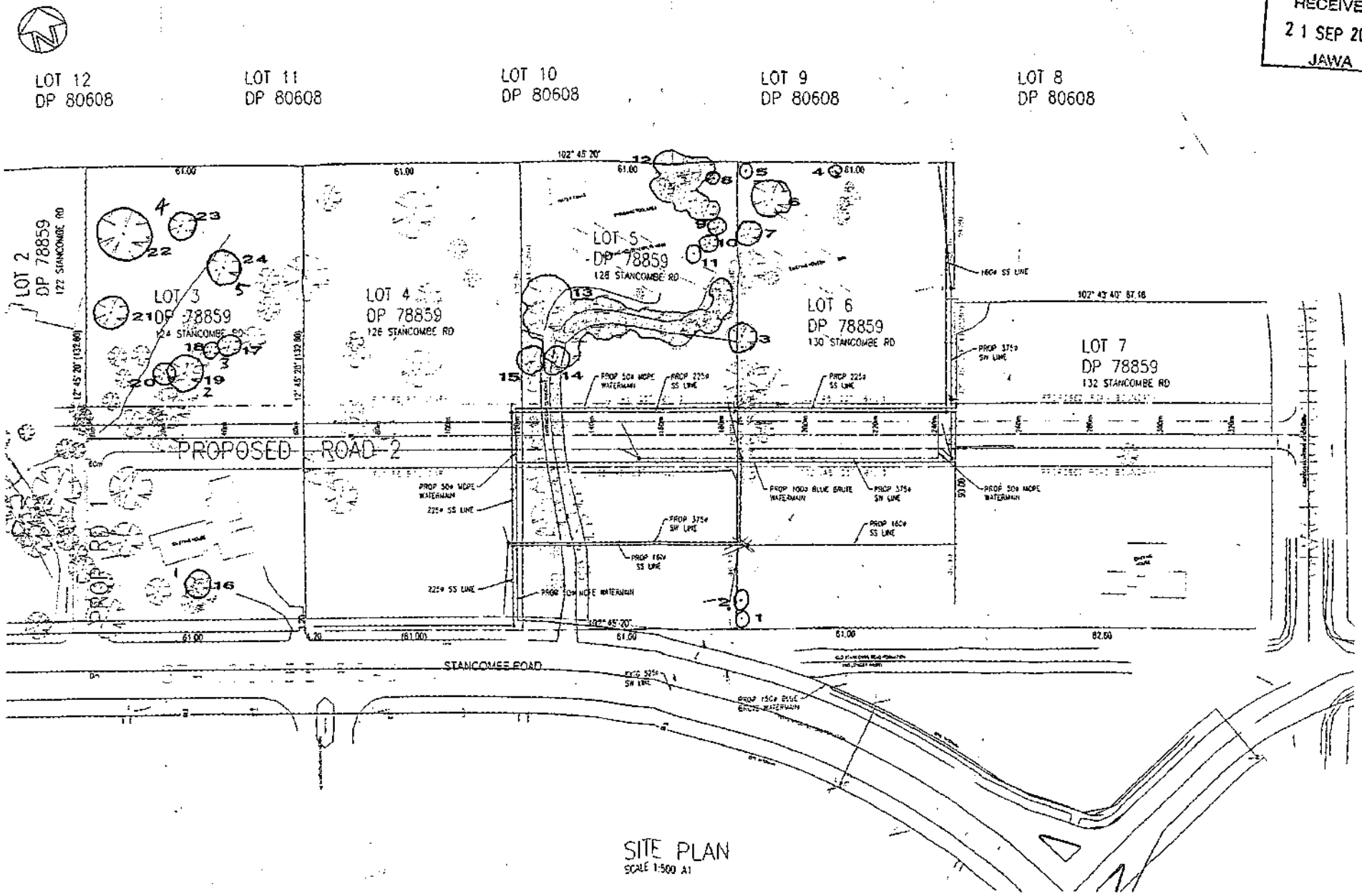
For **THE SPECIMEN TREE COMPANY LTD**



STUART BARTON
Cert. In Arboriculture, Dip. Hort.,
Dip. P&G. Tech., N.C.H. (Amenity)

20 September 2004

RECEIVED
21 SEP 2004
JAWA



SITE PLAN
SCALE 1:500 A1

Traffic
Solutions Ltd

17 SEP 2004

PROPOSED RESIDENTIAL SUBDIVISION

124-132 STANCOMBE ROAD, FLAT BUSH

Traffic Impact Assessment

Date: Issue B: 14 September 2004

Client: Gary James
Jawa Structures Ltd
8 Melrose Street
Newmarket
Auckland

File: 175bTIA.doc

A : 68 Hebron Rd, Torbay, Auckland
T : 09 473 4000 • F : 09 473 4001 • M : 021 315 882 • E : iconstable@xtra.co.nz

1. INTRODUCTION

This report assesses the likely traffic effects of a proposed subdivision at 124-132 Stancombe Road in Flat Bush, Manukau City. The subdivision site is located on the north side of Stancombe Road immediately west of the intersection at Jeffs Road, as indicated on Figure 1. The subdivision layout is shown on the untitled and undated site plan on Figure 2.

Specific residential developments are also being proposed on some of the residential lots that will comprise the subdivision, and the proposed locations of accesses to those lots are also indicated on Figure 2.

The main aspects of the subdivision that are assessed in this report are the effects of the increased traffic generation potential of the land, traffic safety, and the appropriateness of the locations of the vehicle accesses to the individual lots.

2. PROPOSED DEVELOPMENT

Stancombe Road has recently been realigned and reconstructed in accordance with the objectives in Variation 13 of the Manukau City District Plan. As indicated on Figure 2, the western portion of the subdivision land will have direct frontage to the new Stancombe Road alignment, but the eastern portion has frontage to a remnant part of the old road formation no longer in general use. It is intended that the remnant will form part of the access arrangement to Nos 130 and 132 Stancombe Road, as well as an as yet undeveloped site on the immediate south side of the remnant road, which is not part of the subdivision.

The eastern end of the subdivision land also has frontage to Gracechurch Drive.

Carlos Drive, (Proposed Roads 1 and 2 on Figure 2), which is to be constructed as part of the subdivision, will also provide site access to lots that do not have direct frontage to Stancombe Road. Carlos Drive will intersect with Stancombe Road at the western end of the site frontage, and will intersect with Gracechurch Drive at its eastern end. At its western end (Proposed Road 1), only one half of Carlos Place (Proposed Road 1) will be constructed as part of this subdivision, as the remaining half is located on the adjoining property to the west, which is to be subdivided separately.

The residential development as currently proposed at #126 Stancombe Road is to consist of 34 terrace style units. The development is to occur in 2 stages, Stage 1 comprising 16 of the units. All of the units are to have 3-4 bedrooms. The site will be accessed from Stancombe Road and Carlos Drive.

A separate development at #128 Stancombe Road will comprise 30 residential apartments. A vehicle access is to be provided directly off Stancombe Road.

A further development at #130 Stancombe Road is to contain 36 residential apartments, while at #132 Stancombe Road a further 47 apartments are proposed, each with between 1 and 4 bedrooms. Both sites will have vehicle accesses directly onto the remnant part of Stancombe Road.

While details of these site developments are not specifically assessed in this report, they do form the basis of the assessment of effects of the subdivision in regard to the traffic generation potential of the land and traffic safety at the proposed site access locations.

3. DISTRICT PLAN REQUIREMENTS

3.1 Zone

The site is zoned Rural 3 in the Manukau City Operative District Plan 2002 but is subject to the provisions of Proposed Variation 13.

3.2 Road Classifications

Stancombe Road and Murphys Road are classified as District Arterial Roads in Variation 13 of the District Plan. Jeffs Road is classified as a Collector Road. Gracechurch Drive and Topland Drive are classified as Local roads. Carlos Drive should be classified as a Local Road if it is constructed.

3.3 Site Access

Site access requirements are specified in Rule 8.11.7 of the District Plan.

Activities requiring access onto the primary road network are a Restricted Discretionary Activity, and must be assessed against the criteria in Rule 8.12.2 of the District Plan. The criteria include among other things, regard to sight distances, effects on intersections, and the effects of the accesses on the operation of the road network.

3.4 Road Widening

Table 2 in Rule 17.10.11.1 of Variation 13 requires that District Arterial Roads with cycle lanes have a road reserve width of 27.4m. A boundary setback is proposed along the sites with direct frontage to Stancombe Road, in compliance with that Table.

4. EXISTING ROAD AND TRAFFIC SITUATION

4.1 Existing Roads

Stancombe Road and Murphys Road near the site are 16m wide between kerbs, and consist of a parking lane, a cycle lane and a traffic lane in each direction, and a painted median. Stancombe Road is more or less straight and level, but there is a horizontal curve with a radius of approximately 220m in front of the site, where it links with Murphys Road. Stancombe Road and Murphys Road are is in a "Limited Speed Zone" though this will likely reduce to 50 or 60 km/h with further urbanisation of surrounding land.

Jeffs Road between Stancombe Road and Gracechurch Drive has a width of 10.8m between kerbs and is two-laned. The intersection at Stancombe Road presently has a "Give Way" control but Council staff have advised that the intersection will likely be

signalised in the future as traffic volumes increase. Jeffs Road is in a "Limited Speed Zone" though that may decrease with urbanisation of surrounding land.

Gracechurch Drive has a roadway width of 7.5m between edges of seal, and is two-laned. The road is straight adjacent to the subdivision site but there is a horizontal curve immediately to the north. The curve has a radius of about 100m and has a maximum safe design speed value of about 50 km/h. The road adjacent to the site has a gradient of about -6% downhill towards the south. The intersection at Jeffs Road has a "Give Way" control. The legal speed limit on Gracechurch Drive is 50 km/h.

The remnant portion of Stancombe Road in front of the eastern part of the subdivision site is about 6m wide between edges of seal and is straight and level. Access to the remnant is available via a new concrete vehicle crossing. Structurally the remnant road is in poor condition.

4.2 Traffic Volumes

At present, traffic volumes on the road network in the vicinity of the site are low, and they would not be very relevant anyway because there will be significant increases in traffic flows as development in the Flat Bush area progresses. Following consultation with Council staff it is anticipated that the daily traffic flow on Stancombe Road near the site will be around 15,000 vehicles per day. Likewise the traffic volume on Jeffs Road near Stancombe Road is expected to be around 4,000 vehicles per day, and I have adopted these projected flows for traffic planning purposes.

The existing traffic volume on Gracechurch Drive is estimated to be in the range 2000-4000 vehicles per day, based on traffic count data provided to me by the Council.

4.3 Traffic Safety

A study of accident records held by the Land Transport Safety Authority indicates that there has been a traffic safety problem at the previous cross intersection of Stancombe Road with Gracechurch Drive and Jeffs Road, between vehicles colliding at 90 degrees. However with the modified intersection layout now in place these would no longer apply.

Accident records also indicate that a number of vehicles lose control on the road curves in Gracechurch Drive, with excessive vehicle speed for the road conditions being a possible factor.

Otherwise there appear to be no existing traffic safety problems on the road network of significance in the vicinity of the site.

5. TRAFFIC GENERATION

The daily traffic generation rates of residential units depend largely on the location of the units in relation to other amenities such as commercial centres and public transport facilities, and the sizes of the individual units. Peak hourly traffic generation rates also depend somewhat on the personal circumstances of residents, such as in apartment dwellings which are often specifically marketed to professional people who

work outside normal working hours and therefore generate a higher proportion of vehicle trips outside the morning and evening peak traffic periods.

Taking into consideration the location of the site in relation to such facilities, and the anticipated numbers, sizes and types of residential units currently being proposed in the subdivision, it is estimated that the traffic generation of the subdivision development would potentially be as indicated in the following Table:

Site	No of Units	Peak Rate (tph/unit)	Peak Hour (tph)
124 Stancombe	42 x 2-bdm apartments	0.7	29
126 Stancombe	16 x 3/4 bdm terraces (front) 18 x 3/4 bdm terraces (rear)	1.0 1.0	16 18
128 Stancombe	30 x 2-bdm apartments (front) 1 x existing house (rear)	0.7 1.0	21 1
130 Stancombe	36 x 2-bdm apartments (front) 18 x 2-bdm apartments (rear)	0.7 0.7	25 13
132 Stancombe	10 x 1-bdm apartments 16 x 2-bdm apartments 21 x 3/4 bdm apartments	0.5 0.7 0.8	5 11 17
Total:			**156**

In addition to the subdivision development there will also be some traffic generated by future development of the vacant site adjoining the south side of the remnant Stancombe Road formation, which will most likely gain access to the road network via the remnant formation. Although that site is not part of the subdivision I have included an assessment of it to determine the total amount of traffic that will access Stancombe Road from the remnant road. The amount of traffic that will be generated by the site will depend on the activity type that will occupy it, which is not determined at this time. However, typical activities that could reasonably be developed on the site, and the likely peak hour traffic flows they would generate, are listed as follows:

Slow trade specialty retail:	400m² @ 5 tph/100m²	20 tph
Motel:	Say 10 units @ 0.4 tph/unit	4 tph
Medical Centre:	Say 2 practitioners @ 4 tph/practitioner	8 tph

Thus peak hourly traffic flows in the order of about 10 tph should be expected at a development on that site, depending on the activity type that will occupy it.

Taking into consideration all of the above, it is expected that the traffic generated by the development in the subdivision, and including the site on the south side of the remnant part of Stancombe Road, would be distributed on the road network as indicated on Figure 3 in the weekday morning peak traffic period, and Figure 4 in the weekday evening peak traffic period. It is assumed that the accesses to the sites with frontage to Stancombe Road would be provided as indicated on Figure 2.

In the morning peak about 80% of residential traffic will be exiting, with perhaps 80% of those travelling towards the north and west as most residents head for work in Auckland and Manukau. Most would use Stancombe Road but some may also use Gracechurch Drive as a short cut to the north, as indicated. Thus the right turn exit

movements onto Stancombe Road from Carlos drive and the remnant part of Stancombe Road will be the most dominant movements, and to a lesser extent the left turn exit movement from Carlos Drive into Gracechurch Drive. Relatively few vehicles will likely head south along Murphys Road.

In the evening peak traffic period the reverse will occur, so that the dominant vehicle movements will be the left turns into the subdivision from Stancombe Road, and the right turn movement from Gracechurch Drive into Carlos Drive.

It would be possible to reduce the number of turning movements directly on and off Stancombe Road at individual sites with frontage to that road by providing access to those sites on Carlos Drive. However there would be little advantage in doing so as the accesses proposed are generally well separated from each other and other road intersections so that vehicle conflicts are unlikely to occur. In addition, there would likely be no significant reduction in the total number of turns on and off Stancombe Road because most vehicles would simply divert to the intersection at Carlos Drive.

6. SITE ACCESSES

6.1 Access to #124 Stancombe Road

Access to #124 Stancombe Road is currently proposed to be located on Carlos Drive adjoining the western site boundary. I consider that location to be appropriate. It would not be desirable to provide a vehicle access directly to Stancombe Road from this site due to the potential for conflict between vehicles turning at such an access, and vehicles turning or queuing on the painted median to turn into or out of Topland Drive opposite the site.

6.2 Access to #126 Stancombe Road

A vehicle access to #126 Stancombe Road could reasonably be provided at the eastern extremity of the site frontage on Stancombe Road, as is intended according to the development layout for that site shown on Figure 2. At that location there would be sufficient separation from the intersection at Topland Drive to avoid conflicts between other vehicles turning on and off the road. Available sight distances would be at least 150m towards the east, which is adequate for a speed environment up to about 75 km/h according to the sight distance table in Section 8.12.2.3 of the District Plan, and considerably more towards the west. Right turn manoeuvres should be possible from the painted median with reasonably safely.

6.3 Access to #128 Stancombe Road

The location of the proposed access at about the mid-point of the Stancombe Road frontage, as shown on Figure 2, is considered to be satisfactory in regard to sight distances which again are in excess of 150m, and separation from other accesses and road intersections. Right turn manoeuvres should be possible from the painted median with reasonably safely.

6.4 Access to #130 and #132 Stancombe Road

It is proposed that access to #130 and #132 Stancombe Road would be directly to the remnant Stancombe Road formation. The intersection of the remnant formation

with Stancombe Road is separated by about 85m from the intersection at Jeffs Road, and is considered to be appropriate in the existing road environment in regard to avoiding turning conflicts with vehicles turning at the intersection. Available sight distances are in excess of 150m towards the east and significantly more towards the west.

However, if traffic volumes increase on the road network as is currently anticipated, and the intersection at Jeffs Road is signalised, some queuing should be expected to occur on the intersection approaches, which could reach to or even extend beyond the access to the remnant formation at some times. Such queues would obstruct sight lines from the remnant road towards the east and could potentially have an adverse effect on traffic safety, particularly for vehicles wishing to right turn out of the access.

Figures 3 and 4 indicate that the highest right turn exit movements will occur in the morning peak traffic period. However, eastbound traffic flows on Stancombe Road will be lower at that time, and therefore queue lengths will tend to be shorter. The longest vehicle queues in the eastbound direction will occur in the evening peak traffic period, but few vehicles will right turn out of the remnant formation at that time.

It would be possible to reduce the number of vehicle movements onto Stancombe Road from the remnant road by providing additional vehicle accesses directly to Carlos Drive from #130 and #132 Stancombe Road. Based on the desired destinations of residents it is anticipated that the provision of such an access or accesses would potentially reduce the number of right turn manoeuvres directly onto Stancombe Road by about 15 trips per hour in the morning peak traffic period, and considerably less at other times. While it is desirable in principle to reduce the number of uncontrolled turning movements on and off a primary road, the provision of an alternative access arrangement at these sites would likely not make a very significant difference.

7. IMPROVEMENTS TO STANCOMBE ROAD REMNANT

Due to the poor condition of the remnant part of Stancombe Road, it will be necessary to upgrade the road if good access to sites adjoining it is to be provided. Figure 5 shows how that could be done.

The upgraded roadway would have a basic width of 8m, with visitor parking for 14 vehicles at 90 degrees along its northern side. Vehicle crossings to the #130 and #132 Stancombe Road properties are also indicated, each being 6m wide at the boundary.

With the existing alignments, the remnant formation intersects with Stancombe Road at an acute angle, and as a result the left turn exit movement is potentially tight. The turning path of a 90-percentile single unit truck left turning out of the remnant road, shown on Figure 5, demonstrates that the arrangement proposed, which utilises the existing vehicle crossing, would enable a single unit truck to execute a hard left turn out of the remnant road without encroaching onto the painted median on the main road.

Alternatively the remnant road could be realigned so that it intersects with Stancombe Road at a higher entry angle, to ease the left turn exit manoeuvre. However doing so would require that the access be located closer to the intersection

at Jeffs Road, which would not be desirable for traffic safety reasons and is not recommended, particularly as there is no need to do so.

A turning head should be provided at the end of the remnant road. Figure 5 shows a suitable hammerhead style turning head that would cater for single unit trucks such as rubbish trucks.

A new pedestrian footpath would be formed along the site boundaries of #130 and #132 Stancombe Road, to connect to the existing footpath in Gracechurch Drive at its eastern end, and a new footpath which is to be provided along Stancombe Road to the intersection at Carlos Drive as part of the subdivision work at its western end.

On Figure 5 the kerb along the south side of the remnant formation is deliberately omitted, because if one was provided it is likely that it would need to be removed again when the site on the south side of the roadway is eventually developed.

8. CARLOS DRIVE

The available sight distance towards the north from Carlos Drive where it will intersect with Gracechurch Drive is measured to be 79m, restricted by a horizontal curve. That is about equal to the recommendation in the Austroads Guide Part 5 for safe intersection sight distance on urban roads at an operating speed of 50 km/h, and is the minimum that should be provided for traffic safety.

Towards the south the available sight distance is about 60m, to the intersection at Jeffs Road. Again that is about equal to the recommended minimum that should be provided for safe stopping at an operating speed of 40 km/h, which I consider would be an appropriate operating speed of vehicles heading northbound from that intersection.

Thus the available sight distances from Carlos Drive along Gracechurch Drive are at a minimum in both directions, and vehicles turning out of Carlos Drive may impede the flow of passing traffic on Gracechurch Drive at times.

Available sight distances from Carlos Drive where it will intersect with Stancombe Road would be in excess of 200m in both directions and would be satisfactory in regard to both traffic safety and the free flow of traffic on the main road.

The kerb to kerb width of Carlos Place is to be 7.8m, and the road reserve width is to be 18.2m, in compliance with the subdivision construction standards in Appendix 2 of Chapter 9 of the District Plan, for a local road serving more than 30 units.

It is recommended that corner kerbs at the junctions of Gracechurch Road, Stancombe Road and the 90-degree bend near Stancombe Road, have minimum radii 9m, to ensure that trucks can turn in and out of Carlos Drive without encroaching unduly into opposing traffic lanes.

9. CONCLUSIONS

The amount of traffic that would potentially be generated by development of the subdivision land would be well within the capacity of the road network in the vicinity, which has been provided to cater for land development.

It should be possible to locate vehicle accesses to the individual sites in the subdivision so that the function of the primary road network is not significantly compromised, that is, the conveyance of traffic. The access locations indicated on Figure 2 and as recommended in this report, should be satisfactory in that regard.

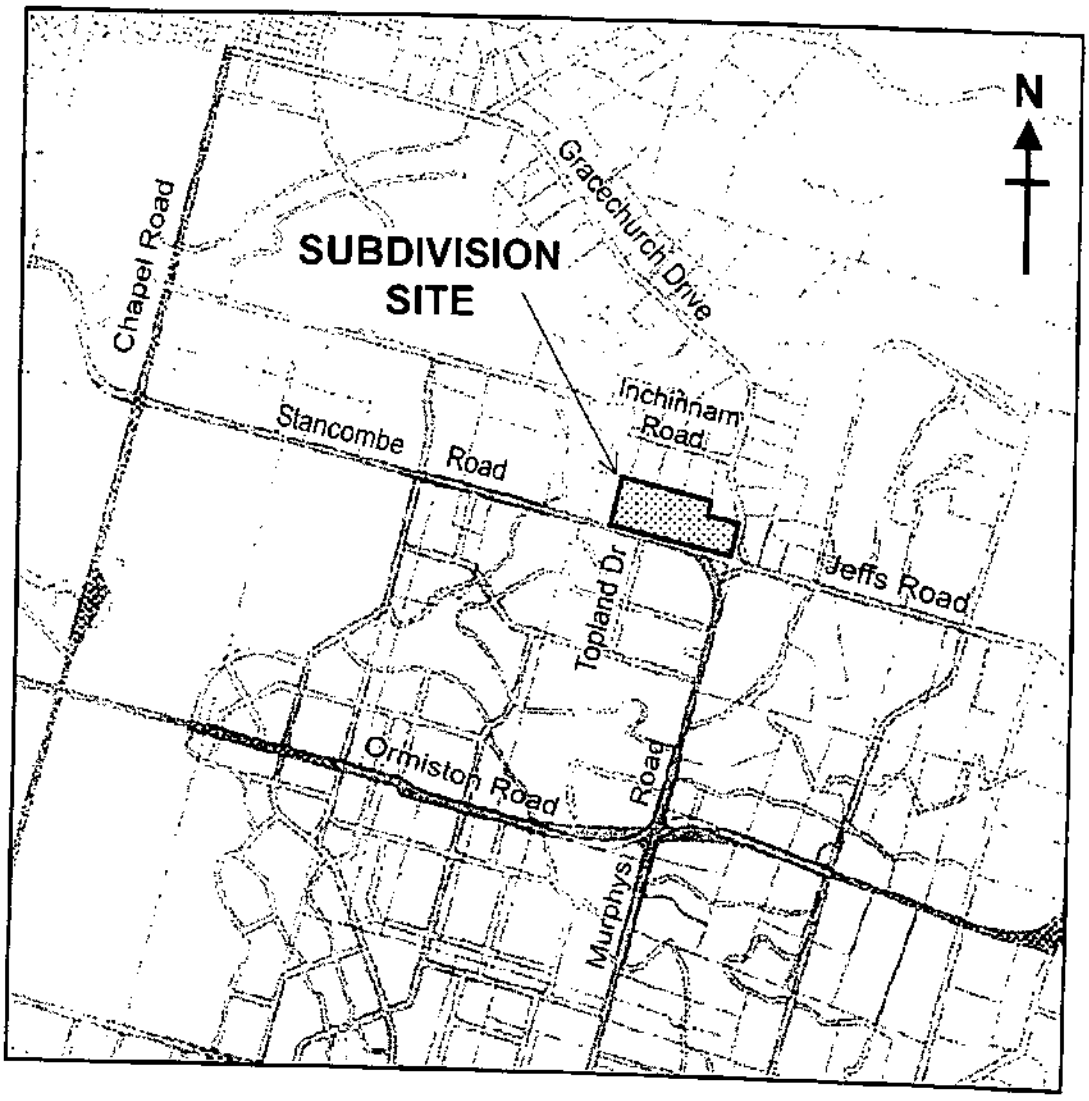
The old remnant part of Stancombe Road should be upgraded to a satisfactory standard of access, including a turning head at the cul-de-sac end to enable vehicles up to the size of a 90-percentile truck to turn around, and so that the existing concrete vehicle crossing apron can be reasonably utilised. The layout shown on Figure 5 shows how that could be done.

Carlos Drive would provide access mainly to the rear lots of the subdivision. The location of its intersection with Stancombe Road is considered to be appropriate in regard to separation from other nearby intersections such as Topland Drive, and available sight distances in both directions would easily be adequate for traffic safety. However, the available sight distances from the proposed intersection at Gracechurch Drive are close to the minimum that should be provided for traffic safety. Carlos Drive itself would be generally compliant with the development controls in the District Plan. It is recommended that the kerbs on each intersection corner, and on the inside of the 90-degree bend in Carlos Drive itself, have minimum radii of 9m.

Taking into consideration the above, it is considered that consent could reasonably be granted for the proposed subdivision from a traffic perspective.

Ian Constable
Traffic Engineer

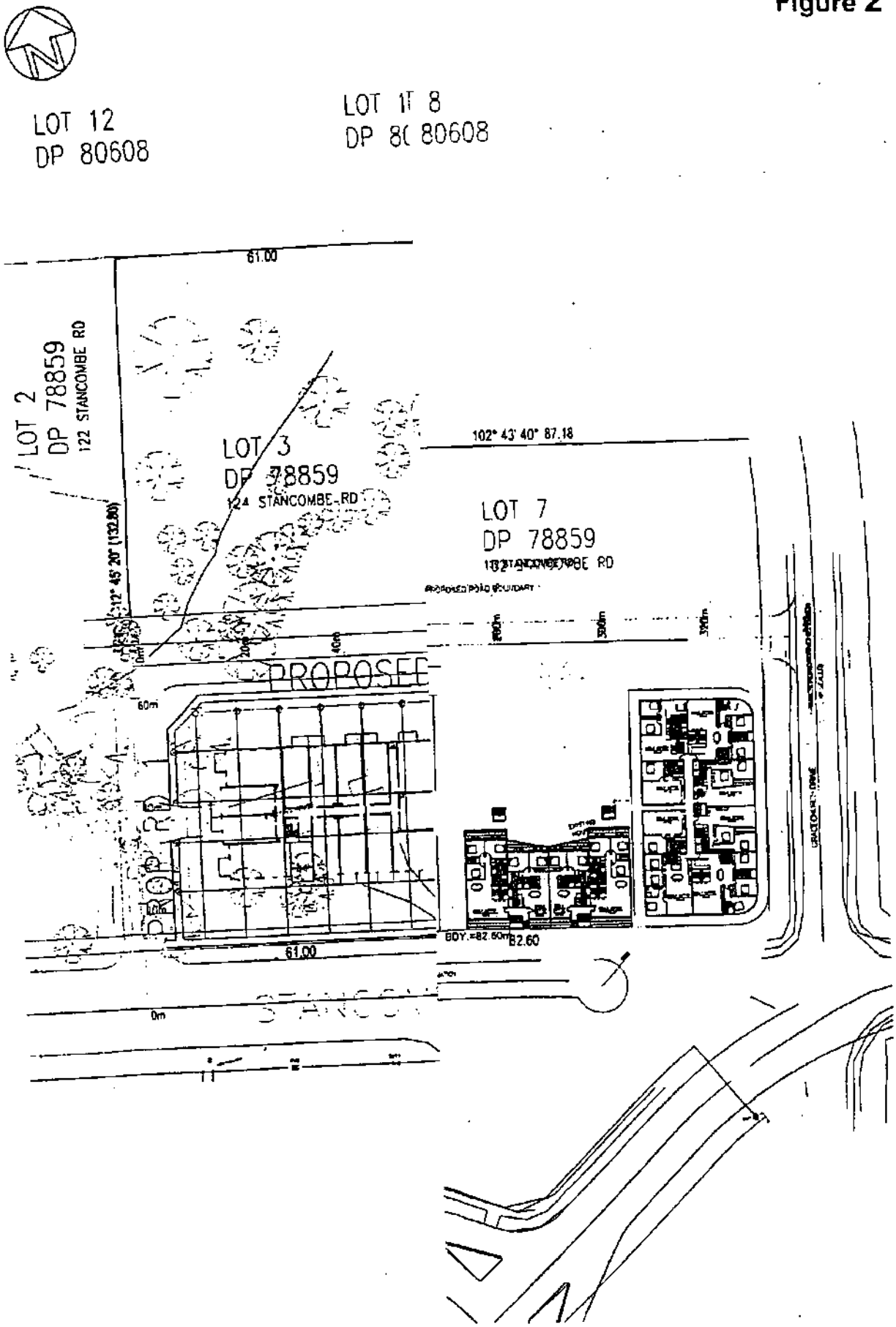
Figure 1



124-132 STANCOMBE ROAD SUBDIVISION

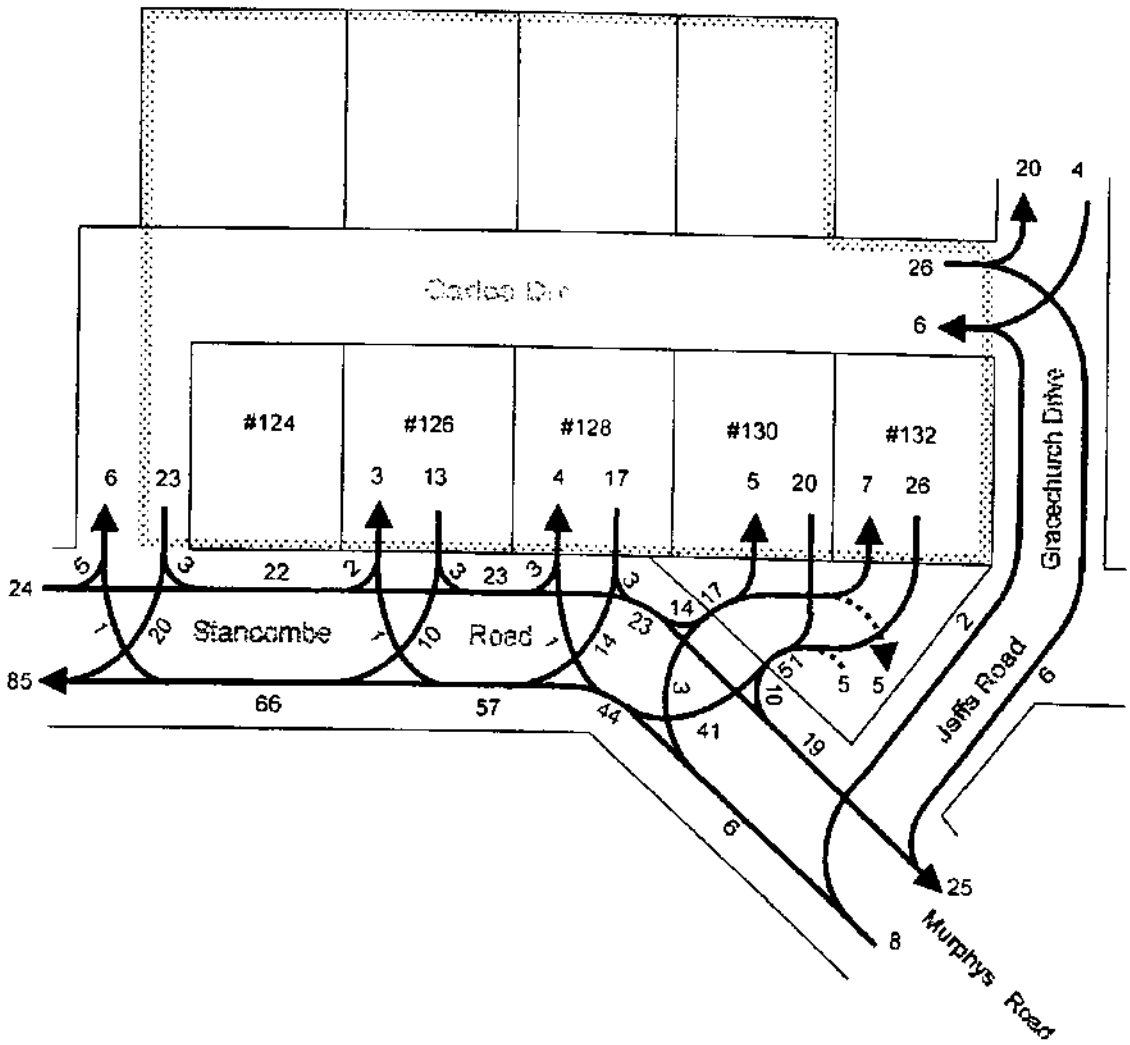
SITE LOCATION

Figure 2



LOT 12
DP 80608
LOT 1T 8
DP 8(80608
61.00
LOT 2
DP 78859
122 STANCOMBE RD
LOT 3
DP 78859
124 STANCOMBE RD
102° 43' 40" 87.18
LOT 7
DP 78859
PROPOSED
60m
BDY.=82.60m
82.60
61.00
0m

Figure 3

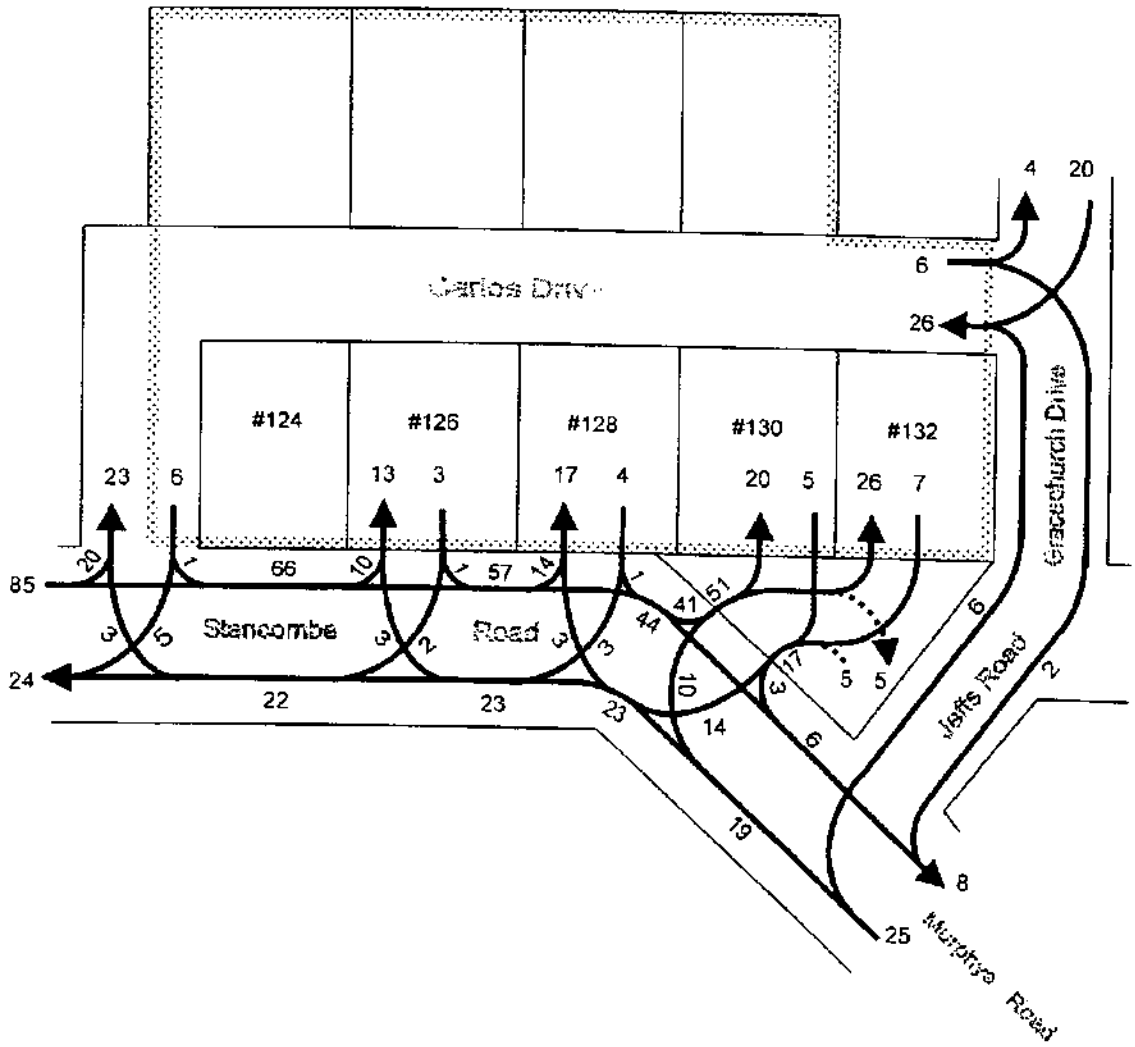


124-132 STANCOMBE ROAD SUBDIVISION

DISTRIBUTION OF GENERATED TRAFFIC

AM PEAK HOUR

Figure 4

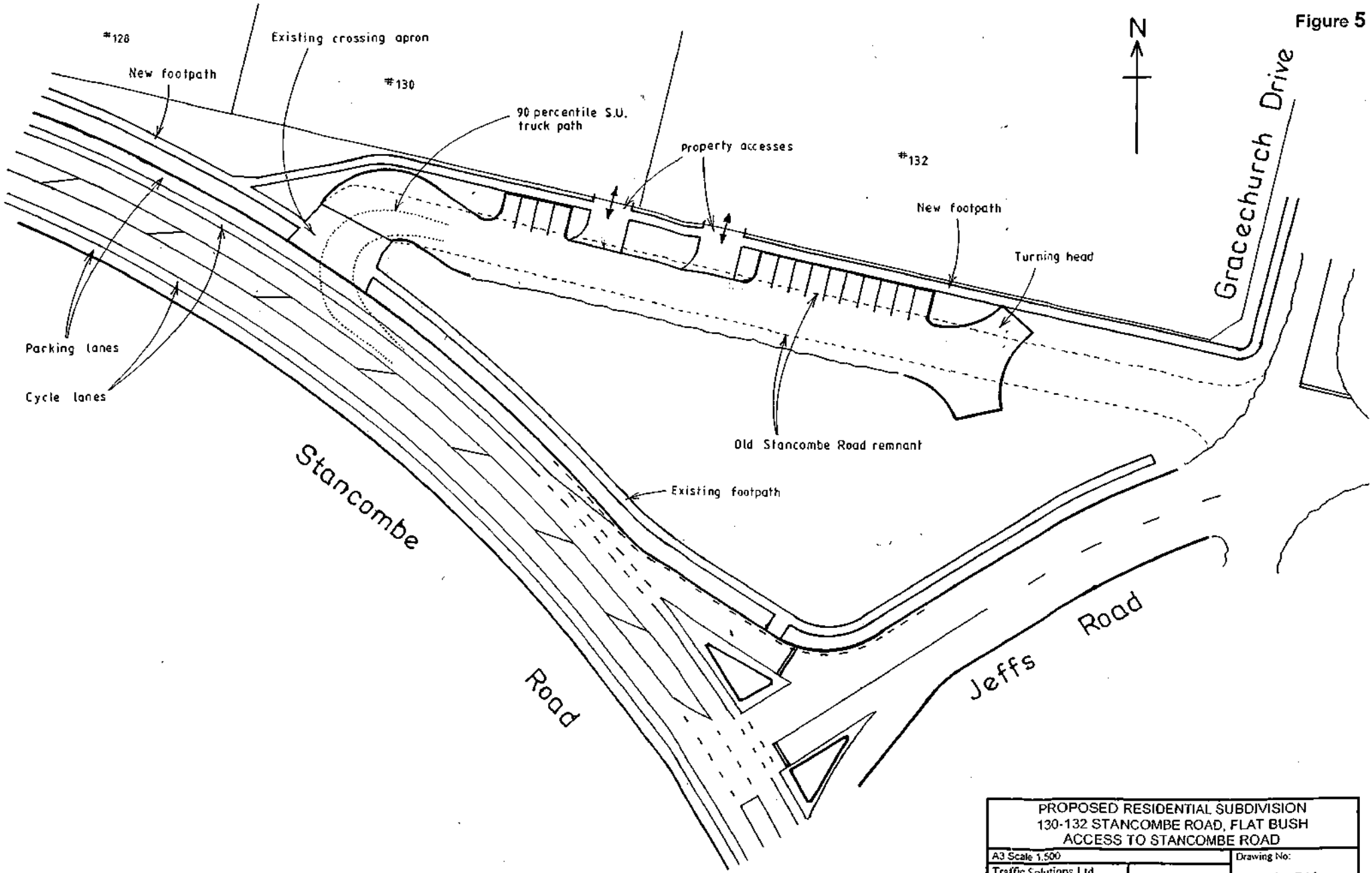


124-132 STANCOMBE ROAD SUBDIVISION

DISTRIBUTION OF GENERATED TRAFFIC

PM PEAK HOUR

Figure 5



PROPOSED RESIDENTIAL SUBDIVISION
130-132 STANCOMBE ROAD, FLAT BUSH
ACCESS TO STANCOMBE ROAD

A3 Scale 1:500

Drawing No: 175/1

Traffic Solutions Ltd
68 Hebron Road, Torbay, Auckland
Ph (09) 473-4000 Fax (09) 473-4061

Drawn:
Date:

AIREY CONSULTANTS LTD

HEALTH AND SAFETY PLAN

June 1994

CONSTRUCTION SITE SAFETY MANUAL

CONTENTS

A SITE SAFETY
B PERSONAL SAFETY
C PLANT SAFETY
D DANGEROUS SUBSTANCES

A SITE SAFETY

SITE CLEANLINESS

Keep site clean and tidy at all times, pick up debris that may cause slips and falls. If materials are accidentally spilt while working, clean up immediately.
All rubbish to be placed in designated areas.

WEATHER CONDITIONS

Stop work when weather conditions make it hazardous. If bad weather forces work to stop, ensure the work area is protected by temporary fences. If working on roads, ensure site is enclosed, well lit and sign-posted.

EXCAVATIONS / TRENCHES

Never work alone in an excavation.

Work in excavations over 1.5 metres deep require the notification and supervision of a qualified safety supervisor.

When open trenching across a road, work on half a road at a time. Fill or cover that half before digging the rest.

Keep safe pedestrian and vehicle access to all private property. Bridge trenches and cover or fill excavations prior to leaving the site unattended.

Any open excavations should be clearly marked. Place temporary fences around excavations if the site is unattended.

When working in excavations greater than 1.5m deep, ensure workers wear appropriate safety equipment, secure access and ensure escape routes are provided.

Inspect excavations every day before work commences and after heavy rain or any other occurrence which could affect the excavation stability.

SITE VEHICLES / TRAFFIC

Keep access and exit paths and walkways clear at all times.

Avoid congestion of work areas.

ROAD WORKS

Signs
Install temporary signs in accordance with Transit New Zealand guidelines.

Use Traffic Controllers when the following conditions exist :-

- When traffic on a two way road must be confined to a single lane.
- Where visibility through a worksite is restricted.
- When traffic must be stopped while a road is temporarily blocked.
- When it is desirable to slow down traffic for it's own safety or to protect work in progress.

Where possible, avoid working during rush hours.

FIRES

Keep work areas clean.
No smoking near petrol, solvents or other flammable materials. Also avoid using machinery which produces sparks or heat near a flammable item.
Place fire extinguishers at suitable points and know how to use them.
Report any fire on site. In case of fire :

a) Extinguish it if possible
b) advise the Supervisor
c) call Fire Department if you cannot extinguish fire
d) evacuate area

B PERSONAL SAFETY

Protective Clothing and Safety Equipment

CLOTHING :

Wear high visibility coloured clothing on road works. Wear reflectorised clothing at night.

FOOTWEAR :

Safety boots or shoes must be worn at all times.

EARMUFFS

Ear protection must be worn while operating plant or machinery which produce in excess of 85 decibels (the level at which a person must raise his voice to be heard 300mm away), or as instructed by a supervisor.

SAFETY HELMETS
Protective helmets must be worn in designated areas.

EYE PROTECTION
Eye protection should be worn whenever workers are exposed to flying particles e.g. drilling concrete, spray painting, working in dusty conditions.

SKIN
Take appropriate precautions when working in the sun e.g. hat and sunscreen.

Use appropriate safety equipment when handling chemicals and hazardous substances e.g. overalls, gloves, creams.

LONG HAIR/ LOOSE CLOTHING
Ensure adequate steps are taken to tie hair and loose clothing which may become entangled in moving machinery.

LIFTING
Do not try to lift more than can be easily managed. Bend the knees and keep a straight back. Ensure that you can see where you are going while lifting. If a load is too heavy, get some assistance.

FIRST AID
First Aid kits must be readily available to workers. Supervisors should be trained in First Aid procedures.

ALCOHOL / DRUGS
No alcohol or drugs are permitted on site.

HORSEPLAY
Horseplay can be fatal - be sensible on work sites.

C PLANT SAFETY

MOVING PLANT

- Only experienced machine operators should operate plant.
- Take care while reversing plant.
- Beware of overhead wires and underground services - check location of such services before operating plant.
- Keep adequate distance and be aware of moving plant.
- Ensure all items of plant are adequately maintained by persons trained to do so.

HAZARD IDENTIFICATION

1 Chemical Hazards
- Affect the skin by contact
- Digestive system
- Lungs if air is contaminated
- Vapour, mist, or dust.

2 Physical Hazards
- Caught in or by machinery
- Buried in trenches
- Collapsing machinery
- Confined spaces
- Being hit by flying objects
- Caught in explosions
- Falling
- Tripping

3 Noise Hazards
- Disrupt concentration
- Interfere with communication
- Result in loss of hearing
- High impact noises.

4 Lighting Hazards
- Inadequate lighting
- Eyes to adjust
- Darker environment
- Bright sunlight
- Temporary lighting

5 Vibration Hazards
- Whole body vibration (e.g. truck drivers, operators of mobile equipment)
- Segmental vibration (e.g. hand tools, chainsaws and pneumatic hammers).

6 Temperature Hazards
- Extremes of cold or heat
- Individual fatigue or reduced capacity to work.

7 Biological Hazards
- Insects
- Bacteria
- Fungi
- Plants
- Worms
- Animals
- Viruses
- Hepatitis and the AIDS virus are other biological hazards.

8 Ergonomic Hazards
- Manual handling procedures
- Incorrectly designed work stations
- Audio and visual alarms.

9 Miscellaneous Hazards
- Stress
- Fatigue
- Assaults
- Drugs and alcohol.

ELECTRICAL EQUIPMENT

- Always use isolating transformers.
- Ensure all defective elements are repaired.
- Power tools must have proper guards in place.
- Operators must use appropriate safety equipment e.g. goggles, earplugs.
- Extension leads, cords and hoses must be placed with care so as to avoid contact with machinery or becoming a hazard to workers.

D DANGEROUS SUBSTANCES

Asbestos
Report discovery of any asbestos to site safety officer and stop work in that area until notified.

Pollution and Spillages
Do not allow waste material to enter stormwater drainage systems or waterways.

Chemicals
Appropriate safety equipment to be worn when handling chemicals and other dangerous substances.

10 Radiation Hazards
- Radioactive gauging devices
- infra-red radiation
- Lasers, ultraviolet radiation
- Microwaves (high frequency).

11 Electrical Hazards
- All forms of electrical energy.

HAZARD IDENTIFICATION PROCEDURE

To ensure further identification of hazards and assessment of their risk, the **Hazard Identification Form** has been produced.

This form should be completed and forwarded to Airey Consultants Ltd - Health and Safety Co-ordinator on discovery of a hazard.

The Health and Safety Co-ordinator will then implement necessary controls to eliminate/isolate or minimise hazard.

Record of accident / serious harm

Complete this copy and retain it.
Forward the following duplicate copy to your nearest OSH office.

1 Particulars of employer: (Business name and address)

2 Location of place of work:

Shop, shed, unit no, floor, building; Street no and name ; Locality / suburb

3 Personal data of injured person:

Name

Residential address

Date of birth

Sex (M/F)

4 Occupation or job title of injured person:

5 Period of employment of injured person:

- ☐ 1st week
- ☐ 1st month
- ☐ 1-6 months
- ☐ 6 months - 1 year
- ☐ 1-5 years
- ☐ Over 5 years
- ☐ non-employee

6 Treatment of injury:

- ☐ Nil
- ☐ First-aid
- ☐ Doctor (not hospitalised)
- ☐ Hospitalised

7 Time and date of accident / serious harm:

Time am / pm

Date

Shift ☐ Day ☐ Afternoon ☐ Night

Hours worked since arrival at work

8 Mechanism of accident / serious harm:

- ☐ Fall, trip or slip
- ☐ Hitting objects with part of the body
- ☐ Sound or pressure
- ☐ Being hit by moving objects
- ☐ Body stressing
- ☐ Heat, radiation or energy
- ☐ Biological factors
- ☐ Chemicals or other substances
- ☐ Mental stress

9 Agency of accident / serious harm:

- ☐ Machinery or (mainly) fixed plant
- ☐ Mobile plant or transport
- ☐ Powered equipment, tools or appliances
- ☐ Non-powered handtools, appliances and equipment
- ☐ Chemical or chemical products
- ☐ Material or substance
- ☐ Environmental agency
- ☐ Animal, human or biological agency (not bacteria or virus)
- ☐ Bacterial or virus

10 Body part:

- ☐ Head
- ☐ Neck
- ☐ Trunk
- ☐ Upper limb
- ☐ Lower limbs
- ☐ Multiple locations
- ☐ Systemic (internal organs)

11 Nature of injury or disease: (specify all) ☐ Fatal

- ☐ Fracture of spine
- ☐ Puncture wound
- ☐ Other fractures
- ☐ Poisoning and toxic effects
- ☐ Dislocation
- ☐ Multiple injuries
- ☐ Sprain or strain
- ☐ Damage to artificial aid
- ☐ Head injury
- ☐ Disease, nervous system
- ☐ Internal injury of trunk
- ☐ Disease, musculoskeletal system
- ☐ Amputation, incl. eye
- ☐ Disease, skin
- ☐ Open wound
- ☐ Disease, digestive system
- ☐ Superficial injury
- ☐ Disease, infectious or parasitic
- ☐ Bruising or crushing
- ☐ Disease, respiratory system
- ☐ Foreign body
- ☐ Disease, circulatory system
- ☐ Burns
- ☐ Tumour (malignant or benign)
- ☐ Nerves or spinal cord
- ☐ Mental disorder

12 Where and how did the accident / harm happen? (If not enough room, attach separate sheet or sheets)

13 Has an investigation been carried out? yes/no

Was a significant hazard involved? yes/no

Completed by: Employer or employer's representative (delete which is not applicable)

Name and position Signature Date

AIREY CONSULTANTS LTD

HAZARD IDENTIFICATION PROGRAMME

(A) JOB	PLACE	DATE

(B) HAZARD	(C) SIGNIFICANT HAZARD

(D) SIGNIFICANT HAZARD CAN WE ELIMINATE	YES/NO
(E) CAN WE ISOLATE	YES/NO
(F) CAN WE MINIMISE EXPOSURE	YES/NO

ACTION PLAN	(H) REQUIRED PROTECTION

(I) EMERGENCY PROCEDURE

POSITION	SIGNATURE

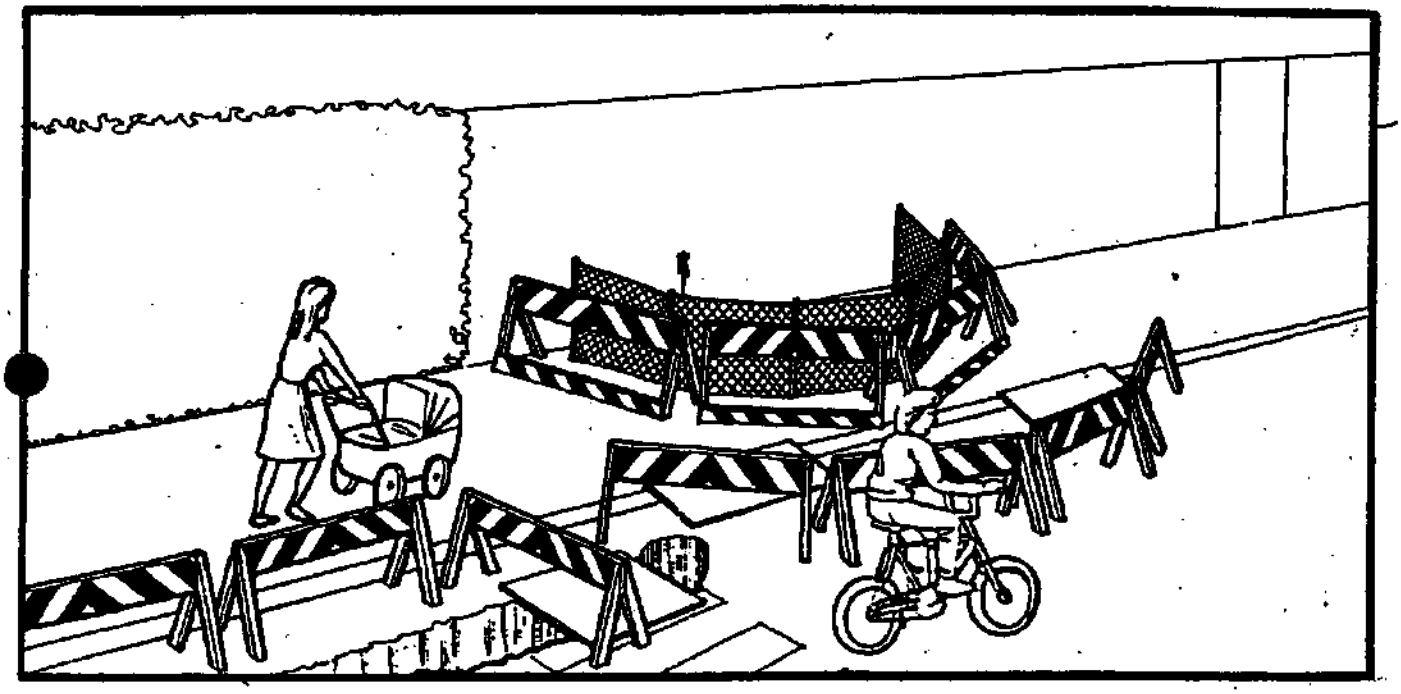
Traffic Management Plan

for

Working on Footpaths

The work on the road reserve involves the installation of public drainage lines in the footpath area. The work will be carried out in accordance with Transit New Zealand "Working on the Road" Publication, with particular reference to the "Working on Footpaths" a copy of which is attached.

The contractor will be required to ensure the safety of pedestrians and cyclists, particularly at night with the use of appropriate barriers and provision for passage of pedestrians without their having to resort to walking on the carriageway.



Working on footpaths

The general principle of control and safety can, and must, also be applied for pedestrians and cyclists. In many ways these groups are less able to cope with worksite situations than motor traffic and special care must be taken to provide adequate facilities for them. Among pedestrians are people who are very young and impulsive, people with [illegible]ted agility and mobility, and those with sight difficulties. As a group they are more vulnerable and therefore high standards of protection and guidance are required.

If it is necessary to block or partially block a footpath then the site or hazard must be safely barricaded off, alternative paths must be clearly defined and protected, and walking surfaces must be kept clear of loose stones and other material.

- Excavations must be protected by safety netting and barricades.
- Safety netting shall be brightly coloured and firmly fixed. Plastic tape is not a suitable substitute for safety netting.
- Barricades or hurdles shall be fixed with toe boards to help the disabled.
- Any alternative path provided in the roadway must be protected with barricades or hurdles.
- Provide ramps to make movement to and from the footpath easy.
- Trench covers must be provided over excavations across pedestrian paths. This is particularly important at pedestrian crossings, both zebra-type and signal controlled. Maintain access to pedestrian call boxes at traffic signals.
- Keep surface conditions smooth and free of stones, mud or other obstructions to provide safe and convenient access for pedestrians, prams, wheelchairs and cyclists.
- Allow safe spaces for cycles, at all times. Ensure they are kept free of shingle and loose stones.
- Ensure that the site is correctly barricaded and well lit overnight.

Environmental Services

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

2 November 2004

Carlos Concepts Ltd
C/o Working Concepts Ltd
PO Box 58-395
Greenmount

Attention: Sandy Heard

Dear Sandy

ACKNOWLEDGEMENT OF RESOURCE CONSENT APPLICATION FOR
2 LOT SUBDIVISION WITH ROAD TO VEST
AT 124 STANCOMBE ROAD, FLAT BUSH

Council acknowledges receipt of your above application received on 2-11-04

Your Consent Co-ordinator for this application is Euan Williams

Your application has been allocated the reference numbers noted at the bottom of this letter. Please quote these numbers when making enquiries.

Should clarification or more detailed information be required, in accordance with Section 92 of the Resource Management Act 1991 you will be contacted within five (5) working days. Otherwise you are advised that the statutory time-frames for processing of non-notified resource consent applications require a written decision to be released no later than 20 working days after receipt of the application; or of any further information pursuant to the Section 92; or the date on which the approval of all affected persons (if any) have been obtained under Section 94, whichever is the later.

As advised above, it is important to note that assessment of this application can only commence once all the requested information has been provided.

~~Attached is a receipt for~~ $562.50 being your application deposit.
has been received

Yours faithfully

FORM 3A
ATTACH BUSINESS CARD
AND RECEIPT HERE

Note:
ROE required from 122 Stancombe.
✓ new CT required.

Consent Co-ordinator
Otara / Clevedon Team
ENVIRONMENTAL SERVICES

delivered to MCC 8/11/04
copy attached

Customer Copy ☐
File Copy ☐

Reference: ES ..... Proposal TBA
Enquiries to Euan Williams

Facsimile 262-5109
Extension 5806

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA34D/637**
Land Registration District	**North Auckland**
Date Issued	14 May 1976

Prior References
NA27C/784

Estate	Fee Simple
Area	8100 square metres more or less
Legal Description	Lot 3 Deposited Plan 78859

Proprietors
Ying Tsung Lin and Wen I Lin

Interests

The Chief Engineer
Manukau City Council
c/- Airey Consultants Ltd
PO Box 39 101
HOWICK

Attn: Building Resource Services

Dear Sir/Madam

We are writing to confirm that we grant Right of Entry to Working Concepts Ltd so that the public drainage works depicted on Airey Consultants Ltd Plan Number 9861/2 and dated 22/10/04 can be completed.

Our conditions of Right of Entry are:

1. The work programme is agreed
2. Agreed rectification works are carried out
3. Water/sewage connections provided to our property

Yours faithfully

(Signature) Date 4/11/2004

M. Chandler (Name)

Box 12728 (Address)

Penrose

MANUKAU

MANUKAU CITY COUNCIL

CONSENT OF PERSONS WHOSE INTERESTS MAY BE AFFECTED BY AN APPLICATION FOR RESOURCE CONSENT UNDER THE RESOURCE MANAGEMENT ACT 1991

IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT MANUKAU CITY COUNCIL ON 263.7100 AND ASK TO SPEAK TO THE CUSTOMER SERVICE CENTRE

RECEIVED
25 NOV 2004
M.C.C.
ENVIRONMENTAL SERVICES

CONSENT OF AFFECTED PERSONS

Applicant Details (Applicant to complete):

Full name/s: Carles Concepts Ltd

Address of proposed activity (Including legal description): 124 Stancombe Road Flatbush, Botany South. Lot 3, DP 78859

Brief description of proposed activity: 3 level, 1-2 bedroom apartments with basement carparking

FILLING OPERATION, DRAINAGE WORK & WATER SUPPLY

AFFECTED PERSON/S

Full name/s: Farm Cove Holdings Ltd (Previously Team Rallyspeed Ltd)

The property affected by this application and situated at [give address of property]: 122 Stancombe Road, Flatbush, Botany South.

~~I am~~/we are the **OWNER(S)JOINT OWNERS/OCCUPIER(S)** *(delete one)* of the above property.
~~I~~/we have authority to sign on behalf of all the other **OWNER(S) JOINT OWNERS /OCCUPIER(S)** *(delete one)* of the property.

IMPORTANT

Please note: In all instances the Council will require the approval of the legal owners and the occupiers of the affected property.

You should only sign below if you **fully understand** the proposal, and if you **support** or have **no opposition** to the proposal you have been asked to consider. Council will not accept conditional approvals. If you have conditions on your approval, these should be discussed and resolved with the applicant directly.

1. ~~I~~/we have been given details of the full and final proposal including a copy of the application form, assessment of the environmental effects and plans.
2. ~~I~~/we understand that aspects of the proposal requires resource consent under the Manukau District Plan to which ~~I~~/we are giving ~~my~~/our written approval
3. ~~I~~/we confirm that we have signed and dated the plans of the proposal and the assessment of environment effects prepared by the Applicant;
4. ~~I~~/we understand and accept that once ~~I~~/we give ~~my~~/our approval the Consent Authority (the Council) cannot take account of any actual or potential effect of the activity and/or proposal upon ~~me~~/us when considering the application and the fact that any such effect may occur shall not be relevant grounds upon which the Consent Authority may refuse to grant the application; and
5. Further, ~~I~~/we understand that at any time before the final decision is made on the application, ~~I~~/we may give notice in writing to the Council that this approval is withdrawn, under S104(7) of the Resource Management Act 1991.

Signed: [signature]

Dated 19.11.04

PLEASE COMPLETE ALL OF THE PARTS SHOWN IN ITALICS

Affected Party
Consent Copy.

PROPOSED ENGINEERING WORKS
FOR
BISHOP LENIHAN CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

RECEIVED
25 NOV 2004
M.C.C.
ENVIRONMENTAL SERVICES

STAGE 1
SUBDIVISION

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

JOB No A9861/5

ISSUED 22.10.04

19.11.04

PROPOSED ENGINEERING WORKS
FOR
BISHOP LENIHAN CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 1
SUBDIVISION

DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
	COVER
	INDEX
1	SITE PLAN, 1:1000
2	EARTHWORKS PLAN 1:500 SILT FENCE DETAIL
3	SITE PLAN - SS DRAINAGE, SHEET 1, 1:500
4	SITE PLAN - SW DRAINAGE, 1:500
5	SITE PLAN - WATERMAIN, 1:500
6	PROPOSED ROAD PLAN - FINISHED LEVELS, STREET LIGHTING & PLANTING, 1:250
7	TYPICAL ROAD CROSS SECTION, 1:100
11	PROPOSED ROAD 1 LONGSECTION
12	PROPOSED ROAD 2 LONGSECTION PART 1
13	CROSS SECTION AT 20m, 40m, 60m PROP ROAD 1 CROSS SECTION AT 0m, 20m, 40m PROP ROAD 2
14	CROSS SECTION AT 60m PROP ROAD 2
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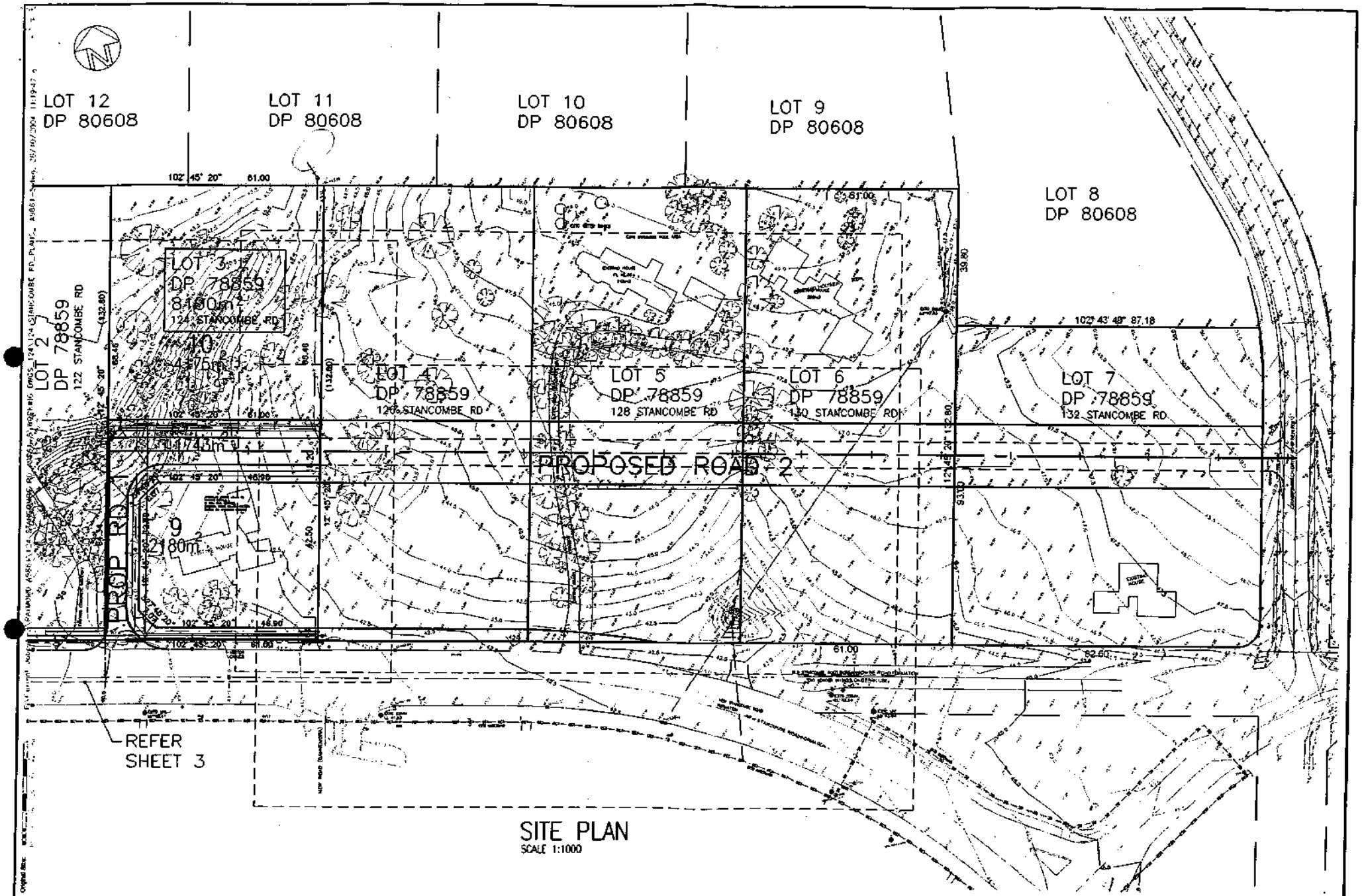
APPENDIX

A1	STANDARD DETAILS - SHEET 1
A2	STANDARD DETAILS - SHEET 2
A6	PROPOSED ROAD 2 LONGSECTION PART 2
A7	PROPOSED ROAD 2 LONGSECTION PART 3
A8	PROPOSED ROAD 2 LONGSECTION PART 4

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

JOB No A9861/5

ISSUED 22.10.04



SITE PLAN
SCALE 1:1000

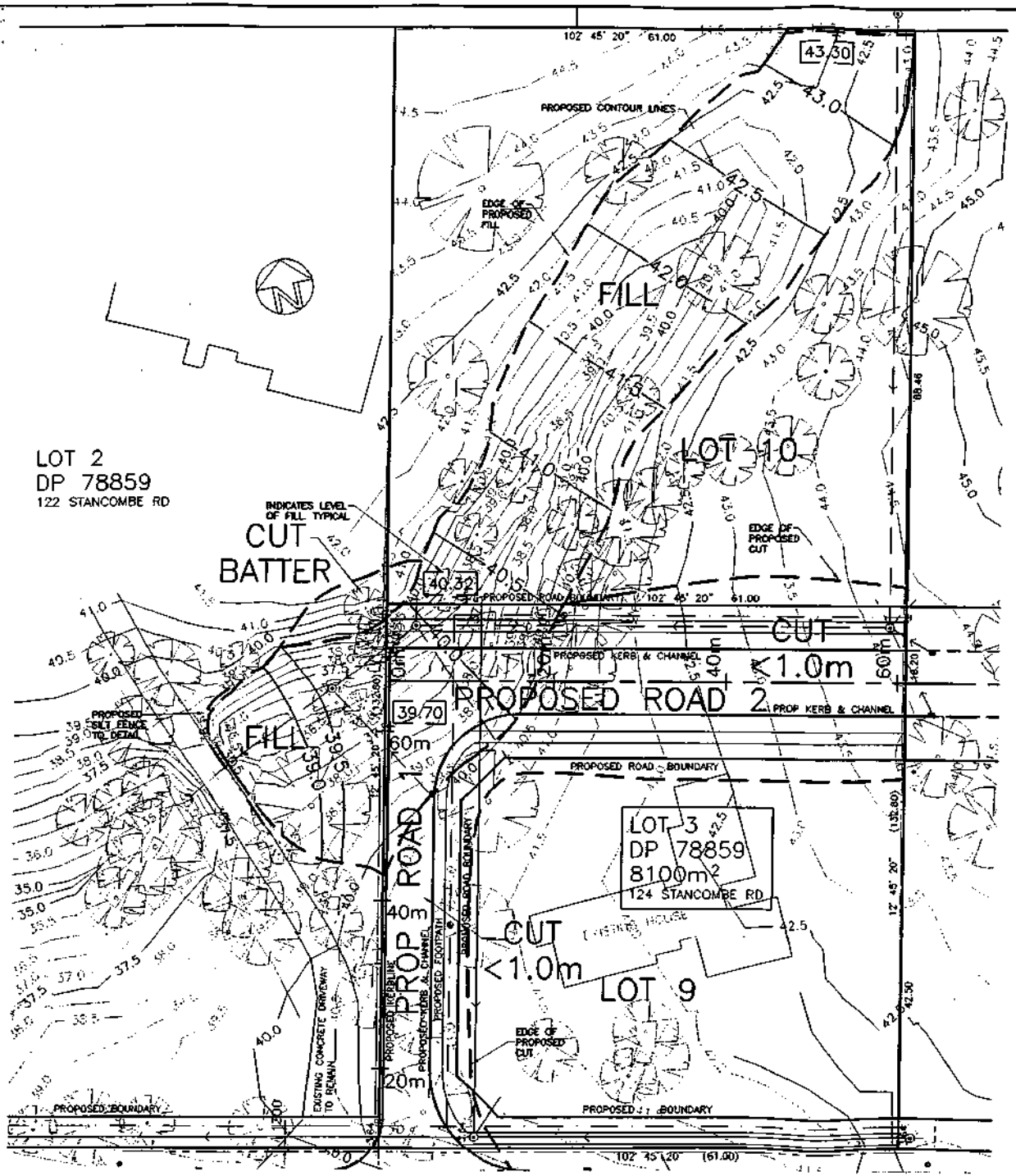
Design: H H GIBSON (HOWICK 534 8823)
Survey: EASDALE SURVEYORS LTD
Drawn: LFF
Checked: HG
Date: SEPT 04

CONSENT

Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

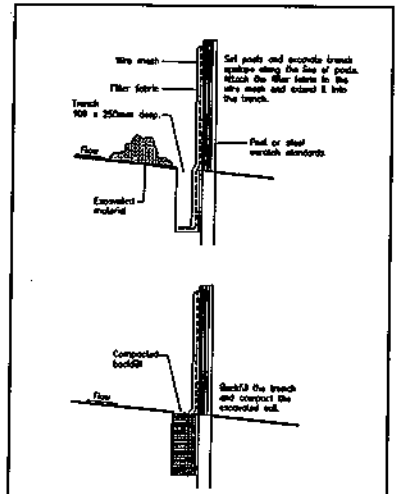
AIREY CONSULTANTS LTD.

Drawing Title
SITE PLAN



LEGEND

42.0	ISOPECS
	CUT EXTENT
	SILT FENCE



SILT FENCE DETAIL
NTS

PART SITE PLAN
1:500

No.	Revision Details	Date
1	PROP ROAD 1 REPOSITIONED	22/10/04

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Drawing Title.
EARTHWORKS PLAN
SILT FENCE DETAIL

Job Title.
PROPOSED ENGINEERING WORK – STAGE 1
FOR
BISHOP LENIHAN
CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH
SUBDIVISION

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Hamilton, Rotorua, Tauranga, Whangarei, Auckland, Taupo

Design	I H GIBSON (p6334 6523)
Survey	EAGDALE SURVEYORS LTD
Drawn	LFP
Checked	IHG
Date	SEPT '04
Scale	A3 1:500
CAD Filename	

CONSENT

Original Size
10 0 10 20 30 40 50

File No. | Rev. | Sheet No.

NOTES

ALL WORK TO BE CARRIED OUT TO M.C.C ENGINEERING STANDARDS.

CONTRACTOR TO LOCATE ALL SERVICES PRIOR TO COMMENCEMENT OF WORK.

STORMWATER, SANITARY SEWER AND WATERMAIN CONNECTIONS SHALL BE INSTALLED BY A M.C.C APPROVED LICENSED CONTRACTOR AT THE APPLICANTS EXPENSE.

CONTRACTOR TO CONFIRM ALL DIMENSIONS ON SITE.

ALL PVC PIPES AND CONNECTIONS TO BE HEAVY WALL SEWER GRADE.

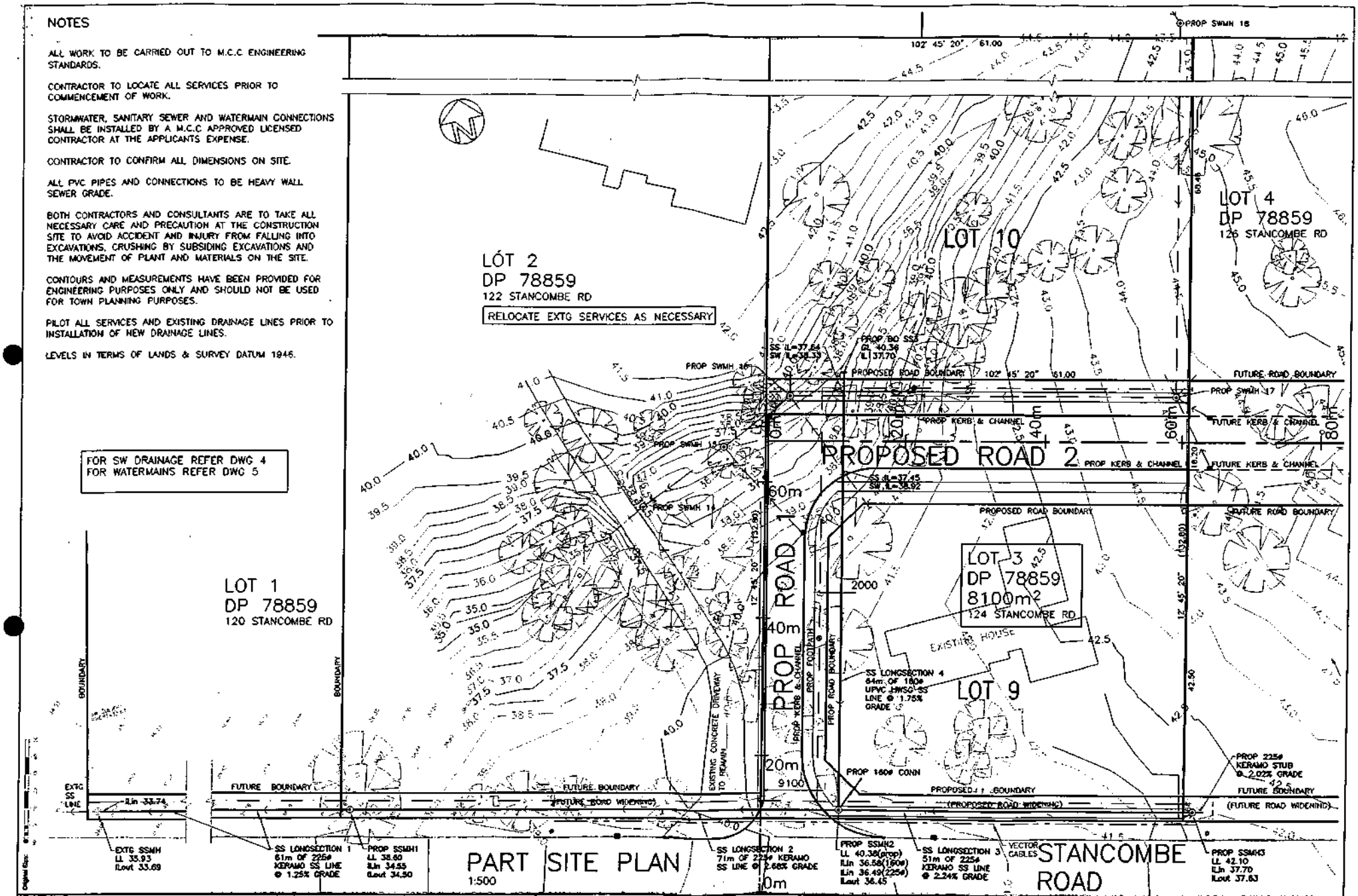
BOTH CONTRACTORS AND CONSULTANTS ARE TO TAKE ALL NECESSARY CARE AND PRECAUTION AT THE CONSTRUCTION SITE TO AVOID ACCIDENT AND INJURY FROM FALLING INTO EXCAVATIONS, CRUSHING BY SUBSIDING EXCAVATIONS AND THE MOVEMENT OF PLANT AND MATERIALS ON THE SITE.

CONTOURS AND MEASUREMENTS HAVE BEEN PROVIDED FOR ENGINEERING PURPOSES ONLY AND SHOULD NOT BE USED FOR TOWN PLANNING PURPOSES.

PILOT ALL SERVICES AND EXISTING DRAINAGE LINES PRIOR TO INSTALLATION OF NEW DRAINAGE LINES.

LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946.

FOR SW DRAINAGE REFER DWG 4
FOR WATERMAINS REFER DWG 5



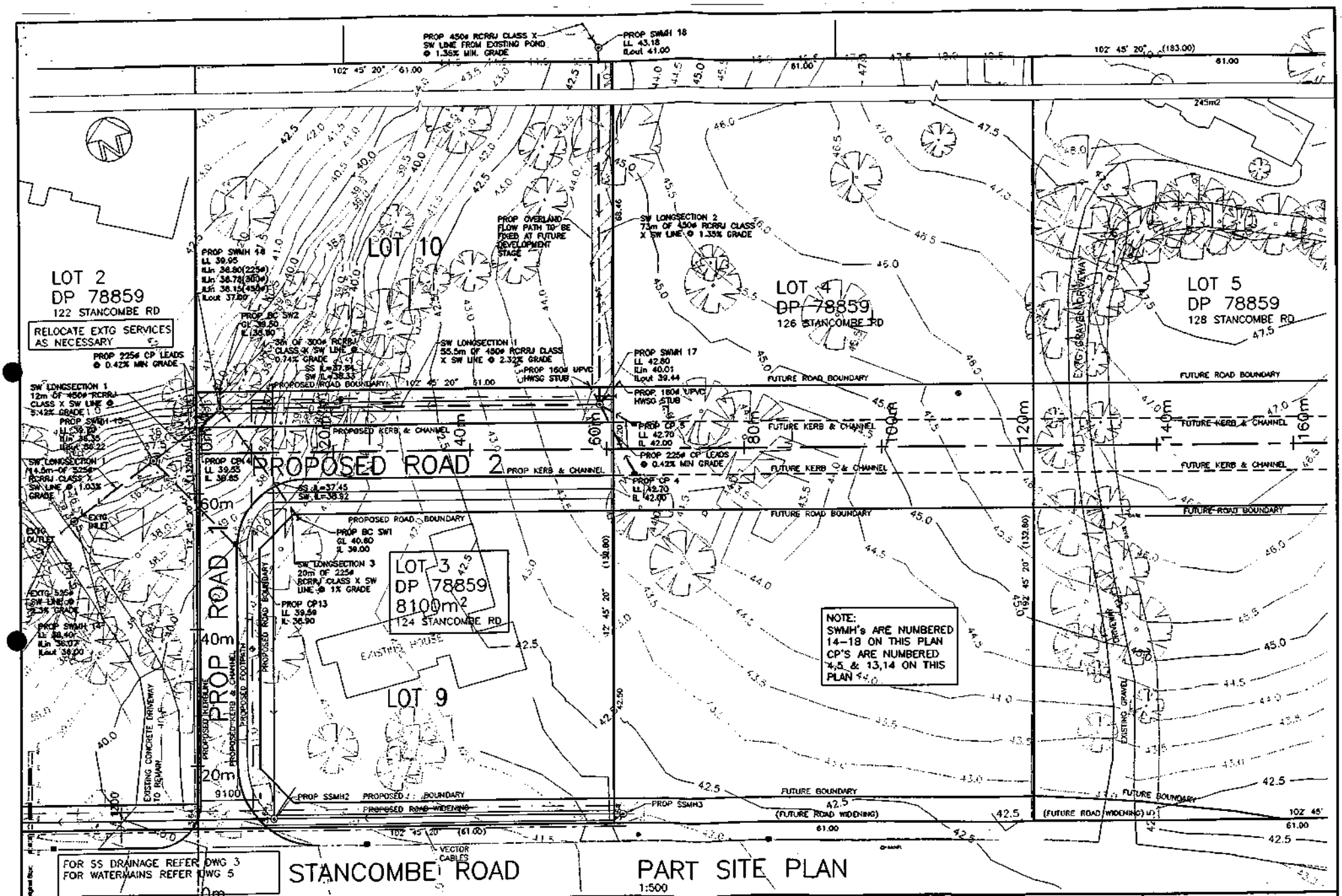
PART SITE PLAN
1:500

Design: I H GIBSON (NZCAE 534 0621)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked:
Date: SEPT 01

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD

Drawing Title:
SITE PLAN
- SS DRAINAGE



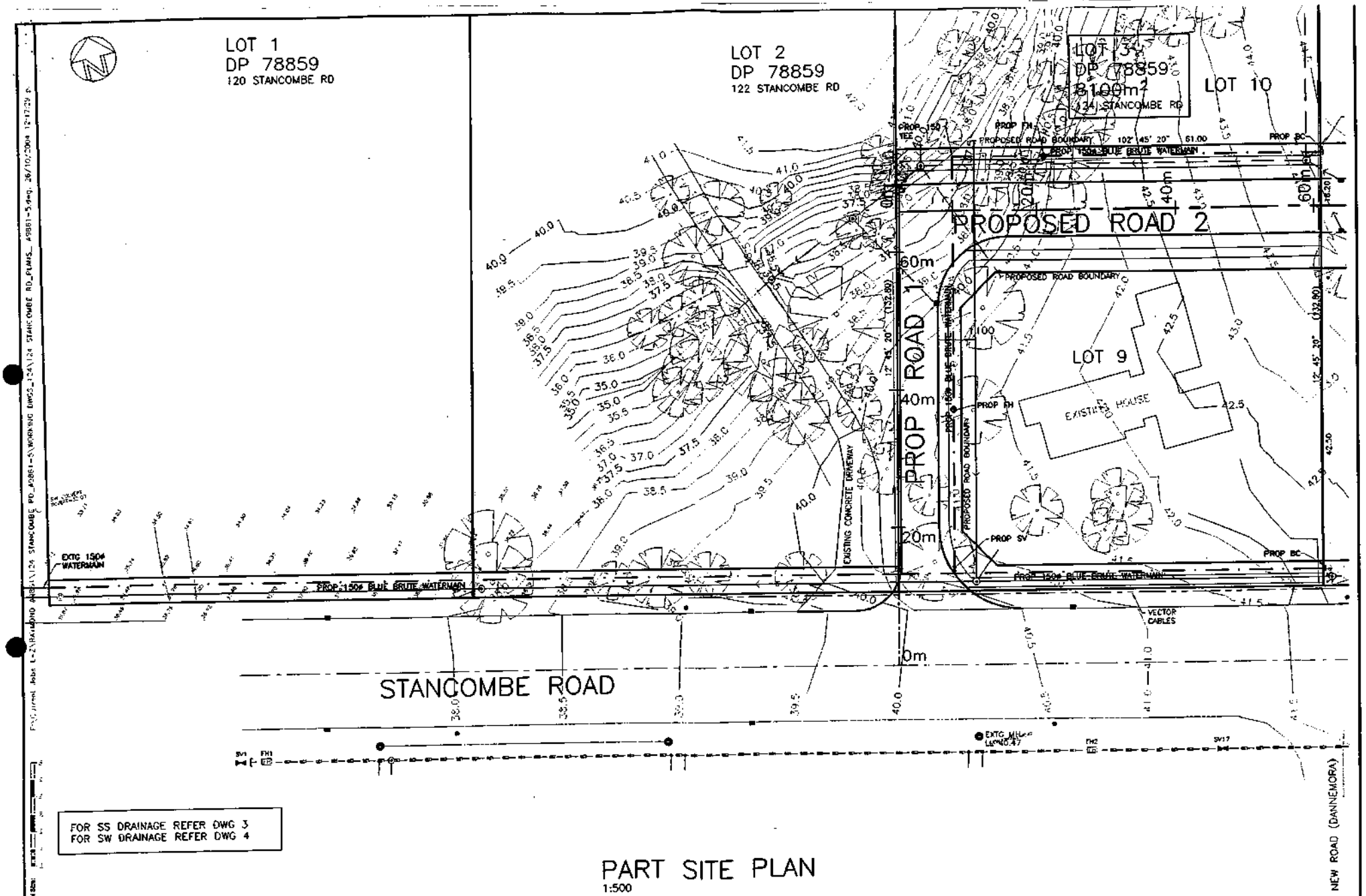
Design: I H GIBSON (HONICK SM 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked:
Date: SEPT 04

CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

Drawing Title:
SITE PLAN
- SW DRAINAGE



PART SITE PLAN

1:500

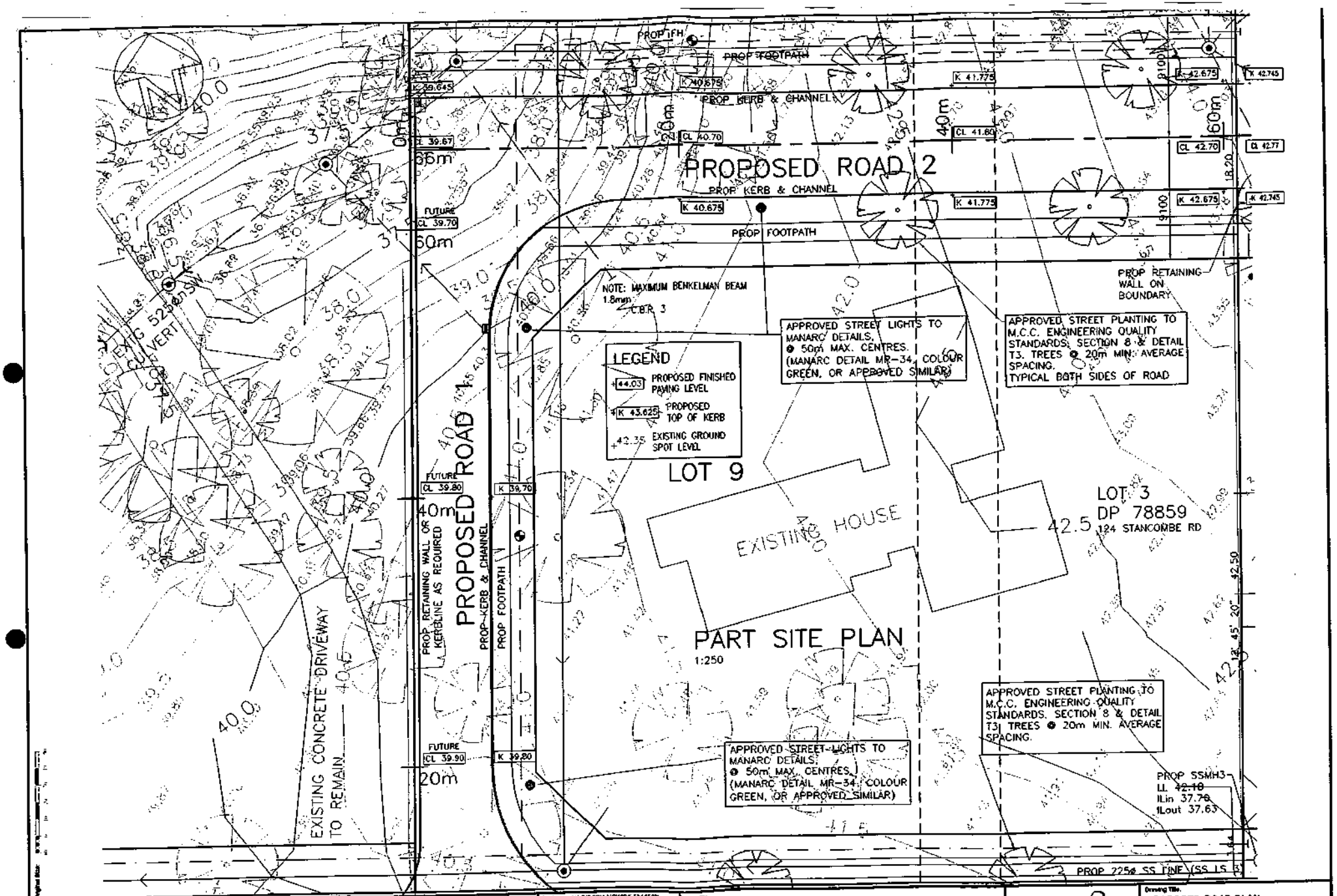
Design	IH GIBSON (NOVICK 534 6523)
Survey	EASDALE SURVEYORS LTD
Drawn	LFP
Checked	
Date	SEPT 04

CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

Drawing Title:
SITE PLAN
- WATERMAIN



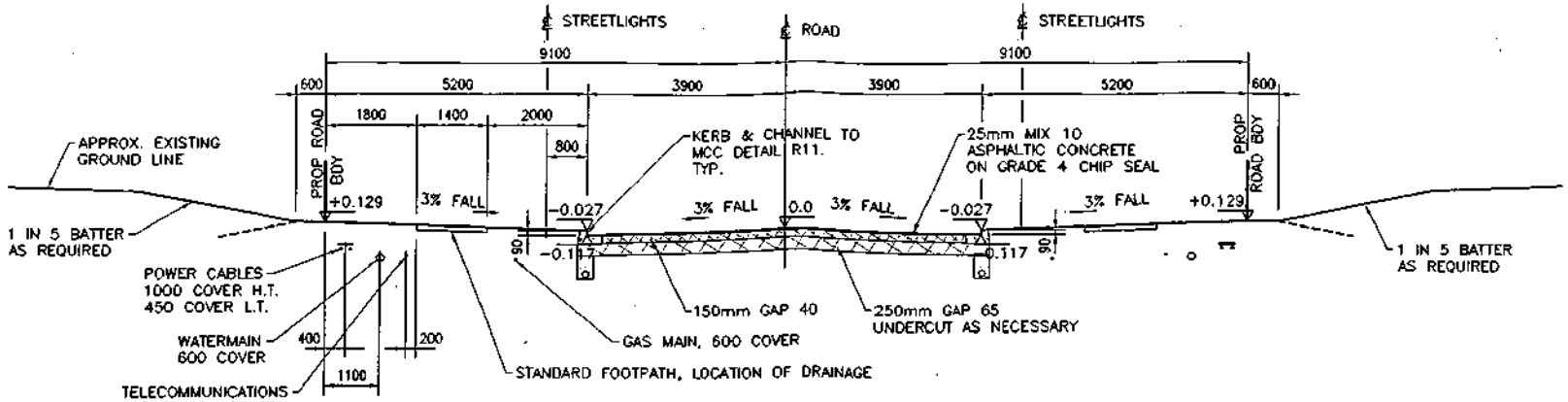
Design: I H GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: BKG
Date: SEPT 04

CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

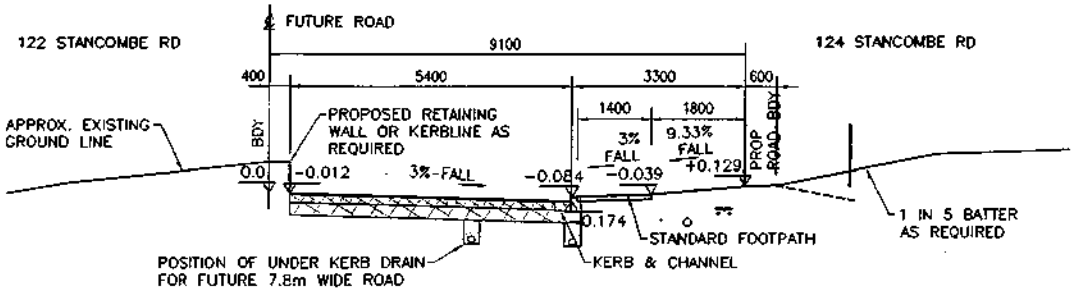
AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD PLAN
FINISHED LEVELS
STREET LIGHTING & PLANTING



TYPICAL PROPOSED ROAD 2 CROSS SECTION

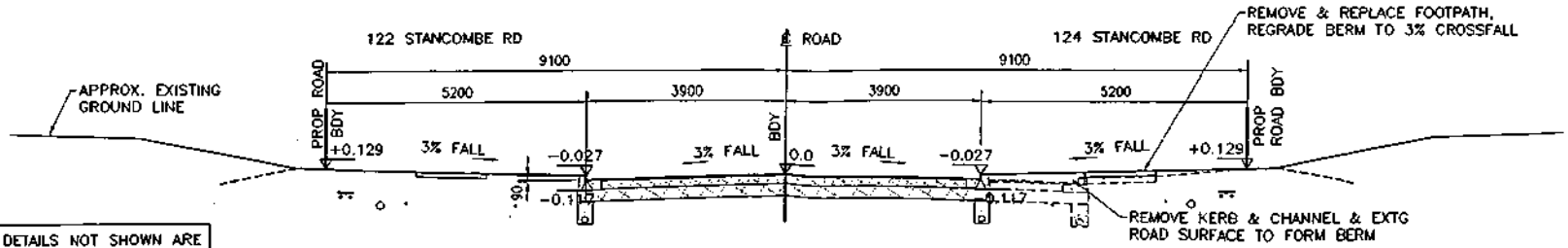
SCALE 1:100



NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100



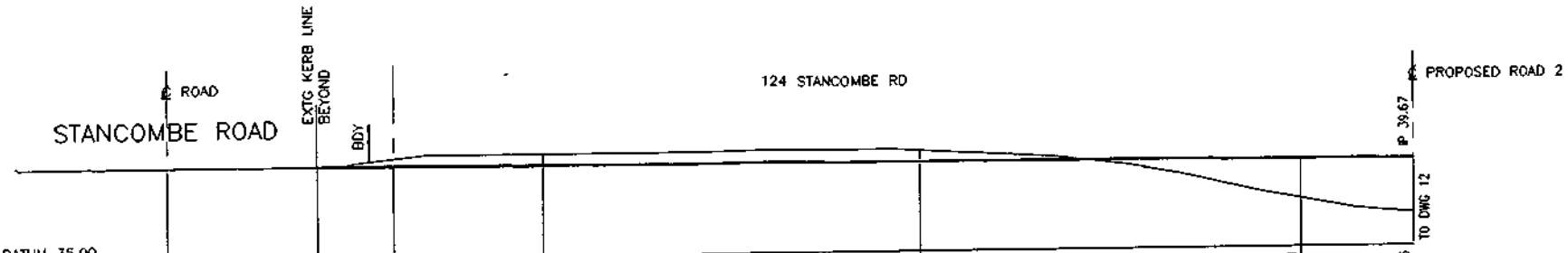
NOTE: DETAILS NOT SHOWN ARE SIMILAR TO TYPICAL PROPOSED ROAD 2 CROSS SECTION

TYPICAL FUTURE PROPOSED ROAD 1 CROSS SECTION

SCALE 1:100

Design: I H GIBSON (HOWICK 534 6533)	Job Title: PROPOSED ENGINEERING WORKS - STAGE 1 FOR BISHOP LENIHAN CONCEPTS LTD	AIREY CONSULTANTS LTD.	Drawing Title: TYPICAL ROAD CROSS SECTIONS
Survey: EASDALE SURVEYORS LTD			
Drawn: GL			
Checked: IHG			
Date: SEPT 04			

CONSENT



DATUM 35.00

EXISTING LEVEL	39.99	39.96	40.50	40.40	37.58	36.75
FINISHED LEVEL	39.99	39.96	39.90	39.80	39.70	39.67
CUT-/FILL+	0.00	0.00	-0.60	-0.60	+2.12	+2.92
DISTANCE	0.00	8.00	20.00	40.00	60.00	66.00
GRADIENT			0.5%			

LONGSECTION ON FUTURE CENTRELINE OF PROPOSED ROAD 1

VERT 1:250
HORIZ 1:250

Original Size:

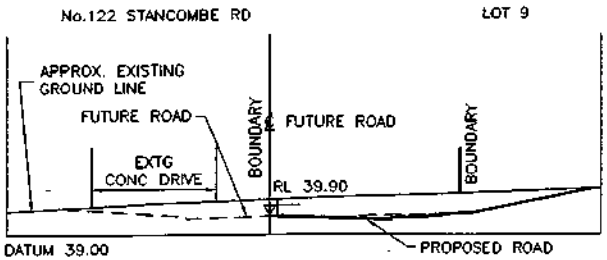
Design: I H GIBSON (NOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GK
Checked: HG
Date: SEPT '04

NSENT

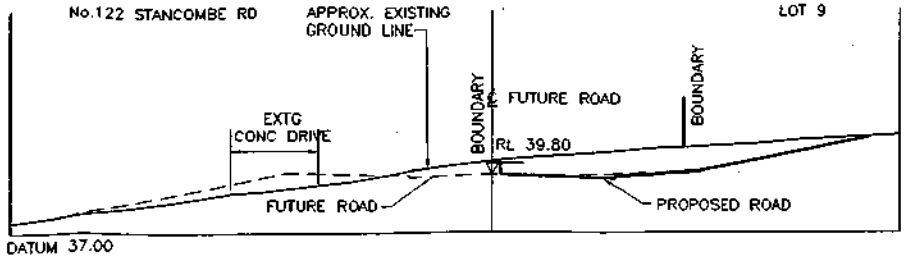
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

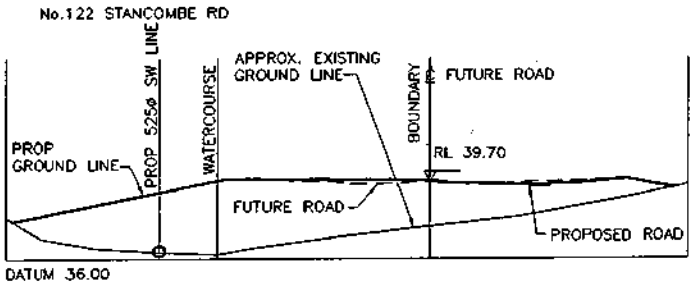
Drawing Title:
PROPOSED ROAD 1
LONGSECTION



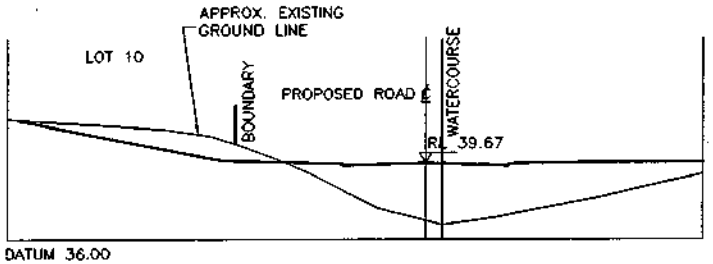
CROSS SECTION AT 20m
PROPOSED ROAD 1
SCALE 1:250



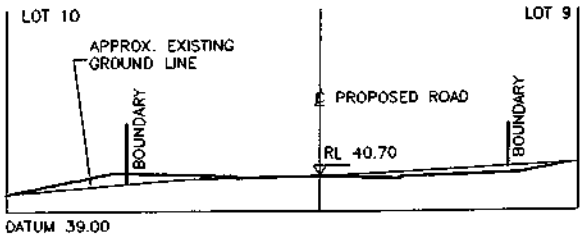
CROSS SECTION AT 40m
PROPOSED ROAD 1
SCALE 1:250



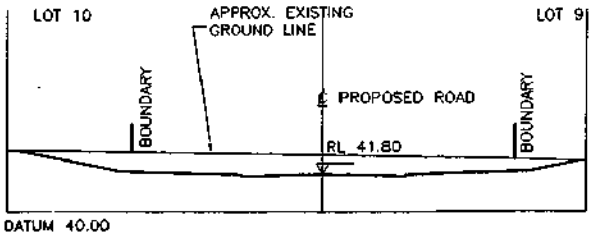
CROSS SECTION AT 60m
PROPOSED ROAD 1
SCALE 1:250



CROSS SECTION AT 0m
PROPOSED ROAD 2
SCALE 1:250



CROSS SECTION AT 20m
PROPOSED ROAD 2
SCALE 1:250



CROSS SECTION AT 40m
PROPOSED ROAD 2
SCALE 1:250

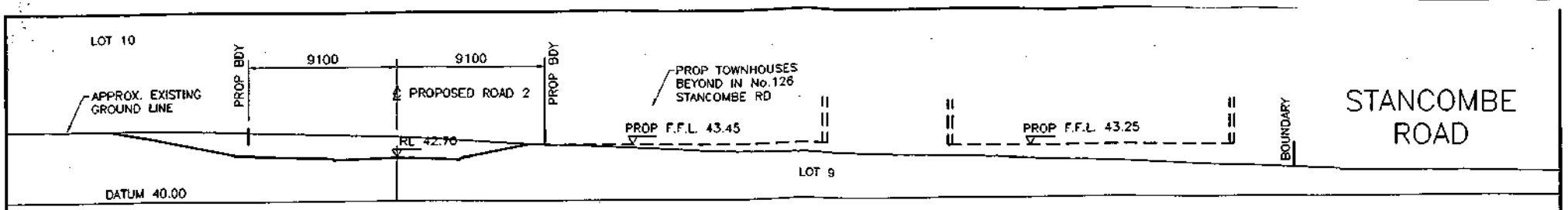
Design: IH GIBSON (HOWICK 534 6529)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: JHG
Date: SEPT 04

CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

Drawing Title:
CROSS SECTIONS
AT 20m, 40m & 60m PROP ROAD 1
AT 0m, 20m & 40m PROP ROAD 2



CROSS SECTION AT 60m
PROPOSED ROAD 2

SCALE 1:250

Original Size

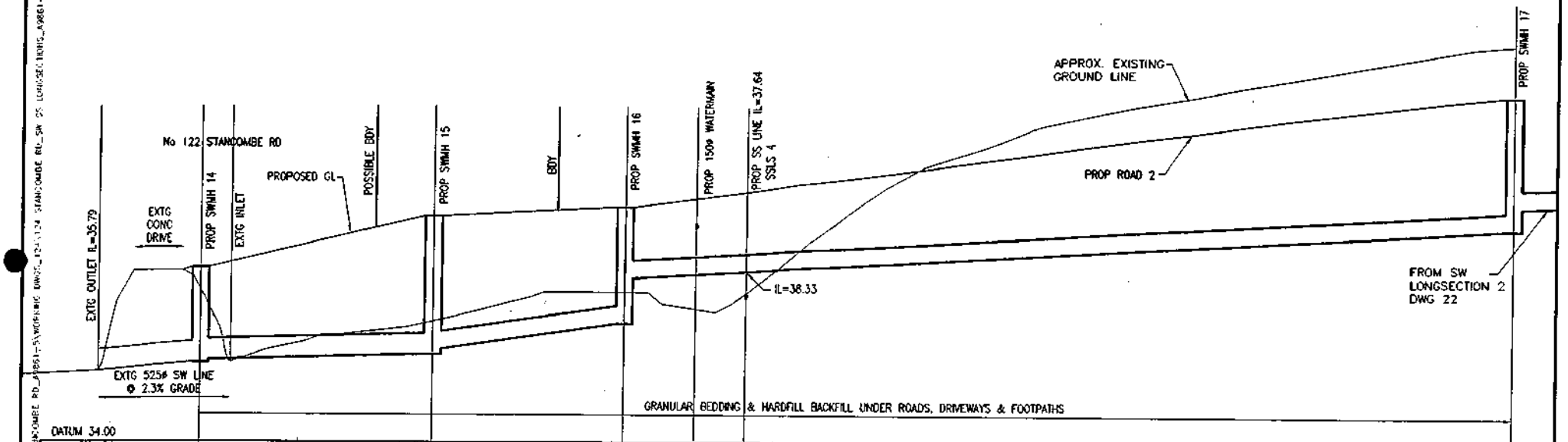
Design	I H GIBSON (HOWICK 534 6523)
Survey	EASDALE SURVEYORS LTD
Drawn	GULFP
Checked	IHG
Date	SEPT '04

CONSENT

Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

Drawing Title
CROSS SECTION AT 60m
- PROP ROAD 2



GROUND LEVEL		38.40		39.70		39.95					42.80	
INVERT LEVEL	36.00	36.07	36.22	36.35	37.00	38.15					39.44	40.01
CUT TO INVERT	2.40	2.33	3.48	3.35	2.95	1.80					3.36	2.79
DISTANCE		00.00		14.50		26.50					82.00	
PIPE SIZE & GRADE		14.5m OF 525ø RCRRJ CLASS X SW LINE @ 1.03% GRADE		12m OF 450ø RCRRJ CLASS X SW LINE @ 5.42% GRADE		55.5m OF 450ø RCRRJ CLASS X SW LINE @ 2.32% GRADE						

SW LONGSECTION 1

VERT 1:100
HORIZ 1:250

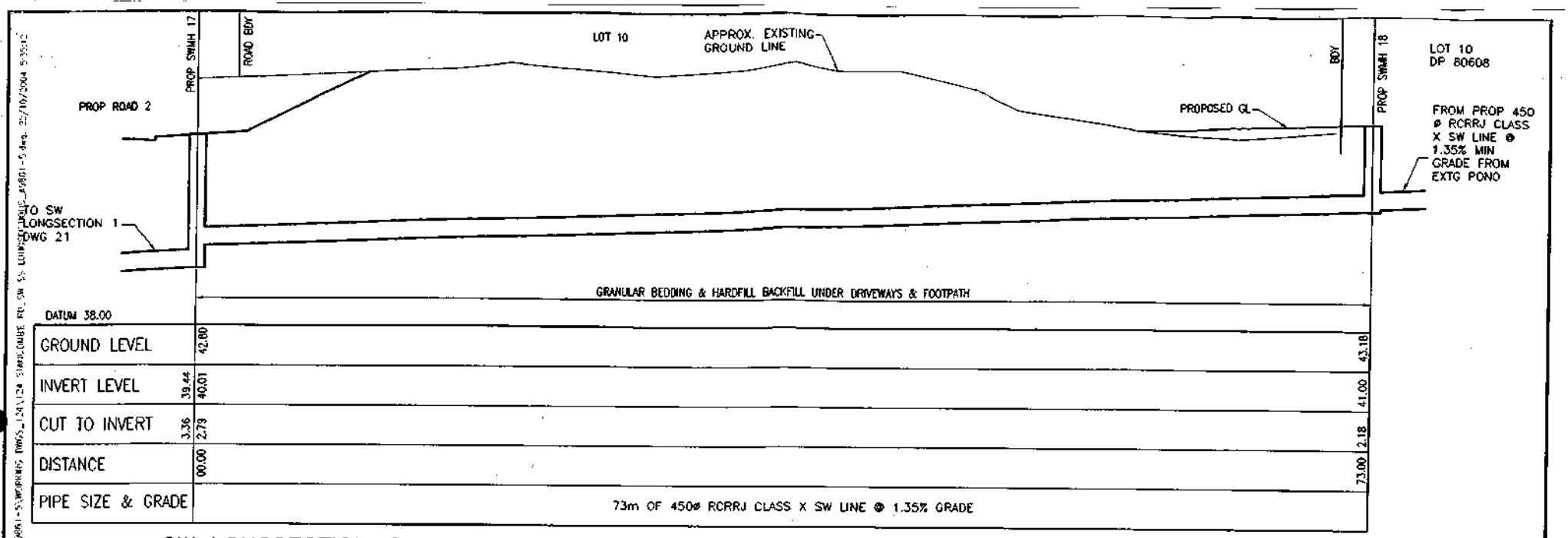
Design: TH GIBSON (NOVICK S34 65231)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: HG
Date: SEPT 04

CONSENT

Job Title: PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

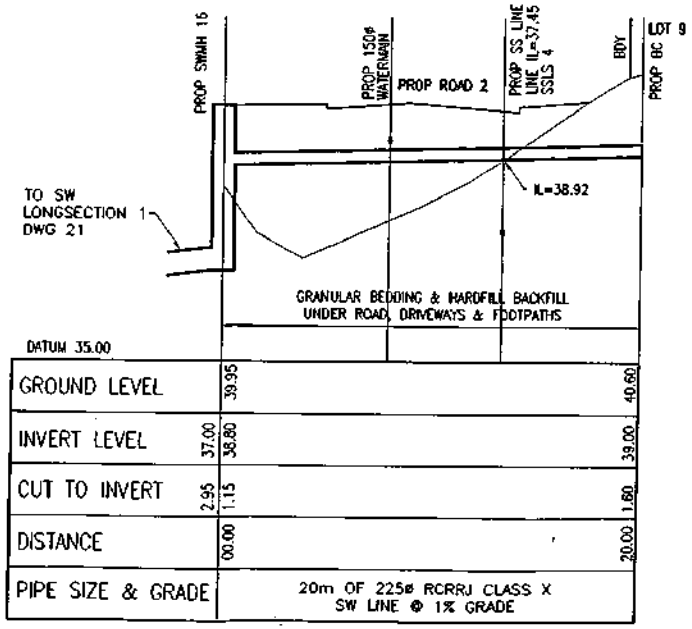
AIREY CONSULTANTS LTD.

Drawing Title: SW LONGSECTION 1



SW LONGSECTION 2

VERT 1:100
HORIZ 1:250



SW LONGSECTION 3

VERT 1:100
HORIZ 1:250

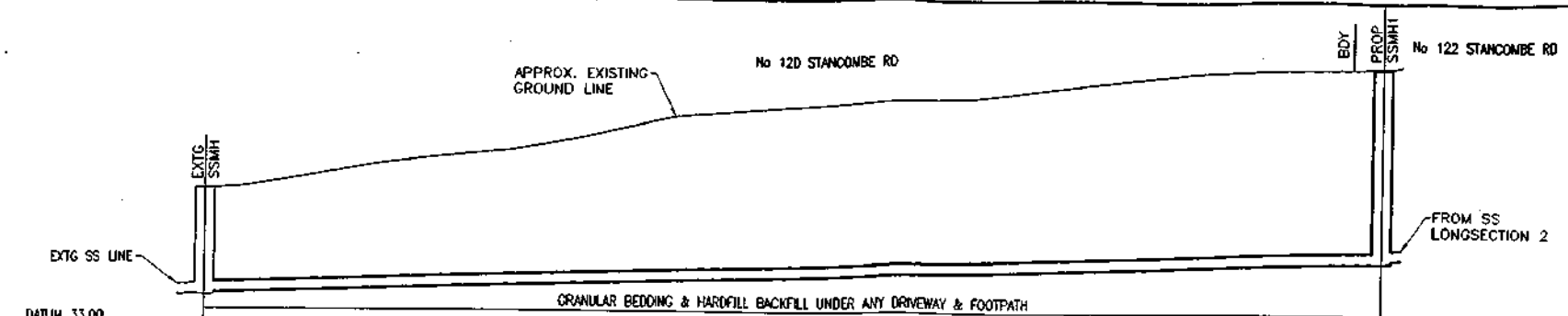
Design: FH GIBSON (HOWICK 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: MG
Date: SEPT 04

CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

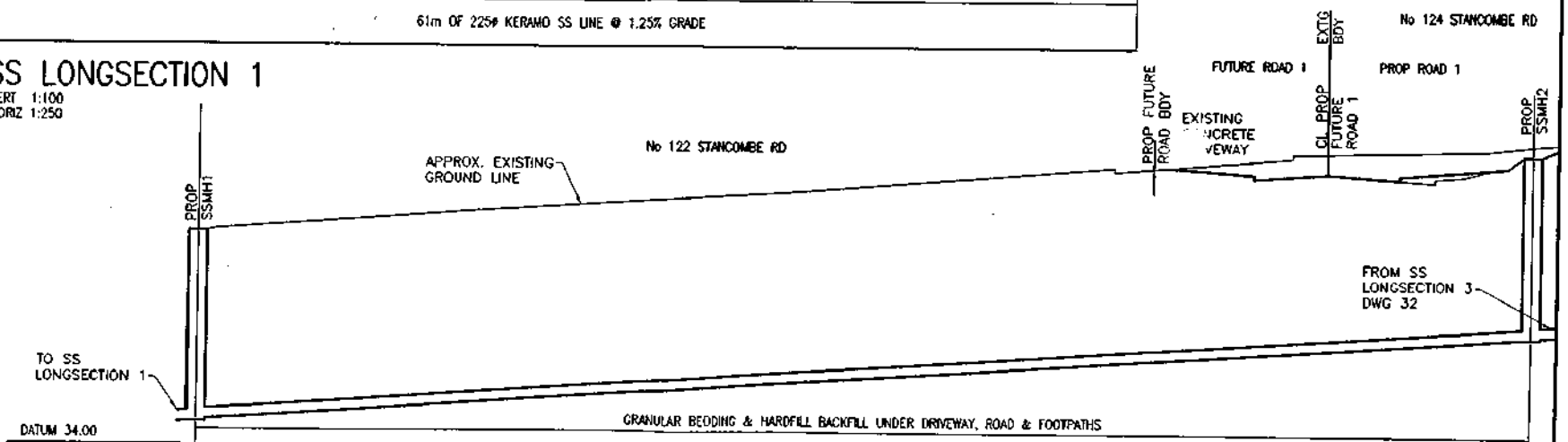
Drawing Title:
SW LONGSECTION 2 & 3



GROUND LEVEL	35.93		38.60	
INVERT LEVEL	33.69	33.74	34.50	34.55
CUT TO INVERT	2.24	2.19	4.10	4.05
DISTANCE	0.00		61.00	
PIPE SIZE & GRADE	61m OF 225ø KERAMO SS LINE @ 1.25% GRADE			

SS LONGSECTION 1

VERT 1:100
HORIZ 1:250



GROUND LEVEL	38.60		PROP 40.38	
INVERT LEVEL	34.50	34.55	36.45	36.49
CUT TO INVERT	4.10	4.05	3.93	3.89
DISTANCE	0.00		71.00	
PIPE SIZE & GRADE	71m OF 225ø KERAMO SS LINE @ 2.68% GRADE			

SS LONGSECTION 2

VERT 1:100
HORIZ 1:250

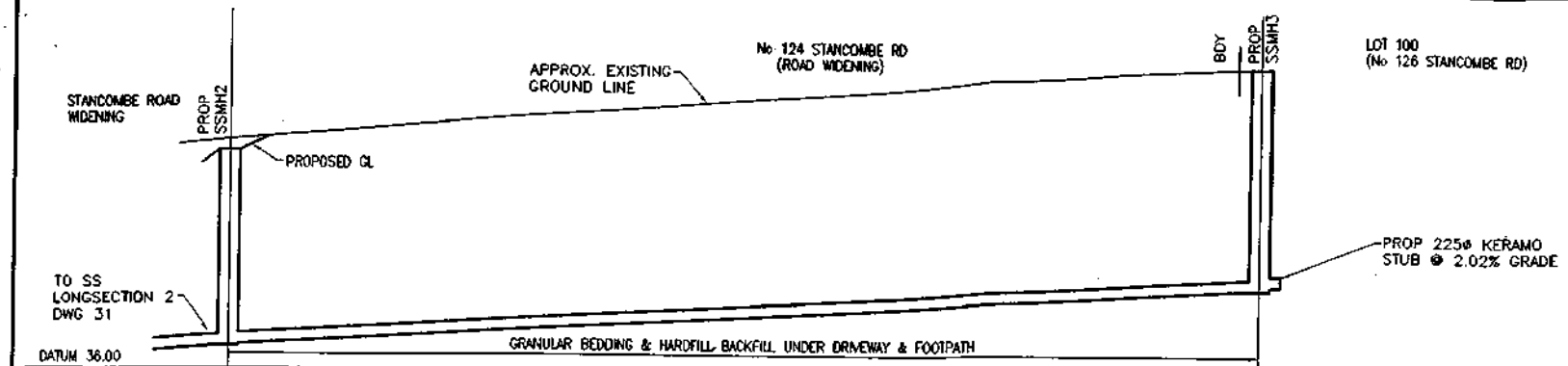
Design: I H GIBSON (HOWICK 534 5523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: MG
Date: SEPT 94

CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

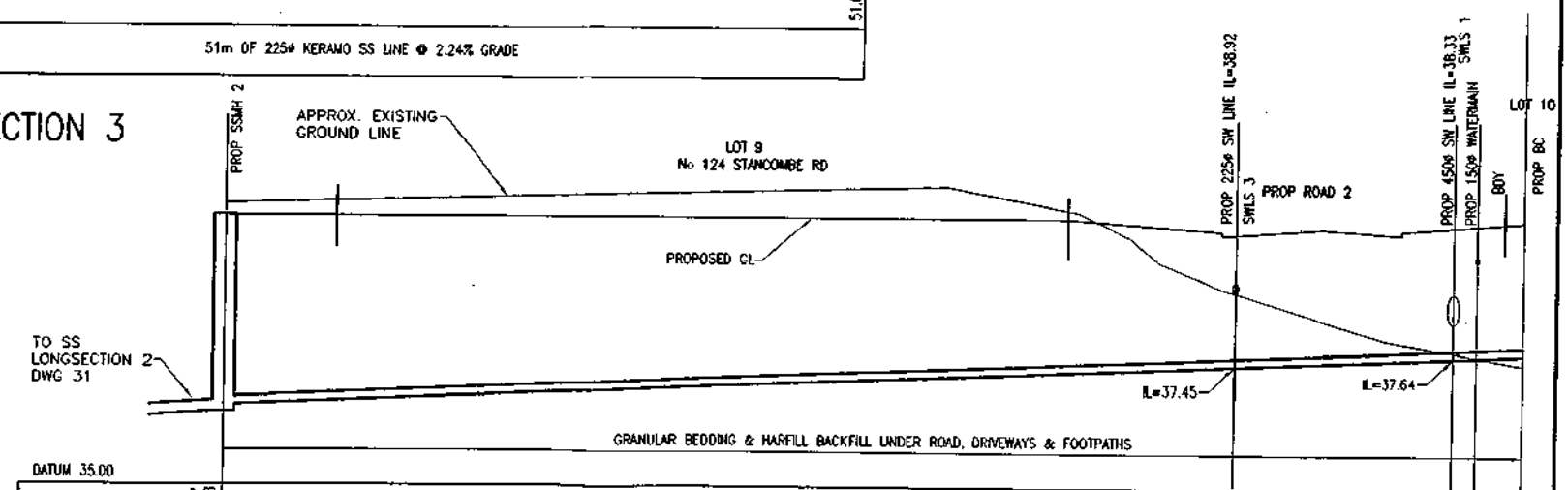
Drawing Title:
SS LONGSECTIONS 1 & 2



GROUND LEVEL	PROP 40.38		42.10	
INVERT LEVEL	36.45	36.49	37.63	37.70
CUT TO INVERT	3.93	3.89	4.47	4.40
DISTANCE	0.00		51.00	
PIPE SIZE & GRADE	51m OF 225ø KERAMO SS LINE @ 2.24% GRADE			

SS LONGSECTION 3

VERT 1:100
HORIZ 1:250



GROUND LEVEL	PROP 40.38		40.36	
INVERT LEVEL	36.45	36.58	37.70	
CUT TO INVERT	3.93	3.80	2.66	
DISTANCE	00.00		64.00	
PIPE SIZE & GRADE	64m OF 160ø UPVC HWSG SS LINE @ 1.75% GRADE			

SS LONGSECTION 4

VERT 1:100
HORIZ 1:250

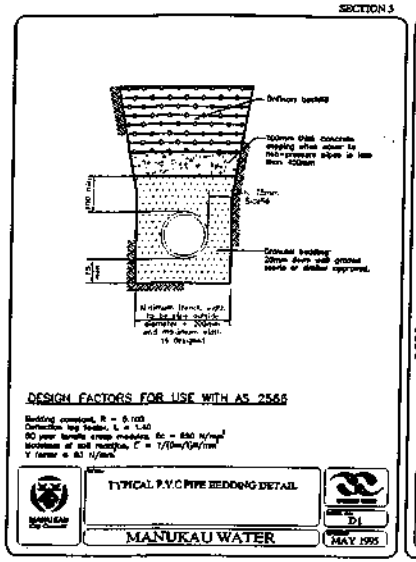
Design I H GIBSON (HOMICK 534 6523)
Survey EASDALE SURVEYORS LTD
Drawn GLAFF
Checked IHG
Date SEPT 94

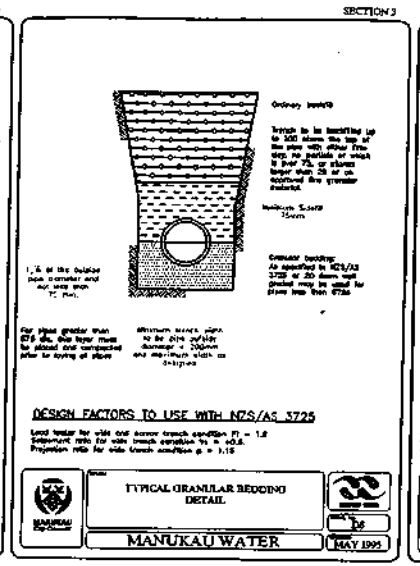
CONSENT

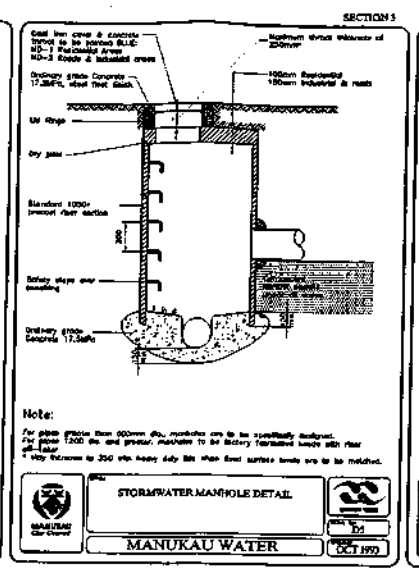
Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

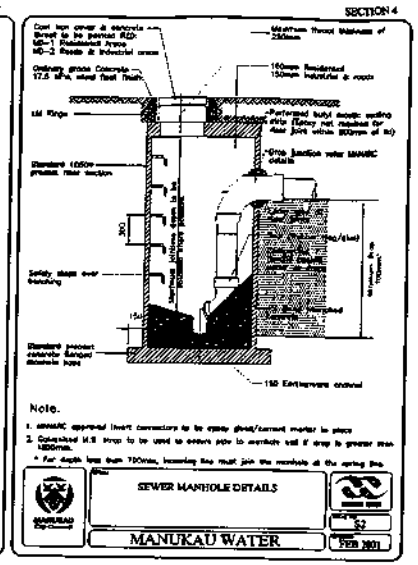
AIREY CONSULTANTS LTD.

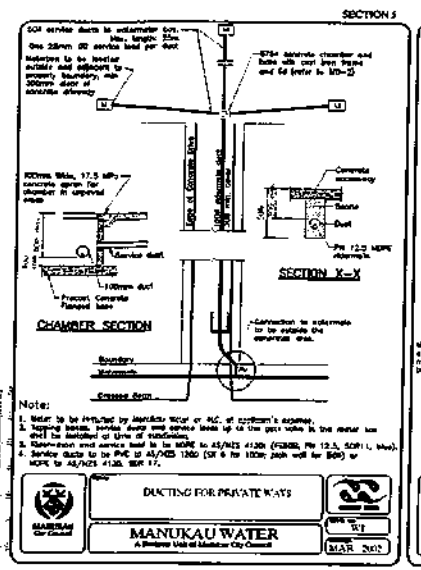
Drawing Title
SS LONGSECTION 3 & 4

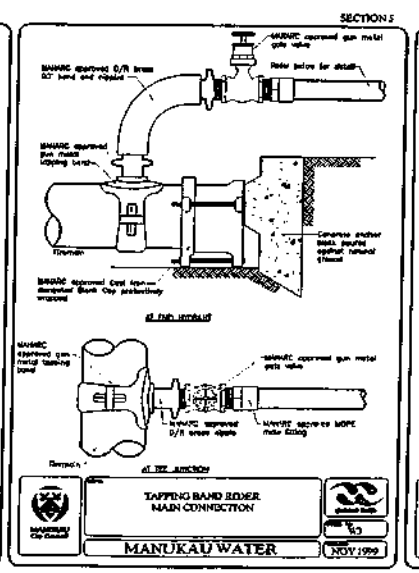


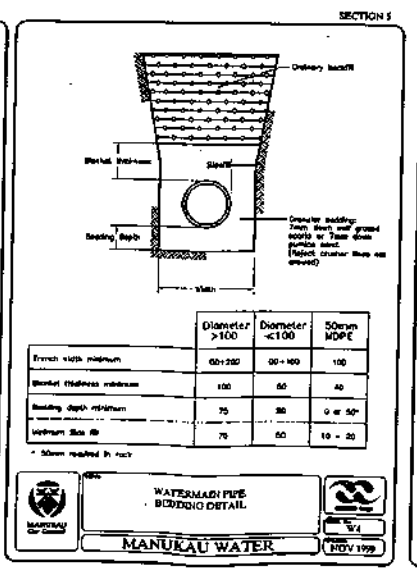






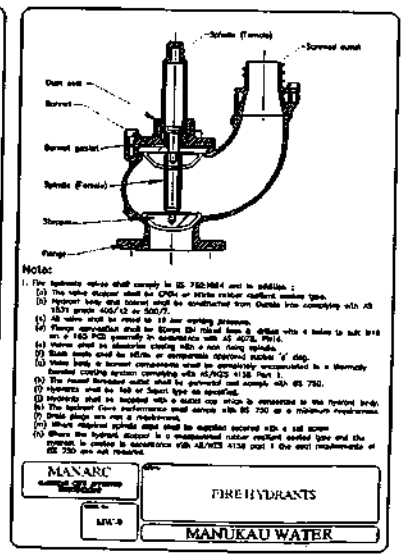






	Diameter >100	Diameter <100	50mm MDPE
Trench width minimum	60+200	60+100	100
Blanket thickness minimum	100	50	40
Bedding depth minimum	75	50	0 or 50*
Minimum Size fill	75	50	10 - 20

* 50mm required in rock



Original Size

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Survey	[illegible]
Drawn	[illegible]
Checked	
Date	[illegible]

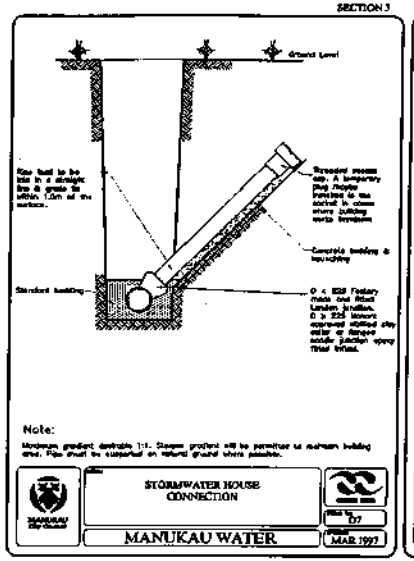
CONSENT

Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

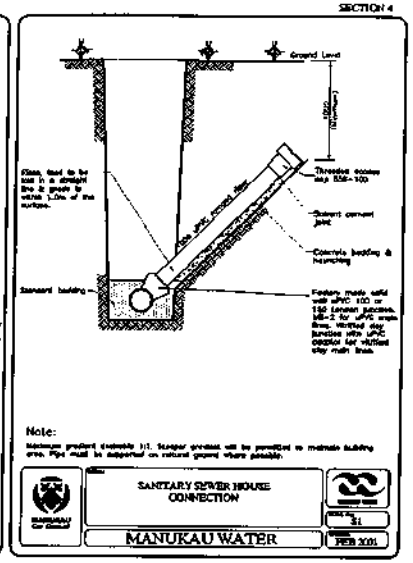
AIREY CONSULTANTS LTD.

Drawing Title
STANDARD DETAILS - SHEET 1
(D1, D5, D8, S2, W1, W3, W4, MW9)

SECTION 3



SECTION 4



Original Size:

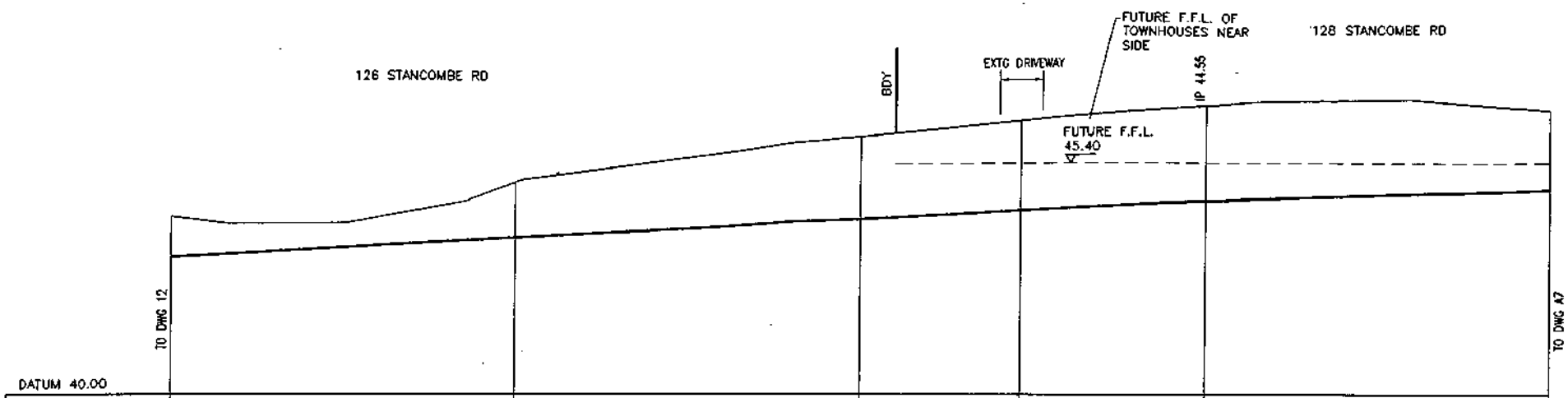
Design
Survey
Drawn
Checked
Date

CONSENT

Job Title.
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

Drawing Title.
STANDARD DETAILS - SHEET 2
(D7 & S1)



EXISTING LEVEL	44.16	44.94	46.04	46.41	46.75	46.63
FINISHED LEVEL	43.15	43.55	44.15	44.33	44.52	44.78
CUT-/FILL+	-1.01	-1.39	-1.89	-2.08	-2.23	-1.85
DISTANCE	80.00	100.00	120.00	129.20	140.00	160.00
GRADIENT	2.24%			20m V.C.		1.12%

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

Original Size

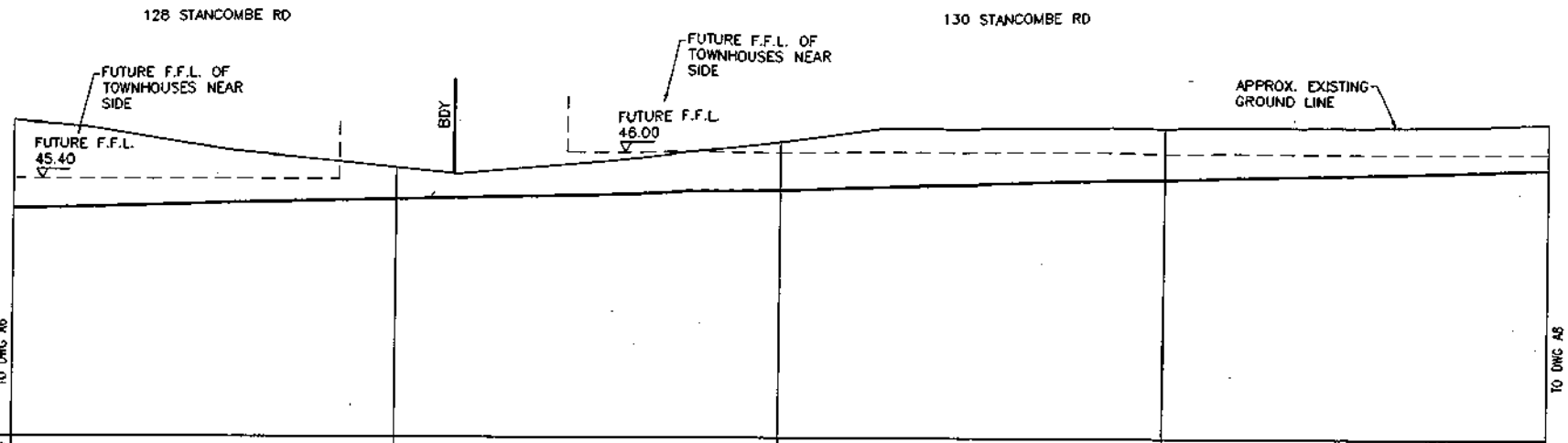
Design: I H GIESON (HOWICK SM 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: IHG
Date: SEPT 04

NSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BSIHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 2



EXISTING LEVEL	46.63	45.65	46.23	46.54	46.63
FINISHED LEVEL	44.78	45.00	45.23	45.45	45.68
CUT-/FILL+	-1.85	-0.65	-1.00	-1.09	-0.95
DISTANCE	160.00	180.00	200.00	220.00	240.00
GRADIENT	1.12%				

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

Original Size

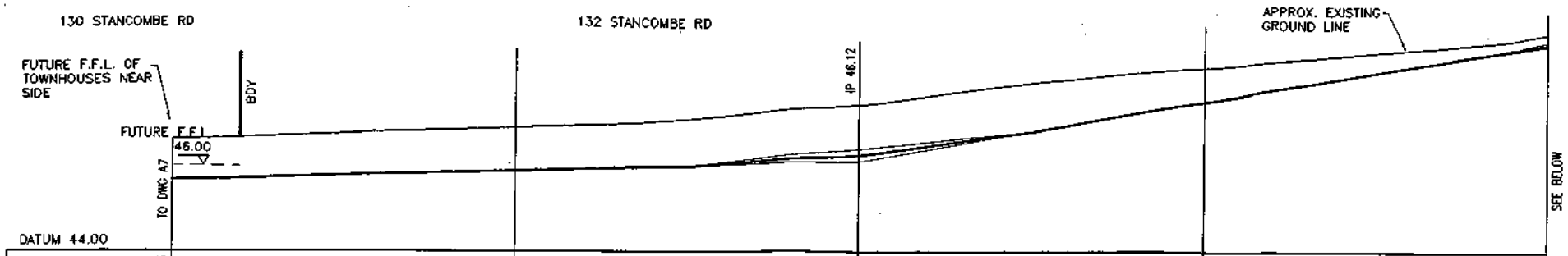
Design I H GIBSON (HOWICK 534 6523)
Survey EASDALE SURVEYORS LTD
Drawn GL
Checked HG
Date SEPT 9

CONSENT

Job Title
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

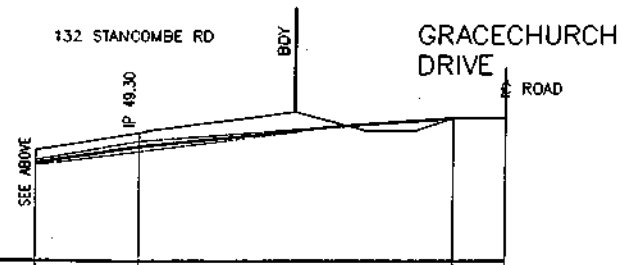
Drawing Title
PROPOSED ROAD 2
LONGSECTION PART 3



EXISTING LEVEL	46.63	46.91	47.48	48.34	49.14
FINISHED LEVEL	45.68	45.90	46.27	47.53	48.94
CUT-/FILL+	-0.95	-1.01	-1.21	-0.81	-0.20
DISTANCE	240.00	260.00	280.00	300.00	320.00
GRADIENT		1.12%	20m V.C.	7.07%	20m V.C.

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250



EXISTING LEVEL	49.14	49.46	49.75	49.75
FINISHED LEVEL	48.94	49.20	49.75	
CUT-/FILL+	-0.20	-0.26	0.00	
DISTANCE	320.00	325.00	340.00	342.50
GRADIENT		7.07%	20m V.C. 3.67%	

PART LONGSECTION ON CENTRELINE OF PROPOSED ROAD 2

VERT 1:100
HORIZ 1:250

Design: I N GIBSON (NOVICX 534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: GL
Checked: HG
Date: SEPT 04

NSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
BISHOP LENIHAN CONCEPTS LTD

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD 2
LONGSECTION PART 4

Proposal No: **27373** File Ref: **6923/124**

SITE ADDRESS **124 STANCOMBE RD FLAT BUSH**
WARD **CLEVEDON**

LEGAL DESCRIPTION
LOT 3 DP 78859

APPLICATION: **TREE REMOVAL**

Applicant: CARLOS CONCEPTS LTD
Address: PO BOX 27029
WELLINGTON
Att: Mr Robert Cummins
Contact: sandy 2713007

Agent: WORKING CONCEPTS LTD
Address: PO BOX 58395
GREENMOUNT
Att: Mrs Sandy Heard

Consent Type **Land Use**
Operative Zone **RURAL 3**
Cadastral Map **8/61;7/72ý7/72**

Consent Co-ordinator **BRYCE POMFRETT**
Proposed Zone
District Plan Map

Discipline	Does not require vetting (tick ✓)	Vetting comments. Please select option and if necessary provide details over leaf				
		NFA	Have taken copy and will provide written conditions	Comments (more space over leaf)	Signed	Date
Planning			✓	Refer to Urban Design - Yes/No Refer to Transportation - Yes/No	B.P.	21/12
Subdivision	✓					
Engineering	✓			Financial contributions - Yes/No		
Manukau Water	✓					
Environmental Health	✓		Send copy to Environmental Health - Genesis 3 - Yes/No			
Transportation	✓			Refer to Roading - Yes/No		
Urban Design	✓					

Received 21/12/04 **Twenty days** _____ **Fast Track** Yes/No **Ten days** _____

Section 94 assessment Notified/ Non-notified **Five days** _____ **Site inspection** _____

Section 92 requests		Information received	Internal referrals to		Response
	⇨			⇨	

Decision status Granted/Refused/Withdrawn

Decision date _____

District Plan **Activity Type**
Operative PE/CA/DA/RD/NC/PR
Proposed PE/CA/DA/RD/NC/PR

NOTES

Comments

Planning

Subdivision

Engineering

Manukau Water

Transportation

Urban Design

Environmental Health

Facsimile

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5168
(09) 262-5109
Email:bpomfret@manukau.govt.nz

To: Sandy Heard
Working Concepts Ltd

Company:

Fax No: 271-4037

From: Bryce Pomfrett

Date: 23 December 2004 No of Pages: ~~8~~ 7

Subject: **Resource Consent Proposal No: 27373, 122 and 124 Stancombe Road, Flat Bush**

Sandy,

As discussed I attach a copy of this final decision. Due to invoicing delays an invoice for this job will be sent to you in the January 2005.

Regards

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied.

TRANSMISSION VERIFICATION REPORT

TIME : 23/12/2004 15:46

DATE,TIME	23/12 15:43
FAX NO./NAME	12714037
DURATION	00:02:45
PAGE(S)	07
RESULT	OK
MODE	STANDARD ECM

Facsimile

FAXED

Te Kaunihera o
MANUKAU
City Council

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5168
(09) 262-5109
Email: .....@manukau.govt.nz

To: Sandy Heard

Company: Working Concepts Ltd

Fax No: 271 - 4037

From: Bryce Pomfrett

Date: 22/12/04 No of Pages: 7

Subject: 122 + 124 Stancombe Road - Tree Consent

WITHOUT PREJUDICE

Sandy,

I attach a draft consent for Proposal No: 27373 for your perusal. Please advise of your acceptance or required changes of any conditions therein.

I'm aiming to have this completed by Friday 24th.

Regards - Bryce Pomfrett.

23/12/04

Sandy Heard phoned back. If we could also add Tree 23 from June 2004 report. This would need to be a retrospective approval as this tree has been removed.

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied.

Environmental Services

22 December 2004

Carlos Concepts Ltd
C/- Working Concepts Ltd
P.O. Box 58-395
Greenmount

Attention: Sandy Heard

Dear Madam

DECISION ON APPLICATION FOR LAND USE RESOURCE CONSENT

Applicant: Carlos Concepts Ltd
Application: Discretionary Activity for removal of 8 protected trees from the site at **122 Stancombe Road**, Flat Bush being:

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

Restricted Discretionary Activity for works with the potential to impact onthe root system of an Elm tree, and Chestnut Tree.

Discretionary Activity for removal of 3 protected trees from the site at **124 Stancombe Road**, Flat Bush being:

- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)

And a group of inextricably linked protected trees including species of Karaka, Totara, Puriri, Ti Kouka, Kauri, Kahikatea, Rewarewa, Taraire, and Kohehohe.

Site: 122 and 124 Stancombe Road, Flat Bush
Legal Description: Lots 2 and 3 DP 78859

DRAFT

122 and 124 Stancombe Road
Flat Bush
Proposal No: 27373

Zoning: Flat Bush Residential 1 (General Precinct) – Proposed Variation 13 to the Manukau Operative District Plan 2002.
Future Development (Stage One) (Manukau Operative District Plan 2002)

Proposal No: 27373

I wish to advise that consent for the above application was granted on 22 December 2004 under delegated authority and pursuant to Sections 104, 104B and 104C of the Resource Management Act 1991 subject to the following conditions being completed to the satisfaction of Council and at no cost to the Council:

CONDITIONS OF CONSENT

General

(1) That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing, and granting of this Resource Consent are paid in full.

(2) That the removal of trees protected under Schedule 6C of the Manukau Operative District Plan 2002 shall be limited to the following trees on the following sites:

<u>122 Stancombe Road, Flat Bush</u>

- Pin Oak (*Quercus palustris*)
- Sweet Gum (*Liquidamber styraciflua*)
- Kowhai Tree (*Sophora sp.*)
- Puriri Tree (*Vitex Lucens*)
- Golden Elm (*Ulmus sp.*)
- Tulip Tree (*Liriodendrum tulipfera*)
- 2 x Magnolia (*Magnolia sp.*)

The above trees being those identified in the Arboricultural Report prepared for this application by the Specimen Tree Company dated 14 December 2004.

<u>124 Stancombe Road, Flat Bush</u>

- Port Jackson Fig (*Ficus rubiginosa*)
- Magnolia Laurel (*Magnolia grandiflora*)
- Michelia (*Michelia doltsopa*)

The above trees being those numbered 24-27 as detailed in the Arboricultural Report prepared for the application by the Specimen Tree Company dated 30 June 2003.

(3) Prior to any land modification works, tree removal, or works proximate to protected trees on the site (for trees not approved for removal by this consent) a suitably qualified arborist shall clearly identify to all contractors, and sub-contractors who are to be working on the site those trees which are approved for removal by this consent, and those trees which shall be protected during all land modification and construction works.

(4) A copy of this resource consent shall be retained on site at all times during all land modification and tree removal works.

DRAFT

(5) Prior to any tree removal a temporary protective fence shall be erected to protect the Elm tree, and Chestnut Tree identified on the plans submitted and numbered 27373 by the Council (attached to and forming part of this consent) and any other protected trees proximate to the area of land modification tree removal works. The extent and location of this temporary protective fencing shall be overseen by a suitably qualified arborist. These trees being identified in the Arboricultural Report prepared for this application by the Specimen Tree Company Ltd dated 14 December 2004.

(6) The area within the dripline of trees identified in condition (5) above shall be treated as a total exclusion zone which requires:

- No entry into the protected areas unless approved by a suitably qualified arborist appointed by the consent holder;
- No storage of diesel, cement, building materials, site offices, or topsoil or any other construction materials within the protected areas;
- No spillages of any substances within the protected areas;
- No alteration of the extent of the protective fencing unless prior approval is given by a suitably qualified arborist;

(7) The temporary protective fencing referred to in condition (5) above should be constructed from a rigid material (e.g. plywood or corrugated iron) attached to a sturdy framework of freestanding scaffolding or posts. This fencing shall be maintained at all times during all land modification and tree removal works.

(8) Any pruning works necessary to any protected trees on the site in conjunction with any land modification or tree removal works shall be undertaken by a suitably qualified arborist in accordance with accepted arboricultural practice.

(9) Tree removal operations shall be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

(10) Prior to commencement of any tree removal on the site at 122 Stancombe Road (Lot 2 DP78859) the consent holder shall obtain right of entry consent of the owner(s) of this site (122 Stancombe Road), to undertake these works.

ADVICE NOTES

(1) In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date of commencement of the consent, unless the consent is given effect to before the end of that period. However, the Council does have the power to extend this period in certain cases where an application under Section 125 is made prior to the consent lapsing.

REASONS FOR THE DECISION

1. The conditions imposed on this consent are in accordance with the recommendations of the Specimen Tree Company Ltd report dated 14 December 2004.

2. Removal of all trees identified in this report are necessary for either road construction works on Lot 124 Stancombe Road, Flat Bush, or for land modification works necessary in association with the construction of this road, or any network utility service provision in conjunction with construction of this road.

3. Proposed Variation 13 to the Manukau Operative District Plan envisages that this site be available for residential development of a medium / high density. Whilst this requires removal of a number of trees protected under Schedule 6C of the Manukau Operative

District Plan 2002 it is considered these works are necessary to fulfil the ultimate intention of residential development of the site provided under Variation 13 to the Manukau Operative District Plan.

COSTS

1. Your deposit of $562.50 already paid has been deducted from the total costs.

2. The aforementioned fee is in addition to the normal fees and requirements as imposed by the Manager - Building Consents for the Building Consent.

RIGHT OF OBJECTION

Within 15 working days of receipt of this decision (commencement date stamped below) you may lodge an objection to the decision pursuant to Section 357(2) of the Resource Management Act 1991. Any such objection shall be made by notice in writing to the Council setting out the reasons for the objection and the relief sought.

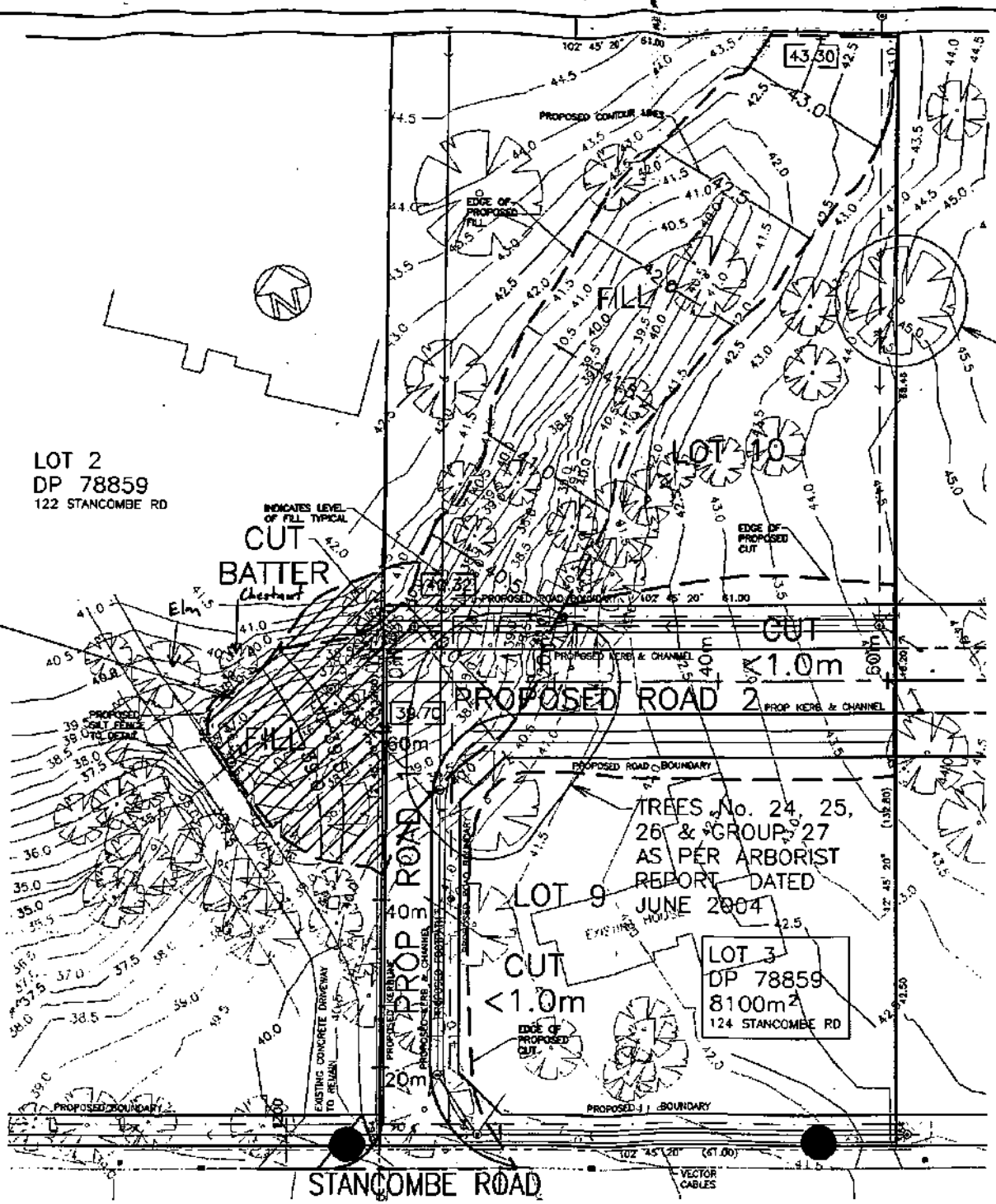
Should you have to enter into any future correspondence, building consent applications, or enquiries relating to this consent, could you please ensure that you include the file reference at the foot of page one of this letter.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

DRAFT

27373



No.	Revision Details	Date

© Copyright 1986 Airey Consultants Ltd

Drawing Title:
PART SITE PLAN

Job Title:
PROPOSED TREE REMOVAL
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

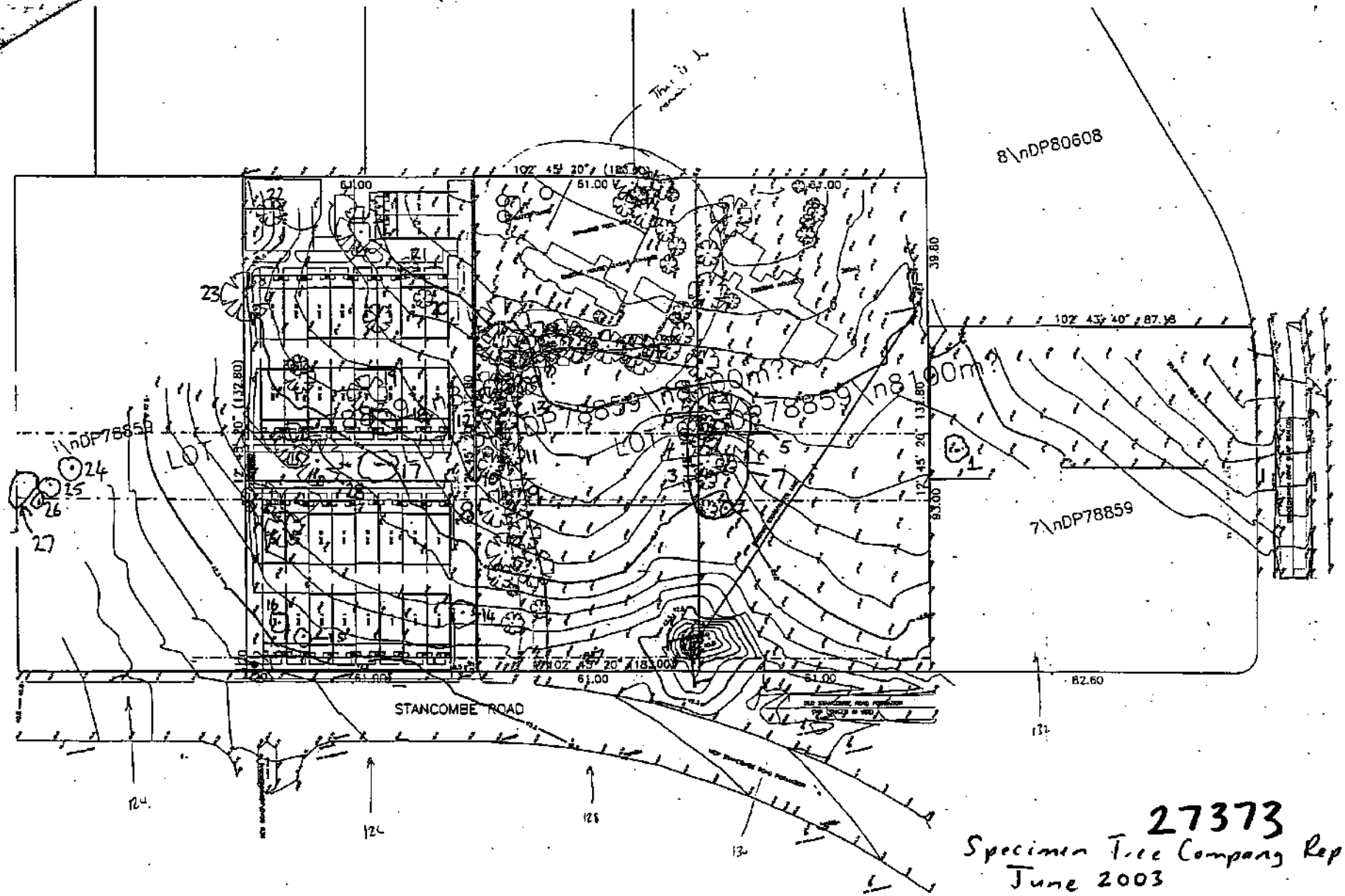
AIREY CONSULTANTS LTD.

Design: I H GIBSON (p4534 6323)
Survey: EASTALE SURVEYORS LTD
Drawn: LFP
Checked: BG
Date: DEC '04
Scale: A3 1:500
CAD Filename:

CONSENT

Original Size:

File No.	Rev.	Sheet No.
A9861/5	–	1A



27373

Specimen Tree Company Report
June 2003

REPORT DATED
JUNE 2004

Te Kaunihera o
MANUKAU
City Council

ENVIRONMENTAL SERVICES

Record of Telephone Conversation ☐
Record of Personal Interview ☐
Officer
Customer

Site 122 & 124 Stancombe Road - tree removal

Site Ref No
Date
Time
Page (1)
Phone

	Action
122 Stancombe Road, Flat Bush	
1 * Liquidamber - poor specimen	
2 * Pin Oak	
3 * Kowhai	
4 * Elm - needs protection	December Report
5 * Chestnut - needs protection	Specimen Tree Co.
6 * Puriri	
5 7 * Golden Elm	
6 8 * Tulip Tree	
7 9 * Magnolia x2	
8 10	
124 Stancombe Road trees	
24 Port Jackson Fig	
25 Magnolia Laurel	
26 Michelia	
27 Group of protected natives	
Tree 23 - has been removed - but not included within consent 8697 Moreton Bay Fig	

Refer to

MEMO-PAD.DOC 1022

27373

MANUKAU CITY COUNCIL

APPLICATION FOR RESOURCE CONSENT

UNDER SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991

TO: The City Manager
Manukau City Council
Private Bag
MANUKAU CITY

ATTENTION: Environmental Services

FOR OFFICE USE ONLY:
File Ref:
Ward
Deposit Paid
Plans A1 ( ) A3 ( )
Cheque Details
Receipt No.

DETAILS TO BE COMPLETED BY THE APPLICANT

Mr/Mrs/Miss/Ms: Mr.
Full Name: Robert. J Cummins.
Trading Name: //.
Limited Liability Company Name: Carlos Concepts Ltd.
Street Address: 4th Floor, 195-201 Willis St, Wellington
Postal Address: PO Box 27-029 Wellington.
Daytime Telephone Number: (09) 271-3007.
Fax Number: (09) 271-4037.
E-mail address:

DETAILS TO BE COMPLETED BY THE AGENT (where applicable)

Mr/Mrs/Miss/Ms: Mrs
Full Name: Sandy Heard
Trading Name:
Limited Liability Company Name: Working Concepts Ltd.
Street Address:
Postal Address: PO Box 58-395, Greenmount.
Daytime Telephone Number: (09) 271-3007.
Fax Number: (09) 271-4037.
E-mail address: Sandy@workingconcepts.co.nz.

ADDRESS FOR SERVICE

Mr/Mrs/Miss/Ms: Mr.
Full Name: Robert Cummins.
Street Address:
Postal Address: PO Box 27-029 Wellington.

APPLICATION FOR RESOURCE CONSENT

FORM 9

MANUKAU CITY COUNCIL

APPLICATION FOR RESOURCE CONSENT
UNDER SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991

This form is to be completed as part of your Resource Consent application.

We request that you provide all details relevant to your application.

Should you require assistance to complete this form, staff are available at the Council Citizen and Customer Centre, Kotuku House, Manukau City, and the Howick Ward Centre.

To accompany your application for Resource Consent we require the written information requested in the enclosed Checklists and Form 9.

Providing all required information when you submit your application will minimise delays when the Council considers your application.

PLEASE PHONE 262.5227 TO ARRANGE AN APPOINTMENT TIME FOR A LODGEMENT MEETING TO BE HELD AT THE COUNCIL CITIZEN & CUSTOMER CENTRE, MANUKAU CITY.

NOTE: If an Air Discharge Permit is required in conjunction with this application, please request an Air Discharge Information and Effects List

PLEASE COMPLETE THE FOLLOWING DETAILS

(1) The description of the activity to which the application relates is:
Tree Removal on 122 & 124 Stonecombe Road
Subdivision Consent.

(2) The type of resource consents(s) sought is/are: *[place ✓ in appropriate box]*

Land Use Consent	☐	Subdivision Consent	
Discharge Permit (Air)	☐	- Crosslease/unit title	☐
Coastal Permit	☐	- Fee simple	☐
Other	☐		

For other please specify: _____

(3) The location to which this application relates is:

No: 124 Street/Road: Stonecombe Road
Locality: Flatbush.
Legal Description: Lot 3, DP 78859.

[Describe the location in a manner which will allow it to be readily identified - e.g. the street address, the legal description, the name of any relevant stream, river or water body to which the application may relate, proximity to any well known landmark, the grid reference (if known) etc]

(4) The names and addresses of the owner and occupier (other than the applicant) of any land to which the application relates are as follows:

Owner: Carlos Concepts Ltd. Occupier: _____

(5) The following additional resource consents are required in relation to the proposal and have OR have not been applied for: *[place ✓ in appropriate box]*

Land Use Consent	☑	Applied for	☐
Subdivision Consent	☑	Applied for	☐
Coastal Permit	☐	Applied for	☐
Water Permit	☐	Applied for	☐
Discharge Permit (Air)	☐	Applied for	☐

(6) I attach, in accordance with the Fourth Schedule of the Resource Management Act 1991, an assessment of environmental effects in the detail that corresponds with the scale and significance of the effects that the proposed activity may have on the environment.

(7) I attach any information required to be included in this application by the District Plan, Regional Plan, the Resource Management Act 1991 or any regulations made under that Act.

(8) *[Where the application is for a subdivision consent]*

As this is an application for a subdivision consent, I attach information that is sufficient to adequately define:

(a) The position of all new boundaries; and
(b) The areas of new allotments *[Not required for cross-leases, company leases or unit plans]*; and
(c) The locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips; and
(d) The locations and areas of any existing esplanade reserves, esplanade strips, and access strips; and
(e) The locations and areas of land below mean high water springs of the sea or of any part of the bed or a river or lake to be vested in the Crown or local authority under section 237A of the Act; and
(f) The locations and areas of land to be set aside as new roads.

(9) *[Where the application is for a coastal permit for reclamation]*

As this is an application for a resource for reclamation, I attach information to show the area proposed to be reclaimed, including its location, the position of all new boundaries, and the portion of that area (if any) to be set apart as an esplanade reserve or esplanade strip.

TERMS AND CONDITIONS OF THE APPLICATION AND CHARGES

(1) **A deposit must accompany this application:** The deposit is in accordance with the Manukau City Schedule of Administrative Charges in terms of Section 36 of the Resource Management Act 1991. Confirmed by Special Order by the Council on 30 September 1999 (Minute No 1455/99). The schedule of administrative charges can be viewed at the Kotuku Customer Centre. **Further charges may be imposed for processing the application and for compliance and supervision.**

(2) Should this form be incomplete or further information is required, you will be advised as we cannot accept this application until all the required information is supplied. You will receive an acceptance letter to confirm your application has met all the requirements

(3) At the completion of processing your application (whether consent is granted or not) all outstanding fees are payable prior to the issuing of the resource consent decision.

THE PERSON RESPONSIBLE FOR THE CHARGES INCURRED MUST SIGN THIS FORM

I/we accept the Terms of our Resource Consent application and understand that at the completion of processing our application, I/we are liable for additional charges incurred by the Council in accordance with Section 36 of the Resource Management Act 1991.

Signature: [signature]

Name: R.J Cummins. Date: 20-12-2004.

Street Address: 6th Floor, 195-201 Willis Street, Wellington

Postal Address: PO Box 27-029, Wellington.

ATTACHMENTS

(a) Information provided in respect of Items (6), (7), (8) and (9) above
(b) Written consent of affected persons *[Where required for a resource consent]*

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz

AIREY CONSULTANTS LTD.

Members of ACENZ

20 December 2004

In all correspondence please quote our ref: 9294/40

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

Attn: Bryce Pomfrett

Dear Bryce,

Re: Resource Consent for Tree Removal, 122 & 124 Stancombe Road, Flat Bush

We enclose a Resource Consent application for the removal of a number of protected trees on the above sites. We also enclose the relevant arborists' reports dated June 2004 (titlcd 'An arboricultural implication report on the proposed subdivision and road at 126 Stancombe Road, Dannemora) and December 2004 (titled 'An arboricultural implication report on the proposal to fill in the gully at 122 Stancombe Road, Dannemora).

The trees in question, regrettably need to be removed to enable the road to be installed through No. 124 and along the boundary of 124 and 126 Stancombe Roads. The trees are those numbered 23 – 27 in the June 2004 report and all the trees in the gully proposed to be fclled as per our approved civil plans titled Carlos Concepts Ltd, dated 10/12/04 and numbered 9861/5 (Ref E7/27046 by Council). (copy enclosed).

The arborist has, in mitigation, proposed supplementary planting within the gully area, which is acceptable to our client.

Please note that the approved consent for No. 124 Stancombe did identify othcr trees (numbered 16 – 23) which have been removed already, as has tree 23 (June Report) which we had bclieved we had had approval to remove.

We trust this is acceptable to Council.

Please contact the writer if you wish to discuss the matter.

Yours faithfully
AIREY CONSULTANTS LTD

I H GIBSON

THE SPECIMEN T·R·E·E COMPANY

AN ARBORICULTURAL IMPLICATION REPORT ON THE PROPOSAL TO FILL IN THE GULLY AT 122 STANCOMBE ROAD, DANNEMORA.

THE SPECIMEN TREE COMPANY LTD
DECEMBER 2004

The Specimen Tree Company Ltd. 180 Princes St. East, Otahuhu, Auckland.
P.O. Box 22-606, Auckland 1133, New Zealand. Ph 09-276 1041. Fax 09-276 1042. www.specimentree.co.nz
Arborists and horticulturists specialising in: Tree surgery • Tree moving • Landscaping • Specimen & semi-mature tree nursery • Consultancy

THE SPECIMEN T·R·E·E COMPANY

AN ARBORICULTURAL IMPLICATION REPORT ON THE PROPOSAL TO FILL IN THE GULLY AT 122 STANCOMBE ROAD, DANNEMORA.

1.0 Introduction.

1.1 I received instruction from Ian Gibson of Airey Consultants, on 23rd November 2004 to prepare an arboricultural implication report on the proposed subdivision at 122 Stancombe Road, Dannemora. I subsequently undertook a site visit on 8 December to collect data.

1.2 This report deals only with the trees that have been specified. It takes no account of any other trees or shrubs that have not been listed.

1.3 This report is to be used for the purpose of a Resource Consent Application.

1.4 All assessments were made from ground level and while the tree dimensions were measured they should be viewed as approximate only.

1.5 I have viewed the following documentation on which I have based this assessment:

- Untitled and undated site plan showing tree positions and another overlaid with proposed subdivision.

1.6 The trees implicated in the subdivision of 126 Stancombe Road and the road that bisects 124 – 132 Stancombe Road have been dealt with in The Specimen Tree Company report dated 30 June 2004 and are not within the scope of this report.

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Arborists and horticulturists specialising in: Tree surgery - Tree moving - Landscaping - Specimen & semi-mature tree nursery - Consultancy

2.0 The Proposal.

2.1 It is proposed that a gully located at the property 122 Stancombe Road is to be filled in. This will require the removal of all the trees located within the area.

3.0 The Schedule of Implicated Vegetation.

3.1 All the specified trees are located within the property at 122 Stancombe Road.

Species	Height (m)	Form	Health	Detail
Liquidambar	15	Poor	Average	The tree is not significant specimen. It has included unions that give it a structural weakness that make in an undesirable specimen for long-term retention. Removal of this tree is recommended.
Pin Oak	15	Average	Average	This tree is a very up right specimen due to it being suppressed by the adjacent trees. It is screened by the other trees and would not be considered to be a visually significant specimen. This tree would require removal as part of filling the gully.
Kowhai	8	Poor	Poor	This tree is an insignificant specimen that has been severely suppressed by the adjacent trees. This tree would require removal as part of filling the gully.
Elm	10	Poor	Poor	This tree is showing signs of stress, which could be attributed to the construction of the adjacent driveway. This driveway is less than 200 mm from the base of the tree. This tree will need to be protected throughout the duration of the project.
Chestnut	7	Average	Average	This tree stands adjacent to the area of the proposed works. It will need to be protected throughout the duration of the project.
Puriri	7	Poor	Average	This tree is a very average specimen that has been severely suppressed by the adjacent trees. This tree would require removal as part of filling the gully.
Golden Elm	7	Average	Average	This tree is an insignificant specimen that is screened by the other adjacent trees. It is located on the edge of the proposed area of fill and requires removal to facilitate this.
Tulip tree	15	Poor	Average	This tree has a severe structural weakness and is located within the batter-cut. Removal of this tree is recommended.
Magnolia x 2	7	Poor	Average	These trees have been severely suppressed by the adjacent trees. This tree would require removal as part of filling the gully.

3.2 Eight of the trees listed will be required to be removed for the proposed filling of the gully. The only trees of any visual significance are the Willow tree and a Swamp Cypress, but these trees are not generally protected. As a group these trees are visually significant but when assessed as individuals most of them have little merit and not worthy of retention. The trees have been either suppressed or have been drawn up by the lack of light. There are several trees included in this group, which are not generally protected and can be removed as of right. Resource Consent will be required for the removal of the eight generally protected trees.

4.0 Recommendations for the Protection of the Retained Trees.

4.1 Prior to any site works commencing, a pre-commencement site meeting should be held so that the conditions of consent that pertain to the retained vegetation can be explained by the consent holder's nominated arborist to all contractors or sub-contractors who shall be working on site within the drip line of, or adjacent to, any protected vegetation that is covered by the consent.

4.2 A copy of the Conditions of Consent should be held on site at all times.

4.3 The erection of temporary protective fencing to protect the trees to be retained should take place before any site works begin. The purpose of the temporary protective fencing is to provide an area around the retained trees that will facilitate their successful retention during the construction process. The exact extent and location of the temporary protective fencing should be finalised on site before works begin, by the consent holder's nominated arborist.

4.4 The area within the dripline of the trees should be considered a total exclusion zone as follows:

- No unauthorised entry into the delineated area.
- No storage of diesel, cement, building materials, site huts, spoil etc within the delineated area.
- No spillages of substances likely to be injurious to tree health within seepage distance of the delineated area.
- No alteration to the dimensions of the delineated area without prior consultation and agreement from the nominated arborist.
- Where access is required into this area for purposes of construction, specific agreement must be reached prior to this occurring in consultation between the consent holder's nominated arborist and the Project Manager.

4.5 Temporary protective fencing should be constructed from a solid face (e.g. plywood or corrugated iron) attached to a sturdy framework of freestanding scaffolding or posts. It should be constructed to a minimum height of 1.8m and should remain in place for the duration of the project.

4.6 The Project Manager will be responsible for maintaining the condition of this temporary protective fencing. The condition, repair and location of the temporary protective fencing should be regularly inspected as part of a routine tree-monitoring programme.

4.7 The Project Manager will be responsible for notifying the consent holder's nominated arborist of the commencement of works on site and any subsequent stages that involves work on or within the dripline of protected trees.

4.8 The consent holder's arborist shall undertake all pruning works necessary, in accordance with documented arboricultural standards.

4.9 During the construction process the consent holder's arborist may make recommendations on the installation of irrigation systems, mulch or remedial pruning works, if they are required to improve the health of the trees.

5.1 Tree Removal Specifications And Methodology.

5.1. Prior to the tree removals being undertaken, the trees to be removed should be identified.

5.2 All tree removals should be in accordance with modern arboricultural practices and MAF regulations for the disposal of Elm.

5.3 Tree removal operations should be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

5.4 Tree removal operations should comply with current Manukau City Council rules and bylaw regulations.

6.0 Recommendation for Mitigation

6.1 Within the next planting season following the competition of works on site the consent holder shall plant at least four specimen trees. These trees shall be of a 45ltr grade or similar and a minimum of 2 metres in height at the time of planting.

If the recommendations contained within this report are adhered to, I am able to support this application for Resource Consent to fill the gully at 122 Stancombe Road, Dannemora, Manukau City.

For **THE SPECIMEN TREE COMPANY LTD**

Rhys Caldwell
Trade Cert – Amenity Horticulture

14 December 2004

986/2

RECEIVED
02 SEP 2004
JAWA

THE SPECIMEN T·R·E·E COMPANY

COPY

AN ARBORICULTURAL IMPLICATION REPORT ON THE PROPOSED SUBDIVISION AND ROAD AT 126 STANCOMBE ROAD, DANNEMORA.

THE SPECIMEN TREE COMPANY LTD
JUNE 2004

The Specimen Tree Company Ltd. 180 Princes St. East, Otahuhu, Auckland.
P.O. Box 22-606, Auckland 1133, New Zealand. Ph 09-276 1041. Fax 09-276 1042. www.specimentree.co.nz
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THE SPECIMEN T·R·E·E COMPANY

AN ARBORICULTURAL IMPLICATION REPORT ON THE PROPOSED SUBDIVISION AND ROAD AT 126 STANCOMBE ROAD, DANNEMORA.

1.0 Introduction.

1.1 I met on site with Gary James, from Jawa Structures Ltd, on 29 June 2004 and he subsequently commissioned our company to prepare an arboricultural implication report on the proposed subdivision and road at 126 Stancombe Road.

1.2 This report deals only with the trees that have been specified. It takes no account of any other trees or shrubs that have not been listed.

1.3 This report is to be used for the purpose of a Resource Consent Application.

1.4 All assessments were made from ground level and while the tree dimensions were measured they should be viewed as approximate only.

1. I have viewed the following documentation on which I have based this assessment:

- Untitled and undated survey plan.
- "Landscape Concept Plan – Planting Details – 126 Stancombe Road, Flat Bush." by Pierce Landscape Company Ltd, undated.

2.0 The Proposal.

2.1 It is proposed that 126 Stancombe Road is to be extensively subdivided and a public road will run perpendicular to Gracechurch Drive bisecting 124 – 132 Stancombe Road.

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Arborists and horticulturists specialising in: Tree surgery • Tree moving • Landscaping • Specimen & semi-mature tree nursery • Consultancy

2.2 This survey deals with those trees implicated at 126 Stancombe Road and those trees within or immediately adjacent to the proposed road.

3.0 The Schedule of Implicated Vegetation.

3.1

Tree / Group No.	Species	Height (m)	Form	Health	Detail
1	London Plane	6	Fair	Poor	Insignificant tree.
2	Pin Oak	6	Fair	Fair	Insignificant tree. Approximately 5m outside the proposed road.
3	Indian Cedar	9	Fair	Poor	Insignificant tree.
4	London Plane	9	Poor	Poor	Insignificant tree.
5	London Plane	7	Poor	Poor	Insignificant tree.
6	London Plane	8	Poor	Fair	Insignificant tree.
7					Group planting of trees not protected under Manukau City Council tree protection rules. Comprising mainly of Mexican Pine, Ash and Cypress shelterbelt. No significant trees are within this group.
8	London Plane	12	Fair	Fair	Form part of a significant Avenue of trees up a driveway. Tree insignificant when viewed individually.
9	London Plane	12	Poor	Fair	Form part of a significant Avenue of trees up a driveway. Tree insignificant when viewed individually.
10	London Plane	12	Fair	Fair	Form part of a significant Avenue of trees up a driveway. Tree insignificant when viewed individually.
11	London Plane	10	Poor	Fair	Form part of a significant Avenue of trees up a driveway. Tree insignificant when viewed individually.
12	London Plane	12	Poor	Fair	Form part of a significant Avenue of trees up a driveway. Tree insignificant when viewed individually.
13	London Plane	10	Poor	Fair	Form part of a significant Avenue of trees up a driveway. Tree insignificant when viewed individually.
14	Liquidambar	8	Poor	Fair	Insignificant tree.
15	Liquidambar	7	Poor	Fair	Insignificant tree.
16	Liquidambar	7	Fair	Fair	Insignificant tree.
17	Liquidambar	10	Poor	Fair	Insignificant tree.

Tree / Group No.	Species	Height (m)	Form	Health	Detail
18	Indian Cedar	8	Fair	Fair	Insignificant tree.
19	Pin Oak	12	Poor	Fair	Insignificant tree.
20	Camphor Laurel	6	Fair	Fair	Insignificant tree.
21	Tulip Tree	6	Fair	Fair	Insignificant tree.
22	Totara	8	Fair	Good	Insignificant tree.
23	Morton Bay Fig	15	Fair	Good	Significant tree although only half it's potential size
24	Port Jackson Fig	14	Fair	Fair	Insignificant tree.
25	Magnolia Laurel	12	Poor	Good	Significant tree.
26	Michelia	7	Fair	Good	Insignificant tree.
27	Group planting of natives mainly Karaka, Totara, Puriri, Ti Kouka, Kauri, Kahikatea, Rewarewa, Taraire, Kohekohe.	6-12	Poor – Good	Fair – Good	Semi - mature to mature planting that has some significance when viewed as a group. The majority of the trees in this group will required to be removed for the proposed road.
28					Trees within 126 Stancombe Road that are not protected under Manukau City Council tree protection rules include one Swamp Cypress, which is a significant tree.

3.2 All of the trees listed will be required to be removed for the proposed subdivision and public road. Of the trees listed, two individually are considered significant and two groups are considered significant.

4.0 Mitigation.

4.1 In meeting the requirements of the Resource Management Act 1991 and the Manukau City District Plan, it is proposed that two PB95 grade trees are planted for each dwelling built as mitigation for the removal of the protected trees as outlined in the Landscape Concept Plan by Pierce Landscape Company Ltd. Also Titoki trees, PB95 grade, will be planted as street trees for the proposed road.

5.0 Tree Removal Specifications And Methodology.

5.1 Prior to the tree removals being undertaken, the trees to be removed should be identified.

5.2 All tree removals should be in accordance with modern arboricultural practices.

5.3 Tree removal operations should be carried out in accordance with the Approved Code of Practice for Safety and Health in Tree Work, Part 1: Arboriculture, and all relevant Health and Safety in Employment Act 1992 regulations.

5.4 Tree removal operations should comply with current Manukau City Council rules and bylaw regulations.

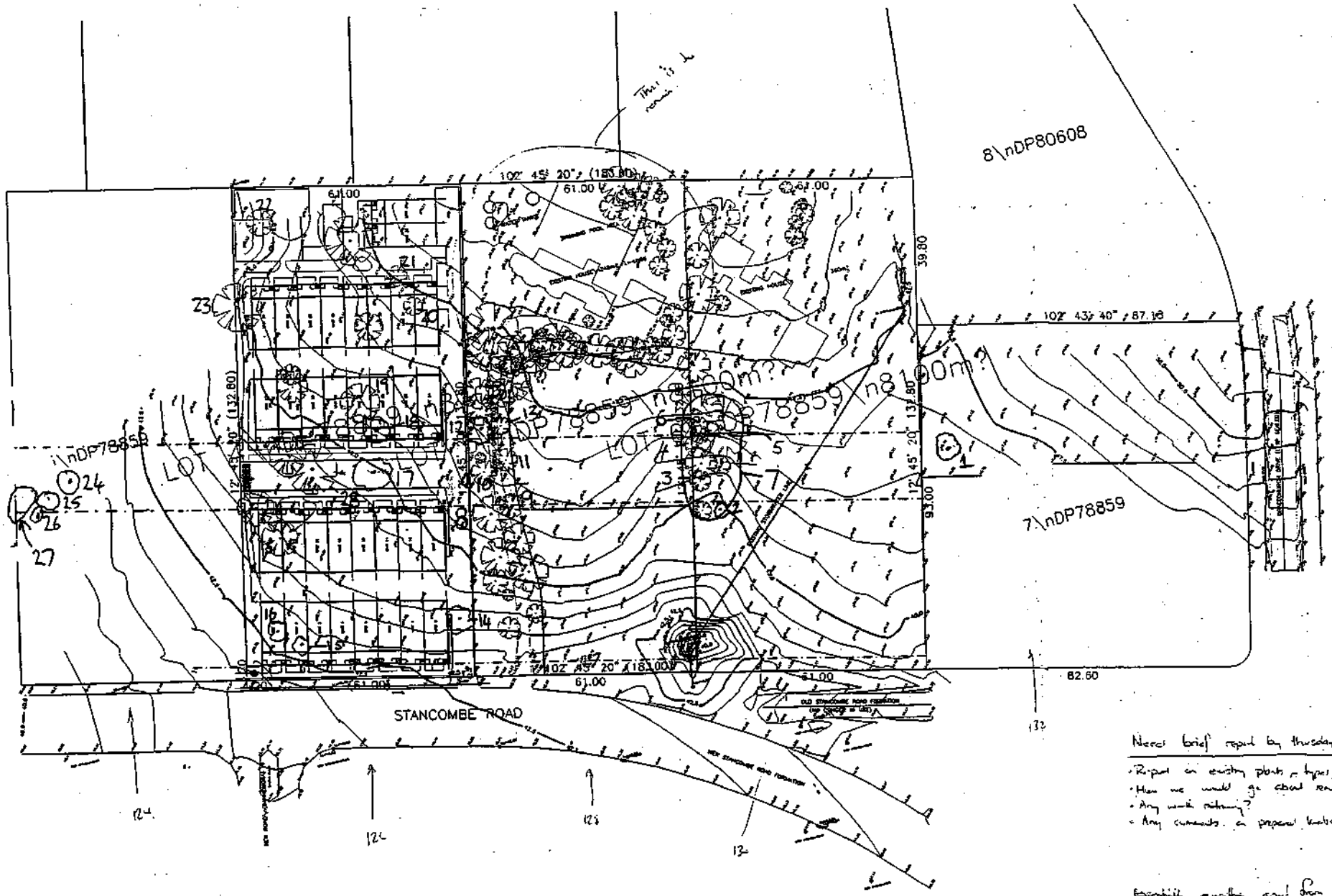
5.5 All generated debris should be safely removed and disposed of immediately following the tree removal operation. The site should be left tidy and safe at the end of each day.

If the recommendations contained within this report are adhered to, I am able to support this application for Resource Consent to construct a public road and dwellings at 126 Stancombe Road, Dannemora, Manukau City.

For **THE SPECIMEN TREE COMPANY LTD**

STUART BARTON
Cert. In Arboriculture, Dip. Hort.,
Dip. P&G. Tech., N.C.H. (Amenity)

30 June 2003



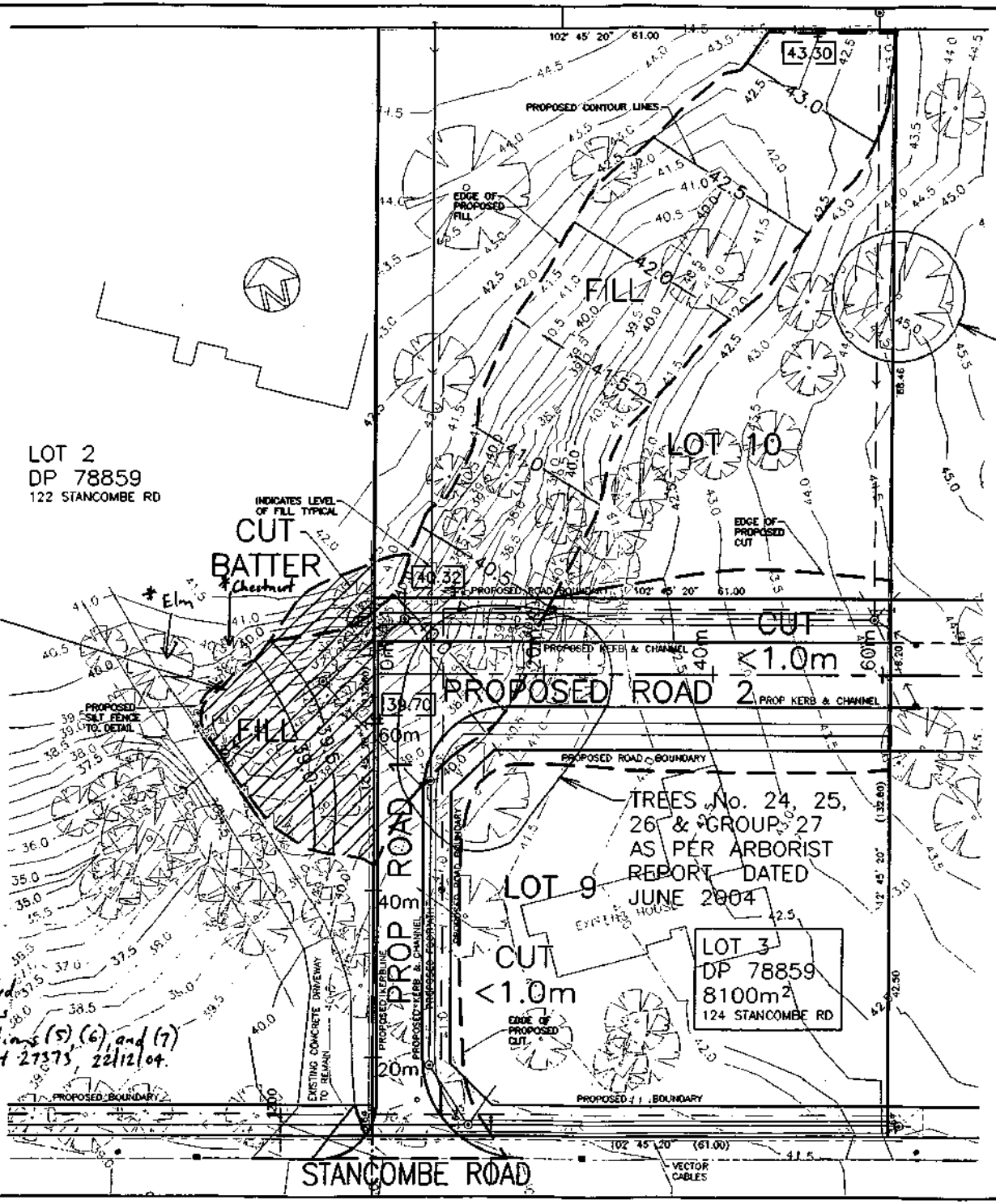
Need brief report by thursday 8 Jun

- Report on existing plants - types, size & form
- How we would go about removing
- Any work retaining?
- Any comments on proposed landscaping for 126?

Essentially everything apart from rear of 125 is to go & replaced with intensive housing

REPORT DATED JUNE 2004

27373



TREE No. 23

NOTE: EXISTING RESOURCE CONSENT SP8840 ALLOWS REMOVAL OF TREES No. 16–22 AS PER ARBORIST REPORT DATED SEPTEMBER 2004

* Trees to be protected during site works. Refer to Conditions (5), (6), and (7) of resource consent 27373, 22/12/04.

No.	Revision Details	Date

© Copyright 1998 Airey Consultants Ltd

Drawing Title:
PART SITE PLAN

Job Title:
PROPOSED TREE REMOVAL FOR CARLOS CONCEPTS LTD 124 STANCOMBE ROAD FLAT BUSH

AIREY CONSULTANTS LTD.

Design: I H GERSON (ph534 6523)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: HG
Date: DEC '04
Scale: A3 1:500
CAD Filename:
Original Size:

CONSENT

File No.	Rev.	Sheet No.
A9861/5	–	1A

51313

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

RECEIVED
10 DEC 2004
M.C.C.
ENVIRONMENTAL SERVICES

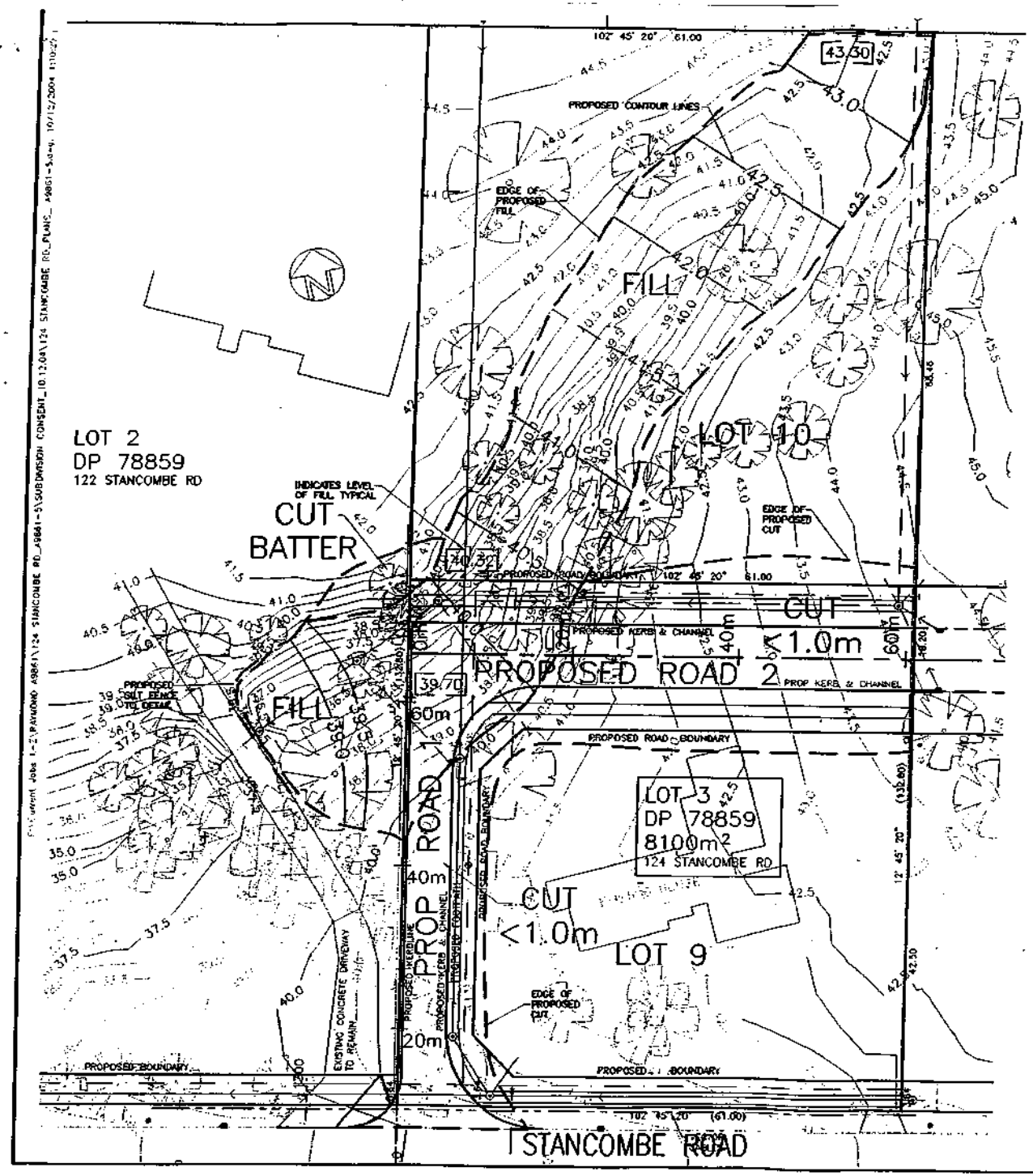
E1/27046
MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT
16 DEC 2004
PER
MCC BUILDING & RESOURCE SERVICES

STAGE 1
SUBDIVISION

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

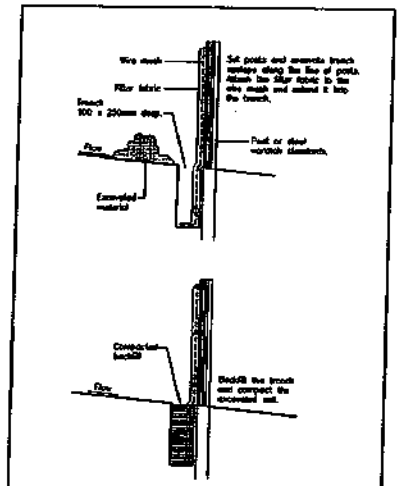
JOB No A9861/5

ISSUED 10.12.04



LEGEND

— 42.0 —	ISOPECS
— — —	CUT EXTENT
— . . —	SILT FENCE



SILT FENCE DETAIL
NTS

E7/27046

MANUKAU CITY COUNCIL
APPROVAL SUBJECT TO CONDITIONS
IN ATTACHED RESOURCE CONSENT

15 DEC 2004

PER

MCC BUILDING & RESOURCE SERVICES

PART SITE PLAN
1:500

No.	Revision Details	Date
3	SEWER LINE MOVED	10/12/04
2	SEWER DESIGN REVISED CLIENT REVISED	15/11/04
1	PROP ROAD 1 REPOSITIONED	22/10/04

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Drawing Title:
EARTHWORKS PLAN
SILT FENCE DETAIL

Job Title:
PROPOSED ENGINEERING WORK – STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

SUBDIVISION

AIREY CONSULTANTS LTD.

Design: I H GIBSON (MSM 6523)
Survey: EXSCALE SURVEYORS LTD
Drawn: LFP
Checked: HG
Date: SEPT '04
Scale: A3 1:500
CAD Filename:

CONSENT

Original Size:

File No.	Rev.	Sheet No.
A9861/5	3	2

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

Environmental Services

21/12/04

Carlos Concepts Ltd / c/- Working Concepts
P.O. Box 27-029 / P.O. Box 58-395
Wellington / Greenmount

Attention: Sandy Heard

Dear Sandy

ACKNOWLEDGEMENT OF RESOURCE CONSENT APPLICATION FOR resource consent application for tree removal
AT 122 & 124 Stancombe Road, Flat Bush

Council acknowledges receipt of your above application received on 21/12/04
Your Consent Co-ordinator for this application is Bryce Pomfrett

Your application has been allocated the reference numbers noted at the bottom of this letter. Please quote these numbers when making enquiries.

Should clarification or more detailed information be required, in accordance with Section 92 of the Resource Management Act 1991 you will be contacted within five (5) working days. Otherwise you are advised that the statutory time-frames for processing of non-notified resource consent applications require a written decision to be released no later than 20 working days after receipt of the application; or of any further information pursuant to the Section 92; or the date on which the approval of all affected persons (if any) have been obtained under Section 94, whichever is the later.

As advised above, it is important to note that assessment of this application can only commence once all the requested information has been provided.

~~Attached~~ is A receipt for $562.50 being your application deposit will be posted to you.

Yours faithfully

B Pomfrett

FORM 3A
ATTACH BUSINESS CARD
AND RECEIPT HERE

Consent Co-ordinator
Otara / Clevedon Team
ENVIRONMENTAL SERVICES

Customer Copy ☐
File Copy ☑

Reference: ES 6923/122/124 Proposal TPA 27373
Enquiries to Bryce Pomfrett

Facsimile 262-5109
Extension 5856

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT LODGEMENT MEETING

PRELIMINARY ASSESSMENT OF INFORMATION

Lodgement meeting date: 21/12/04 Proposal No: 6923/122c ES 124

Site Address: 122 & 124 Stancombe Road, Flat Bush Applicant's e-mail:

Consent Co-ordinator: Bryce Pomfrett Applicant/Agent Attending: Sandy Heard

GENERAL	YES	N/A	NO	Comments
1. Is Form 5 completed correctly and signed by the applicant?	☑	☐	☐	
2. Is the deposit attached?	☑	☐	☐	
3. Are affected parties' consents attached? (Section 94 RMA)	☑	☐	☐	
4. Have written rights of entry from affected parties been provided?	☐	☐	☑	not for tree removal
5. If 'no', summary of approaches made and results of consultation	☑	☐	☐	
6. Certificate of Title (CT) required? (current < than 1 month old)?	☑	☐	☐	
7. Detail of any covenants/consent notices on CT	☐	☑	☐	
Have items on the IPS been addressed?	☐	☑	☐	
9. An assessment of the environmental effects included?	☑	☐	☐	
10. Details of iwi consultation provided	☐	☐	☑	
11. Copy of relevant previous resource consents	☐	☑	☐	
12. Asbestos/contaminated site (e.g. residual petroleum, pesticides, or other hazardous substances) report provided	☐	☑	☐	
13. Compliance details provided for Air Noise Zone	☐	☑	☐	
14. Full explanation of application provided	☑	☐	☐	

PLANS				
15. For Land Use - 1 x A1or A2 and 3 x A3 required	☑	☐	☐	
16. Are the plans to scale? (1:50, 1:100 or 1:200 only)	☐	☑	☐	
17. For Subdivision - 4 x A3 + 1A4	☐	☑	☐	
18. For Engineering - 4 sets of A3 required at appropriate scales	☐	☑	☐	
19. Are the plans legible; are all existing structures shown; north point?	☑	☐	☐	
20. Are scheduled tree and tree species identified (height over 3.0m)?	☑	☐	☐	
21. Are any landscaping plans required?	☐	☐	☑	
22. Are building floor plans required?	☐	☐	☑	

PLANNING				
23. Are all elevations with relevant HIRB recession planes shown incl levels?	☐	☐	☐	
24. Are any infringements shown? (development and performance standards)	☐	☐	☐	
25. Is parking provision indicated?	☐	☐	☐	
26. Is vehicle access/egress shown?	☐	☐	☐	

SUBDIVISION				
27. The net site area of the existing and proposed sites?	☐	☐	☐	
28. The site coverage of all buildings shown on the new sites?	☐	☐	☐	
29. Areas and dimensions of all proposed allotments?	☐	☐	☐	
30. Positions of all new boundaries including unit and covenant boundaries?	☐	☐	☐	
31. Location and areas of all proposed reserves with improvements?	☐	☐	☐	
32. MHW Spring Tides shown ? and areas below this?	☐	☐	☐	
33. Locations and areas of land to be set aside as new road?	☐	☐	☐	
34. Location and areas of any existing or proposed easements?	☐	☐	☐	
35. All watercourses with an average width greater than 3 metres?	☐	☐	☐	
36. Proposed staging of the subdivision (if any)?	☐	☐	☐	
37. Area and dimensions of all privateways and common areas?	☐	☐	☐	
38. The height in relation to boundary details for all new boundaries?	☐	☐	☐	
39. The position of any eaves in relation to a privateway or driveway?	☐	☐	☐	

	YES	N/A	NO	Comments
ENGINEERING				
40. The MCC standard detail drawings appropriate to this application provided?	☐	☒	☐	
41. All proposed details and existing features shown?	☐	☒	☐	
42. Gas, power and telephone services layout?	☐	☒	☐	
WASTEWATER & STORMWATER				
43. Connections shown for all proposed lots for all items below?	☐	☒	☐	
44. Long-sections and all required details shown?	☐	☒	☐	
45. Minimum depth of service connections? (1.2m)	☐	☒	☐	
WASTEWATER DESIGN				
46. For 40 lot subdivisions or larger, or if pump station proposed				
Catchment plan	☐	☒	☐	
Assessment of catchment population in 50 years	☐	☒	☐	
Flow calculations	☐	☒	☐	
Calculations w.r.t. adequacy of downstream system	☐	☒	☐	
STORMWATER DESIGN				
47. Are the stormwater calculations, including catchment plan, appropriate?	☐	☒	☐	
Does the design cater for the upstream catchment?	☐	☒	☐	
Is the assessment of downstream stormwater system satisfactory?	☐	☒	☐	
Is the overland flow assessment accurate	☐	☒	☐	
WATER RETICULATION				
48. Water connections shown for all lots?	☐	☒	☐	
49 All proposed valves, hydrants, bends shown?	☐	☒	☐	
50 Pipe materials specified?	☐	☒	☐	
51. Ducted rider mains for three or more lots served off accessway?	☐	☒	☐	
ROADING				
52. Roading and accessway - plans, long-sections and cross-sections provided?	☐	☒	☐	
53. Road marking and signage shown?	☐	☒	☐	
LAND MODIFICATION				
54 Earthworks plans included?	☐	☒	☐	
55. Quantity of cut/fill identified?	☐	☒	☐	
Cut and fill areas defined?	☐	☒	☐	
Silt control measures?	☐	☒	☐	
Has ARC consent been obtained? (If over 1 ha, or 0.25 ha and over 15° slope or 50m from stream or wetland)	☐	☒	☐	
56. Geotechnical report (steep, filled or unstable sites?)	☐	☒	☐	

INFORMATION FOR THE APPLICANT

Is a Building Consent required?	☐	☐	☑	

If 'yes', has Building Consent been lodged? YES/NO and granted YES / NO

Has applicant been advised or considered any known financial contributions applicable?	☐	☐	☑	

INFORMATION / ACTION FOR THE CONSENT CO-ORDINATOR

Obtain copy of pre-application notes form KO (details on IPS) ..... ☐ ☑ ☐ _____
Confirm with applicant at meeting and tick:

Type of consent
- Land Use only ☑
- Subdivision only ☐. If so, Concept Sub ☐ with Land Mod ☐
- Integrated Consent ☐
- Other .....

Is application solely for administrative, commercial or industrial purposes? Yes / (No)
If so, obtain assessed value of development. $.....
Any requirements for site visits (e.g. dogs on site)? ..... ☐ ☐ ☐ _____
Provide plan of proposal to S Treneary for preliminary street numbering ..... ☐ ☐ ☐ _____

Notes: .....
.....

Please note that the above information is necessary to satisfy the statutory requirements of Section 88(4) of the Resource Management Act 1991. Failure to provide all or any of the information detailed below will render your application inadmissible to the Council. This preliminary assessment of information is check for information requirements for Resource Consents and does not alleviate responsibility to comply with the Development and Performance Standards of the Operative District Plan 2002

Te Kaunihera o
MANUKAU
City Council

ENVIRONMENTAL SERVICES

Record of Telephone Conversation ☑
Record of Personal Interview ☐

Officer: Bryce Pomfrett
Customer: Rhys Caldwell
Specimen Tree Co.
Site: 124 Stancombe Road.

Site Ref No:
Date: 22/12/04
Time:
Page: 1
Phone:

Action

Spoke to Rhys Caldwell to clarify the recommendations of his December 2004 report relating to protecting an Elm and Chestnut during construction. Rhys verbally identified the location of the trees as per the plan attached to this resource consent.

Refer to

MEMO-PAD.DOC 1022

Te Kaunihera o
MANUKAU
City Council

ENVIRONMENTAL SERVICES

Record of Telephone Conversation ☐
Record of Personal Interview ☐

Officer: Bryce Pomfrett
Customer: Peter Fisher - (021) 633-534

Site: 124 + 122 Stancombe Road, Flat Bush

Site Ref No:
Date: 20/12/04
Time:
Page: 1
Phone:

Action

Then are 3 tree removal reports.

* 1 recieved today @ 20 December 2004
* 1 dated 30 June 2004 and report
* September 2004 - Trees approved as part of this consent.

Spoke to Sandy Heard. We require an application be made for the necessary tree removals in order for Council to approve such tree removals

Refer to

MEMO-PAD.DOC 1022

ENVIRONMENTAL SERVICES

RESOURCE CONSENT COMPLETION REVIEW

27373 6923/124
124 STANCOMBE RD FLAT BUSH
CLEVEDON 21/12/04

CARLOS CONCEPTS LTD (key label)
PO BOX 27029 6923/124
WELLINGTON $562.50
Att: Mr Robert Cummins Land Use

TREE REMOVAL

BRYCE POMFRETT

	Yes	No	N/A
Site visit undertaken:	☑	☐	☐
Section 93, 94 , 94A to 94D analysis completed:	☑	☐	☐
Approval from affected persons obtained:	☑	☐	☐
Recommendation and conditions checked:	☑	☐	☐
Report signed and dated:	☑	☐	☐

Team Leader _____
(or nominee) _____
Date: 22 / 12 / 04

Decision recorded on 'Reflections' ☑
Decision saved on N-drive ☑
Accredited Agent application ☐

Consent Co-ordinator: Bryce Pomfrett
RCA's records updated: ...../...../.....

DISTRIBUTION (highlight applicable boxes)	Consent	Consent Plans (where applicable)	Engineering Plans (where applicable)	Notes	Date Sent
When decision completed					
Applicant (or agent)	1	1		posted/faxed	23/12/04
File Copy	1	1		filed 23/12/04	/ /
Digitising (plans only)					/ /
Site Plans for Subdivision or Multi-Units to Dept (K2 Shirley Treneary)					
Building Consents (K4 Mike Davies / Josie Hunia)					
Date file sent to RC					
When consent collected					
Customer Centre (KO .....)	1	1		Provide A4 plar	
Manukau Water					
Opus International Consultants Ltd Attention: Network Manager PO Box 76-725 MANUKAU CITY				(if roadworks in	
Watercare Services Private Bag 92802 PENROSE				(if works affect t	
TOTAL COPIES REQUIRED	1 extra	1 extra			

27373R

ENVIRONMENTAL SERVICES

RESOURCE CONSENT COMPLETION REVIEW

27046 SP8840
124 STANCOMBE RD FLAT BUSH
CLEVEDON 02/11/04
(sticky label)
CARLOS CONCEPTS LTD
PO BOX 27029 6923/124
WELLINGTON $562.50
Att: Mr R J Cummins Subdivision
TWO LOT FEE SIMPLE SUBDIVISION WITH ROAD TO VEST

BRYCE POMFRETT

	Yes	No	N/A
Site visit undertaken:	☑	☐	☐
Section 93, 94 , 94A to 94D analysis completed:	☑	☐	☐
Approval from affected persons obtained:	☑	☐	☐
Recommendation and conditions checked:	☑	☐	☐
Report signed and dated:	☑	☐	☐

Team Leader [signature]
(or nominee)
Date: 16 / 12 / 04

Decision recorded on 'Reflections' ☑
Decision saved on N-drive ☑
Accredited Agent application ☐

Consent Co-ordinator: Bryce Pomfrett
RCA's records updated: DELANEY 05/01/05

DISTRIBUTION (highlight applicable boxes)	Consent	Consent Plans (where applicable)	Engineering Plans (where applicable)	Notes	Date Sent
When decision completed					
Applicant (or agent)	1	1	2	✓	20/12/04 ✓
File Copy	1	1	1	✓ on file	17/12/04 ✓
Digitising (plans only)					/ /
Site Plans for Subdivision or Multi-Units to Dept (K2 Shirley Treneary)		1			/ / ✓
Building Consents (K4 Mike Davies / Josie Hunia)	1	1	1	✓ ✓	17/12/4
Date file sent to RC					/ /
When consent collected					
Customer Centre (KO)	1	1	1	✓ Provide A4 plans	/ / ✓
Manukau Water	1		2	✓	/ /
Opus International Consultants Ltd Attention: Network Manager PO Box 76-725 MANUKAU CITY			1	✓ (if roadworks involved)	/ /
Watercare Services Private Bag 92802 PENROSE				(if works affect their services))	/ /
TOTAL COPIES REQUIRED	5	5	8		

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers Pukekohe Takapuna Howick Orewa	CLIENT:	SHEET No.: 0
	JOB:	JOB No.: A 9851/5
	CALS. BY: 534523	DATE: 18/8/04

Stormwater Drainage
for
124 Stancombe Rd,
East Tamaki.

Contents

	Page
Design	1-2
Catchment Plan	3
Front/Rear site design	4

deedprint co nz 32577

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers Pukekohe Takapuna Howick Orewa	CLIENT:	SHEET No.: 1
	JOB:	JOB No.:
	CALS. BY:	DATE:

Stormwater Design

(1) Area 3.05 Ha

$Q_p = .235 \times C \times 3.05$ Ha

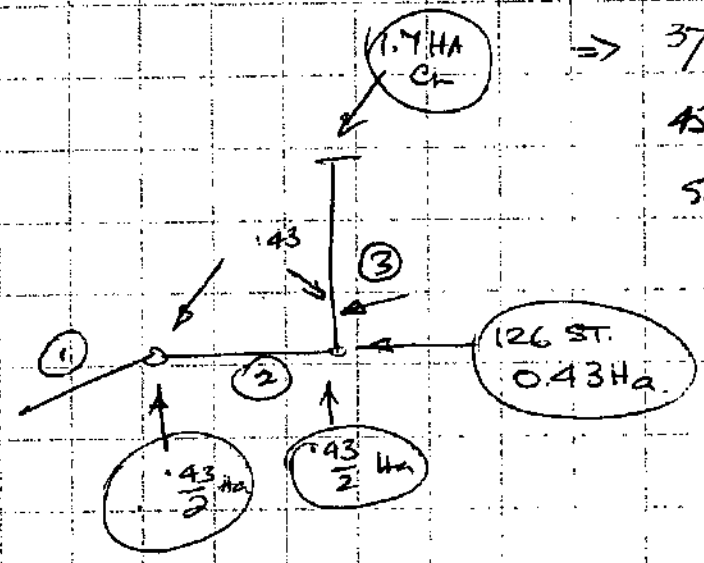
— Country living 1.7 Ha $C = 0.40$

— High Intensity 1.35 $C = 0.9$

$Q_p = .235 \times .4 \times 1.70 = 160$

$+ .9 \times .235 \times 1.35 = 286$

446 l/s



⇒ 375 ϕ @ 5.8%

450 ϕ @ 2.3% (v = 2.77)

525 ϕ @ 1% (v = 1.95 m/s)

(2) Catchment 1.7 H CL ; 1.2 HI

deedprint co nz 32577

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers Pukekohe Takapuna Howick Orewa	CLIENT:	SHEET No.: 2
	JOB:	JOB No.:
	CALS. BY:	DATE:

$Q_p = .235 \times .4 \times 1.7 = 160$

$+ .235 \times .9 \times 1.2 = 254$

414 l/s.

$\Rightarrow$ 375ø @ 5%

450ø @ 1.95%

(3) Catchment 1.7 H CL = 160 l/s

+ .43 HI + .43 H = 91 l/s

$= .235 \times .9 \times .43 = 91$

251 l/s

+ 91

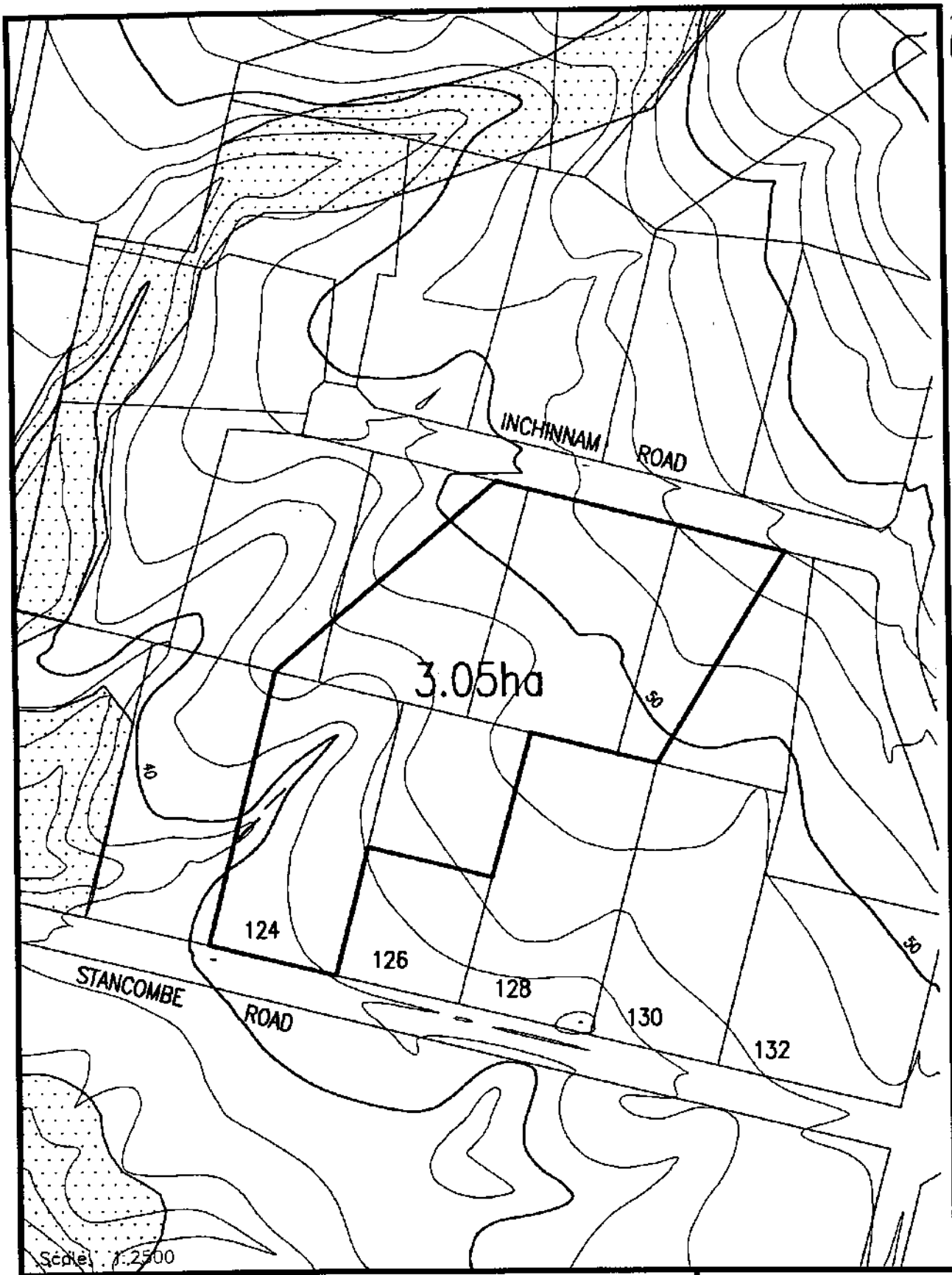
342 l/s

$\Rightarrow$

375ø @ 3.5%

450ø @ 1.35%

deedprint co nz 32577



AIREY CONSULTANTS LTD

Member of the D.N. BOAK CONSULTANT GROUP

ACENZ

CONSULTING CIVIL & STRUCTURAL ENGINEERS
Pukekohe, Tokopana, Hewlok, Waiuku, Orewa

CATCHMENT PLAN

124 STANCOMBE ROAD
EAST TAMAKI

File No.	Sht. No.
A9861/5	1 – 1

CAD Filename: RAYMOND

Stormwater Design

(1) Front site Area 52.5x 43
= 2260

Qp = .235x.9x .2260
= 47.80
=> 225ø @ 1%

(2) Rear site Area = 68.5x 61 = 4179

Qp = .235x.9x .4179 = 88.3 l/s

=> 300ø @ .74%
225ø @ 3.4%

224(c) Documentation
For
Carlos Concepts Ltd
124 Stancombe Road
Flat Bush

408 508

NOTES

For Consultants

1. Items to be filed are as detailed on Engineering Release Form.

2. Engineering Release Form to be filed at front of file.

For LDC

3. Status faxes to be filed at front of file.

4. Processing check-list to be filed at front of file.

** Foundation Completion Report to be filed in front pocket of file.

6213

Bantex DENMARK

STRONG LINE

1	QAM FORMS	✓
2	CORRECTION ACTION ITEMS	✓
3	WORKS TO BE BONDED	✓
4	BONDING ARRANGEMENTS	
5	FOUNDATION COMPLETION STATEMENT **	✓
6	STATUS LIST OF CONSENT CONDITIONS	✓
7	STATUS LIST OF ENGINEERING DRAWING CONDITIONS	✓
8	FINAL AS-BUILT	✓
9	CERTIFICATION OF WORKS	
10	CONFIRMATION OF CONNECTION FORMS FROM ALC	✓
11	RAMMS INFORMATION (2 COPIES)	✓
12	BEAM TEST RESULTS	✓
13	DETAILS OF LIMITED SERVICING	✓
14	OVERLAND FLOWPATH DETAILS	✓
15	RIGHT OF ENTRY RELEASE DETAILS	✓
16	UTILITY SERVICES DETAILS	✓
17	BARTER TAX INVOICE DETAILS	✓
18	SURVEY SHEET SHOWING CO-ORDINATES	
19	ANY OTHER ITEMS Certificate of Title	
20		

AIREY CONSULTANTS LTD

CONSULTING CIVIL & STRUCTURAL ENGINEERS
39 MEADOWLAND DRIVE,
P. O. BOX 39 101, HOWICK
PH: 09 534 6523 FAX: 09 537 5754
EMAIL:iang@aireys.co.nz

AIREY CONSULTANTS LTD.

FACSIMILE TRANSMISSION HEADER SHEET

To	MCC		
Attn	Ben Yu		
Re.	124 Stancombe Rd	**Date**	25\11\05
From	Ian Gibson	**Pages**	3
Fax No.	2625163	**File**	9861
CC:		**CC:**	

Dear Ben
Bond Forms enclosed
Regards
Ian

The information contained in this fax is confidential between Airey Consultants Ltd and the intended recipient. Any other person receiving this fax is required to respect the confidentiality and may not disclose, copy or make use of its contents. If this fax has been received in error, would the recipient please notify Airey Consultants Ltd immediately and return it by mail. Airey Consultants will reimburse the cost incurred.

Application for Minor Bond for Uncompleted Works

The City Manager
Manukau City Council
PO Box 76917
Manukau City

Attention: Resource Compliance

Proposal P27046 SP 8840

Address 124 Stancombe Rd Flat Bush.

I, Bob Cummins wish to apply to bond for a period of 3 months (maximum 24 months) for the following conditions of the above consent:

Condition	Detail	$
3,8	Footpath, Topsoil berms & bollards, streetlight	18761-00
9,22	Street planting, Revegetation clearance	
23		
	Total:	$18,761.00 (minimum $2000)

Terms & Conditions

(1) A bond factor will be added to the total cost of the bond excluding GST.

(2) The bond shall be further secured by cash deposit to the Council of the bond sum.

(3) At the time of processing the release of this bond, the time taken to certify that the above works have been completed will be invoiced and will be payable prior to the refunding the further cash security and may be deducted by the Council from those monies.

(4) A copy of the receipt showing payment of the further security cash deposit will be required when applying for release of the Bond.

(5) In the event those works are not completed and certified acceptable to the Council within the time allowed, the further security deposited in cash with the Council shall be taken in full to be applied by the Council for those purposes.

(6) The bond will be invoiced and refunded to the name shown above.

I agree to the conditions above:

Signed _____ **Date** 25/4/05

Application for Minor Bond for Uncompleted Works

The City Manager
Manukau City Council
PO Box 76917
Manukau City

Attention: Resource Compliance

Proposal P8T046 SP 8840

Address 124 Stancombe Rd, Flat Bush.

I, Bob Cummins. wish to apply to bond for a period of 3 months (maximum 24 months) for the following conditions of the above consent:

Condition	Detail	$
3	Road Reseal following completion	25,000-00
	of building Works.	
	Total:	$25,000-00 (minimum $2000)

Terms & Conditions

(1) A bond factor will be added to the total cost of the bond excluding GST.

(2) The bond shall be further secured by cash deposit to the Council of the bond sum.

(3) At the time of processing the release of this bond, the time taken to certify that the above works have been completed will be invoiced and will be payable prior to the refunding the further cash security and may be deducted by the Council from those monies.

(4) A copy of the receipt showing payment of the further security cash deposit will be required when applying for release of the Bond.

(5) In the event those works are not completed and certified acceptable to the Council within the time allowed, the further security deposited in cash with the Council shall be taken in full to be applied by the Council for those purposes.

(6) The bond will be invoiced and refunded to the name shown above.

I agree to the conditions above:

Signed _____ **Date** 25/11/05

(Joseph
021 - 343416)

22/12/04.
124 Stancombe Road,
Flat Bush.

SECTION 2

GENERAL

CONSULTANT FILE No

MCC SP No 8840
MCC. File No

PRE-CONSTRUCTION MEETING

PRIOR TO CONSTRUCTION COMMENCEMENT	Yes	No	N/A
PRESENT COUNCIL			
(i) BRS Rep - Joseph Bartley	☑	☐	☐
(ii) Future Utility Owner - m/water.	☑	☐	☐
CONSULTANT - Hireys Consultants - Ian G	☑	☐	☐
GEOTECH -	☐	☑	☑
CONTRACTOR -	☑	☐	☐
ARC SOIL CONSERVATION -	☐	☐	☑
OTHERS	☐	☐	☑
CHECK (1) Status of Engineering Approval			
(i) All	☑	☐	☐
(ii) Part	☐	☐	☐
(2) Council advised of name of Engineering Rep	☑	☐	☐
(3) Council advised as to commencement of work	☑	☐	☐
Future Utility Owners advised			
(i) Water & Drainage	☑	☐	☐
(ii) Roads	☐	☐	☐
(iii) Reserve	☐	☐	☐
(4) Contractor's Programme	☑	☐	☐
(5) List of proposed Subcontractors	☐	☐	☑
(6) ARC			
(i) Informed as to commencement of works	☐	☐	☑
(ii) Soil conservation consent	☐	☐	☑
(iii) Right to Discharge obtained	☐	☐	☑

		Yes	No	N/A
(7)	Confirm			
	(i) Approvals for clearing of scrub - trees and disposal	☑	☐	☐ -Processing
	(ii) Permits obtained	☐	☐	☐ ←
	(iii) Alignment with Foundation Investigation Report	☐	☐	☑
	(iv) Any special Resource Consent Conditions (eg protected trees)	☑	☐	☐
(8)	Health and Safety Plan	☑	☐	☐
(9)	Need for work on existing utilities eg Sewer Stormwater Electricity Gas	☑	☐	☐
(10)	Insurances in place	☑	☐	☐
(11)	Current rights of entry for any work outside development boundary.	☑	☐	☐
(12)	MANARC approval to all materials	☑	☐	☐
(13)	Working on existing roads			
	(i) Traffic management plan	☑	☐	☐
	(ii) Open excavation permit for road crossing.	☐	☐	☑
	(iii) Contact person - Ian Gibson	☑	☐	☐
(14)	Approved licensed contractor	☑	☐	☐

Future Reg Owner The division within Manukau City Council which will assume responsibility for maintenance
ie Water and Drainage
Roads
Reserves

22/12/04
Joseph Bartley.

OBJECTIVE

Final inspection and test on sanitary sewer installation prior to Council taking over works and being declared "public drains"

SP No 6923/124
Developer
Consultant Aiings.
Contractor
Subcontractor Shape
Date 23/08/05

FOR LINE THROUGH 124 FROM STANCOMBE.

SANITARY SEWER DRAINAGE

FINAL INSPECTION AND TEST
Pre-meeting tasks

Organisation		Action Required	Yes	No	N/A
Contractor	(1)	Flush out & test all lines	☑	☐	☐
	(2)	Pre-test all manholes	☑	☐	☐
	(3)	Check all manholes	☐	☐	☐
	(4)	All backfilling completed, tidied up	☑	☐	☐
	(5)	Pre-check on MH installation	☐	☐	☐
	(6)	Provide Consultant with as-built information	☑	☐	☐
Consultant	(1)	As-builts completed, checked and to Council	☐	☐	☐
	(2)	Confirm contractor has completed 1-3 above	☐	☐	☐
	(3)	Advise Council of test requirements	☐	☐	☐
Council	(1)	Arrange test time and inform			
		Consultant	☐	☐	☐
		Watercare Services	☐	☐	☐
		Water & Drainage	☐	☐	☐
	(2)	Confirm as-builts received or on site	☐	☐	☐

SITE MEETING
In attendance

Contractor Shape.
Consultant Aiings
BRS Officer
Water & Drainage Officer Jim Cook
Watercare Services N/A

		Yes	No	N/A
(1)	Air-test all lines	☑	☐	☐
(2)	Inspect all manholes	☑	☐	☐
(3)	Note failures and arrange for re-tests	☑	☐	☐

POST SITE MEETING TASKS

			Yes	No	N/A
Contractor	(1)	Attend to any failures/rejects	☑	☐	☐
Consultant	(1)	Observe (1) above and advise Council	☑	☐	☐
	(2)	Co-ordinate connections etc	☑	☐	☐

	(3)	Arrange connection to suit existing Manukau City Council sewers	☑	☐	☐
Council	(1)	Arrange for MH inflitration test and / or re-test	☑	☐	☐
	(2)	Check as-builts against design	☑	☐	☐
	(3)	Floor level restrictions			
	(4)	Other	☑	☐	☐

ITEMS TO BE PROVIDED / CORRECTED

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Date

Future Utility Operator Rep

Consultant / Contractor

23-08-00
Date

OBJECTIVE
Final inspection & test on stormwater reticulation prior to Council taking over works and being declared "Public Drains"

As Per 126 Stancombe
See As Built

SP No	SP 8897
Developer	
Consultant	[illegible]
Contractor	[illegible]
Subcontractor	
Date	8/7/05

LAND DRAINAGE

FINAL INSPECTION AND TEST

Pre-meeting tasks

Organisation	Action Required	Yes	No	N/A
Contractor	(1) Flush out all lines	☐	☐	☐
	(2) Check all manholes	☐	☐	☐
	(3) All backfilling completed and lines tided up	☐	☐	☐
	(4) Provide Consultant with as-built information	☐	☐	☐
Consultant	(1) As-builts completed, checked and to Council	☐	☐	☐
	(2) Confirm 1-3 above completed by Contractor	☐	☐	☐
Council	(1) As-builts received or on site	☐	☐	☐
	(2) Arrange test time and advise consultant	☐	☐	☐
	(3) Advise Water & Drainage	☐	☐	☐

SITE MEETING

In Attendance		
	Contractor	[illegible]
	Consultant	[illegible]
	BRS Officer	
	Water & Drainage Officer	[illegible]

	(1) Jointly inspect all lines, manhole inlet and outlet structures	☐	☑	☐
	(2) Inspect secondary flowpaths	☐	☑	☐
	(3) Check open watercourses at boundary upstream and downstream	☐	☑	☐
	(4) Silt pond monitor	☐	☐	☐

POST SITE MEETING TASKS

Contractor	1) Attend to any items arising from 1 - 4 above	☑	☑	☐
Consultant	(1) Observe (1) above and advise Council	☑	☑	☐
Council	(1) Check as-builts against design	☑	☑	☐
	(2) Floor level restriction	☑	☑	☐
	(3) Others	☐	☑	☐

ITEMS TO BE PROVIDED / CORRECTED

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Acceptance Date

Future Utility Operator Rep

Consultant / Contractor

8/1/05
Date

OBJECTIVE

Final inspection and test on sanitary sewer installation prior to Council taking over works and being declared "public drains"

SP No: SP 8697
Developer:
Consultant: Gilys.
Contractor: Sharp.
Subcontractor:
Date: 8/7/05

LINE ACROSS FRONTAGE
DONE WITH 126
See As Built

SANITARY SEWER DRAINAGE

FINAL INSPECTION AND TEST

Pre-meeting tasks

Organisation		Action Required	Yes	No	N/A
Contractor	(1)	Flush out & test all lines	☐	☐	☐
	(2)	Pre-test all manholes	☐	☐	☐
	(3)	Check all manholes	☐	☐	☐
	(4)	All backfilling completed, tidied up	☐	☐	☐
	(5)	Pre-check on MH installation	☐	☐	☐
	(6)	Provide Consultant with as-built information	☐	☐	☐
Consultant	(1)	As-builts completed, checked and to Council	☐	☐	☐
	(2)	Confirm contractor has completed 1-3 above	☐	☐	☐
	(3)	Advise Council of test requirements	☐	☐	☐
Council	(1)	Arrange test time and inform			
		Consultant	☐	☐	☐
		Watercare Services	☐	☐	☐
		Water & Drainage	☐	☐	☐
	(2)	Confirm as-builts received or on site	☐	☐	☐

SITE MEETING

In attendance

Contractor: Sharp.
Consultant: Gilys.
BRS Officer:
Water & Drainage Officer: T. Crook.
Watercare Services:

(1)	Air-test all lines	☑	☐	☐
(2)	Inspect all manholes	☑	☐	☐
(3)	Note failures and arrange for re-tests	☑	☐	☐

POST SITE MEETING TASKS

			Yes	No	N/A
Contractor	(1)	Attend to any failures/rejects	☑	☐	☐
Consultant	(1)	Observe (1) above and advise Council	☑	☐	☐
	(2)	Co-ordinate connections etc	☐	☐	☐

	(3)	Arrange connection to suit existing Manukau City Council sewers	☑	☐	☐
Council	(1)	Arrange for MH infiltration test and / or re-test	☐	☑	☐
	(2)	Check as-builts against design	☐	☑	☐
	(3)	Floor level restrictions			
	(4)	Other	☐	☐	☐

ITEMS TO BE PROVIDED / CORRECTED

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Acceptance Date
1	Fees Sheet.	AC	MW.	[illegible]	8/7/05

[illegible]
Future Utility Operator Rep

Consultant / Contractor

6/7/05
Date

OBJECTIVE
Final inspection of total development site to ensure all works are completed or bonded for prior to acceptance by Council

SEE NOTE ON BACK OF FORM

SP No
Developer CARLOS CONCEPTS LTD
Consultant AIREY CONSULTANTS
Contractor SHARP
Subcontractor N/A
Date 22/08/05

FINAL SITE INSPECTION AND RELEASE
Final Field Inspection

(a) **SITE FIELD MEETING**
In Attendance Council: R BRACKEBUSH
Contractor P FISHER
Consultant IAN GIBSON

Action Required	Yes	No	N/A
(1) Check all items which failed previous inspections	☐	☐	☐
(a) Earthworks	☐	☐	☐
(b) Drainage	☐	☐	☐
Sewer	☐	☐	☐
Stormwater	☐	☐	☐
(c) Water Reticulation	☐	☐	☐
(d) Roading	☐	☐	☐
(e) Reserves	☐	☐	☐
(2) **General**			
(a) Surplus material removed	☐	☐	☐
(b) Drainage reticulation topsoiled and grassed	☐	☐	☐
(c) Manhole lids level with surrounding area/clear of boundaries	☐	☐	☐
(d) Carriageway and berms clear of rubbish	☐	☐	☐
(e) Grass take on topsoiled areas	☐	☐	☐
(f) Water reticulation, boxes and kerb markings in place	☐	☐	☐
(g) Check Concrete paths vehicle crossings & drives for cracks	☐	☐	☐
(h) Channel swept and cesspits empty of debris	☐	☐	☐
(i) Road surface acceptable	☐	☐	☐
(j) Fences erected where required	☐	☐	☐
(k) Warning sign at end of stage roads	☐	☐	☐

/cont . . .

Final Field Inspection (cont)

	Action Required	Yes	No	N/A
(l)	Restoration after telecommunication, electricity, gas, etc	☐	☐	☐
(m)	Right of entry releases	☐	☐	☐
(n)	Uncompleted items to be bonded for	☐	☐	☐
(o)	See details of Bond Schedule in Appendix No 6	☐	☐	☐

FINAL INSPECTION UNDERTAKEN ON A "WITHOUT PREJUDICE" BASIS COUNCIL WILL REQUIRE A FINAL FINAL UPON COMPLETION OF THE BUILDING DEVELOPMENT, DUE TO THE ONGOING DAMAGE TO THE BERM / ROAD AREAS

ITEMS TO BE PROVIDED / CORRECTED

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Date
•	REMOVE VEHICLE XING				
•	BONDED FOOT PATH				
•	BONDED TOPSOIL BERMS				
•	REPAIR LEISPIT + BALKING				
•	REPAIR KERBS				
	SEAL DAMAGE 800				

BRS Rep

Consultant / Contractor

22/08/05
Date

BOND + 25 K SEAL

Final inspection and test water reticulation prior to being accepted by Council and connected to existing Council System

Consultancy

Contractor

Subcontractor

Dated

WATER RETICULATION

FINAL INSPECTION AND TEST

[illegible]

POST SITE MEETING

Contractor	(1)	Complete backfill on all lines and tidy up	☐	☐	☐
	(2)	Install boxes and posts after topsoil respread	☐	☐	☐
	(3)	Inspection of (2) at final inspection	☐	☐	☐
Consultant	(1)	Arrange connection to Council main	☐	☐	☐

ITEMS TO BE PROVIDED / CORRECTED

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Acceptance Date
1/	All forms	AC	[illegible]	[signature]	13/7/05
2/	All builts			[signature]	13/7/05
	Fee Sheet				
	Comp Cert.				
3/	Backo				
	Samples				
4	Markings on Rd	Contractor	Consultant		
5	Lower service connection	Contractor	Consultant		
	for 128 Stancombe (FAH)				
6/	Set all SU&FH boxes &	Contractor	Consultant		
	markings & reinstatement of berms.				

Bonded work

[signature] 13/7/05
Future Utility Operator Rep

[signature]
Consultant / Contractor

13/7/05
Date

OBJECTIVE
Check subgrade strength and shape is suitable for design depth of metal

~~SP No~~ P 26164
Developer
Consultant Airey
Contractor Sharp Civil
Subcontractor N/A
Date 17/05/05

Balance 126/128
Stanbrook Rd

Done with 126

SUBGRADE INSPECTION

Pre-meeting tasks

Organisation		Action Required	Yes	No	N/A
Contractor	(1)	String subgrade and check design metal depth	☑	☐	☐
	(2)	Check subgrade for soft areas	☑	☐	☐
	(3)	Super-Elevation set out	☐	☐	☑
Consultant	(1)	Arrange for soil tests			
		(a) CBR	☐	☐	☑
		(b) Scala Penetrometer	☑	☐	☐
		(c) B/Beam	☐	☐	☑
		(d) Other and send to Council for approval	☐	☐	☑
	(2)	Confirm metal depth	☑	☐	☐
	(3)	Confirm subgrade improvement procedures proof rolling			
		(a) Area referenced	☑	☐	☐
		(b) Additional depth	☑	☐	☐
		(c) Material used Black sand / extra 65	☑	☐	☐
		(d) Filter cloth used type Terram 1000	☑	☐	☐
		(e) Stabilisation			
		Lime	☐	☐	☑
		KOBM	☐	☐	☑
		Calcicon	☐	☐	☑
	(4)	Pre-string subgrade	☑	☐	☐
	(5)	Observe shape and consistency of subgrade	☑	☐	☐
	(6)	After checking above arrange for inspection with MCC- advise contractor of time	☑	☐	☐
	(7)	Proof Roll	☑	☐	☐
Council	(1)	Confirm design and subgrade improvements	☑	☐	☐
	(2)	Construction depth checked against soil tests	☑	☐	☐
	(3)	Advise Roads	☐	☐	☑

SITE MEETING
In Attendance

Council:
BRS Officer — R Brackebush
Roading Officer — N/A
Contractor — Sharp Civil
Consultant — I. Gibson Airey

		Yes	No	N/A
(1)	Confirm subgrade improvements where required	☑	☐	☐
(2)	String subgrade and confirm surface criteria	☑	☐	☐
(3)	Check under channel drains exposed	☑	☐	☐
(4)	Agreement to proceed with metal			
	(a) Whole	☑	☐	☐
	(b) Part (describe)	☐	☐	☐
	(c) Further inspections required	☐	☐	☐
	(d) Consultant to check any remedial work required	☐	☐	☐

ITEMS TO BE PROVIDED / CORRECTED

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Date

Future Utility Operator Rep

Consultant / Contractor

17/05/05
Date

OBJECTIVE
Check subgrade strength and shape is suitable for design depth of metal

SP No
Developer
Consultant Airey's
Contractor
Subcontractor
Date 5-4-05

Done with 126

SUBGRADE INSPECTION

Pre-meeting tasks

Organisation		Action Required	Yes	No	N/A
Contractor	(1)	String subgrade and check design metal depth	☐	☐	☐
	(2)	Check subgrade for soft areas	☐	☐	☐
	(3)	Super-Elevation set out	☐	☐	☐
Consultant	(1)	Arrange for soil tests			
		(a) CBR	☐	☐	☐
		(b) Scala Penetrometer	☐	☐	☐
		(c) B/Beam	☐	☐	☐
		(d) Other and send to Council for approval	☐	☐	☐
	(2)	Confirm metal depth	☐	☐	☐
	(3)	Confirm subgrade improvement procedures proof rolling			
		(a) Area referenced	☐	☐	☐
		(b) Additional depth	☐	☐	☐
		(c) Material used	☐	☐	☐
		(d) Filter cloth used type	☐	☐	☐
		(e) Stabilisation			
		Lime	☐	☐	☐
		KOBM	☐	☐	☐
		Calcicon	☐	☐	☐
	(4)	Pre-string subgrade	☐	☐	☐
	(5)	Observe shape and consistency of subgrade	☐	☐	☐
	(6)	After checking above arrange for inspection with MCC- advise contractor of time	☐	☐	☐
	(7)	Proof Roll	☐	☐	☐
Council	(1)	Confirm design and subgrade improvements	☑	☐	☐
	(2)	Construction depth checked against soil tests	☑	☐	☐
	(3)	Advise Roads	☐	☐	☑

SITE MEETING

In Attendance

Council:
BRS Officer — Nicky Smith
Roading Officer
Contractor
Consultant — Ian Gibson

		Yes	No	N/A
(1)	Confirm subgrade improvements where required	☑	☐	☐
(2)	String subgrade and confirm surface criteria	☑	☐	☐
(3)	Check under channel drains exposed	☑	☐	☐
(4)	Agreement to proceed with metal			
	(a) Whole	☑	☐	☐
	(b) Part (describe)	☐	☐	☐
	(c) Further inspections required	☐	☐	☐
	(d) Consultant to check any remedial work required	☑	☐	☐

ITEMS TO BE PROVIDED / CORRECTED

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Acceptance Date
(1)	Remove large tree roots at approx ch 20 Road 2. Undercut to remove.	Contractor	Consultant.		6/4/05
(2)	Undercut soft spot HS Road 2 approx Ch 75-90 as identified by proof rolling.	Contractor	Consultant.		6/4/05

Future Utility Operator Rep — Consultant / Contractor — 5/4/05 Date

OBJECTIVE
Final inspection on basecourse
and surface prior to approval
and sealing

SP No	126 & 124 Stencombe
Developer	
Consultant	Airen
Contractor	Chard Civil
Subcontractor	Mathews
Date	9/05/05

Road ① - All
Rd ② Carlos - Drive 0 - 100

BASECOURSE METAL CHECK

Pre-meeting tasks

Organisation		Action Required	Yes	No	N/A
Contractor	(1)	Place and compact metal to design depth	☑	☐	☐
	(2)	Check any visual movement and advise consultant	☐	☐	☑
	(3)	Pre-string check	☑	☐	☐
Consultant	(1)	Confirm sub-base level prior to basecourse being laid	☑	☐	☐
	(2)	Confirm (1) to (3) above	☑	☐	☐
	(3)	Pre-string check	☑	☐	☐
	(4)	Visual check on surface appearance	☑	☐	☐
	(5)	Advise Council of Beam requirements (one free set)	☐	☐	☑
Council	(1)	Arrange Beam tests	☑	☐	☐
	(2)	After receipt of (1) advise consultant of results inspection time	☑	☐	☐
	(3)	Arrange Inspection time	☑	☐	☐
	(4)	Advise Roads	☑	☐	☑

SITE MEETING

In Attendance

Council: _____

Contractor _____

Consultant _____

(1)	String basecourse surface	☑	☐	☐
(2)	Check surface for density and tightness	☑	☐	☐
(3)	Confirm Beam Test compliance	☑	☐	☐
(4)	Agreement on proceed to seal	☑	☐	☐
(5)	Confirm sealing design 25 mm mix 10	☑	☐	☐
(6)	As-built of road construction	☐	☐	☐

ITEMS TO BE PROVIDED / CORRECTED

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Date

Future Utility Operator Rep

Consultant / Contractor

9/05/05
Date

OBJECTIVE
Final inspection of
carriageway pavement surface

SP No 124 & 126 Stencombe.
Developer SHARP
Consultant Airey
Contractor SHARP
Subcontractor MATHENS
Date 9/05/05

PAVEMENT SEALING
Final Inspection

Pre-meeting tasks

Organisation		Action Required	Yes	No	N/A
Contractor	(1)	Arrange sealing date and requirements with subcontractor - advise consultant	☑	☐	☐
Consultant	(1)	Confirm pavement surface			
		(a) Chip Seal	☐	☐	☐
		(b) Asphaltic Concrete / [illegible]	☑	☐	☐
	(2)	Advise brooming time with Council	☑	☐	☐
Council	(1)	BRS liaise with Roading over time	☐	☐	☑

SITE MEETING
In Attendance

Council:
BRS Officer R [illegible]
~~Roads Officer~~
Contractor P Fisher
Consultant I Gibson
Sealing Contractor HER

(1)	Confirm pavement type	☑	☐	☐
(2)	Observe Brooming and check metal surface	☑	☐	☐
(3)	Approval to seal	☑	☐	☐

ITEMS TO BE PROVIDED / CORRECTED

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Date
	Clean sweep all				
	fines from channel	SHARP	Airey	[signature]	13/7/05
	edge / [illegible]				
	remove mud / clay				
	from surface / [illegible]				
	Sealing				
	Compression [illegible]				

[signature] Future Utility Operator Rep

[signature] Consultant / Contractor

9/01/05 Date

COMMENTS

It is important that the consultant and contractor's representatives are on site for the sealing operation so that the following items can be checked during the course of the works

(1) Chip Seal

- (a) Binder type and temperature
- (b) Application rate binder and chip size

(2) Asphaltic concrete

- (a) Emulsion prime coat
- (b) Blinding layer
- (c) Bitumen Prime Coat
- (d) Bitumen Prime Coat and Grade 5 chip

(3) Machinery on site

- (a) Paver
- (b) Steel wheel roller
- (c) Rubber tyred roller

(4) Check during paving operations

- (a) Temperature
- (b) Compacted depth
- (c) Surface appearance

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers Pukekohe Takapuna Howick Orewa	CLIENT:	SHEET No.:
	JOB:	JOB No.:
	CALCS. BY: PHONE:	DATE:

See Section 6
&
Bonded Items List

coadprint.co.nz 32577

Bond List

124 Stancombe Road

Flat Bush

Footpath Northern Side Carlos Drive	condition 9b	$798.00
Topsoil Berms & Batters North Side Carlos Drive	3	$1,064.00
Topsoil Berms & Batters around Front Site	3	$2,719.00
Footpath Front Site	condition 9b	$7,980.00
Streetlights (12 of)	condition 8	$3,200.00
Street Planting	condition 19 20 21, 22	$2,500.00
Reinstatement Clearance 122 Stancombe Rd	and	$500.00
Roading Reseal	condition 3 26	$25,000.00
Subtotal		$43,761.00
GST		$5,470.13
Total		$49,231.13

Bond No 1
$18761.00
Including GST

Bond No 2

Including GST

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers

Pukekohe Takapuna Howick Orewa

CLIENT:	SHEET No.:
JOB:	JOB No.:
CALCS. BY: PHONE:	DATE:

Footpath Nth Carlos.

15m x 1.4 @ $38/m² = $798-00

Topsoil Berms & Batters

(61-5)x(5.2-1.4) x $5 = $1064-00

Topsoil Berms & batters

Front site Carlos & Stancombe

Carlos	53 x (5.2 - 1.4) @	$5.00	= 1007
Carlos Rd	1.8 x 43 @	$5.00	= 387
Stancombe	53 x (6.4 - 1.4) @	5.00	= 1325
			2719.

Footpath Stancombe/Carlos Front site

150x1.4 @ $38 = $ 7980-00.

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COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

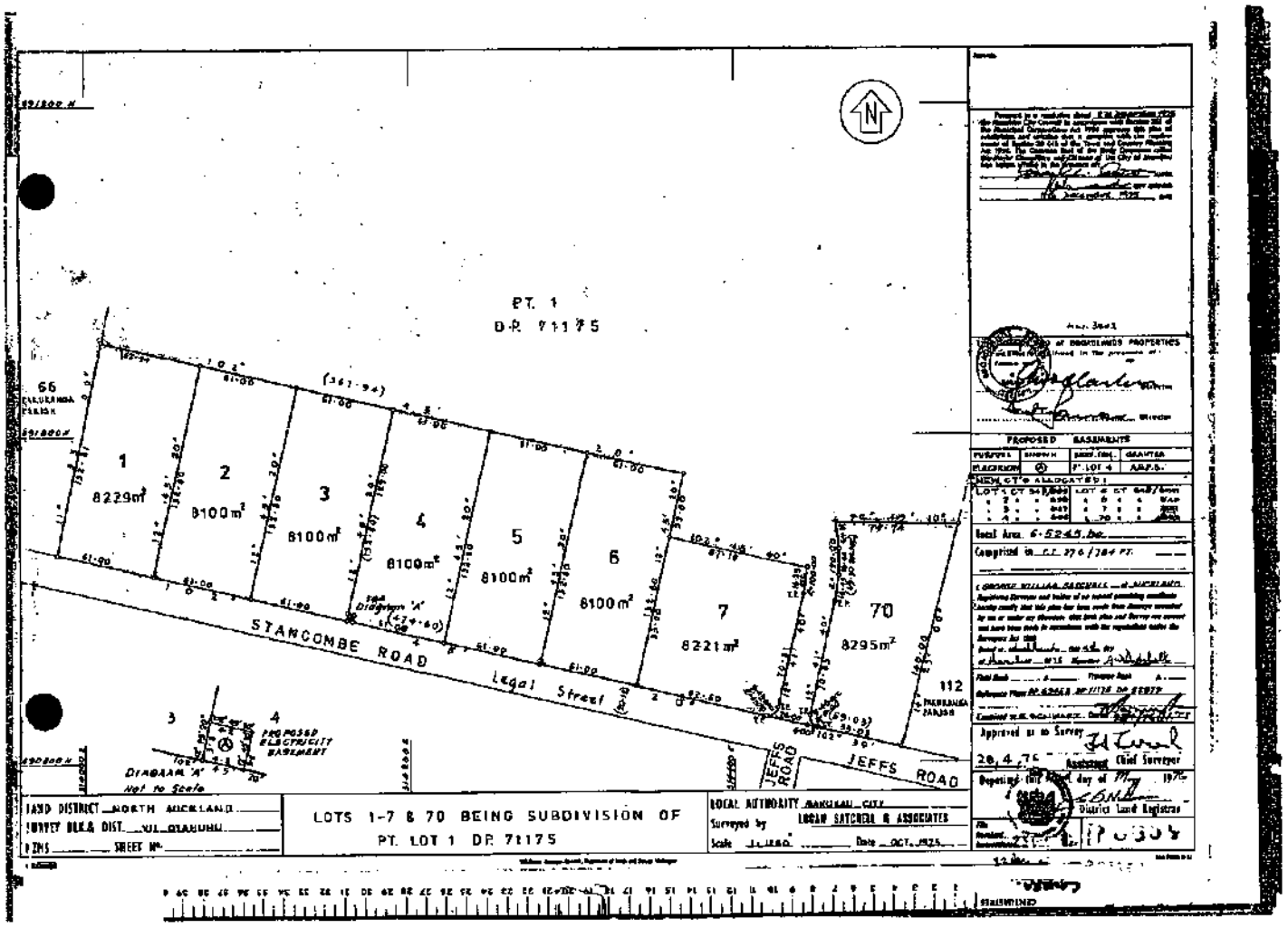
Identifier NA34D/637
Land Registration District North Auckland
Date Issued 14 May 1976

Prior References
NA27C/784

Estate Fee Simple
Area 8100 square metres more or less
Legal Description Lot 3 Deposited Plan 78859
Proprietors
Carlos Concepts Limited

Interests
6242732.3 Mortgage to Marac Finance Limited - 7.12.2004 at 9:00 am
6526012.1 Variation of Mortgage 6242732.3 - 8.8.2005 at 9:00 am

[redacted]


PT. 1
D.P. 71175
66
1
8229m²
2
8100m²
3
8100m²
4
8100m²
5
8100m²
6
8100m²
7
8221m²
70
8295m²
112
STANCOMBE ROAD
Legal Street
JEFFS ROAD
JEFFS ROAD
3
4
PROPOSED ELECTRICITY EASEMENT
DIAGRAM 'A'
Not to Scale
PROPOSED EASEMENTS
Approved as to Survey
Chief Surveyor
District Land Registrar
LAND DISTRICT NORTH AUCKLAND
SURVEY BLK & DIST. VIL OTAHUHU
SHEET No.
LOTS 1-7 & 70 BEING SUBDIVISION OF
PT. LOT 1 DP. 71175
LOCAL AUTHORITY MANUKAU CITY
Surveyed by LOGAN SATCHELL & ASSOCIATES
Scale 1:1250
Date OCT. 1975

AIREY CONSULTANTS LTD.

Consulting Civil and Structural Engineers

Pukekohe Takapuna Howick Orewa

CLIENT:	SHEET No.:
JOB:	JOB No.:
CALS. BY:	DATE:

See attached
Foundation Completion
Report

deedsmini.co.nz 32577

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz

AIREY CONSULTANTS LTD.

Members of ACENZ

22 August 2005

In all correspondence please quote our ref: 9861/5

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

Attn: Ross Brakebush

Dear Ross,

Re: SP8840, P27046 – Carlos Concepts Ltd, 124 Stancombe Road, Flat Bush

We have been engaged to address the engineering Resource Consent conditions of the consent dated 16 December 2004 in support of a 224(c) application and comment as follows.

GENERAL

Condition 1
All invoices received to date have been paid.

Condition 2
The development has been undertaken generally in accordance with the plans submitted and numbered 27046 (SP8840) by Council.

ENGINEERING

Condition 3
All works detailed on Airey Consultants plan E7/27046 (Sheets 1-21) has been completed except items we wish to bond. We enclose engineering documentation confirming completion of the works and a list of proposed bonded items.

Condition 4
Earthworks have been carried out in accordance with appropriate standards and recommendations. Enclosed is a Foundation Completion Report prepared by Geotek Services Ltd.

Conditions 5 & 6
Noted and completed during construction.

ROADING

Condition 7
The new road has been constructed in accordance with the approved engineering plans.

Condition 8
Street lighting is yet to be installed. We wish to bond for this condition.

Condition 9
a) The 3.64 is to be vested.
b) A footpath will be installed. We wish to bond for this item.

Condition 10
Enclosed are completion certificates from Vector & Telecom.

Condition 11
Noted and completed during construction.

Conditions 12 - 16
Payment will be made upon uplift of 224(c) certificate.

Condition 17
Noted.

Condition 18
The septic tank was removed upon excavation of the building site.

Condition 22
We wish to bond for this condition as street, trees will be installed once the landscaping around the new dwelling is undertaken.

Condition 23
Noted.

Condition 24
We enclose an assessment of the cost of relocation of the road as requested. We acknowledge that this assessment should have been submitted earlier. We apologise for this oversight.

Condition 25
We wish to bond for this condition which will be undertaken once the building construction is more advanced.

Conditions 26
Payment will be made upon uplift of 224(c) certificate.

Condition 27
The existing building has been removed.

Condition 28
Noted.

Condition 29
Right of entry was obtained.

We trust that the enclosed documentation will enable you to process the engineering portion of the 224(c) release.

Please contact the writer if you wish to discuss the matter.

Yours faithfully
AIREY CONSULTANTS LTD

I H GIBSON

AIREY CONSULTANTS LTD.

Consulting Civil and Structural Engineers

Pukekohe Takapuna Howick Orewa

CLIENT:		SHEET No.:
JOB:		JOB No.:
CALCS. BY:	PHONE:	DATE:

See Section 6

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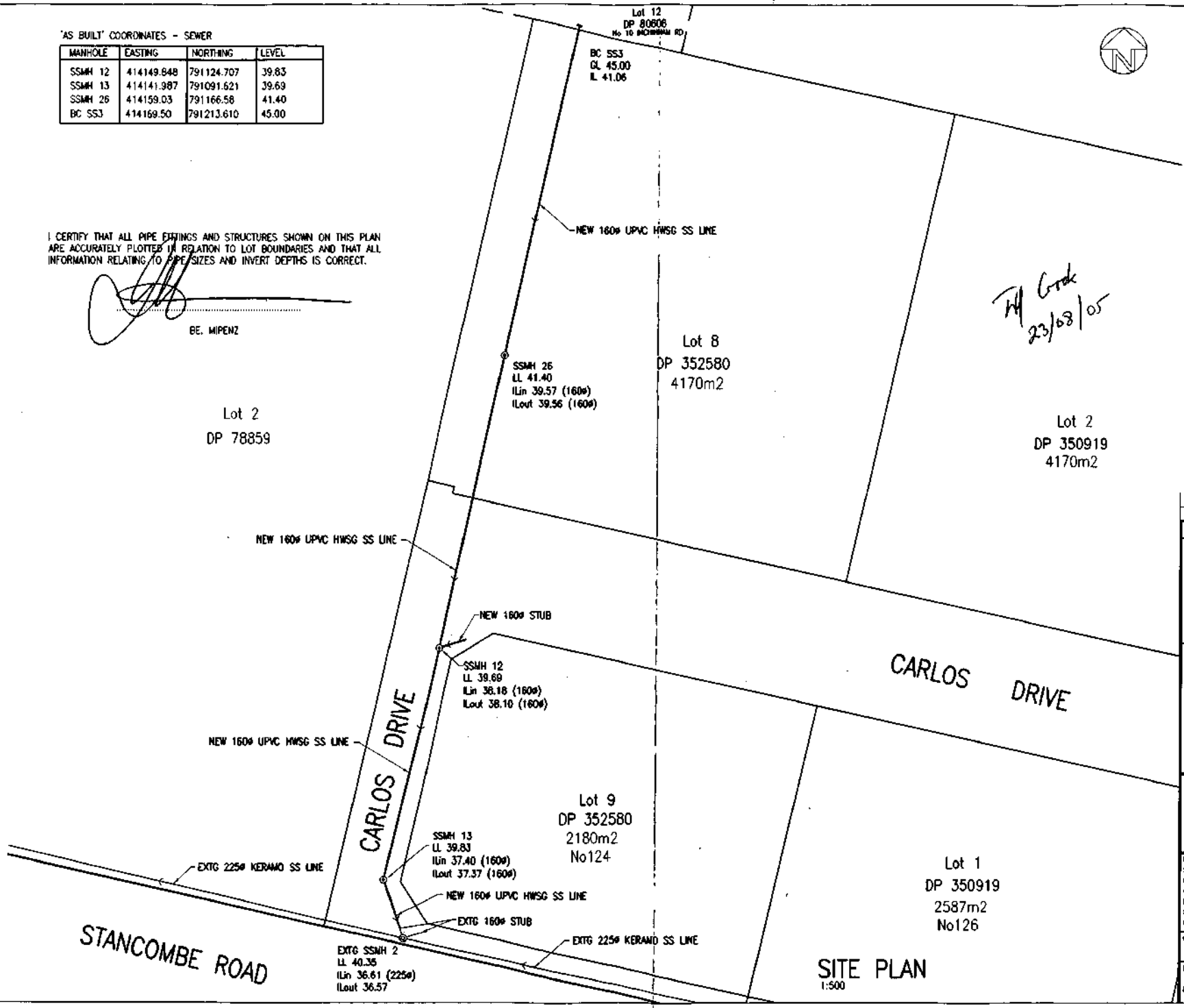
'AS BUILT' COORDINATES - SEWER

MANHOLE	EASTING	NORTHING	LEVEL
SSMH 12	414149.848	791124.707	39.83
SSMH 13	414141.987	791091.621	39.69
SSMH 26	414159.03	791166.58	41.40
BC SS3	414169.50	791213.610	45.00

I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. MIPENZ



SITE PLAN
1:500

F:\Current Jobs L-Z\RAYMOND A9861\AS BUILTS\124 STANCOMBE SS.dwg, 22/08/2005 2:46:42 p

No.	Revision Details	Date

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Drawing Title.
SITE PLAN

Job Title.
'AS BUILT' SS DRAINAGE PLAN
FOR
CARLOS CONCEPTS LTD
AT
124 STANCOMBE ROAD
EAST TAMAKI

AIREY CONSULTANTS LTD.

Design I H GIBSON (pt534 6523)
Survey EASDALE SURVEYORS LTD
Drawn GJ
Checked INC
Date 22/8/05
Scale A3 1:250
CAD Filename RAYMOND

FINAL

Original Size:

File No.	Rev.	Sheet No.
A9861/5	-	1 - 1

REFER TO SHEET 1

Lot 2
DP 78859

Lot 8
DP 352580
4170m2

Lot 2
DP 350919
4170m2

Lot 9
DP 352580
2180m2
No124

Lot 1
DP 350919
2587m2
No126

Lot 5
DP 78859
No128

CARLOS DRIVE

STANCOMBE ROAD

I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. MIPENZ

SWMH 16
LL 39.72
ILin 37.77 (450ø)
ILin 38.22 (225ø)
ILin 38.08
ILout 37.10 (450ø)

NEW 450ø RCRRJ CLASS X SW LINE

SWMH 15
LL 39.56
ILin 35.34
ILout 35.26

NEW 525ø RCRRJ CLASS X SW LINE

EXTG 525ø SW LINE

EXTG OUTLET

SWMH 14
LL 38.49
ILin 36.22
ILout 38.12

NEW 225ø RCRRJ CLASS X CP LEAD

CP 13
LL 39.54

CP 14
LL 39.48

NEW 225ø RCRRJ CLASS X CP LEAD

NEW 225ø STUB

NEW 450ø RCRRJ CLASS X SW LINE

NEW 160ø UPVC HWSG SW LINE

BC SW A

SWMH 17
LL 42.65
ILin 40.08 (450ø)
ILout 39.60 (450ø)

NEW 450ø RCRRJ CLASS X SW LINE

CP 5
LL 42.62

CP 4
LL 42.71

NEW 160ø STUB

NEW 225ø KERAMO SS LINE

BC SS C

SSMH 7
LL 43.62
ILin 41.47 (225ø)
ILout 41.40 (225ø)

NEW 225ø KERAMO SS LINE

SWMH 5
LL 43.09
ILout 41.49

SWMH 4
LL 43.57
ILin 41.38
ILout 41.26

NEW 160ø UPVC HWSG CP LEAD

NEW 300ø RCRRJ CLASS X SW LINE

SS CHAMBER 6(500ø)
LL 43.49
ILout 42.39 (100ø)

SS CHAMBER 5(500ø)
LL 43.73
ILout 42.63 (100ø)

SS CHAMBER 4(500ø)
LL 43.98
Lout 42.94 (100ø)

NEW 100ø CONN TYP.

SSMH 6
LL 43.07
Lout 41.62

SS CHAMBER 3(500ø)
LL 43.25
ILout 42.11 (100ø)

SS CHAMBER 2(500ø)
LL 43.57
ILout 42.60 (100ø)

SS CHAMBER 1(500ø)
LL 43.79
ILout 42.62 (100ø)

NEW 160ø UPVC HWSG CP LEAD

NEW 375ø RCRRJ CLASS X SW LINE

SWMH 3
LL 43.95
ILin 41.05
ILout 39.94

NEW 160ø UPVC HWSG SS LINE

BC SS B

NEW 225ø KERAMO SS LINE

NEW 160ø STUB

SSMH 2
LL 40.35
ILin 36.61 (225ø)
ILout 36.57

NEW 225ø KERAMO SS LINE

NEW 160ø UPVC HWSG SS LINE

NEW 160ø UPVC HWSG CP LEAD

SSMH 5
LL 43.92
ILin 41.42 (160ø)
ILin 39.60 (225ø)
ILout 39.47

SSMH 3
LL 42.03
ILin 37.81
ILout 37.73

NEW 225ø KERAMO SS LINE

SWMH 2
LL 42.97
ILin 39.62 (375ø)
ILout 39.58

NEW 375ø RCRRJ CLASS X SW LINE

NEW 225ø KERAMO SS LINE

NEW 375ø RCRRJ CLASS X SW LINE

SWMH 12
LL 42.53
ILin 39.05
ILout 39.02

NEW 160ø UPVC HWSG CP LEAD

BC SS A

SSMH 4
LL 42.71
ILin 38.98 (225ø)
ILout 38.91

NEW 160ø UPVC HWSG SS LINE

NEW 375ø RCRRJ CLASS X SW LINE

REFER TO SHEET 1

PART SITE PLAN
1:500

F:\Current Jobs L-Z\RAYMOND A9861\AS BUILTS\SW,SS,WATER REV 4-7-05.dwg, 6/07/2005 12:38:04 p.

1	SS & SW BOX ADDED		

Design: H.H.GIBSON-HORNT-SCHOLZ
Survey: EAGDALE SURVEYORS LTD
Drawn: DJ
Checked: EIG
Date: 27.6.05
Scale: AS 1:500
CAD Filename:

FINAL

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Job Title: 'AS BUILT' SW & SS DRAINAGE PLAN

124-132 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

Drawing Title: PART SITE PLAN

File No. A9861/2 | Rev. - | Drg. No. 2-2

'AS BUILT' COORDINATES – STORMWATER

MANHOLE	EASTING	NORTHING	LEVEL
SWMH 1	414306.450	791043.470	42.95
SWMH 2	414250.026	791066.433	42.97
SWMH 3	414254.442	791083.641	43.95
SWMH 4	414232.212	791088.748	43.57
SWMH 5	414203.871	791094.909	43.09
SWMH 12	414279.049	791054.764	42.53
SWMH 14	414127.838	791134.027	38.49
SWMH 15	414139.726	791139.057	39.56
SWMH 16	414150.702	791144.299	39.72
SWMH 17	414205.126	791131.881	42.65
SWMH 18	414218.534	791193.501	42.76
INLET	414216.517	791200.268	41.66
BC SW A	414209.930	791136.260	

'AS BUILT' COORDINATES – SEWER

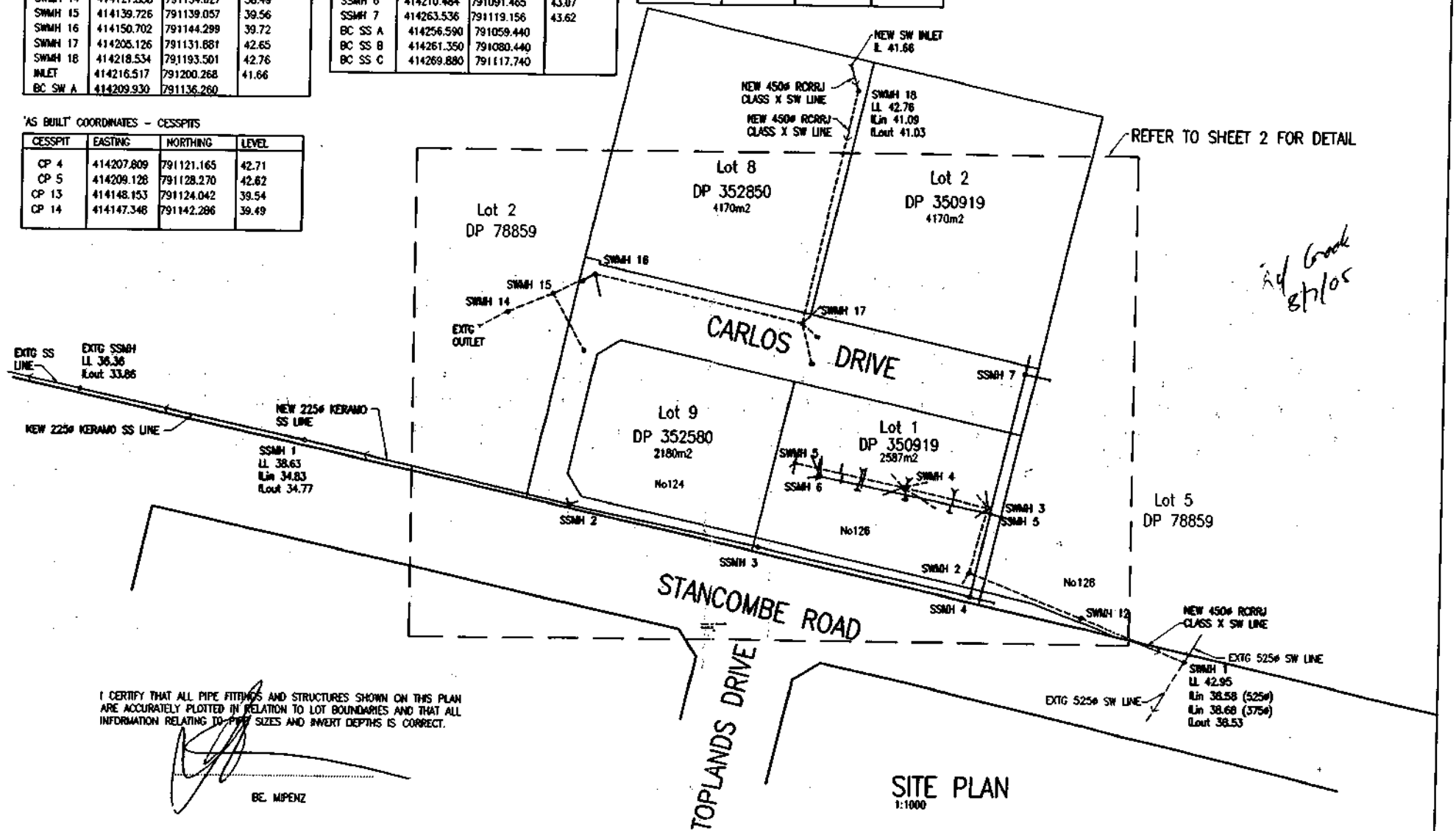
MANHOLE	EASTING	NORTHING	LEVEL
EXTG SSMH	414016.311	791112.731	36.36
SSMH 1	414075.374	791099.546	38.63
SSMH 2	414144.839	791083.271	40.35
SSMH 3	414194.674	791072.492	42.03
SSMH 4	414250.280	791060.068	42.71
SSMH 5	414255.085	791082.193	43.92
SSMH 6	414210.484	791091.465	43.07
SSMH 7	414263.536	791119.156	43.62
BC SS A	414256.590	791059.440	
BC SS B	414261.350	791080.440	
BC SS C	414269.880	791117.740	

'AS BUILT' COORDINATES – 500ø SS CHAMBERS

MANHOLE	EASTING	NORTHING	LEVEL
SS CHAMBER 1	414244.42	791082.58	43.79
SS CHAMBER 2	414232.52	791085.58	43.57
SS CHAMBER 3	414220.21	791088.06	43.28
SS CHAMBER 4	414245.78	791087.69	43.98
SS CHAMBER 5	414233.52	791090.72	43.73
SS CHAMBER 6	414221.47	791093.11	43.49

'AS BUILT' COORDINATES – CESSPITS

CESSPIT	EASTING	NORTHING	LEVEL
CP 4	414207.809	791121.165	42.71
CP 5	414209.128	791128.270	42.62
CP 13	414148.153	791124.042	39.54
CP 14	414147.348	791142.286	39.49



I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. MIPENZ

SITE PLAN
1:1000

Ref Grade 8/7/05

F:\Current Jobs L-Z\RAYMOND A9861\'AS BUILTS'\SW,SS,WATER REV 4-7-05.dwg, 6/07/2005 12:13:04 p.

No.	Revision Details	Date	No.	Revision Details	Date
1	SS & SW BC's ADDED	6/7/05			

Design: I H GIBSON (NORTH ISLAND)
Survey: EASDALE SURVEYORS LTD
Drawn: DJ
Checked: HD
Date: 7/7/05
Scale: A3 1:1000
CAD Filename:

FINAL

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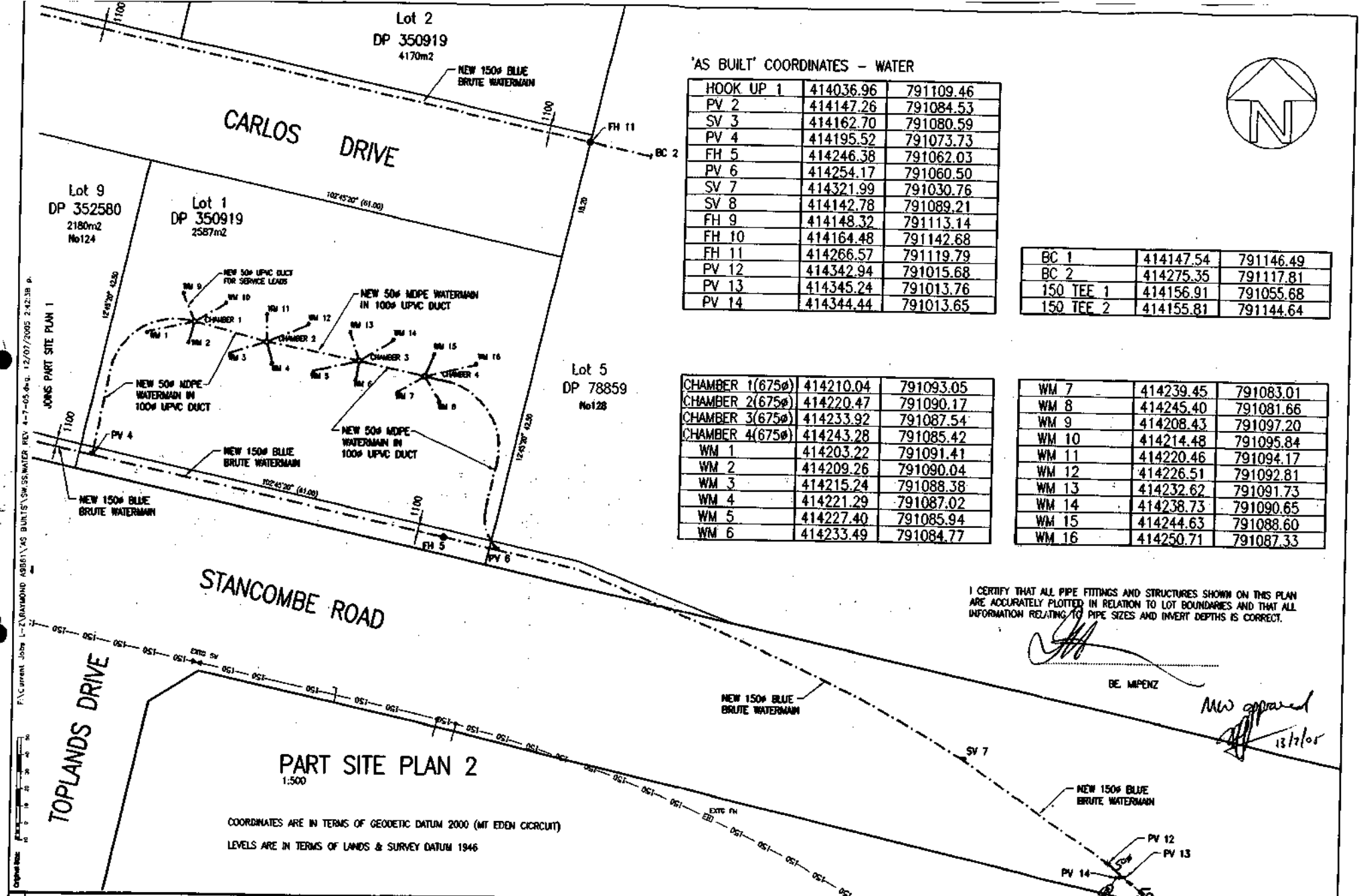
Job Title: 'AS BUILT' SW & SS DRAINAGE PLAN

124-132 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

Drawing Title: SITE PLAN

File No. A9861/2 | Rev. - | Dwg. No. 1-2



PART SITE PLAN 2

1:500

COORDINATES ARE IN TERMS OF GEODETIC DATUM 2000 (MT EDEN CICRCUIT)

LEVELS ARE IN TERMS OF LANDS & SURVEY DATUM 1946

'AS BUILT' COORDINATES – WATER

HOOK UP 1	414036.96	791109.46
PV 2	414147.26	791084.53
SV 3	414162.70	791080.59
PV 4	414195.52	791073.73
FH 5	414246.38	791062.03
PV 6	414254.17	791060.50
SV 7	414321.99	791030.76
SV 8	414142.78	791089.21
FH 9	414148.32	791113.14
FH 10	414164.48	791142.68
FH 11	414266.57	791119.79
PV 12	414342.94	791015.68
PV 13	414345.24	791013.76
PV 14	414344.44	791013.65

BC 1	414147.54	791146.49
BC 2	414275.35	791117.81
150 TEE 1	414156.91	791055.68
150 TEE 2	414155.81	791144.64

CHAMBER 1(675ø)	414210.04	791093.05
CHAMBER 2(675ø)	414220.47	791090.17
CHAMBER 3(675ø)	414233.92	791087.54
CHAMBER 4(675ø)	414243.28	791085.42
WM 1	414203.22	791091.41
WM 2	414209.26	791090.04
WM 3	414215.24	791088.38
WM 4	414221.29	791087.02
WM 5	414227.40	791085.94
WM 6	414233.49	791084.77

WM 7	414239.45	791083.01
WM 8	414245.40	791081.66
WM 9	414208.43	791097.20
WM 10	414214.48	791095.84
WM 11	414220.46	791094.17
WM 12	414226.51	791092.81
WM 13	414232.62	791091.73
WM 14	414238.73	791090.65
WM 15	414244.63	791088.60
WM 16	414250.71	791087.33

I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. MIPENZ

MW approved 13/7/05

No.	Revision Details	Date	No.	Revision Details	Date
2	PV's 13 & 14 DETAILED	12/7/05			
1	PIPE MATERIAL REVISED, PV12 & BC2 ADDED,COORDS REVISED	6/05			

Design: J H OBSCH (NOVOKSH 6523)
Survey: EARDLE SURVEYORS LTD
Drawn: DJ
Checked: HO
Date: 23/6/05
Scale: AS 1:500
CAD Filename:

FINAL

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Job Title: 'AS BUILT' WATERMAIN PLAN

124-132 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD

Drawing Title: PART SITE PLAN 2

File No. A9861/2

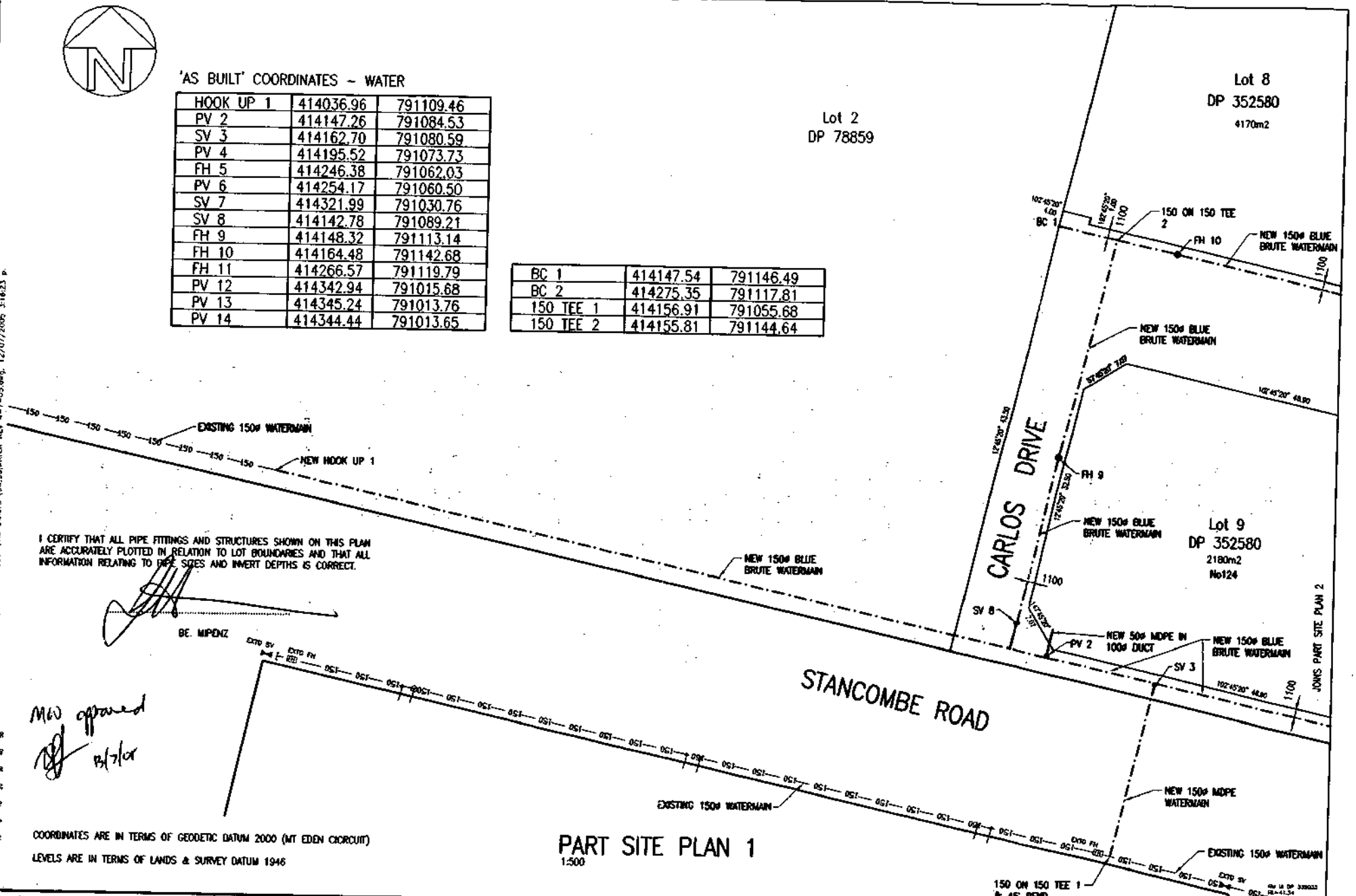
Rev. -

Dwg. No. 2-2

'AS BUILT' COORDINATES – WATER

HOOK UP 1	414036.96	791109.46
PV 2	414147.26	791084.53
SV 3	414162.70	791080.59
PV 4	414195.52	791073.73
FH 5	414246.38	791062.03
PV 6	414254.17	791060.50
SV 7	414321.99	791030.76
SV 8	414142.78	791089.21
FH 9	414148.32	791113.14
FH 10	414164.48	791142.68
FH 11	414266.57	791119.79
PV 12	414342.94	791015.68
PV 13	414345.24	791013.76
PV 14	414344.44	791013.65

BC 1	414147.54	791146.49
BC 2	414275.35	791117.81
150 TEE 1	414156.91	791055.68
150 TEE 2	414155.81	791144.64



I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. MIPENZ

MW approved 13/7/05

COORDINATES ARE IN TERMS OF GEODETIC DATUM 2000 (MT EDEN CICRCUIT)

LEVELS ARE IN TERMS OF LANDS & SURVEY DATUM 1946

PART SITE PLAN 1

1:500

No.	Revision Details	Date
2	PV's 13 & 14 DETAILED	12/7/05
1	PIPE MATERIAL REVISED, PV12 & BC2 ADDED COORDS REVISED	4/05

Design: TH DESCH (HDWD/SD/WSD2)
Survey: EASDALE SURVEYORS LTD
Drawn: DJ
Checked: HG
Date: 22/8/05
Scale: AS 1:500
CAD Filename:

FINAL

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Job Title: 'AS BUILT' WATERMAIN PLAN

124-132 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

Drawing Title: PART SITE PLAN 1

File No. A9861/2 | Rev. - | Dwg. No. 1-2

F:\Current Jobs L-2\RAYMOND A9861\'AS BUILTS'\SW,SS,WATER REV 4-7-05.dwg, 12/07/2005 3:16:23 p.

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz

Members of ACENZ

AIREY CONSULTANTS LTD.

0274 581290

CERTIFICATION UPON COMPLETION OF SUBDIVISIONAL WORK

ISSUED BY:	Ian Harold Gibson
TO:	Carlos Concepts Ltd
TO BE SUPPLIED TO:	Manukau City Council
IN RESPECT OF:	Subdivisional Development
AT:	124 Stancombe Road, Flat Bush

Airey Consultants Ltd has been engaged by Carlos Concepts Ltd to provide construction observation, review and certification services in respect of the above subdivisional work which is described in the specification and shown on the drawings numbered 27046 and approved by Manukau City Council.

I have sighted the Manukau City Council consent and conditions of consent to the subdivisional works and the approved specification and drawings.

As an independent professional I, or personnel under my control, have carried out periodic reviews of the subdivisional work appropriate to the engagement and based upon these reviews and information supplied by the contractor during the course of the subdivisional works **I BELIEVE ON REASONABLE GROUNDS** that the subdivisional works have been completed in accordance with the above consent and sound engineering practice.

Date 23/8/05

I.H.GIBSON
BE (CIVIL) CPENG MIPENZ

Airey Consultants Ltd
PO Box 39 101
HOWICK

Outstanding Works – See bonded items list

126 Stuscombe Rd (As For 126)

Authority Number: 11172

MANUKAU CITY COUNCIL

MANUKAU WATER

Te Kaunihera o MANUKAU City Council

MANUKAU WATER

AUTHORITY TO CONNECT TO MANUKAU CITY COUNCIL LINES

WATER

NOTES:

1. **Connections by Approved Licenced Contractors ("ALCs") Only:**
This Authority to Connect form will be valid only if the Contractor signing it appears on the Council "Register of Approved Licenced Contractors". Only those Contractors whose names appear on this register may make connections to Council sanitary sewer, stormwater or water supply lines *(and the ALC must use Authorised Persons to undertake the actual connection work).* The "Register of Approved Licenced Contractors" and the names of the Authorised Persons, which each ALC may use, is available to the public at Council's offices.

2. **Certification by Council Only:**
The Works described in this form *("the Works")* must be certified by Council.

3. **Binding Agreement:**
Once this form has been duly completed, signed, submitted to Council and then signed by Council, there will be a binding agreement for:

   - The Applicant to pay to the Contractor directly the total amount quoted, for the performance of the works. This amount:
   - Is payable to the Contractor once Council has certified the Works. This amount must not be paid any sooner, and must be withheld by the Applicant, either partially or entirely, if Council requests the Applicant in writing to do so. Such a request will be made only if the Contractor fails to complete or to perform properly the Works.
   - Is in addition to any administration, inspection or certification fee or other amount payable to the Council by the Applicant in relation to the Works.
   - The Applicant to engage Council, and for Council to engage the ALC to perform the Works. The terms of engagement of the Contractor are set out in the "Approved Licenced Contractor Agreement" currently in force between Council and the Contractor.
   - The ALC to perform the Works for the total amount quoted on the basis of the terms of engagement referred to above.

4. **Certification by Council – After Hours Inspection:**
If Council is required to inspect the Works outside normal working hours, Monday to Friday, an after hours fee will be payable by the Applicant, in addition to Council's usual inspection fee.

5. **Water Meter Connections:**
This form should not be used for water meter connections. A separate form for that purpose is available at Council's offices.

6. **Notification:**
The Council connection officer must be notified of the intended commencement of the Works before the Works begin. The ALC must notify the Council Connections Office, telephone 2625752, at least 2 working days in advance for final inspection of the Works. This completed and signed Authority to Connect form must be held on site by the relevant Authorised person at all times while the Works are being performed.

APPLICANT DETAILS

Full Name of Applicant: SHARP CIVIL LIMITED
(if the Applicant is a Company, state its full and correct legal name)

Postal Address: P.O.BOX 82-295, HIGHLAND PARK.

Street Address *(if different)*: 355 EAST TAMAKI ROAD.

Ph No: (09) 273 2992 Fax No: (09) 273 2995 Mobile No: 021 633 534

APPROVED LICENCED CONTRACTOR (ALC) DETAILS

Full Name of ALC Company CALLAGHAN CONTRACTORS LTD
(if the ALC is a company, state its full and correct legal name)

Postal Address: BOX 75299 MANUREWA

Street Address *(if different)*:

Ph No: 2968053 Fax No: 2968038 Mobile No: 0274693

Authorised Person With Overall Responsibility For Works Name: TONY CALLAGHAN

DESCRIPTION OF WORKS

Site at which works to be performed *(insert brief description and attach plan)*:

Street Address: 126 STARCOMBE ROAD, FLAT BUSH.

Legal Description: Lot No: 4 DP No: 78859 CT No:

Description of works *(insert brief description and attach drawings, including Council Land Information Services Plan)*:

Item 1: Connect new 180 MDPE to existing 200 upvc

Item 2: Connect new 150 uPVC to existing 150 upvc

Item 3: Connect new 150mm upvc to exist 63mm MDPE after testing & acceptance

Seen ok. 7/7/05

Including:
- Full reinstatement of private property
- Full reinstatement of Council property
- Notification to Council
- Traffic Control to Transit New Zealand standards
- Notification to OSH, Department of Labour
- Other *(specify)*

QUOTE OF WORKS/PAYMENT DETAILS

Amount of Quote: $ 4000

Plus GST: $ _____

Total: $ 4500

This quote will remain valid until _____ (Date)

AUTHORITY TO ENTER PRIVATE LAND

If the Works are to be performed on land owned by:

- The Applicant, by signing this form, authorises:
  - The Council to go onto the Applicant's land to inspect the Works.
  - The ALC to go onto the Applicant's land to perform the Works.
- To enter land owned by anyone other than the Applicant, the ALC must obtain written consent of the landowner before going onto the owner's land *(and this form is not an authority by the Council for the entry by the ALC or the Applicant onto any such land)*. A copy of the landowner's letter of consent must be submitted with this application.

AGREEMENT

The Applicant, the ALC and the Council agree to be bound by the terms appearing in this form *(including notes to this form)*:

SIGNED by or on behalf of::

Applicant: _____ Date: 30/5/05
(If signing on behalf of a company, show full name and company title of person signing)

Approved Licenced Contractor: _____ Date: 30/5/05
(If signing on behalf of a company, show full name and company title of person signing)

Council: _____ Date: 30/5/05

IMPORTANT NOTE: Neither the Applicant or the Approved Licenced Contractor should sign this "Agreement section unless all preceding sections have been completed in full.

6923/124

MANUKAU WATER CONTACT DETAILS

Manukau Water, Private Bag 76917, Manukau City

7 Springs Road, Level 1 Goodman Fielder House
Attention: Council Connections Officer – Fax: 262 5204

ROADNET Ph; 263-3600
Fax; 263-3601

OSH Ph; 262-5300
Fax; 262-5301

Telephone Numbers
Connections Team

Graham Procter – Team Leader
Ph: 2625750, (025)909544

Gaylene Stodart – General Enquiries
Ph: 2625752 (for notifications to Council, see note 6)

Sonja Coetzee – Customer Services
Ph: 2625751

Royston Jones
Papatoetoe, Manurewa, Mangere
Ph: 2625753, (027)4980820

Tim Crook
Howick, Pakuranga, Otara
Ph: 2625208, (027)4951891

Ken Giffney
Rural, City Wide
Ph: 2625205, (025)2209626

ALC Account Number: 54241159

FOR MANUKAU WATER USE ONLY

Date Received 30/5/05
Ref. To- Ken Giffney
Connection Certified

CONNECTION APPLICATION FEES
GST #: 51-963-660
Administration $ 145-00
Re-Inspection $
Other $
TOTAL $

Receipt Number 18788
Order Number

	Officers Name	Signature	Date
1. Confirmation of Testing and Approval of up-line network			
2. Initial connection Observation/Inspection/ Certification/Rainfall Simulation Test (delete As required)			
3. Connection As-builts and Certificates ~~required~~ by Consultant.			
4. Final approval for connection of works to public line			
5. Copy of this completed form given to Building Control			

128 Stancombe Rd. Authority Number: (As For 120) 11269

MANUKAU CITY COUNCIL

MANUKAU WATER

AUTHORITY TO CONNECT TO MANUKAU CITY COUNCIL LINES

SANITARY SEWER

NOTES:

1. **Connections by Approved Licenced Contractors ("ALCs") Only:**
This Authority to Connect form will be valid only if the Contractor signing it appears on the Council "Register of Approved Licenced Contractors". Only those Contractors whose names appear on this register may make connections to Council sanitary sewer, stormwater or water supply lines *(and the ALC must use Authorised Persons to undertake the actual connection work)*. The "Register of Approved Licenced Contractors" and the names of the Authorised Persons, which each ALC may use, is available to the public at Council's offices.

2. **Certification by Council Only:**
The Works described in this form *("the Works")* must be certified by Council.

3. **Binding Agreement:**
Once this form has been duly completed, signed, submitted to Council and then signed by Council, there will be a binding agreement for:

   - The Applicant to pay to the Contractor directly the total amount quoted, for the performance of the works. This amount:
   - Is payable to the Contractor once Council has certified the Works. This amount must not be paid any sooner, and must be withheld by the Applicant, either partially or entirely, if Council requests the Applicant in writing to do so. Such a request will be made only if the Contractor fails to complete or to perform properly the Works.
   - Is in addition to any administration, inspection or certification fee or other amount payable to the Council by the Applicant in relation to the Works.
   - The Applicant to engage Council, and for Council to engage the ALC to perform the Works. The terms of engagement of the Contractor are set out in the "Approved Licenced Contractor Agreement" currently in force between Council and the Contractor.
   - The ALC to perform the Works for the total amount quoted on the basis of the terms of engagement referred to above.

4. **Certification by Council – After Hours Inspection:**
If Council is required to inspect the Works outside normal working hours, Monday to Friday, an after hours fee will be payable by the Applicant, in addition to Council's usual inspection fee.

5. **Water Meter Connections:**
This form should not be used for water meter connections. A separate form for that purpose is available at Council's offices.

6. **Notification:**
The Council connection officer must be notified of the intended commencement of the Works before the Works begin. The ALC must notify the Council Connections Office, telephone 2625752, at least 2 working days in advance for final inspection of the Works. This completed and signed Authority to Connect form must be held on site by the relevant Authorised person at all times while the Works are being performed.

APPLICANT DETAILS

Full Name of Applicant: Bowker Drainage Ltd
(if the Applicant is a Company, state its full and correct legal name)

Postal Address:

Street Address *(if different)*:

Ph No: 0274 728 157 Fax No: Mobile No:

APPROVED LICENCED CONTRACTOR (ALC) DETAILS

Full Name of ALC Company: Bowker Drainage Ltd.
(if the ALC is a company, state its full and correct legal name)

Postal Address:

Street Address *(if different)*:

Ph No: Fax No: Mobile No: 0274728.. 7

Authorised Person With Overall Responsibility For Works Name: Nigel A

DESCRIPTION OF WORKS

Site at which works to be performed *(insert brief description and attach plan)*:

Street Address: 128 Stancombe Rd Flat bush.

Legal Description: Lot No: DP No: CT No:

Description of works *(insert brief description and attach drawings, including Council Land Information Services Plan)*:

Item 1: New Connection into Existing m/Hole.

Item 2: outside OK.

Item 3: 7/7/05.

Including:

- Full reinstatement of private property
- Full reinstatement of Council property
- Notification to Council
- Traffic Control to Transit New Zealand standards
- Notification to OSH, Department of Labour
- Other *(specify)*

QUOTE OF WORKS/PAYMENT DETAILS

Amount of Quote: $ 500.00

Plus GST: $ _____

Total: $ _____

This quote will remain valid until _____ (Date)

AUTHORITY TO ENTER PRIVATE LAND

If the Works are to be performed on land owned by:

- The Applicant, by signing this form, authorises:
  - The Council to go onto the Applicant's land to inspect the Works.
  - The ALC to go onto the Applicant's land to perform the Works.
- To enter land owned by anyone other than the Applicant, the ALC must obtain written consent of the landowner before going onto the owner's land *(and this form is not an authority by the Council for the entry by the ALC or the Applicant onto any such land)*. A copy of the landowner's letter of consent must be submitted with this application.

AGREEMENT

The Applicant, the ALC and the Council agree to be bound by the terms appearing in this form *(including notes to this form)*:

SIGNED by or on behalf of:

Applicant: _____ Date: 23-05-05
(If signing on behalf of a company, show full name and company title of person signing)

Approved Licenced Contractor: _____ Date: 23-05-05
(If signing on behalf of a company, show full name and company title of person signing)

Council: _____ Date: 30/6/05

IMPORTANT NOTE: Neither the Applicant or the Approved Licenced Contractor should sign this "Agreement section unless all preceding sections have been completed in full.

0423/124

MANUKAU WATER CONTACT DETAILS

Manukau Water, Private Bag 76917, Manukau City

7 Springs Road, Level 1 Goodman Fielder House
Attention: Council Connections Officer – Fax: 262 5204

OPUS Ph: 2632500
Fax: 2632501

OSH Ph: 2625300
Fax: 2625301

Telephone Numbers
Connections Team

Graham Procter – Team Leader
Ph: 2625750, (027)4909544

Gaylene Stodart – General Enquiries
Ph: 2625752 (for notifications to Council, see note 6)

Sonja Coetzee– Customer Services
Ph: 2625751

Royston Jones
Papatoetoe, Manurewa, Mangere
Ph: 2625753, (027)4980820

Tim Crook
Howick, Pakuranga, Otara
Ph: 2625208, (027)4951891

Ken Giffney
Rural, City Wide
Ph: 2625205, (025)2209626

ALC Account Number: 54241159

FOR MANUKAU WATER USE ONLY

Date Received 23/05/05
Ref. To Tim Crook
Connection Certified

CONNECTION APPLICATION FEES
GST #: 51-963-660
Administration $ 145.00
Re-Inspection $
Other $
TOTAL $

Receipt Number
Order Number May 2005

	Officers Name	Signature	Date
1. Confirmation of Testing and Approval of up-line network			
2. Initial connection Observation/Inspection/ Certification/Rainfall Simulation Test (delete As required)			
3. Connection As-builts and Certificates received.			
4. Final approval for connection of works to public line			
5. Copy of this completed form given to Building Control			

all OK
Tim Crook
8/7/05

128 Stancombe Rd (As For 126)

Authority Number: 11154

MANUKAU CITY COUNCIL

MANUKAU WATER

Te Kaunihera o MANUKAU City Council

MANUKAU WATER

AUTHORITY TO CONNECT TO MANUKAU CITY COUNCIL LINES

STORMWATER

NOTES:

1. **Connections by Approved Licenced Contractors ("ALCs") Only:**
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2. **Certification by Council Only:**
The Works described in this form *("the Works")* must be certified by Council.

3. **Binding Agreement:**
Once this form has been duly completed, signed, submitted to Council and then signed by Council, there will be a binding agreement for:

   - The Applicant to pay to the Contractor directly the total amount quoted, for the performance of the works. This amount:
   - Is payable to the Contractor once Council has certified the Works. This amount must not be paid any sooner, and must be withheld by the Applicant, either partially or entirely, if Council requests the Applicant in writing to do so. Such a request will be made only if the Contractor fails to complete or to perform properly the Works.
   - Is in addition to any administration, inspection or certification fee or other amount payable to the Council by the Applicant in relation to the Works.
   - The Applicant to engage Council, and for Council to engage the ALC to perform the Works. The terms of engagement of the Contractor are set out in the "Approved Licenced Contractor Agreement" currently in force between Council and the Contractor.
   - The ALC to perform the Works for the total amount quoted on the basis of the terms of engagement referred to above.

4. **Certification by Council – After Hours Inspection:**
If Council is required to inspect the Works outside normal working hours, Monday to Friday, an after hours fee will be payable by the Applicant, in addition to Council's usual inspection fee.

5. **Water Meter Connections:**
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6. **Notification:**
The Council connection officer must be notified of the intended commencement of the Works before the Works begin. The ALC must notify the Council Connections Office, telephone 2625752, at least 2 working days in advance for final inspection of the Works. This completed and signed Authority to Connect form must be held on site by the relevant Authorised person at all times while the Works are being performed.

APPLICANT DETAILS

Full Name of Applicant: Bowker Drainage Ltd.
(if the Applicant is a Company, state its full and correct legal name)

Postal Address:

Street Address *(if different)*:

Ph No: 0274728157 Fax No: Mobile No:

APPROVED LICENCED CONTRACTOR (ALC) DETAILS

Full Name of ALC Company: Bowker Drainage Ltd.
(if the ALC is a company, state its full and correct legal name)

Postal Address:

Street Address *(if different)*:

No: Fax No: Mobile No: 0274728 7

Authorised Person With Overall Responsibility For Works Name: Nigel A

DESCRIPTION OF WORKS

Site at which works to be performed *(insert brief description and attach plan)*:

Street Address: 126 Stancombe Rd Flat bush.

Legal Description: Lot No: DP No: CT No:

Description of works *(insert brief description and attach drawings, including Council Land Information Services Plan)*:

1: Put m/Hole over existing 525Ø Line.

Item 2:

Item 3:

Including:

- Full reinstatement of private property
- Full reinstatement of Council property
- Notification to Council
- Traffic Control to Transit New Zealand standards
- Notification to OSH, Department of Labour
- Other *(specify)*

QUOTE OF WORKS/PAYMENT DETAILS

Amount of Quote: $ 1500.00

Plus GST: $ _____

Total: $ 1500.00

This quote will remain valid until _____ (Date)

AUTHORITY TO ENTER PRIVATE LAND

If the Works are to be performed on land owned by:

- The Applicant, by signing this form, authorises:
  - The Council to go onto the Applicant's land to inspect the Works.
  - The ALC to go onto the Applicant's land to perform the Works.
- To enter land owned by anyone other than the Applicant, the ALC must obtain written consent of the landowner before going onto the owner's land *(and this form is not an authority by the Council for the entry by the ALC or the Applicant onto any such land)*. A copy of the landowner's letter of consent must be submitted with this application.

AGREEMENT

The Applicant, the ALC and the Council agree to be bound by the terms appearing in this form *(including notes to this form)*:

SIGNED by or on behalf of:

Applicant: _____ Date: 23-05-05
(If signing on behalf of a company, show full name and company title of person signing)

Approved Licenced Contractor: _____ Date: 23-05-05
(If signing on behalf of a company, show full name and company title of person signing)

Council: _____ Date: 23-05-05

IMPORTANT NOTE: Neither the Applicant or the Approved Licenced Contractor should sign this "Agreement section unless all preceding sections have been completed in full.

6723/124

MANUKAU WATER CONTACT DETAILS

Manukau Water, Private Bag 76917, Manukau City

7 Springs Road, Level 1 Goodman Fielder House
Attention: Council Connections Officer – Fax: 262 5204

OPUS Ph: 2632500
Fax: 2632501

OSH Ph: 2625300
Fax: 2625301

Telephone Numbers
Connections Team

Graham Procter – Team Leader
Ph: 2625750, (027)4909544

Gaylene Stodart – General Enquiries
Ph: 2625752 (for notifications to Council, see note 6)

Sonja Coetzee– Customer Services
Ph: 2625751

Royston Jones
Papatoetoe, Manurewa, Mangere
Ph: 2625753, (027)4980820

Tim Crook
Howick, Pakuranga, Otara
Ph: 2625208, (027)4951891

Ken Giffney
Rural, City Wide
Ph: 2625205, (027)2209626

ALC Account Number: 54241159

FOR MANUKAU WATER USE ONLY

Date Received 23/05/05
Ref. To Tim Crook
Connection Certified

CONNECTION APPLICATION FEES
GST #: 51-963-660
Administration $ 145.06
Re-Inspection $
Other $
TOTAL $

Receipt Number
Order Number May 2005

Outside Seen OK Work 28/01/05

	Officers Name	Signature	Date
1. Confirmation of Testing and Approval of up-line network			
2. Initial connection Observation/Inspection/ Certification/Rainfall Simulation Test (delete As required)			
3. Connection As-builts and Certificates received			
4. Final approval for connection of works to public line			
5. Copy of this completed form given to Building Control			

OK 6/7/05

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireys.co.nz
Members of ACENZ

AIREY CONSULTANTS LTD.

CERTIFICATION UPON COMPLETION OF SUBDIVISONAL WORK

ISSUED BY:	Ian Harold Gibson
TO:	Stancombe Concepts Ltd
TO BE SUPPLIED TO:	Manukau City Council
IN RESPECT OF:	Subdivisional Development
AT:	126 Stancombe Road, Flat Bush

Airey Consultants Ltd has been engaged by Stancombe Concepts Ltd to provide construction observation, review and certification services in respect of the above subdivisional work which is described in the specification and shown on the drawings numbered 25182, Sheets 1 – 18 approved by Manukau City Council.

I have sighted the Manukau City Council consent and conditions of consent to the subdivisional works and the approved specification and drawings.

As an independent professional I, or personnel under my control, have carried out periodic reviews of the subdivisional work appropriate to the engagement and based upon these reviews and information supplied by the contractor during the course of the subdivisional works **I BELIEVE ON REASONABLE GROUNDS** that the subdivisional works have been completed in accordance with the above consent and sound engineering practice.

Date 28/6/05

I.H. GIBSON
BE (CIVIL) CPENG MIPENZ

Airey Consultants Ltd
PO Box 39 101
HOWICK

Outstanding Works – See bonded items list

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers

Pukekohe Takapuna Howick Orewa

CLIENT:		SHEET No.:
JOB:		JOB No.:
CALCS. BY:	PHONE:	DATE:

NO LIMITED DRAINAGE

APPENDIX 7 2/

SURFACING DETAILS - SUBDIVISIONS

ASPHALTIC CONCRETE & BITUMEN MACADAM

Membrane Seal

Road Name CARLOS DR.

Chainage Start ROAD1 0 Description Start Carlos/Stancombe Intersection

End ROAD2 ;61 Description End Carlos East End 124 Stancombe

Date 9-5-05 Material GRADE 4 MEMBRANE

Width ..... Aggregate Size GRADE 4

Area Sealed 1137 m² Aggregate Source STEVENSON QUARRY (Company & Quarry)

Binder Type & Grade 180/200

Cutter Type N/A Quantity N/A pph

Spray Temp 175 °C Litres at spray temperature 1.2 L/m²

Residual Appl. Rate 1.0 l/m²

Sealing Notes NO CUTTER

Surfacing

Date 17.5.05 Material TN2 MIX 10

Binder Type & Grade CAT 70 80/100 BITUMEN

Binder Rate 7 %

Aggregate Size 10 mm

Aggregate Source WINSTONE HUNUA QUARRY (Company & Quarry)

Contractor HEB BITUMEN

Mix Temp in Material 150 °C

Surfacing Notes

APPENDIX 7 1

RAMM - **SUBDIVISIONAL ROADS**

- To Be Completed For Each Road

ROAD NO Carlos DR.

SUBDIVISION .....

SP NO .....

Start Reference .....

End Reference .....

Length .....

Width .....

BASECOURSE LAYER (LAYER 1)

Date Completed 6-5-05

Depth 150

Metal Grading Manure GAP 40

Quarry Stevensons Drury Quarry.

Metal Type Basalt/Greywacke

SUB-BASE LAYER (LAYER 2)

Date Completed 14-4-05

Depth 250

Metal Grading GAP 65

Quarry Winstones Hunua Quarry.

Metal Type Basalt/Greywacke

SUBGRADE (LAYER 3)

UNDERCUT

Test Date .....

CBR .....

Type .....

Stabilised Yes/No

Method (Agent) .....

Depth .....

GAP 65

Winstones Hunua Quarry (as per plan)

UNDERCUT (LAYER 4)

Location .....

Length .....

Width .....

Depth .....

Backfill Material .....

PROVISIONAL RESULTS
Subject to validation

Fax: 2432995 - Peter

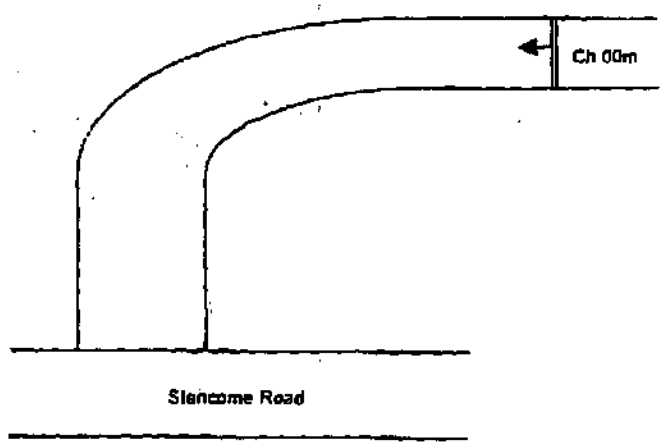
LPS-07F1
Revision 7

BENKELMAN BEAM PAVEMENT DEFLECTION
TEST STANDARD - NRB T1 1977

JOB OR SUB-DIVISION NAME: 124 Stancombe Road
SUB-DIVISION STAGE: -
JOB No. - STREET NAME OR No. -
TYRE PRESSURE 130 psi REPORT 21 5166 00
TYRE SIZE mm: 1000x200 AXLE LOAD: 8.2 tonnes PAGE 1
DATE OF ORDER: 20.06.05

Please note dial gauge has been modified to read directly

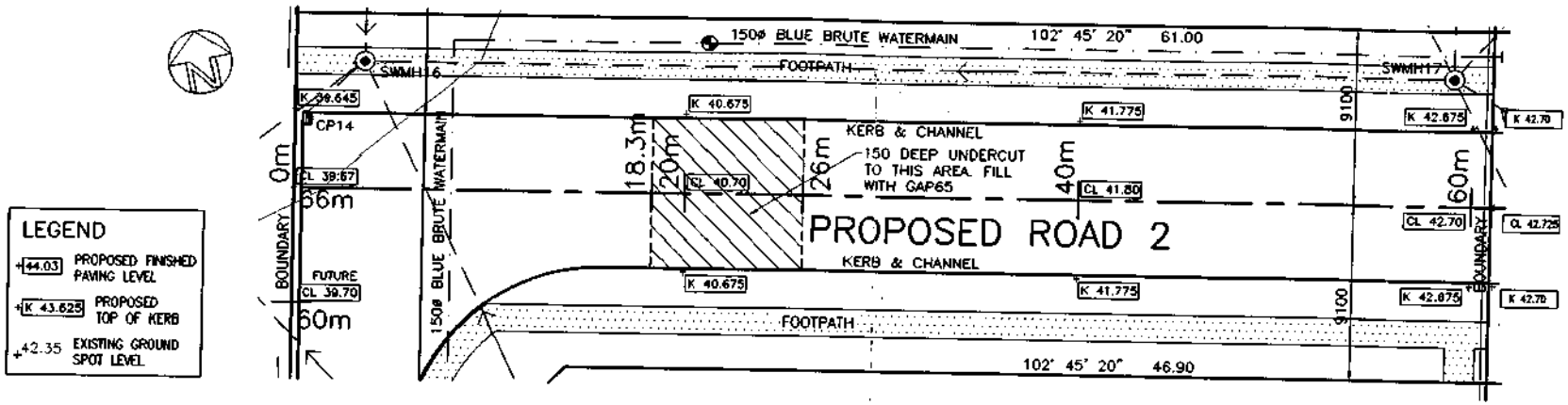
Distance / Chainage (m)	Lane	[All Readings in mm x 10-2] Start S	Inter I	Final F	Rebound Deflection mm	Distance From (m) Centreline	Remarks
20	Left	86	284	288	2.02	0.5	
40	Left	92	246	248	1.56	2.5	
60	Left	88	164	170	0.82	0.5	
80	Left	88	194	194	1.06	2.5	
100	Left	98	152	156	0.60	0.5	
120	Left	70	258	260	1.90	2.5	
140	Left	78	234	236	1.62	0.5	
140	Right	80	276	278	1.98	2.5	
120	Right	88	244	248	1.60	0.5	
100	Right	90	160	162	0.72	2.5	
80	Right	96	192	194	0.98	0.5	
60	Right	96	210	212	1.16	2.5	
40	Right	76	242	246	1.70	0.5	
20	Right	78	226	228	1.50	2.5	



NOT TO SCALE

MEASUREMENT STARTS: Edge of seal
TYPE OF SURFACE: Asphaltic concrete
TEMPERATURE CORRECTION: N/A
START TIME: 8.20am
COMMENTS: Weather - raining

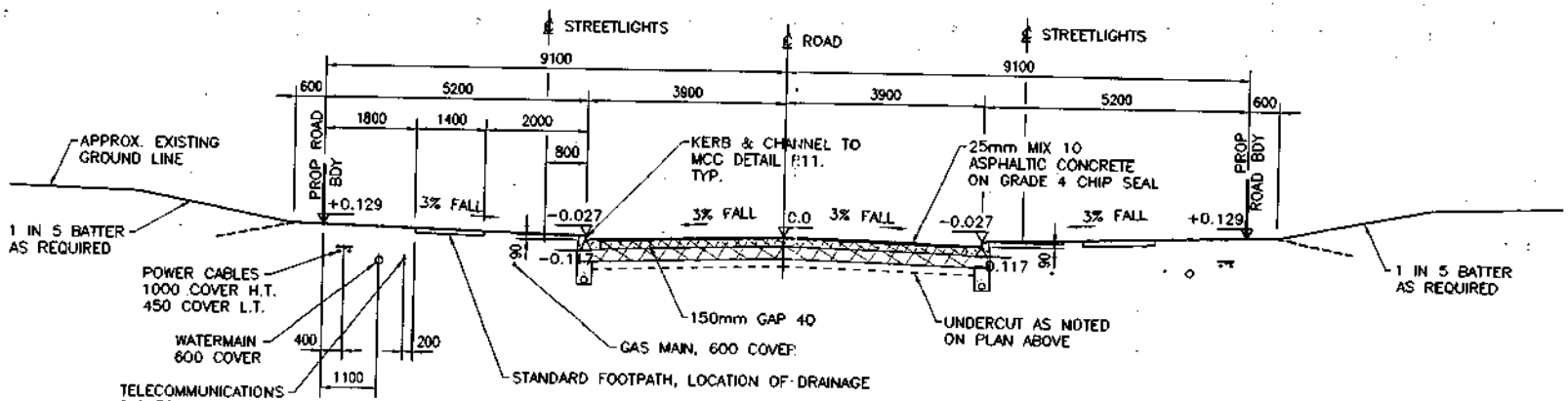
TESTED BY: CA and JM DATE: 21.06.05
CALCULATED BY: JM DATE: 21.06.05
CHECKED BY: DATE:
APPROVED SIGNATORY: DATE:



NOTE: MAXIMUM BENKELMAN BEAM 1.8mm
C.B.R. 3

PART SITE PLAN

1:250



TYPICAL ROAD CROSS SECTION

SCALE 1:100

No.	Revision Details	Date	No.	Revision Details	Date

Design: I H GIBSON (HOWICK 534 6525)
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: EHG
Date: SEPT 04
Scale: A3 1:250
CAD Filename

© Copyright 2004 Airey Consultants Ltd

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 1
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

ROAD AS BUILT

AIREY CONSULTANTS LTD.

Drawing Title:
PROPOSED ROAD PLAN
FINISHED LEVELS
TYPICAL CROSS SECTION

File No. A9861/5 | Rev. - | Dwg. No. 6

F:\Current Jobs L-Z\RAYMOND A9861\124 STANCOMBE RD_A9861-5\STAGE 1\AS BUILTS\124 STANCOMBE RD_CARLOS DR_ A9861-5.dwg 22/08/2005 12:20:47 p

AIREY CONSULTANTS LTD.

Consulting Civil and Structural Engineers

Pukekohe Takapuna Howick Orewa

CLIENT:	SHEET No.:
JOB:	JOB No.:
CALCS. BY: PHONE:	DATE:

No Limited Servicing

deedprint.co.nz 32577

AIREY CONSULTANTS LTD.
Consulting Civil and Structural Engineers
Pukekohe Takapuna Howick Orewa

CLIENT:		SHEET No.:
JOB:		JOB No.:
CALCS. BY:	PHONE:	DATE:

No overland flowpaths
in
this Stage

— Will be within Land Use
for Lot 10

deedprint.co.nz 32577

RIGHT OF ENTRY RELEASE

We enclose the Right of Entry Releases for 120 Stancombe Road. There is some planting to be undertaken within 122 so we propose to bond for the clearance.

The Manager
Manukau Consents
Manukau City Council
Private Bag 76 917
MANUKAU CITY

Attention: Compliance Engineer

RIGHT OF ENTRY RELEASE FOR THE COMPLETION OF REINSTATEMENT WORKS

PROJECT 126 Stancombe Rd

FOR Stancombe Concepts Ltd
(Client/developer)

I/We ..... **being the registered owner/(s)**
of Concepts 120 Ltd, 120 Stancombe Rd

hereby certify that I/we are satisfied with the completion of reinstatement works required following construction of public drainage through our property shown on Airey Consultants Ltd Plan Number 9861/2

(Director) Concepts 120 LTD
(Registered Owners/)

DATED 28/6/2005

Telecom

Telecom New Zealand Limited
Network Delivery
Level 1 Zespri House
9 Hopetoun Street
PO Box 92 028
Auckland

Our Ref: AS103466
Your Ref:

Telephone: 09 357 7038
Facsimile: 09 358 1273

Carlos Concepts Ltd
C/o Airey Consultants Ltd
39 Meadowland Dve
PO Box 39 101
Howick
Attention: Ian Gibson

Date: 18/08/2005

RE: Proposed Subdivision Carlos Concepts Ltd
124 Stancombe Rd, Stage 1
Lots 9, 10 & 1000 DP 352580 being a subdivision of Lot 3 DP 78859

TELEPHONE NETWORK PROVISIONING
SUBDIVISION SIGN OFF

The above subdivision has been reticulated to the standards of Telecom New Zealand Ltd.

It should be noted that this certificate does not cover service lead-ins to individual lots.

Yours faithfully

Graeme Norton
Network Deployment Specialist

Vector
electricity network

Acceptance by VECTOR as ELECTRICITY OPERATOR

Subdivision: 124 Stancombe Road, Flatbush, Auckland

Ref:

Date:- 17/8/05

1. I on behalf of VECTOR confirm that this company will be the Electricity Operator of the electrical reticulation in the existing public roads for the 124 Stancombe Road, Flatbush The reticulation, inclusive of streetlight cables will be installed in accordance, with Council's Requirements and Standards, with VECTOR's Standards, with the Electricity Act 1992 and with the Electricity Regulations 1997.
2. The actual point of connection for a Low Voltage Point of Supply to the private subdivision will be established with a service pit on the road frontage boundary or a transformer on the site, that is suitable to provide a service. You are required to approach VECTOR to discuss your requirement.
3. The reticulation will be installed by Vector to our satisfaction.
4. Connection status to the existing distribution network will be made once a request for a supply has been made and the quotation has been paid to Vector.
5. VECTOR will be the owner operator and maintainer of the reticulation in public vested roads.
6. The Electricity Operator of the distribution system which will provide Line Function Services at the Point of Supply to this subdivision.
7. The Electricity Retailer of the Customers choice will be available to supply energy for the reticulation being connected .

Signed:

Name: Phillipa Fischer

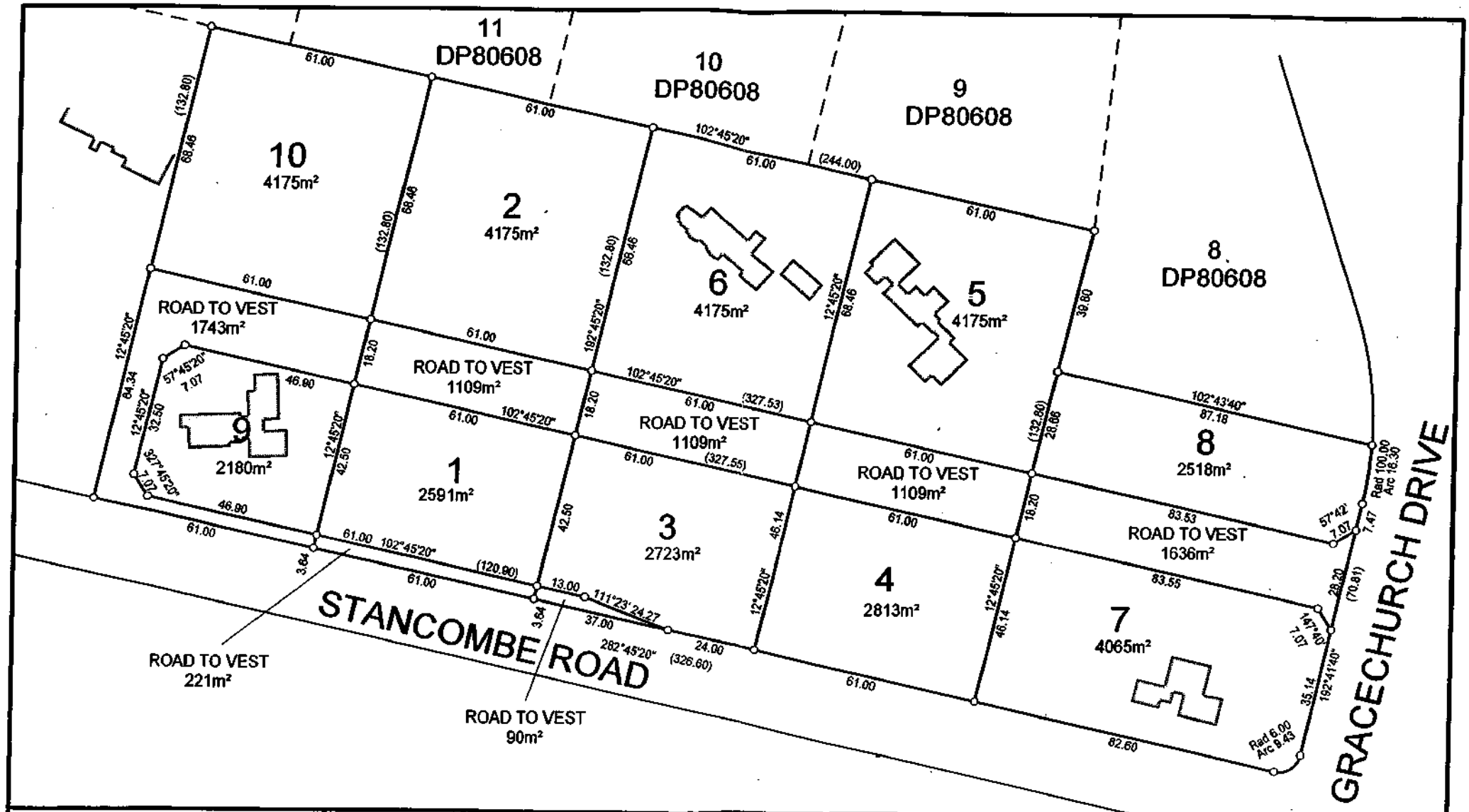
Representative For Vector

Airey Consultants Ltd

PO Box 39 101

Howick

Auckland ATTN: Ian Gibson



Easdale Surveyors Ltd

39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 5375754
e-mail: surveyors@easdales.co.nz

SUBDIVISION BOUNDARIES
124 - 132 STANCOMBE ROAD, FLAT BUSH
(LOTS 3 - 7 DP78859)

FILE	7483a
SCALE	1:1000
DATE	September 2004
SURVEYOR	MSL
REVISION	124 - 132 PLAN (3)

Easdale Surveyors Ltd
REGISTERED LAND SURVEYORS

DIRECTOR:
M.S. LUCAS, B.Surv., M.N.Z.I.S.

39 Meadowland Drive,
Howick, Auckland.
Phone: 0-9-534-8452
Fax: 0-9-537 5754
e-mail: easdales@clear.net.nz

24 August 2005

In all correspondence please quote our ref : 7576

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

RECEIVED
31 AUG 2005
M.C.C.
RESOURCE COMPLIANCE

Attn: B Fergusson

Dear Sir

Re: SP 8840 – 124 Stancombe Road, Flat Bush

The Land Transfer plan of the above subdivision has been allocated plan number DP352580.

The conditions of consent have been met as follows:

Condition:

1. Resource Consent fees paid on 17 December 2004.

2. The development is in accordance with the submitted plans under proposal P27046.

3.-11. See enclosed document folder containing details of compliance with these conditions.

12.-16. The various contributions will be made by Bank Cheque upon advice the 224(c) is available for collection.

17. Noted.

18. Septic tank removed and whole site excavated below this level for building under construction.

19.-22. Trees yet to be planted. Planting included in Bond application.

23. Lot 1000 shown as Road to Vest on Land Transfer plan.

24. Application has been made to Council.

25. Road marking included in Bond calculation.

26. The reserves contribution will be paid by bank cheque upon advice that the certificate is available for collection.

27. House removed.

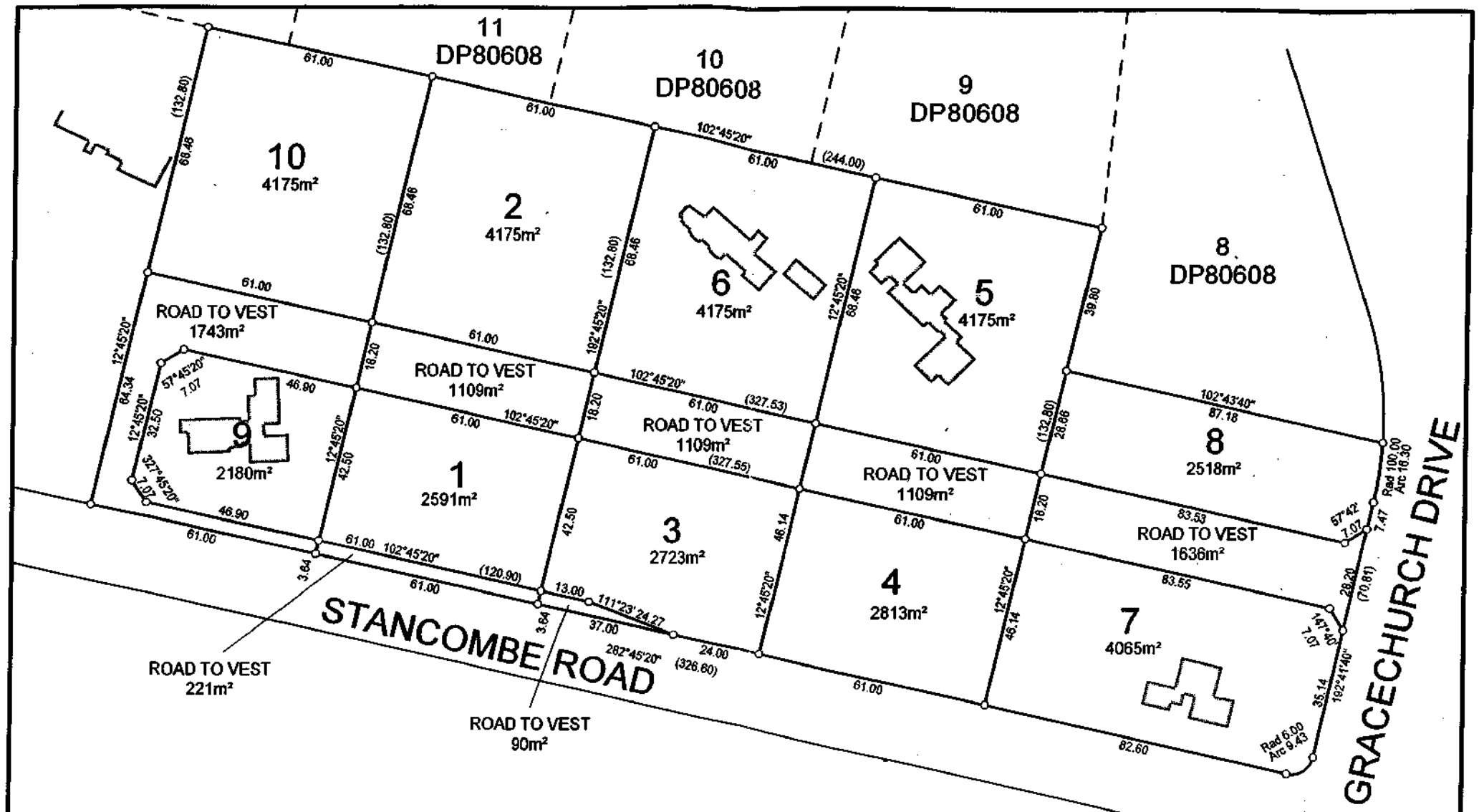
28. We enclose a copy of the survey sheet for your records.

29. Right of Entry obtained prior to installation of new services.

We therefore request the issue of the Section 224(c) certificate.

Yours faithfully
EASDALE SURVEYORS LTD

M S LUCAS



Easdale Surveyors Ltd

39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 5375754
e-mail: surveyors@easdales.co.nz

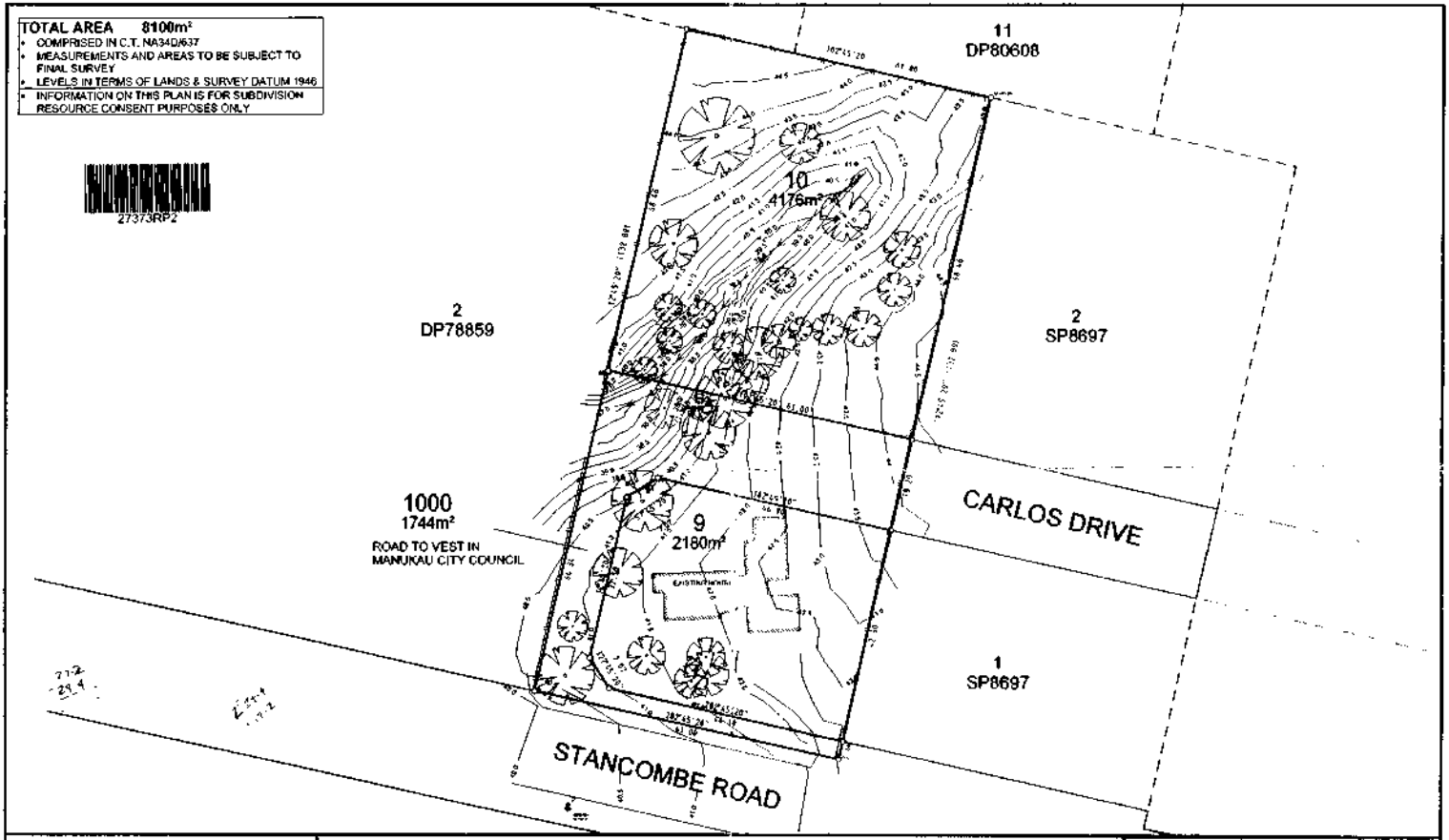
SUBDIVISION BOUNDARIES
124 - 132 STANCOMBE ROAD, FLAT BUSH
(LOTS 3 - 7 DP78859)

FILE	7483a
SCALE	1:1000
DATE	September 2004
SURVEYOR	MSL
REVISION	124 - 132 PLAN (3)

TOTAL AREA 8100m²

- COMPRISED IN C.T. NA34D/637
- MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
- LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946
- INFORMATION ON THIS PLAN IS FOR SUBDIVISION RESOURCE CONSENT PURPOSES ONLY

27373RP2



Easdale Surveyors Ltd
REGISTERED SURVEYORS - LAND DEVELOPMENT CONSULTANTS
39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 537 5754
e-mail: surveyors@easdales.co.nz

PROPOSED SUBDIVISION
124 STANCOMBE ROAD, FLAT BUSH
LOT 3 DP78859

FILE:	7576
SCALE:	1:500
DATE:	September 2004
SURVEYOR	MSL
REVISION	SCHEME 1

GEOTEK SERVICES LIMITED

Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

GEOTECHNICAL INVESTIGATION/ EARTHWORKS COMPLETION REPORT

27373RE

LOT 10

AT

124 STANCOMBE ROAD,
FLAT BUSH

FOR

CARLOS CONCEPTS LIMITED

Ref No. 2704

August 2, 2005

CONTENTS

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Earthworks Specification and Control	9
Conclusions and Recommendations	10
Statement of Professional Opinion as to Suitability of Land for Building Development	13

Appendices

- Pre-Earthworks Borehole Location and Specific Design Zones Plan-GSL Drawing No. 1 of 3
- Pre-Earthworks Borehole Records (18 sheets)
- As Built Final Contours and Isopachs- Airey Consultants Ltd, drawing no. A9861/5, dated 4/7/05
- Earthworks Test Locations and RL's - GSL Drawing No. 2 of 3
- Earthworks Test Results - Summary Sheets
- Diary Notes
- Post-Earthworks topsoil depths and shrink-swell sample location plan- GSL Drawing No.3 of 3
- Shrink Swell Test Results (3 sheets)

Introduction

This report covers both the geotechnical investigation and the earthworks construction monitoring carried out on the above property for Carlos Concepts Limited, in accordance with the appended Airey Consultants Limited 'As-Built' Contour Plan, numbered A9861/5, dated 04 July 2005.

Presented herein, are the results of our observations, geological appraisal, hand auger borehole investigation, including insitu testing, together with general comments, conclusions and recommendations pertaining to the satisfactory development of the land in accordance with accepted quality standards.

This report has been commissioned for the benefit of our client, Carlos Concepts Limited specifically in relation to the project and to the limit of our brief, as described herein. No liability is accepted by this firm or any of its directors, servants or agents, in respect of any other geotechnical aspects of this site, nor for its use by any other person, and any other person who relies upon any information contained herein does so entirely at their own risk, with the exception that the local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent. Where other parties may wish to rely on it, this permission may be extended, subject to our satisfactory review of their interpretation of the report. Moreover, any variations from the development proposals forming the basis of this appraisal should be referred back to us for further evaluation.

Although this report may be submitted to a local authority in connection with an application for a consent, permission, approval, or pursuant to any other requirement of law, this disclaimer shall still apply and require all other parties to use due diligence where necessary, and does not remove the necessity for the normal inspection of site conditions and the design of foundations as would be made under all normal circumstances.

Geology

Reference to the New Zealand Geological Survey, Geological Map Of New Zealand, 1:50000, sheet R11, indicates that the subject site is typical of a significant part of the Auckland Metropolitan area, in that it contains strata of the Puketoka Formation, which are a part of the Tauranga Group sedimentary lithology (Late Pliocene to Late Pleistocene age). Unconformably underlying these are weathered materials derived from strata of the East Coast Bays Formation (also known as Waitemata Formation), which are a part of the Waitemata Group sedimentary lithology (Miocene Epoch).

According to Searle, "City of Volcanoes", in those earlier times, the seas encroached upon the central Auckland area, and thick beds of sedimentary rocks were laid down in alternating sandstone, siltstone and mudstone sequences according to the prevailing eddies and currents at the time and place.

Over the centuries following the retreat of the seas, the normally dark-grey bedrock has weathered in most locations, to produce an overburden made up of clays, silts and sands, being predominantly orange brown in colour at the ground surface, and generally becoming more grey and more coarse grained with increasing depth and less transition from the bedrock. Interspersed within these weathering products, it is not unusual to find bands of hard dark-brown iron oxide (limonitic) concentrations.

Fluctuating sea levels which occurred throughout the Pleistocene period, eventually flooded valleys to form the Waitemata and Manukau Harbours, and it is likely that during these fluctuations, the upper Residual Waitemata Group Soils were partially eroded away, and these, together with pumiceous deposits from the Taupo district, began to fill the subsiding lowlands of Manukau Harbour and Hauraki Gulf. As a result, the lowlands were covered by swamps, volcanic derived alluvium, and coastal deposits (Tauranga Group).

These sediments were deposited in predominantly fluvial and lacustrine settings, but some older deposits were formed in estuarine and shallow conditions. As a result, they can often contain layers and/or lenses of quite peaty materials within the predominantly silty and clayey, but sometimes organic alluvium.

Previous Reports

A Desktop Study was prepared in July 2003 by Geotek Services Limited (GSL) reference number 2532, dated 30 June 2004, as a first pass appraisal of the suitability of the overall general area including the subject land, for residential development generally in terms of NZS 3604 type buildings. The study comprised a review of local geology and inspection of other geotechnical investigation reports conducted on nearby sites.

The conclusions and recommendations of that report were as follows:

> *"On the basis of our observations, research and local knowledge as described herein, we are of the opinion that the subject site is generally suitable for the proposed development, however the following discussion should be noted.*
>
> *The relatively flat topography of the site with respect to the adjacent land, coupled with the two small gullies requiring filling, suggests that to completely fill these gullies with locally cut materials would produce a shallowly south-southwest-sloping subdivision.*

However, given that soft horizons may be present at depths of several metres or more in possible areas of cut, and that it is preferable to maximise the depth of suitable materials over these deposits, a cut/fill budget deficit may occur if designing to completely fill all gullies.

It is our recommendation that an extensive field investigation be carried out prior to finalising any proposed project designs, and the commencement of development works. The aim of this investigation would be to establish a more detailed assessment of the nature of the materials present, and the extent of possible unsuitables across the site, allowing a more accurate quantification of locally available filling.

All subsequent earthworks should be subject to the appropriate standards and tests as specified by the Manukau City Council, under the control of a Chartered Professional Engineer experienced in geotechnical engineering practices, with a Geotechnical Completion Report being prepared at the completion of those works.

Subject to as-built contours, acceptable test results and existing/final ground conditions, we expect the completed development to be suitable for the construction of NZS 3604 type buildings.

This opinion does not, however, remove the necessity for the inspection of site conditions and design of foundations that should be made under all normal circumstances.

The Professional Opinion expressed within this report is furnished to the Stancombe Concepts Limited for their purposes alone, on the express condition that it will not be relied upon by any other person, with the exception that the Local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent."

The site subject to this report was originally part of a large 8100m^2 property (DP78859), identified as number 124 (Lot 3), along the northern side of Stancombe Road in Flat Bush. The site has since been subdivided into two, (Lots 9 and 10) by a proposed through road, Carlos Drive, separating them into northern and southern lots. The southern, lot 9 was the subject of a recent Geotechnical Investigation Report undertaken by GSL (dated 17 November 2004, ref 2635) for a proposed multi-storey dwelling, which report identified some weak underlying natural materials that would be exposed by the proposed basement level of the development. With this in mind, we have tried to target such potentially problematic materials in our investigation, as discussed below.

Site Description Ante-Earthworks

Prior to the recent earthworks, the subject site's main topographical feature was a relatively deep and steep sided gully trending from the northeast to the southwest, around 100 metres in length. The gully head in the northeast corner of the site, was a shallow bowl-like depression, which steepened to the southwest with its invert around 3 metres below the crest of its flanks. The gully broadened out near the southwestern corner and crossed into the adjacent property. The gully flows were channelled below the neighbour's driveway through a small culvert before again continuing southwest as open channel flows. The ground either side of the gully, to the northwest and southeast, was gently sloping towards the invert. The earthworks proposal was to fill the gully and create a near level site.

Site Classification

Seasonal moisture variations and associated swelling and shrinking of the soil mass is a characteristic of the type of surface clay soils believed to exist in the area under consideration and hence, such movement could occur. Even well constructed houses on clay soils are likely to show minor cracking of plaster walls and ceilings, and in masonry. In extreme cases, distortion of building frames may cause doors and windows to jam, but, these effects usually only occur after a long dry summer, and commonly under the extra drying influences of nearby trees. Without considerable expenditure on the part of the individual responsible for building or financing any particular residential construction, it is generally not possible to entirely eliminate such troubles. In the past, the code for residential dwellings, NZS3604, has attempted to make provision for any such influences to be minimised by requiring a minimum foundation depth of 450 millimetres below final cleared ground level, although some shrinking and swelling of the soil under seasonal influences would probably continue to occur and may affect such residential construction.

The current issue of NZS3604:1999, recognises that while expansive clay soils can damage buildings on light strip footings or unstiffened rafts, that not all clays are expansive to the degree which will cause damage to buildings. Although 3604 also nominates liquid limit and linear shrinkage testing as a means of detecting the presence of reactive (expansive) clays, it acknowledges that reactive clays cannot be clearly evaluated by these engineering index properties on their own, which we surmise, may be due to the effects of certain types of clay minerals which may contain high quantities of adsorbed water. Therefore, NZS3604 nominates the Australian code, AS2870:1996, as a guide, whereby section 2 can be adopted for classifying the soils into class A, S, M, H or E, following which, the standard details of section 3, or the engineering principles according to section 4, can be used for foundation design.

The relevant sections of AS2870 are discussed in the Appendix hereto, and in light of the various options available, the basis for our site classification is provided later in this report.

Site Investigation

Our site investigation fieldwork involved the drilling of twelve, 50 millimetre diameter hand auger boreholes to depths of up to 5.2 metres, at the positions indicated on the attached site plan.

The purpose of the fieldwork has been twofold. Firstly, boreholes were drilled along the stripped invert of the gully to check the nature and consistency of the natural soils before filling could take place and to determine if any further undercutting might be needed. Secondly, boreholes have been drilled at the crest of the gully flanks and the adjacent level ground to check the nature and consistency of the natural soils.

As each borehole progressed, careful inspections were made of the materials observed, and soil shear strength and remould tests were performed insitu, at selected depths, using a hand-held shear vane. The materials identified are described in detail on the appended records, together with the results of the various tests undertaken, plus the groundwater conditions as determined during our time on site.

In addition, two cross sections were measured across the flanks and invert of the gully using a tape and electronic level.

Findings

Boreholes along the gully invert

Boreholes 1, 2, 3 and 4 were drilled along the gully invert. Borehole 1 was drilled outside of the property boundary to the southwest. Apart from a soft surficial crust, predominantly stiff sandy silts were encountered throughout the borehole. Boreholes 2 and 3 were drilled in the southwestern corner and near the centre respectively, and both encountered highly variable deposits consisting of clays, silts and sands with intermixed peat and organics. The material strengths were mostly marginally firm with some layers being softer or firmer. Borehole 4 encountered soft materials down to 1.5 metres depth, overlying very stiff uniform silts.

The groundwater was measured at depths of between 0.4 to 1.1 metres below the surface in all four boreholes.

Boreholes above and along the flanks of the gully - cut areas

Boreholes 5, 6, 11, 12 and 13 were drilled on the northwestern side of the gully, while boreholes 7, 8, 9 and 10 were located to the southeast. Generally, a firm to stiff crust was encountered extending to at least 1.2 metres depth below the surface in all boreholes. Below this crust, the materials became weaker and wetter with some layers becoming soft to marginally firm (22 to 50 kPa undrained shear strength). In all except boreholes 9 and 10, dense sandy materials were encountered near the end of the boreholes. The tables below summarise these findings of cut area boreholes:

Boreholes on the northwestern side of the gully:

Borehole No.	5	6	11	12	13
Ground RL	43.0	42.0	44.0	45.0	44.0
Firm to Stiff Crust	0.0 to 2.5m	0.0 to 2.5m	0.0 to 3.0m	0.0 to 2.9m	0.0 to 1.6m
Interbedded Soft Layer	2.5 to 3.3m	-	-	2.9 to 3.9m	1.6 to 2.3m
Dense Basement Layer	3.7m+	3.1m+	3.0m+	3.9m+	2.7m+

Boreholes on the southeastern side of the gully:

Borehole No.	7	8	9	10
Ground RL	43.5	41.5	44.0	43.5
Firm to Stiff Crust	0.0 to 1.6m	0.0 to 1.6m	0.0 to 1.5m	0.0 to 2.0m
Interbedded Soft Layer	1.6 to 3.3m	1.6 to 3.6m	1.5 to 5.0m	2.9 to 2.9m
Dense Basement Layer	3.3m+	3.6m+	-	-

Earthworks Operations

General earthworks construction over the site was carried out in accordance with part 2 of NZS4404:2004, "Code of Practice for Urban Land Subdivision" and its companion document, NZS4431:1989, "Code of Practice for Earth Fill for Residential Development."

Topsoil and unsuitables were stripped and initially stockpiled for later removal from the site. Where further unsuitable and/or weak materials were identified in the gully invert and along its flanks, they were undercut until suitable materials were exposed or, where their depth below the proposed finished fill was deemed to be greater than 3 metres, so as to be beyond the influence depth of shallow foundations, they were left in place.

Once the gully and its flanks had been cleaned as directed, a pad of hardfill consisting of run-of-pit rock, was placed along its invert up to a level that was slightly higher than its lowest outlet level, where a manhole had been placed adjacent to the existing culvert beneath the neighbour's driveway. Once this pad had been tamped down, a 160mm dia. perforated novacoil was laid along the invert and covered with SAP 50 scoria. Where seepages were encountered, they were tapped in a similar fashion and the area covered with scoria blanket.

The earthfill was then progressively placed and compacted under engineering monitoring, to the design subgrade levels, using material cut from the gully flanks and neighbouring site to the east.

Earthworks Specification and Control

General earthworks procedures and compaction testing were carried out in accordance with NZS4404:2004, part 2 and NZS4431:1989, where appropriate.

In order to provide the most flexibility for variations in soil types, the earthworks compaction criteria used for control were the maximum allowable air voids/minimum allowable shear strength figures, as follows:-

Air Voids and Shear Vane (for cohesive soils only)

	Air Voids Percentage (as defined in NZS 4402:1986)		Undrained Shear Strength (Measured insitu by IANZ calibrated vane)	
	Maximum Average Value %	Maximum Single Value %	Minimum Average Value kPa	Minimum Single Value kPa
General Fill	10	12	140	110
Within 500 mm of carriageway subgrade	8	10	150	120

Note: The average value was to be determined over any ten consecutive tests.

During the filling operations, Civil Lab Limited staff carried out Nuclear Densometer Testing of Field Dry Density to NZS 4407:1991; Test 4.2.1, and Field Water Content in accordance with NZS 4402:1986; Test 2.1, together with Vane Shear Strength Tests using a method based on NZGS2001.

Some tests failed to meet the required criteria, in which case the fill was reworked and retested until satisfactory results were obtained.

The final test results are summarised in the appendices, together with a copy of the cut/fill as-built plan, showing test locations, and the inspection diary notes.

Conclusions and Recommendations

On the basis of our borehole investigation, inspections, observations, earthworks monitoring, laboratory and insitu testing as described herein, it is our Professional Opinion, that the subject site, lot 10, 124 Stancombe Road, Flatbush, is generally suitable in terms of section 106 of the Resource Management Act, and Section 2.B.4.8 of the Manukau City Council's Engineering Quality Standards, for the development of conventional residential dwellings, constructed in accordance with the relevant portions of NZS3604:1999, subject to the following overall general recommendations, and provided that building in any of the identified zones on the appended plan (whether "non-specific design", "specific design", or "not for construction") should be subject to the specific requirements of that zone as given below:

A) General Requirements:

(a) There were stockpiles of topsoil and other unsuitable materials still lying near the northern boundary of the site, at the time of preparation of this report. We anticipate that these will be moved before or during building development.

(b) As discussed in the foregoing section on site classification, there are a number of ways of classifying the site soils. In this instance, we have adopted the AS2870 third method, using laboratory tests for soil reactivity and a knowledge of the soil profile. On this basis, foundation soils on this site are considered unlikely to lie outside the definition of 'good ground' as given in NZS3604:1999. We consider that they would lie in Site Class S (slightly expansive) as defined in AS2870:1996, with expected characteristic surface ground movements in the order of 0 to 20 mm, which movement is still within the allowable bounds of 'good ground'. However, this movement is closer to the upper limit of Class S range, therefore, as a precaution, care should be taken to mitigate against the potential seasonal shrinkage and swelling effects of expansive foundation soils on both superstructures and concrete slab-on-grade floors, as follows.

For the design of all foundations, these should extend to a minimum depth of 0.3 metres below the final cleared ground level.

Because of the importance of this issue, especially with regard to controlling potential for cracking in concrete slabs, we consider that when constructing slabs, and especially after the removal of a desiccated surface crust, the exposed subgrade should be covered with 100mm of basecourse as soon as possible, to avoid allowing underlying damp soils to dry out and shrink if they are likely to regain some of their moisture and swell again following pouring of the concrete. If this cannot be avoided and shrinkage cracks occur in the subgrade to the cumulative width of 15mm per metre distance, then prior to the placement of the under-slab hardfill, the subgrade should be hosed down to allow the cracks to close to at least that degree.

Future owners should also be aware of the detrimental effects that large trees can have by way of inducing differential consolidation settlements beneath foundations, through localised soil water deprivation. Accordingly, care should be taken to avoid having large trees positioned where their roots could migrate beneath the building foundations.

(c) All foundations located within the 45 degree envelope of influence rising from the invert of service trenches, should be extended to below that envelope, to avoid surcharging pipes and/or poorly compacted trench backfill.

(d) In accordance with the limitations imposed by NZS3604:1999, fills greater than 0.6 metres that have not been reviewed and approved herein, should not be undertaken on this site without the further review and express approval in writing of the Manukau City Council and that of a Chartered Professional Engineer experienced in geomechanics and familiar with the contents of this report, since such works may, in certain circumstances, disturb existing equilibrium conditions. In a like fashion, cuts should be restricted to no more than 0.6 metres.

(e) All stormwater runoff from roofs and paved areas, plus any water tank overflows, should be collected in sealed pipes and be disposed of into Council's reticulation system. Likewise, overland flows should be directed away from the building footprint.

Under no circumstances should concentrated flows from any source discharge into or onto the ground in an uncontrolled fashion.

(f) All excavations, including those for bulk earthworks, shallow foundations and any piles, should be inspected by a Geotechnical Engineer during construction to check

that the conditions encountered are consistent with those revealed by our isolated boreholes and to provide any additional advice that might be needed. In the event of unacceptable inconsistencies, we should then be in a position to provide appropriate recommendations in support of an application to Council to modify the Building Consent, or to issue an appropriate Producer Statement - Construction Review.

It is in all parties' interests that we be engaged to inspect all such excavations prior to the installation of any foundation materials to maintain continuity of knowledge. Where we are required to carry out inspections during construction and to provide certification or supply a Producer Statement Construction Review, we request that:

(i) Prior to commencement of the building work the Owner or Developer ensures that we are supplied with a copy of both Resource and/or Building Consent Conditions (as appropriate) which request our involvement during construction.

(ii) The Owner or Developer provides us with the appropriate siteworks plans at least 48 hours prior to our inspections, so that we can confirm that all works relevant to our engagement are carried out.

(iii) The Owner, Builder or Contractor makes arrangements for us to visit the site no less than 24 hours before inspections are required. In order for us to provide Producer Statements, where these are required, it is the owner's responsibility to ensure that we are advised when inspections are due.

It should be noted that inspections during construction and associated certification will result in additional costs to the client over and above those associated with the preparation of this report.

B) Non-specific Design Zone:

This area is considered to be generally suitable for any development works carried out in accordance with NZS3604:1999, subject to the general recommendations given above, and is defined as any area on site that is outside the Specific Design Zone. Any building proposals outside NZS3604 might require specific site investigation.

C) Specific Design Zones:

Specific design zones have been designated primarily on the basis of two criteria, viz those areas not containing at least 2 metres depth of engineered fill or stiff natural crust over known soft ground, and those with slopes steeper than 1V:4H or near vertical and greater than 0.6m high, which might present concerns with regard to slope stability. These areas are listed below:

(a) Steep cut batters in the northwestern area. These batters are up to 1.5m high and have gradients of up to 1V:2H. While these slopes are considered stable while undeveloped, any foundations on, or within a horizontal distance of 4m above the crest of the slope, should be designed to allow for lateral creep extending to a depth of 1.0m, and acting over a width of 3 pile diameters, unless the land is adequately retained by suitably designed and constructed retaining walls.

(b) Steep fill batter in the southwestern corner, is up to 1.5m high and is considered unstable in its present form, therefore this batter should be adequately supported at the time of any building development closer than 4 metres from the crest.

(c) Areas of stormwater inlet in the northeastern corner of the site were still to be tidied up at the time of preparation of this report. Any foundations in the vicinity should be specifically designed to mitigate the effects of remaining depressions, steep batters and trench backfills.

(d) The southeastern corner of the site has underlying soft deposits as identified in our boreholes 7 and 9. These are expected to have been rendered closer to the surface by removal of up to around 1.5m depth of cut during the earthworks. Therefore we recommend that for all shallow strip and pad foundations on proposed lots 3 and 4, the foundation depths should be limited to no deeper than 0.45m below the as-built levels, and the ultimate bearing pressures should be limited to no greater than 200 kPa, to which figure should be applied an appropriate factor of safety, such as 2.0 for Factored Load Design and 3.0 for Working Strength Design.

For any foundation loads which cannot be accommodated in the above constraints, we recommend the use of specifically designed piles.

Statement of Professional Opinion as to Suitability of Land for Building Development

Owner/Developer: Carlos Concepts Limited.

Location: Lot 10, 124 Stancombe Road, Flat Bush

Development: Residential Development.

I, S.J. Woodward of Geotek Services Limited, P.O. Box 39-015, Howick, hereby confirm that:

1. I am a Chartered Professional Engineer experienced in the field of geotechnical engineering and was retained by the Owner/Developer as the Geotechnical Engineer on the above development.

2. The extent of our desktop study is described in our Report number 2532, dated 30 June, 2004, and the conclusions and recommendations of that document have been re-evaluated in the preparation of this report. The results of our initial borehole investigation and all tests carried our during the works are also enclosed.

3. In my professional opinion, not to be construed as a guarantee, I consider that:

   (a) The earth fills placed where shown on the attached Airey Consultants plan, numbered A9861/5 dated 4 July, 2005, have been generally placed in compliance with NZS4431:1989.

   (b) The completed works give due regard to land slope and foundation stability considerations, subject to the provisions of the "Conclusions and Recommendations" section above, with regards to the steep batters left in the specific design zone.

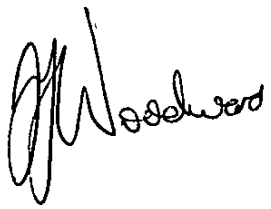
   (c) The areas of filled ground as shown on the attached plan are suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and related documents subject to the provisions of the "Conclusions and Recommendations" section above.

   (d) The original ground not affected by filling is suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and

related documents, subject to the provisions of the "Conclusions and Recommendations" section above.

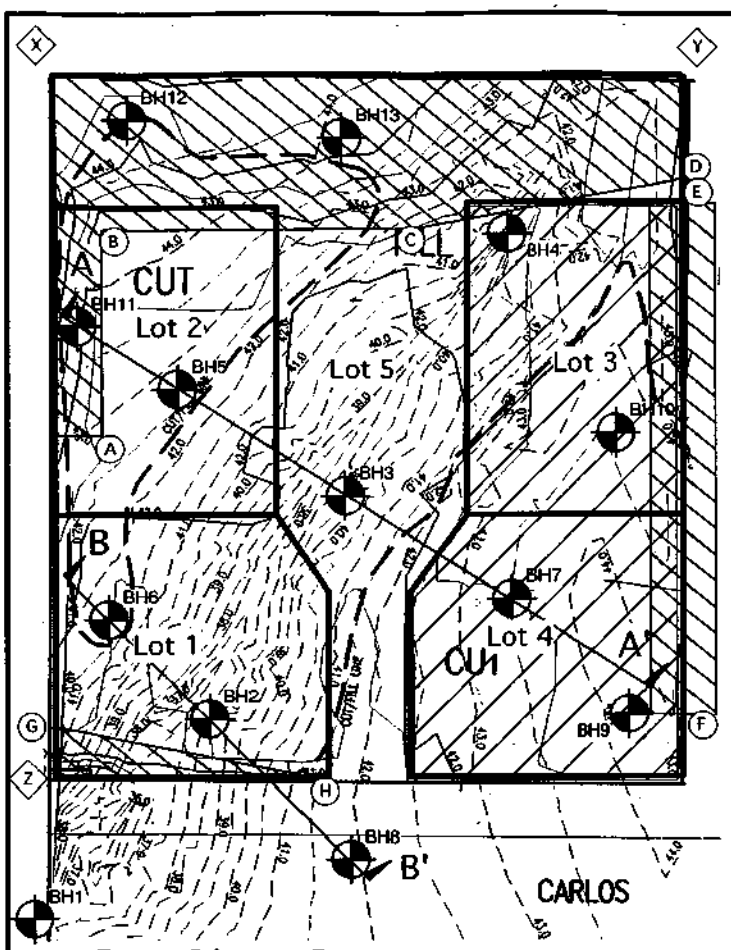
4. This Professional Opinion is furnished to the local Territorial Authority and the current owner/developer, for their purposes alone, on the express condition that it will not be relied upon by any other person, and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any structure.

GEOTEK SERVICES LIMITED.



S.J. Woodward,
M.E., MIPENZ(Geotechnical), CPEng, IntPE.

Report prepared by
Bevan Marr
B.A. (Geography)



Site Plan- Contours

KEY

BH1 — Hand augured borehole

Cross section

Specific Design Zone -Slopes steeper than 1V4:H.

Specific Design Zone -Soft Subsoils.

Specific Design Zone Triangulation. (m)

	A	B	C	D	E	F	G	H
X	35	16	38	62.5	63	87.5	63.5	73.5
Y	67	58	31	10	12.5	62.5	88	77
Z	34.5	54.5	65	85	83.5	61.5	5.0	25

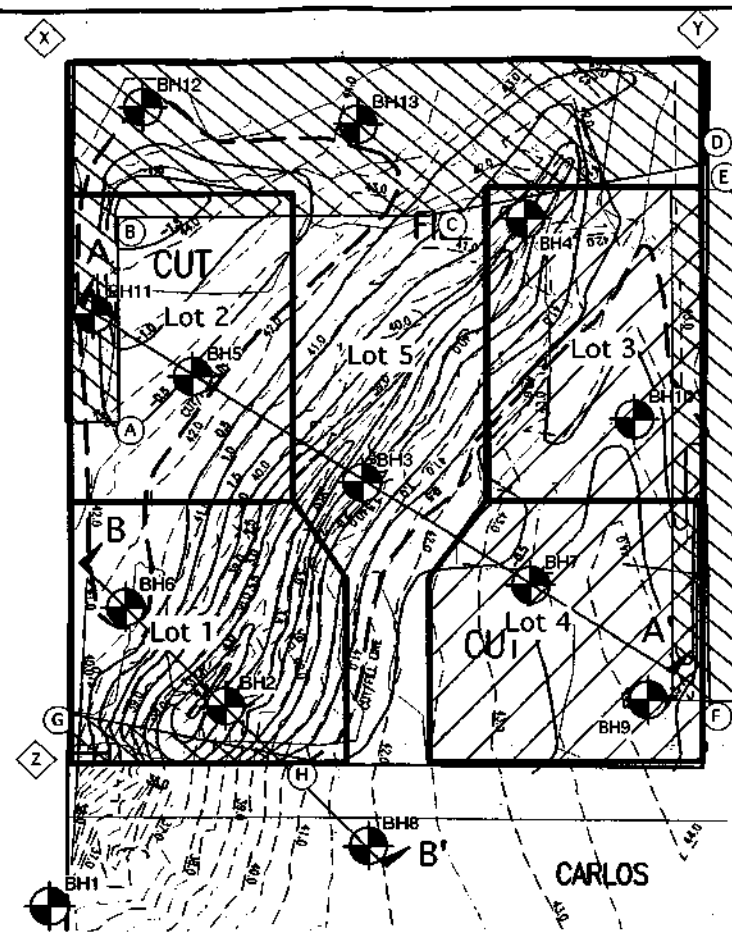
LEGEND

41.0 EXISTING CONTOURS

41.0 'AS BUILT' CONTOURS

1.5 ISOPACH

EXTENT OF CUT/FILL



Site Plan- Isopachs

Pre-Earthworks Borehole Locations, Proposed Subdivisional Scheme Plan and Specific Design Zone.

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

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37 Ellion Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	1 OF 3

CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 1 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 1
	WEIGHT	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
NATURAL: Soft, slightly plastic, dark grey with occasional black specks slightly clayey SILT: very moist, frequent rootlets							
-becoming stiff	0.5		92	31	3.0		
Stiff, non plastic, light grey with orange specks, silty SAND, trace clay: wet		18/01/04	49	15	3.3		
Firm, non plastic, grey, slightly clayey, slightly sandy SILT	1.0	▽					
-becoming stiff			108	32	3.4		
-becoming slightly plastic, greenish grey, slightly clayey, sandy SILT: saturated, fibrous wood and carbonaceous inclusions	1.5		138+				
-@ 1.5: becoming very stiff, bluish green, root inclusions			138+				
-becoming sandy SILT	2.0						
-becoming stiff			120	40	3.0		
	2.5		138++		UTP		
-becoming very stiff, non plastic greenish grey, very sandy SILT: saturated							Very poor sample recovery
	3.0		100	68			
End of Borehole @ 3.1 metres. Groundwater encountered @ 1.4 metres depth during drilling. Standing groundwater @ 1.1 metres depth upon completion.	3.5						
	4.0						

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Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 2 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 2
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 37.22

Stratigraphy	Soil description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Firm, non-plastic, dark grey with orange brown and light grey streaks, sandy SILT: wet.		46	12	3.8		
	-becoming soft, dark blackish grey, some carbonaceous material. -becoming grey, saturated @ 0.4m. -becoming light greyish brown.	0.5	28	7	4.0		
	Loose, non-plastic, light greyish brown, silty SAND: saturated.		25	7	3.6		
	-becoming coarse. -becoming very dense, white, pumiceous, silty SAND.	1.0	138++		UTP		
	Soft, non-plastic, black, amorphous, PEAT: saturated.	1.5	44	19	2.3		Poor material recovery.
	Firm, non-plastic, dark blackish brown, organic stained, SILT: saturated. -becoming medium brown, SILT. -some clay. -minor woody organic material	2.0	54	28	1.9		
		2.5	50	20	2.5		
	-becoming slightly plastic, greyish black, organic stained, clayey SILT: abundant fibrous and woody organic material		42	18	2.3		
		3.0					
	End of Borehole @ 3.2 metres. Groundwater encountered @ 0.4 metres depth during drilling. Standing groundwater @ 0.9 metres depth upon completion.		38	16	2.4		
		3.5					
		4.0					

Water Level: 18/1/05

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 3 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.3
	WEIGHT	DATE	PROBE No.

Stratigraphy	SOIL DESCRIPTION (Topsoil / Fill; Clay / Silt; Sand / Gravel; Peat / Rock)	Legend	GL(m) 39.25 / Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Soft, non plastic to very slightly plastic, grey with orange veins, slightly sandy SILT, trace clay: slightly wet								
	-becoming saturated				46	14	3.3		
	-becoming firm		0.5	18/01/04					
					108	58	1.9		
	-becoming stiff, slightly plastic, purple brown with bright orange mottles occasionally, slightly clayey, slightly sandy SILT		1.0						
	Soft to firm, moderately plastic, purplish grey with occasional orange mottles, very slightly sandy, very slightly silty CLAY: saturated, occasional fibrous organic inclusions of decaying vegetation				40	28	1.4		
			1.5		60	38	1.6		
	-becoming firm								
			2.0		52	34	1.5		
	-becoming light brownish, CLAY, trace sand, no organic inclusions								
	-becoming purple grey				40	22	1.8		
	-becoming soft to firm		2.5						
					70	40	1.8		
	-becoming firm, fibrous organic inclusions								
			3.0		54	26			
	End of Borehole @ 3.1 metres. Groundwater encountered @ .4 metres depth during drilling. Standing groundwater @ .9 metres depth upon completion.								
			3.5						
			4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 4 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 4
	WEIGHT 30 kg	DATE	PROBE No.

GL(m) 39.62

Stratigraphy	SOIL DESCRIPTION (Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock)	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Firm, non-plastic, streaked bluish grey, yellowish brown, SILT: moist.			18/1/05					
	-becoming soft.								
	-becoming wet.								
	-becoming firm, light grey with orange brown streaks, slightly sandy SILT: wet.		0.5		30	9	3.3		
	-becoming saturated.								
					56	23	2.4		
	-some clay.		1.0						
	-becoming moderately plastic, streaked light grey, orange brown, clayey SILT: trace sand.				40	24	1.7		
			1.5						
	Very stiff, non-plastic, light grey with yellowish brown and orange brown streaks, SILT: some sand.				138+				
	-becoming bluish grey, slightly sandy SILT.		2.0		138+				
	-lens of dark green, sandy SILT.								
	-becoming greenish grey, SILT: trace clay.								
			2.5		138+				
					138+				
	End of Borehole @ 3.0 metres.		3.0						
	Groundwater encountered @ 0.7 metres depth during drilling.								
	Standing groundwater @ 0.4 metres depth upon completion.		3.5						
			4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 5 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.5
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 42.75

Depth (m)	Soil description	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Comments Samples Other Tests
	NATURAL: TOPSOIL				
	Stiff, non plastic, brown, SILT: dry, friable				
	Stiff, slightly plastic, tan brown with orange and grey specks, slightly clayey SILT: very slightly moist	130	64	2.0	Approx SGL
0.5	-becoming siff, slightly plastic, grey with orange brown streaks, clayey SILT, trace sand: very slightly moist	106	70	1.5	
1.0	-becoming stiff, slightly plastic, grey with occasional orange brown streaks, very clayey SILT, trace sand: slightly moist	118	72	1.6	
1.5	-becoming slightly clayey SILT, trace sand Non plastic, brown and grey mottles, very slightly clayey SILT, trace sand, slightly moist	58	46	1.3	
	-becoming moderately plastic, grey, moist, slightly sandy				
2.0	-becoming bright orange brown streaks in greyish brown, very clayey SILT, trace sand: moist	50	26	1.9	
	Firm, moderately plastic, greyish brown, silty CLAY: moist				
2.5	Firm, slightly plastic, creamy grey, slightly sandy, slightly clayey SILT: moist	56	44		
	Firm, moderately plastic, slightly purple brown, slightly silty CLAY: moist	48	38	1.3	
3.0		38	28	1.4	
3.5	Slightly plastic, firm, dark blackish brown, organic SILT: very wet, no organic odour, rootlet inclusions (18/01/05)	64	35	1.8	
	-becoming brownish black, saturated				
	Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated	138++		UTP	Poor sample recovery
4.0	Continued on next page.				

Tauranga Group Materials

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 6 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 5
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Legend	GL(m) 42.75 Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated			138++		UTP		Very difficult to penetrate
Unable to penetrate with hand auger End of Borehole @ 4.3 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.	4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 7 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Legend | GL(m) ~~42.33~~ 41.81 | Depth (m) | Water Level | Shear Vane Dial (kPa) DR4828 | Residual Strength (kPa) | Sensitivity | Probe Blows | Comments Samples Other Tests

Tauranga Group Materials

NATURAL: Very stiff, non-plastic, light brown, SILT: friable, dry.

-becoming yellowish brown.

-becoming light grey with orange brown and yellowish brown streaks.

-becoming slightly to moderately plastic, clayey SILT: trace sand, moist.

-becoming non-plastic, slightly purplish grey with orange brown and yellowish brown streaks, slightly clayey SILT.

-becoming very dense, SILT: friable.

-becoming non-plastic to slightly plastic, grey with orange brown and yellow brown streaks, trace clay.

Stiff, highly plastic, streaked grey, purplish grey, orange brown, silty CLAY: moist.

-becoming firm, purplish brown.

Very dense, non-plastic, streaked brown, yellowish brown, light grey, pumiceous, slightly silty SAND: moist.

-becoming whitish grey, very fine SAND: trace silt

Continued on next page.

Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity
0.5	138+		
1.0	138+		
	138+		
1.5	138++		UTP
2.0	102	60	1.7
2.5	66	36	1.8
	62	36	1.7
3.0	138++		UTP
3.5	138++		UTP
4.0			

Approx SGL

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 8 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 42.33

Stratigraphy	Soil description	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very dense, non-plastic, whitish grey, very fine, SAND: trace silt, moist.			18/1/05	138++		UTP		
	-becoming moderately silty SAND.								
	-becoming wet @ 4.2m.		4.5		138++		UTP		
	End of Borehole @ 4.6 metres, unable to penetrate further. Groundwater not encountered during drilling. Standing groundwater @ 4.1 metres upon completion.		5.0						
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 9 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.7
Flat Bush	WEIGHT	DATE	PROBE No.

GL(m) 43.57

Stratigraphy	SOIL DESCRIPTION	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, non plastic, tan brown, very slightly clayey SILT: dry -becoming tan brown with grey and orange brown streaks, slightly clayey SILT -becoming grey with occasional orange brown streaks	0.5	115	64	1.8		
	-developing trace sand, slightly moist		88	70	1.3		Approx SGL
	Stiff, slightly plastic, grey with orange brown streaks, slightly sandy, very clayey SILT: slightly moist	1.0	116	72	1.6		
	Stiff, slightly plastic, purplish grey with occasional orange brown streaks, sandy, clayey SILT: slightly moist	1.5	73	46	1.6		
	-becoming firm, slightly plastic to moderately plastic, creamy white, very slightly clayey SILT, trace sand -becoming soft	2.0	36	18	2.0		
	Non plastic, soft, slightly pink white, SILT: wet -becoming slightly yellow white	2.5	25	18			
	-becoming very wet	3.0	28	20	1.4		
	Very stiff, non plastic, greyish white, fine silty SAND: very wet	3.5	138+ 138++		UTP		
	Continued on next page.	4.0	138++		UTP		

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 10 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 7
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL.(m) 43.57

Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Non plastic, very stiff, greyish white, silty SAND: very wet	19/01/04	60	36	1.7		
-becoming firm						
4.5 -becoming very stiff, saturated		138++		UTP		
		138++		UTP		
Unable to penetrate with hand auger End of Borehole @ 4.7 metres. Groundwater encountered @ 4.7 metres depth during drilling. Standing groundwater @ 4.4 metres depth upon completion.						
5.0						
5.5						
6.0						
6.5						
7.0						
7.5						
8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 11 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 8
	WEIGHT 30 kg	DATE	PROBE No.

GL(m) 41.8

Stratigraphy	SOIL DESCRIPTION	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, slightly plastic, brown with orange brown and greyish brown streaks, slightly clayey SILT: damp.								cut to road SGL
	-becoming moderately to highly plastic, streaked light grey, orange brown, very clayey SILT: trace sand.		0.5		112	70	1.6		
	-becoming whitish grey with some light brown streaks.				98	62	1.6		
	-becoming firm, yellowish white with some light orange and yellow streaks.		1.0		60	28	2.1		
	Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, wet.		1.5		50	20	2.5		Poor material recovery.
			2.0		32	16	2.0		
			2.5		26	16	1.6		
					28	18	1.6		
			3.0	18/1/05	28	18	1.6		
			3.5						
	Very dense, non-plastic, light grey, pumiceous, fine, silty SAND: wet.				138++		UTP		
	End of Borehole @ 4.1 metres. Unable to penetrate further. Standing groundwater @ 3.4 metres depth upon completion.		4.0		138++		UTP		

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 12 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No.9
	WEIGHT	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Stiff, slightly plastic, grey, brown and orange brown streaked, clayey SILT, trace sand: slightly moist			85	60	1.4		Major surface cracking
Stiff, slightly plastic, grey with orange brown streaks, very clayey SILT: slightly moist	0.5						
Stiff, moderately plastic, grey with occasional orange streaks, slightly sandy, clayey SILT: slightly moist			97	71	1.4		
Firm, moderately plastic, creamy white, very slightly sandy, clayey SILT: moist	1.0		77	60	1.3		
Firm, non plastic, creamy white, SILT: very moist							Approx SGL
	1.5		56	28	2.0		
-becoming wet							
-becoming soft	2.0		39	22	1.8		
			22	19	1.2		
	2.5						
			28	21	1.3		
	3.0		58	27			
-becoming firm							
	3.5		48	22	2.2		
	4.0		32	28	1.1		

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 13 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 9
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 42.9

Depth (m)	Soil description	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	Soft, non plastic, yellowish white, SILT: wet					
4.5	-becoming firm	52	25	2.1		
	Very stiff, non plastic, white, fine silty SAND					
	Soft, non plastic, black organic SILT: saturated	32	28	1.1		
5.0	-becoming firm	68	32	2.1		
	End of Borehole @ 5.1 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.					
5.5						
6.0						
6.5						
7.0						
7.5						
8.0						

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CLIENT: Concepts Limited	LOGGED/ CHECKED: MK	SHEET 14 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 42.9

Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
		138++		UTP		Sun baked crust. Approx SGL.
0.5		105	54	1.9		
		88	49	1.8		
1.0						
		58	33	1.8		
1.5						
		93	37	2.5		
2.0		108	37	2.9		
2.5		44	20	2.2		
		50	26	1.9		
3.0						
		78	30	2.6		
3.5						
		77	39	2.0		
4.0						

Tauranga Group Materials

NATURAL: Very stiff, slightly to moderately plastic, light grey with orange brown streaks, very silty CLAY: trace sand, damp.

-becoming stiff, moist.

-becoming brownish grey.

-becoming firm, brownish grey.

-becoming stiff, moderately plastic, greyish brown with grey streaks, very clayey SILT: some sand.

-becoming non-plastic, grey, SILT.

-becoming firm, highly plastic, yellowish brown with some grey and dark purplish brown streaks, very clayey SILT: some sand.

-becoming moderately clayey SILT.

-becoming moderately plastic, blueish grey to greyish brown, slightly clayey SILT: some sand.

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 15 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Stratigraphy	Soil Description	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4802	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Stiff, blueish grey to greyish brown with occasional dark purplish brown streaks, slightly clayey SILT: some sand, moist.		GL(m) 42.9						
					98	46	2.1		
			4.5		76	35	2.2		
					84	48	1.8		
	End of Borehole @ 5.0 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.		5.0						
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 16 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 11
	WEIGHT	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Legend: Topsoil Fill, Clay Silt, Sand Gravel, Peat Rock

GL(m) 43.9 ~~44.19~~

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
NATURAL: TOPSOIL							
Stiff, non plastic, medium brown, SILT: damp, friable							
Stiff, slightly plastic, orange brown, slightly clayey SILT: slightly moist	0.5		89	44	2.0		Approx SGL
Stiff, slightly plastic, grey, orange brown and brown streaked, very clayey SILT, trace sand: slightly moist	1.0		96	64	1.5		
-becoming predominantly grey with brown and orange brown streaks	1.5		114	68	1.7		
-becoming very stiff	2.0		138+				
-becoming grey			138+				
-becoming slightly sandy							
-becoming stiff, slightly to moderately plastic, grey, very clayey SILT: moist	2.5		93	58	1.6		
-developing trace sand, very moist to slightly wet							
-becoming very stiff	3.0		138+				
Very stiff, non plastic, purplish grey, sandy SILT: very moist			138+				
End of Borehole @ 3.2 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	3.5						
	4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 17 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 12
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Stratigraphy	Soil Description	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	TOPSOIL.								Approx SGL
Tauranga Group Materials	NATURAL: Firm, slightly plastic, streaked orange brown, greyish brown, slightly clayey SILT: moist. -becoming stiff @ 0.4m.		0.5		98	50	2.0		
	Stiff, highly plastic, streaked orange brown, greyish brown, moderately silty CLAY: trace sand moist.		1.0		94	50	1.9		
	-becoming streaked light grey, light orange, silty CLAY: some sand.		1.5		86	56	1.5		
	-becoming very clayey SILT: some sand.		2.0		110	86	1.3		
	-becoming light grey with light orange streaks.		2.5		92	68	1.4		
	-becoming firm.				78	48	1.6		
	Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, moist.		3.0		52	28	1.9		
	-becoming wet.		3.5		22	15	1.5		
	Very dense, non-plastic, greyish white, pumiceous, silty SAND: moist.		4.0		138++		UTP		
	End of Borehole @ 4.2 metres. Unable to penetrate further. Groundwater not encountered during drilling. No standing groundwater identified upon completion.								

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 18 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 13
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Legend | GL(m) 44.87 | Depth (m) | Water Level | Shear Vane Dial (kPa) | Residual Strength (kPa) | Sensitivity | Probe Blows | Comments Samples Other Tests

Tauranga Group Materials

Stiff, non plastic, friable, SILT: dry

Stiff, slightly plastic, orange brown and grey brown streaked, slightly clayey SILT: moist — Shear Vane Dial 121; Residual Strength 60; Sensitivity 2.0

0.5

-becoming moderately plastic, light grey and light orange streaked, moderately clayey SILT, trace sand — Shear Vane Dial 116; Residual Strength 66; Sensitivity 1.8

1.0

-becoming light brown grey with thin light orange veins — Shear Vane Dial 132; Residual Strength 94; Sensitivity 1.4

-becoming slightly plastic, slightly clayey SILT, some sand

1.5

-becoming moderately plastic, moderately clayey SILT — Shear Vane Dial 58; Residual Strength 44; Sensitivity 1.3

Soft, non plastic, yellow white, SILT (pumicite): very moist, poor recovery — Shear Vane Dial 28; Residual Strength 18; Sensitivity 1.6

2.0

Shear Vane Dial 58; Residual Strength 32; Sensitivity 1.8

2.5

Very stiff, non plastic, yellow white, silty SAND: very moist, very dense — Shear Vane Dial 138++; Sensitivity UTP

-becoming wet — Shear Vane Dial 138++; Sensitivity UTP

3.0

End of Borehole @ 3.0 metres.
Groundwater not encountered during drilling.
No standing groundwater identified upon completion.

3.5

4.0

Approx SGL

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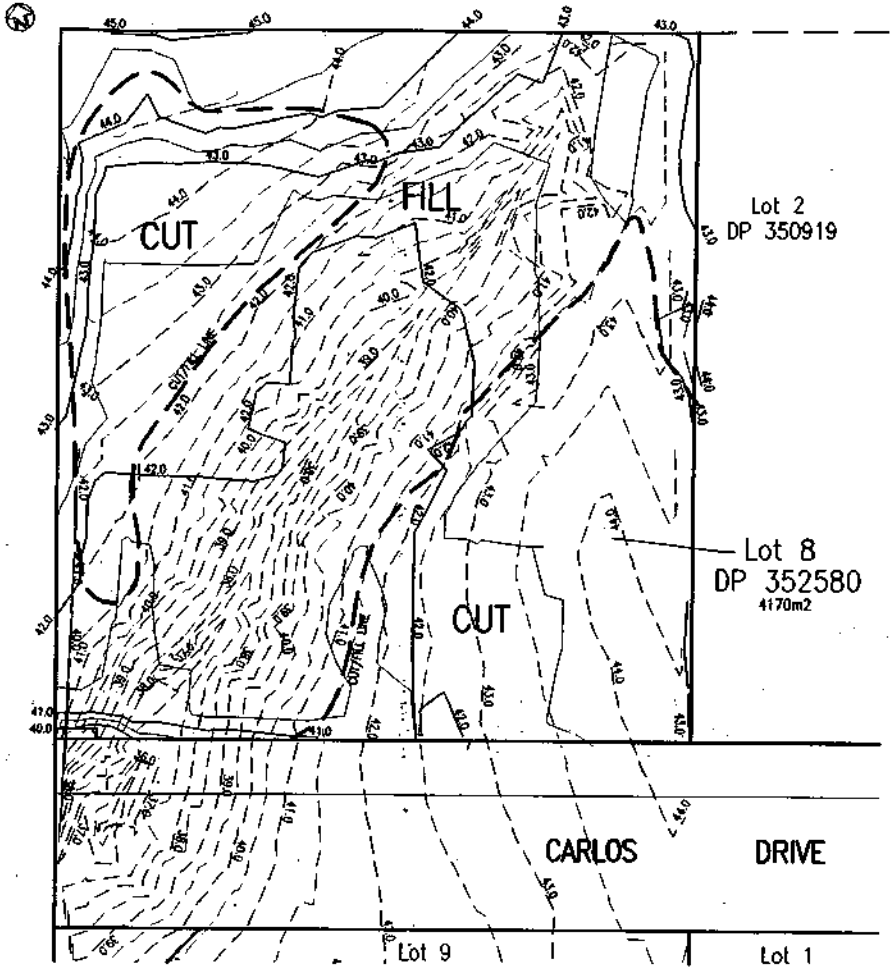
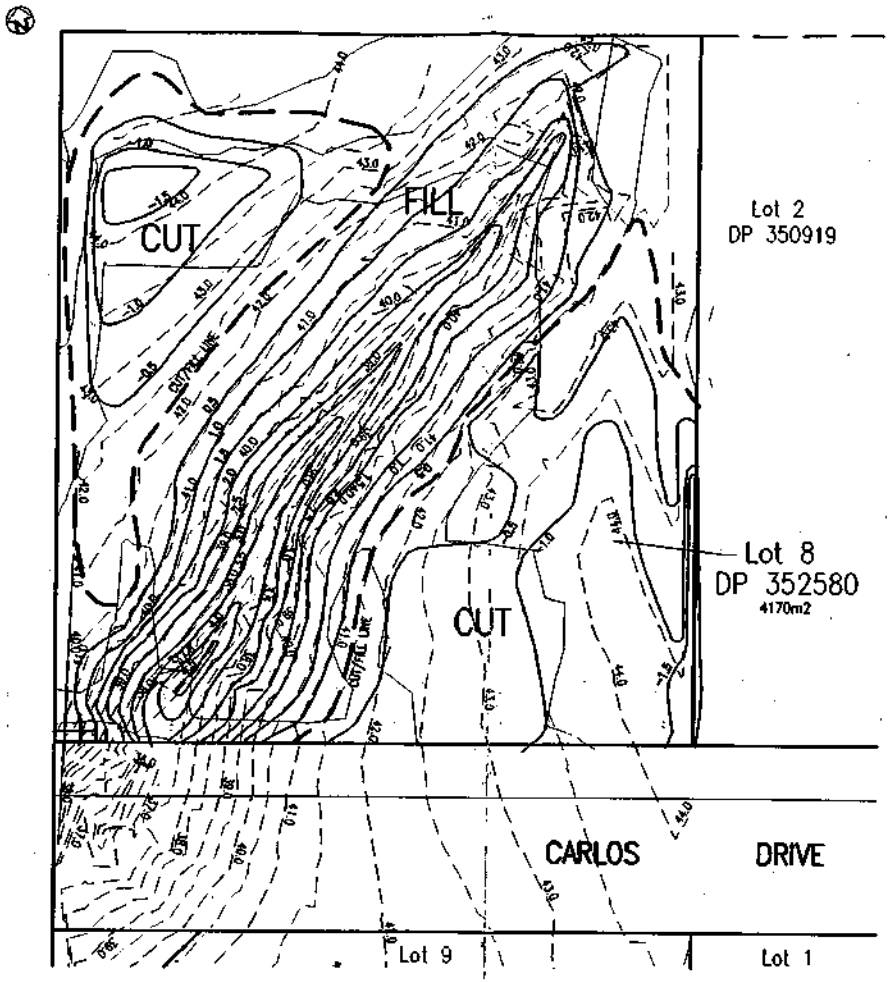


SITE PLAN–FINAL CONTOURS
1:500



SITE PLAN–ISOPACHS
1:500

LEGEND

- 41.0 EXISTING CONTOURS
- 43.0 'AS BUILT' CONTOURS
- -0.5 ISOPACH
- EXTENT OF CUT/FILL

No.	Revision Details	Date	No.	Revision Details	Date

Design: THIGIDSON (HAWKINS) LTD
Survey: EASDALE SURVEYORS LTD
Drawn: LFP
Checked: [illegible]
Date: [illegible]
Scale: 43 1:500
CAD Filename:

FINAL

(C) Copyright 2005 Airey Consultants Ltd

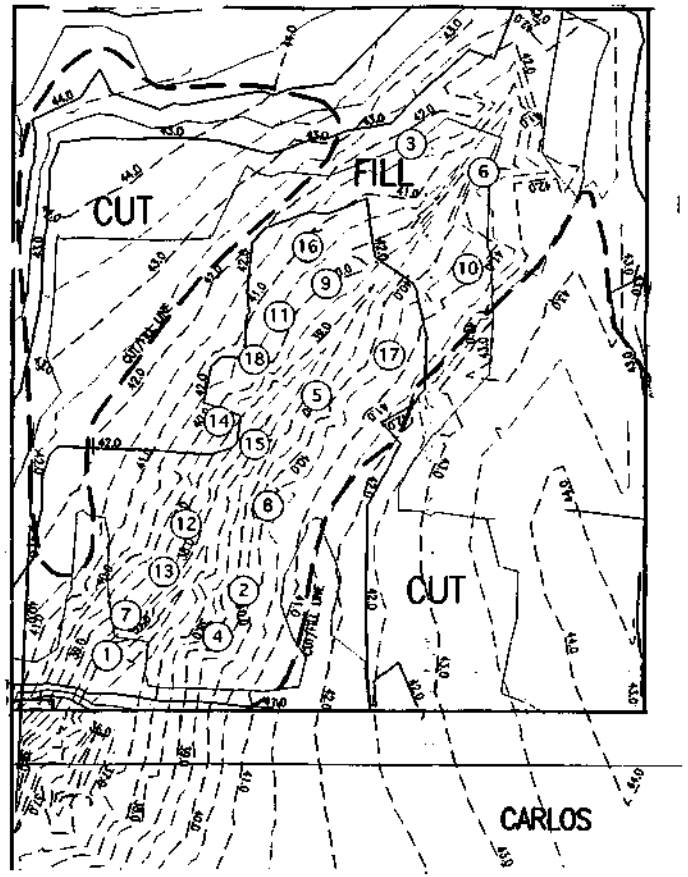
Job Title:
'AS BUILT' CONTOUR PLAN
FOR
CARLOS CONCEPTS
124 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

Drawing Title:
SITE PLAN

File No. A9861/5 | Rev. - | Dwg. No. 1-1

F:\Current Jobs L-Z\RAYMOND A9861\124 STANCOMBE RD_A9861-5\STAGE 2\AS BUILT CONTOURS\124 AS BUILT CONTOURS.dwg, 19/07/2005 1:14:57 p.

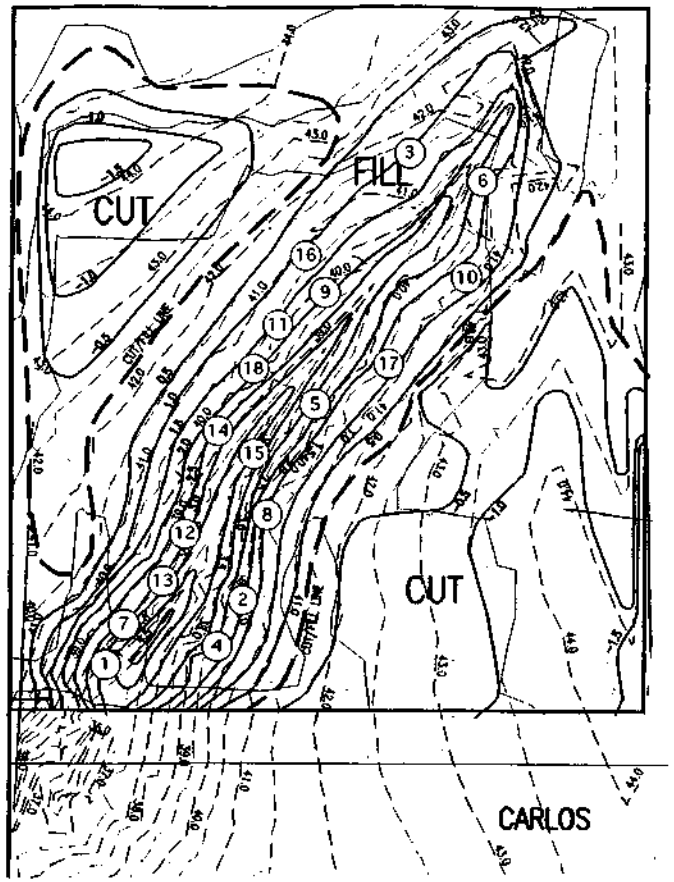


Site Plan- Contours

LEGEND

(1) Location of Compaction Test.

	Northing	Easting	RL
1	6469568	2681626	37.985
2	6469575	2681636	38.850
3	6469603	2681669	41.125
4	6469565	2681629	38.195
5	6469590	2681642	39.010
6	6469596	2681661	39.960
7	6469552	2681612	38.350
8	6469569	2681632	39.005
9	6469599	2681657	40.140
10	6469606	2681668	40.950
11	6469590	2681654	40.335
12	6469555	2681628	39.230
13	6469563	2681616	38.460
14	6469561	2681637	39.690
15	6469576	2681636	FL
16	6469586	2681638	FL
17	6469599	2681641	SGL
18	6469596	2681636	SGL



Site Plan- Isopachs

Location of Earthworks Tests.

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

GEOTEK SERVICES LIMITED
Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	2 OF 3

Report No: 21 5257 00
Page: 2 of 3

FILL SUMMARY SHEET

Job Name : Stancombe Road

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m^3)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m^3)	SOLID DENSITY (t/m^3) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH in kPa				NOTES
1	GC	24.1.05	See plan	1.90	24.6	1.52	2.7	6.1	199++	199++	199++	199++	
2				1.89	28.6	1.47	2.7	3.4	199++	199++	199++	199++	
3				1.78	34.4	1.32	2.7	5.5	153	199+	199+	199+	
4	CA & WF	25.1.05	See plan	1.87	34.6	1.39	2.7	0.5	179	199+	199+	199++	
5				1.82	38.8	1.31	2.7	0.7	182	188	199+	199+	
6				1.73	31.0	1.32	2.7	10	134	131	122	182	
7	CA	26.1.05	See plan	1.96	32.8	1.47	2.7	-2.9	171	199+	199++	199++	
8				1.98	25.7	1.57	2.7	1.3	199+	199+	199+	199+	
9				1.87	33.0	1.40	2.7	1.8	199+	199+	199+	199+	
10	CA	27.1.05am	See plan	1.94	24.2	1.56	2.7	4.3	188	185	199+	199+	
11				1.90	19.6	1.59	2.7	10	148	179	199+	199+	
12				1.87	33.9	1.40	2.7	0.8	199+	199++	199++	199++	
13	CA	27.1.05pm	See plan	1.93	20.5	1.60	2.7	7.8	199++	199++	199++	199++	
14				1.93	25.7	1.53	2.7	3.8	199++	199++	UTP	UTP	

Transpositions Checked By : TB Date: 03.02.05
Approved Signatory : Date: 02.02.05
Please see page 1 of this report for test standard information

FILL SUMMARY SHEET

Job Name : 124 Stancombe Road

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m^3)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m^3)	SOLID DENSITY (t/m^3) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH in kPa				NOTES
15	CA & RP	20.4.05	See plan	1.84	24.5	1.48	2.7	9.0	236++	236++	236++	236++	
16				1.82	20.4	1.51	27	13	236++	236++	236++	236++	
17	CA & RP	22.4.05	See plan	1.89	27.2	1.48	2.7	4.7	236+	236++	236++	236++	
18				1.92	29.8	1.48	27	1.2	236++	236++	236++	236++	

Transpositions Checked By : JM Date: 3.5.05
Approved Signatory : Date: 5.5.05

Please see page 1 of this report for test standard information

Ref: 2704

DIARY NOTES

North of Carlos Drive, 124 Stancombe Road, East Tamaki

Date: 17/1/05 GSL Staff

Ian Gibson (Aireys) rang for GSL to visit site and inspect gully cleanout. I (EC) visited site with knowledge that our initial site investigation was for the proposed apartments at the front of the site only (refer phone conversation note with Graham Raymond). We therefore needed to undertake site investigation for the remainder of the site. Gully had surficial materials mullocked out and flanks stripped of topsoil. Deep stormwater line trenches had been dug along the eastern boundary and to the south along the proposed road alignment. Very soft purniceous materials, saturated the trench invert. Organise return visit to site next day with guys to drill holes.

Date: 18/1/05 GSL Staff

Site investigation/gully cleanout: I (EC) met Peter from Sharpe Civil. Discussed objectives of GSL and plan of attack for gully. Drill holes in current invert to ascertain depth of undercut. Some more materials need to be mucked out. Also noted heavy seepages along northwest back of gully.

Date: 19/1/05 GSL Staff

More gully muckout in invert.

Date: 26/1/05 GSL Staff

I (ML) and EC attended the site at approximately midday on a hot, dry day. We returned on the basis of Civil Lab fill testing from 25.1.05 showing a failure in one area of the gully infill. The results in this area showed 10% air voids and shear strengths as low as 122kPa by comparison to strengths well upward of 180kPa in most other parts. The location of this failure is marked on the attached plan.

At the surface, shear vane readings were all 138+. However, the gumspear highlighted soft spots about .5 metres deep in the otherwise well compacted fill. Eugene had the site guys dig up the fill to a depth of approx 0.5 metres in one part of the area of concern. This revealed an area of poor quality fill with limited compaction. Eugene advised the contractor that the fill above the soft region should be moved temporarily while the substandard fill was removed and discharged. This would then allow the replacement of the fill and continued compaction. Beyond this region of concern, the fill was all very stiff and well compacted, with a large sheepsfoot roller providing more than adequate compaction, with no signs of ground movement beneath its weight.

Date: 19/4/05 GSL Staff

I (PJ) visited the site and spoke to Brendon. They recommended placing the fill some two days ago after several months stand-down. I was told that more than a metre was already placed in the southwest corner but much less at the back. Informed Civil Lab to begin testing as soon as possible. Arranged with James to drill handaugers to test the new fill where it is deep.

Date: 24/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard, although some soft spots were observed and the contractor informed. Very little fill has been placed. One dozer, one compactor and two dump trucks at work on the site.

Date: 25/01/05 Civil Lab Staff

One compactor and one dozer at work. Material is a firm to stiff, highly plastic, silty clay.

Date: 26/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard. One digger and one compactor on site.

Date: 27/01/05 Civil Lab Staff

Morning: fill appears to be of a satisfactory standard. One dozer and one compactor at work. Material is firm to stiff, highly plastic, light grey and yellow/brown mixed, slightly silty clay and moist.

Date: 27/01/05 Civil Lab Staff

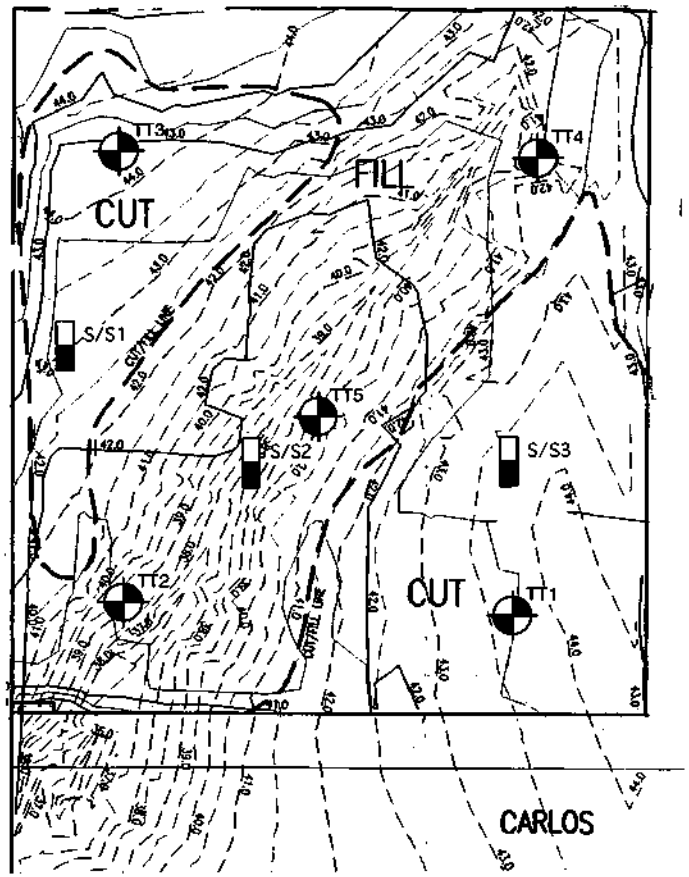
Afternoon: Fill appears to be of a satisfactory standard. One digger on site.

Date: 20/04/05 Civil Lab Staff

One compactor and one digger on site. Material is firm, highly plastic, light grey, cream, orange brown and yellow brown mixed slightly silty clay and moist.

Date: 22/04/05 Civil Lab Staff

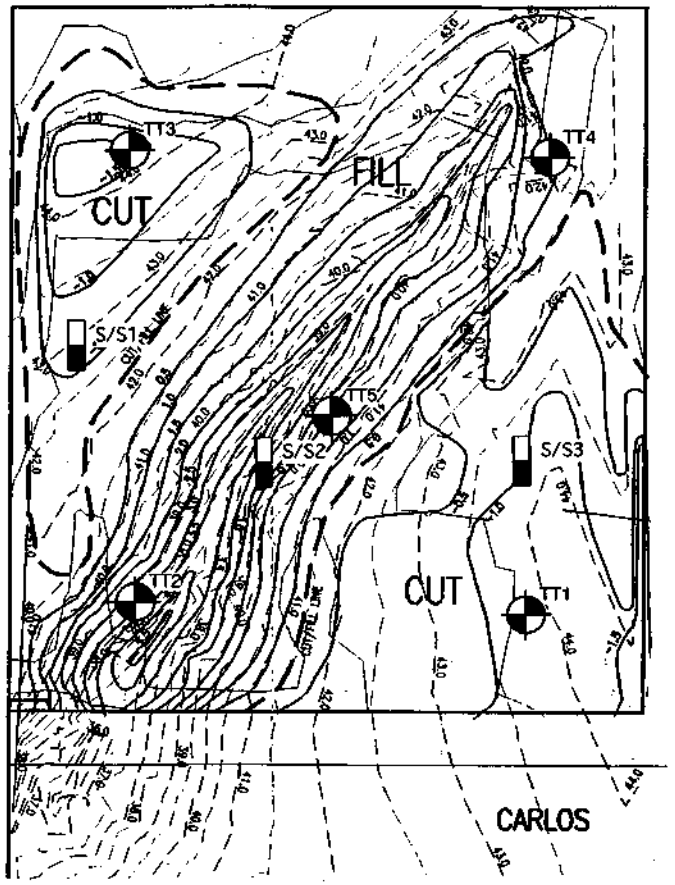
Fill appears to be of a satisfactory standard. One compactor on site. Fill is firm, highly plastic, light grey orange brown and yellow brown mixed silty clay and moist.



Site Plan- Contours

LEGEND

S/S1	Location of Shrink-Swell tests.
TT1	Depth of topsoil = 0.1metres
TT2	Depth of topsoil = 0.1metres
TT3	Depth of topsoil = 0.1metres
TT4	Depth of topsoil = 0.1metres
TT5	Depth of topsoil = 0.1metres



Site Plan- Isopachs

Post-Earthworks Topsoil Depths and Shrink-Swell Samples Location Plan

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

GEOTEK SERVICES LIMITED
Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

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Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	3 OF 3

FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	**Job Number:**	2704
Date Sampled:	20.06.2005	**Date Tested:**	21.06.2005
Sample Number:	1	**Tested By:**	MK
Sampling Depth (m):	0.5	**Checked By:**	
Sample Condition:	Good		
Sample Description:	Highly plastic, light grey with orange mottles, silty CLAY		
Inert Inclusions (%):	0		
Cracking (%):	5		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%): 30.9

Final Water content (%): 34.3

ε_{sw} = Magnitude of Swelling Strain (%) : 0.05

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%): 26.2

ε_{sh} = Magnitude of Shrinkage Strain (%) : 3.54

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 2.0
strain per ΔpF

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FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	**Job Number:**	2704
Date Sampled:	20.06.2005	**Date Tested:**	22.06.2005
Sample Number:	2	**Tested By:**	MK
Sampling Depth (m):	0.5	**Checked By:**	
Sample Condition:	Good		
Sample Description:	FILL: Moderately plastic, mottled orange brown, grey, dark purple, silty CLAY: white silt and topsoil inclusions.		
Inert Inclusions (%):	3		
Cracking (%):	2		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%):	28.9
Final Water content (%):	34.2
ε_{sw} = Magnitude of Swelling Strain (%) :	0.54

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%):	26.7
ε_{sh} = Magnitude of Shrinkage Strain (%) :	3.21

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 1.9
strain per ΔpF

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Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	**Job Number:**	2704
Date Sampled:	20.06.2005	**Date Tested:**	21.06.2005
Sample Number:	3	**Tested By:**	MK
Sampling Depth (m):	0.5	**Checked By:**	
Sample Condition:	Good		
Sample Description:	Moderately plastic, light grey with orange mottles, very clayey SILT: trace sand.		
Inert Inclusions (%):	0		
Cracking (%):	0		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%): 23.3

Final Water content (%): 25.6

ε_{sw} = Magnitude of Swelling Strain (%) : 0.00

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%): 23.6

ε_{sh} = Magnitude of Shrinkage Strain (%) : 2.60

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 1.4
strain per ΔpF

GEOTEK SERVICES LIMITED

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Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

BUILDING CONSENT

Conditions Checklist

Environmental Services

Te Kaunihera o
MANUKAU
City Co

Correspond
Private Bag
Manukau C
New Zealan
Tel: (09) 26
Fax: (09) 26
DX 7181

Bag No: PURP20 071556

Date Rec'd: 8/05/2007

Legal Desc: LOT 10 DP 352580

Owner: WORKING CONCEPTS LIMITED

Site: 46 CARLOS DRV FLAT BUSH 1730

Ward: WARD BOTANY-CLEVEDON

Street Ref: 1176/46

Applicant: Compass Building Consultants Ltd

Phone: 272 2269

Fax:

Map Ref:

Notes: 22 residential townhouses (4 blocks of 5 - 6 units)

Consents – Standard Conditions

- Comprised in this consent ☑
- Site inspections ☑
- Endorsements on plans ☑
- CERT – Any Deviation ☑
- Plumbing & Drainage ☑
- Authorisations ☑
- Consent lapse ☑

Consents – Plumbing & Draining

- Effluent Waste ☐
- P & D Half Siphon ☐
- Kerb ☑
- P & D – As built drainage plan ☑
- P & D – AS 3500 ☑
- Surface Water ☑
- Coil Drain ☐
- Certification on completion ☑

Building Consents – Residential

- Sub-floor ventilators ☐
- Kn Connections ☐
- Compaction of Fill ☐
- Eaves ☐
- Cladding – Monier Brick ☐
- Smoke Detectors ☑
- Applicator / Manufacturer's Warranty Cert ☐
- Truss Roof As Built Plan ☑
- Soundproofing ☑
- Demolition ☐
- Sea Spray Zone ☐
- Treated Timber ☑
- Barriers to stairs / Decks ☑
- Smoke Detectors – Plan ☐
- Hitex Diamond Cavity Plastering system ☐
- Lintels ☑
- Glazing ☑

Building Consents – C&I

- Site barriers to NZBC F5 [2m] ☑
- Evacuation Alarm ☐
- Pre-cast slab [tilt panel] Certificate ☐

Resource Consents

- Single Household Unit – One Residence ☐
- HIRB ☐
- Maximum Height – 8 metres ☐
- Reg. surveyor cert – Max 8 metres ☐
- Section 36 [1] [a] ☐
- Floor Level ☐
- Amalgamation ☐

Consents – Fire & Egress

- Sprinkler System ☐
- Auto sprinkler System ☐
- Emergency Lighting System ☐
- Fire doors to Fire Walls ☐
- Lifts ☐
- Mechanical Ventilation or air Conditioning ☑
- Safety Barriers 1.0m Minimum Height ☑
- Signs [international Symbol for disabled] ☐
- Access & Facilities for people with disabilities ☐
- Backflow Prevention ☐
- Emergency Warning System ☑
- Fire Hose Reels ☐
- Means of Escape ☑
- Panic Breakout or Fail Safe Auto Sliding Door ☐
- Signs ☐
- Intumescent Paint System ☐

Consents – Structural Engineering

- Engineers – Driven Piles ☑
- Minimum Foundation Depth ☐
- Engineer Drainage Certificate ☐
- Engineers – Minimum Foundation ☐
- Engineers – B Grade Block Work ☐
- Engineers – Foundation / Retaining Walls ☐
- Engineers – Certificate Hardfill ☐
- Engineers – Excess Top Soil ☐
- Engineers – Foundation Investigation ☐
- Engineers – Foundation Excavation : Construct ☑
- Engineering Components ☑

CONDITIONS OF CONSENT

Consent/PIM No: 07/1856 Temp Bag No: _____

ENDORSEMENT

All foundation excavation and construction, piling, earthworks and sub grades to be **inspected and certified** by a **CHARTERED PROFESSIONAL ENGINEER (Geotechnical)** prior to the placement of any construction materials as per soil report from: Geotek Services Limited

Date: 2, August 2005

Ref: 2704

* No cuts or fills greater than 600mm is allowed.

CERTIFICATION FOR TESTING OF THE SOUND RATING BETWEEN UNITS TO BE PROVIDED PRIOR TO ISSUE OF CODE COMPLIANCE CERTIFICATE. REFER TO RESOURCE CONSENT CONDITIONS.

ENDORSEMENT

Certificate from registered surveyor to be provided to Council with regard to the height of floor level before:
(a) pouring of concrete slab; or
(b) sub-floor framing commences.

- Refer to RC proposal No 28885 for MFL (LeS Auckland datum 1946).

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	BC032500

Invoice Date:	09 Jul 2007
Customer No:	0227616
Charge Ref:	BC071556
Order No:	

Concepts 124 Ltd
C/- Ormiston Project Management Ltd
Po Box 58395
Greenmount
Auckland 1730

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8967*

Description	Quantity	Unit Price	Amount
PBC71556 46 Carlos Drv			
CCTV	3.00 Each	224.00	672.00

Sub Total	$26,524.05
GST	$2,790.51

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	09 Jul 2007	AMOUNT DUE	$29,314.56

Te Kaunihera o
MANUKAU
City Council

Concepts 124 Ltd
C/- Ormiston Project Management Ltd
Po Box 58395
Greenmount
Auckland 1730

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Customer No:	0227616
Invoice No:	BC032500
Charge Ref:	BC071556

DUE DATE	09 Jul 2007
AMOUNT DUE	$29,314.56

Please note any change of postal address below:

_____

_____

_____

Telephone: _____

AMOUNT PAID $_____

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

20/07/2007 10:56 Trn 382497
Cashier DBDWLING

SUNDRY INVOICES
Invoice Number BC032500 $29314.56

Subtotal $29314.56
Total $29314.56

Payer: SHUTTLEWORTH PROPERTIES
Received CHEQUE $29314.56
Cheque # 457081
Change $0.00

All charges are GST inclusive. Please
retain this receipt for your records

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No: BC032500

Invoice Date: 09 Jul 2007
Customer No: 0227616
Charge Ref: BC071556
Order No:

Concepts 124 Ltd
C/- Ormiston Project Management Ltd
Po Box 58395
Greenmount
Auckland 1730

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone 262 8967

Description	Quantity	Unit Price	Amount
PBC71556 46 Carlos Drv			
PIM	1.00 Each	222.22	222.22
Resource Management Processing	2.00 Hours	88.89	177.78
Building Research Levy	1.00 Each	3,200.00	3,200.00
Dept of Bldg & Housing Levy	1.00 Each	5,603.56	5,603.56
Street Damage Deposit	1.00 Each	1,000.00	1,000.00
Records-Scanning	1.00 Each	208.20	208.20
Code Compliance Certificate	1.00 Each	173.33	173.33
Flooding/Stability	1.60 Hours	88.89	142.22

Te Kaunihera o
MANUKAU
City Council

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	BC032500

Invoice Date: 09 Jul 2007
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Concepts 124 Ltd
C/- Ormiston Project Management Ltd
Po Box 58395
Greenmount
Auckland 1730

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8967*

Description	Quantity	Unit Price	Amount
PBC71556 46 Carlos Drv			
Street Damage Administration	1.00 Each	90.00	90.00
Compass Building Process Fee	1.00 Each	3,078.22	3,078.22
Compass Comp Inspection Fee	1.00 Each	11,544.07	11,544.07
Building Authority Ldgmnt Fee	1.00 Each	102.22	102.22
Building Authority Audit Levy	1.00 Each	102.22	102.22
Consents Hazard Report	1.00 Each	71.90	71.90
Building Authority Admin Fee	1.00 Each	71.11	71.11
Compass WW/SW Conn Inspection	1.00 Each	65.00	65.00

Te Kaunihera o
MANUKAU
City Council

PROPOSED TOWNHOUSES

AT

46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

FOR

CONCEPTS 124 LIMITED

DESIGN OFFICE &
PROJECT MANAGEMENT

ORMISTON
PROJECT MANAGEMENT LIMITED
P.O. Box 58395 GREEN MOUNT
Manukau, Auckland 2141
Ph 09 271 3007
Fax 09 271 4037

PIM COPY

PIM COPY

DRAWING REGISTER

FOR

PROPOSED TOWNHOUSES

AT

46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

FOR

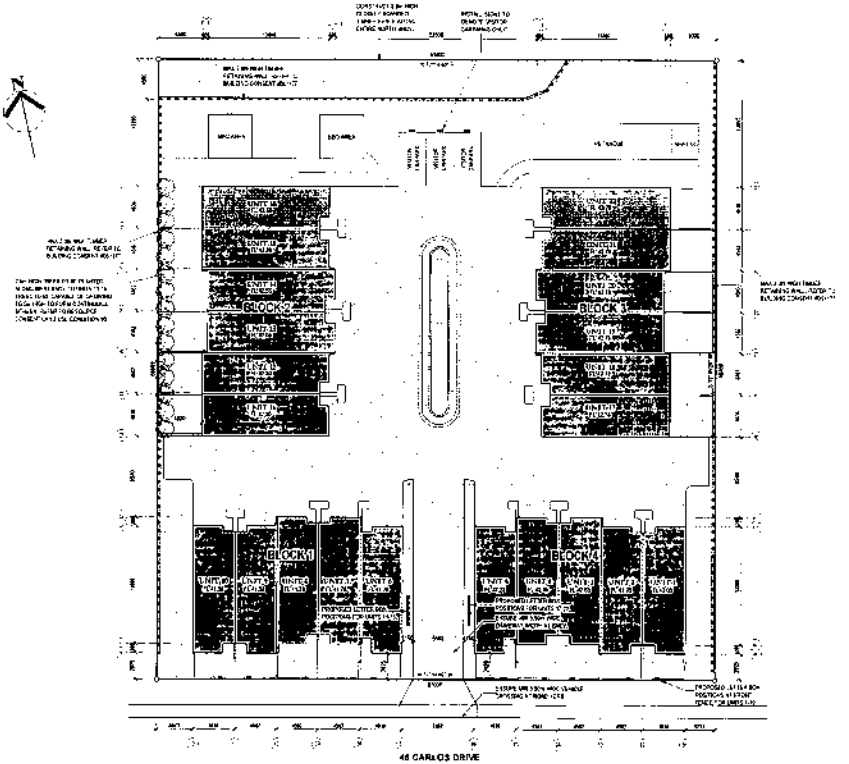
CONCEPTS 124 LIMITED

BUILDING CONSENT ISSUE

SHEET#	REV#	SHEET TITLE	ISSUE
A201		SITE SURFACES PLAN	BUILDING CONSENT
A202		SITE SERVICES PLAN	BUILDING CONSENT
A203		OVERALL GROUND	BUILDING CONSENT
A202		OVERALL FIRST FLOOR PLAN	BUILDING CONSENT
A203		OVERALL SECOND	BUILDING CONSENT
A204		UNIT 9 FLOOR PLAN	BUILDING CONSENT
A205		UNIT 10 FLOOR PLAN	BUILDING CONSENT
A206		UNIT 11 FLOOR PLAN	BUILDING CONSENT
A207		UNIT 12 FLOOR PLAN	BUILDING CONSENT
A208		ELEVATIONS	BUILDING CONSENT
A208		ELEVATIONS	BUILDING CONSENT
A210		ROOF PLAN	BUILDING CONSENT
A212		OVERALL SUBSTITUTE PLAN	BUILDING CONSENT
A213		BLOCK 1 FOUNDATION PLAN	BUILDING CONSENT
A214		BLOCK 1 LEVEL 1	BUILDING CONSENT
A215		BLOCK 1 LEVEL 2	BUILDING CONSENT
A216		BLOCK 1 ROOF FRAMING PLAN	BUILDING CONSENT
A217		BLOCK 2 FOUNDATION PLAN	BUILDING CONSENT
A218		BLOCK 2 LEVEL 1	BUILDING CONSENT
A219		BLOCK 2 LEVEL 2	BUILDING CONSENT
A220		BLOCK 2 ROOF FRAMING PLAN	BUILDING CONSENT
A221		BLOCK 3 FOUNDATION PLAN	BUILDING CONSENT
A222		BLOCK 3 LEVEL 1	BUILDING CONSENT
A223		BLOCK 3 LEVEL 2	BUILDING CONSENT
A224		BLOCK 3 ROOF FRAMING PLAN	BUILDING CONSENT
A225		BLOCK 4 FOUNDATION PLAN	BUILDING CONSENT
A226		BLOCK 4 LEVEL 1	BUILDING CONSENT
A227		BLOCK 4 LEVEL 2	BUILDING CONSENT
A228		BLOCK 4 ROOF FRAMING PLAN	BUILDING CONSENT
A230		CROSS SECTIONS	BUILDING CONSENT
A301		WALL TYPE LEGEND	BUILDING CONSENT
A302		LINEA WEIHRBID SETOUT	BUILDING CONSENT
A303		STAIR DETAILS	BUILDING CONSENT
A304		DECK SCREEN DETAILS	BUILDING CONSENT
A310		FOUNDATION DETAILS	BUILDING CONSENT
A311		CONSTRUCTION DETAILS	BUILDING CONSENT
A312		CONSTRUCTION DETAILS	BUILDING CONSENT
A313		CONSTRUCTION DETAILS	BUILDING CONSENT
A314		CONSTRUCTION DETAILS	BUILDING CONSENT
A315		CONSTRUCTION DETAILS	BUILDING CONSENT
A316		CONSTRUCTION DETAILS	BUILDING CONSENT
A317		CONSTRUCTION DETAILS	BUILDING CONSENT
A318		CLADDING JUNCTION DETAILS	BUILDING CONSENT
A319		CONSTRUCTION DETAILS	BUILDING CONSENT
A601		WINDOW & DOOR SCHEDULES	BUILDING CONSENT
A602		WINDOW BOX DETAILS	BUILDING CONSENT

DESIGN OFFICE &
PROJECT MANAGEMENT

ORMISTON
PROJECT MANAGEMENT LIMITED
P.O. Box 58395 GREENMOUNT
Manukau, Auckland 2141
Ph 09 271 3001
Fax 09 271 4037



SITE SURFACES PLAN

LEGAL DESCRIPTION:

ADDRESS
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

LOT NO 13
DP NO 152560

SITE AREA 417m² MORE OR LESS

LEGEND:

- PROPOSED BUILDINGS
- PROPOSED CONCRETE AREA
- PROPOSED IMPERMEABLE SURFACE
- PROPOSED PERMEABLE LANDSCAPING
- PROPOSED SITE STRUCTURES
- PROPOSED RETAINING WALL (UNDER RETAINING WALL AS PER STRUCTURAL DRAWING)

SHEET NOTES:

- SITE SURFACES PLAN TO BE READ IN CONJUNCTION WITH RESOURCE CONSENT LAND USE CONDITIONS (RC/APR/5520).
- RUBBISH AND RECYCLABLES TO BE STORED & COLLECTED FROM WHEELIE BINS AND RECYCLING BINS AS PER WASTE MANAGEMENT PLAN AS OUTLINED IN RESOURCE CONSENT LAND USE CONDITIONS (RC/APR/5520).
- LANDSCAPING AND PLANTING TO BE AS PROPOSED IN RESOURCE CONSENT (RC/APR/5520).

GENERAL NOTES

	BUILDING CONSENT ISSUE
	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASEDALE SURVEYORS LTD

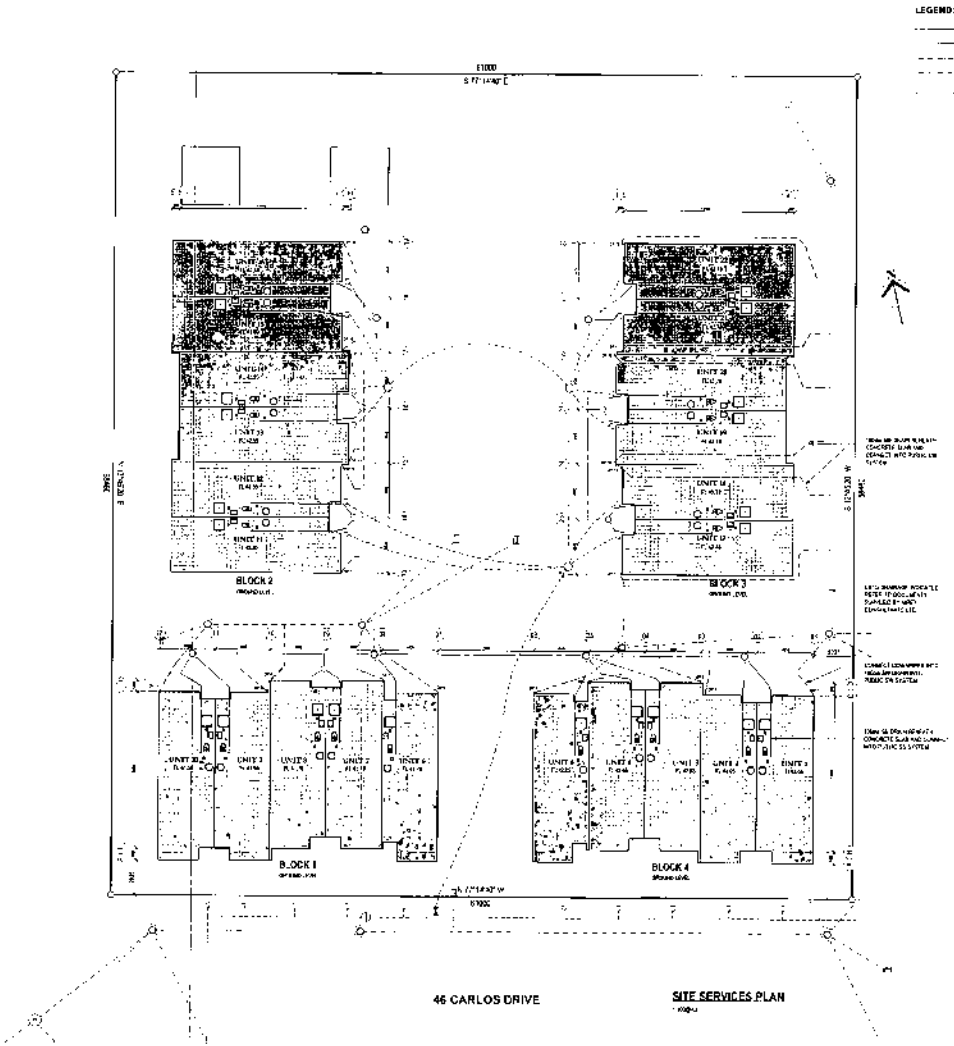
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
SITE SURFACES PLAN

DATE: 2 MAY 2007
DRAWN: RD
SCALE: 1:200@A1 1:400@A3
SHEET: A101
BUILDING CONSENT

ARCHITECTURAL SERIES



SITE SERVICES PLAN

GENERAL NOTES:

	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASEDALE SURVEYORS LTD

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CONCEPTS 124 LIMITED

PROJECT TITLE

PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE

SITE SERVICES PLAN

DATE: 2 MAY 2007

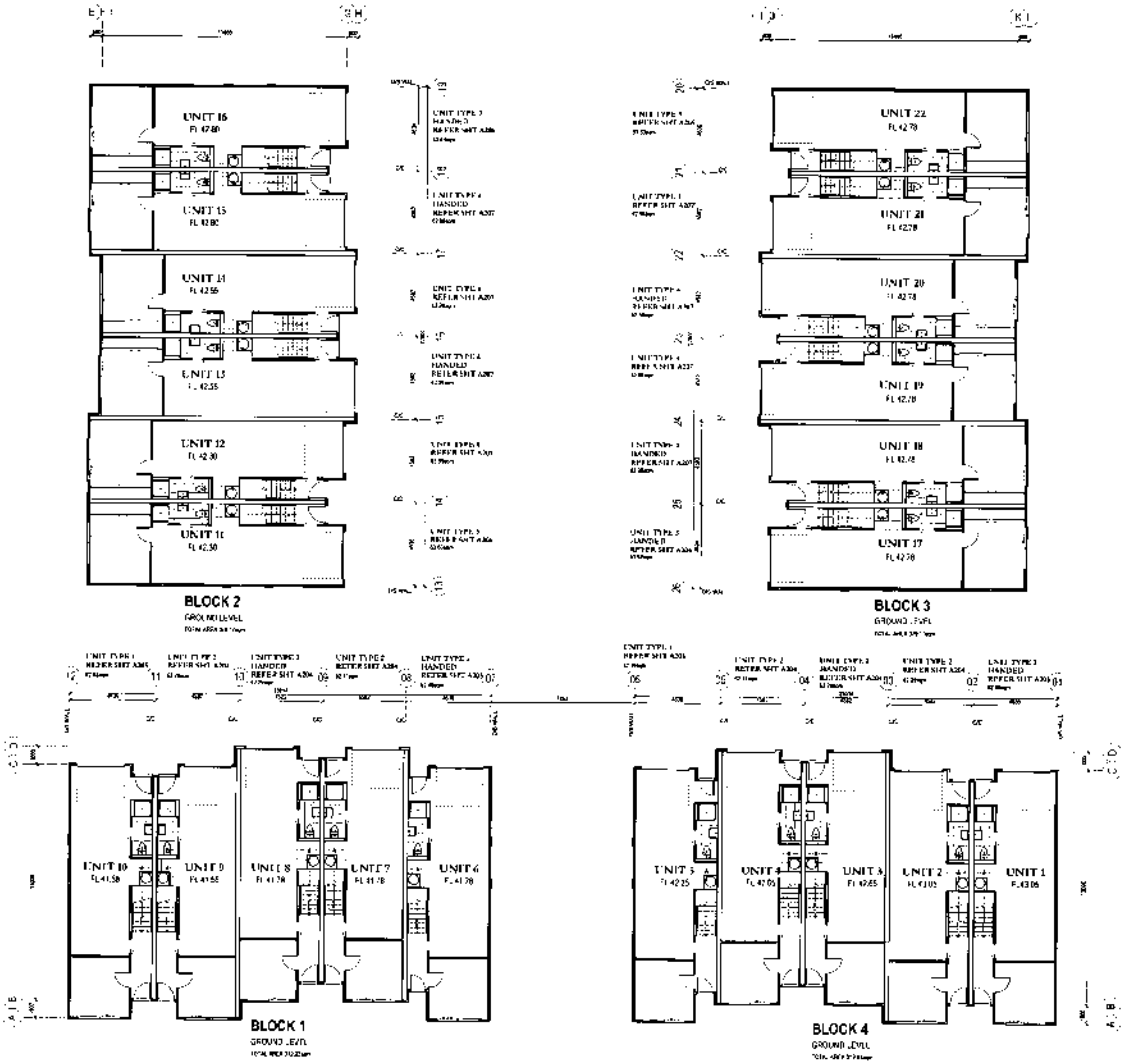
DESIGNED: RC

SCALE: 1:100@A1/1:200@A3

SHEET: A102

BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES

ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
ENGINEERING	GEOTEK SERVICES LTD
SURVEYOR	EASEDALE SURVEYORS LTD

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PROJECT TITLE

PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE

OVERALL GROUND
FLOOR PLAN

DATE: 2 MAY 2007

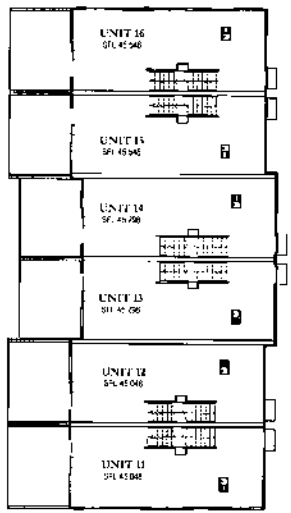
DESIGNED: RD

SCALE: 1:100@A1/1:200@A3

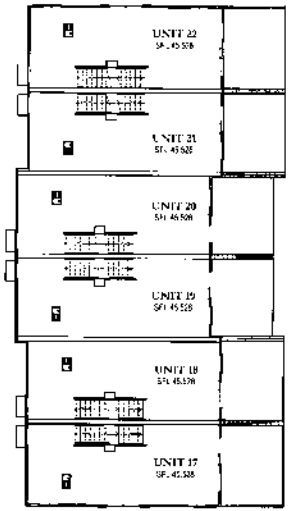
SHEET NO.: A201

ISSUE: BUILDING CONSENT

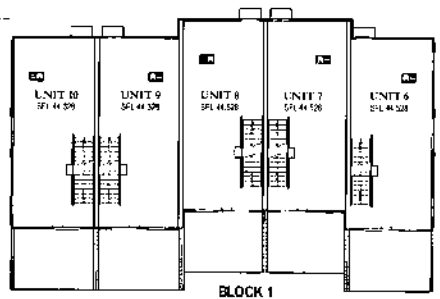
ARCHITECTURAL SERIES



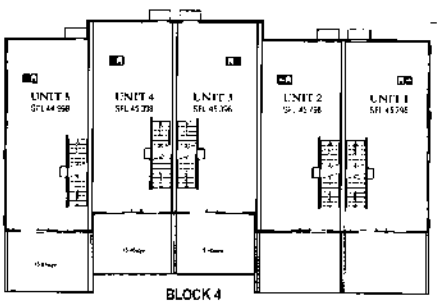
BLOCK 2
FIRST LEVEL



BLOCK 3
FIRST LEVEL



BLOCK 1
FIRST LEVEL



BLOCK 4
FIRST LEVEL

GENERAL NOTES:

	BASIC CONCEPTS 124 LTD
CONSULTANTS	
	KRACETT MITCHELL LTD
	HYDRALIC SERVICES LTD
	FIRE DESIGNS LTD
	ABBEY CONSULTANTS LTD
	ABBEY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	LANDDALE SURVEYORS LTD

ORDERWOOD PROJECT MANAGEMENT LIMITED
P.O. Box 36 [illegible]
MANUKAU, AUCKLAND [illegible]
PH [illegible] FAX [illegible]
PROJECT MANAGEMENT

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PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
OVERALL FIRST FLOOR PLAN

DATE	SCALE
2 MAY 2007	
DRAWN	CHECKED
RD	

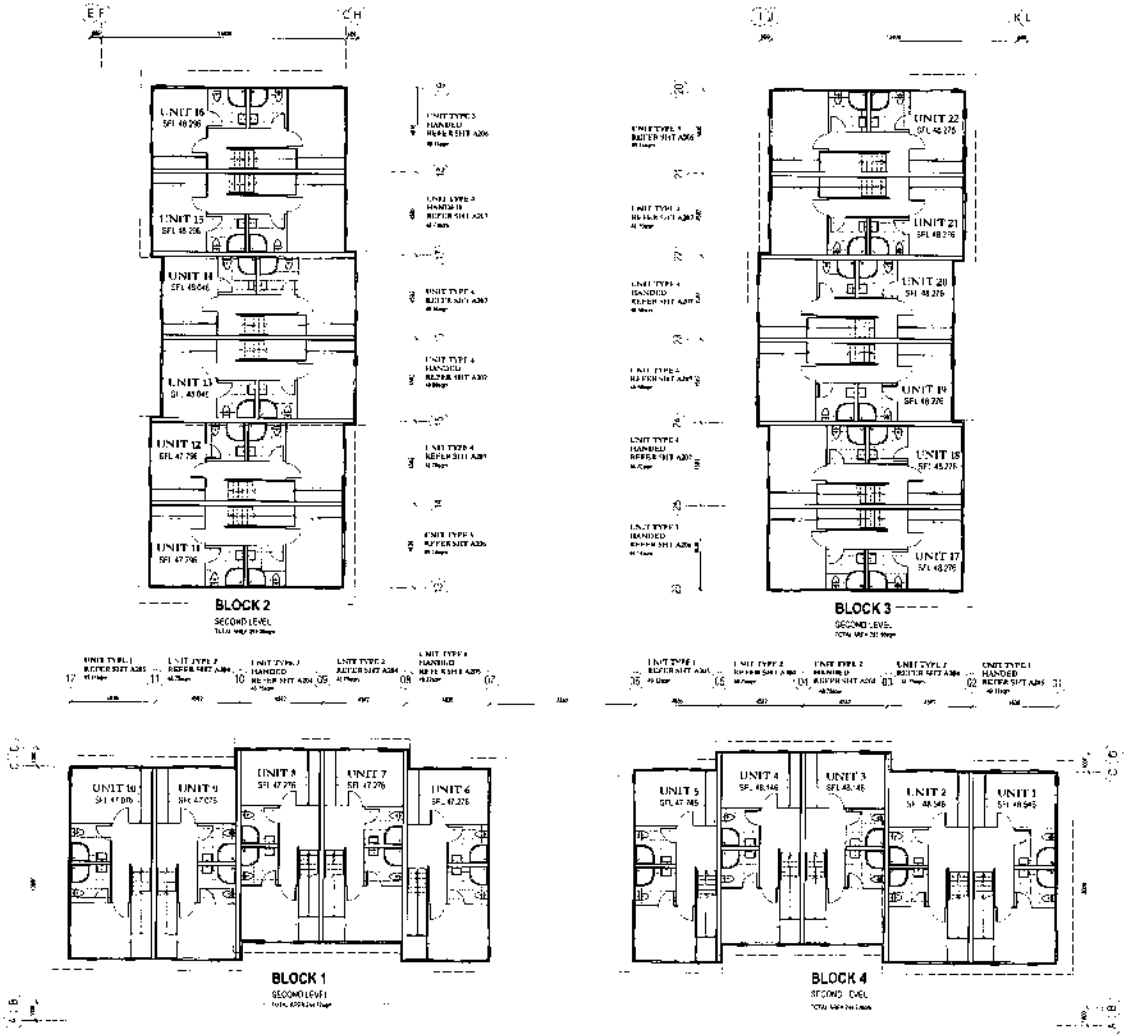
1:100@A1/1:200@A3

DRAWING NO. A202

REV

STAGE
BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES:

	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GECTEK SERVICES LTD
	EASEBASE SURVEYORS LTD

CONCEPTS 124 LIMITED

PROPOSED TOWNHOUSES
48 CAR. OS DRIVE
FLAT BUSH
MANUKAU CITY

OVERALL SECOND
FLOOR PLAN

2 MAY 2007

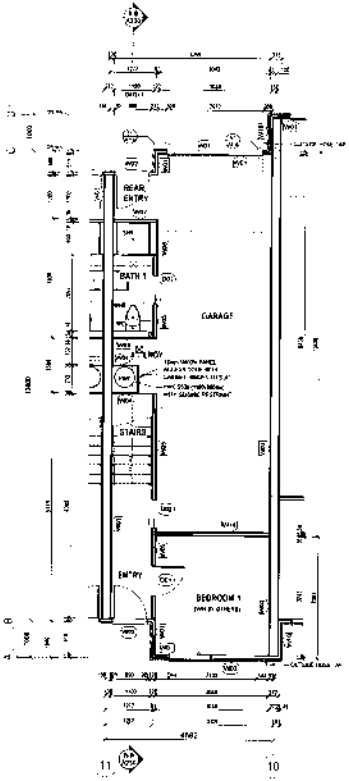
RD

1:100@A1/1:200@A3

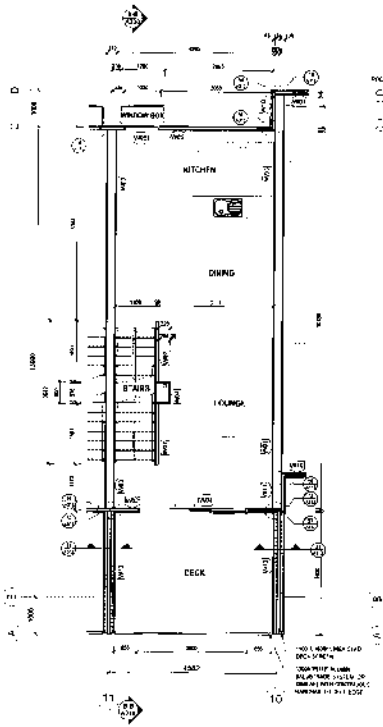
A203

BUILDING CONSENT

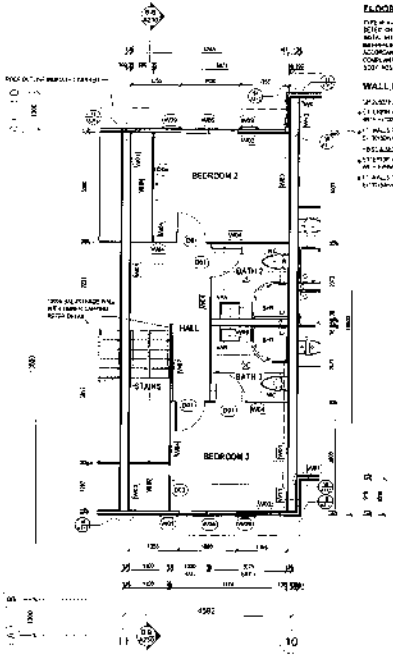
ARCHITECTURAL SERIES



UNIT 9
GROUND LEVEL FLOOR PLAN



UNIT 9
FIRST LEVEL FLOOR PLAN



UNIT 9
SECOND LEVEL FLOOR PLAN

LEGEND.

UNIT TYPE 2 NOTES:

FLOOR PLAN NOTES:

WALL FRAMING NOTES:

GENERAL NOTES:

ARCHITECT	KINGSLEY MITCHELL LTD
STRUCTURAL	HS DRAULT SERVICES LTD
FIRE	FIRE DESIGNS LTD
SITE/CIVIL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
ELECTRICAL	SEOTEN SERVICES LTD
SURVEYOR	EASTDALE SURVEYORS LTD

CHRISTCHURCH PROJECT MANAGEMENT LIMITED
P.O. BOX 29-450, CHRISTCHURCH
MANAGING DIRECTOR: JOHN CRAIG
PH: 03 371 3647 FAX: 03 371 3637

ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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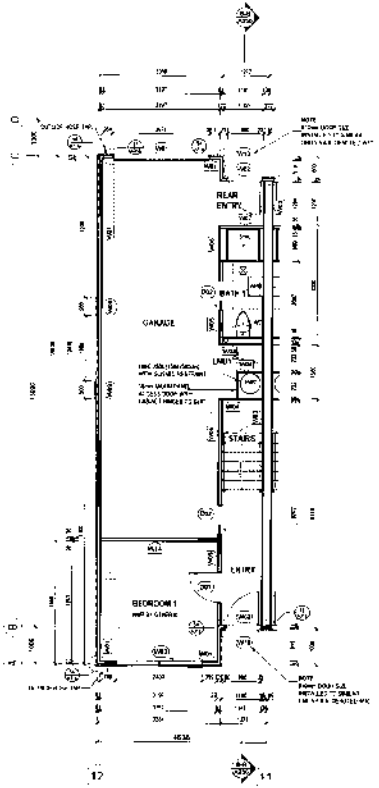
PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

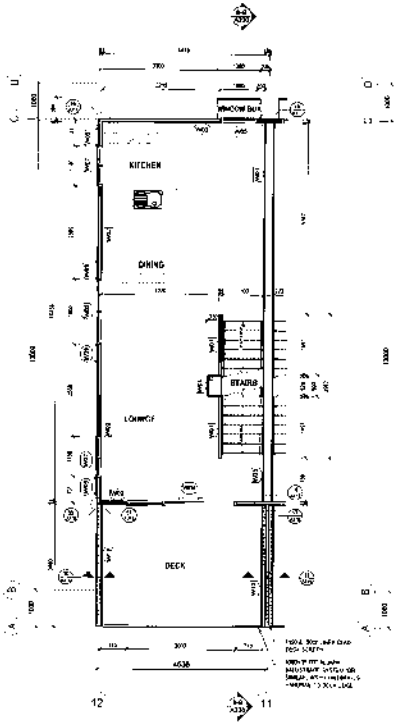
SHEET TITLE
UNIT 9 FLOOR PLAN
UNIT TYPE 2

DATE: 2 MAY 2007
DRAWN: RD
SCALE: 1:50@A1/1:100@A3
SHEET: A204
STATUS: BUILDING CONSENT

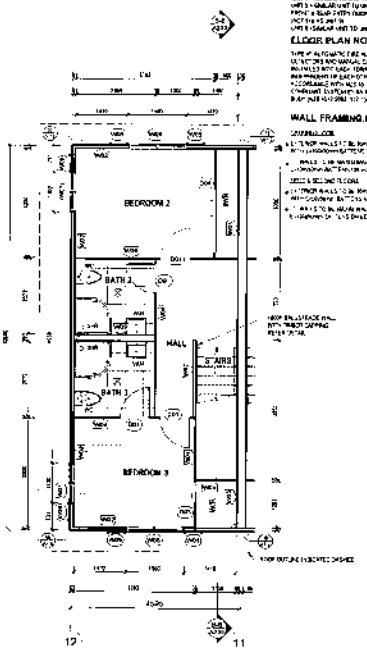
ARCHITECTURAL SERIES



UNIT 10
GROUND LEVEL FLOOR PLAN



UNIT 10
FIRST LEVEL FLOOR PLAN



UNIT 10
SECOND LEVEL FLOOR PLAN

LEGEND:

UNIT TYPE 1 NOTES:

FLOOR PLAN NOTES:

WALL FRAMING NOTES:

GENERAL NOTES

REV	DESCRIPTION	DATE

CONSULTANTS
STRUCTURAL: KINGETT MITCHELL LTD
HYDRAULIC: HYDRAULIC SERVICES LTD
FIRE: FIRE DESIGNS LTD
STRUCTURAL: ARBY CONSULTANTS LTD
CIVIL: ARBY CONSULTANTS LTD
GEOTECHNICAL: GEOTECH SERVICES LTD
SURVEYOR: EASTDALE SURVEYORS LTD

DOMINION PROJECT MANAGEMENT LIMITED
P.O. Box 58 340 Greenmount
Manukau, New Zealand
PH 09 271 2807 FAX 09 273 4867
ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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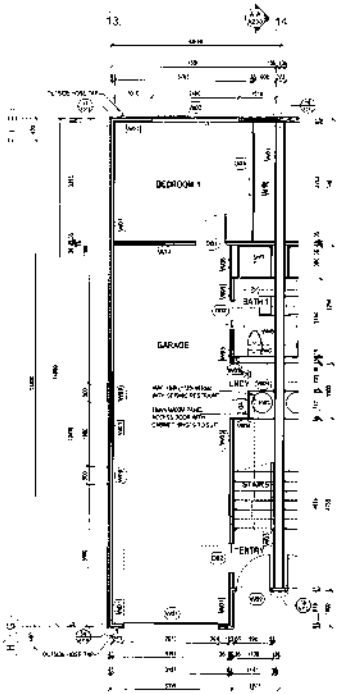
CONCEPTS - 24 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

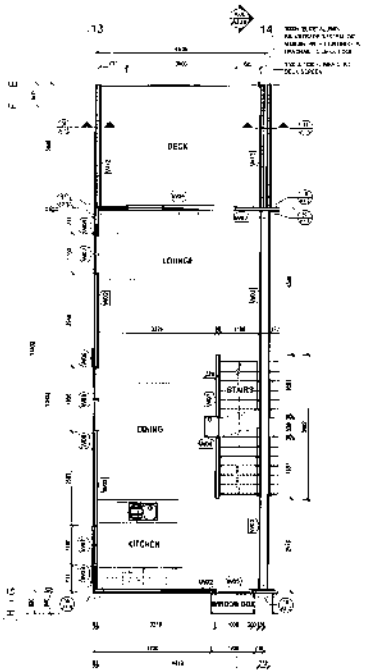
SHEET TITLE
UNIT 10 FLOOR PLAN
UNIT TYPE 1

DATE: 2 MAY 2007
DRAWN: PD
SCALE: 1:50@A1/1:100@A3
SHEET: A205
REVISION:
STATUS: BUILDING CONSENT

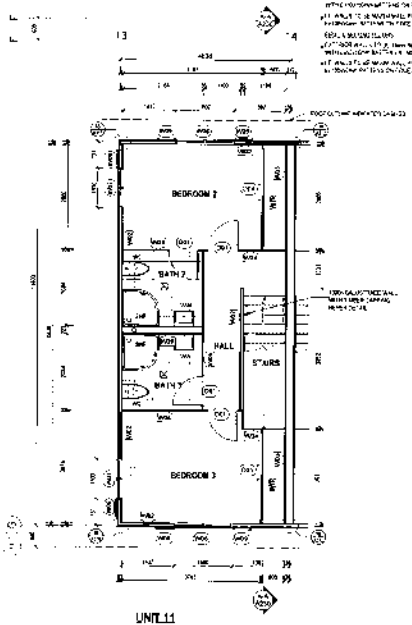
ARCHITECTURAL SERIES



UNIT 11
GROUND LEVEL FLOOR PLAN



UNIT 11
FIRST LEVEL FLOOR PLAN



UNIT 11
SECOND LEVEL FLOOR PLAN

LEGEND.

UNIT TYPE 3 NOTES:

FLOOR PLAN NOTES.

WALL FRAMING NOTES:

GENERAL NOTES

	BUILDING CONSENT ISSUE
REV	DESCRIPTION
CONSULTANT	CONTACT
STRUCTURAL	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
ARCHITECTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASEDALE SURVEYORS LTD

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P O BOX 26 245 EPSOM AUCKLAND 1344
Ph 09 216 3087 FAX 09 216 3089
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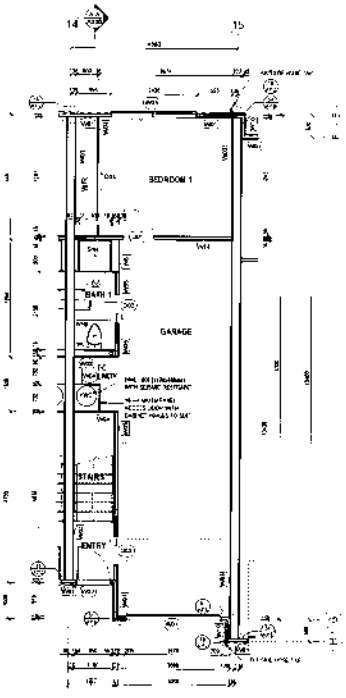
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

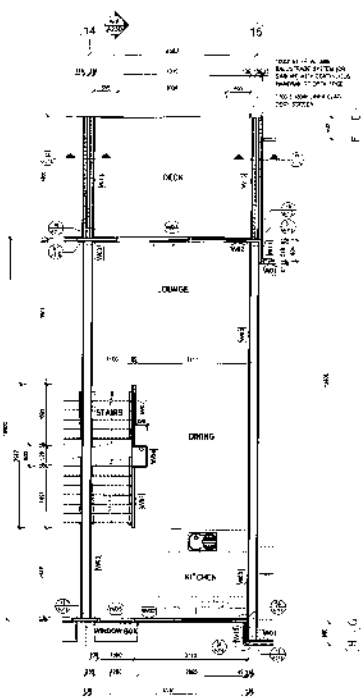
SHEET TITLE
UNIT 11 FLOOR PLAN
UNIT TYPE 3

DATE	PROJECT NO
2 MAY 2007	
DESIGNED / DRAWN	CHECKED
PD	
SCALE	
1:50@A1/1:100@A3	
SHEET	REV
A206	
STATUS	
BUILDING CONSENT	

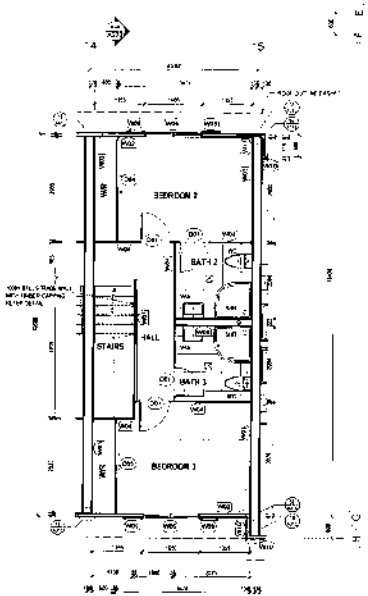
ARCHITECTURAL SERIES



UNIT 12
GROUND LEVEL FLOOR PLAN



UNIT 12
FIRST LEVEL FLOOR PLAN



UNIT 12
SECOND LEVEL FLOOR PLAN

FLOOR PLAN NOTES:

WALL FRAMING NOTES:

LEGEND:

UNIT TYPE 4 NOTES:

GENERAL NOTES

ARCHITECT	BRIGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	WREY CONSULTANTS LTD
CIVIL	WREY CONSULTANTS LTD
MECHANICAL	SCOTTK SERVICES LTD
SURVEYOR	EASCALE SURVEYORS LTD

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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
UNIT 12 FLOOR PLAN
UNIT TYPE 4

7 MAY 2007

RIT

1:50@A1 1:100@A3

A207

BUILDING CONSENT

ARCHITECTURAL SERIES

GENERAL NOTES

LEGEND

CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
ELEVATIONS

DATE
2 MAY 2007

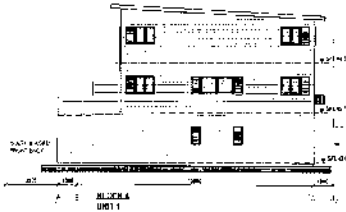
DRAWN
RD

SCALE
1:100@A1 / 1:200@A3

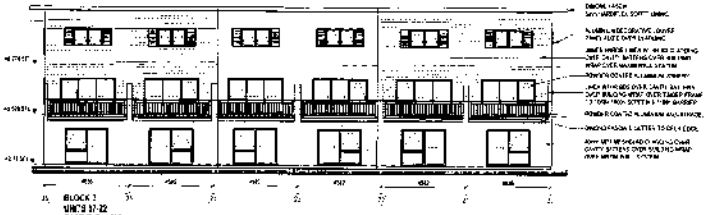
SHEET NO.
A208

SHEET
BUILDING CONSENT

ARCHITECTURAL SERIES

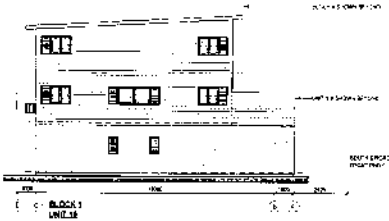


BLOCK 4
UNIT 1
EAST ELEVATION

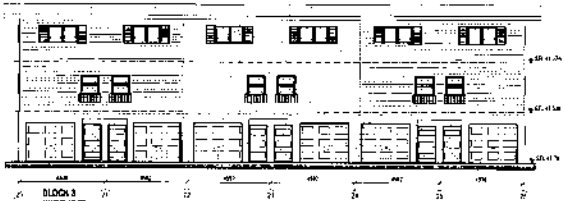


BLOCK 2
UNITS 17-22
EAST ELEVATION

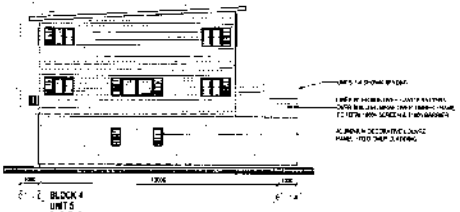
BLOCK 2
UNITS 11-16
WEST ELEVATION



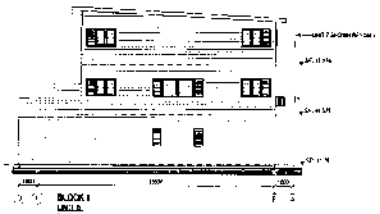
BLOCK 1
UNIT 16
WEST ELEVATION



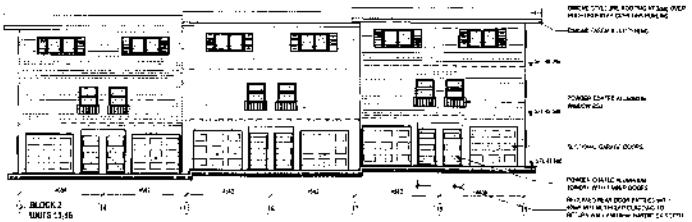
BLOCK 3
UNITS 17-22
COURTYARD ELEVATIONS



BLOCK 4
UNIT 5
END ELEVATION



BLOCK 1
UNITS
END ELEVATION



BLOCK 2
UNITS 13-16
COURTYARD ELEVATIONS

GENERAL NOTES:

LEGEND:

CONSULTANT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
	HYDROLOGIST PACIFIC LTD
	FIRL DESIGNS LTD
STRUCTURAL	AHLY CONSULTANTS LTD
CIVIL	AHLY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASBEALE SURVEYORS LTD

DEMPSTER PROJECT MANAGEMENT LIMITED

CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
ELEVATIONS

DATE
2 MAY 2007

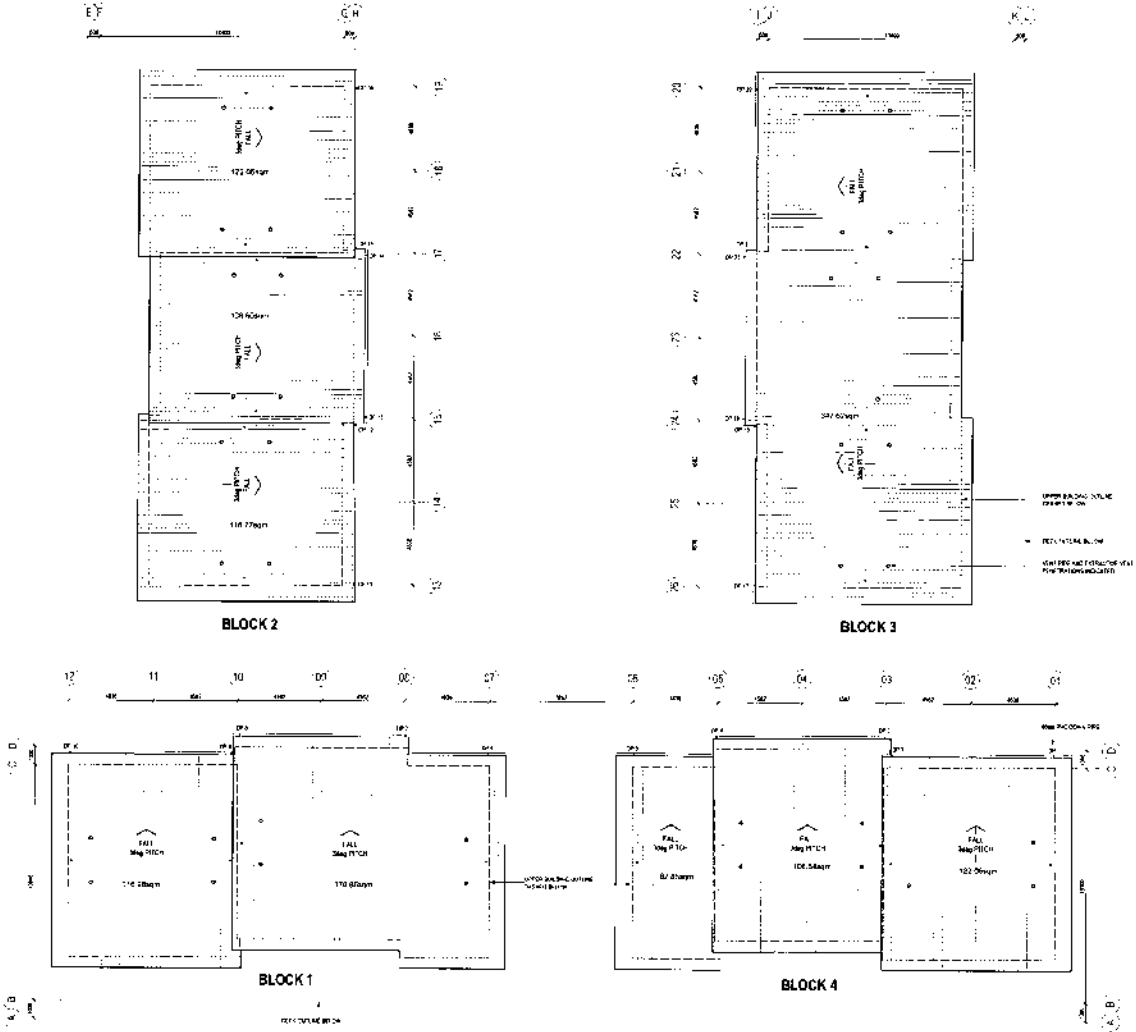
DRAWN
SD

SCALE
1:100@A1 / 1:200@A3

SHEET #
A208

STATUS
BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES

	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASEDALE SURVEYORS LTD

UNIVERSUM PROJECT MANAGEMENT LIMITED

CLIENT

CONCEPTS 124 LIMITED

PROJECT TITLE

PROPOSED TOWNHOUSES
45 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE

ROOF PLAN

DATE: 2 MAY 2007

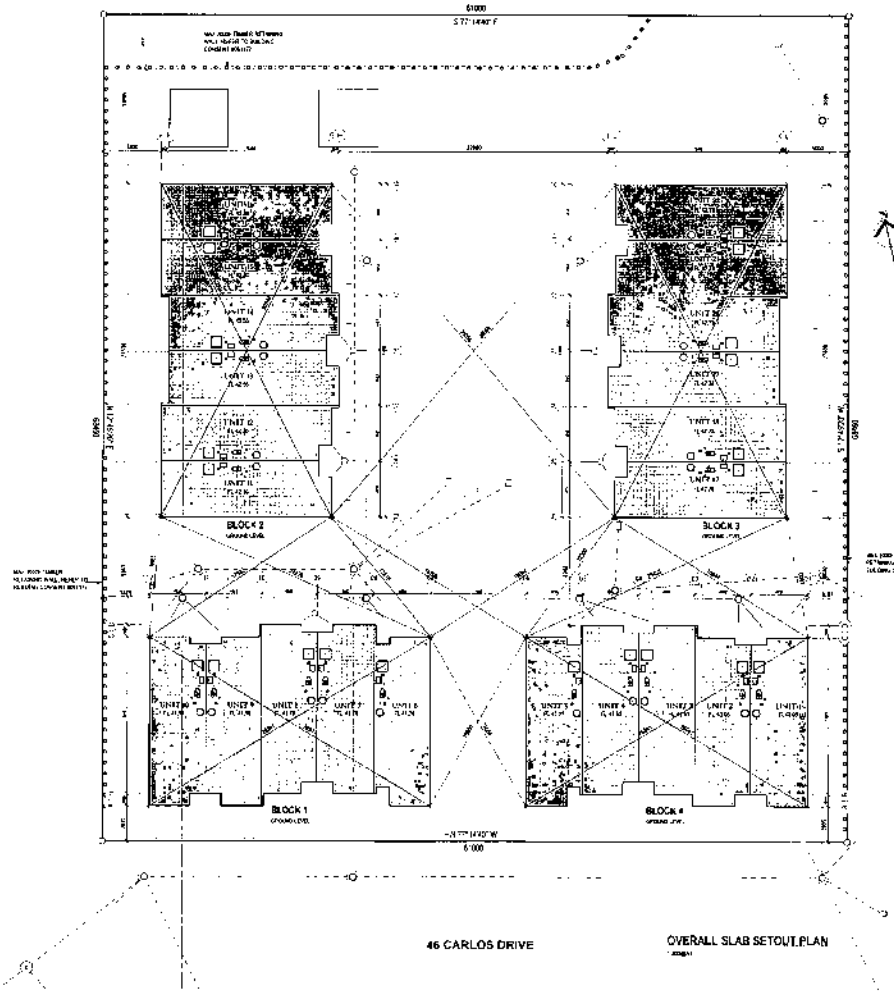
DESIGNED: RC

SCALE: 1:100@A1/1:200@A3

SHEET: A211

ISSUE: BUILDING CONSENT

ARCHITECTURAL SERIES



LEGEND:

GENERAL NOTES.

	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASEDALE SURVEYORS LTD

DIRECTOR OF PROJECT MANAGEMENT LIMITED

ARCHITECTURAL SERIES

CLIENT

CONCEPTS 124 LIMITED

PROJECT TITLE

PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE

OVERALL SLAB SETOUT PLAN

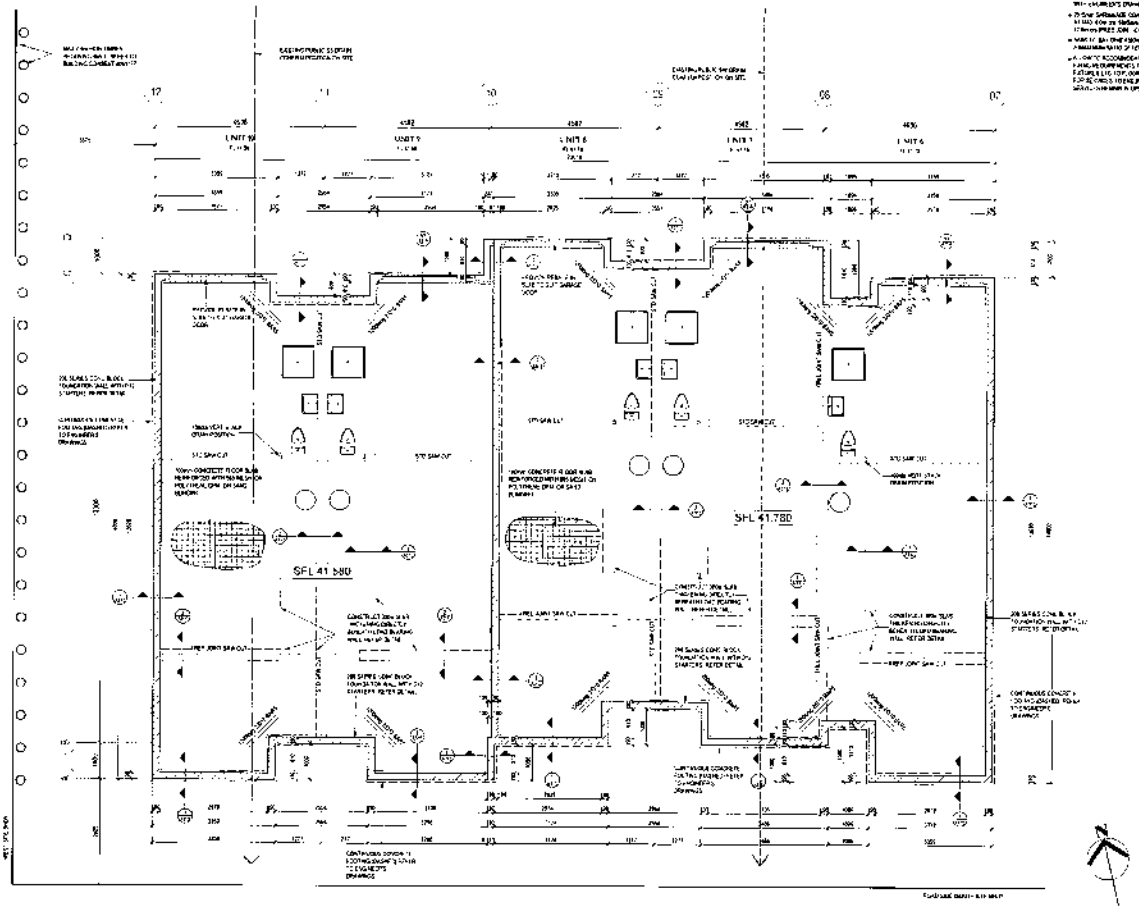
DATE: 2 MAY 2007

DESIGNED: RD

SCALE: 1:150@A1/1:300@A3

SHEET: A212

PLAN: BUILDING CONSENT



BLOCK 1
FOUNDATION PLAN

FOUNDATION NOTES:

GENERAL NOTES

HINGETT MITCHELL LTD
HYDRAULIC SERVICES LTD
FIRE JUSTICE LTD
AIREY CONSULTANTS LTD
AIREY CONSULTANTS LTD
RECTEK SERVICES LTD
EASEDALE SURVEYORS LTD

CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 1 FOUNDATION PLAN

DATE
2 MAY 2007

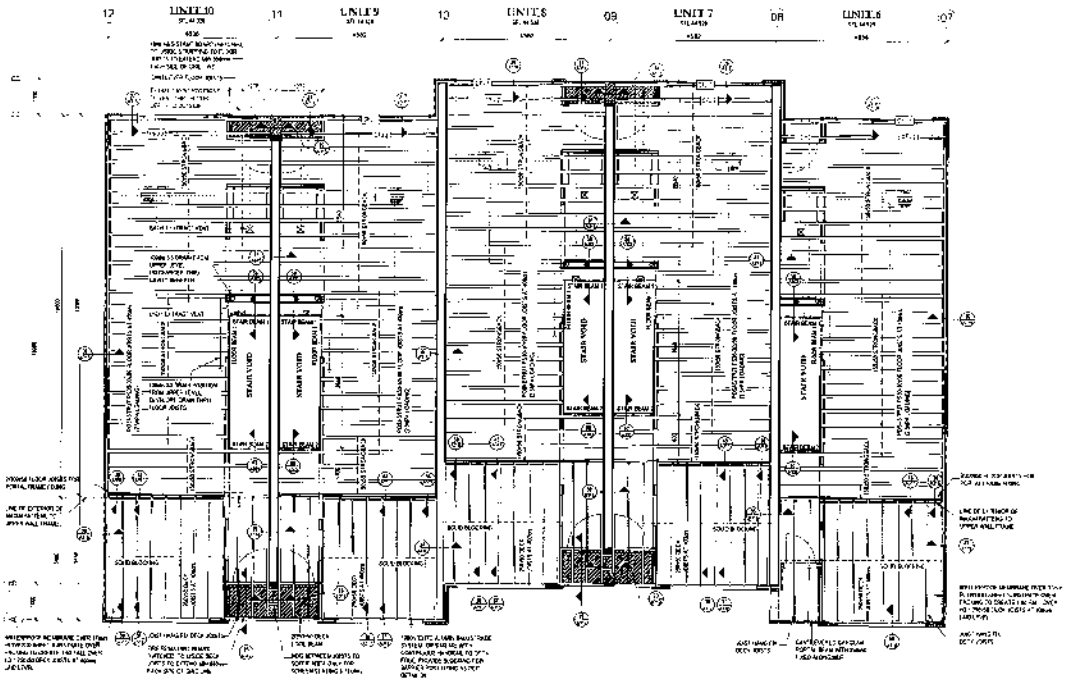
DRAWN
HU

SCALE
1:50@A1 / 1:100@A3

SHEET
A213

ISSUE
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 1
EIRST LEVEL FLOOR FRAMING PLAN

FRAMING MEMBERS.

• FLOOR BEAM 1	300HM0
• STAIR BEAM 1	300HM0
• STAIR BEAM 2	300HM0
• STAIRWELL & FIRST FLOOR JOIST 1	140SM0 (FULL HEIGHT) PROVIDE 2x 150x140 NAILED 500mm ALWAYS IN VERTICAL OR BEST FOR LOAD TO FIRST FLOOR
• STAIRWELL & FIRST FLOOR JOIST 2	300HM0

SERVICES NOTES:

SANITARY PLUMBING FOR STAIR ONLY ON FRAMING PLAN ROOF JOISTS = 150x50C, REFER TO PLUMBER AND DRAINLAYER

GENERAL NOTES.

CONSULTANT	ARCHITECT
ARCHITECT	ANGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	JURFY CONSULTANTS LTD
CIVIL	JURFY CONSULTANTS LTD
MAINTENANCE	GEOTEK SERVICES LTD
SURVEYOR	FASCIALE SURVEYORS LTD

ARCHITECTURAL PROJECT MANAGEMENT LIMITED
P.O. Box 18 384 Glenfield Auckland
Manukau East, New Zealand
PH 09 573 3601 FAX 09 571 4037
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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

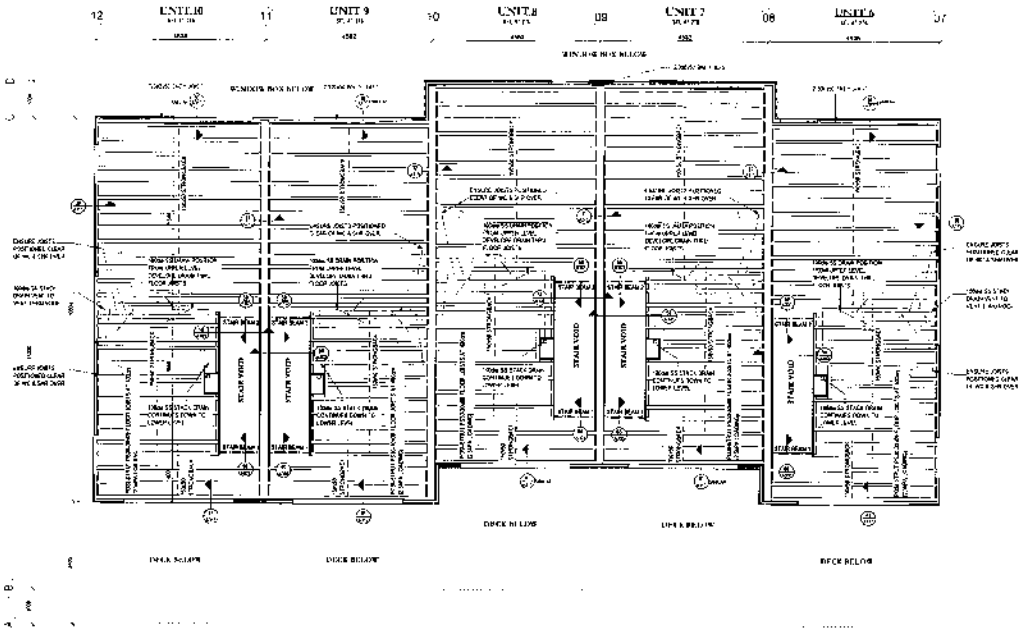
SHEET TITLE
BLOCK 1 (EVE) 1
FLOOR FRAMING PLAN

DATE 2 MAY 2007
DRAWN RD
SCALE 1:50@A1 / 1:100@A3
SHEET A214
REV
BUILDING CONSENT

ARCHITECTURAL SERIES

FRAMING MEMBERS:

SERVICES NOTES:



BLOCK 1
SECOND LEVEL FLOOR FRAMING PLAN

GENERAL NOTES

	BUILDING CONSENT ISSUE
	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASSCALE SURVEYORS LTD

CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
45 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

BLOCK 1 LEVEL 2
FLOOR FRAMING PLAN

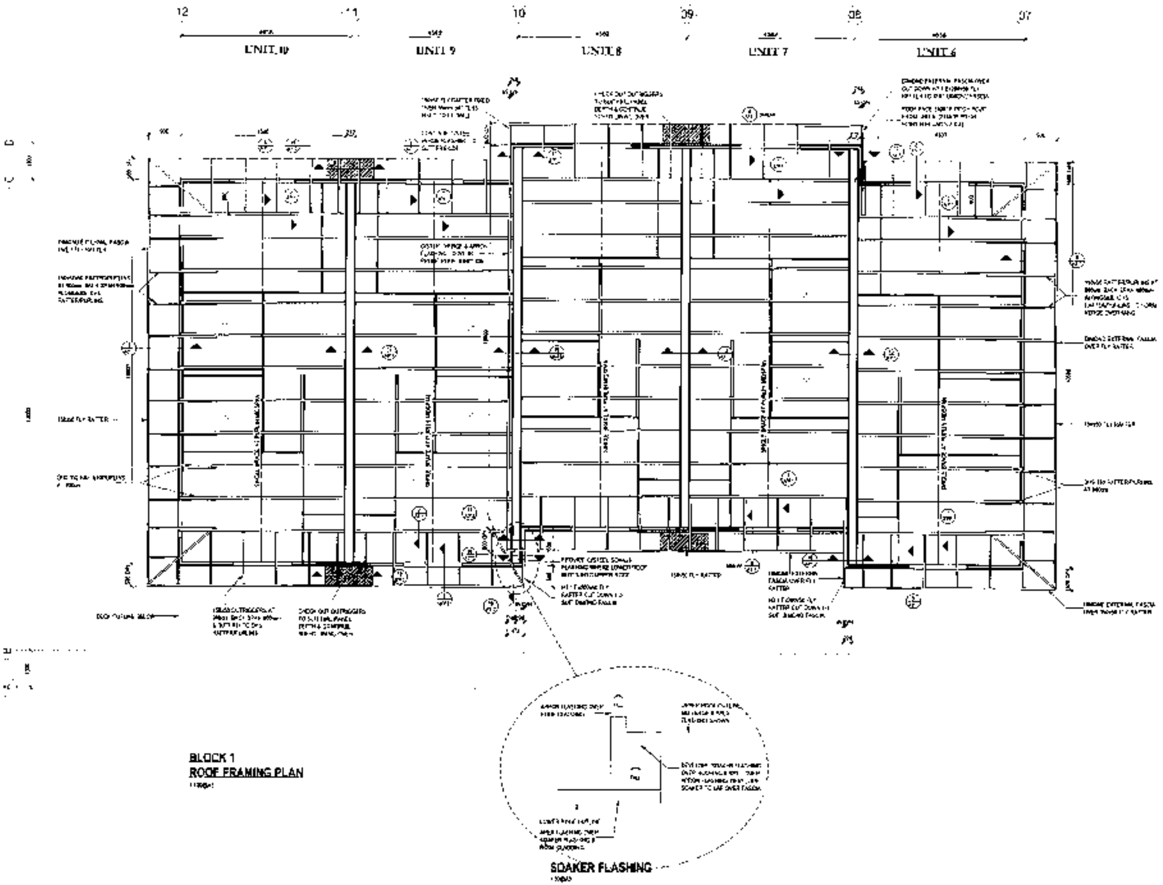
2 MAY 2007

1:50@A1 / 1:100@A3

A215

BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 1
ROOF FRAMING PLAN

GENERAL NOTES:

BUILDING CONSENT ISSUE

MITCHELL LTD

HYDRAULIC SERVICES LTD

FIRE DESIGNS LTD

AIREY CONSULTANTS LTD

AIREY CONSULTANTS LTD

GEOTEK SERVICES LTD

CASCADE SURVEYORS LTD

CLIENT

CONCEPTS 124 LIMITED

PROJECT TITLE

PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE

BLOCK 1 ROOF FRAMING PLAN

2 MAY 2007

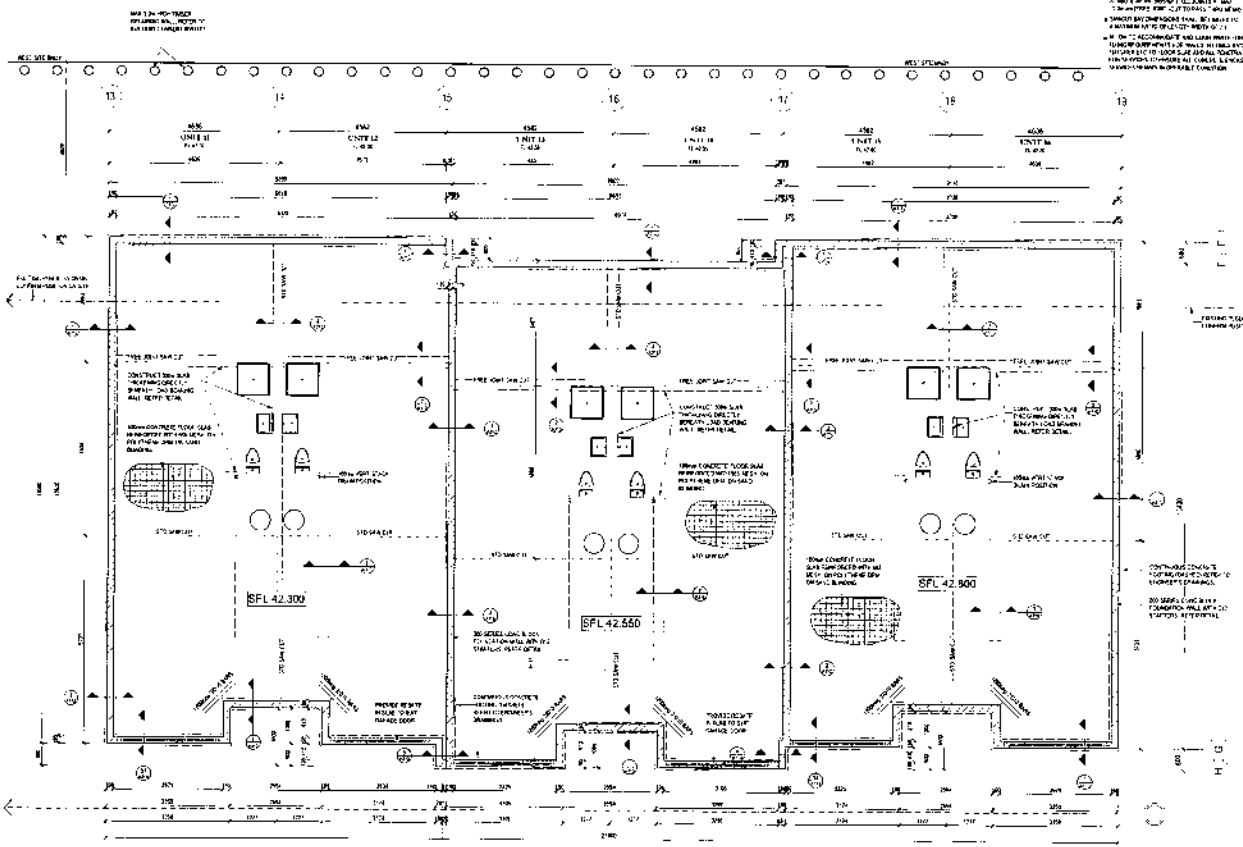
RD

1:50@A1 / 1:100@A3

A216

BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 2
FOUNDATION PLAN

FOUNDATION NOTES:

GENERAL NOTES.

ARCHITECT	KINGETT MITCHELL LTD
PROJECT	PYRAMIDIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEX SERVICES LTD
	CASEDALE SURVEYORS LTD

OPPORTUNITY PROJECT MANAGEMENT LIMITED
PH 09-271 9997 FAX 09-271 9831

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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 2 FOUNDATION PLAN

DATE
2 MAY 2007

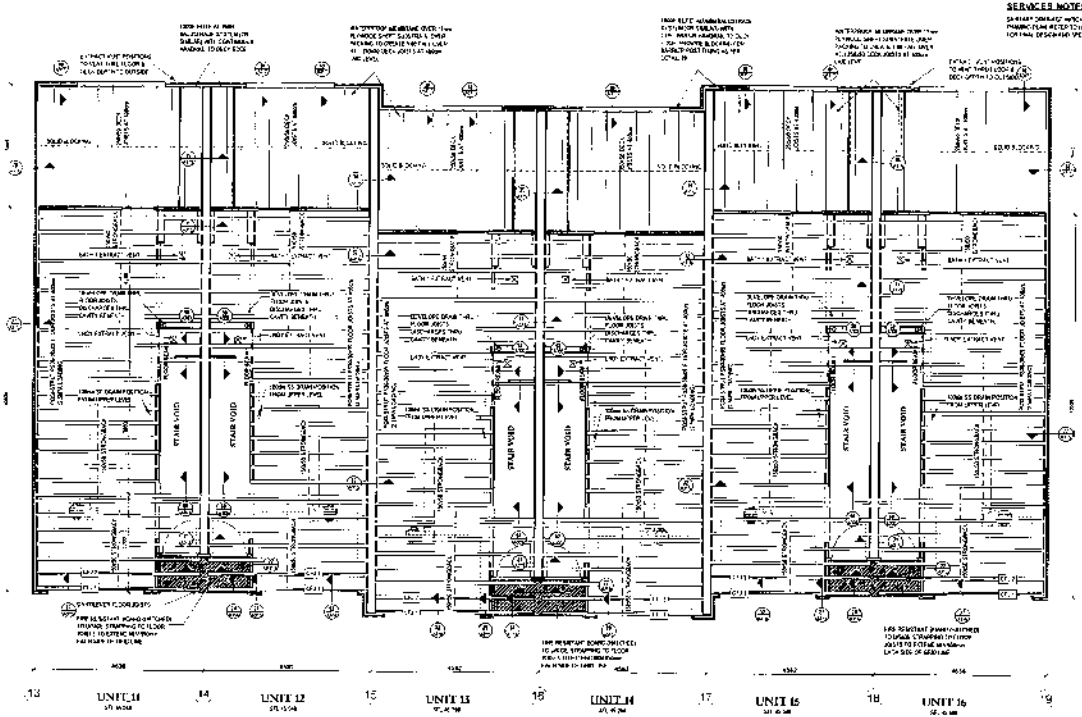
DRAWN
RD

SCALE
1:50@A1 / 1:100@A3

SHEET
A217

BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 2
FIRST LEVEL FLOOR FRAMING PLAN

FRAMING MEMBERS.

SERVICES NOTES:

GENERAL NOTES

KNISETT MITCHELL LTD
HYDRAULIC SERVICES LTD
FIRE DESIGNS LTD
AIREY CONSULTANTS LTD
AIREY CONSULTANTS LTD
LEITH SERVICES LTD
EARSHAUL SURVEYORS LTD

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 2 LEVEL 1
FLOOR FRAMING PLAN

DATE
2 MAY 2007

DRAWN
RD

SCALE
1:50@A1 / 1:100@A3

SHEET
A218

ISSUE
BUILDING CONSENT

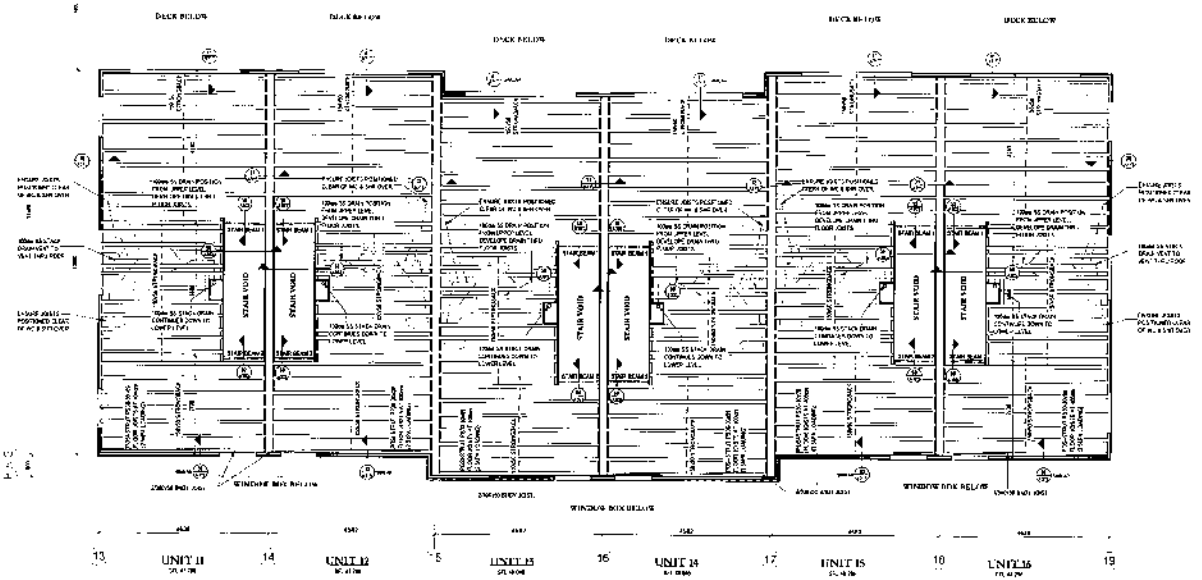
ARCHITECTURAL SERIES

FRAMING MEMBERS:

- STAIR BEAM 1 [illegible]
- STAIR BEAM 2 [illegible]

SERVICES NOTES:

[illegible]



BLOCK 2
SECOND LEVEL FLOOR FRAMING PLAN

GENERAL NOTES:

[illegible]

	[illegible]
	RIVETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASECALE SURVEYORS LTD

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[illegible]
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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 2 LEVEL 2
FLOOR FRAMING PLAN

DATE
2 MAY 2007

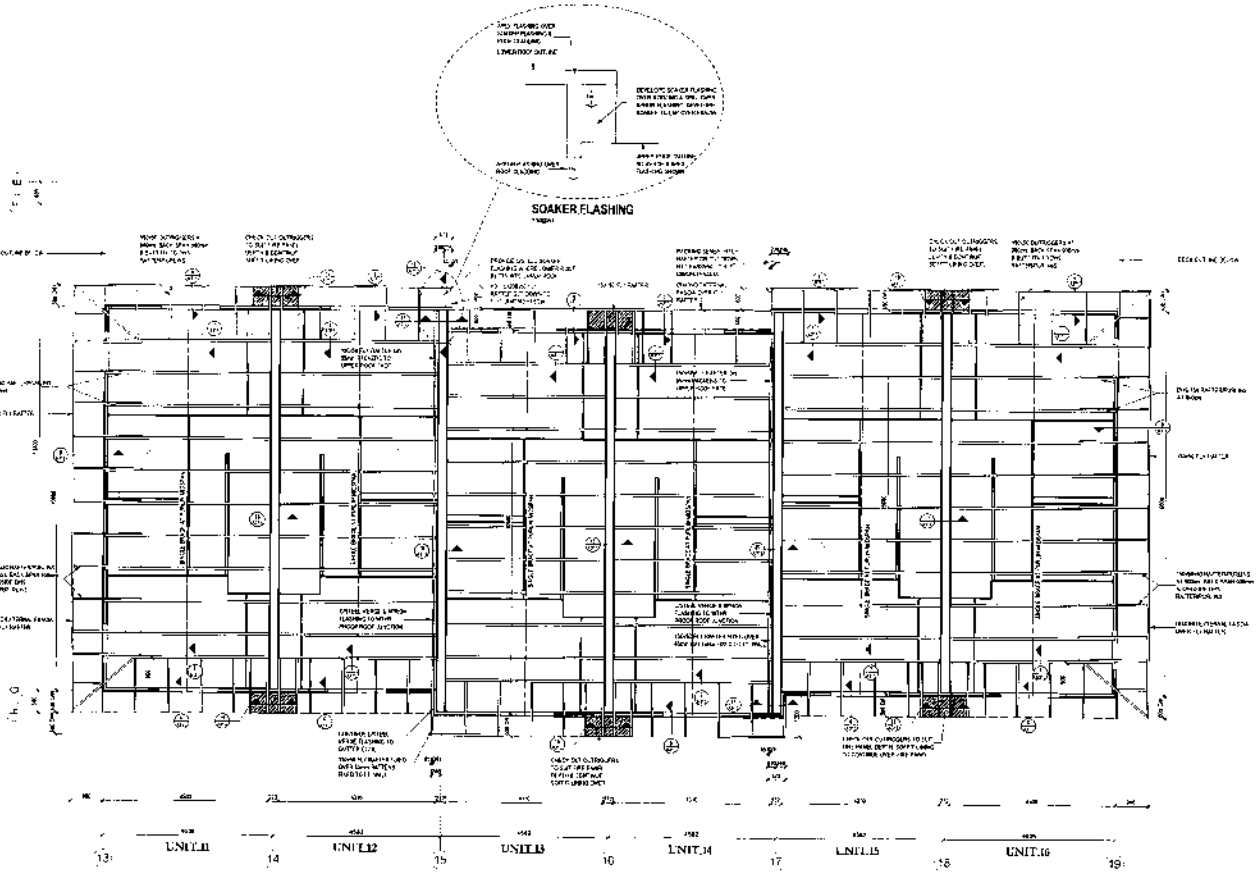
DESIGNED | DRAWN | CHECKED
RD

SCALE
1:50@A1 / 1:100@A3

SHEET # | REV #
A219

SCALE
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 2
ROOF FRAMING PLAN

GENERAL NOTES

	KNIGHTT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASEDALE SURVEYORS LTD

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CONCEPTS 124 LIMITED

PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

BLOCK 2 ROOF FRAMING PLAN

2 MAY 2007

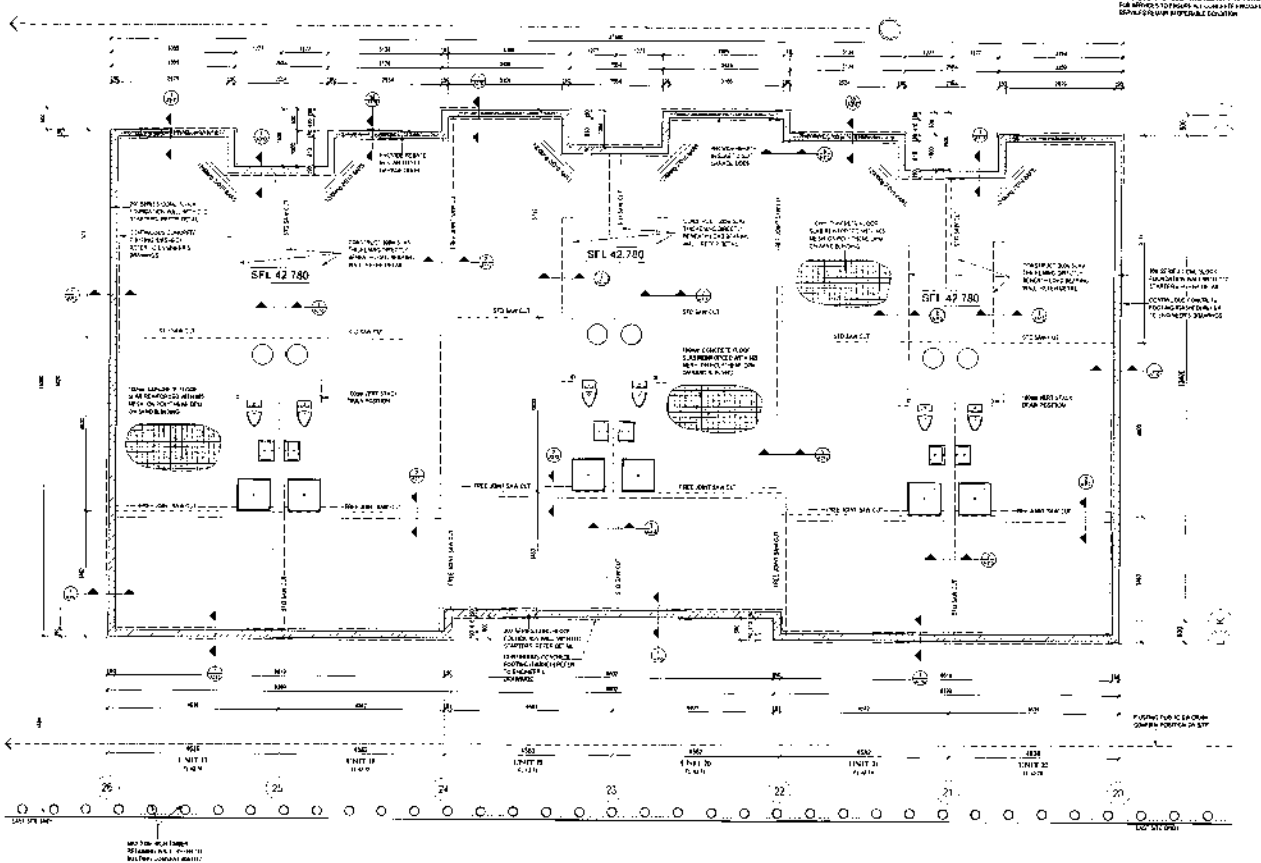
RD

1:50@A1 / 1:100@A3

A220

BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 3
FOUNDATION PLAN
1:100@A3

FOUNDATION NOTES:

- [illegible]
- [illegible]
- [illegible]
- [illegible]

GENERAL NOTES

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

[illegible]

ORMISTON PROJECT MANAGEMENT LIMITED
[illegible]

[illegible]

CLIENT
CONCEPTS '24 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 3 FOUNDATION PLAN

DATE 2 MAY 2007	DRAWN RD	CHECKED
SCALE 1:50@A1 / 1:100@A3		
SHEET NO. A221	REV	
STAGE BUILDING CONSENT		

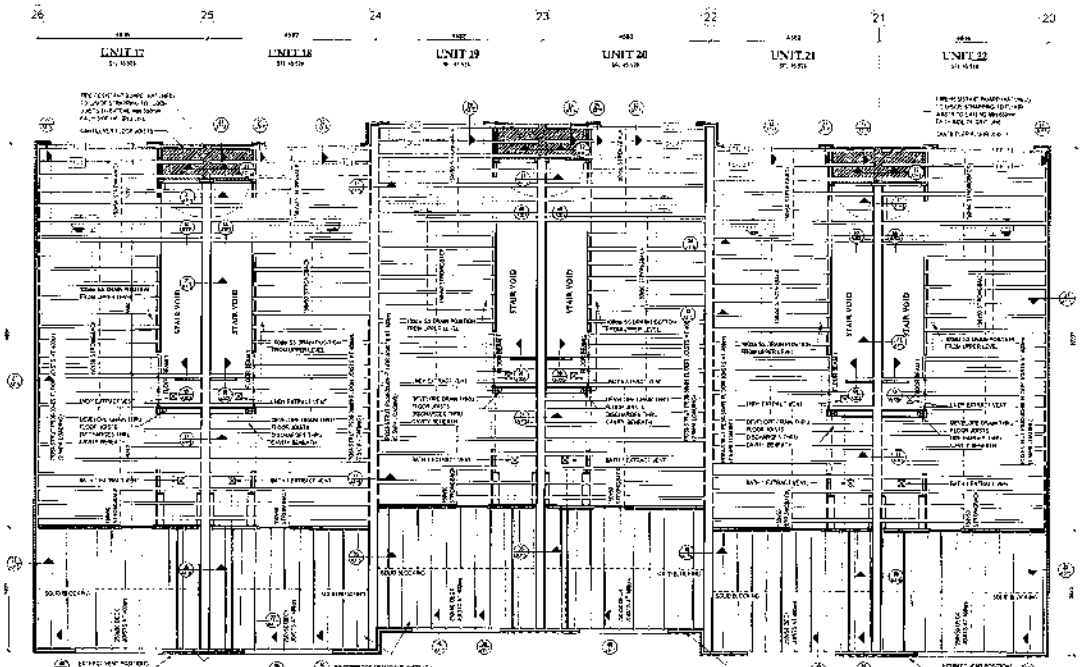
ARCHITECTURAL SERIES

FRAMING MEMBERS.

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

SERVICES NOTES:

[illegible]



BLOCK 3
FIRST LEVEL FLOOR FRAMING PLAN

GENERAL NOTES.

[illegible]

REV	DESCRIPTION	DATE
	[illegible]	

[illegible]	KINGETT MITCHELL LTD
[illegible]	[illegible]
[illegible]	FIRE DESIGNS LTD
[illegible]	AIREY CONSULTANTS LTD
[illegible]	AIREY CONSULTANTS LTD
[illegible]	GEOTECH SERVICES LTD
[illegible]	EXCELSIOR SURVEYORS LTD

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[illegible]
PH [illegible] FAX [illegible]
[illegible]

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[illegible]

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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 3 LEVEL 1
FLOOR FRAMING PLAN

DATE
2 MAY 2007

DESIGNED | DRAWN | CHECKED
RD

SCALE
1:50@A1 / 1:100@A3

SHEET #
A222

TITLE
BUILDING CONSENT

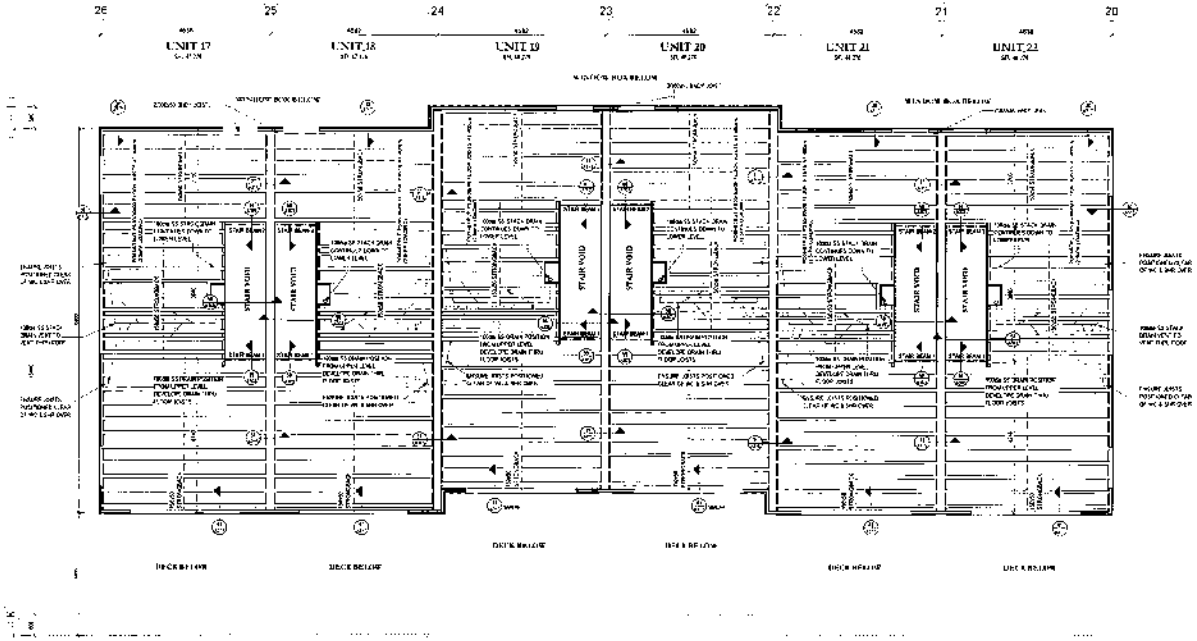
ARCHITECTURAL SERIES

FRAMING MEMBERS:

- STAIR BEAM 200x400
- STAIR BEAM 170x400

SERVICES NOTES:

SANITARY DRAINAGE INVERTS ONE FOOT MINIMUM FROM BEAM. REFER "DWG" DRAINAGE FOR FINAL DESIGN AND SPECIFICATION.



BLOCK 3
SECOND LEVEL FLOOR FRAMING PLAN

GENERAL NOTES:

ARCHITECT	ARNDELL MITCHELL LTD
STRUCTURAL	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
MECHANICAL	AIRTY CONSULTANTS LTD
ELECTRICAL	AIRTY CONSULTANTS LTD
SERVICES	DEDION SERVICES LTD
SURVEYOR	FASTRAIT SURVEYORS LTD

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ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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PROJECT TITLE
PROPOSED TOWN HOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

DRAWING TITLE
BLOCK 3 LEVEL 2
FLOOR FRAMING PLAN

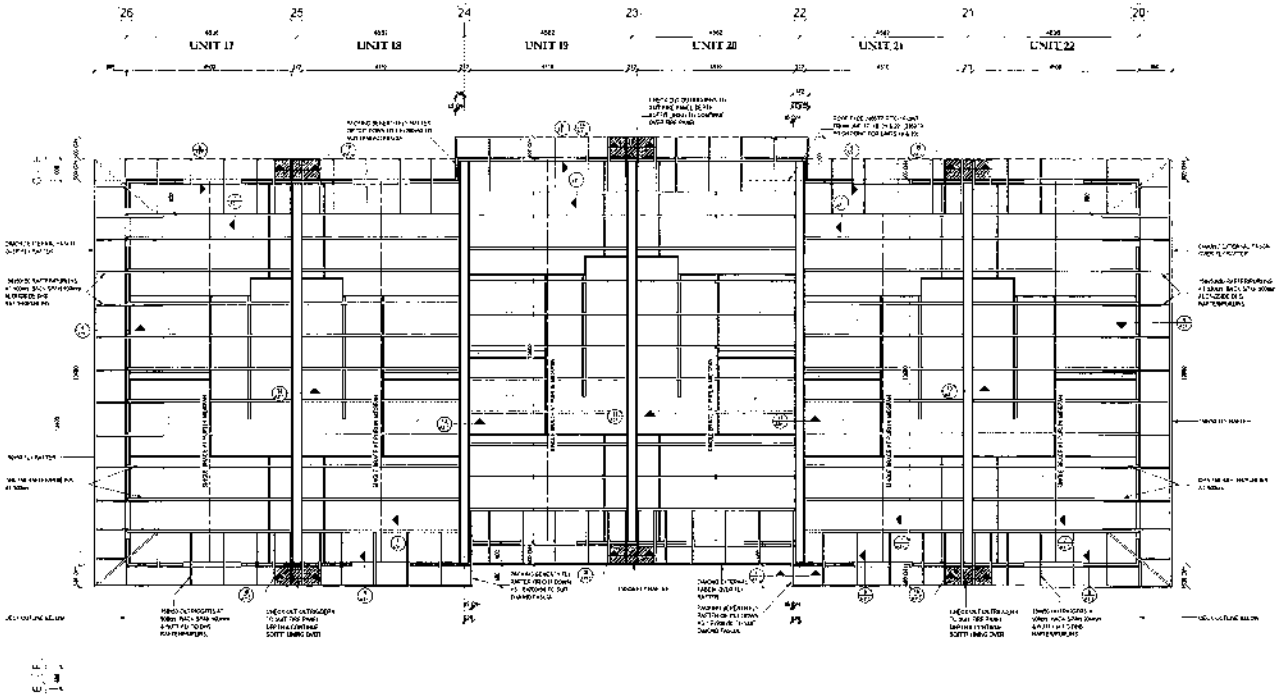
DATE 2 MAY 2007
DRAWN RD

SCALE 1:50@A1 / 1:100@A3

DRAWING NO. A223

STATUS BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 3
ROOF FRAMING PLAN

GENERAL NOTES

BUILDING CONSENT

	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	PIPE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTECH SERVICES LTD
	EASEDALE SURVEYORS LTD

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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 3 ROOF FRAMING PLAN

DATE
2 MAY 2007

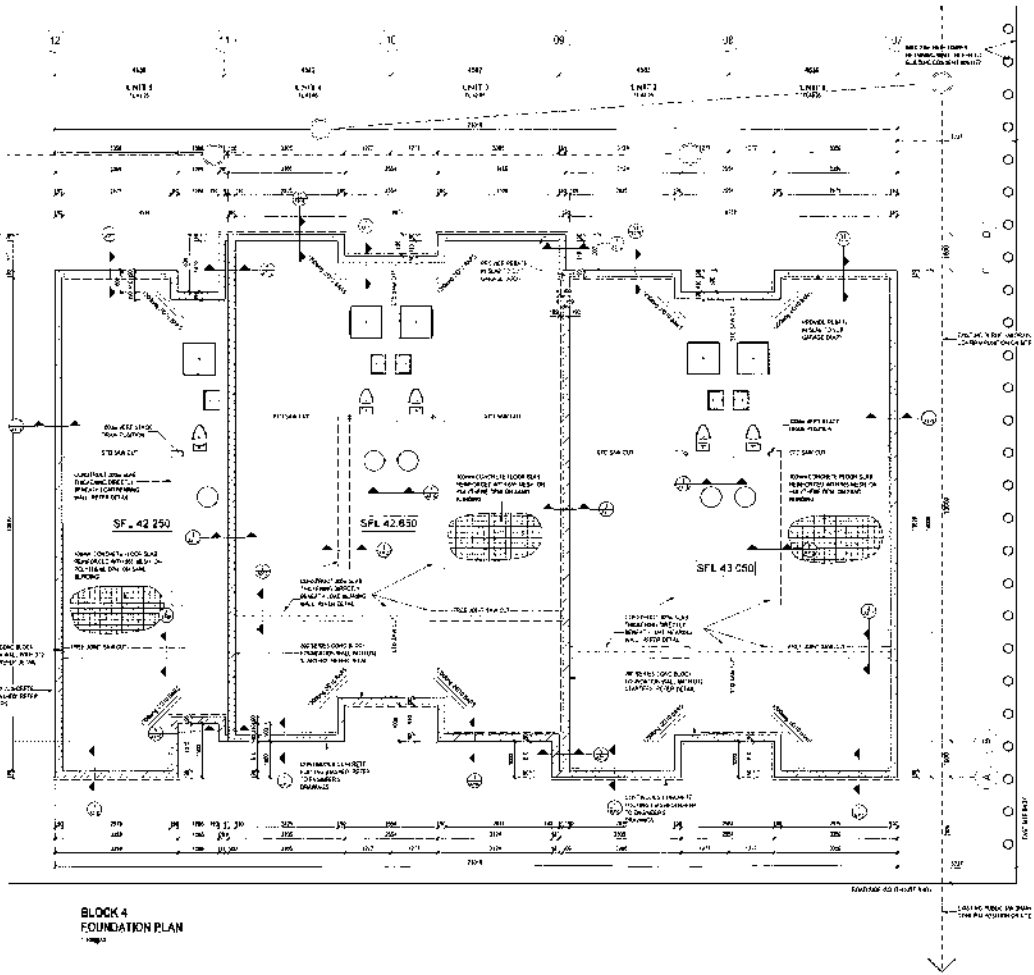
DRAWN
SD

SCALE
1:50@A1 / 1:100@A3

SHEET
A224

PLAN
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 4
FOUNDATION PLAN

FOUNDATION NOTES:

- [illegible]
- [illegible]
- [illegible]
- [illegible]

GENERAL NOTES

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

PINGETT MITCHELL LTD
HYDRAULIC SERVICES LTD
FIRE DESIGNS LTD
AIREY CONSULTANTS LTD
AIREY CONSULTANTS LTD
CROTEH SERVICES LTD
PASEGATE SURVEYORS LTD

DRAGSTON PROJECT MANAGEMENT LIMITED
[illegible]

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[illegible]

CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 4 FOUNDATION PLAN

DATE
2 MAY 2007

DESIGNED | DRAWN | CHECKED
RD

SCALE
1:50@A1 / 1:100@A3

SHEET #
A225

SCALE
BUILDING CONSENT

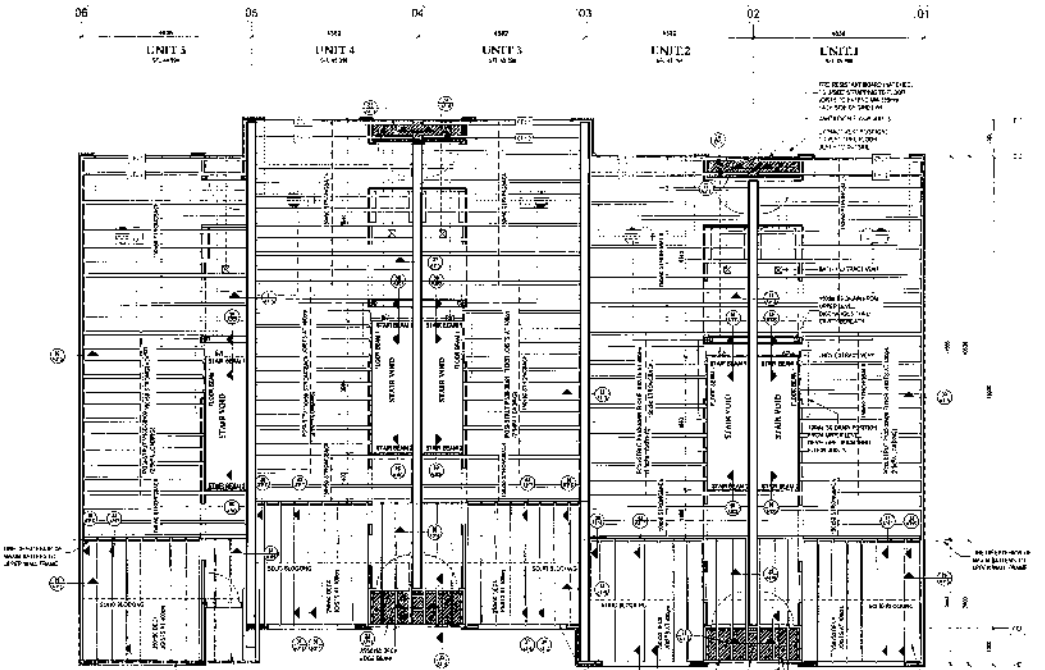
ARCHITECTURAL SERIES

FRAMING MEMBERS:

- FLOOR BEAM 1 — 270PFC
- STAIR BEAM 1 — 200PFC
- STAIR BEAM 2 — 150PFC
- CITY COUNCIL OWNED FLOOR JOIST — 150X50 FLOOR BEAM WHICH OF 2 - 1 RAM HAS A 150MM AHEAD LOCATION OF BEAM FOR CONCRETE DETAILS TO BE AGREED
- CITY COUNCIL OWNED FLOOR BEAM 2 — 270PFC

SERVICES NOTES:

SANITARY PLUMBING, INSULATION FIRE FOAM
FIREWALL IS TO BE WRAPPED WITH FIRE BLANKET
FIRE WALL IS TO BE WRAPPED WITH FIRE BLANKET



BLOCK 4
FIRST LEVEL FLOOR FRAMING PLAN
1:100@A3

GENERAL NOTES:

BUILDING CONSENT ISSUE

REV	DESCRIPTION	DATE

	CONTACT
ARCHITECT	MASCETTI MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
GEO	AIREY CONSULTANTS LTD
ELECTRICAL	CEDTEK SERVICES LTD
SURVEYOR	EASEDALE SURVEYORS LTD

ORBISTON PROJECT MANAGEMENT LIMITED
P.O. BOX 58-285 GREENLYNN
MANUKAU, AUCKLAND 2141
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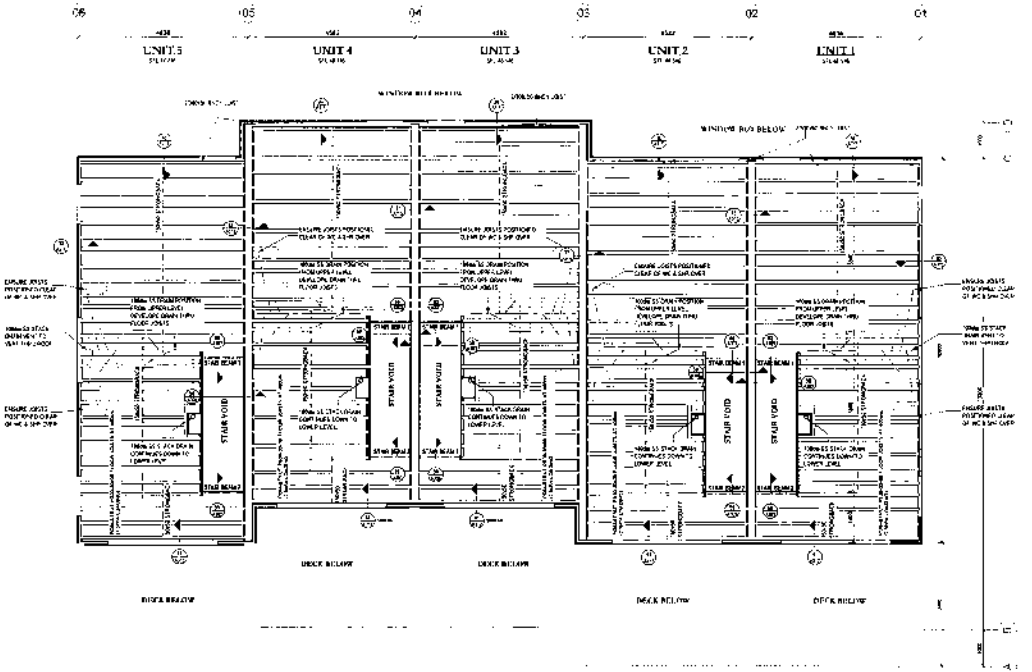
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 FARIOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 4 LEVEL 1
FLOOR FRAMING PLAN

DATE: 2 MAY 2017
DRAWN: RD
SCALE: 1:50@A1 1:100@A3
SHEET: A226
REV: 4
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 4
SECOND LEVEL FLOOR FRAMING PLAN

FRAMING MEMBERS:

SERVICES NOTES:

GENERAL NOTES:

	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	DEOTER SERVICES LTD
	EASEDALE SURVEYORS LTD

CRIMSTON PROJECT MANAGEMENT LIMITED

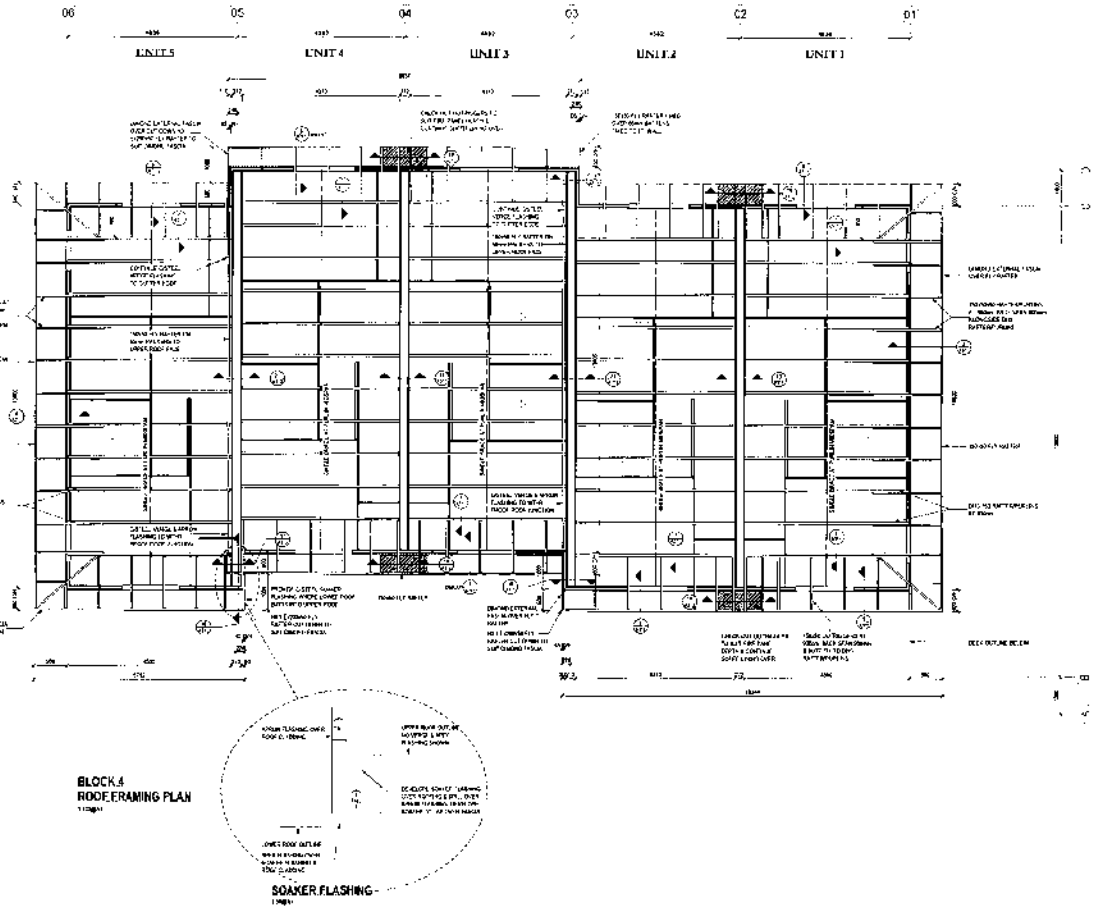
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 4 LEVEL 2
FLOOR FRAMING PLAN

DATE: 2 MAY 2007
DESIGNED: RD
SCALE: 1:50@A1 / 1:100@A3
SHEET: A227
NOTE: BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES.

	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	SAUNDERS SURVEYORS LTD

DIRECTOR PROJECT MANAGEMENT LIMITED

CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 4 ROOF FRAMING PLAN

DATE
2 MAY 2007

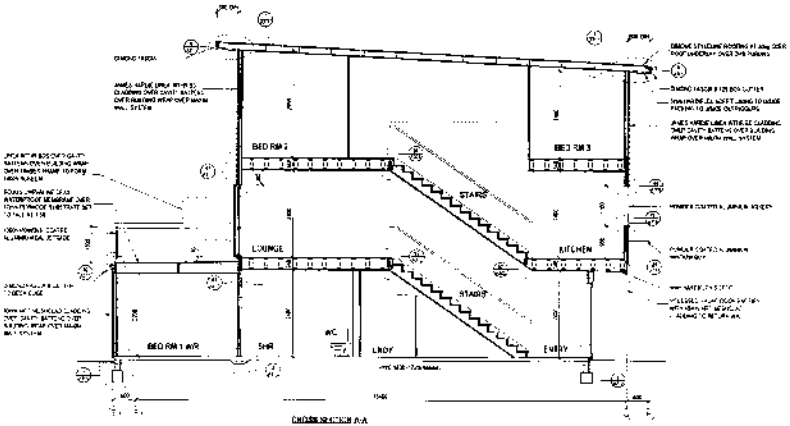
DESIGNED
RD

SCALE
1:50@A1 / 1:100@A3

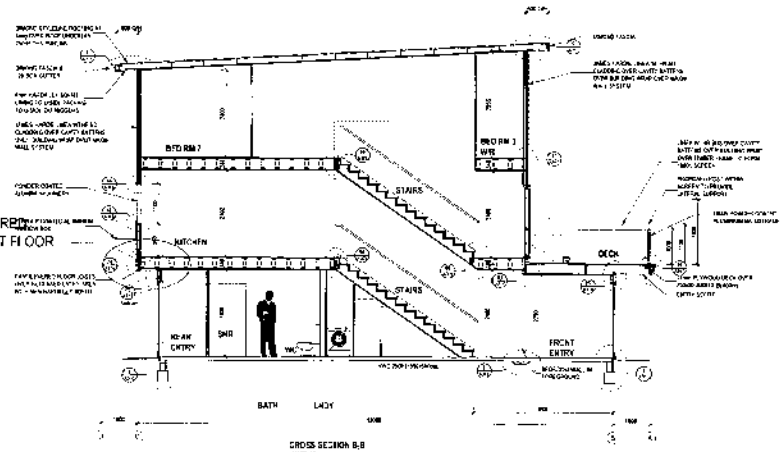
SHEET
A228

BUILDING CONSENT

ARCHITECTURAL SERIES



CROSS SECTION A-A
UNIT 11
(TYPICAL FOR UNITS 11-22)



CANTILEVERED POSI-STRUT FLOOR JOISTS.

CROSS SECTION B-B
UNIT 10
(TYPICAL FOR UNITS 1-10)

GENERAL NOTES

	BUILDING CONSENT SAVE SELECT
	KINGE T MCCALLUM LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASEDALE SURVEYORS LTD

ORBISTON PROJECT MANAGEMENT LIMITED
P.O. Box 36 365 MCLEAN BAY
MANUKAU, AUCKLAND 2141
PH 09 271 0907 FAX 09 271 0937

ARCHITECTURAL SERVICES PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CROSS SECTIONS

DATE
2 MAY 2007

DRAWN BY
RD

SCALE
1:50@A1/1:100@A3

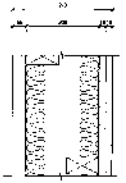
SHEET NO.
A230

SHEET
BUILDING CONSENT

ARCHITECTURAL SERIES

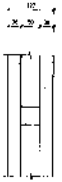
WALL TYPE W01
SCALE 1:5 @ A1 ELEVATION VIEW

WALL TYPE W02
SCALE 1:5 @ A1 ELEVATION VIEW

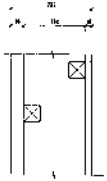


WALL TYPE W03
SCALE 1:5 @ A1 PLAN VIEW

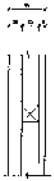
WALL TYPE W04
SCALE 1:5 @ A1 ELEVATION VIEW



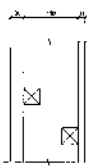
WALL TYPE W05
SCALE 1:5 @ A1 PLAN VIEW



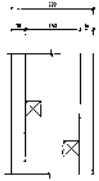
WALL TYPE W06
SCALE 1:5 @ A1 PLAN VIEW



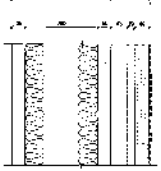
WALL TYPE W07
SCALE 1:5 @ A1 ELEVATION VIEW



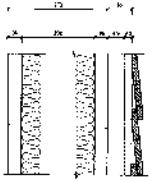
WALL TYPE W08
SCALE 1:5 @ A1 PLAN VIEW



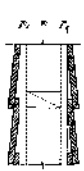
WALL TYPE W09
SCALE 1:5 @ A1 PLAN VIEW



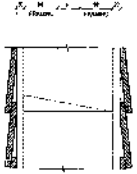
WALL TYPE W10
SCALE 1:5 @ A1 ELEVATION VIEW



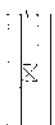
WALL TYPE W11
SCALE 1:5 @ A1 ELEVATION VIEW



WALL TYPE W12
SCALE 1:5 @ A1 ELEVATION VIEW



WALL TYPE W13
SCALE 1:5 @ A1 ELEVATION VIEW



WALL TYPE W14
SCALE 1:5 @ A1 PLAN VIEW

HZEC E2 BUILDING ENVELOPE RISK MATRIX

RISK FACTOR	RISK SEVERITY	RISK SCORE
WINDOWS	M	3
ROOF SHAPES	VH	4
ROOF/WALL INTERSECTION DESIGN	H	3
EAVES WIDTH	L	1
PLAN SHAPE COMPLEXITY	M	2
DECK DETAILS	H	4
TOTAL RISK SCORE		17

SUITABLE WALL CLADDINGS

RISK SCORE 17	
DIRECT FIXED TO FRAMING	OVER NOMINAL 20mm CAVITY
1) STUCCO, SYNTHETIC MASONRY ACCEPTABLE	2) WEATHERBOARD, VENEER, 20mm CAVITY
3) VERTICAL TIMBER BOARD AND BATTEN	4) STUCCO
5) VERTICAL TIMBER BOARD AND BATTEN	6) HORIZONTAL PROFILED METAL, FIBREGLASS & FIBREBOARD SHEET
7) VERTICAL METAL CORRUGATED SHEET	8) FIBREGLASS WEATHERBOARD
	9) FIBRE CEMENT WEATHERBOARD
	10) FIBRE CEMENT SHEET
	11) PLYWOOD SHEET
	12) EIFS

GENERAL NOTES:

KINGETT MITCHELL LTD
HYDRAULIC SERVICES LTD
FIRE DESIGNS LTD
AIRE - CONSULTANTS LTD
AIRE - TECHNICAL CONSULTANTS LTD
GEOTECH SERVICES LTD
PARTIAL SURVEYORS LTD

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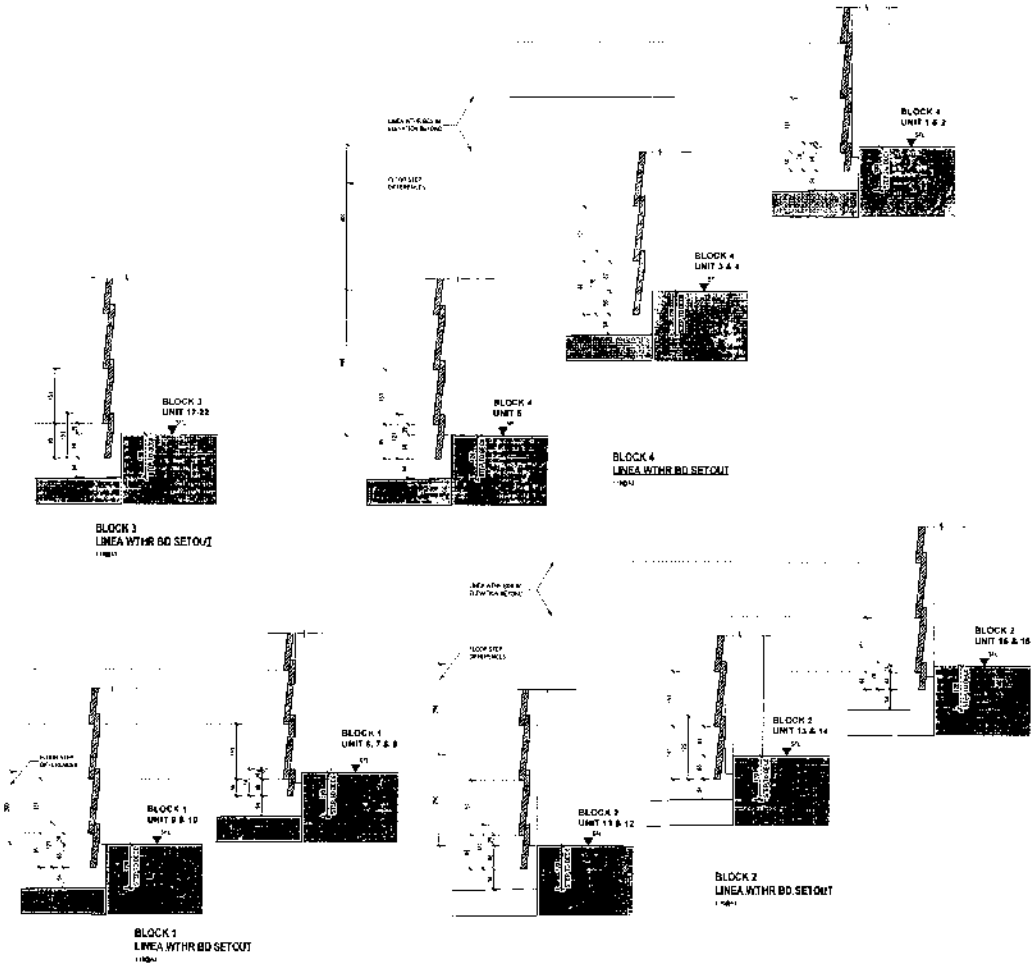
PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
WALL TYPE LEGEND
E2 RISK MATRIX

DATE 2 MAY 2007
DRAWN RD
SCALE 1:5@A1 / 1:10@A3
SHEET A301
STAGE BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES

	KINGETT MITCHELL LTD
	PYEPAUL SERVICES LTD
	HPB DESIGNS LTD
	AREY CONSULTANTS LTD
	AREY CONSULTANTS LTD
	CECTEK SERVICES LTD
	EASEDALE SURVEYORS LTD

CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
LINEA WTHR BD SETOUT

2 MAY 2007

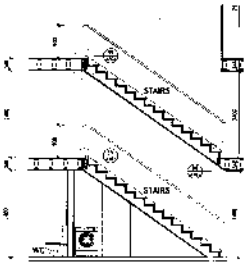
RD

1:50@A1 / 1:100@A3

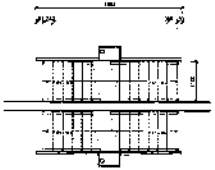
A302

BUILDING CONSENT

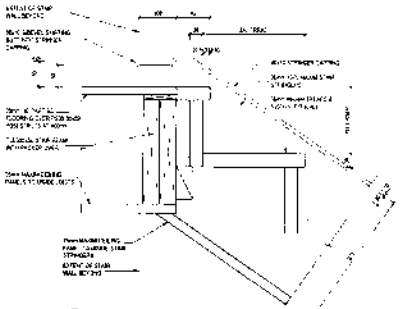
ARCHITECTURAL SERIES



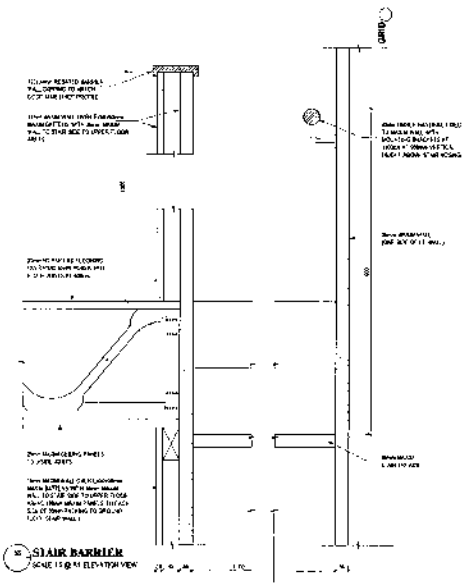
TYPICAL STAIR SECTION



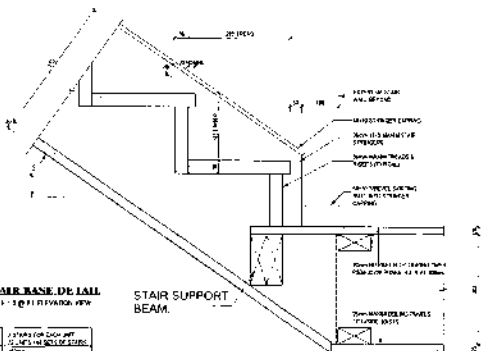
STAIR PLAN



STAIR TOP DETAIL
SCALE : 1 @ A1 ELEVATION VIEW



STAIR BARRIER
SCALE 1:5 @ A1 ELEVATION VIEW



STAIR BASE DETAIL
SCALE : 1 @ A1 ELEVATION VIEW

STAIRS	2 STAIRS FOR EACH UNIT (1 FLIGHT = 14 RISERS OF STAIRS)
RISING	175mm
TREAD	250mm
RAILS	50 (MIN. 5 RISERS)
FLIGHT	1000mm
STRINGER FRAME	8mm MGM (150mm WIDE) CAPPED

GENERAL NOTES:

REV	DESCRIPTION	DATE

CONSULTANT	KINNETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASEDALE SURVEYORS LTD

DIRECTOR: PROJECT MANAGEMENT LIMITED
P.O. Box 31 184, Lower Hutt
Ph: 04 921 2007 Fax: 04 971 4037

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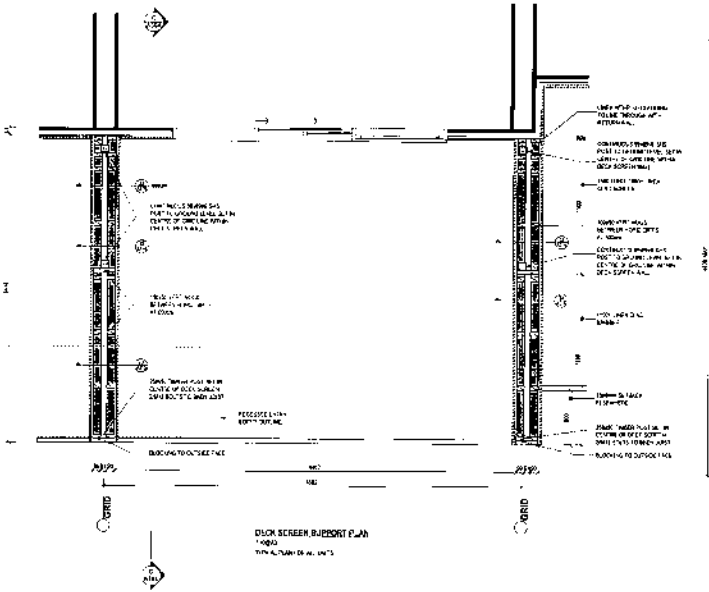
PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

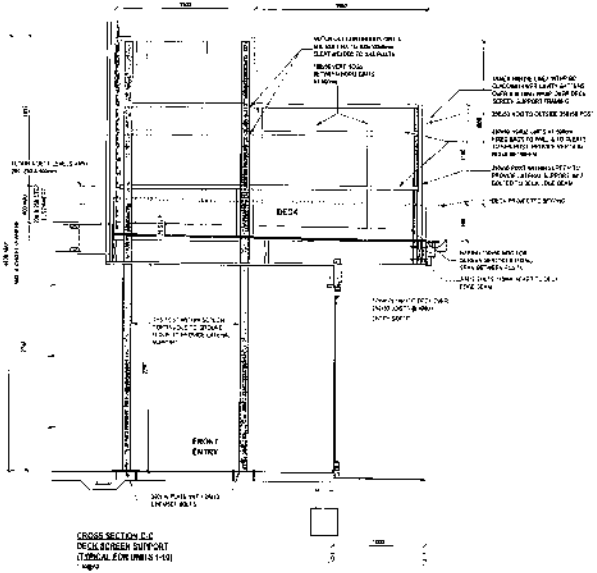
SHEET TITLE
STAIR DETAILS

DATE 2 MAY 2007
DESIGNED DRAWN RD
SCALE AS SHOWN
SHEET A303
STATUS BUILDING CONSENT

ARCHITECTURAL SERIES



DECK SCREEN SUPPORT PLAN
1:10@A3
TYPICAL PLAN FOR ALL UNITS



CROSS SECTION C-C
DECK SCREEN SUPPORT
(TYPICAL FOR UNITS 1-10)
1:10@A3

GENERAL NOTES:

CONSULTANT	CONTACT
ACOUSTIC	RINGLIT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
ENVIRONMENTAL	GEOTEK SERVICES LTD
LANDSCAPE	LASERSALE SURVEYORS LTD

CHRISTON PROJECT MANAGEMENT LIMITED
P.O. Box 35 355 Greenwood Ave
Manukau, Auckland 2011
PH 09 271 3007 FAX 09 271 4007
ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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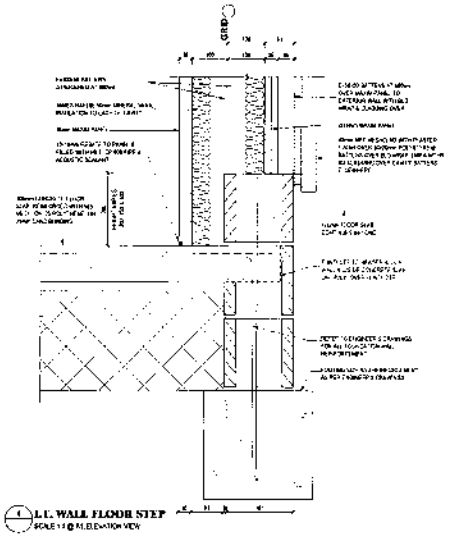
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

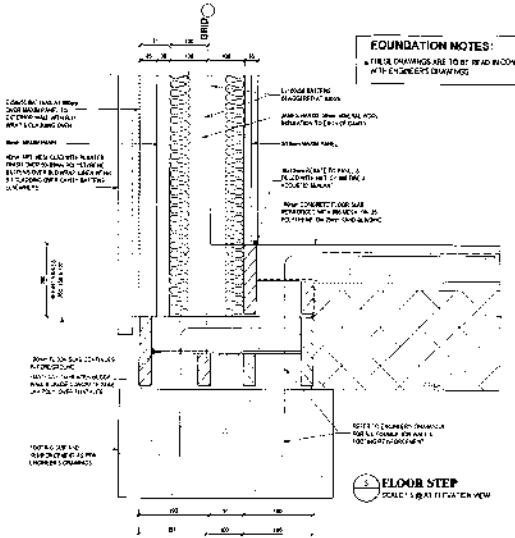
SHEET TITLE
DECK SCREEN DETAILS

DATE: 2 MAY 2007
PROJECT #:
DRAWN: RD
CHECKED:
SCALE: 1:20 @ A1 / 1:40 @ A3
SHEET #: A304
REV:
BUILDING CONSENT

ARCHITECTURAL SERIES



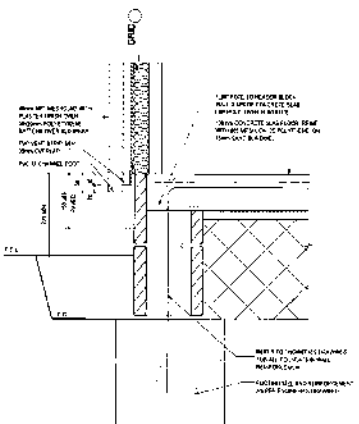
4 L.T. WALL FLOOR STEP
SCALE 1:5 @ A1 ELEVATION VIEW



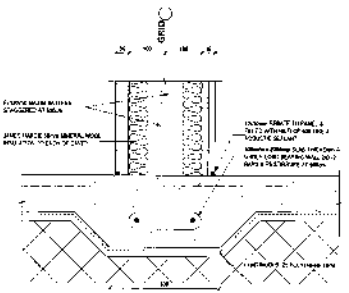
5 FLOOR STEP
SCALE 1:5 @ A1 ELEVATION VIEW

FOUNDATION NOTES:

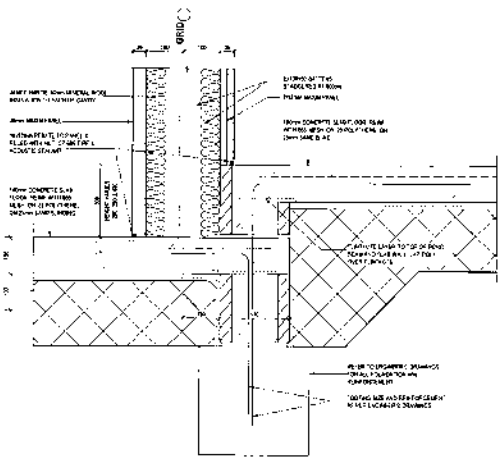
- FIELD DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ENGINEERS DRAWINGS



1 PERIMETER FOOTING
SCALE 1:5 @ A1 ELEVATION VIEW



2 SLAB THICKENING
SCALE 1:5 @ A1 ELEVATION VIEW



3 FLOOR STEP
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES.

	BUILDING CONSENT ISSUE	CONSENT
REV	DESCRIPTION	DATE
CONSULTANT	CONTACT	
ARCHITECT	KINGETT MITCHELL LTD	
HYDRAULIC	HYDRAULIC SERVICES LTD	
FIRE	FIRE DESIGNS LTD	
STRUCTURAL	KREY CONSULTANTS LTD	
CIVIL	KREY CONSULTANTS LTD	
GEOTECHNICAL	GEOTEK SERVICES LTD	
SURVEYOR	EASEDALE SURVEYORS LTD	

DIMISION PROJECT MANAGEMENT LIMITED
P.O. Box 34 567 GREENLAND
MANUKAU SUPERCITY
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ARCHITECTURAL SERVICES PROJECT MANAGEMENT

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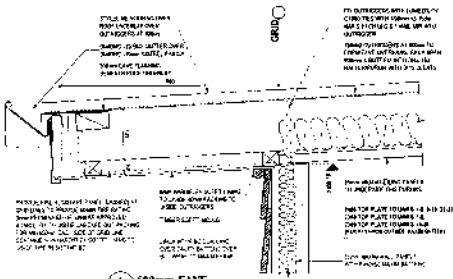
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

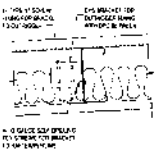
SHEET TITLE
FOUNDATION DETAILS

DATE: 2 MAY 2007
DESIGNED: RD
SCALE: 1:5@A1/1:10@A3
SHEET NO: A310
SHEET: BUILDING CONSENT

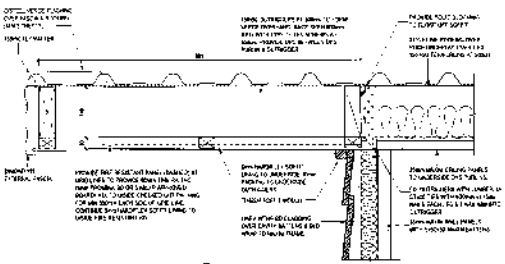
ARCHITECTURAL SERIES



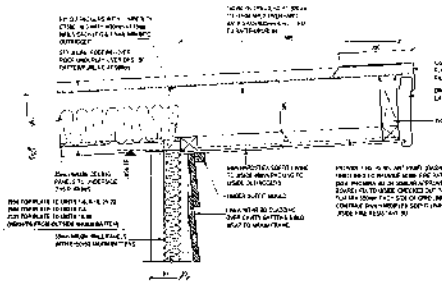
600mm EAVE
SCALE 1:5 @ A1 ELEVATION VIEW



OUTRIGGER FIXING
SCALE 1:5 @ A1 ELEVATION VIEW

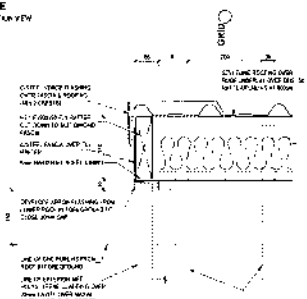


900mm VERGE
SCALE 1:5 @ A1 ELEVATION VIEW

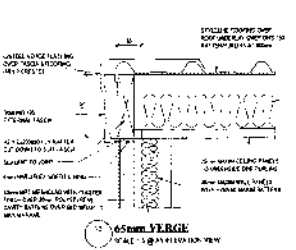


600mm APEX
SCALE 1:5 @ A1 ELEVATION VIEW

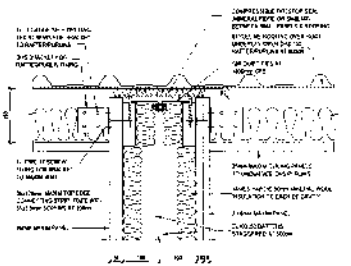
450mm VERGE
SCALE 1:5 @ A1 ELEVATION VIEW



C/STEEL VERGE
SCALE 1:5 @ A1 ELEVATION VIEW



650mm VERGE
SCALE 1:5 @ A1 ELEVATION VIEW



IT WALL/ROOF JOINT
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES

	VALDEC CONSULTANTS LTD
	KINSETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GROTON SERVICES LTD
	EASEDALE SURVEYORS LTD

GROMETON PROJECT MANAGEMENT LIMITED
P.O. Box 58 363 GREENLANE
AUCKLAND, NEW ZEALAND
PH 09 276 2007 FAX 09 271 4007

ARCHITECTURAL DESIGN & PROJECT MANAGEMENT

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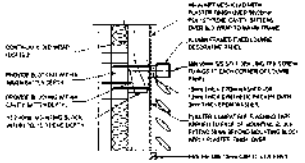
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

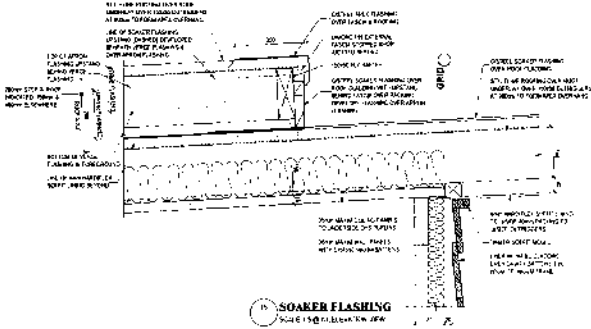
SHEET TITLE
CONSTRUCTION DETAILS

DATE 2 MAY 2007
DRAWN RD
SCALE 1:5@A1 10@A3
SHEET A311
REV
STATUS BUILDING CONSENT

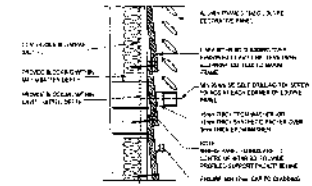
ARCHITECTURAL SERIES



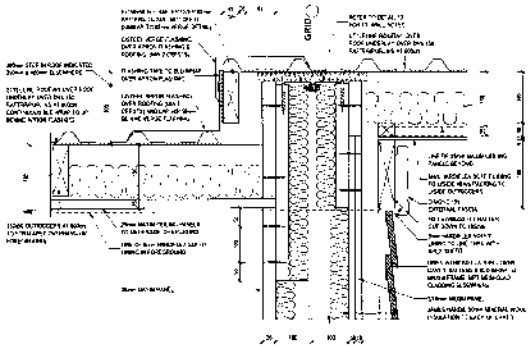
14 **MPT MOUNTING BLOCK**
SCALE 1:5 @ A1 ELEVATION VIEW



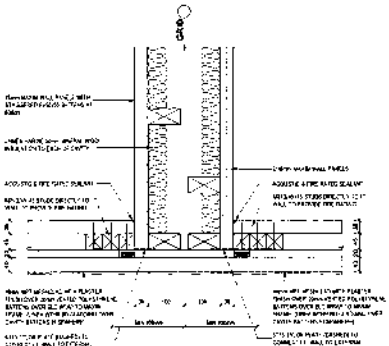
15 **SOAKER FLASHING**
SCALE 1:5 @ A1 ELEVATION VIEW



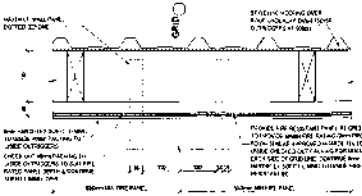
16 **LINEA MOUNTING BLOCK**
SCALE 1:5 @ A1 ELEVATION VIEW



17 **ROOF JOINT & SOFFITS**
SCALE 1:5 @ A1 ELEVATION VIEW



18 **1Hr WALL FIRE RATED RETURN**
SCALE 1:5 @ A1 PLAN VIEW



19 **SOFFIT FIRE RATING**
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES

REV	DESCRIPTION	DATE

SCALE (AT A1)	1:50
MECHANICAL	MINOTT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGN LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
SURVEYOR	GEOTEN SERVICES LTD
ELEVATION	BASEDALE SURVEYORS LTD

CONSULTANT
PROJECT MANAGEMENT LIMITED
P.O. BOX 58 301, GREENLANE
MANUKAU, AUCKLAND, NZ
PH: 09 271 2000 FAX: 09 271 4027

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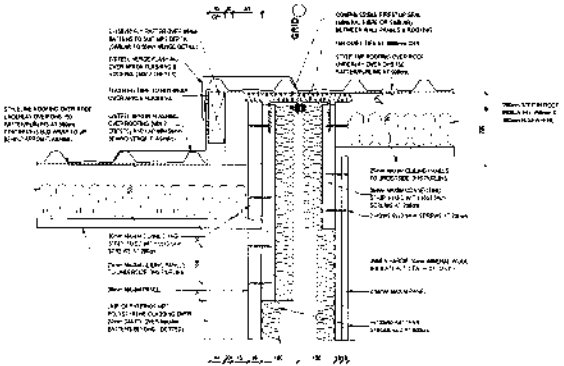
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

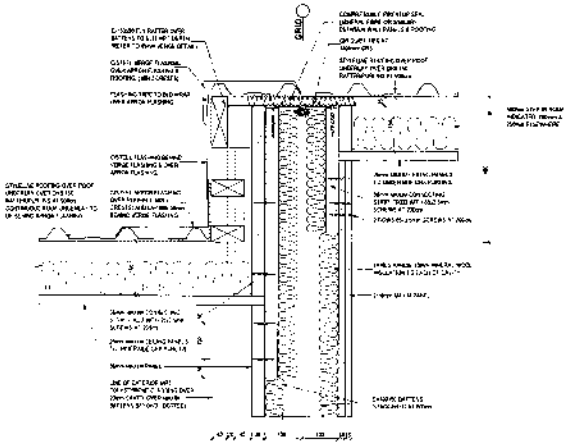
SHEET TITLE
CONSTRUCTION DETAILS

DATE: 2 MAY 2007
PROJECT #:
DRAWN: RS
CHECKED:
SCALE: 1:5@A1 / 1:10@A3
SHEET #: A312
REV:
STAGE: BUILDING CONSENT

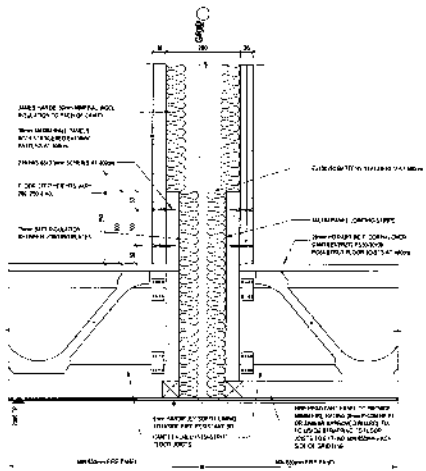
ARCHITECTURAL SERIES



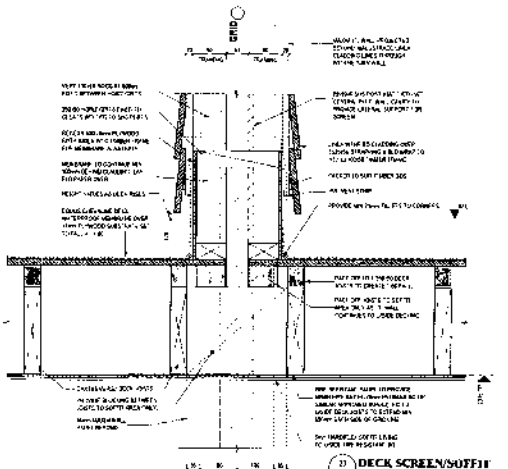
20 IT WALL/STEPPED ROOF JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



21 IT WALL/STEPPED ROOF JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



22 IT WALL/SOFFIT JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



23 DECK SCREEN/SOFFIT
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES

BUILDING CONSENT PLAN

ARCHITECT	ANDREW MITCHELL LTD
STRUCTURAL	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
	AIRLY CONSULTANTS LTD
	AIRLY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASTLAKE SURVEYORS LTD

GENERATION PROJECT MANAGEMENT LIMITED

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
45 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CONSTRUCTION DETAILS

DATE
2 MAY 2007

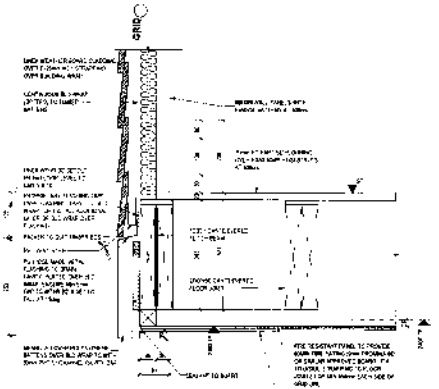
DRAWN
RD

SCALE
1:5@A1 / 1:10@A3

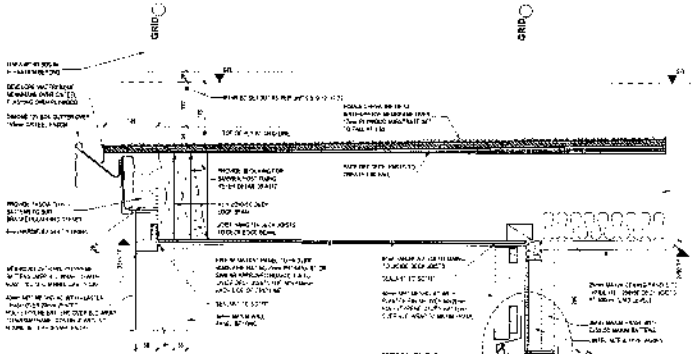
SHEET
A313

SHEET
BUILDING CONSENT

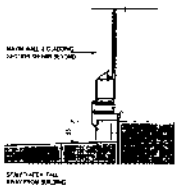
ARCHITECTURAL SERIES



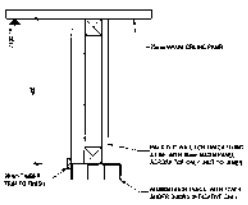
24 ENTRY SOFFIT
SCALE 1:5 @ A1 ELEVATION VIEW



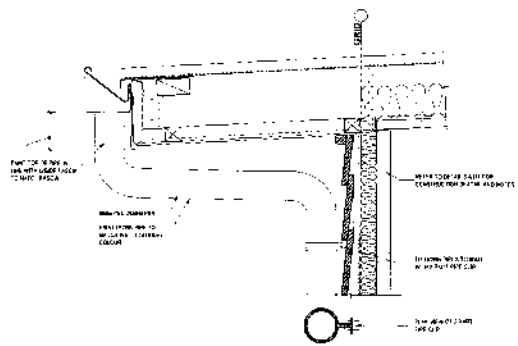
25 ENTRY SOFFIT
SCALE 1:5 @ A1 ELEVATION VIEW



8 DOOR SILL
SCALE 1:5 @ A1 ELEVATION VIEW



63 WARD ROBE DOOR TRACK
SCALE 1:5 @ A1 ELEVATION VIEW



65 DOWN PIPE PAINTING & FIXING
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES

CONTRACT	
ARCHITECT	KINETT MITCHELL LTD
HYDRAULIC	THORALLIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
ENV	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASEDALE SURVEYORS LTD

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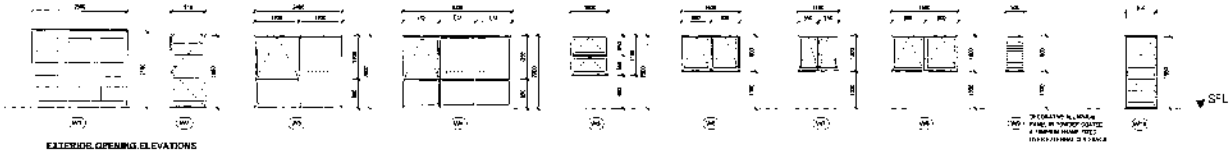
PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CONSTRUCTION DETAILS

DATE: 2 MAY 2007
DESIGNED
DRAWN: RD
SCALE: 1:5@A1 1:15@A3
SHEET: A314
ISSUE: BUILDING CONSENT

ARCHITECTURAL SERIES

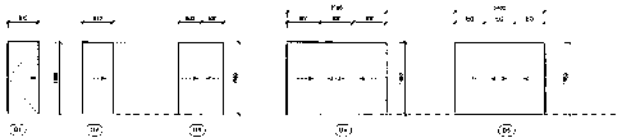


EXTERIOR OPENING ELEVATIONS

SCALE 1:100

EXTERIOR OPENING SCHEDULE

NO	SIZE (mm)	DESCRIPTION	QUANTITY PER UNIT	TOTAL QUANTITY
WA1	2100x2300	THERMOSTAT SECTIONAL GARAGE DOOR	1	22
WC1	1800x910	TIMBER DOOR IN PC ALUMIN FRAME	2 IN UNITS 1 & 2 1 IN UNITS 11 22	24
WD1	2000x2400	PC ALUMIN SLIDING DOOR WITH AWNING & FIXED SASHES	1	22
WD4	1000x1900	PC ALUMIN & TIMBER DOOR WITH AWNING & FIXED SASHES	1	22
WW3	1100x1500	PC ALUMIN AWNING WINDOW	1	24
WW6	1000x1500	PC ALUMIN AWNING WINDOW	1	44
WW7	1000x1900	PC ALUMIN AWNING WINDOW	4 IN 2 END UNITS	32
WW8	1000x1800	PC ALUMIN AWNING WINDOW	1 IN 2 END UNITS	8
WW9	1000x500	ALUMIN DECORATIVE PANEL MOUNTED OVER EXTERNAL CLADDING	12 IN 2 END UNITS 4 IN 10 UNITS	52
WW10	1000x410	TIMBER DOOR WITH ALUMIN FRAME	2 IN UNITS 9 & 10	4



INTERIOR OPENING ELEVATIONS

SCALE 1:100

INTERIOR OPENING SCHEDULE

NO	SIZE (mm)	DESCRIPTION	QUANTITY PER UNIT	TOTAL QUANTITY
D01	1000x810	TIMBER HOLLOW CORE DOOR	2	110
D02	1000x810	CAVITY SLIDER HOLLOW CORE DOOR	2	44
D03	1000x1800	DOUBLE SLIDING PANEL WARD ROBE DOORS	1 IN UNITS 9-10	10
D04	1000x2400	TRIPLE SLIDING PANEL WARD ROBE DOORS	1 IN UNITS 1-10 2 IN UNITS 11 & 22	34
D05	1000x2400	TRIPLE SLIDING PANEL WARD ROBE DOORS	1 IN UNITS 11 & 22	12

GENERAL NOTES

[illegible]

CONSULTANT	CONCEPT
ARCHITECT	KINGFISHER ARCHITECTS LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
SITE	AIREY CONSULTANTS LTD
ELECTRICAL	GEOTEK SERVICES LTD
SURVEYOR	BASEDALE SURVEYORS LTD

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CONCEPTS 124 LIMITED

PROJECT TITLE

PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE

WINDOW & DOOR SCHEDULES

DATE: 2 MAY 2007

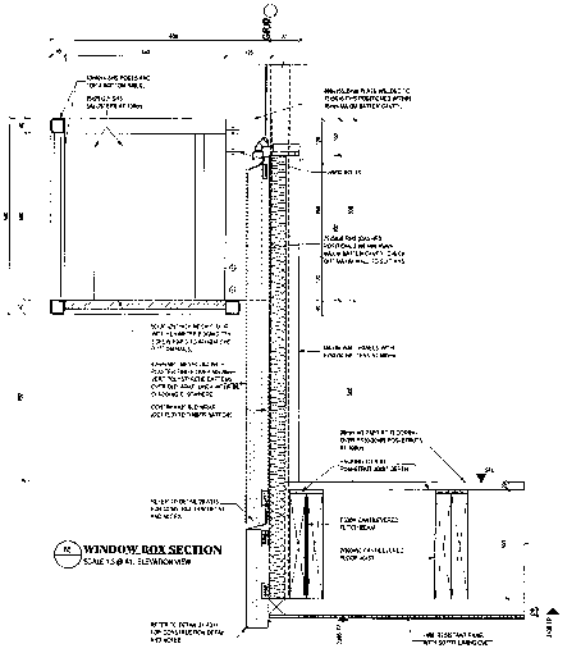
DRAWN: RD

SCALE: 1:50@A1 1:100@A3

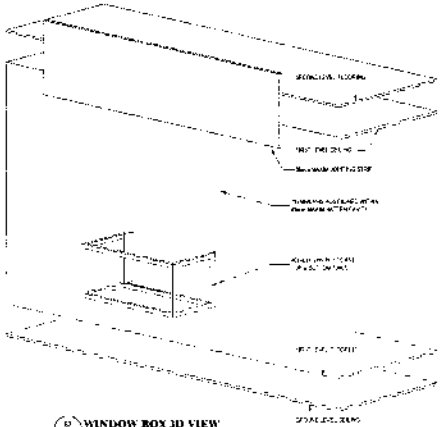
SHEET: A601

STAGE: BUILDING CONSENT

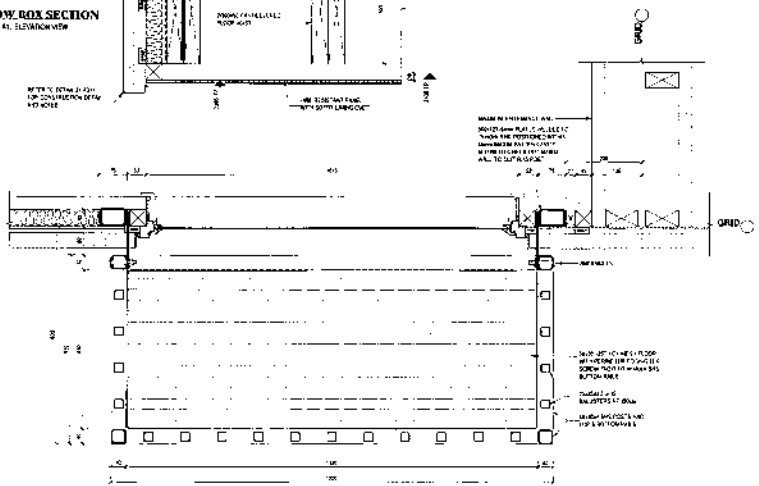
ARCHITECTURAL SERIES



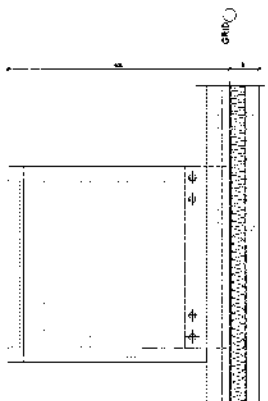
WINDOW BOX SECTION
SCALE 1:5 @ A1, ELEVATION VIEW



WINDOW BOX 3D VIEW
SCALE N/TS 3D VIEW



WINDOW BOX PLAN
SCALE 1:5 @ A1, PLAN VIEW



WINDOW BOX ELEVATION
SCALE 1:5 @ A1, ELEVATION VIEW

GENERAL NOTES

	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	CASE SALE SURVEYORS LTD

GRIDSTON PROJECT MANAGEMENT LIMITED

CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
45 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
WINDOW BOX DETAILS

DATE
2 MAY 2007

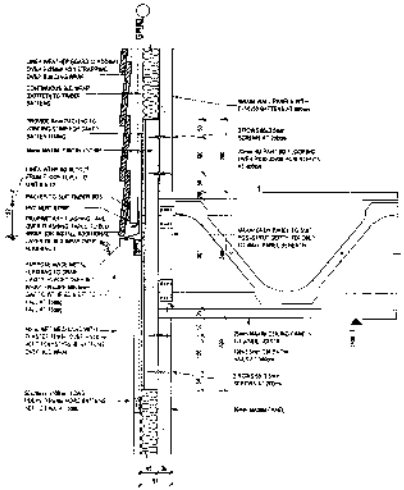
DRAWN
RD

SCALE
AS SHOWN

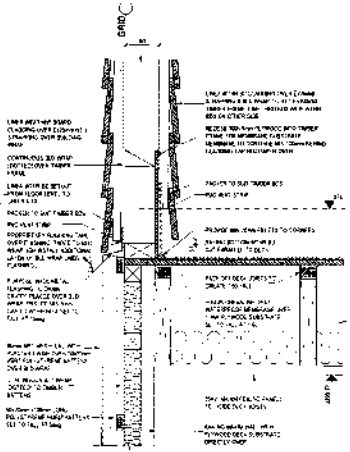
SHEET
A602

BUILDING CONSENT

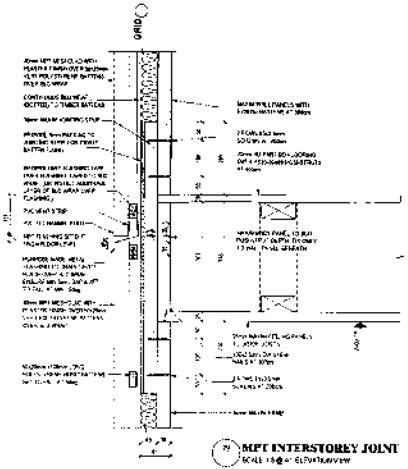
ARCHITECTURAL SERIES



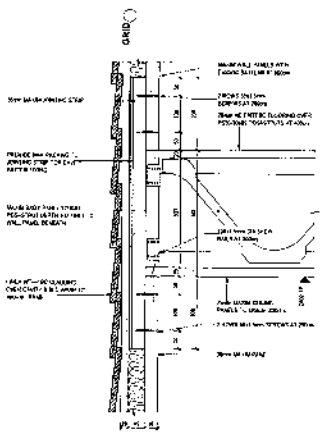
CLADDING JUNCTION AT FLOOR
SCALE 1:5 @ A1 ELEVATION VIEW



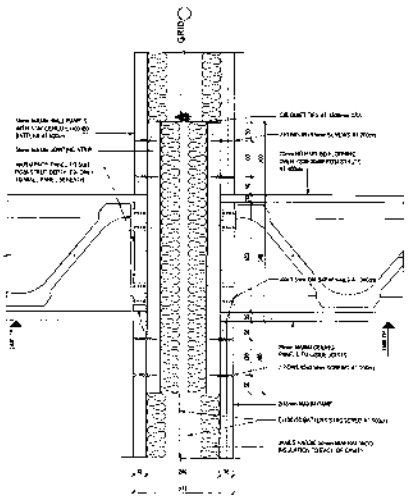
CLADDING JUNCTION AT DECK
SCALE 1:5 @ A1 ELEVATION VIEW



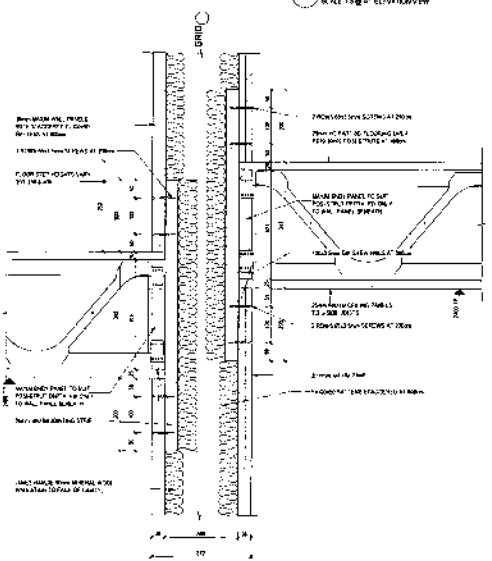
MPT INTERSTOREY JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



END WALL/FLOOR JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



IT WALL/FLOOR JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



IT WALL/FLOOR JOINT
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES.

REV	DESCRIPTION	DATE

CONSULTANTS

STRUCTURAL	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
ENVIRONMENTAL	AREY CONSULTANTS LTD
ELECTRICAL	AREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASEBRUF SURVEYORS LTD

ORMISTON PROJECT MANAGEMENT LIMITED
P.O. Box 36-060 CROFTON HEIGHTS
MANUKAU NORTH 2240
PH. 09 271 1001 FAX. 09 271 1007
PROJECT MANAGEMENT & PROJECT MANAGEMENT

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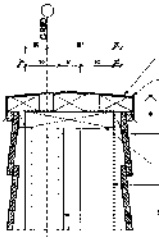
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

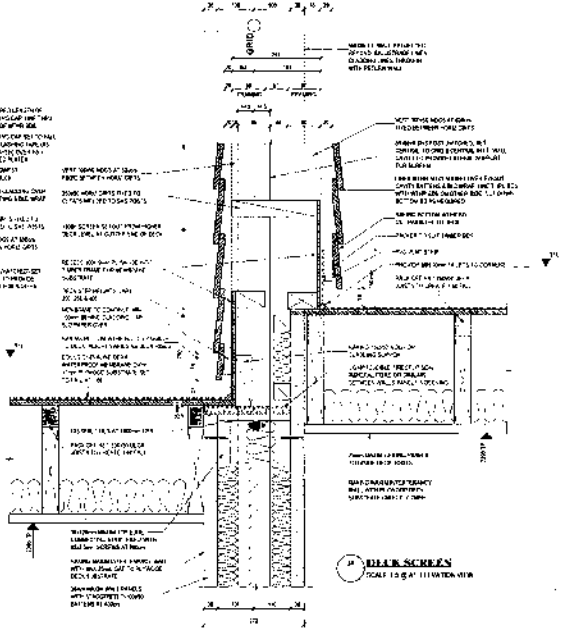
SHEET TITLE
CONSTRUCTION DETAILS

DATE 2 MAY 2007
DRAWN RD
SCALE 1:5@A1 / 1:10@A3
SHEET A315
REVISION 1
ISSUE BUILDING CONSENT

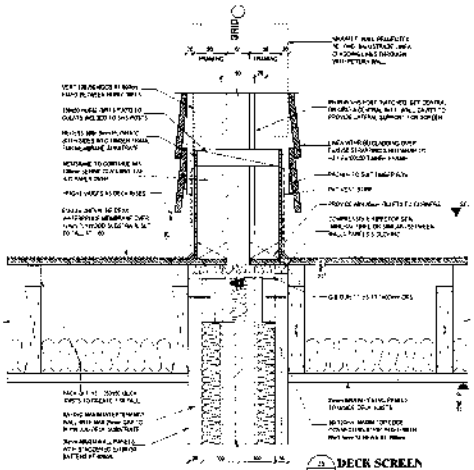
ARCHITECTURAL SERIES



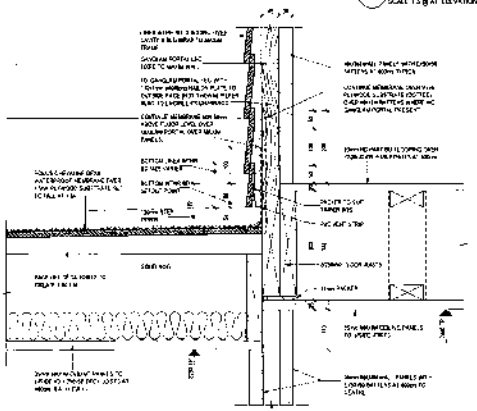
SCREEN CAPPING
SCALE 1:5 @ A1 ELEVATION VIEW



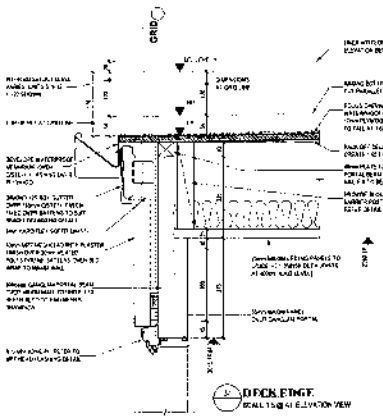
DECK SCREEN
SCALE 1:5 @ A1 ELEVATION VIEW



DECK SCREEN
SCALE 1:5 @ A1 ELEVATION VIEW



DECK JUNCTION
SCALE 1:5 @ A1 ELEVATION VIEW



DECK EDGE
SCALE 1:5 @ A1 ELEVATION VIEW

REFER DETAIL #33 A316

SCREEN CAPPING END UNITS
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES

REV	DESCRIPTION	DATE

CONSULTANT
- ALBERT MITCHELL LTD
- HYDRAULIC SERVICES LTD
- FIRE DESIGNS LTD
- AIRLEY CONSULTANTS LTD
- AIRLEY CONSULTANTS LTD
- GEOTEK SERVICES LTD
- BASEDALE SURVEYORS LTD

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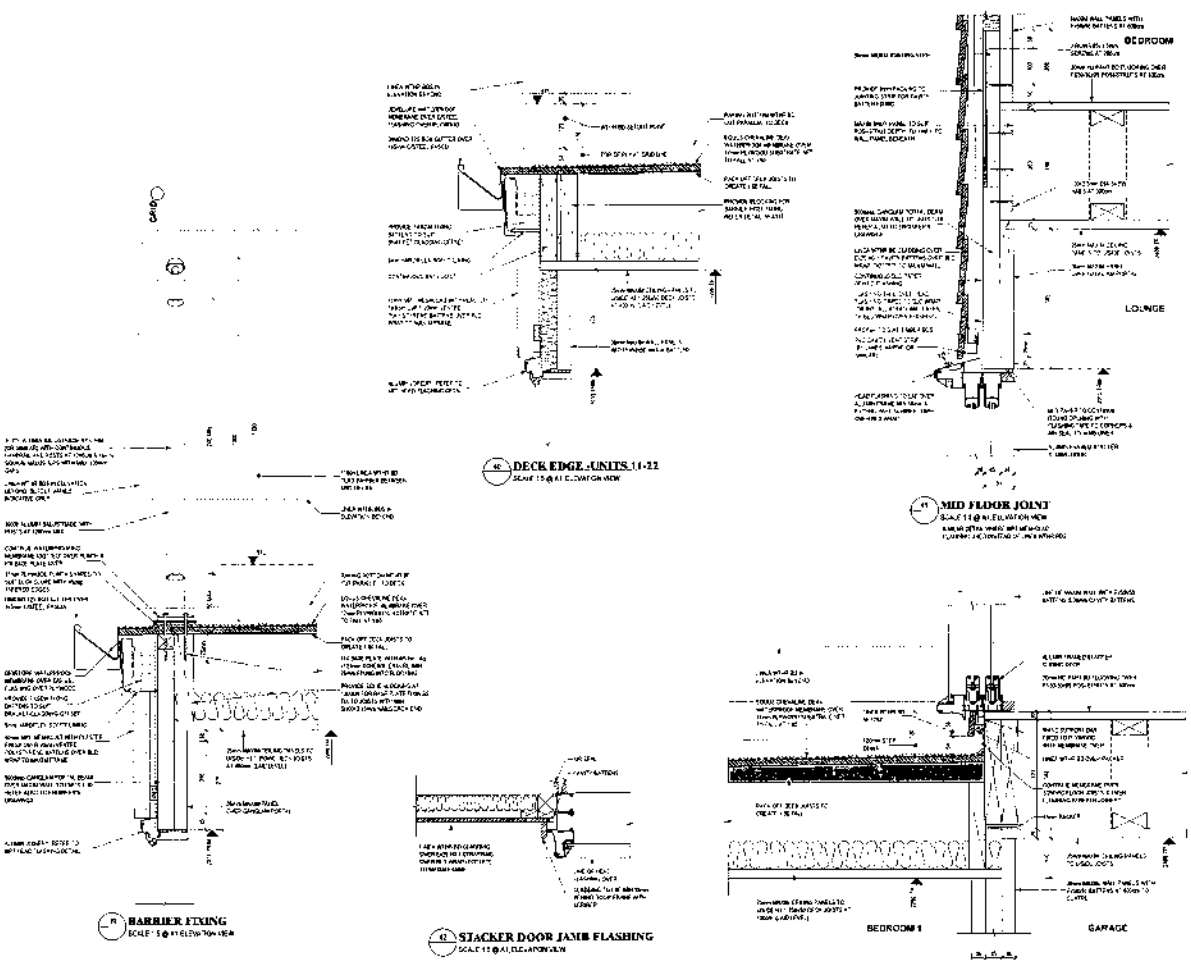
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CONSTRUCTION DETAILS

DATE 2 MAY 2007
DESIGNED RC
SCALE V5@A1 1:1 0@A3
SHEET A316
SHEET BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES.

	BUILDING CONSENT ISSUE
	DESCRIPTION
	CONTACT
	KINGETT MITCHELL LTD
	HYDRAULIC SERVICES LTD
	PRE DESIGNS LTD
	A REY CONSULTANTS LTD
	A REY CONSULTANTS LTD
	GEOTEC SERVICES LTD
	EASTDALE SURVEYORS LTD

CONCEPTS 124 LIMITED

PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

CONSTRUCTION DETAILS

2 MAY 2007

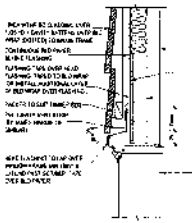
RD

1:5@A1 / 1:10@A3

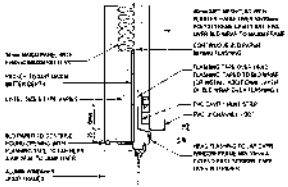
A317

BUILDING CONSENT

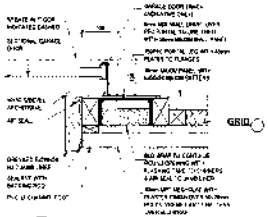
ARCHITECTURAL SERIES



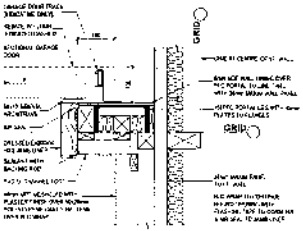
41 WTHR BD HEAD FLASHING
SCALE 1:5 @ A1 ELEVATION VIEW



42 MPT HEAD FLASHING
SCALE 1:5 @ A1 ELEVATION VIEW



51 GARAGE DOOR JAMB
SCALE 1:5 @ A1 PLAN VIEW



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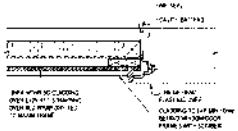
SCALE 1:5 @ A1 PLAN VIEW



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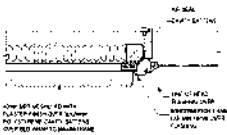
SCALE 1:5 @ A1 PLAN VIEW



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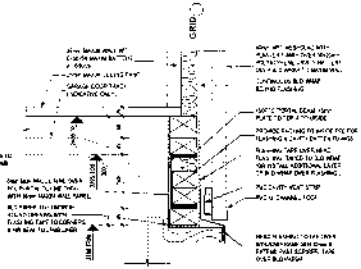
SCALE 1:5 @ A1 PLAN VIEW



52 GARAGE DOOR HEAD
SCALE 1:5 @ A1 ELEVATION VIEW

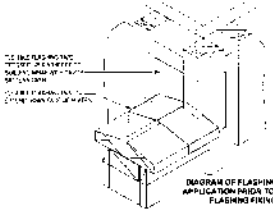
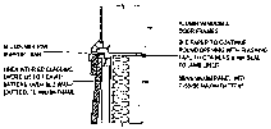
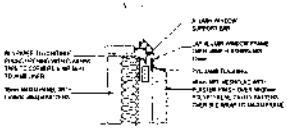


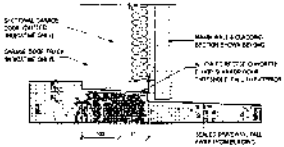
DIAGRAM OF FLASHING TAPE APPLICATION PRIOR TO METAL FLASHING FIXING



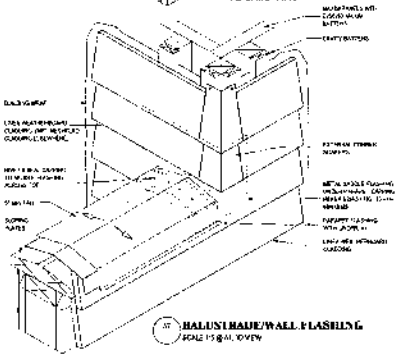
48 WTHR BD SILL FLASHING
SCALE 1:5 @ A1 ELEVATION VIEW



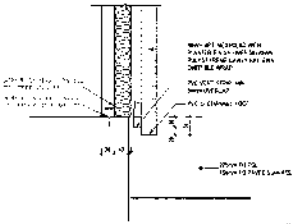
50 MPT SILL FLASHING
SCALE 1:5 @ A1 ELEVATION VIEW



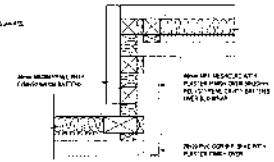
53 GARAGE DOOR SILL
SCALE 1:5 @ A1 ELEVATION VIEW



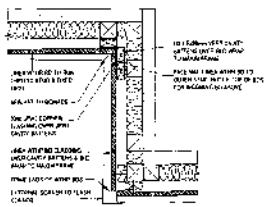
57 HALUSTRADE/WALL FLASHING
SCALE 1:5 @ A1 TO VIEW



47 MPT MESHCLAD BASE
SCALE 1:5 @ A1 ELEVATION VIEW



54 MPT MESHCLAD
SCALE 1:5 @ A1 PLAN VIEW



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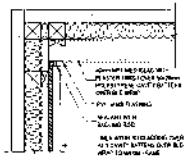


55 CLADDING JUNCTION
SCALE 1:5 @ A1 PLAN VIEW

GENERAL NOTES.

	KINGL T MITCHELL LTD
	HYDRAULIC SERVICES LTD
	FIRE DESIGNS LTD
	AIREY CONSULTANTS LTD
	AIREY CONSULTANTS LTD
	GEOTEK SERVICES LTD
	EASEDALE SURVEYORS LTD

DIMASTON PROJECT MANAGEMENT LIMITED

CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CLADDING JUNCTION DETAILS

DATE
2 MAY 2007

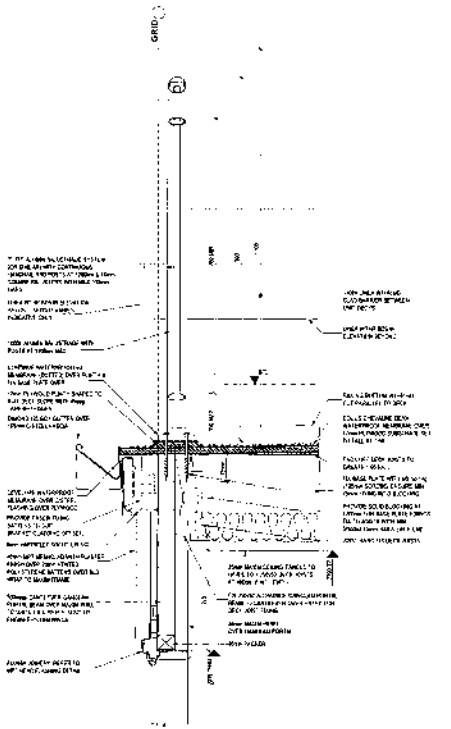
DRAWN
RD

SCALE
1:5@A1/1:10@A3

SHEET
A318

ISSUE
BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES:

ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASEDALE SURVEYORS LTD

CHRISTOPHER PROJECT MANAGEMENT LIMITED

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CLIENT

CONCEPTS 124 LIMITED

PROJECT TITLE

PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE

CONSTRUCTION DETAILS

DATE: 2 MAY 2007

DESIGNED: RD

SCALE: 1:5@A1 1:10@A3

SHEET: A319

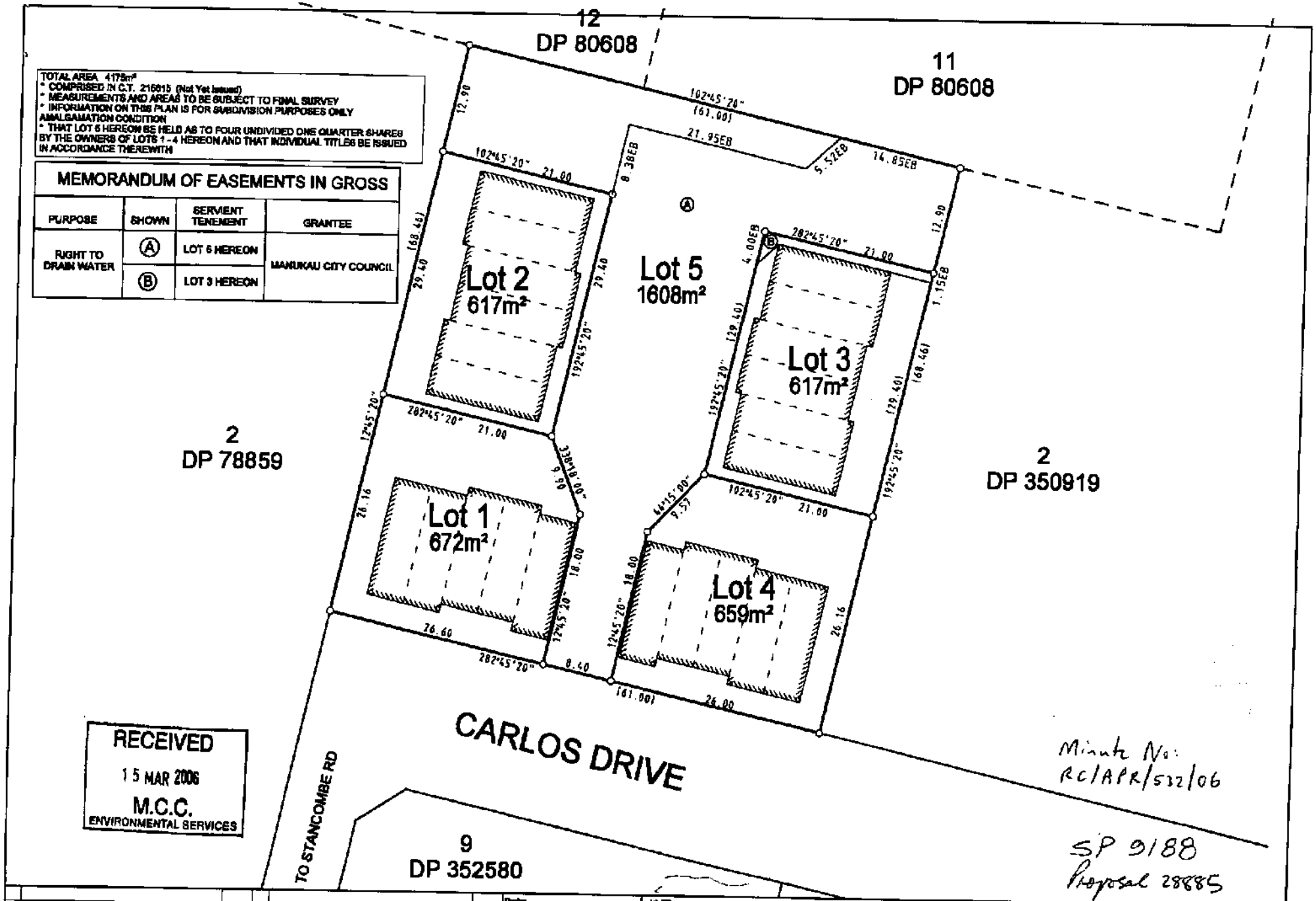
PAGE: BUILDING CONSENT

ARCHITECTURAL SERIES

TOTAL AREA 4175m²
* COMPRISED IN C.T. 215615 (Not Yet Issued)
* MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
* INFORMATION ON THIS PLAN IS FOR SUBDIVISION PURPOSES ONLY
AMALGAMATION CONDITION
* THAT LOT 5 HEREON BE HELD AS TO FOUR UNDIVIDED ONE QUARTER SHARES BY THE OWNERS OF LOTS 1 - 4 HEREON AND THAT INDIVIDUAL TITLES BE ISSUED IN ACCORDANCE THEREWITH

MEMORANDUM OF EASEMENTS IN GROSS

PURPOSE	SHOWN	SERVIENT TENEMENT	GRANTEE
RIGHT TO DRAIN WATER	Ⓐ	LOT 5 HEREON	MANUKAU CITY COUNCIL
	Ⓑ	LOT 3 HEREON	



RECEIVED
15 MAR 2006
M.C.C.
ENVIRONMENTAL SERVICES

Minute No:
RC/APR/532/06

SP 9188
Proposal 28885

No.	Revision Details	Date	No.	Revision Details	Date

Design
Survey MSL
Drawn MSL
Checked
Date March 2006
Scale 1:400 (A3)

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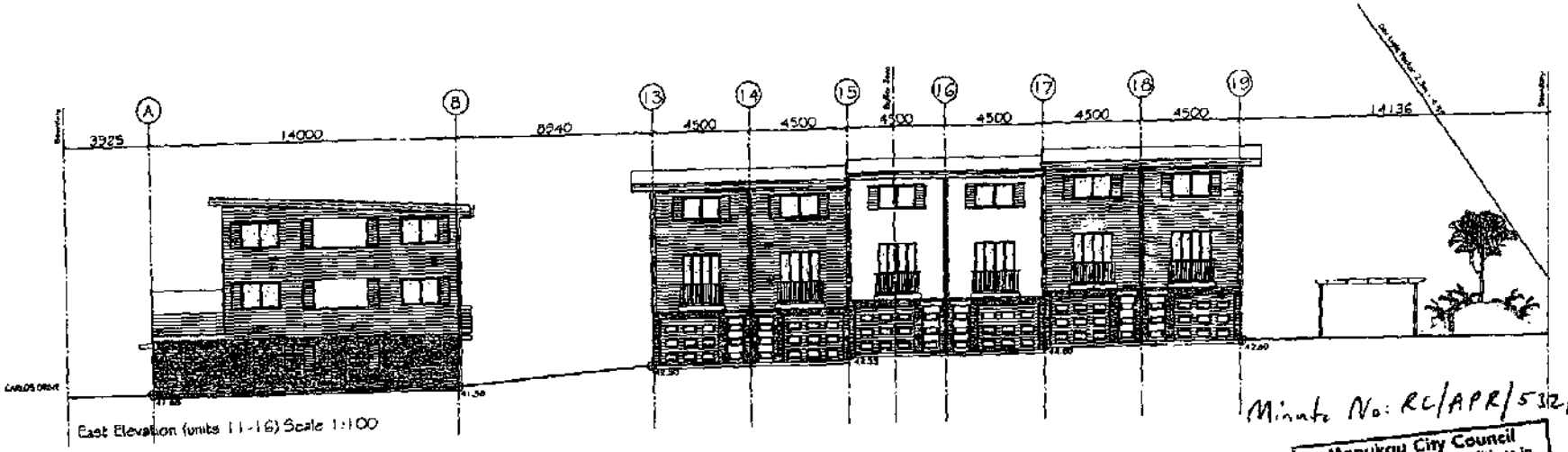
Job Title
PROPOSED SCHEME
FOR
CARLOS CONCEPTS LTD
CARLOS DRIVE, FLAT BUSH
LOT 10 DP 352580

Ecodate Surveyors Ltd
30 Mondeland Drive, Hoskin
Phone 09 534 8422
Fax 09 5376784
e-mail: surveyors@ecodate.co.nz

Drawing Title:
SCHEME PLAN 2

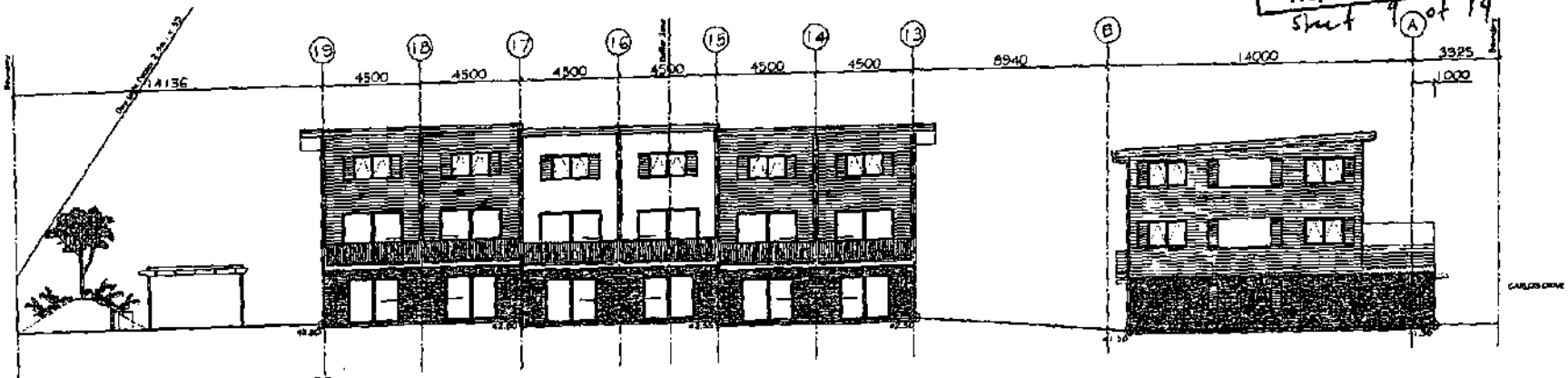
Issue: 7793
Rev: 1



East Elevation (units 11-16) Scale 1:100

Minute No: RC/APR/532/06

Manukau City Council
Approval Subject to Conditions in attached Resource Consent
13 MAR 2006
Proposal No 28885
Sheet 9 of 19



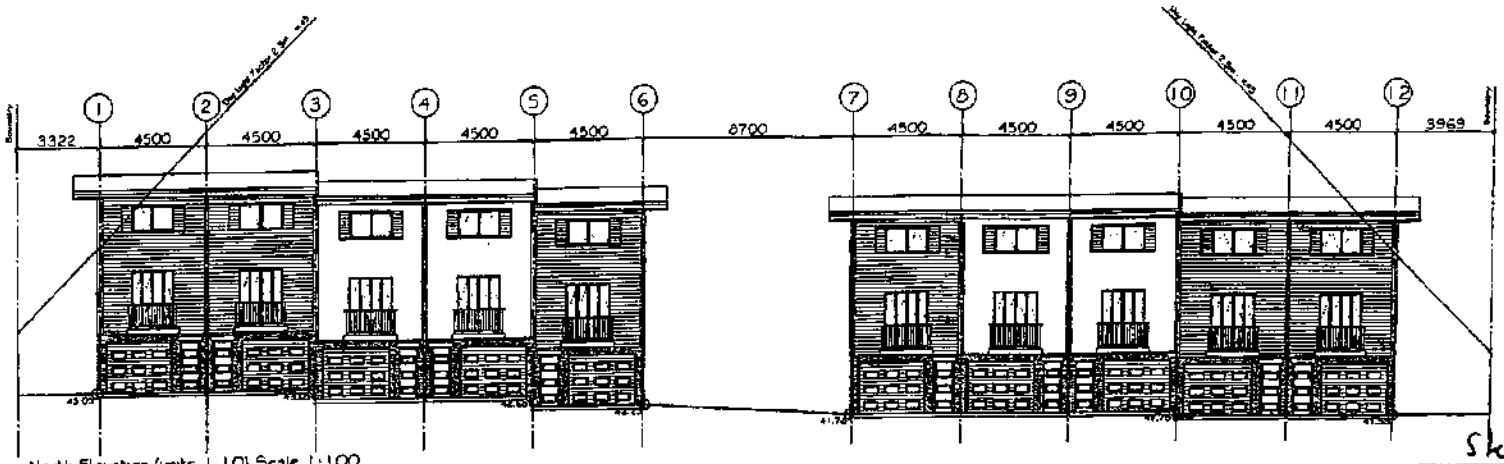
West Elevation (units 11-16) Scale 1:100

a)to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

A08

Elevations
Units 11 - 16



North Elevation (units 1-10) Scale 1:100

South Elevation (units 1-10) Scale 1:100

Carlos Drive

Sheet 8 of 14

Manukau City Council
Approval Subject to Conditions in attached Resource Consent

13 MAR 2006

Proposal No 28885

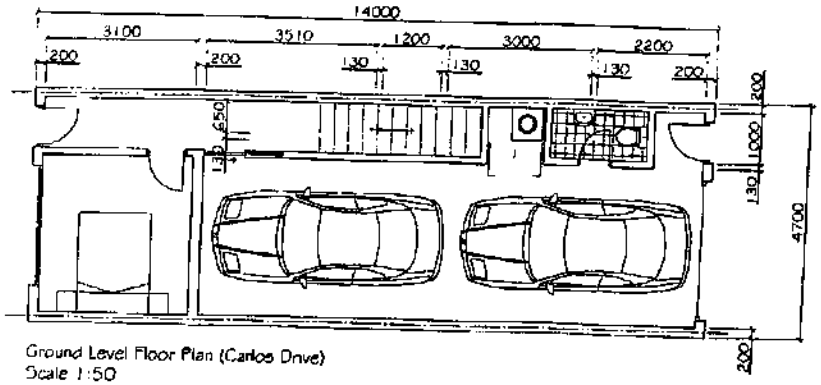
Minute No: RC/APR/532/06

a)to

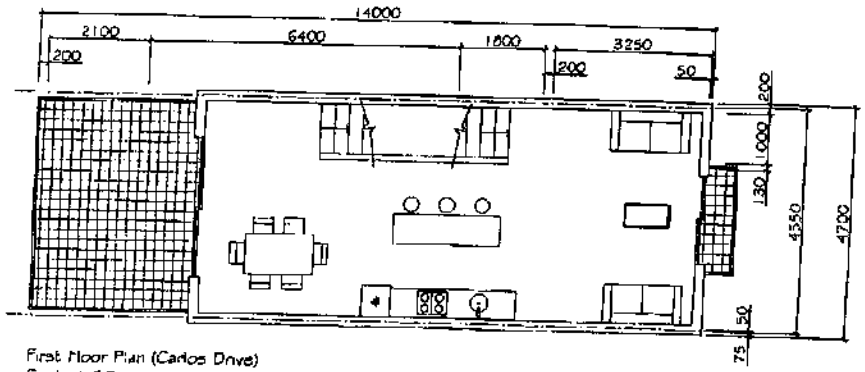
Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

Sheet Title
A07
Elevations
Units 1 - 10

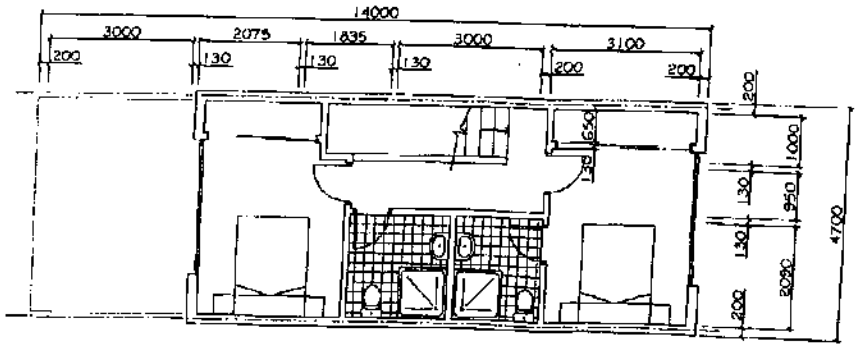
Drawing Scale 1:100 - A1, 1:200 - A3
Date Printed
Drawn
Checked
Project No



Ground Level Floor Plan (Carlos Drive)
Scale 1:50



First Floor Plan (Carlos Drive)
Scale 1:50



Second Floor Plan (Carlos Drive)
Scale 1:50

Sheet 7 of 14

Manukau City Council
Approval Subject to Conditions in attached Resource Consent

13 MAR 2006

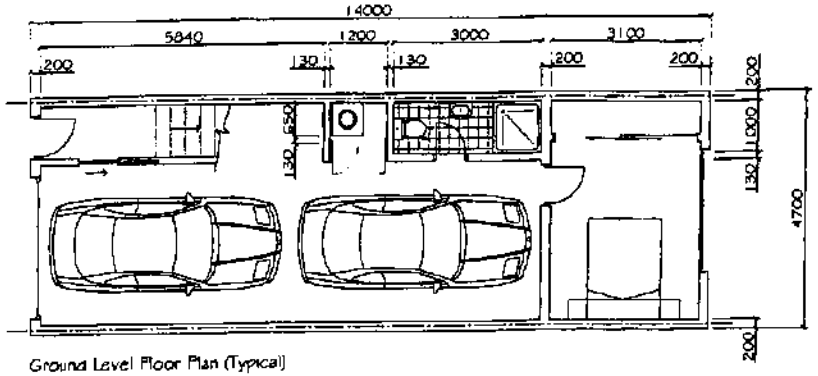
Proposal No 28885

Minute No:
RC/APR/532/06

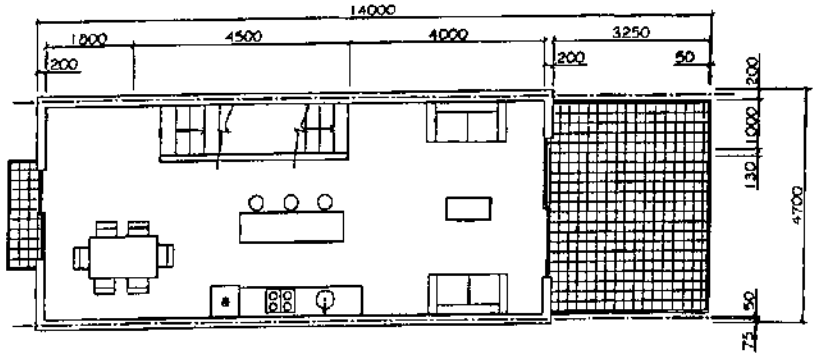
a/to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

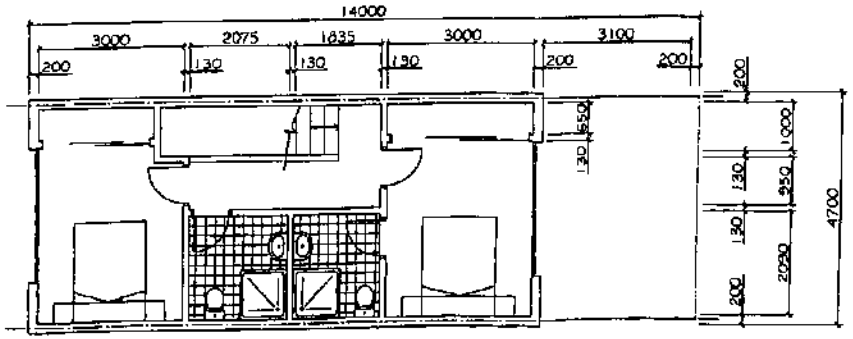
Sheet Title
A06
Proposed
Floor Plans
(Carlos Drive)



Ground Level Floor Plan (Typical)
Scale 1:50



First Floor Plan (Typical)
Scale 1:50



Second Floor Plan (Typical)
Scale 1:50

Sheet 6 of 14

Manukau City Council
Approval Subject to Conditions in attached Resource Consent
13 MAR 2006
Proposal No 28885

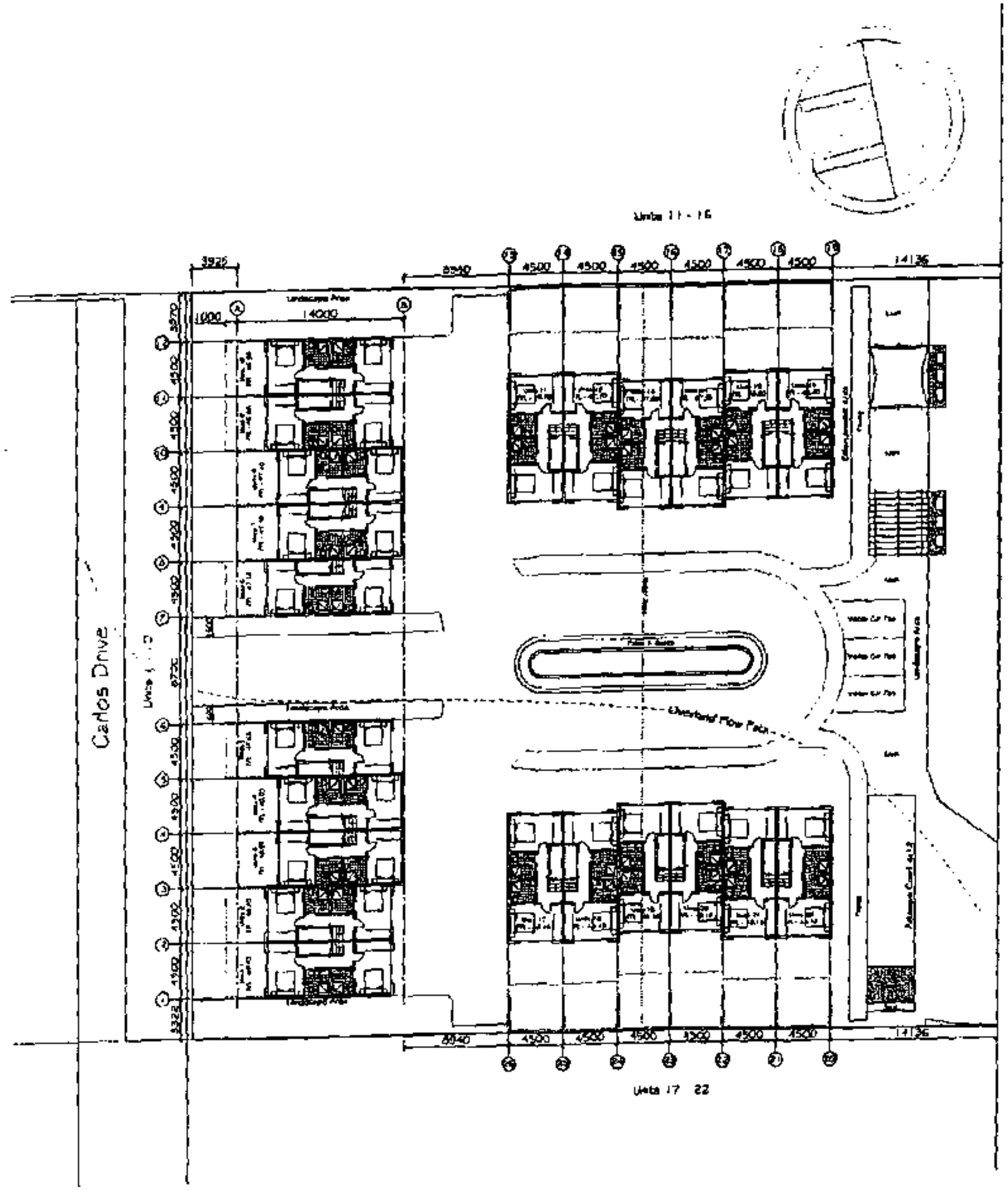
Minute No:
RC/APR/532/06

a)to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

Sheet Title
A05
Proposed
Floor Plans

Drawing Scale 1:50 - A1, 1:100 - A3
Date Printed 28-04-06
Drawn JL
Checked GB
Project No 1281



Sheet 5 of 14

Manukau City Council
Approval Subject to Conditions in attached Resource Consent

· 13 MAR 2006 ·

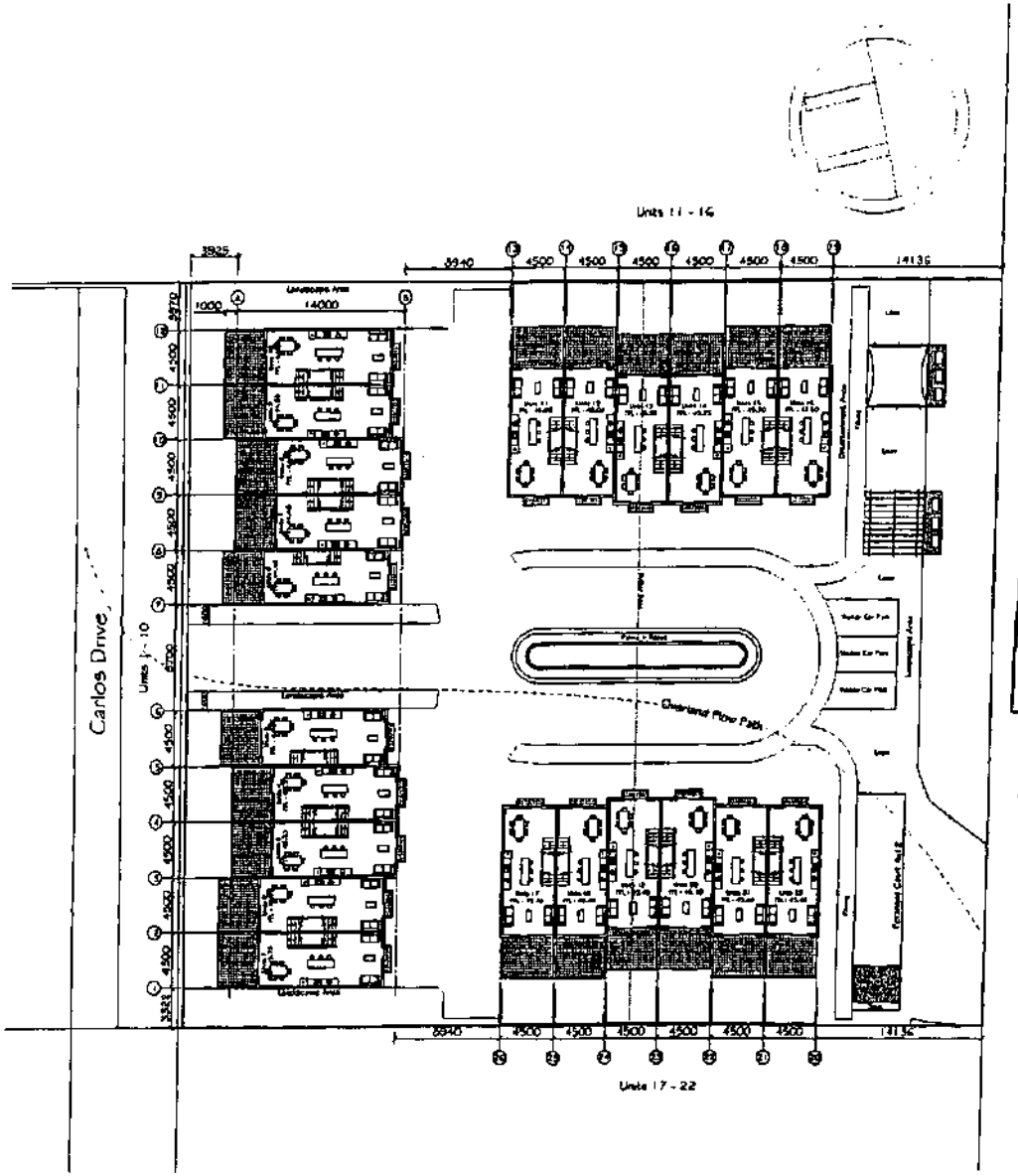
Proposal No 28885

Minute No: RC/APR/532/06

a|to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

A03
Second Floor
Site Plan



Sheet 4 of 14

Manukau City Council
Approval Subject to Conditions in attached Resource Consent
13 MAR 2006
Proposal No 28885

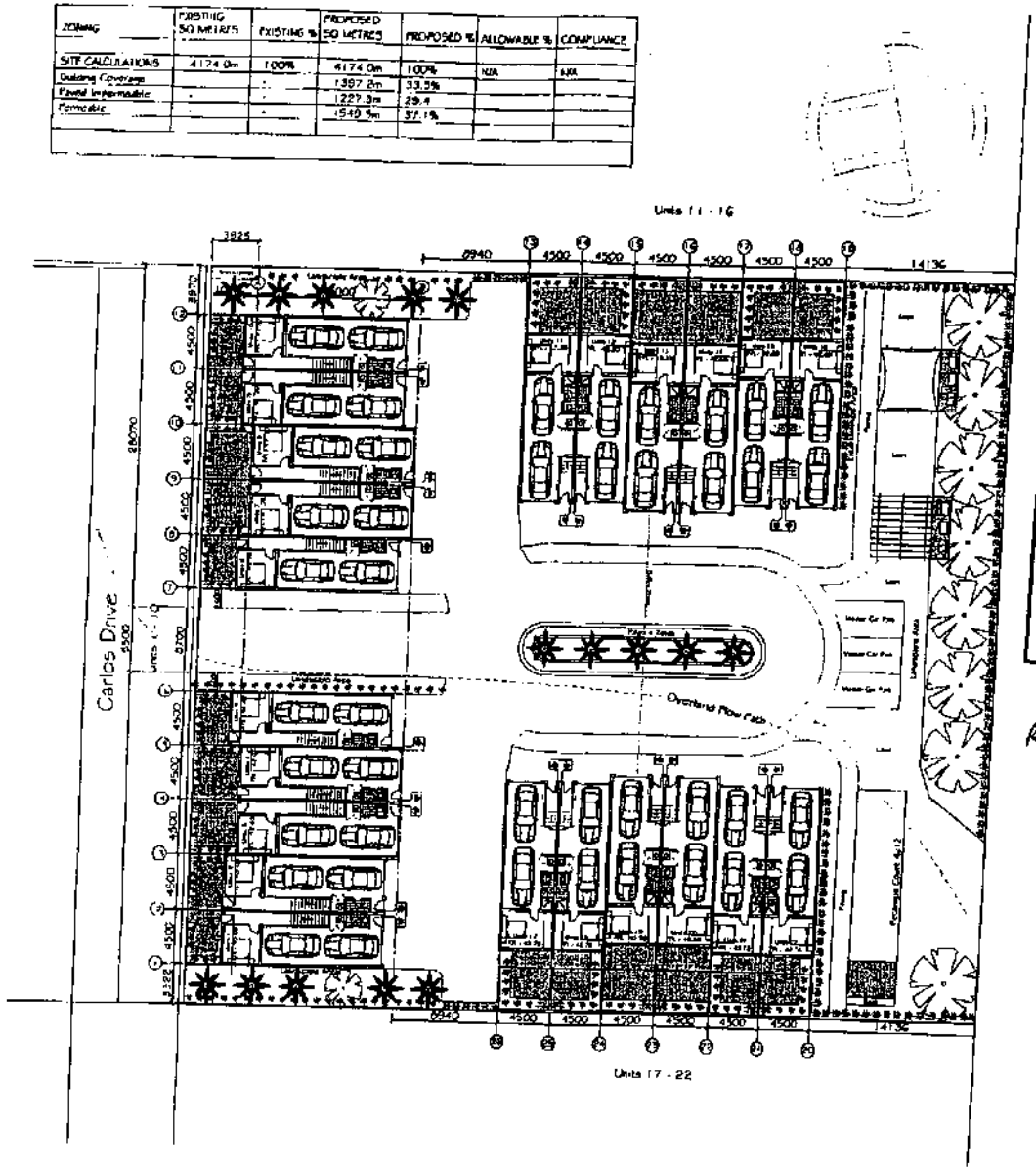
Minute No:
RC/APR/532/06

a)to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

A02
First Floor
Site Plan

ZONING	EXISTING SQ METRES	EXISTING %	PROPOSED SQ METRES	PROPOSED %	ALLOWABLE %	COMPLIANCE
SITE CALCULATIONS	4174.0m	100%	4174.0m	100%	N/A	N/A
Building Coverage			1397.2m	33.5%		
Paved Impermeable			1227.3m	29.4		
Permeable			1549.5m	37.1%		



Sheet 3 of 14

Manukau City Council
Approval Subject to Conditions in attached Resource Consent
13 MAR 2006
Proposal No 26885

Minute No:
RC/APR/532/06

alto

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

A01
Ground Floor
Site Plan

124 Stancombe Road, Flatbush

Stancombe Estate - 124 Stancombe Road

Date: 20- 04 - 05

DRAWING ISSUE REGISTER

ISSUED TO		29 Mar 05	18 Apr 05							
		NUMBER OF COPIES								
Client	Wonang Concrete Ltd									
Contractor	T.B.A									
Council	Manukau City									
Electrical Eng	T.B.A									
Fire Planner	Peter Dunlop	1								
Hydraulics Eng	Hydraulic Services									
Mechanical Eng	T.B.A									
Q.S.	T.B.A									
Structural Eng	Jaws Structures Ltd									
Acoustics	John Cawley	1								
Town Planner	Carl Cook	1	2	2						
	Total sheets									
	REASON FOR ISSUE									
	ISSUE FORMAT									

REASON FOR ISSUE: 1. PRELIMINARY 2. INFORMATION 3. PERMIT 4. MARKETING 5. TENDER

CONTRACT 7. CONSTRUCTION 8. REQUESTED 9. APPROVAL

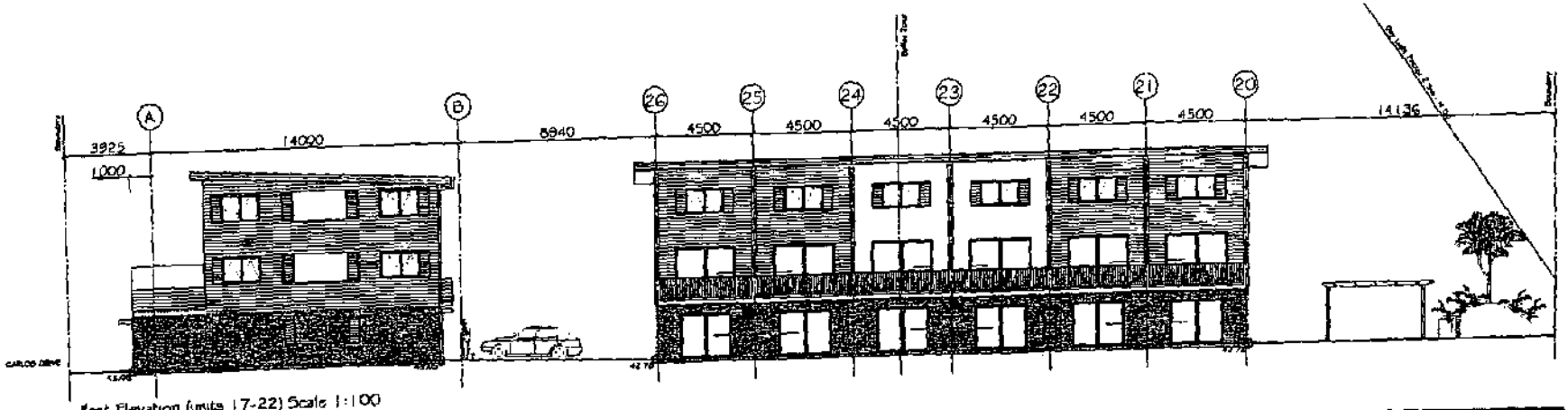
FORMAT A1- HARDCOPY A3- HARDCOPY D- DISKETTE

E- DISKETTE EMAIL F- FAX

DRAWING No AND TITLE		BUILDING CONSENT	A1	A3	REVISION
A 00	Title Sheet		N/A	N/A	
A 01	Ground Level Site Plan		1: 200	1: 400	
A 02	First Floor Site Plan		1: 200	1: 400	
A 03	Second Floor Site Plan		1: 200	1: 400	
A 04	Roof Plan		1: 200	1: 400	
A 05	Proposed Floor Plans		1: 50	1: 100	
A 06	Proposed Floor Plans (Carlow Drive)		1: 50	1: 100	
A 07	Proposed Elevations (units 1-10)		1: 100	1: 200	
A 08	Proposed Elevations (units 11-16)		1: 100	1: 200	
A 12	Proposed Elevations (units 17-22)		1: 100	1: 200	
A 10	Elevations 11 & 17 / 16 & 22		1: 100	1: 200	
11	Elevation Notes		1: 100	1: 200	
12	Sections		1: 25	1: 50	

Manukau City Council
Approval Subject to Conditions in attached Resource Consent
13 MAR 2006
Proposal No. 28885
Sheet 2 of 14
Minute No:
RC/APR/532/06

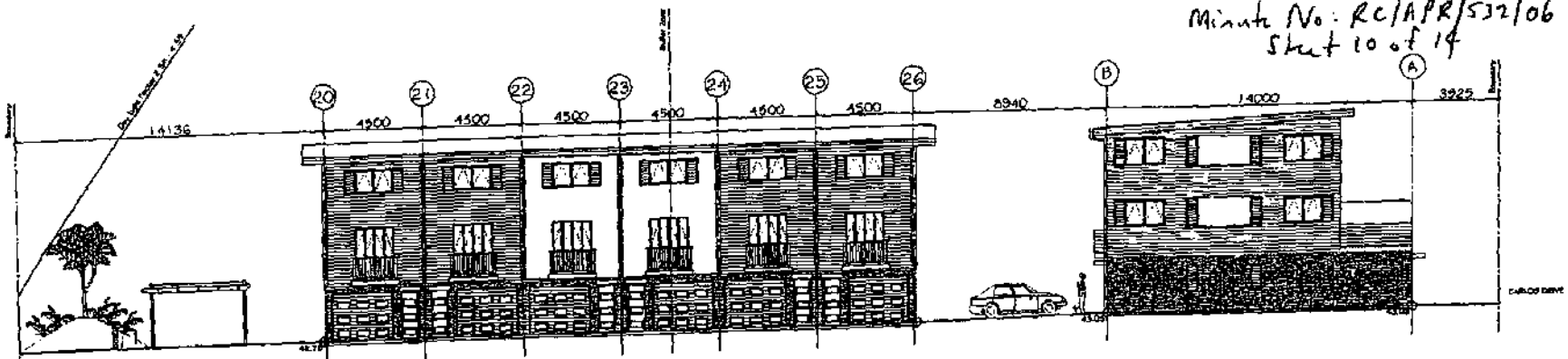
a to



East Elevation (units 17-22) Scale 1:100

Manukau City Council
Approval Subject to Conditions in attached Resource Consent
13 MAR 2006
Proposal No 28885

Minute No: RC/APR/532/06
Sheet 10 of 14

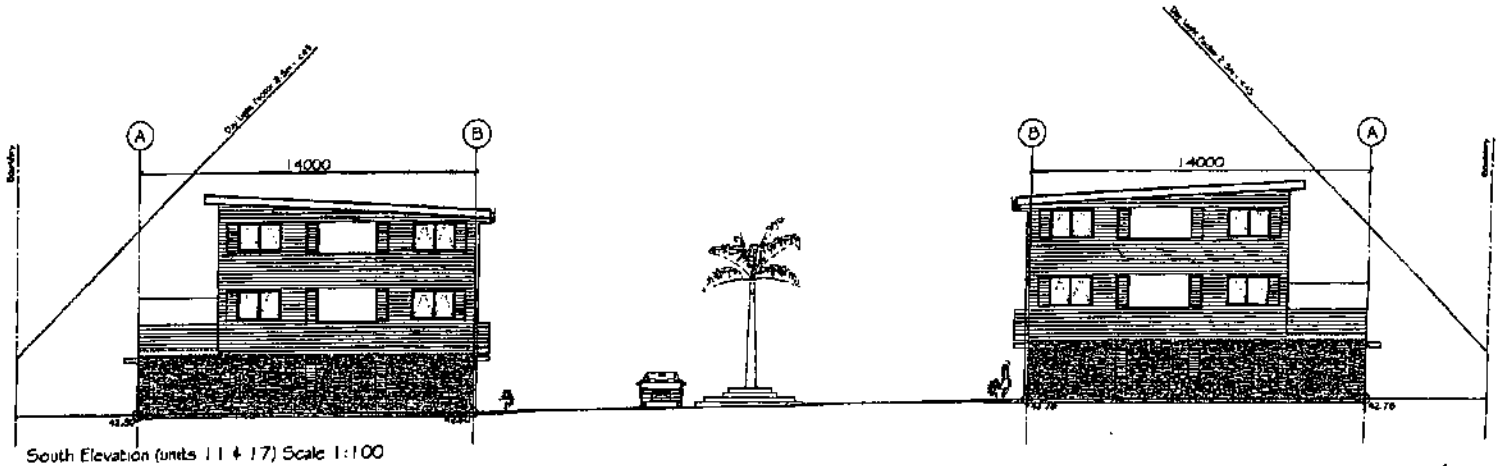


West Elevation (units 17-22) Scale 1:100

a|to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

Sheet Title
A09
Elevations
Units 17 - 22

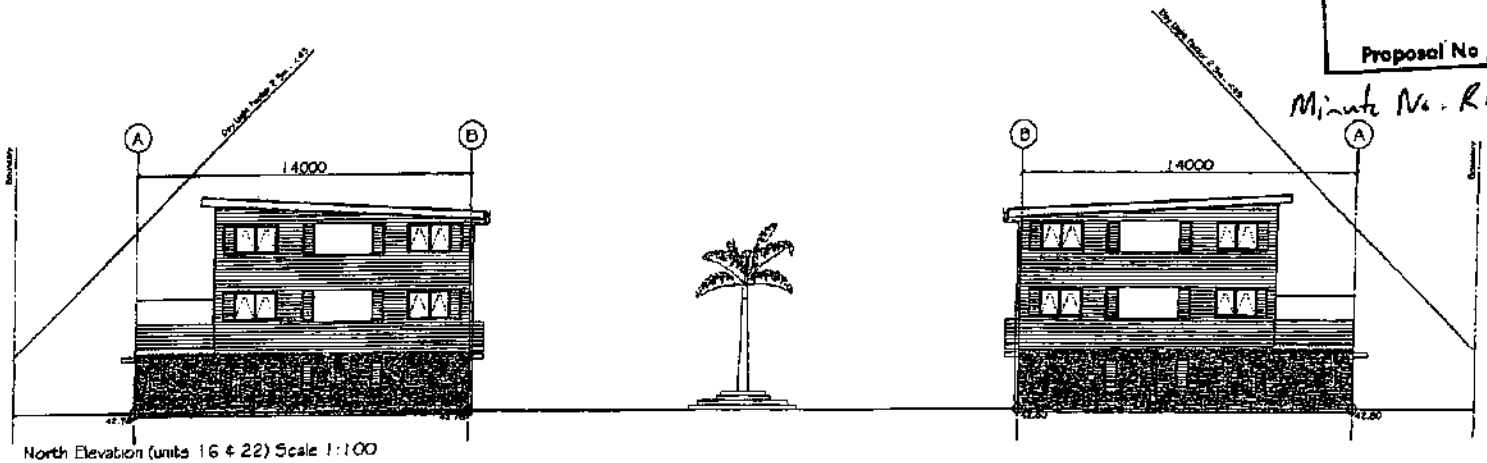


South Elevation (units 11 & 17) Scale 1:100

Sheet 11 of 14

Manukau City Council
Approval Subject to Conditions in attached Resource Consent
13 MAR 2006
Proposal No 28885

Minute No. RC/APR/532/06

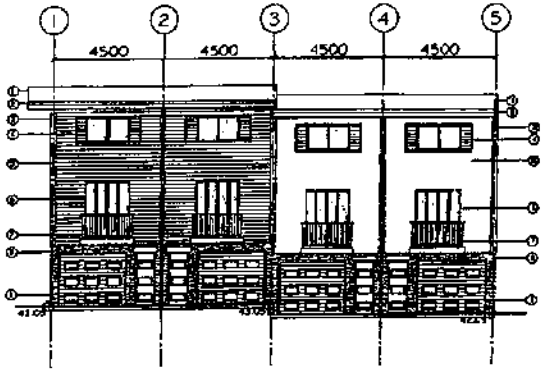


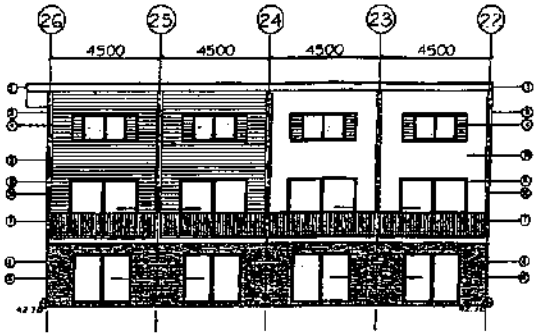
North Elevation (units 16 & 22) Scale 1:100

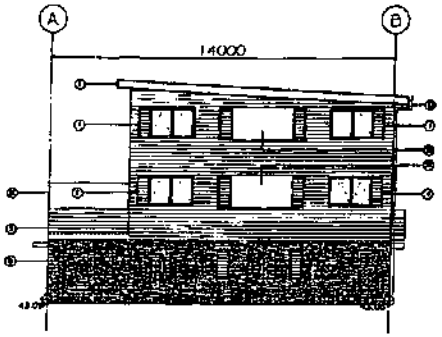
a)to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

Sheet Title
A10
Elevations Units
11 & 17
16 & 22







Manukau City Council
Approval Subject to Conditions in attached Resource Consent
13 MAR 2006
Proposal No 28885
Sheet 12 of 14

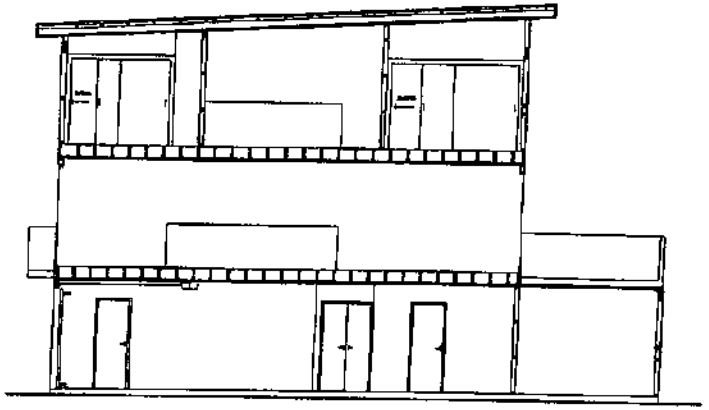
Minute No:
RC/APR/532/06

	Elevation Notes				
1	Steel and Tube trimline coloursteel roofing	7	Selected Wrought iron balastrade	13	UPVC downpipes. Paint finish to specification
2	Coloursteel gutter on timber fascia. Paint finish to specification	8	Selected Schist	14	
3	Concrete tilt panel wall with selected paint finish lined with 25x50 battens and 10mm standard gib to interior walls	9	Selected garage sectional door installed to manufacturers specifications	15	
4	Selected powder coated aluminium windows and Louvers with 6mm glass	10	Solid plaster coating to exterior 20 series mansonry wall installed to manufacturers specifications	16	
5	Weatherboard on building paper installed to manufacturers specifications	11	Selected powder coated aluminium sliding doors with 6mm glass.	17	
6	Aluminium Bi-folds with 6mm glass intalled to manufactures specifications	12	Aluminium deck partitions installed to manufacturers specifications.	18	

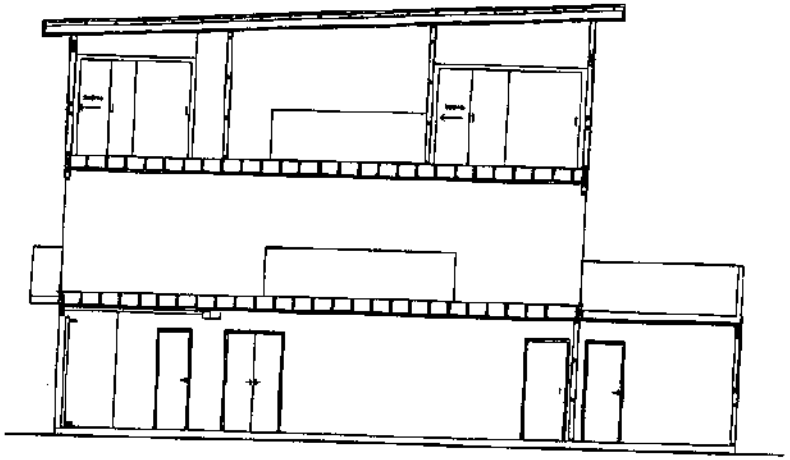
a)to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bath

A11
Elevations Notes



Section A-A
Scale 1:50



Carlos Drive

Section A-A
Scale 1:50

Manukau City Council
Approval Subject to Conditions in attached Resource Consent

1 3 MAR 2006

Proposal No 28885
Sheet 13 of 19
Minute No:
RC/APR/532/06

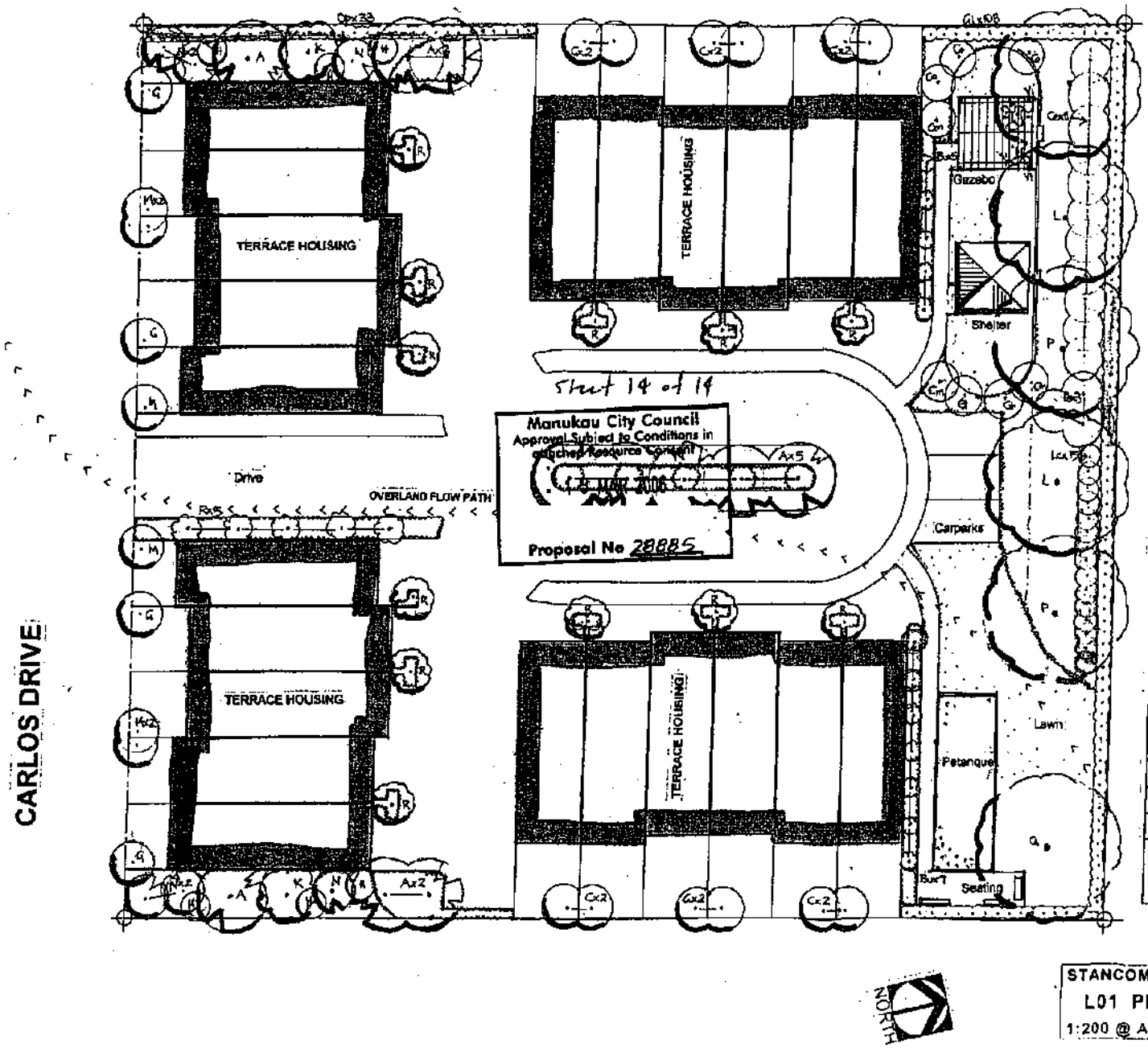
a/to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

Sheet Title
A12

Sections

Drawn
Checked



NOTES

+ Larger trees generally character species for the area in MCC Tree Policy, (liquidamber, taraire, rewarewa). Pinoak selected for tolerance to flooding.
+ Palms and smaller trees include nikau, rhododendron, queen palms, Gordonia, citrus.
+ A 2-3m NZ broadleaf hedge encloses the rear of the property, and an Olearia hedge screens the front west side. The driveway area to the east is screened by a hedge on the neighbouring property.
+ Under-planting will include groundcover roses, rosemary, lavender. Patterning of groundcovers and gravel provides visual interest in narrow side-yard areas. Planting in yards fronting Carlos Drive defined with hedging and herbaceous planting to max 1m height.
+ Landscape allows for 3 different activity areas including petanque court, and 2 gazebos with BBQs.
+ Overland flow path traverses lawn and driveway.

PLANT SCHEDULE – 124 STANCOMBE ROAD N

Symbol	Botanical name	Common name	No.	Size	Mature ht & spread	Notes
A	*Arecastrum romanoffianum*	Queen Palm	11	Pb40 x6 Pb150x5	15m x 5m	
C	*Camellia* 'Plantation pink'	Or similar upright pink camellia	6	Pb40	3m x 2m	
G	*Gordonia axillaris*	White flowers	10	Pb95	3m x 2m	
H	*Rhododendron* 'Susan'	Tall, mauve flowers	6	Pb28	3m x 2m	
K	*Knightia excelsa*	Rewarewa	2	Pb95	20m x 4m	
L	*Liquidamber styraciflua*	Liquidamber	3	Pb95	10m+ x 10m	
M	*Michelia figo*	Port wine magnolia	6	Pb95	3m x 3m	
N	*Rhopalostylis sapida*	Nikau	6	Pb95	6m x 3m	
P	*Beilschmiedia taraire*	Taraire	2	Pb95	10m+ x 10m	
Q	*Quercus palustris*	Pinoak	1	Pb95	10m+ x 10m	
R	*Radamecheria sinica*	Canton lace / China doll	17	Pb95	4m x 3m	
Su	*Buxus sempervirens*	Standard English box or similar as available	12	Pb8	1.5m as available	
Ce	*Cedrela sinensis*	Chinese toon	11	Pb8	3m x 2m	1.5m o-c
Cm	*Citrus* Mandarin Satsuma	Mandarin	3	Pb28	Hedged	600mm o-c
Co	*Citrus* Nevel orange	Orange	3	Pb28	Hedged	600mm o-c
Ct	*Citrus* Tangelo	Tangelo	2	Pb28	Hedged	600mm o-c
Gl	*Grisellinia littoralis*	NZ Broadleaf Hedged to approx. 2m	108	Pb8	Hedged	600mm o-c
Lc	*Loropetalum chinense*	Fringe flower	15	Pb5	1.5 x 1.5m	1m o-c
Op	*Olearia paniculata*	Akiraho Hedged to approx. 2m	33	Pb8	Hedged	600mm o-c
Ps	*Pseudopanax* 'Cyril Watson'	NZ fivefinger variety	3	Pb18	3m x 3m	1m o-c
Vl	*Vitis* 'Albany surprise' & suitable white var.	Edible grape – white & red	1 each	Pb8		As shown

Note: Check location of all services before planting. See separate planting plan for herbaceous planting. Plant and mulch trees to tree planting detail provided.
Any changes in cultivar to be discussed with Landscape Architect. All plants subject to approval by Landscape Architect for plant quality, also suitability shape and size.
Lay out plants prior to planting for approval by Landscape Architect.

Minute No: RC/APR/532/06

STANCOMBE ESTATE 124 STANCOMBE ROAD (N)

L01 PLANTING PLAN – STRUCTURAL PLANTING

1:200 @ A2 April 2006

Te Kaunihera o
MANUKAU
City Council

Correspondence:
Private Bag 76-917
Manukau City
New Zealand
Talk (09) 263 7100
Fax: (09) 262 5154
DX 7151

Consent Suspense Letter

ATTN:- JESSICA . FAX '262 5154

Date: 12th JUNE '07

Building Act 2004

Building Consent Application for:

PIM No: 071556

Project Location:

This application is currently being considered under the provisions to the Building Act 2004. Processing has now reached the stage where further information is required to enable work on the application to continue.

Fees

- ☐ Evaluation
- ☐ Foundation Plans
- ☐ Ventilation
- ☐ Water Treatment
- ☐ Retaining Wall
- ☐ Exterior Cladding
- ☐ Surface Water Control
- ☐ Compliance Item

Standard Requests

- ☐ Fire Report
- ☐ Bracing to Comply
- ☐ Mahuhu Water 2nd visit
- ☐ Details of Exterior Cladding

PLEASE SEE ATTACHED

Please respond to this request within 21 days. In this way you can help in keeping the overall consent processing time to a minimum.

In the meantime, I have to advise you that the "prescribed period" for processing this application has been suspended in terms of the Building Act 2004.

For general queries regarding the progress of your application, you may contact the Building Consents Administrator on ext 8142.

For specific queries contact:

Yours faithfully

Multi-Skilled Building Official
ENVIRONMENTAL SERVICES

Compass Building Consultants Ltd.
PO BOX 23 019 HUNTERS CORNER, PAPATOETOE, AUCKLAND.
UNIT E, 5 JACK CONWAY AVENUE, MANUKAU CITY
Phone: 262 2201
Email: info@bldgcert.co.nz

FAXED
1606

Fax No (64) (09) 262 2205

Date: 12th June `07 **Our Ref: BC 12596**

To: Ormiston Project Management Ltd.

Attention: Graeme Raymond

Fax No: 09 271 4037

From: Joe Kaio

No. Pages (including this page): 2

Re: Building Consent Application for – new 3 level 22 Townhouses in 4 blocks of 5 & 6 units at 46 Carlos Drive Flat Bush.

Owner: Concepts 124 Ltd.

The documentation for the above application has been checked for compliance with the requirements of the Building Act 2004. Processing of the application has now reached the stage where the following further/amended information is required as noted on the attached page/s to enable the checking to be completed.

1. Please provide detail of decks attached to units complying with NZ Building Code acceptable solutions E2/AS1.
2. Please provide details of Fire stopping to ends of IT walls through to outside face of combustible cladding and through cavity.
3. Please provide detail of Fire rating to framing supporting fire rated soffits as ends of framing appear to be cantilevered beyond rafters.
4. Details of Fire rated soffits do not indicate full fire stopping at IT wall line.

Should you have any enquiries to items 2,3 & 4 please refer to Mr Alastair Couper.

Please provide 3 copies of the requested information as soon as possible to facilitate the issue of the building consent.

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any of the material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied. We will reimburse your cost of transmission to us.

In reply please quote our reference number as noted above.

If you have any queries regarding these items please contact Joe Kaio
Telephone (09) 262 2201ext. 715.

Kind regards

Joe Kaio.

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any of the material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied. We will reimburse your cost of transmission to us.

MINUTE NO. RC/APR/532/06 - COMMITTEE DECISION

LIMITED NOTIFIED APPLICATION FOR RESOURCE CONSENT UNDER THE RESOURCE MANAGEMENT ACT 1991 – APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 46 CARLOS DRIVE (FORMERLY 124 STANCOMBE ROAD), FLAT BUSH

PART A – LAND USE CONSENT:

Land Use Conditions

General

1. *That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing and granting of this Resource Consent are paid in full.*

2. *That the development shall be completed in accordance with the plans and documentation including Assessment of Environmental Effects (AEE) submitted with the application and numbered 28885 by Council unless otherwise amended by the following conditions of consent.*

Apartment Design and Construction

3. *That prior to the commencement of construction on the site the following information shall be submitted to the satisfaction of the Manager Resource Consents and Compliance:*

   (a) *details including a schedule of materials, and elevations of the privacy screens to be erected at the end of all balconies identified in the application plans approved in condition (2) above. These screens shall be a maximum of 1.8 metres high where the screens meet the building, extending for a minimum of 1.5 metres at this height and stepping down to the balcony edge;*
   (b) *details including a schedule of materials and elevations of overhangs for second floor balconies to comply with Rule 17.10.12.9 of the Manukau Operative District Plan 2002.*

   The items and works required to be shown in plans in (a) to (b) above shall be completed to the satisfaction of the Manager, Resource Consents and Compliance prior to occupation of any of the units on the site.

4. *That the external colour scheme of the apartments be consistent with the colour scheme plans (Coloured Renderings) numbered 28885 by the Council (1 Sheet).*

Landscaping

5. *The proposed landscape planting as identified on the planting plan and plant schedule submitted (dated April 2005) and numbered 28885 by the Council shall be implemented to the satisfaction of the Manager – Resource Consents and Compliance within 3 months of completion of construction of the units on the site. The landscaped areas shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state to the satisfaction of the Manager, Resource Consents and Compliance.*

6. *Prior to occupation of the units on the site the consent holder shall undertake specimen tree planting between proposed Units 11-16 being:*

   (a) *capable of forming an unbroken 5 metre high screen between these units and the site to the west, with planting being provided within the boundary of the site at 46 Carlos Drive. These specimen trees shall be planted at a minimum height of 2.5 metres; or*
   (b) *where the agreement of the adjoining owner to the west is obtained, capable of forming an unbroken 3 metre high screen on the western side of the existing fence on the boundary at 122 Stancombe Road. These specimen trees shall be planted at a minimum height of 2.5 metres.*

   This planting shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state at the entire cost of the consent holder and to the satisfaction of the Manager – Resource Consents and Compliance.

   Every new owner, or tenant, within Units 11-16 shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs, and that the obligations specified in this condition shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

7. *All buildings and construction works shall be undertaken in accordance with the Geotechnical Investigation and completion report prepared by Geotek Services Ltd Ref: 2704 and dated 2 August 2005.*

Noise Insulation Requirements

8. *That the units shall be designed, constructed and pass field tests demonstrating compliance with the following standards:*

   (i) *The Sound Transmission Loss of common walls shall be no less than 60 and the Sound Transmission Loss of common floors and ceilings shall be no less than 55.*

   (ii) *The Impact Insulation Class of floors shall be no less than 55.*

   (iii) *The Verification Method shall be G6/VM1.*

   (iv) *When assessing Impact Insulation Class, all floors, hallways and stairs in a building outside a household unit are deemed to be common building elements to that household unit. The Impact requirement shall therefore apply between any other unit or common space and the habitable space of the household unit irrespective of vertical or horizontal separation.*

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been designed in accordance with the above standards shall be provided at building consent stage.

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been constructed and has passed field tests demonstrating compliance with the above standards shall be provided to the Manager, Resource Consents and Compliance prior to occupation of the units.

Waste Management

9. *That the management of domestic waste on the site be undertaken in accordance with the Waste Management Plan submitted with the application and numbered 28885 by the Council.*

10. *Every new owner, or tenant, within the apartment complex shall be advised in writing of the process for waste management storage and disposal. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.*

11. *That the outdoor rubbish collection areas shall be screened from public view by the erection of a fence prior to the occupation of the household units and be thereafter maintained to the satisfaction of the Manager, Resource Consents and Compliance.*

Washing Lines

12. *That no washing lines, or airing of laundry occur at a level above the height of balcony balustrades on each floor.*

13. *Every new owner, or tenant, within the apartment complex shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.*

Letter Boxes

14. *Letter boxes shall be provided for each unit fronting Carlos Drive at the street frontage. For the rear two blocks of units a letter box shall be provided for each of these units in an accessible position, which meets the requirements of New Zealand Post.*

Engineering

15. *The works detailed on the approved plans referenced E8/28885 (sheets 1-16) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements:*

    (i) *All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.*

    (ii) *All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).*

    (iii) *On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.*

    (iv) *A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).*

(v) *All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.*

16. *The works shall be completed to the satisfaction of the Manager - Resource Consents & Compliance within six months of the commencement of these works and/or prior to occupation of the proposed buildings or subdivision.*

Overland Stormwater Flowpath

17. *The site has been identified as being subject to flooding from the overland flow of stormwater therefore an overland flowpath shall be provided in accordance with approved engineering drawings referenced E8/28885, and shall be protected by a 'right to drain water' easement in favour of the Council.*

The 'right to drain water' easement shall be defined by the consent holder's registered surveyor and the subsequent easement documents prepared by the City Solicitor at the consent holder's expense. A copy of the Council's requirements for the preparation of legal documentation is attached in this regard. The easement documents shall include the provision that no buildings, structures, fences or filling be placed in the easement area or other works carried out thereon, except with specific Council approval; and that the level and profile of the overland flowpath area) shall remain unchanged thereafter. The easement documents shall also include as-built plans showing levels in terms of the Lands & Survey Auckland Datum, 1946 a suitably located datum mark and boundary dimensions for the proposed easement. One copy of the easement as built plan is required to be clearly printed, showing legible levels, within the box on the enclosed sheet.

Suitable benchmarks (Lands & Survey Auckland Datum, 1946) shall be established and shown on a suitable plan for inclusion in the easement documents to allow all future buildings to be constructed accordingly.

This information shall be recorded on Council's Land Information Register.

18. *The following units have been identified as being susceptible to flooding from an overland stormwater flowpath.*

In order to protect future building from the effects of flooding or the 1% AEP storm event the following minimum floor levels, identified by the consent holder on the approved plan referenced E8/28885 (Sheet 6) shall be established for the unit areas shown on this plan.

Unit	Minimum Floor Level
1	43.05
2	43.05
3	42.65
4	42.65
5	42.25
6	41.78
7	41.78
8	41.78
9	41.58
10	41.58
11	42.30
12	42.30

13	42.55
14	42.55
15	42.80
16	42.80
17	42.78
18	42.78
19	42.78
20	42.78
21	42.78
22	42.78

All levels are in terms of the Lands & Survey Auckland Datum, 1946 and the levels are in accordance with the approved plans referenced E/28885 (Sheet 6) by Council.

Compliance with this requirement shall be on a continuing basis and shall be registered as a covenant in accordance with Section 108 of the Resource Management Act 1991 on the Certificate of Title of Lot 10 DP352580 (and recorded on Council's Land Information Register) both at no cost to Council.

Suitable benchmarks to the Lands & Survey Auckland 1946 datum shall be established to enable future buildings to be constructed accordingly.

The above information (floor levels and benchmarks) shall be shown on a plan on the attached form for inclusion in the covenant.

Stormwater Inlet / Rock Apron

19. *That the wing wall flanking the stormwater outlet near the northern boundary of the site be backfilled to ensure an even transition with the surrounding ground level. This stormwater inlet shall be covered by a grille the objective of which is to prevent access of any children into the stormwater inlet while continuing to allow stormwater flows to be unobstructed by any debris which may become trapped in the grille.*

    A plan of the proposed grille shall be submitted for the approval of the Manager Resource Consents and Compliance prior to its installation. The grille shall be installed in accordance with this approved plan prior to occupation of any units on the site.

    In addition to these works the consent holder shall ensure that boundary between the subject site and the site to the north is stabilised and any erosion at this boundary repaired and regrassed to ensure permanent protection of the adjoining land to the north from any effects of stormwater flows. These works shall be completed to the satisfaction of the Manager – Resource Consents and Compliance prior to the occupation of any units on the site.

Public Drainage and Water Supply

20. *Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each unit with individual connection points in accordance with the approved engineering drawings referenced E8/28885 by Council and to the satisfaction of the Manager – Resource Consents & Compliance.*

21. *Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.*

22. *A detailed structural design shall be undertaken of the retaining walls at the time of Building Consent application. Specific consideration to design shall be given where the retaining wall is to be constructed over the existing sanitary sewer pipes. This will include but not be limited to allowing 1m clearance between the pipe face and adjacent pile surrounds, the diameter of adjacent piles and the rail sizes between them, as well as increases to the embedment depth to allow a minimum of 300mm clearance below the bottom of pipe.*

Roading

23. *The proposed access way shall be constructed in accordance with the approved engineering drawings referenced E8/28885 by Council prior to the occupation of the units and maintained thereafter to the satisfaction of the Manager – Resource Consents & Compliance.*

Vehicle Access

24. *The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to occupation of the household units and maintained thereafter to the satisfaction of the Manager - Resource Consents and Compliance.*

25. *That the width of the vehicle crossing shall be 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to the occupation of the household units to the satisfaction of the Manager - Resource Consents and Compliance.*

Visitor Carparking

26. *That the three visitor carparks identified on the Ground Floor site plan submitted and numbered 28885 by the Council shall remain for the exclusive use of visitors to the site only. This requirement shall be conveyed by the erection of a sign alongside and clearly visible from all three of these carparking spaces.*

    Every new owner, or tenant, within the apartment complex shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

8. *Applicable financial contributions have been paid on the preceding subdivision numbered 27046 and SP8840 by the Council.*

9. *Any future subdivision of the units on the site by way of Unit Title subdivision will be subject to a requirement for payment of reserves contribution in accordance with Rule 15.15.2.3.3.2 of the Manukau Operative District Plan 2002.*

10. *The existing Land Information Register (LIR) notes, and consent notices on Lot 10 DP 352580 shall be carried down to the new allotments.*

Reasons for the Subdivision Decision

1. *The application merits the granting of a resource consent pursuant to Sections 104 and 104A of the Resource Management Act 1991 and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan (2002).*

2. *The effects of the proposal on the surrounding environment will be no more than minor.*

3. *The proposal will provide for an efficient use of the land while maintaining the character and amenity values of the surrounding residential area.*

4. *The proposed development and engineering works are in accordance with Council's engineering standards and will not result in any adverse effect on the environment.*

5. *The reserve contribution has been imposed pursuant to Rule 15.15.2.3.3.1. There are no circumstances that warrant alleviation from the maximum contribution payable.*

Note: The Reserve contribution payable specified above has been derived as follows:

Aggregate market value of Lots 1-4	*$391,250.00 (including GST)*
Contribution: $391,250 x 6% x 3 = $70,425.00	*$79,228.13 (including GST)*

(b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

Section 224

15. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and the Land Transfer Plan number and a copy of the survey plan (showing co-ordinates) are supplied to the Council.

Advice Notes

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where an application under Section 125 is made before the consent lapses.

2. This Consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent MUST accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Each building is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. A Building Consent is required for retaining walls unless exempted under the Schedule 1 of the Building Act 2004.This consent does not include any structural approval of the design/calculations submitted.

6. The requirements pursuant to Conditions 9 and 10 will be recorded on Council's Land Information Register.

7. <u>Development Contributions under the Local Government Act 2002.</u>

In terms of the Development Contribution under the Local Government Act 2002, it is expected that a contribution for 22 residential units would have been paid when building consent for these units are issued pursuant to Condition 3 of this subdivision consent.

18	42.78
19	42.78
20	42.78
21	42.78
22	42.78

All levels are in terms of the Lands and Survey Auckland Datum, 1946 and that the levels are in accordance with the approved plans referenced E/28885 (Sheet 6) by Council.

Compliance with this requirement shall be on a continuing basis and shall be registered as a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 on the Certificates of Title of the respective lots (and recorded on Council's Land Information Register) both at no cost to Council.

Suitable benchmarks to the Lands & Survey Auckland 1946 datum shall be established to enable future buildings to be constructed accordingly.

The above information (floor levels and benchmarks) shall be shown on a plan on the attached form for inclusion in the covenant.

Public Drainage and Water Supply

11. *Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment with individual connection points in accordance with the approved engineering drawings referenced E8/28885 by Council to the satisfaction of the Manager – Resource Consents & Compliance.*

12. *Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.*

Network Utilities

13. *Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed allotments.*

    The consent holder shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts. Confirmation shall also be provided that demonstrates all services for the each of the proposed dwellings lie within their respective common area.

Reserves Contribution

14. (a) *A reserves contribution of $79,228.13(including 12.5%) GST being 6% plus GST of 3/4 x the assessed average market value of Lots 1 to 4, shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.*

Overland Stormwater Flowpath

9. *The site has been identified as being subject to flooding from the overland flow of stormwater therefore an overland flowpath shall be provided within Lots 3 and 5 in accordance with approved engineering drawings referenced E8/28885 (Sheet 6), and shall be protected by a 'right to drain water' easement in favour of the Council.*

   The 'right to drain water' easement shall be defined by the consent holder's registered surveyor and the subsequent easement documents prepared by the City Solicitor at the consent holder's expense. A copy of the Council's requirements for the preparation of legal documentation is attached in this regard. The easement documents shall include the provision that no buildings, structures, fences or filling be placed in the easement area or other works carried out thereon, except with specific Council approval; and that the level and profile of the overland flowpath area) shall remain unchanged thereafter. The easement documents shall also include as-built plans showing levels in terms of the Lands and Survey Auckland Datum, 1946 a suitably located datum mark and boundary dimensions for the proposed easement. One copy of the easement as built plan is required to be clearly printed, showing legible levels, within the box on the enclosed sheet.

   Suitable benchmarks (Lands & Survey Auckland Datum, 1946) shall be established and shown on a suitable plan for inclusion in the easement documents to allow all future buildings to be constructed accordingly.

   This information shall be recorded on Council's Land Information Register.

10. *Lots 1 to 4 have been identified as being susceptible to flooding from the overland stormwater flowpath.*

    In order to protect future building on these lots from the effects of flooding or the 1% AEP storm event the following minimum floor levels, identified by the consent holder on the epproved plan referenced E8/28885 (Sheet 6) shall be established for the proposed unit areas shown on this plan as follows.

Unit	Minimum Floor Level
1	43.05
2	43.05
3	42.65
4	42.65
5	42.25
6	41.78
7	41.78
8	41.78
9	41.58
10	41.58
11	42.30
12	42.30
13	42.55
14	42.55
15	42.80
16	42.80
17	42.78

Advice Note:

The purpose of this condition is to ensure that the proposed subdivision, which closely aligns with the land use consent proposed, does not occur prior to the land use consent being implemented.

Amalgamation

4. *That Lot 5 be held as to four undivided one quarter shares by the owners of Lots 1 to 4 hereon as and that Individual Certificates of Title be issued in accordance therewith (RGL Ref A634857).*

Parking and Manoeuvring Areas

5. *The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate and maintained thereafter to the satisfaction of the Manager - Resource Consents and Compliance.*

6. *That the width of the vehicle crossing shall be formed at 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate to the satisfaction of the Manager - Resource Consents and Compliance.*

Engineering

7. *The works detailed on the approved plans referenced E8/28885 (sheets 1-16) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements:*

   (i) *All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.*

   (ii) *All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).*

   (iii) *On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.*

   (iv)A *'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).*

   (v) *All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.*

8. *The works shall be completed to the satisfaction of the Manager - Resource Consents & Compliance within six months of the commencement of these works and/or prior to occupation of the proposed buildings or subdivision.*

7. *Prior to any certification being issued under Section 224 of the Resource Management Act 1991 for any future Unit Title subdivision of the units subject of this consent, compliance will need to be achieved with the requirements of Section 224(f) of the RMA.*

8. *The requirements pursuant to Conditions 9 and 10 (Overland Flowpath) will be recorded on Council's Land Information Register.*

Reasons for the Decision

1. *The proposal merits consent pursuant to Section 104, 104A, 104B, 104C and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan (2002).*

2. *Overall, the proposed land use consent complies with the minimum density provisions as prescribed by the in the Flat Bush Residential 1 Zone. In this regard it is considered that the proposed units will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.*

3. *The design and external appearance of the proposed dwellings are generally in keeping with expected development in the vicinity.*

4. *The proposed layout of the site will provide for efficient use of resources providing for satisfactory on site amenity while preserving the amenity values of surrounding properties and the general streetscape and residential characteristics of the area.*

5. *The proposed development and the associated engineering works are in accordance with Council's engineering standards and would not result in any adverse effect on the environment.*

PART B - SUBDIVISION CONSENT

Subdivision Conditions

General

1. *That pursuant to Section 36 of the Resource management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing and granting of this Resource Consent are paid in full.*

2. *That the subdivision and development shall be in general accordance with the plans and information submitted with the application and numbered 28885 (SP9188) by Council.*

Commencement of Consent

3. *Pursuant to Section 116 of the Resource Management Act 1991, the subdivision consent shall not commence, and the Council approval under Section 223 of the Resource Management Act 1991 shall not be issued, until the Land Use Consent - Part A of this consent for construction of the 22 dwellings referenced P28885 has been given effect to the extent that the exterior walls and roof of all the approved units have been constructed.*

Compliance with this condition shall be secured by the registration of a covenant on the Certificate of Title of Units 11-16 authorised by this consent in favour of the owners or occupiers of 122 Stancombe Road, Flat Bush. This covenant shall be registered prior to occupation of any units on the site.

Advice Notes

1. *In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However, the Council does have the power to extend this period in certain cases where a further application is made within three months of the consent lapsing.*

2. *This consent does not constitute authority to build or undertake private drainage works and it may be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.*

3. *A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.*

4. *Each building is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.*

5. *<u>Development Contributions under the Local Government Act 2002</u>*

   Please note that under section 198(1)(a) of the Local Government Act 2002 a Development Contribution is applicable to all proposed residential dwellings proposed as part of this development.

   The consent holder is advised that a Development Contribution will be calculated on 22 additional household equivalent units (HEU) for the development.

   This contribution is currently $4,505 plus GST per additional HEU. The rate of contribution is subject to periodic review through the Council's Annual Plan process. The amount payable will be determined and invoiced at the date of issue of building consent.

   Pursuant to section 208(1) of the Local Government Act 2002 until the development contribution is paid the Council may prevent the commencement of the resource consent or withhold a code compliance certificate under section 95 of the Building Act 2004 (from 31 March 2005). The Council may also register the development contribution under the Statutory Land Charges Registration Act 1928 as a charge on the title of the land.

6. *A Building Consent is required for retaining walls unless exempted under the Third Schedule of the Building Act 1991. The minimum design load on retaining wall should be 12.0 kPa. This consent does not include any structural approval of the design/calculations submitted.*

Fencing

27. *That prior to occupation of any unit on the site the consent holder shall complete the erection of a 2.0 metre high closely boarded wooden fence along the entire length of the northern boundary of the site. This fencing shall be constructed in addition to the landscaping required under condition (5) of this consent. Following completion of this fencing work the consent holder shall ensure that all land on this boundary is left in a manner that ensures this land remains stable, and is provided with an appropriate batter and regrassed as necessary to the satisfaction of the Manager, Resource Consents and Compliance.*

Retaining Walls

28. *The retaining walls proposed shall be undertaken in such a manner as to ensure that the land within the site and the land on adjoining sites remains stable at all times. The consent holder shall ensure that prior to construction commencing, all necessary approvals for the retaining walls are obtained and that the retaining walls are completed in a timely manner and supervised by a Chartered Civil Engineer.*

Network Utilities

29. *Power and telephone services shall be installed underground within the common area to provide suitably located service connections to all proposed units.*

30. *The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:*

Table - Residential Zone and Dwellings in Rural Zones						
Time period	Weekdays (dBA)		Saturdays (dBA)		Sundays and Public Holidays (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

Covenant

31. *That the consent holder and its successors in title shall not make or lodge, be party to, finance or contribute to the cost of any complaint, application, appeal or other proceeding (either pursuant to the Resource Management Act 1991 or otherwise) designed to limit, prohibit or restrict any permitted activity or any activity authorised by resource consent, or any lawfully established existing uses undertaken at 122 Stancombe Road, Flat Bush by the owners or occupiers of those properties, provided that such activity is carried out in accordance with the terms, standards or conditions applicable to such permitted activity, resource consent or lawfully established existing uses.*

Te Kaunihera o

Control Sheet for A Building Consent

PIM: 071556A1
Bag No: PURP36A
Date Rec'd: 16/07/2007
Legal Desc: LOT 10 DP 352580

Owner: WORKING CONCEPTS LIMITED
Site: 46 CARLOS DRV FLAT BUSH 1730
Ward: WARD BOTANY-CLEVEDON
Street Ref: 1176/46

Applicant: Compass Building Consultants Ltd Phone: 272 2269 Fax: 272 2270 Map Ref:

Notes: 22 residential townhouses (4 blocks of 5 - 6 units)/Various amendments (see letter)

Wind Zone _____ Sea Spray ☐ Producer Statement ☐ Stage Consent ☐ LIR ☐ Section 37 ☐

Refer for Action to:	6	36	3	44										20	19

	Approved	Officer's Name Print Clearly	Initials	Date	Time & Rate	*Additional Information Required 17	
						Date Asked	Date Received
6	Vetting	Dehya	D	17/8			
36	Hazards	Bhatia	B	23/7	0.8h		
3	Planning	[illegible]	[illegible]	25/7			
12	BA Technical						
25	Awaiting PIM						
10	Manukau Water						
50	Process Location Check						
1	Plumbing and Drainage	JKAID	JK	06/8/07			
2	Building	JKAID	JK	06/8/07			
4	Fire & Egress	Alastair	AJC	30/7			
5	Structural Engineer						
20	BA Check/Audit	[illegible]	SC	13/8/07			
19	Administration						

☐ Contours ☐ Excavation ☐ Retaining Wall
☐ Foundation Plans ☐ Exterior Cladding ☐ Ventilation
☐ Surface Water Control ☐ Wastewater Treatment ☐ Compliance Items
☐ Old Consent

BCA - 030 / Page 1 of 1 / 24 08 06

Te Kaunihera o
MANUKAU
City Council

Application Documents Form

For Building Authority Vetting Officers Use Only

Internal Form

Documents included ✓ :

1. Application form and associated documents ☑
   - Plans ☑
   - Preferred Provider Form ☑
   - Vetting Checklist ☑
   - Reflections Printout ☐
   - Hazard Report ☐
   - Street Damage ☐
   - Manukau Water ☐

✓

6. Geotech Reports ☐
7. Engineer Calculations ☑
8. Certificates ☐
9. Manukau Water ☐

Notes:

File Secure: Yes / No

Name:

Signature:

ORMISTON PROJECT MANAGEMENT LIMITED
Ph: (09) 271 3007
Fax: (09) 271 4037

Facsimile Transmittal

To:	COMPASS BUILDING CERTIFIERS LTD	From:	RAVI PATEL
Fax:	09 272 2270	Pages:	1 (INCL COVER SHEET)
Phone:	09 272 2269	Date:	13 July 2007
Re:	46C CONSENT AMMENDMENT DESCRIPTION	CC:	

Hello Lauren,

Re: 46CARLOS DRIVE, CONSENT AMMENDMENT DESCRIPTION

With reference to our building consent amendment application for the above project we confirm the following amendments:

ORIGINAL WORKS	REVISED / AMMENDED WORKS
pile foundations + slab on grade (to accommodate maxim panel construction system)	pile foundations + slab on grade (to accommodate masonry blockwork + timber frame loading)
maxim panel construction system to all 3 levels	masonry blockwork to ground level + timber framed construction to level 1, level 2 & roof
structural bracing being maxim panel system + steel & timber portals	structural bracing being masonry portals, timber framing, gib bracing system.
timber framed deck screen + steel posts	timber framed deck screen + timber posts
not detailed	masonry blockwork walls to carlos drive fence / boundary line.
not detailed	timber framed pergola to rear of property
not detailed	timber framed planter between blocks 2&3

Should you have any further queries on the above, please do not hesitate to call on 09 271 3007.

Regards,

Ravi Patel

Ormiston Project Management Limited

noted 25/7/07

Te Kaunihera o
MANUKAU
City Council

Correspondence
Private Bag 76-917
Manukau City
New Zealand
Tel (09) 263 7100
Fax (09) 262 5154
DX 7181

FORM 2 – PROJECT INFORMATION MEMORANDUM & BUILDING CONSENT

Application

Section 33 or Section 45 Of The Building Act 2004

AMENDMENTS TO MCC # 071556

Section A: The Building

Project Location

Street Address of Building 46 CARLOS DRIVE
FLAT BUSH MANUKAU

[for structures that do not have a street address, state the nearest street intersection and the distance and direction from that intersection]

Legal description of land where building is located

Lot(s) 10 DP/S 352580

Lot area(s) Sq.m 4170 Hectares

Property ID Holding No

Building Name *[if applicable]*

Location of building within site/block number
[include nearest street access]

Number of Levels 3 Level/Unit No 1-22
[include ground level and any levels below ground] *[insert level/unit number if possible]*

Floor area of proposed work [area m²]

Ground Floor	1382.4 m²	First Floor	107544 m²
Second Floor	107544 m²	Basement	m²
Additional Floor	m²	Mezzanine	m²
Decks	344.2 m²		Total 3877.48 m²

Detached accessory buildings

Garage	m²	Other buildings	m²
Carport	m²		Total m²

Current, lawfully established use RESIDENTIAL 6 PEOPLE/UNIT x 22 UNITS = 132 PEOPLE
[include number of occupants per level and per use if more than one]

Year first constructed *[Approximate date is acceptable eg. C1920s or 1960-1970]*

Section B: The Owner

Name of owner CONCEPTS 124 LIMITED

Mr ☐ Mrs ☐ Miss ☐ Ms ☐ or other

Contact Person CARE OF AGENT

Mailing Address

Street address / registered office

Home Phone Mobile Phone

Daytime Phone Facimile No

Email Website

Te Kaunihera o
MANUKAU
City Council

FORM 2 – PROJECT INFORMATION MEMORANDUM & BUILDING CONSENT
Application

Continued

Section B: The Owner [continued...]

The following evidence of ownership is attached to this application (please tick once attached):

Copy of certificate of title ☑ Lease ☐ Agreement for sale and purchase ☐

Other document showing full name of legal owner(s) of the building ☐

Please state what document is attached C.T.

Section C: The Agent *[only required if application is being made on behalf of the owner]*

Name of Agent ORMISTON PROJECT MANAGEMENT LTD

Contact Person RUWEN DUINKERKE

Mailing Address PO BOX 58395 GREENMOUNT MANUKAU 2141

Street address / registered office UNIT 3 #12 LAIDLAW WAY BOTANY SOUTH

Home Phone _____ Mobile Phone _____

Daytime Phone 09 271 3007 Facimile No 09 271 4037

Email _____ Website _____

Relationship to owner EMPLOYEE

[state details of the authorisation from the owner to make the application on the owner's behalf]

First point of contact for communication with the council / building consent authority

[and shall be invoiced for all fees related to this consent] Concepts Build

Full name AGENT Ormiston Project Management Ltd

Mailing Address P O Box 58395, Greenmount

Daytime Phone 271 3007 Facimile No 271 4037

Email _____

Compass Building Consultants Ltd
Unit 23-2 Bishop Dunn Pl
Botany South
Manukau City
Fax: 272 2270
Ph: 272 2269

Section D: The Application

I request that you issue a:

Project Information Memorandum ☐ Building Consent ☐ Both ☑

For the building work described in this application

Signature: [signature] Date: 3 JULY 2007

Signature of owner ☐ Agent on behalf of and with the authority of the owner ☑

Section E: The Project AMENDMENTS TO MCC # 071556

Description of the building work:

New ☑ Additions/Alterations ☐ Demolition ☐

NEW 3 LEVEL, 22 TOWNHOUSES IN 4 BLOCKS OF 5 + 6 UNITS. EACH TOWNHOUSE CONSISTS OF 3 BEDROOMS, DOUBLE GARAGE + DECK AT FIRST LEVEL

[provide sufficient description of building work to enable scope of work to be fully understood]

Te Kaunihera o
MANUKAU
City Council

FORM 2 – PROJECT INFORMATION MEMORANDUM & BUILDING CONSENT Application

Continued

Section E: The Project [continued...]

Will the building work result in a change of use of the building? Yes ☐ No ☑

If Yes, provide details of the new use: _____

Intended life of the building if less than 50 years: 50 years

List building consents previously issued for this project [if any] available from Council Records

Who issued the consent	Date of consent	Consent number
MCC - RETAINING WALL	16/5/2006	061177

State estimated value [as defined in section 7 of the Building Act 2004] of the value of the building work on which the building levy will be calculated [including goods and services tax] $ 1,200,000

Section F: Project Information Memorandum

The project involves the following matters. Tick each applicable box, if any, and attach relevant information in duplicate. Delete this section if this is an application for a building consent only.

(a) Subdivision ☐
(b) Alteration to Land Contours ☑
(c) New or altered connections to public utilities ☑
(d) New or altered locations and/or external dimensions of buildings ☑
(e) New or altered access for vehicles, including parking ☑
(f) Building work over or adjacent to any road or public place ☐
(g) Disposal of stormwater and wastewater ☐
(h) Building work over existing drains or sewers, or in close proximity to well or watermain ☑
(i) New connections to public utilities, i.e. water supply, stormwater system, wastewater system ☑
(j) Matters of cultural heritage significance ☐
(k) Other matters known to the applicant that may require authorisations from the territorial authority *[please specify in the space provided below]*

Section G: Building Consent

The following plans and specifications are attached to this application:

REFER TO DOCUMENT TRANSMITTAL RECORD

[detail plans and specifications]

Te Kaunihera o
MANUKAU
City Council

Section G: Building Consent [continued...]

The building work will comply with the building code as follows:

Clause	Means of compliance
REFER TO ATTACHED SHEET	

*[For **Clause** list relevant clause numbers of building code]*

*[For **Means of compliance** refer to the relevant compliance document[s] or attach details of alternative solution in the plans and specifications]*

Waiver / modification required

REFER TO ATTACHED SHEET

*[For **Waiver / modification required** state nature of waiver or modification of building code required]*

Section H: Compliance Schedule

The specified systems for the building are as follows: *[specified systems are defined in regulations]*

SYSTEMS NECESSITATING A COMPLIANCE SCHEDULE

- Automatic systems for fire suppression [for example, sprinkler systems] ☐
- Automatic or manual emergency warning systems for fire or other dangers [other than a warning system for fire that is within a household unit and serves only for that unit] ☐
- Electromagnetic or automatic doors or windows [for example, ones that close on fire alarm activation] ☐
- Emergency lighting systems ☐
- Escape route pressurisation systems ☐
- Rise mains for sue by fire services ☐
- Automatic back-flow preventers connected to a potable water supply ☐
- Lifts, escalators, travelators or other systems for moving people or goods within buildings ☐
- Mechanical ventilation or air conditioning systems ☐
- Building maintenance units providing access to exterior and/or interior wall of building ☐
- Audio loops or other assistive listening systems or feature specified in any of the above ☐
- Rise mains for use by Fire Services ☐

Section I: Attachments

The following documents are attached to this application:

- Plans and specifications [please list] REFER TO DOCUMENT + DRAWING ☑
- Project information memorandum TRANSMITTAL RECORD ☐
- Development contribution notice [Form 3] ☐
- Certificate attached to project information memorandum [Form 4] ☐

Section G: Building Consent - Means of Compliance.

Clause (tick relevant clause numbers of building code)	Means of compliance (refer to the relevant compliance document(s) or detail of alternative solution in the plans and specifications; if not applicable, put n/a)	Waiver/modification required (state nature of waiver or modification of building code required; if not applicable, put n/a)
✓ B1 Structure	B1/AS1	SPECIFIC DESIGN
✓ B2 Durability	B2/AS1	
✓ C1 Outbreak of fire	C/AS1	
✓ C2 Means of escape	C/AS1	
✓ C3 Spread of fire	C/AS1	
✓ C4 Structural stability during fire	C/AS1	
○ D1 Access routes		
○ D2 Mechanical installations for access		
✓ E1 Surface water	E1/AS1	
✓ E2 External moisture	E2/AS1	
✓ E3 Internal moisture	E3/AS1	
○ F1 Hazardous agents on site		
○ F2 Hazardous building materials		
○ F3 Hazardous substances and processes		
✓ F4 Safety from falling	F4/AS1	
○ F5 Construction and demolition hazards		
○ F6 Lighting for emergency		
✓ F7 Warning systems	F7/AS1 N2S4512	
○ F8 Signs		
✓ G1 Personal hygiene	G1/AS1	
✓ G2 Laundering	G2/AS1	
✓ G3 Food preparation and prevention of contamination	G3/AS1	
✓ G4 Ventilation	G4/AS1	
✓ G5 Interior environment	G5/AS1	
✓ G6 Airborne and impact sound	G6/AS1	
✓ G7 Natural light	G7/AS1	
○ G8 Artificial light		
✓ G9 Electricity	G9/AS1	
○ G10 Piped services		
○ G11 Gas as an energy source		
✓ G12 Water supplies	G12/AS1	
✓ G13 Foul water	G13/AS1	
○ G14 Industrial liquid waste		
○ G15 Solid waste		
✓ H1 Energy efficiency	H1/AS1	

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **215615**
Land Registration District **North Auckland**
Date Issued 19 April 2006

Prior References
NA34D/637

Estate Fee Simple
Area 4170 square metres more or less
Legal Description Lot 10 Deposited Plan 352580
Proprietors
Working Concepts Limited

Interests

Appurtenant hereto is a right of way created by Easement Instrument 6678027.6 - 6.12.2005 at 9:00 am
The easements created by Easement Instrument 6678027.6 are subject to Section 243 (a) Resource Management Act 1991
7057397.3 Mortgage to North South Finance Limited - 5.10.2006 at 9:00 am

Compass Building Consultants Ltd.

PO BOX 23 019 HUNTERS CORNER, PAPATOETOE, AUCKLAND.

Manukau City Council Transmittal Advice
For Building Consent Vetting & Registration

RECEIVED
- 5 JUL 2007
Building Authority

Attention: Jessica Matthews

From: Lauren McColl

Date: 09/07/07

Commercial ☐ Residential ☑

PIM only application ☐

PIM & Building Consent application ☑

PIM issued ..... ☐

Please find the following Documents enclosed:

1. Manukau Building Consent Application form ☑
2. Application Checklist completed ☑
3. Water Meter Connection form (if applicable) ☑
4. Street Damage & Vehicle Crossing Exists form ☑
5. Certificate of Title (or other evidence of ownership) ☑
6. 3x Sets of Plans/Drawings ☑
7. 2x Sets of all other documents (specs, calcs, fire report, etc) ☑

Address: 46 Carlos Drive, Flat Bush

Compass BC No: BC12815

Signed: LMcColl

ORMISTON PROJECT MANAGEMENT LIMITED

DRAWING TRANSMITTAL RECORD

CLIENT	CONCEPTS 124 LTD
PROJECT TITLE	PROPOSED TOWNHOUSES
PROJECT ADDRES	46 CARLOS DR, FLAT BUSH
PROJECT NO	#008

	DATE OF ISSUE									
DAY	02	22	11	11	12	13	03			
MONTH	05	05	06	06	06	06	07			
YEAR	07	07	07	07	07	07	07			

ISSUED TO:		NO OF COPIES:									
CLIENT	CONCEPTS 124 LIMITED										
SURVEYOR	EASDALES SURVEYORS LTD										
GEOTECHNICAL ENGINEER	GEOTEK SERVICES LTD										
CIVIL ENGINEER	AIREY CONSULTANTS LTD										
STRUCTURAL ENGINEER	AIREY CONSULTANTS LTD										
FIRE ENGINEER	FIRE DESIGNS LTD										
ACOUSTIC ENGINEER	KINGETT MITCHELL LTD										
HYDRAULIC ENGINEER	HSC CONSULTANTS LTD										
CONSENT PROVIDER	COMPASS BUILDING CONSULTANTS	4					4	4			
CONTRACTOR	FLAT BUSH CONSTRUCTION LTD										
MAXIM PANELS	PANELBILT SYSTEMS LTD		2								
PROJECT MANAGER	JOE				1						
SCAFFOLD ESTIMATE						1					
JOHN T BUILDERS	JOHN			1							
REASON FOR ISSUE:											
1. PRELIMINARY	5. TENDER	3	5	5	2	5	3	3			
2. INFORMATION	6. CONTRACT										
3. BUILDING CONSENT	7. REQUESTED										
4. CONSTRUCTION	8. APPROVAL										
ISSUE FORMAT:											
9. A1 HARDCOPY	12. EMAIL ATTACHMENT	10	10	10	10	10	10	10			
10. A3 HARDCOPY	13. CD										
11. A4 HARDCOPY											
DELIVERY MODE:											
C = COURIER	P = POST	H	H	H	H	H	H	H			
H = HAND	E = EMAIL										

	DATE OF ISSUE									
DAY	02	22	11	11	12	13	03			
MONTH	05	05	06	06	06	06	07			
YEAR	07	07	07	07	07	07	07			

DRAWING REGISTER											
DRAWING NO:	DRAWING TITLE:	REVISION:									
	COVER SHEET	X	X		X	X		X			
	DRAWING LIST	X	X	X	X	X		X			
A101	SITE SURFACES PLAN	X	X		X	X		1			
A102	SITE SERVICES PLAN	X	X		X	X		1			
A150	BLOCK 1 LANDSCAPING PLAN							X			
A151	BLOCK 2 LANDSCAPING PLAN							X			
A152	BLOCK 3 LANDSCAPING PLAN							X			
A153	BLOCK 4 LANDSCAPING PLAN							X			
A154	ROAD SIDE FENCING PLAN							X			
A155	ROAD SIDE FENCING ELEVATIONS							X			
A156	PERGOLA CONSTRUCTION							X			
A201	OVERALL GROUND FLOOR PLAN	X	X	X	X	X		1			
A202	OVERALL FIRST FLOOR PLAN	X	X	X	X	X		1			
A203	OVERALL SECOND FLOOR PLAN	X	X	X	X	X		1			
A204	UNIT 9 FLOOR PLAN	X	X	X	X	X		1			
A205	UNIT 10 FLOOR PLAN	X	X	X	X	X		1			
A206	UNIT 11 FLOOR PLAN	X	X	X	X	X		1			
A207	UNIT 12 FLOOR PLAN	X	X	X	X	X		1			
A208	ELEVATIONS	X	X	X	X	X		1			
A209	ELEVATIONS	X	X	X	X	X		1			
A211	ROOF PLAN	X	X	X	X	X		1			
A212	OVERALL SLAB SETOUT PLAN	X	X		X	X		1			
A213	BLOCK 1 FOUNDATION PLAN	X	X		X	X		1			
A214	BLOCK 1 LEVEL 1 FRAMING PLAN	X	X	X	X	X		1			
A215	BLOCK 1 LEVEL 2 FRAMING PLAN	X	X	X	X	X		1			
A216	BLOCK 1 ROOF FRAMING PLAN	X	X	X	X	X		1			
A217	BLOCK 2 FOUNDATION PLAN	X	X		X	X		1			
A218	BLOCK 2 LEVEL 1 FRAMING PLAN	X	X	X	X	X		1			
A219	BLOCK 2 LEVEL 2 FRAMING PLAN	X	X	X	X	X		1			
A220	BLOCK 2 ROOF FRAMING PLAN	X	X	X	X	X		1			
A221	BLOCK 3 FOUNDATION PLAN	X	X		X	X		1			
A222	BLOCK 3 LEVEL 1 FRAMING PLAN	X	X	X	X	X		1			
A223	BLOCK 3 LEVEL 2 FRAMING PLAN	X	X	X	X	X		1			
A224	BLOCK 3 ROOF FRAMING PLAN	X	X	X	X	X		1			
A225	BLOCK 4 FOUNDATION PLAN	X	X		X	X		1			
A226	BLOCK 4 LEVEL 1 FRAMING PLAN	X	X	X	X	X		1			
A227	BLOCK 4 LEVEL 2 FRAMING PLAN	X	X	X	X	X		1			
A228	BLOCK 4 ROOF FRAMING PLAN	X	X	X	X	X		1			
A230	CROSS SECTIONS	X	X	X	X	X		1			
A301	WALL TYPE LEGEND	X	X		X	X		1			
A302	LINEA WTHR BD SETOUT	X	X		X	X		1			
A303	STAIR DETAILS	X	X		X	X		1			
A304	DECK SCREEN DETAILS	X	X		X	X		1			
A310	FOUNDATION DETAILS	X	X		X	X		1			
A311	CONSTRUCTION DETAILS	X	X		X	X	1	2			
A312	CONSTRUCTION DETAILS	X	X		X	X	1	2			

		DATE OF ISSUE									
	DAY	02	22	11	11	12	13	03			
	MONTH	05	05	06	06	06	06	07			
	YEAR	07	07	07	07	07	07	07			
A313	CONSTRUCTION DETAILS	X	X		X	X		1			
A314	CONSTRUCTION DETAILS	X	X		X	X		1			
A315	CONSTRUCTION DETAILS	X	X		X	X		1			
A316	CONSTRUCTION DETAILS	X	X		X	X		1			
A317	CONSTRUCTION DETAILS	X	X		X	X		1			
A318	CLADDING JUNCTION DETAILS	X	X		X	X		1			
A319	CONSTRUCTION DETAILS	X	X		X	X		1			
A320	CONSTRUCTION DETAILS							X			
A321	CONSTRUCTION DETAILS							X			
A601	WINDOW & DOOR SCHEDULES	X	X	X	X	X		1			
A602	WINDOW BOX DETAILS -SHEET DELETED	X	X		X	X					
A603	BALUSTRADE DETAILS							X			
E110	UNIT 9 ELECTRICAL PLAN										
E111	UNIT 10 ELECTRICAL PLAN										
E112	UNIT 11 ELECTRICAL PLAN										
E113	UNIT 12 ELECTRICAL PLAN										
E114	EXTERNAL LIGHTING PLAN										

PREFERED PROVIDER FOR

Consent Processing & Compliance

Environmental Services

Te Kaunihera o
MANUKAU
City Council

Correspondence:
Private Bag 76-917
Manukau City
New Zealand
Tel: (09) 263 7100
Fax: (09) 262 5154
DX 7181

AMENDMENTS TO MCC # 071556

Owner and Location

Name CONCEPTS 124 Ltd

Project Location 46 CARLOS DRIVE
FLAT BUSH
MANUKAU

Service Provider

Please select of one the following units to undertake the processing of your consent and the compliance inspections during the development of your project. Listed below are the services that each unit offers.

Professional Building Consultants Ltd ☐
Residential

Compass Building Consultants Ltd ☑
Residential
Commercial
Industrial

Manukau City Council Processing Unit ☐
Residential
Commercial
Industrial

I/we accept that we are liable for all fees with respect to this Building Consent. Fees are payable prior to consent issue. Code of Compliance Certificate will not be issued if fees, including Development Contribution, are outstanding.

Signature

Signed _____ Date 3 JULY 2007

Name RUWEN DUNKERKE

Signed by:
Owner ☐ Agent [engaged by owner] ☑

Plans and Specifications

I/we require that my/our plans ☑ specifications ☑
Be treated as confidential in order to protect: the security of the building ☑ copyright ☑

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RESIDENTIAL BUILDING CONSENT

Application Checklist

Owner CONCEPTS 124 LTD

Project Location 46 CARLOS DR, FLAT BUSH, MANUKAU

Application Form/Checklist

	Applicant	Council	Comment
Preferred Provider for Consent and Compliance Processing	☑	☐	
Building Consent Application Form	☑	☐	
Application Checklist	☑	☐	
Water Connection Application Form [if applicable]	☑	☐	
Vehicle Crossing Form	☑	☐	
Street Damage Exists Form [if applicable]	☑	☐	
PIM [if applicable]	☐	☐	
Resource Consent [if applicable]	☑	☐	
Certificate of Title [or other]	☑	☐	

Site Plans

Three sets of working drawings are required [preferably on A3]. Plans are to be clear, in ink and black linework on a white background, with a scale of 1:100 [or 1:200 for sections larger than 1500m²]. Provide accurate dimensions

	Applicant	Council	Comment
Scale	☑	☐	
North Point	☑	☐	
Road Name	☑	☐	
Dwelling Siting	☑	☐	
Legal Description	☑	☐	
Legal Boundaries	☑	☐	
Dimensions	☑	☐	
Land Detail			
♦ Contours	☑	☐	
Show lines at 0.5m intervals both existing and proposed			
Using spot heights show the following			
Height in relation to boundary	☐	☐	
Maximum height of building	☐	☐	
Ground floor level with reference to Lands and Survey Auckland Datum 1946	☐	☐	
♦ Excavation	☐	☐	
Show all excavation details, gradients and calculations including battens and retaining wall positions and dimensions in relation to the boundaries			
♦ Retaining walls AS PER BC # 061177	☐	☐	
Details of all retaining walls, driveways and parking access on this property and adjacent properties within the zone of influence to bordering property plus two metres			
Development			
Vehicle manoeuvring and parking provisions including garage and carport on each site	☐	☐	

Working Drawings and Specifications

Three sets of working drawings are required [preferably on A3]. Plans are to be clear, in ink and black linework on a white background, with a scale of 1:100 or 1:50. Provide accurate dimensions

	Applicant	Council	Comment
Specifications	☐	☐	
Provide two sets with section headings, include only relevant information			
Floor Plans	☑	☐	
Provide floor plans of existing and proposed levels			
Elevations	☑	☐	
Show elevations of all exterior walls and windows. Show ground level, existing and proposed including height in relation to boundary			

Te Kaunihera o
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City Council

RESIDENTIAL BUILDING CONSENT

Application Checklist

Continued

	Applicant	Council	Comment
♦Foundation Plans	☑	☐	
Detail each element used and show bracing for timber subfloor			
Concrete floor detail, concrete foundation showing all reinforcing			
Provide Geotech report [where applicable]			
Slab	☑	☐	
Provide construction details, design certificate confirming compliance and calculations [if applicable]			
Timber Floors	☑	☐	
Show joist layout spans, supports, nogs and trimmers			
Roof Plan	☑	☐	
Show layout with members and bracing [include point loads]			
Cross Sections	☑	☐	
Provide crossways through length and width of proposed and existing structures			
Show finished ground levels			
Insulation [R value and type]			
Timber treatment			
Building Envelope Construction			
Construction Detail	☑	☐	
Bracing Calculations	☑	☐	
Element clearly shown on the floor plan			
♦Exterior Cladding and Specifications	☑	☐	
Details to be included on plans			
To include risk assessment matrix as per NZBC E2 2004			
Smoke detector locations	☐	☐	
Ventilation eg. Aircraft Zone	☐	☐	
Plumbing and Drainage			
Plumbing layout including sizing and gradient	☐	☐	
Sewer and storm water drains (public and private)	☐	☐	
Show layout of drains, connections, discharge, inspection junctions, bends, size and gradient			
♦Surface Water Control [Cesspits]	☐	☐	
Show collections from paved and sealed areas			
Novaflow drainage from battered banks and retaining walls discharged to cesspit			
♦Wastewater Treatment System	☐	☐	
Provide drainage engineer's design and letter stating that they will supervise construction and issue a certificate to the Council upon completion of the installation stating that it has been installed in accordance with the approved plans			
Provide a certificate from producer			
Provide engineer's design in accordance with TP58			
Public drain in close proximity	☑	☐	
Provide an engineer's design			
Other Requirements			
Engineer			
Specific Design	☑	☐	
Provide two sets of engineer's drawings with all dimensions and calculations which have been signed and dated			
Blockwork Observation Certificate	☐	☐	
Driven Foundation Piles Certificate	☐	☐	
Other			
Fire/Sound proof rated walls	☑	☐	
Show cross section detail, manufacturer's fire/sound proof rating, displayed on floor plan			
♦Consents and Permits	☐	☐	
Have all prior consents and building permits had a final inspection and a Code of Compliance Certificate issued?			

☐ **The Council requires further information in the areas indicated.**

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CITY SERVICES

Charges for Services Provided

Pursuant to the Building Act 2004. Certificate of Accreditation.

The Environmental Management Committee has resolved, pursuant to the Building Act 2004, and in accordance with Section 690A of the Local Government Act 1974, that the following fees and charges shall apply, effective from 1 August 2000.

Basic Administrative and Technical (Vetting Deposits)

Provides for all recording, handling, vetting and filing activity for building consent applications. This deposit and the basic administrative and vetting cost is payable on application and is not refundable should the project not proceed.

Estimated value of Building Work *(including all services and site works)*	***Total deposit payable on application***
Up to $2,500	$120
$2,501 to $10,000	$230
$10,001 to $25,000	$280
$25,001 to $50,000	$350
$50,001 to $100,000	$400
>$100,001	$500

Other Fees

Provides for the technical processing up to consent approval and is a set charge based on the processing of a well-documented, fully complying application. The set charge has been calculated on a predetermined time frame to process the application. This deposit and the basic administrative and vetting cost is payable on application and is not refundable should the project not proceed.

		Charges ($)
(a)	Issue of Code Compliance Certificates	Residential = $33.75 Other = $45.00
(b)	Application for waiver from Building code	At cost
(c)	Application to extend time for which a building consent is valid (set charge payable on application)	$56.25
(d)	Re-inspections due to work incomplete or non-complying	Per inspection = $35.00
(e)	Vehicle Crossing inspection	$56.25
(f)	Street Damage Deposits	*Refer schedule bylaw*
(g)	Monthly summary of building consents issued (hard copy) (minimum 6 months)	Per months = $15.00
(h)	Building Consent Cancellation fee	$56.25

Processing

Provides for the processing up to consent issue and is a set charge based on the processing of a fully complying application. The charge has been calculated on a predetermined time frame to process the application.

	Payable on Issue of Building Consent
Processing by Internal Specialist eg. fire and egress, swimming pool, fencing, NZ Building Code	Cost
Processing by External Specialist	Cost plus 20% administrative / supervision charge

* *Payable on issue of Building Consent*

Compliance Inspection

During processing an assessment will be made of the minimum number of inspections necessary to confirm construction compliance. Any specialist inspection involving external suppliers will be charged at cost plus 10% related administrative and supervision charge.

Charges for Services Provided

Continued

	Payable on Issue of Building Consent
Compliance Inspection	Cost based on assessment of time to be spent on inspection
Inspection by Specialist Consultant e.g. lifts, heating, ventilation, sprinklers	Cost plus 10% administrative / supervision charge

* *Payable on issue of Building Consent*

Project Information Memorandum

Charges for Project Information Memorandum (*The charge is for preparation and issue, and is payable on application*).

	Payable on application
For all internal alterations to existing buildings including electrical, plumbing, drainage and other services *(for projects where the value of building work is estimated at less than $5,000 and the Project Information Memorandum is applied for in conjunction with the building consent application. No charge will be made for the PIM)*	$56.25
For all new buildings, external alterations and additions	$150 00

Producer Statements

Charge for assessment by the Council of the competence and acceptability of persons to prepare Producer Statements.	
Miscellaneous elements of building, building services, detached dwellings etc where the building project has a total value of up to $1,000,000	$112.50

Charges for auditing projects for which Producer Statements have been provided

- Technical Processing
  - A standard audit charge of $11.25 per Producer Statement Design (or Design/Design Review where a design review is required) for work associated with residential users. This will meet the costs for a full audit of the design of a small number of projects selected at random
- Technical Compliance Inspection
  - Charge for establishing construction compliance where Producer Statements – Construction and/or Producer Statements – Construction Review are accepted

Value of Work ($)	Audit Cost per Project ($)
Up to $5,000	50
$5,001 to $25,000	60
$25,001 to $50,000	65
$50,001 to $100,000	75
$100,001 to $150,000	85
$150,001 to $250,000	100
$250,001 to $500,000	120
$500,001 to $1,000,000	150
PLUS ADDITIONAL COST FOR WORK VALUED AT MORE THAN $1,000,000	
Additional per $500,000 increment	100

Note: The above charge is to cover the cost of receiving and recording the notification of inspections required to enable auditing to be carried out, the audit inspection cost and the cost of receiving and checking of Producer Statements before issuing Code Compliance Certificates.

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RESIDENTIAL BUILDING CONSENT

Application Pack Guide

Owner CONCEPTS 124 Ltd

Project Location 46 CARLOS DRIVE
FLAT BUSH
MANUKAU

You must have a **meeting** to lodge your application. Ensure that **all forms are completed** prior to booking your meeting. Please phone 262 5227 to book your appointment.

Preferred Provider for Building Consent Processing and Compliance

- This form must be completed to indicate choice of provider.

♦ BCA001A – Application

- An application form is to be completed and signed by the owner or his authorised agent [ie architect, draughtsman, builder]. All items on the application form are to be completed.

♦ BCA001B – Checklist

- This checklist must be fully completed before applying for building consent.

BCA001C – Fee Sheet

- Information to be used only as a guide.

Manukau Water Form

- For new buildings on a reticulated water supply, a completed water connection form will be required. For new units, or where an additional unit is to be erected, separate water meters will be required for each of the units.

Vehicle Crossing Form

- This form acknowledges either that a vehicle crossing already exists on the property described, or that the applicant wishes to apply for a consent to install a vehicle crossing.

Existing Street Damage and Vehicle Crossing Form

- This form is to be completed if any damage exists to the vehicle crossing, footpath, and/ or channel in front of the property.

!

Important!

Failure to produce these documents will result in immediate refusal of acceptance.

Contact the Citizen and Customer Centre 262 5296 with any questions.

Te Kaunihera o
MANUKAU
City Council

Processing Documents Form

For Building Authority Technical Officer Use Only

Internal Form

Documents included ✓ :

1. Building Consent ☐
2. Conditions of Consent ☐
3. PIM ☐
4. Invoice ☐
5. Checklists ☐

Health Check

Item	Y	N/A	Comment
File Layout	✓		
Consent Docs	✓		
Fee Sheet	✓		
Application Form	✓		
PIM	✓		Area [illegible]
Consent Checklist			
• Planning		✓	
• Plumbing/Drainage	✓		
• Building	✓		
• Engineering	✓	PS	
• Application	✓		
HAZARDS	✓		
Section 37			

Checking Officer MC Date 13/8/07

Building Authority Technical Audit Team has identified issues as listed above. Your assistance is appreciated in completing this application and will help your customers complete their consent in a timely manner.

Form 5

BUILDING CONSENT

Section 51, Building Act 2004

Te Kaunihera o
MANUKAU
City Council

Correspondence:
Private Bag
76-917
Manukau City
New Zealand
Tel: (09) 263 7100
Fax: (09) 262 5154
DX 7181

THE BUILDING

Building consent:	071556A1
Street address of building:	46 CARLOS DRV FLAT BUSH 1730
Legal description of land:	LOT 10 DP 352580
Building name:	
Location of building:	
Level / Unit no:	

T OWNER

Name of owner:	Concepts 124 Limited	
Mailing address:	C/- PO Box 58395 Greenmount	
Street address/ Registered office:		
Contact details:	Daytime ph: 271 3007 Fax no: 271 4037 Website:	Mobile ph: E-mail:

FIRST POINT OF CONTACT FOR CONSENT

Full name:	Compass Building Consultants Ltd	
Mailing address:	PO Box 23 019 Papatoetoe Manukau City	
Street address/ Registered office:	Unit 23/ 2 Bishop Dunn Place Botany South Manukau City	
Contact details:	Daytime ph: 272 2269 Fax no: 272 2270 Website:	Mobile ph: E-mail:

Form 5 - Building Consent

Form 5

BUILDING CONSENT

Section 51, Building Act 2004

Te Kaunihera o MANUKAU City Council

BUILDING WORK

The following building work is authorised by this building consent:

22 residential townhouses (4 blocks of 5 - 6 units)/Various amendments (see letter)

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building [or proposed building] of any duty or responsibility under any other Act relating to or affecting the building [or proposed building].

This building consent also does not permit the construction, alteration, demolition or removal of the building [or proposed building] if that construction, alteration, demolition or removal would be in breach of any other Act.

This building consent is subject to the following conditions:

(a) [any other conditions] - see Conditions Sheet BCA 038

COMPLIANCE SCHEDULE

A compliance schedule is/is not required for the building.

The compliance schedule must contain the following specified systems and comply with the performance standards for those systems required by the building code. - Refer BCA 038

ATTACHMENTS

Copies of the following documents are attached to this building consent

- Project Information Memorandum number 071556 ☐
- Development contribution notice - [Form 3] ☐
- Certificate attached to Project Information Memorandum- [Form 4] ☐
- Conditions of Consent - BCA 038 ☐

Signature

Team Leader
Building Authority

Position

On behalf of Manukau City Council

Date: 13/08/2007

Form 5 - Building Consent

Te Kaunihera o
MANUKAU
City Council

CONDITIONS OF CONSENT

Correspondence:
Private Bag
76-917
Manukau City
New Zealand
Tel: (09) 263 7100
Fax: (09) 262 5154
DX 7181

CONSENT INFORMATION

Consent no: 071556A1
Issue date:
Bag: PURP36A

Endorsements on plans

All endorsements on plans form part of this consent and are to be adhered to.

Plumbing and drainage

All plumbing and drainage work to be carried out by registered tradesmen. All plumbing and drainage to comply with NZBC or AS 3500 or an approved system.

Comprised in this consent

All that is comprised in this consent is subject to compliance with the Electricity Act 1992 and the Gas Act 1992. Energy work certificates for the energy work must be provided prior to the issue of a code compliance certificate. This consent is given on the basis that no waiver or modification for the building code has been sought or approved in relation to energy work

Authorisations

Any other authorisations identified in this Document must be obtained prior to the commencement of work.

Consent lapse

This consent will lapse if building work has not commenced within 12 calendar months after the date of issue. Council may extend this time frame if application to do so is received prior to the expiry date. Once work has commenced the consent will also lapse if reasonable progress is not made with 12 months.

Site inspections

Site inspections required as per inspection sheet attached to approved plans. Additional or reinspections will be invoiced prior to issue of Code Compliance Certificate.

Owner advice

An owner shall as soon as practicable advise the Council, in the prescribed form, that the building work has been completed to the extent required by the building consent issued in respect of that building work.

8 - Engineers - Foundation Excavation

Foundation excavation and construction to be supervised and certified by a registered engineer. A Council inspection is also required prior to placement of concrete.

9 - Engineering Components

This consent is for the engineering components outlined in the attached engineering calculations ONLY

Development Contribution

A development contribution fee is payable for the amount of 138575.25. This development contribution fee is payable via the building consent stream and will be invoiced at the time of your final inspection and payable before issue of the CCC

All foundation excavation and construction, piling, earthworks, and sub grades to be inspected and certified by a Chartered Professional Engineer (Geotechnical) prior to the placement of any construction materials as per soil report from Geotek Services Ltd Ref: 2704 Dated: 2 August 2005.

Endorsement

Certificate from registered surveyor to be provided to Council with regard pouring of floor level before:
a) pouring of concrete slab; or
b) sub-floor framing commences.
MFFL As per Resource Consent Proposal No:28885

Prior to commencement of building operations, please complete and return this form to:

Manukau City Council
Building Control Field Operations
Level 4, Kotuku House
Private Bag
MANUKAU CITY

Date: _____

Street Ref: 1176/46 Site: 46 CARLOS DRV FLAT BUSH 1730

PIM/CONSENT No: 071556A1

	NAME	ADDRESS	TEL NO	REG NO
Builder				
Plumber				
Drainlayer				

Building Authority

Bin 36 Checklist

PIM/CONSENT No: 071558A

CHECK ALL ITEMS ✓

Council Records

	Yes	No	Comments
• **Property Insight Report** - Has the Property Insight Report been provided	☐	☐	Amendment
• **LIR** – Are there any specific requirements that relate to hazards?	☐	☐	
• **G.I.S.** - Has the GIS been checked for relevant details?	☑	☐	
• **Building Consent Plans** – Have the Building Consent Plans been checked?	☑	☐	

Flooding and Land Stability

	Yes	No	N/A	Comments
• **Specific foundation design** – is a Specific Foundation Design required?	☐	☐		Enclosed original conditions approved.
• **Geotechnical reports** – Have all the relevant Geotechnical Reports been provided?	☐	☐	☐	
• **Earthworks** – Are there any earthworks that cause an issue with regard to stability?	☐	☐		
• **Retaining walls** – Are there any retaining walls that require specific design?	☐	☐		
• **Easement** – Is there an easement on the site?	☐	☐		
• **Flooding** – Does the site appear to be prone to Flooding?	☐	☐		
• **Minimum Floor Level** – Is there a Minimum Floor Level applicable?	☐	☐		
• **Water Tanks** - Are there any water tanks that require specific design?	☐	☐		

Signature

ORMISTON PROJECT MANAGEMENT LIMITED
Ph: (09) 271 3007
Fax: (09) 271 4037

Facsimile Transmittal

To:	COMPASS BUILDING CERTIFIERS LTD	From:	RAVI PATEL
Fax:	09 272 2270	Pages:	1 (INCL COVER SHEET)
Phone:	09 272 2269	Date:	13 July 2007
Re:	46C CONSENT AMMENDMENT DESCRIPTION	CC:	

Hello Lauren,

Re: 46CARLOS DRIVE, CONSENT AMMENDMENT DESCRIPTION

With reference to our building consent amendment application for the above project we confirm the following amendments:

ORIGINAL WORKS	REVISED / AMMENDED WORKS
pile foundations + slab on grade (to accommodate maxim panel construction system)	pile foundations + slab on grade (to accommodate masonry blockwork + timber frame loading)
maxim panel construction system to all 3 levels	masonry blockwork to ground level + timber framed construction to level 1, level 2 & roof
structural bracing being maxim panel system + steel & timber portals	structural bracing being masonry portals, timber framing, gib bracing system.
timber framed deck screen + steel posts	timber framed deck screen + timber posts
not detailed	masonry blockwork walls to carlos drive fence / boundary line.
not detailed	timber framed pergola to rear of property
not detailed	timber framed planter between blocks 2&3

Should you have any further queries on the above, please do not hesitate to call on 09 271 3007.

Regards,

Ravi Patel

Ormiston Project Management Limited

Tel: 09 272 2269
Fax: 09 272 2270
Ema: info@bldgcert.co.nz

COMPASS
BUILDING
CONSULTANTS

Unit 23/2 Bishop Dunn Place,
Botany South, Manukau City
PO Box 23019 Hunters Corner,
Papatoetoe 1730

CHECK LIST - Building Consents

CBC Building Certificate No. 12815

Project Address 4b Carlos Drive, Flat Bush

CHECK ALL ITEMS – "☑" OK, or "☒" Incomplete or "n/a"

DOCUMENTS SUPPLIED

Forms

1) ☐ Copy "Scope of Certifiers Engagement" signed by client
2) ☐ TA form(s) for - "Street Damage" / "Vehicle Crossings"
3) ☐ TA form(s) for - application for "Water meter(s)
4) ☐ MCC form – "Street Damage Statement"

Plans (drawn to appropriate metric scales)

1) ☐ PIM or BC only - 3 sets of plans (2 TA, 1CBC)
2) ☐ PIM & BC - 4 sets of plans (3TA, 1CBC based on re submitting TA appd. PIM plans)

(i) Site plan to include

- ☐ North point
- ☐ Contours or spot heights at strategic points
- ☐ Location of buildings
- ☐ HRB & overall height of buildings
- ☐ Provision for storm water disposal
- ☐ Length & bearing of all bdys. existing & proposed
- ☐ Proposed excavation/filling
- ☐ Floor levels
- ☐ Public & private drainage - existing & proposed
- ☐ Provision for effluent disposal

(ii) Working drawings to include

- ☐ Foundation plans
- ☐ Elevations of all external walls
- ☐ Roof framing plan
- ☐ Details of wall bracing
- ☐ Details of thermal insulation
- ☐ Floor Plans
- ☐ Floor framing plan
- ☐ Details of sub-floor bracing
- ☐ Details of roof bracing
- ☐ Details of barriers (safety from falling & pools)

Specifications

1) ☐ Specifications (relevant to proposal) - 3 Copies

Design Calculations

1) ☐ Sub-floor & wall bracing calculations
2) ☐ Structural design calculations - 2 copies
3) ☐ Storm water design calculations - 2 copies
4) ☐ Effluent disposal system design - 2 copies
5) ☐ Specific thermal design calculations - 2 copies
6) ☐ Enclosing rectangle calculations - 2 copies

Reports

1) ☐ Fire design report - 2 copies
2) ☐ Foundation report - 2 copies

Producer Statements

1) ☐ Producer statements – design
2) ☐ Producer statements – reviews

COMPLIANCE CHECK LIST

Clause			External Consultant	CBC Staff	Checked by	Reviewed by
B1	Structure	- General PS	Heron	✓	JK	✓
		- Timber barriers				
		- Small chimneys				
		- Foundations PS	Heron			✓
B2	Durability			✓	JK	
C1	Outbreak of fire	- Solid fuel appliances & chimneys				
		- Gas fuel appliances				
		- Gas fired engines				
		- Liquid fuel appliances				
C2	Means of escape	- Escape routes		✓		AJC
		- Open paths		✓		AJC
		- Exitways				
		- Single escape routes		✓		AJC
		- ~~Crowd &~~ sleeping purpose groups		✓		AJC
		- Smoke control				
C3	Spread of fire	- Fire cells		✓		AJC
		- Fire ratings		✓		AJC
		- External walls & roofs		✓		AJC
		- Closures in fire & smoke stopping				
		- Fire stopping		✓		AJC
		- Concealed spaces		✓		AJC
		- Surface finishes & floor coverings				
		- Suspended flexible fabrics				
		- Smoke control				

SITE

Clause			External Consultant	CBC Staff	Checked by	Reviewed by
C4	Structural stability in fire	- Non evacuation				
		- Fire resistance ratings		✓		AJC
D1	Access routes	- General criteria		✓	JK	
		- Level access routes				
		- Ramps				
		- Stairways		✓	JK	
		- Fixed ladders				
		- Handrails		✓	JK	
		- Doors & openings				
		- Accessible accommodation units of communal residential units				
D2	Mechanical installations for access					
E1	Surface water	- Drainage systems		✓		JK
		- Down pipes		✓		JK
		- Roof gutters		✓		JK
E2	External moisture	- Roofs		✓		JK
		- Walls		✓	JK	
		- Exterior joinery		✓	JK	
		- Floors		✓	JK	
		- Basements				
		- Construction moisture		✓	JK	
E3	Internal moisture	- Prevention of fungal growth		✓	JK	
		- Over flow		✓	JK	
		- Water splash		✓	JK	
F1	Hazard agents on site					
F2	Hazardous building materials			✓	JK	
F3	Hazardous substances & processes					
F4	Safety from falling	- Barriers in buildings		✓	JK	
		- Construction site barriers				
		- Swimming pool barriers				
F5	Construction & demolition hazards					
F6	Lighting for emergency	- Location & installation				
F7	Warning systems			✓		AJC
F8	Signs					

4f

Clause			External Consultant	CBC Staff	Checked by	Reviewed by
G1	Personal hygiene	- No. & type of fixtures		✓		JK
		- Fixture construction and installation		✓		JK
		- Location of sanitary fixtures		✓		JK
		- Facilities for people with disabilities		—		
		- Privacy		✓		JK
G2	Laundering	- Laundering facilities		✓		JK
G3	Food preparation Prevention of contamination			✓		JK
G4	Ventilation	- Natural ventilation		✓		
		- Mechanical ventilation				
		- Spaces containing gas-fuel appliances				
G5	Interior environment	- Temperature control				
		- Space				
		- People with disabilities				
G6	Airbourne Sound Impact Sound					
G7	Natural light	- Vertical windows		✓	JK	✓
		- Awareness of the outside environment		✓	JK	✓
G8	Artificial light			—		
G9	Electricity			✓	JK	✓
G10	Piped Services					
G11	Gas as an energy source					
G12	Water supplies	- Protection of potable water supply		✓		JK
		- Water supply system		✓		JK
		- Hot water supply		✓		JK
		- Materials & installation methods		✓		JK
		- Equipotential bonding		—	Site	—
		- Non-potable water supply		—		
G13	Foul water Foul water	- Sanitary plumbing		✓		JK
		- Drainage		✓		JK
G14	Industrial liquid waste					
G15	Solid waste					
H1	Energy efficiency	- Housing		✓	JK	✓
		- Other buildings		—		

Project Information Memorandum sent to client **Signed** .....
Date ..... No PIM

Building Consent application checked against PIM **Signed** .....
Date .....

Processing completed ready for issue of Building Certificate **Signed** ..... **Director**
Date 1/8/07

Water Meter Application Required Yes/No **Vehicle Crossing Application Required Yes/No**

Form CBC2
Issue 4

Compass Building Consultants Ltd.

PO BOX 23 019 HUNTERS CORNER, PAPATOETOE, AUCKLAND.

Manukau City Council Transmittal Advice
For Building Consent Application

Attention: Danica Bellve

From: Ronda Hirst

Date: 08.08.07

Please find the following Documents enclosed:

1. CBC Invoice ☑
2. Scope of Engagement (2 sheets) ☑
3. CBC2 Checklist ☑
4. Inspection Sheet (In conjunction with BC12596) ☑
5. Application Form ☑
6. Certificate of Title (or other evidence of ownership) ☑
7. Street Damage & Vehicle Crossing Exists form ☑
8. Wastewater / Water Meter Connection form (if applicable) refer original consent ☑
9. Producer Statements ☑
10. 2x Full sets of Stamped Plans & Documents ☑
11. Copy of PIM refer original consent 071556 ☑
12. MCC Conditions Checklist ☑
13. MCC Processing Control Sheet ☑
14. ☐

Address: 46 Carlos Drive Flat Bush

Description of Works: Various Amendments to 071556 no. 22
3 Level Townhouse (refer attached list of revised works)

Compass BC No: 12815 (to 12596) Signed: [signature]

MCC Consent No: 071566 A1 MCC Bag: Purple 36 A

AMENDMENT

Ph: 09 272 2269
Fax: 09 272 2270
Email: info@bldgcert.co.nz
PO Box 23 019 Hunters Corner,
Papatoetoe, Auckland 2155
Unit 23/2 Bishop Dunn Place, Botany
South, Manukau City, Auckland 2013

COMPASS
BUILDING
CONSULTANTS

Scope of Building Consultant's Engagement No E / 12815

Issued By: Compass Building Consultants Ltd.

Scope of Engagement:

Various Amendments to 071556 BC12596) to new 22, 3 level Townhouses refer attached list

46 Carlos Drive, Flat Bush

Lot 10 DP 352580

Plan / Specification Compliance: Yes

Exclusions

Nil

Construction Compliance: Yes

Exclusions

Nil

Issue Code Compliance Certificate: No

Compass Building Consultants Ltd

..... **Authorised Signatory**

Form CBC1
Issue 2

Ph: 09 272 2269
Fax: 09 272 2270
Email: info@bldgcert.co.nz
PO Box 23 019 Hunters Corner,
Papatoetoe, Auckland 2155
Unit 23/2 Bishop Dunn Place, Botany
South, Manukau City, Auckland 2013

COMPASS
BUILDING
CONSULTANTS

Certificate No: 12815

Issued By: Compass Building Consultants Ltd.

TO: Manukau City Council

Project Information Memorandum No: 071556

Building Consent No: 071566 A1

PROJECT	PROJECT LOCATION
Project Description: Various Amendments to 071556 BC12596) to new 22, 3 level Townhouses refer attached list	**Address** 46 Carlos Drive, Flat Bush
Intended Life: 50 **Years** **Intended Use:** Multi-unit Dwelling **Stage** 1 **of:** 1	**Legal Description:** Lot 10 DP 352580

This is to certify that the Building Consultant has been engaged to inspect specified building work in relation to listed provisions of the building code as detailed in the page headed "Scope of Building Consultant's Engagement" No / E 12815 attached to this notice.

The building consultant is satisfied on reasonable grounds that the proposed building work would comply with the listed provisions of the building code if properly completed in accordance with the plans and specifications identified with Compass Building Consultants Ltd's stamp bearing the above certificate number.

Signed for and on behalf of the Building Consultant:

Authorised Signatory: ..... **Date:** 6/08/07

Golder Associates

Kingett Mitchell

10 July 2007

Ref: ORMPR-MAN-003

Ormiston Project Management Ltd
PO Box 64494
Botany Town Centre
Manukau
Auckland 2016

Attention: Mr Ravi Patel

Dear Mr Patel

Acoustic Design Report - 46 Carlos Drive, Flat Bush, Manukau City

Introduction

It is proposed to construct a residential development comprising 22 three-story terraced houses on 46 Carlos Drive, Flat Bush.

Golder Kingett Mitchell (Golder Associates (NZ) Ltd) has been commissioned to prepare an acoustic design report for the proposed residential development, to review the design against the relevant Building Code standards and identify any necessary additional noise control measures.

Design Standards

Under Rule 17.10.12.11 of the Manukau District Plan, common building elements of household units in the Flat Bush Residential 1 & 2, Town Centre and Neighbourhood Centre zones are required to be designed, constructed and maintained in accordance with the following performance standards:

- the Sound Transmission Class (STC) of common walls shall be no less than 60 and the STC of common floors and ceilings, shall be no less than 55;
- the Impact Insulation Class (IIC) of floors shall be no less than 55;
- the verification method shall be G6/VM1;
- all floors, hallways and stairs in a building outside a household unit are deemed to be common elements, irrespective of horizontal or vertical separation; and

Hewitt BEST
2005

Golder Associates (NZ) Ltd
Level 2, Takapuna Business Park, 4 Fred Thomas Drive, Takapuna, Auckland, PO Box 33-849, Takapuna, Auckland, NEW ZEALAND
Tel +64 (9) 486 8068 Fax +64 (9) 486 8072 www.golder.co.nz
Golder Associates: Operations in Africa, Asia Pacific, Europe, North America and South America

- a report is to be provided by a suitably qualified and experienced acoustic engineer stating that the building has been designed, constructed and has passed field tests demonstrating compliance with the above.

Assessment of Noise Effects

The development will comprise a total of 22 terraced three-storey residential units in four separate blocks. Blocks 1 & 4 will each comprise 5 terraced houses; while Blocks 2 & 3 will each comprise 6 terraced houses.

As the units are vertically separated and there are no interfaces between common areas and the walls of habitable rooms, the performance requirements will apply solely to the STC ratings of intertenancy walls and not to external walls or the STC or IIC ratings for floors or other building elements.

The proposed ground floor intertenancy wall design comprises 190 mm solid concrete blocks with a layer of 10 mm Gib board over a 50 mm cavity on one side and a layer of 10 mm Gib board over a 45 mm cavity on the other side, with a layer of 40 mm insulation batts in the 50 mm cavity. The Insul6.2 Sound Insulation Prediction Model identifies that this design has an STC rating of at least 60 (+/- 3).

The proposed intertenancy wall design for levels 1 and 2 will be constructed to the Gib GBT(L)A 60 design, comprising a double timber stud with 2 x 10 mm Gib Fryline on each side and 75 mm insulation batts to one side within the cavity. Based on the manufacture's data, this design has an STC rating of 60, and will satisfy District Plan requirements in regard to noise control performance of intertenancy walls between habitable rooms.

Conclusions

The design of the proposed residential development at 46 Carlos Drive, Flat Bush has been reviewed for compliance with the relevant District Plan (and NZBC) acoustic criteria.

The proposed intertenancy wall designs have been identified to comply with the District Plan requirement for an STC 60 rating.

Because of the building designs and the layout of the development there are no other elements that need to comply with the STC and IIC ratings.

Yours sincerely
Golder Kingett Mitchell
Golder Associates (New Zealand) Limited

John Cawley
Principal Consultant - Acoustics

Te Kaunihera o
MANUKAU
City Council

CCS-PS-16

AMENDED PLAN
17 JUL 2007

PRODUCER STATEMENT

Form 3: ☑ Design ☐ Design Review

Producer Statement Author Acceptance No: 26

Plumbing and/or Drainage Registration Number: ..... Expiry Date .....
Issued by (*Designer*): .....**Ian H Gibson** **(Airey Consultants)** .....

Address:.....**39 Meadowlands Drive Howick** .....

Phone:.....**534 6523** ..... Fax: **537 5754** .....

To: Manukau City Council
In respect of an application for Building Consent application number: .....

in relation to (*description of building work*): **Structural elements As per Airey Calculations # AH9861-21 and dated 02 July 2007.** .....

at (*address*)..... **46 Carlos Drive, Flat Bush** .....

Lot: .....**1,2,3,4**..... DP: ...**352580**..... SO: .....

(*Designer*) .....**Airey Consultants**.....

has been engaged by (*applicant*):.....**Concepts 124 Ltd.**.....

to provide design services in respect of the requirements of Clauses .....**B1** .....

of the First Schedule to the Building Regulations 1992 for

☐ All ☑ Part only as specified in the attached particulars of the building work, the subject of the application for building consent. The design has been prepared in accordance with (*verification methods / acceptable solution/s*)..... **VM1 & VM4**..... ..... respectively

of the Approved Documents issued by the Building Industry Authority and the work described in (*Designer*) ..... **Airey Consultants.** .....

drawings titled: **Proposed Townhouses For Concepts 124 Ltd. At 46 Carlos Drive, Flat Bush** .....

and numbered ..... and the specifications and other documents according to which the building is proposed to be constructed and which I have submitted with the application.

Note: Any producer statement design and construction that is directly attributable to applying loads to the ground must include documented evidence by specific engineering design or other approved method, the soil type, bearing capacity, slope and position, is suitable for the structure as specified within the scope of the producer statement.

As a designer/reviewer, I have taken all reasonable steps necessary (including where applicable site and soil investigation) to verify design assumptions. I am satisfied that in relation to the building work specified above, the provisions of the NZ Building Code 1992 would be met if the work were properly completed in accordance with the drawings, specifications and other documents according to which the building is proposed to be constructed and which have been submitted with the application. I understand that if this Producer Statement is accepted, it will be relied on by Manukau City Council for the purposes of establishing compliance with the Building Code.

Name (please print): **Ian H Gibson**

Signature ..... Date:.....**03 July 2007** .....

MANUKAU CITY COUNCIL

GEOTEK SERVICES LIMITED

Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

18 JUN 2007

GEOTECHNICAL INVESTIGATION/
EARTHWORKS COMPLETION REPORT

ON

LOT 10

AT

124 STANCOMBE ROAD,
FLAT BUSH

FOR

CARLOS CONCEPTS LIMITED

Ref No. 2704

August 2, 2005

CONTENTS

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Appendices

Pre-Earthworks Borehole Location and Specific Design Zones Plan-GSL Drawing No. 1 of 3
Pre-Earthworks Borehole Records (18 sheets)
As Built Final Contours and Isopachs- Airey Consultants Ltd, drawing no. A9861/5, dated 4/7/05
Earthworks Test Locations and RL's - GSL Drawing No. 2 of 3
Earthworks Test Results - Summary Sheets
Diary Notes
Post-Earthworks topsoil depths and shrink-swell sample location plan- GSL Drawing No.3 of 3
Shrink Swell Test Results (3 sheets)

Introduction

This report covers both the geotechnical investigation and the earthworks construction monitoring carried out on the above property for Carlos Concepts Limited, in accordance with the appended Airey Consultants Limited 'As-Built' Contour Plan, numbered A9861/5, dated 04 July 2005.

Presented herein, are the results of our observations, geological appraisal, hand auger borehole investigation, including insitu testing, together with general comments, conclusions and recommendations pertaining to the satisfactory development of the land in accordance with accepted quality standards.

This report has been commissioned for the benefit of our client, Carlos Concepts Limited specifically in relation to the project and to the limit of our brief, as described herein. No liability is accepted by this firm or any of its directors, servants or agents, in respect of any other geotechnical aspects of this site, nor for its use by any other person, and any other person who relies upon any information contained herein does so entirely at their own risk, with the exception that the local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent. Where other parties may wish to rely on it, this permission may be extended, subject to our satisfactory review of their interpretation of the report. Moreover, any variations from the development proposals forming the basis of this appraisal should be referred back to us for further evaluation.

Although this report may be submitted to a local authority in connection with an application for a consent, permission, approval, or pursuant to any other requirement of law, this disclaimer shall still apply and require all other parties to use due diligence where necessary, and does not remove the necessity for the normal inspection of site conditions and the design of foundations as would be made under all normal circumstances.

Geology

Reference to the New Zealand Geological Survey, Geological Map Of New Zealand, 1:50000, sheet R11, indicates that the subject site is typical of a significant part of the Auckland Metropolitan area, in that it contains strata of the Puketoka Formation, which are a part of the Tauranga Group sedimentary lithology (Late Pliocene to Late Pleistocene age). Unconformably underlying these are weathered materials derived from strata of the East Coast Bays Formation (also known as Waitemata Formation), which are a part of the Waitemata Group sedimentary lithology (Miocene Epoch).

According to Searle, "City of Volcanoes", in those earlier times, the seas encroached upon the central Auckland area, and thick beds of sedimentary rocks were laid down in alternating sandstone, siltstone and mudstone sequences according to the prevailing eddies and currents at the time and place.

Over the centuries following the retreat of the seas, the normally dark-grey bedrock has weathered in most locations, to produce an overburden made up of clays, silts and sands, being predominantly orange brown in colour at the ground surface, and generally becoming more grey and more coarse grained with increasing depth and less transition from the bedrock. Interspersed within these weathering products, it is not unusual to find bands of hard dark-brown iron oxide (limonitic) concentrations.

Fluctuating sea levels which occurred throughout the Pleistocene period, eventually flooded valleys to form the Waitemata and Manukau Harbours, and it is likely that during these fluctuations, the upper Residual Waitemata Group Soils were partially eroded away, and these, together with pumiceous deposits from the Taupo district, began to fill the subsiding lowlands of Manukau Harbour and Hauraki Gulf. As a result, the lowlands were covered by swamps, volcanic derived alluvium, and coastal deposits (Tauranga Group).

These sediments were deposited in predominantly fluvial and lacustrine settings, but some older deposits were formed in estuarine and shallow conditions. As a result, they can often contain layers and/or lenses of quite peaty materials within the predominantly silty and clayey, but sometimes organic alluvium.

Previous Reports

A Desktop Study was prepared in July 2003 by Geotek Services Limited (GSL) reference number 2532, dated 30 June 2004, as a first pass appraisal of the suitability of the overall general area including the subject land, for residential development generally in terms of NZS 3604 type buildings. The study comprised a review of local geology and inspection of other geotechnical investigation reports conducted on nearby sites.

The conclusions and recommendations of that report were as follows:

> *"On the basis of our observations, research and local knowledge as described herein, we are of the opinion that the subject site is generally suitable for the proposed development, however the following discussion should be noted.*
>
> *The relatively flat topography of the site with respect to the adjacent land, coupled with the two small gullies requiring filling, suggests that to completely fill these gullies with locally cut materials would produce a shallowly south-southwest-sloping subdivision.*

However, given that soft horizons may be present at depths of several metres or more in possible areas of cut, and that it is preferable to maximise the depth of suitable materials over these deposits, a cut/fill budget deficit may occur if designing to completely fill all gullies.

It is our recommendation that an extensive field investigation be carried out prior to finalising any proposed project designs, and the commencement of development works. The aim of this investigation would be to establish a more detailed assessment of the nature of the materials present, and the extent of possible unsuitables across the site, allowing a more accurate quantification of locally available filling.

All subsequent earthworks should be subject to the appropriate standards and tests as specified by the Manukau City Council, under the control of a Chartered Professional Engineer experienced in geotechnical engineering practices, with a Geotechnical Completion Report being prepared at the completion of those works.

Subject to as-built contours, acceptable test results and existing/final ground conditions, we expect the completed development to be suitable for the construction of NZS 3604 type buildings.

This opinion does not, however, remove the necessity for the inspection of site conditions and design of foundations that should be made under all normal circumstances.

The Professional Opinion expressed within this report is furnished to the Stancombe Concepts Limited for their purposes alone, on the express condition that it will not be relied upon by any other person, with the exception that the Local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent."

The site subject to this report was originally part of a large 8100m^2 property (DP78859), identified as number 124 (Lot 3), along the northern side of Stancombe Road in Flat Bush. The site has since been subdivided into two, (Lots 9 and 10) by a proposed through road, Carlos Drive, separating them into northern and southern lots. The southern, lot 9 was the subject of a recent Geotechnical Investigation Report undertaken by GSL (dated 17 November 2004, ref 2635) for a proposed multi-storey dwelling, which report identified some weak underlying natural materials that would be exposed by the proposed basement level of the development. With this in mind, we have tried to target such potentially problematic materials in our investigation, as discussed below.

Site Description Ante-Earthworks

Prior to the recent earthworks, the subject site's main topographical feature was a relatively deep and steep sided gully trending from the northeast to the southwest, around 100 metres in length. The gully head in the northeast corner of the site, was a shallow bowl-like depression, which steepened to the southwest with its invert around 3 metres below the crest of its flanks. The gully broadened out near the southwestern corner and crossed into the adjacent property. The gully flows were channelled below the neighbour's driveway through a small culvert before again continuing southwest as open channel flows. The ground either side of the gully, to the northwest and southeast, was gently sloping towards the invert. The earthworks proposal was to fill the gully and create a near level site.

Site Classification

Seasonal moisture variations and associated swelling and shrinking of the soil mass is a characteristic of the type of surface clay soils believed to exist in the area under consideration and hence, such movement could occur. Even well constructed houses on clay soils are likely to show minor cracking of plaster walls and ceilings, and in masonry. In extreme cases, distortion of building frames may cause doors and windows to jam, but, these effects usually only occur after a long dry summer, and commonly under the extra drying influences of nearby trees. Without considerable expenditure on the part of the individual responsible for building or financing any particular residential construction, it is generally not possible to entirely eliminate such troubles. In the past, the code for residential dwellings, NZS3604, has attempted to make provision for any such influences to be minimised by requiring a minimum foundation depth of 450 millimetres below final cleared ground level, although some shrinking and swelling of the soil under seasonal influences would probably continue to occur and may affect such residential construction.

The current issue of NZS3604:1999, recognises that while expansive clay soils can damage buildings on light strip footings or unstiffened rafts, that not all clays are expansive to the degree which will cause damage to buildings. Although 3604 also nominates liquid limit and linear shrinkage testing as a means of detecting the presence of reactive (expansive) clays, it acknowledges that reactive clays cannot be clearly evaluated by these engineering index properties on their own, which we surmise, may be due to the effects of certain types of clay minerals which may contain high quantities of adsorbed water. Therefore, NZS3604 nominates the Australian code, AS2870:1996, as a guide, whereby section 2 can be adopted for classifying the soils into class A, S, M, H or E, following which, the standard details of section 3, or the engineering principles according to section 4, can be used for foundation design.

The relevant sections of AS2870 are discussed in the Appendix hereto, and in light of the various options available, the basis for our site classification is provided later in this report.

Site Investigation

Our site investigation fieldwork involved the drilling of twelve, 50 millimetre diameter hand auger boreholes to depths of up to 5.2 metres, at the positions indicated on the attached site plan.

The purpose of the fieldwork has been twofold. Firstly, boreholes were drilled along the stripped invert of the gully to check the nature and consistency of the natural soils before filling could take place and to determine if any further undercutting might be needed. Secondly, boreholes have been drilled at the crest of the gully flanks and the adjacent level ground to check the nature and consistency of the natural soils.

As each borehole progressed, careful inspections were made of the materials observed, and soil shear strength and remould tests were performed insitu, at selected depths, using a hand-held shear vane. The materials identified are described in detail on the appended records, together with the results of the various tests undertaken, plus the groundwater conditions as determined during our time on site.

In addition, two cross sections were measured across the flanks and invert of the gully using a tape and electronic level.

Findings

Boreholes along the gully invert

Boreholes 1, 2, 3 and 4 were drilled along the gully invert. Borehole 1 was drilled outside of the property boundary to the southwest. Apart from a soft surficial crust, predominantly stiff sandy silts were encountered throughout the borehole. Boreholes 2 and 3 were drilled in the southwestern corner and near the centre respectively, and both encountered highly variable deposits consisting of clays, silts and sands with intermixed peat and organics. The material strengths were mostly marginally firm with some layers being softer or firmer. Borehole 4 encountered soft materials down to 1.5 metres depth, overlying very stiff uniform silts.

The groundwater was measured at depths of between 0.4 to 1.1 metres below the surface in all four boreholes.

Boreholes above and along the flanks of the gully - cut areas

Boreholes 5, 6, 11, 12 and 13 were drilled on the northwestern side of the gully, while boreholes 7, 8, 9 and 10 were located to the southeast. Generally, a firm to stiff crust was encountered extending to at least 1.2 metres depth below the surface in all boreholes. Below this crust, the materials became weaker and wetter with some layers becoming soft to marginally firm (22 to 50 kPa undrained shear strength). In all except boreholes 9 and 10, dense sandy materials were encountered near the end of the boreholes. The tables below summarise these findings of cut area boreholes:

Boreholes on the northwestern side of the gully:

Borehole No.	5	6	11	12	13
Ground RL	43.0	42.0	44.0	45.0	44.0
Firm to Stiff Crust	0.0 to 2.5m	0.0 to 2.5m	0.0 to 3.0m	0.0 to 2.9m	0.0 to 1.6m
Interbedded Soft Layer	2.5 to 3.3m	-	-	2.9 to 3.9m	1.6 to 2.3m
Dense Basement Layer	3.7m+	3.1m+	3.0m+	3.9m+	2.7m+

Boreholes on the southeastern side of the gully:

Borehole No.	7	8	9	10
Ground RL	43.5	41.5	44.0	43.5
Firm to Stiff Crust	0.0 to 1.6m	0.0 to 1.6m	0.0 to 1.5m	0.0 to 2.0m
Interbedded Soft Layer	1.6 to 3.3m	1.6 to 3.6m	1.5 to 5.0m	2.9 to 2.9m
Dense Basement Layer	3.3m+	3.6m+	-	-

Earthworks Operations

General earthworks construction over the site was carried out in accordance with part 2 of NZS4404:2004, "Code of Practice for Urban Land Subdivision" and its companion document, NZS4431:1989, "Code of Practice for Earth Fill for Residential Development."

Topsoil and unsuitables were stripped and initially stockpiled for later removal from the site. Where further unsuitable and/or weak materials were identified in the gully invert and along its flanks, they were undercut until suitable materials were exposed or, where their depth below the proposed finished fill was deemed to be greater than 3 metres, so as to be beyond the influence depth of shallow foundations, they were left in place.

1 8 JUN 2007

Once the gully and its flanks had been cleaned as directed, a pad of hardfill consisting of run-of-pit rock, was placed along its invert up to a level that was slightly higher than its lowest outlet level, where a manhole had been placed adjacent to the existing culvert beneath the neighbour's driveway. Once this pad had been tamped down, a 160mm dia. perforated novacoil was laid along the invert and covered with SAP 50 scoria. Where seepages were encountered, they were tapped in a similar fashion and the area covered with scoria blanket.

The earthfill was then progressively placed and compacted under engineering monitoring, to the design subgrade levels, using material cut from the gully flanks and neighbouring site to the east.

Earthworks Specification and Control

General earthworks procedures and compaction testing were carried out in accordance with NZS4404:2004, part 2 and NZS4431:1989, where appropriate.

In order to provide the most flexibility for variations in soil types, the earthworks compaction criteria used for control were the maximum allowable air voids/minimum allowable shear strength figures, as follows:-

Air Voids and Shear Vane (for cohesive soils only)

	Air Voids Percentage (as defined in NZS 4402:1986)		Undrained Shear Strength (Measured insitu by IANZ calibrated vane)	
	Maximum Average Value %	Maximum Single Value %	Minimum Average Value kPa	Minimum Single Value kPa
General Fill	10	12	140	110
Within 500 mm of carriageway subgrade	8	10	150	120

Note: The average value was to be determined over any ten consecutive tests.

During the filling operations, Civil Lab Limited staff carried out Nuclear Densometer Testing of Field Dry Density to NZS 4407:1991; Test 4.2.1, and Field Water Content in accordance with NZS 4402:1986; Test 2.1, together with Vane Shear Strength Tests using a method based on NZGS2001.

Some tests failed to meet the required criteria, in which case the fill was reworked and retested until satisfactory results were obtained.

The final test results are summarised in the appendices, together with a copy of the cut/fill as-built plan, showing test locations, and the inspection diary notes.

Conclusions and Recommendations

On the basis of our borehole investigation, inspections, observations, earthworks monitoring, laboratory and insitu testing as described herein, it is our Professional Opinion, that the subject site, lot 10, 124 Stancombe Road, Flatbush, is generally suitable in terms of section 106 of the Resource Management Act, and Section 2.B.4.8 of the Manukau City Council's Engineering Quality Standards, for the development of conventional residential dwellings, constructed in accordance with the relevant portions of NZS3604:1999, subject to the following overall general recommendations, and provided that building in any of the identified zones on the appended plan (whether "non-specific design", "specific design", or "not for construction") should be subject to the specific requirements of that zone as given below:

A) General Requirements:

(a) There were stockpiles of topsoil and other unsuitable materials still lying near the northern boundary of the site, at the time of preparation of this report. We anticipate that these will be moved before or during building development.

(b) As discussed in the foregoing section on site classification, there are a number of ways of classifying the site soils. In this instance, we have adopted the AS2870 third method, using laboratory tests for soil reactivity and a knowledge of the soil profile. On this basis, foundation soils on this site are considered unlikely to lie outside the definition of 'good ground' as given in NZS3604:1999. We consider that they would lie in Site Class S (slightly expansive) as defined in AS2870:1996, with expected characteristic surface ground movements in the order of 0 to 20 mm, which movement is still within the allowable bounds of 'good ground'. However, this movement is closer to the upper limit of Class S range, therefore, as a precaution, care should be taken to mitigate against the potential seasonal shrinkage and swelling effects of expansive foundation soils on both superstructures and concrete slab-on-grade floors, as follows.

For the design of all foundations, these should extend to a minimum depth of 0.3 metres below the final cleared ground level.

Because of the importance of this issue, especially with regard to controlling potential for cracking in concrete slabs, we consider that when constructing slabs, and especially after the removal of a desiccated surface crust, the exposed subgrade should be covered with 100mm of basecourse as soon as possible, to avoid allowing underlying damp soils to dry out and shrink if they are likely to regain some of their moisture and swell again following pouring of the concrete. If this cannot be avoided and shrinkage cracks occur in the subgrade to the cumulative width of 15mm per metre distance, then prior to the placement of the under-slab hardfill, the subgrade should be hosed down to allow the cracks to close to at least that degree.

Future owners should also be aware of the detrimental effects that large trees can have by way of inducing differential consolidation settlements beneath foundations, through localised soil water deprivation. Accordingly, care should be taken to avoid having large trees positioned where their roots could migrate beneath the building foundations.

(c) All foundations located within the 45 degree envelope of influence rising from the invert of service trenches, should be extended to below that envelope, to avoid surcharging pipes and/or poorly compacted trench backfill.

(d) In accordance with the limitations imposed by NZS3604:1999, fills greater than 0.6 metres that have not been reviewed and approved herein, should not be undertaken on this site without the further review and express approval in writing of the Manukau City Council and that of a Chartered Professional Engineer experienced in geomechanics and familiar with the contents of this report, since such works may, in certain circumstances, disturb existing equilibrium conditions. In a like fashion, cuts should be restricted to no more than 0.6 metres.

(e) All stormwater runoff from roofs and paved areas, plus any water tank overflows, should be collected in sealed pipes and be disposed of into Council's reticulation system. Likewise, overland flows should be directed away from the building footprint.

Under no circumstances should concentrated flows from any source discharge into or onto the ground in an uncontrolled fashion.

(f) All excavations, including those for bulk earthworks, shallow foundations and any piles, should be inspected by a Geotechnical Engineer during construction to check

that the conditions encountered are consistent with those revealed by our isolated boreholes and to provide any additional advice that might be needed. In the event of unacceptable inconsistencies, we should then be in a position to provide appropriate recommendations in support of an application to Council to modify the Building Consent, or to issue an appropriate Producer Statement - Construction Review.

It is in all parties' interests that we be engaged to inspect all such excavations prior to the installation of any foundation materials to maintain continuity of knowledge. Where we are required to carry out inspections during construction and to provide certification or supply a Producer Statement Construction Review, we request that:

(i) Prior to commencement of the building work the Owner or Developer ensures that we are supplied with a copy of both Resource and/or Building Consent Conditions (as appropriate) which request our involvement during construction.

(ii) The Owner or Developer provides us with the appropriate siteworks plans at least 48 hours prior to our inspections, so that we can confirm that all works relevant to our engagement are carried out.

(iii) The Owner, Builder or Contractor makes arrangements for us to visit the site no less than 24 hours before inspections are required. In order for us to provide Producer Statements, where these are required, it is the owner's responsibility to ensure that we are advised when inspections are due.

It should be noted that inspections during construction and associated certification will result in additional costs to the client over and above those associated with the preparation of this report.

B) <u>Non-specific Design Zone:</u>

This area is considered to be generally suitable for any development works carried out in accordance with NZS3604:1999, subject to the general recommendations given above, and is defined as any area on site that is outside the Specific Design Zone. Any building proposals outside NZS3604 might require specific site investigation.

C) Specific Design Zones:

Specific design zones have been designated primarily on the basis of two criteria, viz those areas not containing at least 2 metres depth of engineered fill or stiff natural crust over known soft ground, and those with slopes steeper than 1V:4H or near vertical and greater than 0.6m high, which might present concerns with regard to slope stability. These areas are listed below:

(a) Steep cut batters in the northwestern area. These batters are up to 1.5m high and have gradients of up to 1V:2H. While these slopes are considered stable while undeveloped, any foundations on, or within a horizontal distance of 4m above the crest of the slope, should be designed to allow for lateral creep extending to a depth of 1.0m, and acting over a width of 3 pile diameters, unless the land is adequately retained by suitably designed and constructed retaining walls.

(b) Steep fill batter in the southwestern corner, is up to 1.5m high and is considered unstable in its present form, therefore this batter should be adequately supported at the time of any building development closer than 4 metres from the crest.

(c) Areas of stormwater inlet in the northeastern corner of the site were still to be tidied up at the time of preparation of this report. Any foundations in the vicinity should be specifically designed to mitigate the effects of remaining depressions, steep batters and trench backfills.

(d) The southeastern corner of the site has underlying soft deposits as identified in our boreholes 7 and 9. These are expected to have been rendered closer to the surface by removal of up to around 1.5m depth of cut during the earthworks. Therefore we recommend that for all shallow strip and pad foundations on proposed lots 3 and 4, the foundation depths should be limited to no deeper than 0.45m below the as-built levels, and the ultimate bearing pressures should be limited to no greater than 200 kPa, to which figure should be applied an appropriate factor of safety, such as 2.0 for Factored Load Design and 3.0 for Working Strength Design.

For any foundation loads which cannot be accommodated in the above constraints, we recommend the use of specifically designed piles.

Statement of Professional Opinion as to Suitability of Land for Building Development

Owner/Developer: Carlos Concepts Limited.

Location: Lot 10, 124 Stancombe Road, Flat Bush

Development: Residential Development.

I, S.J. Woodward of Geotek Services Limited, P.O. Box 39-015, Howick, hereby confirm that:

1. I am a Chartered Professional Engineer experienced in the field of geotechnical engineering and was retained by the Owner/Developer as the Geotechnical Engineer on the above development.

2. The extent of our desktop study is described in our Report number 2532, dated 30 June, 2004, and the conclusions and recommendations of that document have been re-evaluated in the preparation of this report. The results of our initial borehole investigation and all tests carried our during the works are also enclosed.

3. In my professional opinion, not to be construed as a guarantee, I consider that:

   (a) The earth fills placed where shown on the attached Airey Consultants plan, numbered A9861/5 dated 4 July, 2005, have been generally placed in compliance with NZS4431:1989.

   (b) The completed works give due regard to land slope and foundation stability considerations, subject to the provisions of the "Conclusions and Recommendations" section above, with regards to the steep batters left in the specific design zone.

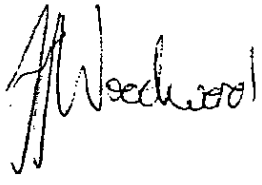
   (c) The areas of filled ground as shown on the attached plan are suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and related documents subject to the provisions of the "Conclusions and Recommendations" section above.

   (d) The original ground not affected by filling is suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and

related documents, subject to the provisions of the "Conclusions and Recommendations" section above.

4. This Professional Opinion is furnished to the local Territorial Authority and the current owner/developer, for their purposes alone, on the express condition that it will not be relied upon by any other person, and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any structure.

GEOTEK SERVICES LIMITED.



S.J. Woodward,
M.E., MIPENZ(Geotechnical), CPEng, IntPE.

Report prepared by
Bevan Marr
B.A. (Geography)

CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 1 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 1
	WEIGHT	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
NATURAL: Soft, slightly plastic, dark grey with occasional black specks slightly clayey SILT: very moist, frequent rootlets							
-becoming stiff	0.5		92	31	3.0		
Stiff, non plastic, light grey with orange specks, silty SAND, trace clay: wet		18/01/04	49	15	3.3		
Firm, non plastic, grey, slightly clayey, slightly sandy SILT	1.0	▽					
-becoming stiff			108	32	3.4		
-becoming slightly plastic, greenish grey, slightly clayey, sandy SILT: saturated, fibrous wood and carbonaceous inclusions	1.5		138+				
-@ 1.5: becoming very stiff, bluish green, root inclusions			138+				
-becoming sandy SILT	2.0						
-becoming stiff			120	40	3.0		
	2.5						
-becoming very stiff, non plastic greenish grey, very sandy SILT: saturated			138++		UTP		Very poor sample recovery
	3.0		100	68			
End of Borehole @ 3.1 metres. Groundwater encountered @ 1.4 metres depth during drilling. Standing groundwater @ 1.1 metres depth upon completion.	3.5						
	4.0						

18 JUN 2007

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 2 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 2
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 37.22

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Firm, non-plastic, dark grey with orange brown and light grey streaks, sandy SILT: wet.		46	12	3.8		
	-becoming soft, dark blackish grey, some carbonaceous material.						
	-becoming grey, saturated @ 0.4m.	0.5	28	7	4.0		
	-becoming light greyish brown.						
	Loose, non-plastic, light greyish brown, silty SAND: saturated.		25	7	3.6		
	-becoming coarse.	1.0					
	-becoming very dense, white, pumiceous, silty SAND.		138++		UTP		
	Soft, non-plastic, black, amorphous, PEAT: saturated.	1.5	44	19	2.3		Poor material recovery.
	Firm, non-plastic, dark blackish brown, organic stained, SILT: saturated.						
	-becoming medium brown, SILT.	2.0	54	28	1.9		
	-some clay. -minor woody organic material	2.5	50	20	2.5		
	-becoming slightly plastic, greyish black, organic stained, clayey SILT: abundant fibrous and woody organic material		42	18	2.3		
		3.0					
	End of Borehole @ 3.2 metres. Groundwater encountered @ 0.4 metres depth during drilling. Standing groundwater @ 0.9 metres depth upon completion.		38	16	2.4		
		3.5					
		4.0					

Water Level: 18/1/05

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 3 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.3
	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Legend | GL(m) 39.25 | Depth (m) | Water Level | Shear Vane Dial (kPa) | Residual Strength (kPa) | Sensitivity | Probe Blows | Comments Samples Other Tests

Tauranga Group Materials

NATURAL: Soft, non plastic to very slightly plastic, grey with orange veins, slightly sandy SILT, trace clay: slightly wet

-becoming saturated

-becoming firm

46 | 14 | 3.3

0.5

Water Level 18/01/04

108 | 58 | 1.9

-becoming stiff, slightly plastic, purple brown with bright orange mottles occasionally, slightly clayey, slightly sandy SILT

1.0

Soft to firm, moderately plastic, purplish grey with occasional orange mottles, very slightly sandy, very slightly silty CLAY: saturated, occasional fibrous organic inclusions of decaying vegetation

40 | 28 | 1.4

1.5

-becoming firm

60 | 38 | 1.6

-becoming light brownish, CLAY, trace sand, no organic inclusions

2.0

52 | 34 | 1.5

-becoming purple grey

-becoming soft to firm

40 | 22 | 1.8

2.5

-becoming firm, fibrous organic inclusions

70 | 40 | 1.8

3.0

54 | 26

End of Borehole @ 3.1 metres.
Groundwater encountered @ .4 metres depth during drilling. Standing groundwater @ .9 metres depth upon completion.

3.5

4.0

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 4 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 4
	WEIGHT 30 kg	DATE	PROBE No.

GL(m) 39.62

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Tauranga Group Materials

NATURAL: Firm, non-plastic, streaked bluish grey, yellowish brown, SILT: moist.

-becoming soft.

-becoming wet.

-becoming firm, light grey with orange brown streaks, slightly sandy SILT: wet.

-becoming saturated.

-some clay.

-becoming moderately plastic, streaked light grey, orange brown, clayey SILT: trace sand.

Very stiff, non-plastic, light grey with yellowish brown and orange brown streaks, SILT: some sand.

-becoming bluish grey, slightly sandy SILT.

-lens of dark green, sandy SILT.

-becoming greenish grey, SILT: trace clay.

End of Borehole @ 3.0 metres.
Groundwater encountered @ 0.7 metres depth during drilling.
Standing groundwater @ 0.4 metres depth upon completion.

Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	18/1/05					
0.5		30	9	3.3		
1.0		56	23	2.4		
1.5		40	24	1.7		
		138+				
2.0		138+				
2.5		138+				
		138+				
3.0						
3.5						
4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 5 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.5.
	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

GL(m) 42.75

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	NATURAL: TOPSOIL						
	Stiff, non plastic, brown, SILT: dry, friable						
Tauranga Group Materials	Stiff, slightly plastic, tan brown with orange and grey specks, slightly clayey SILT: very slightly moist		130	64	2.0		Approx SGL
	-becoming siff, slightly plastic, grey with orange brown streaks, clayey SILT, trace sand: very slightly moist	0.5	106	70	1.5		
	-becoming stiff, slightly plastic, grey with occasional orange brown streaks, very clayey SILT, trace sand: slightly moist	1.0	118	72	1.6		
	-becoming slightly clayey SILT, trace sand Non plastic, brown and grey mottles, very slightly clayey SILT, trace sand, slightly moist	1.5	58	46	1.3		
	-becoming moderately plastic, grey, moist, slightly sandy						
	-becoming bright orange brown streaks in greyish brown, very clayey SILT, trace sand: moist	2.0	50	26	1.9		
	Firm, moderately plastic, greyish brown, silty CLAY: moist						
	Firm, slightly plastic, creamy grey, slightly sandy, slightly clayey SILT: moist	2.5	56	44			
	Firm, moderately plastic, slightly purple brown, slightly silty CLAY: moist		48	38	1.3		
		3.0					
	Slightly plastic, firm, dark blackish brown, organic SILT: very wet, no organic odour, rootlet inclusions		38	28	1.4		
	-becoming brownish black, saturated	3.5 (18/01/05)	64	35	1.8		
	Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated		138++		UTP		Poor sample recovery
	Continued on next page.	4.0					

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 6 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 5
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Legend	GL(m) 42.75 Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated			138++		UTP		Very difficult to penetrate
Unable to penetrate with hand auger End of Borehole @ 4.3 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.	4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 7 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
NATURAL: Very stiff, non-plastic, light brown, SILT: friable, dry.							Approx SGL
-becoming yellowish brown.							
-becoming light grey with orange brown and yellowish brown streaks.	0.5		138+				
-becoming slightly to moderately plastic, clayey SILT: trace sand, moist.			138+				
	1.0						
-becoming non-plastic, slightly purplish grey with orange brown and yellowish brown streaks, slightly clayey SILT.			138+				
	1.5						
-becoming very dense, SILT: friable.			138++		UTP		
-becoming non-plastic to slightly plastic, grey with orange brown and yellow brown streaks, trace clay.	2.0		102	60	1.7		
Stiff, highly plastic, streaked grey, purplish grey, orange brown, silty CLAY: moist.							
	2.5						
-becoming firm, purplish brown.			66	36	1.8		
			62	36	1.7		
	3.0						
Very dense, non-plastic, streaked brown, yellowish brown, light grey, pumiceous, slightly silty SAND: moist.			138++		UTP		
	3.5						
-becoming whitish grey, very fine SAND: trace silt			138++		UTP		
	4.0						

Continued on next page.

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 8 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Stratigraphy	Description	Legend	GL(m) 42.33 Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very dense, non-plastic, whitish grey, very fine, SAND: trace silt, moist.				138++		UTP		
	-becoming moderately silty SAND.			18/1/05					
	-becoming wet @ 4.2m.		4.5		138++		UTP		
	End of Borehole @ 4.6 metres, unable to penetrate further.								
	Groundwater not encountered during drilling.								
	Standing groundwater @ 4.1 metres upon completion.		5.0						
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 9 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.7
	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 43.57

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, non plastic, tan brown, very slightly clayey SILT: dry						
	-becoming tan brown with grey and orange brown streaks, slightly clayey SILT		115	64	1.8		
	-becoming grey with occasional orange brown streaks	0.5					
	-developing trace sand, slightly moist		88	70	1.3		Approx SGL
	Stiff, slightly plastic, grey with orange brown streaks, slightly sandy, very clayey SILT: slightly moist	1.0	116	72	1.6		
	Stiff, slightly plastic, purplish grey with occasional orange brown streaks, sandy, clayey SILT: slightly moist	1.5	73	46	1.6		
	-becoming firm, slightly plastic to moderately plastic, creamy white, very slightly clayey SILT, trace sand						
	-becoming soft	2.0	36	18	2.0		
	Non plastic, soft, slightly pink white, SILT: wet						
	-becoming slightly yellow white	2.5	25	18			
			28	20	1.4		
	-becoming very wet	3.0					
	Very stiff, non plastic, greyish white, fine silty SAND: very wet		138+				
		3.5	138++		UTP		
		4.0	138++		UTP		
	Continued on next page.						

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 10 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 7
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Legend	GL(m) 43.57 Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Non plastic, very stiff, greyish white, silty SAND: very wet							
-becoming firm		19/01/04	60	36	1.7		
-becoming very stiff, saturated	4.5		138++		UTP		
			138++		UTP		
Unable to penetrate with hand auger End of Borehole @ 4.7 metres. Groundwater encountered @ 4.7 metres depth during drilling. Standing groundwater @ 4.4 metres depth upon completion.	5.0						
	5.5						
	6.0						
	6.5						
	7.0						
	7.5						
	8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 11 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 8
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

GL(m) 41.8

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, slightly plastic, brown with orange brown and greyish brown streaks, slightly clayey SILT: damp.						Cut to road SGL
	-becoming moderately to highly plastic, streaked light grey, orange brown, very clayey SILT: trace sand.	0.5	112	70	1.6		
	-becoming whitish grey with some light brown streaks.		98	62	1.6		
	-becoming firm, yellowish white with some light orange and yellow streaks.	1.0	60	28	2.1		
	Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, wet.	1.5	50	20	2.5		Poor material recovery.
		2.0	32	16	2.0		
		2.5	26	16	1.6		
			28	18	1.6		
		3.0	28	18	1.6		
	Very dense, non-plastic, light grey, pumiceous, fine, silty SAND: wet.	3.5	138++		UTP		
	End of Borehole @ 4.1 metres. Unable to penetrate further. Standing groundwater @ 3.4 metres depth upon completion.	4.0	138++		UTP		

Water Level: 18/1/05

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 12 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No.9
	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Stratigraphy	Soil description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Comments Samples Other Tests
Tauranga Group Materials	Stiff, slightly plastic, grey, brown and orange brown streaked, clayey SILT, trace sand: slightly moist					Major surface cracking
	Stiff, slightly plastic, grey with orange brown streaks, very clayey SILT: slightly moist	0.5	85	60	1.4	
	Stiff, moderately plastic, grey with occasional orange streaks, slightly sandy, clayey SILT: slightly moist		97	71	1.4	
	Firm, moderately plastic, creamy white, very slightly sandy, clayey SILT: moist	1.0	77	60	1.3	
	Firm, non plastic, creamy white, SILT: very moist					Approx SGL
	-becoming wet	1.5	56	28	2.0	
	-becoming soft	2.0	39	22	1.8	
			22	19	1.2	
		2.5				
			28	21	1.3	
	-becoming firm	3.0	58	27		
		3.5	48	22	2.2	
		4.0	32	28	1.1	

Continued on next page.

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 13 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 9
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 42.9

Description	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Soft, non plastic, yellowish white, SILT: wet								
-becoming firm		4.5		52	25	2.1		
Very stiff, non plastic, white, fine silty SAND								
Soft, non plastic, black organic SILT: saturated				32	28	1.1		
		5.0						
-becoming firm				68	32	2.1		
End of Borehole @ 5.1 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.		5.5						
		6.0						
		6.5						
		7.0						
		7.5						
		8.0						

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CLIENT: Concepts Limited	LOGGED/ CHECKED: MK	SHEET 14 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 42.9

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, slightly to moderately plastic, light grey with orange brown streaks, very silty CLAY: trace sand, damp.		138++		UTP		Sun baked crust. Approx SGL.
	-becoming stiff, moist.	0.5	105	54	1.9		
	-becoming brownish grey.		88	49	1.8		
	-becoming firm, brownish grey.	1.0	58	33	1.8		
	-becoming stiff, moderately plastic, greyish brown with grey streaks, very clayey SILT: some sand.	1.5	93	37	2.5		
	-becoming non-plastic, grey, SILT.	2.0	108	37	2.9		
	-becoming firm, highly plastic, yellowish brown with some grey and dark purplish brown streaks, very clayey SILT: some sand.	2.5	44	20	2.2		
			50	26	1.9		
	-becoming moderately clayey SILT.	3.0	78	30	2.6		
		3.5	77	39	2.0		
	-becoming moderately plastic, blueish grey to greyish brown, slightly clayey SILT: some sand.						
	Continued on next page.	4.0					

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 15 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 42.9

Stratigraphy	Depth (m)	Shear Vane Dial (kPa) DR4802	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials: NATURAL: Stiff, blueish grey to greyish brown with occasional dark purplish brown streaks, slightly clayey SILT: some sand, moist.		98	46	2.1		
	4.5	76	35	2.2		
		84	48	1.8		
End of Borehole @ 5.0 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	5.0					
	5.5					
	6.0					
	6.5					
	7.0					
	7.5					
	8.0					

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 16 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 11
	WEIGHT	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
NATURAL: TOPSOIL							
Stiff, non plastic, medium brown, SILT: damp, friable							
Stiff, slightly plastic, orange brown, slightly clayey SILT: slightly moist	0.5		89	44	2.0		Approx SGL
Stiff, slightly plastic, grey, orange brown and brown streaked, very clayey SILT, trace sand: slightly moist	1.0		96	64	1.5		
-becoming predominantly grey with brown and orange brown streaks	1.5		114	68	1.7		
-becoming very stiff			138+				
-becoming grey	2.0		138+				
-becoming slightly sandy							
-becoming stiff, slightly to moderately plastic, grey, very clayey SILT: moist	2.5		93	58	1.6		
-developing trace sand, very moist to slightly wet							
-becoming very stiff			138+				
Very stiff, non plastic, purplish grey, sandy SILT: very moist	3.0		138+				
End of Borehole @ 3.2 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	3.5						
	4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 17 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 12
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill; Clay / Silt; Sand / Gravel; Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
TOPSOIL.							Approx SGL
NATURAL: Firm, slightly plastic, streaked orange brown, greyish brown, slightly clayey SILT: moist. -becoming stiff @ 0.4m.	0.5		98	50	2.0		
Stiff, highly plastic, streaked orange brown, greyish brown, moderately silty CLAY: trace sand moist.	1.0		94	50	1.9		
-becoming streaked light grey, light orange, silty CLAY: some sand.	1.5		86	56	1.5		
-becoming very clayey SILT: some sand.	2.0		110	86	1.3		
-becoming light grey with light orange streaks.	2.5		92	68	1.4		
-becoming firm.			78	48	1.6		
Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, moist.	3.0		52	28	1.9		
-becoming wet.	3.5		22	15	1.5		
Very dense, non-plastic, greyish white, pumiceous, silty SAND: moist.							
End of Borehole @ 4.2 metres. Unable to penetrate further. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	4.0		138++		UTP		

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 18 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No.13
	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 44.87

Description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Water Level	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials: Stiff, non plastic, friable, SILT: dry							Approx SCL
Stiff, slightly plastic, orange brown and grey brown streaked, slightly clayey SILT: moist		121	60	2.0			
	0.5						
-becoming moderately plastic, light grey and light orange streaked, moderately clayey SILT, trace sand		116	66	1.8			
	1.0						
-becoming light brown grey with thin light orange veins		132	94	1.4			
-becoming slightly plastic, slightly clayey SILT, some sand							
	1.5						
-becoming moderately plastic, moderately clayey SILT		58	44	1.3			
Soft, non plastic, yellow white, SILT (pumicite): very moist, poor recovery	2.0	28	18	1.6			
		58	32	1.8			
	2.5						
Very stiff, non plastic, yellow white, silty SAND: very moist, very dense					138++	UTP	
-becoming wet							
End of Borehole @ 3.0 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	3.0				138++	UTP	
	3.5						
	4.0						

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FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	Job Number:	2704
Date Sampled:	20.06.2005	Date Tested:	21.06.2005
Sample Number:	1	Tested By:	MK
Sampling Depth (m):	0.5	Checked By:	
Sample Condition:	Good		
Sample Description:	Highly plastic, light grey with orange mottles, silty CLAY		
Inert Inclusions (%):	0		
Cracking (%):	5		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%): 30.9

Final Water content (%): 34.3

ε_{sw} = Magnitude of Swelling Strain (%) : 0.05

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%): 26.2

ε_{sh} = Magnitude of Shrinkage Strain (%) : 3.54

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 2.0

strain per ΔpF

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FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	Job Number:	2704
Date Sampled:	20.06.2005	Date Tested:	22.06.2005
Sample Number:	2	Tested By:	MK
Sampling Depth (m):	0.5	Checked By:	
Sample Condition:	Good		
Sample Description:	FILL: Moderately plastic, mottled orange brown, grey, dark purple, silty CLAY: white silt and topsoil inclusions.		
Inert Inclusions (%):	3		
Cracking (%):	2		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%): 28.9

Final Water content (%): 34.2

ε_{sw} = Magnitude of Swelling Strain (%) : 0.54

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%): 26.7

ε_{sh} = Magnitude of Shrinkage Strain (%) : 3.21

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 1.9

strain per ΔpF

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FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report 18 JUN 2007

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	Job Number:	2704
Date Sampled:	20.06.2005	Date Tested:	21.06.2005
Sample Number:	3	Tested By:	MK
Sampling Depth (m):	0.5	Checked By:	
Sample Condition:	Good		
Sample Description:	Moderately plastic, light grey with orange mottles, very clayey SILT: trace sand.		
Inert Inclusions (%):	0		
Cracking (%):	0		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%): 23.3

Final Water content (%): 25.6

ε_{sw} = Magnitude of Swelling Strain (%) : 0.00

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%): 23.6

ε_{sh} = Magnitude of Shrinkage Strain (%) : 2.60

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 1.4

strain per ΔpF

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REPORT for

FIRE SAFETY, ACCESS and SAFETY FROM FALLING

NEW APARTMENTS

AT

46 CARLOS DRIVE

FLAT BUSH

MANUKAU CITY

Prepared by: ALAN DUNKIN

Reviewed by: PETER C. DUNKIN
MIFireE FNZFBI

13 March 2007 (Issue 1)
27 March 2007 (Issue 2)
27 June 2007 (Issue 3)

Reference N° 0700117

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1.0 PURPOSE OF THIS REPORT

1.1 The purpose of this report is to satisfy the Territorial Authority that the proposed apartment complex will satisfy the following provisions of the Building Act 2004 and the Building Amendments Act 2005:

1.1.1 **Section 17: All building work to comply with the building code.** – *All building work must comply with the building code to the extent required by this Act, whether or not a building consent is required in respect of that building work.*

1.2 The fire design issues detailed in this report are the minimum required to satisfy the requirements of the Building Code. Unless specifically stated, this report does not address matters in addition to the Building Act such as owners and/or tenants property and contents protection. The owner is advised to check the acceptability of the provisions of this report with the property insurer.

End of Section 1

2.0 DOCUMENTATION REVIEWED

2.1 A set of plans provided Ormiston Project Management Ltd have been used to compile this report:

- Sheet P01 - Site Plan, Dated 15th March 2007
- Sheet P02 – Overall Ground Floor Plan, Dated 15th March 2007
- Sheet P03 - Overall First Floor Plan, Dated 15th March 2007
- Sheet P04 – Overall Second Floor Plan, Dated 15th March 2007
- Sheet P05 – Unit 9 Floor Plan, Dated 15th March 2007
- Sheet P06 – Unit 10 Floor Plan, Dated 15th March 2007
- Sheet P07 – Unit 11 Floor Plan, Dated 15th March 2007
- Sheet P08 – Unit 12 Floor Plan, Dated 15th March 2007
- Sheet P09 – Roof Plan, Dated 15th March 2007
- Sheet P10 – Elevations, Dated 15th March 2007
- Sheet P11 – Elevations, Dated 15th March 2007
- Sheet P12 to 24 – Other plans, Dated 15th March 2007

2.2 The New Zealand Building Code and following Acceptable Solutions were referenced:

C/AS1 Fire Safety Clauses
F4/AS1 Safety from falling
F7/AS1 Warning systems

2.3 A site visit has not been carried out.

End of Section 2

3.0 THE COMPLEX

3.1 The complex is designed as four blocks of three level apartments, a total of 22 new Apartments.

BLOCK 1, UNITS 6 to 10

Ground floor: 63 m², Garage and 1 double bedroom.
First floor: 47 m², Lounge, kitchen and Dining, plus 15 m² deck
Second floor: 48 m², 2 double bedrooms

BLOCK 2, UNITS 11 to 16

Ground floor: 64 m², Garage and 1 double bedroom.
First floor: 48 m², Lounge, kitchen and Dining, plus 15 m² deck
Second floor: 48 m², 2 double bedrooms

BLOCK 3, UNITS 17 to 22

Ground floor: 64 m², Garage and 1 double bedroom.
First floor: 48 m², Lounge, kitchen and Dining, plus 15 m² deck
Second floor: 48 m², 2 double bedrooms

BLOCK 4, UNITS 1 to 5

Ground floor: 63 m², Garage and 1 double bedroom.
First floor: 47 m², Lounge, kitchen and Dining, plus 15 m² deck
Second floor: 48 m², 2 double bedrooms

3.2 Each apartment is on a separate Unit Title.

3.3 The primary method of construction is 200 series concrete block ground floor load bearing walls with timber framed load bearing and non load bearing walls on the upper floor levels. The intertenancy walls are double stud timber framed walls to provide the required fire and acoustic values. The upper floors are timber.

End of Section 3

4.0 PART 2: OCCUPANT NUMBERS AND PURPOSE GROUPS

4.1 Table 2.1: Purpose groups

SR 1 Attached residential dwellings.

4.2 Table 2.2: Occupant densities

Each Apartment has 3 double bedrooms = 6 people per apartment.

End of Section 4

5.0 PART 3: MEANS OF ESCAPE

5.1 Table 3.1: Number of escape routes

The means of escape from the ground floor is via the main front door directly to the outside.

A single means of escape is provided from the upper floors of each apartment via the internal stairs to the ground floor and out the main front door directly to the outside.

5.2 Table 3.2: Width of escape routes

Minimum width of horizontal escape routes to be 700 mm. - less than 50 occupants
Minimum width of the vertical (stairs) escape routes are to be no less than 850 mm.

- The doors subdividing the escape routes are all no less than 810 mm wide doors.
- The stairs are a minimum of 1000 mm wide.

5.3 Table 3.3: Lengths of escape routes

Apartment	Purpose Group	Dead End open path		Total open path	
		Permitted	Actual[1]	Permitted	Actual[1]
BLOCK 1 6 to 10	SR	36	33	90	n/a
BLOCK 2 11 to 16	SR	36	31	90	n/a
BLOCK 3 17 to 22	SR	36	31	90	n/a
BLOCK 4 1 to 6	SR	36	33	90	n/a

NOTES:

1. The lengths of the escape routes shown above are in metres and take into account the 50% increase in travel distances where smoke detectors are installed
2. The distances of travel from the apartments are measured as a horizontal distance terminating at the final exit.

5.4 Paragraph 3.17 Doors subdividing escape routes

3.17.2 Locking devices fitted to doors subdividing escape routes shall not be capable of being locked from the inside with a key or other implement.

- All door hardware is to meet the requirements of this paragraph.

End of Section 5

6.0 PART 4: REQUIREMENTS FOR FIRECELLS

6.1 Table 4.1/5 Fire safety precautions

Firecell rating	F0
Alarm type	See note 1
Other precautions	nil

NOTE 1 To satisfy the provisions of Table 3.3 for the permitted increase in the dead end distances of travel, install a **Type 4f** automatic fire alarm system with smoke detectors and manual call points in each apartment.

The alarm system is to be independent to each apartment.

Installation is to be in accord with NZS 4512: 2003 and be certified as a compliant system by an accredited inspection body. (NZS4512:2003: 107.1(e))

A direct connection to the Fire Service is not required provided a telephone is installed and accessible at all times to enable "111" calls to be made.

NOTE 2: A **Type 16** emergency lighting system is not required as there are no exitways[1].

End of Section 6

[1] C/AS1, Definitions, page 27, Exitway.

7.0 PART 5: FIRE RESISTANCE RATINGS

7.1 Paragraph 5.5 Determining the S rating

Units	Floor area A_f (m^2)	Vertical Vent. A_v (m^2)	A_v / A_f	Horizontal Vent. A_h (m^2)	A_h / A_f	S rating (t_e) minutes
Block 1						
6	158	21.3	0.13	0.0	0.0	50
7 to 9	158	15.1	0.09	0.0	0.0	60
10	158	21.3	0.13	0.0	0.0	50
Block 2						
11	160	16.5	0.10	0.0	0.0	60
12 to 15	160	15.1	0.09	0.0	0.0	60
16	160	16.5	0.10	0.0	0.0	60
Block 3						
17	160	16.5	0.10	0.0	0.0	60
18 to 21	160	15.1	0.09	0.0	0.0	60
22	160	16.5	0.10	0.0	0.0	60
Block 4						
1	158	21.3	0.13	0.0	0.0	50
2 to 4	158	15.1	0.09	0.0	0.0	60
5	158	21.3	0.13	0.0	0.0	50

- For consistency of construction an S rating of **60 minutes** has been adopted.

7.2 Paragraph 5.7 Applying FRRs to building elements

The percentage of wall areas identified in Table 7.2 as requiring a FRR are to be rated to no less than an 60 minute FRR.

- The intertenancy walls (Common boundary walls) are to be designed to achieve a minimum 60/60/60 FRR and STC 55 acoustic value by constructing the walls to Gib board spec GBT(L)A 60.

7.3 Paragraph 5.9 Structural stability during fire

Primary elements required to be fire rated shall provide sufficient structural stability to avoid premature failure under design dead loads, design live loads and any additional load caused by fire.

- Stability to the inter apartment walls is provided by the connections to the wall in the adjoining apartment outside the firecell of fire origin.

End of Section 7

8.0 PART 6: CONTROL OF INTERNAL FIRE and SMOKE SPREAD

8.1 Paragraph 6.8 Purpose group SR (Apartments)

6.8.1 Every household unit in purpose group SR shall be a single firecell separated from every other firecell by fire separations having a FRR derived from the F rating in Table 4.1/5, or 30/30/30, whichever is the greater.

- Each apartment is a separate household unit on separate Unit Titles, so the minimum FRR shall be no less than the greater of the F or S ratings or 30/30/30. The greater value is the S rating of **60 minutes**. An acoustic value of no less than STC55 is also required between apartment.

  - The intertenancy walls between the apartments are to be designed to achieve a minimum 60/60/60 FRR and STC 55 acoustic value by constructing the walls to Gib board spec GBT(L)A 60.

8.2 Paragraph 6.17 Fire stopping

The continuity and effectiveness of fire separations shall be maintained by fire stops.

- All electrical sockets and switches penetrating fire rated walls to have approved fire rated switch boxes to the appropriate FRR.

- All PVC, plastic and metal pipes penetrating fire rated walls, ducts, floors and ceilings are to be fitted with approved fire rated collars.

- Ventilation ducts penetrating fire rated walls and ceilings are to be fitted with approved fire rated dampers or similar to achieve the appropriate FRR.

8.3 Paragraph 6. 18 Concealed spaces

The spread of fire in concealed spaces shall be avoided by ensuring that extensive voids do not pass from one firecell to another.

- ALL fire rated walls shall terminate as close as possible to the underside of the roof cladding and out to the facia boards with any gaps fully fire stopped.

End of Section 8

9.0 PART 7: CONTROL OF EXTERNAL FIRE SPREAD

9.1 Paragraph 7.2.1 Separation of legal titles

When a building is subdivided into cross lease titles, company lease titles or unit titles, each title shall be separated from the adjacent title by fire separations of no less than the greater of the F or S rating. The areas in common, if roofed, shall be treated as a separate firecell.

- Each apartment is on a separate Unit Title. The apartments are all separated from each other by no less than the S rating of 60/60/60 as detailed previously.

9.2 Table 7.4: Return and wing walls: Protection of other property

Where each apartment firecell is off set from another apartment or other spaces the area of off set external wall is fire rated to a 60 minute FRR

- Fire rate external walls offset off from the adjacent neighbouring apartment/property to a two way 60 minute fire rated system such as James Hardie JHETGJ60, or similar
  - NOTE: Ordinary timber products would "typically" not meet the requirement of C/AS1 Table 7.5 as an external cladding material that is <1 m from a boundary. Drawings show timber weatherboard but it does not appear to be <1.0 m to a boundary. – OK.

9.3 Paragraph 7.8.4 Roof projections

Where the external wall is not required to be fire rated, the eaves projecting from that wall within 650 mm of the relevant boundary shall be fire rated.

- On the ground and top floors the eaves are continuous between units so the area of eaves within 650 mm of the relevant boundary are to be fire rated using 9 mm thick Promina Board, or similar

9.4 Paragraph 7.10.6 Purpose groups SH and SR

Where a building contains purpose groups SH or, SR with household units located only side by side, and each firecell has no more than three floor levels, the external walls need not be fire rated except that, a FRR of no less than 30/30/30 shall apply to any external wall less than 1.0 m from the relevant boundary.

- The external walls of each apartment are >1.0 m from the boundary so no fire rating is required.

End of Section 9

10.0 D1: ACCESS ROUTES

10.1 Paragraph 4.0 Stairway

The stairs to the upper floors in each apartment can be designed as main private stairs.

Pitch	37°	maximum
Riser	190 mm	maximum
Tread	280 mm	minimum

Handrail one side only

End of Section 10

11.0 F4 SAFETY FROM FALLING

11.1 Table 1: Barrier heights

The stairway and landing are to be fitted with 900 mm high barrier rails.
All other openings shall be fitted with 1000 mm high barrier rails.

11.2 Table 2: Barrier construction

Barriers shall have no openings which will permit the passage of a sphere greater than 100 mm dia. and no components between 150 mm and 760 mm above the level of the stair nosing which can provide a toehold. Except that perforated sheet, mesh or trellis rigidly fixed over the full barrier height is acceptable provided that openings have a maximum dimension of 50 mm.

- The stairs and openings from the upper floors are to meet this requirement.

11.3 Opening windows

Where the possible height of a fall is greater than 1.0 m, measured from the adjacent floor level the windows shall have:

a) The lower edge of the opening no less than 760 mm above floor level and 610 mm above any toeholds, or
b) A window opening restrictor fitted to limit the opening to a maximum of 100 mm, or
c) A 760 mm high barrier in front of the window, with no toeholds above 150 mm from the floor, and with no openings that will allow the passage of a sphere greater than 100 mm.

- Opening windows on the upper floor levels of the apartments are to meet this requirement.

End of Section 11

12.0 SUMMARY OF KEY POINTS

12.1 Each apartment is designed on a separate Unit Title.

12.2 One means of escape is provided from the first & second floor levels of each apartment via the internal stair to the ground floor and out the main front entrance door. A single means is provided from the ground floor via the main front entrance door.

12.3 The lengths of the escape routes from the apartments are all within the requirements once the 50% increase in travel distances where smoke detectors are installed has been taken into account.

12.4 Locking devices fitted to doors subdividing escape routes shall not be capable of being locked from the inside with a key or other implement.

12.5 Fire alarm system:
To satisfy the provisions of Table 3.3 for permitted distances of travel, install a **Type 4f** automatic fire alarm system with smoke detectors and manual call points. The alarm system is to be independent to each apartment.
Installation is to be in accord with NZS 4512: 2003 and be certified as a compliant system by an accredited inspection body. (NZS4512:2003: 107.1(e))
A direct connection to the Fire Service is not required provided a telephone is installed and accessible at all times to enable "111" calls to be made.

12.6 Fire separate the apartments from each other by no less than a 60/60/60 FRR and STC 55 acoustic value. The FRRs are to terminate at the underside of the roof cladding and continue out to the outer edge apartments.

12.7 Fire rate external walls offset off from the adjacent neighbouring apartment/property to a two way 60 minute fire rated system.

12.8 The external walls that are >1 m from the relevant boundary, are not required to be fire rated.

12.9 The soffits on the ground and top floors within 650 mm of the relevant boundary are to be fire rated using 9 mm Promina Board.

12.10 Fire stop all penetrations made in fire rated walls such as; plastic and metal pipes, electrical cables, ventilation ducts, sockets and switches.

12.11 The internal stairs may be designed as main private stairs.

12.12 Barriers on stairs and landings to be 900 mm high. The barriers on the terraces are to be 1000 mm high. The spacing between all vertical barrier rails to be a maximum of 100 mm dia.

12.13 Opening windows on the upper levels are to satisfy the provisions of Section 11, on page 10 of this report.

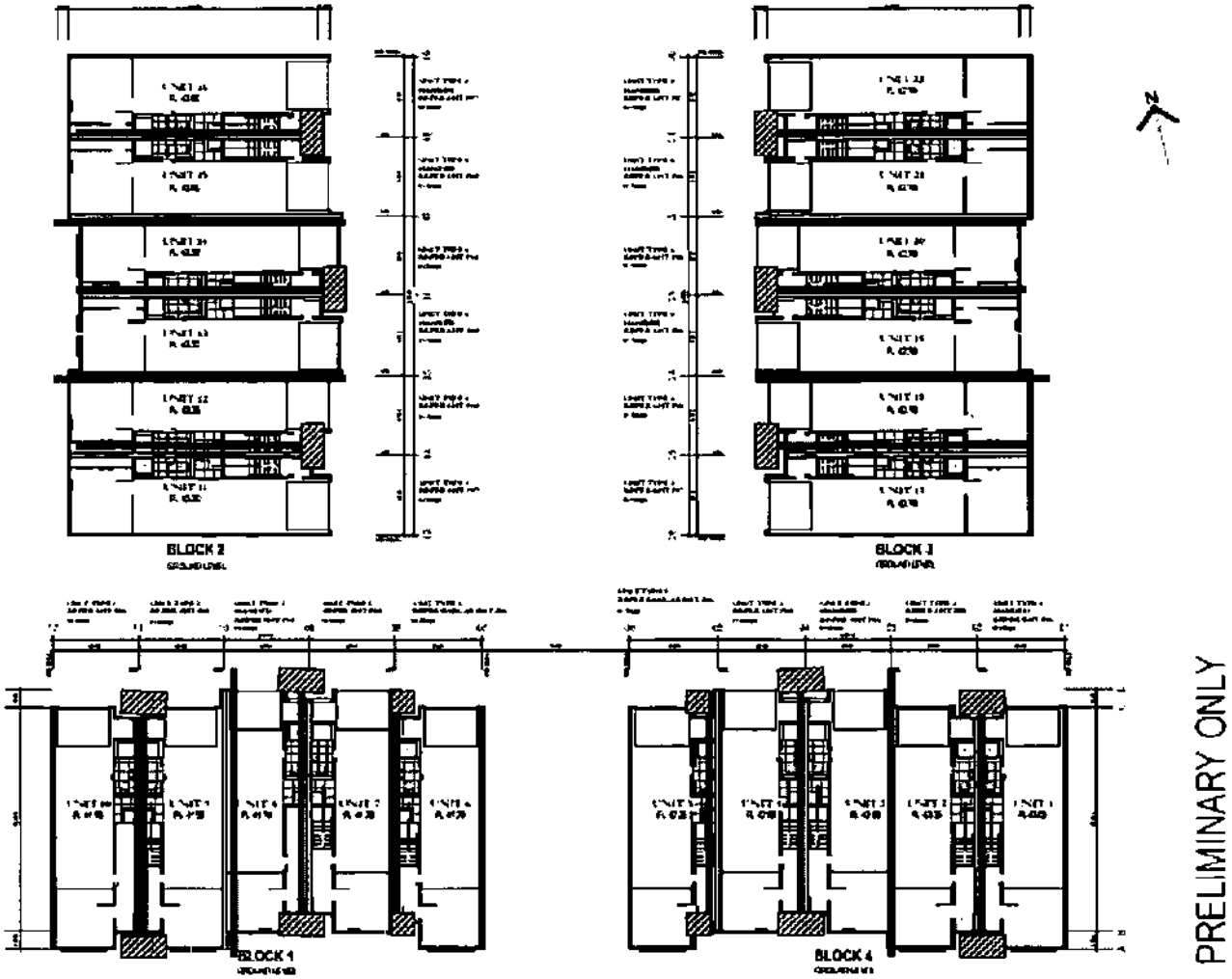
End of Section 12

13.0 FIRE PLAN

13.1 GROUND FLOOR

Key

60/60/60 FRR walls FRR to soffits 650 mm each side of the boundary

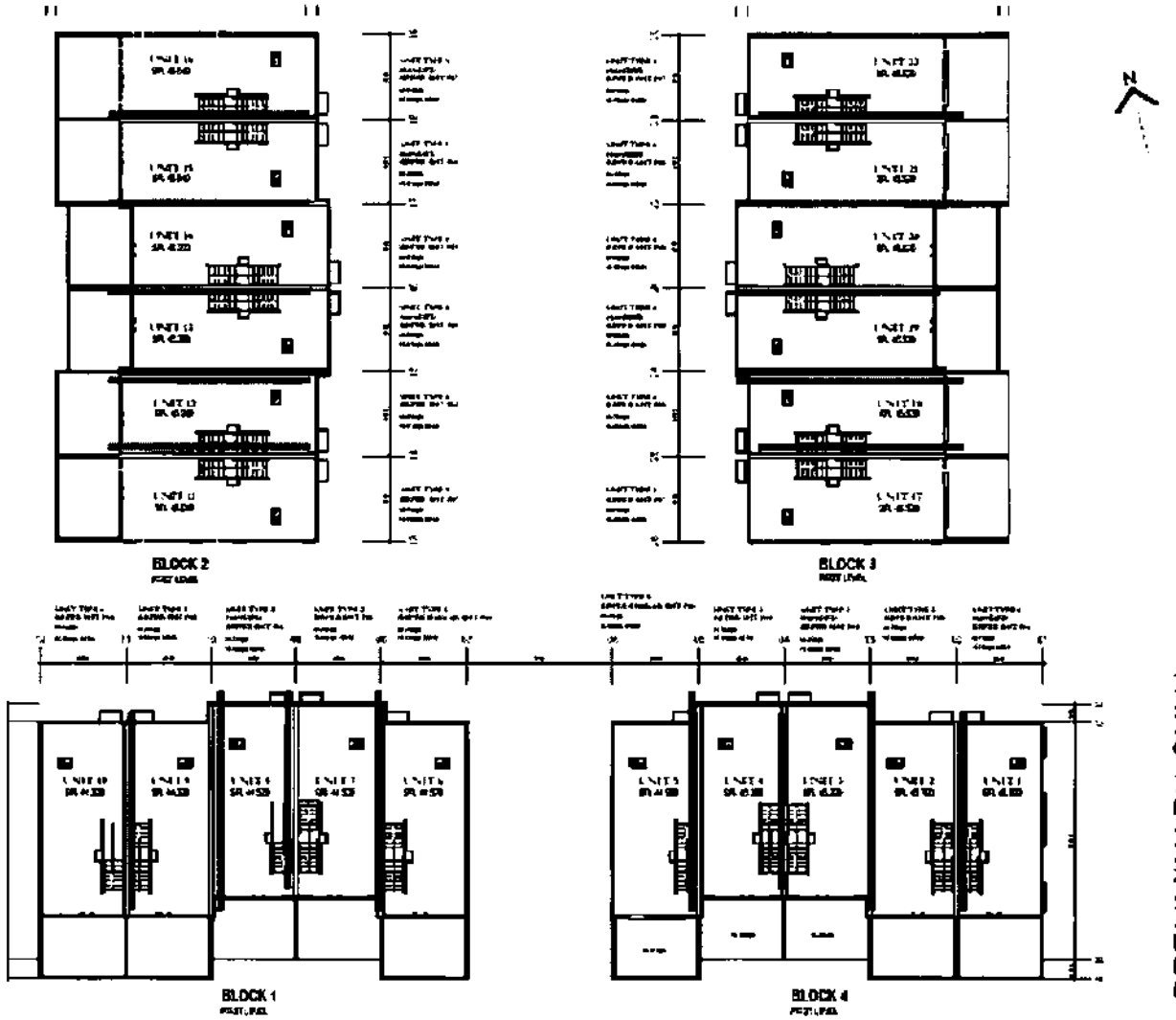


PRELIMINARY ONLY

13.2 FIRST FLOOR

Key

60/60/60 FRR walls



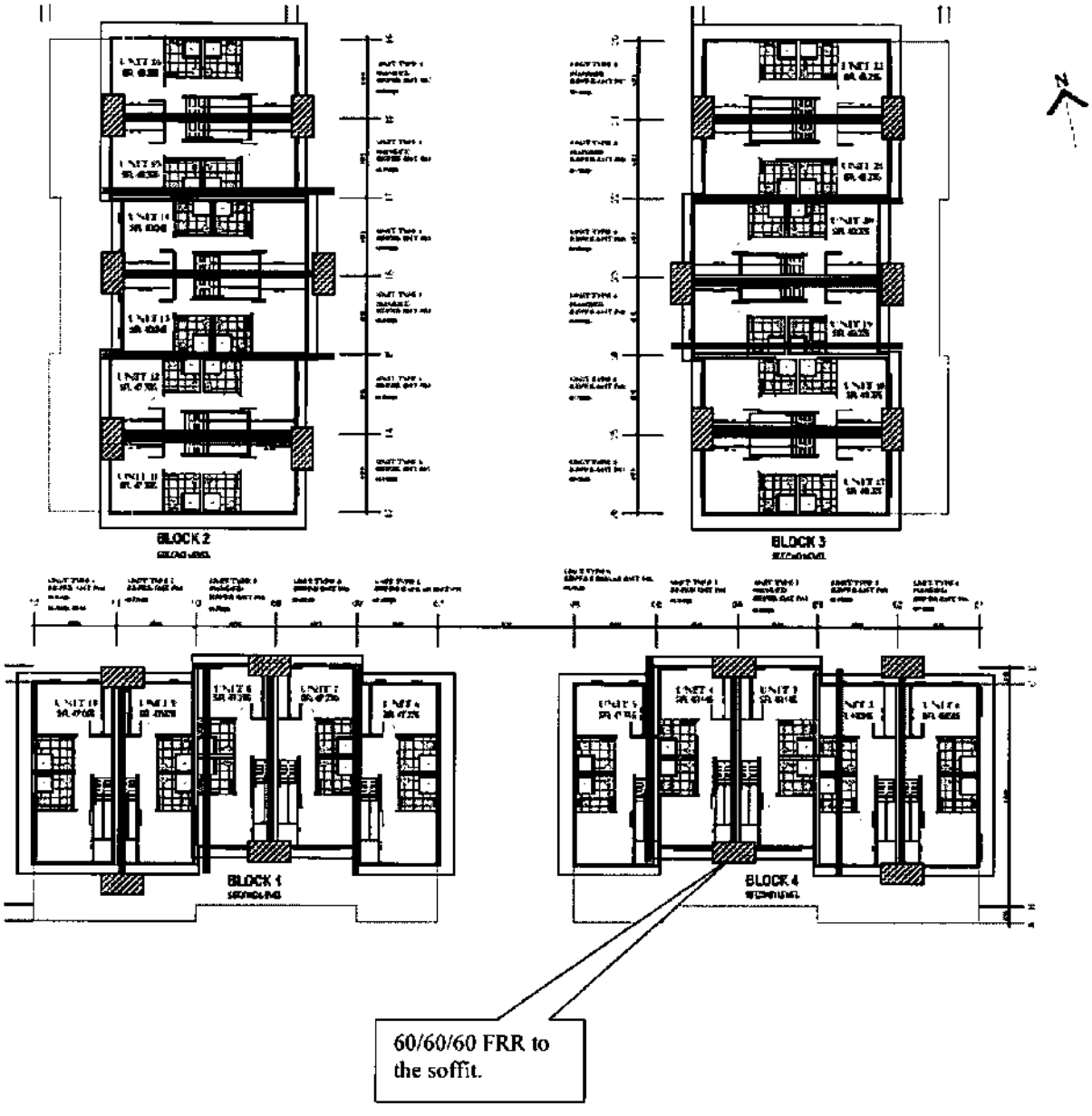
PRELIMINARY ONLY

13.3 SECOND FLOOR

Key

60/60/60 FRR walls

FRR to soffits 650 mm each side of the boundary



PRELIMINARY ONLY

ACE AIR CONDITIONING
(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

30th March 2007

Aubrey Edwards Construction
P.O Box 101656
North Shore Mail Centre
AUCKLAND

Attention: Tom Tuke

Dear Tom

RE: AIR CONDITIONING PROPOSED DEVELOPMENT AT LOT 6, 46 CROOKS ROAD, EAST TAMAKI

We have pleasure in submitting our quotation for the supply and installation of Air Conditioning equipment to Air Condition the above development.

Our calculations have been based on the following criteria:

Windows internally covered with blinds or solar type curtains.

People load based on one person per 10 square metres.

Lighting load based on 20 watts per square metre.

Maintaining comfort conditions of 21 degrees C +/- 2 degrees, with humidity between 50 - 60 percent.

We have used our Carrier E20-II heat load estimation programme to perform these calculations.

Our recommendations and equipment selections are set out as follows:

Unit A
Ground Floor Our calculations have been based on this area being open plan. We are setting out three options for your consideration. Option One is based on one large Temperzone exposed ducted heat pump split system unit with exposed circular sheetmetal ducting running the length of the shop, supplying the air via grilles mounted on the face of the circular ducting.

Option Two is based on the same large Temperzone ducted heat pump split system unit but designed around a suspended ceiling being installed at a later date.

Option Three is based on the installation of 2 only Carrier inverter Cassette heat pump split system unit. This option is an alternative to Option One designed around an exposed area. The air handling units will be suspended down from the floor above by threaded rods. This third option will be quieter in operation to Option One.

The cooling requirements for this area call for 18.10 kilowatts.

Option One One only **Temperzone model ISD221Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA221R - 3 phase** outdoor condensing unit, total cooling and heating capacity 22.0 kilowatts respectively.

Option Two One only **Temperzone model ISD221Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA221R - 3 phase** outdoor condensing unit, total cooling and heating capacity 22.0 kilowatts respectively.

Option Three 1 only **Carrier model 40KQV130** inverter cassette heat pump split system air handler connected to 1 only **Carrier model 38VYX130N** inverter outdoor condensing unit, and 1 only **Carrier model 40KQV110** inverter cassette heat pump split system air handler connected to 1 only **Carrier model 38VYX110** inverter outdoor condensing unit, the combined total cooling and heating capacity 22.7 & 23.1 kilowatts respectively.

Unit A – Mezzanine Floor We are submitting two options for your consideration for this area.

Option One is based on installing on system for the total area based on the area being open plan, with Option Two based on installing two systems.

Our equipment selection is set out as follows:

The cooling requirements for this total area call for 20.5 kilowatts.

Option One One only **Temperzone model ISD221Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA221R - 3 phase** outdoor condensing unit, total cooling and heating capacity 22.0 kilowatts respectively.

Option Two
Front Window Zone The cooling requirements for this area call for 13.10 kilowatts.

One only **Temperzone model ISD150Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA150R - 3 phase** outdoor condensing unit, total cooling and heating capacity 15.0 kilowatts respectively.

Balance of Area The cooling requirements for this area call for 8.6 kilowatts.

One only **Temperzone model ISD101Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA101R - 3 phase** outdoor condensing unit, total cooling and heating capacity 10.0 kilowatts respectively.

Unit B – Ground Floor Our calculations have been based on this area being open plan. We area setting out three options for your consideration. Option One is based on one large Temperzone exposed ducted heat pump split system unit with exposed circular sheetmetal ducting running the length of the shop, supplying the air via grilles mounted on the face of the circular ducting.

Option Two is based on the same large Temperzone ducted heat pump split system unit but designed around a suspended ceiling being installed at a later date.

Option Three is based on the installation of 2 only Carrier inverter Cassette heat pump split system unit. This option is an alternative to Option One designed around an exposed area. The air handling units will be suspended down from the floor above by threaded rods. This third option will be quieter in operation to Option One.

The cooling requirements for this area call for 11.10 kilowatts.

Option One One only **Temperzone model ISD127Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA127R - 3 phase** outdoor condensing unit, total cooling and heating capacity 12.50 kilowatts respectively.

Option Two One only **Temperzone model ISD127Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA127R - 3 phase** outdoor condensing unit, total cooling and heating capacity 12.50 kilowatts respectively.

Option Three The area is too large for one cassette system to be installed, so we are recommending for two systems to be installed.

Two only Carrier **model 40KQV080** inverter cassette through the ceiling type heat pump split system air handling units, connected to two only **Carrier model 38VYX080** inverter outdoor condensing units, total cooling and heating capacity 13.20 & 15.20 kilowatts respectively.

Unit B – Mezzanine Floor As for Unit A, we are submitting two options for your consideration.

The cooling requirements for this total area call for 13.70 kilowatts.

Option One One only **Temperzone model ISD181Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA181R - 3 phase** outdoor condensing unit, total cooling and heating capacity 18.0 kilowatts respectively.

Option Two
Front Window Face The cooling requirements for this area call for 8.5 kilowatts.

One only **Temperzone model ISD101Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA100R - single phase** outdoor condensing unit, total cooling and heating capacity 10.1 kilowatts respectively.

Balance of Area The cooling requirements for this area call for 5.2 kilowatts.

One only **Temperzone model ISD75Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA73R - single phase** outdoor condensing unit, total cooling and heating capacity 7.5 kilowatts respectively.

Unit A & B
Fresh Air – Ground Floor 1 only **Fantech model TD800/200N** inline fan for each unit. The air will be supplied via a roof cowl in each case, with 200 diameter spirotube circular ducting running down with in the warehouse, taken through the wall in each case, supplying the air via 2 only wall grilles in each unit. Fire damper will be installed where the warehouse wall is penetrated. The fans will be wired up and controlled by the timeclock.

Toilet Extract – Units A & B
Ground Floor To extract 10 litres per second per square metre of air from each toilet block will require 1 only **Fantech model TD500/150** inline fan.

A cowl will be mounted through the roof in each case within the warehouse area with 150 diameter spirotube circular sheetmetal ducting running down within the warehouse, then taken into the ceiling space of the toilet block, extracting air via 2 only eggcrate grilles in each case. Where the wall is penetrated a fire damper will be installed. The fan will be wired up to operate by the timeclock.

Units C, D, E – Block 2 – Ground Floor The cooling requirements for each of the three ground floor offices call for 5.2 kilowatts.

We recommend to install one only **Carrier model 53P060HX** hi wall heat pump split system unit, total cooling and heating capacity 6.0 & 6.2 kilowatts respectively.

Units C, D, E – Mezzanine Floor The cooling requirements for each of the Mezzanine Floor Office Area calls for 6.1kilowatts.

We are setting out two options for your consideration. Option One is based on installing a Temperzone ducted heat pump split system unit in each office, with Option Two based on installing a separate Hi Wall heat pump split system unit. A separate fresh air duct and fan system will be required to be installed if Option Two is selected.

The equipment selection is set out as follows:

Option One One only **Temperzone model ISD71Q** ducted heat pump split system air handler, connected to one only **Temperzone model OSA73R - single phase** outdoor condensing unit, total cooling and heating capacity 7.3 kilowatts respectively.

or Option Two One only **Toshiba model RAS-28NKHP-A** hi wall heat pump split system unit, total cooling and heating capacity 8.0 & 9.5 kilowatts respectively.

Fresh Air – Ground Floor
Units C, D, E 1 only **Fantech TD500/150** inline fresh air fan for each unit. A roof cowl will be installed through the roof within the warehouse area connecting to the fan, with 150 diameter spirotube circular ducting running down within the warehouse area taken through the wall and supplying air via a fire damper and wall grille into each office area.

First Floor – Option One A separate fresh air roof cowl will be installed into each office, supplying air via flexible ducting into the return air section of each ducted air handler.

Option Two If the Hi Wall option is selected, then a separate fresh air fan and duct system will need to be installed. 1 only **Fantech model TD250/100** inline fan, supplying air to 1 only 300 x 300 supply air ceiling diffuser.

Toilet Extract The requirements call for 1 only **Fantech TD250/100** inline fan extracting the air via an eggcrate grille, fire damper, spirotube circular ducting rising up within the warehouse, discharging outside via a roof cowl the fan wired up to operate by the timeclock.

The ducted air handling units will be mounted up in the ceiling space, supplying air via insulated magiloc flexible ducting, to supply air ceiling diffusers.

The supply air outlets will be fitted with manually operated dampers, located at the supply air distribution box, so as to balance the air flows from each outlet.

The air will return via egg crate return air ceiling grilles, returning the air via magiloc flexible ducting back to the air handlers, for the Mezzanine Floor only.

Refrigeration pipework from the ducted in-ceiling air handler will run within the ceiling space, be taken up through the roof, and connected to the condensing unit mounted on the roof above.

The condensate drainpipe from the ducted in-ceiling air handler will also run within the ceiling space, and drain into the nearest drain outlet.

The ducted systems will be wired up and controlled by separate remote wall mounted thermostats located on the wall near the return air ceiling grille, in the selected areas.

If the Hi Wall option is selected for Units C, D, E, then you may want to consider installing the drainline within the wall and discharging into the nearest drain outlet, before the lining is installed.

Timeclock Control We have shown a separate price for the supply and connecting up of all units to a timeclock. The timeclock will be located on the switchboard, and will control the on and off operation of the air conditioning units and fans in each of the 5 units.

We have also shown a separate price for the supply and installation of a two hour override timer to be located on the switchboard, for after hours operation of the air conditioning units and fans in each unit.

Attached please find our Quotation Sheet, which sets out our equipment selection, pricing, delivery structure and terms of payment. The prices include the complete installation of the equipment including the electrical work.

Delivery and installation of the equipment will be worked in with the construction program planned for the development.

Thank you for inviting this company to submit a quotation and should you require any further information, please do not hesitate to contact us.

Yours faithfully

ACE AIR CONDITIONING
(a division of Martin Simmons Air Conditioning Services Ltd)

MARTIN SIMMONS
Ref: 300307A

ACE AIR CONDITIONING

(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

QUOTATION

DATE 30th March 2007 ESTIMATE NUMBER A300307A

QUOTATION FOR THE PRODUCTION AND SALE OF GOODS BY ACE AIRCONDITIONING (A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD) (HEREINAFTER CALLED 'THE SELLER')

TO: **Aubrey Edwards Construction – Lot 6, East Tamaki** (HEREINAFTER CALLED 'THE BUYER')

DESCRIPTION OF GOODS: To Supply, Install and Wire Up
Page 1 of 8

Unit A – Ground Floor

Option One 1 only **Temperzone model ISD221Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA221R - 3 phase** outdoor condensing unit, supplying air via spirotube circular sheetmetal ducting and 12 only 300 x 150 multidirectional supply air grilles, wired up and controlled by a remote wall mounted thermostat.

Option Two 1 only **Temperzone model ISD221Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA221R - 3 phase** outdoor condensing unit, including 10 only 300 x 300 four way supply air ceiling diffusers, 3 only 550 x 550 egg crate return air ceiling grilles, 250 & 400mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Option Three 1 only **Carrier model 40KQV130** inverter cassette through the ceiling type heat pump split system air handler, connected to 1 only **Carrier model 38VYX130N** inverter outdoor condensing unit, and 1 only **Carrier model 40KQV110 inverter** cassette through the ceiling type heat pump split system air handler, connected to 1 only **Carrier model 38VYX110** inverter outdoor condensing unit, wired up and controlled by separate infra red remote controllers.

Fresh Air 1 only **Fantech model TD800/200N** inline fan, supplying air via roof cowl and spirotube ducting to 2 only wall grilles and fire dampers, wired up to operate by the timeclock.

Toilet Extract 1 only **Fantech TD500/150** inline fan, extracting air via 2 only 200 x 200 eggcrate ceiling grilles, fire damper 150 spirotube circular ducting to the outside, wired up and controlled by the timeclock.

THIS QUOTATION IS SUBJECT TO THE GENERAL CONDITIONS OF CONTRACT ENDORSED ON THE BACK HEREOF AND THE BUYER AGREES TO BE BOUND BY THEM ON ACCEPTANCE OF THIS QUOTATION.

CUSTOMER ACCEPTANCE (SIGNED) _____

FOR ACE AIR CONDITIONING
(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

DATE _____

ACE AIR CONDITIONING

(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

QUOTATION

DATE 30th March 2007 ESTIMATE NUMBER A300307A

QUOTATION FOR THE PRODUCTION AND SALE OF GOODS BY ACE AIRCONDITIONING (A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD) (HEREINAFTER CALLED 'THE SELLER')

TO: **Aubrey Edwards Construction – Lot 6, East Tamaki** (HEREINAFTER CALLED 'THE BUYER')

DESCRIPTION OF GOODS: To Supply, Install and Wire Up

Mezzanine Floor – Option One 1 only **Temperzone model ISD221Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA221R - 3 phase** outdoor condensing unit, including 10 only 300 x 300 four way supply air ceiling diffusers, 3 only 550 x 550 egg crate return air ceiling grilles, 250 & 400mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Fresh Air 1 only roof penetration with a cowl supplying air via 150mm magiloc flexible ducting into the return air of the ducted air handler.

Option Two

Front Window Zone 1 only **Temperzone model ISD150Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA150R - 3 phase** outdoor condensing unit, including 6 only 300 x 300 four way supply air ceiling diffusers, 2 only 550 x 550 egg crate return air ceiling grilles, 250 & 350mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Balance of Area 1 only **Temperzone model ISD101Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA101R - 3 phase** outdoor condensing unit, including 5 only 300 x 300 four way supply air ceiling diffusers, 2 only 550 x 550 egg crate return air ceiling grilles, 250 & 350mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Fresh Air 2 only roof penetration with a cowl supplying air via 150mm magiloc flexible ducting into the return air of the ducted air handlers.

Timeclock Control 1 only timeclock mounted on the switchboard controlling the on and off operation of the air conditioning units and fans.

Overide Timer 1 only 2 hour override timer, located on the switchboard to control the after hours operation of the air conditioning units and fans.

THIS QUOTATION IS SUBJECT TO THE GENERAL CONDITIONS OF CONTRACT ENDORSED ON THE BACK HEREOF AND THE BUYER AGREES TO BE BOUND BY THEM ON ACCEPTANCE OF THIS QUOTATION.

CUSTOMER ACCEPTANCE (SIGNED) _____

DATE _____

FOR ACE AIR CONDITIONING

(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

ACE AIR CONDITIONING

(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

QUOTATION

DATE 30th March 2007 ESTIMATE NUMBER A300307A

QUOTATION FOR THE PRODUCTION AND SALE OF GOODS BY ACE AIRCONDITIONING (A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD) (HEREINAFTER CALLED 'THE SELLER')

TO: **Aubrey Edwards Construction – Lot 6, East Tamaki** (HEREINAFTER CALLED 'THE BUYER')

DESCRIPTION OF GOODS: To Supply, Install and Wire Up

Unit B – Ground Floor

Option One 1 only **Temperzone model ISD127Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA127R - 3 phase** outdoor condensing unit, supplying air via spirotube circular sheetmetal ducting and 10 only 300 x 150 multidirectional supply air grilles, wired up and controlled by a remote wall mounted thermostat.

Option Two 1 only **Temperzone model ISD127Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA127R - 3 phase** outdoor condensing unit, including 6 only 300 x 300 four way supply air ceiling diffusers, 2 only 550 x 550 egg crate return air ceiling grilles, 250 & 350mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Option Three 2 only **Carrier model 40KQV080** inverter cassette through the ceiling type heat pump split system air handlers, connected to 2 only **Carrier model 38VYX080** inverter outdoor condensing units, wired up and controlled by separate infra red remote controller.

Fresh Air 1 only **Fantech model TD800/200N** inline fan, supplying air via roof cowl and spirotube ducting to 2 only wall grilles, fire dampers, wired up to operate by the timeclock.

Toilet Extract 1 only **Fantech TD500/150** inline fan, extracting air via 2 only 200 x 200 eggcrate ceiling grilles, fire dampers, 150 spirotube circular ducting to the outside, wired up and controlled by the timeclock.

THIS QUOTATION IS SUBJECT TO THE GENERAL CONDITIONS OF CONTRACT ENDORSED ON THE BACK HEREOF AND THE BUYER AGREES TO BE BOUND BY THEM ON ACCEPTANCE OF THIS QUOTATION.

CUSTOMER ACCEPTANCE (SIGNED) _____

FOR ACE AIR CONDITIONING

(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

DATE _____

ACE AIR CONDITIONING

(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

QUOTATION

DATE 30th March 2007 ESTIMATE NUMBER A300307A

QUOTATION FOR THE PRODUCTION AND SALE OF GOODS BY ACE AIRCONDITIONING (A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD) (HEREINAFTER CALLED 'THE SELLER')

TO: **Aubrey Edwards Construction – Lot 6, East Tamaki** (HEREINAFTER CALLED 'THE BUYER')

DESCRIPTION OF GOODS: To Supply, Install and Wire Up
Page 4 of 8

Mezzanine Floor – Option One 1 only **Temperzone model ISD181Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA180R - 3 phase** outdoor condensing unit, including 8 only 300 x 300 four way supply air ceiling diffusers, 2 only 550 x 550 egg crate return air ceiling grilles, 250 & 400mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Fresh Air 1 only roof penetration with a cowl supplying air via 150mm magiloc flexible ducting into the return air of the ducted air handler.

Option Two
Front Window Face 1 only **Temperzone model ISD101Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA101R - 3 phase** outdoor condensing unit, including 4 only 300 x 300 four way supply air ceiling diffusers, 2 only 550 x 550 egg crate return air ceiling grilles, 250 & 350mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Balance of Area 1 only **Temperzone model ISD75Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA73R - single phase** outdoor condensing unit, including 4 only 300 x 300 four way supply air ceiling diffusers, 2 only 400 x 400 egg crate return air ceiling grilles, 200 & 300mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Fresh Air 2 only roof penetrations and cowls supplying air via 150mm magiloc flexible ducting into the return air of the ducted air handlers.

Timeclock Control 1 only timeclock mounted on the switchboard controlling the on and off operation of the air conditioning units and fans.

Overide Timer 1 only 2 hour override timer, located on the switchboard to control the after hours operation of the air conditioning units.

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DESCRIPTION OF GOODS: To Supply, Install and Wire Up
Page 5 of 8

Unit C – Block Two
Ground Floor 1 only **Carrier model 53P060HX** hi wall heat pump split system unit, wired up and controlled by an infra red remote controller.

Fresh Air 1 only **Fantech model TD500/150** inline fresh air fan supplying air via a roof cowl and spirotube circular ducting and fire damper to 1 only wall grille wired up and controlled by the timeclock.

Toilet Extract 1 only **Fantech model TD250/150** inline extract fan, extracting air via an eggcrate grille, fire damper, 150mm spirotube circular ducting connecting to a roof cowl, wired up to operate by the timeclock.

Mezzanine Floor
Option One 1 only **Temperzone model ISDL71Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA73R - single phase** outdoor condensing unit, including 3 only 300 x 300 four way supply air ceiling diffusers, 2 only 400 x 400 egg crate return air ceiling grilles, 250 & 300mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Fresh Air 1 only roof penetration with a cowl supplying air via 150mm magiloc flexible ducting into the return air of the ducted air handler.

Option Two 1 only **Toshiba model RAS-28NKHP-A** hi wall heat pump split system unit, wired up and controlled by an infra red remote controller.

Fresh Air 1 only **Fantech model TD250/100** inline fan, supplying air via a roof cowl to 1 only 300 x 300 supply air ceiling diffuser, wired up to operate by the timeclock.

Timeclock Control 1 only timeclock mounted on the switchboard controlling the on and off operation of the air conditioning units and fans.

Overide Timer 1 only 2 hour override timer, located on the switchboard to control the after hours operation of the air conditioning units.

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TO: **Aubrey Edwards Construction – Lot 6, East Tamaki** (HEREINAFTER CALLED 'THE BUYER')

DESCRIPTION OF GOODS: To Supply, Install and Wire Up

Unit D – Block Two

Ground Floor 1 only **Carrier model 53P060HX** hi wall heat pump split system unit, wired up and controlled by an infra red remote controller.

Fresh Air 1 only **Fantech model TD500/150** inline fresh air fan supplying air via a roof cowl and spirotube circular ducting and fire damper to 1 only wall grille wired up and controlled by the timeclock.

Toilet Extract 1 only **Fantech model TD250/150** inline extract fan, extracting air via an eggcrate grille, fire damper, 150mm spirotube circular ducting connecting to a roof cowl, wired up to operate by the timeclock.

Mezzanine Floor

Option One 1 only **Temperzone model ISDL71Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA73R - single phase** outdoor condensing unit, including 3 only 300 x 300 four way supply air ceiling diffusers, 2 only 400 x 400 egg crate return air ceiling grilles, 250 & 300mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Fresh Air 1 only roof penetration with a cowl supplying air via 150mm magiloc flexible ducting into the return air of the ducted air handler.

Option Two 1 only **Toshiba model RAS-28NKHP-A** hi wall heat pump split system unit, wired up and controlled by an infra red remote controller.

Fresh Air 1 only **Fantech model TD250/100** inline fan, supplying air via a roof cowl to 1 only 300 x 300 supply air ceiling diffuser, wired up to operate by the timeclock.

Timeclock Control 1 only timeclock mounted on the switchboard controlling the on and off operation of the air conditioning units and fans.

Overide Timer 1 only 2 hour override timer, located on the switchboard to control the after hours operation of the air conditioning units.

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TO: **Aubrey Edwards Construction – Lot 6, East Tamaki** (HEREINAFTER CALLED 'THE BUYER')

DESCRIPTION OF GOODS: To Supply, Install and Wire Up

Unit E – Block Two

Ground Floor 1 only **Carrier model 53P060HX** hi wall heat pump split system unit, wired up and controlled by an infra red remote controller.

Fresh Air 1 only **Fantech model TD500/150** inline fresh air fan supplying air via a roof cowl and spirotube circular ducting and fire damper to 1 only wall grille wired up and controlled by the timeclock.

Toilet Extract 1 only **Fantech model TD250/150** inline extract fan, extracting air via an eggcrate grille, fire damper, 150mm spirotube circular ducting connecting to a roof cowl, wired up to operate by the timeclock.

Mezzanine Floor

Option One 1 only **Temperzone model ISDL71Q** ducted heat pump split system air handler, connected to 1 only **Temperzone model OSA73R - single phase** outdoor condensing unit, including 3 only 300 x 300 four way supply air ceiling diffusers, 2 only 400 x 400 egg crate return air ceiling grilles, 250 & 300mm insulated magiloc flexible ducting wired up and controlled by a remote wall mounted thermostat.

Fresh Air 1 only roof penetration with a cowl supplying air via 150mm magiloc flexible ducting into the return air of the ducted air handler.

Option Two 1 only **Toshiba model RAS-28NKHP-A** hi wall heat pump split system unit, wired up and controlled by an infra red remote controller.

Fresh Air 1 only **Fantech model TD250/100** inline fan, supplying air via a roof cowl to 1 only 300 x 300 supply air ceiling diffuser, wired up to operate by the timeclock.

Timeclock Control 1 only timeclock mounted on the switchboard controlling the on and off operation of the air conditioning units and fans.

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DATE _____

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(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

ACE AIR CONDITIONING

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QUOTATION

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TO: **Aubrey Edwards Construction – Lot 6, East Tamaki** (HEREINAFTER CALLED 'THE BUYER')

DESCRIPTION OF GOODS: To Supply, Install and Wire Up
Page 8 of 8

Overide Timer 1 only 2 hour override timer, located on the switchboard to control the after hours operation of the air conditioning units.

THE ABOVE PRICES ARE G.S.T. EXCLUSIVE

WHERE GOODS TO BE INSTALLED OR DELIVERED: LOT 6, 46 CROOKS ROAD, EAST TAMAKI.
EXCLUSIONS: AS PER ATTACHED LETTER.
PRICE: AS ABOVE.
(Subject to Clause 2 of the General Conditions of Contract).
TERMS OF PAYMENT: CASH 20TH MONTH FOLLOWING INVOICE.
ESTIMATED TIME OF DELIVERY: AS PER ATTACHED LETTER.

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DATE _____

FOR ACE AIR CONDITIONING
(A DIVISION OF MARTIN SIMMONS AIR CONDITIONING SERVICES LTD)

Engineering Calculations

For

46 Carlos Drive, Flat Bush.

Client:	Concepts 124 Ltd.
Architectural Office	
& Project Management:	Ormiston Project Management Limited
Job No:	AH 9861-21
Date:	2 July 2007
Design Engineer:	Han Tong
Contact Phone:	(09) 534 6523
	Fax: (09) 5375754
	Email: hant@aireys.co.nz

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AS/NZS1170.2:2002 Wind speed calculation At 46 Carlos Drive

$V_{sit,\beta}=V_R M_d(M_{z,cat},M_s,M_t)$			Unit	References
Structure importance		2	Normal structures and structures not in other important levels	
Required annual probability of exceedance	R_{uls}	500		
	R_{sls}	25		
Wind region		A	A6 - Auckland	
Regional wind speed	$V_{R,uls}$	45.0	m/s	Section 3
	$V_{R,sls}$	37.3	m/s	
Directional multiplier	M_d	1.0		Section 3
Terrain category		3	Terrain with numerous closely spaced obstructions 3m -5m high such as areas of suburban housing	
Building height	z	10.0	m	
Terrain multiplier	$M_{z,cat}$	0.83		Section 4
Shielding multiplier	M_s	1.0		Section 4
Topographic multiplier	M_t	1.0		Section 4
Site wind speed	$V_{sit,\beta}$	37.3	m/s	ULS
		30.9	m/s	SLS
Density of air	ρ_{air}	1.2	kg/m^3	
Dynamic response factor	C_{dyn}	1.00		Section 6
Design wind pressure	$q_{(z)}$	0.84	kPa	ULS
		0.57	kPa	SLS

AS/NZS1170 Seismic Actions

Equivilent static method-horizontal design coefficient

$C_d(T_1)=C(T_1)S_p/k_\mu$

Structural ductility factor M_μ	3.0			
Structure importance	2.0			
Soil Classification	C	**Shallow Soil**		
Period of structure	T	0.4		
Spectral shape factor $C_h(T)$		2.36		
Required annual probability of exceedance		$R_{p\ uls}$	500	
		$R_{p\ sls}$	25	
Structure location	Manukau City			
	R_u	1	$0.03R_u$	0.09
	R_s	0.25		
Zone factor Z	Z	0.13	ZR_u	0.13 OK
Distance to nearest fault	D	>20 km		
Near fault factor N				
	$N_{max}(T)$	1		
Enter exact distance to nearest fault		28 km		
	N(T,D)	1		
Structural Performance factor	S_{pULS}	0.7		
	S_{pSLS}	0.7		
	$C(T_1)_{uls}$	0.3068	(Z/20+0.02)Ru	0.0265
	$C(T_1)_{sls}$	0.0767	C(T1)>0.03Ru & (Z/20+0.02)Ru OK	
	k_μ A-D	2.14		
	k_μ E	N/A		
	$C_d(T_1)_{uls}$	0.10		
	$C_d(T_1)_{sls}$	0.03		

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Consulting Civil and Stuctural Engineers

AS/NZS1170 Seismic Actions

Equivilent static method-horizontal design coefficient

$C_d(T_1)=C(T_1)S_p/k_\mu$

Structural ductility factor M_μ	1.0			
Structure importance	2.0			
Soil Classification	C	**Shallow Soil**		
Period of structure	T	0.4		
Spectral shape factor $C_h(T)$		2.36		
Required annual probability of exceedance		$R_{p\,uls}$	500	
		$R_{p\,sls}$	25	
Structure location	Manukau City			
	R_u	1	$0.03R_u$	0.03
	R_s	0.25		
Zone factor Z	Z	0.13	ZR_u	0.13 OK
Distance to nearest fault	D	>20 km		
Near fault factor N				
	$N_{max}(T)$	1		
Enter exact distance to nearest fault		20 km		
	N(T,D)	1		
Structural Performance factor	S_{pULS}	1		
	S_{pSLS}	0.7		
	$C(T_1)_{uls}$	0.3068	(Z/20+0.02)Ru	0.0265
	$C(T_1)_{sls}$	0.0767	C(T1)>0.03Ru & (Z/20+0.02)Ru OK	
	k_μ A-D	1.00		
	k_μ E	N/A		
	$C_d(T_1)_{uls}$	0.31		
	$C_d(T_1)_{sls}$	0.05		

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Building weight (Dead & Live

Light roof = 0.4 kPa @ 10° => 0.4/cos10° = 0.41 kPa

Live = 0.25

Timber floor Dead load = 0.5 kPa

Live load = 1.5 kPa

Wall Dead load = 0.5 kPa

Unit 1-5 & 6-10

Roof level Area = 24.5 × 11.9 = 292 m²

Dead load = (0.41 + 0.5/2) × 292 = 193 kN

Level 1 Area = 22.6 × 10.6 = 240 m²

Dead load = (0.5 + 0.5) × 240 = 240 kN

Live load = 1.5 × 240 = 360 kN

Ground Area = 14.8 × 22.4 = 332 m²

Dead load = 332 × (0.5 + 0.5) = 332 kN

Live load = 1.5 × 332 = 498 kN

Unit 11-16 & 17-22

Roof Level A = 28.4 × 11.8 = 335 m²

Dead Load = 221 kN

Level 1 A = 26.8 × 10.6 = 284 m²

Dead = 284 kN

Live = 426 kN

Ground A = 26.8 × 14 = 375 m²

Dead = 375 kN

Live = 563 kN

Force distribution using the equivilent static method

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
1Top	193	0	0	193	8.60	1660	0.31	0.39	40 kN	40 kN	794 Bu
2	240	380	0.3	348	5.60	1949	0.36	0.36	37 kN	77 kN	1533 Bu
3	332	498	0.3	481.4	2.80	1348	0.25	0.25	26 kN	102 kN	2045 Bu
			Σ	1022 kN		4957	0.92	1	102 kN		

C_d 0.10 g (timber bracing)

V 102 kN

Seismic load @ 1Top

No. of members 50

φ_s = 1.000

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
1	193	0	0	193.0	8.60	1660	0.31	0.39	40 kN	40 kN	794 Bu
			Σ	1022 kN							

C_d 0.10 g

V 102 kN

Force distribution using the equivlient static method

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
1Top	193	0	0	193	8.60	1660	0.31	0.39	40 kN	40 kN	794 Bu
2	240	360	0.3	348	5.60	1949	0.36	0.36	37 kN	77 kN	1533 Bu
3	332	498	0.3	481.4	2.80	1348	0.25	0.25	26 kN	102 kN	2045 Bu
			Σ	1022 kN		4957	0.92	1	102 kN		

C_d 0.10 g (timber bracing)

V 102 kN

Seismic load @ 2

No. of members 50

φ_s = 1.000

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
2	240	360	0.3	348.0	5.60	1949	0.36	0.36	37 kN	[illegible]	[illegible]
			Σ	1022 kN							

C_d 0.10 g

V 102 kN

Ground

Force distribution using the equivilent static method

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
1Top	193	0	0	193	8.60	1660	0.31	0.39	40 kN	40 kN	794 Bu
2	240	360	0.3	348	5.60	1949	0.36	0.36	37 kN	77 kN	1533 Bu
3	332	498	0.3	481.4	2.60	1348	0.25	0.25	26 kN	102 kN	2045 Bu
			Σ	1022 kN		4957	0.92	1	102 kN		

C_d 0.10 g (timber bracing)

V 102 kN

Seismic load @ 3

No. of members 50

φ_e = 1.000

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
3	332	498	0.3	481.4	2.60	1348	0.25	0.25	26 kN	102 kN	2045 Bu
			Σ	1022 kN							

C_d 0.10 g

V 102 kN

Wind loads

q_s =	0.84	kPa							
	Fl to FL	Bld width	Bld length	Along			Across		
	m	m	m	level, kN	Total, kN	Total Bus	level, kN	Total, kN	Total Bus
1Top	3	12.6	23	15.8	16	316	28.8	29	577
2	2.8	12.6	23	30.6	46	927	55.8	85	1692
3	2.8	15	23	32.3	63	1257	53.8	110	2192

Force distribution using the equivlient static method

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
1Top	221	0	0	221	8.60	1901	0.31	0.39	45 kN	45 kN	906 Bu
2	284	426	0.3	411.8	5.60	2306	0.37	0.37	44 kN	89 kN	1778 Bu
3	375	563	0.3	543.9	2.80	1523	0.24	0.24	29 kN	118 kN	2353 Bu
			Σ	1177 kN		5730	0.92	1	118 kN		
			C_d	0.10 g (timber bracing)							
			V	118 kN							

Seismic load @ 1Top

No. of members 50

φ_s = 1.000

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
1	221	0	0	221.0	8.60	1901	0.31	0.39	45 kN	45 kN	906 Bu
			Σ	1177 kN							
			C_d	0.10 g							
			V	118 kN							

Level 2

Force distribution using the equivilent static method

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
1Top	221	0	0	221	8.60	1901	0.31	0.39	45 kN	45 kN	906 Bu
2	284	426	0.3	411.8	5.60	2306	0.37	0.37	44 kN	89 kN	1778 Bu
3	375	563	0.3	543.9	2.80	1523	0.24	0.24	29 kN	118 kN	2353 Bu
			Σ	1177 kN		5730	0.92	1	118 kN		

C_d 0.10 g (timber bracing)

V 116 kN

Seismic load @ 2

No. of members 50

φ_s = 1.000

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
2	284	426	0.3	411.8	5.60	2306	0.37	0.37	44 kN	89 kN	1778 Bu
			Σ	1177 kN							

C_d 0.10 g

V 118 kN

Ground

Force distribution using the equivilent static method

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
1Top	221	0	0	221	8.60	1901	0.31	0.39	45 kN	45 kN	906 Bu
2	284	426	0.3	411.8	5.60	2306	0.37	0.37	44 kN	89 kN	1778 Bu
3	375	563	0.3	543.9	2.80	1523	0.24	0.24	29 kN	118 kN	2353 Bu
			Σ	1177 kN		5730	0.92	1	118 kN		

C_d 0.10 g (timber bracing)

V 118 kN

Seismic load @ 3

No. of members 50

φ_s = 1.000

Level	W_{DL}	W_{LL}	φ_E	W_i	h_i	W_ih_i	$\frac{0.92W_ih_i}{\Sigma W_ih_i}$	Total +0.08V to top	Seismic Force	Total to each level	Bu's
3	375	563	0.3	543.9	2.80	1523	0.24	0.24	29 kN	118 kN	2353 Bu
			Σ	1177 kN							

C_d 0.10 g

V 118 kN

Wind loads

q_z =	0.84	kPa							
	Fl to FL	Bld width	Bld length	Along			Across		
	m	m	m	level, kN	Total, kN	Total Bus	level, kN	Total, kN	Total Bus
1Top	3	11.8	27.6	14.8	15	296	34.6	35	692
2	2.8	11.8	27.6	28.6	43	868	66.9	102	2031
3	2.8	14.6	27.6	30.9	60	1190	64.6	132	2631

GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace ™ *GIB® Bracing Systems, 2006*

Along									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
A	enter	1	GIB®	BL1	1.4	2.4		175	161
		2	GIB®	BL1	1.4	2.4		175	161
line totals		3							
W	350	4							
EQ	322	5							
B	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3	GIB®	GS2	2	2.4		160	140
W	480	4							
EQ	420	5							
C	enter	1	GIB®	BL1	1.4	2.4		175	161
		2	GIB®	BL1	1.4	2.4		175	161
line totals		3							
W	350	4							
EQ	322	5							
D	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
E	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
F	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
G	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
H	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								1180	1064
								OK	OK
Totals Required (from Sheet A)								316	794

GIB® Wall Bracing Calculation Sheet B — single storey — V65A

GIB® EzyBrace ™ — *GIB® Bracing Systems, 2006*

Across									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
M	enter	1	GIB®	GS1a	2	2.4		130	110
		2							
line totals		3							
W	130	4							
EQ	110	5							
N	enter	1	GIB®	GS2	1.2	2.4		84	72
		2	GIB®	GS2	1.2	2.4		84	72
line totals		3							
W	168	4							
EQ	144	5							
O	enter	1	GIB®	GS2	1.2	2.4		84	72
		2	GIB®	GS2	1.2	2.4		84	72
line totals		3							
W	168	4							
EQ	144	5							
P	enter	1	GIB®	GS2	1.2	2.4		84	72
		2	GIB®	GS2	1.2	2.4		84	72
line totals		3							
W	168	4							
EQ	144	5							
Q	enter	1	GIB®	GS2	1.2	2.4		84	72
		2	GIB®	GS2	1.2	2.4		84	72
line totals		3							
W	168	4							
EQ	144	5							
R	enter	1	GIB®	GS1a	2	2.4		130	110
		2							
line totals		3							
W	130	4							
EQ	110	5							
S	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
T	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								932	796
								OK	OK
Totals Required (from Sheet A)								577	714

GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace ™ *GIB® Bracing Systems, 2006*

Along									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
A	enter	1	GIB®	BLP	0.6	2.4		87	81
		2	GIB®	BLP	0.6	2.4		87	81
line totals		3	GIB®	BLP	0.6	2.4		87	81
W	435	4	GIB®	BLP	0.6	2.4		87	81
EQ	405	5	GIB®	BLP	0.6	2.4		87	81
	enter	6	GIB®	BLP	0.6	2.4		87	81
line totals									
W	87								
EQ	81								
B	enter	1	GIB®	BLP	0.6	2.4		87	81
		2	GIB®	BLP	0.6	2.4		87	81
line totals		3	GIB®	BLP	0.6	2.4		87	81
W	348	4	GIB®	BLP	0.6	2.4		87	81
EQ	324								
C	enter	1	GIB®	GS1a	3	2.4		225	195
		2	GIB®	GS1a	3	2.4		225	195
line totals		3	GIB®	GS1a	3	2.4		225	195
W	1125	4	GIB®	GS1a	3	2.4		225	195
EQ	975	5	GIB®	GS1a	3	2.4		225	195
	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
F	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
G	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
H	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								1995	1785
								OK	OK
Totals Required (from Sheet A)								927	1533

GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace™ — *GIB® Bracing Systems, 2006*

Across									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
M	enter	1	GIB®	GS1a	2.5	2.4		188	163
		2	GIB®	GS1a	2.5	2.4		188	163
line totals		3							
W	375	4							
EQ	325	5							
N	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3							
W	320	4							
EQ	280	5							
O	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3							
W	320	4							
EQ	280	5							
P	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3							
W	320	4							
EQ	280	5							
Q	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3							
W	320	4							
EQ	280	5							
R	enter	1	GIB®	GS1a	2.5	2.4		188	163
		2	GIB®	GS1a	2.5	2.4		188	163
line totals		3							
W	375	4							
EQ	325	5							
S	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
T	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								2030	1770
								OK	OK
Totals Required (from Sheet A)								1692	1533

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GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace ™ — *GIB® Bracing Systems, 2006*

Along									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
A	enter	1	GIB®	BL1	0.4	2.4		48	46
		2	GIB®	BL1	0.4	2.4		48	46
line totals		3	GIB®	BL1	0.4	2.4		48	46
W	240	4	GIB®	BL1	0.4	2.4		48	46
EQ	230	5	GIB®	BL1	0.4	2.4		48	46
	enter	6	GIB®	BL1	0.4	2.4		48	46
		7	GIB®	BL1	0.4	2.4		48	46
line totals		8	GIB®	BL1	0.4	2.4		48	46
W	240	9	GIB®	BL1	0.4	2.4		48	46
EQ	230	10	GIB®	BL1	0.4	2.4		48	46
B	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3	GIB®	GS2	2	2.4		160	140
W	600	4	GIB®	GS2	2	2.4		160	140
EQ	700	5	GIB®	GS2	2	2.4		160	140
C	enter	1	GIB®	BLG	1	2.4		145	130
		2	GIB®	BLG	1	2.4		145	130
line totals		3	GIB®	BLG	1	2.4		145	130
W	725	4	GIB®	BLG	1	2.4		145	130
EQ	650	5	GIB®	BLG	1	2.4		145	130
D	enter	1	Engineer	Portal	1	2.4		150	150
		2	Engineer	Portal	1	2.4		150	150
line totals		3	Engineer	Portal	1	2.4		150	150
W	750	4	Engineer	Portal	1	2.4		150	150
EQ	750	5	Engineer	Portal	1	2.4		150	150
F	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
G	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
H	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								2755	2560
								OK	OK
Totals Required (from Sheet A)								1257	2045

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GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace™ — *GIB® Bracing Systems, 2006*

Across									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
M	enter	1	NZS3604	masonry 1	7	2.4		700	700
		2	NZS3604	masonry 1	7	2.4		700	700
line totals		3							
W	1400	4							
EQ	1400	5							
N	enter	1	NZS3604	masonry 1	6	2.4		600	600
		2	NZS3604	masonry 1	6	2.4		600	600
line totals		3							
W	1200	4							
EQ	1200	5							
O	enter	1	NZS3604	masonry 1	7	2.4		700	700
		2	NZS3604	masonry 1	7	2.4		700	700
line totals		3							
W	1400	4							
EQ	1400	5							
P	enter	1	NZS3604	masonry 1	6	2.4		600	600
		2	NZS3604	masonry 1	6	2.4		600	600
line totals		3							
W	1200	4							
EQ	1200	5							
Q	enter	1	NZS3604	masonry 1	7	2.4		700	700
		2	NZS3604	masonry 1	7	2.4		700	700
line totals		3							
W	1400	4							
EQ	1400	5							
R	enter	1	NZS3604	masonry 1	6	2.4		600	600
		2	NZS3604	masonry 1	6	2.4		600	600
line totals		3							
W	1200	4							
EQ	1200	5							
S	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
T	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								7800	7800
								OK	OK
Totals Required (from Sheet A)								2192	2045

GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace ™ — *GIB® Bracing Systems, 2006*

Along									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
A	enter	1	GIB®	BL1	1.4	2.4		175	161
		2	GIB®	BL1	1	2.4		125	115
line totals		3							
W	300	4							
EQ	276	5							
B	enter	1	GIB®	GS2	1.2	2.4		84	72
		2	GIB®	GS2	1.2	2.4		84	72
line totals		3	GIB®	GS2	1.2	2.4		84	72
W	336	4	GIB®	GS2	1.2	2.4		84	72
EQ	288	5							
C	enter	1	GIB®	GS2	1.2	2.4		84	72
		2	GIB®	GS2	1.2	2.4		84	72
line totals		3	GIB®	GS2	1.2	2.4		84	72
W	336	4	GIB®	GS2	1.2	2.4		84	72
EQ	288	5							
D	enter	1	GIB®	BL1	1.4	2.4		175	161
		2	GIB®	BL1	1	2.4		125	115
line totals		3							
W	300	4							
EQ	276	5							
E	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
F	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
G	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
H	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								1272	1128
								OK	OK
Totals Required (from Sheet A)								296	906

GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace™ — *GIB® Bracing Systems, 2006*

Across									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
M	enter	1	GIB®	GS1a	2	2.4		130	110
		2							
line totals		3							
W	130	4							
EQ	110	5							
N	enter	1	GIB®	GS2	1.5	2.4		105	90
		2	GIB®	GS2	1.5	2.4		105	90
line totals		3							
W	210	4							
EQ	180	5							
O	enter	1	GIB®	GS2	1.5	2.4		105	90
		2	GIB®	GS2	1.5	2.4		105	90
line totals		3							
W	210	4							
EQ	180	5							
P	enter	1	GIB®	GS2	1.5	2.4		105	90
		2	GIB®	GS2	1.5	2.4		105	90
line totals		3							
W	210	4							
EQ	180	5							
Q	enter	1	GIB®	GS2	1.5	2.4		105	90
		2	GIB®	GS2	1.5	2.4		105	90
line totals		3							
W	210	4							
EQ	180	5							
R	enter	1	GIB®	GS2	1.5	2.4		105	90
		2	GIB®	GS2	1.5	2.4		105	90
line totals		3							
W	210	4							
EQ	180	5							
S	enter	1	GIB®	GS1a	2	2.4		130	110
		2							
line totals		3							
W	130	4							
EQ	110	5							
T	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								1310	1120
								OK	OK
Totals Required (from Sheet A)								692	766

GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace ™ — *GIB® Bracing Systems, 2006*

Along									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
A	enter	1	GIB®	BLP	0.6	2.4		87	81
		2	GIB®	BLP	0.6	2.4		87	81
line totals		3	GIB®	BLP	0.6	2.4		87	81
W	435	4	GIB®	BLP	0.6	2.4		87	81
EQ	405	5	GIB®	BLP	0.6	2.4		87	81
	enter	6	GIB®	BLP	0.6	2.4		87	81
		7	GIB®	BLP	0.6	2.4		87	81
line totals		8	GIB®	BLP	0.6	2.4		87	81
W	435	9	GIB®	BLP	0.6	2.4		87	81
EQ	405	10	GIB®	BLP	0.6	2.4		87	81
	enter	11	GIB®	BLP	0.6	2.4		87	81
		12	GIB®	BLP	0.6	2.4		87	81
line totals			GIB®	GS1a		2.4			
W	174		GIB®	GS1a		2.4			
EQ	162		GIB®	GS1a		2.4			
B	enter	1	GIB®	GS1a	2.8	2.4		210	182
		2	GIB®	GS1a	2.8	2.4		210	182
line totals		3	GIB®	GS1a	2.8	2.4		210	182
W	1050	4	GIB®	GS1a	2.8	2.4		210	182
EQ	910	5	GIB®	GS1a	2.8	2.4		210	182
	enter	6	GIB®	GS1a	2.8	2.4		210	182
line totals									
W	210								
EQ	182								
F	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
G	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
H	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								2304	2064
								OK	OK
Totals Required (from Sheet A)								868	1776

GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace™ — *GIB® Bracing Systems, 2006*

Across									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
M	enter	1	GIB®	GS1a	2.5	2.4		188	163
		2	GIB®	GS1a	2.5	2.4		188	163
line totals		3							
W	375	4							
EQ	325	5							
N	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3							
W	320	4							
EQ	280	5							
O	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3							
W	320	4							
EQ	280	5							
P	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3							
W	320	4							
EQ	280	5							
Q	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3							
W	320	4							
EQ	280	5							
R	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3							
W	320	4							
EQ	280	5							
S	enter	1	GIB®	GS1a	2.5	2.4		188	163
		2	GIB®	GS1a	2.5	2.4		188	163
line totals		3							
W	375	4							
EQ	325	5							
T	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								2350	2050
								OK	OK
Totals Required (from Sheet A)								2031	1778

GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace ™ — *GIB® Bracing Systems, 2006*

Along									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
A	enter	1	Engineer	Portal	1	2.4		150	150
		2	Engineer	Portal	1	2.4		150	150
line totals		3	Engineer	Portal	1	2.4		150	150
W	900	4	Engineer	Portal	1	2.4		150	150
EQ	900	5	Engineer	Portal	2	2.4		300	300
B	enter	1	GIB®	BLG	1	2.4		145	130
		2	GIB®	BLG	1	2.4		145	130
line totals		3	GIB®	BLG	1	2.4		145	130
W	725	4	GIB®	BLG	1	2.4		145	130
EQ	650	5	GIB®	BLG	1	2.4		145	130
	enter	6	GIB®	BLG	1	2.4		145	130
line totals									
W	145								
EQ	130								
C	enter	1	GIB®	GS2	2	2.4		160	140
		2	GIB®	GS2	2	2.4		160	140
line totals		3	GIB®	GS2	2	2.4		160	140
W	800	4	GIB®	GS2	2	2.4		160	140
EQ	700	5	GIB®	GS2	2	2.4		160	140
	enter	6	GIB®	GS2	2	2.4		160	140
line totals									
W	160								
EQ	140								
D	enter	1	GIB®	BL1	0.4	2.4		48	46
		2	GIB®	BL1	0.4	2.4		48	46
line totals		3	GIB®	BL1	0.4	2.4		48	46
W	240	4	GIB®	BL1	0.4	2.4		48	46
EQ	230	5	GIB®	BL1	0.4	2.4		48	46
	enter	6	GIB®	BL1	0.4	2.4		48	46
		7	GIB®	BL1	0.4	2.4		48	46
line totals		8	GIB®	BL1	0.4	2.4		48	46
W	240	9	GIB®	BL1	0.4	2.4		48	46
EQ	230	10	GIB®	BL1	0.4	2.4		48	46
	enter	11	GIB®	BL1	0.4	2.4		48	46
		12	GIB®	BL1	0.4	2.4		48	46
line totals									
W	96								
EQ	92								
								Wind	Earthq.
Totals Achieved								3306	3072
								OK	OK
Totals Required (from Sheet A)								1190	2353

GIB® Wall Bracing Calculation Sheet B — single storey — V85A

GIB® EzyBrace ™ — *GIB® Bracing Systems, 2006*

Across									
Wall or Bracing Line		*Bracing Elements provided*						*Wind*	*Earthq.*
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
M	enter	1	NZS3604	masonry 1	7	2.4		700	700
		2	NZS3604	masonry 1	7	2.4		700	700
line totals		3							
W	1400	4							
EQ	1400	5							
N	enter	1	NZS3604	masonry 1	6	2.4		600	600
		2	NZS3604	masonry 1	6	2.4		600	600
line totals		3							
W	1200	4							
EQ	1200	5							
O	enter	1	NZS3604	masonry 1	7	2.4		700	700
		2	NZS3604	masonry 1	7	2.4		700	700
line totals		3							
W	1400	4							
EQ	1400	5							
P	enter	1	NZS3604	masonry 1	6	2.4		600	600
		2	NZS3604	masonry 1	6	2.4		600	600
line totals		3							
W	1200	4							
EQ	1200	5							
Q	enter	1	NZS3604	masonry 1	7	2.4		700	700
		2	NZS3604	masonry 1	7	2.4		700	700
line totals		3							
W	1400	4							
EQ	1400	5							
R	enter	1	NZS3604	masonry 1	6	2.4		600	600
		2	NZS3604	masonry 1	6	2.4		600	600
line totals		3							
W	1200	4							
EQ	1200	5							
S	enter	1	NZS3604	masonry 1	7	2.4		700	700
		2	NZS3604	masonry 1	7	2.4		700	700
line totals		3							
W	1400	4							
EQ	1400	5							
T	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
								Wind	Earthq.
Totals Achieved								9200	9200
								OK	OK
Totals Required (from Sheet A)								2631	2353

Masonry Portal Design:

$kPa = 10^3 \cdot Pa$ $kN = 10^3 \cdot N$ $MPa = 10^6 \cdot Pa$ $mm = 10^{-3} \cdot m$

Loading Criteria:

	Dead	Live
Roof (Light)	$G_{rf} := \frac{0.4kPa}{\cos(25deg)}$	$Q_{rf} := 0.25kPa$
Floor (Timber)	$G_{tf} := 0.5kPa$	$Q_{fl} := 1.5kPa$
Garage (Concrete)	$G_{cg} := 2.4 \cdot kPa$	$Q_{ga} := 2.5 \cdot kPa$

Applied loads

Design BM $M' := 6kN \cdot m$
Design shear $V' := 9kN$

Compression strength, $f_m := 12MPa$ **Grade B masonry**

Beam

Depth $D_b := 390mm$
Width $B_b := 190mm$
Block unit wall $t_{uw} := 40mm$
Cavity width $t_c := B_b - 2 \cdot t_{uw}$ $t_c = 110mm$
Cavity height $h_c := D_b - 2 \cdot t_{uw}$ $h_c = 310mm$
Moment reduction factor $\phi_m := 0.85$
Shear reduction factor $\phi_v := 0.75$

Longitudinal reinforcement (NZS 4230:2004)

Top reinforcement size $d_{ts} := 12mm$, **number of bar** $n_t := 2$
Bottom reinforcement size $d_{bs} := 12mm$ **number of bar** $n_b := 2$

Steel area $A_{bs} := \pi \cdot \left(\frac{d_{bs}}{2}\right)^2$ $A_{bs} = 113mm^2$ $A_{ts} := \pi \cdot \left(\frac{d_{ts}}{2}\right)^2$ $A_{ts} = 113mm^2$
Steel strength $f_y := 300MPa$,
Tension steel area, $A_s := n_b \cdot A_{bs}$ $A_s = 226.2mm^2$
Concrete cover $c := 100mm$
Distance of vertical steel to wall extreme fibre $d := D_b - c$ $d = 290mm$

BM Capacity $\phi M_n := \phi_m \cdot A_s \cdot f_y \cdot \left(d - \frac{A_s \cdot f_y}{2 \cdot 0.85 \cdot f_m \cdot B_b}\right)$ $\phi M_n = 15.7kN \cdot m$

BM check $CHK := \begin{cases} \text{"OK"} & \text{if } M' < \phi M_n \\ \text{"NG"} & \text{otherwise} \end{cases}$ $CHK = \text{"OK"}$

Shear reinforcement (NZS 4230:2004)

Stirrup diameter $d_{bt} := 6mm$
Strength $f_{yt} := 300MPa$
Spacing $S_2 := \min(0.5 \cdot D_b, B_b, 16 \cdot d_{bs}, 48 \cdot d_{bt})$ $S_2 = 190mm$
Spacing check $CHK := \begin{cases} \text{"NG"} & \text{if } S_2 > \min(0.5 \cdot D_b, B_b, 16 \cdot d_{bs}, 48 \cdot d_{bt}) \\ \text{"OK"} & \text{otherwise} \end{cases}$ $CHK = \text{"OK"}$

Tension steel ratio $\rho_w := \frac{A_s}{B_b \cdot d}$ $\rho_w = 0.4\%$

$C_1 := 33 \cdot \rho_w \cdot \frac{f_y}{300MPa}$ $C_1 = 0.1$

For beam $C_2 := 1.0$

Basic shear provided by masonry, $v_{bm} := 0.7MPa$

Shear strength provided by masonry, $v_m := (C_1 + C_2) \cdot v_{bm}$ $v_m = 0.8MPa$

Design shear stress $v_i := \begin{cases} \text{"NG"} & \text{if } \frac{V^*}{\phi_v \cdot B_b \cdot d} > 1.5MPa \\ \frac{V^*}{\phi_v \cdot B_b \cdot d} & \text{otherwise} \end{cases}$ $v_i = 0.2MPa$

Shear Reinforcement Area $A_v := \begin{cases} \frac{(0.15MPa \cdot B_b \cdot S_2)}{f_{yt}} & \text{if } v_i - v_m < 0.15MPa \\ \text{"R6 @ 200mm crs"} & \text{if } v_i < v_m \\ \frac{(v_i - v_m) \cdot B_b \cdot S_2}{f_{yt}} & \text{otherwise} \end{cases}$ $A_v = \text{"R6 @ 200mm crs"} mm^2$

Reinforcement Check (NZS 4230:2004 Sec. 3.4.3)

Ultimate masonry strain $\varepsilon_c := 0.003$, $\beta_1 := 0.85$

Steel modulus elasticity $E_s := 2 \times 10^5 MPa$

Steel strain, $\varepsilon_s := \frac{f_y}{E_s}$, $\varepsilon_s = 0.0015$

Steel ratio @ balanced conditions, $\rho_b := \frac{0.85 f_m \cdot \beta_1}{f_y} \cdot \left(\frac{\varepsilon_c}{\varepsilon_s + \varepsilon_c}\right)$ $\rho_b = 0.0193$

Longitudinal steel in beam

Total steel area, $A_{ts} := (n_t \cdot A_{ts} + n_b \cdot A_{bs})$ $A_{ts} = 452mm^2$

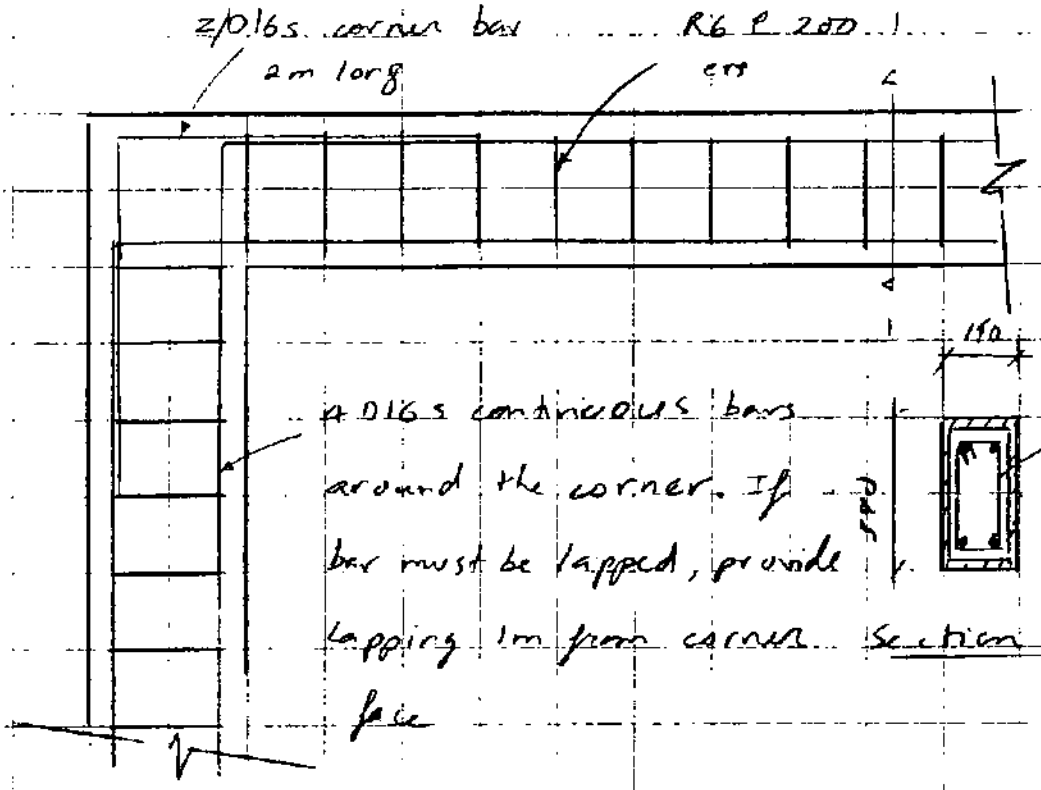
Maximum diameter $CHK := \begin{cases} \text{"OK"} & \text{if } d_{bs} < \min\left(\frac{h_c}{4}, \frac{t_c}{4}, \frac{D_b}{8}, \frac{B_b}{8}\right) \\ \text{"NG"} & \text{otherwise} \end{cases}$ CHK = "OK"

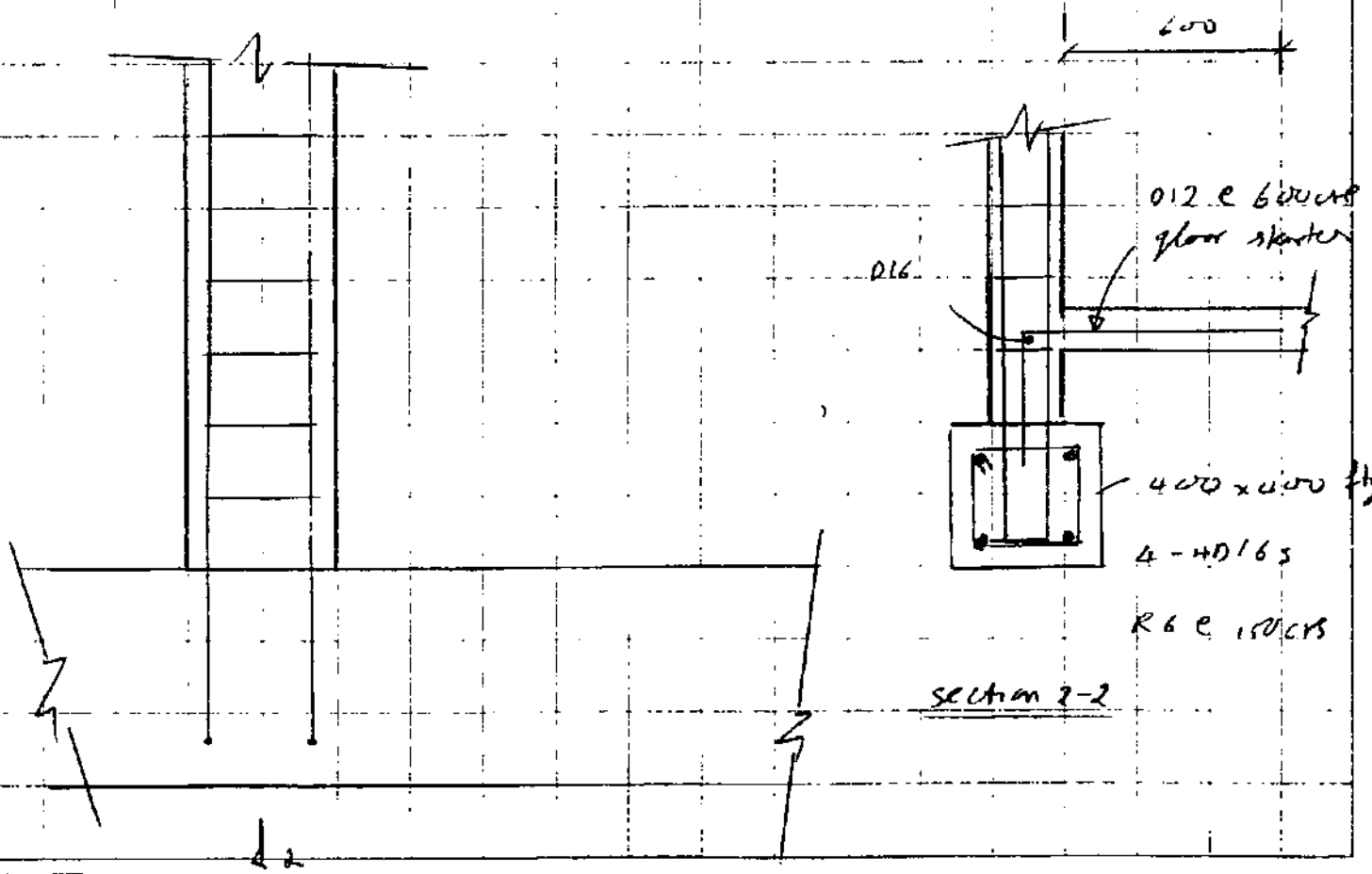
Maximum steel area $CHK := \begin{cases} \text{"OK"} & \text{if } A_{ts} < \frac{6.5MPa \cdot h_c \cdot t_c}{f_y} \\ \text{"NG"} & \text{otherwise} \end{cases}$ CHK = "OK"

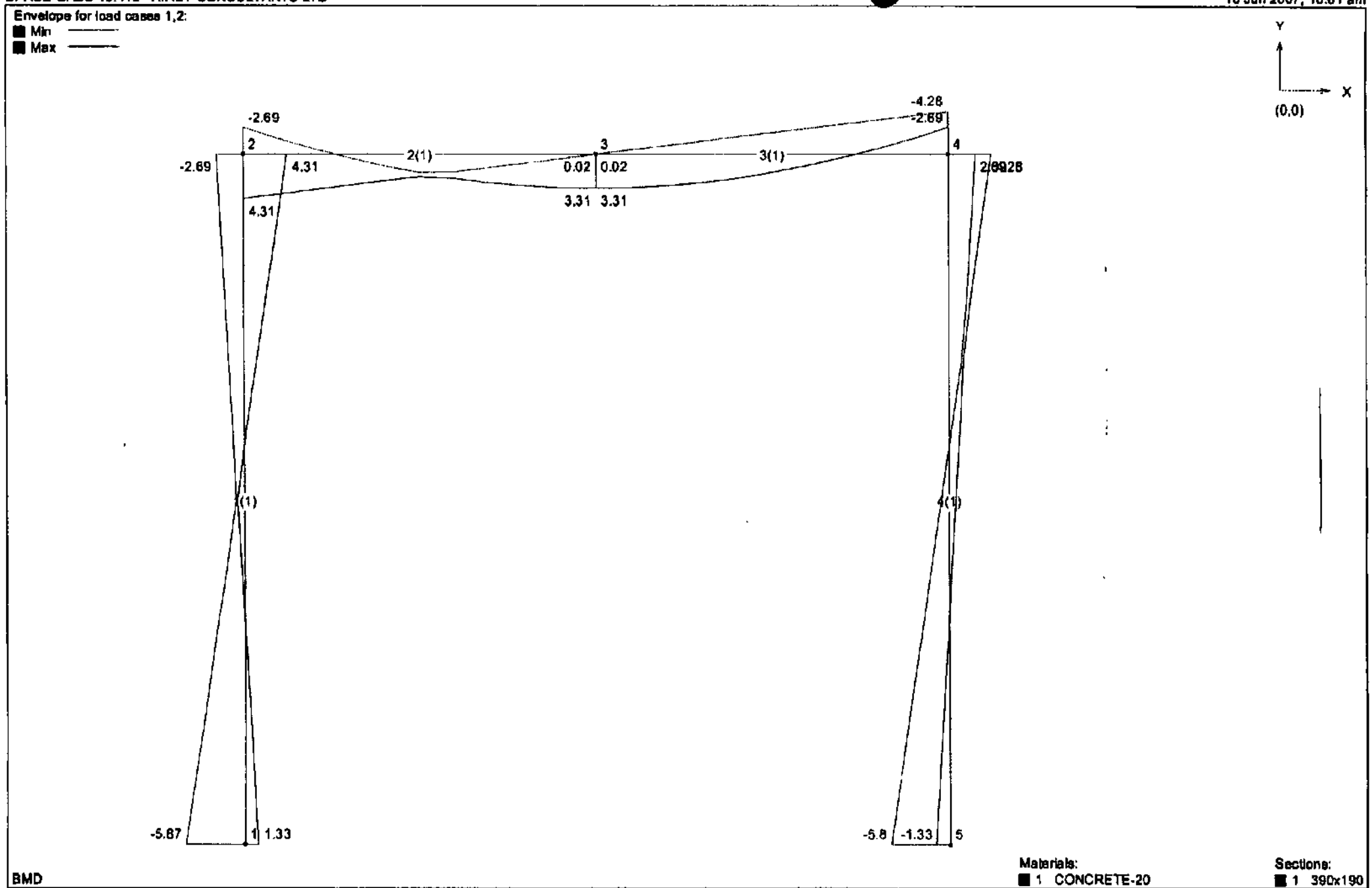
Minimum steel $CHK := \begin{cases} \text{"OK"} & \text{if } \rho_w > \max\left(0.07\%, \frac{0.7MPa}{f_y}\right) \\ \text{"NG"} & \text{otherwise} \end{cases}$ CHK = "OK"

Maximum steel $CHK := \begin{cases} \text{"OK"} & \text{if } \rho_w < 0.75 \rho_b \\ \text{"NG"} & \text{otherwise} \end{cases}$ CHK = "OK"

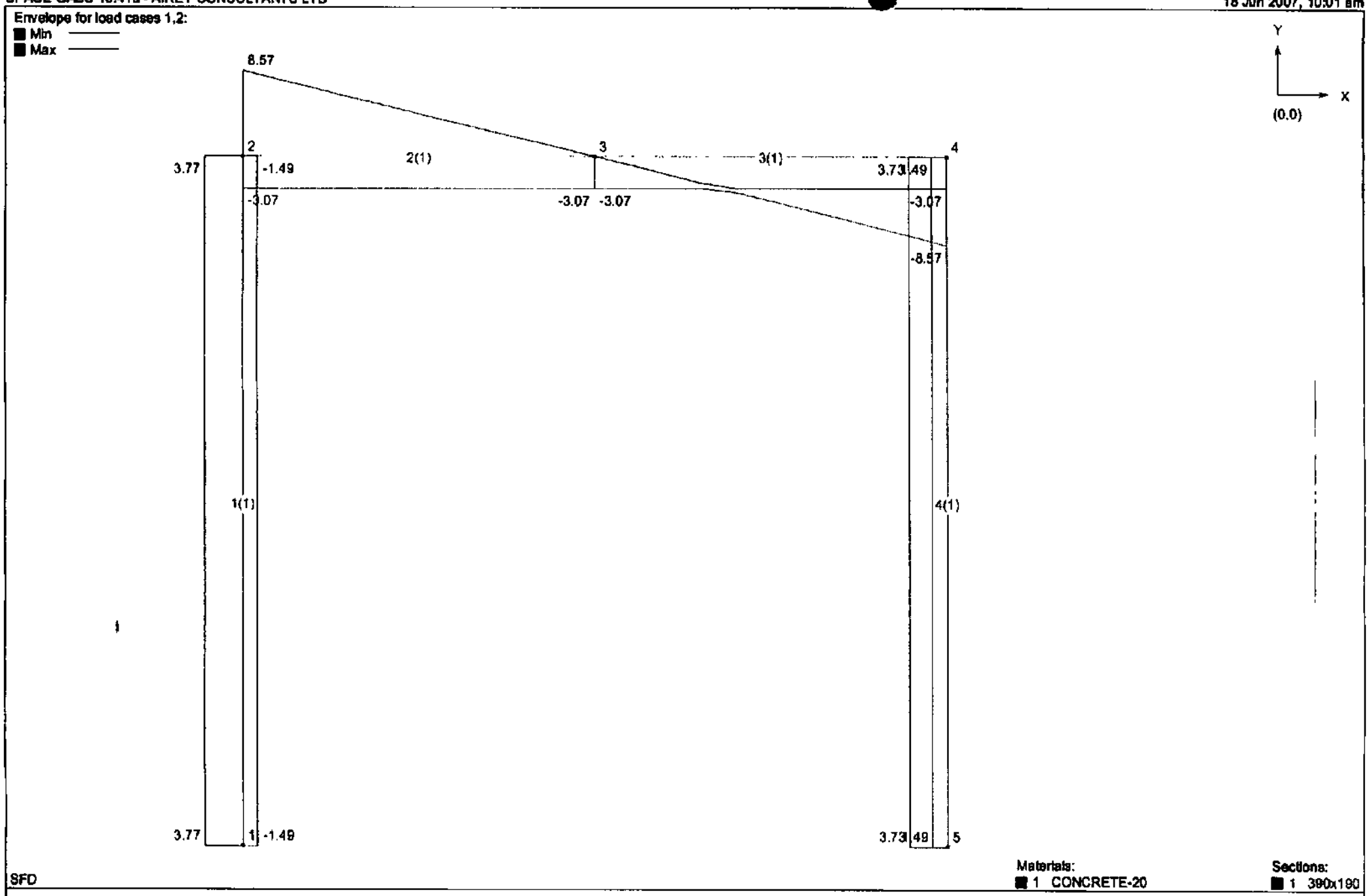
AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers Pukekohe Takapuna Howick Orewa	CLIENT:	SHEET No.: 33
	JOB:	JOB No.:
	CALCS. BY: PHONE:	DATE:







Job: G:\000 CURRENT PROJECTS\9861 WORKING CONCEPTS\...\Masonry portal design
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
Scales - Frame: 1:20, Load: None, Disp: None, Moment: 0.5, Shear: None, Axial: None, Torsion: None



Job: G:\000 CURRENT PROJECTS\9881 WORKING CONCEPTS\...\Masonry portal design
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
Scales - Frame: 1:20, Load: None, Disp: None, Moment: None, Shear: 0.5, Axial: None, Torsion: None

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ANALYSIS STATUS REPORT

Job name ..... Masonry portal design
Location ..... G:\000 CURRENT PROJECTS\9461 MODERNS CONCEPTS\Z1_46 Carlos ...

Length units	m
Section property units	mm
Material strength units	MPa
Mass density units	T/m^3
Temperature units	Celsius
Force units	kN
Moment units	kNm
Mass units	T
Acceleration units	g's
Translation units	mm
Stress units	MPa

Nodes	5	(2500)
Members	4	(5000)
Restrained nodes	3	(2500)
Nodes with spring restraints	0	(2500)
Section properties	2	(100)
Material properties	1	(25)
Constrained nodes	0	(2500)
Member offsets	0	(5000)

Node loads	1	(10000)
Prescribed node displacements	0	(10000)
Member concentrated loads	0	(10000)
Member distributed forces	2	(10000)
Member distributed torsions	0	(10000)
Thermal/Prestress loads	0	(10000)
Self weight load cases	0	(200)
Combination load cases	0	(200)
Load cases with titles	2	(200)
Lumped masses	0	(10000)
Spectral load cases	0	(200)

Static analysis	Y
Dynamic analysis	N
Response analysis	N
Buckling analysis	N
Ill-conditioned	N
Non-linear convergence	Y
Frontwidth	6
Total degrees of freedom	9
Static load cases	2 (200)
Dynamic load cases	0 (200)

NODE COORDINATES (m)

Node	X Coord	Y Coord	Z Coord
1	0.000	0.000	0.000
2	0.000	2.700	0.000
3	1.400	2.700	0.000
4	1.800	2.700	0.000
5	1.800	0.000	0.000

MEMBER DATA (deg, kNm/rad, m)
(F=Fixed, R=Released) (*=Cable length)

Memb	Dir Angle	Dir Node	Dir Axis	Memb Type	Node A	Node B	Sec	Mat	Node A Fixity	Node B Fixity	Length
1	0.00			Norm	1	2	1	1	FFFFFF	FFFFFF	2.700
2	0.00			Norm	2	3	1	1	FFFFFF	FFFFFF	1.400
3	0.00			Norm	3	4	1	1	FFFFFF	FFFFFF	1.400
4	0.00			Norm	5	4	1	1	FFFFFF	FFFFFF	2.700

NODE RESTRAINTS (kN/m, kNm/rad)
(F=Fixed, R=Released, D=Deleted, S=Spring, *=General)

Node	Rest Code	X Axial Stiffness	Y Axial Stiffness	Z Axial Stiffness	X Rotation Stiffness	Y Rotation Stiffness	Z Rotation Stiffness
1	FFFDDF						
2	RRRDDR*						
5	FFFDDF						

SECTION PROPERTIES (mm, mm^2, mm^4, deg)

Sect	Section Name	Mark	Angle Type	Flipped	Source
1	390x190	R1	Not applicable	No	Standard shape
2	200 PFC	C1	Not applicable	No	Aust300

Sect	Area of Section	Torsion Constant	Y-Axis Mom of In	Z-Axis Mom of In	Y-Axis Shr Area	Z-Axis Shr Area	Princ Angle
1	7.4100E+04	6.1928E+08	2.2393E+08	9.3922E+08	INFINITE	INFINITE	0.00
2	2.9200E+03	1.0100E+05	1.6500E+06	1.9100E+07	INFINITE	INFINITE	0.00

Sect	Section Shape	D	B/Bt	Bb/Tf	Tw	Tf
1	Rectangle	390.000	190.000			

MATERIAL PROPERTIES (MPa, T/m^3, strain/degC)

Mat	Material Name	Young's Modulus	Poisson's Ratio	Mass Density	Coeff of Expansion	Concrete Strength
1	CONCRETE-20	2.2610E+04	0.15	2.4000E+00	1.1000E-05	20.00

NODE LOADS (kN, kNm)

Load Case	Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	2	7.500	0.000	0.000	0.000	0.000	0.000

MEMBER DISTRIBUTED FORCES (m, kN/m)

Load Case	Memb	Sub Load	Axes Sys	Start Position	Finish Position	X Start/ Finish	Y Start/ Finish	Z Start/ Finish
2	2	1	GZ	0.000%	100.000%	0.000	-6.120	0.000
						0.000	-6.120	0.000
	3	1	GZ	0.000%	100.000%	0.000	-6.120	0.000
						0.000	-6.120	0.000

LOAD CASE TITLES

Load Case	Title
1	Eu or Wu
2	1.2G+1.5Q

NODE DISPLACEMENTS (mm, rad)

Load case 1 (Linear): Eu or Wu

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.425	0.005	0.000	0.000	0.000	0.000
3	0.422	-0.001	0.000	0.000	0.000	0.000
4	0.419	-0.005	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000

Load case 2 (Linear): 1.2G+1.5Q

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.001	-0.014	0.000	0.000	0.000	0.000
3	0.000	-0.170	0.000	0.000	0.000	0.000
4	-0.001	-0.014	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000

MEMBER FORCES AND MOMENTS (kN, kNm)

Load case 1 (Linear): Eu or Wu

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	-3.066	3.770	0.000	0.000	0.000	-5.868
	2	-3.066	3.770	0.000	0.000	0.000	4.310
2	2	3.730	-3.066	0.000	0.000	0.000	4.310
	3	3.730	-3.066	0.000	0.000	0.000	0.018
3	3	3.730	-3.066	0.000	0.000	0.000	0.018
	4	3.730	-3.066	0.000	0.000	0.000	-4.275
4	5	3.066	3.730	0.000	0.000	0.000	-5.796
	4	3.066	3.730	0.000	0.000	0.000	4.275

Load case 2 (Linear): 1.2G+1.5Q

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	8.568	-1.491	0.000	0.000	0.000	1.334
	2	8.568	-1.491	0.000	0.000	0.000	-2.691
2	2	1.491	8.568	0.000	0.000	0.000	-2.691
	3	1.491	0.000	0.000	0.000	0.000	3.307
3	3	1.491	0.000	0.000	0.000	0.000	3.307
	4	1.491	-8.568	0.000	0.000	0.000	-2.691
4	5	8.568	1.491	0.000	0.000	0.000	-3.334
	4	8.568	1.491	0.000	0.000	0.000	2.691

NODE REACTIONS (kN, kNm)

Load case 1 (Linear): Eu or Wu

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	-3.770	-3.066	0.000	0.000	0.000	5.868
5	-3.730	3.066	0.000	0.000	0.000	5.796
Load	7.500	0.000	0.000			
Reac	-7.500	0.000	0.000			

Load case 2 (Linear): 1.2G+1.5Q

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	1.491	8.568	0.000	0.000	0.000	-1.334
5	-1.491	8.568	0.000	0.000	0.000	1.334
Load	0.000	-17.136	0.000			
Reac	0.000	17.136	0.000			

BILL OF MATERIALS (m, T)

Item	Sect	Qty	Section Name	Unit Length	Total Length	Unit Mass	Total Mass
1	1	2	390x190	2.700	5.400	0.480	0.964
2	1	2	390x190	1.400	2.800	0.249	0.498

Total mass = 1.458
Centre of gravity = 1.400,1.811,0.000

$kPa \equiv 10^3 \cdot Pa$ $kN \equiv 10^3 \cdot N$ $MPa \equiv 10^6 \cdot Pa$ $mm \equiv 10^{-3} \cdot m$ $° := deg$

Load

	Dead	Live
Light roof, $\alpha := 5°$ pitch	$G_{rf} := \frac{0.4}{\cos(\alpha)} \cdot kPa$	$Q_{rf} := 0.25 \cdot kPa$
Pergola	$G_{pg} := 0.2 \cdot kPa$	
Maxim internal wall	$G_{tc} := 0.2 \cdot kPa$	
Maxim external wall	$G_{tw} := 0.3 \cdot kPa$	
Maxim IT wall	$G_{tw} := 0.6 \cdot kPa$	
200 Series Masonry	$G_{mw} := 4.0 kPa$	
Timber Floor	$G_{tf} := 0.5 \cdot kPa$	$Q_{fl} := 1.5 \cdot kPa$
Timber Deck	$G_{td} := 0.4 \cdot kPa$	$Q_{dc} := 2.0 \cdot kPa$

Section Properties

	Size	EI Values (N^*mm^2)	ΦM_n (kN^*m)	k_2
Member :=	0	1	2	3
0	"100x50 Timber"	$2.2 \cdot 10^{10}$	0.7	2
1	"150x50 Timber"	$8.2 \cdot 10^{10}$	1.6	2
2	"200x50 Timber"	$2.1 \cdot 10^{11}$	3	2
3	"250x50 Timber"	$4.1 \cdot 10^{11}$	4.8	2
4	"300x50 Timber"	$7.3 \cdot 10^{11}$	7.1	2
5	"2/100x50 Timber"	$4.4 \cdot 10^{10}$	1.6	2
6	"2/150x50 Timber"	$1.6 \cdot 10^{11}$	3.8	2
7	"2/200x50 Timber"	$4.1 \cdot 10^{11}$	6.9	2
8	"2/250x50 Timber"	$8.3 \cdot 10^{11}$	11	2
9	"2/300x50 Timber"	$1.5 \cdot 10^{12}$	16.1	2
10	"3/100x50 Timber"	$6.6 \cdot 10^{10}$	2.4	2
11	"3/150x50 Timber"	$2.5 \cdot 10^{11}$	5.9	2
12	"3/200x50 Timber"	$6.2 \cdot 10^{11}$	10.9	2
13	"3/250x50 Timber"	$1.2 \cdot 10^{12}$	17.4	2
14	"3/300x50 Timber"	$2.2 \cdot 10^{12}$	25.4	2
15	"FB30H Flitch"	$4.426 \cdot 10^{12}$	34.6	1.2

Floor Beam:

Load case

		G	Q	ULS(*)	SLS
Roof	$W_{roof} :=$	G_{rf}	Q_{rf}	$1.2G_{rf} + 1.5Q_{rf}$	G_{rf}
Floor	$W_{floor} :=$	G_{ff}	Q_{fl}	$1.2G_{ff} + 1.5Q_{fl}$	$G_{ff} + 0.4Q_{fl}$
Self weight & Wall	$W(G) :=$	G	0	$1.2G$	G

Pt. Load

$$P := \frac{1.2m}{2} \cdot \frac{4m}{2} \cdot W_{floor} \qquad P = (0.6\ \ 1.8\ \ 3.4\ \ 1.3)\,kN$$

UDL

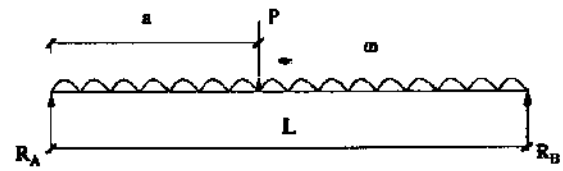
$$\omega := W\left(1kN \cdot m^{-1}\right) + W_{floor} \times \frac{3.5m}{2}$$

	G	Q	*	SLS
$\omega =$	$(1.9$	2.6	6.2	$2.9)\,kN \cdot m^{-1}$

$L := 1.6 \cdot m$

$a := 0.8 \cdot m$

$b := L - a$



Design data

Member size $\boxed{Size := \text{"2/300x50 Timber"}}$

Duration factor $k_1 := 0.8$

Member stiffness $EI := 0.84 \cdot lookup\left(Size, Member^{\langle 0 \rangle}, Member^{\langle 1 \rangle}\right)_{0,0} \cdot N \cdot mm^2 \qquad EI = 1.3 \times 10^{12} N \cdot mm^2$

Nominal BM $\phi M_n := k_1 \cdot lookup\left(Size, Member^{\langle 0 \rangle}, Member^{\langle 2 \rangle}\right)_{0,0} \cdot kN \cdot m \qquad \phi M_n = 12.9 kN \cdot m$

Creep factor $k := lookup\left(Size, Member^{\langle 0 \rangle}, Member^{\langle 3 \rangle}\right)_{0,0} \qquad k_2 := (k\ \ 1\ \ 1\ \ k)$

Reactions

$$R_A := \omega \cdot \frac{L}{2} + P \cdot \frac{b}{L} \qquad R_a := R_A \qquad R_a = (1.8\ \ 3.0\ \ 6.7\ \ 3.0)\,kN$$

$$R_B := \omega \cdot \frac{L}{2} + P \cdot \frac{a}{L} \qquad R_b := R_B \qquad R_b = (1.8\ \ 3.0\ \ 6.7\ \ 3.0)\,kN$$

BM

$$M_a := R_A \cdot a - \frac{\omega \cdot a^2}{2} \qquad M_b := R_B \cdot \frac{L}{2} - \frac{\omega \cdot L^2}{8}$$

$$M' := \max(M_a, M_b) \qquad M' = 3.3\,kN \cdot m$$

Deflections

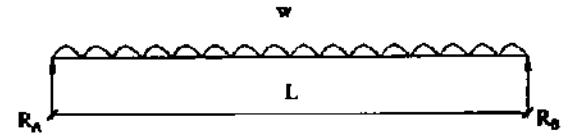
$$\psi_P := 3 \cdot \frac{a}{L} - 4 \cdot \left(\frac{a}{L}\right)^3 \qquad \Delta := \frac{P \cdot L^3}{48 \cdot EI} \cdot \psi_P + \frac{5}{384} \cdot \frac{\omega \cdot L^4}{EI}$$

	G	Q	*	SLS
$\overrightarrow{(k_2 \cdot \Delta)} =$	$(0.3$	0.3	0.7	$0.6)\,mm$

$$\frac{L}{\left(\overrightarrow{(k_2 \cdot \Delta)}\right)_{0,3}} = 3 \times 10^3$$

$$CHK := \begin{cases} \text{"OK"} & \text{if } \phi M_n > M' \wedge \max\left[\left(\overrightarrow{(k_2 \cdot \Delta)}\right)_{0,0}, \left(\overrightarrow{(k_2 \cdot \Delta)}\right)_{0,1}\right] < 9mm \wedge \dfrac{L}{\left(\overrightarrow{(k_2 \cdot \Delta)}\right)_{0,3}} > 333 \\ \text{"NG"} & \text{otherwise} \end{cases} \qquad CHK = \text{"OK"}$$

Stair Beam:



Load Position

Beam Span $L := 1.2 \cdot m$

Load case

		G	Q	ULS(*)	SLS
Roof	$W_{roof} :=$	G_{rf}	Q_{rf}	$1.2G_{rf}$	G_{rf}
Floor	$W_{floor} :=$	G_{tf}	Q_{fl}	$1.2G_{tf} + 1.5Q_{fl}$	$G_{tf} + 0.4Q_{fl}$
Self weight & Wall	$W(G) :=$	G	0	$1.2G$	G

Bearing data

UDL $\omega := W_{floor} \times 3.6m \div 2$ $\qquad \omega = (0.9\ \ 2.7\ \ 5.1\ \ 2.0)\, kN \cdot m^{-1}$

Design data

Member size $\boxed{Size := \text{"2/150x50 Timber"}}$

Duration factor $k_1 := 0.8$

Member stiffness $EI := lookup(Size, Member^{\langle 0 \rangle}, Member^{\langle 1 \rangle})_{0,0} \cdot N \cdot mm^2$ $\qquad EI = 1.6 \times 10^{11}\, N \cdot mm^2$

Nominal BM $\phi M_n := k_1 \cdot lookup(Size, Member^{\langle 0 \rangle}, Member^{\langle 2 \rangle})_{0,0} \cdot kN \cdot m$ $\qquad \phi M_n = 3.0\, kN \cdot m$

Creep factor $k := lookup(Size, Member^{\langle 0 \rangle}, Member^{\langle 3 \rangle})_{0,0}$ $\qquad k_2 := (k\ \ 1\ \ 1\ \ k)$

Design Loads

Reactions $R := \omega \cdot \frac{L}{2}$ $\qquad R := R$ $\qquad R = (0.5\ \ 1.6\ \ 3.1\ \ 1.2)\, kN$

Determine position for maximum moment, ie. zero shear from left support (A)

$f(u) := \max(\omega) \cdot u - \max(R)$ $\qquad u := \frac{L}{2}$

$x := root(f(u), u)$ $\qquad x = 0.6m$

Design BM $M' := \max(R) \cdot x - \frac{\max(\omega) \cdot x^2}{2}$ $\qquad M' = 0.9\, kN \cdot m$

Deflections $\Delta := \frac{5}{384} \cdot \frac{\omega \cdot L^4}{EI}$

	G	Q	*	SLS
$\overrightarrow{(k_2 \cdot \Delta)} =$	0.3	0.5	0.9	0.7 mm

$$\frac{L}{\left(\overrightarrow{(k_2 \cdot \Delta)}\right)_{0,3}} = 2 \times 10^3$$

$$CHK := \begin{cases} \text{"OK"} & \text{if } 1.05\phi M_n > M' \wedge \max\left[\left(\overrightarrow{(k_2 \cdot \Delta)}\right)_{0,0}, \left(\overrightarrow{(k_2 \cdot \Delta)}\right)_{0,1}\right] < 9mm \wedge \frac{L}{\left(\overrightarrow{(k_2 \cdot \Delta)}\right)_{0,3}} > 333 \\ \text{"NG"} & \text{otherwise} \end{cases}$$

$CHK = \text{"OK"}$

Cantilever Boundary Joist:

Pt. Load

$$P := \left[\left(W_{roof} + W_{floor}\right)\cdot\frac{4.5m}{2} + 2W\left(G_{tw}\right)\cdot 2.4m\right]\cdot 0.4m + 2 + 4kN \qquad P = (5.0\ \ 4.8\ \ 6.2\ \ 5.3)\,kN$$

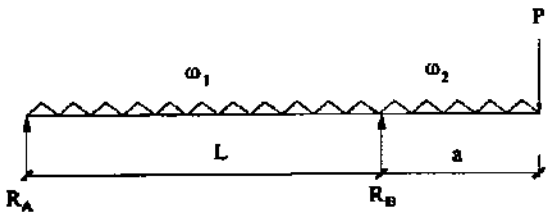
UDL

UDL 1 $\quad \omega_1 := W\left(0.1kN\cdot m^{-1}\right) + W_{floor} \times \frac{0.4m}{2} \qquad \omega_1 = (0.2\ \ 0.3\ \ 0.7\ \ 0.3)\,kN\cdot m^{-1}$

UDL 2 $\quad \omega_2 := W\left(0.1kN\cdot m^{-1}\right) + W_{floor} \times \frac{0.4m}{2} \qquad \omega_2 = (0.2\ \ 0.3\ \ 0.7\ \ 0.3)\,kN\cdot m^{-1}$

Back span $L := 3.5\cdot m$

Cant. span $a := 1.3\cdot m$



Design data

Member size $\quad$ Size := "FB30H Flitch"

Duration factor $\quad k_1 := 1$

Member stiffness $\quad EI := lookup\left(Size, Member^{\langle 0\rangle}, Member^{\langle 1\rangle}\right)_{0,0}\cdot N\cdot mm^2 \qquad EI = 4.4\times 10^{12}\,N\cdot mm^2$

Nominal BM $\quad \phi M_n := k_1\cdot lookup\left(Size, Member^{\langle 0\rangle}, Member^{\langle 2\rangle}\right)_{0,0}\cdot kN\cdot m \qquad \phi M_n = 34.6\,kN\cdot m$

Creep factor $\quad k := lookup\left(Size, Member^{\langle 0\rangle}, Member^{\langle 3\rangle}\right)_{0,0} \qquad k_2 := (k\ \ 1\ \ 1\ \ k)$

Reactions

$$R_A := \frac{\omega_1\times L}{2} - \left(\frac{\omega_2\times a^2}{2\cdot L} + P\times\frac{a}{L}\right) \qquad R_a := R_A \qquad R_a = (-1.5\ \ -1.3\ \ -1.3\ \ -1.5)\,kN$$

$$R_B := \frac{\omega_1\cdot L}{2} + \frac{\omega_2\cdot a}{2\cdot L}\cdot(2\cdot L + a) + P\cdot\frac{L+a}{L} \qquad R_b := R_B \qquad R_b = (7.5\ \ 7.6\ \ 10.8\ \ 8.3)\,kN$$

Cantilever span $\qquad$ **G Q * SLS**

Deflection $\quad \Delta_c := \frac{P\cdot a^2\cdot(L+a)}{3\cdot EI} + \frac{\omega_2\cdot a^4\cdot\left(3 + 4\cdot\frac{L}{a}\right) - \omega_1\cdot L^3\cdot a}{24\cdot EI} \qquad \overrightarrow{\left(k_2\cdot\Delta_c\right)} = (3.6\ \ 2.9\ \ 3.7\ \ 3.8)\,mm$

Design BM $\quad M_c := \max\left(P\cdot a + \frac{\omega_2\cdot a^2}{2}\right) \qquad M_c = 8.6\,kN\cdot m$

Back span $\qquad$ **G Q * SLS**

Deflection $\quad \Delta := \frac{5}{384}\cdot\frac{\omega_1\cdot L^4}{EI} - 0.06415\cdot\frac{P\cdot a\cdot L^2}{EI} - 0.03208\cdot\frac{\omega_2\cdot a^2\cdot L^2}{EI} \qquad \overrightarrow{\left(k_2\cdot\Delta\right)} = (-1.3\ \ -1.0\ \ -1.2\ \ -1.3)\,mm$

Design BM $\quad M_b := \max\left[R_A\cdot\frac{L}{2} - \frac{\omega_1\cdot\left(\frac{L}{2}\right)^2}{2}\right] \qquad M_b = -2.8\,kN\cdot m$

$$CHK := \begin{cases} \text{"OK"} & \text{if } \phi M_n > \max(M_c, M_b) \wedge \max\left[\left|\left(\overrightarrow{\left(k_2\cdot\Delta_c\right)}\right)_{0,0}\right|, \left|\left(\overrightarrow{\left(k_2\cdot\Delta_c\right)}\right)_{0,1}\right|\right] < 9mm \wedge \frac{2a}{\left|\left(\overrightarrow{\left(k_2\cdot\Delta_c\right)}\right)_{0,3}\right|} \ge 333 \\ \text{"NG"} & \text{otherwise} \end{cases}$$

CHK = "OK"

Cantilever Joist:

Pt. Load

$$P := \left[\left(W_{roof} + W_{floor}\right)\cdot\frac{4.5m}{2} + 2W\left(G_{tw}\right)\cdot 2.4m\right]\cdot 0.4m \qquad P = (2.0\ \ 1.6\ \ 4.4\ \ 2.5)\,kN$$

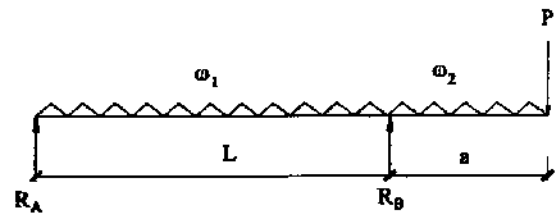
UDL

UDL 1 $\quad \omega_1 := W\left(0.1kN\cdot m^{-1}\right) + W_{floor}\times\frac{0.4m}{2} \qquad \omega_1 = (0.2\ \ 0.3\ \ 0.7\ \ 0.3)\,kN\cdot m^{-1}$

UDL 2 $\quad \omega_2 := W\left(0.1kN\cdot m^{-1}\right) + W_{floor}\times\frac{0.4m}{2} \qquad \omega_2 = (0.2\ \ 0.3\ \ 0.7\ \ 0.3)\,kN\cdot m^{-1}$

Back span $L := 3.5\cdot m$

Cant. span $a := 1.3\cdot m$



Design data

Member size $\quad$ Size := "2/300x50 Timber"

Duration factor $\quad k_1 := 0.8$

Member stiffness $\quad EI := lookup\left(Size, Member^{\langle 0\rangle}, Member^{\langle 1\rangle}\right)_{0,0}\cdot N\cdot mm^2 \qquad EI = 1.5\times 10^{12}\,N\cdot mm^2$

Nominal BM $\quad \phi M_n := k_1\cdot lookup\left(Size, Member^{\langle 0\rangle}, Member^{\langle 2\rangle}\right)_{0,0}\cdot kN\cdot m \qquad \phi M_n = 12.9\,kN\cdot m$

Creep factor $\quad k := lookup\left(Size, Member^{\langle 0\rangle}, Member^{\langle 3\rangle}\right)_{0,0} \qquad k_2 := (k\ \ 1\ \ 1\ \ k)$

Reactions

$$R_A := \frac{\omega_1\times L}{2} - \left(\frac{\omega_2\times a^2}{2\cdot L} + P\times\frac{a}{L}\right) \qquad R_a := R_A \qquad R_a = (-0.4\ \ -0.1\ \ -0.6\ \ -0.4)\,kN$$

$$R_B := \frac{\omega_1\cdot L}{2} + \frac{\omega_2\cdot a}{2\cdot L}\cdot(2\cdot L + a) + P\cdot\frac{L+a}{L} \qquad R_b := R_B \qquad R_b = (3.4\ \ 3.1\ \ 8.3\ \ 4.5)\,kN$$

Cantilever span $\qquad$ **G Q * SLS**

Deflection $\quad \Delta_c := \frac{P\cdot a^2\cdot(L+a)}{3\cdot EI} + \frac{\omega_2\cdot a^4\cdot\left(3 + 4\cdot\frac{L}{a}\right) - \omega_1\cdot L^3\cdot a}{24\cdot EI} \qquad \overrightarrow{\left(k_2\cdot\Delta_c\right)} = (6.9\ \ 2.7\ \ 7.6\ \ 8.7)\,mm$

Design BM $\quad M_c := \max\left(P\cdot a + \frac{\omega_2\cdot a^2}{2}\right) \qquad M_c = 6.3\,kN\cdot m$

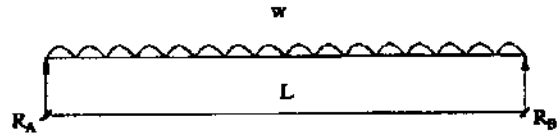
Back span $\qquad$ **G Q * SLS**

Deflection $\quad \Delta := \frac{5}{384}\cdot\frac{\omega_1\cdot L^4}{EI} - 0.06415\cdot\frac{P\cdot a\cdot L^2}{EI} - 0.03208\cdot\frac{\omega_2\cdot a^2\cdot L^2}{EI} \qquad \overrightarrow{\left(k_2\cdot\Delta\right)} = (-2.3\ \ -0.8\ \ -2.4\ \ -2.9)\,mm$

Design BM $\quad M_b := \max\left[R_A\cdot\frac{L}{2} - \frac{\omega_1\cdot\left(\frac{L}{2}\right)^2}{2}\right] \qquad M_b = -0.7\,kN\cdot m$

Deck Edge Beams:

Load Position



Beam Span $L := 2.5\,m$

Load case

		G	Q	ULS(*)	SLS
Roof	$W_{roof} :=$	G_{rf}	Q_{rf}	$1.2G_{rf}$	G_{rf}
Deck	$W_{deck} :=$	G_{td}	Q_{de}	$1.2G_{td} + 1.5Q_{de}$	$G_{td} + 0.4Q_{de}$
Self weight & Wall	$W(G) :=$	G	0	$1.2G$	G

Bearing data

UDL $\omega := W\left(0.5kN\cdot m^{-1}\right) + W_{deck} \times \frac{1m}{2}$ $\qquad$ **G Q * SLS** $\qquad \omega = (0.7\ \ 1.0\ \ 2.3\ \ 1.1)\,kN\cdot m^{-1}$

Design data

Member size $\boxed{Size := \text{"2/250x50 Timber"}}$

Duration factor $k_1 := 0.8$

Member stiffness $EI := 0.84\cdot lookup\left(Size, Member^{\langle 0\rangle}, Member^{\langle 1\rangle}\right)_{0,0}\cdot N\cdot mm^2$ $\qquad EI = 7.0\times 10^{11}\,N\cdot mm^2$

Nominal BM $\phi M_n := k_1\cdot lookup\left(Size, Member^{\langle 0\rangle}, Member^{\langle 2\rangle}\right)_{0,0}\cdot kN\cdot m$ $\qquad \phi M_n = 8.8\,kN\cdot m$

Creep factor $k := lookup\left(Size, Member^{\langle 0\rangle}, Member^{\langle 3\rangle}\right)_{0,0}$ $\qquad k_2 := (k\ \ 1\ \ 1\ \ k)$

Design Loads

Reactions $R := \omega\cdot\frac{L}{2}$ $\qquad R := R$ $\qquad R = (0.9\ \ 1.3\ \ 2.9\ \ 1.4)\,kN$

Determine position for maximum moment, ie. zero shear from left support (A)

$f(u) := \max(\omega)\cdot u - \max(R)$ $\qquad u := \frac{L}{2}$

$x := root(f(u), u)$ $\qquad x = 1.3\,m$

Design BM $M' := \max(R)\cdot x - \frac{\max(\omega)\cdot x^2}{2}$ $\qquad M' = 1.8\,kN\cdot m$

Deflections $\Delta := \frac{5}{384}\cdot\frac{\omega\cdot L^4}{EI}$

	G	Q	*	SLS
$\overrightarrow{(k_2\cdot\Delta)} =$	1.0	0.7	1.7	1.6 mm

$$\frac{L}{\left(\overrightarrow{(k_2\cdot\Delta)}\right)_{0,3}} = 2\times 10^3 > 333$$

$$CHK := \begin{cases} \text{"OK"} & \text{if } 1.05\phi M_n > M' \wedge \max\left[\left(\overrightarrow{(k_2\cdot\Delta)}\right)_{0,0}, \left(\overrightarrow{(k_2\cdot\Delta)}\right)_{0,1}\right] < 9mm \wedge \frac{L}{\left(\overrightarrow{(k_2\cdot\Delta)}\right)_{0,3}} > 333 \\ \text{"NG"} & \text{otherwise} \end{cases}$$

$CHK = \text{"OK"}$

Cantilever Deck Beam:

Pt. Load

$P := W(G_{tw}) \cdot 0m^2$ $\qquad P = (0.0\ \ 0.0\ \ 0.0\ \ 0.0)\,kN$

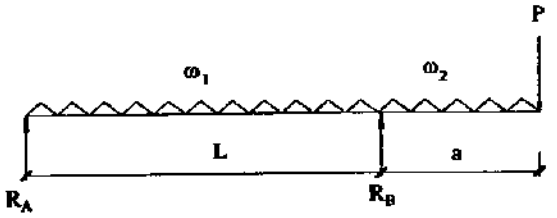
UDL

UDL 1 $\quad \omega_1 := W(0.1kN \cdot m^{-1}) + W_{deck} \times \frac{3.2m}{2}$ $\qquad \omega_1 = (0.7\ \ 3.2\ \ 5.7\ \ 2.0)\,kN \cdot m^{-1}$

UDL 2 $\quad \omega_2 := W(0.1kN \cdot m^{-1}) + W_{deck} \times \frac{1.6m}{2}$ $\qquad \omega_2 = (0.4\ \ 1.6\ \ 2.9\ \ 1.1)\,kN \cdot m^{-1}$

Back span $L := 3.2 \cdot m$

Cant. span $a := 1.2 \cdot m$



Design data

Member size $\quad \boxed{Size := \text{"2/250x50 Timber"}}$

Duration factor $\quad k_1 := 0.8$

Member stiffness $\quad EI := 0.84 \cdot lookup(Size, Member^{\langle 0 \rangle}, Member^{\langle 1 \rangle})_{0,0} \cdot N \cdot mm^2$ $\qquad EI = 7.0 \times 10^{11} N \cdot mm^2$

Nominal BM $\quad \phi M_n := k_1 \cdot lookup(Size, Member^{\langle 0 \rangle}, Member^{\langle 2 \rangle})_{0,0} \cdot kN \cdot m$ $\qquad \phi M_n = 8.8\,kN \cdot m$

Creep factor $\quad k := lookup(Size, Member^{\langle 0 \rangle}, Member^{\langle 3 \rangle})_{0,0}$ $\qquad k_2 := (k\ \ 1\ \ 1\ \ k)$

Reactions

$$R_A := \frac{\omega_1 \times L}{2} - \left(\frac{\omega_2 \times a^2}{2 \cdot L} + P \times \frac{a}{L}\right) \qquad R_a := R_A \qquad R_a = (1.1\ \ 4.8\ \ 8.4\ \ 3.0)\,kN$$

$$R_B := \frac{\omega_1 \cdot L}{2} + \frac{\omega_2 \cdot a}{2 \cdot L} \cdot (2 \cdot L + a) + P \cdot \frac{L + a}{L} \qquad R_b := R_B \qquad R_b = (1.8\ \ 7.4\ \ 13.2\ \ 4.7)\,kN$$

Cantilever span

Deflection $$\Delta_c := \frac{P \cdot a^2 \cdot (L + a)}{3 \cdot EI} + \frac{\omega_2 \cdot a^4 \cdot \left(3 + 4 \cdot \frac{L}{a}\right) - \omega_1 \cdot L^3 \cdot a}{24 \cdot EI} \qquad \overrightarrow{(k_2 \cdot \Delta_c)} = (-2.1\ \ -4.8\ \ -8.4\ \ -5.9)\,mm$$

Design BM $$M_c := \max\left(P \cdot a + \frac{\omega_2 \cdot a^2}{2}\right) \qquad M_c = 2.1\,kN \cdot m$$

Back span $\qquad$ **G** $\quad$ **Q** $\quad$ ***** $\quad$ **SLS**

Deflection $$\Delta := \frac{5}{384} \cdot \frac{\omega_1 \cdot L^4}{EI} - 0.06415 \cdot \frac{P \cdot a \cdot L^2}{EI} - 0.03208 \cdot \frac{\omega_2 \cdot a^2 \cdot L^2}{EI} \qquad \overrightarrow{(k_2 \cdot \Delta)} = (2.3\ \ 5.2\ \ 9.2\ \ 6.5)\,mm$$

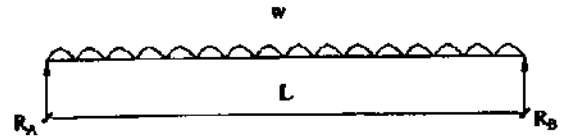
Design BM $$M_b := \max\left[R_A \cdot \frac{L}{2} - \frac{\omega_1 \cdot \left(\frac{L}{2}\right)^2}{2}\right] \qquad M_b = 6.2\,kN \cdot m$$

$$CHK := \begin{cases} \text{"OK"} & \text{if } \phi M_n > \max(M_c, M_b) \wedge \max\left[\left|\left(\overrightarrow{(k_2 \cdot \Delta_c)}\right)_{0,0}\right|, \left|\left(\overrightarrow{(k_2 \cdot \Delta_c)}\right)_{0,1}\right|\right] < 9mm \wedge \frac{2a}{\left|\left(\overrightarrow{(k_2 \cdot \Delta_c)}\right)_{0,3}\right|} \geq 333 \\ \text{"NG"} & \text{otherwise} \end{cases}$$

$CHK = \text{"OK"}$

Pergola Purlins:

Load Position



Beam Span $L := 4.1 \cdot m$

Bearing data

UDL $\omega := W\left(0.1 kN \cdot m^{-1}\right)$

	G	Q	*	SLS
$\omega =$	(0.1	0.0	0.1	0.1) $kN \cdot m^{-1}$

Design data

Member size $Size := \text{"150x50 Timber"}$

Duration factor $k_1 := 1$

Member stiffness $EI := lookup\left(Size, Member^{\langle 0 \rangle}, Member^{\langle 1 \rangle}\right)_{0,0} \cdot N \cdot mm^2$ $\quad EI = 8.2 \times 10^{10} N \cdot mm^2$

Nominal BM $\phi M_n := k_1 \cdot lookup\left(Size, Member^{\langle 0 \rangle}, Member^{\langle 2 \rangle}\right)_{0,0} \cdot kN \cdot m$ $\quad \phi M_n = 1.6 kN \cdot m$

Creep factor $k := lookup\left(Size, Member^{\langle 0 \rangle}, Member^{\langle 3 \rangle}\right)_{0,0}$ $\quad k_2 := (k \;\; 1 \;\; 1 \;\; k)$

Design Loads

Reactions $R := \omega \cdot \frac{L}{2}$ $\quad R := R$ $\quad R = (0.2 \;\; 0.0 \;\; 0.2 \;\; 0.2)\, kN$

Determine position for maximum moment, ie. zero shear from left support (A)

$f(u) := \max(\omega) \cdot u - \max(R)$ $\quad u := \frac{L}{2}$

$x := root(f(u), u)$ $\quad x = 2.1 m$

Design BM $M' := \max(R) \cdot x - \frac{\max(\omega) \cdot x^2}{2}$ $\quad M' = 0.3 kN \cdot m$

Deflections $\Delta := \frac{5}{384} \cdot \frac{\omega \cdot L^4}{EI}$

	G	Q	*	SLS
$\overrightarrow{\left(k_2 \cdot \Delta\right)} =$	(9.0	0.0	5.4	9.0) mm

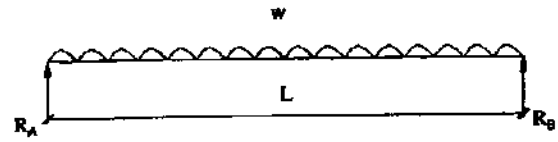
$\frac{L}{\left(\overrightarrow{\left(k_2 \cdot \Delta\right)}\right)_{0,3}} = 457 > 333$

$$CHK := \begin{cases} \text{"OK"} & \text{if } 1.05\phi M_n > M' \wedge \max\left[\left(\overrightarrow{\left(k_2 \cdot \Delta\right)}\right)_{0,0}, \left(\overrightarrow{\left(k_2 \cdot \Delta\right)}\right)_{0,1}\right] < 9mm \wedge \frac{L}{\left(\overrightarrow{\left(k_2 \cdot \Delta\right)}\right)_{0,3}} > 333 \\ \text{"NG"} & \text{otherwise} \end{cases}$$

$CHK = \text{"OK"}$

Pergola Beam:

Load Position



Beam Span $L := 4.4 \cdot m$

Bearing data

UDL $\omega := W\left(0.1kN \cdot m^{-1} + G_{pg} \cdot 4.1m \div 2\right)$

G	Q	*	SLS

$\omega = (0.5 \;\; 0.0 \;\; 0.6 \;\; 0.5)\, kN \cdot m^{-1}$

Design data

Member size $\boxed{Size := \text{"2/300x50 Timber"}}$

Duration factor $k_1 := 1$

Member stiffness $EI := 0.84 \cdot lookup\left(Size, Member^{\langle 0 \rangle}, Member^{\langle 1 \rangle}\right)_{0,0} \cdot N \cdot mm^2$ $\quad EI = 1.3 \times 10^{12} N \cdot mm^2$

Nominal BM $\phi M_n := k_1 \cdot lookup\left(Size, Member^{\langle 0 \rangle}, Member^{\langle 2 \rangle}\right)_{0,0} \cdot kN \cdot m$ $\quad \phi M_n = 16.1\, kN \cdot m$

Creep factor $k := lookup\left(Size, Member^{\langle 0 \rangle}, Member^{\langle 3 \rangle}\right)_{0,0}$ $\quad k_2 := (k \;\; 1 \;\; 1 \;\; k)$

Design Loads

Reactions $R := \omega \cdot \frac{L}{2}$ $\quad R := R$ $\quad R = (1.1 \;\; 0.0 \;\; 1.3 \;\; 1.1)\, kN$

Determine position for maximum moment, ie. zero shear from left support (A)

$f(u) := \max(\omega) \cdot u - \max(R)$ $\quad u := \frac{L}{2}$

$x := root(f(u), u)$ $\quad x = 2.2\, m$

Design BM $M^* := \max(R) \cdot x - \frac{\max(\omega) \cdot x^2}{2}$ $\quad M^* = 1.5\, kN \cdot m$

Deflections $\Delta := \frac{5}{384} \cdot \frac{\omega \cdot L^4}{EI}$

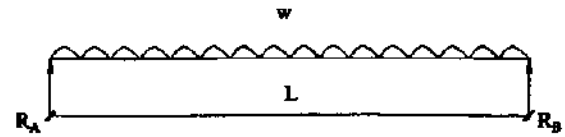
G	Q	*	SLS

$\overrightarrow{\left(k_2 \cdot \Delta\right)} = (4.0 \;\; 0.0 \;\; 2.4 \;\; 4.0)\, mm$ $\quad \frac{L}{\left(\overrightarrow{\left(k_2 \cdot \Delta\right)}\right)_{0,3}} = 1 \times 10^3 > 333$

$$CHK := \begin{cases} \text{"OK"} & \text{if } 1.05\phi M_n > M^* \wedge \max\left[\left(\overrightarrow{\left(k_2 \cdot \Delta\right)}\right)_{0,0}, \left(\overrightarrow{\left(k_2 \cdot \Delta\right)}\right)_{0,1}\right] < 9mm \wedge \frac{L}{\left(\overrightarrow{\left(k_2 \cdot \Delta\right)}\right)_{0,3}} > 333 \\ \text{"NG"} & \text{otherwise} \end{cases}$$

$CHK = \text{"OK"}$

Masonry Lintel:



Load Position

Beam Span $L := 1 \cdot m$

Load case

		G	Q	ULS(*)	SLS
Roof	$W_{roof} :=$	G_{rf}	Q_{rf}	$1.2G_{rf}$	G_{rf}
Deck	$W_{deck} :=$	G_{td}	Q_{de}	$1.2G_{td} + 1.5Q_{de}$	$G_{td} + 0.4Q_{de}$
Self weight & Wall	$W(G) :=$	G	0	$1.2G$	G

Bearing data

UDL $\omega := W\left(2kN \cdot m^{-1}\right) + W_{deck} \times \frac{3.6m}{2}$

	G	Q	*	SLS
$\omega =$	2.7	3.6	8.7	4.2 $kN \cdot m^{-1}$

Design Loads

Reactions $R := \omega \cdot \frac{L}{2}$ $\quad R := R \quad$ $R = (1.4\ \ 1.8\ \ 4.3\ \ 2.1)\,kN$

Determine position for maximum moment, ie. zero shear from left support (A)

$f(u) := \max(\omega) \cdot u - \max(R)$ $\quad u := \frac{L}{2}$

$x := \mathrm{root}(f(u), u)$ $\quad x = 0.5m$

Design BM $M^* := \max(R) \cdot x - \frac{\max(\omega) \cdot x^2}{2}$ $\quad M^* = 1.1kN \cdot m$

Beam

Depth $D_b := 390mm$

Width $B_b := 190mm$

Moment reduction factor $\phi_m := 0.85$

Compression strength, $f_m := 12MPa$ **Grade B masonry**

Longitudinal reinforcement (NZS 4230:2004)

Top reinforcement size $d_{ts} := 12mm$, **number of bar** $n_t := 1$

Bottom reinforcement size $d_{bs} := 12mm$ **number of bar** $n_b := 1$

Steel area $A_{bs} := \pi \cdot \left(\frac{d_{bs}}{2}\right)^2$ $\quad A_{bs} = 113mm^2$ $\quad A_{ts} := \pi \cdot \left(\frac{d_{ts}}{2}\right)^2$ $\quad A_{ts} = 113mm^2$

Steel strength $f_y := 300MPa$,

Tension steel area, $A_s := n_b \cdot A_{bs}$ $\quad A_s = 113mm^2$

Concrete cover $c := 100mm$

Distance of vertical steel to wall extreme fibre $d := 300mm$ $\quad d = 300mm$

BM Capacity $\phi M_n := \phi_m \cdot A_s \cdot f_y \cdot \left(d - \frac{A_s \cdot f_y}{2 \cdot 0.85 \cdot f_m \cdot B_b}\right)$ $\quad \phi M_n = 8.4kN \cdot m$

BM check $CHK := \begin{cases} \text{"OK"} & \text{if } M^* < \phi M_n \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\quad CHK = \text{"OK"}$

General Footing

$kPa \equiv 10^3 \cdot Pa$ $kN \equiv 10^3 \cdot N$ $MPa \equiv 10^6 \cdot Pa$ $mm \equiv 10^{-3} \cdot m$ $° := deg$

Load	Dead	Live
Light roof, $\alpha := 5°$ pitch	$G_{rf} := \frac{0.4}{\cos(\alpha)} \cdot kPa$	$Q_{rf} := 0.25 kPa$
Maxim external wall	$G_{tw} := 0.3 \cdot kPa$	
Maxim IT wall	$G_{it} := 0.6 \cdot kPa$	
200 Series Masonry	$G_{mw} := 4.0 kPa$	
Timber Floor	$G_{tf} := 0.5 \cdot kPa$	$Q_{fl} := 1.5 \cdot kPa$
Concrete floor	$G_{cf} := 2.4 \cdot kPa$	$Q_{fl} := 1.5 \cdot kPa$
Concrete Garage	$G_{cg} := 2.4 \cdot kPa$	$Q_{ga} := 2.5 \cdot kPa$

Load case

	G Q ULS(*) SLS
Roof	$W_{roof} := (G_{rf}\ Q_{rf}\ 1.2G_{rf}\ G_{rf})$
Floor	$W_{floor}(G) := (G\ Q_{fl}\ 1.2G + 1.5Q_{fl}\ G + 0.4Q_{fl})$
Garage	$W_{garage}(G) := (G\ Q_{ga}\ 1.2G + 1.5Q_{ga}\ G + 0.4Q_{ga})$
Self weight & Wall	$W(G) := (G\ 0\ 1.2G\ G)$

Block 3 and 4:

IT wall footing loads

Roof $\omega_a := 4.6m \cdot W_{roof}$	$\omega_a = (1.8\ 1.2\ 2.2\ 1.8)\, kN \cdot m^{-1}$
Timber floor $\omega_b := 4.6m \cdot W_{floor}(G_{tf}) \times 2$	$\omega_b = (4.6\ 13.8\ 26.2\ 10.1)\, kN \cdot m^{-1}$
Concrete footing $\omega_{ft} := 0.4m \cdot 0.4m \cdot W(24kN \cdot m^{-3})$	$\omega_{ft} = (3.8\ 0.0\ 4.6\ 3.8)\, kN \cdot m^{-1}$
Masonry footing $\omega_{mf} := 0.39m \cdot W(G_{mw})$	$\omega_{mf} = (1.6\ 0.0\ 1.9\ 1.6)\, kN \cdot m^{-1}$
Concrete floor $\omega_{cf} := 1m \cdot W_{garage}(G_{cg})$	$\omega_{cf} = (2.4\ 2.5\ 6.6\ 3.4)\, kN \cdot m^{-1}$
Wall/cladding $\omega_{tc} := 2.4m \cdot W(G_{it}) \times 2$	$\omega_{tc} = (2.9\ 0.0\ 3.5\ 2.9)\, kN \cdot m^{-1}$
Masonry Wall $\omega_{mw} := 3m \cdot W(G_{mw})$	$\omega_{mw} = (12.0\ 0.0\ 14.4\ 12.0)\, kN \cdot m^{-1}$
$\omega_{it} := \omega_a + \omega_b + \omega_{mf} + \omega_{ft} + \omega_{cf} + \omega_{tc} + \omega_{mw}$	$\omega_{it} = (29.1\ 17.5\ 59.4\ 35.6)\, kN \cdot m^{-1}$

External footing loads:

Roof $\omega_a := 4.6m \cdot W_{roof} \div 2$	$\omega_a = (0.9\ 0.6\ 1.1\ 0.9)\, kN \cdot m^{-1}$
Timber floor $\omega_b := 4.6m \div 2 \cdot W_{floor}(G_{tf}) \times 2$	$\omega_b = (2.3\ 6.9\ 13.1\ 5.1)\, kN \cdot m^{-1}$
Masonry footing $\omega_{mf} := 0.39 \cdot m \cdot W(G_{mw})$	$\omega_{mf} = (1.6\ 0.0\ 1.9\ 1.6)\, kN \cdot m^{-1}$
Concrete footing $\omega_{ft} := 0.4 \cdot m \cdot 0.4 \cdot m \cdot W(24 \cdot kN \cdot m^{-3})$	$\omega_{ft} = (3.8\ 0.0\ 4.6\ 3.8)\, kN \cdot m^{-1}$
Concrete floor $\omega_{cf} := 0.5 \cdot m \cdot W_{garage}(G_{cg})$	$\omega_{cf} = (1.2\ 1.3\ 3.3\ 1.7)\, kN \cdot m^{-1}$
Wall/cladding $\omega_{tc} := 2.4m \cdot W(G_{it}) \times 2$	$\omega_{tc} = (2.9\ 0.0\ 3.5\ 2.9)\, kN \cdot m^{-1}$
Masonry Wall $\omega_{mw} := 3m \cdot W(G_{mw})$	$\omega_{mw} = (12.0\ 0.0\ 14.4\ 12.0)\, kN \cdot m^{-1}$
$\omega_{ex} := \omega_a + \omega_b + \omega_{mf} + \omega_{ft} + \omega_{cf} + \omega_{tc} + \omega_{mw}$	$\omega_{ex} = (24.7\ 8.7\ 41.9\ 28.0)\, kN \cdot m^{-1}$

Stair LBW footing loads:

Timber floor $\omega_b := 4.6m \div 2 \cdot W_{floor}(G_{tf}) \times 2$ $\qquad \omega_b = (2.3\ \ 6.9\ \ 13.1\ \ 5.1)\,kN \cdot m^{-1}$

Concrete footing $\omega_{ft} := 0.4 \cdot m \cdot 0.4 \cdot m \cdot W(24 \cdot kN \cdot m^{-3})$ $\qquad \omega_{ft} = (3.8\ \ 0.0\ \ 4.6\ \ 3.8)\,kN \cdot m^{-1}$

Concrete floor $\omega_{cf} := 1 \cdot m \cdot W_{garage}(G_{cg})$ $\qquad \omega_{cf} = (2.4\ \ 2.5\ \ 6.6\ \ 3.4)\,kN \cdot m^{-1}$

Wall/cladding $\omega_{tc} := 2.4m \cdot W(G_{it}) \times 2$ $\qquad \omega_{tc} = (2.9\ \ 0.0\ \ 3.5\ \ 2.9)\,kN \cdot m^{-1}$

$\omega_{st} := \omega_b + \omega_{ft} + \omega_{cf} + \omega_{tc}$ $\qquad \omega_{st} = (11.4\ \ 9.4\ \ 27.8\ \ 15.2)\,kN \cdot m^{-1}$

Bedroom LBW footing loads:

Timber floor $\omega_b := 3.5m \div 2 \cdot W_{floor}(G_{tf})$ $\qquad \omega_b = (0.9\ \ 2.6\ \ 5.0\ \ 1.9)\,kN \cdot m^{-1}$

Concrete footing $\omega_{ft} := 0.4 \cdot m \cdot 0.4 \cdot m \cdot W(24 \cdot kN \cdot m^{-3})$ $\qquad \omega_{ft} = (3.8\ \ 0.0\ \ 4.6\ \ 3.8)\,kN \cdot m^{-1}$

Concrete floor $\omega_{cf} := 1 \cdot m \cdot W_{garage}(G_{cg})$ $\qquad \omega_{cf} = (2.4\ \ 2.5\ \ 6.6\ \ 3.4)\,kN \cdot m^{-1}$

Wall/cladding $\omega_{tc} := 2.4m \cdot W(G_{it})$ $\qquad \omega_{tc} = (1.4\ \ 0.0\ \ 1.7\ \ 1.4)\,kN \cdot m^{-1}$

$\omega_{be} := \omega_b + \omega_{ft} + \omega_{cf} + \omega_{tc}$ $\qquad \omega_{be} = (8.6\ \ 5.1\ \ 18.0\ \ 10.6)\,kN \cdot m^{-1}$

Block 1 and 2:

Soil Properties

Bearing strength $q_{bearing} := 300kPa \div 2$ **(Geotek Services report 20 April 07),**

Width $\qquad B_f := 400mm$

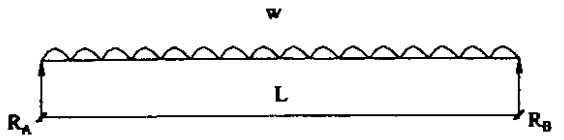
Applied pressure $\qquad q' := \dfrac{\max(\omega_{it}, \omega_{ex})}{B_f}$ $\qquad q' = 148.5kPa$

Check $\qquad CHK := \begin{cases} \text{"OK"} & \text{if } q' < q_{bearing} \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

400 D x 400 W - 4HD 16S + R6 @ 600 CRS

Drain Bridging Design - Unit 9 & 10:

GB1



Beam Span $L := 2.75 \cdot m$

$\omega := \omega_{st}$ $\qquad \omega = (11.4\ \ 9.4\ \ 27.8\ \ 15.2)\,kN \cdot m^{-1}$

Design data

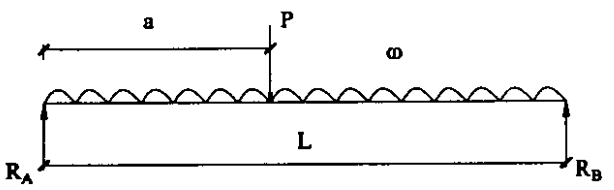
Let $d := 320mm$

Design BM $\quad M1 := \max\left(\omega \times \frac{L^2}{8}\right)$ $\qquad M1 = 26.3kN \cdot m$

Design shear $\quad V1 := \max\left[\omega \cdot \left(\frac{L}{2} - d\right)\right]$ $\qquad V1 = 29.3kN$

Reactions $\quad R := \omega \cdot \frac{L}{2}$ $\qquad GB1 := R$ $\qquad GB1 = (15.7\ \ 12.9\ \ 38.2\ \ 20.9)\,kN$

GB2



Beam Span $L := 2.9 \cdot m$

$a := 1.2 \cdot m$

$b := L - a$

$P := GB1$ $\qquad P = (15.7\ \ 12.9\ \ 38.2\ \ 20.9)\,kN$

$\omega_1 := \omega_{be}$ $\qquad \omega_1 = (8.6\ \ 5.1\ \ 18.0\ \ 10.6)\,kN \cdot m^{-1}$

$\omega_2 := \omega_{be}$ $\qquad \omega_2 = (8.6\ \ 5.1\ \ 18.0\ \ 10.6)\,kN \cdot m^{-1}$

Reactions:

$R_A := \omega_1 \cdot a \cdot \left(1 - \frac{a}{2 \cdot L}\right) + \omega_2 \cdot \frac{b^2}{2 \cdot L} + P \cdot \frac{b}{L}$ $\qquad GB2_a := R_A$ $\qquad GB2_a = (21.6\ \ 15.0\ \ 48.4\ \ 27.6)\,kN$

$R_B := \omega_2 \cdot b \cdot \left(1 - \frac{b}{2 \cdot L}\right) + \omega_1 \cdot \frac{a^2}{2 \cdot L} + P \cdot \frac{a}{L}$ $\qquad GB2_b := R_B$ $\qquad GB2_b = (18.9\ \ 12.8\ \ 41.9\ \ 24.0)\,kN$

Shear:

Let $d := 320mm$

$V2 := \max(R_A - \omega_1 \cdot d, R_B - \omega_2 \cdot d)$ $\qquad V2 = 42.7kN$

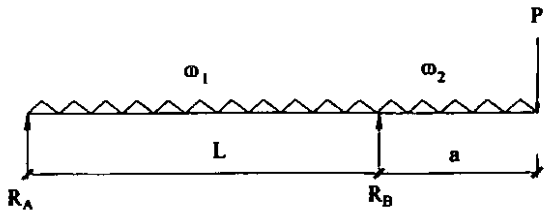
BM

$M_a := R_A \cdot a - \frac{\omega_1 \cdot a^2}{2}$ $\qquad M_a = (19.8\ \ 14.3\ \ 45.2\ \ 25.5)\,kN \cdot m$

$M_b := R_B \cdot \frac{L}{2} - \frac{\omega_2 \cdot L^2}{8}$ $\qquad M_b = (18.4\ \ 13.1\ \ 41.8\ \ 23.7)\,kN \cdot m$

$M2 := \max(M_a, M_b)$ $\qquad M2 = 45.2kN \cdot m$

GB3



Back span $L := 0.5\,m$

Cant. span $a := 0.9\,m$

$P := 1.25 \times 2 \times GB1$ $\qquad P = (39.3\ \ 32.3\ \ 95.6\ \ 52.2)\,kN$

$\omega_1 := \omega_{ft}$ $\qquad \omega_1 = (3.8\ \ 0.0\ \ 4.6\ \ 3.8)\,kN \cdot m^{-1}$

$\omega_2 := \omega_{ft}$ $\qquad \omega_2 = (3.8\ \ 0.0\ \ 4.6\ \ 3.8)\,kN \cdot m^{-1}$

Reactions:

$$R_A := \frac{\omega_1 \times L}{2} - \left(\frac{\omega_2 \times a^2}{2 \cdot L} + P \times \frac{a}{L}\right) \qquad GB_a := R_A \qquad GB_a = (-72.8\ \ -58.2\ \ -174.6\ \ -96.1)\,kN$$

$$R_B := \frac{\omega_1 \cdot L}{2} + \frac{\omega_2 \cdot a}{2 \cdot L} \cdot (2 \cdot L + a) + P \cdot \frac{L + a}{L} \qquad GB_a := R_B \qquad GB_a = (117.4\ \ 90.5\ \ 276.6\ \ 153.6)\,kN$$

Shear:

Assume $d := 320mm$

$$V3 := \max\left[R_A - \omega_1 \cdot d, \left[R_B - \left(P + \omega_2 \cdot a\right) - \omega_1 \cdot d\right], P + \omega_2 \cdot (a - d)\right] \qquad V3 = 175.4kN$$

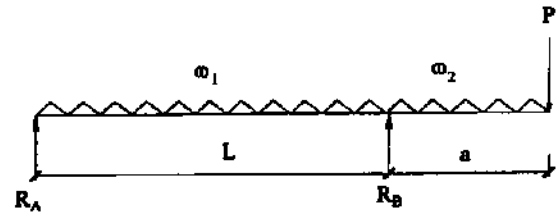
BM

$$M_b := R_A \cdot \frac{L}{2} - \frac{\omega_1 \cdot \left(\frac{L}{2}\right)^2}{2}$$ **(Maximum +ve BM within back span)** $\qquad M_b = (-18.3\ \ -14.5\ \ -43.8\ \ -24.1)\,kN \cdot m$

$$M_c := -\left(P \cdot a + \frac{\omega_2 \cdot a^2}{2}\right)$$ **(Maximum -ve BM at cantilever support)** $\qquad M_c = (-36.9\ \ -29.1\ \ -87.9\ \ -48.5)\,kN \cdot m$

$$M3 := \max\left(\max\left(\left|M_{c_{0,2}}\right|\right), \left|M_{b_{0,2}}\right|\right) \qquad M3 = 87.9kN \cdot m$$

GB4



Back span $L := 0.5\,m$

Cant. span $a := 0.9\,m$

$P := GB1$ $\qquad P = (15.7\ \ 12.9\ \ 38.2\ \ 20.9)\,kN$

$\omega_1 := \omega_{ft}$ $\qquad \omega_1 = (3.8\ \ 0.0\ \ 4.6\ \ 3.8)\,kN\cdot m^{-1}$

$\omega_2 := \omega_{ft}$ $\qquad \omega_2 = (3.8\ \ 0.0\ \ 4.6\ \ 3.8)\,kN\cdot m^{-1}$

Reactions:

$$R_A := \frac{\omega_1 \times L}{2} - \left(\frac{\omega_2 \times a^2}{2\cdot L} + P \times \frac{a}{L}\right)$$ $\qquad GB_a := R_A \qquad GB_a = (-30.4\ \ -23.3\ \ -71.4\ \ -39.7)\,kN$

$$R_B := \frac{\omega_1 \cdot L}{2} + \frac{\omega_2 \cdot a}{2\cdot L}\cdot(2\cdot L + a) + P\cdot\frac{L+a}{L}$$ $\qquad GB_a := R_B \qquad GB_a = (51.5\ \ 36.2\ \ 116.1\ \ 66.0)\,kN$

Shear:

Assume $d := 320mm$

$$V4 := \max\left[R_A - \omega_1\cdot d, \left[R_B - \left(P + \omega_2\cdot a\right) - \omega_1\cdot d\right], P + \omega_2\cdot(a-d)\right]$$ $\qquad V4 = 72.2kN$

BM

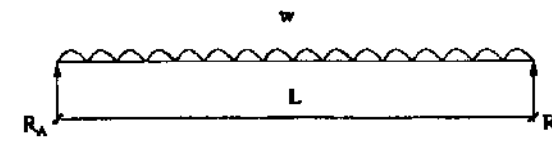
$$M_b := R_A\cdot\frac{L}{2} - \frac{\omega_1\cdot\left(\frac{L}{2}\right)^2}{2}$$ **(Maximum +ve BM within back span)** $\qquad M_b = (-7.7\ \ -5.8\ \ -18.0\ \ -10.1)\,kN\cdot m$

$$M_c := -\left(P\cdot a + \frac{\omega_2\cdot a^2}{2}\right)$$ **(Maximum -ve BM at cantilever support)** $\qquad M_c = (-15.7\ \ -11.6\ \ -36.3\ \ -20.3)\,kN\cdot m$

$$M4 := \max\left(\max\left(\left|M_{c_{0,2}}\right|\right), \left|M_{b_{0,2}}\right|\right)$$ $\qquad M4 = 36.3kN\cdot m$

Drain Bridging Design - Unit 11-16:

GB5



Beam Span $L := 4.5\,m$

$\omega := \omega_{bc}$ $\qquad \omega = (8.6\ \ 5.1\ \ 18.0\ \ 10.6)\,kN\cdot m^{-1}$

Design data

Let $d := 320mm$

Design BM $\qquad M5 := \max\left(\omega \times \frac{L^2}{8}\right) \qquad M5 = 45.4kN\cdot m$

Design shear $\qquad V5 := \max\left[\omega\cdot\left(\frac{L}{2} - d\right)\right] \qquad V5 = 34.7kN$

Reactions $\qquad R := \omega\cdot\frac{L}{2} \qquad GB := R \qquad GB = (19.2\ \ 11.5\ \ 40.4\ \ 23.9)\,kN$

Ground Beam - 4-HD16, R6@150crs :

Concrete properties:

Beam Depth $D_{beam} := 400mm$

Beam Width $B_{beam} := 400mm$

Concrete grade $f'_c := 20MPa$

Concrete weight, $\gamma_c := 24kN \cdot m^{-3}$

Concrete cover $c := 80mm$

Concrete compression strain $\varepsilon_c := 0.003$

Moment reduction factor $\phi_m := 0.85$

Shear reduction factor $\phi_v := 0.75$

Steel properties:

Steel bar, $d_{bar} := 16mm$, **Bar area,** $A_{bar} := \left(\frac{d_{bar}}{2}\right)^2 \cdot \pi$

Steel strength $f_y := 500MPa$

Steel modulus Elasticity $E_s := 200 \cdot 10^3 MPa$

Steel Strain $\varepsilon_s := \frac{f_y}{E_s}$, $\varepsilon_s = 0.0025$

Number of tension bars per layer $n := 2$,

Number of layers $n_l := 1$,

Layer spacing $S_l := 25mm$

Tension steel area, $A_s := n \cdot n_l \cdot A_{bar}$, $\boxed{A_s = 402.1mm^2}$

Internal force lever arm $d := D_{beam} - \left[c + n_l \frac{d_{bar}}{2} + (n_l - 1) \cdot \frac{S_l}{2}\right]$, $d = 312mm$

Nominal BM $\phi M_{n1} := \phi_m \cdot A_s \cdot f_y \cdot \left(d - \frac{A_s \cdot f_y}{2 \times 0.85 \times B_{beam} \cdot f'_c}\right)$ $\phi M_{n1} = 50.8kN \cdot m$

Tension steel ratio $\rho_s := \frac{A_s}{B_{beam} \cdot d}$ $\rho_s = 0.0032$

Shear steel, $R_{bar} := 6mm$ $A'_v := \left(\frac{R_{bar}}{2}\right)^2 \cdot \pi$, **# of leg** $n_{leg} := 2$ $A_v := n_{leg} \cdot A'_v$

$f_{yt} := 300MPa$

$S_v := 150mm$

Concrete shear stress $v_c := \begin{cases} 0.2 \cdot \sqrt{f'_c \cdot (MPa)} & \text{if } (0.07 + 10 \cdot \rho_s) \cdot \sqrt{f'_c \cdot (MPa)} \ge 0.2 \cdot \sqrt{f'_c \cdot (MPa)} \\ 0.08 \sqrt{f'_c \cdot (MPa)} & \text{if } (0.07 + 10 \cdot \rho_s) \cdot \sqrt{f'_c \cdot (MPa)} \le 0.08 \sqrt{f'_c \cdot (MPa)} \\ (0.07 + 10 \cdot \rho_s) \cdot \sqrt{f'_c \cdot (MPa)} & \text{otherwise} \end{cases}$ $v_c = 0.46MPa$

$\phi V_{c1} := \phi_v \cdot B_{beam} \cdot d \cdot v_c$ $\phi V_{c1} = 42.8kN$

$\phi V_{n1} := \phi_v \cdot B_{beam} \cdot d \cdot \left(v_c + \frac{A_v \cdot f_{yt}}{B_{beam} \cdot S_v}\right)$ $\phi V_{n1} = 69.3kN$

Ground Beam - 400Wx400D, 3-HD20T+2-HD16B, HD12@150crs:

Concrete properties:

Beam Depth $D_{beam} := 400mm$

Beam Width $B_{beam} := 400mm$

Concrete grade $f'_c := 20MPa$

Concrete weight, $\gamma_c := 24kN \cdot m^{-3}$

Concrete cover $c := 80mm$

Concrete compression strain $\varepsilon_c := 0.003$

Moment reduction factor $\phi_m := 0.85$

Shear reduction factor $\phi_v := 0.75$

Steel properties:

Steel bar, $d_{bar} := 20mm$, **Bar area,** $A_{bar} := \left(\frac{d_{bar}}{2}\right)^2 \cdot \pi$

Steel strength $f_y := 500MPa$

Steel modulus Elasticity $E_s := 200 \cdot 10^3 MPa$

Steel Strain $\varepsilon_s := \frac{f_y}{E_s}$, $\varepsilon_s = 0.0025$

Number of tension bars per layer $n := 3$,

Number of layers $n_l := 1$,

Layer spacing $S_l := 25mm$

Tension steel area, $A_s := n \cdot n_l \cdot A_{bar}$, $\boxed{A_s = 942.5mm^2}$

Internal force lever arm $d := D_{beam} - \left[c + n_l \frac{d_{bar}}{2} + (n_l - 1) \cdot \frac{S_l}{2}\right]$, $d = 310mm$

Nominal BM $\phi M_{n2} := \phi_m \cdot A_s \cdot f_y \cdot \left(d - \frac{A_s \cdot f_y}{2 \times 0.85 \times B_{beam} \cdot f'_c}\right)$ $\phi M_{n2} = 110.3kN \cdot m$

Tension steel ratio $\rho_s := \frac{A_s}{B_{beam} \cdot d}$ $\rho_s = 0.0076$

Shear steel, $R_{bar} := 12mm$, $A'_v := \left(\frac{R_{bar}}{2}\right)^2 \cdot \pi$, **# of leg** $n_{leg} := 2$ $A_v := n_{leg} \cdot A'_v$

$f_{yt} := 300MPa$

$S_v := 150mm$

Concrete shear stress $v_c := \begin{cases} 0.2 \cdot \sqrt{f'_c \cdot (MPa)} & \text{if } (0.07 + 10 \cdot \rho_s) \cdot \sqrt{f'_c \cdot (MPa)} \ge 0.2 \cdot \sqrt{f'_c \cdot (MPa)} \\ 0.08 \cdot \sqrt{f'_c \cdot (MPa)} & \text{if } (0.07 + 10 \cdot \rho_s) \cdot \sqrt{f'_c \cdot (MPa)} \le 0.08 \cdot \sqrt{f'_c \cdot (MPa)} \\ (0.07 + 10 \cdot \rho_s) \cdot \sqrt{f'_c \cdot (MPa)} & \text{otherwise} \end{cases}$ $v_c = 0.65MPa$

$\phi V_{c2} := \phi_v \cdot B_{beam} \cdot d \cdot v_c$ $\phi V_{c2} = 60.7kN$

$\phi V_{n2} := \phi_v \cdot B_{beam} \cdot d \cdot \left(v_c + \frac{A_v \cdot f_{yt}}{B_{beam} \cdot S_v}\right)$ $\phi V_{n2} = 165.9kN$

Summary $\phi M_{n1} = 50.8kN\cdot m$ $\phi V_{c1} = 42.8kN$ $\phi V_{n1} = 69.3kN$ **400Wx400D, 4-HD16, R6@150crs**

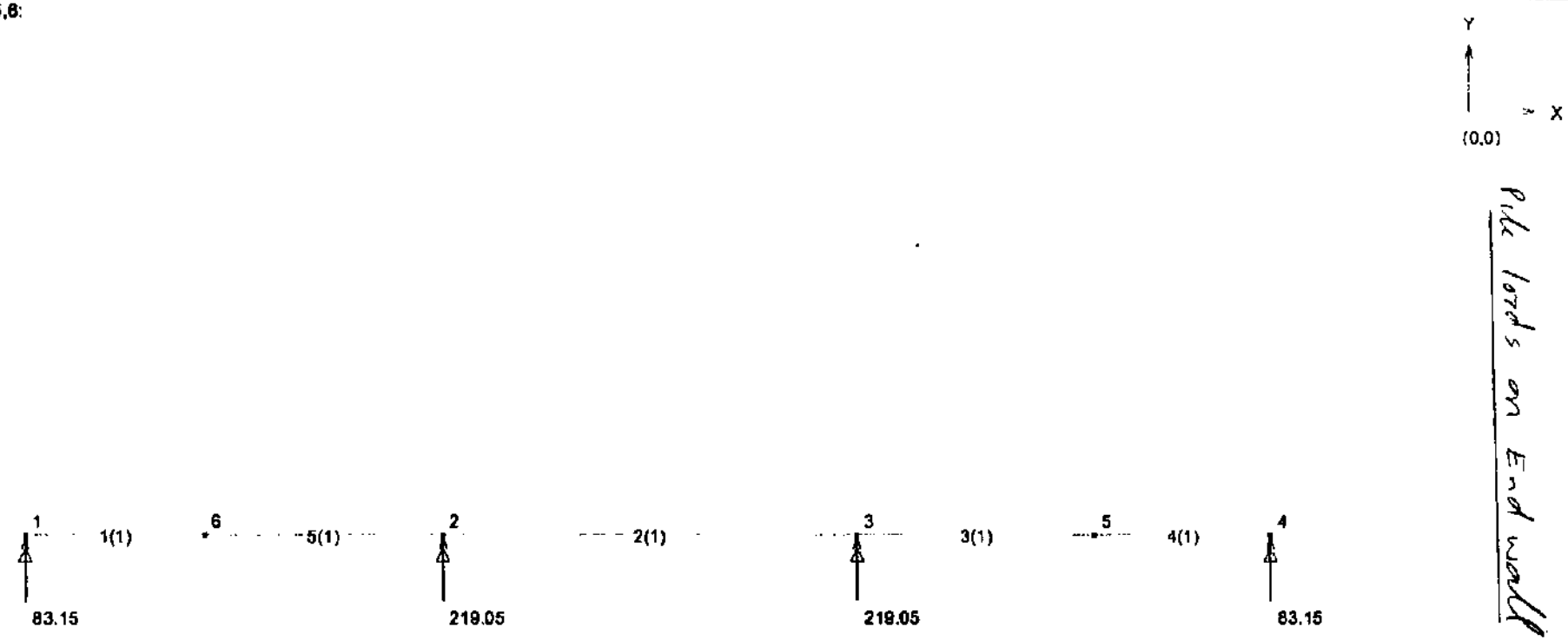
$\phi M_{n2} = 110.3kN\cdot m$ $\phi V_{c2} = 60.7kN$ $\phi V_{n2} = 165.9kN$ **400Wx400D, 5-HD20, HD12@150crs**

If conrete shear strength, ϕV_c is greater that 2 times of design shear, V_c, then minimum shear steel requires.

	BM	SF	
GB1	M1 = 26.3kN·m	V1 = 29.3kN	**400Wx400D, 4-HD16, R6@150crs**
GB2	M2 = 45.2kN·m	V2 = 42.7kN	**400Wx400D, 4-HD16, R6@150crs**
GB3	M3 = 87.9kN·m	V3 = 175.4kN	**400Wx400D, 3-HD20T+2-HD16B, HD12@150crs**
GB4	M4 = 36.3kN·m	V4 = 72.2kN	**400Wx400D, 4-HD16, R6@150crs**
GB5	M5 = 45.4kN·m	V5 = 34.7kN	**400Wx400D, 4-HD16, R6@150crs**

Notes: **If full height masonry wall span between piles, there is not need to check BM and SF capacity of a footing below. It is considered deep beam action and well ok by inspection.**

Envelope for load cases 5,6:
Min
Max



Pile loads on End wall

Reactions
No general restraint

Materials:
1 CONCRETE-32

Sections:
1 400x400

Job: G:\000 CURRENT PROJECTS\...\Edge Beam grid 20 19Jun07
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
Scales - Frame: 1:75, Load: None, Disp: None, Moment: None, Shear: None, Axial: None, Torsion: None

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ANALYSIS STATUS REPORT

Job name ..... Edge Beam grid 20 19Jun07
Location ..... G:\000 CURRENT PROJECTS\9661 WORKING CONCEPTS\21_46 Carlton ...

Length units	m
Section property units	mm
Material strength units	MPa
Mass density units	T/m^3
Temperature units	Celsius
Force units	kN
Moment units	kNm
Mass units	T
Acceleration units	g's
Translation units	mm
Stress units	MPa

Nodes	6	(2500)
Members	5	(5000)
Restrained nodes	4	(2500)
Nodes with spring restraints	0	(2500)
Section properties	1	(100)
Material properties	1	(25)
Constrained nodes	0	(2500)
Member offsets	0	(5000)
Node loads	0	(10000)
Prescribed node displacements	0	(10000)
Member concentrated loads	0	(10000)
Member distributed forces	10	(10000)
Member distributed torsions	0	(10000)
Thermal/Prestress loads	0	(10000)
Self weight load cases	0	(200)
Combination load cases	2	(200)
Load cases with titles	6	(200)
Lumped masses	0	(10000)
Spectral load cases	0	(200)
Static analysis	Y	
Dynamic analysis	N	
Response analysis	N	
Buckling analysis	N	
Ill-conditioned	N	
Non-linear convergence	Y	
Bandwidth	7	
Total degrees of freedom	16	
Static load cases	4	(200)
Mass load cases	0	(200)

NODE COORDINATES (m)

Node	X Coord	Y Coord	Z Coord
1	0.000	0.000	0.000
2	4.670	0.000	0.000
3	9.330	0.000	0.000
4	14.000	0.000	0.000
5	12.000	0.000	0.000
6	2.000	0.000	0.000

MEMBER DATA (deg, kNm/rad, m)

(F=Fixed, R=Released) (*=Cable length)

Memb	Dir Angle	Dir Node	Dir Axis	Memb Type	Node A	Node B	Sec	Mat	Node A Fixity	Node B Fixity	Length
1	0.00			Norm	1	6	1	1	FFFFFF	FFFFFF	2.000
2	0.00			Norm	2	3	1	1	FFFFFF	FFFFFF	4.660
3	0.00			Norm	3	5	1	1	FFFFFF	FFFFFF	2.670
4	0.00			Norm	5	4	1	1	FFFFFF	FFFFFF	2.000
5	0.00			Norm	6	2	1	1	FFFFFF	FFFFFF	2.670

NODE RESTRAINTS (kN/m, kNm/rad)

(F=Fixed, R=Released, D=Deleted, S=Spring, *=General)

Node	Rest Code	X Axial Stiffness	Y Axial Stiffness	Z Axial Stiffness	X Rotation Stiffness	Y Rotation Stiffness	Z Rotation Stiffness
1	DFDDDR						
2	DFDDDR						
3	DFDDDR						
4	DFDDDR						

SECTION PROPERTIES (mm, mm^2, mm^4, deg)

Sect	Section Name	Mark	Angle	Type	Flipped	Source
1	400x400	S1	Not applicable		No	Standard shape

Sect	Area of Section	Torsion Constant	Y-Axis Mom of In	Z-Axis Mom of In	Y-Axis Shr Area	Z-Axis Shr Area	Princ Angle
1	1.6000E+05	3.6053E+09	2.1333E+09	2.1333E+09	INFINITE	INFINITE	0.00

Sect	Section Shape	D	B/Bt	Bb/Bf	Tw	Tf
1	Rectangle	400.000	400.000			

MATERIAL PROPERTIES (MPa, T/m^3, strain/degC)

Matl	Material Name	Young's Modulus	Poisson's Ratio	Mass Density	Coeff of Expansion	Concrete Strength
1	CONCRETE-32	2.8500E+04	0.15	2.4000E+00	1.100E-05	32.00

MEMBER DISTRIBUTED FORCES (m, kN/m)

Load Case	Memb	Sub Load	Axes Sys	Start Position	Finish Position	X Start/ Finish	Y Start/ Finish	Z Start/ Finish
1	1	1	GX	0.000%	100.000%	0.000	-24.700	0.000
						0.000	-24.700	0.000
	3	1	GX	0.000%	100.000%	0.000	-24.700	0.000
						0.000	-24.700	0.000
	4	1	GX	0.000%	100.000%	0.000	-24.700	0.000
						0.000	-24.700	0.000
	5	1	GX	0.000%	100.000%	0.000	-24.700	0.000
						0.000	-24.700	0.000
2	2	1	GX	0.000%	100.000%	0.000	-24.700	0.000
						0.000	-24.700	0.000
3	1	1	GX	0.000%	100.000%	0.000	-8.700	0.000
						0.000	-8.700	0.000
	3	1	GX	0.000%	100.000%	0.000	-8.700	0.000
						0.000	-8.700	0.000
	4	1	GX	0.000%	100.000%	0.000	-8.700	0.000
						0.000	-8.700	0.000
	5	1	GX	0.000%	100.000%	0.000	-8.700	0.000
						0.000	-8.700	0.000
4	2	1	GX	0.000%	100.000%	0.000	-8.700	0.000
						0.000	-8.700	0.000

COMBINATION LOAD CASES

Load case 5: Maximum -BM combination

1.200 * Load case 1: DL1, Dead load 1
1.200 * Load case 2: DL2, Dead load 2
1.500 * Load case 3: LL1, Live load 1
1.500 * Load case 4: LL2, Live load 2

Load case 6: Maximum +BM combination

1.200 * Load case 1: DL1, Dead load 1
1.000 * Load case 2: DL2, Dead load 2
1.500 * Load case 3: LL1, Live load 1
0.400 * Load case 4: LL2, Live load 2

LOAD CASE TITLES

Load Case	Title
1	DL1, Dead load 1
2	DL2, Dead load 2
3	LL1, Live load 1
4	LL2, Live load 2
5	Maximum -BM combination
6	Maximum +BM combination

NODE DISPLACEMENTS (mm, rad)

Load case 1 (Linear): DL1, Dead load 1

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	-0.001
2	0.000	0.000	0.000	0.000	0.000	0.001
3	0.000	0.000	0.000	0.000	0.000	-0.001
4	0.000	0.000	0.000	0.000	0.000	0.001
5	0.000	-1.884	0.000	0.000	0.000	0.000
6	0.000	-1.884	0.000	0.000	0.000	0.000

Load case 2 (Linear): DL2, Dead load 2

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	-0.001
3	0.000	0.000	0.000	0.000	0.000	0.001
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.556	0.000	0.000	0.000	0.000
6	0.000	0.556	0.000	0.000	0.000	0.000

Load case 3 (Linear): LL1, Live load 1

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	-0.563	0.000	0.000	0.000	0.000
6	0.000	-0.563	0.000	0.000	0.000	0.000

Load case 4 (Linear): LL2, Live load 2

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.197	0.000	0.000	0.000	0.000
6	0.000	0.197	0.000	0.000	0.000	0.000

Load case 5 (Linear): Maximum -BM combination

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	-0.002
2	0.000	0.000	0.000	0.000	0.000	0.001
3	0.000	0.000	0.000	0.000	0.000	-0.001
4	0.000	0.000	0.000	0.000	0.000	0.002
5	0.000	-2.291	0.000	0.000	0.000	0.000
6	0.000	-2.291	0.000	0.000	0.000	0.000

Load case 6 (Linear): Maximum +BM combination

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	-0.002
2	0.000	0.000	0.000	0.000	0.000	0.001
3	0.000	0.000	0.000	0.000	0.000	-0.001
4	0.000	0.000	0.000	0.000	0.000	0.002
5	0.000	-2.615	0.000	0.000	0.000	0.000
6	0.000	-2.619	0.000	0.000	0.000	0.000

SPACE GASS 10.01a - ARUP CONSULTANTS LTD
Job: @ \000 CURRENT PROJECTS\9861 WORKING CONCEPTS\...\Bridge Beam grid 20 18Jun07
Designer: Date: 25 Jun 2007, 8:16 p.m. Page: 3

MEMBER FORCES AND MOMENTS (kN,kNm)

Load case 1 (Linear): DL1, Dead load 1

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	51.900	0.000	0.000	0.000	0.000
	6	0.000	2.500	0.000	0.000	0.000	54.399
2	2	0.000	0.000	0.000	0.000	0.000	-26.969
	3	0.000	0.000	0.000	0.000	0.000	-26.969
3	3	0.000	63.449	0.000	0.000	0.000	-26.969
	5	0.000	-2.500	0.000	0.000	0.000	54.399
4	5	0.000	-2.500	0.000	0.000	0.000	54.399
	4	0.000	-51.900	0.000	0.000	0.000	0.000
5	6	0.000	2.500	0.000	0.000	0.000	54.399
	2	0.000	-63.449	0.000	0.000	0.000	-26.969

Load case 2 (Linear): DL2, Dead load 2

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	-5.738	0.000	0.000	0.000	0.000
	6	0.000	-5.738	0.000	0.000	0.000	-11.476
2	2	0.000	57.551	0.000	0.000	0.000	-26.796
	3	0.000	-57.551	0.000	0.000	0.000	-26.796
3	3	0.000	5.738	0.000	0.000	0.000	-26.796
	5	0.000	5.738	0.000	0.000	0.000	-11.476
4	5	0.000	5.738	0.000	0.000	0.000	-11.476
	4	0.000	5.738	0.000	0.000	0.000	0.000
5	6	0.000	-5.738	0.000	0.000	0.000	-11.476
	2	0.000	-5.738	0.000	0.000	0.000	-26.796

Load case 3 (Linear): LL1, Live load 1

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	18.280	0.000	0.000	0.000	0.000
	6	0.000	0.880	0.000	0.000	0.000	19.161
2	2	0.000	0.000	0.000	0.000	0.000	-9.499
	3	0.000	0.000	0.000	0.000	0.000	-9.499
3	3	0.000	22.349	0.000	0.000	0.000	-9.499
	5	0.000	-0.880	0.000	0.000	0.000	19.161
4	5	0.000	-0.880	0.000	0.000	0.000	19.161
	4	0.000	-18.280	0.000	0.000	0.000	0.000
5	6	0.000	0.880	0.000	0.000	0.000	19.161
	2	0.000	-22.349	0.000	0.000	0.000	-9.499

Load case 4 (Linear): LL2, Live load 2

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	-2.021	0.000	0.000	0.000	0.000
	6	0.000	-2.021	0.000	0.000	0.000	-4.042
2	2	0.000	20.271	0.000	0.000	0.000	-9.438
	3	0.000	-20.271	0.000	0.000	0.000	-9.438
3	3	0.000	2.021	0.000	0.000	0.000	-9.438
	5	0.000	2.021	0.000	0.000	0.000	-4.042
4	5	0.000	2.021	0.000	0.000	0.000	-4.042
	4	0.000	2.021	0.000	0.000	0.000	0.000
5	6	0.000	-2.021	0.000	0.000	0.000	-4.042
	2	0.000	-2.021	0.000	0.000	0.000	-9.438

Load case 5 (Linear): Maximum -BM combination

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	79.783	0.000	0.000	0.000	0.000
	6	0.000	-5.597	0.000	0.000	0.000	74.187
2	2	0.000	99.468	0.000	0.000	0.000	-92.923
	3	0.000	-99.468	0.000	0.000	0.000	-92.923
3	3	0.000	119.579	0.000	0.000	0.000	-92.923
	5	0.000	5.597	0.000	0.000	0.000	74.187
4	5	0.000	5.597	0.000	0.000	0.000	74.187
	4	0.000	-79.783	0.000	0.000	0.000	0.000
5	6	0.000	-5.597	0.000	0.000	0.000	74.187
	2	0.000	-119.579	0.000	0.000	0.000	-92.923

Load case 6 (Linear): Maximum +BM combination

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	83.154	0.000	0.000	0.000	0.000
	6	0.000	-2.226	0.000	0.000	0.000	80.928
2	2	0.000	65.659	0.000	0.000	0.000	-77.182
	3	0.000	-65.659	0.000	0.000	0.000	-77.182
3	3	0.000	116.208	0.000	0.000	0.000	-77.182
	5	0.000	2.226	0.000	0.000	0.000	80.928
4	5	0.000	2.226	0.000	0.000	0.000	80.928
	4	0.000	-83.154	0.000	0.000	0.000	0.000
5	6	0.000	-2.226	0.000	0.000	0.000	80.928
	2	0.000	-116.208	0.000	0.000	0.000	-77.182

NODE REACTIONS (kN,kNm)

Load case 1 (Linear): DL1, Dead load 1

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	51.900	0.000	0.000	0.000	0.000
2	0.000	63.449	0.000	0.000	0.000	0.000
3	0.000	63.449	0.000	0.000	0.000	0.000
4	0.000	51.900	0.000	0.000	0.000	0.000
Load	0.000	-230.698	0.000			
Reac	0.000	230.698	0.000			

Load case 2 (Linear): DL2, Dead load 2

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	-5.738	0.000	0.000	0.000	0.000
2	0.000	63.289	0.000	0.000	0.000	0.000
3	0.000	63.289	0.000	0.000	0.000	0.000
4	0.000	-5.738	0.000	0.000	0.000	0.000
Load	0.000	-115.102	0.000			
Reac	0.000	115.102	0.000			

Load case 3 (Linear): LL1, Live load 1

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	18.280	0.000	0.000	0.000	0.000
2	0.000	22.349	0.000	0.000	0.000	0.000
3	0.000	22.349	0.000	0.000	0.000	0.000
4	0.000	18.280	0.000	0.000	0.000	0.000
Load	0.000	-81.258	0.000			
Reac	0.000	81.258	0.000			

Load case 4 (Linear): LL2, Live load 2

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	-2.021	0.000	0.000	0.000	0.000
2	0.000	22.292	0.000	0.000	0.000	0.000
3	0.000	22.292	0.000	0.000	0.000	0.000
4	0.000	-2.021	0.000	0.000	0.000	0.000
Load	0.000	-40.542	0.000			
Reac	0.000	40.542	0.000			

Load case 5 (Linear): Maximum -BM combination

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	79.783	0.000	0.000	0.000	0.000
2	0.000	219.047	0.000	0.000	0.000	0.000
3	0.000	219.047	0.000	0.000	0.000	0.000
4	0.000	79.783	0.000	0.000	0.000	0.000
Load	0.000	-597.660	0.000			
Reac	0.000	597.660	0.000			

Load case 6 (Linear): Maximum +BM combination

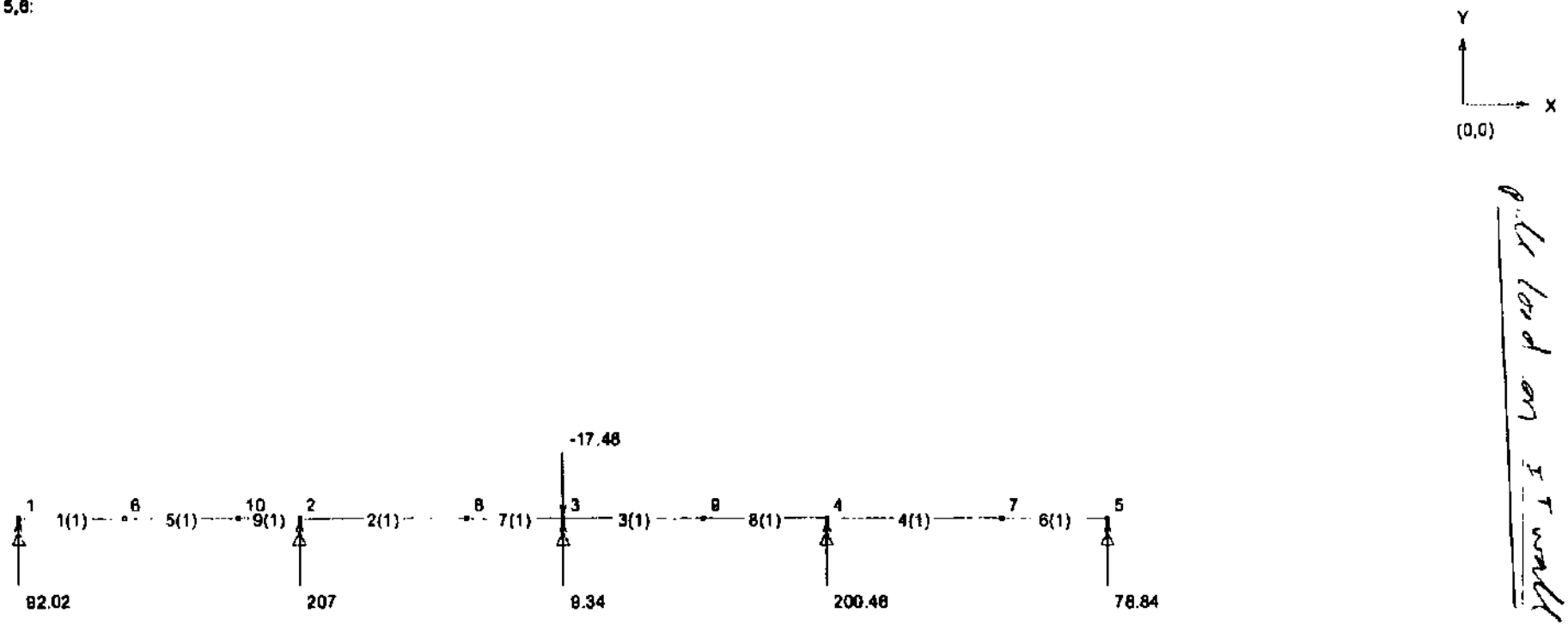
Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	83.154	0.000	0.000	0.000	0.000
2	0.000	181.868	0.000	0.000	0.000	0.000
3	0.000	181.868	0.000	0.000	0.000	0.000
4	0.000	83.154	0.000	0.000	0.000	0.000
Load	0.000	-530.043	0.000			
Reac	0.000	530.043	0.000			

BILL OF MATERIALS (m,T)

Item	Sect	Qty	Section Name	Unit Length	Total Length	Unit Mass	Total Mass
1	1	2	400x400	2.000	4.000	0.768	1.536
2	1	1	400x400	4.660	4.660	1.789	1.789
3	1	2	400x400	2.670	5.340	1.025	2.051

Total mass = 5.376
Centre of gravity = 7.000,0.000,0.000

Envelope for load cases 5,6:
Min
Max



Reactions
No general restraint

Materials:
1 CONCRETE-32

Sections:
1 400x400

Job: G:\000 CURRENT PROJECTS\...\Drain bridging unit 9 &10 25Jun07
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
Scales - Frame: 1:75, Load: None, Disp: None, Moment: None, Shear: None, Axial: None, Torsion: None

SPACE GASS 12.41a - AIREY CONSULTANTS LTD
Job: Q:\000 CURRENT PROJECTS\...\Drain bridging unit 9 410 25Jun07
Designer: Date: 25 Jun 2007, 8:05 p.m. Page: 1

ANALYSIS STATUS REPORT

Job name ..... Drain bridging unit 9 410 25Jun07
Location ..... Q:\000 CURRENT PROJECTS\9861 WORKING CONCEPTS\Z1_46 Carlos ...

Length units ..... m
Section property units ..... mm
Material strength units ..... MPa
Mass density units ..... T/m^3
Temperature units ..... Celsius
Force units ..... kN
Moment units ..... kNm
Mass units ..... T
Acceleration units ..... g's
Translation units ..... mm
Stress units ..... MPa

Nodes	10	(2500)
Members	9	(5000)
Restrained nodes	5	(2500)
Nodes with spring restraints	0	(2500)
Section properties	1	(100)
Material properties	1	(25)
Constrained nodes	0	(2500)
Member offsets	0	(5000)
Node loads	6	(10000)
Prescribed node displacements	0	(10000)
Member concentrated loads	0	(10000)
Member distributed forces	18	(10000)
Member distributed torsions	0	(10000)
Thermal/Prestress loads	0	(10000)
Self weight load cases	0	(200)
Combination load cases	2	(200)
Load cases with titles	6	(200)
Lumped masses	0	(10000)
Spectral load cases	0	(200)
Static analysis	Y	
Dynamic analysis	N	
Response analysis	N	
Buckling analysis	N	
Ill-conditioned	N	
Nonlinear convergence	Y	
Bandwidth	12	
Total degrees of freedom	35	
Static load cases	4	(200)
Mass load cases	0	(200)

NODE COORDINATES (m)

Node	X Coord	Y Coord	Z Coord
1	-0.200	0.000	0.000
2	3.000	0.000	0.000
3	6.000	0.000	0.000
4	9.000	0.000	0.000
5	12.200	0.000	0.000
6	1.000	0.000	0.000
7	11.000	0.000	0.000
8	4.900	0.000	0.000
9	7.600	0.000	0.000
10	2.300	0.000	0.000

MEMBER DATA (deg, kNm/rad, m)

(F=Fixed, R=Released) (*=Cable length)

Memb	Dir Angle	Dir Node	Dir Axis	Memb Type	Node A	Node B	Sec	Mat	Node A Fixity	Node B Fixity	Length
1	0.00			Norm	1	6	1	1	FFFFFF	FFFFFF	1.200
2	0.00			Norm	2	8	1	1	FFFFFF	FFFFFF	1.900
3	0.00			Norm	3	9	1	1	FFFFFF	FFFFFF	1.600
4	0.00			Norm	4	7	1	1	FFFFFF	FFFFFF	2.000
5	0.00			Norm	6	10	1	1	FFFFFF	FFFFFF	1.300
6	0.00			Norm	7	5	1	1	FFFFFF	FFFFFF	1.200
7	0.00			Norm	8	3	1	1	FFFFFF	FFFFFF	1.100
8	0.00			Norm	9	4	1	1	FFFFFF	FFFFFF	1.400
9	0.00			Norm	10	2	1	1	FFFFFF	FFFFFF	0.700

NODE RESTRAINTS (kN/m, kNm/rad)

(F=Fixed, R=Released, D=Deleted, S=Spring, *=General)

Node	Rest Code	X Axial Stiffness	Y Axial Stiffness	Z Axial Stiffness	X Rotation Stiffness	Y Rotation Stiffness	Z Rotation Stiffness
1	DFDDDR						
2	DFDDDR						
3	DFDDDR						
4	DFDDDR						
5	DFDDDR						

SECTION PROPERTIES (mm, mm^2, mm^4, deg)

Sect	Section Name	Mark	Angle	Type	Flipped	Source
1	400x400	S1	Not applicable		No	Standard shape

Sect	Area of Section	Torsion Constant	Y-Axis Mom of In	Z-Axis Mom of In	Y-Axis Shr Area	Z-Axis Shr Area	Princ Angle
1	1.6000E+05	3.6055E+09	2.1333E+09	2.1333E+09	INFINITE	INFINITE	0.00

Sect	Section Shape	D	B/Bt	Bb/Bt	Tw	Tf
1	Rectangle	400.000	400.000			

MATERIAL PROPERTIES (MPa, T/m^3, strain/degC)

Matl	Material Name	Young's Modulus	Poisson's Ratio	Mass Density	Coeff of Expansion	Concrete Strength
1	CONCRETE-32	2.8600E+04	0.15	2.4000E+00	1.100E-05	32.00

NODE LOADS (kN, kNm)

Load Case	Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	9	0.000	30.400	0.000	0.000	0.000	0.000
	10	0.000	-21.600	0.000	0.000	0.000	0.000
2	8	0.000	72.400	0.000	0.000	0.000	0.000
3	9	0.000	23.300	0.000	0.000	0.000	0.000
	10	0.000	-15.000	0.000	0.000	0.000	0.000
4	8	0.000	58.200	0.000	0.000	0.000	0.000

MEMBER DISTRIBUTED FORCES (m, kN/m)

Load Case	Memb	Sub Load	Axes Sys	Start Position	Finish Position	X Start/ Finish	Y Start/ Finish	Z Start/ Finish
1	1	1	GX	0.0000	100.0000	0.000	-29.100	0.000
						0.000	-29.100	0.000
	3	1	GX	0.0000	100.0000	0.000	-29.100	0.000
						0.000	-29.100	0.000
	5	1	GX	0.0000	100.0000	0.000	-29.100	0.000
						0.000	-29.100	0.000
	8	1	GX	0.0000	100.0000	0.000	-29.100	0.000
						0.000	-29.100	0.000
	9	1	GX	0.0000	100.0000	0.000	-29.100	0.000
						0.000	-29.100	0.000
2	2	1	GX	0.0000	100.0000	0.000	-29.100	0.000
						0.000	-29.100	0.000
	4	1	GX	0.0000	100.0000	0.000	-29.100	0.000
						0.000	-29.100	0.000
	6	1	GX	0.0000	100.0000	0.000	-29.100	0.000
						0.000	-29.100	0.000
	7	1	GX	0.0000	100.0000	0.000	-29.100	0.000
						0.000	-29.100	0.000
3	1	1	GX	0.0000	100.0000	0.000	-17.500	0.000
						0.000	-17.500	0.000
	3	1	GX	0.0000	100.0000	0.000	-17.500	0.000
						0.000	-17.500	0.000
	5	1	GX	0.0000	100.0000	0.000	-17.500	0.000
						0.000	-17.500	0.000
	8	1	GX	0.0000	100.0000	0.000	-17.500	0.000
						0.000	-17.500	0.000
	9	1	GX	0.0000	100.0000	0.000	-17.500	0.000
						0.000	-17.500	0.000
4	2	1	GX	0.0000	100.0000	0.000	-17.500	0.000
						0.000	-17.500	0.000
	4	1	GX	0.0000	100.0000	0.000	-17.500	0.000
						0.000	-17.500	0.000
	6	1	GX	0.0000	100.0000	0.000	-17.500	0.000
						0.000	-17.500	0.000
	7	1	GX	0.0000	100.0000	0.000	-17.500	0.000
						0.000	-17.500	0.000

COMBINATION LOAD CASES

Load case 5: Maximum -BM combination

1.200 * Load case 1: DL1, Dead load 1
1.200 * Load case 2: DL2, Dead load 2
1.500 * Load case 3: LL1, Live load 1
1.500 * Load case 4: LL2, Live load 2

Load case 6: Maximum +BM combination

1.200 * Load case 1: DL1, Dead load 1
1.000 * Load case 2: DL2, Dead load 2
1.500 * Load case 3: LL1, Live load 1
0.400 * Load case 4: LL2, Live load 2

LOAD CASE TITLES

Load Case	Title
1	DL1, Dead load 1
2	DL2, Dead load 2
3	LL1, Live load 1
4	LL2, Live load 2
5	Maximum -BM combination
6	Maximum +BM combination

NODE DISPLACEMENTS (mm, rad)

Load case 1 (Linear): DL1, Dead load 1

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	-0.001
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	-0.509	0.000	0.000	0.000	0.000
7	0.000	0.067	0.000	0.000	0.000	0.000
8	0.000	0.193	0.000	0.000	0.000	0.000
9	0.000	-0.153	0.000	0.000	0.000	0.000
10	0.000	-0.320	0.000	0.000	0.000	0.000

Load case 2 (Linear): DL2, Dead load 2

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.014	0.000	0.000	0.000	0.000
7	0.000	-0.407	0.000	0.000	0.000	0.000
8	0.000	0.036	0.000	0.000	0.000	0.000
9	0.000	0.112	0.000	0.000	0.000	0.000

60

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
~~10~~	~~0.000~~	~~-0.013~~	~~0.000~~	~~0.000~~	~~0.000~~	0.000

Load case 3 (Linear): LL1, Live load 1

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	-0.311	0.000	0.000	0.000	0.000
7	0.000	0.031	0.000	0.000	0.000	0.000
8	0.000	0.110	0.000	0.000	0.000	0.000
9	0.000	-0.068	0.000	0.000	0.000	0.000
10	0.000	-0.196	0.000	0.000	0.000	0.000

Load case 4 (Linear): LL2, Live load 2

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	-0.014	0.000	0.000	0.000	0.000
7	0.000	-0.237	0.000	0.000	0.000	0.000
8	0.000	0.083	0.000	0.000	0.000	0.000
9	0.000	0.043	0.000	0.000	0.000	0.000
10	0.000	-0.013	0.000	0.000	0.000	0.000

Load case 5 (Linear): Maximum -BM combination

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	-0.001
2	0.000	0.000	0.000	0.000	0.000	0.001
3	0.000	0.000	0.000	0.000	0.000	0.000
[illegible]	0.000	0.000	0.000	0.000	0.000	0.000
[illegible]	0.000	0.000	0.000	0.000	0.000	0.001
6	0.000	-1.081	0.000	0.000	0.000	0.000
7	0.000	-0.718	0.000	0.000	0.000	0.000
8	0.000	0.563	0.000	0.000	0.000	0.000
9	0.000	-0.086	0.000	0.000	0.000	0.000
10	0.000	-0.682	0.000	0.000	0.000	0.001

Load case 6 (Linear): Maximum +BM combination

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	-0.001
2	0.000	0.000	0.000	0.000	0.000	0.001
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	-1.069	0.000	0.000	0.000	0.000
7	0.000	-0.376	0.000	0.000	0.000	0.000
8	0.000	0.465	0.000	0.000	0.000	0.000
9	0.000	-0.156	0.000	0.000	0.000	0.000
10	0.000	-0.670	0.000	0.000	0.000	0.001

MEMBER FORCES AND MOMENTS (kN,kNm)

Load case 1 (Linear): DL1, Dead load 1

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	43.583	0.000	0.000	0.000	0.000
	6	0.000	8.663	0.000	0.000	0.000	31.347
2	2	0.000	8.205	0.000	0.000	0.000	-24.647
	8	0.000	8.205	0.000	0.000	0.000	-9.057
3	3	0.000	27.003	0.000	0.000	0.000	-0.031
	9	0.000	-19.557	0.000	0.000	0.000	5.925
4	4	0.000	2.316	0.000	0.000	0.000	-7.413
	7	0.000	2.316	0.000	0.000	0.000	-2.780
5	6	0.000	8.663	0.000	0.000	0.000	31.347
	10	0.000	-29.167	0.000	0.000	0.000	18.019
6	7	0.000	2.316	0.000	0.000	0.000	-2.780
	5	0.000	2.316	0.000	0.000	0.000	0.000
7	8	0.000	8.205	0.000	0.000	0.000	-9.057
	3	0.000	8.205	0.000	0.000	0.000	-0.031
8	9	0.000	10.843	0.000	0.000	0.000	5.925
	4	0.000	-29.897	0.000	0.000	0.000	-7.413
9	10	0.000	-50.767	0.000	0.000	0.000	18.019
	2	0.000	-71.137	0.000	0.000	0.000	-24.647

Load case 2 (Linear): DL2, Dead load 2

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	-0.477	0.000	0.000	0.000	0.000
	6	0.000	-0.477	0.000	0.000	0.000	-0.572
2	2	0.000	20.846	0.000	0.000	0.000	-1.525
	8	0.000	-34.444	0.000	0.000	0.000	-14.444
3	3	0.000	-10.407	0.000	0.000	0.000	10.142
	9	0.000	-10.607	0.000	0.000	0.000	-6.829
4	4	0.000	53.334	0.000	0.000	0.000	-21.678
	7	0.000	-4.866	0.000	0.000	0.000	26.791
5	6	0.000	-0.477	0.000	0.000	0.000	-0.572
	10	0.000	-0.477	0.000	0.000	0.000	-1.191
6	7	0.000	-4.866	0.000	0.000	0.000	26.791
	5	0.000	-39.785	0.000	0.000	0.000	0.000
7	8	0.000	38.356	0.000	0.000	0.000	-14.444
	3	0.000	6.346	0.000	0.000	0.000	10.142
8	9	0.000	-10.607	0.000	0.000	0.000	-6.829
	4	0.000	-10.607	0.000	0.000	0.000	-21.678
9	10	0.000	-0.477	0.000	0.000	0.000	-1.191
	2	0.000	-0.477	0.000	0.000	0.000	-1.525

Load case 3 (Linear): LL1, Live load 1

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	26.392	0.000	0.000	0.000	0.000
	6	0.000	5.392	0.000	0.000	0.000	19.071
2	2	0.000	5.646	0.000	0.000	0.000	-15.645
	8	0.000	5.646	0.000	0.000	0.000	-4.918
3	3	0.000	15.817	0.000	0.000	0.000	1.293
	9	0.000	-14.183	0.000	0.000	0.000	1.001
4	4	0.000	1.058	0.000	0.000	0.000	-3.385
	7	0.000	1.058	0.000	0.000	0.000	-1.269
5	6	0.000	5.392	0.000	0.000	0.000	19.071
	10	0.000	-17.358	0.000	0.000	0.000	11.293
6	7	0.000	1.058	0.000	0.000	0.000	-1.269
	5	0.000	1.058	0.000	0.000	0.000	0.000
7	8	0.000	5.646	0.000	0.000	0.000	-4.918
	3	0.000	5.646	0.000	0.000	0.000	1.293
8	9	0.000	9.117	0.000	0.000	0.000	1.001
	4	0.000	-15.383	0.000	0.000	0.000	-3.385
9	10	0.000	-32.358	0.000	0.000	0.000	11.293
	2	0.000	-46.608	0.000	0.000	0.000	-15.645

Load case 4 (Linear): LL2, Live load 2

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	0.470	0.000	0.000	0.000	0.000
	6	0.000	0.470	0.000	0.000	0.000	0.564
2	2	0.000	7.682	0.000	0.000	0.000	1.504
	8	0.000	-25.568	0.000	0.000	0.000	-15.487
3	3	0.000	-7.919	0.000	0.000	0.000	9.821
	9	0.000	-7.919	0.000	0.000	0.000	-2.850
4	4	0.000	32.355	0.000	0.000	0.000	-13.937
	7	0.000	-2.445	0.000	0.000	0.000	15.774
5	6	0.000	0.470	0.000	0.000	0.000	0.564
	10	0.000	0.470	0.000	0.000	0.000	1.175
6	7	0.000	-2.645	0.000	0.000	0.000	15.774
	5	0.000	-23.645	0.000	0.000	0.000	0.000
7	8	0.000	32.632	0.000	0.000	0.000	-15.487
	3	0.000	13.382	0.000	0.000	0.000	9.821
8	9	0.000	-7.919	0.000	0.000	0.000	-2.850
	4	0.000	-7.919	0.000	0.000	0.000	-13.937
9	10	0.000	0.470	0.000	0.000	0.000	1.175
	2	0.000	0.470	0.000	0.000	0.000	1.504

Load case 5 (Linear): Maximum -BM combination

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	92.021	0.000	0.000	0.000	0.000
	6	0.000	18.617	0.000	0.000	0.000	66.383
2	2	0.000	54.853	0.000	0.000	0.000	-52.618
	8	0.000	-61.370	0.000	0.000	0.000	-58.808
3	3	0.000	28.522	0.000	0.000	0.000	28.803
	9	0.000	-69.350	0.000	0.000	0.000	-3.859
4	4	0.000	116.901	0.000	0.000	0.000	-60.893
	7	0.000	-5.439	0.000	0.000	0.000	50.569
5	6	0.000	18.617	0.000	0.000	0.000	66.383
	10	0.000	-60.904	0.000	0.000	0.000	38.896
6	7	0.000	-5.439	0.000	0.000	0.000	50.569
	5	0.000	-78.843	0.000	0.000	0.000	0.000
7	8	0.000	113.290	0.000	0.000	0.000	-58.808
	3	0.000	86.003	0.000	0.000	0.000	28.803
8	9	0.000	2.080	0.000	0.000	0.000	-3.859
	4	0.000	-83.558	0.000	0.000	0.000	-60.893
9	10	0.000	-109.324	0.000	0.000	0.000	38.896
	2	0.000	-152.143	0.000	0.000	0.000	-52.618

Load case 6 (Linear): Maximum +BM combination

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	91.599	0.000	0.000	0.000	0.000
	6	0.000	18.195	0.000	0.000	0.000	65.877
2	2	0.000	42.234	0.000	0.000	0.000	-53.967
	8	0.000	-26.356	0.000	0.000	0.000	-38.884
3	3	0.000	39.355	0.000	0.000	0.000	15.972
	9	0.000	-58.517	0.000	0.000	0.000	0.642
4	4	0.000	70.643	0.000	0.000	0.000	-41.226
	7	0.000	-1.557	0.000	0.000	0.000	27.860
5	6	0.000	18.195	0.000	0.000	0.000	65.877
	10	0.000	-61.326	0.000	0.000	0.000	37.842
6	7	0.000	-1.557	0.000	0.000	0.000	27.860
	5	0.000	-84.877	0.000	0.000	0.000	0.000
7	8	0.000	69.724	0.000	0.000	0.000	-38.884
	3	0.000	30.014	0.000	0.000	0.000	15.972
8	9	0.000	12.913	0.000	0.000	0.000	0.642
	4	0.000	-72.725	0.000	0.000	0.000	-41.226
9	10	0.000	-109.746	0.000	0.000	0.000	37.842
	2	0.000	-152.565	0.000	0.000	0.000	-53.967

NODE REACTIONS (kN,kNm)

Load case 1 (Linear): DL1, Dead load 1

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	43.583	0.000	0.000	0.000	0.000
2	0.000	79.345	0.000	0.000	0.000	0.000
3	0.000	18.797	0.000	0.000	0.000	0.000
4	0.000	32.714	0.000	0.000	0.000	0.000
5	0.000	-2.316	0.000	0.000	0.000	0.000
Load	0.000	-171.620	0.000			
Reac	0.000	171.620	0.000			

Load case 2 (Linear): DL2, Dead load 2

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	-0.477	0.000	0.000	0.000	0.000
2	0.000	21.322	0.000	0.000	0.000	0.000
3	0.000	-16.952	0.000	0.000	0.000	0.000
4	0.000	63.941	0.000	0.000	0.000	0.000
5	0.000	39.785	0.000	0.000	0.000	0.000
Load	0.000	-107.620	0.000			
Reac	0.000	107.620	0.000			

Load case 3 (Linear): LL1, Live load 1

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	26.152	0.000	0.000	0.000	0.000
2	0.000	50.254	0.000	0.000	0.000	0.000
3	0.000	8.171	0.000	0.000	0.000	0.000
4	0.000	16.440	0.000	0.000	0.000	0.000
5	0.000	-1.058	0.000	0.000	0.000	0.000
Load	0.000	-100.200	0.000			
Reac	0.000	100.200	0.000			

Load case 4 (Linear): LL2, Live load 2

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	0.470	0.000	0.000	0.000	0.000
2	0.000	7.212	0.000	0.000	0.000	0.000
3	0.000	-21.302	0.000	0.000	0.000	0.000
4	0.000	40.275	0.000	0.000	0.000	0.000
5	0.000	23.645	0.000	0.000	0.000	0.000
Load	0.000	-50.300	0.000			
Reac	0.000	50.300	0.000			

Load case 5 (Linear): Maximum -BM combination

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	92.021	0.000	0.000	0.000	0.000
2	0.000	206.996	0.000	0.000	0.000	0.000
3	0.000	-17.481	0.000	0.000	0.000	0.000
4	0.000	200.459	0.000	0.000	0.000	0.000
5	0.000	78.843	0.000	0.000	0.000	0.000
Load	0.000	-560.838	0.000			
Reac	0.000	560.838	0.000			

Load case 6 (Linear): Maximum +BM combination

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	91.599	0.000	0.000	0.000	0.000
2	0.000	194.799	0.000	0.000	0.000	0.000
3	0.000	9.341	0.000	0.000	0.000	0.000
4	0.000	183.368	0.000	0.000	0.000	0.000
5	0.000	64.877	0.000	0.000	0.000	0.000
Load	0.000	-483.984	0.000			
Reac	0.000	483.984	0.000			

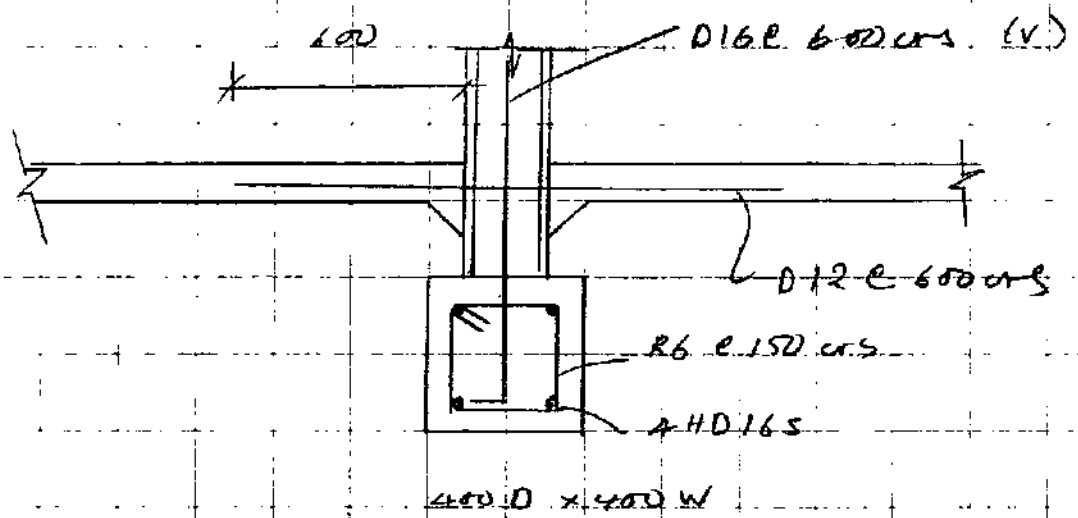
BILL OF MATERIALS (m,T)

Item	Sect	Qty	Section Name	Unit Length	Total Length	Unit Mass	Total Mass
1	1	2	400x400	1.200	2.400	0.461	0.922
2	1	1	400x400	1.900	1.900	0.730	0.730
3	1	1	400x400	1.600	1.600	0.614	0.614
4	1	1	400x400	2.000	2.000	0.768	0.768
5	1	1	400x400	1.300	1.300	0.499	0.499
6	1	1	400x400	1.100	1.100	0.422	0.422
7	1	1	400x400	1.400	1.400	0.538	0.538
8	1	1	400x400	0.700	0.700	0.269	0.269

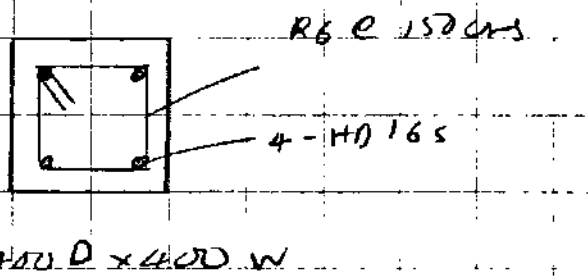
Total mass = 6.762
Centre of gravity = 6.000,0.000,0.000

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers Pukekohe Takapuna Howick Orewa	CLIENT:	SHEET No.: 62
	JOB:	JOB No.:
	CALCS. BY: PHONE:	DATE:

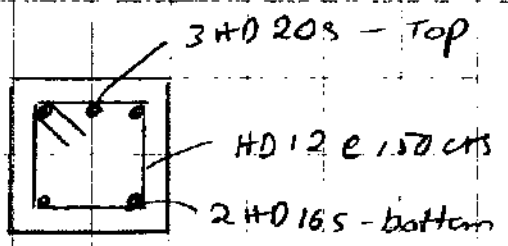
I T wall footing



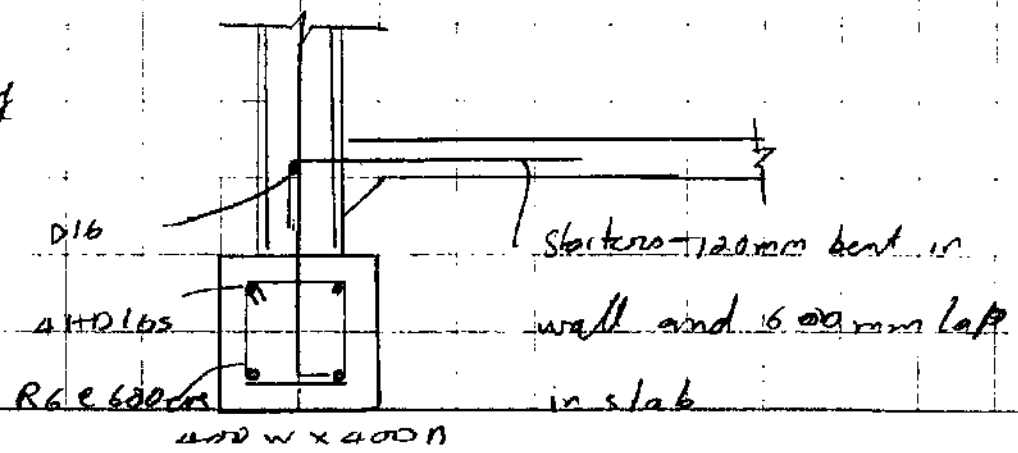
GB1, GB2, GB4, GB5



GB3



Perimeter footing



Airey Consultants Ltd.
39 Meadowlands Drive
Howick
Ph. 5346523

PILE SET CALCULATIONS

Job Address	46 Carlos Drive
Job No.	2246-1258
Date	2/07/2007
Pile Location	Pile A

Pile S.E.D.	(mm)		200	
Pile Length	(m)		6	
Pile Weight	(kn)	+		1.88
Hammer Weight	**(kg)**		**1000**	
Blow Efficiency				0.85
Pile Load	(kN)		120	
Safety Factor			6	
Driving Stress	(mpa)			22.92
Bearing Stress	(mpa)			3.82
Driving Hardness				Very Hard
Cc	(mm)			5.1
Cp	(mm)			8.00
Cq	(mm)			2.54
Temp. Compression	(mm)			15.64
Hammer Drop	**(m)**		**1.5**	
Required Set	**(mm)**			**9.92**

Airey Consultants Ltd.							
39 Meadowlands Drive							
Howick							
Ph. 5346523							
	PILE SET CALCULATIONS					Driving Hardness	
						0	Easy
Job Address	46 Carlos Drive					5.17	Medium
Job No.	2246-1258					8.62	Hard
Date	2/07/2007					12.1	Very Hard
Pile Location	Pile B						
						Cc	
Pile S.E.D.	(mm)	200				Easy	1.3
Pile Length	(m)	7				Medium	2.5
Pile Weight	(kn)	+	2.20			Hard	3.8
Hammer Weight	**(kg)**	**1000**				Very Hard	5.1
Blow Efficiency			0.83				
Pile Load	(kN)	300				Cp	
Safety Factor		3				Easy	2.3
Driving Stress	(mpa)		28.65			Medium	4.7
Bearing Stress	(mpa)		9.55			Hard	7.0
Driving Hardness			Very Hard			Very Hard	9.3
Cc	(mm)		5.1				
Cp	(mm)		9.33			Cq	
Cq	(mm)		2.54			Easy	1.3
Temp. Compression	(mm)		16.97			Medium	3.8
Hammer Drop	**(m)**	**1.5**				Hard	5.1
Required Set	**(mm)**		**5.36**			Very Hard	2.5

Deck screen

200 x 50 post

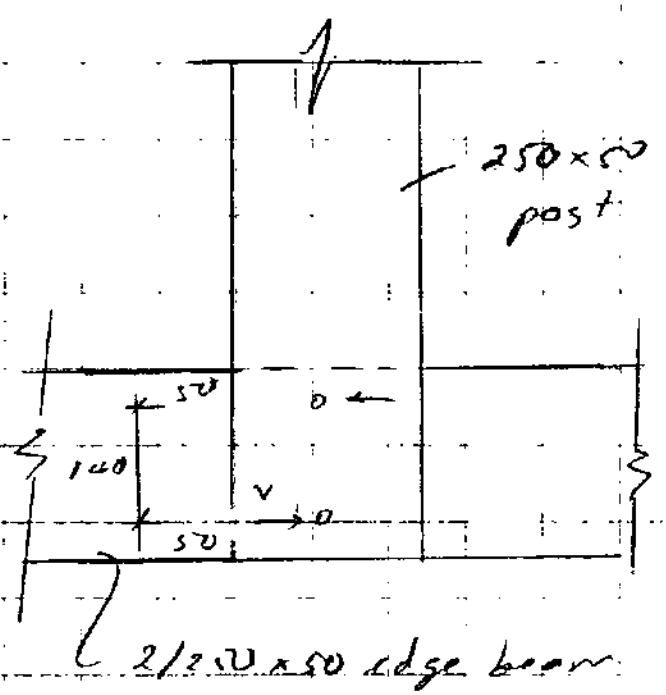
$$M^* = \frac{1.01 \times 2/2 \times 1.1^2}{2} = 0.61 \text{ kN.m} \Rightarrow \text{OK}$$

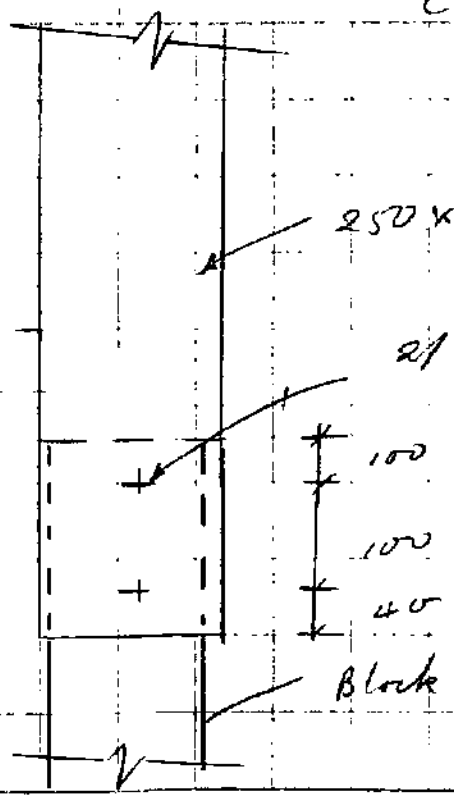
$$\Delta = \frac{0.68 \times 2/2 \times 1100^4}{8 \times 21 \times 10^{11}} = 0.6 \text{ mm} \Rightarrow \text{OK}$$

Timber post fixing

$$V^* = \frac{0.61}{0.100} = 4.4 \text{ kN}$$

Use 2/M10 bolts





Design deck screen

$q_{ULS} = 0.84\ kPa$

$q_{SLS} = 0.57\ kPa$

Design 1.8 m cantilever screen

$G_{pn} = 1.2$

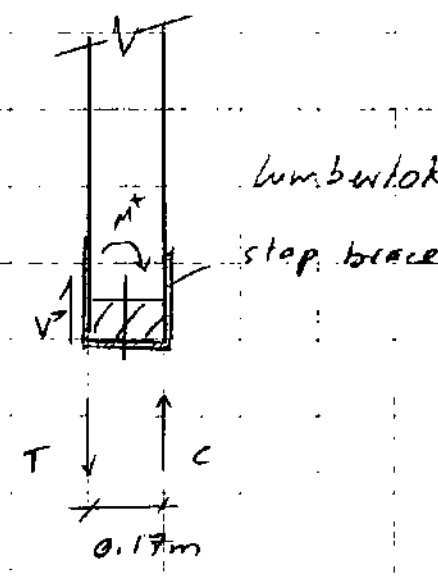
Try 200x50 @ 600 crs , $EI = 21 \times 10^{10}\ N.mm^2$, $\phi M_n = 3.04\ kNm$

$$M^* = 1.2 \times 0.84 \times \frac{1.8^2}{2} \times .6 = 0.98\ kNm$$

$$\Delta_{SLS} = \frac{0.57 \times 1800^4}{8 \times 21 \times 10^{10}} \times .6 = 4.3\ mm$$

Fixing

$V^* = 0.98 / .17 = 5.8\ kN$



Use 3.15ϕ nail ,

$\phi V_n = 0.8 \times 0.8 \times 1.0 = 0.64\ kN/nail$

⇒ requires 10 nails / side

Provide M12 chemset @ 600 crs $\phi T_n = 10\ kN$

$T^* = 0.98 / .09 = 10.9\ kN$

⇒ Use M12 Chemset @ 400 crs

Design for 1.2m cantilever screen

Try 200 x 50 @ 600 crs

$M^* = 1.2 \times .84 \times \frac{1.2^2}{2} \times .6 = 0.44$ kN.m

OK by inspection

Fixings

$V^* = .44/.17 = 2.59$ kN

$\# 3.15\phi$ nails $= 2.59/.64 = 4$ nails/side

Use M12 chemset @ 600 crs

$T^* = 0.44/.09 = 5$ kN $\Rightarrow$ OK

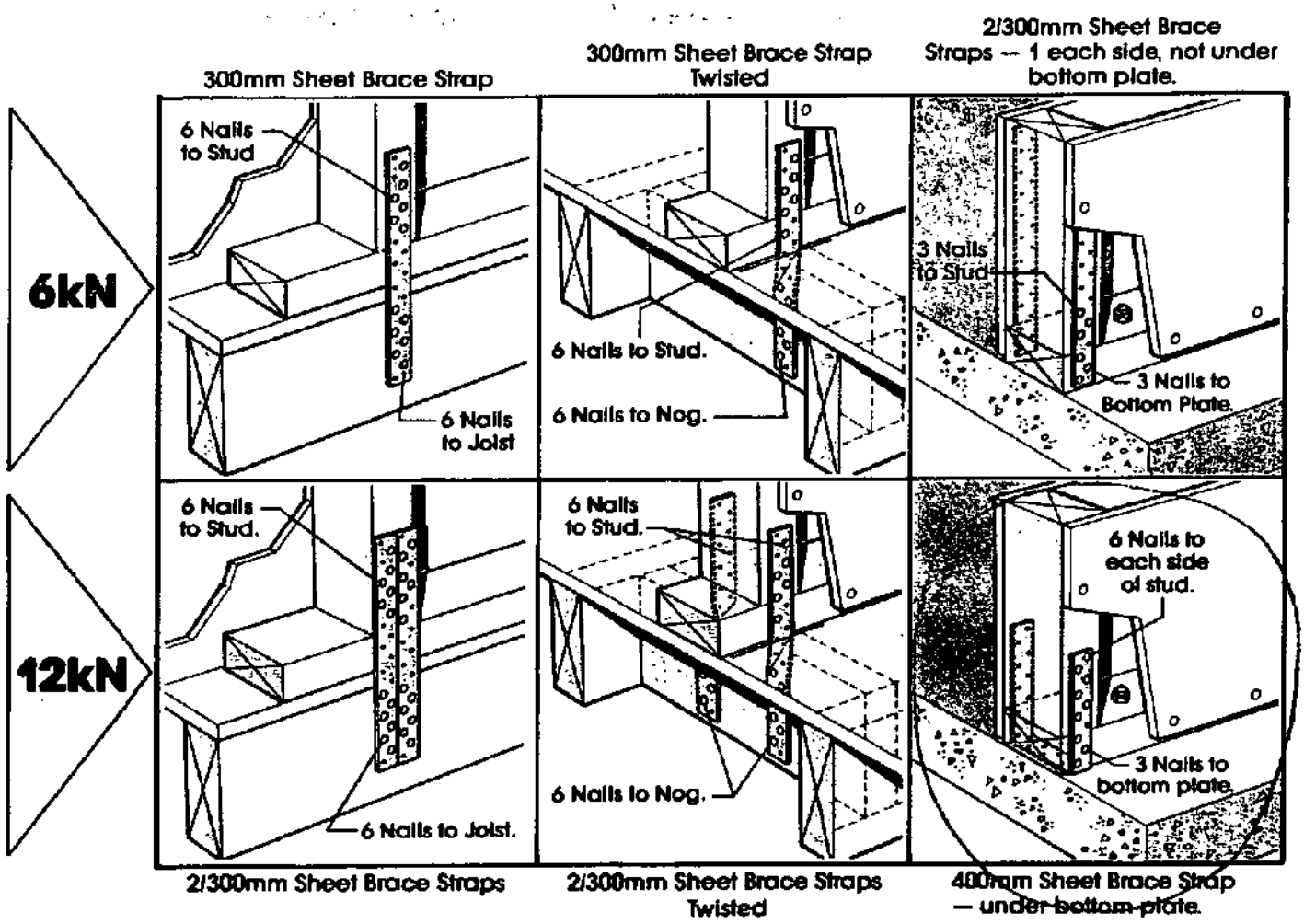
Summary

	screen height 1.8 m	screen height 1.2 m
bolt spacing (M12)	400 crs	600 crs
stud spacing (200 x 50)	400 crs	600 crs
# nails/side (3.15 ϕ)	10	4

SHEET BRACE STRAPS

- **Comply with NZS 3604 1999**
- **Provides holdown for all types of sheet bracing**
- **6kN and 12kN fixings**
- **200, 300, 400mm and 600mm lengths**
- **Quick and easy to apply**

GALVANISED OPTION NOT TO BE USED IN EXTERIOR SITUATIONS



– LUMBERLOK sheet brace straps are available in 200, 300, 400mm and 600mm lengths. Steel is 25 x 0.91mm pre-galvanised. In addition to a sheet brace holdown, this product can be used for a multitude of 6kN fixing situations, as detailed in NZS 3604 : 1999.

– Nailing. LUMBERLOK product nail – 30 x 3.15 Ø is recommended.

– Also available in 0.91mm stainless steel 304-2B.

Available from leading Builders Supply Merchants throughout New Zealand

LUMBERLOK®

MiTek™

MiTek New Zealand Ltd.

AUCKLAND
PO Box 58-014, Greenmount
Phone: (09) 274 7109
Fax: (09) 274 7100

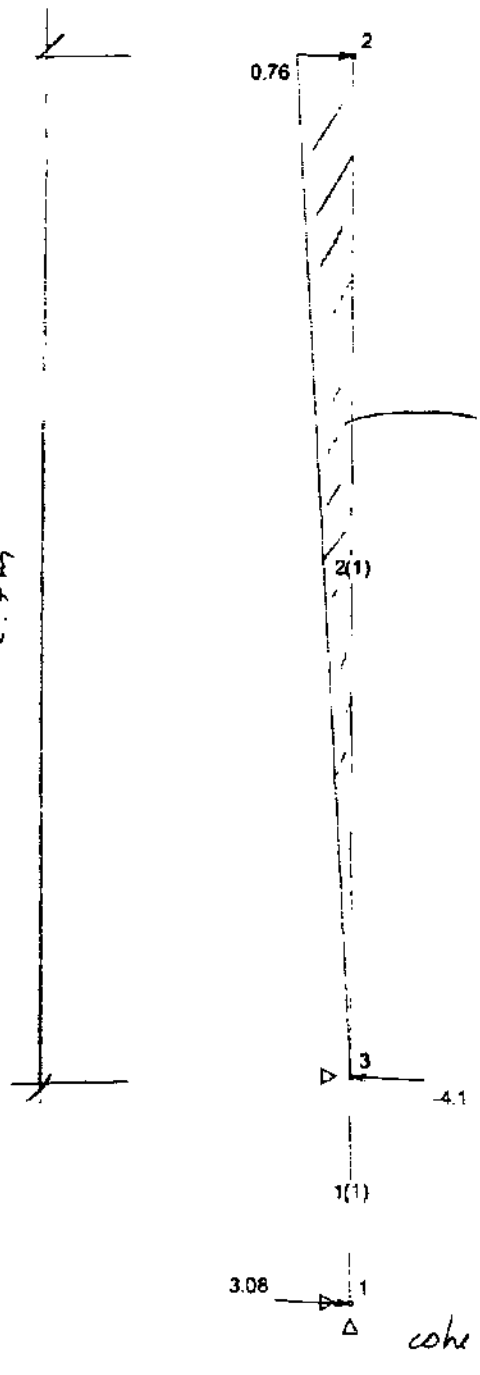
CHRISTCHURCH
PO Box 8387, Riccarton
Phone: (03) 348 8591
Fax: (03) 348 0314

www.mitekinz.co.nz

Masonry wall design out of plan

SPACE GASS 10.41a - AIREY CONSULTANTS LTD 21 Jun 2007, 1:54

Load cases:
■ 1 Seismic face loads



$\gamma_m = 20\ kN/m^3$

$W_m = 20 \times .19 \times 2.7$

$= 10.3\ kN/m$

Seismic coefficient $= 0.1$ (M=3)

$F_W = 0.1 \times 10.3 = 1.03\ kN$

$q_W = \frac{1.03 \times 2}{2.7} = 0.76\ kN/m$

FFL

cohesion under footing

Loads/reaction
No general restraint

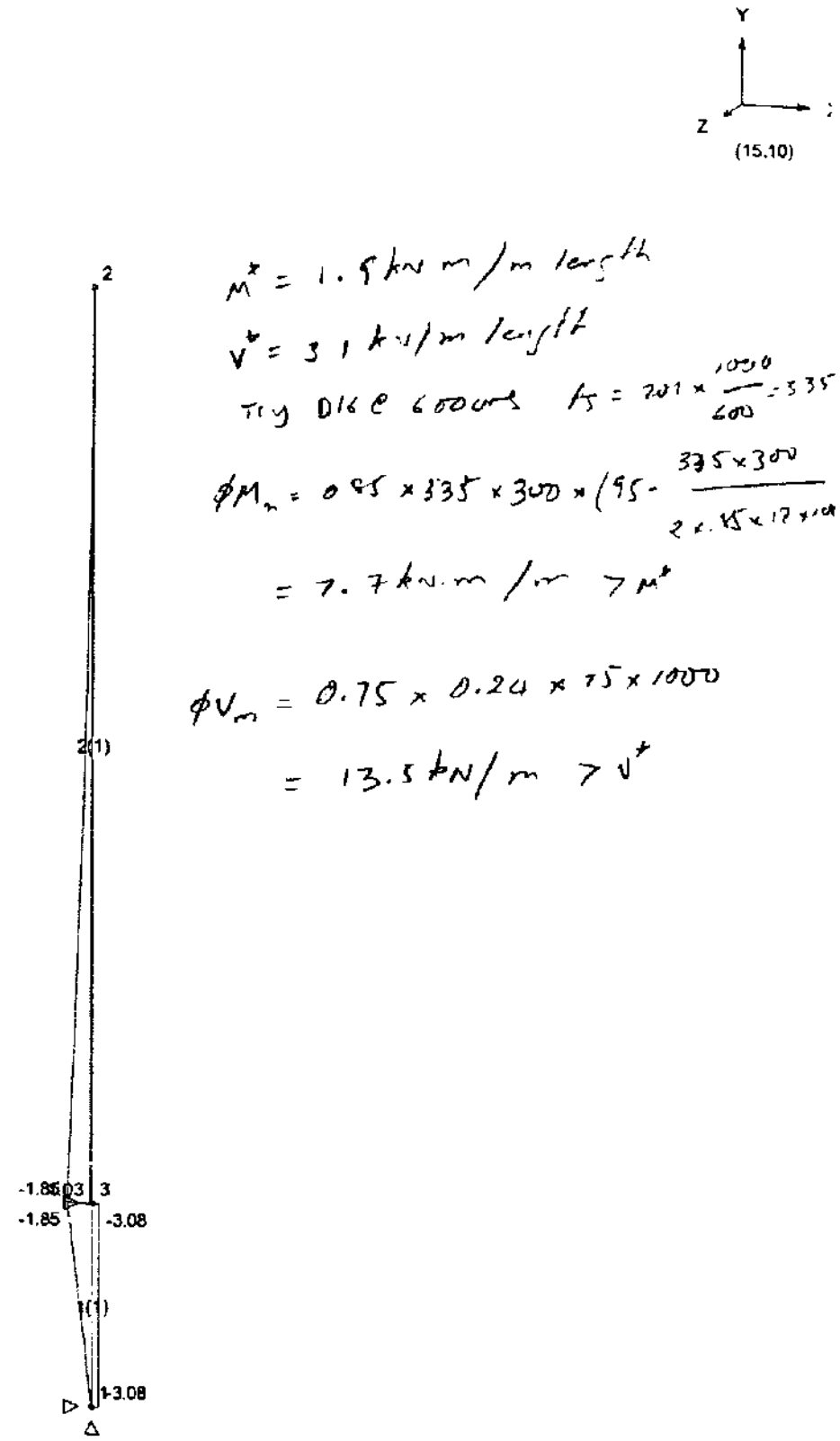
Materials:
■ 1 CONCRETE-20

Sections:
■ 1 190x10

Job: G:\000 CURRENT PROJECTS\...\Masonry wall face load design
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
Scales - Frame: 1:20, Load: 0.1, Disp: None, Moment: None, Shear: None, Axial: None, Torsion: None

SPACE GASS 10.41a - AIREY CONSULTANTS LTD 21 Jun 2007, 2:17

Load cases:
■ 1 ——— Seismic face loads



$M^* = 1.9$ kN m/m length

$V^* = 3.1$ kN/m length

Try D16 @ 600 crs $A_s = 201 \times \frac{1000}{600} = 335$

$\phi M_n = 0.85 \times 335 \times 300 \times (95 - \frac{335 \times 300}{2 \times 0.85 \times 17 \times 10^3})$

$= 7.7$ kN.m/m $> M^*$

$\phi V_n = 0.75 \times 0.24 \times 75 \times 1000$

$= 13.5$ kN/m $> V^*$

BMD/SFD
No general restraint

Materials:
■ 1 CONCRETE-20

Sections:
■ 1 190x1(

Job: G:\000 CURRENT PROJECTS\...\Masonry wall face load design
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
Scales - Frame: 1:20, Load: None, Disp: None, Moment: 0.5, Shear: 3.2, Axial: None, Torsion: None

SPACE GASS 10.41a - ALLEN CONSULTANTS LTD
Job: G:\000 CURRENT PROJECTS\...\Masonry wall face load design
Designer: Date: 21 Jun 2007, 1:59 p.m. Page: 1

ANALYSIS STATUS REPORT

Job name ..... Masonry wall face load design
Location ..... G:\000 CURRENT PROJECTS\9861 WORKING CONCEPTS\21_66 Carlton ...

Length units	m
Section property units	mm
Material strength units	MPa
Mass density units	T/m^3
Temperature units	Celsius
Force units	kN
Moment units	kNm
Mass units	T
Acceleration units	g's
Translation units	mm
Stress units	MPa

Nodes	3	(2500)
Members	2	(5000)
Restrained nodes	2	(2500)
Nodes with spring restraints	0	(2500)
Section properties	1	(100)
Material properties	1	(25)
Constrained nodes	0	(2500)
Member offsets	0	(5000)
Node loads	0	(10000)
Prescribed node displacements	0	(10000)
Member concentrated loads	0	(10000)
Member distributed forces	1	(10000)
Member distributed torsions	0	(10000)
Thermal/Prestress loads	0	(10000)
Self weight load cases	0	(200)
Combination load cases	0	(200)
Load cases with titles	1	(200)
Lumped masses	0	(10000)
Spectral load cases	0	(200)
Static analysis	T	
Dynamic analysis	N	
Response analysis	N	
Buckling analysis	N	
Ill-conditioned	N	
Non-linear convergence	Y	
Frontwidth	7	
Total degrees of freedom	8	
Static load cases	1	(200)
Mass load cases	0	(200)

NODE COORDINATES (m)

Node	X Coord	Y Coord	Z Coord
1	0.000	0.000	0.000
2	0.000	3.300	0.000
3	0.000	0.600	0.000

MEMBER DATA (deg,kNm/rad,m)
(F=Fixed R=Released) (*=Cable length)

Memb	Dir Angle	Dir Node	Dir Axis	Memb Type	Node A	Node B	Sec	Mat	Node A Fixity	Node B Fixity	Length
1	0.00			Norm	1	3	1	1	FFFFFF	FFFFFF	0.600
2	0.00			Norm	3	2	1	1	FFFFFF	FFFFFF	2.700

NODE RESTRAINTS (kN/m,kNm/rad)
(F=Fixed, R=Released, D=Deleted, S=Spring, *=General)

Node	Rest Code	X Axial Stiffness	Y Axial Stiffness	Z Axial Stiffness	X Rotation Stiffness	Y Rotation Stiffness	Z Rotation Stiffness
1	FFDDDR						
3	FDDDDR						

SECTION PROPERTIES (mm,mm^2,mm^4,deg)

Sect	Section Name	Mark	Angle Type	Flipped	Source
1	190x1000	S1	Not applicable	No	Standard shape

Sect	Area of Section	Torsion Constant	Y-Axis Mom of In	Z-Axis Mom of In	Y-Axis Shr Area	Z-Axis Shr Area	Princ Angle
1	1.9000E+05	2.0127E+09	1.5833E+10	5.7158E+08	INFINITE	INFINITE	0.00

Sect	Section Shape	D	B/Bt	Bb/Wt	Tw	Tf
1	Rectangle	190.000	1000.000			

MATERIAL PROPERTIES (MPa, T/m^3, strain/degC)

Matl	Material Name	Young's Modulus	Poisson's Ratio	Mass Density	Coeff of Expansion	Concrete Strength
1	CONCRETE-20	2.2610E+04	0.15	2.4000E+00	1.100E-05	20.00

MEMBER DISTRIBUTED FORCES (m,kN/m)

Load Case	Memb	Sub Load	Axes Sys	Start Position	Finish Position	X Start/ Finish	Y Start/ Finish	Z Start/ Finish
1	2	1	GZ	0.000%	100.000%	0.000	0.000	0.000
						0.760	0.000	0.000

LOAD CASE TITLES

Load Case	Title
1	Seismic face loads

NODE DISPLACEMENTS (mm,rad)

Load case 1 (Linear): Seismic face loads

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.364	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000

MEMBER FORCES AND MOMENTS (kN,kNm)

Load case 1 (Linear): Seismic face loads

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.000	-3.078	0.000	0.000	0.000	0.000
	3	0.000	-3.078	0.000	0.000	0.000	-1.847
2	3	0.000	1.026	0.000	0.000	0.000	-1.847
	2	0.000	0.000	0.000	0.000	0.000	0.000

NODE REACTIONS (kN,kNm)

Load case 1 (Linear): Seismic face loads

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	3.078	0.000	0.000	0.000	0.000	0.000
3	-4.104	0.000	0.000	0.000	0.000	0.000
Load	1.026	0.000	0.000			
Reac	-1.026	0.000	0.000			

BILL OF MATERIALS (m,T)

Item	Sect	Qty	Section Name	Unit Length	Total Length	Unit Mass	Total Mass
1	1	1	190x1000	0.600	0.600	0.274	0.274
2	1	1	190x1000	2.700	2.700	1.231	1.231

Total mass = 1.505
Centre of gravity = 0.000,1.650,0.000

check sliding under footing

Soil cohesion is 25kPa

footing width = 0.4m

⇒ Allowable sliding force = 25 × .4 = 10 kN/m

$$FOS = \frac{10}{3.1} = 3.2 \quad \therefore OK$$

check sliding @ slab level

Friction coefficient between slab & metal $\mu = 0.5$

check block 1-5

Previous building weight (page 5) = 1022 kN

extra weight from masonry wall = 6 × 20 × .19 × 14 × 2.7 (wall length)

= 862 kN

Total = 1884 kN

Total resisting force due to friction = 1884 × .5 = 942 kN

sliding force @ floor level due to seismic = 1022 × .1 + 6 × 4.1 × 14 = 447 kN

$$FOS = \frac{942}{447} = 2.1 \Rightarrow OK$$

Bracing:

$kPa := 10^3 \cdot Pa$ $kN := 10^3 \cdot N$ $MPa := 10^6 \cdot Pa$ $mm := 10^{-3} \cdot m$

Seismic Factor

Seismic coefficent for $j=1$ and $T_s \times 0.4s$, $C_{uls} := 0.15$ and $C_{sls} := 0.05$ refer seismic coefficient calculation

Lateral load

Axial load $P := 5.5m \times 5m \times 0.2kPa$

Seismic load $F := C_{uls} \cdot P$ $F = 0.8kN$

No. post $N_{post} := 4$

Seimic force per post $P_u := \frac{F}{N_{post}}$ $P_u = 0.2kN$

Height above footing $h := 2.7m$

BM on post $M_u := P_u \cdot h$ $M_u = 0.6kN \cdot m$

Post 125 square H5

Width $d_{post} := 125 \cdot mm$

Strength reduction factor $\Phi := 0.8$

Load duration factor, $k_1 := 1$

Timber strength (bending) $f_b := 11.7 \cdot MPa$

Compression Stress $f_c := 18 \cdot MPa$

Timber modulus of Elasticity $E_{post} := 6.7 \times 10^3 MPa$

Embedment Length L (Brom's in clays)

Footing diameter $D_{pile} := 0.30 \cdot m$

Ground strength $C_u := 50 \cdot kPa$ $\phi := 0.5$

$e := h$ $e = 2.7m$

Forces $f := \frac{P_u}{9 \cdot \phi \cdot C_u \cdot D_{pile}}$ $f = 3mm$

Unsupported length $e_u := 0.45m$

Maximum BM $M_{max} := P_u \cdot (e + e_u + 0.5 \cdot f)$

$g := \sqrt{\frac{M_{max}}{2.25 \cdot \phi \cdot C_u \cdot D_{pile}}}$ $g = 0.20m$

Embedment $L := \max(e_u + f + g)$ $L = 0.65m$

Deflection Check

$E_{pile} := 20 \times 10^3 MPa$ $\quad E_{soil} := 300 \cdot C_u$ $\quad K := \frac{E_{pile}}{E_{soil}}$

Active Length $L_a := 0.5 \cdot D_{pile} \cdot K^{0.36}$ $\quad L_a = 2.0m$ **If L_a > L Deflection need to increase 25%**

Horizontal Displacement

$$f_{uh} := \frac{1.3 \cdot K^{-0.18}}{E_{soil} \cdot D_{pile}} \qquad f_{um} := \frac{2.2 \cdot K^{-0.45}}{E_{soil} \cdot D_{pile}^2}$$

$$\Delta_h := f_{uh} \cdot P_u + f_{um} \cdot P_u \cdot (e + e_u) \qquad \Delta_h = 0.1mm$$

Rotation Displacement

$$f_{\theta m} := \frac{9.2 \cdot K^{-0.73}}{E_{soil} \cdot D_{pile}^3} \qquad f_{\theta h} := \frac{2.2 \cdot K^{-0.45}}{E_{soil} \cdot D_{pile}^2}$$

$$\theta := f_{\theta h} \cdot P_u + f_{\theta m} \cdot P_u \cdot (e + e_u) \qquad \theta = 9.0 \times 10^{-5}$$

$$\Delta_\theta := \theta \cdot (e + e_u) \qquad \Delta_\theta = 0.3mm$$

Moment Displacement

$$I_{post} := \frac{d_{post}^4}{12} \qquad I_{post} = 2.0 \times 10^7 mm^4$$

$$\Delta_b := \frac{P_u \cdot (e + e_u)^3}{3 \cdot E_{post} \cdot I_{post}} \qquad \Delta_b = 16mm$$

Total Displ (ULS) $\Delta_u := (\Delta_h + \Delta_\theta) \cdot 1.25 + \Delta_b$ $\quad \Delta_u = 16mm$

Total Displ (SLS) $\Delta_s := \Delta_u \cdot \frac{C_{sls}}{C_{uls}}$ $\quad \Delta_s = 5.4mm$

$$CHK := \begin{cases} \text{"OK"} & \text{if } \frac{h}{\Delta_s} > 150 \\ \text{"NG"} & \text{otherwise} \end{cases} \qquad CHK = \text{"OK"}$$

Strength Check

Compression Capacity

Slenderness $S := \frac{h}{d_{post}}$ $\quad S = 22$

Dry timber $a_1 := 0.21$ $\quad a_2 := 0.175$ $\quad a_3 := -0.0116$

$a_4 := \frac{1}{5000}$ $\quad a_5 := 235.5$ $\quad a_6 := -1.937$ $\quad$ **NZS 3603:1993, C2.10**

Stability factor $k_8 := \begin{cases} 1 & \text{if } S < 1 \\ a_5 \cdot S^{a_6} & \text{if } S > 25 \\ (a_1 + a_2 \cdot S + a_3 \cdot S^2 + a_4 \cdot S^3) & \text{otherwise} \end{cases}$ $\quad k_8 = 0.59$

Nonimal Compression $\phi N_c := \Phi \cdot k_1 \cdot k_8 \cdot f_c \cdot d_{post}^2$ $\quad \phi N_c = 134kN$

Bending Capacity

Section modulus $Z := \frac{d_{post}^3}{6}$ $\quad Z = 3.3 \times 10^5\ mm^3$

Moment capacity $\phi M_n := \Phi \cdot k_1 \cdot k_8 \cdot f_b \cdot Z$ $\quad \phi M_n = 1.8 kN \cdot m$

$$CHK := \begin{cases} \text{"OK"} & \text{if } 1.05\phi M_n > M_u + P \cdot \Delta_u \\ \text{"NG"} & \text{otherwise} \end{cases}$$

CHK = "OK"

Combined Actions

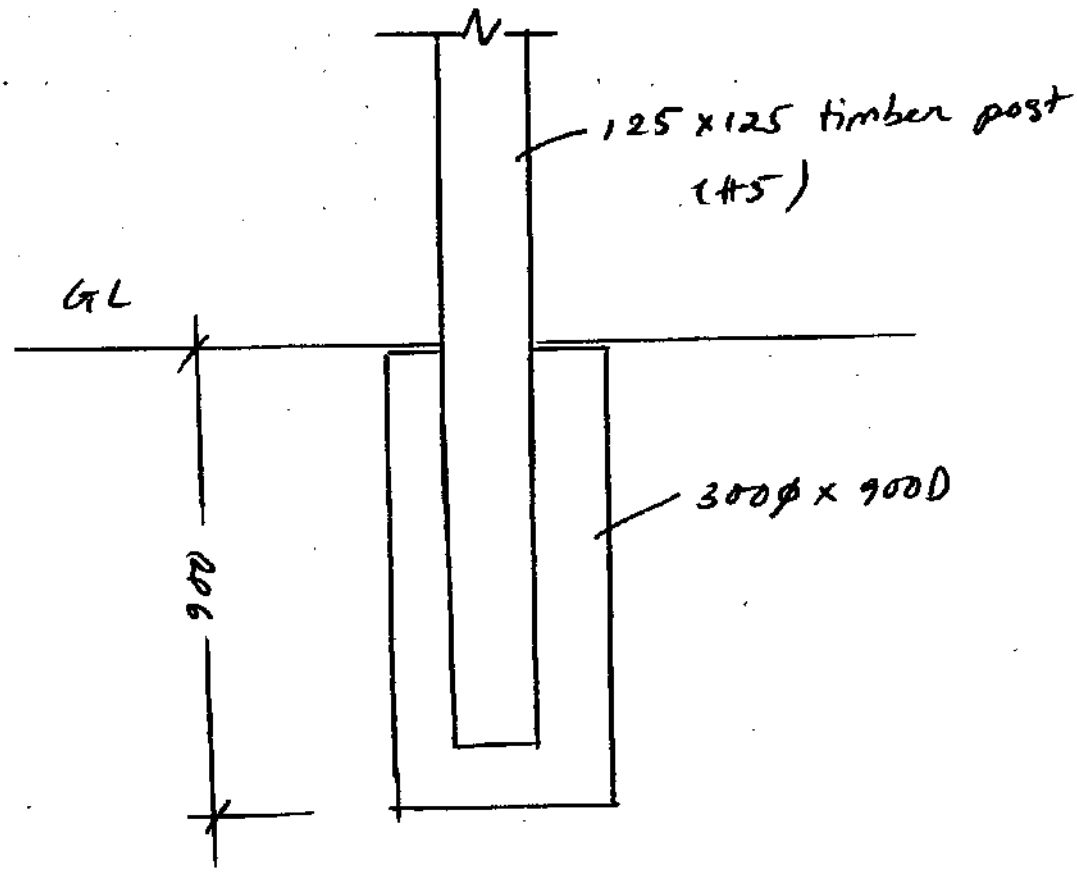
$N' := P + N_{post}$ $\quad N' = 1.4kN$

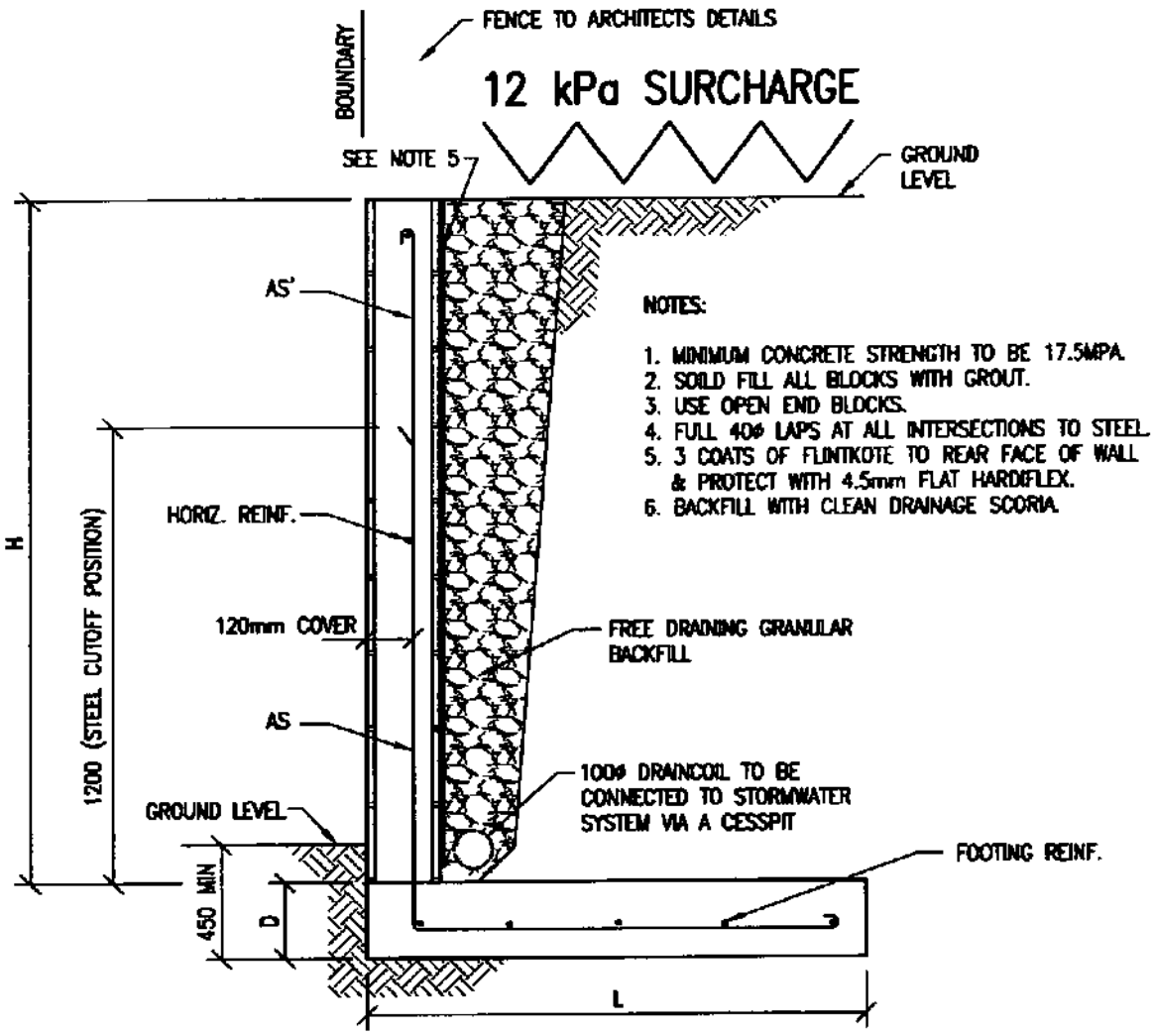
$M' := M_u + P \cdot \Delta_u$ $\quad M' = 0.6kN \cdot m$

$$CHK := \begin{cases} \text{"OK"} & \text{if } \left(\frac{N'}{\phi N_c} + \frac{M'}{\phi M_n}\right) < 1 \\ \text{"NG"} & \text{otherwise} \end{cases}$$

CHK = "OK"

d_{post} = 125mmϕ Timber post in D_{pile} = 300mmΦx L = 649mmD concrete footing.





NOTES:

1. MINIMUM CONCRETE STRENGTH TO BE 17.5MPA.
2. SOILD FILL ALL BLOCKS WITH GROUT.
3. USE OPEN END BLOCKS.
4. FULL 40Ø LAPS AT ALL INTERSECTIONS TO STEEL.
5. 3 COATS OF FLINTKOTE TO REAR FACE OF WALL & PROTECT WITH 4.5mm FLAT HARDIFLEX.
6. BACKFILL WITH CLEAN DRAINAGE SCORIA.

H	L	AS	AS'	BLOCK	D	HORIZ REINF	FOOTING REINF.
1800–1600	1800	2–HD16 OUT OF 3 CORES	HD16 @ 600c/c	200	300	D12 @ 800c/c	6/D16
1600–1400	1600	HD16 @ 400c/c	HD16 @ 400c/c	200	300	D12 @ 800c/c	5/D16
1400–1200	1450	HD16 @ 600c/c	HD12 @ 600c/c	200	300	D12 @ 800c/c	4/D16
1200–1000	1300	HD12 @ 400c/c	HD12 @ 400c/c	200	300	D12 @ 800c/c	4/D16
1000–800	1150	HD12 @ 600c/c	HD12 @ 600c/c	200	300	2/D12	3/D16
800–0	1000	HD12 @ 600c/c	D12 @ 600c/c	200	300	2/D12	3/D16

BLOCK RETAINING WALL

SCALE 1:20

Boundary Cantilever Retaining Wall For 12kPa

Properties $kN := 10^3 \cdot N$ $kPa := 10^3 \cdot Pa$ $MPa := 10^3 kPa$

Soil

Density $\gamma_s := 18kN \cdot m^{-3}$

Cohesive $S_u := 25kPa$

Masonry

200 mm block $\gamma_m := 21kN \cdot m^{-3}$ $t_w := 190mm$ $C_{blk} := 70mm$

Density $\gamma_m := 20 \cdot kN \cdot m^{-3}$

Compression strength, $f_m := 12MPa$ **Grade B masonry**

Active pressure factor $K_a := 0.5$ **For Rigid structure**

Concrete

Density $\gamma_c := 24 \cdot kN \cdot m^{-3}$

Loadings

Surcharge $Q_u := 12kPa$

Wall Design

Nominal BM, $\phi M_n(A_s, d, f_y) := 0.8 \cdot A_s \cdot f_y \cdot \left(d - \frac{A_s \cdot f_y}{2 \cdot 0.85 \cdot f_m}\right)$

Axial load $N'(H) := \gamma_m \cdot t_w \cdot H$

Shear friction provide by vertical steel (NZS 4230:2004 C10.3.2.13), for $\mu_f := 1.0$ **and** $\phi_v := 0.75$

Shear friction steel area required $A_{vf}(V_u, \phi V_m N', f_y) := \frac{1}{f_y} \cdot \left(\frac{V_u - \phi V_m}{\phi_v \cdot \mu_f} - N'\right)$

Footing design

Over turning moment $M_{ot}(h_e, D) := \left[Q_u \cdot \frac{(h_e + D)^2}{2} + \gamma_s \cdot \frac{(h_e + D)^3}{6}\right] \cdot K_a$

$$M_{res}(H, B, D, B_t, h_e) := \left[\gamma_m \cdot t_w \cdot H \cdot \left(B_t + \frac{t_w}{2}\right) + \gamma_c \cdot D \cdot \frac{B^2}{2} + (\gamma_s \cdot h_e + Q_u) \cdot \left[\frac{B^2 - (t_w + B_t)^2}{2}\right]\right]$$

A. Retaining Height [redacted] Wall height $H := 1.0m$

Design loads

Bending Moment $M_u := \left(1.5\cdot\frac{\gamma_s\cdot h_e^3}{6} + 1.5\cdot\frac{Q_u\cdot h_e^2}{2}\right)\cdot K_a$ $\qquad M_u = 4.0\frac{1}{m}\,kN\cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $\qquad d = 120mm$

Critical shear $V_u := \left[1.5\cdot\frac{\gamma_s\cdot(h_e - d)^2}{2} + 1.5\cdot Q_u\cdot(h_e - d)\right]\cdot K_a$ $\qquad V_u = 9.2\frac{1}{m}\,kN$

Wall Design

$d_{bv} := 12mm$ @ $S_v := 600mm$ crs, $f_y := 500MPa$ $\qquad A_s := \left(\frac{d_{bv}}{2}\right)^2\cdot\frac{\pi}{S_v}$

Nominal BM, $\phi M_n(A_s, d, f_y) = 8.7\frac{1}{m}\,kN\cdot m$

Axial load $N'(H) = 3.8\frac{1}{m}\,kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} > 0.56MPa \\ 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} & \end{cases}$ $\qquad v_m = 0.25MPa$

$\phi V_n := 0.85\cdot v_m\cdot d$ $\qquad \phi V_n = 25.1\frac{1}{m}\,kN$

Strength check $CHK := \begin{cases} \text{"OK"} & \text{if } \phi M_n(A_s, d, f_y) \ge M_u \wedge \phi V_n \ge V_u \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

Check Overturning about TOE

Concrete footing width $B := 1000mm$
Concrete footing thickness $D := 300\cdot mm$
Toe $B_t := 0mm$

Design OTM $M_{ot}(h_e, D) = 5.6\frac{1}{m}\,kN\cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 16.7\frac{1}{m}\,kN\cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

Total weight $W_G := \gamma_c\cdot B\cdot D + \gamma_m\cdot t_w\cdot H + (\gamma_s\cdot h_e + Q_u)\cdot(B - B_t - t_w)$ $\qquad W_G = 32.4kN\cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $\qquad y = 341mm > B\cdot 3 = 333mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6\cdot(B + 2 - y)}{B}\right]\right]$ $\qquad q_u = 63.2kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

For Retaining $h_e = 0.8m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 12mm$ @ $S_v = 600mm$ crs $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300\,mm$ **Deep x** $B = 1000\,mm$ **Wide Footing, D16@300crs**

B. Retaining Height [redacted] **Wall height** $H := 1.2m$

Design loads

Bending Moment $M_u := \left(1.5\frac{\gamma_s \cdot h_e^3}{6} + 1.5\frac{Q_u \cdot h_e^2}{2}\right) \cdot K_a$ $\qquad M_u = 6.8\frac{1}{m}kN \cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $\qquad d = 120mm$

Critical shear $V_u := \left[1.5\frac{\gamma_s \cdot (h_e - d)^2}{2} + 1.5 \cdot Q_u \cdot (h_e - d)\right] \cdot K_a$ $\qquad V_u = 13.1\frac{1}{m}kN$

Wall Design

$d_{bv} := 12mm$ @ $S_v := 600mm$ crs, $f_y := 500MPa$ $\qquad A_s := \left(\frac{d_{bv}}{2}\right)^2 \cdot \frac{\pi}{S_v}$

Nominal BM, $\phi M_n(A_s, d, f_y) = 8.7\frac{1}{m}kN \cdot m$

Axial load $N'(H) = 4.6\frac{1}{m}kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24MPa + 0.3\frac{N'(H)}{t_w} > 0.56MPa \\ 0.24MPa + 0.3\frac{N'(H)}{t_w} & \end{cases}$ $\qquad v_m = 0.25MPa$

$\phi V_n := 0.85 v_m \cdot d$ $\qquad \phi V_n = 25.2\frac{1}{m}kN$

Strength check $CHK := \begin{cases} \text{"OK"} & \text{if } \phi M_n(A_s, d, f_y) \geq M_u \wedge \phi V_n \geq V_u \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

Check Overturning about TOE

Concrete footing width $B := 1150mm$
Concrete footing thickness $D := 300 \cdot mm$
Toe $B_t := 0mm$

Design OTM $M_{ot}(h_e, D) = 8.4\frac{1}{m}kN \cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 24.5\frac{1}{m}kN \cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

Total weight $W_G := \gamma_c \cdot B \cdot D + \gamma_m \cdot t_w \cdot H + (\gamma_s \cdot h_e + Q_u) \cdot (B - B_t - t_w)$ $\qquad W_G = 41.6kN \cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $\qquad y = 387mm > B \div 3 = 383mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6 \cdot (B + 2 - y)}{B}\right]\right]$ $\qquad q_u = 71.7kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

For Retaining $b_e = 1.0m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 12mm$ @ $S_v = 600mm$ crs $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300mm$ **Deep x** $B = 1150mm$ **Wide Footing, D16@300 crs**

C. Retaining Height [redacted] Wall height $H := 1.4m$

Design loads

Bending Moment $M_u := \left(1.5\cdot\frac{\gamma_s\cdot h_e^3}{6} + 1.5\cdot\frac{Q_u\cdot h_e^2}{2}\right)\cdot K_a$ $\qquad M_u = 10.4\frac{1}{m}\,kN\cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $\qquad d = 120mm$

Critical shear $V_u := \left[1.5\cdot\frac{\gamma_s\cdot(h_e - d)^2}{2} + 1.5\cdot Q_u\cdot(h_e - d)\right]\cdot K_a$ $\qquad V_u = 17.6\frac{1}{m}\,kN$

Wall Design

$d_{bv} := 12mm$ @ $S_v := 400mm$ crs, $f_y := 500MPa$ $\qquad A_s := \left(\frac{d_{bv}}{2}\right)^2\cdot\frac{\pi}{S_v}$

Nominal BM, $\phi M_n(A_s, d, f_y) = 12.8\frac{1}{m}\,kN\cdot m$

Axial load $N'(H) = 5.3\frac{1}{m}\,kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} > 0.56MPa \\ 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} & \end{cases}$ $\qquad v_m = 0.25MPa$

$\phi V_n := 0.85\cdot v_m\cdot d$ $\qquad \phi V_n = 25.3\frac{1}{m}\,kN$

Strength check $CHK := \begin{cases} \text{"OK"} & \text{if } \phi M_n(A_s, d, f_y) \ge M_u \wedge \phi V_n \ge V_u \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

Check Overturning about TOE

Concrete footing width $B := 1300mm$
Concrete footing thickness $D := 300\,mm$
Toe $B_t := 0mm$

Design OTM $M_{ot}(h_e, D) = 11.8\frac{1}{m}\,kN\cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 34.4\frac{1}{m}\,kN\cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

Total weight $W_G := \gamma_c\cdot B\cdot D + \gamma_m\cdot t_w\cdot H + (\gamma_s\cdot h_e + Q_u)\cdot(B - B_t - t_w)$ $\qquad W_G = 52.0kN\cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $\qquad y = 434mm > B \div 3 = 433mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6\cdot(B \div 2 - y)}{B}\right]\right]$ $\qquad q_u = 79.8kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

For Retaining $h_e = 1.2m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 12mm$ @ $S_v = 400mm$ crs $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300mm$ **Deep x** $B = 1300mm$ **Wide Footing, D16@300crs**

D. Retaining Height [redacted] Wall height $H := 1.6m$

Design loads

Bending Moment $M_u := \left(1.5\frac{\gamma_s \cdot h_e^3}{6} + 1.5\frac{Q_u \cdot h_e^2}{2}\right) \cdot K_a$ $\quad M_u = 15.0\frac{1}{m}\,kN \cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $\quad d = 120mm$

Critical shear $V_u := \left[1.5\frac{\gamma_s \cdot (h_e - d)^2}{2} + 1.5 \cdot Q_u \cdot (h_e - d)\right] \cdot K_a$ $\quad V_u = 22.6\frac{1}{m}\,kN$

Wall Design

$d_{bv} := 16mm$ @ $S_v := 600mm$ crs, $f_y := 500MPa$ $\quad A_s := \left(\frac{d_{bv}}{2}\right)^2 \cdot \frac{\pi}{S_v}$

Nominal BM, $\phi M_n(A_s, d, f_y) = 15.0\frac{1}{m}\,kN \cdot m$

Axial load $N'(H) = 6.1\frac{1}{m}\,kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24MPa + 0.3\frac{N'(H)}{t_w} > 0.56MPa \\ 0.24MPa + 0.3\frac{N'(H)}{t_w} & \end{cases}$ $\quad v_m = 0.25MPa$

$\phi V_n := 0.85 \cdot v_m \cdot d$ $\quad \phi V_n = 25.5\frac{1}{m}\,kN$

Strength check $CHK := \begin{cases} \text{"OK"} & \text{if } 1.05\phi M_n(A_s, d, f_y) \geq M_u \wedge \phi V_n \geq V_u \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\quad CHK = \text{"OK"}$

Check Overturning about TOE

Concrete footing width $B := 1450mm$

Concrete footing thickness $D := 300mm$

Toe $B_t := 0mm$

Design OTM $M_{ot}(h_e, D) = 16.0\frac{1}{m}\,kN \cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 46.6\frac{1}{m}\,kN \cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ Working bearing capacity

Total weight $W_G := \gamma_c \cdot B \cdot D + \gamma_m \cdot t_w \cdot H + (\gamma_s \cdot h_e + Q_u) \cdot (B - B_t - t_w)$ $\quad W_G = 63.4kN \cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $\quad y = 482mm >$ [redacted]

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6 \cdot (B + 2 - y)}{B}\right]\right]$ $\quad q_u = 87.7kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\quad CHK = \text{"OK"}$

For Retaining $h_e = 1.4m$ Use $t_w = 190mm$ series Masonry,
$d_{bv} = 16mm$ @ $S_v = 600mm$ crs $f_y = 500MPa$ vertical, D16 @800 crs horizontal.
$D = 300mm$ Deep x $B = 1450mm$ Wide Footing, D16@300crs

E. Retaining Height [redacted] Wall height $H := 1.8m$

Design loads

Bending Moment $M_u := \left(1.5\cdot\frac{\gamma_s\cdot h_e^3}{6} + 1.5\cdot\frac{Q_u\cdot h_e^2}{2}\right)\cdot K_a$ $\qquad M_u = 20.7\frac{1}{m}\,kN\cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $\qquad d = 120mm$

Critical shear $V_u := \left[1.5\cdot\frac{\gamma_s\cdot(h_e - d)^2}{2} + 1.5\cdot Q_u\cdot(h_e - d)\right]\cdot K_a$ $\qquad V_u = 28.1\frac{1}{m}\,kN$

Wall Design

$d_{bv} := 16mm@\ S_v := 400mm\,crs,\ f_y := 500MPa$ $\qquad A_s := \left(\frac{d_{bv}}{2}\right)^2\cdot\frac{\pi}{S_v}$

Nomimal BM, $\qquad \phi M_n(A_s, d, f_y) = 21.7\frac{1}{m}\,kN\cdot m$

Axial load $N'(H) = 6.8\frac{1}{m}\,kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} > 0.56MPa \\ 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} & \end{cases}$ $\qquad v_m = 0.25MPa$

$\phi V_m := 0.85\cdot v_m\cdot d$ $\qquad \phi V_m = 25.6\frac{1}{m}\,kN$

Shear friction steel area required $A_{vf}(V_u, \phi V_m N'(H), f_y) = -7.0\frac{1}{m}\,mm^2$

Steel area provided $A_{vp} := \frac{(\phi M_n(A_s, d, f_y) - M_u)}{\phi M_n(A_s, d, f_y)}\cdot A_s$ $\qquad A_{vp} = 21.2\frac{1}{m}\,mm^2$

Check Overturning about TOE

Concrete footing width $B := 1600mm$
Concrete footing thickness $D := 300\cdot mm$
Toe $\qquad B_t := 0mm$

Design OTM $M_{ot}(h_e, D) = 21.1\frac{1}{m}\,kN\cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 61.4\frac{1}{m}\,kN\cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

Total weight $W_G := \gamma_c\cdot B\cdot D + \gamma_m\cdot t_w\cdot H + (\gamma_s\cdot h_e + Q_u)\cdot(B - B_t - t_w)$ $\qquad W_G = 75.9kN\cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $\qquad y = 530mm > B \div 3 = 533mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6\cdot(B + 2 - y)}{B}\right]\right]$ $\qquad q_u = 95.4kPa$

Check FOS $\quad CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

For Retaining $h_e = 1.6m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 16mm@\ S_v = 400mm\,crs$ $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300mm$ **Deepx** $B = 1600mm$ **Wide Footing, D16@300crs**

F. Retaining Height [redacted] Wall height $H := 2.0m$

Design loads

Bending Moment $M_u := \left(1.5\cdot\frac{\gamma_s\cdot h_e^3}{6} + 1.5\cdot\frac{Q_u\cdot h_e^2}{2}\right)\cdot K_a$ $\qquad M_u = 27.7\frac{1}{m}\,kN\cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $\qquad d = 120mm$

Critical shear $V_u := \left[1.5\cdot\frac{\gamma_s\cdot(h_e - d)^2}{2} + 1.5\cdot Q_u\cdot(h_e - d)\right]\cdot K_a$ $\qquad V_u = 34.2\frac{1}{m}\,kN$

Wall Design

$d_{bv} := 16mm@\ S_v := 300mm$ crs, $f_y := 500MPa$ $\qquad A_s := \left(\frac{d_{bv}}{2}\right)^2\cdot\frac{\pi}{S_v}$

Nominal BM, $\qquad \phi M_n(A_s, d, f_y) = 27.8\frac{1}{m}\,kN\cdot m$

Axial load $N'(H) = 7.6\frac{1}{m}\,kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} > 0.56MPa \\ 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} & \end{cases}$ $\qquad v_m = 0.25MPa$

$\phi V_m := 0.85\cdot v_m\cdot d$ $\qquad \phi V_m = 25.7\frac{1}{m}\,kN$

Shear friction steel area required $A_{vf}(V_u, \phi V_m N'(H), f_y) = 7.4\frac{1}{m}\,mm^2$

Steel area provided $A_{vp} := \frac{(\phi M_n(A_s, d, f_y) - M_u)}{\phi M_n(A_s, d, f_y)}\cdot A_s$ $\qquad A_{vp} = 1.6\frac{1}{m}\,mm^2$

Check Overturning about TOE

Concrete footing width $B := 1800mm$

Concrete footing thickness $D := 300\cdot mm$

Toe $\qquad B_t := 0mm$

Design OTM $M_{ot}(h_e, D) = 27.1\frac{1}{m}\,kN\cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 83.5\frac{1}{m}\,kN\cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ Working bearing capacity

Total weight $W_G := \gamma_c\cdot B\cdot D + \gamma_m\cdot t_w\cdot H + (\gamma_s\cdot h_e + Q_u)\cdot(B - B_t - t_w)$ $\qquad W_G = 92.0kN\cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $\qquad y = 613mm > B\div 3 = 600mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6\cdot(B + 2 - y)}{B}\right]\right]$ $\qquad q_u = 100.1kPa$

Check FOS $\qquad CHK := \begin{cases} \text{"OK"} & \text{if } 1.05q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

For Retaining $h_e = 1.8m$ Use $t_w = 190mm$ series Masonry,

$d_{bv} = 16mm@\ S_v = 300mm$ crs $f_y = 500MPa$ vertical, D16 @800 crs horizontal.

$D = 300mm$ Deep x $B = 1800mm$ Wide Footing, D16@300 crs

Cantilever Retaining Wall For 2kPa

Properties $kN := 10^3 \cdot N$ $kPa := 10^3 \cdot Pa$ $MPa := 10^3 kPa$

Soil

Density $\gamma_s := 18 kN \cdot m^{-3}$

Cohesive $S_u := 25 kPa$

Masonry

200 mm block $\gamma_m := 21 kN \cdot m^{-3}$ $t_w := 190mm$ $C_{blk} := 95mm$

Density $\gamma_m := 20 \cdot kN \cdot m^{-3}$

Compression strength, $f_m := 12MPa$ **Grade B masonry**

Active pressure factor $K_a := 0.5$ **For Rigid structure**

Concrete

Density $\gamma_c := 24 \cdot kN \cdot m^{-3}$

Loadings

Surcharge $Q_u := 2kPa$

Wall Design

Nomimal BM, $\phi M_n(A_s, d, f_y) := 0.8 \cdot A_s \cdot f_y \cdot \left(d - \frac{A_s \cdot f_y}{2 \cdot 0.85 \cdot f_m} \right)$

Axial load $N'(H) := \gamma_m \cdot t_w \cdot H$

Shear friction provide by vertical steel (NZS 4230:2004 C10.3.2.13), for $\mu_f := 1.0$ **and** $\phi_v := 0.75$

Shear friction steel area required $A_{vf}(V_u, \phi V_m N', f_y) := \frac{1}{f_y} \cdot \left(\frac{V_u - \phi V_m}{\phi_v \cdot \mu_f} - N' \right)$

Footing design

Over turning moment $M_{ot}(h_e, D) := \left[Q_u \cdot \frac{(h_e + D)^2}{2} + \gamma_s \cdot \frac{(h_e + D)^3}{6} \right] \cdot K_a$

$$M_{res}(H, B, D, B_t, h_e) := \left[\gamma_m \cdot t_w \cdot H \cdot \left(B_t + \frac{t_w}{2} \right) + \gamma_c \cdot D \cdot \frac{B^2}{2} + (\gamma_s \cdot h_e + Q_u) \cdot \left[\frac{B^2 - (t_w + B_t)^2}{2} \right] \right]$$

A. Retaining Height $h_e := 0.8m$ Wall height $H := 1.0m$

Design loads

Bending Moment $M_u := \left(1.5 \cdot \frac{\gamma_s \cdot h_e^3}{6} + 1.5 \cdot \frac{Q_u \cdot h_e^2}{2}\right) \cdot K_a$ $M_u = 1.6 \frac{1}{m} kN \cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $d = 95mm$

Critical shear $V_u := \left[1.5 \cdot \frac{\gamma_s \cdot (h_e - d)^2}{2} + 1.5 \cdot Q_u \cdot (h_e - d)\right] \cdot K_a$ $V_u = 4.4 \frac{1}{m} kN$

Wall Design

$d_{bv} := 12mm$ @ $S_v := 600mm$ **crs,** $f_y := 500MPa$ $A_s := \left(\frac{d_{bv}}{2}\right)^2 \cdot \frac{\pi}{S_v}$

Nomimal BM, $\phi M_n(A_s, d, f_y) = 6.8 \frac{1}{m} kN \cdot m$

Axial load $N'(H) = 3.8 \frac{1}{m} kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24MPa + 0.3 \cdot \frac{N'(H)}{t_w} > 0.56MPa \\ 0.24MPa + 0.3 \cdot \frac{N'(H)}{t_w} & \end{cases}$ $v_m = 0.25MPa$

$\phi V_n := 0.85 \cdot v_m \cdot d$ $\phi V_n = 19.9 \frac{1}{m} kN$

Strength check $CHK := \begin{cases} \text{"OK"} & \text{if } \phi M_n(A_s, d, f_y) \geq M_u \wedge \phi V_n \geq V_u \\ \text{"NG"} & \text{otherwise} \end{cases}$ $CHK = \text{"OK"}$

Check Overturning about TOE

Concrete footing width $B := 750mm$
Concrete footing thickness $D := 300 \cdot mm$
Toe $B_t := (B - 190mm) \div 2$

Design OTM $M_{ot}(h_e, D) = 2.6 \frac{1}{m} kN \cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 6.3 \frac{1}{m} kN \cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

Total weight $W_G := \gamma_c \cdot B \cdot D + \gamma_m \cdot t_w \cdot H + (\gamma_s \cdot h_e + Q_u) \cdot (B - B_t - t_w)$ $W_G = 13.8kN \cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $y = 265mm > B \div 3 = 250mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6 \cdot (B + 2 - y)}{B}\right]\right]$ $q_u = 34.6kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5 M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $CHK = \text{"OK"}$

For Retaining $h_e = 0.8m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 12mm$ @ $S_v = 600mm$ **crs** $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300mm$ **Deepx** $B = 750mm$ **Wide Footing, D16@300crs**

B. Retaining Height $h_e := 1m$ Wall height $H := 1.2m$

Design loads

Bending Moment $M_u := \left(1.5\cdot\frac{\gamma_s\cdot h_e^3}{6} + 1.5\cdot\frac{Q_u\cdot h_e^2}{2}\right)\cdot K_a$ $M_u = 3.0\frac{1}{m}\,kN\cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $d = 95mm$

Critical shear $V_u := \left[1.5\cdot\frac{\gamma_s\cdot(h_e - d)^2}{2} + 1.5\cdot Q_u\cdot(h_e - d)\right]\cdot K_a$ $V_u = 6.9\frac{1}{m}\,kN$

Wall Design

$d_{bv} := 12mm$ @ $S_v := 600mm$ **crs,** $f_y := 500MPa$ $A_s := \left(\frac{d_{bv}}{2}\right)^2\cdot\frac{\pi}{S_v}$

Nomimal BM, $\phi M_n(A_s, d, f_y) = 6.8\frac{1}{m}\,kN\cdot m$

Axial load $N'(H) = 4.6\frac{1}{m}\,kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24\cdot MPa + 0.3\cdot\frac{N'(H)}{t_w} > 0.56\cdot MPa \\ 0.24\cdot MPa + 0.3\cdot\frac{N'(H)}{t_w} & \end{cases}$ $v_m = 0.25MPa$

$\phi V_n := 0.85\cdot v_m\cdot d$ $\phi V_n = 20.0\frac{1}{m}\,kN$

Strength check $CHK := \begin{cases} \text{"OK"} & \text{if } \phi M_n(A_s, d, f_y) \ge M_u \wedge \phi V_n \ge V_u \\ \text{"NG"} & \text{otherwise} \end{cases}$ $CHK = \text{"OK"}$

Check Overturning about TOE

Concrete footing width $B := 850mm$

Concrete footing thickness $D := 300\cdot mm$

Toe $B_t := (B - 190mm) \div 2$

Design OTM $M_{ot}(h_e, D) = 4.1\frac{1}{m}\,kN\cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 9.1\frac{1}{m}\,kN\cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

Total weight $W_G := \gamma_c\cdot B\cdot D + \gamma_m\cdot t_w\cdot H + (\gamma_s\cdot h_e + Q_u)\cdot(B - B_t - t_w)$ $W_G = 17.3kN\cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $y = 285mm > B \div 3 = 283mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6\cdot(B \div 2 - y)}{B}\right]\right]$ $q_u = 40.5kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $CHK = \text{"OK"}$

For Retaining $h_e = 1.0m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 12mm$ @ $S_v = 600mm$ **crs** $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300mm$ **Deepx** $B = 850mm$ **Wide Footing, D16@300crs**

C. Retaining Height $h_e := 1.2m$ Wall height $H := 1.4m$

Design loads

Bending Moment $M_u := \left(1.5 \cdot \frac{\gamma_s \cdot h_e^3}{6} + 1.5 \cdot \frac{Q_u \cdot h_e^2}{2}\right) \cdot K_a$ $\qquad M_u = 5.0 \frac{1}{m} kN \cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $\qquad d = 95mm$

Critical shear $V_u := \left[1.5 \cdot \frac{\gamma_s \cdot (h_e - d)^2}{2} + 1.5 \cdot Q_u \cdot (h_e - d)\right] \cdot K_a$ $\qquad V_u = 9.9 \frac{1}{m} kN$

Wall Design

$d_{bv} := 12mm$ @ $S_v := 600mm$ **crs,** $f_y := 500MPa$ $\qquad A_s := \left(\frac{d_{bv}}{2}\right)^2 \cdot \frac{\pi}{S_v}$

Nominal BM, $\phi M_n(A_s, d, f_y) = 6.8 \frac{1}{m} kN \cdot m$

Axial load $N'(H) = 5.3 \frac{1}{m} kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24 \cdot MPa + 0.3 \cdot \frac{N'(H)}{t_w} > 0.56 \cdot MPa \\ 0.24 \cdot MPa + 0.3 \cdot \frac{N'(H)}{t_w} & \end{cases}$ $\qquad v_m = 0.25MPa$

$\phi V_n := 0.85 \cdot v_m \cdot d$ $\qquad \phi V_n = 20.1 \frac{1}{m} kN$

Strength check $CHK := \begin{cases} \text{"OK"} & \text{if } \phi M_n(A_s, d, f_y) \geq M_u \wedge \phi V_n \geq V_u \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

Check Overturning about TOE

Concrete footing width $B := 1000mm$
Concrete footing thickness $D := 300 \cdot mm$
Toe $B_t := (B - 190mm) \div 2$

Design OTM $M_{ot}(h_e, D) = 6.2 \frac{1}{m} kN \cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 13.9 \frac{1}{m} kN \cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

Total weight $W_G := \gamma_c \cdot B \cdot D + \gamma_m \cdot t_w \cdot H + (\gamma_s \cdot h_e + Q_u) \cdot (B - B_t - t_w)$ $\qquad W_G = 22.1 kN \cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $\qquad y = 349mm > B \div 3 = 333mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6 \cdot (B \div 2 - y)}{B}\right]\right]$ $\qquad q_u = 42.1kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5 M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

For Retaining $h_e = 1.2m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 12mm$ @ $S_v = 600mm$ **crs** $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300mm$ **Deep x** $B = 1000mm$ **Wide Footing, D16@300crs**

D. Retaining Height $h_e := 1.4m$ Wall height $H := 1.6m$

Design loads

Bending Moment $M_u := \left(1.5\cdot\frac{\gamma_s\cdot h_e^3}{6} + 1.5\cdot\frac{Q_u\cdot h_e^2}{2}\right)\cdot K_a$ $\qquad M_u = 7.6\frac{1}{m}\,kN\cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $\qquad d = 95mm$

Critical shear $V_u := \left[1.5\cdot\frac{\gamma_s\cdot(h_e - d)^2}{2} + 1.5\cdot Q_u\cdot(h_e - d)\right]\cdot K_a$ $\qquad V_u = 13.5\frac{1}{m}\,kN$

Wall Design

$d_{bv} := 12mm$ @ $S_v := 400mm$ crs, $f_y := 500MPa$ $\qquad A_s := \left(\frac{d_{bv}}{2}\right)^2\cdot\frac{\pi}{S_v}$

Nomimal BM, $\phi M_n(A_s, d, f_y) = 10.0\frac{1}{m}\,kN\cdot m$

Axial load $N'(H) = 6.1\frac{1}{m}\,kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} > 0.56MPa \\ 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} & \end{cases}$ $\qquad v_m = 0.25MPa$

$\phi V_n := 0.85\cdot v_m\cdot d$ $\qquad \phi V_n = 20.2\frac{1}{m}\,kN$

Strength check $CHK := \begin{cases} \text{"OK"} & \text{if } 1.05\phi M_n(A_s, d, f_y) \ge M_u \wedge \phi V_n \ge V_u \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

Check Overturning about TOE

Concrete footing width $B := 1100mm$

Concrete footing thickness $D := 300mm$

Toe $B_t := (B - 190mm) \div 2$

Design OTM $M_{ot}(h_e, D) = 8.8\frac{1}{m}\,kN\cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 18.5\frac{1}{m}\,kN\cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

Total weight $W_G := \gamma_c\cdot B\cdot D + \gamma_m\cdot t_w\cdot H + (\gamma_s\cdot h_e + Q_u)\cdot(B - B_t - t_w)$ $\qquad W_G = 26.4kN\cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $\qquad y = 367mm > B \div 3 = 367mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6\cdot(B \div 2 - y)}{B}\right]\right]$ $\qquad q_u = 47.9kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, b_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\qquad CHK = \text{"OK"}$

For Retaining $h_e = 1.4m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 12mm$ @ $S_v = 400mm$ **crs** $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300mm$ **Deepx** $B = 1100mm$ **Wide Footing, D16@300crs**

E. Retaining Height $h_e := 1.6m$ Wall height $H := 1.8m$

Design loads

Bending Moment $M_u := \left(1.5\cdot\frac{\gamma_s\cdot h_e^3}{6} + 1.5\cdot\frac{Q_u\cdot h_e^2}{2}\right)\cdot K_a$ $M_u = 11.1\frac{1}{m}\,kN\cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $d = 95mm$

Critical shear $V_u := \left[1.5\cdot\frac{\gamma_s\cdot(h_e - d)^2}{2} + 1.5\cdot Q_u\cdot(h_e - d)\right]\cdot K_a$ $V_u = 17.5\frac{1}{m}\,kN$

Wall Design

$d_{bv} := 16mm$ @ $S_v := 600mm$ **crs,** $f_y := 500MPa$ $A_s := \left(\frac{d_{bv}}{2}\right)^2\cdot\frac{\pi}{S_v}$

Nomimal BM, $\phi M_n(A_s, d, f_y) = 11.6\frac{1}{m}\,kN\cdot m$

Axial load $N'(H) = 6.8\frac{1}{m}\,kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} > 0.56MPa \\ 0.24MPa + 0.3\cdot\frac{N'(H)}{t_w} & \end{cases}$ $v_m = 0.25MPa$

$\phi V_m := 0.85\cdot v_m\cdot d$ $\phi V_m = 20.3\frac{1}{m}\,kN$

Shear friction steel area required $A_{vf}(V_u, \phi V_m N'(H), f_y) = -20.9\frac{1}{m}\,mm^2$

Steel area provided $A_{vp} := \frac{(\phi M_n(A_s, d, f_y) - M_u)}{\phi M_n(A_s, d, f_y)}\cdot A_s$ $A_{vp} = 14.3\frac{1}{m}\,mm^2$

Check Overturning about TOE

Concrete footing width $B := 1250mm$
Concrete footing thickness $D := 300\cdot mm$
Toe $B_t := (B - 190mm) \div 2$

Design OTM $M_{ot}(h_e, D) = 12.1\frac{1}{m}\,kN\cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 26.0\frac{1}{m}\,kN\cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

Total weight $W_G := \gamma_c\cdot B\cdot D + \gamma_m\cdot t_w\cdot H + (\gamma_s\cdot h_e + Q_u)\cdot(B - B_t - t_w)$ $W_G = 32.2kN\cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $y = 432mm > B \div 3 = 417mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6\cdot(B \div 2 - y)}{B}\right]\right]$ $q_u = 49.6kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $CHK = \text{"OK"}$

For Retaining $h_e = 1.6m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 16mm$ @ $S_v = 600mm$ **crs** $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300mm$ **Deepx** $B = 1250mm$ **Wide Footing, D16@300crs**

F. Retaining Height $h_e := 1.8m$ Wall height $H := 2.0m$

Design loads

Bending Moment $M_u := \left(1.5\cdot\frac{\gamma_s\cdot h_e^3}{6} + 1.5\cdot\frac{Q_u\cdot h_e^2}{2}\right)\cdot K_a$ $\quad M_u = 15.6\frac{1}{m}\,kN\cdot m$

Distance of vertical steel to wall extreme fibre $d := t_w - C_{blk}$ $\quad d = 95mm$

Critical shear $V_u := \left[1.5\cdot\frac{\gamma_s\cdot(h_e - d)^2}{2} + 1.5\cdot Q_u\cdot(h_e - d)\right]\cdot K_a$ $\quad V_u = 22.2\frac{1}{m}\,kN$

Wall Design

$d_{bv} := 16mm$ @ $S_v := 400mm$ **crs,** $f_y := 500MPa$ $\quad A_s := \left(\frac{d_{bv}}{2}\right)^2\cdot\frac{\pi}{S_v}$

Nomimal BM, $\phi M_n(A_s, d, f_y) = 16.6\frac{1}{m}\,kN\cdot m$

Axial load $N'(H) = 7.6\frac{1}{m}\,kN$

Masonry shear stress, $v_m := \begin{cases} 0.56MPa & \text{if } 0.24\cdot MPa + 0.3\cdot\frac{N'(H)}{t_w} > 0.56MPa \\ 0.24\cdot MPa + 0.3\cdot\frac{N'(H)}{t_w} & \end{cases}$ $\quad v_m = 0.25MPa$

$\phi V_m := 0.85\cdot v_m\cdot d$ $\quad \phi V_m = 20.3\frac{1}{m}\,kN$

Shear friction steel area required $A_{vf}(V_u, \phi V_m N'(H), f_y) = -10.3\frac{1}{m}\,mm^2$

Steel area provided $A_{vp} := \frac{(\phi M_n(A_s, d, f_y) - M_u)}{\phi M_n(A_s, d, f_y)}\cdot A_s$ $\quad A_{vp} = 32.4\frac{1}{m}\,mm^2$

Check Overturning about TOE

Concrete footing width $B := 1350mm$
Concrete footing thickness $D := 300\cdot mm$
Toe $B_t := (B - 190mm) \div 2$

Design OTM $M_{ot}(h_e, D) = 16.1\frac{1}{m}\,kN\cdot m$

Resisted OTM $M_{res}(H, B, D, B_t, h_e) = 32.8\frac{1}{m}\,kN\cdot m$

Bearing Check

Soil bearing strength, $q_{bearing} := 100kPa$ **Working bearing capacity**

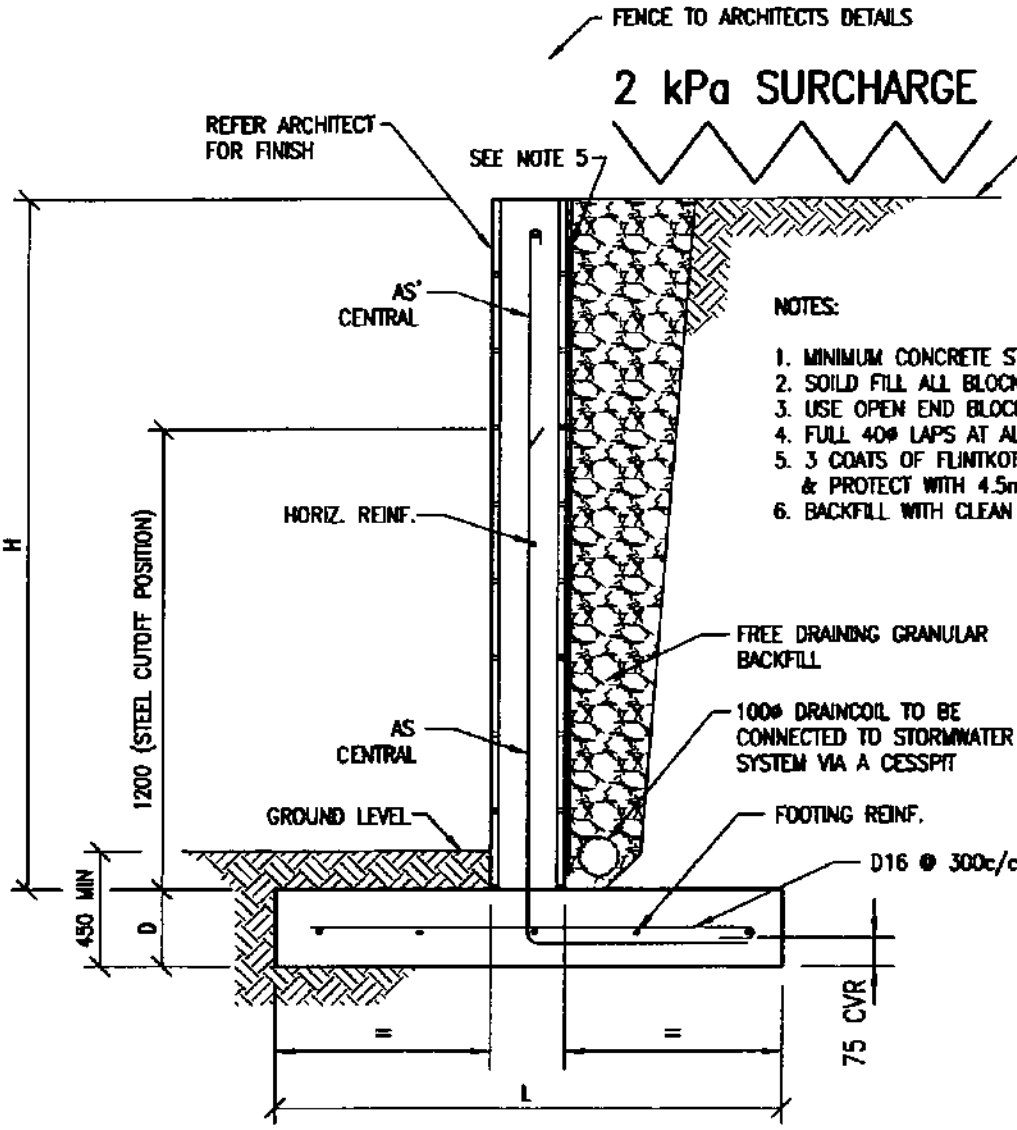
Total weight $W_G := \gamma_c\cdot B\cdot D + \gamma_m\cdot t_w\cdot H + (\gamma_s\cdot h_e + Q_u)\cdot(B - B_t - t_w)$ $\quad W_G = 37.3kN\cdot m^{-1}$

Load eccentricity $y := \frac{M_{res}(H, B, D, B_t, h_e) - M_{ot}(h_e, D)}{W_G}$ $\quad y = 449mm > B \div 3 = 450mm$

Applied load $q_u := \max\left[\frac{W_G}{B}, \frac{W_G}{B}\left[1 + \frac{6\cdot(B + 2 - y)}{B}\right]\right]$ $\quad q_u = 55.3kPa$

Check FOS $CHK := \begin{cases} \text{"OK"} & \text{if } 1.05q_{bearing} > q_u \wedge M_{res}(H, B, D, B_t, h_e) > 1.5M_{ot}(h_e, D) \\ \text{"NG"} & \text{otherwise} \end{cases}$ $\quad CHK = \text{"OK"}$

For Retaining $h_e = 1.8m$ **Use** $t_w = 190mm$ **series Masonry,**
$d_{bv} = 16mm$ @ $S_v = 400mm$ **crs** $f_y = 500MPa$ **vertical, D16 @800 crs horizontal.**
$D = 300mm$ **Deepx** $B = 1350mm$ **Wide Footing, D16@300crs**



NOTES:

1. MINIMUM CONCRETE STRENGTH TO BE 17.5MPA.
2. SOILD FILL ALL BLOCKS WITH GROUT.
3. USE OPEN END BLOCKS.
4. FULL 40ø LAPS AT ALL INTERSECTIONS TO STEEL.
5. 3 COATS OF FLINTKOTE TO REAR FACE OF WALL & PROTECT WITH 4.5mm FLAT HARDIFLEX.
6. BACKFILL WITH CLEAN DRAINAGE SCORIA.

H	L	AS	AS'	BLOCK	D	HORIZ REINF	FOOTING REINF.
1800–1600	1350	HD16 @ 400c/c	HD16 @ 400c/c	200	300	D12 @ 800c/c	5/D16
1600–1400	1250	HD16 @ 600c/c	HD16 @ 600c/c	200	300	D12 @ 800c/c	4/D16
1400–1200	1100	HD12 @ 400c/c	HD12 @ 400c/c	200	300	D12 @ 800c/c	4/D16
1200–1000	1000	HD12 @ 600c/c	HD12 @ 400c/c	200	300	D12 @ 800c/c	4/D16
1000–800	850	HD12 @ 600c/c	HD12 @ 600c/c	200	300	2/D12	3/D16
800–0	750	HD12 @ 600c/c	D12 @ 600c/c	200	300	2/D12	3/D16

BLOCK RETAINING WALL AWAY FROM BOUNDARY

SCALE 1:20

Report No: 21 5257 00
Page: 2 of 3

FILL SUMMARY SHEET

Job Name : **Stancombe Road**

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m³)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m³)	SOLID DENSITY (t/m³) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH In kPa				NOTES
1	GC	24.1.05	See plan	1.90	24.6	1.52	2.7	6.1	199++	199++	199++	199++	
2				1.89	28.6	1.47	2.7	3.4	199++	199++	199++	199++	
3				1.78	34.4	1.32	2.7	5.5	153	199+	199+	199+	
4	CA & WF	25.1.05	See plan	1.87	34.6	1.39	2.7	0.5	179	199+	199+	199++	
5				1.82	38.8	1.31	2.7	0.7	182	188	199+	199+	
6				1.73	31.0	1.32	2.7	10	134	131	122	182	
7	CA	26.1.05	See plan	1.96	32.8	1.47	2.7	-2.9	171	199+	199++	199++	
8				1.98	25.7	1.57	2.7	1.3	199+	199+	199+	199+	
9				1.87	33.0	1.40	2.7	1.6	199+	199+	199+	199+	
10	CA	27.1.05am	See plan	1.94	24.2	1.56	2.7	4.3	188	185	199+	199+	
11				1.90	19.6	1.59	2.7	10	148	179	199+	199+	
12				1.87	33.9	1.40	2.7	0.8	199+	199++	199++	199++	
13	CA	27.1.05pm	See plan	1.93	20.5	1.60	2.7	7.8	199++	199++	199++	199++	
14				1.93	25.7	1.53	2.7	3.8	199++	199++	UTP	UTP	

Transpositions Checked By : TB Date: 03.02.05
Approved Signatory : Date: 02.02.05

Please see page 1 of this report for test standard information

FILL SUMMARY SHEET

Job Name : **124 Stancombe Road**

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m³)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m³)	SOLID DENSITY (t/m³) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH in kPa				NOTES
15	CA & RP	20.4.05	See plan	1.84	24.5	1.48	2.7	9.0	236++	236++	236++	236++	
16				1.82	20.4	1.51	27	13	236++	236++	236++	236++	
17	CA & RP	22.4.05	See plan	1.89	27.2	1.48	2.7	4.7	236+	236++	236++	236++	
18				1.92	29.8	1.48	27	1.2	236++	236++	236++	236++	

Transpositions Checked By : JM Date: 3.5.05
Approved Signatory : Date: 5.5.05

Please see page 1 of this report for test standard information

Ref: 2704

DIARY NOTES

North of Carlos Drive, 124 Stancombe Road, East Tamaki

Date: 17/1/05 GSL Staff

Ian Gibson (Aireys) rang for GSL to visit site and inspect gully cleanout. I (EC) visited site with knowledge that our initial site investigation was for the proposed apartments at the front of the site only (refer phone conversation note with Graham Raymond). We therefore needed to undertake site investigation for the remainder of the site. Gully had surficial materials mullocked out and flanks stripped of topsoil. Deep stormwater line trenches had been dug along the eastern boundary and to the south along the proposed road alignment. Very soft pumiceous materials, saturated the trench invert. Organise return visit to site next day with guys to drill holes.

Date: 18/1/05 GSL Staff

Site investigation/gully cleanout: I (EC) met Peter from Sharpe Civil. Discussed objectives of GSL and plan of attack for gully. Drill holes in current invert to ascertain depth of undercut. Some more materials need to be mucked out. Also noted heavy seepages along northwest back of gully.

Date: 19/1/05 GSL Staff

More gully muckout in invert.

Date: 26/1/05 GSL Staff

I (ML) and EC attended the site at approximately midday on a hot, dry day. We returned on the basis of Civil Lab fill testing from 25.1.05 showing a failure in one area of the gully infill. The results in this area showed 10% air voids and shear strengths as low as 122kPa by comparison to strengths well upward of 180kPa in most other parts. The location of this failure is marked on the attached plan.

At the surface, shear vane readings were all 138+. However, the gumspear highlighted soft spots about .5 metres deep in the otherwise well compacted fill. Eugene had the site guys dig up the fill to a depth of approx 0.5 metres in one part of the area of concern. This revealed an area of poor quality fill with limited compaction. Eugene advised the contractor that the fill above the soft region should be moved temporarily while the substandard fill was removed and discharged. This would then allow the replacement of the fill and continued compaction. Beyond this region of concern, the fill was all very stiff and well compacted, with a large sheepsfoot roller providing more than adequate compaction, with no signs of ground movement beneath its weight.

Date: 19/4/05 GSL Staff

I (PJ) visited the site and spoke to Brendon. They recommended placing the fill some two days ago after several months stand-down. I was told that more than a metre was already placed in the southwest corner but much less at the back. Informed Civil Lab to begin testing as soon as possible. Arranged with James to drill handaugers to test the new fill where it is deep.

Date: 24/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard, although some soft spots were observed and the contractor informed. Very little fill has been placed. One dozer, one compactor and two dump trucks at work on the site.

Date: 25/01/05 Civil Lab Staff

One compactor and one dozer at work. Material is a firm to stiff, highly plastic, silty clay.

Date: 26/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard. One digger and one compactor on site.

Date: 27/01/05 Civil Lab Staff

Morning: fill appears to be of a satisfactory standard. One dozer and one compactor at work. Material is firm to stiff, highly plastic, light grey and yellow/brown mixed, slightly silty clay and moist.

Date: 27/01/05 Civil Lab Staff

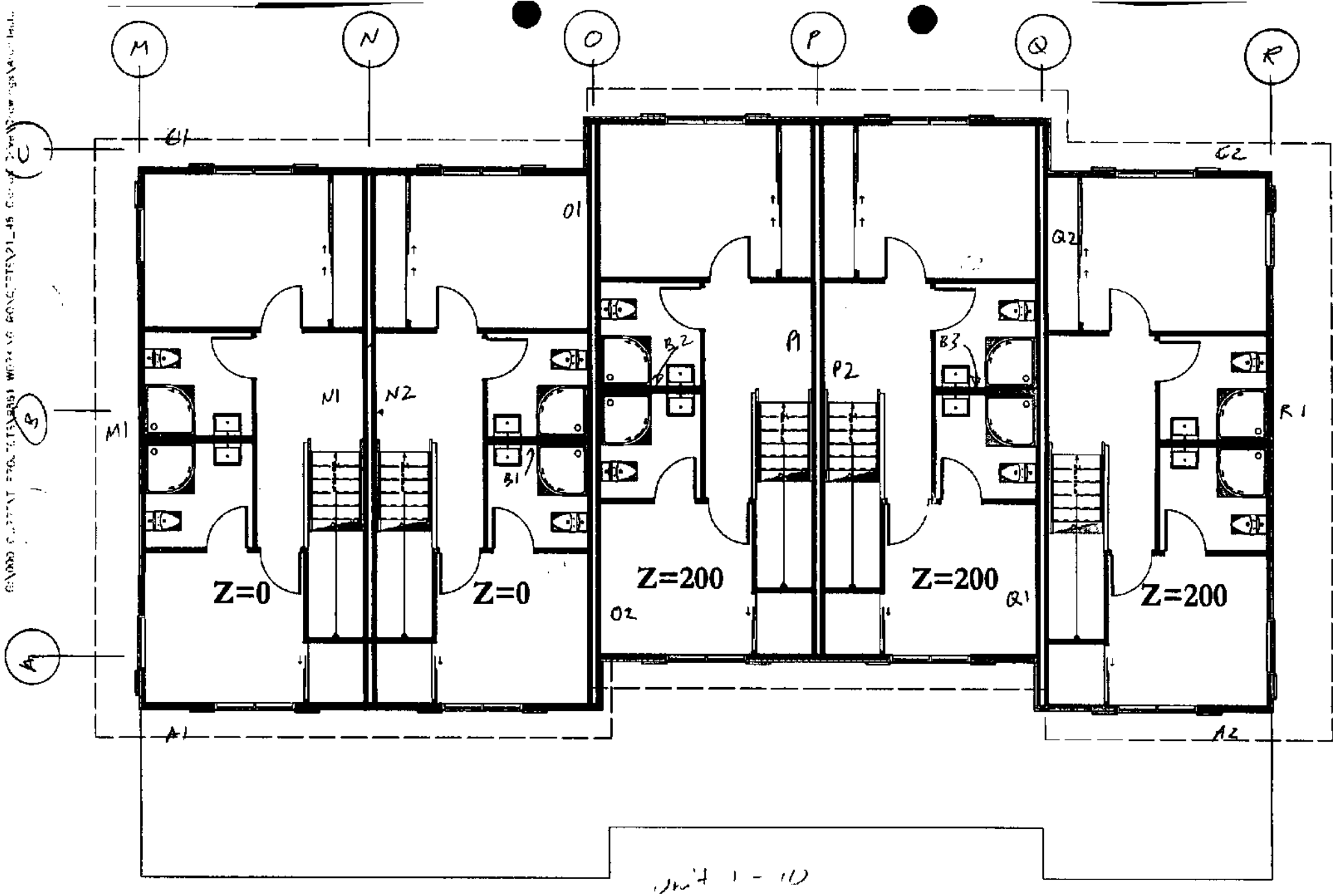
Afternoon: Fill appears to be of a satisfactory standard. One digger on site.

Date: 20/04/05 Civil Lab Staff

One compactor and one digger on site. Material is firm, highly plastic, light grey, cream, orange brown and yellow brown mixed slightly silty clay and moist.

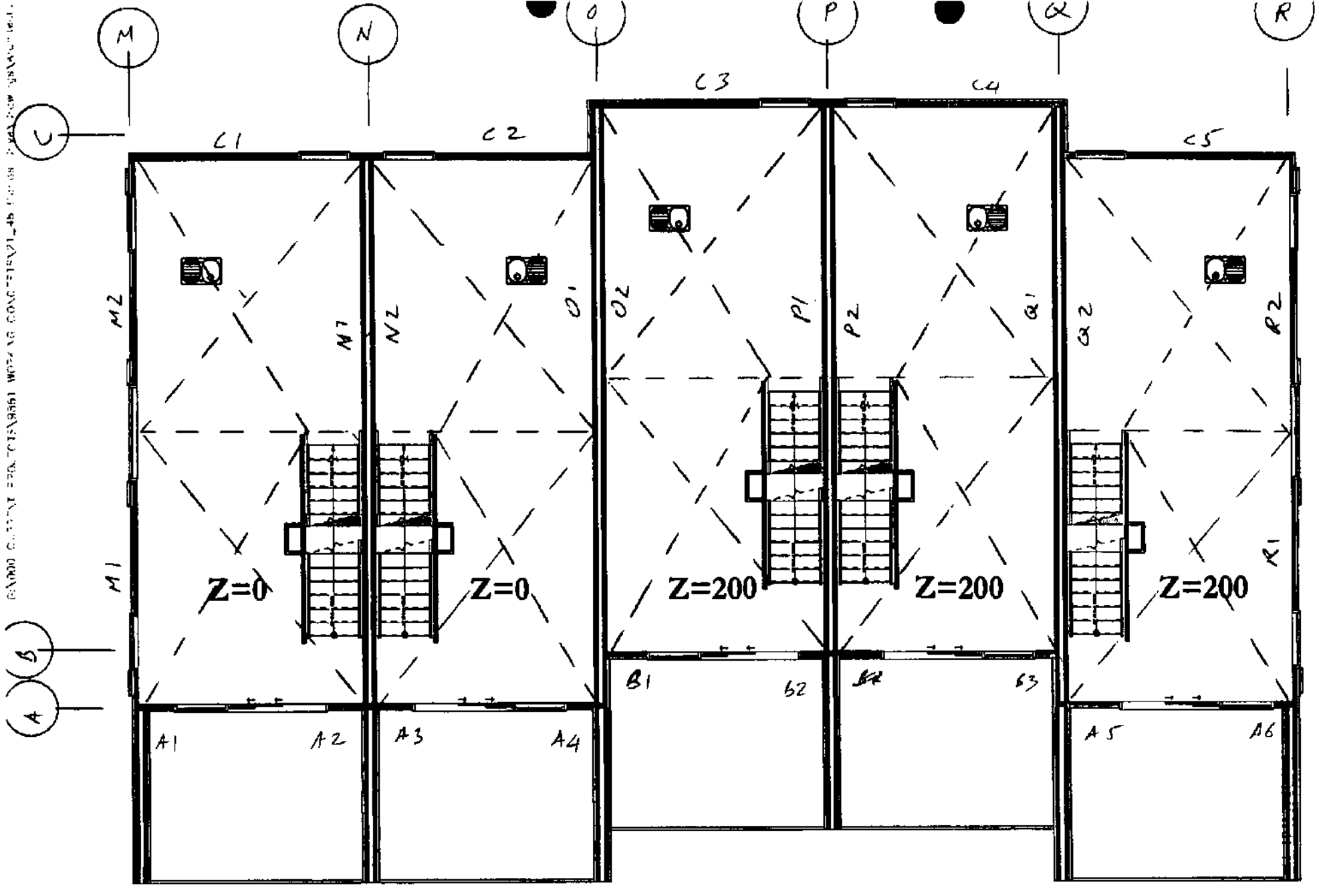
Date: 22/04/05 Civil Lab Staff

Fill appears to be of a satisfactory standard. One compactor on site. Fill is firm, highly plastic, light grey orange brown and yellow brown mixed silty clay and moist.



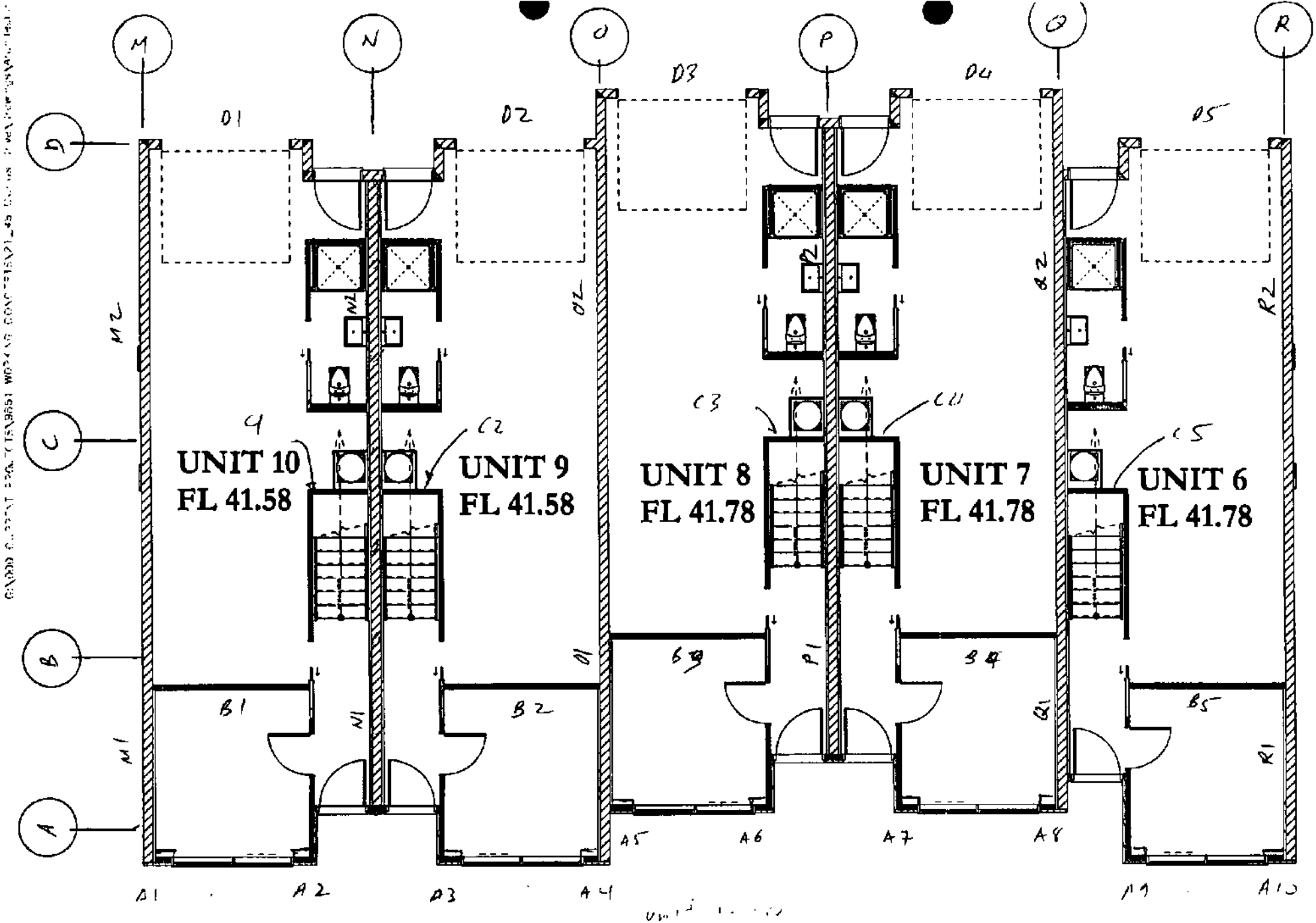
Unit 1 - 10

level 2



Unit 1-10

Level 1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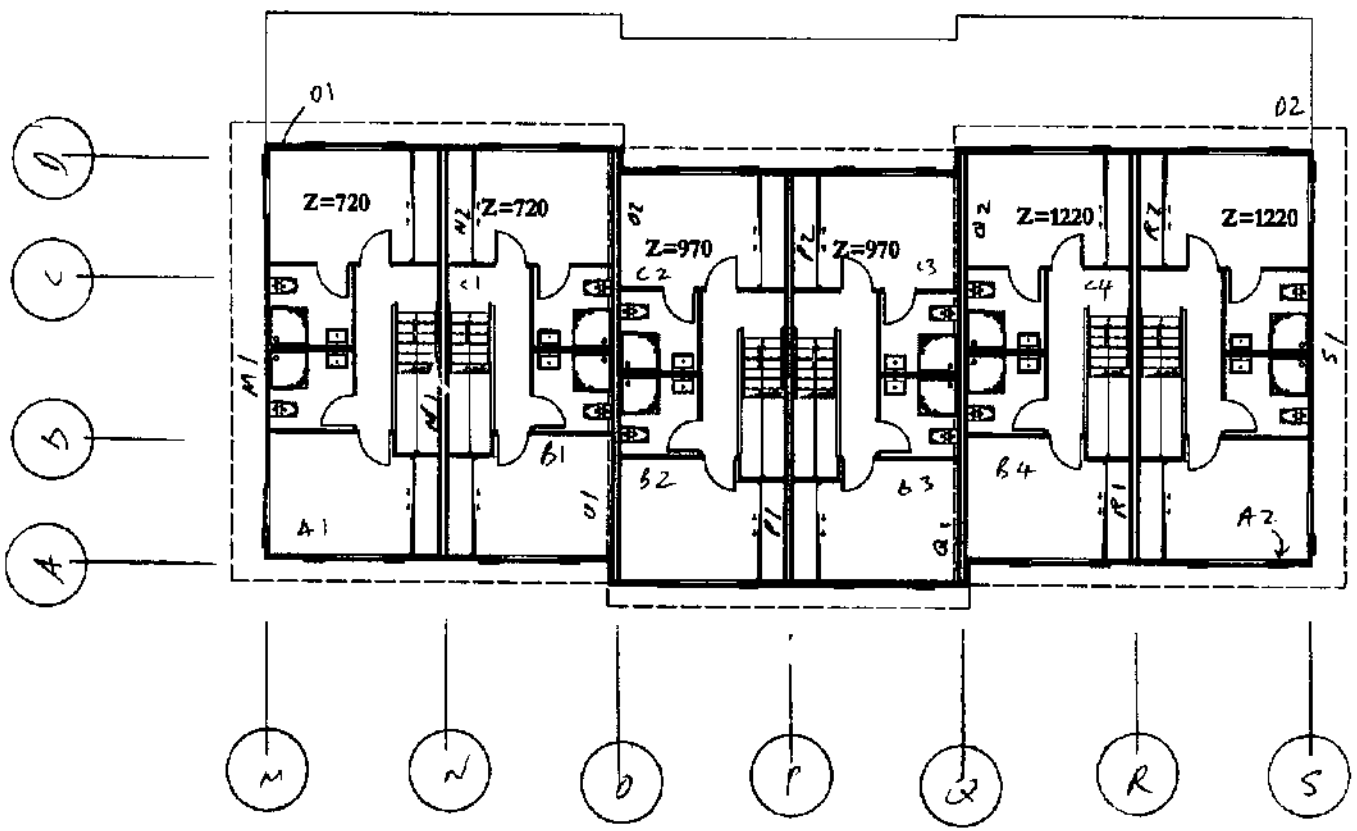
FL 41.58
UNIT 9
FL 41.58
UNIT 8
FL 41.78
UNIT 7
FL 41.78
UNIT 6
FL 41.78

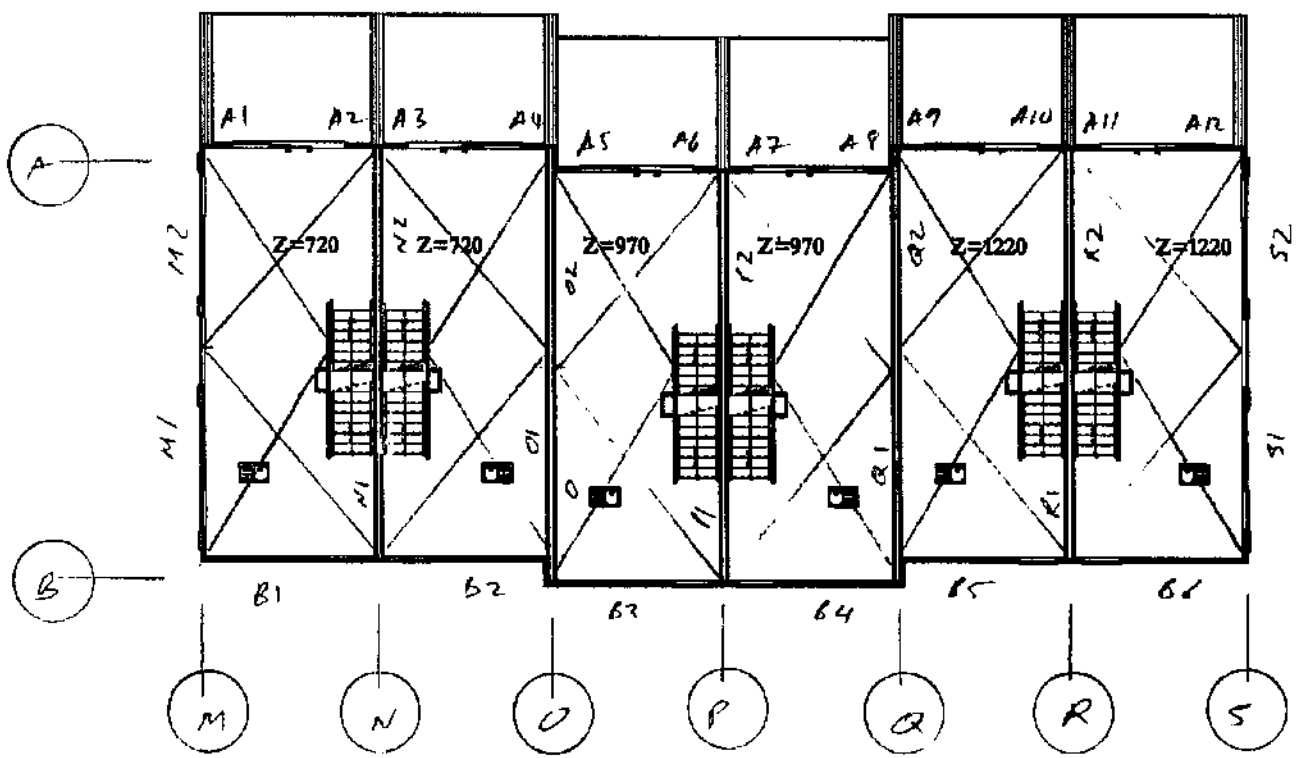
Unit 11 - 22



2nd floor

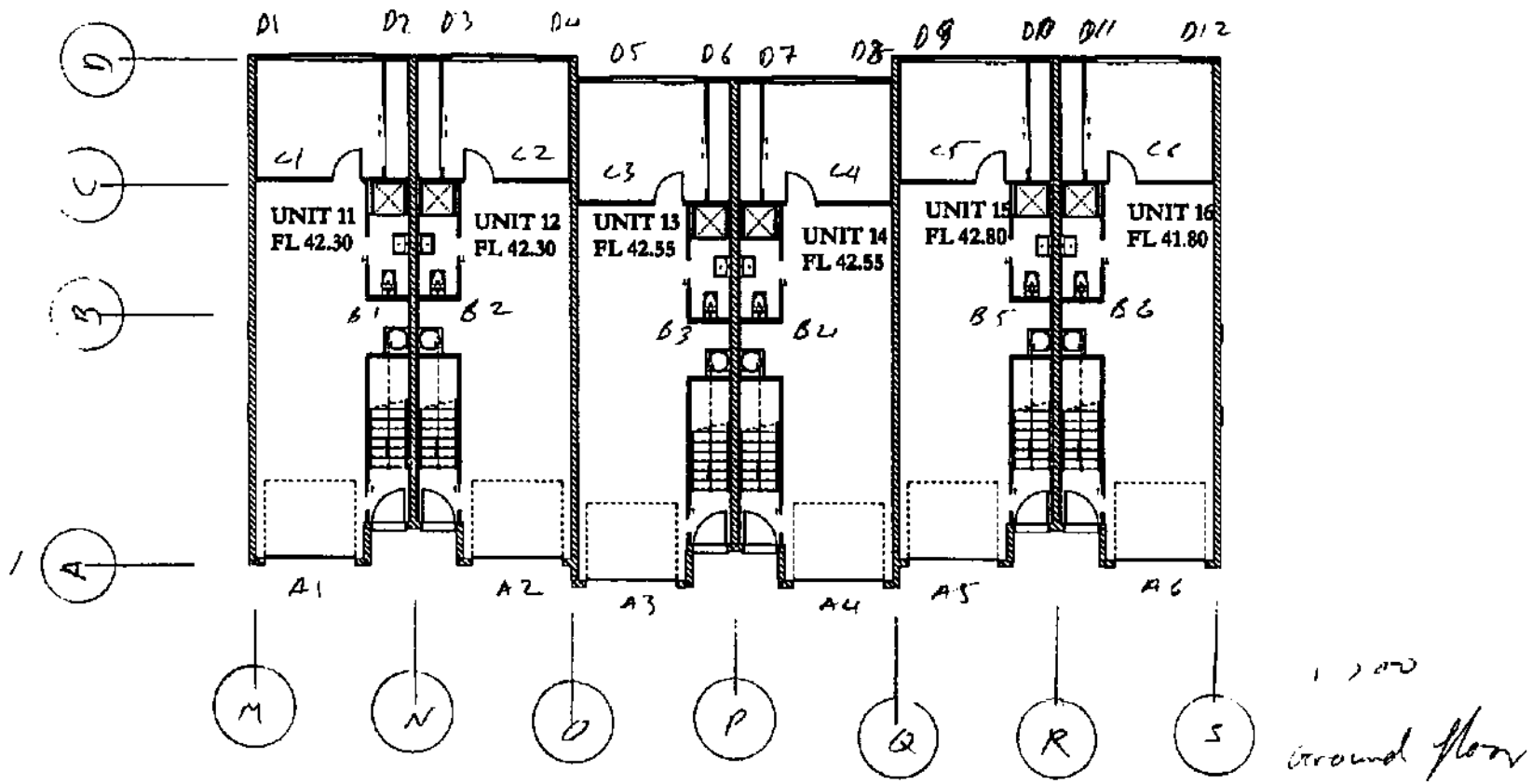
1:200

Unit 11-22



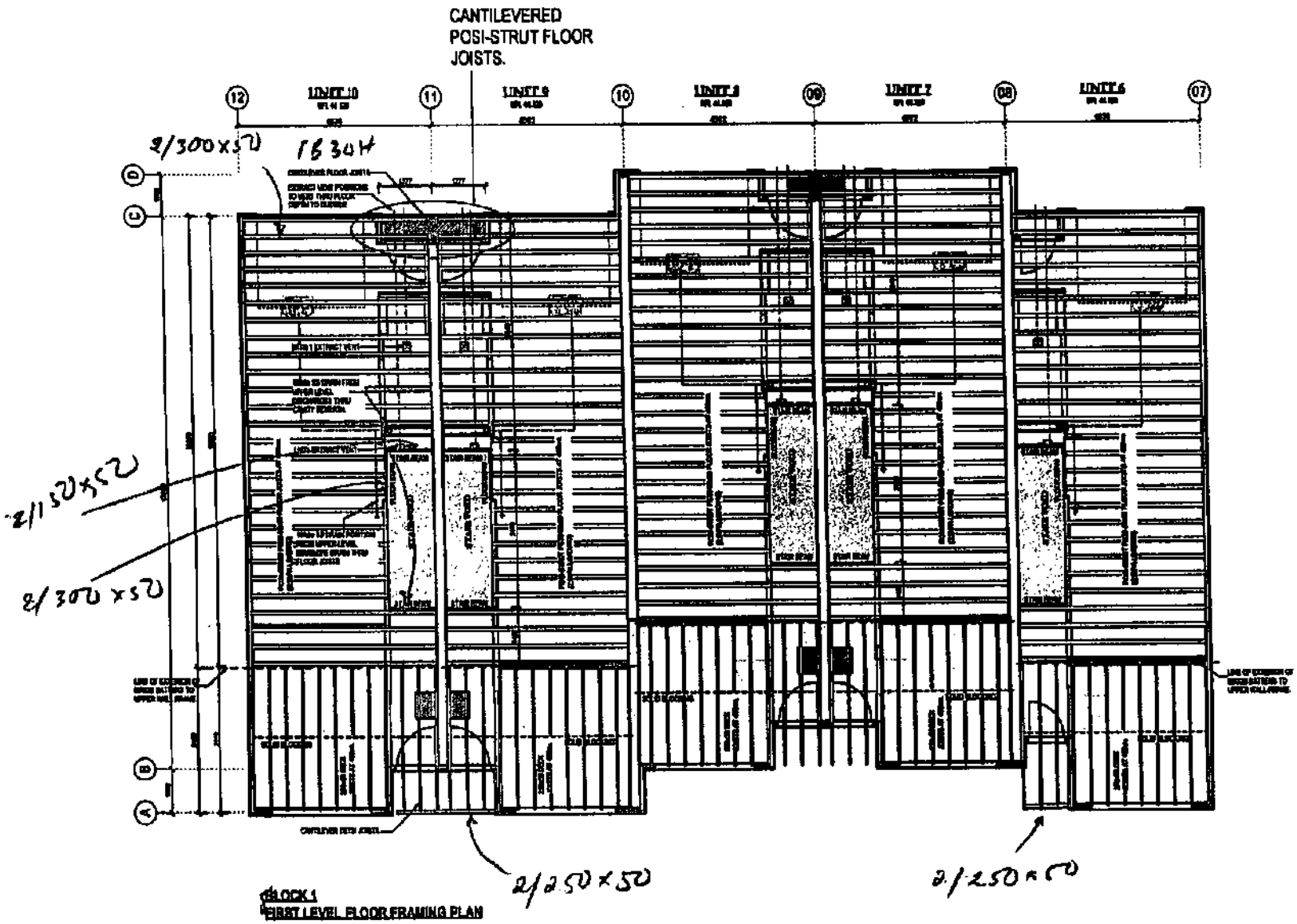
First floor

1:200


UNIT 11
FL 42.30
UNIT 12
FL 42.30
UNIT 13
FL 42.55
UNIT 14
FL 42.55
UNIT 15
FL 42.80
UNIT 16
FL 41.80
D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12
C1 C2 C3 C4 C5 C6
B1 B2 B3 B4 B5 B6
A1 A2 A3 A4 A5 A6
D C B A
M N O P Q R S
ground floor

unit 11 - 22

46



BLOCK 1
FIRST LEVEL FLOOR FRAMING PLAN

PRELIMINARY ONLY

GENERAL NOTES:

KINGSTT MITCHELL LTD
HYDRAULIC SERVICES LTD
FIRE DESIGNS LTD
KINGSTT MITCHELL LTD
ARBY CONSULTANTS LTD
ARBY CONSULTANTS LTD
GEOTEK SERVICES LTD
SAMEDALE SURVEYORS LTD

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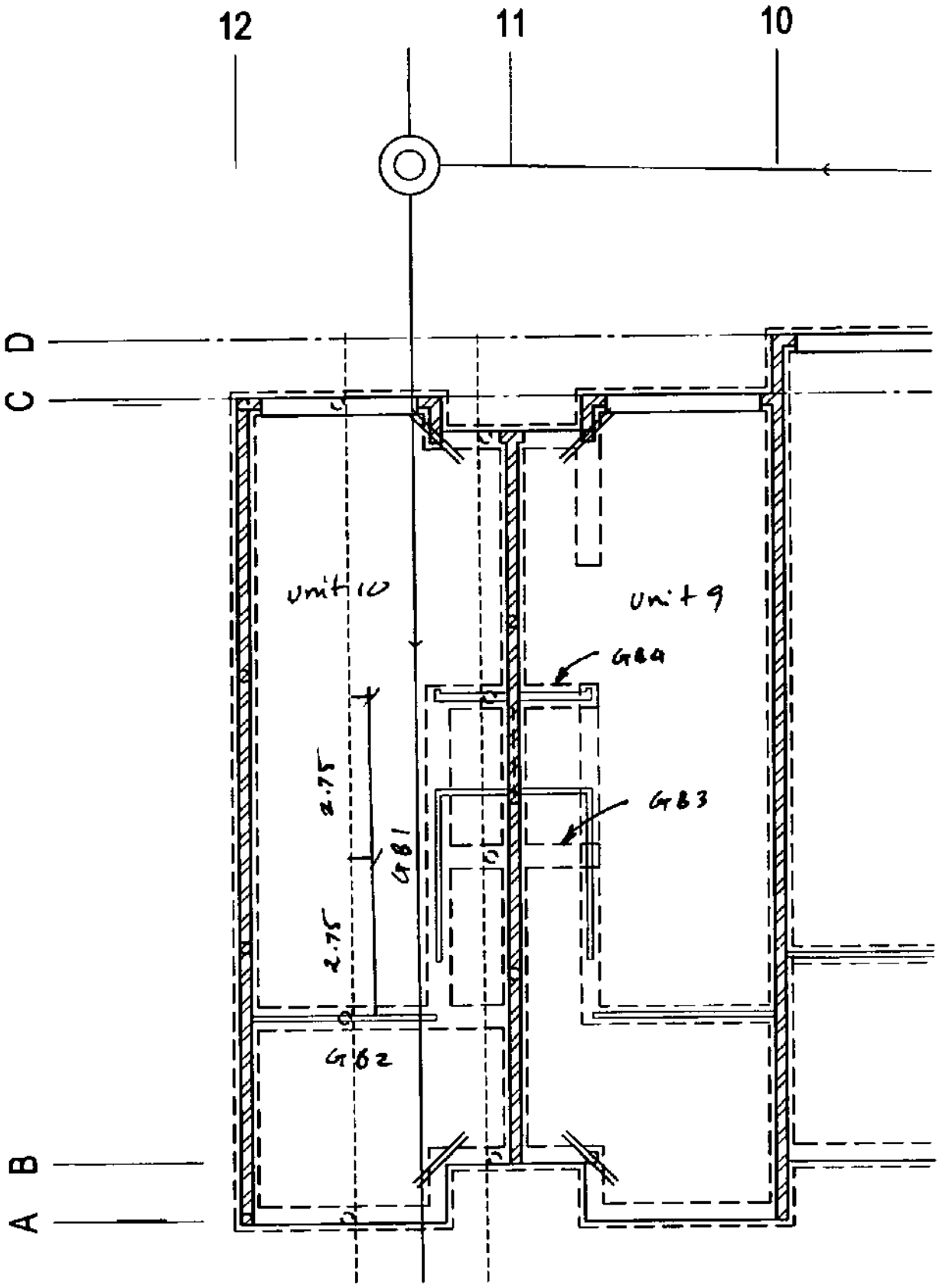
CLIENT
CARLOS CONCEPTS LIMITED

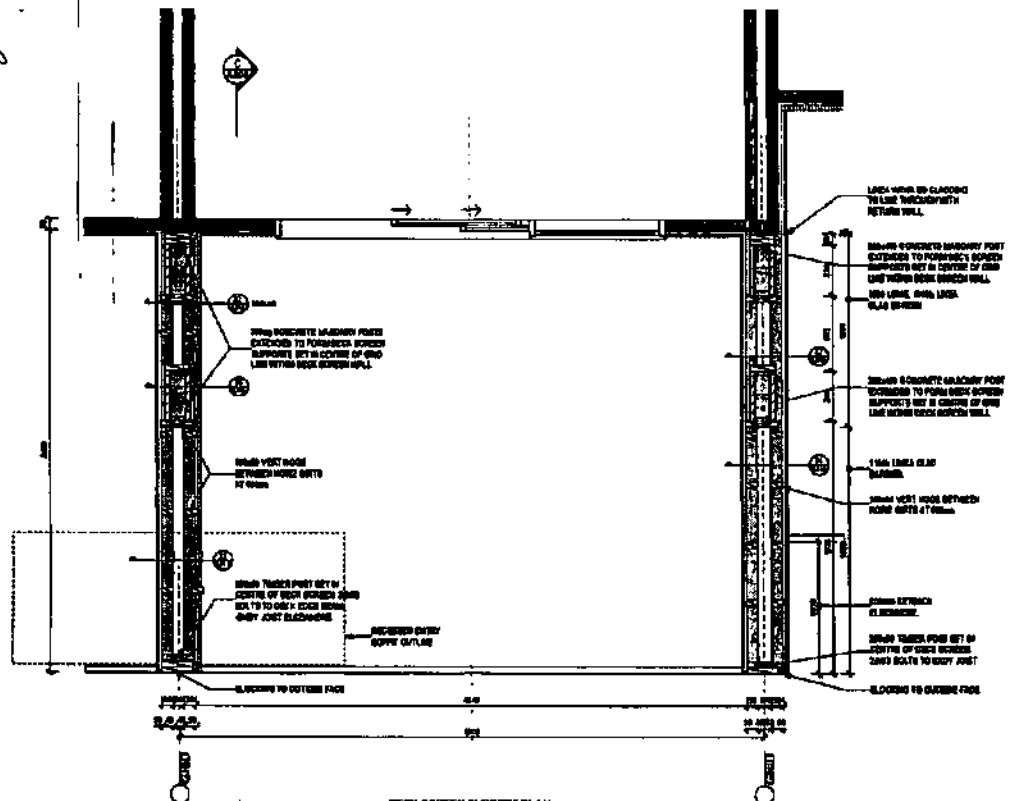
PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

DWG TITLE
BLOCK 1 LEVEL 1
FLOOR FRAMING PLAN

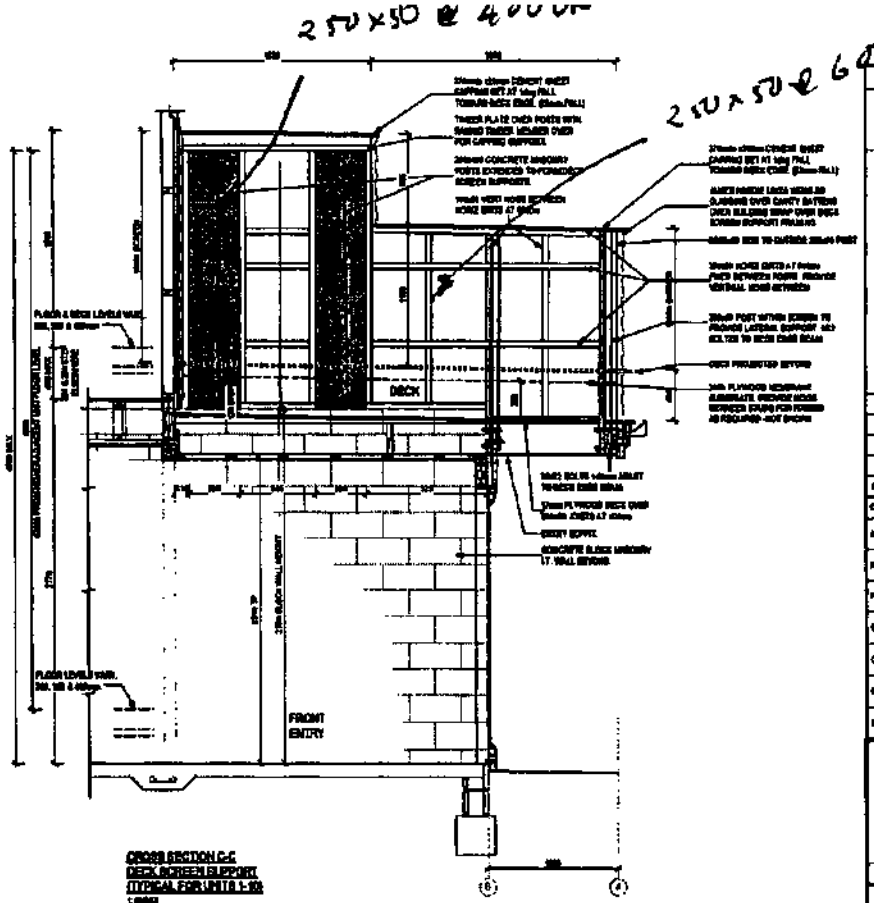
DATE 4 APR 2007
DRAWN RD
SCALE 1:50@A1 / 1:100@A3
DWG P 31
REV A
STAGE PRELIMINARY

ARCHITECTURAL SERIES

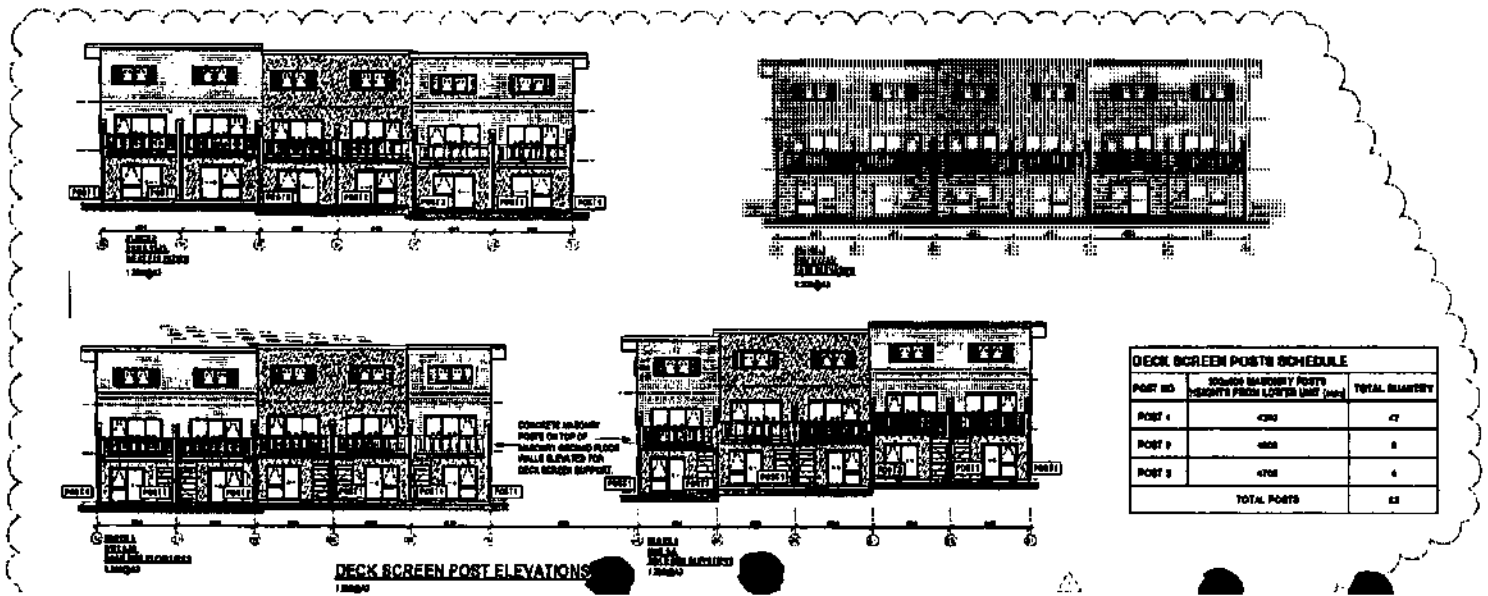

12
11
10
D
C
B
A
unit 10
unit 9
GB4
GB3
GB1
GB2
2.75
2.75



DECK SCREEN SUPPORT PLAN



CROSS SECTION C-C
DECK SCREEN SUPPORT
(TYPICAL FOR UNITS 1-10)



DECK SCREEN POST ELEVATIONS

DECK SCREEN POSTS SCHEDULE		
POST NO	200x400 MASONRY POSTS HEIGHTS FROM LOWER UNIT (mm)	TOTAL QUANTITY
POST 1	4200	47
POST 2	4800	8
POST 3	4700	4
TOTAL POSTS		63

GENERAL NOTES:

REV	DESCRIPTION	DATE
1	STRUCTURAL CHANGES & ELEVATIONS	[illegible]
	BUILDING CONSENT ISSUE	[illegible]

CONSULTANT	COMPANY
ACCOUNTING	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

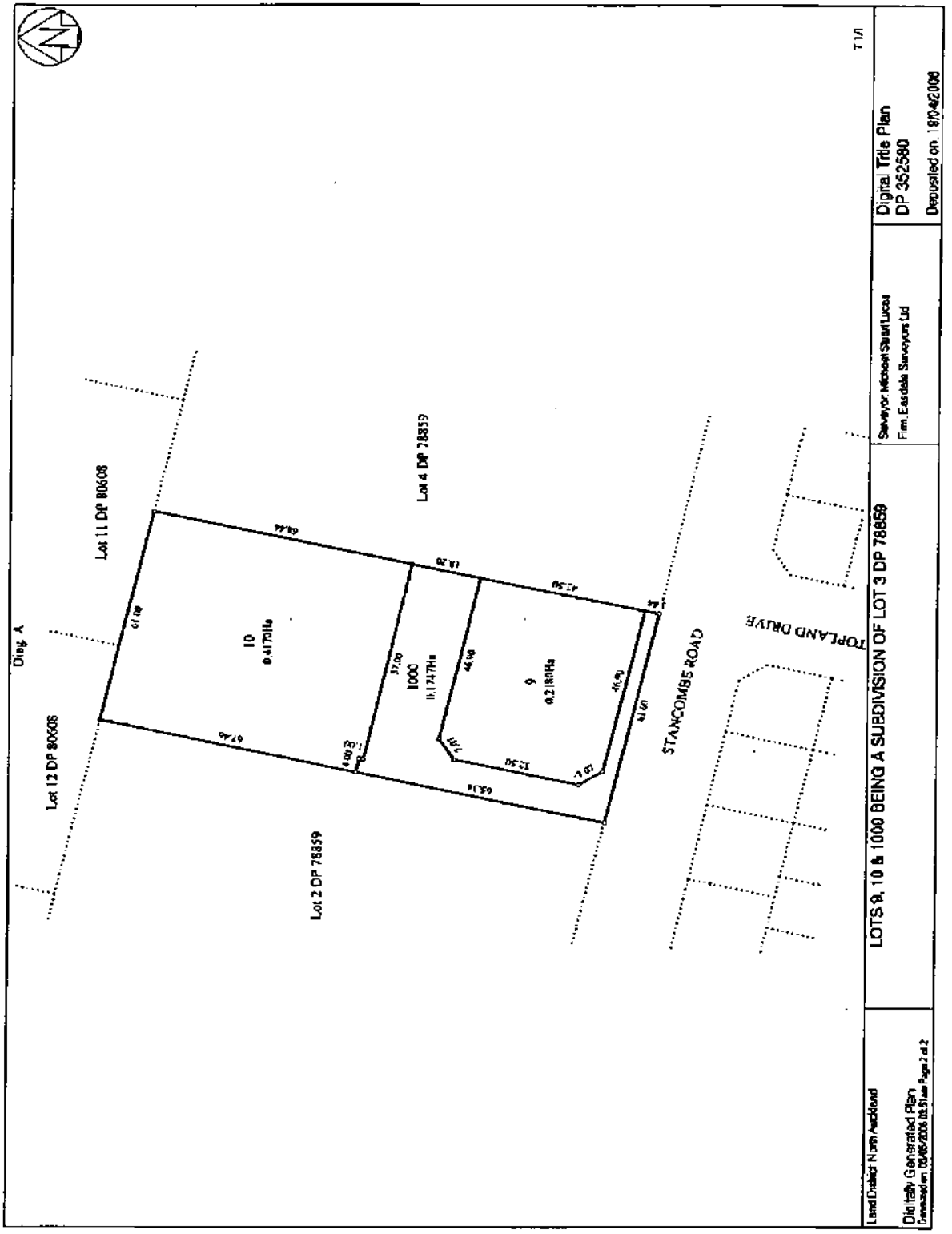
SHEET TITLE
DECK SCREEN DETAILS

DATE: 2 MAY 2007
PROJECT #: 008
DESIGNED:
DRAWN: RD
CHECKED:
SCALE: 1:20 @ A1 / 1:40 @ A3
SHEET #: A304
REV #: 1
ISSUE: BUILDING CONSENT

PRELIMINARY BC 2

ARCHITECTURAL SERIES

Identifier **215615**



PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LIMITED
46 CARLOS DRIVE
FLAT BUSH

STRUCTURAL

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa
Ph. 09 534 6523, Fax 09 537 5754

JOB No A9861/21

ISSUED 2.07.07

PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LIMITED
46 CARLOS DRIVE
FLAT BUSH

STRUCTURAL

DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
	COVER
	INDEX
S00	GENERAL NOTES
S01	BLOCK 1 FOUNDATION & SLAB PLAN 1:100
S02	BLOCK 2 FOUNDATION & SLAB PLAN 1:100
S03	BLOCK 3 FOUNDATION & SLAB PLAN 1:100
S04	BLOCK 4 FOUNDATION & SLAB PLAN 1:100
S05	DELETED
S06	DELETED
S07	DELETED
S08	GROUND LEVEL BRACING PLANS, 1:200
S09	FIRST LEVEL BRACING PLANS, 1:200
S10	SECOND LEVEL BRACING PLANS, 1:200
S15	PORTAL ELEVATION & BLWK DETAILS 1:50, 1:25
S16	DECK SCREEN ELEVATION, 1:25
S17	DELETED
S21	CONCRETE DETAILS, SHEET 1, 1:25
S22	CONCRETE DETAILS, SHEET 2, 1:25
S23	RETAINING WALL DETAIL, 1:20

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JOB No A9861/21

ISSUED 2.07.07

GENERAL:

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS. ANY DISCREPANCIES IN DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. NO DEVIATION FROM THE DOCUMENTS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER. ALL CONDITIONS OF THE BUILDING CONSENT AND ANY OTHER CONSENTS SHALL BE STRICTLY OBSERVED.

ALL WORK SHALL BE CARRIED OUT TO GOOD TRADE PRACTICE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS INCLUDING THE NEW ZEALAND BUILDING CODE, ALL RELEVANT NEW ZEALAND STANDARDS INCLUDING THE MOST CURRENT AMENDMENTS, THE HEALTH AND SAFETY IN EMPLOYMENT ACT AND LOCAL AUTHORITY BYLAWS.

DIMENSIONS:

ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE SETTING OUT, FABRICATION AND ERECTION WITH PARTICULAR REGARD TO DIMENSIONS OF EXISTING STRUCTURES WHERE APPLICABLE. DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.

ALL PROPOSED FINISHED LEVELS AND EXISTING STRUCTURAL OR DRAINAGE LEVELS SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO STARTING ANY WORK. THE ENGINEER SHALL BE ADVISED IMMEDIATELY OF ANY DISCREPANCIES AND NO VARIATIONS SHALL BE MADE WITHOUT THE ENGINEERS APPROVAL.

FOUNDATIONS:

FOUNDATIONS SHALL BE CONSTRUCTED ON FIRM UNDISTURBED NATURAL GROUND. MINIMUM FOUNDATION DEPTH BELOW FINISHED GROUND LEVEL SHALL BE 450mm UNLESS SPECIFIED OTHERWISE ON THE STRUCTURAL PLANS. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE REMOVED FROM UNDER THE STRUCTURE. GEOTECHNICAL ENGINEERS OR QUALIFIED ENGINEERS TO INSPECT ALL EXCAVATED SUBGRADE PRIOR TO CONCRETE/HARDFILL PLACEMENT. THE ENGINEER SHALL BE ADVISED IMMEDIATELY SHOULD THE CONTRACTOR BE UNSURE OF ANY GROUND CONDITIONS. THE ENGINEER SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE TO OBSERVE COMPLETED FOUNDATION EXCAVATIONS PRIOR TO THE PLACEMENT OF ANY CONCRETE OR REINFORCING. SITE CONCRETE SHALL BE PLACED IF SPECIFIED OR AS OTHERWISE APPROVED BY THE ENGINEER.

CONCRETE:

ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NZS 3109 CONCRETE CONSTRUCTION. CONCRETE STRENGTHS SHALL BE AS FOLLOWS UNLESS SPECIFIED OTHERWISE ON STRUCTURAL PLANS:

CONCRETE STRENGTHS	
ON GRADE FLOOR SLAB	20 MPa.
BLOCK GROUT	17.5 MPa
FOOTINGS	20 MPa

CONSTRUCTION JOINTS SHALL ONLY BE CONSTRUCTED WHERE SHOWN ON PLANS OR AS OTHERWISE APPROVED BY THE ENGINEER.

REINFORCEMENT:

REINFORCEMENT SHALL BE ADEQUATELY TIED AND SUPPORTED SO AS TO MAINTAIN CORRECT POSITION AND COVER. COVERS TO REINFORCEMENT SHALL BE AS SHOWN ON STRUCTURAL PLANS AND AS PER NZS 3109. MINIMUM CONCRETE COVERS UNLESS OTHERWISE NOTED.

CAST AGAINST GROUND 75mm
CAST AGAINST GROUND AND PROTECTED BY DPM 50mm
INTERIOR ENVIRONMENTS MIN 30mm
NOTE: ALL CONCRETE SURFACES ABOVE GROUND TO BE PROTECTED FROM EXTERIOR ENVIRONMENT

LIFTING OF REINFORCEMENT DURING POURING OF CONCRETE IS NOT PERMITTED.
THE LONGEST PRACTICABLE LENGTHS OF BAR SHALL BE USED WHERE POSSIBLE AND LAPS SHALL ONLY BE LOCATED AS SHOWN ON STRUCTURAL PLANS UNLESS APPROVED OTHERWISE.
LAPS SHALL BE FULL CONTACT, SECURELY TIED AT EACH END AND LAP LENGTHS SHALL BE AS SHOWN BUT NOT LESS THAN AS SPECIFIED IN NZS 3109 AND NOT LESS THAN AS SET OUT BELOW:

MASONRY CONSTRUCTION:	GRADE 300	40 BAR DIAMETERS
	GRADE 500	65 BAR DIAMETERS
CONCRETE CONSTRUCTION:	GRADE 300	40 BAR DIAMETERS
	GRADE 500	65 BAR DIAMETERS

DESIGNATION OF REINFORCEMENT IS AS FOLLOWS:

HIGH STRENGTH DEFORMED GRADE 500MPa	HD	eg HD20
HIGH STRENGTH ROUND, GRADE 500MPa	HR	eg HR10
DEFORMED, GRADE 300MPa	D	eg D20
ROUND, GRADE 300MPa	R	eg R10

BLOCKWORK:

ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NZS 4210.
ALL CELLS SHALL BE GROUTED UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
REINFORCEMENT SHALL BE CENTRALLY PLACED UNLESS NOTED OTHERWISE.
GROUT STRENGTH SHALL BE 17.5 MPa UNLESS NOTED OTHERWISE.
REFER TO REINFORCEMENT SECTION ABOVE. ALL BLOCKWORK TO BE STACK BOND UNLESS NOTED OTHERWISE.

STEELWORK:

ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NZS 3404.
ALL WELDING SHALL BE IN ACCORDANCE WITH NZS 4701 AND TO BE A MINIMUM OF 6mm CONTINUOUS FILLET WELDS UNLESS NOTED OTHERWISE.

ALL STEEL WORK SHALL BE SHOP PAINTED IN AN APPROVED ZINC PRIMER IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS UNLESS HOT DIPPED GALVANISED, CONCRETE ENCASED OR SPECIFIED WITH A FIRE RETARDANT SURFACE FINISH.

BOLTS SHALL BE COMMERCIAL GRADE 8.8/S TO AS 1111 AND AS 1112 UNLESS NOTED OTHERWISE, AND SHALL BE SNUG TIGHTENED TO AS1252 UNLESS NOTED OTHERWISE. PROPRIETARY BOLTS SHALL ONLY BE USED AS INDICATED ON STRUCTURAL PLANS, STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH: (09) 279 8460
STRUCTURAL DESIGN REVIEW

No	Revision Details	Date	No	Revision Details	Date

Design: H. FONG (APRVD 19-10-21)
Survey: CASSANE SURVEYORS LTD
Drawn: DL
Checked: HF
Date: MAY 21
Scale: AS NOTED
CAD Filename:
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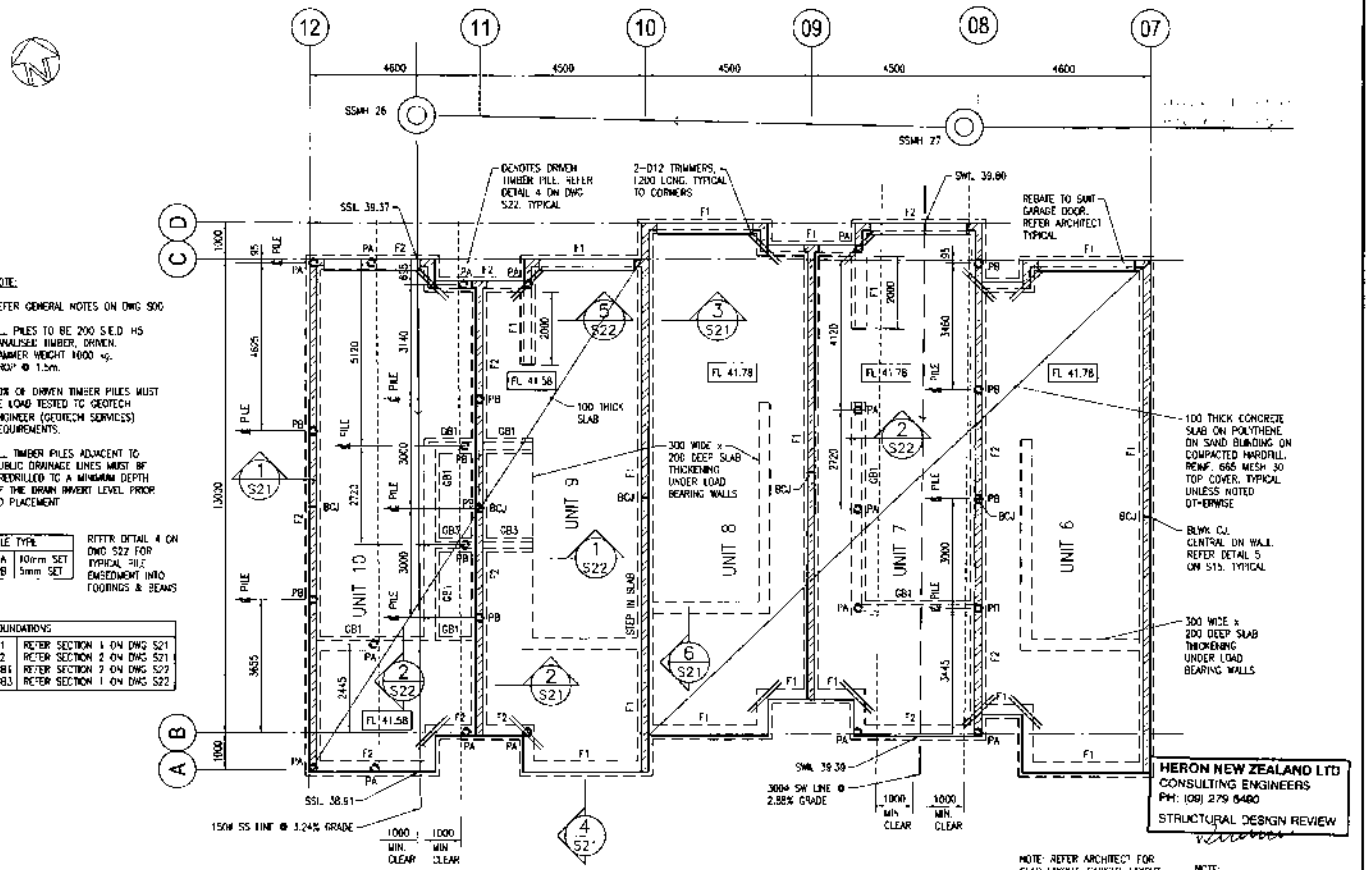
CONSENT

Job Title
PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD.

Drawing Title
GENERAL NOTES

File No: A9861/21
Rev: 1
Dwg No: S00



NOTE:

1. REFER GENERAL NOTES ON DWG S00
2. ALL PILES TO BE 200 S.E.D. HS TANALISED TIMBER, DRIVEN. HAMMER WEIGHT 1000 kg. DROP @ 1.5m.
3. 10% OF DRIVEN TIMBER PILES MUST BE LOAD TESTED TO GEOTECH ENGINEER (GEOTECH SERVICES) REQUIREMENTS.
4. ALL TIMBER PILES ADJACENT TO PUBLIC DRAINAGE LINES MUST BE PREDRILLED TO A MINIMUM DEPTH OF THE DRAIN INVERT LEVEL PRIOR TO PLACEMENT

PILE TYPE	
PA	10mm SET
PB	5mm SET

REFER DETAIL 4 ON DWG S22 FOR TYPICAL PILE EMBEDMENT INTO FOOTINGS & BEAMS

FOUNDATIONS	
F1	REFER SECTION 1 ON DWG S21
F2	REFER SECTION 2 ON DWG S21
GB1	REFER SECTION 2 ON DWG S22
GB3	REFER SECTION 1 ON DWG S22

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH: (09) 279 6480
STRUCTURAL DESIGN REVIEW

NOTE: REFER ARCHITECT FOR SLAB LAYOUT, SAWCUT LAYOUT & SLAB PENETRATIONS

NOTE:
THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS.
REFER GENERAL NOTES DWG S00

BLOCK 1 FOUNDATION & SLAB PLAN

1:100

No.	Revision Details	Date	No.	Revision Details	Name
1	STRUCTURAL CHANGES				

Design: H. YONG (HOWICK CONCRETE)
Survey: CASCADE SURVEYORS LTD
Drawn: GL
Checked: HR
Date: APR 07
Scale: A3 1:100
CAD Filename:

CONSENT

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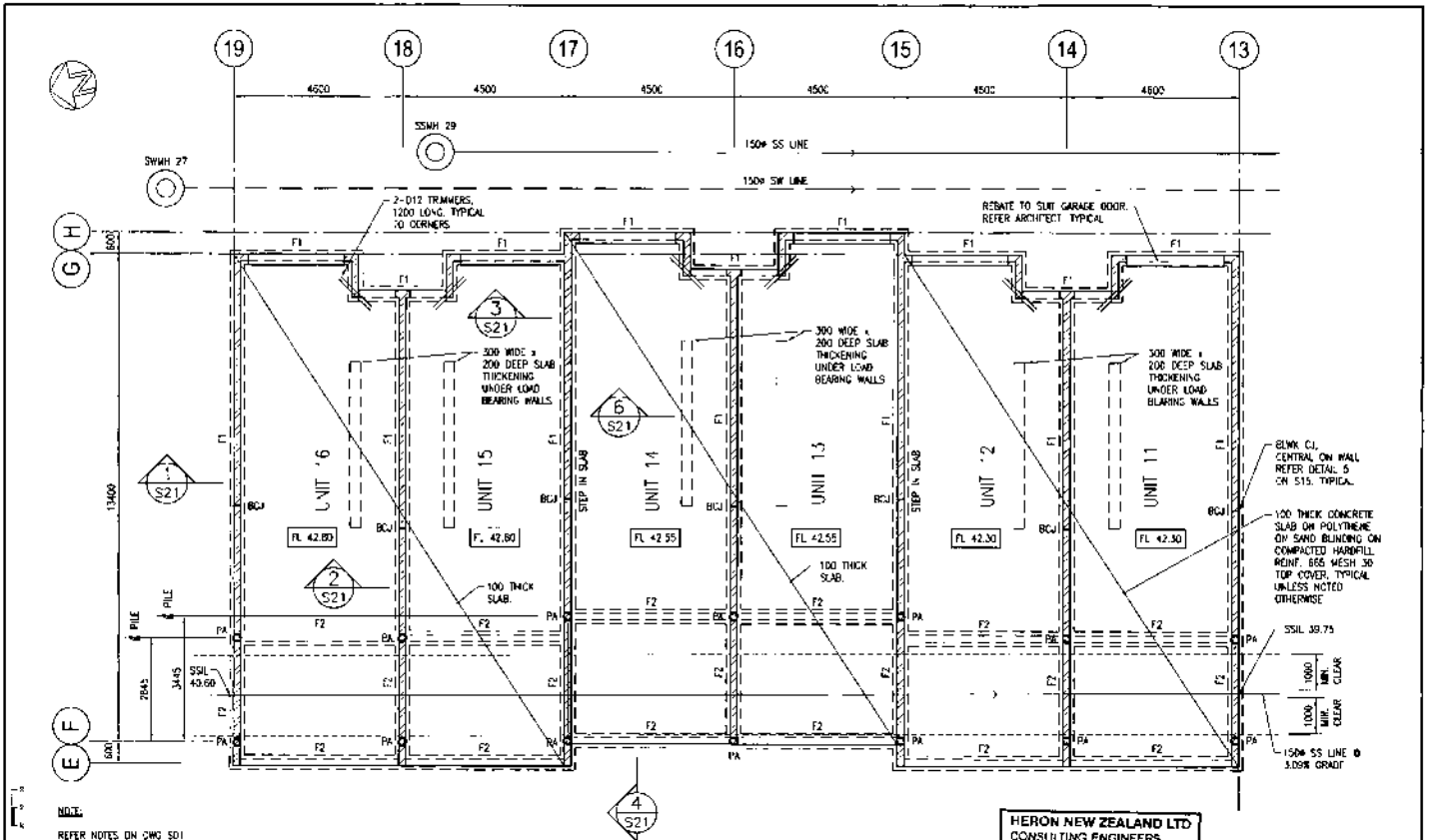
Job Title
PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD
CONSULTING STRUCTURAL ENGINEERS
Takapuna Tauranga Auckland Hamilton Christchurch

Drawing Title
BLOCK 1
FOUNDATION & SLAB PLAN

File No.	Rev	Dwg No.
A9861/21	1	S01



NOTE:

REFER NOTES ON DWG S01

PILE TYPE	
PA	10mm SET

FOUNDATIONS	
F1	REFER SECTION 1 ON DWG S21
F2	REFER SECTION 2 ON DWG S21

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH: (09) 279 8490
STRUCTURAL DESIGN REVIEW

BLOCK 2 FOUNDATION & SLAB PLAN

1:100

NOTE:
THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS.
REFER GENERAL NOTES DWG S00

1	STRUCTURAL CHANGES		
No.	Revision Details	Date	Initial

Revision Details

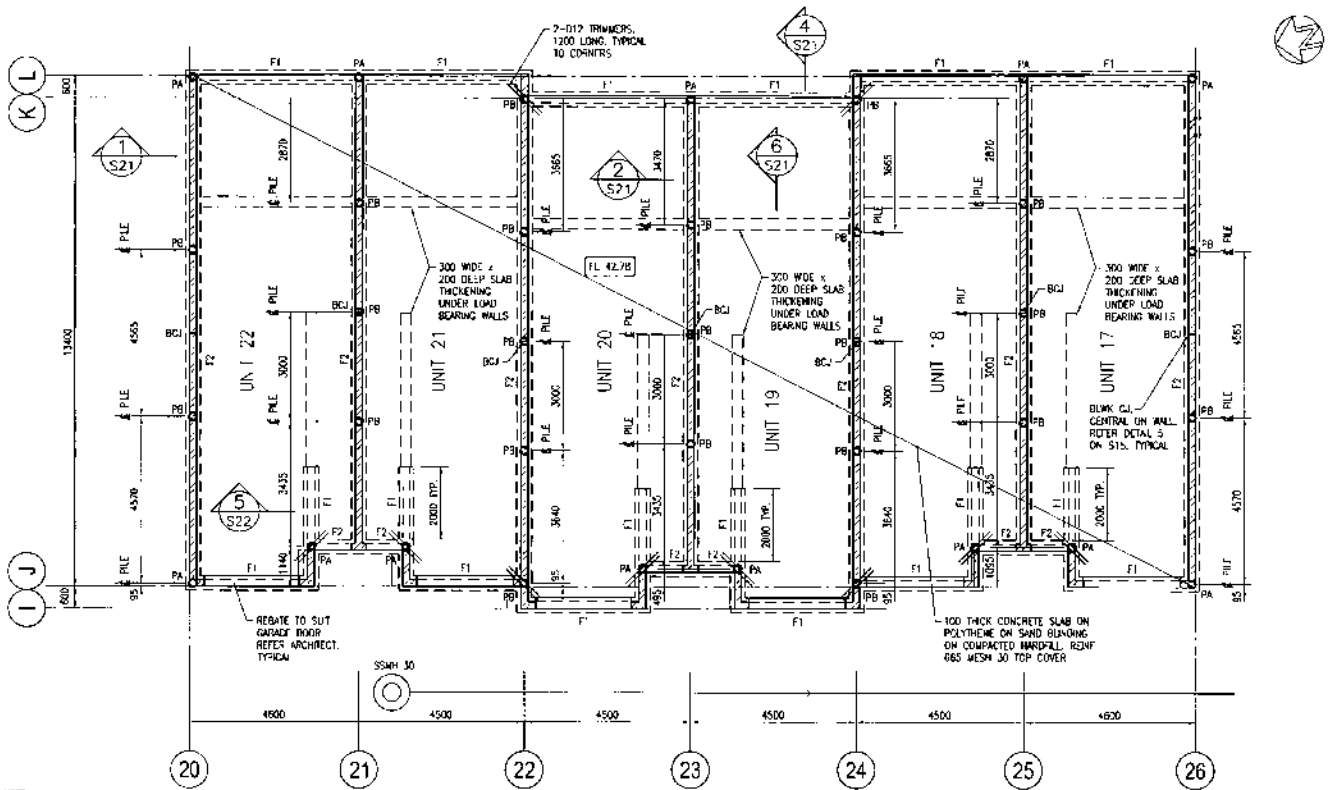
CONSENT

Job Title
PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD

Drawing Title
BLOCK 2
FOUNDATION & SLAB PLAN

File No. A8861/21 | Rev 1 | Dwg. No. S02



NOTE:

REFER NOTES ON DWG S01

PILE TYPE	
PA	10mm SET
PB	5mm SET

FOUNDATIONS	
F1	REFER SECTION 1 ON DWG S21
F2	REFER SECTION 2 ON DWG S21

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH: (09) 279 5490
STRUCTURAL DESIGN REVIEW

BLOCK 3 FOUNDATION & SLAB PLAN

1:100

NOTE
THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS
REFER GENERAL NOTES DWG S00

No	Revision Details	Date	No	Revision Details	Date
1	STRUCT. SUB. DRAWINGS	2.1.07			

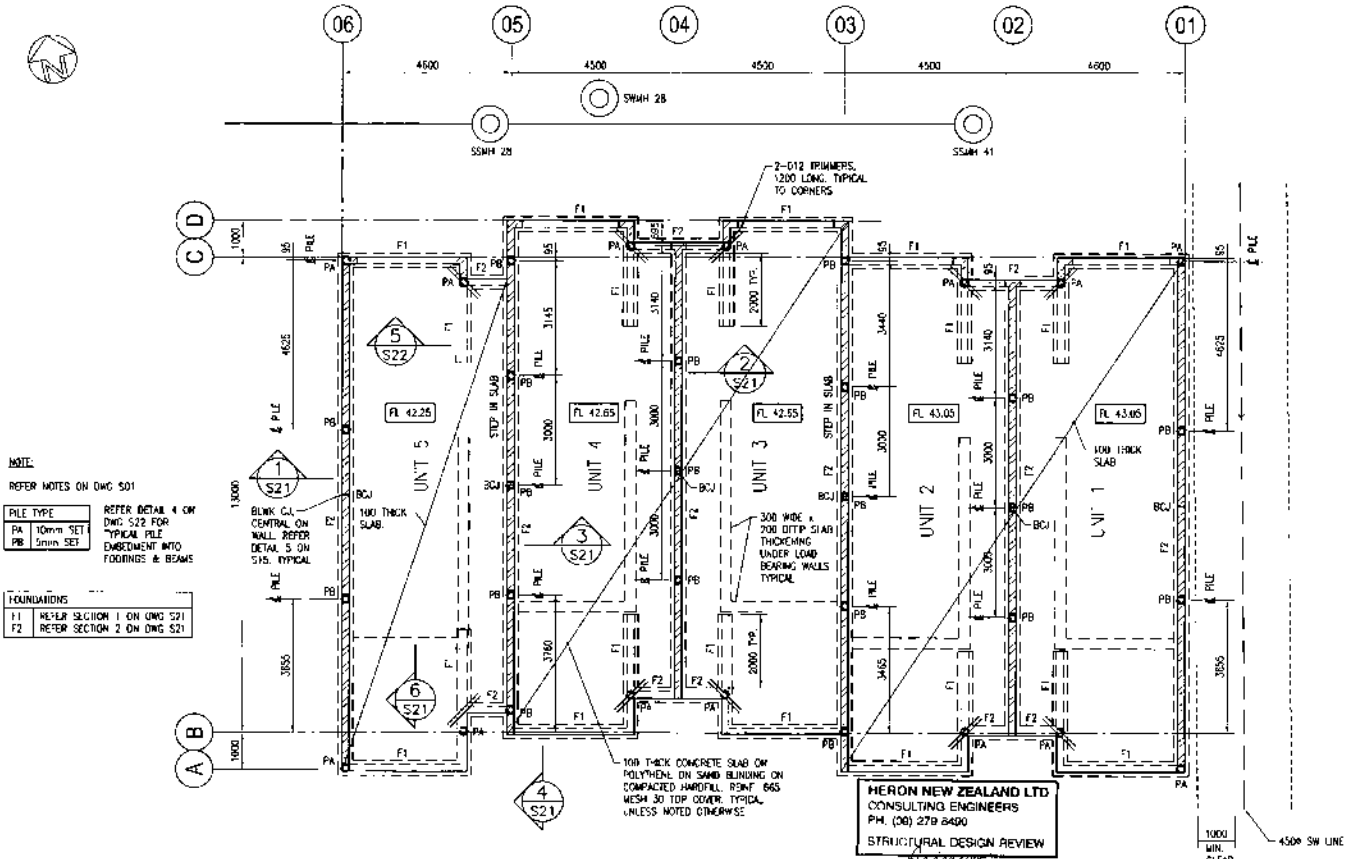
CONSENT

Job Title:
PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTING LTD.

Drawing Title:
BLOCK 3
FOUNDATION & SLAB PLAN

File No: A9861/21 | Rev: 1 | Dwg No: S03



BLOCK 4 FOUNDATION & SLAB PLAN

1:100

NOTE:
THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS.
REFER GENERAL NOTES DWG S00

1	STRUCTURAL CHANGES	27.7.07	
No	Description	Date	No

Design: H. TONG (HOWICK SW-REED)
Surveyor: FASCIALE SURVEYORS LTD
Drawn: DL
Checked: HT
Date: APR 07
Scale: A3 - 1:50
CAD Filename:

CONSENT

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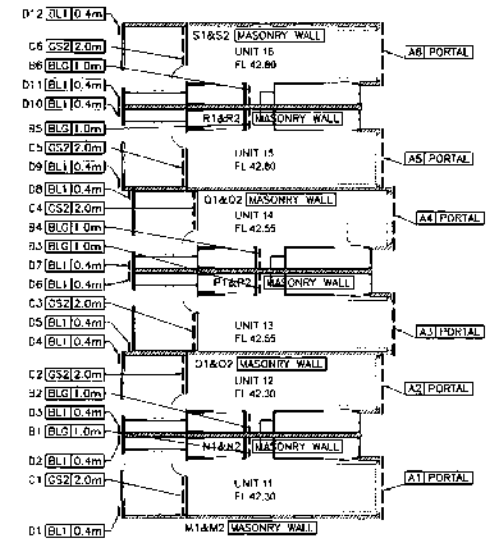
Job Title
PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD

Drawing Title
BLOCK 4
FOUNDATION & SLAB PLAN

File No: A9661/21
Rev: 1
Dwg No: S04

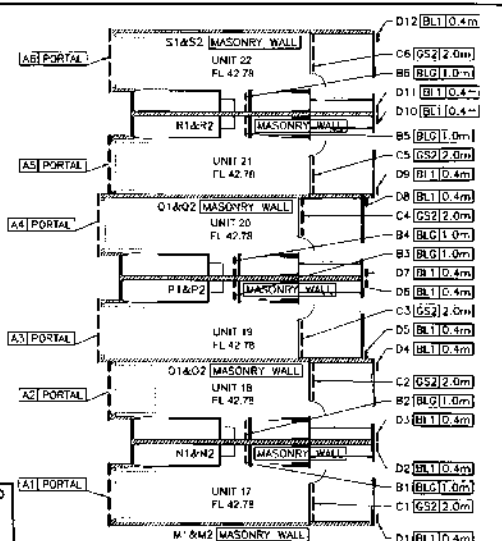


BLOCK 2

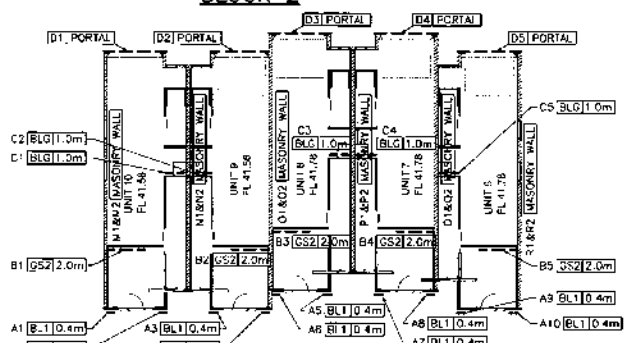
BLOCK 1 & 4
D1–D5 PORTALS –
200 BLWK PORTAL,
REFER ELEVATION 1
ON DWG 515

BLOCK 2 & 3
A1–A6 PORTALS –
200 BLWK PORTAL,
REFER ELEVATION 1
ON DWG 515

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH: (09) 276 8490
STRUCTURAL DESIGN REVIEW



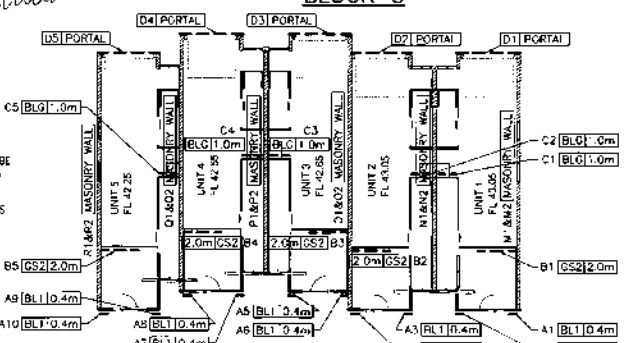
BLOCK 3



BLOCK 1

NOTE.
THESE DRAWINGS TO BE
READ IN CONJUNCTION
WITH ARCHITECTS
DRAWINGS.
REFER GENERAL NOTES
DWG 500

GROUND LEVEL FLOOR PLANS
1:200



BLOCK 4

Revision Details	Date	No.	Revision Details	Date	

Design: H. LONG (HONORS) CIVIL NZCE
Survey: HASTINGS SURVEYORS LTD
Drawn: GJ
Checked: HL
Date: MAR '07
Scale: AS + 200
CAD Filename:
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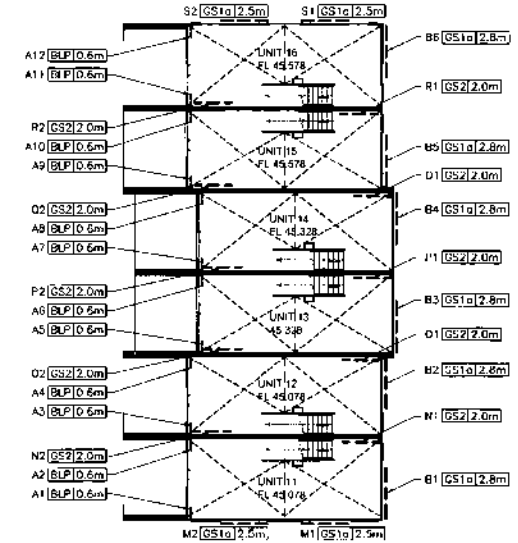
CONSENT

No. title
PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

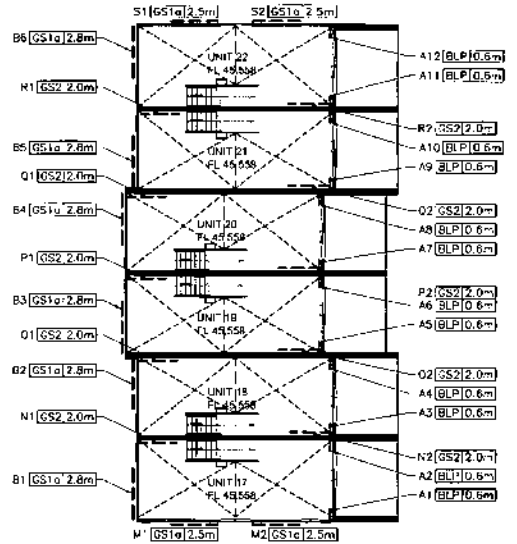
AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tauranga Palmerston North Hamilton Wellington Christchurch

Drawing title
GROUND LEVEL
BRACING PLANS

File no.: A9851/21
Rev: 1
Dwg no.: 508

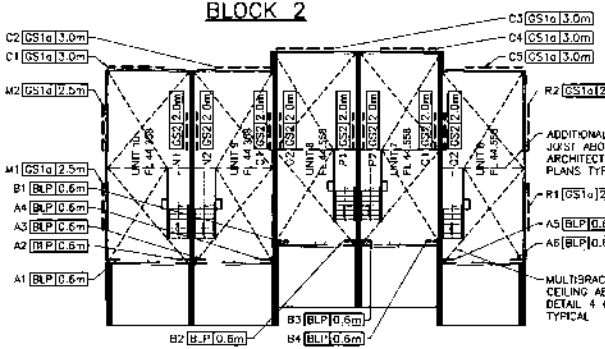


BLOCK 2



BLOCK 3

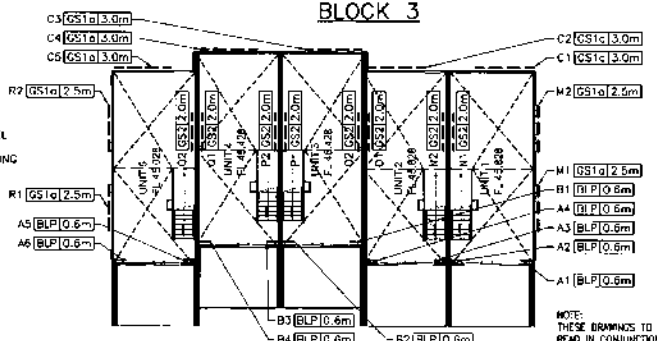
HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH: (09) 279 8490
STRUCTURAL DESIGN REVIEW



BLOCK 1

FIRST LEVEL FLOOR PLANS

1:200



BLOCK 4

NOTE:
THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS.
REFER GENERAL NOTES DWG S00

No.	Revision Details	Date	No.	Revision Details	Date
1	STRUCTURAL CHANGES	27.07			

Design: [illegible]
Survey: FASCATI SURVEYORS LTD
Drawn: FL
Checked: MT
Date: MAR 01
Scale: 1:1 - 1:200
CAD Reference:

CONSENT

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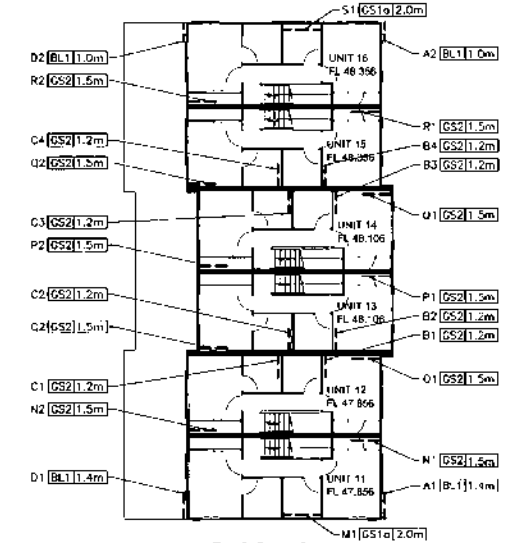
Job Title
PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

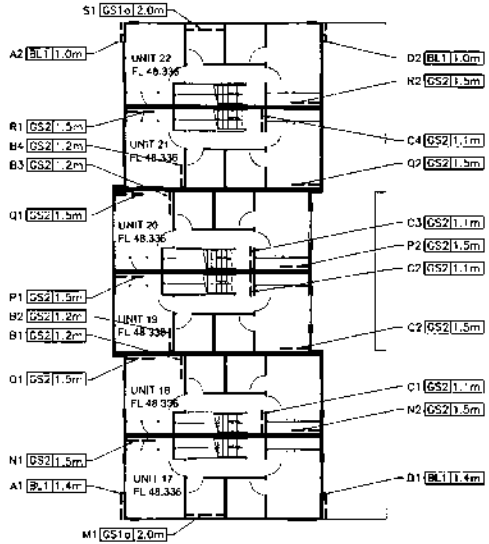
AIREY CONSULTANTS LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Tauranga Rotorua Hamilton Napier & Cairns

Drawing Title
FIRST LEVEL
BRACING PLANS

File No. A9861/21
No. 1
Dwg. No. S08

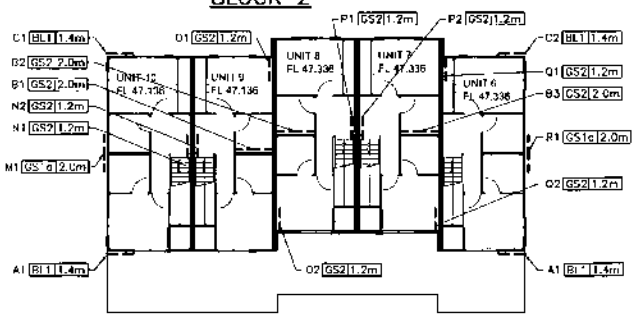


BLOCK 2

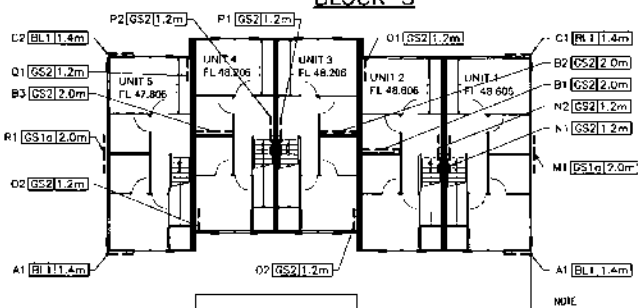


BLOCK 3

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH (09) 279 9490
STRUCTURAL DESIGN REVIEW



BLOCK 1



BLOCK 4

NOTE
THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS.
REFER GENERAL NOTES DWG S00

SECOND LEVEL FLOOR PLANS

1:200

No.	Revision Details	Date	No.	Revision Details	Date
	STRUCTURAL DRAWINGS				

Design: N. COATES (NZCE) SA-652X
Survey: HAGGAS & MAY CORAN LTD
Drawn: TD
Checked: N.C.
Date: MAR 07
Scale: A3 1:200
CAD Filename:
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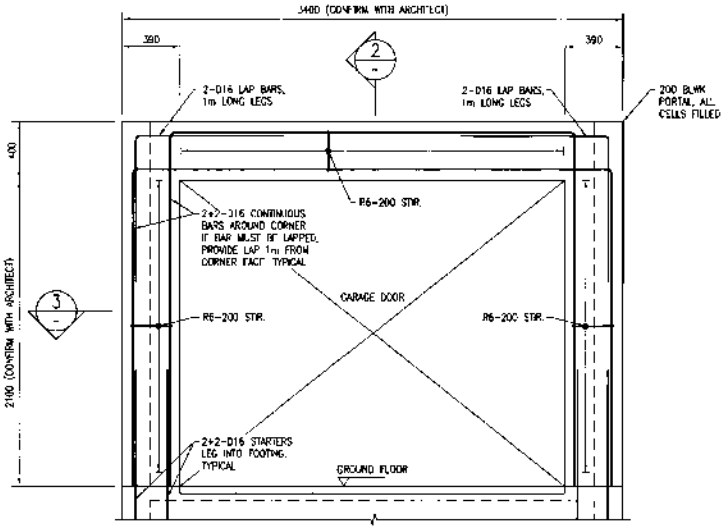
CONSENT

Job Title:
PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD.
CIVIL ENGINEERS & STRUCTURAL ENGINEERS
Telephone Kaitaia Kerikeri Paihia Russell Opua

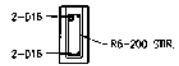
Drawing Title:
SECOND LEVEL
BRACING PLANS

File No. A9861/21
Rev. 1
Dwg. No. S10

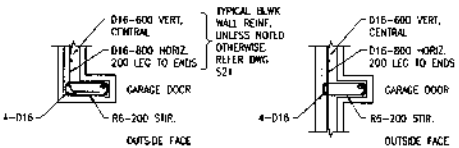


ELEVATION OF A1,A3–A6 & D1,D3–D5 PORTALS AT GROUND FLOOR, A2 & D2 PORTALS SIMILAR

ELEVATION 1
1:25



SECTION 2
1:25

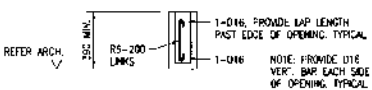


TYPICAL FOR A1,A3–A6 & D1,D3–D5 PORTALS

TYPICAL FOR A2 & D2 PORTALS

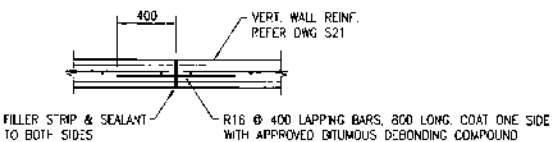
SECTION 3
1:25

NOTE: REFER ARCHITECTS WINDOW & DOOR SCHEDULES TO CONFIRM DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION



TYPICAL SECTION THROUGH BLWK LINTEL, 1100 MAX. WIDTH

DETAIL 4
1:25



TYPICAL BLWK CONTROL JOINT (B.C.J.)

DETAIL 5
1:25

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH: (09) 279 8490
STRUCTURAL DESIGN REVIEW

STRUCTURAL CHANGES

CONSENT

PROPOSED TOWNHOUSES FOR CONCEPTS 124 LTD 46 CARLOS DRIVE FLAT BUSH

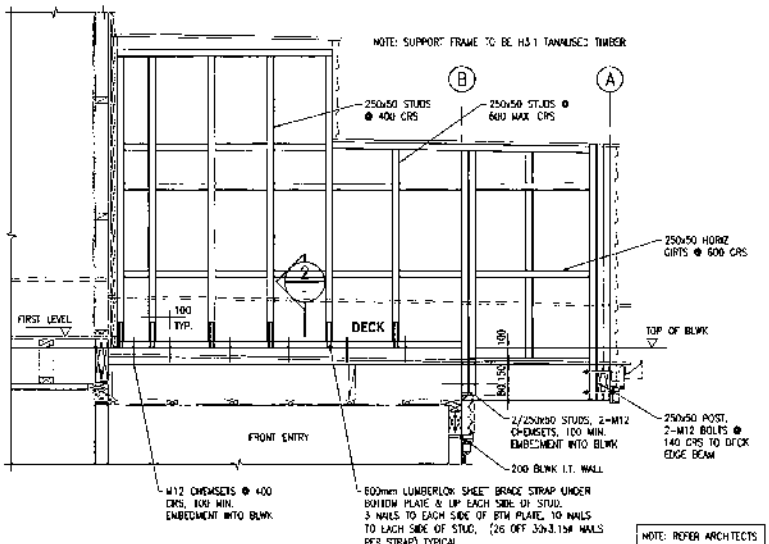
AIREY CONSULTANTS LTD.

PORTAL ELEVATION & BLWK DETAILS

A9851/21

1

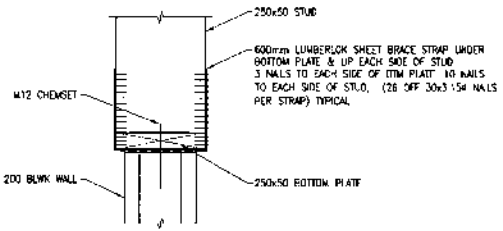
S15



NOTE: REFER ARCHITECTS DWG A304 FOR DETAILS NOT SHOWN

ELEVATION OF DECK SCREEN SUPPORT TYPICAL FOR UNITS 1–10, SIMILAR FOR UNITS 11–22 WITH NO RECESSED ENTRY

ELEVATION 1
1:25



SECTION 2
1:10

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH: (09) 279 8490
STRUCTURAL DESIGN REVIEW

Structural Changes	Date	No.	Revision Details

CONSENT

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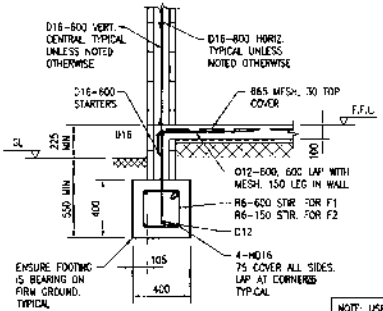
PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD

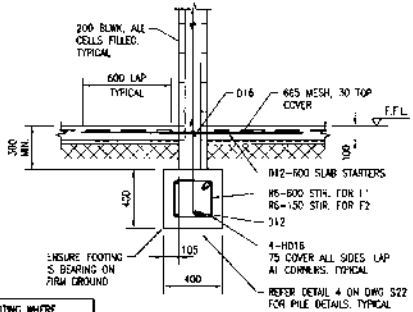
DECK SCREEN ELEVATION

File No. A8861/21 | Rev. 1 | Dwg. No. S16



TYPICAL F1/F2 PERIMETER FOOTING, UNLESS NOTED OTHERWISE

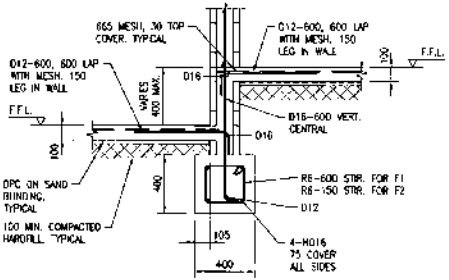
SECTION 1 S01 to S04
1:25



NOTE: USE F2 FOOTING WHERE BRIDGING OR ON PILES (REINF. 4-HD16 WITH R6 STIR @ 150 CRS), USE F1 FOOTING ELSEWHERE (REINF. 4-HD16 WITH R6 STIR @ 600 CRS). REFER PLANS. TYPICAL

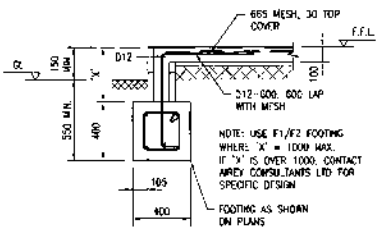
TYPICAL F1/F2 INTER-TENANCY WALL FOOTING, UNLESS NOTED OTHERWISE

SECTION 2 S01 to S04
1:25



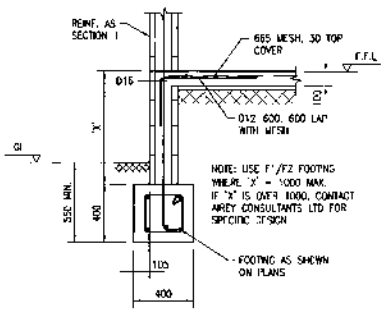
TYPICAL F1/F2 INTER-TENANCY WALL FOOTING, UNLESS NOTED OTHERWISE

SECTION 3 S01 to S04
1:25

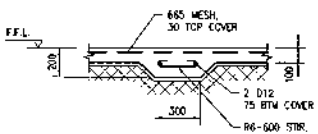


TYPICAL F1/F2 PERIMETER FOOTING, UNLESS NOTED OTHERWISE

SECTION 4 S01 to S04
1:25



SECTION 5
1:25



TYPICAL SLAB THICKENING, UNLESS NOTED OTHERWISE

SECTION 6 S01 to S04
1:25

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH. (09) 279 8490
STRUCTURAL DESIGN REVIEW

NOTES:
1. REFER GENERAL NOTES ON DWG S00

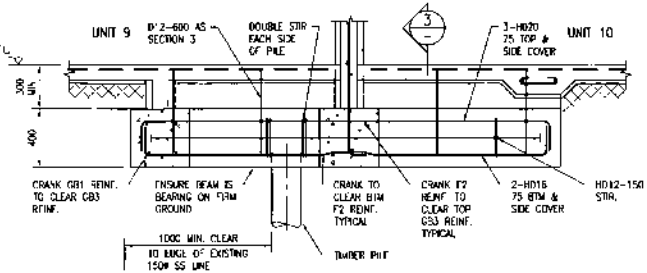
CONSENT

PROPOSED TOWNHOUSES FOR CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD.

CONCRETE DETAILS SHEET 1

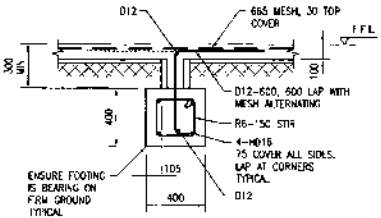
A9861/21 | 1 | S21



NOTE ALL TIMBER PILES ADJACENT TO PUBLIC DRAINAGE LINES MUST BE PREDRILLED TO A MINIMUM DEPTH OF THE DRAIN INVERT LEVEL PRIOR TO PLACEMENT

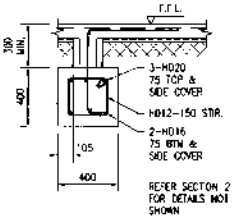
ELEVATION OF GROUND BEAM GB3

SECTION 1 / S01
1:25



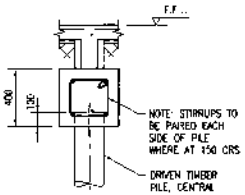
TYPICAL FOR GB1 GROUND BEAMS

SECTION 2 / S01
1:25



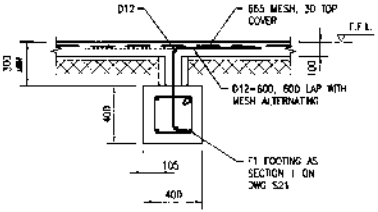
GROUND BEAM GB3

SECTION 3 / —
1:25



TYPICAL PILE DETAIL FOR GROUND BEAMS & FOOTINGS

DETAIL 4 / —
1:25



TYPICAL FOR GB1 GROUND BEAMS

SECTION 5 / S01
1:25

S03, S04

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
Ph. (09) 279 8400
STRUCTURAL DESIGN REVIEW

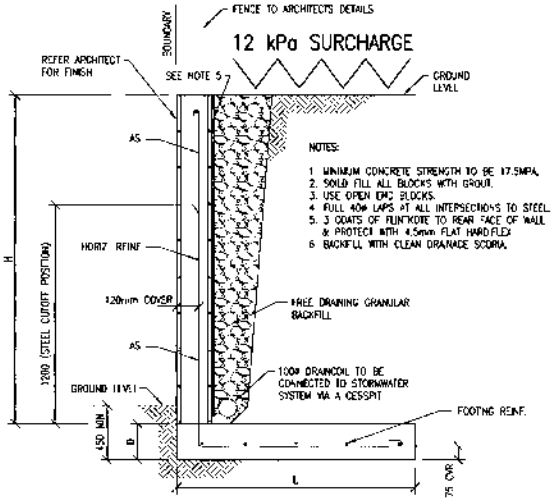
CONSENT

PROPOSED TOWNHOUSES
FOR
CONCEPTS 124 LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD

CONCRETE DETAILS
SHEET 2

File No. A9861/21 | Rev. 1 | Drg. No. S22



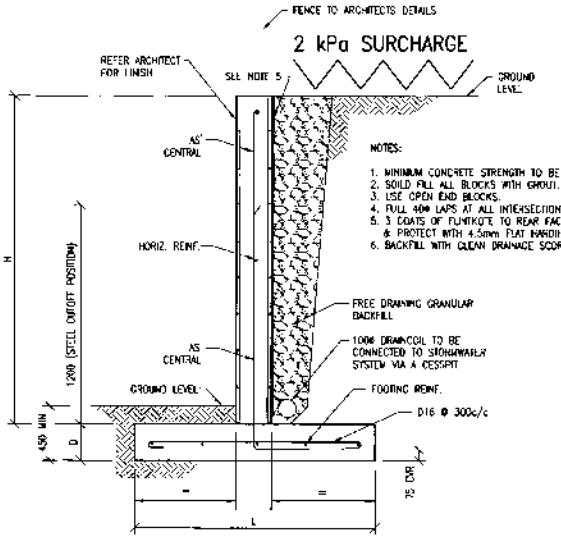
NOTES:

1. MINIMUM CONCRETE STRENGTH TO BE 17.5MPA.
2. SOLID FILL ALL BLOCKS WITH GROUT.
3. USE OPEN END BLOCKS.
4. FULL 40ø LAPS AT ALL INTERSECTIONS TO STEEL.
5. 3 COATS OF FUNTKOTE TO REAR FACE OF WALL & PROTECT WITH 4.5mm FLAT HARDIFLEX.
6. BACKFILL WITH CLEAN DRAINAGE SCORIA.

H	L	AS	AS'	BLOCK	D	HORIZ REINF	FOOTING REINF.
1800-1600	1800	2 HD16 OUT OF 3 CORES	HD16 @ 600c/c	200	300	D12 @ 800c/c	6/D16
1600-1400	1600	HD16 @ 400c/c	HD16 @ 400c/c	200	300	D12 @ 800c/c	5/D16
1400-1200	1450	HD16 @ 600c/c	HD12 @ 600c/c	200	300	D12 @ 800c/c	4/D16
1200-1000	1300	HD12 @ 400c/c	HD12 @ 400c/c	200	300	D12 @ 800c/c	4/D16
1000-800	1150	HD12 @ 600c/c	HD12 @ 600c/c	200	300	2/D12	3/D16
800-0	1000	HD12 @ 600c/c	D12 @ 600c/c	200	300	2/D12	3/D16

BLOCK RETAINING WALL ON BOUNDARY

SCALE 1:20



NOTES:

1. MINIMUM CONCRETE STRENGTH TO BE 17.5MPA
2. SOLID FILL ALL BLOCKS WITH GROUT.
3. USE OPEN END BLOCKS.
4. FULL 40ø LAPS AT ALL INTERSECTIONS TO STEEL.
5. 3 COATS OF FUNTKOTE TO REAR FACE OF WALL & PROTECT WITH 4.5mm FLAT HARDIFLEX.
6. BACKFILL WITH CLEAN DRAINAGE SCORIA.

H	L	AS	AS'	BLOCK	D	HORIZ REINF	FOOTING REINF
1800-1600	1350	HD16 @ 400c/c	HD16 @ 400c/c	200	300	D12 @ 800c/c	5/D16
1600-1400	1250	HD16 @ 600c/c	HD16 @ 600c/c	200	300	D12 @ 800c/c	4/D16
1400-1200	1100	HD12 @ 400c/c	HD12 @ 400c/c	200	300	D12 @ 800c/c	4/D16
1200-1000	1000	HD12 @ 600c/c	HD12 @ 600c/c	200	300	D12 @ 800c/c	4/D16
1000-800	850	HD12 @ 600c/c	HD12 @ 600c/c	200	300	2/D12	3/D16
800-0	750	HD12 @ 600c/c	D12 @ 600c/c	200	300	2/D12	3/D16

BLOCK RETAINING WALL AWAY FROM BOUNDARY

SCALE 1:20

HERON NEW ZEALAND LTD
CONSULTING ENGINEERS
PH: (09) 279 8480
STRUCTURAL DESIGN REVIEW

No.	Revision Details	Date	No.	Revision Details	Date

Design: N. Tolan BEng(Hons) MIPENZ
Survey: GASSON SURVEYORS LTD
Drawn: G.
Checked: PT
Date: JUNE 97
Scale: AS NS SHOWN
CAD Filename:
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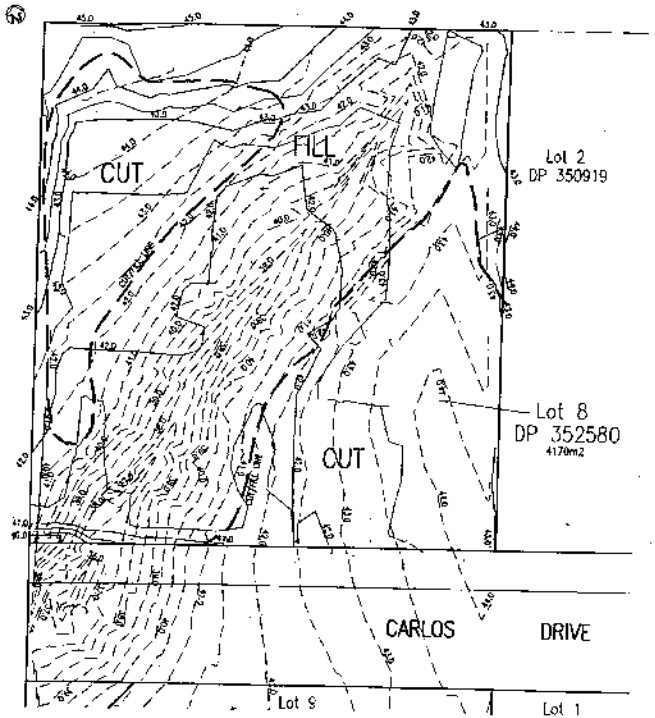
CONSENT

Job title: PROPOSED TOWNHOUSES FOR CONCEPTS 124 LTD 46 CARLOS DRIVE FLAT BUSH

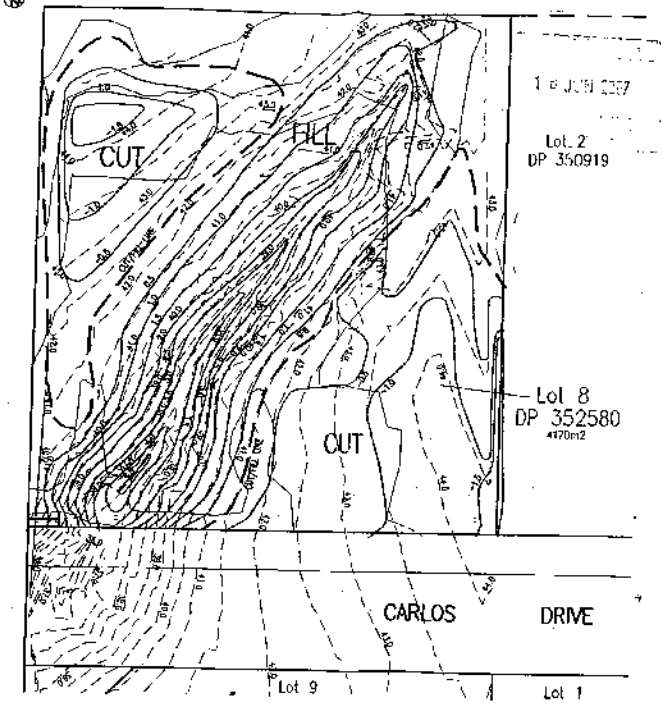
AIREY CONSULTANTS LTD.

Drawing title: RETAINING WALL DETAILS

File No: A9961/21 | Rev: - | Drwg No: S23



SITE PLAN–FINAL CONTOURS
1:500



SITE PLAN–ISOPACHS
1:500

LEGEND

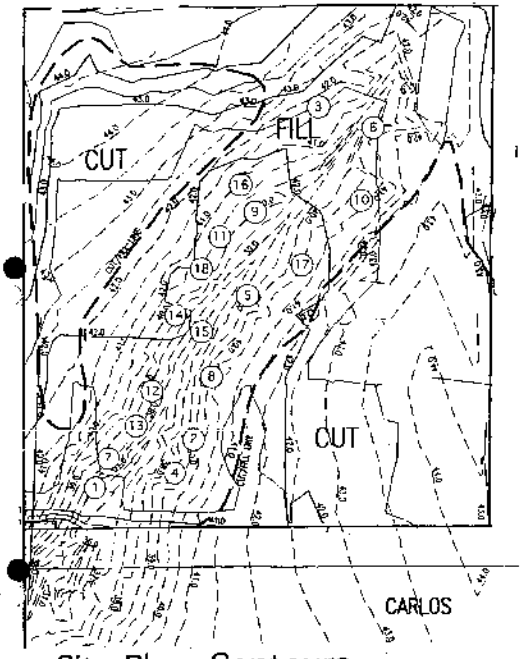
- EXISTING CONTOURS
- 'AS BUILT' CONTOURS
- ISOPACH
- EXTENT OF CUT/FILL

FINAL

'AS BUILT' CONTOUR PLAN
FOR
CARLOS CONCEPTS
124 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

SITE PLAN

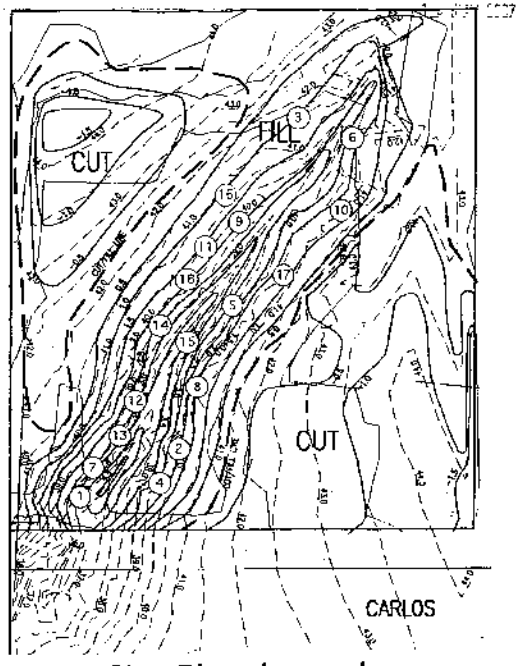


Site Plan- Contours

LEGEND

(1) Location of Compaction Test.

	Northing	Easting	RL
1	6469568	2681626	37.985
2	6469575	2681638	38.850
3	6469603	2681669	41.125
4	6469565	2681629	38.195
5	6469590	2681642	39.010
6	6469596	2681681	39.960
7	6469552	2681612	38.350
8	6469569	2681632	39.005
9	6469599	2681657	40.140
10	6469606	2681668	40.950
11	6469590	2681654	40.335
12	6469555	2681628	39.230
13	6469563	2681618	38.460
14	6469581	2681637	39.890
15	6469576	2681636	FL
16	6469588	2681636	FL
17	6469599	2681641	SGL
18	6469598	2681636	SGL



Site Plan- Isopachs

Location of Earthworks Tests.

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

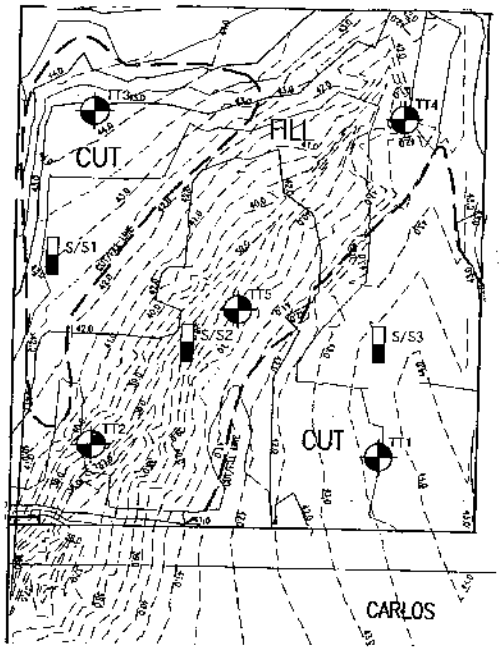
GEOTEK SERVICES LIMITED

Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-1243 E-mail enquiries@geotek.co.nz

37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

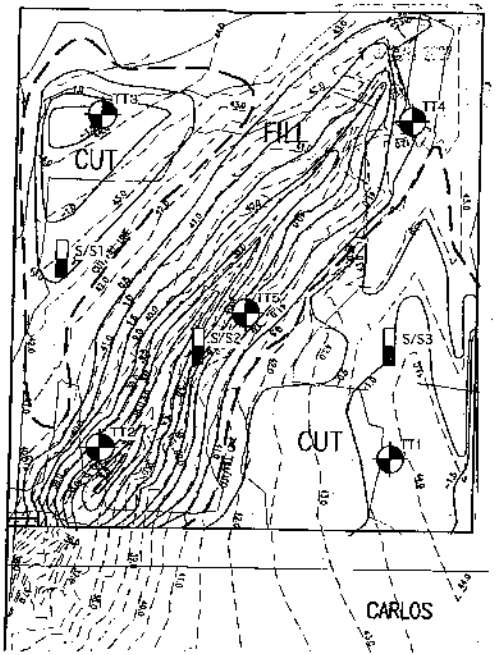
SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	2 OF 3



Site Plan- Contours

LEGEND

- S/S1 — Location of Shrink-Swell tests.
- TT1 — Depth of topsoil = 0.1metres
- TT2 — Depth of topsoil = 0.1metres
- TT3 — Depth of topsoil = 0.1metres
- TT4 — Depth of topsoil = 0.1metres
- TT5 — Depth of topsoil = 0.1metres



Site Plan- Isopachs

Post-Earthworks Topsoil Depths and Shrink-Swell Samples Location Plan

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

GEOTEK SERVICES LIMITED
Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7241 E-mail: enquiries@geotek.co.nz

37 Elliot Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION: North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	3 OF 3

PROPOSED TOWNHOUSES

AT

46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

FOR

CONCEPTS 124 LIMITED

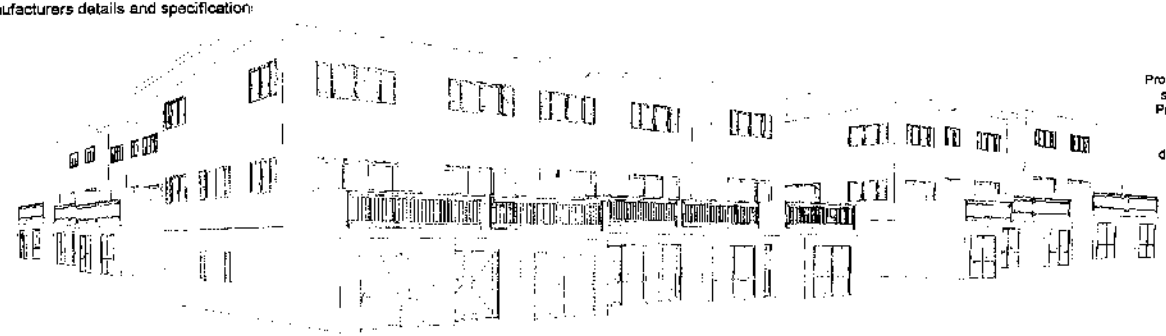
12815 7/8/07

DESIGN OFFICE &
PROJECT MANAGEMENT

ORMISTON
PROJECT MANAGEMENT LIMITED
P.O. Box 58395 GREENMOUNT
Manukau Auckland 2141
Ph 09 271 3007
Fax 09 271 4037

PLEASE NOTE
Timber identification and treatment of all timber work associated with this building consent must comply with NZBCode B2/AS1, NZS 3602:2003 and NZS 3640:2003

All flashings are to be installed in strict accordance with the cladding manufacturers details and specification



Provide overflows to kitchen sinks and laundry tubs
Provide flood guards on water supply to clothes washing and dishwashing machines.

DRAWING REGISTER

FOR

PROPOSED TOWNHOUSES

AT

46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

FOR

CONCEPTS 124 LIMITED

BUILDING CONSENT ISSUE

3 JULY 2007

SHEET#	REV#	SHEET TITLE	ISSUE	DATE
A100	1	SITE SURFACES PLAN	BUILDING CONSENT	2 MAY 2007
A102	1	SITE SERVICES PLAN	BUILDING CONSENT	2 MAY 2007
A150		LANDSCAPING PLAN	BUILDING CONSENT	3 JULY 2007
A151		LANDSCAPING PLAN	BUILDING CONSENT	3 JULY 2007
A152		LANDSCAPING PLAN	BUILDING CONSENT	3 JULY 2007
A153		LANDSCAPING PLAN	BUILDING CONSENT	3 JULY 2007
A154		ROAD SIDE FENCING PLAN	BUILDING CONSENT	3 JULY 2007
A155		ROAD SIDE FENCING	BUILDING CONSENT	3 JULY 2007
A156		PERGOLA CONSTRUCTION	BUILDING CONSENT	3 JULY 2007
A201	1	OVERALL GROUND	BUILDING CONSENT	2 MAY 2007
A202	1	OVERALL FIRST FLOOR PLAN	BUILDING CONSENT	2 MAY 2007
A203	1	OVERALL SECOND	BUILDING CONSENT	2 MAY 2007
A204	1	UNIT 9 FLOOR PLAN	BUILDING CONSENT	2 MAY 2007
A205	1	UNIT 10 FLOOR PLAN	BUILDING CONSENT	2 MAY 2007
A206	1	UNIT 11 FLOOR PLAN	BUILDING CONSENT	2 MAY 2007
A207	1	UNIT 12 FLOOR PLAN	BUILDING CONSENT	2 MAY 2007
A208	1	ELEVATIONS	BUILDING CONSENT	2 MAY 2007
A209	1	ELEVATIONS	BUILDING CONSENT	2 MAY 2007
A211	1	ROOF PLAN	BUILDING CONSENT	2 MAY 2007
A212	1	OVERALL SITE SETOUT PLAN	BUILDING CONSENT	2 MAY 2007
A213	1	BLOCK 1 FOUNDATION PLAN	BUILDING CONSENT	2 MAY 2007
A214	1	BLOCK 1 LEVEL 1	BUILDING CONSENT	2 MAY 2007
A215	1	BLOCK 1 LEVEL 2	BUILDING CONSENT	2 MAY 2007
A216	1	BLOCK 1 ROOF FRAMING PLAN	BUILDING CONSENT	2 MAY 2007
A217	1	BLOCK 2 FOUNDATION PLAN	BUILDING CONSENT	2 MAY 2007
A218	1	BLOCK 2 LEVEL 1	BUILDING CONSENT	2 MAY 2007
A219	1	BLOCK 2 LEVEL 2	BUILDING CONSENT	2 MAY 2007
A220	1	BLOCK 2 ROOF FRAMING PLAN	BUILDING CONSENT	2 MAY 2007
A221	1	BLOCK 3 FOUNDATION PLAN	BUILDING CONSENT	2 MAY 2007
A222	1	BLOCK 3 LEVEL 1	BUILDING CONSENT	2 MAY 2007
A223	1	BLOCK 3 LEVEL 2	BUILDING CONSENT	2 MAY 2007
A224	1	BLOCK 3 ROOF FRAMING PLAN	BUILDING CONSENT	2 MAY 2007
A225	1	BLOCK 4 FOUNDATION PLAN	BUILDING CONSENT	2 MAY 2007
A226	1	BLOCK 4 LEVEL 1	BUILDING CONSENT	2 MAY 2007
A227	1	BLOCK 4 LEVEL 2	BUILDING CONSENT	2 MAY 2007
A228	1	BLOCK 4 ROOF FRAMING PLAN	BUILDING CONSENT	2 MAY 2007
A230	1	CROSS SECTIONS	BUILDING CONSENT	2 MAY 2007
A301	1	WALL TYPE LEGEND	BUILDING CONSENT	2 MAY 2007
A302	1	UNDERWATERSETOUT	BUILDING CONSENT	2 MAY 2007
A303	1	STAIR DETAILS	BUILDING CONSENT	2 MAY 2007
A304	1	DECK SCREEN DETAILS	BUILDING CONSENT	2 MAY 2007
A310	1	FOUNDATION DETAILS	BUILDING CONSENT	2 MAY 2007
A311	2	CONSTRUCTION DETAILS	BUILDING CONSENT	2 MAY 2007
A312	2	CONSTRUCTION DETAILS	BUILDING CONSENT	2 MAY 2007
A313	1	CONSTRUCTION DETAILS	BUILDING CONSENT	2 MAY 2007
A314	1	CONSTRUCTION DETAILS	BUILDING CONSENT	2 MAY 2007
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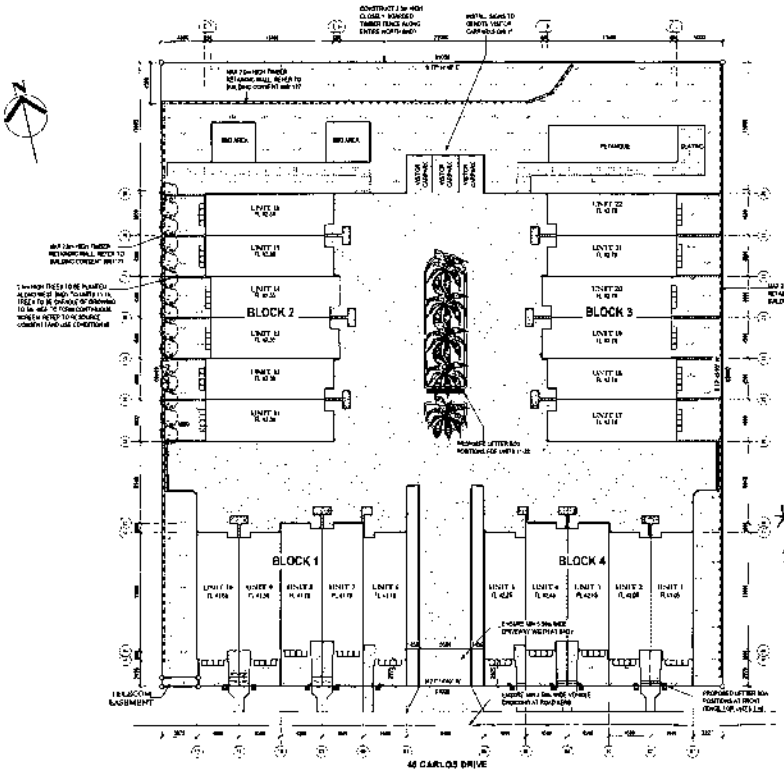
A316	1	CONSTRUCTION DETAILS	BUILDING CONSENT	2 MAY 2007
A317	1	CONSTRUCTION DETAILS	BUILDING CONSENT	2 MAY 2007
A318	1	CLADDING JUNCTION DETAILS	BUILDING CONSENT	2 MAY 2007
A319	1	CONSTRUCTION DETAILS	BUILDING CONSENT	2 MAY 2007
A320		CONSTRUCTION DETAILS	BUILDING CONSENT	3 JULY 2007
A321		CONSTRUCTION DETAILS	BUILDING CONSENT	3 JULY 2007
A601	1	WINDOW & DOOR SCHEDULES	BUILDING CONSENT	2 MAY 2007
A602		SHOT CALCS	BUILDING CONSENT	2 MAY 2007
A603		BALUSTRADE DETAILS	BUILDING CONSENT	3 JULY 2007

DESIGN OFFICE &
PROJECT MANAGEMENT

DRIMSTON
PROJECT MANAGEMENT LIMITED
P.O. Box 58395 GREENMOUNT
Manukau, Auckland 2141
Ph 09 271 3007
Fax 09 271 4037



SITE SURFACES PLAN

LEGAL DESCRIPTION:

ADDRESS
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

LOT NO: 40
DP NO: 152566

SITE AREA: 417.8sqm MORE OR LESS

LEGEND:

- PROPOSED BUILDINGS
- PROPOSED CONCRETE AREA
- PROPOSED IMPERMEABLE SURFACE
- PROPOSED PERMEABLE LANDSCAPING
- PROPOSED SITE STRUCTURES
- PROPOSED RETAINING WALL
  CONCRETE RETAINING WALL AS PER BUILDING CONSENT NO: 117

SHEET NOTES:

- SITE SURFACES PLAN TO BE READ IN CONJUNCTION WITH RESOURCE CONSENT LAND USE CONDITIONS (RCDAP/2/2006).
- RUBBISH AND RECYCLABLES TO BE STORED & COLLECTED FROM KERBSIDE EVERYONE FORTNIGHTLY. REFER AS PER MANAGEMENT PLAN AS OUTLINED IN RESOURCE CONSENT LAND USE CONDITIONS (RCAP/1/2/2006).
- LANDSCAPING AND PLANTING TO BE AS PROPOSED IN RESOURCE CONSENT RCDAP/2/2006.

ENDORSEMENT

All foundation excavation and construction, piling, earthworks and subgrades to be inspected and certified by a CHARTERED PROFESSIONAL ENGINEER (Geotechnical) prior to the placement of any construction materials as per soil report from:

Geotek Services Limited

Ref: 3104 Date: 2 August 2005

ENDORSEMENT

Certificate from registered surveyor to be provided to Council with regard to the height of floor level before:
(a) pouring of concrete slab, or
(b) sub-floor framing commences.

M.F.F.L - As per Resource Consent - Approval No: 228885

GENERAL NOTES

1	STRUCTURAL CHANGE & GENERAL CHANGES	030801
	BUILDING CONSENT ISSUE	020801
REV	REVISION	DATE

CONSULTANT	CONTACT
ACOUSTIC	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	A REY CONSULTANTS LTD
FIRE	A REY CONSULTANTS LTD
GEOTECH	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

ORMISTON PROJECT MANAGEMENT LIMITED
P.O. Box 58-141 GREENLANE EAST
MANUKAU NORTH AND Fax
PH: 09 271 9667 FAX: 09 271 9667

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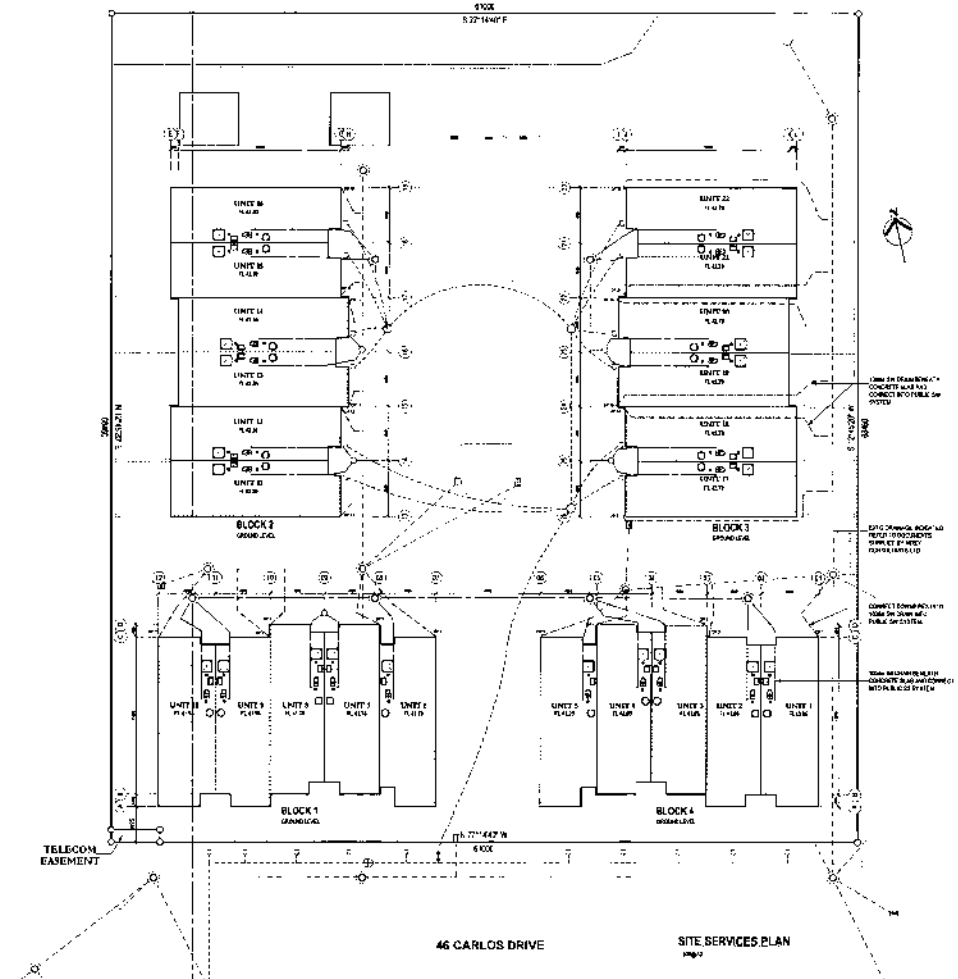
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
SITE SURFACES PLAN

DATE: 2 MAY 2007 | PROJECT: 206
DRAWN: RD | CHECKED:
SCALE: 1:200@A1 1:400@A3
SHEET: A101 | REV: 1
NAME: BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES.

MAIN CONTRACTOR TO
CHECK ALL DIMENSIONS ON SITE BEFORE
COMMENCING WORK
NOTIFY ARCHITECT OF ANY DISCREPANCIES
DO NOT SCALE FROM DRAWINGS
ALL WORK TO COMPLY WITH NZ BUILDING CODE

1	PRELIMINARY DRAWINGS FOR CONSULTANT COMMENTS 09/05/07
	BUILDING CONSENT ISSUE 02/05/07
REV	DESCRIPTION DATE

MAIN CONTRACTOR	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECH	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

KINGETT PROJECT MANAGEMENT LIMITED
P.O. Box 58 301 (WHANGAPARAOA)
WAINUI PORT, AUCKLAND 2111
PH 09 271 1666 FAX 09 271 1665
ARCHITECTURAL SERVICES PROJECT MANAGEMENT

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
SITE SERVICES PLAN

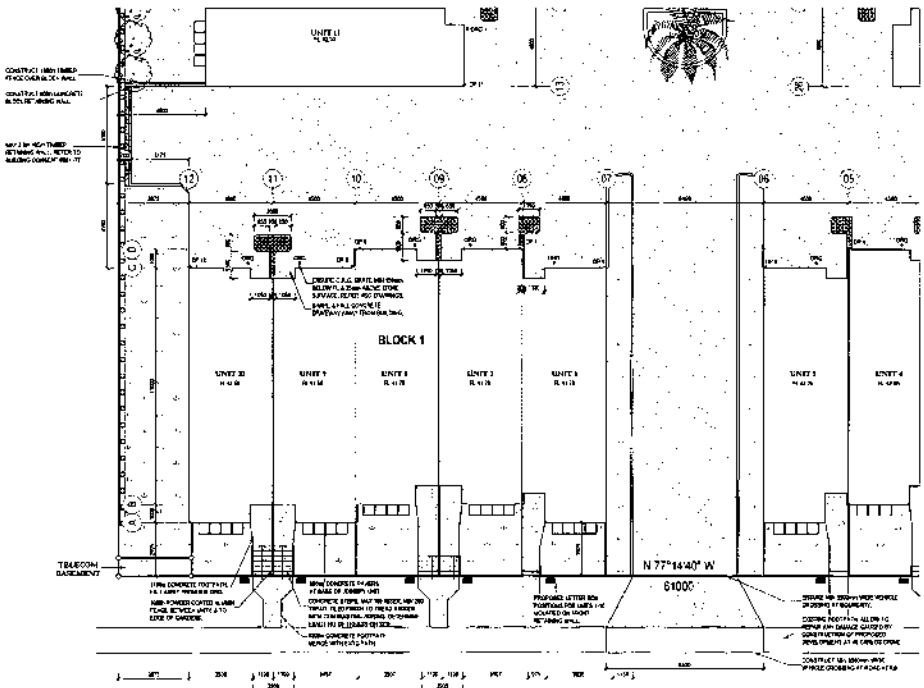
DATE 2 MAY 2007	PROJECT NO. 006
DESIGNED	DRAWN RD	CHECKED

SCALE 1:150@A1/1:300@A3

SHEET A102	REV 1

ISSUE BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 1
LANDSCAPING PLAN

SITE LEGEND:

- PROPOSED BUILDINGS
- PROPOSED CONCRETE AREA
- PROPOSED BITUMINOUS SURFACE
- PROPOSED PERMEABLE LANDSCAPING
- PROPOSED PERMEABLE PEBBLED SURFACE
- PROPOSED SITE STRUCTURES
- PROPOSED RETAINING WALL (REFER RETAINING WALL NOTES BUILDING CONSENT ARCHITECT)
- PROPOSED CONCRETE BLOCK RETAINING WALL
- PROPOSED UNIT FENCING

SHEET NOTES:

- SITE SURFACES PLAN TO BE READ IN CONJUNCTION WITH RESOURCE CONSENT LAND USE CONDITIONS (RC/APP/03/208)
- RUBBISH AND RECYCLABLES TO BE STORED & COLLECTED FROM WHEELIE BINS AND RECYCLING BINS AS PER WASTE MANAGEMENT PLAN AS OUTLINED IN RESOURCE CONSENT LAND USE CONDITIONS (RC/APP/03/208)
- LANDSCAPING AND PLANTING TO BE AS PROPOSED IN RESOURCE CONSENT RC/APP/03/208
- REFER TO PLANS BY AREY CONSULTANTS LTD FOR STORMWATER DRAINAGE. DESIGN PONDING AND FALLS TO SEALED AREAS

GENERAL NOTES:

	BUILDING CONSENT ISSUE	4/06/07
REV	DESCRIPTION	DATE

CONTRACTOR	CONTACT
ARCHITECT	KIRKETT WITTAKER LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AREY CONSULTANTS LTD
CIVIL	AREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	CADDALL SURVEYORS LTD

DEVELOPER PROJECT MANAGEMENT LIMITED
P.O. Box 58 145 GREENMOUNT
MANUKAU, AUCKLAND 2141
PH. 09 273 8687 FAX. 09 27[illegible] 2630
ARCHITECTURAL LITTLE & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
LANDSCAPING PLAN
BLOCK 1

DATE	PROJECT #
1 JULY 2007	006

DESIGNED	DRAWN	CHECKED
	RD	

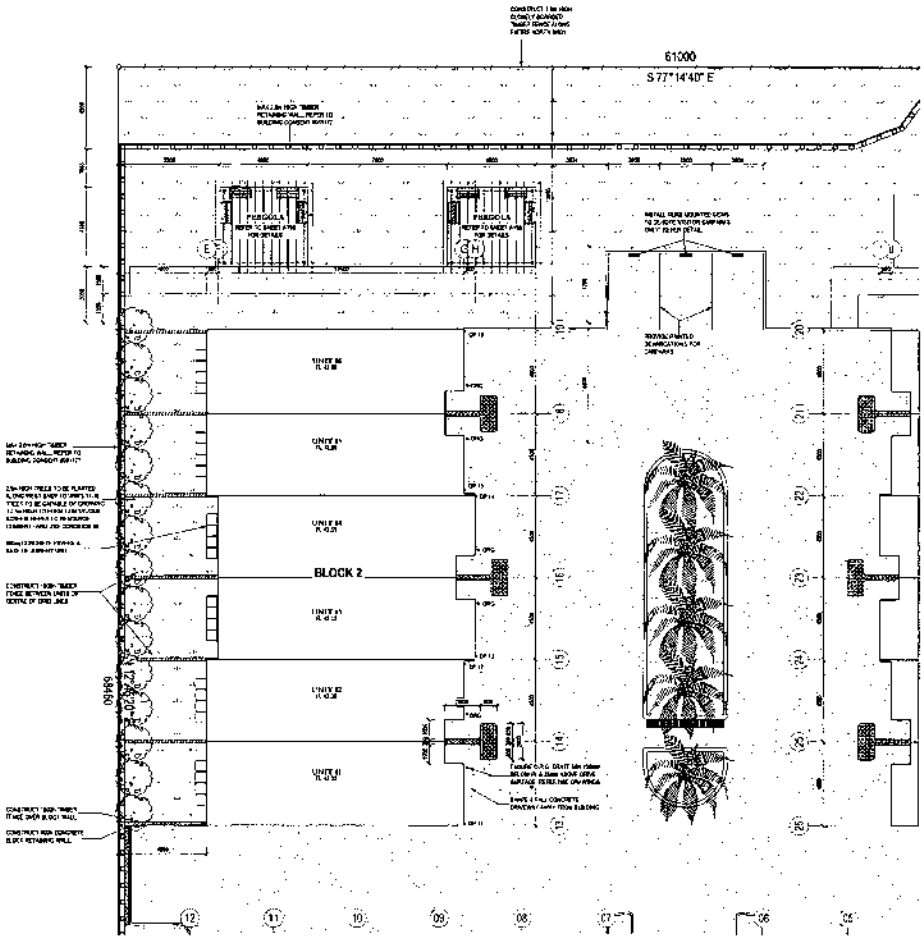
SCALE
1:100@A1/1:200@A3

SHEET #
A150

REV #

STAGE
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 2
LANDSCAPING PLAN

SITE LEGEND:

- PROPOSED BUILDINGS
- PROPOSED CONCRETE AREA
- PROPOSED IMPERMEABLE SURFACE
- PROPOSED PERMEABLE LANDSCAPING
- PROPOSED PERMEABLE PROBLED SURFACE
- PROPOSED SITE STRUCTURES
- PROPOSED RETAINING WALL (TIMBER RETAINING WALL UNDER BUILDING CONSENT 69417)
- PROPOSED CONCRETE INTIX RETAINING WALL
- PROPOSED UNIT FENCING

SHEET NOTES:

- SITE SURFACES PLAN TO BE READ IN CONJUNCTION WITH RESOURCE CONSENT LAND USE CONDITIONS (MUNI/95/3231).
- RUBBISH AND RECYCLAN FA TO BE STORED & COLLECTED FROM WHEELIE BINS AND RECYCLING BINS AS PER WASTE MANAGEMENT PLAN AS OUTLINED IN RESOURCE CONSENT LAND USE CONDITIONS (TOMPKINSON)
- LANDSCAPING AND PLANTING TO BE AS PROVIDED IN RESOURCE CONSENT PLAN PLS 2/03
- REFER TO PLANS BY AIREY CONSULTANTS LTD FOR STORMWATER DRAINAGE, CESS PIT POSITIONS AND FALLS TO SEALED AREAS

GENERAL NOTES

REV	DESCRIPTION	DATE
	BUILDING CONSENT ISSUE	30/07/07

ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
	PIPE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
ELECTRICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
LANDSCAPING PLAN
BLOCK 2

DATE	PROJECT #
3 JULY 2007	008

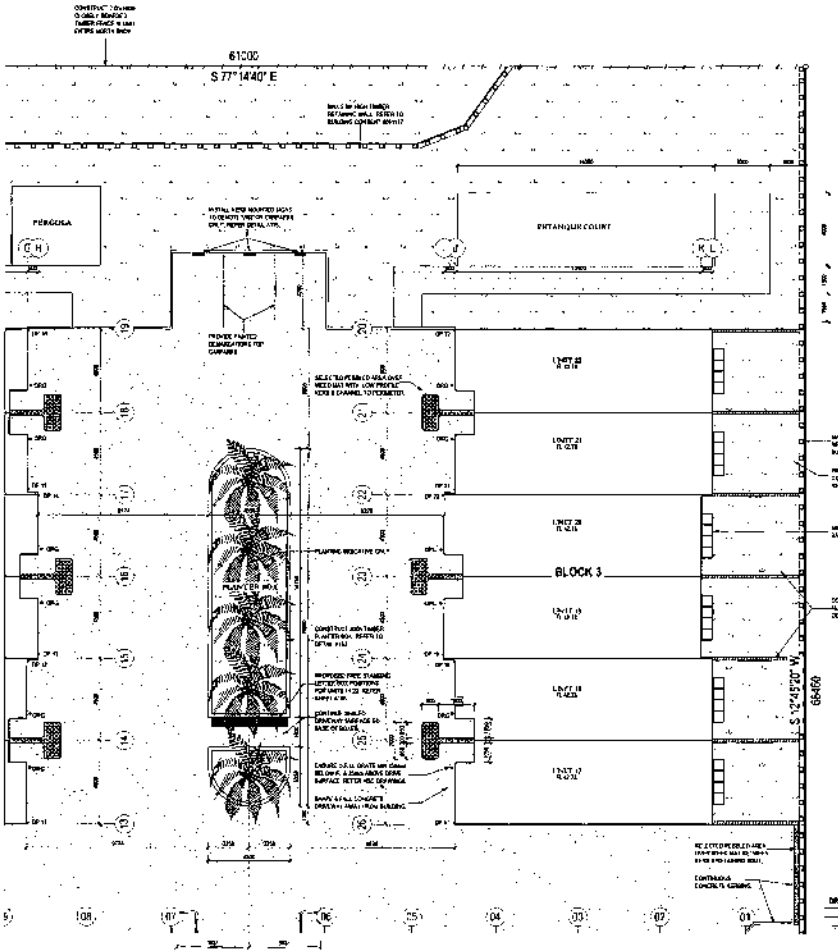
DRAWN	CHECKED	APPROVED
RD		

SCALE
1:100@A1/1:200@A3

SHEET # A151
REV #

ISSUE
BUILDING CONSENT

ARCHITECTURAL SERIES



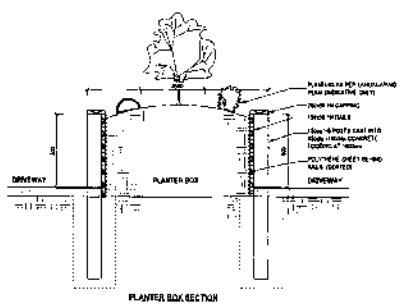
BLOCK 3
LANDSCAPING PLAN

SITE LEGEND:

- PROPOSED BUILDINGS
- PROPOSED CONCRETE AREA
- PROPOSED IMPERMEABLE SURFACE
- PROPOSED PERMEABLE LANDSCAPING
- PROPOSED PERMEABLE PAVER FLOOR SURFACE
- PROPOSED SITE STRUCTURES
- PROPOSED RETAINING WALL (TIMBER RETAINING WALL AS PER BUILDING CONSENT 06/1117)
- PROPOSED CONCRETE BLOCK RETAINING WALL
- PROPOSED UNIT FENCING

SHEET NOTES:

- SITE SURFACES PLAN TO BE READ IN CONJUNCTION WITH RESOURCE CONSENT LAND USE CONSENT (TO APPROVE)
- RUBBISH AND RECYCLABLES TO BE STORED & COLLECTED FROM WHEELIE BIN AND RECYCLING BINS AS PER WASTE MANAGEMENT PLAN AS OUTLINED IN RESOURCE CONSENT LAND USE CONDITIONS (TO APPROVE)
- LANDSCAPING AND PLANTING TO BE AS PROPOSED IN RESOURCE CONSENT (TO APPROVED)
- REFER TO PLANS BY ARCY CONSULTANTS FOR STORMWATER DRAINAGE, DESIGN PIT POSITIONS AND FALLS TO SEALED AREAS



PLANTER BOX SECTION

GENERAL NOTES:

ARCHITECT	AINGETT MITCHELL LTD
HYDRAULIC SERVICES	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AREY CONSULTANTS LTD
CIVIL	AREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASSALE SURVEYORS LTD

ARCHITECT/PROJECT MANAGEMENT LIMITED
P O Box 58 181 WHITFORD
BOMBAY AUCKLAND
PH 09 271 7067 FAX 09 271 4027
ARCHITECTURAL DESIGN & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

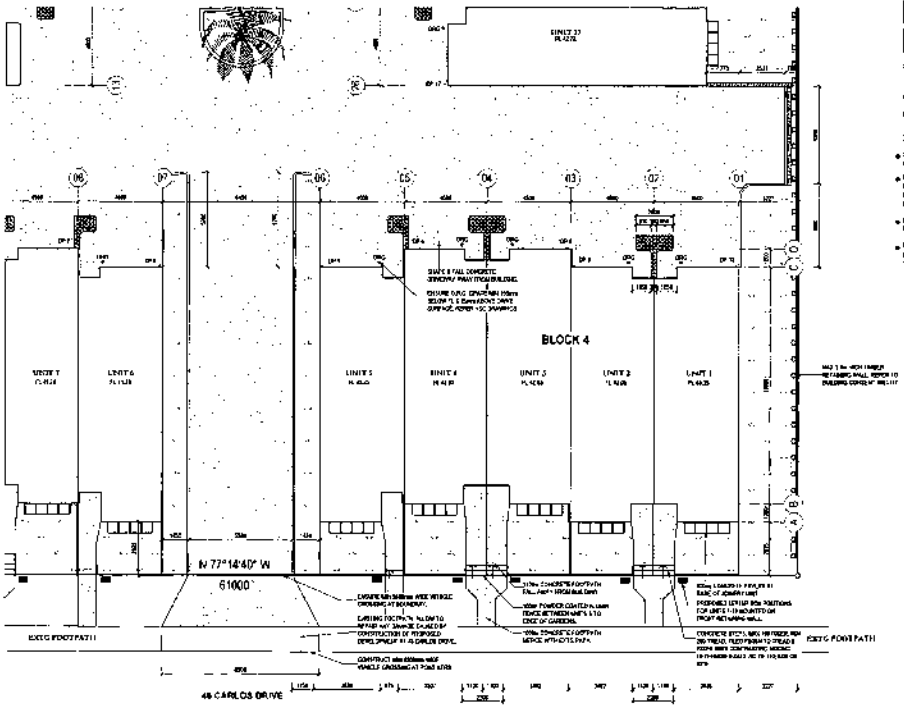
PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
LANDSCAPING PLAN
BLOCK 3

DATE: 3 JULY 2007
PROJECT #: 006
DESIGNED: RS
SCALE: 1:100@A1/1:200@A3

SHEET #: A152
REV:
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 4.
LANDSCAPING PLAN

SITE LEGEND:

- PROPOSED BUILDINGS
- PROPOSED CONCRETE AREA
- PROPOSED IMPERMEABLE SURFACE
- PROPOSED PERMEABLE LANDSCAPING
- PROPOSED PERMEABLE PEBBLED SURFACE
- PROPOSED SITE STRUCTURES
- PROPOSED RETAINING WALL, TIMBER RETAINING WALL AS PER BUILDING CONSENT 404117
- PROPOSED CONCRETE BLOCK RETAINING WALL
- PROPOSED UNIT FENCING

SHEET NOTES:

- SITE SURFACES PLAN TO BE READ IN CONJUNCTION WITH RESOURCE CONSENT LAND USE CONDITIONS (RC/APR/15/2009)
- RUBBISH AND RECYCLABLES TO BE STORED & COLLECTED FROM PUBLIC BINS AND RECYCLING BINS AS PER WASTE MANAGEMENT PLAN AS OUTLINED IN RESOURCE CONSENT LAND USE CONDITIONS (RC/APR/15/2009)
- LANDSCAPING AND PLANTING TO BE AS PROPOSED BY RESOURCE CONSENT RC/APR/15/09
- REFER TO PLANS BY AREY CONSULTANTS LTD FOR STORMWATER DRAINAGE, CESS PIT POSITIONS AND FALLS TO SEWER DRAINS

GENERAL NOTES:

	BUILDING CONSENT 404141
REV	DESCRIPTION DATE
DISCIPLINE / PART	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULICS	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AREY CONSULTANTS LTD
CIVIL	AREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

DAMASTON PROJECT MANAGEMENT LIMITED
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Ph 09 271 8027 Fax 09 271 8027
ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
LANDSCAPING PLAN
BLOCK 4

DATE	PROJECT #
3 JULY 2007	008

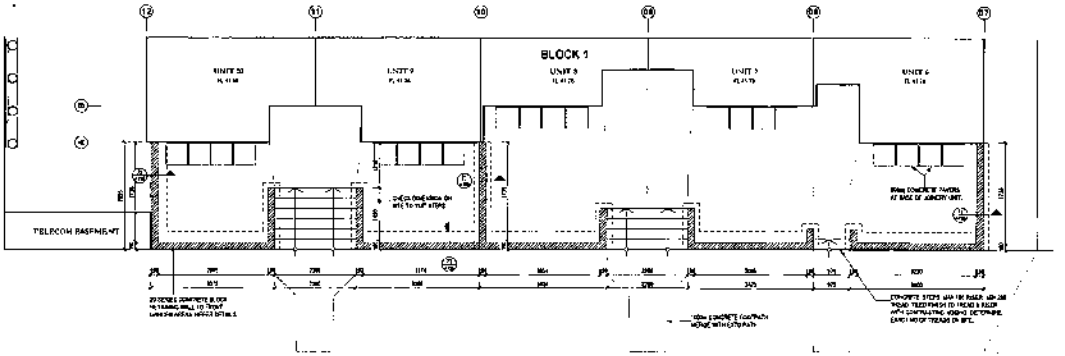
DESIGNED	DRAWN	CHECKED
	RD	

SCALE
1:100@A1/1:200@A3

SHEET #	REV
A153	

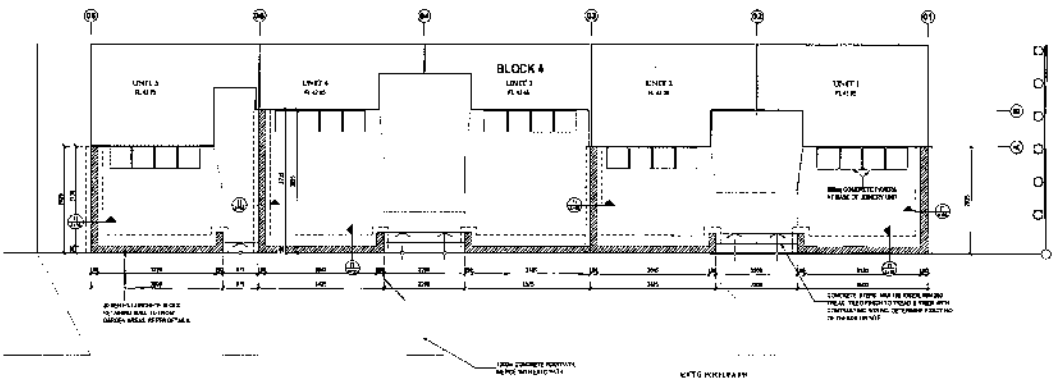
ISSUE
BUILDING CONSENT

ARCHITECTURAL SERIES



46 CARLOS DRIVE

BLOCK 1
ROAD SIDE FENCING PLAN



46 CARLOS DRIVE

BLOCK 4
ROAD SIDE FENCING PLAN

GENERAL NOTES:

	BUILDING CONSENT ISSUE	10/07/07
ISSUE	DESCRIPTION	DATE

CONSULTANT	GENERAL
ACOUSTIC	KIRKOFF & MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AREY CONSULTANTS LTD
CIVIL	AREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

OPPOSITION PROJECT MANAGEMENT LIMITED
P.O. Box 26 294 GREENHITHE
MANUKAU, AUCKLAND 2141
PH. 09 271 1007 FAX. 09 271 4037

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
ROAD SIDE FENCING PLAN
BLOCK 1 & 4

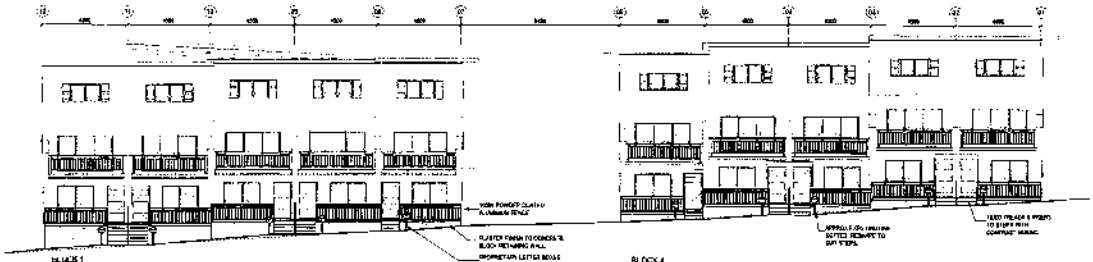
DATE: 3 JULY 2007
PROJECT #: 008
DESIGNED: RO
DRAWN: RO
CHECKED:

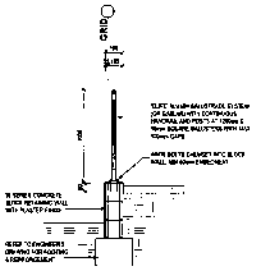
SCALE: 1:100@A1/1:200@A3

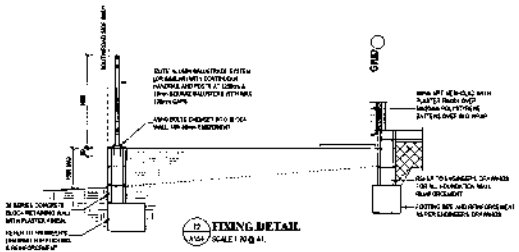
SHEET #: A154
REV #:

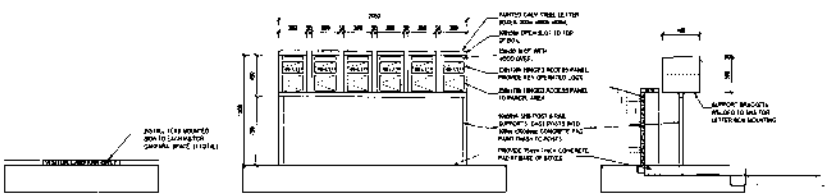
ISSUE: BUILDING CONSENT

ARCHITECTURAL SERIES









CARPARK SIGN

LETTER BOX BANK

LETTER BOX BANK END ELEVATION

GENERAL NOTES:

BUILDING CONSENT ISSUE	
REV	DATE
CONSULTANT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULICS	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	A REY CONSULTANTS LTD
CIVIL	A REY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
QUANTS	BASHAW & ASSOCIATES LTD

DIGGETON PROJECT MANAGEMENT LIMITED
P O Box 36 291 DEVONPORT
AUCKLAND, NEW ZEALAND
Ph 09 271 3007 Fax 09 271 1237

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CLIENT

CONCEPTS 124 LIMITED

PROJECT TITLE

PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE

ROAD SIDE FENCING
ELEVATIONS
BLOCK 1 & 4

DATE: 3 JULY 2007

PROJECT #

DRAWN: RD

CHECKED

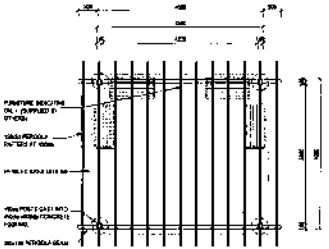
SCALE: 1:100@A1/1:200@A3

SHEET #: A155

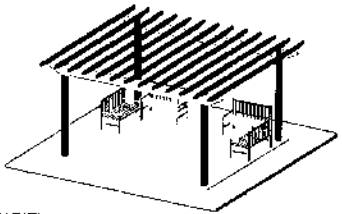
REV #

ISSUE: BUILDING CONSENT

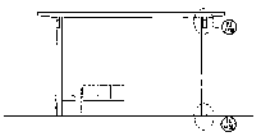
ARCHITECTURAL SERIES



PERGOLA PLAN

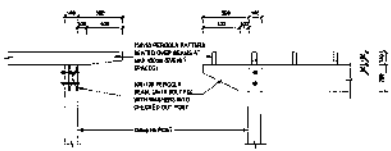


PERGOLA 3D VIEW

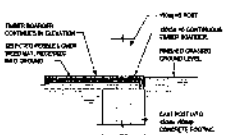


PERGOLA END ELEVATION

PERGOLA FRONT ELEVATION



FIXING DETAIL
A156 / SCALE 1:20 @ A1



BASE DETAIL
A156 / SCALE 1:20 @ A1

GENERAL NOTES:

	BUILDING CONSENT ISSUE	03/07/07
		DATE

CONSULTANT	CONCEPT 1 MIRUNDA LTD
GEOTECH	HYDRAULIC SERVICES LTD
HYDRAULIC	FIRE DESIGNS LTD
FIRE	A REY CONSULTANTS LTD
STRUCTURAL	A REY CONSULTANTS LTD
CIVIL	GEOTEK SERVICES LTD
GEOTECHNICAL	EASDALE SURVEYORS LTD
SURVEYOR	

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
PERGOLA CONSTRUCTION

DATE 3 JULY 2007		PROJECT 308
DRAWN	DRAWN NO	CHECKED

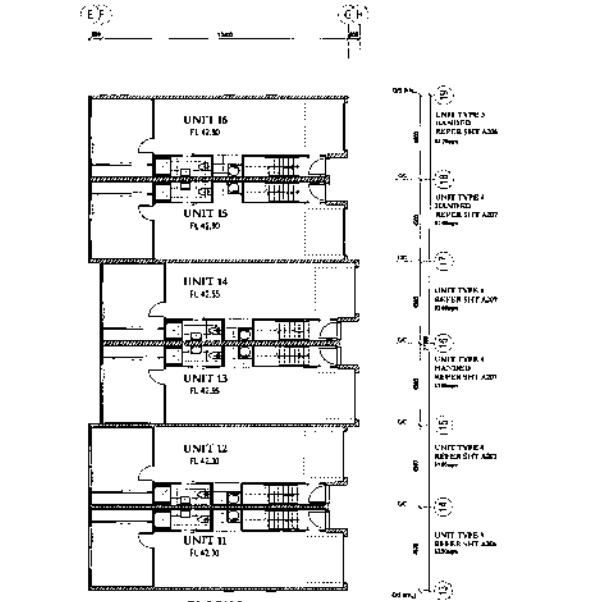
SCALE
AS SHOWN

SHEET
A156

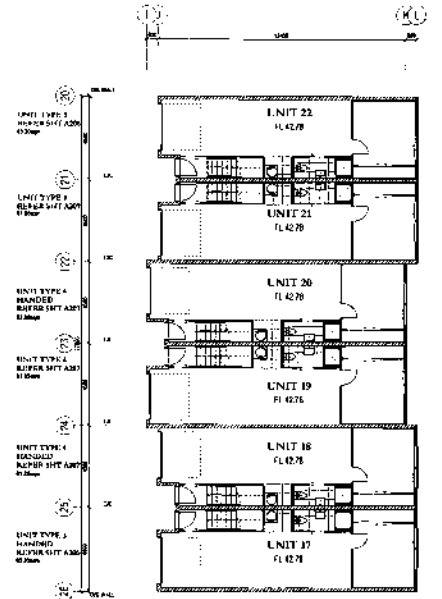
REV

STATUS
BUILDING CONSENT

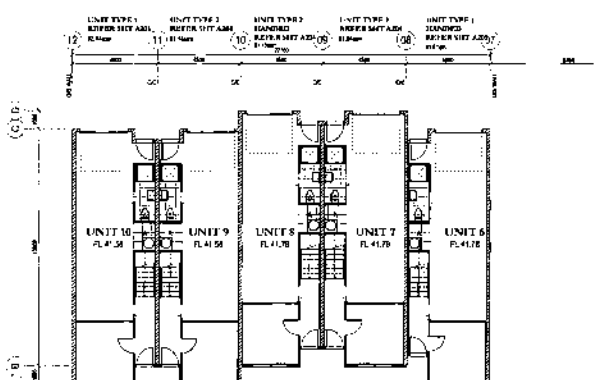
ARCHITECTURAL SERIES



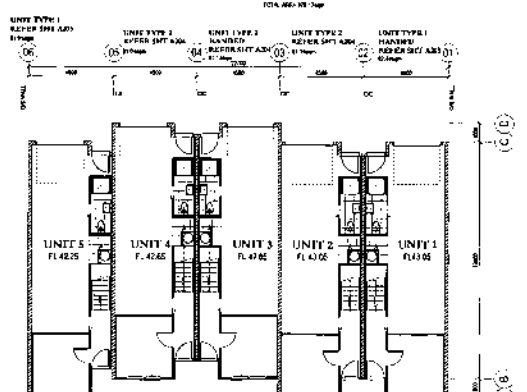
BLOCK 2
GROUND LEVEL



BLOCK 3
GROUND LEVEL



BLOCK 1
GROUND LEVEL



BLOCK 4
GROUND LEVEL

GENERAL NOTES

REV	DESCRIPTION	DATE
1	STRUCTURAL CHANGES, OVERALL DIMENSIONS	09/07/07
	BUILDING CONSENT ISSUE	02/05/07

CONSULTANT	CONTACT
ACCOUNTS	KINGETT MITCHELL LTD
ARCHITECT	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTECH SERVICES LTD
SURVEYOR	FASDALE SURVEYORS LTD

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ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

DRAWING TITLE
OVERALL GROUND
FLOOR PLAN

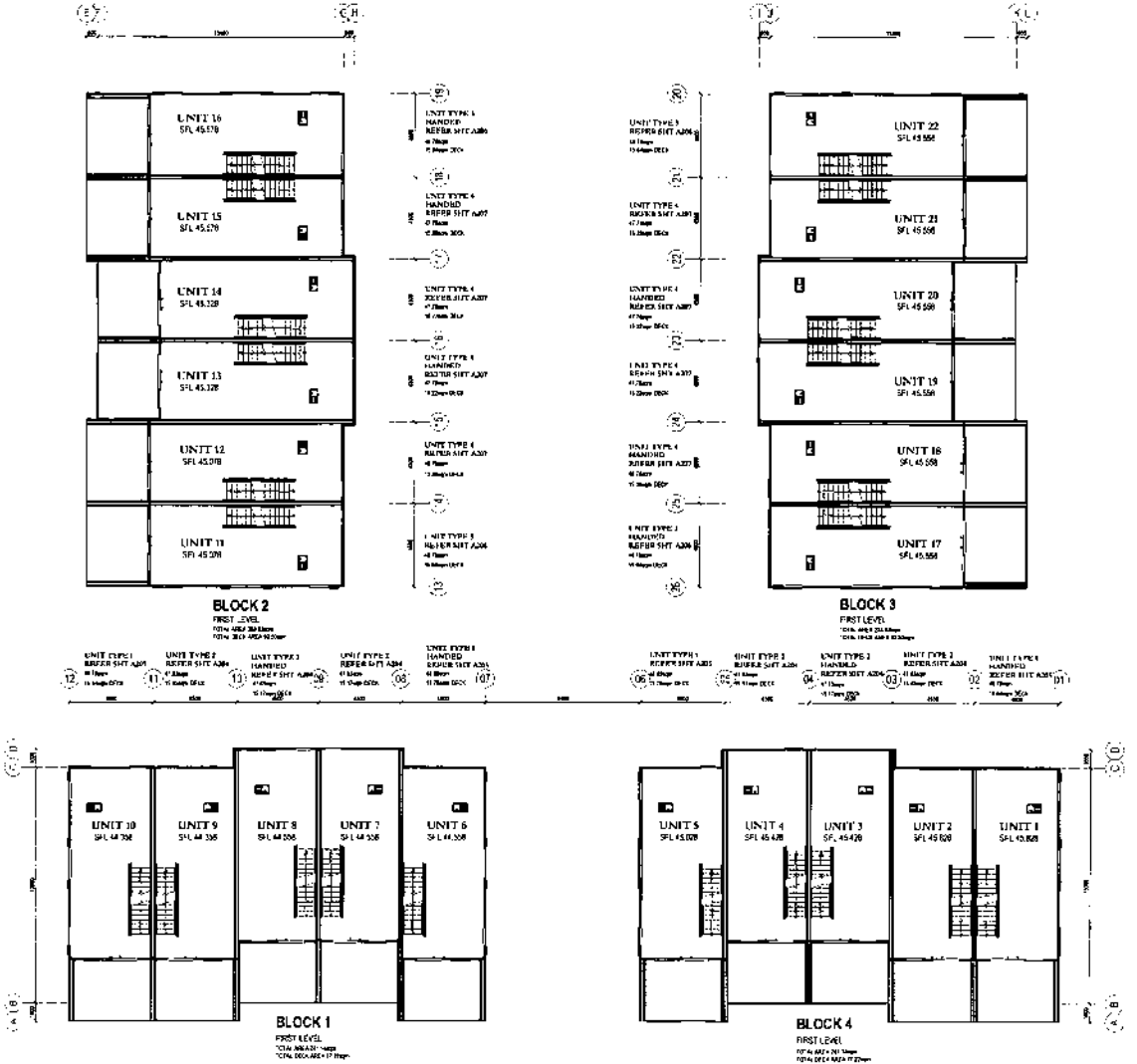
DATE	PROJECT
2 MAY 2007	008
DESIGNED	DRAWN: RD / CHECKED

SCALE
1:100@A1/1:200@A3

SHEET	REV
A201	1

ISSUE
BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES

1	STRUCTURAL CHANGES & OVERALL DIMENSIONS	10/05/07
	GUN ZONE CHANGES ISSUE	02/04/07
REV	DESCRIPTION	DATE

CONSULTANT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	ABREY CONSULTANTS LTD
CIVIL	ABREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	SASCALE SURVEYORS LTD

DESIGNED FOR PROJECT MANAGEMENT LIMITED
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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
OVERALL FIRST FLOOR PLAN

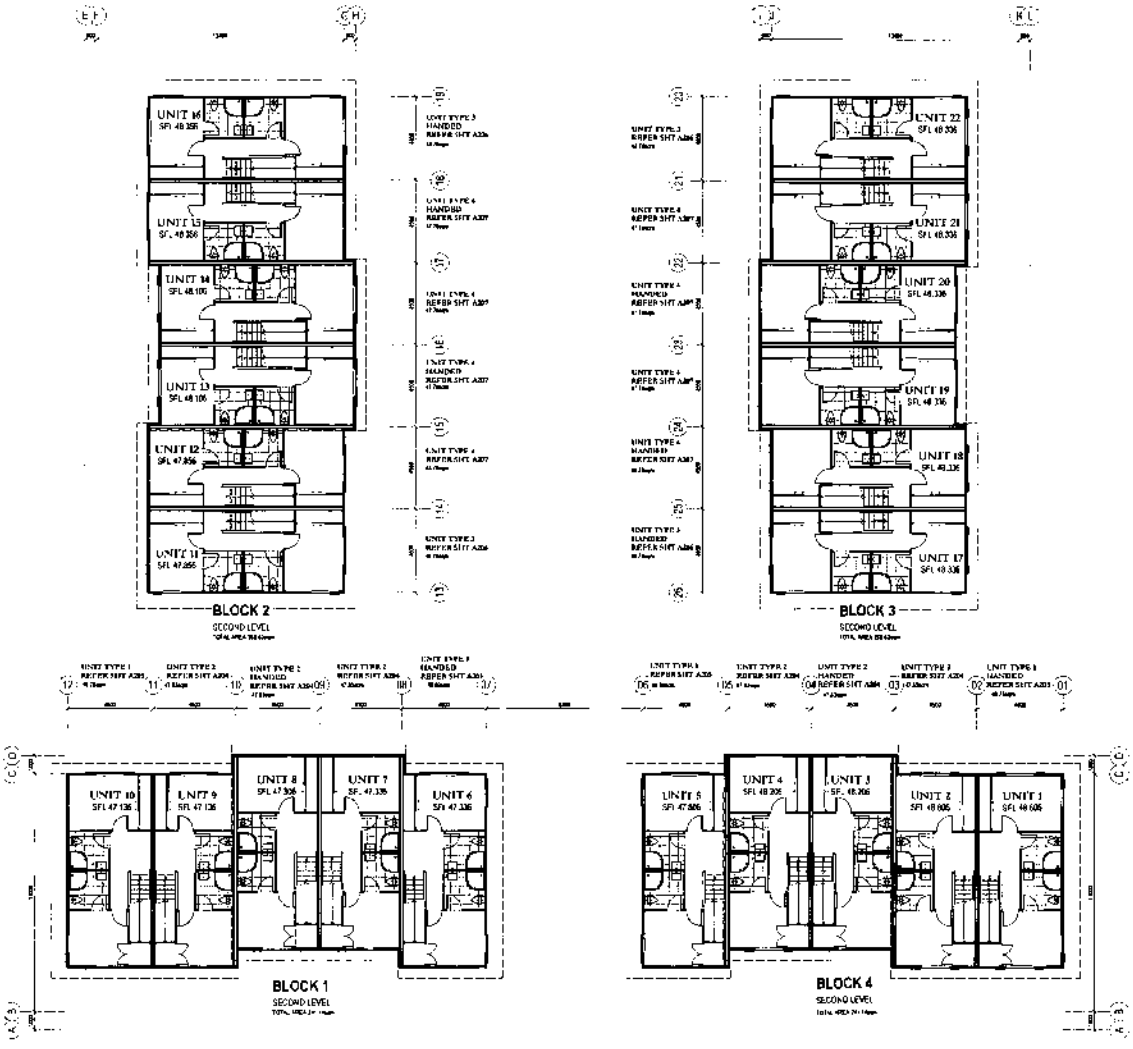
DATE 2 MAY 2007	PROJECT # 608
DRAWN RD	CHECKED

SCALE
1:100@A1/1:200@A3

SHEET # A202	REV 1

STATUS
BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES:

1	STRUCTURAL CHANGES & OVERALL DIMENSIONS	
	BUILDING CONSENT ISSUE	02.05.07

CONSULTANT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AMPY LEINDER PARTNERS LTD
CIVIL	ARREY CONSULTANTS LTD
MECHANICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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A.C. Sec 50 M1 DEVELOPMENT
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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
OVERALL SECOND FLOOR PLAN

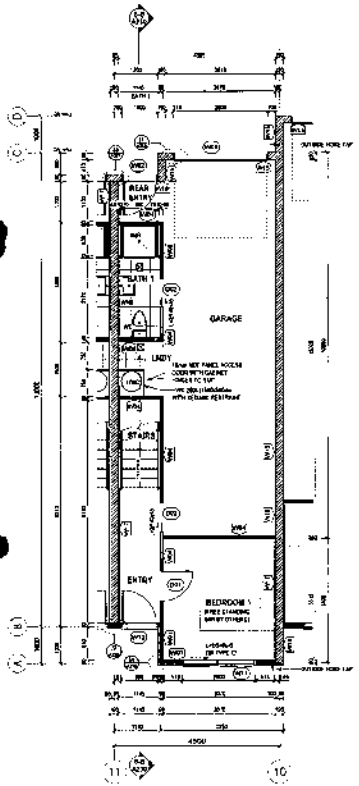
DATE 2 MAY 2007
PROJECT # 06
DESIGNED
DRAWN RD
CHECKED

FILE 1 100@A1/1 200@A3

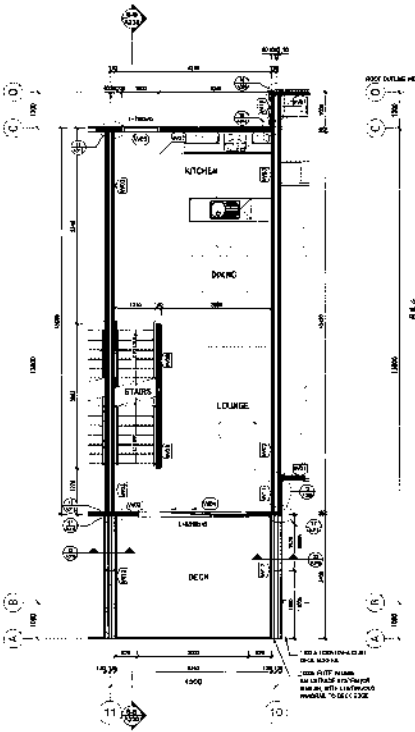
SHEET A203
REV 1

STATUS BUILDING CONSENT

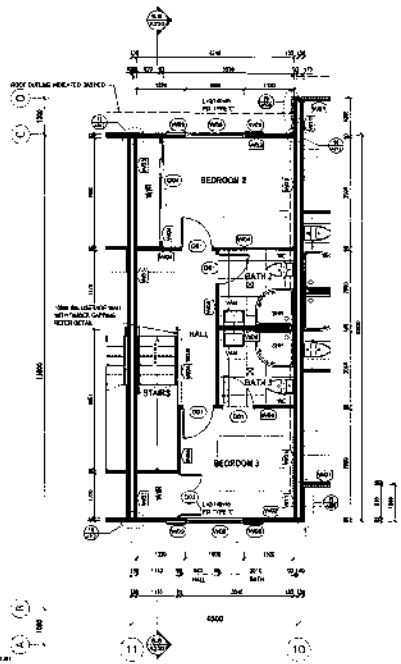
ARCHITECTURAL SERIES



UNIT 9
GROUND LEVEL FLOOR PLAN



UNIT 9
FIRST LEVEL FLOOR PLAN



UNIT 9
SECOND LEVEL FLOOR PLAN

LEGEND:

- (WM) WALL TYPES REFER TO SHEET A201
- (WT) EXTERIOR WINDOWS REFER TO SHEET A401
- (DT) INTERIOR DOORS REFER TO SHEET A401
- (FX) CEILING MOUNTED MECHANICAL EXTRACTION UNIT

UNIT TYPE 2 NOTES:

FLOOR PLAN FOR UNIT 6 SHOWN
UNITS 2 + 4 + 1 = SAME APT + MIRRING FLOOR LEVELS ONLY
UNITS 3 & 5 = INVERTED (SAME APT + MIRRING FLOOR LEVELS)

FLOOR PLAN NOTES:

TYPE of AUTOMATIC FIRE ALARM SYSTEM WITH SMOKE DETECTORS AND WARNING CALL POINTS TO BE INSTALLED IN EACH TOWNHOUSE AND TO BE INDEPENDENT OF ANY OTHER INSTALLATION TO BE IN ACCORDANCE WITH NZS 4512 AND CERTIFIED AS COMPLIANT BY A SUITABLY ACCREDITED INSPECTOR (NZS 4512:2000 clause 1.4.2)

WALL FRAMING NOTES:

GROUND LEVEL BLOCK

- EXTERIOR WALLS TO BE 90 SERIES COMPOSITE BLOCK MASONRY WALL WITH 120mm TIMBER FRAMED WALLS WITH STUDS AT 400mm MAX NOGGS AT 800mm
- L1 WALLS (140 x 90 TIMBER FRAMED TO BLOCK MASONRY WALL WITH 90mm GAP BETWEEN FRAME AND BOARD LINING WITH BATT INSULATION AS INDICATED
- FIRST LEVEL BLOCK
- EXTERIOR WALLS TO BE H1.2 SGN4 TIMBER FRAMED WALLS WITH STUDS AT MAXIMUM 400mm MAX NOGGS AT 800mm
- L1 WALLS TO BE COMBO H1.2 SGN4 TIMBER FRAMED WALLS WITH STUDS AT MAXIMUM 400mm AND NOGGS AT 800mm WITH 90mm GAP BETWEEN FRAMES, PREFACE 2 LAYERS 13mm GIB PLASTERBOARD TO EACH FACE WITH INSULATION TO ONE SIDE

SECOND LEVEL BLOCK

- EXTERIOR WALLS TO BE H1.2 SGN4 TIMBER FRAMED WALLS WITH STUDS AT MAXIMUM 400mm MAX NOGGS AT 800mm
- L1 WALLS TO BE COMBO H1.2 SGN4 TIMBER FRAMED WALLS WITH STUDS AT MAXIMUM 400mm AND NOGGS AT 800mm WITH 90mm GAP BETWEEN FRAMES, PREFACE 2 LAYERS 13mm GIB PLASTERBOARD TO EACH FACE WITH INSULATION TO ONE SIDE

TOP PLATE FIXINGS:

SECOND LEVEL WALL FRAME SUPPORTING ROOF STRUCTURES SHALL HAVE TOP PLATE FIXED TO STUDS AND LINTELS WITH 2 No 3.75 SKEWED NAILS 3 No WIRE DOGS REFER TO TABLE 8 NZS4229 2004 - 1998

A TRIMMING TO HOLD 2000 mm
REFER TO LUMBER OR STUD TO TOP PLATE FIXING SCHEDULE 8.3.7.1.1(b)

LINTEL FIXINGS:

- LINTELS REFERTO TRUSS MANUFACTURER LINTEL SELECTION MANUAL 1999 BY BATTEN NZ LTD. 09 271 1148
- SECONDARY LINTELS 2 No 90 x 190 H1.2 SGN4 PINE BOARDS 2 No 3.75 SKEWED NAILS

GENERAL NOTES.

NOTE CONTRACTOR TO
VERIFY ALL DIMENSIONS & SITE DRAINS
PRIOR TO COMMENCEMENT
WORK PLEASE REFER TO DRAWINGS
DO NOT SCALE FROM DRAWINGS
REFER ALL DISCREPANCIES TO THE DRAWING OFFICE

1	ADDED WALL WITH MASONRY & TIMBER FRAME	CONCEPT
0	BUILDING CONSENT ISSUE	CONCEPT
RFI	DESCRIPTION	BY

CONSULTANTS	COMPANY
ACOUSTIC	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
UNIT 9 FLOOR PLAN
UNIT TYPE 2

DATE	PROJECT #
2 MAY 2007	008

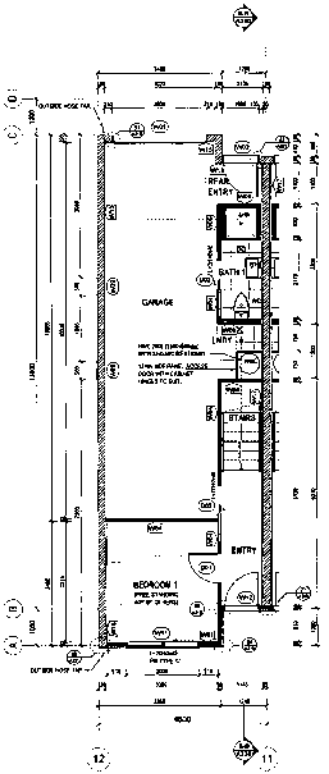
DRAWN	CHECKED	CHECKED
	RO	

SCALE
1:50@A1/1:100@A3

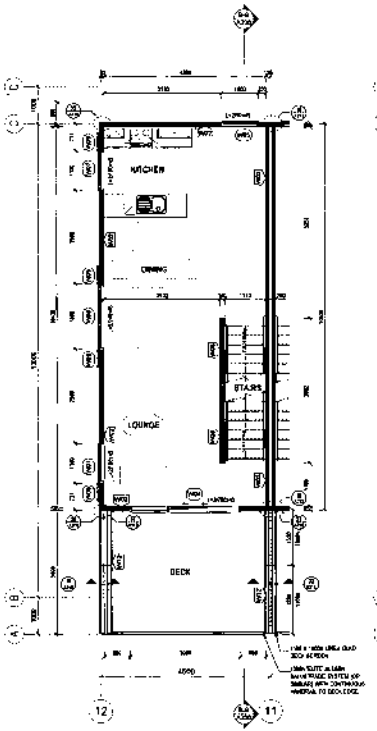
SHEET #	REV #
A204	1

STAGE
BUILDING CONSENT

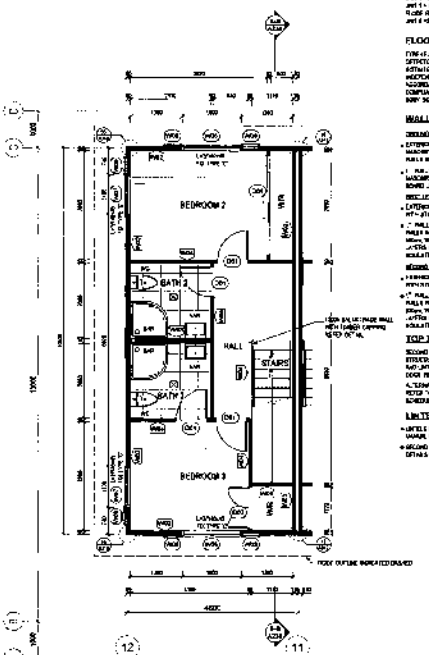
ARCHITECTURAL SERIES



UNIT 10
GROUND LEVEL FLOOR PLAN



UNIT_10
FIRST LEVEL FLOOR PLAN



UNIT_10
SECOND LEVEL FLOOR PLAN

LEGEND:

- WALL TYPES REFER TO SHEET A301
- EXTERIOR DRAWINGS REFER TO SHEET A304
- INTERIOR DRAWINGS REFER TO SHEET A305
- CEILING MOUNTED MECHANICAL EXTRACTOR UNIT

UNIT TYPE 1 NOTES:

FLOOR PLAN FOR UNIT 10 SHOWN
UNIT 1 = MIRROR TO UNIT 10 WITH DIFFERENT FLOOR LEVELS
UNIT 1 = MIRROR UNIT 10 USE 1 ELEVATION FOR GROUND FLOOR RIGHT FLOOR REVERSE
UNIT 6 = MIRROR UNIT 10 UNIT 6 ONLY MIRROR

FLOOR PLAN NOTES:

FIRE & AUTOMATIC FIRE WARNING SYSTEM WITH SMOKE DETECTORS AND WARNING CHIME POINTS TO BE INSTALLED IN ACCORDANCE WITH NZS 4514 AND CERTIFIED TO BE IN ACCORDANCE WITH NZS 4515 AND CERTIFIED AS A COMPLIANT SYSTEM BY AN ACCREDITED INSPECTOR NZS 4515 4512 NZS 4514

WALL FRAMING NOTES:

GROUND FLOOR

- EXTERIOR WALLS TO BE 90 SERIES CONCRETE FLOOR MASONRY WALLS WITH 90 x 45 FRAMED WALLS
- NOTE: STUD 90 INTERNAL LOADBEARING BLOCK MASONRY WALLS WITH 45x45 BATTENS AND 10mm SB BOARD JOINERS WITH ACTT INSULATION AS INDICATED

SECOND LEVEL

- EXTERIOR WALLS TO BE H1.2 ROUGH TIMBER FRAMED WALLS WITH STUDS AT MAXIMUM 600mm (MT) MAXIMUM
- 2" WALLS (110mm DOUBLE H1.2 ROUGH TIMBER FRAMED WALLS WITH 90 x 45 STUDS AT MAXIMUM 600mm AND HOLES IN 90mm WITH 45mm GAP BETWEEN 2 WALLS AND THE 2 LAYERS 45mm CLEAR FIXING TO EACH FRAME WITH INSULATION 120 SHEE

WALL OPENINGS

- WINDOWS WALL & STUD H1.2 ROUGH TIMBER FRAMED WALL WITH STUDS AT MAXIMUM 600mm AND HOLES IN
- 2" WALLS TO BE DOUBLE H1.2 ROUGH TIMBER FRAMED WALLS WITH 45 x 90 STUDS AT MAXIMUM 600mm AND HOLES IN 90mm WITH 45mm GAP BETWEEN 2 WALLS AND HOLES 2 LAYERS 45mm WALL FIXING AT 1.0 HOLES AND WITH INSULATION 120 SHEE 600

TOP PLATE FIXINGS:

SECOND LEVEL WALL FRAME SUPPORTING ROOF STRUCTURE SHALL HAVE TOP PLATES FIXED TO STUDS AND JOISTS WITH 10 NAILS 3 STEPHED NAILS 1 7 PER DOOR REFER TO TABLE 8 NZS 3604 1990
4. TERMITE TO NZS 3604 1990
REFER TO LUMBERTOK STUD TO TOP PLATE FRAME SCHEDULE 8 2 4 1 1 8

LINTEL FIXINGS:

- LINTELS SELECTED FROM LUMBERTOK LINTEL SELECTION MANUAL REFER BY LINTEL NO. TO TO 1 1 4 0
- SECOND LEVEL LINTELS TO BE FIXED AS PER FRAMING DETAILS ON SHEET A 3 1 0

GENERAL NOTES:

1	REPLACE WINDOW WITH WINDOW 1 + FIXED PANEL	10/07/07
	BUILDING CONSENT ISSUE	5/06/07

REV	DESCRIPTION	DATE

CONSULTANTS	CONTACT
GEOTECHNICAL	KINGETT MITCHELL LTD
MECHANICAL	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
ACOUSTICS	AIRCY CONSULTANTS LTD
STATIC	AIRCY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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ARCHITECTURAL SERVICES & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
UNIT 10 FLOOR PLAN
UNIT TYPE 1

DATE	PROJECT #
2 MAY 2007	006

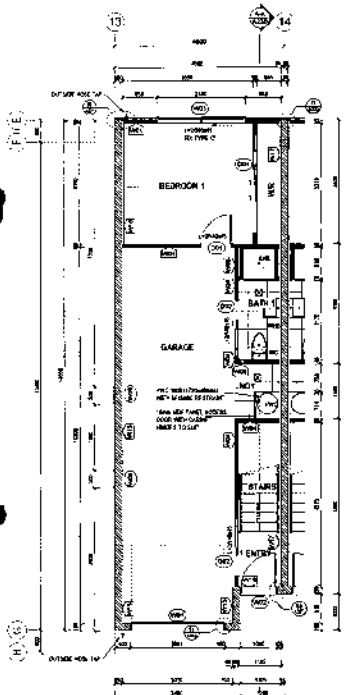
DRAWN	CHECKED	DATE
RD		

SCALE
1:50@A3/1:100@A3

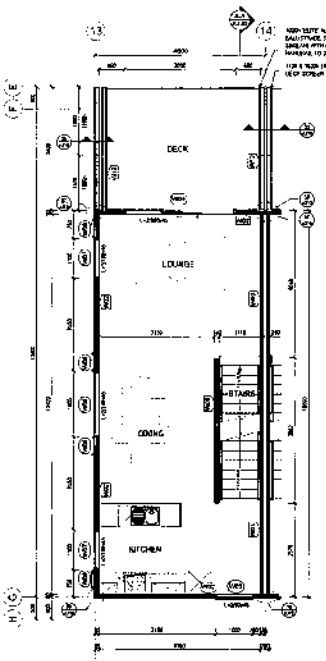
SHEET #	REV #
A205	1

ISSUE
BUILDING CONSENT

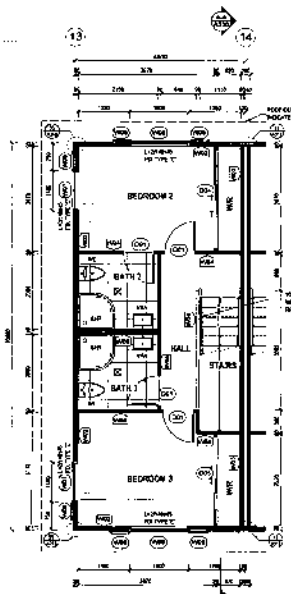
ARCHITECTURAL SERIES



UNIT 11
GROUND LEVEL FLOOR PLAN



UNIT 11
FIRST LEVEL FLOOR PLAN



UNIT 11
SECOND LEVEL FLOOR PLAN

LEGEND:

- (WA1) WALL TYPE 1 REFER TO SHEET A201
- (WA1) EXTERIOR OPENING REFER TO SHEET A201
- (DR1) INTERIOR OPENING REFER TO SHEET A201
- (F) CEILING MOUNTED MECHANICAL EXTRACTOR VENT

UNIT TYPE 3 NOTES:

TYPE 3 UNIT FOR UNIT 11 ONLY.
UNIT 11 = SAME WITH IMPLIED HOUSE LOWER
UNITS 11 & 1 = MIRROR UNITS TO UNIT 11 WITH AWNING HOUSE LEVELS.

FLOOR PLAN NOTES:

TYPE 4 AUTOMATIC FIRE ALARM SYSTEM WITH SMOKE DETECTORS AND MANUAL CALL POINTS TO BE INSTALLED IN EACH TOWNHOUSE AND TO BE INDEPENDENT OF EACH OTHER INSTALLATION TO BE IN ACCORDANCE WITH NZS 4514:2000 AND CERTIFIED AS COMPLIANT BY THE AUTHORITY ACCREDITED INSPECTION (REF NZS 4512:2000 CLAUSE)

WALL FRAMING NOTES:

GROUND LEVEL HOUSE

- EXTERIOR WALLS 100 MM 20 NOMINAL CONCRETE BLOCK MASONRY WALL WITH 2 MMA TIMBER FRAMED WALLS WITH STUDS AT 400mm and WIDE AT 600mm
- 1 WALL TO BE MASONRY CONCRETE BLOCK MASONRY WALL WITH 40x40 BATTENS and 13mm GIB BOARD LINING WITH 50 MM INSULATION AS INDICATED

FIRST LEVEL HOUSE

- EXTERIOR WALLS 100 MM 20 MMA TIMBER FRAMED WALL WITH STUDS AT MAXIMUM 400mm AND WIDE AT 600mm
- 1 WALL TO BE DOUBLE 90 X 45 MMA TIMBER FRAMED WALL WITH STUDS AT MAXIMUM 400mm AND WIDE AT 600mm WITH 90mm GAP BETWEEN FRAMES. PROVIDE 2 LAYERS 13mm GIB FIREGUARD TO EACH FRAME WITH INSULATION TO ONE SIDE

SECOND LEVEL HOUSE

- EXTERIOR WALLS 100 MM 20 MMA TIMBER FRAMED WALL WITH STUDS AT MAXIMUM 400mm AND WIDE AT 600mm
- 1 WALL TO BE DOUBLE 90 X 45 MMA TIMBER FRAMED WALL WITH STUDS AT MAXIMUM 400mm AND WIDE AT 600mm WITH 90mm GAP BETWEEN FRAMES. PROVIDE 2 LAYERS 13mm GIB FIREGUARD TO EACH FRAME WITH INSULATION TO ONE SIDE

TOP PLATE FIXINGS:

SECOND LEVEL WALL FRAME SUPPORTING ROOF STRUCTURE WALL SAME TOP PLATES FIXED TO STUDS AND JOINTED WITH 2NOS 4.5 SHANKED NAILS 4.3 WIRE NAILS REFER TO TABLE 8.18 NZS 3604 1999

ALTERNATIVE TO NZS 3604 1999:
REFER TO LUMBERLOK STAND TO TOP PLATE FIXING SCHEDULE ID 214 F18

LINTEL FIXINGS:

- LINTELS SELECTED FROM DANGAN LINTEL SELECTION MANUAL BASED ON MITCHELL LTD DESIGN F18
- SECOND LEVEL LINTELS TO BE FIXED AS PER FIXING DETAILS ON SHEET A206

GENERAL NOTES:

REFER CONTRACTOR TO
- STRUCTURAL DRAWINGS OF ARTS BEFORE COMMENCING WORK
- REFER TO ALL ARCHITECTURAL DRAWINGS
- DO NOT SCALE FROM DRAWINGS
- REPORT ALL DISCREPANCIES TO THE DRAWING OFFICE

1	REPORT WALL WITH MASONRY & TIMBER FRAME	EGPWP
	BUILDING CONSENT ISSUE	EGPWP
REV	DESCRIPTION	DRAWN

CONSULTANTS CONTACT

ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
MECHANICAL	GECRICK SERVICES LTD
SURVEYOR	LASSALE SURVEYORS LTD

DIMENTION PROJECT MANAGEMENT LIMITED
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Manukau, Auckland 2141
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ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
UNIT 11 FLOOR PLAN
UNIT TYPE 3

DATE	PROJECT No
2 MAY 2007	005

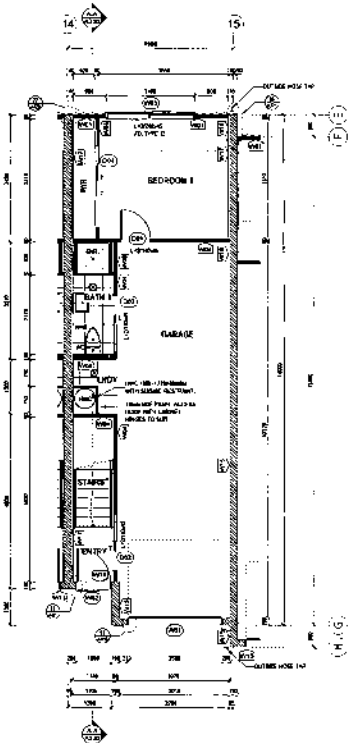
DESIGNED	DRAWN	CHECKED
	RD	

PLANS 1:50@A1/1:100@A3

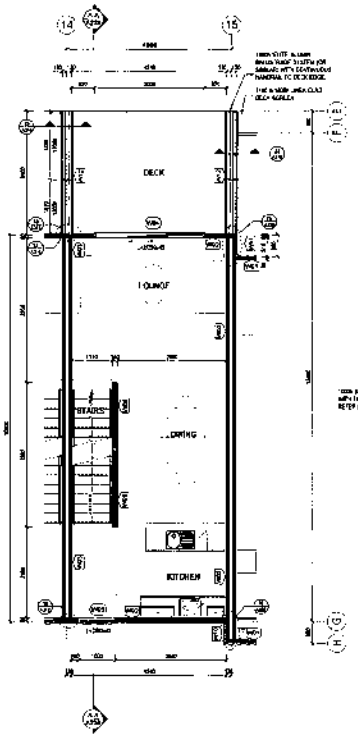
SHEET	REV
A206	1

STATUS
BUILDING CONSENT

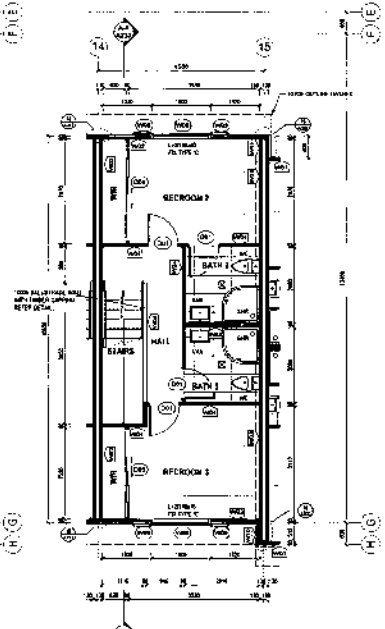
ARCHITECTURAL SERIES



UNIT 12
GROUND LEVEL FLOOR PLAN



UNIT_12
FIRST LEVEL FLOOR PLAN



UNIT_12
SECOND LEVEL FLOOR PLAN

LEGEND:

- (W01) WALL TYPE REFER TO SHEET A401
- (W01) EXTERIOR OPENINGS REFER TO SHEET A401
- (D01) INTERIOR OPENINGS REFER TO SHEET A401
- ⊠ CEILING MOUNTED MECHANICAL EXTRACTOR VENT

UNIT TYPE 4 NOTES:

FLOOR PLAN FOR UNIT 12 ONLY
UNITS 11, 13 & 21 – SAME WITH MIRROR FLOOR LEVELS
UNITS 10, 14, 19 & 20 – SAME WITH MIRROR LEVEL 1 ONLY WITH NORMAL FLOOR LEVELS

FLOOR PLAN NOTES:

TYPE 4: 3 STOREYS: 1 ONE-BEDROOM UNIT WITH 1 BEDROOM, 1 BATHROOM AND LIVING AREA, PLUS 2 TWO-BEDROOM UNITS EACH COMMODIOUS SIZE. ONE BEDROOM AT SECOND LEVEL AND 1 ALL THE WAY ON ONE IN ACCORDANCE WITH NZS 4121:2001 AND CERTIFIED AS A COMPLIANT FACILITY BY AN ACCREDITED INSPECTOR BOTH NZS AND NZ 4121 "A".

WALL FRAMING NOTES:

GROUND FLOOR LEVEL

- EXTERIOR WALLS 100 DEEP TO REFER TO CONTRACT DRAWINGS FOR DETAILS AND 2 70mm TIMBER FRAMED WALLS WITH 110 R4.1 400mm AND NOGGS AT 800mm
- 87 WALLS TO BE IN MOVES CONCRETE BLOCK MASONRY WALLS WITH steel BATTENS AND 10mm GIB BOARD LINING WITH BATTENS AND NOGGS
- NOTE WALLS 100 DEEP

- EXTERIOR WALLS 100 DEEP, 2 70mm TIMBER FRAMED WALLS WITH 110 R4.1 MAXIMUM 400mm AND NOGGS AT 800mm
- 88 WALLS TO BE DOUBLE 2 70mm TIMBER FRAMED WALL & WITH 110 R4.1 MAXIMUM 400mm AND NOGGS AT 800mm 400mm DAP "BRACE" FRAMES PROVIDE 7 LAYERS 10mm GIB ONE ONLY TO EACH FRAME WITH INSULATION TO ONE SIDE

SECOND FLOOR LEVEL

- EXTERIOR WALLS 100 DEEP, 2 70mm TIMBER FRAMED WALLS WITH R4.1 MAXIMUM 400mm AND NOGGS AT 800mm
- 87 WALLS TO BE DOUBLE 2 70mm TIMBER FRAMED WALL WITH 110 R4.1 MAXIMUM 400mm AND NOGGS AT 800mm, 100 x 50mm DAP "BRACE" FRAMES PROVIDE 7 LAYERS 10mm GIB ONE ONLY TO EACH FRAME WITH INSULATION TO ONE SIDE

TOP PLATE FIXINGS:

SECOND LEVEL WALL TO BE SUPPORTING ROOF STRUCTURE SHALL HAVE TOP PLATES FIXED TO STUDS INCLUDED WITH 2 NAILS 30 SQUARE NAILS & 2 NAILS DOUBLE FIXED TO TABLE B1 NZS 3604 1999

ALTERNATIVE TO 4.4 NZS 3604 1999
FIXING TO UNDERSIDE STUD TO TOP PLATE USING BOX NAILS 90 x 3.15 1999

LINTEL FIXINGS:

- LINTEL SELECTED FROM SCHEDULE AND LINTEL SELECTION MANUAL BOTTOM PLATE NZS 4229 2001
- SECOND LEVEL LINTEL 2 10 NZ TIMBER AS PER FIXING DETAILS ON SHEET A4-8

GENERAL NOTES.

1	ISSUED FOR BUILDING CONSENT	2/MAY/07
	BUILDING CONSENT ISSUE	7/03/07
REV	DESCRIPTION	DATE

DEVELOPMENT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD PH 09 358 3754 Fax 09 358 3757
HYDRAULIC	HYDRAULIC SERVICES LTD PH 09 828 7158 Fax 09 828 7159
FIRE	FIRE DESIGNS LTD PH 09 815 8322 Fax 09 815 8327
STRUCTURAL	AIREY CONSULTANTS LTD PH 09 534 5553 Fax 09 534 5554
CIVIL	AIREY CONSULTANTS LTD PH 09 534 5553 Fax 09 534 5554
GEOTECHNICAL	GEOTECH SERVICES LTD PH 09 828 7159 Fax 09 828 7159
BUILDER	CASCADE SURVEYORS LTD PH 09 534 5553 Fax 09 534 5554

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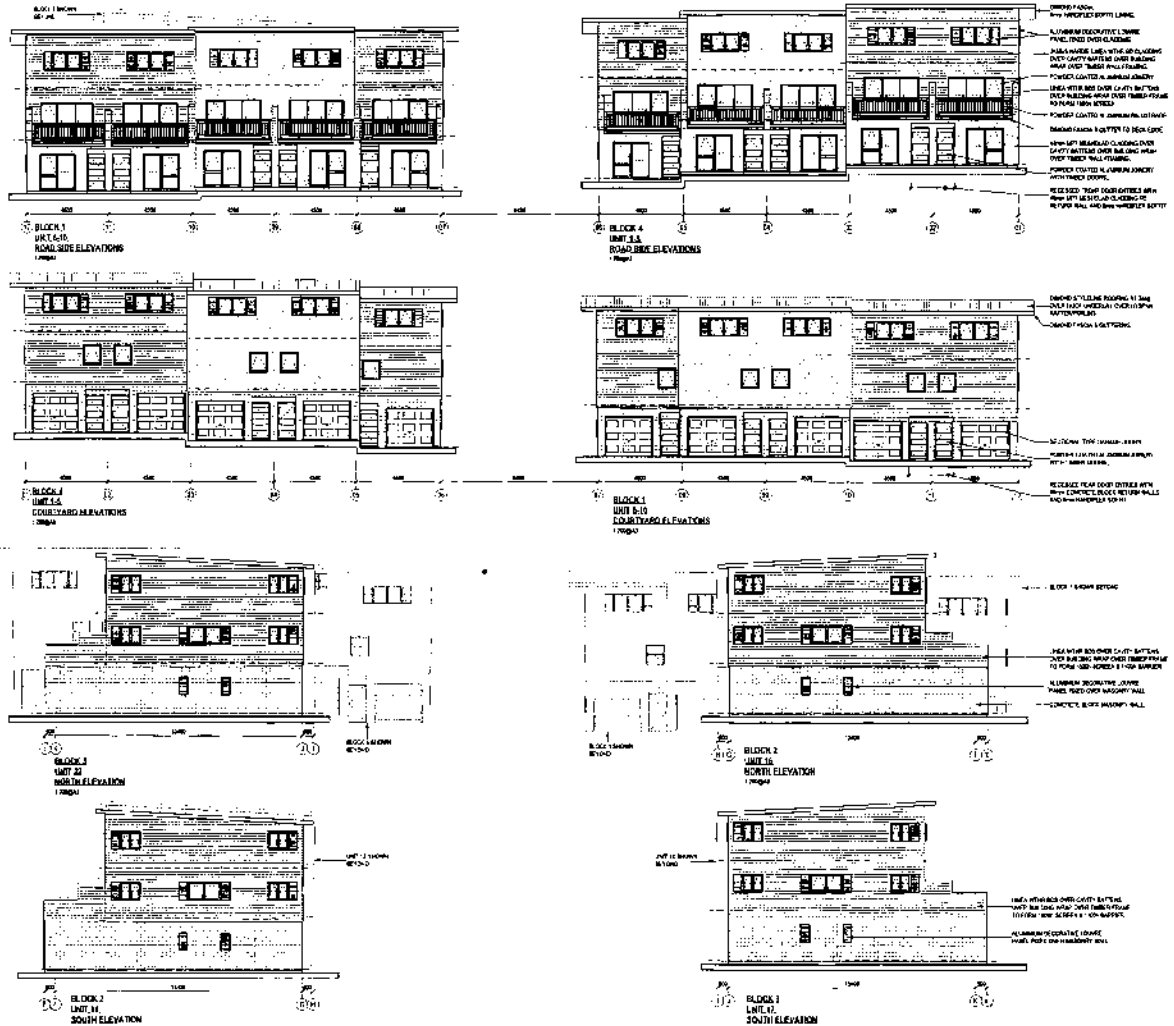
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
UNIT 12 FLOOR PLAN
UNIT TYPE 4

DATE 2 MAY 2007	PROJECT # 008
DRAWN RD	CHECKED
SCALE 1:50@A1/1:100@A3	
SHEET # A207	REV # 1
STAGE BUILDING CONSENT	

ARCHITECTURAL SERIES



GENERAL NOTES.

[illegible]

LEGEND:

[illegible]

1	[illegible]	[illegible]
	[illegible]	

KEY	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
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[illegible]	[illegible]
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[illegible]	[illegible]

[illegible]
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[illegible]

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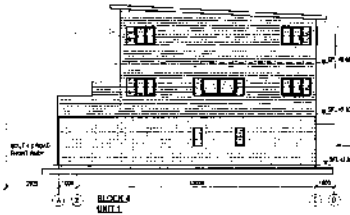
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
ELEVATIONS

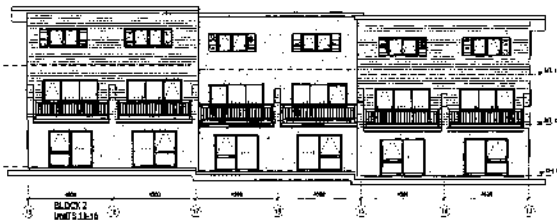
DATE 2 MAY 2007	PROJECT # 008	
DESIGNED	DRAWN RD	CHECKED
SCALE 1:100@A1 / 1:200@A3		
SHEET # A208	REV # 1	
STATUS BUILDING CONSENT		

ARCHITECTURAL SERIES

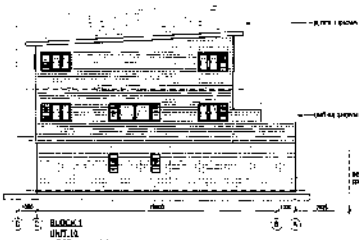


BLOCK 4
UNIT 1
EAST ELEVATION
1:200@A3

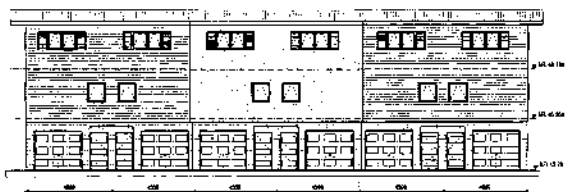
BLOCK 3
UNITS 17-22
EAST ELEVATION
1:200@A3



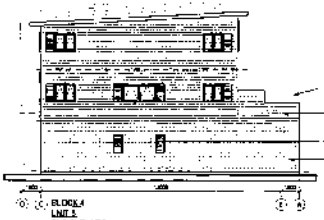
BLOCK 2
UNITS 11-16
WEST ELEVATION
1:200@A3



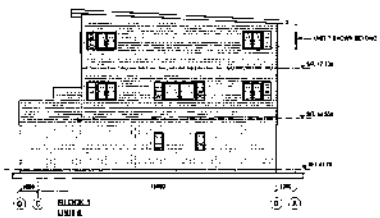
BLOCK 1
UNIT 10
WEST ELEVATION
1:200@A3



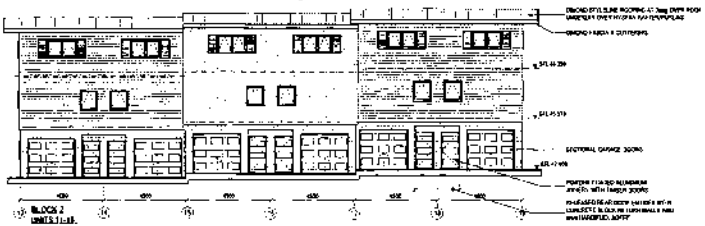
BLOCK 3
UNITS 17-22
COURTYARD ELEVATIONS
1:200@A3



BLOCK 4
UNIT 1
END ELEVATION
1:200@A3



BLOCK 3
UNIT 6
END ELEVATION
1:200@A3



BLOCK 2
UNITS 11-16
COURTYARD ELEVATIONS
1:200@A3

GENERAL NOTES.

LEGEND:

	PLACE MARKER, 3MM WEATHER BOARD CLADDING OVER 35mm CAVITY BATTENS.
	40mm MPI MINERAL WOOL OVER 35mm CAVITY BATTENS.
	GROUND STUDS/ME FLOORING AT 300g OVER ROOF UNDERLAY OVER PLYWOOD.
	20 SERIES CONCRETE BLOCK. BRICKWORK WALL.

	PLACE MARKER WITH WEATHER BOARD CLADDING
	BUILDING CONSENT ISSUE

CONSULTANT	COMPANY
ARCHITECT	MINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECH	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

DAVERTON PROJECT MANAGEMENT LIMITED
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MANUKAU, AUCKLAND 2141
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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SUBJECT TITLE
ELEVATIONS

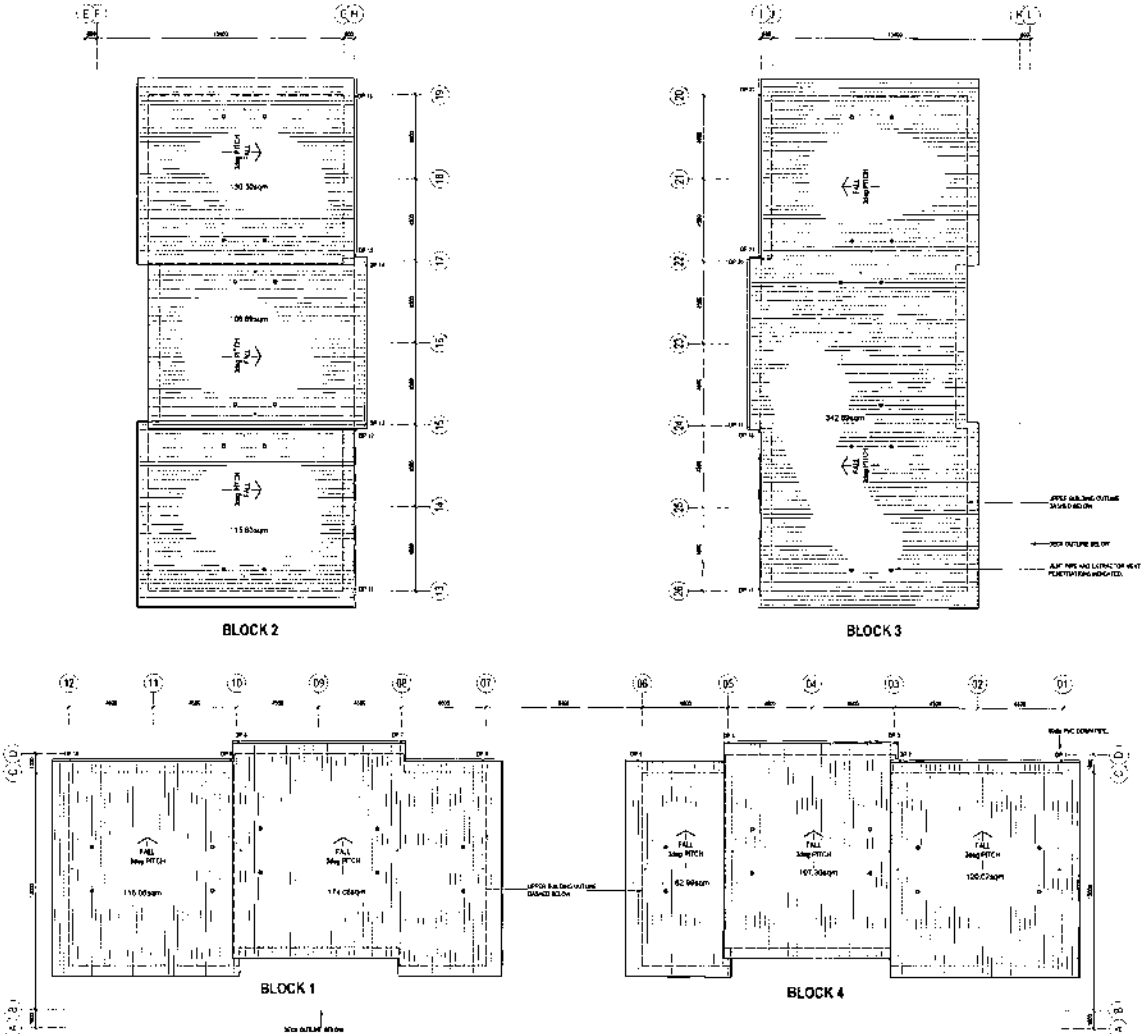
DATE: 2 MAY 2007	PROJECT #: 008
DRAWN: RD	Volume: / Checked:

SCALE
1:100@A1 / 1:200@A3

SHEET # A209	REV # 1

ISSUE
BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES:

REV	DESCRIPTION	DATE
1	STRUCTURAL CHANGE & INITIAL CONSENSING	02/07/07

CONSULTANT	CONTACT
ACOUSTIC	GINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASCALE SURVEYORS LTD

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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
ROOF PLAN

DATE	PROJECT #
2 MAY 2007	008

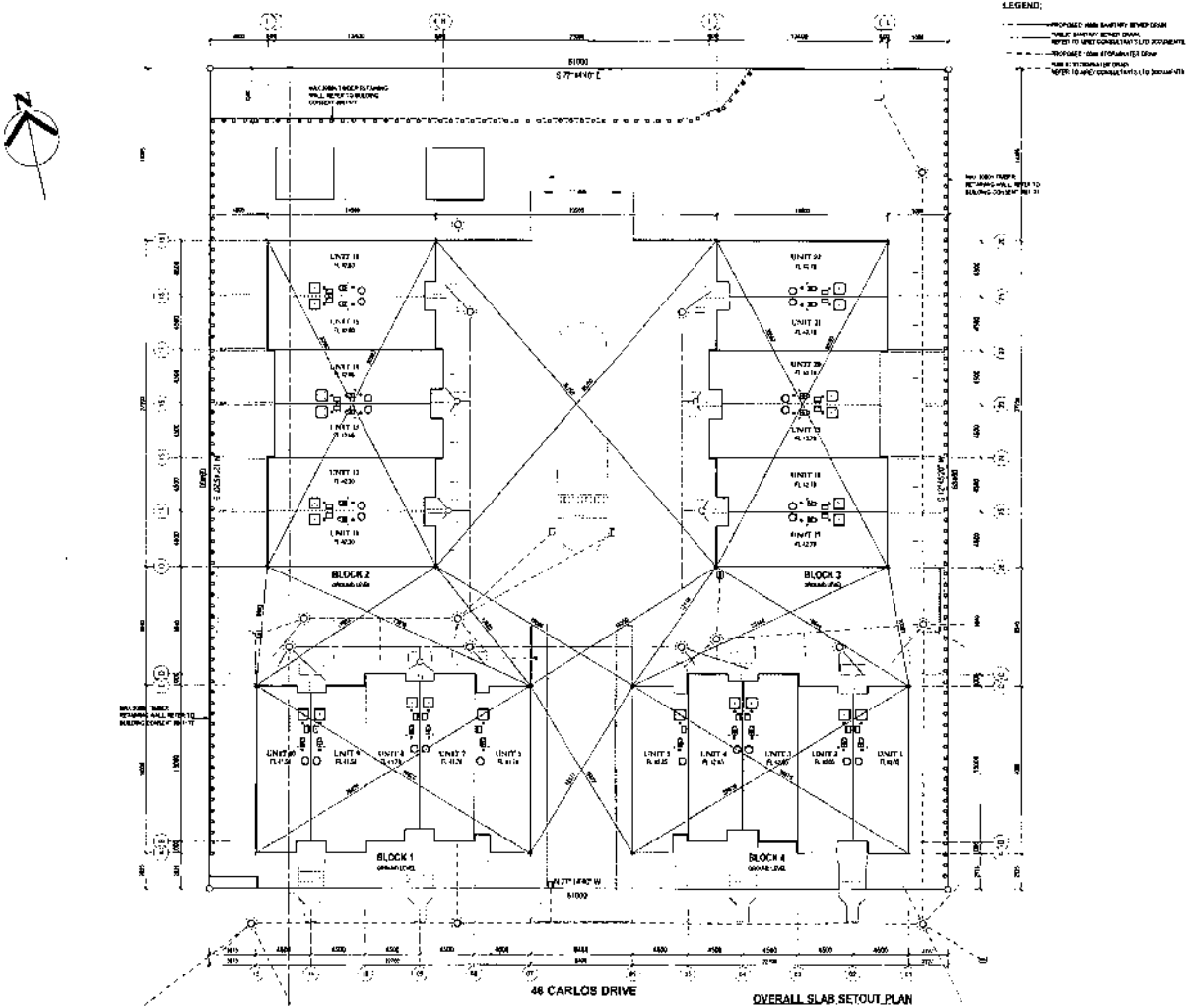
DESIGNED	DRAWN	CHECKED
	RD	

SCALE
1:100@A1/1:200@A3

SHEET #	REV #
A211	1

SHEET
BUILDING CONSENT

ARCHITECTURAL SERIES



GENERAL NOTES

1	STRUCTURAL CHANGES OVERALL DIMENSIONS	02/05/07
	WALKING CONSENT RFI &	02/05/07
REV	DESCRIPTION	DATE

Drawing Pack	CONTACT
ARCHITECT	RINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEC SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
OVERALL SLAB SETOUT PLAN

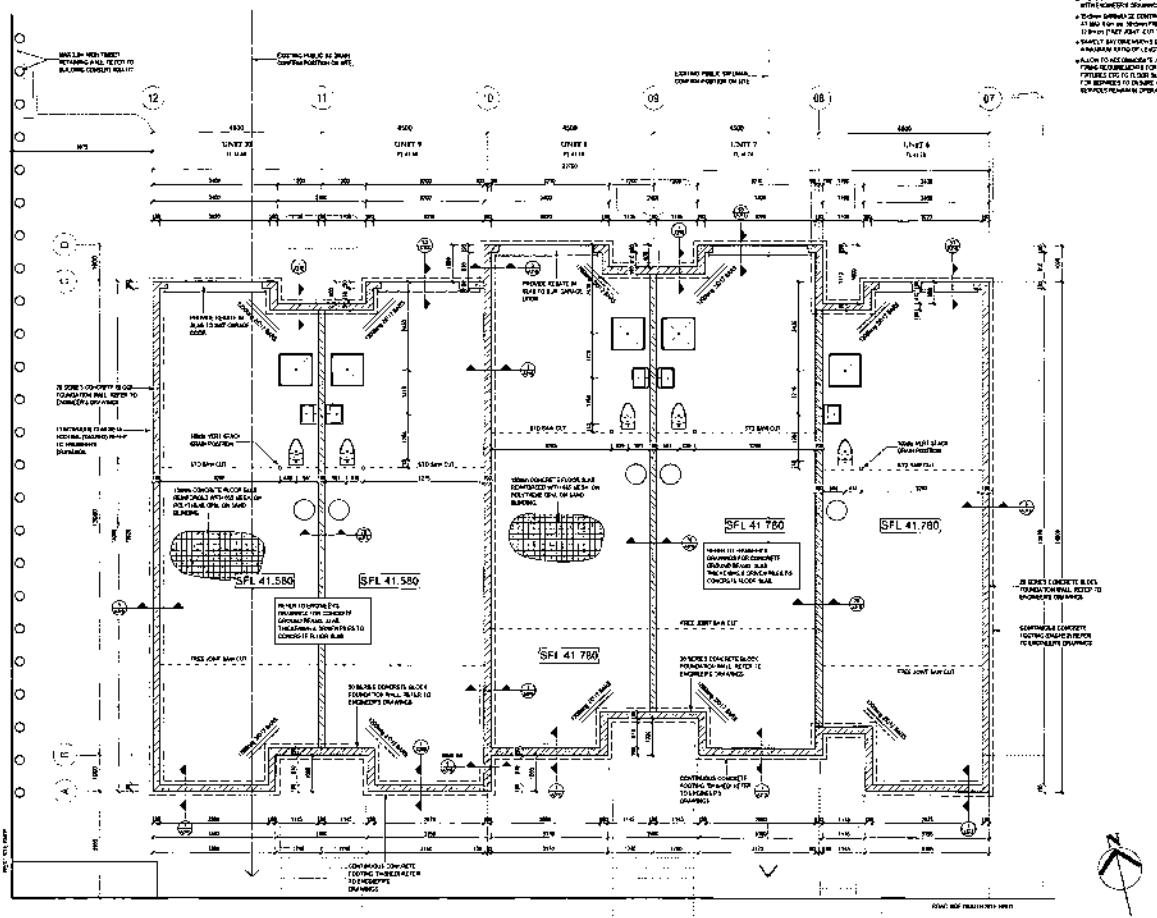
DATE 2 MAY 2007	PROJECT # 008	
DRAWN	Mason	CHECKED RD

SCALE 1:150@A1 1:300@A3

SHEET # A212	REV 1

STATUS
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 1
FOUNDATION PLAN

FOUNDATION NOTES:

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONCRETE SPECIFICATION.
- 15mm BARRIER TO CONTROL JOINTS (SAW CUTS) AT MAX 10m on 30mm FREE JOINTS AT MAX 10 m (FREE JOINT CUT TO PASS THRU WET BM)
- STRICTLY NO CONCRETE OVER, DEVIATED TO A MAXIMUM RATIO OF LENGTH (WIDTH) OF 2:1
- ALLOW TO ACCOMMODATE AND COORDINATE FOR FIXING REQUIREMENTS FOR WALL FITTINGS AND FIXTURES ETC TO FLOOR SLAB AND ALL PENETRATIONS FOR SERVICES TO ENSURE ALL CONCRETE IDEALLY REMAIN IN OPERABLE CONDITION

GENERAL NOTES:

1	STRUCTURAL CHANGE & FINAL ENGINEERS	
	BUILDING CONSENT ISSUE	
REV	DESCRIPTION	DATE

CONSULTANT	CONCEPTS
HYDRAULIC	KINGETT MITCHELL LTD
MECHANICAL	HYDRAIN INSPECTION LTD
GAS	PIPE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GROTER SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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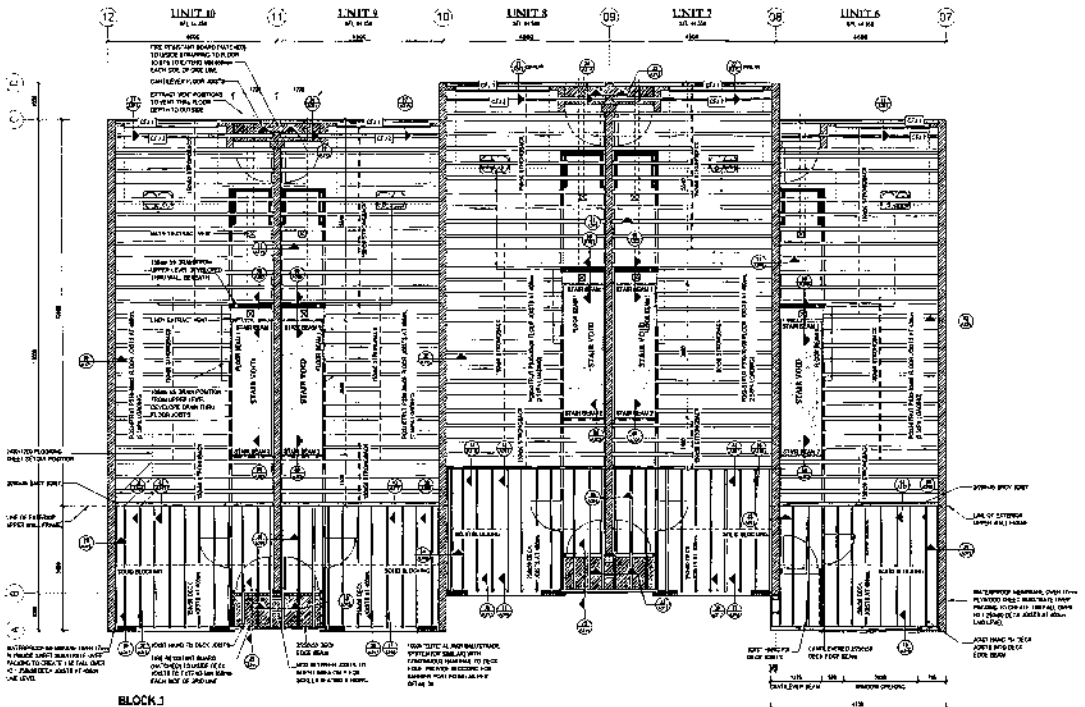
PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 1 FOUNDATION PLAN

DATE 2 MAY 2007	SCALE JOB
DRAWN RD	CHECKED
SCALE 1:50@A1 / 1:100@A3	
SHEET # A213	REV # 1
STAGE BUILDING CONSENT	

ARCHITECTURAL SERIES



BLOCK 1
FIRST LEVEL FLOOR FRAMING PLAN

FRAMING MEMBERS:

FLOOR BEAM	[illegible]
STAIR BEAM	[illegible]
STAIR BEAM	[illegible]
OFF-CANTILEVERED FLOOR JOIST	[illegible]
OFF-CANTILEVERED FLOOR JOIST	[illegible]

SERVICES NOTES:

[illegible]

GENERAL NOTES

[illegible]

REV	DESCRIPTION	DATE
1	STRUCTURAL CHANGE & DIGITAL DIMENSIONS	[illegible]
	BUILDING CONSENT	[illegible]

CONSULTANT	COMPANY
ACCOUNTS	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 1 LEVEL 1
FLOOR FRAMING PLAN

DATE	PROJECT #
2 MAY 2007	008

DRAWN BY	Checked	CHECKED
	RD	

SCALE
1:50@A1 / 1:100@A3

SHEET #	REV #
A214	1

NOTES
BUILDING CONSENT

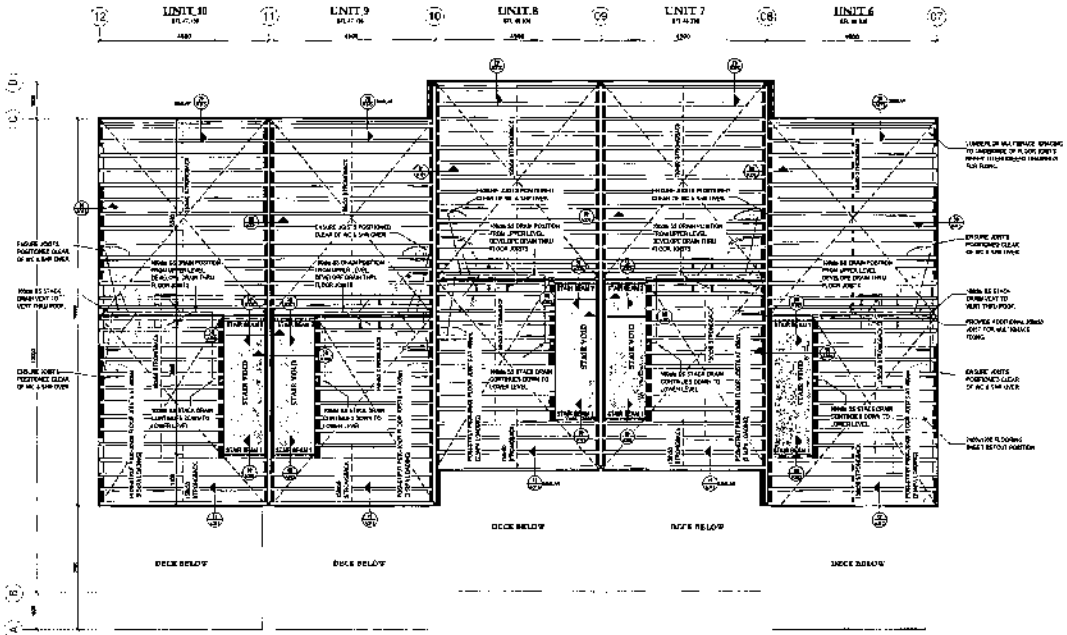
ARCHITECTURAL SERIES

FRAMING MEMBERS:

- [illegible]
- STAIR BEAM [illegible]

SERVICES NOTES:

[illegible]



BLOCK 1
SECOND LEVEL FLOOR FRAMING PLAN
1:100@A1

GENERAL NOTES:

1	STRUCTURAL CHANGE 4 OVERALL DIMENSIONS	[illegible]
	BUILDING CONSENT ISSUE	[illegible]
REV	REVISION	DATE

CONSULTANTS

ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	CASDALE SURVEYORS LTD

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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 1 LEVEL 2
FLOOR FRAMING PLAN

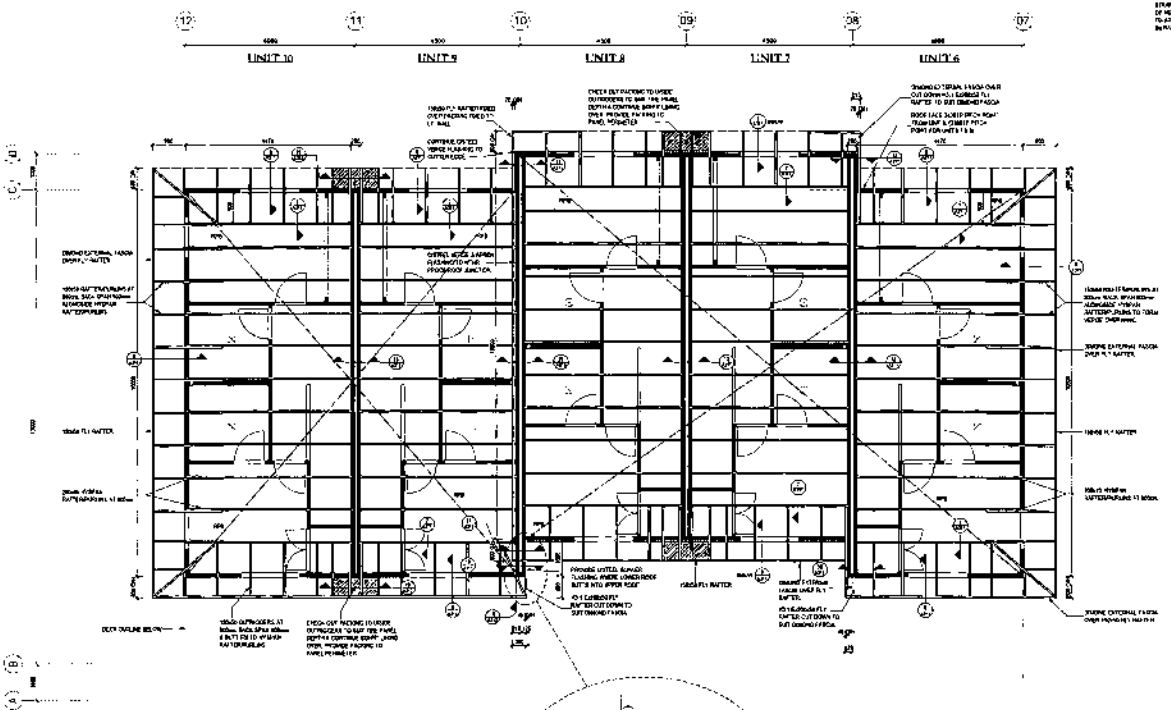
DATE 2 MAY 2007	PROJECT 005
DRAWN RD	CHECKED

SCALE 1:50@A1 / 1:100@A3

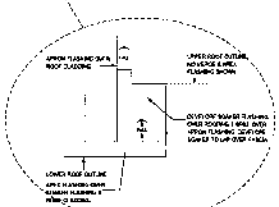
SHEET A215	REV 1

STAGE BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 1
ROOF FRAMING PLAN
1:100@A1



SOAKER FLASHING
1:50@A3

ROOF MEMBER FIXINGS:

- TO HYDRAULIC RAFTERS TO TOP PLATE WITH 2 X 100 FT SKEWED NAILS & 2 X 100 FT SKEWED NAILS OR ALTERNATIVE 4 X 100 FT DOWN CAPACITY REFER TO TABLE 1.2.3 NZS 3604 1999
- TO OUTRIGGERS TO TOP PLATE WITH 2 X 100 FT SKEWED NAILS & 1 X 100 FT DOWN CAPACITY REFER TO TABLE 1.2.3 NZS 3604 1999

ROOF PLANE BRACING (RPB):

- 1 LINE OF 0.4 x 0.4 mm CROSS STRIP BRACING WITH TENSIONERS
- PROVIDE REQUIRED EACH END OF STRAPS BETWEEN RAFTER SPACING AND TAKE STRIP OVER RAFTER PURLINS AND DOWN FACE OF NEGG TO TOP PLATE
- TO ATTACH END WITH 4 NAILS 3.5 x 50 mm IN PURLIN

GENERAL NOTES

	ARCHITECTURAL CHANGES & OVERALL DIMENSIONS	02/05/07
	BUILDING CONSENT ISSUE	02/05/07
REV	DESCRIPTION	DATE
CONSULTANT	CONTACT	
ARCHITECT	KIRKCAT MITCHELL LTD	
HYDRAULIC	HYDRAULIC SERVICES LTD	
FIRE	FIRE DESIGNS LTD	
STRUCTURAL	AIREY CONSULTANTS LTD	
CIVIL	AIREY CONSULTANTS LTD	
GEOTECHNICAL	GEOTEK SERVICES LTD	
SURVEYOR	FASSOLA SURVEYORS LTD	

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
45 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 1 ROOF FRAMING PLAN

DATE	PROJECT #
2 MAY 2007	008

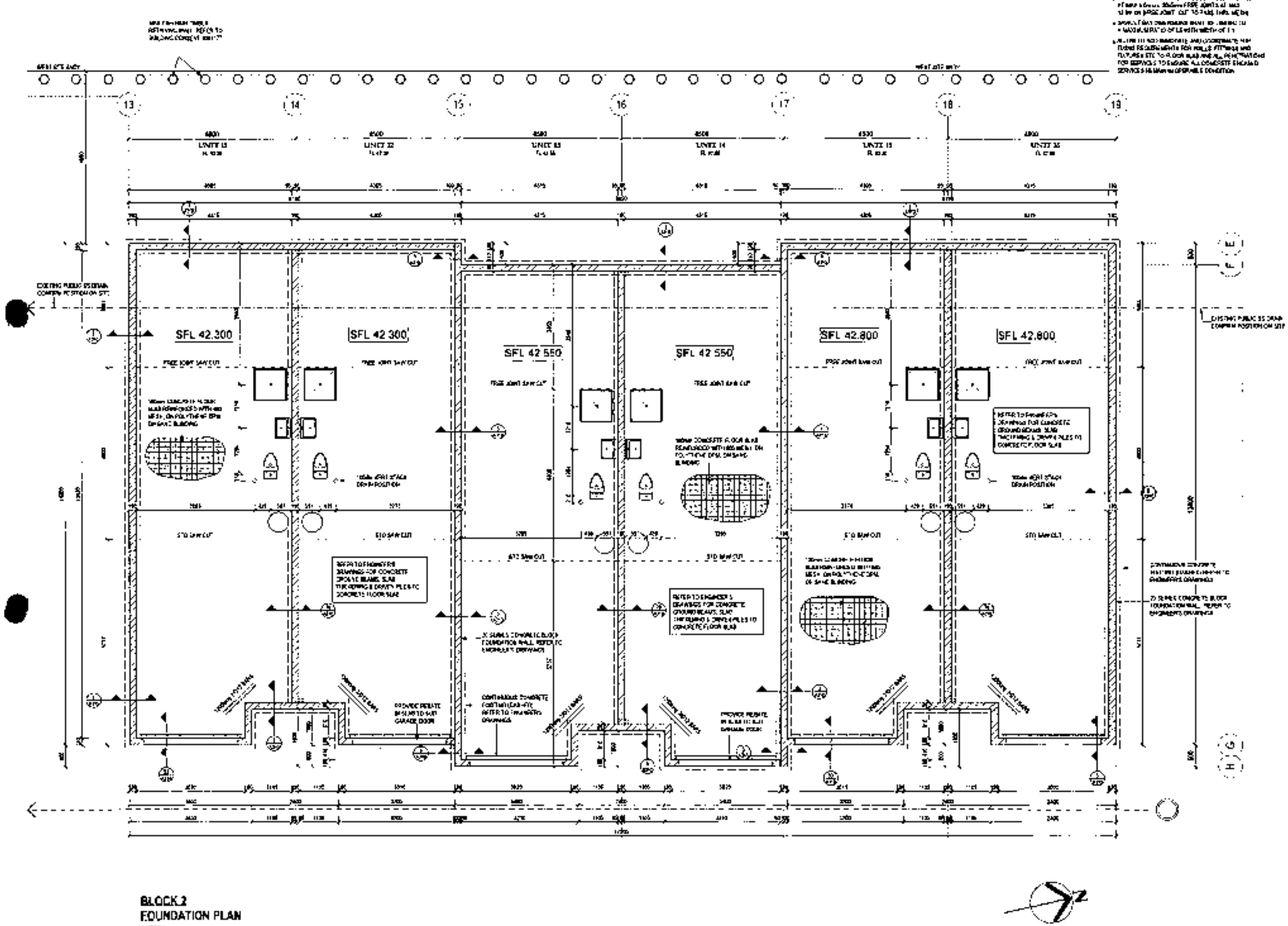
DESIGNED	DRAWN	CHECKED
	RD	

SCALE
1:50@A1 / 1:100@A3

SHEET #	REV #
A216	1

SERIES
BUILDING CONSENT

ARCHITECTURAL SERIES



FOUNDATION NOTES:

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ENGINEERS DRAWINGS

BLOCK 2
FOUNDATION PLAN

GENERAL NOTES:

KINGETT MITCHELL LTD

HYDRAULIC SERVICES LTD

FIRE DESIGNS LTD

AIREY CONSULTANTS LTD

AIREY CONSULTANTS LTD

GEOTEK SERVICES LTD

CASDALE SURVEYORS LTD

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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 2 FOUNDATION PLAN

2 MAY 2007

RD

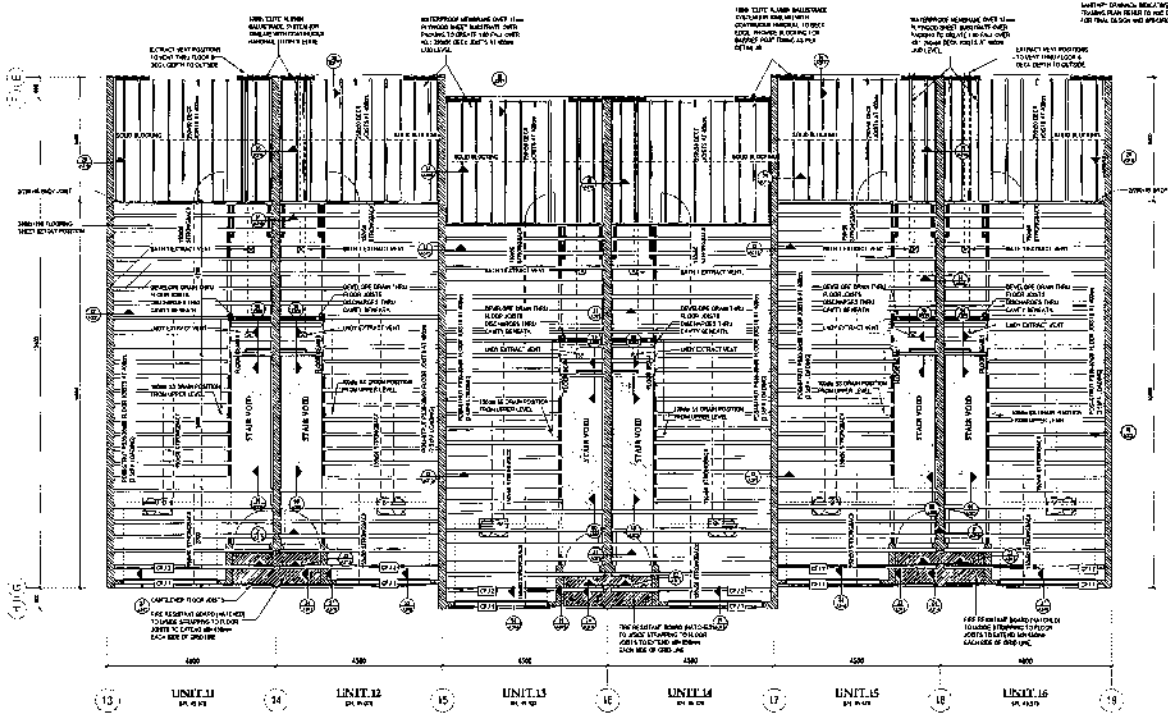
1:50@A1 / 1:100@A3

A217

1

BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 2
FIRST LEVEL FLOOR FRAMING PLAN
1:100@A3

FRAMING MEMBERS:

- FLOOR BEAM 1 — 3/300x90
- STAIR BEAM 1 — 3/300x90
- STAIR BEAM 2 — 3/300x90
- CF2 / CANTILEVERED FLOOR JOIST 1 — 7/300x90 (PITCH HERE)
  PROVIDE 1/10 BEAM SPAN FOR 1/1 BEAM / FLOOR
- CF1 / CANTILEVERED FLOOR JOIST 1 — 3/300x90

SERVICES NOTES:

SWITCHES, DRAINS, MECHANICAL SHEET ON TRADES PLAN REFER TO ARE SUBMITTED FOR FINAL DESIGN AND APPROVAL

GENERAL NOTES.

1	STRUCTURAL CHANGES & INITIAL ISSUE	13/04/07
	BUILDING CONSENT ISSUE	12/03/07
date	description	by

CIVIL/SITE	CIVIL 1
STRUCTURAL	KINGS 1 7 MITCHELL LTD
HYDRAULIC	AFCOR PLUMBING SERVICES LTD
FIRE	FIRE DESIGNS LTD
ARCHITECTURAL	AREY CONSULTANTS LTD
GIS	AREY CONSULTANTS LTD
GEOTECHNICAL	GEOTECH SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 2 LEVEL 1
FLOOR FRAMING PLAN

DATE: 2 MAY 2007	PROJECT #: 008
DRAWN/CHECKED: RD	CHECKED:
SCALE: 1:50@A1 / 1:100@A3	
SHEET #: A218	REV #: 1
STAGE: BUILDING CONSENT	

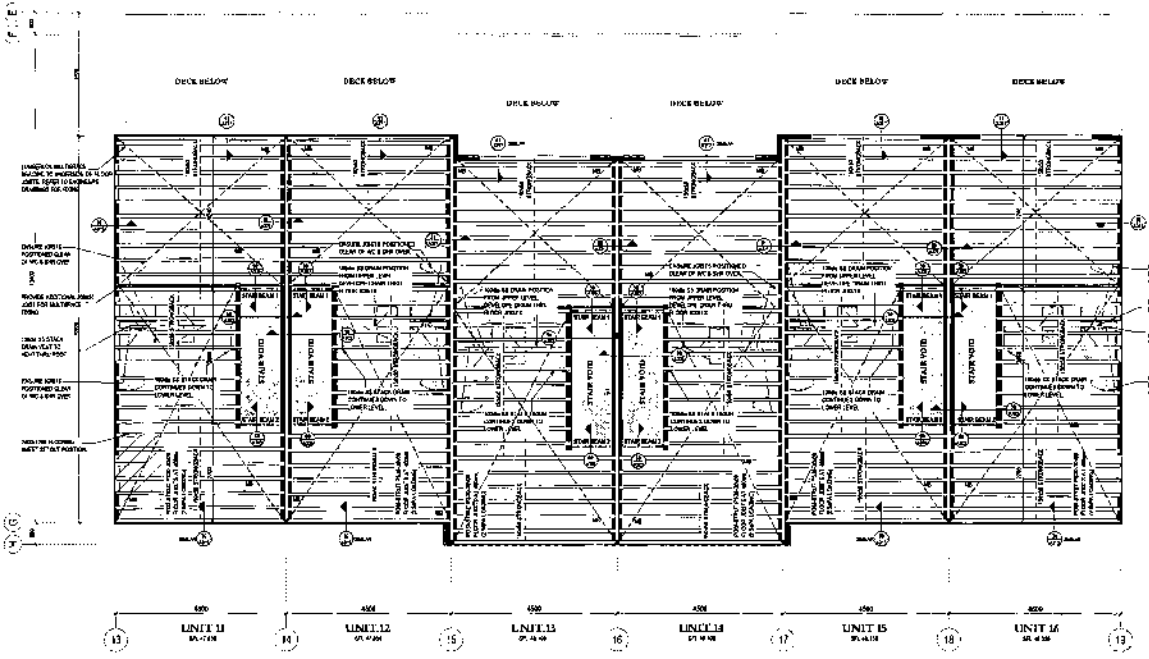
ARCHITECTURAL SERIES

FRAMING MEMBERS:

- STAIR BEAM 1 — 270PFC
- STAIR BEAM 2 — 270PFC
- LB — LABEL ON WALL PERIMETER BRACING TO PRODUCE OF FLOOR JOISTS WITH ADDITIONAL 200x50 JOIST FOR FIXING

SERVICES NOTES:

SANITARY DRAINAGE INDICATIVE ONLY ON FRAMING PLAN REFER TO HYDRAULIC PLANS FOR FINAL DESIGN AND SPECIFICATION



BLOCK 2
SECOND LEVEL FLOOR FRAMING PLAN
1:100@A3

GENERAL NOTES:

1	STRUCTURAL CHANGES UPDATED	02/07/07
	BUILDING CONSENT ISSUE	02/05/07
REV.	DESCRIPTION	DATE

CONSULTANT CONTACT

ARCHITECT: KINGETT MITCHELL LTD
Ph 09 480 4593 Fax 09 480 4071

HYDRAULIC: HYDRAULIC SERVICES LTD
Ph 09 536 1738 Fax 09 815 7798

FIRE: FIRE DESIGNS LTD
Ph 09 534 0303 Fax 09 534 0313

STRUCTURAL: AIREY CONSULTANTS LTD
Ph 09 534 4600 Fax 09 521 8294

CIVIL: AIREY CONSULTANTS LTD
Ph 09 534 4600 Fax 09 521 8294

MECHANICAL: GEOTEK SERVICES LTD
Ph 09 534 9814 Fax 09 534 9844

SURVEYOR: BASHAM & SURVEYORS LTD
Ph 09 534 8460 Fax 09 521 8196

DRINSTON PROJECT MANAGEMENT LIMITED
P.O. Box 45 Mt. Albert Mt Eden
Manukau Auckland 1547
Ph 09 571 8947 Fax Ph 09 571 8947
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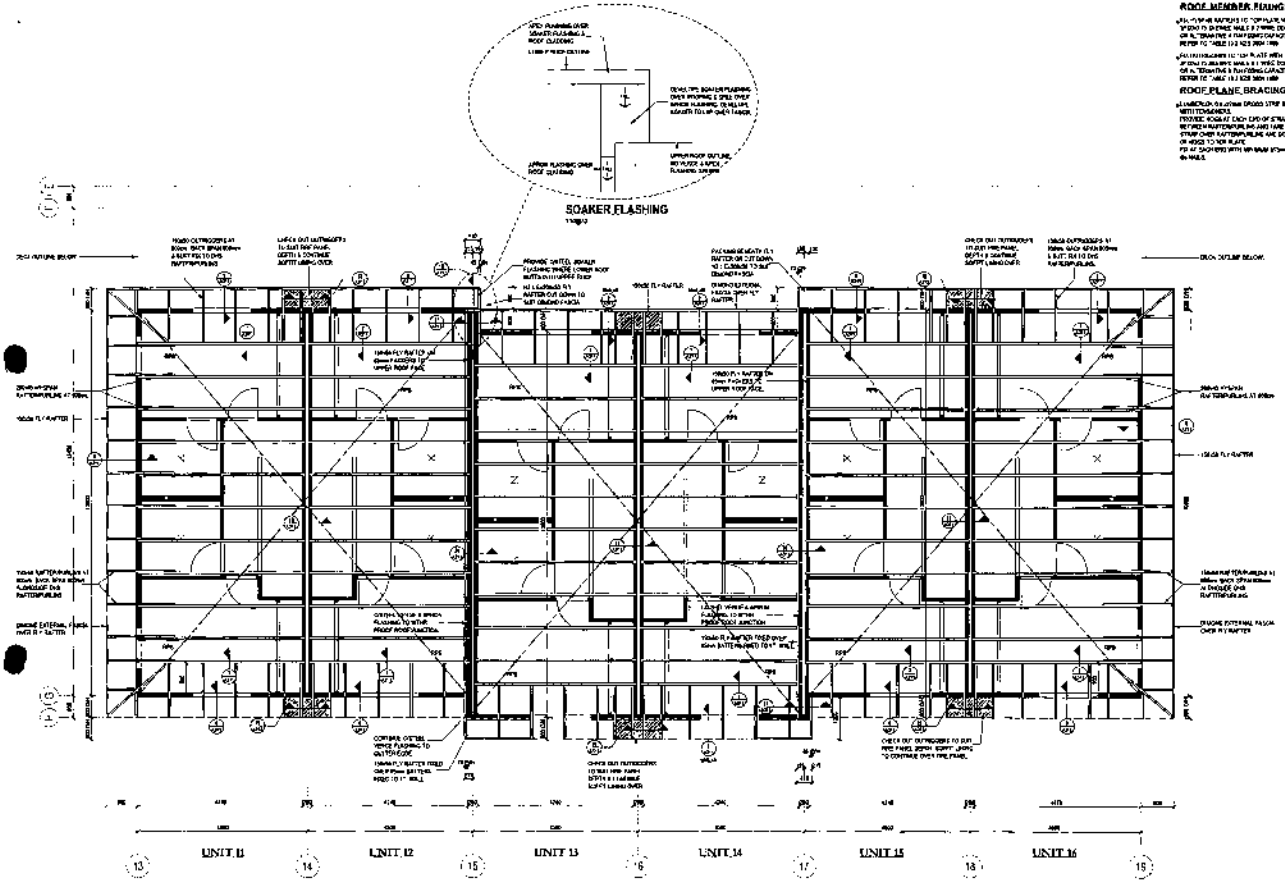
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 2 LEVEL 2
FLOOR FRAMING PLAN

DATE: 2 MAY 2007
PROJECT #: 002
DESIGNED: RD
DRAWN:
CHECKED:
SCALE: 1:50@A1 / 1:100@A3
SHEET #: A219
REV #: 1
STAGE: BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 2
ROOF FRAMING PLAN

ROOF MEMBER FIXINGS:

ROOF PLANE BRACING (RPB):

GENERAL NOTES.

1	STRUCTURAL ENGINEER & CIVIL ENGINEERS	12/07/07
	BUILDING CONSENT ISSUE	12/07/07
REV	DESCRIPTION	DATE

CONSULTANT	COMPANY
PROJECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

THIRTEENTH PROJECT MANAGEMENT LIMITED
P.O. Box 36 368 DEVELOPMENT
MANUKAU AUCKLAND 2141
PH: 09 271 8007 FAX: 09 271 4607

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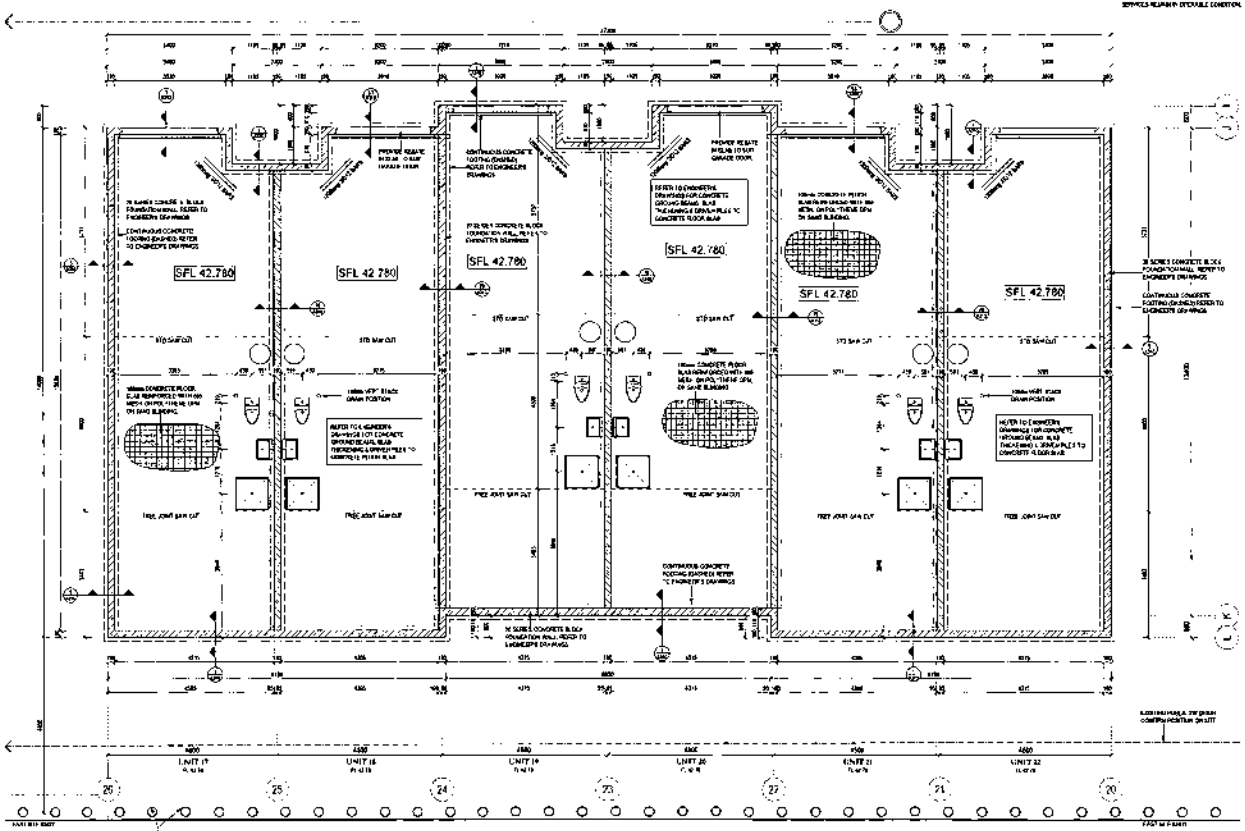
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 2 ROOF FRAMING PLAN

DATE: 2 MAY 2007	PROJECT #: 008
DRAWN BY: RD	CHECKED BY:
SCALE: 1:50@A1 / 1:100@A3	
SHEET #: A220	REV #: 1
SCALE: BUILDING CONSENT	

ARCHITECTURAL SERIES



BLOCK 3
FOUNDATION PLAN
1:100@A3

FOUNDATION NOTES:

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ENGINEERS DRAWINGS
- [illegible] CONTROL JOINTS (SAWCUTS) [illegible] MAX [illegible] AT MAX [illegible] OPEN JOINT CUT TO PASS THRU METRO
- EXPOSED SPA CONCRETE SLABS TO BE LIMITED TO A MAXIMUM RATIO OF LENGTH WIDTH OF 2:1
- ALLOW TO ACCOMMODATE AND COORDINATE FOR SUBCONTRACTOR REQUIREMENTS FOR INSULATION AND FIXINGS TO TOP FLOOR SLAB AND ALL PENETRATIONS FOR SERVICES TO ENSURE ALL CONCRETE CAPABLE SERVICES REMAIN IN DURABLE CONDITION.

GENERAL NOTES.

[illegible]

3	REMOVING CHANGE & DETAIL DIMENSIONS	03/04/07
	BUILDING CONSENT ISSUE	02/03/07
DATE	DESCRIPTION	CLIP

ORIGINAL SHT	[illegible]
ACOUSTIC	MINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
SERVICES	GECTEH SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

ARCHITECTURE PROJECTS MANAGEMENT LIMITED
P O Box 58 [illegible]
MANUKAU HORTICULTURE [illegible]
PH 09 261 [illegible] FAX 09 271 [illegible]

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 3 FOUNDATION PLAN

DATE: 2 MAY 2007	PROJECT #: 008
DRAWN BY: RD	CHECKED:
SCALE: 1:100@A1 1:100@A3	
SHEET #: A221	REV: 1
STATUS: BUILDING CONSENT	

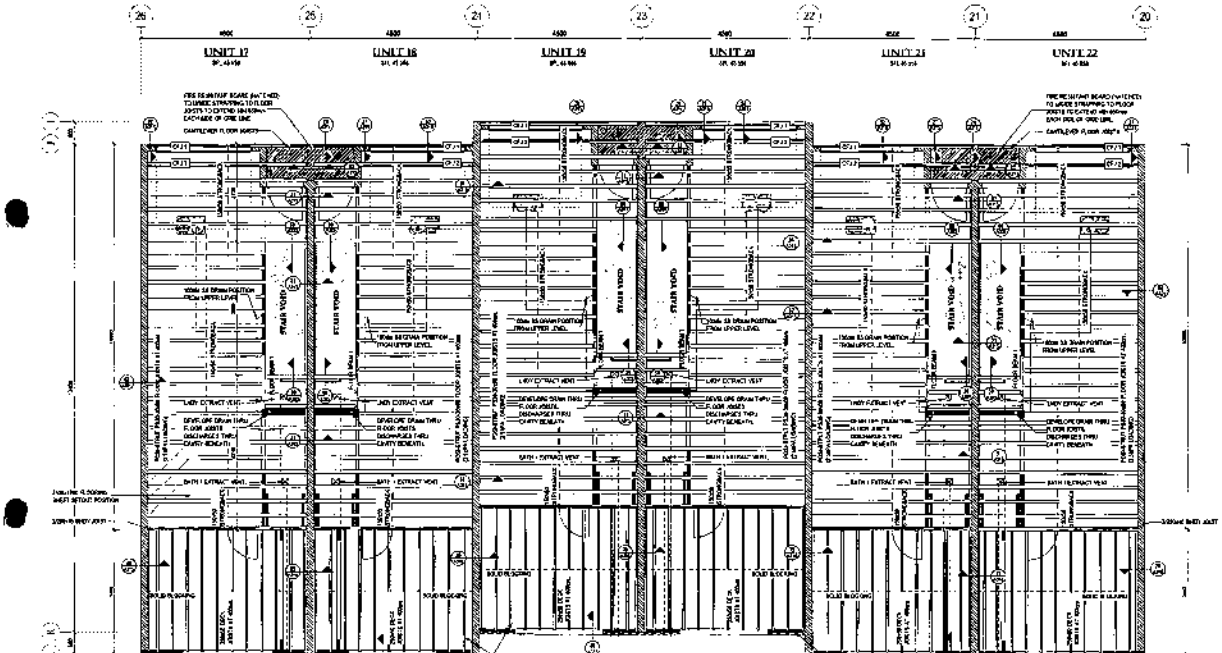
ARCHITECTURAL SERIES

FRAMING MEMBERS:

- FLOOR BEAM 1 — 300x50
- ROOF BEAM 1 — 300x50
- FIRE BEAM 2 — 300x50
- CF11 CANTILEVERED FLOOR JOIST 1 — FLOOR BLOCK BEAM (WITH 90x45 PLATFORM BEAM WITH 90x45 PLATE)
- CF12 CANTILEVERED FLOOR JOIST 2 — 200x50

SERVICES NOTES:

SANITARY DRAINAGE INDICATIVE ONLY ON FRAMING PLAN REFER TO HVAC DOCUMENTS FOR FINAL DESIGN AND SPECIFICATION



BLOCK 3
FIRST LEVEL FLOOR FRAMING PLAN

GENERAL NOTES

	STRUCTURAL CHANGES OVERALL DIMENSIONS — SAMPSON
	BUILDING CONSENT ISSUE — EMBASSY
REV	DESCRIPTION — DATE
CONSULTANT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	ABREY CONSULTANTS LTD
CIVIL	ABREY CONSULTANTS LTD
MATERIALS	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

DEVELOPER: PROJECT MANAGEMENT LIMITED
P.O. Box 76-304 MANGERE MAIL
MANGERE, AUCKLAND CITY
PH: 09 271 9497 FAX: 09 271 9507

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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 3 LEVEL 1
FLOOR FRAMING PLAN

DATE: 2 MAY 2007	PROJECT: 008
DESIGNED:	DRAWN: RO

SCALE: 1:50@A1 / 1:100@A3

SHEET: A222	REV: 1

ISSUE: BUILDING CONSENT

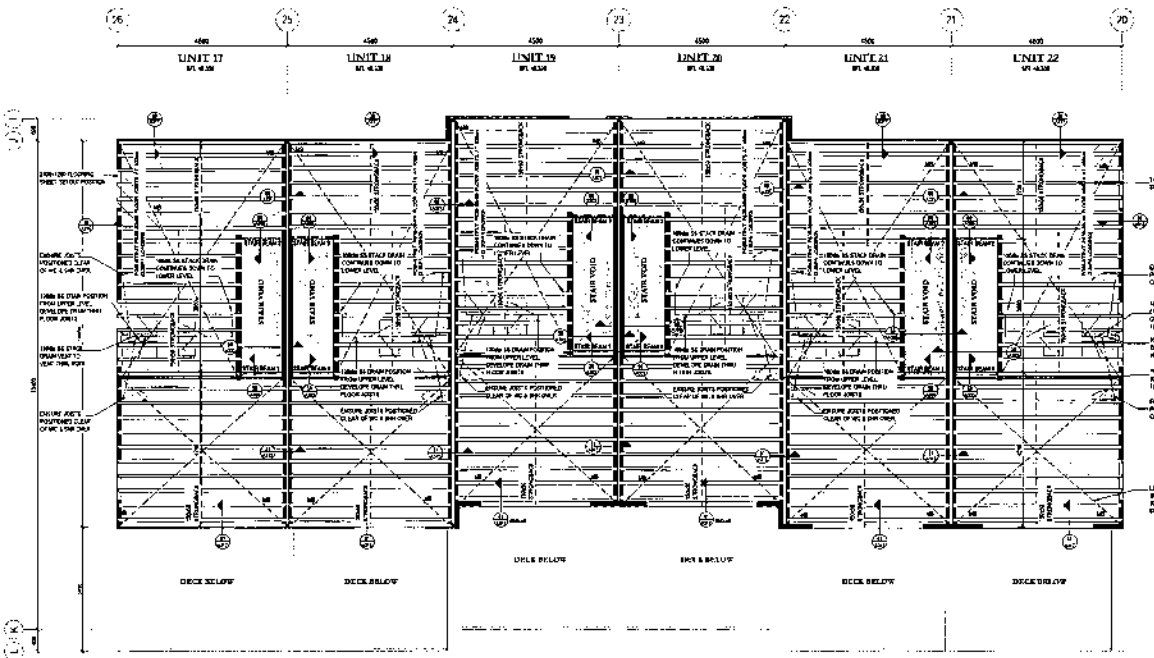
ARCHITECTURAL SERIES

FRAMING MEMBERS:

- STAIR BEAM 1 — 300x90
- STAIR BEAM 2 — 300x90
- HB — LUMBER DE MULTIBEAM BUNDING TO MANUFACTURER'S SPECIFICATIONS

SERVICES NOTES:

SANITARY DRAINAGE SHOWN FOR UNIT ON STANDARD PLAN. REFER TO CIVIL DOCUMENTS FOR FINAL DESIGN AND SPECIFICATION



BLOCK 3
SECOND LEVEL FLOOR FRAMING PLAN

1:100@A1

GENERAL NOTES

1	STRUCTURAL CHANGES & DWELL WINDOWS	02/05/07
	BUILDING CONSENT ISSUE	02/05/07
REV		
DESIGN UNIT		
ARCHITECT	MONAGHETTI MITCHELL LTD	
HYDRAULIC	HYDRALIC SERVICES LTD	
FIRE	FIRE DESIGNS LTD	
STRUCTURAL	ARCEY CONSULTANTS LTD	
CIVIL	ARNEY CONSULTANTS LTD	
SERVICES (MECH.)	GROOTER SERVICES LTD	
SURVEYOR	EASDALE SURVEYORS LTD	

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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 3 LEVEL 2
FLOOR FRAMING PLAN

DATE	PROJECT #
2 MAY 2007	006

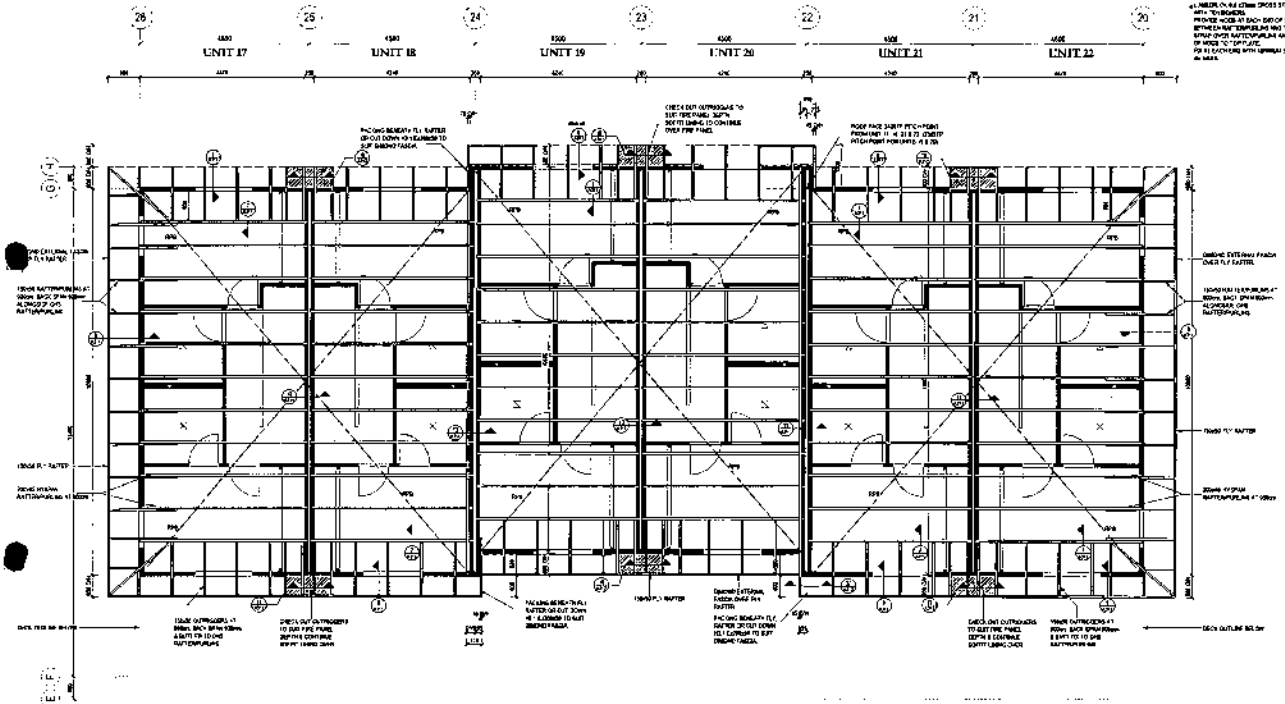
DRAWN BY	SCALE	CHECKED
RD		

SCALE
1:50@A1 1:100@A3

SHEET #	REV #
A223	1

STATUS
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 3
ROOF FRAMING PLAN

ROOF MEMBER FIXINGS:

ROOF PLANE BRACING (RPB):

GENERAL NOTES:

REV	DESCRIPTION	DATE
1	STRUCTURAL DRAWING & DETAIL DRAWINGS	02/05/07
	BUILDING CONSENT ISSUE	02/05/07

CONSULTANT	SGM AFI
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULICS	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
MECH	AIREY CONSULTANTS LTD
GEOTECH ENGINEER	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

ORESTON PROJECT MANAGEMENT LIMITED
P O Box 36 365 STEVENSON PLACE
MANUKAU, AUCKLAND CITY
PH 09 263 2001 FAX 09 263 6020
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PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 3 ROOF FRAMING PLAN

DATE	PROJECT #
2 MAY 2007	008

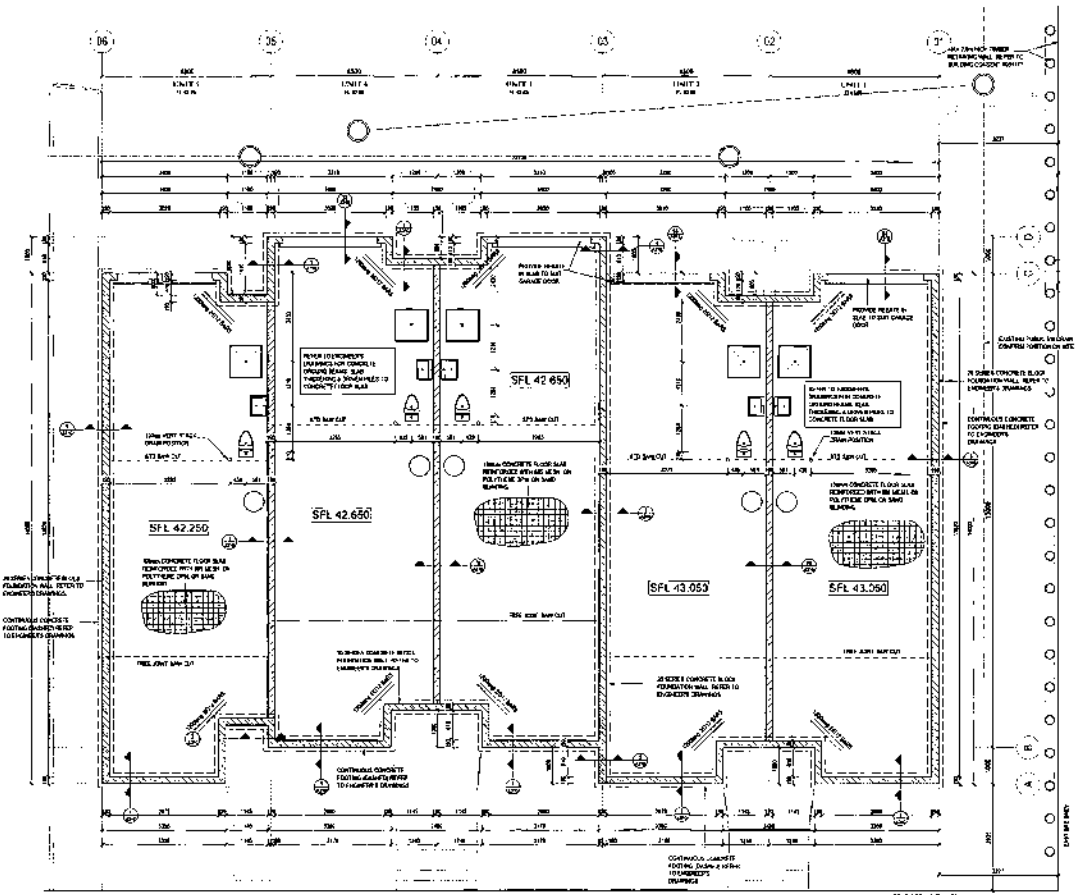
DESIGNED	DRAWN	CHECKED
	RD	

SCALE
1:100@A1 / 1:100@A3

SHEET # A224 REV 1

TITLE
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 4
FOUNDATION PLAN
1:100@A1

FOUNDATION NOTES.

- THE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS.
- ALL DRAINAGE CONTROL JOINTS (SAW CUTS) TO BE 1/4 OF THE SLAB DEPTH AND 3 MM WIDE AS SOON AFTER POURING AS POSSIBLE.
- SLAB JOINT SPACINGS SHALL BE LIMITED TO A MAXIMUM RATIO OF LENGTH AND WIDTH OF 1.5:1.
- ALL PIPE TO BE ADEQUATELY SUPPORTED FOR FIXING ELEMENTS FOR WALLS, FITTINGS AND FIXTURES ETC TO FLOOR SLAB AND ALL PENETRATIONS FOR SERVICES TO ENSURE ALL CONCRETE INCLUDE SERVICES REMAIN IN SEPARABLE CONDITION

GENERAL NOTES:

REV	DESCRIPTION	DATE
1	STRUCTURAL CHANGES (INCLUDE DRAWINGS) BUILDING CONSENT ISSUE	DRAWN DRAWN

CONSULTANT	CONTACT
ARCHITECT	KINGSFIT MITCHELL LTD Ph 09 ... Fax 09 ...
HYDRAULICS	HYDRAULIC SERVICES LTD Ph 09 ... Fax 09 ...
FIRE	FIRE CONSULTANTS LTD Ph 09 ... Fax 09 ...
STRUCTURAL	ARREY CONSULTANTS LTD Ph 09 ... Fax 09 ...
CIVIL	ARREY CONSULTANTS LTD Ph 09 ... Fax 09 ...
GEOTECHNICAL	GEOTEK SERVICES LTD Ph 09 ... Fax 09 ...
SURVEYOR	CASCADE SURVEYORS LTD Ph 09 ... Fax 09 ...

ORIENTION PROJECT MANAGEMENT LIMITED
P.O. BOX 34 241 MERIVALE
CHRISTCHURCH, NEW ZEALAND 8141
PH 03 371 3087 FAX 03 371 4337
ARCHITECTURAL SERVICES & PROJECT MANAGEMENT

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CONCEPTS '24 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 4 FOUNDATION PLAN

DATE	PROJECT #
2 MAY 2007	608

DESIGNED	DRAWN	CHECKED
	RD	

SCALE
1:50@A1 / 1:100@A3

SHEET #	REV
A225	1

STAGE
BUILDING CONSENT

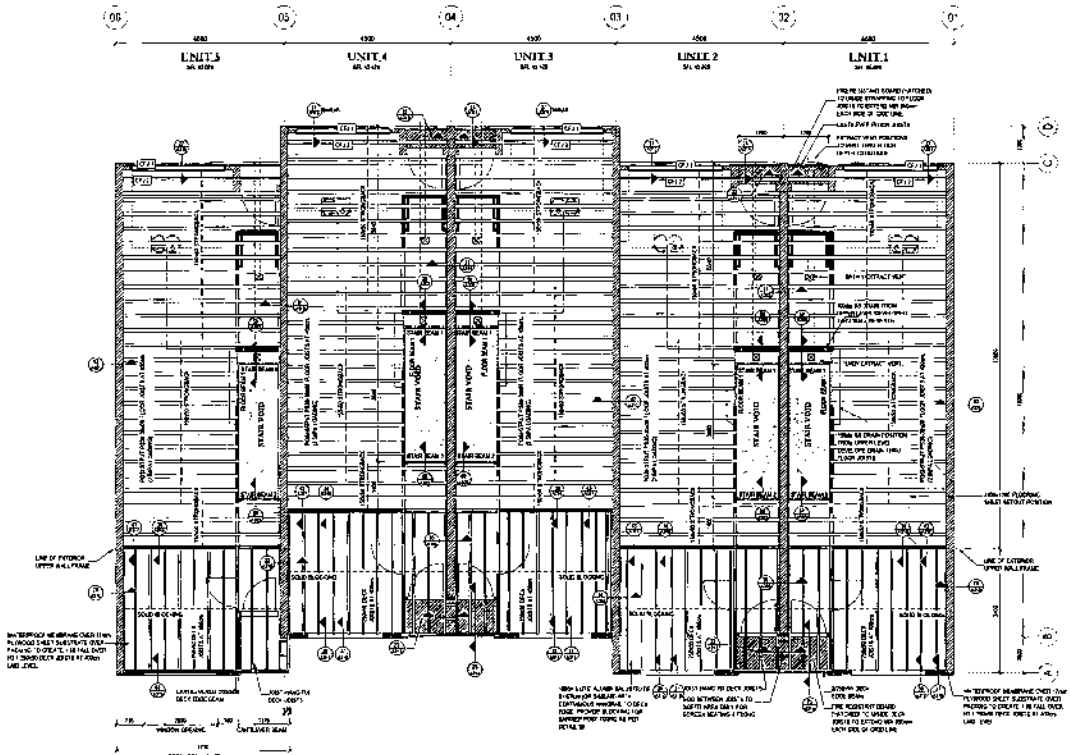
ARCHITECTURAL SERIES

FRAMING MEMBERS:

- FLOOR BEAM 1 — 200x60
- STAIR BEAM 1 — 100x60
- STAIR BEAM 2 — 200x60
- GLASS CANTILEVERED FLOOR JOIST — 160mm Rolson beam (300mm beam within, OVR, 1 ALL STAGE.
- GLASS CANTILEVERED FLOOR JOIST 2 — 200x60

SERVICES NOTES:

BAFFLES DRAINAGE INDICATIVE ONLY ON FRAMING PLAN. REFER TO HSE DOCUMENTS FOR FINAL DESIGN AND SPECIFICATION



BLOCK 4
FIRST LEVEL FLOOR FRAMING PLAN
1:100@A1

GENERAL NOTES

1	STRUCTURAL CHANGES / OVERALL DIMENSIONS	4/08/07
	BUILDING CONSENT ISSUE	6/08/07

CONSULTANT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	ABREY CONSULTANTS LTD
CIVIL	ABREY CONSULTANTS LTD
SERVICES	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

BRIERTON PROJECT MANAGEMENT LIMITED
P.O. Box 16 196 GREENLANE
AUCKLAND, NEW ZEALAND 2141
PH 09 521 2667 FAX 09 521 4041
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CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 4 LEVEL 1
FLOOR FRAMING PLAN

DATE	2 MAY 2007
PROJECT	008
DRAWN	KD
SCALE	1:50@A1 / 1:100@A3
SHEET	A226
REV	1
ISSUE	BUILDING CONSENT

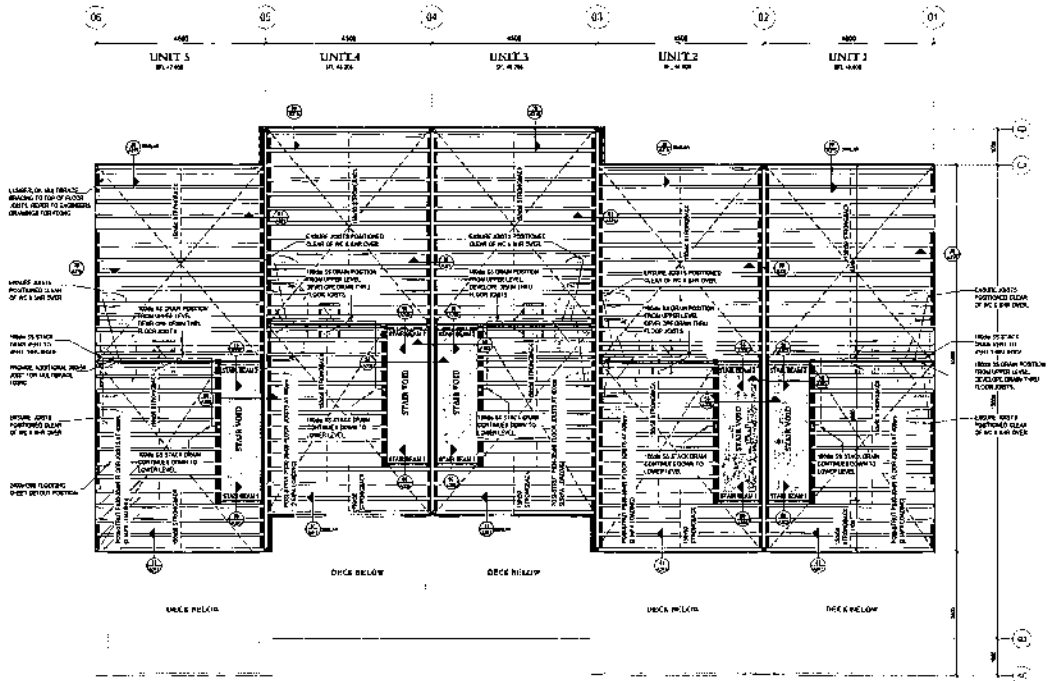
ARCHITECTURAL SERIES

FRAMING MEMBERS:

- STAIR BEAM 1 300x90
- STAIR BEAM 2 315x90

SERVICES NOTES:

SANITARY DRAINAGE INDICATIVE ONLY ON FRAMING PLAN REFER TO HSE DOCUMENTS FOR FINAL DESIGN AND SPECIFICATION.



BLOCK 4
SECOND LEVEL FLOOR FRAMING PLAN

GENERAL NOTES:

REV	DESCRIPTION	DATE
1	STRUCTURAL CHANGES CHANGE DIMENSIONS	030707
	BUILDING CONSENT ISSUE	030527

CONSULTANT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
SERVICES	CRITEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

DEVELOPER PROJECT MANAGEMENT LIMITED
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MANUKAU, AUCKLAND
Ph: 09 571 5097 FAX: 09 571 4037

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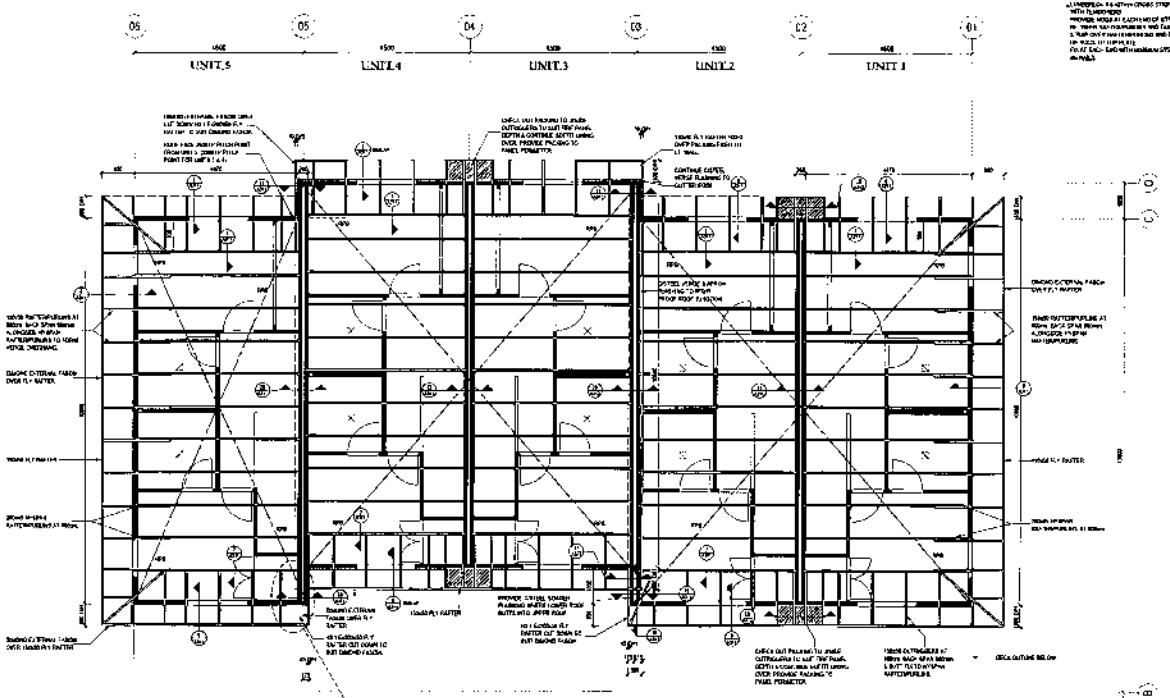
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BLOCK 4 LEVEL 2
FLOOR FRAMING PLAN

DATE: 2 MAY 2007
PROJECT No: 002
DRAWN: RC
SCALE: 1:50@A1 1:100@A3
SHEET: A227
REV: 1
STAGE: BUILDING CONSENT

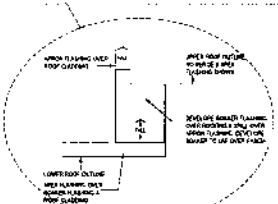
ARCHITECTURAL SERIES



ROOF MEMBER FIXINGS:

ROOF PLANE BRACING (RPB):

BLOCK 4
ROOF FRAMING PLAN



SOAKER FLASHING

GENERAL NOTES.

	STRUCTURAL CHANGE & GENERAL DIMENSIONS
	BUILDING CONSENT ISSUE
REV	DESCRIPTION DATE
CONSULTANT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

GROUP 1 PROJECT MANAGEMENT LIMITED
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MANUKAU, NEW ZEALAND 2141
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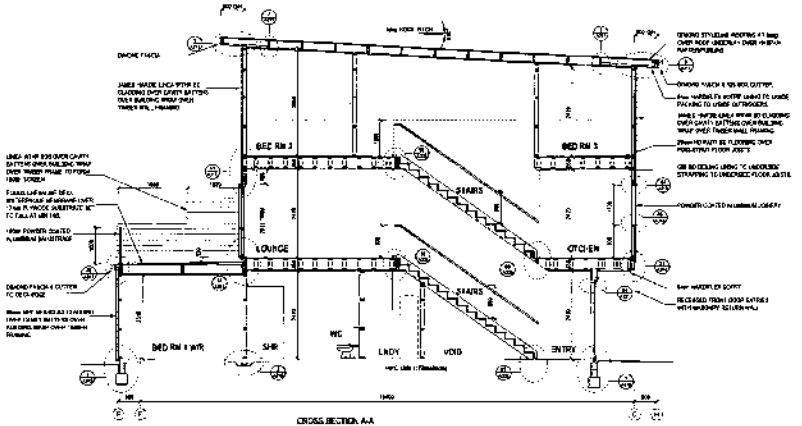
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

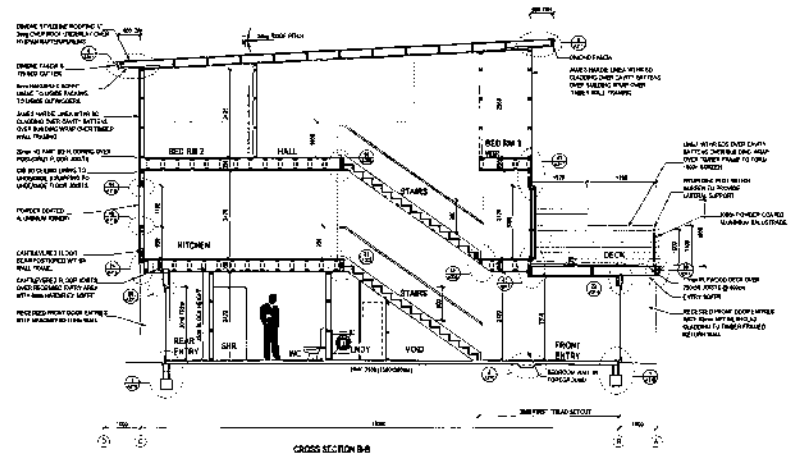
SHEET TITLE
BLOCK 4 ROOF FRAMING PLAN

DATE 2 MAY 2007	PROJECT # 006	
DESIGNED	DRAWN RD	CHECKED
SCALE 1:50@A1 / 1:100@A3		
SHEET # A228	REV # 1	
ISSUE BUILDING CONSENT		

ARCHITECTURAL SERIES



CROSS SECTION A-A
UNIT B1
(TYPICAL FOR UNITS 1-5,7)



CROSS SECTION B-B
UNIT B2
(TYPICAL FOR UNITS 1-15)

GENERAL NOTES:

REV	DESCRIPTION	DATE
1	REPLACE BARS WITH 40 SCHEDULE TIMBER PRIMER	02/07/07
	BUILDING CONSENT ISSUE	02/05/07

ARCHITECT: KINGETT MITCHELL LTD
HYDRAULIC: HYDRAULIC SERVICES LTD
FIRE: FIRE DESIGNS LTD
STRUCTURAL: AIREY CONSULTANTS LTD
CIVIL: AIREY CONSULTANTS LTD
MECHANICAL: GRIFFEN SERVICES LTD
SURVEYOR: EASDALE SURVEYORS LTD

Collection PROJECT MANAGER for Landmark
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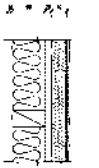
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

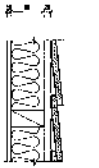
SHEET TITLE
CROSS SECTIONS

DATE: 2 MAY 2007
PROJECT #: 306
DRAWN: RD
CHECKED:
SCALE: 1:50@A1/1:100@A3
SHEET #: A230
REV #: 1
STATUS: BUILDING CONSENT

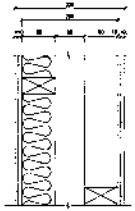
ARCHITECTURAL SERIES



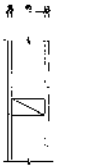
1 WALL TYPE W01
SCALE 1:5 @ A1, ELEVATION VIEW



2 WALL TYPE W02
SCALE 1:5 @ A1, ELEVATION VIEW

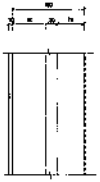


3 WALL TYPE W03
SCALE 1:5 @ A1, PLAN VIEW



4 WALL TYPE W04
SCALE 1:5 @ A1, ELEVATION VIEW

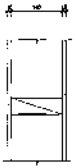
5 WALL TYPE W05
SCALE 1:5 @ A1, PLAN VIEW



6 WALL TYPE W06
SCALE 1:5 @ A1, PLAN VIEW

WALL TYPE DELETED

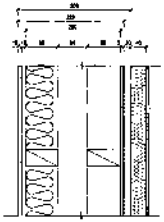
7 WALL TYPE W07
SCALE 1:5 @ A1, PLAN VIEW



8 WALL TYPE W08
SCALE 1:5 @ A1, PLAN VIEW

WALL TYPE DELETED

9 WALL TYPE W09
SCALE 1:5 @ A1, PLAN VIEW



10 WALL TYPE W10
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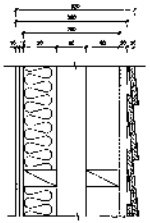
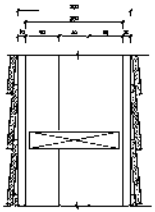


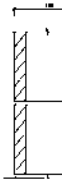
11 WALL TYPE W11
SCALE 1:5 @ A1, ELEVATION VIEW



12 WALL TYPE W12
SCALE 1:5 @ A1, ELEVATION VIEW

WALL TYPE NOT ISSUED

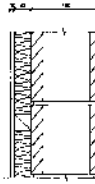
13 WALL TYPE W13
SCALE 1:5 @ A1, ELEVATION VIEW



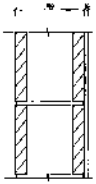
WALL TYPE DELETED

14 WALL TYPE W14
SCALE 1:5 @ A1, PLAN VIEW

15 WALL TYPE W15
SCALE 1:5 @ A1, ELEVATION VIEW



16 WALL TYPE W16
SCALE 1:5 @ A1, ELEVATION VIEW



17 WALL TYPE W17
SCALE 1:5 @ A1, ELEVATION VIEW

18 WALL TYPE W18
SCALE 1:5 @ A1, ELEVATION VIEW

NZBC E2 BUILDING ENVELOPE RISK MATRIX		
RISK FACTOR	RISK REPORTED	RISK SCORE
WIND ZONE	M	1
NO OF STOREYS	1	1
ROOF/WALL INTERSECTION DESIGN	1	1
ENVELOPE WIDTH	1	1
EAVES/ROOF COMPLEXITY	M	1
DECK DESIGN	1	1
...		
TOTAL RISK SCORE		10

SUITABLE WALL CLADDINGS	RISK SCORE 1-10
DESCRIPTION TO INCLUDE	OVER NORMAL 20mm DRAINED CAVITY
a) SOLID MASS TIMBER WEATHERBOARDS	a) BRICKWORK VENEER (with min 40mm gap)
b) VERTICAL TIMBER HOUSE WEATHERBOARDS	b) STUCCO
c) VERTICAL PROFILED METAL (CORRUGATED OR)	c) HORIZONTAL PROFILED METAL (CORRUGATED & PLANK FORMS ONLY)
	d) PLASTERED HOUSE WEATHERBOARDS
	e) THICK EXTERNAL HOUSE WEATHERBOARDS
	f) FIBRE CEMENT SHEET
	g) PLYWOOD SHEET
	h) LBP

GENERAL NOTES:

REV	DESCRIPTION	DATE
	REPLACE WALL WITH WALL CLADDING TYPE	
	SUB CONS. CONSENT ISSUE	6/05/07

TRANSMITTALS	CONSULTANTS
ROOFING	KINGBETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECH/HAZ	GEOTECH SERVICES LTD
SURVEYOR	EASTALE SURVEYORS LTD

CONSTRUCTION PROJECT MANAGEMENT LIMITED
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PH 09 271 3867 FAX 09 271 4031
ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
WALL TYPE LEGEND
E2 RISK MATRIX

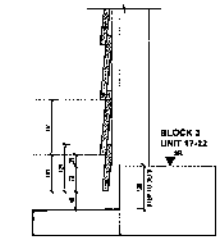
DATE	PROJECT #
2 MAY 2007	005
DESIGNED	DRAWN	CHECKED
	RD	

SCALE
1:5@A1/ 10@A3

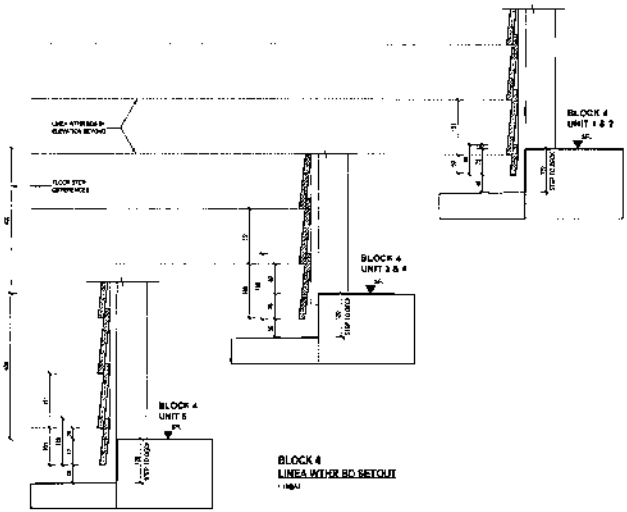
SHEET #	REV #
A301	1

STATUS
BUILDING CONSENT

ARCHITECTURAL SERIES



BLOCK 3
LINEA WTHR BD SETOUT
1:100@A1



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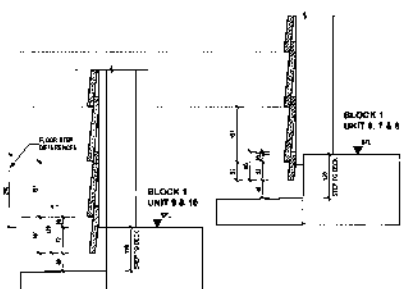
1:100@A1



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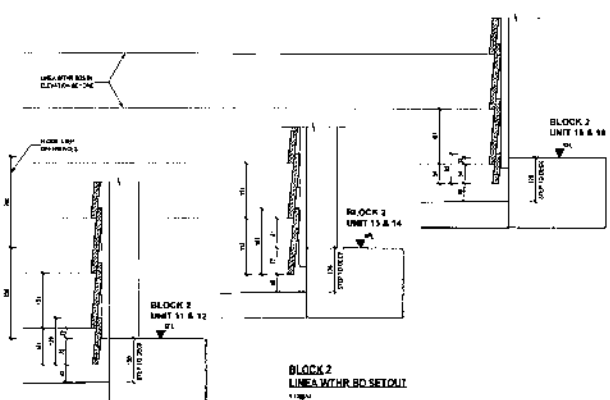
1:100@A1



BLOCK 2
LINEA WTHR BD SETOUT
1:100@A1

GENERAL NOTES:

1	STRUCTURAL CHANGE & GENERAL REVISIONS	
	BUILDING CONSENT ISSUE	
DATE	DESCRIPTION	DATE

FORMER CLIENT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULICS	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AREY CONSULTANTS LTD
CIVIL	AREY CONSULTANTS LTD
MECHANICAL	GEOTEX SERVICES LTD
SURVEYOR	FASTAR F SURVEYORS LTD

GRANATHAM PROJECT MANAGEMENT LIMITED
P O Box 58 196 OREWA/GULF
MANUKAU, NEW ZEALAND 2141
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ARCHITECT: TURNER OFFICE & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
LINEA WTHR BD SETOUT

DATE	PROJECT #
2 MAY 2007	008

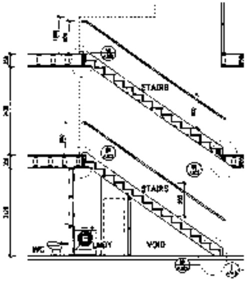
DESIGNED	DRAWN	CHECKED
	RD	

SCALE
1:50@A1 / 1:100@A3

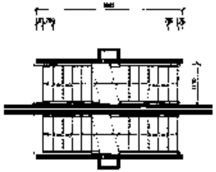
SHEET #	REV #
A302	1

ISSUE
BUILDING CONSENT

ARCHITECTURAL SERIES

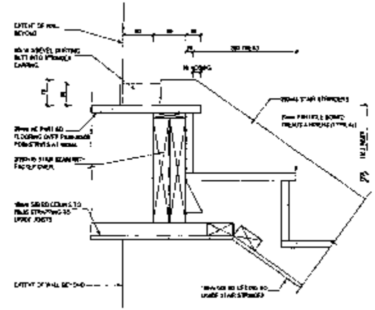


TYPICAL STAIR SECTION

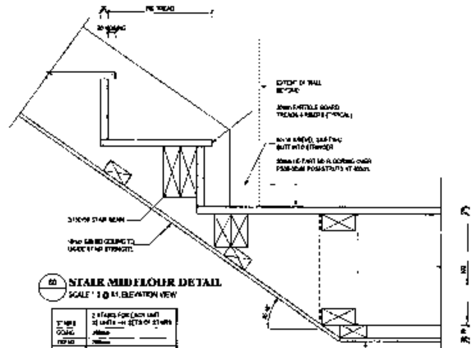


STAIR PLAN

Stair Construction.
Max riser -~~220-200-190~~-180-mm.
Min tread-~~220-250-280~~-310-mm
Handrail required ~~1 side~~, both sides.

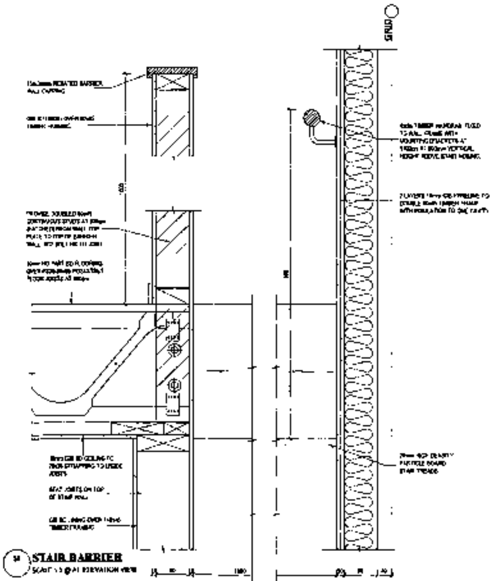


STAIR TOP DETAIL
SCALE 1:5 @ A1 ELEVATION VIEW

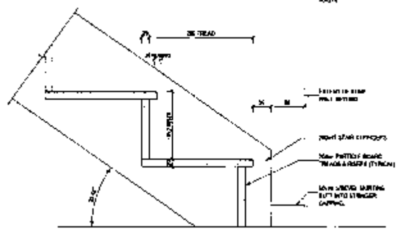


STAIR MIDFLOOR DETAIL
SCALE 1:5 @ A1 ELEVATION VIEW

[illegible]	[illegible]
RISER	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
FINISH	CARPET



STAIR BARRIER
SCALE 1:5 @ A1 ELEVATION VIEW



STAIR BASE DETAIL
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES

1	STRUCTURAL CHANGES	
REV	DESCRIPTION	DATE
CONSULTANT	CONTACT	
	KINGETT MITCHELL LTD	
	HYDRAULIC SERVICES LTD	
FIRE	FIRE DESIGNS LTD	
STRUCTURAL	AIREY CONSULTANTS LTD	
CIVIL	AIREY CONSULTANTS LTD	
GEOTECHNICAL	GEOTEK SERVICES LTD	
	EASDALE SURVEYORS LTD	

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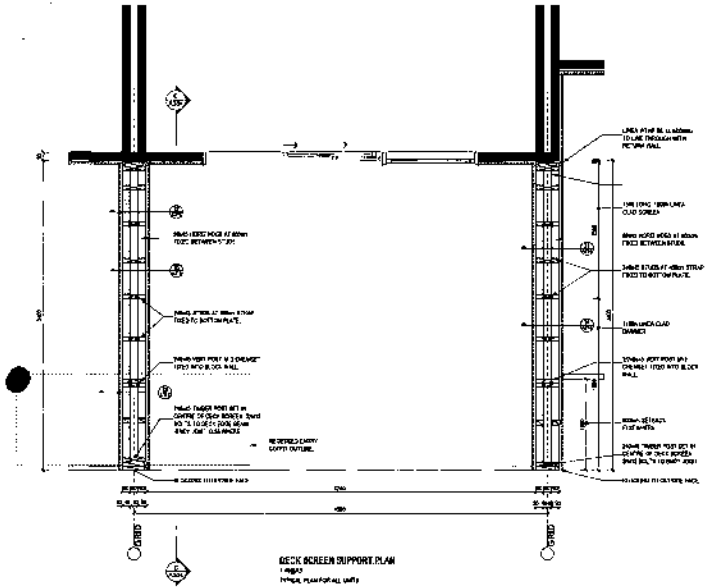
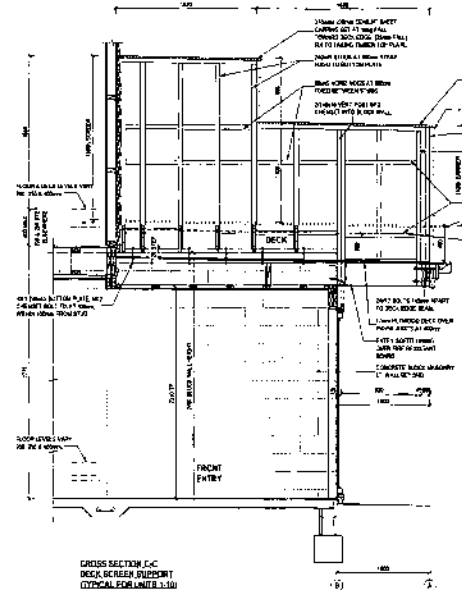
PROJECT TITLE
PROPOSED TOWNHOUSES
45 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
STAIR DETAILS

DATE 2 MAY 2007 | PROJECT 006
DRAWN RD
SCALE AS SHOWN
SHEET A303 | REV 1
BUILDING CONSENT

ARCHITECTURAL SERIES





GENERAL NOTES

1	STRUCTURAL CHANGE	15/4/07
	R-BORE CONCRETE BASE	10/05/07

REV	DESCRIPTION	DATE

CONSULTANTS

ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
DECK SCREEN DETAILS

DATE	PROJECT #
2 MAY 2007	933

DRAWN	CHECKED	CHECKED
	HD	

SCALE
1:20 @ A1 / 1:40 @ A3

SHEET # A304 REV # 1

STAGE
BUILDING CONSENT

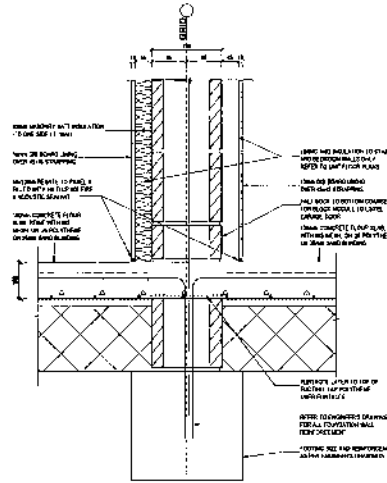
ARCHITECTURAL SERIES

FOUNDATION NOTES:

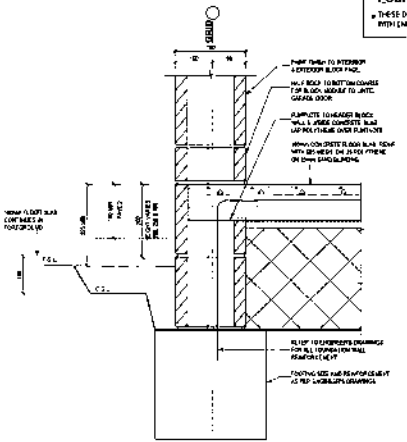
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ENGINEER'S DRAWINGS.

DETAIL DELETED

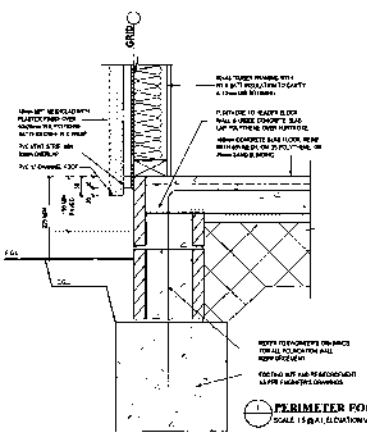
4 **L.T. WALL FLOOR STEP**
SCALE 1:5 @ A1, ELEVATION VIEW



10 **L.T. WALL FOOTING**
SCALE 1:5 @ A1, ELEVATION VIEW



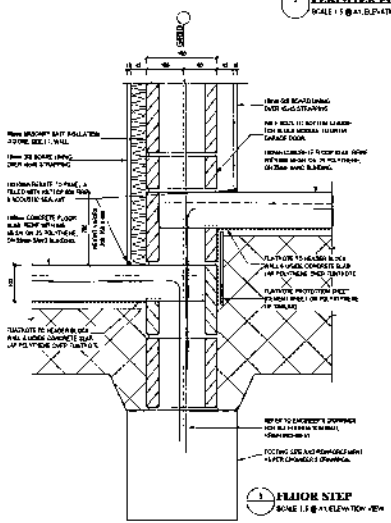
1 **PERIMETER FOOTING**
SCALE 1:5 @ A1, ELEVATION VIEW



1 **PERIMETER FOOTING**
SCALE 1:5 @ A1, ELEVATION VIEW

REFER TO ENGINEER'S DRAWING

2 **SLAB THICKENING**
SCALE 1:5 @ A1, ELEVATION VIEW



3 **FLOOR STEP**
SCALE 1:5 @ A1, ELEVATION VIEW

GENERAL NOTES:

1	REVISED WALLS WITH MASONRY & TIMBER FRAME	02/05/01
	BUILDING CONSENT ISSUE	02/05/01
REV	DESCRIPTION	DATE

CONSULTANT	CONTACT
ARCHITECT	KINCEFF MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AREY CONSULTANTS LTD
CIVIL	AREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SUB-SET TITLE
FOUNDATION DETAILS

DATE	PROJECT #
2 MAY 2007	005

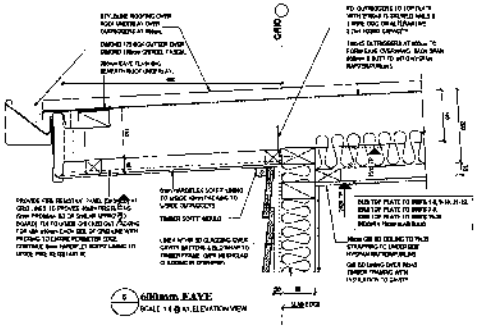
DRAWN	CHECKED	CHECKED
RD		

SCALE
1:5@A1/1:10@A3

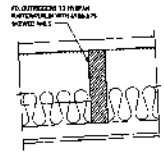
SHEET #	REV #
A310	1

SHEET
BUILDING CONSENT

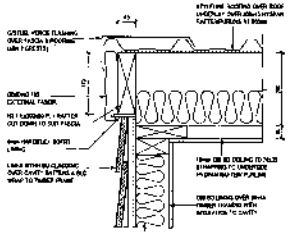
ARCHITECTURAL SERIES



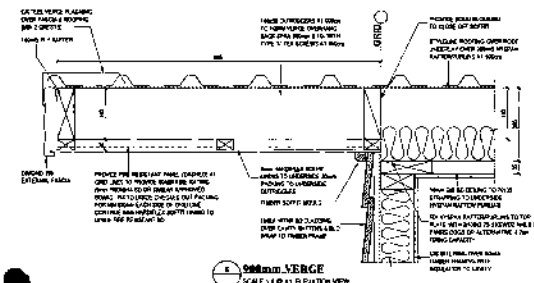
6 **600mm EAVE**
SCALE 1:6 @ A1, ELEVATION VIEW



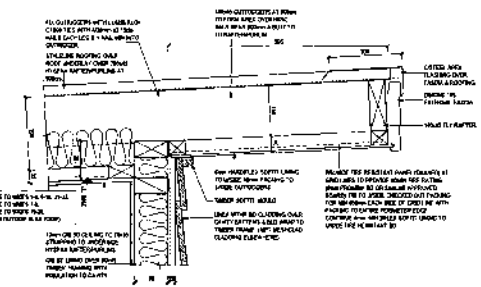
7 **OUTRIGGER FIXING**
SCALE 1:5 @ A1, ELEVATION VIEW



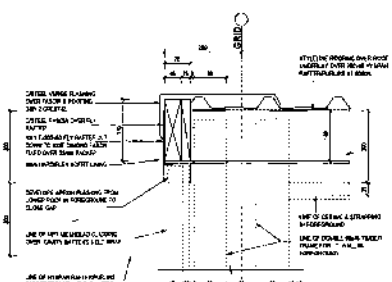
10 **45mm VERGE**
SCALE 1:6 @ A1, ELEVATION VIEW



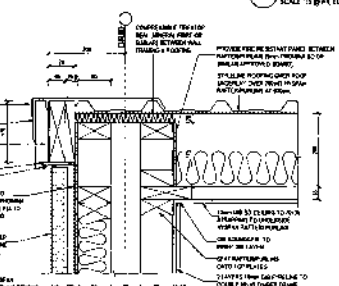
8 **900mm VERGE**
SCALE 1:6 @ A1, ELEVATION VIEW



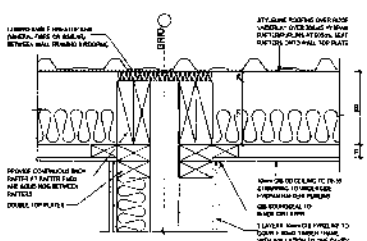
9 **600mm APEX**
SCALE 1:6 @ A1, ELEVATION VIEW



1 **C/STEEL VERGE**
SCALE 1:6 @ A1, ELEVATION VIEW



12 **70mm VERGE**
SCALE 1:6 @ A1, ELEVATION VIEW



11 **IT WALL/ROOF JOINT**
SCALE 1:5 @ A1, ELEVATION VIEW

GENERAL NOTES:

REV	DESCRIPTION	DATE
	BUILDING CONSENT ISSUE	2 MAY 2007

CONSULTANT	CONTACT
STRUCTURAL	KINSETT MITCHELL LTD
MECHANICAL	HYDRAULICS SERVICES LTD
FIRE	FIRE DESIGNS LTD
ARCHITECTURAL	AREY CONSULTANTS LTD
CIVIL	AREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EAGDALE SURVEYORS LTD

DRIBERTON PROJECT MANAGEMENT LIMITED
P.O. Box 36 361 GREENLANDS
MANUKAU, NEW ZEALAND
PH: 09 271 8687 FAX: 09 271 4867

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWN-HOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CONSTRUCTION DETAILS

DATE	PROJECT #
2 MAY 2007	608

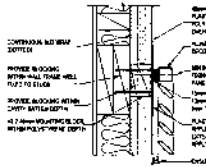
DRAWN	CHECKED	APPROVED
RD		

SCALE
1:5@A1, 10@A3

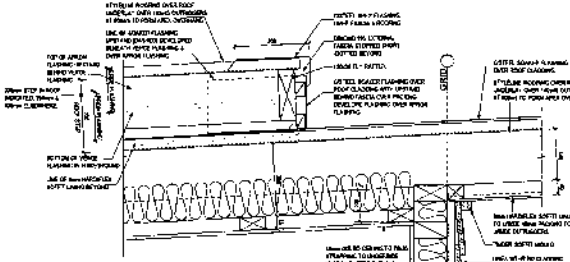
SHEET #	REV #
A311	2

STATUS
BUILDING CONSENT

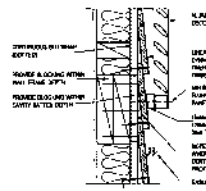
ARCHITECTURAL SERIES



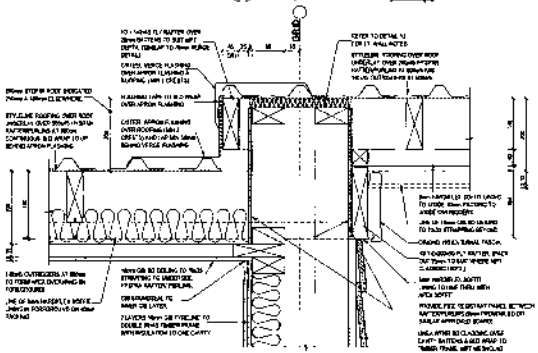
14 MPT MOUNTING BLOCK
SCALE 1:5 @ A1 ELEVATION VIEW



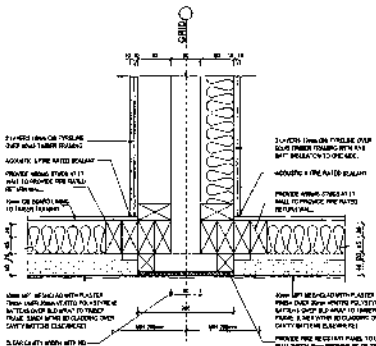
18 SOAKER FLASHING
SCALE 1:5 @ A1 ELEVATION VIEW



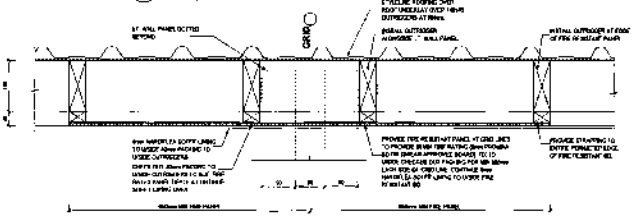
16 LINEA MOUNTING BLOCK
SCALE 1:5 @ A1 ELEVATION VIEW



17 ROOF JOINT & SOFFITS
SCALE 1:5 @ A1 ELEVATION VIEW



13 IT WALL/FIRE RATED RETURN
SCALE 1:5 @ A1 PLAN VIEW



19 SOFFIT FIRE RATING
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES:

REV	DESCRIPTION	DATE
2		
1		

DRAWING	CONTRACT
ARCHITECT	HINGETT MITCHELL LTD
HYDRAULIC SERVICES	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTECH SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

GRESSION PROJECT MANAGEMENT LIMITED
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ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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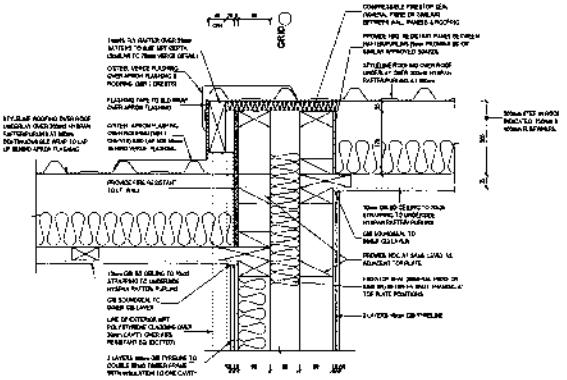
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

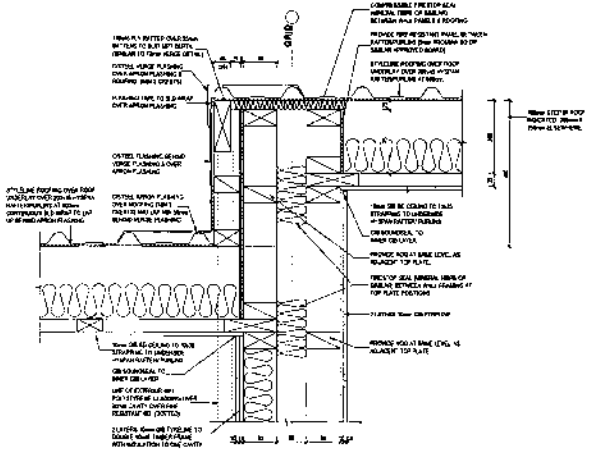
SHEET TITLE
CONSTRUCTION DETAILS

DATE	2 MAY 2007
PROJECT #	008
DRAWN	RC
CHECKED	
APPROVED	
SCALE	1:5@A1 / 1:10@A3
SHEET #	A312
REV #	2
PHASE	BUILDING CONSENT

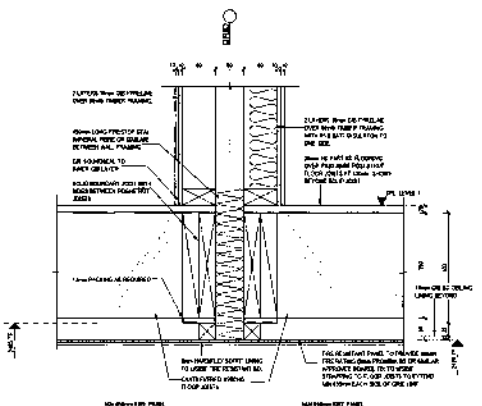
ARCHITECTURAL SERIES



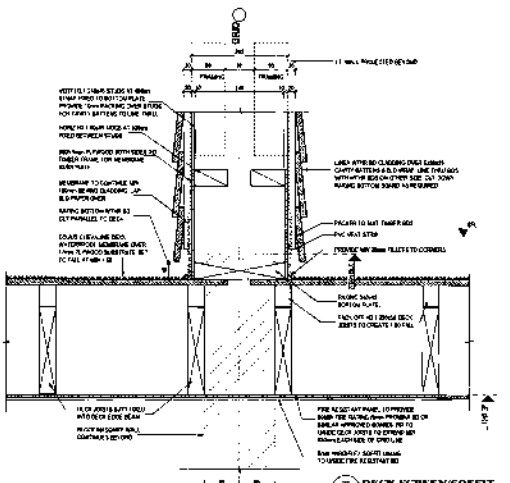
70 IT WALL/STEPPED ROOF JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



71 IT WALL/STEPPED ROOF JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



72 IT WALL/SOFFIT JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



73 DECK SCREEN/SOFFIT
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES:

REV	DESCRIPTION	DATE
A	REPLACE [illegible] WITH [illegible] & TIMBER FRAME.	[illegible]
	[illegible] CONSENT ISSUE	[illegible]

COORDINATOR	[illegible]
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
MECHANICAL	GRIFFITHS SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

ORMISTON PROJECT MANAGEMENT LIMITED
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ARCHITECTURAL OWNER & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CONSTRUCTION DETAILS

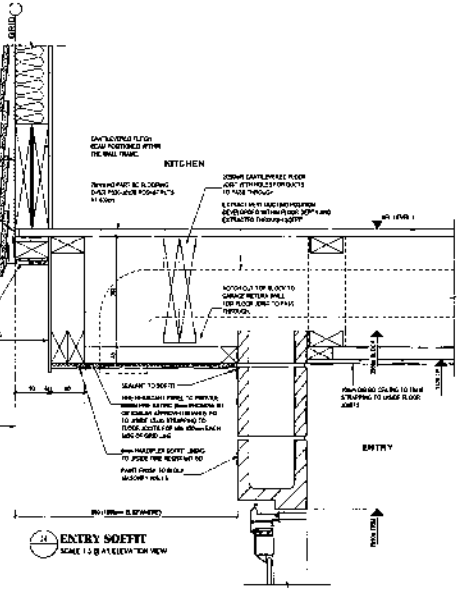
DATE	PROJECT #	
2 MAY 2007	006	
DRAWN	CHECKED	CHECKED
	RD	

SCALE
1:5@A1 1:10@A3

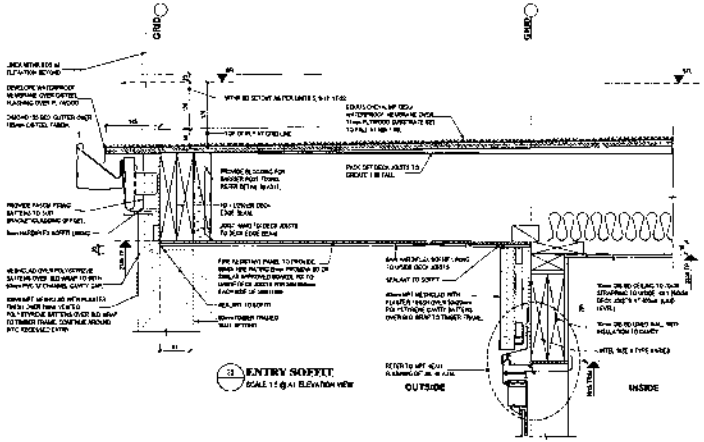
SHEET #	REV
A313	1

STATUS
BUILDING CONSENT

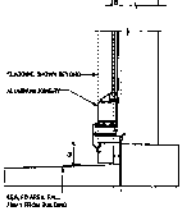
ARCHITECTURAL SERIES



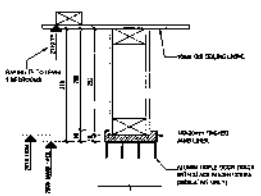
24 ENTRY SOFFIT
SCALE 1:5 @ A1 ELEVATION VIEW



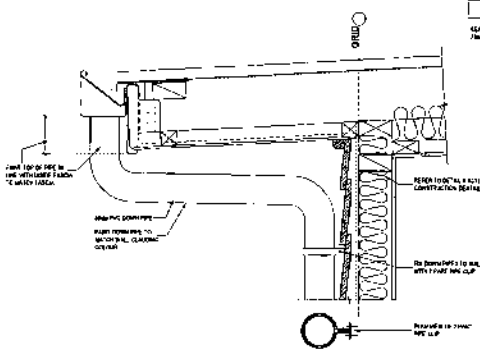
23 ENTRY SOFFIT
SCALE 1:5 @ A1 ELEVATION VIEW



26 DOOR SILL
SCALE 1:3 @ A1 ELEVATION VIEW



62 WARD ROBE DOOR TRACK
SCALE 1:5 @ A1 ELEVATION VIEW



63 DOWN PIPE PAINTING & FIXING
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES

1	REPLACE BROKEN WITH MASONRY & TIMBER FRAME	CONTRACTOR
	BUILDING CONSENT ISSUE	02/05/07

DEVELOPER / OWNER	CONCEPTS 124 LIMITED
ARCHITECT	MONAGHETTI MITCHELL LTD
MECHANICAL	HYDRALUX SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECH (Consultant)	GEOTECH SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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MANAKAU, WAITAKERE CITY
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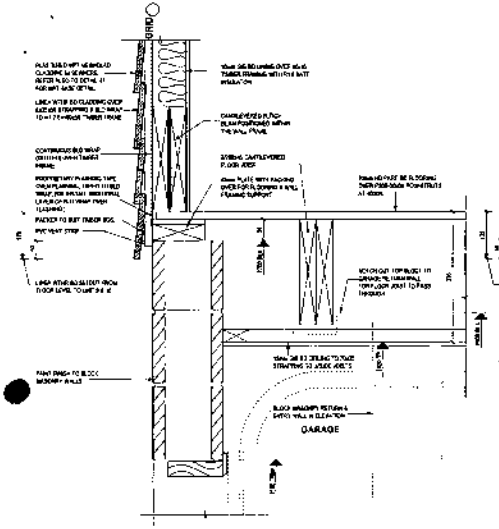
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

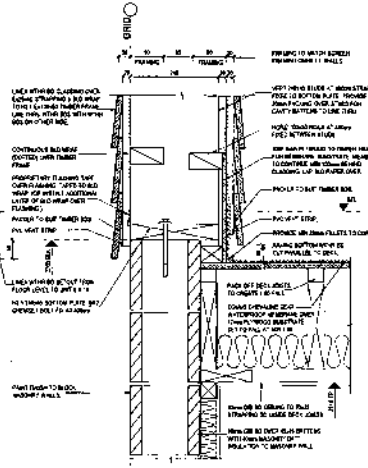
SHEET TITLE
CONSTRUCTION DETAILS

DATE: 2 MAY 2007	PROJECT: 008
DESIGNED:	DRAWN: RD
SCALE: 1:5@A1 1:10@A3	
SHEET: A314	REV: 1
ISSUE: BUILDING CONSENT	

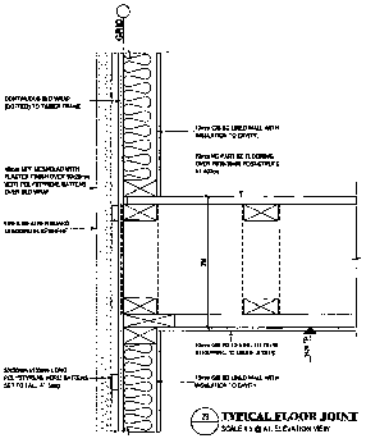
ARCHITECTURAL SERIES



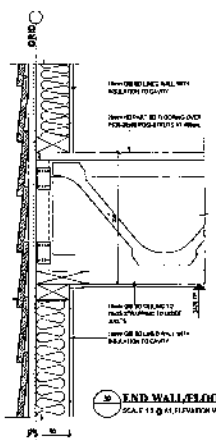
77 CLADDING JUNCTION AT FLOOR
SCALE 1:5 @ A1, ELEVATION VIEW



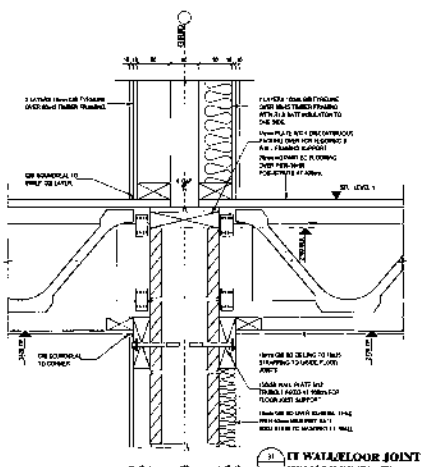
78 CLADDING JUNCTION AT DECK
SCALE 1:5 @ A1, ELEVATION VIEW



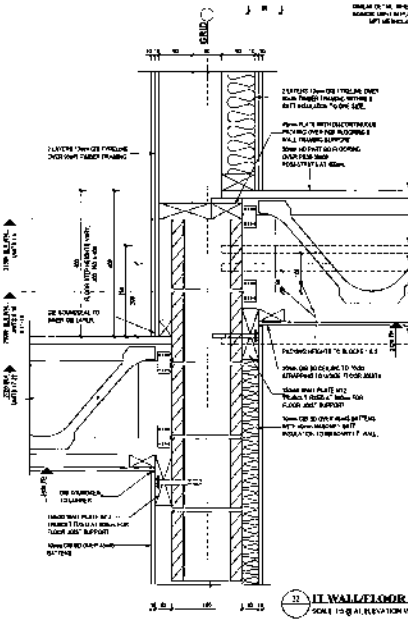
79 TYPICAL FLOOR JOINT
SCALE 1:5 @ A1, ELEVATION VIEW



80 END WALL/FLOOR JOINT
SCALE 1:5 @ A1, ELEVATION VIEW



81 IT WALL/FLOOR JOINT
SCALE 1:5 @ A1, ELEVATION VIEW



82 IT WALL/FLOOR JOINT
SCALE 1:5 @ A1, ELEVATION VIEW

GENERAL NOTES:

REV	DESCRIPTION	DATE
1	REPLACE MAIN WITH MAGNUM 2 SLIMLINE FRAME	02/07/07
	BUILDING CONSENT ISSUE	02/05/07

DESIGNER	CONCEPT
ACOUSTIC	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
MOTOR VEHICLES	ZEOTEK SERVICES LTD
SURVEYOR	EASGULE SURVEYORS LTD

ORMISTON PROJECT MANAGEMENT LIMITED
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AUCKLAND, NEW ZEALAND (1141)
PH 09 373 9888 FAX 09 373 4637
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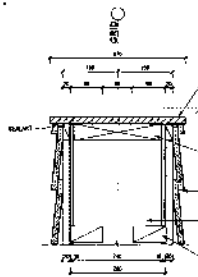
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

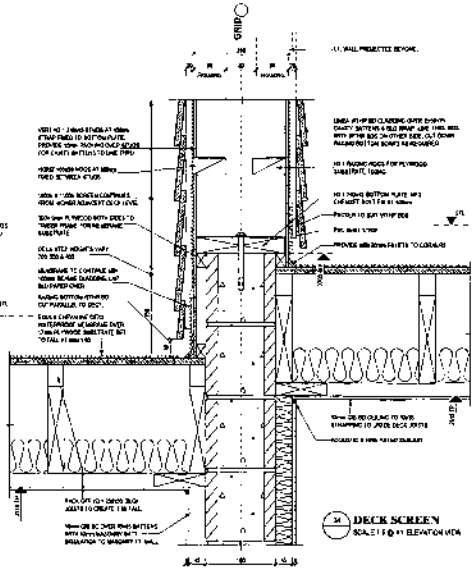
SHEET TITLE
CONSTRUCTION DETAILS

DATE: 2 MAY 2007
PROJECT No: 004
DESIGN BY: RD
DRAWN: RD
SCALE: 1:5@A1 / 1:10@A3
SHEET No: A315
REV: 1
STATUS: BUILDING CONSENT

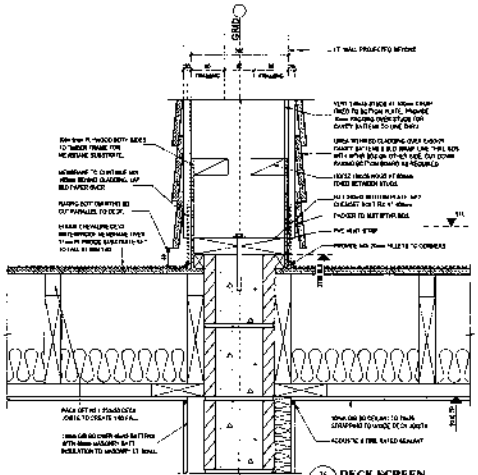
ARCHITECTURAL SERIES



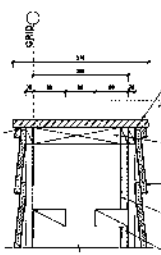
33 SCREEN CAPPING
SCALE 1:5 @ A1, ELEVATION VIEW



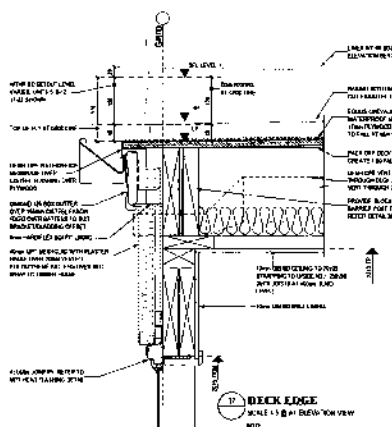
34 DECK SCREEN
SCALE 1:5 @ A1 ELEVATION VIEW



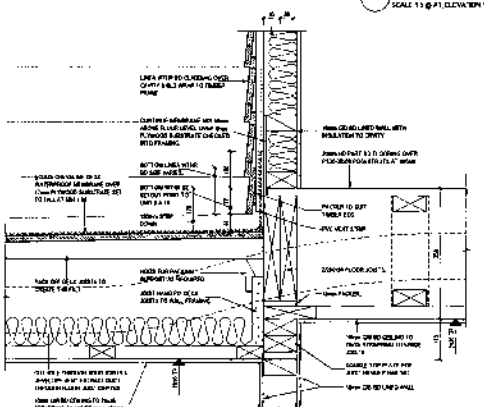
35 DECK SCREEN
SCALE 1:5 @ A1, ELEVATION VIEW



36 SCREEN CAPPING END UNITS
SCALE 1:5 @ A1, ELEVATION VIEW



37 DECK EDGE
SCALE 1:5 @ A1 ELEVATION VIEW



38 DECK JUNCTION
SCALE 1:5 @ A1, ELEVATION VIEW

GENERAL NOTES:

REV	DESCRIPTION	DATE
1	REPLACE WITH LIST TO MANAGEMENT & PLANNER ISSUE	02/07/07
	BUILDING CONSENT ISSUE	02/05/07

DEVELOPER	CONCEPTS
ARCHITECT	WINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DES GNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECH	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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MANUKAU, AUCKLAND 2141
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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
48 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CONSTRUCTION DETAILS

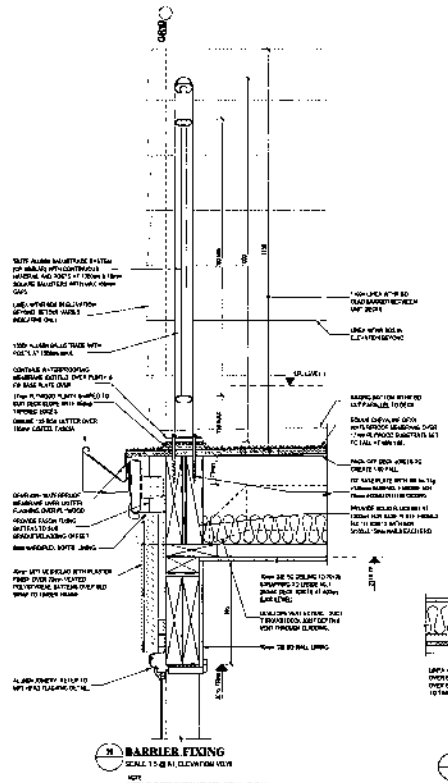
DATE	PROJECT #
2 MAY 2007	008
DRAWN BY	CHECKED BY
RD	

SCALE
1:5@A1 / 1:10@A3

SHEET A316 REV 1

ISSUE
BUILDING CONSENT

ARCHITECTURAL SERIES

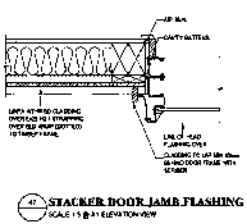


39 BARRIER FIXING
SCALE 1:5 @ A1 ELEVATION VIEW

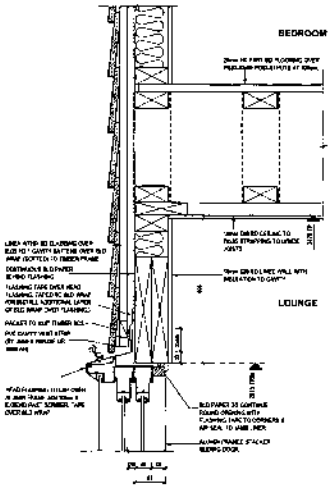
NOTE:
EXTRACT DUCTS HARDWARE FOR UNITS 1 - 22 ONLY

DETAIL DELETED
REFER DETAIL 37 SHEET A316

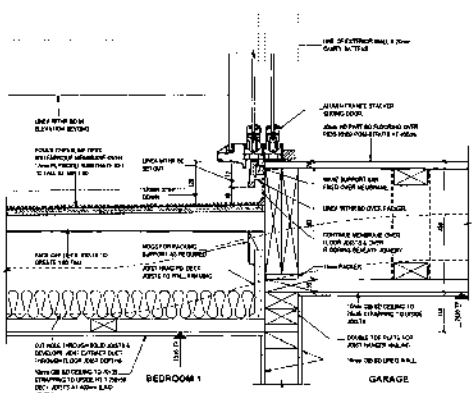
40 DECK EDGE JOINTS 11-22
SCALE 1:5 @ A1 ELEVATION VIEW



42 STACKER DOOR JAMB FLASHING
SCALE 1:5 @ A1 ELEVATION VIEW



41 MID FLOOR JOINT
SCALE 1:5 @ A1 ELEVATION VIEW



43 DECK CONNECTION
SCALE 1:5 @ A1 ELEVATION VIEW

NOTE:
EXTRACT DUCTS HARDWARE FOR UNITS 11-22 ONLY

GENERAL NOTES

1	REPLACE HARDWARE WITH HARDWARE & FINISH PLANS	GARRY
	Building Consent issue	partial
REV	DESCRIPTION	DATE

CONSULTANT	CONTACT
ARCHITECT	RINGETT MITCHELL LTD
HYDRAULICS	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTECH SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

CHARTON PROJECT MANAGEMENT LIMITED
P.O. Box 78-341 GRAFTON, AUCKLAND
New Zealand, Auckland 2141
Ph: 09 373 6860 Fax: 09 373 6867
ARCHITECTURAL CONSULTANTS & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
40 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CONSTRUCTION DETAILS

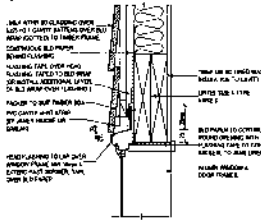
DATE	PROJECT No
2 MAY 2007	038
DRAWN	CHECKED
RD	

SCALE
1:5@A1 / 1:10@A3

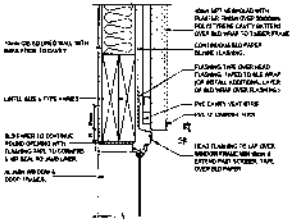
SHEET	REV
A317	1

STATUS
BUILDING CONSENT

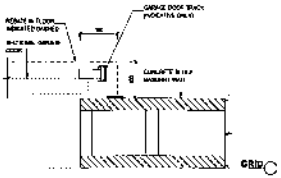
ARCHITECTURAL SERIES



44 WTHR BD HEAD FLASHING
SCALE 1:5 @ A1, ELEVATION VIEW



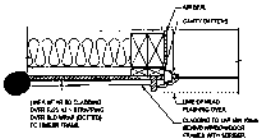
46 MPT HEAD FLASHING
SCALE 1:5 @ A1 ELEVATION VIEW



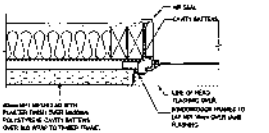
51 GARAGE DOOR JAMB
SCALE 1:5 @ A1 PLAN VIEW

DETAIL DELETED

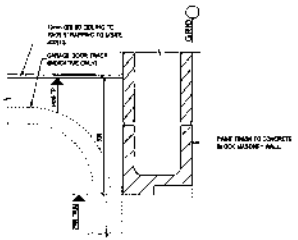
61 GARAGE DOOR JAMB
SCALE 1:5 @ A1 PLAN VIEW



43 WTHR BD JAMB FLASHING
SCALE 1:5 @ A1, PLAN VIEW



49 MPT JAMB FLASHING
SCALE 1:5 @ A1, PLAN VIEW



52 GARAGE DOOR HEAD
SCALE 1:5 @ A1 ELEVATION VIEW

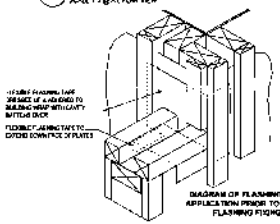
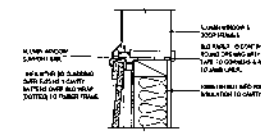
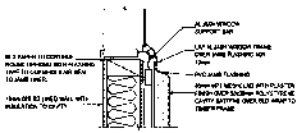


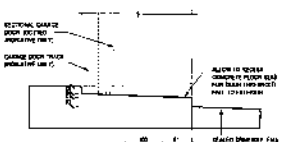
DIAGRAM OF FLASHING TAPE APPLICATION PRIOR TO METAL FLASHING FIXING



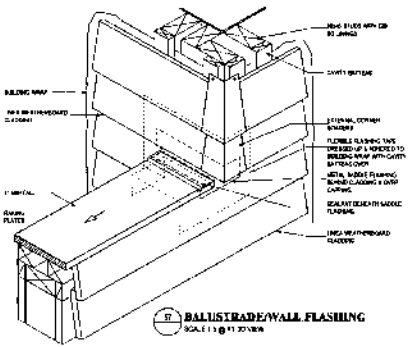
48 WTHR BD SILL FLASHING
SCALE 1:5 @ A1, ELEVATION VIEW



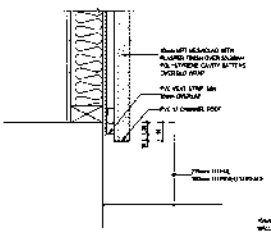
50 MPT SILL FLASHING
SCALE 1:5 @ A1 ELEVATION VIEW



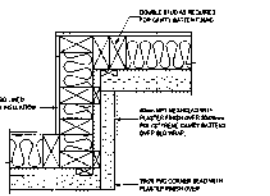
53 GARAGE DOOR SILL
SCALE 1:5 @ A1, ELEVATION VIEW



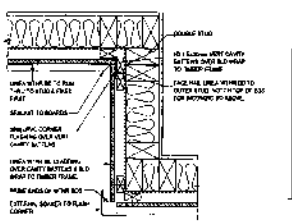
57 BALUSTRADE/WALL FLASHING
SCALE 1:5 @ A1 ELEVATION



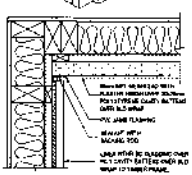
47 MPT MESHCLAD BASE
SCALE 1:5 @ A1, ELEVATION VIEW



54 MPT MESHCLAD
SCALE 1:5 @ A1, PLAN VIEW



58 WTHR BD CLADDING
SCALE 1:5 @ A1, PLAN VIEW



56 CLADDING JUNCTION
SCALE 1:5 @ A1, PLAN VIEW

GENERAL NOTES:

REV	DESCRIPTION	DATE
1	REPLACE GARAGE WITH MASONRY & TIMBER FRAME	09/05/07
	BUILDING CONSENT ISSUE	02/05/07

TRANSLATOR	CONTACT
ARCHITECT	RINGETT MITCHELL LTD
HYDRAULIC	HYDRAUR BC CONSULTANCE LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASGALE SURVEYORS LTD

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CLADDING JUNCTION DETAILS

DATE	PROJECT #
2 MAY 2007	008

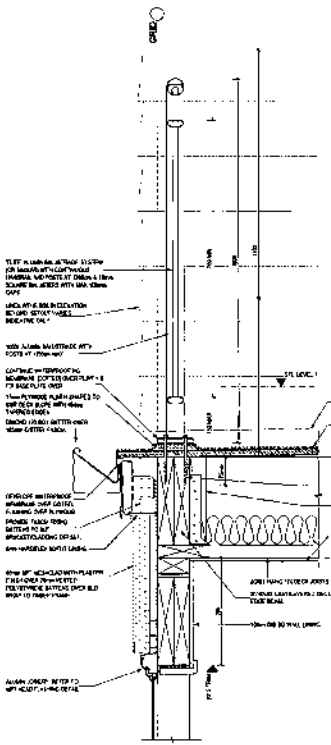
DESIGNED	DRAWN	CHECKED
	RD	

SCALE
1:5@A1/1:10@A3

SHEET #	REV
A318	1

NAME
BUILDING CONSENT

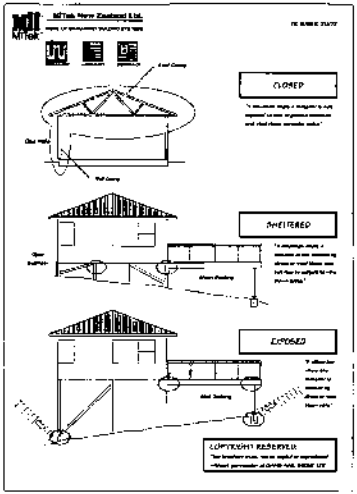
ARCHITECTURAL SERIES

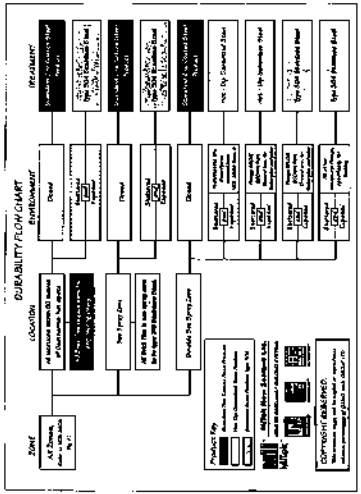


CANTILEVER DECK BEAM

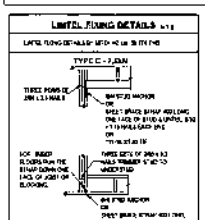
SCALE 1:1 @ A3 ELEVATION VIEW

CANTILEVER DECK BEAM" DIMETS 1:5:4 ONLY.





LINTEL FIXING DETAILS



TIMBER TREATMENT

MEMBER	TREATMENT LEVEL
INTERIOR FLOOR JOISTS & UNCOATED CEILING FRAMING	H1.1
SHEDS JOISTS	H1.2
SHEDS JOISTS WITH DECK CONNECTION	H3.1
DECK JOISTS	H3.1
DECK STRINGERS	H3.2
EXTERIOR WALL FRAME & INTERIOR LOAD BEARING & BRACED WALLS	H1.2
INTERIOR NON-LOAD BEARING WALLS	
WALL CLADDING STRAPPING	H3.1
HARDIES PLANK AND ASBESTOS SHEETS	H1.1
RAFTERS, PURLINS & CEILING BATTENS (NO DECK PITCH BELOW, DECK FLAT ROOF FRAMING)	H3.1
PERGOLA BEAM EXPOSED RAFTERS & PURLINS	H3.2
CEILING BEAM UNTREATED BAGNALL FRAMING	H3.1
FALSE POSTS	H5
RETAINING WALL RAILS	H4

NOTE TO SPECIFICATION FOR DURABILITY FLOW CHART & TO "FIELD IN NOS WAY" ZONE OF SUBSTITUTE TIMBER USED & ADDITIONAL MEMBERS MUST BE THOSE INDICATED

FIXINGS TREATMENT

OUTDOOR SEA SPRAY ZONE
MEASURED 1km INLAND - TUDOR CRESCENT & EAST COAST

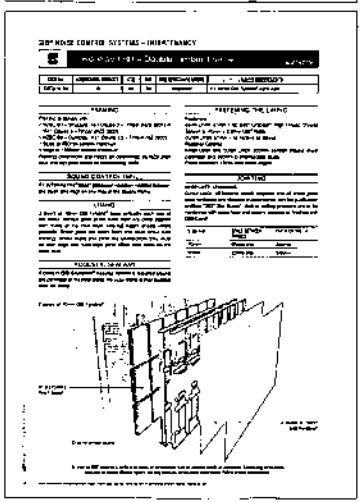
LOCATION	TREATMENT LEVEL
CLADDING (ALL LOCATIONS)	STANDARD ZINC COATED STEEL FINISHES
SHELTER & EXPOSED (FROM GROUND LEVEL)	304 GRADE STAINLESS STEEL
SHELTERED & EXPOSED (FROM GROUND LEVEL)	TYPE 304 STAINLESS STEEL

FOR NOTES

CLOSED NOT EXPOSED TO RAIN OR MOISTURE OR WIND BLOWN RAIN OR ROOF EAVES & WALL OUTLETS

SHELTERED NOT AFFECTED DIRECT OR WIND BLOWN RAIN BUT SUBJECT TO WIND BLOWN RAIN

EXPOSED AFFECTED DIRECT OR WIND BLOWN RAIN



GENERAL NOTES

REV	DESCRIPTION	DATE

CONSULTANT	WINDETT MITCHELL LTD
PLANNER	HYDRAULIC SURVEYORS LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	GASDALE SURVEYORS LTD

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CONSTRUCTION DETAILS

DATE 2 MAY 2007 | REVISION 0/0

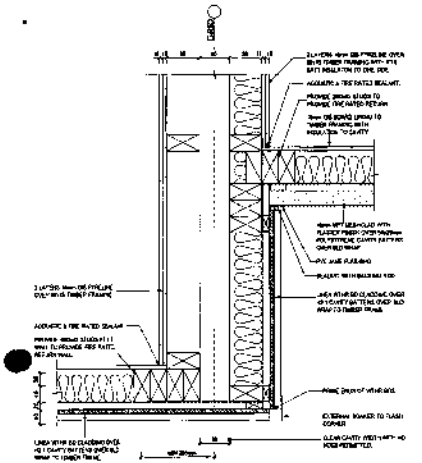
DESIGNED RD

SCALE 1:50@A1/1:100@A3

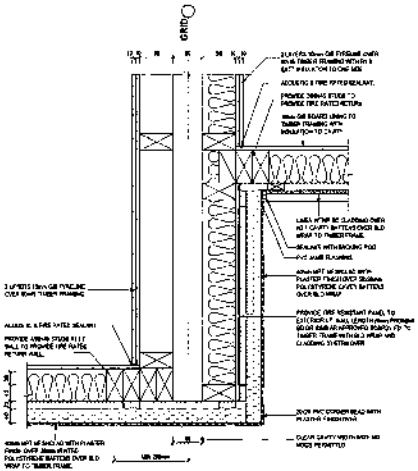
SHEET A319 | REV 1

STAGE BUILDING CONSENT

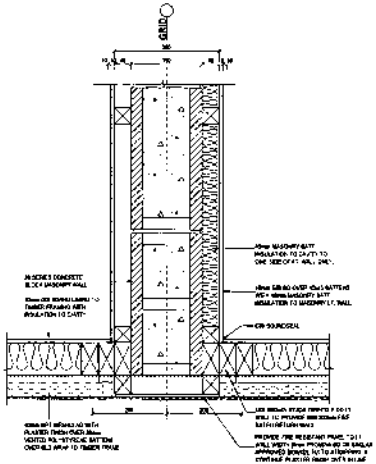
ARCHITECTURAL SERIES



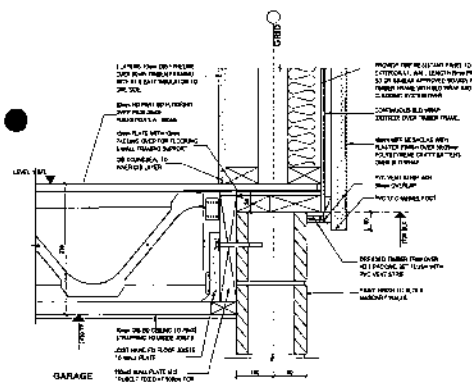
75 IT WALL/FIRE RATED RETURN
SCALE 1:5 @ A1 PLAN VIEW



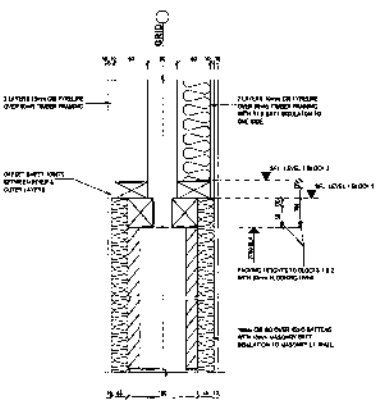
76 IT WALL/FIRE RATED RETURN
SCALE 1:5 @ A1 PLAN VIEW



77 BLOCK IT WALL/FIRE RATED RETURN
SCALE 1:5 @ A1 PLAN VIEW



78 CLADDING JUNCTION AT FLOOR
SCALE 1:5 @ A1 ELEVATION VIEW



79 STAIR IT WALL
SCALE 1:5 @ A1 ELEVATION VIEW

GENERAL NOTES:

REV	DESCRIPTION	DATE
	BUILDING CONSENT ISSUE	13/07/07

CONSULTANT	CONTACT
ARCHITECT	KINGETT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
TAX	AIREY CONSULTANTS LTD
SITE/TRANSPORT	GEOTECH SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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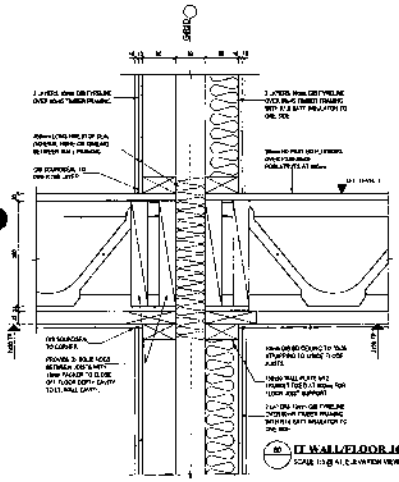
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

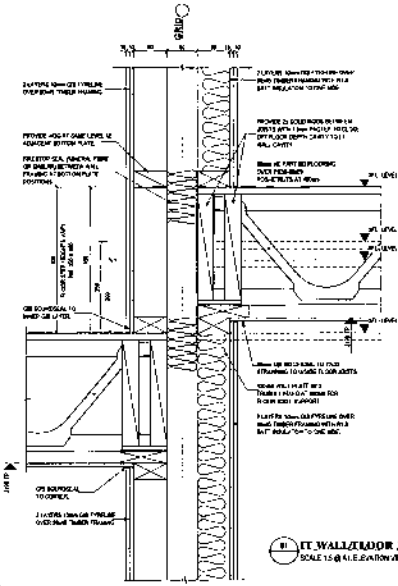
SHEET TITLE
CONSTRUCTION DETAILS

DATE: 3 JULY 2007
PROJECT #: 008
DRAWN: RO
SCALE: 1:5@A1 / 1:10@A1
SHEET #: A320
STAGE: BUILDING CONSENT

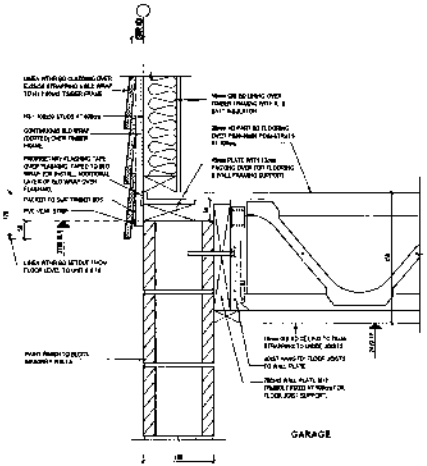
ARCHITECTURAL SERIES



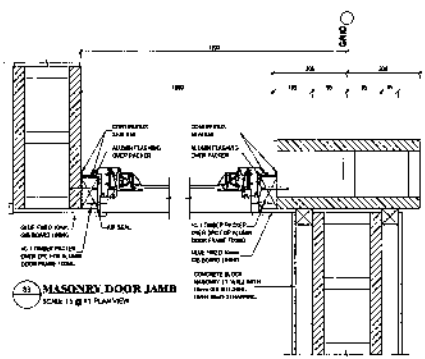
80 IT WALL/FLOOR JOINT
SCALE 1:5 @ A1, ELEVATION VIEW



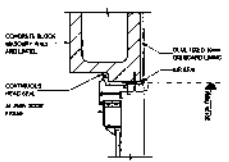
81 IT WALL/FLOOR JOINT
SCALE 1:5 @ A1, ELEVATION VIEW



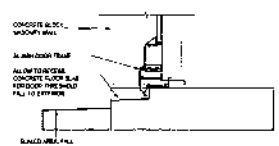
82 CLADDING JUNCTION AT FLOOR
SCALE 1:5 @ A1, ELEVATION VIEW



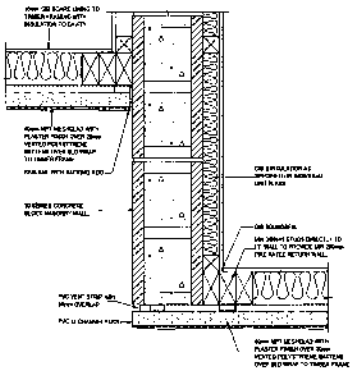
83 MASONRY DOOR JAMB
SCALE 1:5 @ A1, PLAN VIEW



84 MASONRY DOOR HEAD
SCALE 1:5 @ A1, ELEVATION VIEW



85 MASONRY DOOR SILL
SCALE 1:5 @ A1, ELEVATION VIEW



86 MASONRY CLADDING JUNCTION
SCALE 1:5 @ A1, PLAN VIEW

GENERAL NOTES:

REV	DESCRIPTION	DATE

CONSULTANT	CONTACT
ARCHITECT	KNIGHT MITCHELL LTD
HYDRAULIC	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

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ARCHITECTURAL SERVICES & PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
CONSTRUCTION DETAILS

DATE	PROJECT #
3 JULY 2007	008

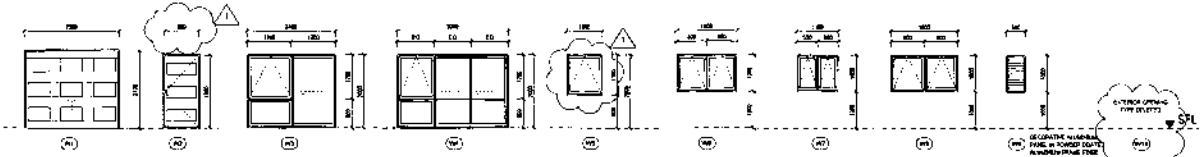
DRAWN BY	CHECKED	CHECKED BY
	RD	

SCALE
1:5@A1 / 1:10@A3

SHEET # A321
REV

ISSUE
BUILDING CONSENT

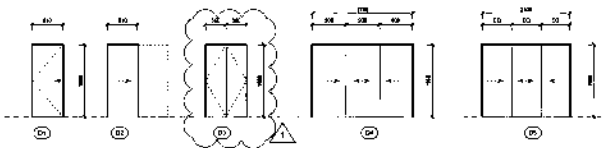
ARCHITECTURAL SERIES



EXTERIOR OPENING ELEVATIONS

SCALE 1:50@A1

EXTERIOR OPENING SCHEDULE				
NO	SIZE (mm)	DESCRIPTION	QUANTITY PER UNIT	TOTAL QUANTITY
W01	3100x2400	PROPRIETARY SECTIONAL GARAGE DOOR	1	22
W02	1800x900	TIMBER DOOR IN PVC ALUMIN FRAME IN MASONRY WALL	1	22
W03	2000x2100	PVC ALUMIN SLIDING DOOR WITH AWNING & FIXED SASHES	1 (IN UNITS 1-11)	12
W04	2000+1000	PVC ALUMIN SLIDING DOOR WITH AWNING & FIXED SASHES	1	22
W05	1100x1000	PVC ALUMIN AWNING WINDOW	1	33
W06	1000x1000	PVC ALUMIN AWNING WINDOW	2	44
W07	1000x1100	PVC ALUMIN AWNING WINDOW	1 (IN SEMI-UNITS)	33
W08	1000x1400	PVC ALUMIN AWNING WINDOW	1 (IN SEMI-UNITS)	4
W09	1800x300	ALUMINIUM LOUVRES FINISH MOUNTED WITH EXTERNAL CLADDING	12 (IN SEMI-UNITS) 4 (IN SEMI-UNITS)	12
W10	3000x2400	SECTION		
W11	2000x2000	PVC ALUMIN SLIDING DOOR WITH AWNING & FIXED SASHES	1 (IN UNITS 1-10)	13
W12	1800x900	TIMBER DOOR IN PVC ALUMIN FRAME IN TIMBER FRAMED PANEL	1 (IN UNITS 1-10)	13



INTERIOR OPENING ELEVATIONS

SCALE 1:50@A1

INTERIOR OPENING SCHEDULE				
NO	SIZE (mm)	DESCRIPTION	QUANTITY PER UNIT	TOTAL QUANTITY
D01	1800x810	HINGED HOLLOW CORE DOOR	2	110
D02	1800x810	CAVITY SLIDER HOLLOW CORE DOOR	2	44
D03	1800x2040	HINGED HOLLOW CORE DOOR	1 (UNITS 1-10)	13
D04	1800x2000	TRIPLE SLIDING PANEL WARDROBE DOORS	1 (IN UNITS 1-10) 2 (IN UNITS 11-22)	34

GENERAL NOTES:

REV	DESCRIPTION	DATE
1	SCHEME WORKS	09/01
	BUILDING CONSENT ISSUE	02/07

CONSULTANT	CONCEPTS
ACOUSTICS	WINDETT MITCHELL LTD
HYDRAULICS	HYDRAULIC SERVICES G. LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	AIREY CONSULTANTS LTD
CIVIL	AIREY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	GASDALE SURVEYORS LTD

DRAKE PROJECT MANAGEMENT LIMITED
P.O. Box 34 340 GREENHITHE
AUCKLAND 0741
Ph: 09 271 3007 FAX: 09 271 4007
ARCHITECTURAL OFFICE & PROJECT MANAGEMENT

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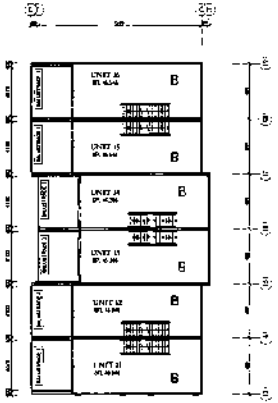
CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

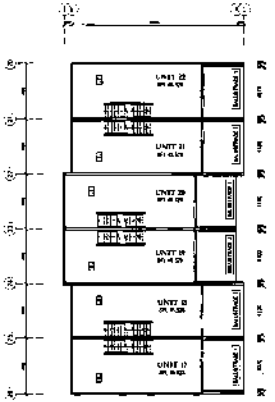
SHEET TITLE
WINDOW & DOOR SCHEDULES

DATE 2 MAY 2007	PROJECT 006
DESIGNED	DRAWN RD / CHECKED
SCALE 1:50@A1/1:100@A3	
SHEET A601	REV 1
STAGE BUILDING CONSENT	

ARCHITECTURAL SERIES

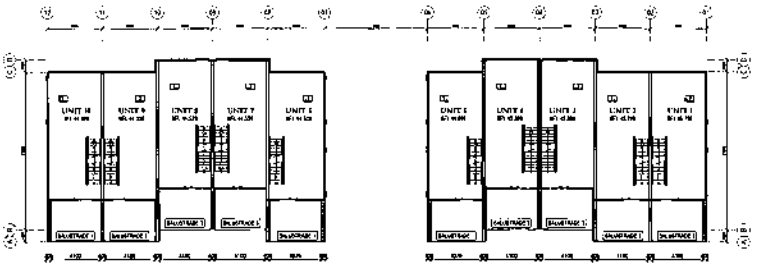


BLOCK 2
FIRST LEVEL



BLOCK 3
FIRST LEVEL

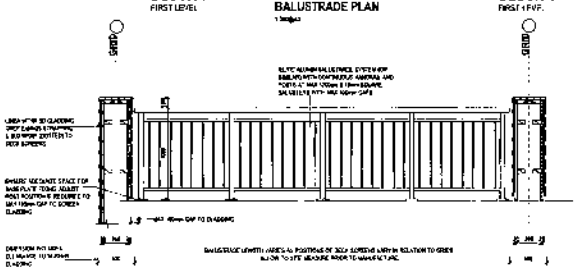
BALUSTRADE SCHEDULE	
BALUSTRADE NO	QUANTITY
BALUSTRADE 1	4
BALUSTRADE 2	6
BALUSTRADE 4	4
TOTAL BALUSTRADES	22



BLOCK 1
FIRST LEVEL

BLOCK 4
FIRST LEVEL

BALUSTRADE PLAN



BALUSTRADE ELEVATION

GENERAL NOTES:

BUILDING CONSENT ISSUE	03/07/07
REV	DATE
CONSULTANTS	
ARCHITECT	KINSETT MITCHELL LTD
MECHANICAL	HYDRAULIC SERVICES LTD
FIRE	FIRE DESIGNS LTD
STRUCTURAL	A REY CONSULTANTS LTD
CIVIL	A REY CONSULTANTS LTD
GEOTECHNICAL	GEOTEK SERVICES LTD
SURVEYOR	EASDALE SURVEYORS LTD

DESIGN PROJECT MANAGEMENT LIMITED
P.O. Box 34 365 Glenfield
Auckland, New Zealand
PH 09 271 3000 FAX 09 271 4037
ARCHITECTURAL SERVICES PROJECT MANAGEMENT

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CLIENT
CONCEPTS 124 LIMITED

PROJECT TITLE
PROPOSED TOWNHOUSES
46 CARLOS DRIVE
FLAT BUSH
MANUKAU CITY

SHEET TITLE
BALUSTRADE DETAILS

DATE	PROJECT #
3 JULY 2007	006
DRAWN	CHECKED
RD	

SCALE
AS SHOWN

SHEET # A603 REV #

ISSUE
BUILDING CONSENT

ARCHITECTURAL SERIES

CONDITIONS OF CONSENT

Consent/PIM No: 07/1556 A1 Temp Bag No: _____

X

ENDORSEMENT

All foundation excavation and construction, piling, earthworks and subgrades to be inspected and certified by a **CHARTERED PROFESSIONAL ENGINEER (Geotechnical)** prior to the placement of any construction materials as per soil report from:

Geotek Services Ltd

Ref: 2704 Date: 2 August 2005

X

ENDORSEMENT

Certificate from registered surveyor to be provided to Council with regard to the height of floor level before:
(a) pouring of concrete slab; or
(b) sub-floor framing commences.

(M.F.F.L. As per Resource Consent Proposal No - 28885)

Te Kaunihera o
MANUKAU

BUILDING CONSENT

Conditions Checklist

Environmental Services

PIM:	071556A1				
Bag No:	PURP36A	Owner:	WORKING CONCEPTS LIMITED		
Date Rec'd:	16/07/2007	Site:	46 CARLOS DRV FLAT BUSH 1730		
Legal Desc:	LOT 10 DP 352580	Ward:	WARD BOTANY-CLEVEDON	Street Ref:	1176/46
Applicant:	Compass Building Consultants Ltd	Phone: 272 2269		Fax: 272 2270	Map Ref:
Notes:	22 residential townhouses (4 blocks of 5 - 6 units)/Various amendments (see letter)				

Consents – Standard Conditions

- Comprised in this consent ☑
- Site inspections ☑
- Endorsements on plans ☑
- CERT – Any Deviation ☑
- Plumbing & Drainage ☑
- Authorisations ☑
- Consent lapse ☑

Consents – Plumbing & Draining

- Effluent Waste ☐
- P & D Half Siphon ☐
- Kerb ☐
- P & D – As built drainage plan ☐
- P & D – AS 3500 ☐
- Surface Water ☐
- Coil Drain ☐
- Certification on completion ☐

Building Consents – Residential

- Sub-floor ventilators ☐
- Kn Connections ☐
- Compaction of Fill ☐
- Eaves ☐
- Cladding – Monier Brick ☐
- Smoke Detectors ☐
- Applicator / Manufacturer's Warranty Cert ☐
- Truss Roof As Built Plan ☐
- Soundproofing ☐
- Demolition ☐
- Sea Spray Zone ☐
- Treated Timber ☐
- Barriers to stairs / Decks ☐
- Smoke Detectors – Plan ☐
- Hitex Diamond Cavity Plastering system ☐
- Lintels ☐
- Glazing ☐

Building Consents – C&I

- Site barriers to NZBC F5 [2m] ☐
- Evacuation Alarm ☐
- Pre-cast slab [tilt panel] Certificate ☐

Resource Consents

- Single Household Unit – One Residence ☐
- HIRB ☐
- Maximum Height – 8 metres ☐
- Reg. surveyor cert – Max 8 metres ☐
- Section 36 [1] [a] ☐
- Floor Level ☐
- Amalgamation ☐

Consents – Fire & Egress

- Sprinkler System ☐
- Auto sprinkler System ☐
- Emergency Lighting System ☐
- Fire doors to Fire Walls ☐
- Lifts ☐
- Mechanical Ventilation or air Conditioning ☐
- Safety Barriers 1.0m Minimum Height ☐
- Signs [international Symbol for disabled] ☐
- Access & Facilities for people with disabilities ☐
- Backflow Prevention ☐
- Emergency Warning System ☐
- Fire Hose Reels ☐
- Means of Escape ☐
- Panic Breakout or Fail Safe Auto Sliding Door ☐
- Signs ☐
- Intumescent Paint System ☐

Consents – Structural Engineering

- Engineers – Driven Piles ☐
- Minimum Foundation Depth ☐
- Engineer Drainage Certificate ☐
- Engineers – Minimum Foundation ☐
- Engineers – B Grade Block Work ☐
- Engineers – Foundation / Retaining Walls ☐
- Engineers – Certificate Hardfill ☐
- Engineers – Excess Top Soil ☐
- Engineers – Foundation Investigation ☐
- Engineers – Foundation Excavation ☑
- Engineering Components ☑

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	BC033483

Invoice Date: 14 Aug 2007
Customer No: 0199784
Charge Ref: BC071556A1
Order No:

Ormiston Project Management Ltd
Attn: Ruven Dunkerke
Po Box 58395
Greenmount
South Auckland 1730

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone 262 8967

Description	Quantity	Unit Price	Amount
PBC71556 46 Carlos Drv			
Compass Building Process Fee	1.00 Each	2,860.82	2,860.82
Building Authority Admin Fee	1.00 Each	75.56	75.56
Building Authority Audit Levy	1.00 Each	107.56	107.56
Building Authority Lodgemt Fee	1.00 Each	108.44	108.44
Resource Management Processing	0.20 Each	95.10	19.02
Flooding/Stability	0.80 Each	95.11	76.09
Plan Copying	1.00 Each	208.00	208.00

RECEIVED
21 AUG 2007
CONSULTANTS

Sub Total	$3,455.49
GST	$431.94

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Sep 2007	AMOUNT DUE	$3,887.43

Ormiston Project Management Ltd
Attn: Ruven Dunkerke
Po Box 58395
Greenmount
South Auckland 1730

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Te Kaunihera o
MANUKAU
City Council

Customer No: 0199784
Invoice No: BC033483
Charge Ref: BC071556A1

Please note any change of postal address below:

DUE DATE	20 Sep 2007
AMOUNT DUE	$3,887.43

Telephone:

AMOUNT PAID $

Manukau City Council
GST No. 51-963-660

23/0 /2007 10:18 Trn 393432
Cashier DBOWLING

SUNDRY INVOICES
Invoice Number BC033483 $3887.43

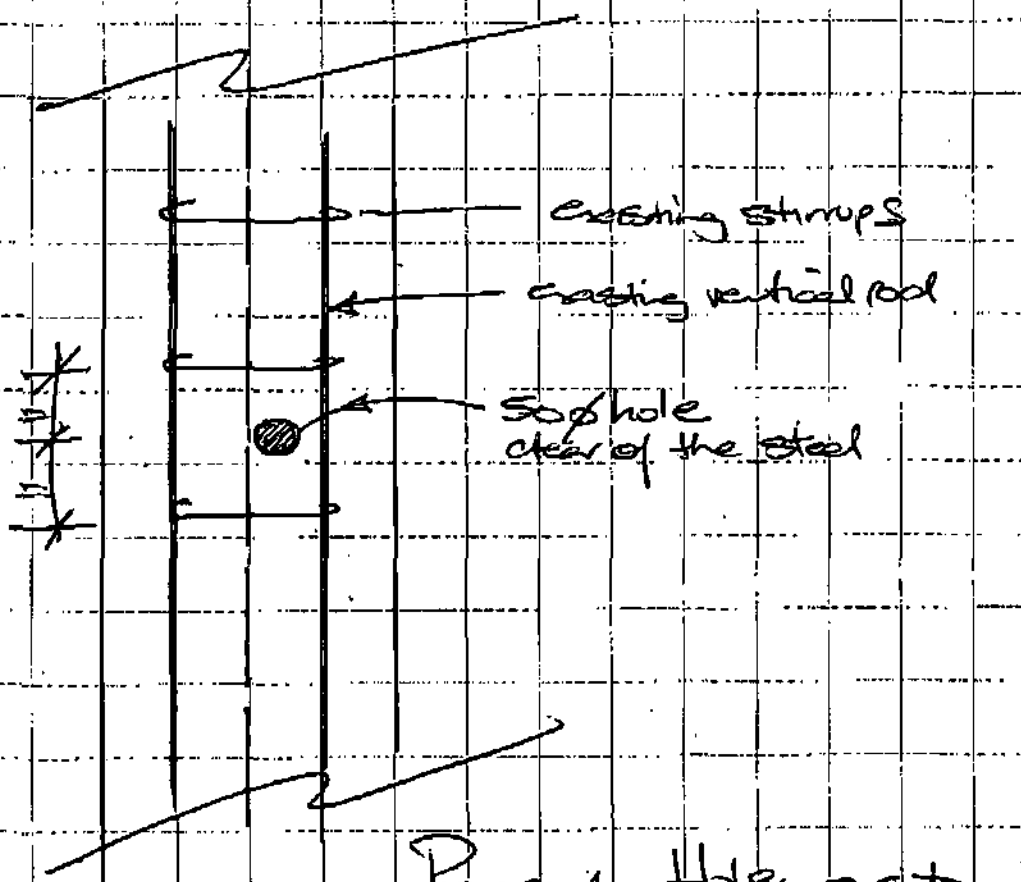
Subtotal $3887.43
Total $3887.43

Payer: ORMISTON PROJECT MANAGEMENT
Received CHEQUE $3887.43
Cheque # 119698
Change $0.00

All charges are GST inclusive. Please
retain this receipt for your records

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers
Pukekohe Takapuna Howick Orewa

CLIENT: Concepts 124 Ltd	SHEET No.: 0
JOB: 46 Carlos Drive	JOB No.: A9861
CALCS BY: [signature] PHONE: 5346523	DATE: 22/11/07



Proposed Hole position
50ø hole

- The vertical & horizontal steel must not be compromised. Check position with ultrasonic before drilling

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers

Pukekohe Takapuna Howick Orewa

CLIENT: Working Concepts		SHEET No.: 0
JOB: 46 Carlos Gutter		JOB No.: 9861
CALCS. BY: [illegible]	PHONE: 846523	DATE: 16/11/07

Gutter / S/W Design

Area = 4.3 × 3.4 = 14.62 m²

100mm/hr

$Q = 95 \times 100 \times 2.78 \times \frac{14.62}{10{,}000}$

= 0.38 l/s

5m over 100
70mm

⇒ 80ø PVC 1 in 200 gradient

⇒ Capacity = 0.7 l/s

OK

.05m / 100m

50ø @ .25% ⇒ 1m

35mm fall over 14m

80ø

.025 × 14 =

2mm / 14000 × 100 = .14

20mm

40ø

.8%

⇒ over 14m = 112mm

@ 100 pipe, 10mm over 14 metres

⇒ .07

⇒ Capacity OK but not self cleaning velocity

For 14m

⇒ 20mm for 80ø

35m for 50ø

10mm for 100ø

Mineral Plaster Technologies Limited

87b Ben Lomond Crescent
Pakuranga, Auckland
PO Box 38-508, Howick
Auckland, New Zealand

Phone: +64-9 572-0444
Fax: +64-9 577-5191
Email: mineralplaster@xtra.co.nz

Date of issue: 28 February 2008

Producer Statement Application Review

Mineral Plaster Technologies Ltd. Is a Telarc Q-Based Registered Company and guarantees that the material components of the MPT system are manufactured to specification in accordance with an audited quality control system.

Mineral Plaster Technologies Ltd., guarantees for a period of 15 years (from date of completion) that the MPT system will perform and meet the relevant provisions of the New Zealand Building Code Clauses B1 Structure; B2 Durability; E2 External Moisture; E3 internal Moisture, provided that all the material components of the Mineral Plaster Technologies Ltd system have been prepared and installed in accordance with our written instructions and detail drawings and the work carried out by an Approved Contractor. The system must have been properly maintained and subjected to no more than normal conditions of exposure.

Mineral Plaster Technologies products and systems are dependant upon the correct preparation and application of all the components in strict accordance with the relevant written instructions. On-site application is beyond our control and Mineral Plasters Technologies cannot guarantee workmanship or the correct preparation and application of the MPT system. The Contractor will on request provide a separate guarantee for their workmanship.

Mineral Plaster Technologies Ltd., will at its discretion, replace, repair or make a contribution to any part of the MPT system where failure proves to be due to defective due to material components provided notice is given in writing within the guarantee period.

Mineral Plaster Technologies Ltd. will not accept any responsibility for damage of any kind due to defective building structure, hydrostatic pressure, mechanical or physical abuse or any other abnormal cause.

Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 1, 46 Carlos Drive, Flatbush,Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Meshclad 140 sqm.

For and On Behalf of MINERAL PLASTER TECHNOLOGIES LIMITED

Name: Paul Eru

PP. Signed: C.D. Crook.

Position: Contracts Manager.

BRANZ APPRAISED
SPECIFY WITH CONFIDENCE

BRANZ Appraisal Certificate No.445 (2004) MPT Meshclad

MINERAL PLASTER TECHNOLOGY

Breathability & Insulation

Mineral Plaster Technologies Limited

87b Ben Lomond Crescent
Pakuranga, Auckland
PO Box 38-508, Howick
Auckland, New Zealand

Phone: +64-9 572-0444
Fax: +64-9 577-5191
Email: mineralplaster@xtra.co.nz

RECEIVED
3 1 MAR 2008
BY:

Date of Issue: 26 February 2008

Producer Statement Application Review

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Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 1, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Stoneclad System 45 sqm.

For and On Behalf of MINERAL PLASTER TECHNOLOGIES LIMITED

Name: Paul Eru

pp Signed: CQ Cook.

Position: Contracts Manager.

BRANZ APPRAISED
SPECIFY WITH CONFIDENCE

BRANZ Appraisal Certificate No.445 (2004) MPT Meshclad

Mineral Plaster Technologies Limited

87b Ben Lomond Crescent
Pakuranga, Auckland
PO Box 38-508, Howick
Auckland, New Zealand

Phone: +64-9 572-0444
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Email: mineralplaster@xtra.co.nz

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Guarantee Certificate issued to:
Home Owner

Related to plaster work at: Block 2, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Meshclad 140 sqm.

For and On Behalf of MINERAL PLASTER TECHNOLOGIES LIMITED

Name: Paul Eru
PR Signed: CD.Crook.
Position: Contracts Manager.

BRANZ APPRAISED
SPECIFY WITH CONFIDENCE

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Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 2, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Stoneclad System 56 sqm.

For and On Behalf of MINERAL PLASTER TECHNOLOGIES LIMITED

Name: Paul Eru

Signed: CQ Crook.

Position: Contracts Manager.

BRANZ APPRAISED
SPECIFY WITH CONFIDENCE

BRANZ Appraisal Certificate No.445 (2004) MPT Meshclad

Mineral Plaster Technologies Limited

87b Ben Lomond Crescent
Pakuranga, Auckland
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Fax: +64-9 577-5191
Email: mineralplaster@xtra.co.nz

Date of issue: 28 February 2008

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Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 3, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Meshclad 140 sqm.

For and On Behalf of MINERAL PLASTER TECHNOLOGIES LIMITED

Name: Paul Eru

PP Signed: C.D. Crook

Position: Contracts Manager.

BRANZ APPRAISED
SPECIFY WITH CONFIDENCE

BRANZ Appraisal Certificate No.445 (2004) MPT Meshclad

MINERAL PLASTER TECHNOLOGY

Breathability & Insulation

Mineral Plaster Technologies Limited

87b Ben Lomond Crescent
Pakuranga, Auckland
PO Box 38-508, Howick
Auckland, New Zealand

Phone: +64-9 572-0444
Fax: +64-9 577-5191
Email: mineralplaster@xtra.co.nz

Date of Issue: 26 February 2008

Producer Statement Application Review

Mineral Plaster Technologies Ltd. Is a Telarc Q-Based Registered Company and guarantees that the material components of the MPT system are manufactured to specification in accordance with an audited quality control system.

Mineral Plaster Technologies Ltd., guarantees for a period of 15 years (from date of completion) that the MPT system will perform and meet the relevant provisions of the New Zealand Building Code Clauses B1 Structure; B2 Durability; E2 External Moisture; E3 internal Moisture, provided that all the material components of the Mineral Plaster Technologies Ltd system have been prepared and installed in accordance with our written instructions and detail drawings and the work carried out by an Approved Contractor. The system must have been properly maintained and subjected to no more than normal conditions of exposure.

Mineral Plaster Technologies products and systems are dependant upon the correct preparation and application of all the components in strict accordance with the relevant written instructions. On-site application is beyond our control and Mineral Plasters Technologies cannot guarantee workmanship or the correct preparation and application of the MPT system. The Contractor will on request provide a separate guarantee for their workmanship.

Mineral Plaster Technologies Ltd., will at its discretion, replace, repair or make a contribution to any part of the MPT system where failure proves to be due to defective due to material components provided notice is given in writing within the guarantee period.

Mineral Plaster Technologies Ltd. will not accept any responsibility for damage of any kind due to defective building structure, hydrostatic pressure, mechanical or physical abuse or any other abnormal cause.

Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 3, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Stoneclad System 56 sqm.

For and On Behalf of MINERAL PLASTER TECHNOLOGIES LIMITED

Name: Paul Eru

PP. Signed: C.A. Crook.

Position: Contracts Manager.

BRANZ APPRAISED
SPECIFY WITH CONFIDENCE

BRANZ Appraisal Certificate No.445 (2004) MPT Meshclad

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Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 4, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Stoneclad System 45 sqm.

For and On Behalf of MINERAL PLASTER TECHNOLOGIES LIMITED

Name: Paul Eru

Signed: C.O. Cook.

Position: Contracts Manager.

BRANZ APPRAISED
SPECIFY WITH CONFIDENCE

BRANZ Appraisal Certificate No.445 (2004) MPT Meshclad

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Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 4, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Meshclad 140 sqm.

For and On Behalf of MINERAL PLASTER TECHNOLOGIES LIMITED

Name: Paul Eru

Signed: C.D. Cook

Position: Contracts Manager.

BRANZ APPRAISED
SPECIFY WITH CONFIDENCE

BRANZ Appraisal Certificate No.445 (2004) MPT Meshclad

WORKMANSHIP GUARANTEE

Date of Issue: 28 February 2008

I certify that this project has been completed with materials that meet Mineral Plaster Technologies Ltd., specifications and that all work has been carried out in accordance with Mineral Plaster Technologies Ltd., written installation instructions.

I guarantee for a period of five years, that should any defect in the plastering system occur due to an application fault, I will, at my discretion, replace, repair or make a contribution to the rectification of the defect. The system must have been property maintained and subjected to no more than normal conditions of exposure.

I will not accept any responsibility for damage of any kind due to defective building structure, hydrostatic pressure, mechanical or physical abuse or any other abnormal cause. The system is dependent upon the correct specification of Mineral Plaster Technologies Ltd., construction details, as provided in their current Data Sheet Manual. I will accept no responsibility for alternative construction details, which are specified unless they have been agreed to in writing prior to their construction on-site.

Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 1, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Meshclad 140 sqm.

I Stefan Coles of CSS Construction Services & Solutions

.....

being an Approved Contractor to Mineral Plaster Technologies Ltd

Confirm that I have applied MPT Meshclad

in accordance with all the manufacturers installation/application requirements and clause E2 of the NZ Building Code. I am satisfied that the substrate over which the system has been applied had been suitably prepared for the application of that system and that the required flashings had been properly installed.

Signed..... Date 14/3/08.....

WORKMANSHIP GUARANTEE

Date of Issue: 26 February 2008

I certify that this project has been completed with materials that meet Mineral Plaster Technologies Ltd., specifications and that all work has been carried out in accordance with Mineral Plaster Technologies Ltd., written installation instructions.

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Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 1, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Stoneclad System 45 sqm.

I Stefan Coles of CSS Construction Services & Solutions

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being an Approved Contractor to Mineral Plaster Technologies Ltd

Confirm that I have applied MPT Stoneclad System

in accordance with all the manufacturers application requirements and clause E2 of the NZ Building Code. I am satisfied that the substrate over which the system has been applied had been suitably prepared for the application of that system.

Signed..... Date 14/3/08.

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Guarantee Certificate issued to: Home Owner

Related to plaster work at: Block 2, 46 Carlos Drive, Flatbush, Manukau, Auckland

Date of Completion: 25.02.08

Details of work: MPT Meshclad 140 sqm.

I Stefan Coles of CSS Construction Services & Solutions

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being an Approved Contractor to Mineral Plaster Technologies Ltd

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Signed..... Date ....14/3/08.....

TRASK CONTRACTORS LTD

1/133 Somerville Road
Howick
Auckland

Phone/Fax: 64 - 9 - 534-7685
Mobile: 64 - 21 - 300-054
Email: traskcontractors@xtra.co.nz

LABOUR, WARRANTY AND PRODUCER STATEMENT FOR PRACTICAL COMPLETION CERTIFICIATE

COMPLETED BY Silivaai Tamale JOB NO. 46

DATE COMPLETED 31-3-08. TOTAL TIME ON JOB 4 weeks.

CLIENT NAME Flat bush construction LTD PH NO. 092713007

SITE ADDRESS
46 Carlos Dr.
Flat bush Manukau City

PRODUCT (S) USED Mapelastic M2 500 LIN M 590

JOB SITE LEFT CLEAN AND RUBBISH TAKEN AWAY YES/~~NO~~

TANK TESTED ~~YES~~/NO

AREAS COMPLETED – Brief description only

1. bathroom & Kitchen Floors.
2. .....
3. .....

Work has been completed by a registered applicator and installed as to

Mapei NZ. specifications.

Installation Warranty for a period of five years.

SIGNED AS COMPLETED W Trask. DATE 30-4-08.

REGISTRATION NO. 139

ADHESIVES , SEALANTS AND ADMIXTURES, ACOUSTIC AND WATERPROOFING SYSTEMS FOR BUILDING AND CONSTRUCTION

29 April 2008

Ormiston Projects
46 Carlos Drive
Flatbush

PRODUCT PERFORMANCE WARRANTY
MAPELASTIC

When installed to Mapei specification and as detailed in our relevant technical data sheet Mapei warrants the suitability of Mapelastic for waterproofing to roofs, decks, water tanks, swimming pools, shower cubicles etc.

If the Mapelastic is to be uncovered or exposed to extreme levels of ultraviolet light over a prolonged period of time then it must be coated with an Elastomeric paint like Mapei Elastocolor.

Mapei will warrant the performance of this material for its intended use for a period of 20 years.

Mapei Products meet the Performance and Quality Standards as set by the following:

Australian/New Zealand Standards for Waterproofing Membranes AS/NZS 4858:2004

BRANZ Appraisal Certificate No. 484 (2005) Internal Waterproofing Membrane.

BRANZ Appraisal Certificate No. 485 (2005) External Waterproofing Membrane.

Mapei Quality System ISO 9001 Certified Certiquality No 250/1

The Mapei Environmental Management System ISO 14004 Certico No 1230

EC Eco Management and Audit Scheme Registration No 1-5-000019

Certiquality Occupational Health and Safety Management Systems OHSAS 18001

PP

Brent Worthington
Managing Director

MAPEI NEW ZEALAND LTD, 30 Fisher Crescent, Mt Wellington
PO Box 12-326, Penrose, Auckland, New Zealand
Tel: 64 9 921 1994 Fax: 64 9 921 1993 Email: mapei@mapei.co.nz Website: www.mapei.it

MAPEI®

ADHESIVES , SEALANTS AND ADMIXTURES, ACOUSTIC AND WATERPROOFING SYSTEMS FOR BUILDING AND CONSTRUCTION

Mapegum WPS
Mapelastic
Mapelastic Smart

Mapei NZ Ltd has received BRANZ Appraisal and Certification for our Waterproofing Products - **Mapegum WPS** and **Mapelastic/Mapelastic Smart**.

BRANZ
Appraised and Certified
Internal No. 484 (2005) External No. 485 (2005)

You will be seeing the above label appear on Product and Marketing Material which we believe will give your customers the added confidence to specify and use Mapei **Mapegum WPS** and **Mapelastic/Mapelastic Smart** Waterproofing Systems in Wet Areas.

Mapei New Zealand Ltd will also contact the Councils in your area to advise them of the Certification that has been received.

We view this Certification most positively and know that with our continuing Marketing and Sales initiatives and your positive contribution to our Distribution Network, sales will continue to grow to attain greater Market Share.

MAPEI NEW ZEALAND LTD, 30 Fisher Crescent, Mt Wellington
PO Box 12-326, Penrose, Auckland, New Zealand
Tel: 64 9 921 1994 Fax: 64 9 921 1993 Email: mapei@mapei.co.nz Website: www.mapei.it

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

RECEIVED
24 APR 2008
BY:

R.W. Muir
Registrar-General
of Land

Identifier **215615**
Land Registration District **North Auckland**
Date Issued 19 April 2006

FAXED

Prior References
NA34D/637

Estate	Fee Simple
Area	4170 square metres more or less
Legal Description	Lot 10 Deposited Plan 352580

Proprietors
Concepts 124 Limited

Interests

Appurtenant hereto is a right of way created by Easement Instrument 6678027.6 - 6.12.2005 at 9:00 am
The easements created by Easement Instrument 6678027.6 are subject to Section 243 (a) Resource Management Act 1991
7370581.2 Mortgage to North South Finance Limited - 15.5.2007 at 9:00 am
7725893.1 CAVEAT BY MARY SCOURFIELD AND GARETH SCOURFIELD - 25.2.2008 at 9:00 am

AIREY CONSULTANTS LTD

CONSULTING CIVIL & STRUCTURAL ENGINEERS
39 MEADOWLAND DRIVE,
P. O. BOX 39 101, HOWICK
PH: 09 534 6523 FAX: 09 537 5754
EMAIL:iang@aireys.co.nz

AIREY CONSULTANTS LTD.

FACSIMILE TRANSMISSION HEADER SHEET

To	Ormiston Projects		
Attn	Reg/ Ravi		
Re.	46 Carlos—stormwater from decks	**Date**	22/11/07
From	Ian Gibson	**Pages**	3
Fax No.	2714037	**File**	9861
CC:	**CC:**		

Dear Reg and Ravi
Further to our site meeting this morning I wish to confirm that a 40mm dia pipe will work, with 115mm of fall the length of the building. Han is happy with a 50mm hole through the column at mid-height .However, we MUST not compromise the steel in the column so at least the first few positions should be checked by ultrasound to avoid hitting the vertical steel and the stirrups which are at 200 centres horizontally
I suggest you arrange for an ultrasound and do an installation to see how practical it is
Regards
Ian

IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CONTACT US IMMEDIATELY.

The information contained in this fax is confidential between Airey Consultants Ltd and the intended recipient. Any other person receiving this fax is required to respect the confidentiality and may not disclose, copy or make use of its contents. If this fax has been received in error, would the recipient please notify Airey Consultants Ltd immediately and return it by mail. Airey Consultants will reimburse the cost incurred.

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CONSULTING CIVIL & STRUCTURAL ENGINEERS
39 MEADOWLAND DRIVE,
P. O. BOX 39 101, HOWICK
PH: 09 534 6523 FAX: 09 537 5754
EMAIL:iang@aireys.co.nz

AIREY CONSULTANTS LTD.

FACSIMILE TRANSMISSION HEADER SHEET

To			
Attn			
Re.	Graeme R.	Date	22/5/08
From		Pages	4
Fax No.		File	
CC:	CC:		

URGENT!!!

Calculation &
Calculation for pipe
through bdy. / think you
went for 50ϕ @ .25 & ? or 40ϕ @
0.88.

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Easdale Surveyors Ltd
REGISTERED PROFESSIONAL SURVEYORS

DIRECTOR:
M.S. LUCAS, B.Surv., M.N Z.I.S

39 Meadowland Drive,
Howick, Auckland.

Phone: 0-9-534-8452
Fax: 0-9-537-5754
email: surveyors@easdales.co.nz

April 11, 2008

TO WHOM IT MAY CONCERN

RE : LOT 10 DP 352580
46 CARLOS DRIVE, FLAT BUSH

I hereby certify that the buildings under construction on the above property have been set out in accordance with the approved building consent plans for position and level.

.....
Licensed Cadastral Surveyor

File :7793

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O.Box 39101 Howick
Manukau 2145
Telephone: +64 9 534 6523
Facsimile: +64 9 537 5754
Email: iang@aireys.co.nz
www.aireys.co.nz

AIREY CONSULTANTS LTD.

Members of ACENZ

14 April 2008

In all correspondence please quote our ref: 9863-0021

The Chief Engineer
Manukau City Council
Private Bag
MANUKAU CITY

Attn: Building Inspectors

Dear Sir

Re: Grade B Masonry Inspections for New Residential Apartments at 46 Carlos Drive, Flat Bush.

We were engaged by Working Concepts Ltd to provide construction observation and certification of the masonry blockwork walls at the above address.

We confirm that in our professional opinion, the masonry blockwork walls were reinforced and constructed in accordance with the details contained in our calculations numbered 9863-0021. Note that this certification also covers observation of foundation construction which is an integral part of the Grade B Masonry certification process.

This certification relates only to the structure of the walls (Grade B masonry Ref NZS4230:2004) and does not include any aspects of wall waterproofing or drainage which maybe required and which are to be inspected by the Local Authority.

Please contact the writer if you wish to discuss the matter.

Yours faithfully
AIREY CONSULTANTS LTD

D McKENZIE

AIREY CONSULTANTS LTD

CONSULTING CIVIL & STRUCTURAL ENGINEERS
39 MEADOWLAND DRIVE,
P. O. BOX 39 101, HOWICK
PH: 09 534 6523 FAX: 09 537 5754
EMAIL:iang@aireys.co.nz

AIREY CONSULTANTS LTD.

FACSIMILE TRANSMISSION HEADER SHEET

To	Ormiston Projects		
Attn	Ravi/Reg		
Re.	Deck Downpipe problem, 46 Carlos Dr Flat Bush	**Date**	14/11/07
From	Ian Gibson	**Pages**	2
Fax No.	2714037	**File**	9861
CC:		**CC:**	

Dear Ravi/Reg
Please pass this on if not your problem
I have discussed the stormwater issue with Compass Building Certifiers and the only solution is to get the water through the floor space out to the other side of the building. An 80mm pipe at 1 in 200 fall would give the required capacity. In fact it could be at as flat as 1 in 500 . This is 70mm-30mm over the 14m depth of the building.
I enclose a sketch of what I am suggesting but a site visit with whomever will try to get a pipe through would be appropriate. The posi-strut joists have gaps through which we can run a pipe but there will need to be holes drilled in the timber joists and I want these to be in the correct structural position.
Call me when you want to meet on site
Regards
Ian

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ORMISTON PROJECT MANAGEMENT LIMITED
Ph: (09) 271 3007
Fax: (09) 271 4037

Document Transfer

To:	Compass Building Consultants	From:	Ruven Duinkerke
Fax:	09	Pages:	3 + Reports
Phone:	09	Date:	29 Nov 07
Re:	46 Carlos Dr (Ref 12596)	CC:	

☐ Urgent ■ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Please find attached a revised Fire Report for our project at 46 Carlos Dr.

The fire alarm system originally specified at the time of Building Consent application was a Type 4F.

What will be installed is a Type 5F system. Hence the report has been amended to reflect this change.

Compass ref: #12596

If there are any queries, please contact me.

Regards

Ruven

File
As built doc's to MCC with CCC discussed AJC / MR 30/11/07

30/11 As built

Ph: 09 272 2269
Fax: 09 272 2270
Email: info@bldgcert.co.nz
PO Box 23 019 Hunters Corner, Papatoetoe, Auckland 2155
Unit 23/2 Bishop Dunn Place, Botany South, Manukau City, Auckland 2013

COMPASS
BUILDING
CONSULTANTS

ADVICE OF COMPLETION OF BUILDING WORK

Territorial Authority: Manukau City Council
Building Consent No: 071556
Certificate No: 12596
Project Description: 22 x 3 level Townhouses (Blk 1 Unit 6-10, Blk 2 Units 11-16, Blk 3 Unit
Project Address: 46 Carlos Drive, Flat Bush
Owner: Concepts 124 Ltd c/- Ormiston Project Management Ltd
Owners Address: Po Box 58 395, Greenmount

Please issue Code Compliance Certificate.

You are hereby advised:

- ☑ All
- ☐ Part only (as specified in the attached Certificates)

of the building work under the above consent is believed to have been completed to the extent required by the building consent.

- ☑ To issue a Compliance Schedule or amended Compliance Schedule as appropriate.

The attached particulars include:

- ☑ Compass Inspection Records
- ☑ Building Certificates - i.e. energy work certificates
- ☐ Concrete masonry observation/supervision certificates
- ☐ Truss manufacturers layout plan
- ☐ Compaction certificate
- ☑ "As Built" drainage plan
- ☑ Producer Statements

- As per schedule

	Name	Postal Address	Phone No	Registration No
Builder	Flatbush Construction Ltd		273 8108	
Plumber	AOK Plumbing/Active Plumbing			17616
Drainlayer	Bowkett Drainage			11351

Signed: ..... **Compass Building Consultants Ltd.**

Authorised Signatory JOHN POTTER Technical Officer Building Authority **Date:** 6 / 6 / 08

* B C 1 2 5 9 6 *

Form CBC9 Issue 4

Flatbush Construction Ltd

Unit H, 8 Bishop Lenihan Place, East Tamaki
P.O.Box 58395,
Greenmount
Tel 273-8108
Fax 273.8109

CODE COMPLIANCE INSPECTION

4th June 2008	**Project – 46 Carlos Drive, Flatbush, Manukau (22 Apartments)**

MCC Building Consent No – 071556A1

A	Manukau City Council Application Form	√
B	Certificate of Title	√
C	Easdale Surveyors – Certifying Form	√
D	Airey Consultants – Producer Statement	√
E	CSS Exterior Systems Ltd – Producer Statement	√
F	CCS Plastering Exterior - Workmanship Producer Statement	√
G	Trask Contractors Ltd (Waterproofing) – Labour Warranty & Producer Statement	√
H	Mapei NZ Ltd (Waterproofing product) – Product Performance Warranty	√
I	Drainage As Builts!	√
J. 1	South Pacific Electrical – apartment 1 - ECC	√
J. 2	South Pacific Electrical – apartment 2 - ECC	√
J. 3	South Pacific Electrical – apartment 3 - ECC	√
J. 4	South Pacific Electrical – apartment 4 - ECC	√
J. 5	South Pacific Electrical – apartment 5 - ECC	√
J. 6	South Pacific Electrical – apartment 6 - ECC	√
J. 7	South Pacific Electrical – apartment 7 - ECC	√
J. 8	South Pacific Electrical – apartment 8 - ECC	√
J. 9	South Pacific Electrical – apartment 9 - ECC	√
J. 10	South Pacific Electrical – apartment 10 - ECC	√
J. 11	South Pacific Electrical – apartment 11 - ECC	√
J. 12	South Pacific Electrical – apartment 12 - ECC	√
J. 13	South Pacific Electrical – apartment 13 - ECC	√
J. 14	South Pacific Electrical – apartment 14 - ECC	√
J. 15	South Pacific Electrical – apartment 15 - ECC	√
J. 16	South Pacific Electrical – apartment 16 - ECC	√
J. 17	South Pacific Electrical – apartment 17 - ECC	√
J. 18	South Pacific Electrical – apartment 18 - ECC	√
J. 19	South Pacific Electrical – apartment 19 - ECC	√
J. 20	South Pacific Electrical – apartment 20 ECC	√
J. 21	South Pacific Electrical – apartment 21 ECC	√
J. 22	South Pacific Electrical – apartment 22 ECC	√

K	AOK Plumbing – Producer Statement	√
L	Insulation – Producer Statement	√
M	Contour Aluminum – Producer Statement	√
N	Geotek Services Ltd – Geotechnical Completion Report	√
O	Bob Russell soundproofing Inspections Ltd – acoustic report & test? Don't know if we need a report for the townhouse development?	√
P	Entire Fire – Producer Statement	√
Q	Fire Alarm System – Certificate of Compliance	√
R	Climatech	√

Ph: 09 272 2269
Fax: 09 272 2270
Email: info@bldgcert.co.nz
PO Box 23 019 Hunters Corner,
Papatoetoe, Auckland 2155
Unit 23/2 Bishop Dunn Place, Botany
South, Manukau City, Auckland 2013

COMPASS
BUILDING
CONSULTANTS

Building Consultant's Building Inspection Report MR/12596

Issued By: Compass Building Consultants Ltd.

Certificate No: 12596 **Report Issued:** 06/06/08

Building Consent No: 071556 **Address:** 46 Carlos Drive, Flat Bush

Building Name: 22 x 3 level Townhouses (Blk 1 Unit 6-10, Blk 2 Units 11- **Legal Description:** Lot 10 DP 352580

Type of Inspection		Approved	Date	Comments
Siting		Yes	11/04/08	Surveyors Cert recd
Foundations	Strip Footing:	Yes	25/09/07	5/9/07 Block 1 appd subject to completing clean out & chairs (Eng reinspecting) AJC; 14/9/07 Block 4 appd (also by engineer) DJ; 18/9/07 Block 3 appd subject to ensuring cover & minor clean out AJC; 25/9/07 8.30am Incorrect stirrups to ridging area Block 2. 25/09/0711.00am Foundations Block 2 appd MHH;
	Pile Footing:			
	Driven Pile Certificate Rec.:			
Masonry	Bond Beam:	Yes	05/06/08	4/10/07 Block 1 IT walls 1st lift appd up to 1.2m high ground to lvl 2. GL; 8/10/07 Blockwork appd to Block 1 2nd lift to 2.7 metres DJ; 12/10/07 Blockwork appd to 1.2 metres high (Block 4) also checked by engineer DJ; 16/10/07 Blockwork 2nd lift block 4 appd PC; 23/10/07 Block 3 blockwork appd to 1.2 metres DJ; 26/10/07 Block 3 blockwork appd to 2.6 metres DJ; 31/10/07 Block 2 blockwork appd to 1.2 metres AJC; 5/6/08 Grade B masonry cert recd MHH;
	Header Block:			
	Observation/Supervision Cert. Rec.:		05/06/08	
Concrete Construction Beams/Columns/Panels:				
Conc. Floor	Slab:	Yes	18/10/07	28/9/07 Appd to Block 1 DJ; 4/10/07 Block 4 slab on grade appd GL; 12/10/07 Floor slab appd to block 3 (also underfloor plumbing) DJ; 18/10/07 Block 2 appd AJC;
	D.P.C.:	Yes	18/10/07	28/9/07 Appd to Block 1 DJ; 28/9/07 Appd to Block 1 DJ; 4/10/07 Block 4 slab on grade appd GL; 18/10/07 Patch at power conduit penetrations block 2 AJC;
	Mesh:	Yes	18/10/07	28/9/07 Appd to Block 1 DJ; 28/9/07 Appd to Block 1 DJ; 4/10/07 Block 4 slab on grade appd GL;
	Plumbing:	Yes	18/10/07	27/9/07 Lots 1 & 4 Units 1-10 tested & appd MHH;
	Compaction Certificate Rec.:			28/9/07 Appd to Block 1 DJ;

Type of Inspection		Approved	Date	Comments
Sub-Floor	Bracing:			
	Insulation:			
Pre-Cladding				
Wraps and Cavity				
Pre-Lining	Framing:	Yes	02/08/08	12/11/07 Framing okay Block 1 only PC; 13/11/07 Framing okay Block 4 only PC; 5/12/07 Preline appd to Unit 1 DJ; 7/12/07 Preline appd to block 4 (bldg & plumbing). Note: Wall/ceiling insulation not installed DJ; 18/01/08 Block 2 , Unit 11-14, all brace marked * to complete on ground level. Joist hange rto complete at stair area, Level 2 brace marked * to complete, AR. Block 3, Unit 17-22, all brace marked * to complete on ground level. Joist hanger to complete at stair area, AR. 25/1/08 Block 2 needs joist hangers to stair lanidng joists. IMM; 8/2/08 IT walls block 2 appd AJC; 27/03/08 Waterproofing appd to wet areas (block 2) DJ;
	Wall Bracing:	Yes	25/01/08	12/11/07 Check straps and bolts at preline PC; 13/11/07 Check bolts to BL braces on ground floor PC; 25/1/08 Blocks 3 & 2 appd IMM;
	Roof/Ceiling Bracing:			
	Fire Wall Construction:	Yes	18/01/08	18/01/08 Unit 1, Block 1 IT walls 1st six approved, AR. Refer framing
	Wall/Ceiling Insulation:	Yes	14/02/08	8/1/08 Insulation appd to Block 4 PC; 10/01/08 Insulation app'd to block 1 PC 8/2/08 Block 2 except garage level & block 3 ceilings only appd AJC; 14/02/08 Walls to block 3 and garages to block 2 app'd MHH
	Plumbing:	Yes	05/06/08	8/1/08 S/S stacks to Building 2 appd PS1 to come for pressure test PC; 10/1/08 PS1 to come for pressure test Block 3. Stacks to block 3 also PC; 5/6/08 PS recd MHH
Lining		Yes	14/02/08	29/11/07 Substitution of BDB approved for Fire &Acoustic only NOT approved fro Bracing (BL) elements MHH 10/12/07 Further discussion re provide information re BPB substitution MHH 15/1/08 IT walls appd to Block 4 DJ; 25/1/08 Block 2, Units 6 7 6, IT wall sealant and brace walls excluding room under deck in Unit 7 IMM; 31/1/08 Gib nail appd to Units 8,9 & 10 also acoustic sealant to first layer of fureline to IT walls to 8,9 & 10 appd DJ; 14/02/08 - 1st layer to IT walls, bracing & sound seal Levels 1 & 2, Units 21 Wall R, Units 20, Wall P & Q, Unit 19 Wall Q, Unit 18 Wall N approved. Leve 1 & 2, Block 2 IT walls, 1st layer plus sound seal approved. Block1 & 4 Wet area floors of kitchen, bathroom & ensuite, PS required, MHH>
Cladding	Masonry Veneer:			
	Plaster:	Yes	15/01/08	28/11/07 Polybatten block 1 appd AJC; 8/1/08 Polybatten to block 3 appd PC; 15/1/08 Timber cavity battens appd to Block 3 DJ;
	Timber:			
	Linea/MPT	Yes	07/03/08	23/11/07 Building One. East elevation to start of balcony. North elevation from East to jutt out. Building Four. All elevations appd to balcony line and above balconies on South elevation. PC; 26/11/07 Cavity battens to balance of west & north elevation block 1 AJC;

			overland flow path MHH 10/1/08 Cavity batten appd Block 2 PC; 4/2/08 Polynail to Block 2 = 3 appd PC; 17/03/08 Site meeting with Reg & Architect re saddle flashings on balcony wing walls, Confirmed that saddle flashings were required and they need to be on the wet side of the cavity as the dry side has already been flashed off with 'Protecta Tape" MHH
Drainage	Yes	05/06/08	10/12/07 Site meeting with N Bowker re heights of ORGs Agreed that the min below floor level could reduce to 130 mm so as to achieve ground levels and
Final Air Cond./Mech. Vent:			
Lifts/Escalators:			
Egress :	Yes	5/6/08	
Fire Safety/Protection Systems:	Yes	05/06/08	PS4 & cert recd
Barriers:	Yes	05/06/08	Barriers to decks & pations as per plans appd.
Facilities for the Disabled:			N/A
Signs:	Yes	05/06/08	Sign for alarms okay
Final - Building:	Yes	05/06/08	8/2/08 Water proofing block 1 except 8 & 10 appd AJC; 01/04/08 Waterproofing block 3 kitchens appd AJC; 16/04/08 Meeting with Graeme Raymond and Renee re final requirements for sound testing ,advised PS required MHH 19/05/08 Prepared inspection with Debbie Raymond - Inspection of units 16, 20, 4 & 6. Revealed common problems that need to be addressed 1. Wastes from decks to be connected & design of pipes to be provided. 2. Seal floor wastes & tiles & sluces & benches to wall. 3. Check all deck partitions for minimum fall of capping. 4. Provide barriers & handrails to units 6 - 10. 6. Provide all documentation. 7. Provide 2 straps to all HWC. Call for reinspection MHH; 5/6/08 All docs recd as required. Refer transmital to MCC. All works completed & appd MHH
Final - Plumbing:	Yes	05/06/08	All fittings connected & working water temp 60 deg c
Seismic Straps Fitted:		05/06/08	
Tempering Valves Fitted:		05/06/08	
Final - Drainage:	Yes	05/06/08	All completed & appd. ORG's accept because of ground contours MHH
"As Built" Plan Received:		05/06/08	
Compliance Schedule Docs:	Yes	05/06/08	

Te Kaunihera o
MANUKAU
City Council

Correspondence:
Private Bag 76-917
Manukau City
New Zealand
Tel: (09) 262 8900
Fax: (09) 262 5119
DX 7181

FORM 6 – CODE COMPLIANCE CERTIFICATE

Application

The Building Consent

Building Consent Number 071556A1 Issued by Manukau City Council

Person making this application: Owner ☐ Agent ☐
Applicant to fill in appropriate sections below

The Owner

Name of Owner CONCEPTS 124 LTD

Mr ☐ Mrs ☐ Miss ☐ Ms ☐ or other _____ Contact Person _____

Mailing Address P O BOX 58395
GREENMOUNT MANUKAU

Street address / registered office 3/12 LAIDLAW WAY, FLATBUSH, MANUKAU

Home Phone _____ Mobile Phone _____ Daytime Phone 271-3007

A/H Phone _____ E-mail debbie@flatbushconstruction.co.nz

Website _____

The following evidence of ownership is attached to this application [please tick once attached]

Copy of certificate of title ☑ Lease ☐ Agreement for sale and purchase ☐
Other document showing full name of legal owner(s) of the building ☐

Please state what document is attached COPY OF TITLE

The Agent

Name of Agent FLATBUSH CONSTRUCTION LIMITED

Contact Name DEBBIE SHUTTLEWORTH

Mailing Address P O BOX 58395
GREENMOUNT, MANUKAU

Street address / registered office 3/12 LAIDLAW WAY, FLATBUSH, MANUKAU

Home Phone — Mobile Phone 027 2500160 Daytime Phone 271-3007 2738108

A/H Phone — E-mail debbie@ormistonprojects.co.nz

Website —

Relationship to owner Construction company

[state details of the authorisation from the owner to make the application on the owner's behalf]

First point of contact for communication with the council / building consent authority:

Full name COMPASS BUILDING CONSULTANTS MAURICE HINTON

Mailing Address P O BOX 23019, HUNTERS CORNER
PAPATOETOE, MANUKAU

Phone No 272 2269 Fax No 272 2270

E-mail maurice@bldgcert.co.nz

Te Kaunihera o
MANUKAU
City Council

All building work to be carried out under the above building consent was completed on:

Commercial

The following specified systems are contained on the Compliance Schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent.

☑ List specified systems - refer to Compliance Schedule Checklist overleaf (Tick if applicable)

FIRE ENGINEER | FIRE SAFETY | HVAC | GLAZING JOINERY
EMERGENCY LIGHTING

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

The **Code Compliance Certificate** should be sent to [state which address, and whether owner or agent]

CONCEPTS 124 LTD
PO BOX 58395
GREENMOUNT, MANUKAU

Signature

Signature of owner / agent on behalf of and with the authority of the owner [delete items not applicable]

Signed _____ Date 4 June 2008

Name of person signing D Shuttleworth

Attachments

The following documents are attached to this application:

Certificate from the personnel who carried out the work [complete form attatched] ..... ☐

Certificates that relate to the energy work ..... ☐

Evidence that specified systems are capable of performing to the performance standards set out in the Building Consent [Compliance Schedule only] ..... ☐

Te Kaunihera o
MANUKAU
City Council

Contractors List

Consent Number 071556A1

Projects Location 46 CARLOS DRIVE, FLATBUSH
22 APARTMENTS

Licensed Building Practitioner / Builder	Name FLATBUSH CONSTRUCTION LTD Address P O BOX 280024, FLATBUSH, MANUKAU Contact No. 273 8108 Registration No. —	Producer Statement Supplied Yes ☐ No ☐ N/A ☑
Plumber	Name AOK PLUMBING / ACTIVE PLUMBING Address P O BOX 5173, PAKURANGA Contact No. 021 2995887 Registration No. 17616	Producer Statement Supplied Yes ☑ No ☐ N/A ☐
Drain Layer	Name BOWKETT DRAINAGE Address P O BOX 58763, GREENMOUNT, MANUKAU Contact No. 0274 926 781 Registration No. 11351	Producer Statement Supplied Yes ☐ No ☐ N/A ☑
Site Supervisor	Name FLATBUSH CONSTRUCTION LTD Address P O BOX 280024, FLATBUSH, MANUKAU Contact No. 2738108 Registration No. —	Producer Statement Supplied Yes ☐ No ☐ N/A ☑
Tiler	Name 4 NOT TILING Address P O Box 10047, Dominion Road, Auckland. Contact No. 579 1925 Registration No.	Producer Statement Supplied Yes ☐ No ☑ N/A ☐
Exterior Cladding	Name CSS Construction Services & Solutions Address P.O. Box 259337, Greenmount Contact No. 2724558 Registration No.	Producer Statement Supplied Yes ☑ No ☐ N/A ☐

Te Kaunihera o
MANUKAU
City Council

Contractors List Continued

Installer	Name: Quality Builders Ltd Address: 158 Chichester Drive, Papakura Contact No. 2980788 Registration No.	Producer Statement Supplied Yes ☐ No ☑ N/A ☐
Roofer	Name: CLARKE ROOFING LTD Address: P O BOX 12042, PENROSE, AUCKLAND Contact No. 579 9483 Registration No. —	Producer Statement Supplied Yes ☐ No ☐ N/A ☐
Foundations / Slab	Name: FLATBUSH CONSTRUCTION LTD Address: P O BOX 280024, FLATBUSH, MANUKAU Contact No. 273 8108 Registration No. —	Producer Statement Supplied Yes ☐ No ☑ N/A ☐
Plasterer	Name: CSS EXTERIOR SYSTEMS LTD Address: P O Box 259337, Greenmount, Auckland. Contact No. 272 4558 Registration No.	Producer Statement Supplied Yes ☐ No ☐ N/A ☐
Block Layer	Name: Commercial Masonry Ltd Address: P O Box 58293 Greenmount Contact No. 5371954 Registration No.	Producer Statement Supplied Yes ☐ No ☑ N/A ☐
Bricklayer	Name: N/A Address: Contact No. Registration No.	Producer Statement Supplied Yes ☐ No ☐ N/A ☐

Commercial / Industrial

Fire Engineer	Name: FIRE DESIGN — PETER DUNKIN Address: P O Box 601 HAMILTON Contact No. 07 8550032 Registration No. —	Producer Statement Supplied Yes ☐ No ☐ N/A ☐

Te Kaunihera o
MANUKAU
City Council

Contractors List Continued

Fire Safety Precautions Installer	Name: ENTIRE FIRE PROTECTION Address: PO BOX 1214, SHORTLAND ST, AUCKLAND Contact No. 356 7100 Registration No. 696	Producer Statement Supplied Yes ☑ No ☐ N/A ☐
Airconditioning	Name: N/A Address: Contact No. Registration No.	Producer Statement Supplied Yes ☐ No ☐ N/A ☐
HVAC	Name: CLIMATECH Address: P O BOX 112068, PENROSE, AUCKLAND Contact No. 634-9601 Registration No.	Producer Statement Supplied Yes ☑ No ☐ N/A ☐
Passive Fire Protection	Name: ENTIRE FIRE PROTECTION Address: P O BOX 1214, SHORTLAND ST, AUCKLAND Contact No. 356 7100 Registration No. 696	Producer Statement Supplied Yes ☑ No ☐ N/A ☐
Glazing / Joinery	Name: CONTOUR ALUMINIUM LTD Address: P O BOX 51650 PAKURANGA Contact No. 634 1113 Registration No. —	Producer Statement Supplied Yes ☑ No ☐ N/A ☐
Emergency Lighting	Name: SOUTH PACIFIC ELECTRICAL (NZ) LTD Address: PO BOX 22321, OTAHUHU Contact No. 269 3384 Registration No. E242978	Producer Statement Supplied Yes ☑ No ☐ N/A ☐
Lifts	Name: N/A. Address: Contact No. Registration No.	Producer Statement Supplied Yes ☐ No ☐ N/A ☐

CODE COMPLIANCE CERTIFICATE

Section 95, Building Act 2004

Te Kaunihera o
MANUKAU
City Council

Correspondence:
Private Bag
76-917
Manukau City
New Zealand
Tel: (09) 263 7100
Fax: (09) 262 5154
DX 7181

THE BUILDING

Code compliance certificate (PIM): 071556A1, 071556

Street address of building: 46 CARLOS DRV FLAT BUSH 1730

Legal description of land: LOT 10 DP 352580

Building name:

Location of building:

Level / Unit no:

Current lawfully established use: 22 residential townhouses (4 blocks of 5 - 6 units)/Various amendments (see letter)

Year first constructed: 2007

Code compliance certificate issued date: 25/06/2008

THE OWNER

Name of owner: WORKING CONCEPTS LIMITED

Mailing address: C/- PO Box 58395
Greenmount

Street address/ Registered office:

Contact details: Daytime ph: 271 3007
Fax no: 271 4037
Website:

Mobile ph:
EMail:

FIRST POINT OF CONTACT FOR CODE COMPLIANCE CERTIFICATE

Full name: Compass Building Consultants Ltd

Mailing address: PO Box 23 019
Papatoetoe
Manukau City

Street address/ Registered office: Unit 23/ 2 Bishop Dunn Place
Botany South
Manukau City

Contact details: Daytime ph: 272 2269
Fax no: 272 2270
Website:

Mobile ph:
EMail:

Form 7 - Code Compliance Certificate

Te Kaunihera o
MANUKAU
City Council

BUILDING WORK

Building consent number: 071556A1, 071556

Issued by: Manukau City Council

CODE COMPLIANCE

The building consent authority named below is satisfied, on reasonable grounds that:

(a) The building work complies with the building consent, and

(b) The specified systems in the building are capable of performing to the performance standards set out in the building consent

Compliance schedule attached if applicable

Signature

MARK RANFURLY
Team Leader
Building Authority

Position

On behalf of Manukau City Council

Print Date: 25/06/2008

Form 7 - Code Compliance Certificate

ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2566115

No. of attachments

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning of the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09/2738108

Address of installation: 46 Carlos Drive, Flat Bush Contruction

Postal address of customer if not as above: P.O. Box 280024, Flat Bush.

WORK DETAILS

33	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes:			
23	No. of socket outlets	1	No. of water heaters	✓	Mains	✓	Main earthing system
Was any installation work carried out by the Consumer?			Yes ✓ No	✓	Switchboard	✓	Use of Tires

Description: New Installation

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

If necessary attach any pages with sketches of work done

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem. C. Singh
Registration no.	E242978
Company	United Electrical Service
Signature	[signature]
Date	11/4/08.
Contact Ph No.	027 2693989.

CERTIFICATION OF ELECTRIC LINES

To be completed where a Qualified Electrical Worker has installed the electric line portion of the [illegible]

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS [illegible]

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	[signature]	Registration no.	I1722
Signature	[signature]	Date	11-4-08
		Daytime Contact Ph No.	

CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED

This form is approved by the Electrical Workers Registration Board (PO Box 10-156, Wellington. Freephone 0800 66-1000) for the purposes of the Electricity Regulations 1997.

ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2566116

No. of attachments

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning of the repairing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09/2738108

Address of installation: 46 Carlos Drive,

Postal address of customer (if not as above): P.O. Box 280024, Flat Bush.

WORK DETAILS

- [ ] No. of lighting outlets
- [ ] No. of ranges
- [ ] No. of socket outlets
- [ ] No. of water heaters
- [ ] Was any installation work carried out in the immediate vicinity? [ ] Yes [ ] No

Please tick (✓) as appropriate where work includes:

- [✓] Mains
- [✓] Main bathing system
- [✓] Switchboard
- [✓] Electric lines

Description: New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination [✓]
- Earth Continuity [✓]
- Bonding [✓]
- Polarity [✓]
- Insulation Resistance _____ Mohm
- Other _____

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration no.	E242978
Company	United Electrical Service
Signature	[signature]
Date	11/4/08.
Contact Ph No.	027 2693989.

CERTIFICATION OF ELECTRIC LINES (to be completed where a separate electrical worker has installed the electric line portion of the mains)

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS (Electrical work requiring inspection by a registered electrical inspector)

- [✓] New mains
- [✓] Switchboard
- [✓] Earthing system
- [ ] Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of regulation 4 of the Electricity Regulations 1997.

Name	[signature]
Signature	[signature]
Registration no.	I1722
Date	11-4-08
Daytime Contact Ph No.	

CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED

This form is approved by the Electrical Workers Registration Board (PO Box 10-156, Wellington. Freephone 0800 66-1000) for the purposes of the Electricity Regulations 1997.

ELECTRICAL WORKERS REGISTRATION BOARD

Safety · Competency

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

No. 2566117

No. of attachments

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09/273 8108

Address of installation: 46 Carlos Drive, Flat Bush

Postal address of customer (if not as above): P.O. Box 280024, Flat Bush

WORK DETAILS

- [ ] No. of lighting outlets
- [ ] No. of ranges
- [ ] No. of socket outlets
- [ ] No. of water heaters
- [ ] Mains
- [ ] Main earthing system
- [ ] Switchboard
- [ ] Electric lines

Please tick (✓) as appropriate where work includes

Was any installation work carried out by the homeowner? [ ] Yes [ ] No

Description: New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

Certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS		CERTIFICATION OF ELECTRIC LINES (To be completed where a separate electrical worker has installed the electric line portion of the mains)	
Name	Prem. C. Singh	Name	
Registration no.	E242978	Registration no.	
Company	United Electrical Service	Company	
Signature	[signature]	Signature	
Date	11/04/08	Date	
Contact Ph No.	027 269 3989	Contact Ph No.	

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector

- [✓] New mains
- [✓] Switchboard
- [✓] Earthing system
- [ ] Installation work in hazardous areas

Certify that the inspection has been carried out in accordance with the requirements of regulation 17 of the Electricity Regulations 1997.

Name	[signature]	Registration no.	I1722
Signature	[signature]	Date	11-4-08
		Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety - Competency

No. 2566118

No. of attachments

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning of the replacing or repositioning of conductors (including fittings attached to those conductors).

To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09/2738708

Address of installation: 146 Carlos Drive, Flat Bush

Postal address of customer (if not above): P.O. Box 280024, Flat Bush

WORK DETAILS

- [ ] No. of lighting outlets
- [ ] No. of ranges
- [ ] No. of socket outlets
- [ ] No. of water heaters
- [ ] Mains
- [ ] Main earthing system
- [ ] Was any installation work carried out in the immediate [illegible]
- [ ] Yes
- [ ] No
- [ ] [illegible]
- [ ] [illegible]

Please tick (✓) as appropriate where work includes:

Description: New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration no.	E242978
Company	United Electrical Services
Signature	[signature]
Date	11/04/08
Contact Ph No.	027 2693989

CERTIFICATION OF ELECTRIC LINES

[illegible]

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS: electrical work requiring inspection or a registered electrical inspector

- [x] New mains
- [x] Switchboard
- [x] Earthing system
- [ ] Installation work in hazardous areas

[illegible]

Name	[signature]
Signature	[signature]
Registration no.	I1722
Date	11-4-08
Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety · Competency

No. 2566120

No. of attachments

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning of the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09/2738108

Address of installation: 46 Carlos Drive Flat Bush

Postal address of customer (if not as above): P.O. Box 280024, Flat Bush

WORK DETAILS

- [ ] No. of lighting outlets
- [ ] No. of ranges
- [ ] No. of socket outlets
- [ ] No. of water heaters
- [ ] Mains
- [ ] Main earthing system
- [ ] Was any installation work carried out by the homeowner? [ ] Yes [ ] No
- [ ] Switchboard
- [ ] Electric lines

Please tick ✓ as appropriate where work includes

Description: New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration no.	E242978
Company	United Electrical Services
Signature	[signature]
Date	11/04/08
Contact Ph No.	027 2693989

CERTIFICATION OF ELECTRIC LINES (for be completed where a separate electrical work is has installed the electric line section of the mains)

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS (Contact work requiring inspection by a registered electrical inspector)

- [✓] New mains
- [✓] Switchboard
- [✓] Earthing system
- [ ] Installation work in hazardous areas

[illegible]

Name	[signature]
Signature	[signature]
Registration no.	I1722
Date	11-4-08
Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

No. 2566110

No. of attachments

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 46 Carlos Drive, Flat Bush

Postal address of customer if not as above: P.O. Box 280024, Flat Bush

WORK DETAILS

33	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?		Yes	✓ No	✓ Switchboard	✓ Electric lines

Description: New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

CERTIFICATION OF ELECTRICIANS

Certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS		CERTIFICATION OF ELECTRICLINES (To be completed where a separate electrical worker has installed the electric line portion of the mains)	
Name	PREM C. SINSH	Name	
Registration no.	E242978	Registration no.	
Company	UNITED ELECTRICAL SERV.	Company	
Signature	[signature]	Signature	
Date	4/4/08	Date	
Contact Ph No.	027-2693989	Contact Ph No.	

INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

Certify that the inspection has been carried out in accordance with the requirements of regulation 61 of the Electricity Regulations 1997.

Name	Mike Ellis	Registration no.	I2664
Signature	[signature]	Date	4-4-08
		Daytime Contact Ph No.	0212423191

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety · Competency

No. 2566111

No. of attachments

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning of the repairing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

[illegible]

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 7/46 Carlos Drive, Flat Bush

Postal address of customer: P.O. Box 280024, Flat Bush

WORK DETAILS

33	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes	
13	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Has any installation work carried out by the homeowners		Yes	✓ No	✓ Switchboard	✓ Earth [illegible]

Description

New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ☑
- Earth Continuity ☑
- Bonding ☑
- Polarity ☑
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem C Singh
Registration no.	E 242978
Company	United Electrical Service
Signature	[signature]
Date	4/4/08
Contact Ph. No.	027-269 3989

CERTIFICATION OF ELECTRIC LINES

To be completed whereas a separate electrical worker has [illegible] the electric line portion of the mains.

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph. No.	

INSPECTION DETAILS [illegible]

✓ New Mains ✓ Switchboard ✓ Earthing System ☐ Installation work in hazardous areas

[illegible]

Name	Miro Ellis	Registration no.	I 2664
Signature	[signature]	Date	4-4-08
		Daytime Contact Ph. No.	0212423191

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety · Competency

No. 2566112

No. of attachments

[illegible]

To prescribed electrical work that is [illegible] installations and involves the placing or positioning of the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09/2738108

Address of installation: 8/46 Carlos Drive, Flat Bush.

Postal address of customer if not [illegible]: P.O. Box 280024, Flat Bush.

WORK DETAILS

23	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work included	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
[illegible]				✓ Switchboard	✓ Electric lines

Description: New Installation

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

If necessary attach any pages with sketches of work done

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration no.	E242978
Company	United Electrical Service
Signature	[signature]
Date	4/4/08
Contact Ph No.	027-2693989

CERTIFICATION OF ELECTRIC LINES

[illegible]

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS [illegible]

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	Miro Ellis	Registration no.	I2664
Signature	[signature]	Date	4-4-08
		Daytime Contact Ph No.	0212423191

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2566113

No. of attachments

[illegible] to prescribe electrical work that is carried out on electrical installations and involves the placing or positioning or the repasting or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 46 Carlos Drive,

Postal address of customer: P.O. Box 280024, Flat Bush.

WORK DETAILS

33	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work included	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?			Yes ✓ No	✓ Switchboard	✓ Electric lines

Description: New Installation

It is recommended that test results be recorded here:

- Visual Examination ☑
- Earth Continuity ☑
- Bonding ☑
- Polarity ☑
- Insulation Resistance _____ Mohm
- Other _____

If necessary attach any pages with sketches of work done

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem. C. Singh
Registration no.	E242978
Company	United Electrical Servic
Signature	[signature]
Date	4/4/08
Contact Ph. No.	027-2693989

REGISTRATION OF ELECTRIC LINES

[illegible]

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph. No.	

INSPECTION DETAILS [illegible]

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation wiring in hazardous areas

[illegible]

Name	Miro Ellis	Registration no.	IZ664
Signature	[signature]	Date	4-4-08
		Daytime Contact Ph. No.	0212423191

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2566114

No. of attachments

[illegible]

[illegible] electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION (PLEASE PRINT CLEARLY)

Name of customer: Flat Bush Construction

Phone: 9-2738108

Address of installation: 46 Carlos Drive, Flat Bush

Postal address of customer [illegible]: P.O. Box 280024, Flat Bush

WORK DETAILS

33	No. of lighting outlets	1	No. of ranges	Please tick ✓ as appropriate where work includes:	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work [illegible] by the homeowner?		Yes ✓ No		✓ Switchboard	✓ Electric lines

Description: New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem. C. Singh
Registration no.	E 242978
Company	United Electrical Service
Signature	[signature]
Date	4/4/08
Contact Ph. No.	027 2693989.

CERTIFICATION OF ELECTRIC LINES (To be completed where a separate electrical worker has installed the electric line portion of the mains)

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph. No.	

INSPECTION DETAILS [illegible]

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	Miro Ellis	Registration no.	I 2664
Signature	[signature]	Date	4-4-08
		Daytime Contact Ph. No.	0212423191

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

No. 2568006

No. of attachments

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 11/46 Carlos Drive, Flat Bush

Postal address of customer if not as above: P.O. Box 280024, Flat Bush

WORK DETAILS

23 No. of lighting outlets	1 No. of ranges	Please tick (✓) as appropriate where work includes:	
23 No. of socket outlets	1 No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?	Yes ✓ No	✓ Switchboard	✓ Electric lines

Description: New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

Certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS		CERTIFICATION OF ELECTRIC LINES (To be completed where a separate electrical worker has installed the electric line portion of the mains)	
Name	Prem. C. Singh	Name	
Registration no.	E242978	Registration no.	
Company	United Electrical Service	Company	
Signature	[signature]	Signature	
Date	18/4/08	Date	
Contact Ph No.	0272693989	Contact Ph No.	

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of regulation 15 of the Electricity Regulations 1997.

Name	[signature]	Registration no.	D264
Signature	[signature]	Date	15-4-08
		Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2568007

No. of attachments

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning of the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER DECLARATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 12/46 Carlos Drive, Flat Bush

Postal address of customer: P.O. Box 280024, Flat Bush

WORK DETAILS

23	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the [illegible]		Yes	✓ No	✓ Switchboard	✓ Electric lines

Description: New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ☑
- Earth Continuity ☑
- Bonding ☑
- Polarity ☑
- Insulation Resistance _____ Mohm
- Other _____

Certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS		CERTIFICATION OF ELECTRIC LINES (To be completed where a electrical contractor has installed the electric line portion of the mains)	
Name	Prem C. Singh	Name	
Registration No.	E242978	Registration No.	
Company	United Electrical Services	Company	
Signature	[signature]	Signature	
Date	18/4/08	Date	
Contact Ph No.	027-2693989	Contact Ph No.	

INSPECTION DETAILS: Electrical work requiring inspection by a registered electrical inspector

✓ New Mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

Certify that the inspection has been carried out in accordance with the requirements of regulation of the Electricity Regulations 1997.

Name	N Smith	Registration No.	D2264
Signature	[signature]	Date	18-04-08
		Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2568008

No. of attachments

[illegible]

for prescribed electrical work that is carried out on electrical installations are involved in placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 13/46 Carlos Drive, Flat Bush

Postal address of customer: P.O. Box 280024, Flat Bush

WORK DETAILS

23	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes:	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?		Yes	✓ No	✓ Switchboard	✓ Electric lines

Description: New Installation

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

If necessary attach any pages with sketches of work done

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration no.	E242978
Company	United Electrical Services
Signature	[signature]
Date	18/4/08
Contact Ph No.	027-2693989

CERTIFICATION OF ELECTRIC LINES

(To be completed where a separate electrical worker has installed the electric line section of the mains)

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS (Electrical work requiring inspection by a registered electrical inspector)

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	N Scott	Registration no.	D2764
Signature	[signature]	Date	18-4-08
		Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2568009

No. of attachments

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning of the replacing or repositioning of conductors (including fittings attached to these conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION (PLEASE PRINT CLEARLY)

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 14/46 Carlos Drive, Flat Bush.

Postal address of customer: P.O. Box 280024, Flat Bush

WORK OF FILE

33	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the consumer?			Yes ✓ No	✓ Switchboard	✓ Earth in lines

Description

New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem. C. Singh
Registration no.	E242978
Company	United Electrical Services
Signature	[signature]
Date	18/4/08.
Contact Ph No.	027-2693989

CERTIFICATION OF ELECTRIC LINES

[illegible]

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS [illegible]

✓ New Mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	N Subit	Registration no.	D2764
Signature	[signature]	Date	18-4-08
		Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2568010

No. of attachments

[illegible]

[illegible] electrical work that is carried out on electrical installations and involves the [illegible] or repositioning of conductors (including fittings attached to these conductors). To be completed whether or not an inspection is required.

[illegible]

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 15/46 Carlos Drive Flat Bush

Postal address of customer [illegible]: P.O. Box 280024, Flat Bush

WORK DETAILS

23	No. of lighting outlets	1	No. of ranges	Please tick ✓ as appropriate where work includes	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?			✓ No	✓ Switchboard	✓ Electric lines

Description

New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration no.	E242978
Company	United Electrical Services
Signature	[signature]
Date	18/4/08
Contact Ph. No.	027 2693989

CERTIFICATION OF ELECTRIC LINES

(To be completed where a separate electrical worker has installed the Electric line portion of the mains)

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph. No.	

INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector

✓ New Mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	[signature]	Registration no.	D264
Signature	[signature]	Date	18-4-08
		Daytime Contact Ph. No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2568011

No. of attachments

[illegible]

[illegible] electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

[illegible]

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 16/46 Carlos Drive, Flat Bush.

Postal address of customer (if not as above): P.O. Box 280024, Flat Bush.

WORK DETAILS

23	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes:	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?			Yes ✓ No	✓ Switchboard	✓ Electric lines

Description: New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem. C. Singh
Registration no.	E242978
Company	United Electrical Services
Signature	[signature]
Date	18/4/08
Contact Ph. No.	027-2693989

CERTIFICATION OF ELECTRIC LINES

[illegible]

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph. No.	

INSPECTION OF AIRS [illegible]

✓ New Mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	[signature]	Registration no.	T2264
Signature	[signature]	Date	18-04-08
		Daytime Contact Ph. No.	

CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED

This form is approved by the Electrical Workers Registration Board (PO Box 10-156, Wellington. Freephone 0800 66-1000) for the purposes of the Electricity Regulations 1997.

ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

No. 2568012

No. of attachments

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09-2738108.

Address of installation: 17/46 Carlos Drive, Flat Bush.

Postal address of customer (if not as above): P.O. Box 280024, Flat Bush.

WORK DETAILS

23	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?		Yes	✓ No	✓ Switchboard	✓ Electric lines

Description

New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

Certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS		CERTIFICATION OF ELECTRIC LINES (To be completed where a separate electrical worker has installed the electric line portion of the mains)	
Name	Prem. C. Singh	Name	
Registration no.	E242978	Registration no.	
Company	United Electrical Services	Company	
Signature	[signature]	Signature	
Date	18/4/08.	Date	
Contact Ph No.	027-2693989.	Contact Ph No.	

INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

Certify that the inspection has been carried out in accordance with the requirements of regulation 27 of the Electricity Regulations 1997.

Name	N Swift	Registration no.	I2764
Signature	[signature]	Date	22-4-08
		Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety · Competency

CERTIFICATE OF COMPLETION OF ELECTRICAL WORK

This prescribes electrical work carried out on electrical installations and includes the placing or replacing or the replacing or reconditioning of conductors including changes effected to those conductors. The completed certificate or test and inspection is required.

No. 2568013

No. of attachments

CUSTOMER INFORMATION – PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 18/46 Carlos Drive, Flat Bush.

Postal address of customer (if not at above): P.O. Box 280024, Flat Bush.

WORK DETAILS

23	No. of lighting outlets	1	No. of switches	Please tick (✓) as appropriate where work includes:	
23	No. of socket outlets	1	No. of water heaters	✓ Wiring	✓ Wiring/lighting system
Was any installation work carried out on this connection?			Yes ✓ No	✓ Switchboard	✓ Lighting fixtures

Description: New Installation

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

If necessary attach any pages with sketches of work done

I certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and the Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration No.	E242978
Company	
Signature	
Date	United Electrical Services 18/4/08
Contact Ph No.	027-269 3989

CERTIFICATE OF ELECTRIC LINES

To be completed where a certificate under section 5 of the Electricity Act 1992 is required.

Name	
Registration No.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector:

✓ New wiring ✓ Switchboard ✓ Lighting system ☐ Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of regulation 6 of the Electricity Regulations 1997.

Name	N Sudot
Registration No.	D2764
Signature	
Date	22-04-08
Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety · Competency

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

No. 2568014

No. of attachments

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 19/46 Carlos Drive, Flat Bush

Postal address of customer (if not as above): P.O. Box 280024 Flat Bush

WORK DETAILS

23	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes:	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by non-commonwealth			Yes ✓ No	✓ Switchboard	✓ Electric lines

Description: New Installation

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

If necessary attach any pages with sketches of work done

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration no.	E242978
Company	United Electrical Services
Signature	[signature]
Date	18/4/08
Contact Ph. No.	027-2693989

CERTIFICATION OF ELECTRIC LINES

(Complete this section where a separate electrical worker has carried out the electric line portion of the mains)

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph. No.	

INSPECTION DETAILS: Electrical work requiring inspection and registered electrical inspector

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	[signature]	Registration no.	D274
Signature	[signature]	Date	22-04-08
		Daytime Contact Ph. No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2568015

No. of attachments

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of Customer: Flat Bush Construction

Phone: 09-2738108

Address of Installation: 20/46 Carlos Drive Flat Bush

Postal address of Customer [illegible]: P.O. Box 280024, Flat Bush

Work details

23	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes:	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?			Yes ✓ No	✓ Switchboard	✓ Earth lines

Description

New Installation

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration no.	E242978
Company	United Electrical Services
Signature	[signature]
Date	18/4/08
Contact Ph No.	027 - 2693989

CERTIFICATION OF ELECTRIC LINES

[illegible]

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS [illegible]

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	N Smith	Registration no.	I2764
Signature	[signature]	Date	22-4-08
		Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2568016

No. of attachments:

[illegible]

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning of the repairing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 21/46 Carlos Drive, Flat Bush

Postal address of customer: P.O. Box 280024, Flat Bush

WORK OF ALL

33	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes:	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?		Yes ✓ No		✓ Switchboard	✓ Electric lines

Description: New Installation

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

If necessary attach any pages with sketches of work done

[illegible]

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration no.	E242978
Company	United Electrical Services
Signature	[signature]
Date	18/4/08
Contact Ph No.	027-2693989

CERTIFICATION OF ELECTRIC LINES

To be completed where a separate electrical worker has installed the electric line portion of the mains.

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION OF ALL electrical work requiring inspection or a registered electrical inspector

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

[illegible]

Name	NSmith	Registration no.	I 2764
Signature	[signature]	Date	22-4-08
		Cayl Mc Connell Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2568017

No. of attachments

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION (PLEASE PRINT CLEARLY)

Name of customer: Flat Bush Construction

Phone: 09-2738108

Address of installation: 22/46 Carlos Drive, Flat Bush

Postal address of customer if not as used: P.O. Box 280024, Flat Bush

WORK DETAILS

23	No. of lighting outlets	1	No. of ranges	Please tick (✓) as appropriate where work includes:	
23	No. of socket outlets	1	No. of water heaters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?			Yes ✓ No	✓ Switchboard	✓ Electric lines

Description: New Installation

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

If necessary attach any pages with sketches of work done

I certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and the Safety Regulations 1997.

ELECTRICAL WORKER DETAILS

Name	Prem C. Singh
Registration No.	E242978
Company	United Electrical Services
Signature	[signature]
Date	18/4/08
Contact Ph No.	027-2693989

CERTIFICATION OF ELECTRIC LINES
(To be completed where a separate electrical worker has installed the electric line portion of the mains)

Name	
Registration No.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector

✓ Safety New Mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of Regulation 17 of the Electricity Regulations 1997.

Name	[signature]	Registration No.	I2264
Signature	[signature]	Date	22-04-08
		Daytime Contact Ph No.	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

No. 2566107

No. of attachments

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors). To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: FLAT BUSH CONSTRUCTION

Phone: 09/2738108

Address of installation: 46 Carlos Drive, Flat Bush Construction

Postal address of customer (if not as above): 460 Boxs 280024, Flat Bush

WORK DETAILS

No. of lighting outlets	No. of ranges	Please tick (✓) as appropriate where work includes	
1 No. of socket outlets	No. of water meters	✓ Mains	✓ Main earthing system
Was any installation work carried out by the homeowner?	Yes ✓ No	✓ Switchboard	✓ Electric lines

Description: NEW INSTALLATION

Common Meter

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

CERTIFICATION

Certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS		CERTIFICATION OF ELECTRIC LINES (to be completed where a separate electrical worker has installed the electric lines portion of the mains)	
Name	Prem. G. Singh	Name	
Registration no.	E242978	Registration no.	
Company	UNITED ELEC. SERV. NZ Ltd	Company	
Signature	[signature]	Signature	
Date	16/4/08	Date	
Contact Ph. No.	027-2693989	Contact Ph. No.	

INSPECTION DETAILS (Electrical work including inspection by a registered electrical inspector)

✓ New mains ✓ Switchboard ✓ Earthing system ☐ Installation work in hazardous areas

Certify that the inspection has been carried out in accordance with the requirements of the Electricity Regulations 1997.

Name	Miro Ellis	Registration no.	I2664
Signature	[signature]	Date	17/4/08
		Daytime Contact Ph. No.	0212423191

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety · Competency

No. 2605402

FLAT BUSH CONSTRUCTION — 09-2738/08

46 CARLOS DRIVE

P.O. BOX 280024, FLAT BUSH

Description: Block 2

MAINS DISTRIBUTION BOARD
100 Amps MAIN
MAIN EARTH

MAIN EARTH BAR TO BE CHANGED TO STUD BAR.

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

Name: Prem C. Singh

Registration No.: E242978

Company: UNITED ELEC. SERV. NZLD

Signature: [signature]

Date: 22/4/08

Contact Phone No.: 027-2693889

Name: M ELLIS.

Registration No.: I2664

Date: 22-4-08

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety · Competency

No. 2605403

Flat Bush 09-2738408

46 Carlos Drive

P.O. Box 280024 Flat Bush

Description Block 3

Mains Distribution

100 Amps Main

Main Earth

Main Earth Bar to be Handed to

Sub Bar

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ✓
- Earth Continuity ✓
- Bonding ✓
- Polarity ✓
- Insulation Resistance _____ Mohm
- Other _____

Name	Prem C. Sinkh	Name	
Registration No.	E242978	Registration No.	
Company	United Elec. Serv. Ltd	Company	
Signature	[signature]	Signature	
Date	22/4/08	Date	
Contact Phone	087-2693989.	Contact Phone	

✓ Visual Examination ✓ Earth Continuity ✓ Bonding System

Name	N Smith	Registration No.	I2764
Signature	[signature]	Date	22-04-08
		Date Inspection Period	

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety - Competency

No. 2605404

Flat Bush

09 2738/08

46 CARLOS DRIVE

P. O. Box 280024, Flat Bush

Description Block 4

Main Distribution Box

100 Amps Main

Main Earth

Hawearth to be changed to Sub

Bar

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

Visual Examination ☐

Earth Continuity ☐

Bonding ☐

Polarity ☐

Insulation Resistance _____ Mohm

Other _____

Prem C. Singh

E242978

United Electrical Serv. Ltd

22/4/08

027-2693989

Nsubst

22-4-08

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PRODUCER STATEMENT

Issued By: **AOK Plumbing Ltd**

To: Flat Bush Construction Ltd

Re: **46 Carlos Drive, Flat Bush, Auckland**

I have tested the plumbing system installed for the building authorised by Building Consent No. **071556A1** as specified below –

Pressure testing of the hot and/or cold water supply to units 1 – 22, flood tested PVC to units 1 – 22, pressure test public water main in basement in accordance with the New Zealand Building Code G12/AS1 (NZS 7643) or (AS 3500 Part 1 and Part 4) and the system(s) passed the appropriate test.

Plumbing Work Carried Out By: Logant

Craftsman Registered Plumber: Alan Hurling

Registration Number: 17616

Address: PO Box 5173, Pakuranga

Phone: 021 299 5887

Signature: ..... Date: 02/05/08

PinkBatts PINKFIT®

PREFERRED PINK® BATTS® INSTALLERS

Home Insulation Installation Guarantee

for retrofit installations in existing homes

This is to certify that

this home has been insulated with Pink®Batts® insulation to the extent detailed below by a Tasman Insulation approved Pink®Batts® installer. Pink®Batts® when properly installed satisfies the requirements of the Australian/New Zealand Standard 4859.1 and the durability requirement of the New Zealand Building Code B2.3.1(a). The PinkFit® installer guarantees that the Pink®Batts® have been properly installed. This guarantee is transferable to any subsequent owners of the home.

Signed ..... Date 6/5/08

Pink® Batts® Installer .....

Registration Details:

Compliance Number: 29788

Builder Details:
Private
0

Site Details:
Private
46 Carlos Dr
Dannemora,

Date Printed: 06-May-2008
Install Date: 15-Feb-2008
Completion 15-Feb-2008

Product Details
Pink®Batts®Masonry R1.0
Pink®Batts®Wall R1.8

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Comfortable living with

Pink® Batts®

WARM·DRY·QUIET

Comfortable living begins with a comfortable home, and choosing products from the Pink® Batts® range is the first step. Other areas within your home to consider are:

Window ~ Open windows whenever possible, especially when using the kitchen, laundry and bathrooms, to allow the moisture to escape your home.

Curtains ~ Open curtains during sunny periods and close when the sun goes down.

Kitchen ~ Keep lids on pots and use an extractor fan or open windows when cooking to minimise condensation that can linger for hours.

Hot Water Cylinder Wrap ~ Install to keep your water hotter for longer whilst also helping to reduce your energy bill.

Remember your "home has to breathe..." therefore regularly ventilating your home will help avoid mouldy ceilings and walls, window condensation, musty smells and possible paint damage.

Pink®Batts® and PinkFit® are registered trademarks of Tasman Insulation New Zealand.

Pink® Batts®

WARM·DRY·QUIET

PinkBatts® ULTRA

ULTRA THICK - ULTRA WARM

PinkBatts® SILENCER®

PEACE AND QUIET THAT'S BUILT IN

PinkBatts® COSY FLOOR

PinkBatts® HOT WATER CYLINDER WRAP

PinkBatts® PINKFIT

PREFERRED PINK® BATTS® INSTALLERS

PinkBatts PINKFIT®

PREFERRED PINK® BATTS® INSTALLERS

Home Insulation Installation Guarantee

for retrofit installations in existing homes

This is to certify that

this home has been insulated with Pink®Batts® insulation to the extent detailed below by a Tasman Insulation approved Pink®Batts® installer. Pink®Batts® when properly installed satisfies the requirements of the Australian/New Zealand Standard 4859.1 and the durability requirement of the New Zealand Building Code B2.3.1(a). The PinkFit® installer guarantees that the Pink®Batts® have been properly installed. This guarantee is transferable to any subsequent owners of the home.

Signed..... Date 6/5/08

Pink® Batts® Installer .....

Registration Details:

Compliance Number: 29787

Builder Details:
Private
0

Site Details:
Private
46 Carlos Dr
Flat Bush,

Date Printed: 06-May-2008
Install Date: 15-Feb-2008
Completion 15-Feb-2008

Product Details
Pink®Batts®Ceiling R2.2

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Comfortable living with

Pink® Batts®

WARM·DRY·QUIET

Comfortable living begins with a comfortable home, and choosing products from the Pink® Batts® range is the first step. Other areas within your home to consider are:

Window ~ Open windows whenever possible, especially when using the kitchen, laundry and bathrooms, to allow the moisture to escape your home.

Curtains ~ Open curtains during sunny periods and close when the sun goes down.

Kitchen ~ Keep lids on pots and use an extractor fan or open windows when cooking to minimise condensation that can linger for hours.

Hot Water Cylinder Wrap ~ Install to keep your water hotter for longer whilst also helping to reduce your energy bill.

Remember your "home has to breathe..." therefore regularly ventilating your home will help avoid mouldy ceilings and walls, window condensation, musty smells and possible paint damage.

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Pink® Batts®

WARM·DRY·QUIET

PinkBatts® ULTRA

ULTRA THICK · ULTRA WARM

PinkBatts® SILENCER®

PEACE AND QUIET THAT'S BUILT IN

PinkBatts® COSY FLOOR

PinkBatts® HOTWATER CYLINDER WRAP

PinkBatts® PINKFIT®

PinkBatts PINKFIT®

PREFERRED PINK® BATTS® INSTALLERS

Home Insulation Installation Guarantee

for retrofit installations in existing homes

This is to certify that

this home has been insulated with Pink®Batts® insulation to the extent detailed below by a Tasman Insulation approved Pink®Batts® installer. Pink®Batts® when properly installed satisfies the requirements of the Australian/New Zealand Standard 4859.1 and the durability requirement of the New Zealand Building Code B2.3.1(a). The PinkFit® installer guarantees that the Pink®Batts® have been properly installed. This guarantee is transferable to any subsequent owners of the home.

Signed..... Date 6/5/08

Pink® Batts® Installer .....

Registration Details:

Compliance Number: 29599

Builder Details:
Private
0

Site Details:
Private
46 Carlos Dr
Dannemora,

Date Printed: 06-May-2008
Install Date: 04-Feb-2008
Completion 07-Feb-2008

Product Details
Pink®Batts®Ceiling R2.2

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Comfortable living with

WARM·DRY·QUIET

Comfortable living begins with a comfortable home, and choosing products from the Pink® Batts® range is the first step. Other areas within your home to consider are:

Window ~ Open windows whenever possible, especially when using the kitchen, laundry and bathrooms, to allow the moisture to escape your home.

Curtains ~ Open curtains during sunny periods and close when the sun goes down.

Kitchen ~ Keep lids on pots and use an extractor fan or open windows when cooking to minimise condensation that can linger for hours.

Hot Water Cylinder Wrap ~ Install to keep your water hotter for longer whilst also helping to reduce your energy bill.

Remember your "home has to breathe..." therefore regularly ventilating your home will help avoid mouldy ceilings and walls, window condensation, musty smells and possible paint damage.

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WARM·DRY·QUIET

ULTRA THICK · ULTRA WARM

PEACE AND QUIET THAT'S BUILT IN

PinkBatts
PINKFIT®

PREFERRED PINK® BATTS® INSTALLERS

Home Insulation Installation Guarantee

for retrofit installations in existing homes

This is to certify that

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Signed..... Date 6/5/08.....

Pink® Batts® Installer .....

Registration Details:

Compliance Number: 29602

Builder Details:
Private
0

Site Details:
Private
46 Carlos Dr
Dannemora,

Date Printed: 06-May-2008
Install Date: 07-Feb-2008
Completion 09-Feb-2008

Product Details
Pink®Batts®Ceiling R2.2
Pink®Batts®Masonry R1.0
Pink®Batts®Wall R1.8

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Comfortable living with

WARM·DRY·QUIET

Comfortable living begins with a comfortable home, and choosing products from the Pink® Batts® range is the first step. Other areas within your home to consider are:

Window ~ Open windows whenever possible, especially when using the kitchen, laundry and bathrooms, to allow the moisture to escape your home.

Curtains ~ Open curtains during sunny periods and close when the sun goes down.

Kitchen ~ Keep lids on pots and use an extractor fan or open windows when cooking to minimise condensation that can linger for hours.

Hot Water Cylinder Wrap ~ Install to keep your water hotter for longer whilst also helping to reduce your energy bill.

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PinkBatts PINKFIT®

PREFERRED PINK® BATTS® INSTALLERS

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for retrofit installations in existing homes

This is to certify that

this home has been insulated with Pink®Batts® insulation to the extent detailed below by a Tasman Insulation approved Pink®Batts® installer. Pink®Batts® when properly installed satisfies the requirements of the Australian/New Zealand Standard 4859.1 and the durability requirement of the New Zealand Building Code B2.3.1(a). The PinkFit® installer guarantees that the Pink®Batts® have been properly installed. This guarantee is transferable to any subsequent owners of the home.

Signed..... Date 6/5/08

Pink® Batts® Installer .....

Registration Details:

Compliance Number: 29786

Builder Details:
Private

Site Details:
Private
0 46 Carlos Dr
Flat Bush,

Date Printed: 06-May-2008
Install Date: 15-Feb-2008
Completion 15-Feb-2008

Product Details
Pink®Batts® Wall R1.8

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Signed..... Date 6/5/08

Pink® Batts® Installer .....

Registration Details:

Compliance Number: 28860

Builder Details:
Private

Site Details:
Private
0 46 Carlos Dr
Dannemora, Blocks4&1

Date Printed: 06-May-2008
Install Date: 24-Dec-2007
Completion 11-Jan-2007

Product Details
Pink®Batts®Ceiling R2.2
Pink®Batts®Masonry R1.0
Pink®Batts®Wall R1.8

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Pink Batts SILENCER

PEACE AND QUIET THAT'S BUILT-IN

Pink Batts COSY FLOOR

Pink Batts HOTWATER CYLINDER WRAP

Pink Batts PINKFIT

Pink®Batts® and PinkFit® are registered trademarks of Tasman Insulation New Zealand.

Élite
Contour Aluminium Ltd

331 Neilson Street,
Onehunga, Auckland.
PO Box 51 650,
Pakuranga, Auckland.

☎ 09 634 1113
09 634 1114
info@contourali.co.nz

PRODUCER STATEMENT – CONSTRUCTION (PS 3)

RECEIVED
17 APR 2008
BY:

Building Consent No:

Issued by: **Contour Aluminium Ltd**

To: Flatbush Construction Limited

In respect of Building Consent Application Number:

Granted to:

In Relation to (Description of Building Work): **New Aluminium Joinery**

At: 46 Carlos Drive, East Tamaki, Auckland

Lot: **DP:** **SO:**

We, Contour Aluminium, have been engaged by Flatbush Construction Limited

(Cross out non relevant manufacturing sections below)

To Manufacture			To Manufacture and Install			To Manufacture and Part Install	
ALL	PART ONLY		ALL	PART ONLY		ALL	PART ONLY

Am satisfied on reasonable grounds that the building work specified above has been completed to the extent required by New Zealand Building Code – NZS 4211: 1958 Specification for Performance of Windows NZS 4223 (Part 3) Glazing and NZS 3504: 1997 Specification for Windows.
I understand that if this ProducerStatement is accepted, it will be relied upon by (City/Disrtict Council) .....for the purpose of establishing compliance with the Building Code.

Constructor: Contour Aluminium Limited **Date: 14th April 2008**

Address: 331 Neilson Street, Onehunga, Auckland

Phone: (09) 634 1113 **Fax: (09) 634 1114**

Signed: .....

Elite
Contour Aluminium Ltd

331 Neilson Street,
Onehunga, Auckland.
PO Box 51 650,
Pakuranga, Auckland.

☎ 09 634 1113
09 634 1114
info@contourali.co.nz

PRODUCER STATEMENT – Glass and Glazing

To: Flatbush Construction Ltd

In respect of: Aluminium Joinery

At: 46 Carlos Drive, East Tamaki, Auckland

LOT No.	**Consent No.**

To supply glass and glaze in accordance with the drawings and specifications:

PREPARED BY (Design Firm)
SPECIFICATION
DRAWING NUMBERS
VARIATIONS NOTES

The glass and glazing in the above project has been supplied and installed in accordance with the following:

A. STANDARDS

NZS 4223:	**Code of Practice for Glazing in Buildings.**
Part 1:1985	**The Selection and Installation of Glass in Buildings.**
Part 3:1993	**Human Impact Safety Requirements.**
Part 3:1999	**Human Impact Safety Requirements.**
Part 4:2000	**Dead, Wind Loading**
AS/NZS 4667:2000	**Quality requirements for cut-to-size and processed glass**
AS/NZS 4668:2000	**Glossary of terms used in the glass & glazing industry**

NZBC Clause B2 **DURABILITY (July 1992)**

Glass when installed and maintained in accordance with the manufacturers instructions will satisfy the durability performance requirements of Clause B2.3© for a minimum serviceability life of 15 years.

Ordinary annealed monolithic glass has a service history in excess of 50 years when regularly maintained with standard cleaning procedures.

Metal fittings used in toughened glass systems will also satisfy 15 years durability performance requirements as long as they are maintained in accordance with the manufacturers instructions and this may include routine maintenance checks.

NZBC Clause G7 **NATURAL LIGHT (July 1992)**

Clear glass used in accordance with Acceptable Solution G7/AS1 Clause 1.0 & 2.0 will meet the performance requirements of G7.3.1 & 3.2

COMPANY	***Contour Aluminium Limited***
NAME	**Ian Duncan**
DATE	**14th April 2008**
SIGNATURE	pp. S. Sargent.

GEOTEK SERVICES LIMITED

PAPAKURA BRANCH: 37 Elliott Street, PO Box 272-1217, Papakura, Manukau 2244, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

HEAD OFFICE: Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Manukau 2145, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

Ref: 2704

PRODUCER STATEMENT - CONSTRUCTION REVIEW

ISSUED BY:	Geotek Services Limited
TO:	Carlos Concepts Ltd
TO BE SUPPLIED TO:	Manukau City Council
IN RESPECT OF:	Building development
AT:	46 Carlos Drive, Flat Bush
BUILDING CONSENT No:	071556

This is to certify that we have been engaged by Carlos Concepts Ltd to provide construction monitoring services as required by the Territorial Authority for specific sections of construction at the above site, in accordance with the relevant sections of the Building Regulations 1992, as follows:-

(a) Inspection of the footings and subgrade excavations, on the basis of which we confirm that the ground conditions exposed were in keeping with expectations from our investigation reports numbered 2704, dated 2 August 2005 and 23 May 2007.

(b) Inspection of piled foundations for compliance with the recommendations of our above report and Airey Consultants Ltd pile set calculations as supplied to us. In this regard, we have observed the driving of a selected number of timber piles representing all different areas of the site, while the sets and pile lengths for all the piles were recorded and provided to us by the piling contractor to our satisfaction.

We further advise that

(i) We have sighted Building Consent number 071556 and attached conditions.

(ii) we are independent design professionals covered by a current policy of Professional Indemnity Insurance to a value of $1,000,000, and that

(iii) I or staff under my control, have carried out periodic reviews of the work appropriate to the engagement, and based upon these reviews during the course of the works I **believe on reasonable grounds** that the above work has been carried out as required by Approved Document B1 "Structure" of the Building Regulations.

(iv) Our certification herein covers only the work mentioned in (a)-(b) above, all other work is excluded.

Signature SJWoodward Date 7 February 2008

S.J. Woodward
Professional Qualifications M.E., MIPENZ(Geotechnical), CPEng, IntPE.
Prepared by: PJ

GEOTEK SERVICES LIMITED

PAPAKURA BRANCH: 37 Elliott Street, PO Box 272-1217, Papakura, Manukau 2244, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

HEAD OFFICE: Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Manukau 2145, Auckland
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Ref: 2704

PRODUCER STATEMENT - CONSTRUCTION REVIEW

ISSUED BY:	Geotek Services Limited
TO:	Carlos Concepts Ltd
TO BE SUPPLIED TO:	Manukau City Council
IN RESPECT OF:	Building development
AT:	46 Carlos Drive, Flat Bush
BUILDING CONSENT No:	071556

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GEOTECHNICAL INVESTIGATION/ EARTHWORKS COMPLETION REPORT

ON

LOT 10

AT

124 STANCOMBE ROAD,
FLAT BUSH

FOR

CARLOS CONCEPTS LIMITED

Ref No. 2704

August 2, 2005

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Appendices

- Pre-Earthworks Borehole Location and Specific Design Zones Plan-GSL Drawing No. 1 of 3
- Pre-Earthworks Borehole Records (18 sheets)
- As Built Final Contours and Isopachs- Airey Consultants Ltd, drawing no. A9861/5, dated 4/7/05
- Earthworks Test Locations and RL's - GSL Drawing No. 2 of 3
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- Diary Notes
- Post-Earthworks topsoil depths and shrink-swell sample location plan- GSL Drawing No.3 of 3
- Shrink Swell Test Results (3 sheets)

Introduction

This report covers both the geotechnical investigation and the earthworks construction monitoring carried out on the above property for Carlos Concepts Limited, in accordance with the appended Airey Consultants Limited 'As-Built' Contour Plan, numbered A9861/5, dated 04 July 2005.

Presented herein, are the results of our observations, geological appraisal, hand auger borehole investigation, including insitu testing, together with general comments, conclusions and recommendations pertaining to the satisfactory development of the land in accordance with accepted quality standards.

This report has been commissioned for the benefit of our client, Carlos Concepts Limited specifically in relation to the project and to the limit of our brief, as described herein. No liability is accepted by this firm or any of its directors, servants or agents, in respect of any other geotechnical aspects of this site, nor for its use by any other person, and any other person who relies upon any information contained herein does so entirely at their own risk, with the exception that the local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent. Where other parties may wish to rely on it, this permission may be extended, subject to our satisfactory review of their interpretation of the report. Moreover, any variations from the development proposals forming the basis of this appraisal should be referred back to us for further evaluation.

Although this report may be submitted to a local authority in connection with an application for a consent, permission, approval, or pursuant to any other requirement of law, this disclaimer shall still apply and require all other parties to use due diligence where necessary, and does not remove the necessity for the normal inspection of site conditions and the design of foundations as would be made under all normal circumstances.

Geology

Reference to the New Zealand Geological Survey, Geological Map Of New Zealand, 1:50000, sheet R11, indicates that the subject site is typical of a significant part of the Auckland Metropolitan area, in that it contains strata of the Puketoka Formation, which are a part of the Tauranga Group sedimentary lithology (Late Pliocene to Late Pleistocene age). Unconformably underlying these are weathered materials derived from strata of the East Coast Bays Formation (also known as Waitemata Formation), which are a part of the Waitemata Group sedimentary lithology (Miocene Epoch).

According to Searle, "City of Volcanoes", in those earlier times, the seas encroached upon the central Auckland area, and thick beds of sedimentary rocks were laid down in alternating sandstone, siltstone and mudstone sequences according to the prevailing eddies and currents at the time and place.

Over the centuries following the retreat of the seas, the normally dark-grey bedrock has weathered in most locations, to produce an overburden made up of clays, silts and sands, being predominantly orange brown in colour at the ground surface, and generally becoming more grey and more coarse grained with increasing depth and less transition from the bedrock. Interspersed within these weathering products, it is not unusual to find bands of hard dark-brown iron oxide (limonitic) concentrations.

Fluctuating sea levels which occurred throughout the Pleistocene period, eventually flooded valleys to form the Waitemata and Manukau Harbours, and it is likely that during these fluctuations, the upper Residual Waitemata Group Soils were partially eroded away, and these, together with pumiceous deposits from the Taupo district, began to fill the subsiding lowlands of Manukau Harbour and Hauraki Gulf. As a result, the lowlands were covered by swamps, volcanic derived alluvium, and coastal deposits (Tauranga Group).

These sediments were deposited in predominantly fluvial and lacustrine settings, but some older deposits were formed in estuarine and shallow conditions. As a result, they can often contain layers and/or lenses of quite peaty materials within the predominantly silty and clayey, but sometimes organic alluvium.

Previous Reports

A Desktop Study was prepared in July 2003 by Geotek Services Limited (GSL) reference number 2532, dated 30 June 2004, as a first pass appraisal of the suitability of the overall general area including the subject land, for residential development generally in terms of NZS 3604 type buildings. The study comprised a review of local geology and inspection of other geotechnical investigation reports conducted on nearby sites.

The conclusions and recommendations of that report were as follows:

> *"On the basis of our observations, research and local knowledge as described herein, we are of the opinion that the subject site is generally suitable for the proposed development, however the following discussion should be noted.*
>
> *The relatively flat topography of the site with respect to the adjacent land, coupled with the two small gullies requiring filling, suggests that to completely fill these gullies with locally cut materials would produce a shallowly south-southwest-sloping subdivision.*

However, given that soft horizons may be present at depths of several metres or more in possible areas of cut, and that it is preferable to maximise the depth of suitable materials over these deposits, a cut/fill budget deficit may occur if designing to completely fill all gullies.

It is our recommendation that an extensive field investigation be carried out prior to finalising any proposed project designs, and the commencement of development works. The aim of this investigation would be to establish a more detailed assessment of the nature of the materials present, and the extent of possible unsuitables across the site, allowing a more accurate quantification of locally available filling.

All subsequent earthworks should be subject to the appropriate standards and tests as specified by the Manukau City Council, under the control of a Chartered Professional Engineer experienced in geotechnical engineering practices, with a Geotechnical Completion Report being prepared at the completion of those works.

Subject to as-built contours, acceptable test results and existing/final ground conditions, we expect the completed development to be suitable for the construction of NZS 3604 type buildings.

This opinion does not, however, remove the necessity for the inspection of site conditions and design of foundations that should be made under all normal circumstances.

The Professional Opinion expressed within this report is furnished to the Stancombe Concepts Limited for their purposes alone, on the express condition that it will not be relied upon by any other person, with the exception that the Local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent."

The site subject to this report was originally part of a large 8100m^2 property (DP78859), identified as number 124 (Lot 3), along the northern side of Stancombe Road in Flat Bush. The site has since been subdivided into two, (Lots 9 and 10) by a proposed through road, Carlos Drive, separating them into northern and southern lots. The southern, lot 9 was the subject of a recent Geotechnical Investigation Report undertaken by GSL (dated 17 November 2004, ref 2635) for a proposed multi-storey dwelling, which report identified some weak underlying natural materials that would be exposed by the proposed basement level of the development. With this in mind, we have tried to target such potentially problematic materials in our investigation, as discussed below.

Site Description Ante-Earthworks

Prior to the recent earthworks, the subject site's main topographical feature was a relatively deep and steep sided gully trending from the northeast to the southwest, around 100 metres in length. The gully head in the northeast corner of the site, was a shallow bowl-like depression, which steepened to the southwest with its invert around 3 metres below the crest of its flanks. The gully broadened out near the southwestern corner and crossed into the adjacent property. The gully flows were channelled below the neighbour's driveway through a small culvert before again continuing southwest as open channel flows. The ground either side of the gully, to the northwest and southeast, was gently sloping towards the invert. The earthworks proposal was to fill the gully and create a near level site.

Site Classification

Seasonal moisture variations and associated swelling and shrinking of the soil mass is a characteristic of the type of surface clay soils believed to exist in the area under consideration and hence, such movement could occur. Even well constructed houses on clay soils are likely to show minor cracking of plaster walls and ceilings, and in masonry. In extreme cases, distortion of building frames may cause doors and windows to jam, but, these effects usually only occur after a long dry summer, and commonly under the extra drying influences of nearby trees. Without considerable expenditure on the part of the individual responsible for building or financing any particular residential construction, it is generally not possible to entirely eliminate such troubles. In the past, the code for residential dwellings, NZS3604, has attempted to make provision for any such influences to be minimised by requiring a minimum foundation depth of 450 millimetres below final cleared ground level, although some shrinking and swelling of the soil under seasonal influences would probably continue to occur and may affect such residential construction.

The current issue of NZS3604:1999, recognises that while expansive clay soils can damage buildings on light strip footings or unstiffened rafts, that not all clays are expansive to the degree which will cause damage to buildings. Although 3604 also nominates liquid limit and linear shrinkage testing as a means of detecting the presence of reactive (expansive) clays, it acknowledges that reactive clays cannot be clearly evaluated by these engineering index properties on their own, which we surmise, may be due to the effects of certain types of clay minerals which may contain high quantities of adsorbed water. Therefore, NZS3604 nominates the Australian code, AS2870:1996, as a guide, whereby section 2 can be adopted for classifying the soils into class A, S, M, H or E, following which, the standard details of section 3, or the engineering principles according to section 4, can be used for foundation design.

The relevant sections of AS2870 are discussed in the Appendix hereto, and in light of the various options available, the basis for our site classification is provided later in this report.

Site Investigation

Our site investigation fieldwork involved the drilling of twelve, 50 millimetre diameter hand auger boreholes to depths of up to 5.2 metres, at the positions indicated on the attached site plan.

The purpose of the fieldwork has been twofold. Firstly, boreholes were drilled along the stripped invert of the gully to check the nature and consistency of the natural soils before filling could take place and to determine if any further undercutting might be needed. Secondly, boreholes have been drilled at the crest of the gully flanks and the adjacent level ground to check the nature and consistency of the natural soils.

As each borehole progressed, careful inspections were made of the materials observed, and soil shear strength and remould tests were performed insitu, at selected depths, using a hand-held shear vane. The materials identified are described in detail on the appended records, together with the results of the various tests undertaken, plus the groundwater conditions as determined during our time on site.

In addition, two cross sections were measured across the flanks and invert of the gully using a tape and electronic level.

Findings

Boreholes along the gully invert

Boreholes 1, 2, 3 and 4 were drilled along the gully invert. Borehole 1 was drilled outside of the property boundary to the southwest. Apart from a soft surficial crust, predominantly stiff sandy silts were encountered throughout the borehole. Boreholes 2 and 3 were drilled in the southwestern corner and near the centre respectively, and both encountered highly variable deposits consisting of clays, silts and sands with intermixed peat and organics. The material strengths were mostly marginally firm with some layers being softer or firmer. Borehole 4 encountered soft materials down to 1.5 metres depth, overlying very stiff uniform silts.

The groundwater was measured at depths of between 0.4 to 1.1 metres below the surface in all four boreholes.

Boreholes above and along the flanks of the gully - cut areas

Boreholes 5, 6, 11, 12 and 13 were drilled on the northwestern side of the gully, while boreholes 7, 8, 9 and 10 were located to the southeast. Generally, a firm to stiff crust was encountered extending to at least 1.2 metres depth below the surface in all boreholes. Below this crust, the materials became weaker and wetter with some layers becoming soft to marginally firm (22 to 50 kPa undrained shear strength). In all except boreholes 9 and 10, dense sandy materials were encountered near the end of the boreholes. The tables below summarise these findings of cut area boreholes:

Boreholes on the northwestern side of the gully:

Borehole No.	5	6	11	12	13
Ground RL	43.0	42.0	44.0	45.0	44.0
Firm to Stiff Crust	0.0 to 2.5m	0.0 to 2.5m	0.0 to 3.0m	0.0 to 2.9m	0.0 to 1.6m
Interbedded Soft Layer	2.5 to 3.3m	-	-	2.9 to 3.9m	1.6 to 2.3m
Dense Basement Layer	3.7m+	3.1m+	3.0m+	3.9m+	2.7m+

Boreholes on the southeastern side of the gully:

Borehole No.	7	8	9	10
Ground RL	43.5	41.5	44.0	43.5
Firm to Stiff Crust	0.0 to 1.6m	0.0 to 1.6m	0.0 to 1.5m	0.0 to 2.0m
Interbedded Soft Layer	1.6 to 3.3m	1.6 to 3.6m	1.5 to 5.0m	2.9 to 2.9m
Dense Basement Layer	3.3m+	3.6m+	-	-

Earthworks Operations

General earthworks construction over the site was carried out in accordance with part 2 of NZS4404:2004, "Code of Practice for Urban Land Subdivision" and its companion document, NZS4431:1989, "Code of Practice for Earth Fill for Residential Development."

Topsoil and unsuitables were stripped and initially stockpiled for later removal from the site. Where further unsuitable and/or weak materials were identified in the gully invert and along its flanks, they were undercut until suitable materials were exposed or, where their depth below the proposed finished fill was deemed to be greater than 3 metres, so as to be beyond the influence depth of shallow foundations, they were left in place.

Once the gully and its flanks had been cleaned as directed, a pad of hardfill consisting of run-of-pit rock, was placed along its invert up to a level that was slightly higher than its lowest outlet level, where a manhole had been placed adjacent to the existing culvert beneath the neighbour's driveway. Once this pad had been tamped down, a 160mm dia. perforated novacoil was laid along the invert and covered with SAP 50 scoria. Where seepages were encountered, they were tapped in a similar fashion and the area covered with scoria blanket.

The earthfill was then progressively placed and compacted under engineering monitoring, to the design subgrade levels, using material cut from the gully flanks and neighbouring site to the east.

Earthworks Specification and Control

General earthworks procedures and compaction testing were carried out in accordance with NZS4404:2004, part 2 and NZS4431:1989, where appropriate.

In order to provide the most flexibility for variations in soil types, the earthworks compaction criteria used for control were the maximum allowable air voids/minimum allowable shear strength figures, as follows:-

Air Voids and Shear Vane (for cohesive soils only)

	Air Voids Percentage (as defined in NZS 4402:1986)		Undrained Shear Strength (Measured insitu by IANZ calibrated vane)	
	Maximum Average Value %	Maximum Single Value %	Minimum Average Value kPa	Minimum Single Value kPa
General Fill	10	12	140	110
Within 500 mm of carriageway subgrade	8	10	150	120

Note: The average value was to be determined over any ten consecutive tests.

During the filling operations, Civil Lab Limited staff carried out Nuclear Densometer Testing of Field Dry Density to NZS 4407:1991; Test 4.2.1, and Field Water Content in accordance with NZS 4402:1986; Test 2.1, together with Vane Shear Strength Tests using a method based on NZGS2001.

Some tests failed to meet the required criteria, in which case the fill was reworked and retested until satisfactory results were obtained.

The final test results are summarised in the appendices, together with a copy of the cut/fill as-built plan, showing test locations, and the inspection diary notes.

Conclusions and Recommendations

On the basis of our borehole investigation, inspections, observations, earthworks monitoring, laboratory and insitu testing as described herein, it is our Professional Opinion, that the subject site, lot 10, 124 Stancombe Road, Flatbush, is generally suitable in terms of section 106 of the Resource Management Act, and Section 2.B.4.8 of the Manukau City Council's Engineering Quality Standards, for the development of conventional residential dwellings, constructed in accordance with the relevant portions of NZS3604:1999, subject to the following overall general recommendations, and provided that building in any of the identified zones on the appended plan (whether "non-specific design", "specific design", or "not for construction") should be subject to the specific requirements of that zone as given below:

A) General Requirements:

(a) There were stockpiles of topsoil and other unsuitable materials still lying near the northern boundary of the site, at the time of preparation of this report. We anticipate that these will be moved before or during building development.

(b) As discussed in the foregoing section on site classification, there are a number of ways of classifying the site soils. In this instance, we have adopted the AS2870 third method, using laboratory tests for soil reactivity and a knowledge of the soil profile. On this basis, foundation soils on this site are considered unlikely to lie outside the definition of 'good ground' as given in NZS3604:1999. We consider that they would lie in Site Class S (slightly expansive) as defined in AS2870:1996, with expected characteristic surface ground movements in the order of 0 to 20 mm, which movement is still within the allowable bounds of 'good ground'. However, this movement is closer to the upper limit of Class S range, therefore, as a precaution, care should be taken to mitigate against the potential seasonal shrinkage and swelling effects of expansive foundation soils on both superstructures and concrete slab-on-grade floors, as follows.

For the design of all foundations, these should extend to a minimum depth of 0.3 metres below the final cleared ground level.

Because of the importance of this issue, especially with regard to controlling potential for cracking in concrete slabs, we consider that when constructing slabs, and especially after the removal of a desiccated surface crust, the exposed subgrade should be covered with 100mm of basecourse as soon as possible, to avoid allowing underlying damp soils to dry out and shrink if they are likely to regain some of their moisture and swell again following pouring of the concrete. If this cannot be avoided and shrinkage cracks occur in the subgrade to the cumulative width of 15mm per metre distance, then prior to the placement of the under-slab hardfill, the subgrade should be hosed down to allow the cracks to close to at least that degree.

Future owners should also be aware of the detrimental effects that large trees can have by way of inducing differential consolidation settlements beneath foundations, through localised soil water deprivation. Accordingly, care should be taken to avoid having large trees positioned where their roots could migrate beneath the building foundations.

(c) All foundations located within the 45 degree envelope of influence rising from the invert of service trenches, should be extended to below that envelope, to avoid surcharging pipes and/or poorly compacted trench backfill.

(d) In accordance with the limitations imposed by NZS3604:1999, fills greater than 0.6 metres that have not been reviewed and approved herein, should not be undertaken on this site without the further review and express approval in writing of the Manukau City Council and that of a Chartered Professional Engineer experienced in geomechanics and familiar with the contents of this report, since such works may, in certain circumstances, disturb existing equilibrium conditions. In a like fashion, cuts should be restricted to no more than 0.6 metres.

(e) All stormwater runoff from roofs and paved areas, plus any water tank overflows, should be collected in sealed pipes and be disposed of into Council's reticulation system. Likewise, overland flows should be directed away from the building footprint.

Under no circumstances should concentrated flows from any source discharge into or onto the ground in an uncontrolled fashion.

(f) All excavations, including those for bulk earthworks, shallow foundations and any piles, should be inspected by a Geotechnical Engineer during construction to check

that the conditions encountered are consistent with those revealed by our isolated boreholes and to provide any additional advice that might be needed. In the event of unacceptable inconsistencies, we should then be in a position to provide appropriate recommendations in support of an application to Council to modify the Building Consent, or to issue an appropriate Producer Statement - Construction Review.

It is in all parties' interests that we be engaged to inspect all such excavations prior to the installation of any foundation materials to maintain continuity of knowledge. Where we are required to carry out inspections during construction and to provide certification or supply a Producer Statement Construction Review, we request that:

(i) Prior to commencement of the building work the Owner or Developer ensures that we are supplied with a copy of both Resource and/or Building Consent Conditions (as appropriate) which request our involvement during construction.

(ii) The Owner or Developer provides us with the appropriate siteworks plans at least 48 hours prior to our inspections, so that we can confirm that all works relevant to our engagement are carried out.

(iii) The Owner, Builder or Contractor makes arrangements for us to visit the site no less than 24 hours before inspections are required. In order for us to provide Producer Statements, where these are required, it is the owner's responsibility to ensure that we are advised when inspections are due.

It should be noted that inspections during construction and associated certification will result in additional costs to the client over and above those associated with the preparation of this report.

B) Non-specific Design Zone:

This area is considered to be generally suitable for any development works carried out in accordance with NZS3604:1999, subject to the general recommendations given above, and is defined as any area on site that is outside the Specific Design Zone. Any building proposals outside NZS3604 might require specific site investigation.

C) Specific Design Zones:

Specific design zones have been designated primarily on the basis of two criteria, viz those areas not containing at least 2 metres depth of engineered fill or stiff natural crust over known soft ground, and those with slopes steeper than 1V:4H or near vertical and greater than 0.6m high, which might present concerns with regard to slope stability. These areas are listed below:

(a) Steep cut batters in the northwestern area. These batters are up to 1.5m high and have gradients of up to 1V:2H. While these slopes are considered stable while undeveloped, any foundations on, or within a horizontal distance of 4m above the crest of the slope, should be designed to allow for lateral creep extending to a depth of 1.0m, and acting over a width of 3 pile diameters, unless the land is adequately retained by suitably designed and constructed retaining walls.

(b) Steep fill batter in the southwestern corner, is up to 1.5m high and is considered unstable in its present form, therefore this batter should be adequately supported at the time of any building development closer than 4 metres from the crest.

(c) Areas of stormwater inlet in the northeastern corner of the site were still to be tidied up at the time of preparation of this report. Any foundations in the vicinity should be specifically designed to mitigate the effects of remaining depressions, steep batters and trench backfills.

(d) The southeastern corner of the site has underlying soft deposits as identified in our boreholes 7 and 9. These are expected to have been rendered closer to the surface by removal of up to around 1.5m depth of cut during the earthworks. Therefore we recommend that for all shallow strip and pad foundations on proposed lots 3 and 4, the foundation depths should be limited to no deeper than 0.45m below the as-built levels, and the ultimate bearing pressures should be limited to no greater than 200 kPa, to which figure should be applied an appropriate factor of safety, such as 2.0 for Factored Load Design and 3.0 for Working Strength Design.

For any foundation loads which cannot be accommodated in the above constraints, we recommend the use of specifically designed piles.

Statement of Professional Opinion as to Suitability of Land for Building Development

Owner/Developer: Carlos Concepts Limited.

Location: Lot 10, 124 Stancombe Road, Flat Bush

Development: Residential Development.

I, S.J. Woodward of Geotek Services Limited, P.O. Box 39-015, Howick, hereby confirm that:

1. I am a Chartered Professional Engineer experienced in the field of geotechnical engineering and was retained by the Owner/Developer as the Geotechnical Engineer on the above development.

2. The extent of our desktop study is described in our Report number 2532, dated 30 June, 2004, and the conclusions and recommendations of that document have been re-evaluated in the preparation of this report. The results of our initial borehole investigation and all tests carried our during the works are also enclosed.

3. In my professional opinion, not to be construed as a guarantee, I consider that:

   (a) The earth fills placed where shown on the attached Airey Consultants plan, numbered A9861/5 dated 4 July, 2005, have been generally placed in compliance with NZS4431:1989.

   (b) The completed works give due regard to land slope and foundation stability considerations, subject to the provisions of the "Conclusions and Recommendations" section above, with regards to the steep batters left in the specific design zone.

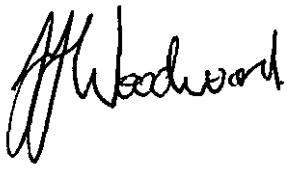
   (c) The areas of filled ground as shown on the attached plan are suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and related documents subject to the provisions of the "Conclusions and Recommendations" section above.

   (d) The original ground not affected by filling is suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and

related documents, subject to the provisions of the "Conclusions and Recommendations" section above.

4. This Professional Opinion is furnished to the local Territorial Authority and the current owner/developer, for their purposes alone, on the express condition that it will not be relied upon by any other person, and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any structure.

GEOTEK SERVICES LIMITED.



S.J. Woodward,
M.E., MIPENZ(Geotechnical), CPEng, IntPE.

Report prepared by
Bevan Marr
B.A. (Geography)

CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 1 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 1
	WEIGHT	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
NATURAL: Soft, slightly plastic, dark grey with occasional black specks slightly clayey SILT: very moist, frequent rootlets							
-becoming stiff	0.5		92	31	3.0		
Stiff, non plastic, light grey with orange specks, silty SAND, trace clay: wet		18/01/04	49	15	3.3		
Firm, non plastic, grey, slightly clayey, slightly sandy SILT	1.0	▽					
-becoming stiff			108	32	3.4		
-becoming slightly plastic, greenish grey, slightly clayey, sandy SILT: saturated, fibrous wood and carbonaceous inclusions	1.5		138+				
-@ 1.5: becoming very stiff, bluish green, root inclusions			138+				
-becoming sandy SILT	2.0						
-becoming stiff			120	40	3.0		
	2.5		138++		UTP		
-becoming very stiff, non plastic greenish grey, very sandy SILT: saturated							Very poor sample recovery
	3.0		100	68			
End of Borehole @ 3.1 metres. Groundwater encountered @ 1.4 metres depth during drilling. Standing groundwater @ 1.1 metres depth upon completion.	3.5						
	4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 2 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 2
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 37.22

Stratigraphy	Description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Firm, non-plastic, dark grey with orange brown and light grey streaks, sandy SILT: wet.			46	12	3.8		
	-becoming soft, dark blackish grey, some carbonaceous material.							
	-becoming grey, saturated @ 0.4m.	0.5		28	7	4.0		
	-becoming light greyish brown.		18/1/05					
	Loose, non-plastic, light greyish brown, silty SAND: saturated.			25	7	3.6		
		1.0						
	-becoming coarse.							
	-becoming very dense, white, pumiceous, silty SAND.			138++		UTP		
	Soft, non-plastic, black, amorphous, PEAT: saturated.	1.5						Poor material recovery.
				44	19	2.3		
	Firm, non-plastic, dark blackish brown, organic stained, SILT: saturated.							
	-becoming medium brown, SILT.	2.0		54	28	1.9		
	-some clay.							
	-minor woody organic material							
		2.5		50	20	2.5		
	-becoming slightly plastic, greyish black, organic stained, clayey SILT: abundant fibrous and woody organic material			42	18	2.3		
		3.0						
	End of Borehole @ 3.2 metres. Groundwater encountered @ 0.4 metres depth during drilling. Standing groundwater @ 0.9 metres depth upon completion.			38	16	2.4		
		3.5						
		4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 3 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.3
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 39.25

Stratigraphy	Soil description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Soft, non plastic to very slightly plastic, grey with orange veins, slightly sandy SILT, trace clay: slightly wet							
	-becoming saturated			46	14	3.3		
	-becoming firm	0.5						
			18/01/04	108	58	1.9		
	-becoming stiff, slightly plastic, purple brown with bright orange mottles occasionally, slightly clayey, slightly sandy SILT	1.0						
	Soft to firm, moderately plastic, purplish grey with occasional orange mottles, very slightly sandy, very slightly silty CLAY: saturated, occasional fibrous organic inclusions of decaying vegetation			40	28	1.4		
		1.5		60	38	1.6		
	-becoming firm							
		2.0		52	34	1.5		
	-becoming light brownish, CLAY, trace sand, no organic inclusions							
	-becoming purple grey							
				40	22	1.8		
	-becoming soft to firm	2.5						
				70	40	1.8		
	-becoming firm, fibrous organic inclusions							
		3.0		54	26			
	End of Borehole @ 3.1 metres. Groundwater encountered @ .4 metres depth during drilling. Standing groundwater @ .9 metres depth upon completion.							
		3.5						
		4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 4 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 4
Flat Bush	WEIGHT 30 kg	DATE	PROBE No.

GL(m) 39.62

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Stratigraphy	Soil description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Firm, non-plastic, streaked bluish grey, yellowish brown, SILT: moist.		18/1/05					
	-becoming soft.							
	-becoming wet.							
	-becoming firm, light grey with orange brown streaks, slightly sandy SILT: wet.	0.5		30	9	3.3		
	-becoming saturated.							
				56	23	2.4		
	-some clay.	1.0						
	-becoming moderately plastic, streaked light grey, orange brown, clayey SILT: trace sand.			40	24	1.7		
		1.5						
	Very stiff, non-plastic, light grey with yellowish brown and orange brown streaks, SILT: some sand.			138+				
	-becoming bluish grey, slightly sandy SILT.	2.0		138+				
	-lens of dark green, sandy SILT.							
	-becoming greenish grey, SILT: trace clay.							
		2.5		138+				
				138+				
		3.0						
	End of Borehole @ 3.0 metres. Groundwater encountered @ 0.7 metres depth during drilling. Standing groundwater @ 0.4 metres depth upon completion.							
		3.5						
		4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 5 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.5
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 42.75

Stratigraphy	Soil description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	NATURAL: TOPSOIL						
Tauranga Group Materials	Stiff, non plastic, brown, SILT: dry, friable						
	Stiff, slightly plastic, tan brown with orange and grey specks, slightly clayey SILT: very slightly moist		130	64	2.0		Approx SGL
	-becoming siff, slightly plastic, grey with orange brown streaks, clayey SILT, trace sand: very slightly moist	0.5	106	70	1.5		
	-becoming stiff, slightly plastic, grey with occasional orange brown streaks, very clayey SILT, trace sand: slightly moist	1.0	118	72	1.6		
	-becoming slightly clayey SILT, trace sand Non plastic, brown and grey mottles, very slightly clayey SILT, trace sand, slightly moist	1.5	58	46	1.3		
	-becoming moderately plastic, grey, moist, slightly sandy						
	-becoming bright orange brown streaks in greyish brown, very clayey SILT, trace sand: moist	2.0	50	26	1.9		
	Firm, moderately plastic, greyish brown, silty CLAY: moist						
	Firm, slightly plastic, creamy grey, slightly sandy, slightly clayey SILT: moist	2.5	56	44			
	Firm, moderately plastic, slightly purple brown, slightly silty CLAY: moist		48	38	1.3		
		3.0					
			38	28	1.4		
	Slightly plastic, firm, dark blackish brown, organic SILT: very wet, no organic odour, rootlet inclusions	3.5	64	35	1.8		
	-becoming brownish black, saturated						
	Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated		138++		UTP		Poor sample recovery
		4.0					
	Continued on next page.						

Water Level: 18/01/05 (3.5)

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 6 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 5
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Legend	GL(m) 42.75 / Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated			138++		UTP		Very difficult to penetrate
Unable to penetrate with hand auger End of Borehole @ 4.3 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.	4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 7 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
NATURAL: Very stiff, non-plastic, light brown, SILT: friable, dry.							Approx SGL
-becoming yellowish brown.							
-becoming light grey with orange brown and yellowish brown streaks.	0.5		138+				
-becoming slightly to moderately plastic, clayey SILT: trace sand, moist.			138+				
	1.0						
			138+				
-becoming non-plastic, slightly purplish grey with orange brown and yellowish brown streaks, slightly clayey SILT.	1.5						
-becoming very dense, SILT: friable.			138++		UTP		
-becoming non-plastic to slightly plastic, grey with orange brown and yellow brown streaks, trace clay.	2.0		102	60	1.7		
Stiff, highly plastic, streaked grey, purplish grey, orange brown, silty CLAY: moist.	2.5						
-becoming firm, purplish brown.			66	36	1.8		
			62	36	1.7		
	3.0						
Very dense, non-plastic, streaked brown, yellowish brown, light grey, pumiceous, slightly silty SAND: moist.			138++		UTP		
	3.5						
			138++		UTP		
-becoming whitish grey, very fine SAND: trace silt							
	4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 8 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
Flat Bush	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy	SOIL DESCRIPTION (Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock)	Legend	GL(m) 42.33 Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very dense, non-plastic, whitish grey, very fine, SAND: trace silt, moist.			▽	138++		UTP		
	-becoming moderately silty SAND.			18/1/05					
	-becoming wet @ 4.2m.		4.5		138++		UTP		
	End of Borehole @ 4.6 metres, unable to penetrate further. Groundwater not encountered during drilling. Standing groundwater @ 4.1 metres upon completion.		5.0						
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 9 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.7
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 43.57

Stratigraphy	Soil description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, non plastic, tan brown, very slightly clayey SILT: dry						
	-becoming tan brown with grey and orange brown streaks, slightly clayey SILT		115	64	1.8		
	-becoming grey with occasional orange brown streaks	0.5					
	-developing trace sand, slightly moist		88	70	1.3		Approx SGL
	Stiff, slightly plastic, grey with orange brown streaks, slightly sandy, very clayey SILT: slightly moist	1.0	116	72	1.6		
	Stiff, slightly plastic, purplish grey with occasional orange brown streaks, sandy, clayey SILT: slightly moist	1.5	73	46	1.6		
	-becoming firm, slightly plastic to moderately plastic, creamy white, very slightly clayey SILT, trace sand						
	-becoming soft	2.0	36	18	2.0		
	Non plastic, soft, slightly pink white, SILT: wet						
	-becoming slightly yellow white	2.5	25	18			
			28	20	1.4		
	-becoming very wet	3.0					
	Very stiff, non plastic, greyish white, fine silty SAND: very wet		138+				
		3.5	138++		UTP		
		4.0	138++		UTP		
	Continued on next page.						

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 10 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 7
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 43.57

Depth (m)	Soil description	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	Non plastic, very stiff, greyish white, silty SAND: very wet	19/01/04	60	36	1.7		
	-becoming firm						
4.5	-becoming very stiff, saturated		138++		UTP		
			138++		UTP		
	Unable to penetrate with hand auger End of Borehole @ 4.7 metres. Groundwater encountered @ 4.7 metres depth during drilling. Standing groundwater @ 4.4 metres depth upon completion.						
5.0							
5.5							
6.0							
6.5							
7.0							
7.5							
8.0							

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 11 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 8
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
NATURAL: Very stiff, slightly plastic, brown with orange brown and greyish brown streaks, slightly clayey SILT: damp.							Cut to road SGL
-becoming moderately to highly plastic, streaked light grey, orange brown, very clayey SILT: trace sand.	0.5		112	70	1.6		
-becoming whitish grey with some light brown streaks.			98	62	1.6		
-becoming firm, yellowish white with some light orange and yellow streaks.	1.0		60	28	2.1		
Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, wet.	1.5		50	20	2.5		Poor material recovery.
	2.0		32	16	2.0		
	2.5		26	16	1.6		
			28	18	1.6		
	3.0	18/1/05	28	18	1.6		
	3.5						
Very dense, non-plastic, light grey, pumiceous, fine, silty SAND: wet.			138++		UTP		
End of Borehole @ 4.1 metres. Unable to penetrate further. Standing groundwater @ 3.4 metres depth upon completion.	4.0		138++		UTP		

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 12 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No.9
	WEIGHT	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Stiff, slightly plastic, grey, brown and orange brown streaked, clayey SILT, trace sand: slightly moist			85	60	1.4		Major surface cracking
Stiff, slightly plastic, grey with orange brown streaks, very clayey SILT: slightly moist	0.5						
Stiff, moderately plastic, grey with occasional orange streaks, slightly sandy, clayey SILT: slightly moist			97	71	1.4		
Firm, moderately plastic, creamy white, very slightly sandy, clayey SILT: moist	1.0		77	60	1.3		Approx SGL
Firm, non plastic, creamy white, SILT: very moist							
	1.5		56	28	2.0		
-becoming wet							
	2.0		39	22	1.8		
-becoming soft							
			22	19	1.2		
	2.5						
			28	21	1.3		
	3.0		58	27			
-becoming firm							
	3.5	▽	48	22	2.2		
	4.0		32	28	1.1		

Continued on next page.

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 13 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 9
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy	SOIL DESCRIPTION (Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock)	Legend	GL(m) 42.9 / Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	Soft, non plastic, yellowish white, SILT: wet								
	-becoming firm		4.5		52	25	2.1		
	Very stiff, non plastic, white, fine silty SAND								
	Soft, non plastic, black organic SILT: saturated				32	28	1.1		
			5.0						
	-becoming firm				68	32	2.1		
	End of Borehole @ 5.1 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.								
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Concepts Limited	LOGGED/ CHECKED: MK	SHEET 14 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
	WEIGHT 30 kg	DATE	PROBE No.

GL(m) 42.9

Stratigraphy	SOIL DESCRIPTION	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, slightly to moderately plastic, light grey with orange brown streaks, very silty CLAY: trace sand, damp.		138++		UTP		Sun baked crust. Approx SGL
	-becoming stiff, moist.	0.5	105	54	1.9		
			88	49	1.8		
	-becoming brownish grey.	1.0					
	-becoming firm, brownish grey.		58	33	1.8		
	-becoming stiff, moderately plastic, greyish brown with grey streaks, very clayey SILT: some sand.	1.5	93	37	2.5		
	-becoming non-plastic, grey, SILT.	2.0	108	37	2.9		
	-becoming firm, highly plastic, yellowish brown with some grey and dark purplish brown streaks, very clayey SILT: some sand.	2.5	44	20	2.2		
			50	26	1.9		
	-becoming moderately clayey SILT.	3.0	78	30	2.6		
		3.5	77	39	2.0		
	-becoming moderately plastic, blueish grey to greyish brown, slightly clayey SILT: some sand.	4.0					

Continued on next page.

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 15 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
Flat Bush	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 42.9

Stratigraphy	Soil Description	Depth (m)	Shear Vane Dial (kPa) DR4802	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Stiff, blueish grey to greyish brown with occasional dark purplish brown streaks, slightly clayey SILT: some sand, moist.		98	46	2.1		
		4.5	76	35	2.2		
			84	48	1.8		
	End of Borehole @ 5.0 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	5.0					
		5.5					
		6.0					
		6.5					
		7.0					
		7.5					
		8.0					

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 16 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 11
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) ~~44.19~~ 43.1

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	NATURAL: TOPSOIL						
	Stiff, non plastic, medium brown, SILT: damp, friable						
	Stiff, slightly plastic, orange brown, slightly clayey SILT: slightly moist		89	44	2.0		Approx SGL
		0.5					
	Stiff, slightly plastic, grey, orange brown and brown streaked, very clayey SILT, trace sand: slightly moist		96	64	1.5		
		1.0					
	-becoming predominantly grey with brown and orange brown streaks		114	68	1.7		
		1.5	138+				
	-becoming very stiff						
		2.0	138+				
	-becoming grey						
	-becoming slightly sandy		93	58	1.6		
	-becoming stiff, slightly to moderately plastic, grey, very clayey SILT: moist	2.5					
	-developing trace sand, very moist to slightly wet		138+				
	-becoming very stiff						
	Very stiff, non plastic, purplish grey, sandy SILT: very moist	3.0	138+				
	End of Borehole @ 3.2 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	3.5					
		4.0					

Tauranga Group Materials

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 17 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 12
Flat Bush	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Stratigraphy	Soil description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	TOPSOIL.						Approx SGL
Tauranga Group Materials	NATURAL: Firm, slightly plastic, streaked orange brown, greyish brown, slightly clayey SILT: moist. -becoming stiff @ 0.4m.	0.5	98	50	2.0		
	Stiff, highly plastic, streaked orange brown, greyish brown, moderately silty CLAY: trace sand moist.	1.0	94	50	1.9		
	-becoming streaked light grey, light orange, silty CLAY: some sand.	1.5	86	56	1.5		
	-becoming very clayey SILT: some sand.	2.0	110	86	1.3		
	-becoming light grey with light orange streaks.	2.5	92	68	1.4		
	-becoming firm.		78	48	1.6		
	Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, moist. -becoming wet.	3.0	52	28	1.9		
	Very dense, non-plastic, greyish white, pumiceous, silty SAND: moist.	3.5	22	15	1.5		
	End of Borehole @ 4.2 metres. Unable to penetrate further. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	4.0	138++		UTP		

Legend: Water Level ▽

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 18 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 13
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

GL(m) 44.87

Stratigraphy	Soil description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	Stiff, non plastic, friable, SILT: dry						
	Stiff, slightly plastic, orange brown and grey brown streaked, slightly clayey SILT: moist		121	60	2.0		
		0.5					
	-becoming moderately plastic, light grey and light orange streaked, moderately clayey SILT, trace sand		116	66	1.8		
		1.0					
	-becoming light brown grey with thin light orange veins		132	94	1.4		
	-becoming slightly plastic, slightly clayey SILT, some sand						
		1.5					
	-becoming moderately plastic, moderately clayey SILT		58	44	1.3		
	Soft, non plastic, yellow white, SILT (pumicite): very moist, poor recovery	2.0	28	18	1.6		
			58	32	1.8		
		2.5					
	Very stiff, non plastic, yellow white, silty SAND: very moist, very dense		138++		UTP		
	-becoming wet		138++		UTP		
	End of Borehole @ 3.0 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	3.0					
		3.5					
		4.0					

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CIVIL LAB

Report No: 21 5257 00
Page: 2 of 3

FILL SUMMARY SHEET

Job Name : **Stancombe Road**

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m³)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m³)	SOLID DENSITY (t/m³) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH in kPa				NOTES
1	GC	24.1.05	See plan	1.90	24.6	1.52	2.7	6.1	199++	199++	199++	199++	
2				1.89	28.6	1.47	2.7	3.4	199++	199++	199++	199++	
3				1.78	34.4	1.32	2.7	5.5	153	199+	199+	199+	
4	CA & WF	25.1.05	See plan	1.87	34.6	1.39	2.7	0.5	179	199+	199+	199++	
5				1.82	38.8	1.31	2.7	0.7	182	186	199+	199+	
6				1.73	31.0	1.32	2.7	10	134	131	122	182	
7	CA	26.1.05	See plan	1.96	32.8	1.47	2.7	-2.9	171	199+	199++	199++	
8				1.98	25.7	1.57	2.7	1.3	199+	199+	199+	199+	
9				1.87	33.0	1.40	2.7	1.8	199+	199+	199+	199+	
10	CA	27.1.05am	See plan	1.94	24.2	1.56	2.7	4.3	168	185	199+	199+	
11				1.90	19.6	1.59	2.7	10	148	179	199+	199+	
12				1.87	33.9	1.40	2.7	0.8	199+	199++	199++	199++	
13	CA	27.1.05pm	See plan	1.93	20.5	1.60	2.7	7.8	199++	199++	199++	199++	
14				1.93	25.7	1.53	2.7	3.8	199++	199++	UTP	UTP	

Transpositions Checked By : TB Date: 03.02.05
Approved Signatory : Date: 02.03.05

Please see page 1 of this report for test standard information

Report No: 21 5257 01

FILL SUMMARY SHEET

Job Name : **124 Stancombe Road**

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m³)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m³)	SOLID DENSITY (t/m³) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH in kPa				NOTES
15	CA & RP	20.4.05	See plan	1.84	24.5	1.48	2.7	9.0	236++	236++	236++	236++	
16				1.82	20.4	1.51	27	13	236++	236++	236++	236++	
17	CA & RP	22.4.05	See plan	1.89	27.2	1.48	2.7	4.7	236+	236++	236++	236++	
18				1.92	29.8	1.48	27	1.2	236++	236++	236++	236++	

Transpositions Checked By : JM Date: 3.5.05
Approved Signatory : Date: 5.5.05

Please see page 1 of this report for test standard information

Ref: 2704

DIARY NOTES

North of Carlos Drive, 124 Stancombe Road, East Tamaki

Date: 17/1/05 GSL Staff

Ian Gibson (Aireys) rang for GSL to visit site and inspect gully cleanout. I (EC) visited site with knowledge that our initial site investigation was for the proposed apartments at the front of the site only (refer phone conversation note with Graham Raymond). We therefore needed to undertake site investigation for the remainder of the site. Gully had surficial materials mullocked out and flanks stripped of topsoil. Deep stormwater line trenches had been dug along the eastern boundary and to the south along the proposed road alignment. Very soft pumiceous materials, saturated the trench invert. Organise return visit to site next day with guys to drill holes.

Date: 18/1/05 GSL Staff

Site investigation/gully cleanout: I (EC) met Peter from Sharpe Civil. Discussed objectives of GSL and plan of attack for gully. Drill holes in current invert to ascertain depth of undercut. Some more materials need to be mucked out. Also noted heavy seepages along northwest back of gully.

Date: 19/1/05 GSL Staff

More gully muckout in invert.

Date: 26/1/05 GSL Staff

I (ML) and EC attended the site at approximately midday on a hot, dry day. We returned on the basis of Civil Lab fill testing from 25.1.05 showing a failure in one area of the gully infill. The results in this area showed 10% air voids and shear strengths as low as 122kPa by comparison to strengths well upward of 180kPa in most other parts. The location of this failure is marked on the attached plan.

At the surface, shear vane readings were all 138+. However, the gumspear highlighted soft spots about .5 metres deep in the otherwise well compacted fill. Eugene had the site guys dig up the fill to a depth of approx 0.5 metres in one part of the area of concern. This revealed an area of poor quality fill with limited compaction. Eugene advised the contractor that the fill above the soft region should be moved temporarily while the substandard fill was removed and discharged. This would then allow the replacement of the fill and continued compaction. Beyond this region of concern, the fill was all very stiff and well compacted, with a large sheepsfoot roller providing more than adequate compaction, with no signs of ground movement beneath its weight.

Date: 19/4/05 GSL Staff

I (PJ) visited the site and spoke to Brendon. They recommended placing the fill some two days ago after several months stand-down. I was told that more than a metre was already placed in the southwest corner but much less at the back. Informed Civil Lab to begin testing as soon as possible. Arranged with James to drill handaugers to test the new fill where it is deep.

Date: 24/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard, although some soft spots were observed and the contractor informed. Very little fill has been placed. One dozer, one compactor and two dump trucks at work on the site.

Date: 25/01/05 Civil Lab Staff

One compactor and one dozer at work. Material is a firm to stiff, highly plastic, silty clay.

Date: 26/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard. One digger and one compactor on site.

Date: 27/01/05 Civil Lab Staff

Morning: fill appears to be of a satisfactory standard. One dozer and one compactor at work. Material is firm to stiff, highly plastic, light grey and yellow/brown mixed, slightly silty clay and moist.

Date: 27/01/05 Civil Lab Staff

Afternoon: Fill appears to be of a satisfactory standard. One digger on site.

Date: 20/04/05 Civil Lab Staff

One compactor and one digger on site. Material is firm, highly plastic, light grey, cream, orange brown and yellow brown mixed slightly silty clay and moist.

Date: 22/04/05 Civil Lab Staff

Fill appears to be of a satisfactory standard. One compactor on site. Fill is firm, highly plastic, light grey orange brown and yellow brown mixed silty clay and moist.

FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	**Job Number:**	2704
Date Sampled:	20.06.2005	**Date Tested:**	21.06.2005
Sample Number:	1	**Tested By:**	MK
Sampling Depth (m):	0.5	**Checked By:**	
Sample Condition:	Good		
Sample Description:	Highly plastic, light grey with orange mottles, silty CLAY		
Inert Inclusions (%):	0		
Cracking (%):	5		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%): 30.9

Final Water content (%): 34.3

ε_{sw} = Magnitude of Swelling Strain (%) : 0.05

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%): 26.2

ε_{sh} = Magnitude of Shrinkage Strain (%) : 3.54

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 2.0
strain per ΔpF

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FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	**Job Number:**	2704
Date Sampled:	20.06.2005	**Date Tested:**	22.06.2005
Sample Number:	2	**Tested By:**	MK
Sampling Depth (m):	0.5	**Checked By:**	
Sample Condition:	Good		
Sample Description:	FILL: Moderately plastic, mottled orange brown, grey, dark purple, silty CLAY: white silt and topsoil inclusions.		
Inert Inclusions (%):	3		
Cracking (%):	2		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%): 28.9

Final Water content (%): 34.2

ε_{sw} = Magnitude of Swelling Strain (%) : 0.54

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%): 26.7

ε_{sh} = Magnitude of Shrinkage Strain (%) : 3.21

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 1.9

strain per ΔpF

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FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	Job Number:	2704
Date Sampled:	20.06.2005	Date Tested:	21.06.2005
Sample Number:	3	Tested By:	MK
Sampling Depth (m):	0.5	Checked By:	
Sample Condition:	Good		
Sample Description:	Moderately plastic, light grey with orange mottles, very clayey SILT: trace sand.		
Inert Inclusions (%):	0		
Cracking (%):	0		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%): 23.3

Final Water content (%): 25.6

ε_{sw} = Magnitude of Swelling Strain (%) : 0.00

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%): 23.6

ε_{sh} = Magnitude of Shrinkage Strain (%) : 2.60

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 1.4

strain per ΔpF

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Compass Building Consultants
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Hunters Corner
Papatoetoe 1730
Auckland

7th February 2008

Re: 46 Carlos Dr, Flatbush. G6 soundproofing final:
BLD 71556

Dear Maurice,

Random test results for this complex follow:

Apartment	4	bedroom	3	-	apartment	5	bedroom	STC	64
Apartment	4	kitchen	2	-	apartment	3	lounge	STC	55
Apartment	17	bedroom	1	-	apartment	18	bedroom	STC	58
Apartment	18	lounge	2	-	apartment	19	lounge	STC	55
Apartment	21	bedroom	3	-	apartment	20	bedroom	STC	62
Apartment	21	lounge	2	-	apartment	22	lounge	STC	57
Apartment	15	bedroom	3	-	apartment	16	bedroom	STC	62
Apartment	15	bedroom	1	-	apartment	14	bedroom	STC	62
Apartment	14	lounge	2	-	apartment	13	lounge	STC	50
Apartment	12	lounge	2	-	apartment	13	lounge	STC	51
Apartment	12	bedroom	1	-	apartment	11	bedroom	STC	56
Apartment	9	bedroom	3	-	apartment	10	bedroom	STC	57
Apartment	9	lounge	2	-	apartment	8	lounge	STC	55
Apartment	7	lounge	2	-	apartment	8	lounge	STC	57
Apartment	4	bathroom	3	-	apartment	3	lounge	IIC	63

Apartment	3	en-suite	3	-	apartment	2	lounge	IIC	60
Apartment	3	kitchen	2	-	apartment	2	bedroom	IIC	74
Apartment	18	en-suite	3	-	apartment	19	lounge	IIC	57
Apartment	20	bathroom	3	-	apartment	21	lounge	IIC	57
Apartment	15	bathroom	3	-	apartment	14	lounge	IIC	61
Apartment	13	en-suite	3	-	apartment	12	lounge	IIC	62
Apartment	8	en-suite	3	-	apartment	9	lounge	IIC	59
Apartment	7	en-suite	3	-	apartment	6	lounge	IIC	59
Apartment	3	en-suite	3	-	apartment	2	lounge	IIC	60

Based on the above random test results and my currently held DBH legal rulings, I believe that the above complex complies generally with current G6 requirements.

Best wishes

Bob Russell, (Managing Director)
Acoustics Enforcement NZ Ltd.
021 324 627
bob@aenz.co.nz

FIRE PROTECTION INDUSTRY
PRODUCER STATEMENT – CONSTRUCTION

Building Consent Application No. 071556A1

Producer Statement Issued By: The Entire Group (Constructor)

To: Manukau City Council (Local Authority)

In respect of an Application for Building Consent made by Flat Bush Construction in relation to the Fire Protection system installed in:

46 Carlos Drive (Building Name)

Address: 46 Carlos Drive , Flat Bush

Lot:10 DP: 352580 SO:

Flat Bush Construction (Main Contractor)

The Constructor has agreed to install a Fire Protection System/s type as detailed below:

System (Fire Alarm etc)	Design Standard Used	Type (1, 2, 3 etc)
1. Fire Alarm	NZS 4512	5f

We are satisfied that the Fire Protection System detailed above which is the subject of Building Consent No: 071556A1 has been completed to the extent required by that Building Consent and its conditions and complies with the Building Code.

This covers part only of the Fire Protection Systems described in the Building Consent.

The only Fire Protection System construction requirements of the Building Consent which are covered by this Producer Statement are:

*
*
*

We understand that if the Producer Statement is accepted, it will be relied on by the Manukau City Council for the purposes of establishing Compliance with the Building Code for the system as installed.

The Producer Statement Author is authorized to make and is making these statements on behalf of the Construction:

Producer Statement Author – Signature

Producer Statement Author – Name Barrie Llewellyn

Producer Statement Author – Acceptance No: Iconz Approval 107

Producer Statement Author – Position with Constructor: **Manager**

Address: PO Box 1214, Shortland St, Auckland

Telephone: 09 3567100 Facsimile: 09 356 7010 Date: 7/5/08

FIRE PROTECTION INSPECTION SERVICES FPIS

CERTIFICATE OF COMPLIANCE

FIRE ALARM SYSTEM

Building Name: Carlos Dr Townhouses

Location: 46 Carlos Dr, Flatbush, Auckland

Occupancy: Townhouses

Certificate No: 52966 Building Consent No: 071556A1
(PROVIDED BY CONTRACTOR)

Details of System:

Type of system: Automatic Type 5f

Declared functional requirements: C, D & G

Equipment Manufacturer: Pertonics

Equipment Register No: Panel: PI/120 Callpoints: PI/620

Detector Register No: Thermal: PI/221, 230 Smoke: SS/315

Alerting Device Type: PI/640

Detail of remote receiving centre: Not Brigade Connected

Details of Ancillary Services: Nil

Date of Completion: 07/05/2008

I hereby certify that the above system has been inspected and tested in accordance with NZS 4512:2003 and on the basis of the results, the system as installed meets with the requirements of this Standard.

Installer: B Llewellyn

Signed:

Capacity: Authorised Representative

Date: 7/5/08

Company: Entire Fire Protection

Address: PO Box 1214
Shortland Street
Auckland City

Company: Fire Protection Inspection Services
PO Box 101-230
North Shore Mail Centre
Auckland

Signed:

Dave McDonald
IANZ Approved Signatory

Date: 07/05/08

Inspection body

THIS CERTIFICATE MUST NOT BE REPRODUCED EXCEPT IN FULL

PRODUCER STATEMENT
CONSTRUCTION

FOR	Flatbush Construction		
ISSUED BY	CLIMATECH		
TO	MANUKAU CITY COUNCIL		
IN RESPECT OF A BUILDING CONSENT		071556A1	
COMPRISING THE WORKS OF		Ventilation	
AT	46 Carlos Drive		
LOT	10	DP	352580
Climatech (Installer) has contracted to		Flat Bush Construction	
To carry out the following works		Mechanical Ventilation	
Described in the drawings and specifications prepared by		Climatech	
I, Mike West (Author number 1484)		a duly authorised agent of CLIMATECH	
believe on reasonable grounds that the work of		Mechanical ventilation and air conditioning	

Has been completed to the extent required by the Building Consent application with the Building Code, Section G4AS1

DATE: 14/5/2008

(Signature of Duly Authorised Agent)

CLIMATECH
P O BOX 112 068
PENROSE

Te Kaunihera o
MANUKAU
City Council

COMPLIANCE SCHEDULE No. 3909

Issued by Manukau City Council 24 June,2008

Section105, Building Act 2004

Correspondence:
Private Bag
Manukau City
New Zealand

Telephone: (09) 263-7100
Facsimile: (09) 262-5151
DX EP 75557

THE BUILDING

Street address of building:	46 CARLOS DRV FLAT BUSH 1730		
Legal description of land where building is located:	LOT 10 DP 352580		
Level/Unit No:	UNIT 1 TO UNIT 22		
Current lawfully established use:	RESIDENTIAL APARTMENTS	Building Purpose Group:	SR
Maximum Occupancy:	6 OCCUPANTS PER UNIT	Year first constructed:	2007
	132 OCCUPANTS TOTAL	Highest fire hazard category for building use:	1
Building Consent No.:	07/1556		

THE OWNER

Name of owner:	WORKING CONCEPTS LIMITED
Mailing address:	PO BOX 58395 GREENMOUNT MANUKAU, 2141
Street address/ Registered office:	8 MOANA ROAD DAYS BAY LOWER HUTT, 5013

SPECIFIED SYSTEM

The following specified systems are covered by the compliance schedule for this building:

SS 2/1 - Automatic or Manual Emergency Warning Systems

SS 14/2 - Signs for Specified System(s) 1 - 13

SS 15/2 - Final Exits/Means of Escape

AMENDMENTS

Revision No.	Revision Date	Revision Comment
1	24-Jun-2008	ORIGINAL ISSUE OF COMPLIANCE SCHEDULE

Records

Records shall be kept for all the aforementioned systems and features indication:

(i) Date of inspection
(ii) Type of inspection
(iii) Any repairs maintenance found to be done
(iv) Action taken
(v) Systems acceptability as meeting compliance
(vi) Name of person undertaking inspection

Records must be kept for a minimum of 2 years

The compliance schedule is kept: ON THE PREMISES

Signature: .....
S Purcell

Position: **Building Warrant of Fitness Process Officer**
District Plan & Building Enforcement

On behalf of: Manukau City Council

Issue Date: 24 June,2008

System or feature	Inspection, Maintenance and Reporting Procedures
Automatic or Manual Emergency Warning Systems	A. INSPECTIONS Emergency warning systems shall be inspected regularly to ensure continued effective operation. Content of the inspections for the different inspection frequencies shall be in accordance with the following referenced Standards: (i) Automatic fire alarms - monthly, annually - NZS 4512. (ii) Manual fire alarms - monthly - NZS 4561or NZS 4512. (iii) Emergency intercommunication systems - monthly, 6 monthly - AS 2220 and AS 1851.10. In buildings, with no more than 3 floors, the "monthly" inspections required by NZS 4561 for manual alarm systems, may be performed at no more than 3 monthly intervals: (v) Where there is no provision for sleeping, and total occupant load does not exceed 100 in a single floor building or 50 in a two floor building, or (vi) Where the building contains SA or SR purpose groups and has: a) only a single floor level, or b) two or three floor levels and contains no more than 10 beds or four suites for SA occupants, or four household units for SR occupants. (vii) During the off-season, for a building a building erected especially for seasonal use, provided that the only use of sleeping accommodation is by maintenance staff. Interface Inspections and Testing Where an emergency warning system is interfaced with other specified features listed in this compliance schedule inspection and testing shall be undertaken in accordance with the specified system it is connected to, to ensure correct operation. B. MAINTENANCE Emergency warning systems shall be maintained in accordance with the appropriate Standard referenced above. Planned preventative maintenance and responsive maintenance shall be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure the system will operate as required in the event of a fire or other danger. Defects that directly have an effect on the performance of the system shall be remedied immediately they become apparent. C. PERSONS RESPONSIBLE Monthly inspection and maintenance procedures shall be undertaken by the building owner or the building owner's authorised agent for Type 1 manual fire alarm systems installed before January 1993. All other fire alarm systems shall be inspected by independent qualified persons. Annual inspection and maintenance procedures shall be undertaken by independent qualified persons. Revised 22/02/06 Revised 01/08/07

Signs for Specified System(s) 1 - 13	A. SCOPE Signs are required on a compliance schedule where: (i) The sign has been installed to aid evacuation of people in the building in the event of an emergency; and (ii) The sign is installed in a means of escape from fire; and (iii) That means of escape from fire contains one or more of the specified systems 1-6, 9 and 13 and 14/2. EXAMPLES a) Exit sign b) Arrow direction signs c) Manual call point location signs SIGNS RELATING TO SPECIFIED SYSTEMS 1 TO 13 INCLUDE, BUT ARE NOT LIMITED TO: a) SS 2 – sign instruction on how to operate a fire alarm call point b) SS 3 – sign showing location of automatic door for accessibility c) SS 8 – sign advising not to use the lift in the event of fire d) SS 8 – sign indicating the lift's rated load in persons and kilograms e) SS 8 – sign showing location of lift for accessibility f) SS 12 – international symbol for deafness. SIGNS TO FACILITATE EVACUATION INCLUDE, BUT ARE NOT LIMITED TO: a) Exit sign b) Directional sign c) No exit sign. B. INSPECTIONS Signs shall be inspected regularly to ensure continued effectiveness. FREQUENCY Inspections of signs required for emergency purposes to be illuminated shall be done monthly and annually. For other signs inspections shall be done annually. MONTHLY INSPECTION Illuminated signs shall be inspected to ensure they are: (i) Of the correct type (ii) Present and in the right locations (iii) Legible (iv) Illuminated. ANNUAL INSPECTION Signs not required to be illuminated shall be inspected to ensure they are: (v) Of the correct type (vi) Present and in the right locations (vii) Legible ILLUMINATED SIGNS SHALL BE INSPECTED TO ENSURE THEY: (viii) Are illuminated (ix) Remain illuminated and visible in the event of a power failure of the main lighting supply, for the same duration as required by Clause F6 Lighting for Emergency. C. MAINTENANCE Signs shall be: (i) Replaced if not of the correct type. (ii) Replaced immediately shall they be missing. (iii) Refurbished before they become illegible. (iv) Refurbished if they fail to operate Responsive maintenance shall be carried out in accordance with the nominated performance and inspection Standard of the associated system, and to ensure signs remain correctly-positioned and legible and where appropriate ensure the escape route is identified. Defects that directly have an effect on the performance of the system shall be remedied immediately they become apparent.

D. PEOPLE RESPONSIBLE
Monthly inspection and maintenance procedures shall be underteken by the owner.

Annual inspection and maintenance procedures shall be undertaken by independent qualified persons.

Revised 01/08/07

Final Exits/Means of Escape

A. INSPECTIONS
Final exits located in a escape route shall be inspected to ensure occupants are not prevented from leaving the building in the event of an emergency.

FREQUENCY
Final exits located in a escape route shall be inspected:

- Daily when the building is in use, for crowd occupancies (Purpose Groups: CS, CL, CO & CM)
- Monthly in other occupancies
- Annual for all occupancies

DAILY & MONTHLY & QUARTERLY INSPECTIONS
Inspections shall ensure the door(s) are not:

(i) Locked
(ii) Barred
(iii) Blocked

Inspections shall ensure door locking devices:

(iv) Are clearly visible
(v) Are easily operated without a key or other security device
(vi) Do not prevent or override the direct operation of panic bolts fitted to any door
(vii) Quarterly inspections for any electromechanical locking device to ensure that in the event of a power failure, fire alarm activation or door malfunctions, either:

a) Automatically switch to the unlocked (fail-safe) condition, or
b) Be readily opened by an alternative method.

Monthly inspections for purpose groups: CS & CM where the occupancy is less than 50 persons and dead end is not exceeded.

ANNUAL INSPECTIONS

(viii) Check log book held by the building owner.
(ix) Carry out the procedures specified under 'Daily & Monthly & Quarterly inspections.

B. MAINTENANCE
In particular final exit/s and escape routes shall be maintained to ensure they are;

(i) Clearly identified
(ii) Free of obstructions
(iii) Unlocked
(iv) Easily used
(v) Free of stored goods

Responsive maintenance shall be carried out to ensure continual safe operation of escape route(s), final exit(s) and that occupants are not prevented from leaving the building in the event of an emergency.

Defects that directly have an effect on the performance of the system shall be remedied immediately they become apparent.

C. PEOPLE RESPONSIBLE
Daily & Monthly inspection and maintenance procedures shall be undertaken by the owner.

Annual inspection and maintenance shall be undertaken by independent qualified persons.

Quarterly and annual inspection and maintenance procedures for electro-mechanical door locking devices shall be undertaken by independent qualified persons.

BACK COPY

Manukau Building
CONSULTANTS

FORM

As-Built Drainage Plan

T2-3024
Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 **DP:** 352580 **Consent No:** 12596

Owner: Concepts 124 LTD **Date:** 24-9-07

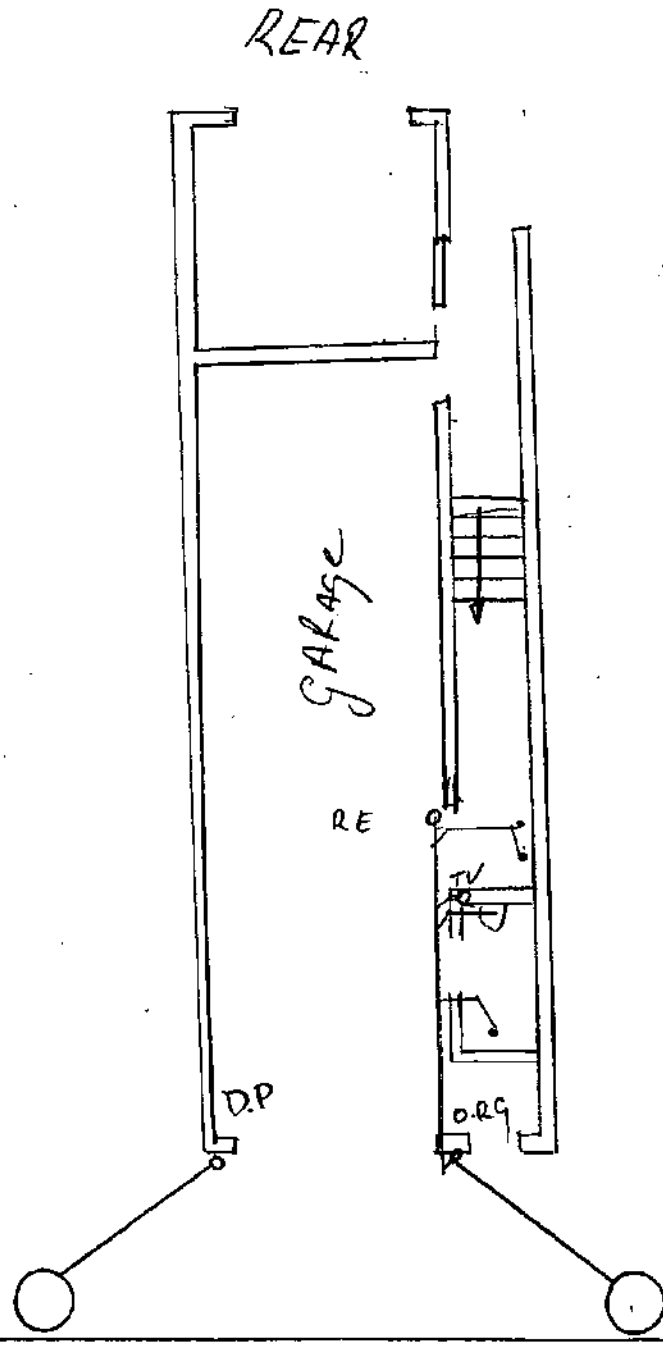
Address: 1 46 Carlos Drive Flat Bush

Drainlayer: Nigel Bowker **Signature:** [signature] **Reg No:** 11351

MBCL Use Only	Inspected by:	Signature:

NOTE: Please provide figured measurements from a defined point of reference in black ink

Plan:



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Address: 2 46 Carlos Drive

Drainlayer: Nigel Bowker **Signature:** [illegible] **Reg No:** 11351

MBCL Use Only	Inspected by	Signature

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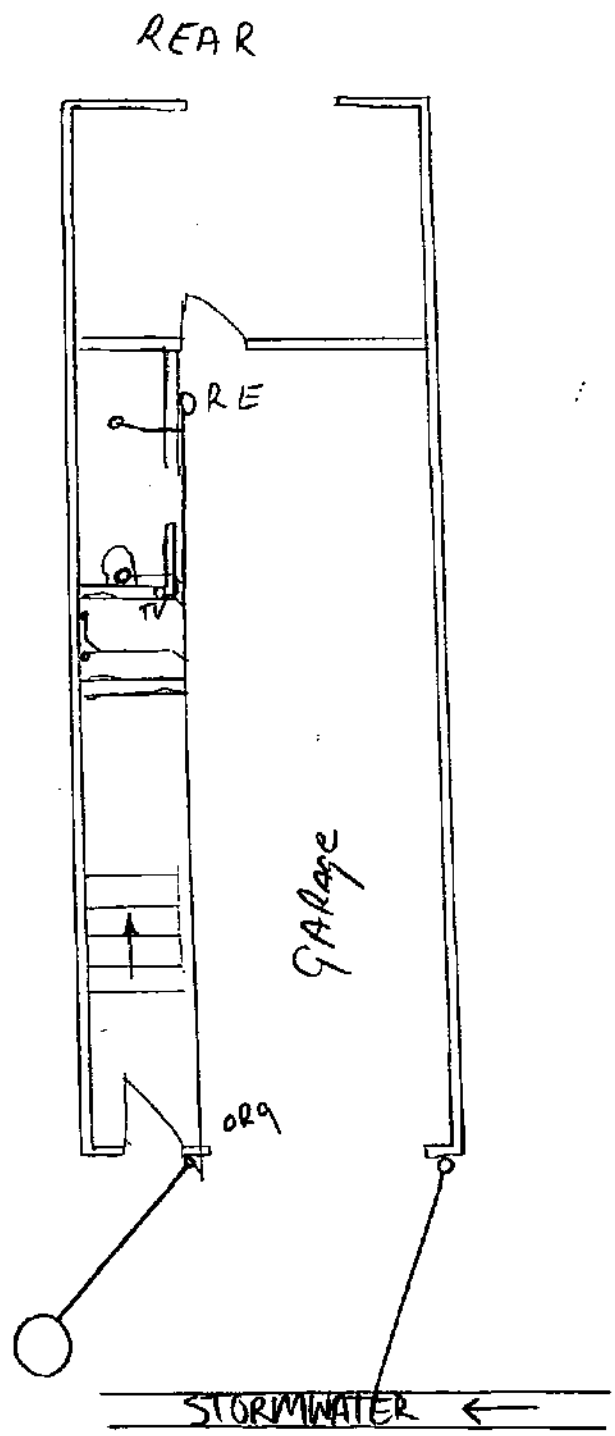

Manukau Building CONSULTANTS

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Address: 3 46 Carlos Drive Flat Bush

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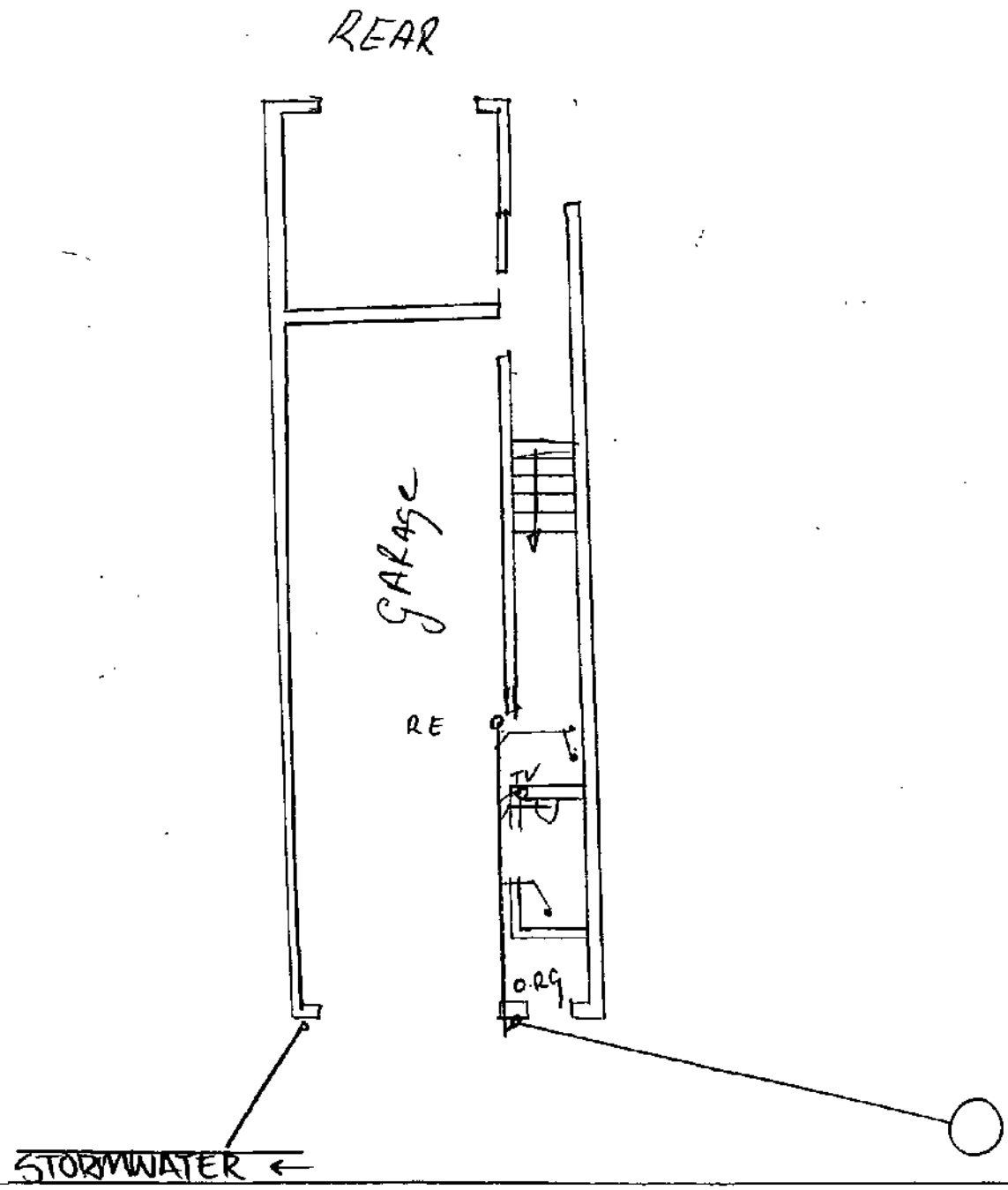

Manukau Building
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Owner: Concepts 124 LtD Date: 24-9-07

Address: 4 46 Carlos Drive

Drainlayer: Nigel Bowker Signature: N Bowker Reg No: 11251

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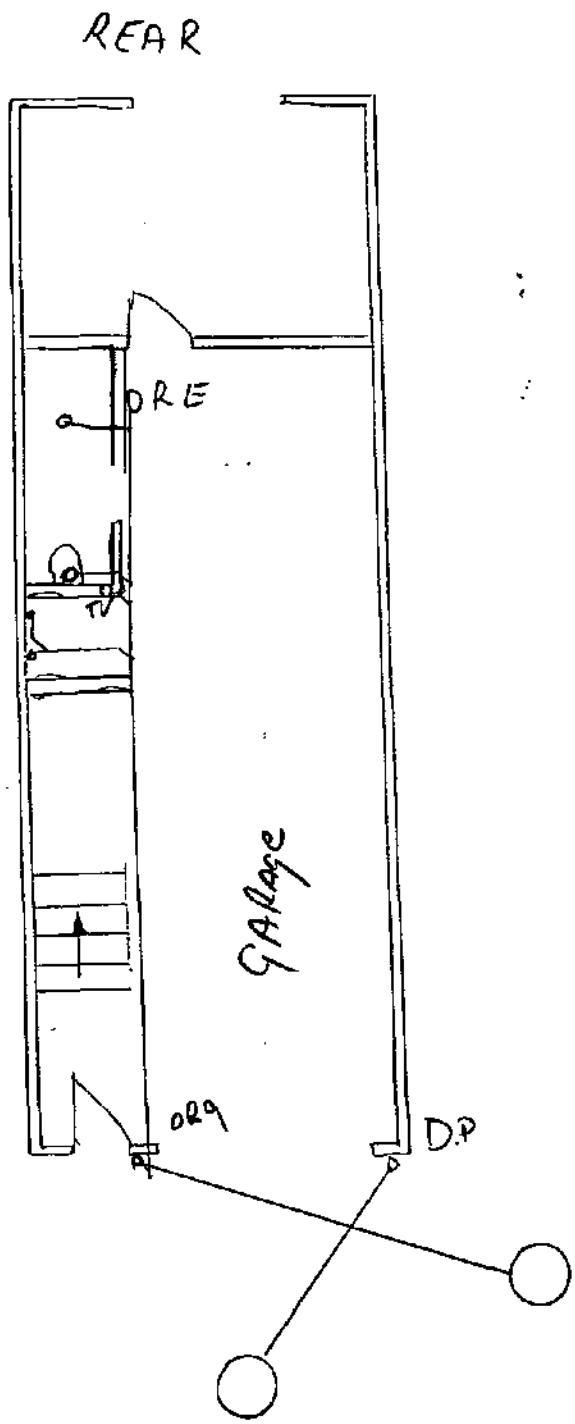

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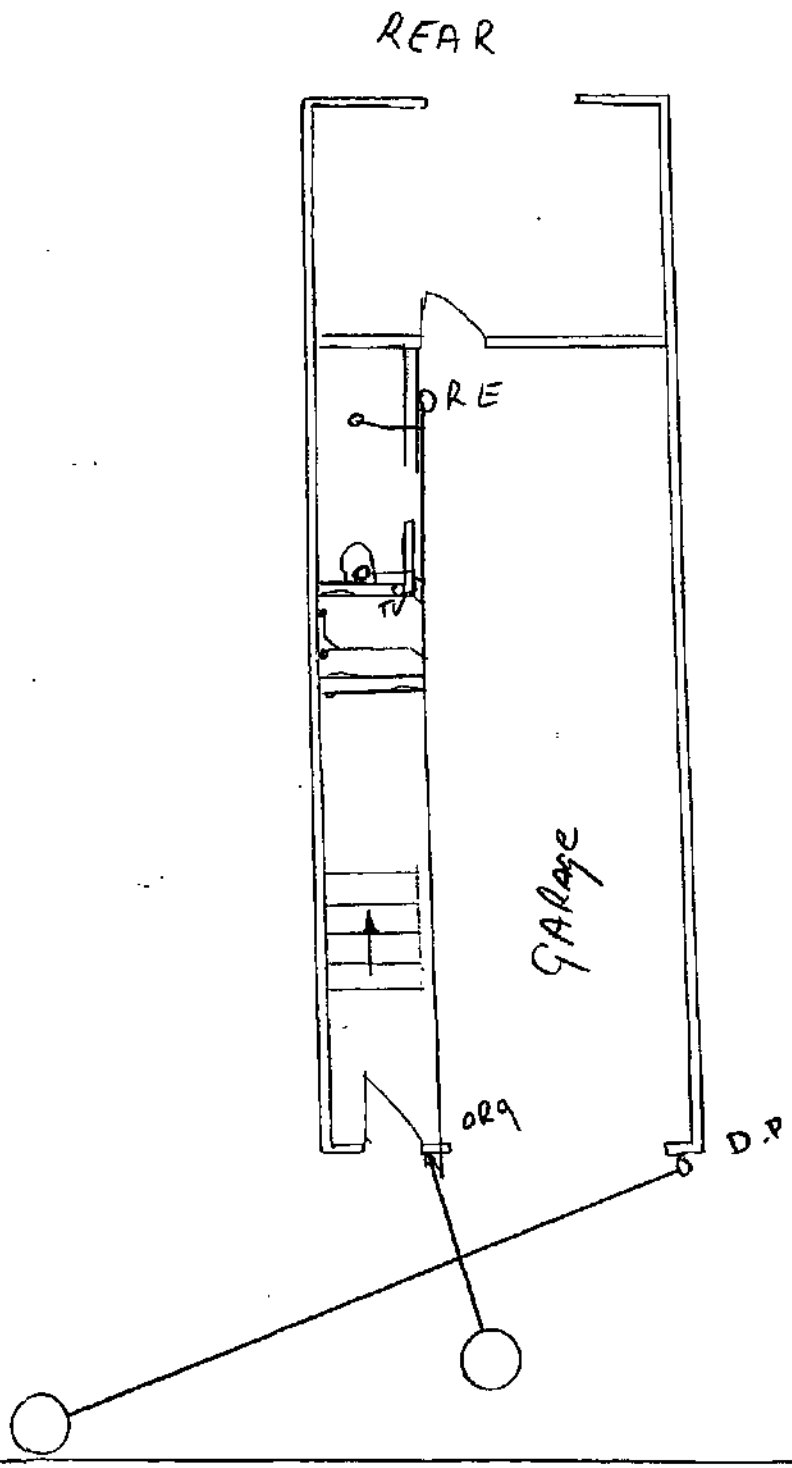

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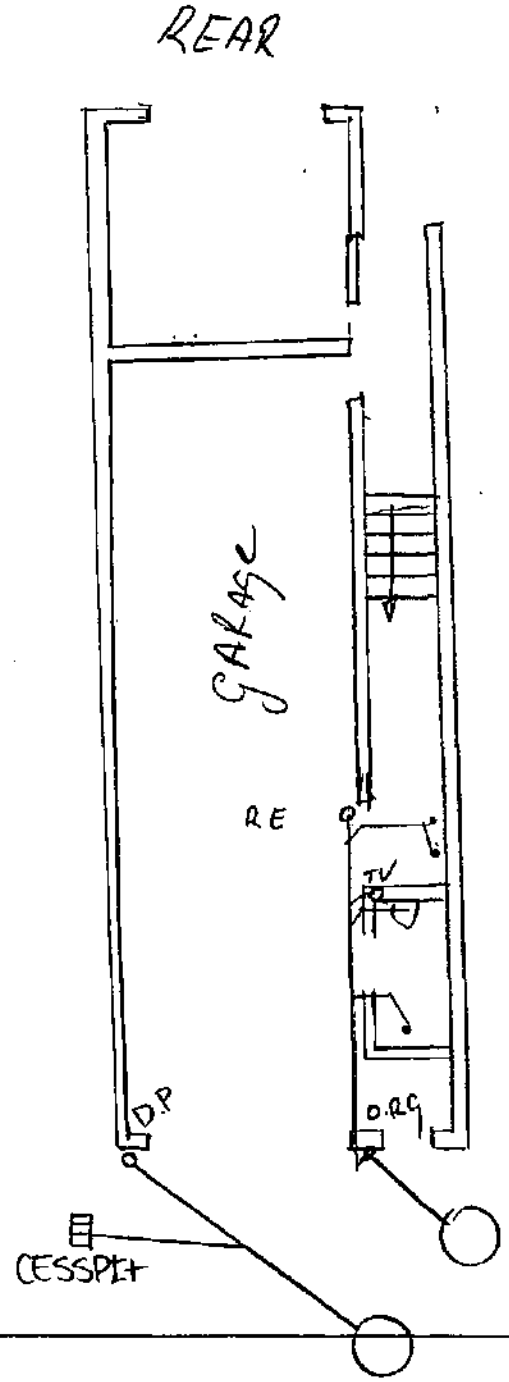

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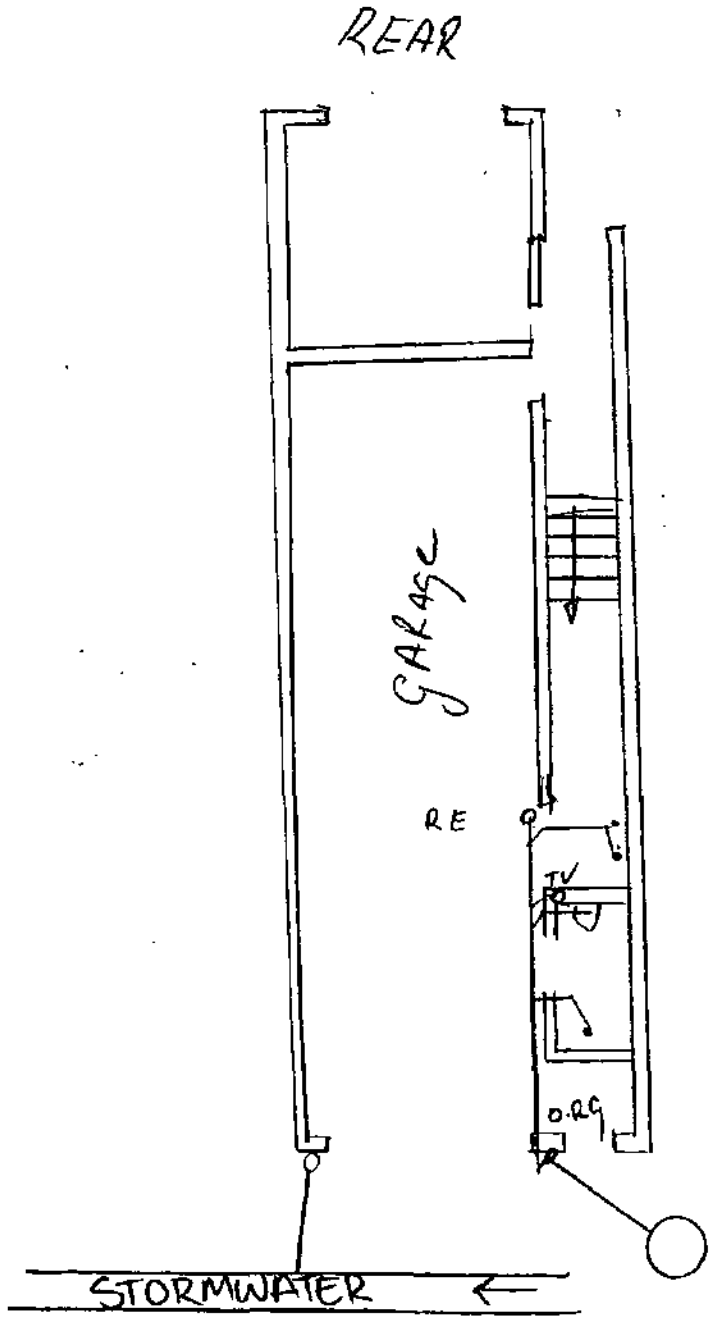

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Drainlayer: Nigel Bowker Signature: [signature] Reg No: 11251

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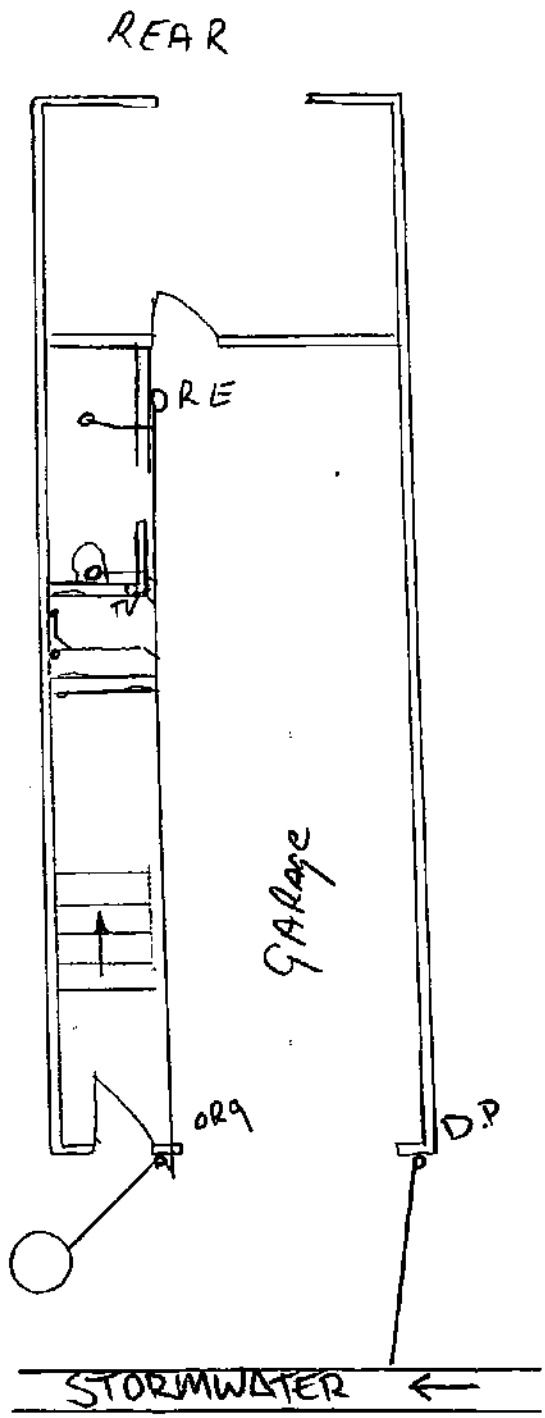

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Address: 9 46 Carlos Drive Flat Bush

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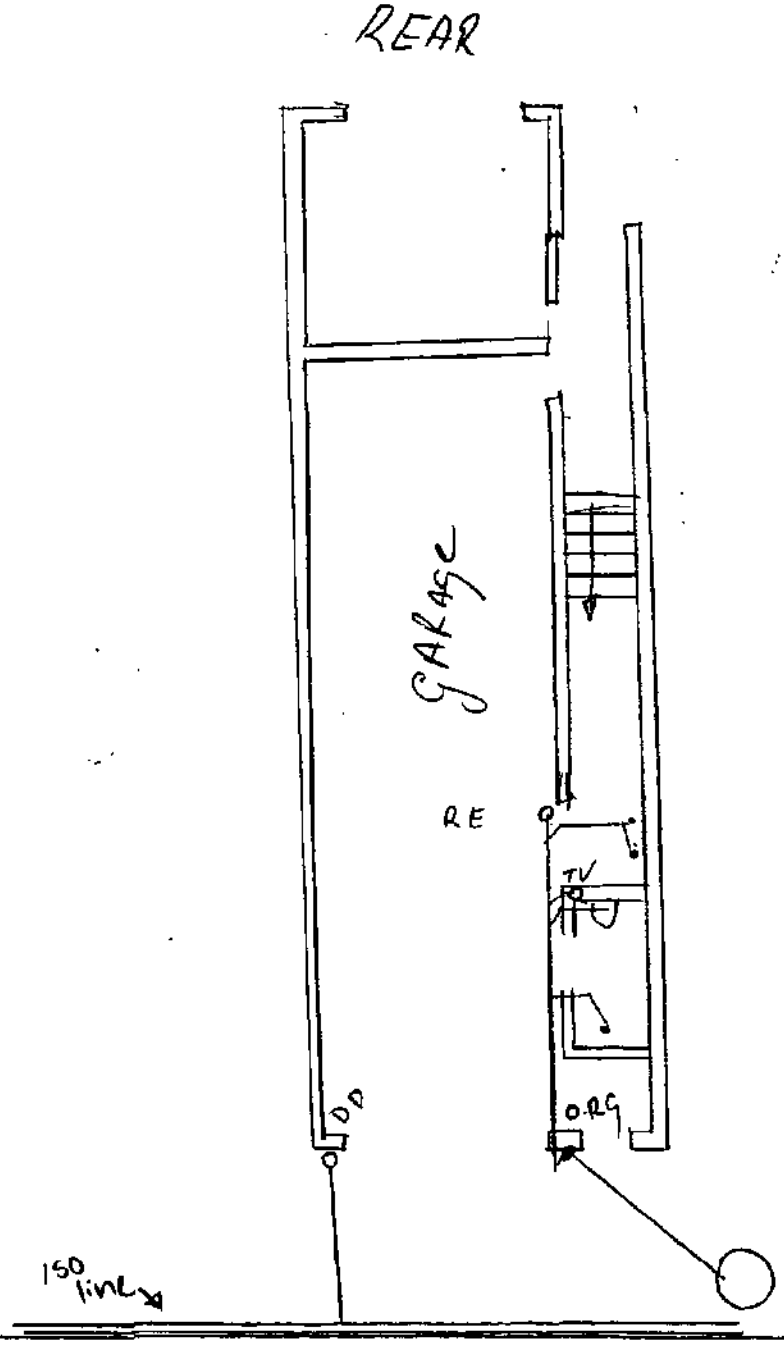

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Owner: Concepts 124 LTD **Date:** 24-9-07

Address: 10 46 Carlos Drive

Drainlayer: Nigel Bowker **Signature:** [signature] **Reg No:** 11251

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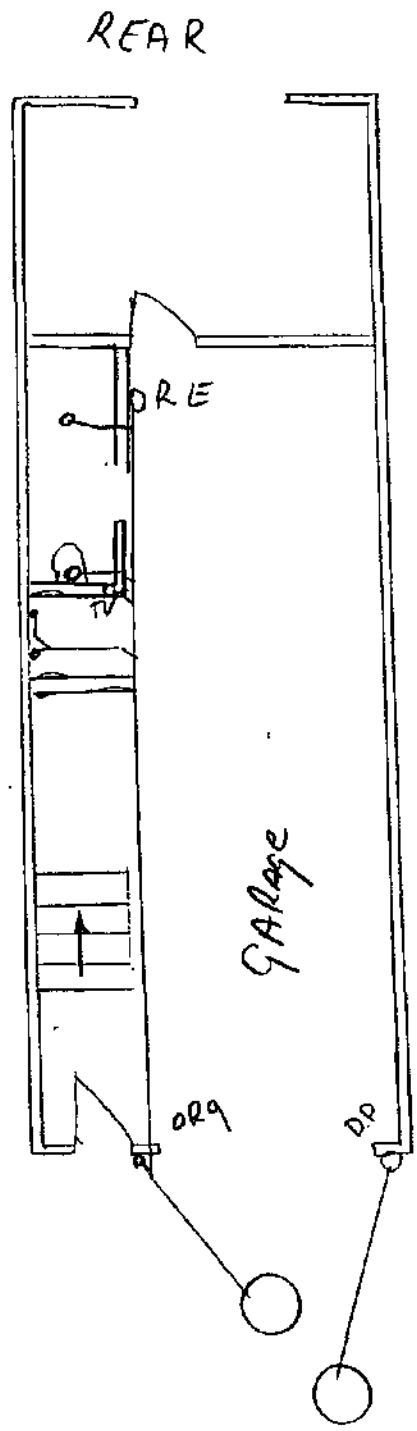

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CONSULTANTS

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Version: 1
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Lot: 10 **DP:** 352580 **Consent No:** 12596

Owner: Concepts 124 LTD **Date:** 24-9.07

Address: 11-46 Carlos Drive Flat Bush

Drainlayer: Nigel Bowker **Signature:** [signature] **Reg No:** 11351

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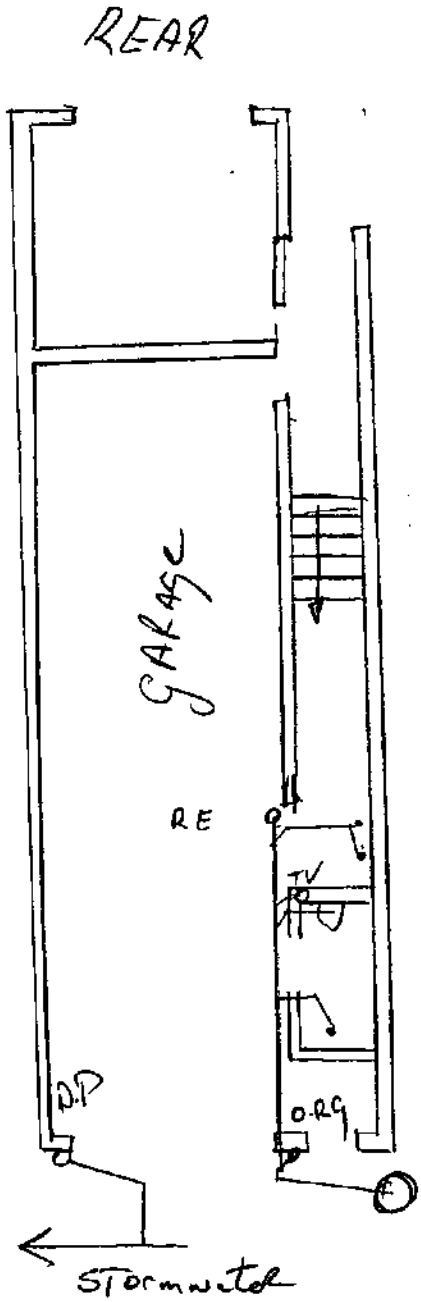

Manukau Building CONSULTANTS

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Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 DP: 352580 Consent No: 12596

Owner: Concepts 124 LTD Date: 24-9-07

Address: 12-16 Carlos Drive

Drainlayer: Nigel Bowker Signature: N Bowker Reg No: 11251

MBCL Use Only: Inspected by: Signature:

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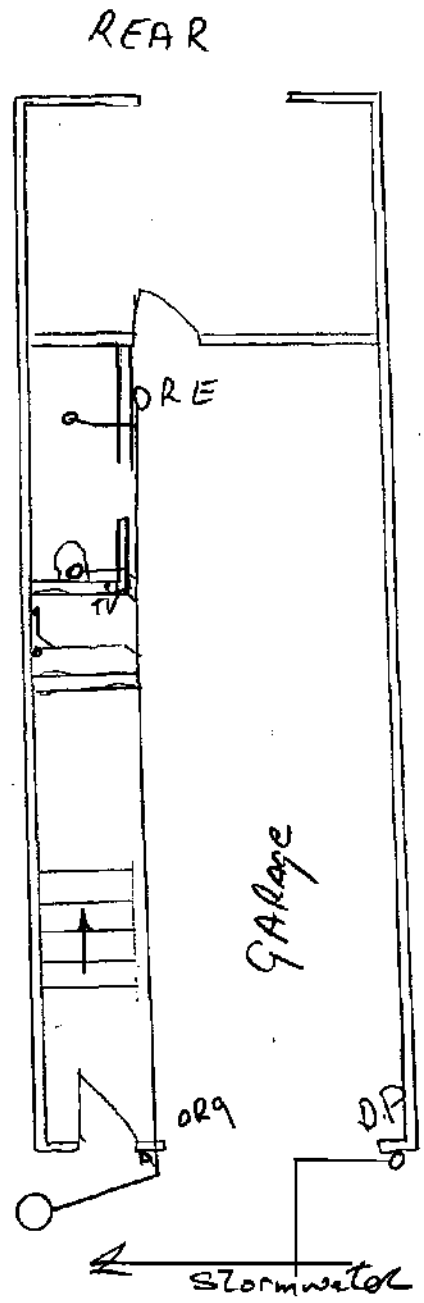

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Lot: 10 **DP:** 352580 **Consent No:** 12596

Owner: Concepts 124 LTD **Date:** 24-9-07

Address: 13 - 46 Carlos Drive Flat Bush

Drainlayer: Nigel Bowker **Signature:** [signature] **Reg No:** 11351

MBCL Use Only	Inspected by:	Signature:

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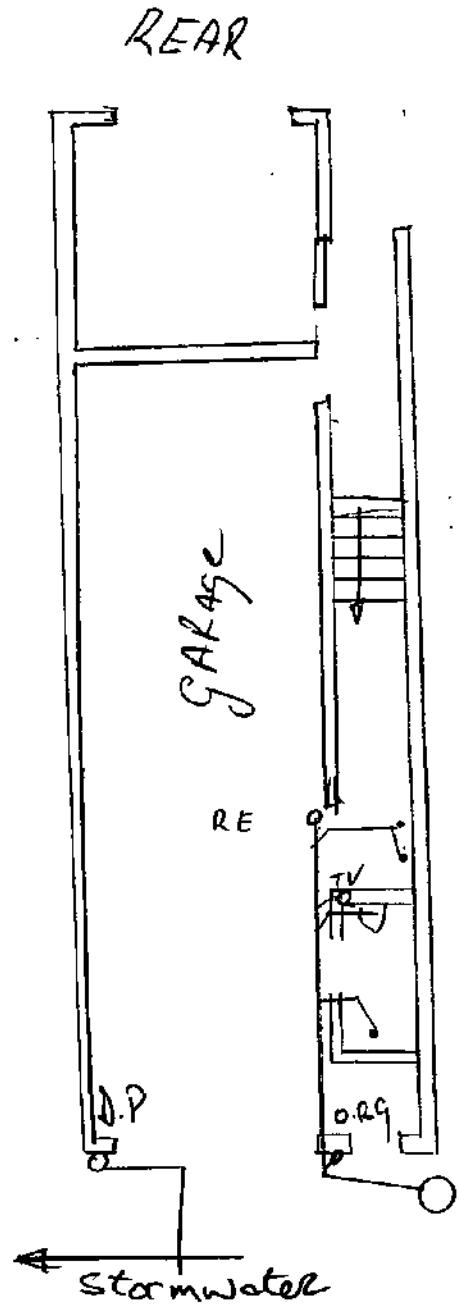

Manukau Building CONSULTANTS

FORM

As-Built Drainage Plan

T2-3024
Page 1 of 1
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Released: Jul-07

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Owner: Concepts 124 LtD Date: 24-9-07

Address: 14 - 46 Carlos Drive

Drainlayer: Nigel Bonker Signature: [signature] Reg No: 11251

MBCL Use Only	Inspected by:	Signature:

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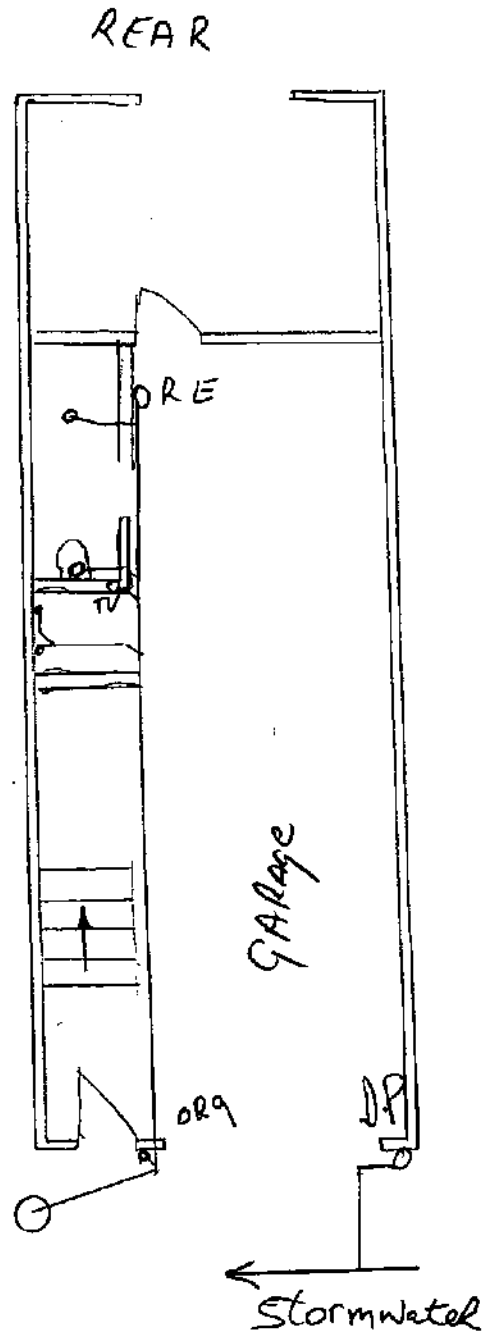

Manukau Building
CONSULTANTS

FORM

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Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 **DP:** 352580 **Consent No:** 12596

Owner: Concepts 124 LTD **Date:** 24-9.07

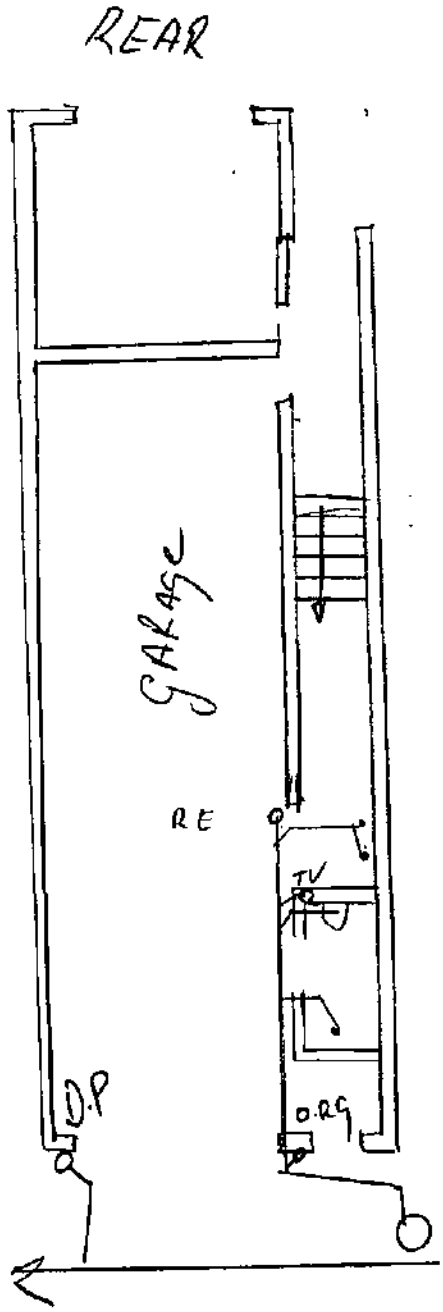
Address: 15 - 46 Carlos Drive Flat Bush

Drainlayer: Nigel Bowker **Signature:** [signature] **Reg No:** 11351

MBCL Use Only	Inspected by:	Signature:

NOTE: Please provide figured measurements from a defined point of reference in black ink

Plan:



Manukau Building CONSULTANTS

FORM

As-Built Drainage Plan

T2-3024
Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 DP: 352580 Consent No: 12596

Owner: Concepts 124 LTD Date: 24-9-07

Address: 16 - 46 Carlos Drive

Drainlayer: Nigel Bowker Signature: [signature] Reg No: 11251

MBCL Use Only	Inspected by:	Signature:

NOTE: Please provide figured measurements from a defined point of reference in black ink

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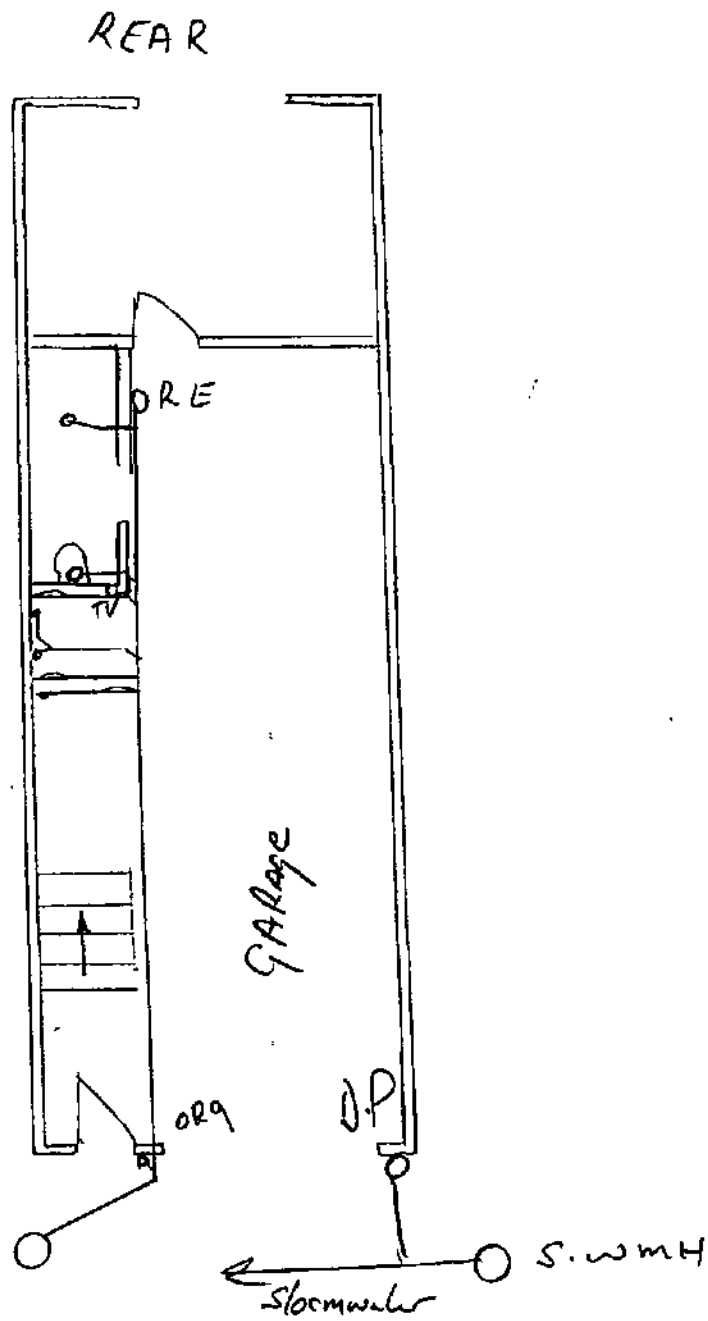


Manukau Building
CONSULTANTS

FORM

As-Built Drainage Plan

T2-3024
Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 DP: 352580 Consent No: 12596

Owner: Concepts 124 LtD Date: 24-9-07

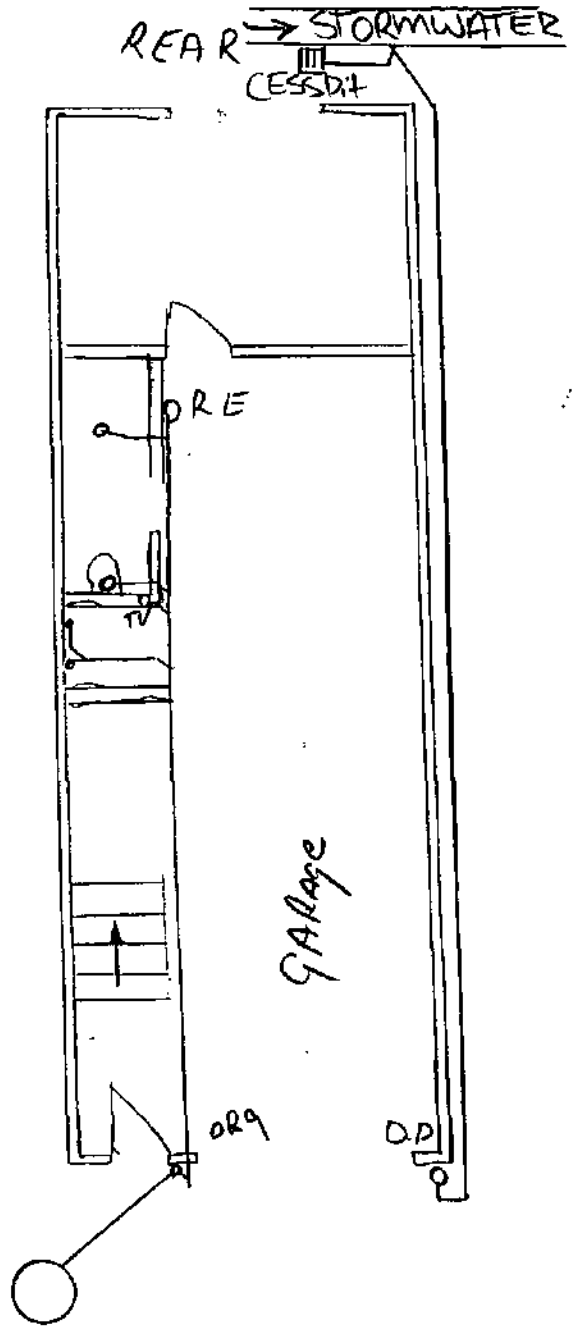
Address: 17 & 46 Carlos Drive

Drainlayer: Nigel Bowker Signature: N Bowker Reg No: 11251

MBCL Use Only	Inspected by:	Signature:

NOTE: Please provide figured measurements from a defined point of reference in black ink

Plan:



Manukau Building
CONSULTANTS

FORM

As-Built Drainage Plan

T2-3024
Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 DP: 352580 Consent No: 12596

Owner: Concepts 124 LTD Date: 24-9-07

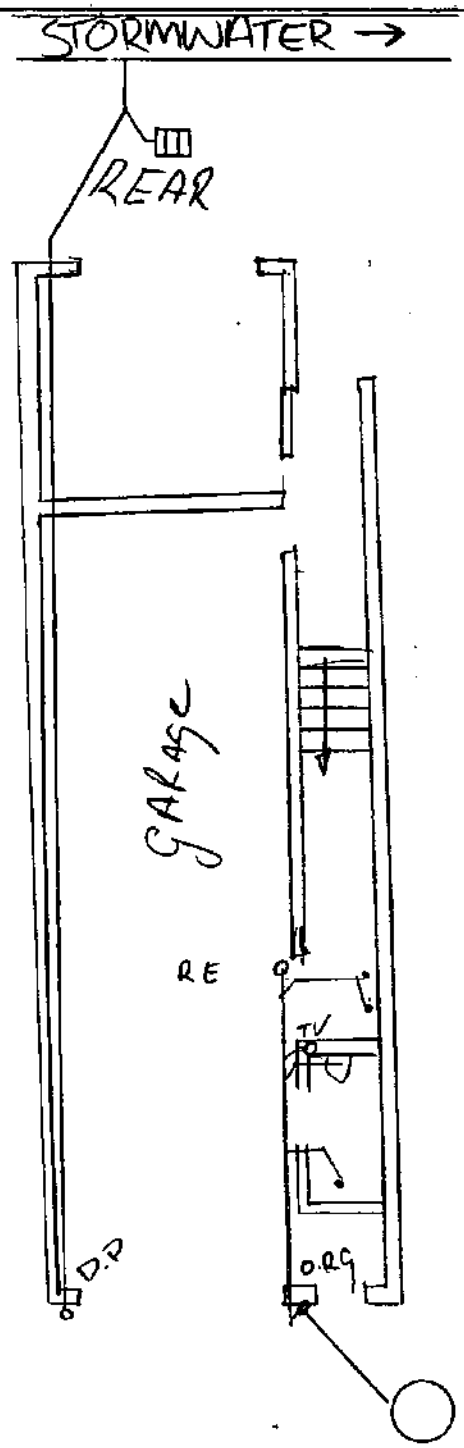
Address: 18 46 Carlos Drive Flat Bush

Drainlayer: Nigel Bowker Signature: [illegible] Reg No: 11351

MBCL Use Only	Inspected by:	Signature:

NOTE: Please provide figured measurements from a defined point of reference in black ink

Plan:



Manukau Building CONSULTANTS

FORM

As-Built Drainage Plan

T2-3024
Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 DP: 352580 Consent No: 12596

Owner: Concepts 124 LTD Date: 24-9-07

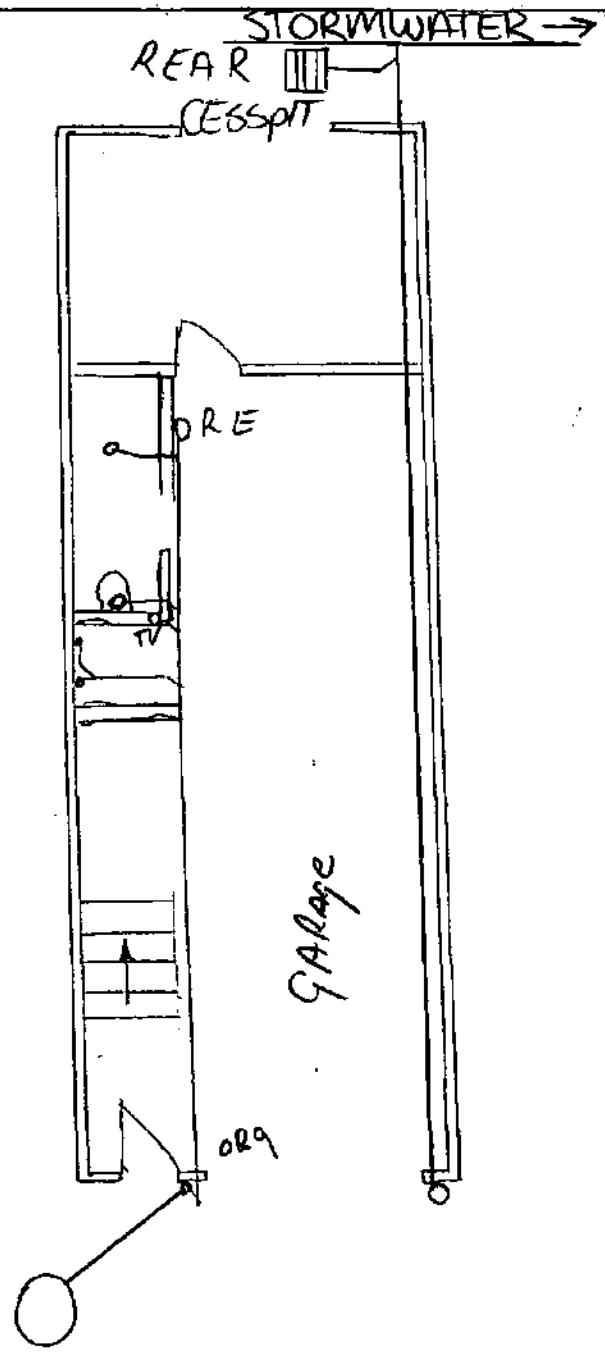
Address: 19 46 Carlos Drive

Drainlayer: Nigel Bowker Signature: [signature] Reg No: 11251

MBCL Use Only	Inspected by:	Signature:

NOTE: Please provide figured measurements from a defined point of reference in black ink

Plan:



Manukau Building
CONSULTANTS

FORM

As-Built Drainage Plan

T2-3024
Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 **DP:** 352580 **Consent No:** 12596

Owner: Concepts 124 LTD **Date:** 24-9.07

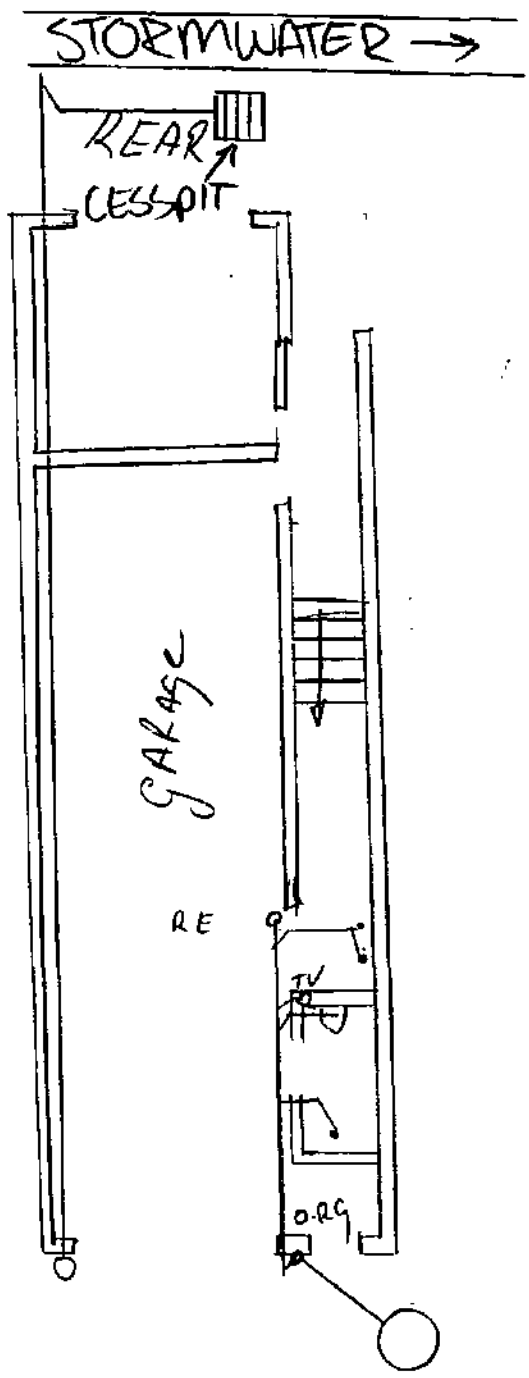
Address: 20 46 Carlos Drive Flat Bush

Drainlayer: Nigel Bowker **Signature:** [signature] **Reg No:** 11351

MBCL Use Only	Inspected by:	Signature:

NOTE: Please provide figured measurements from a defined point of reference in black ink

Plan:



Manukau Building
CONSULTANTS

FORM

As-Built Drainage Plan

T2-3024
Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 **DP:** 352580 **Consent No:** 12596

Owner: Concepts 124 LTD **Date:** 24-9-07

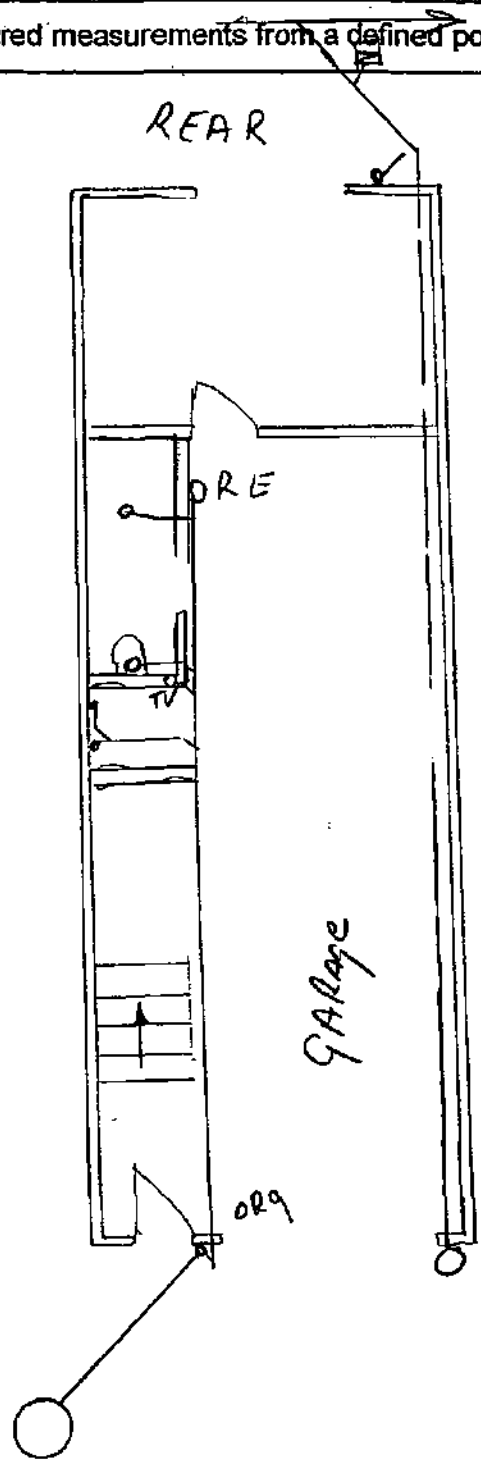
Address: 21-46 Carlos Drive

Drainlayer: Nigel Bowker **Signature:** [signature] **Reg No:** 11251

MBCL Use Only	Inspected by:	Signature:

NOTE: Please provide figured measurements from a defined point of reference in black ink

Plan:



Manukau Building
CONSULTANTS

FORM

As-Built Drainage Plan

T2-3024
Page 1 of 1
Version: 1
Released: Jul-07

Lot: 10 **DP:** 352580 **Consent No:** 12596

Owner: Concepts 124 LTD **Date:** 24-9.07

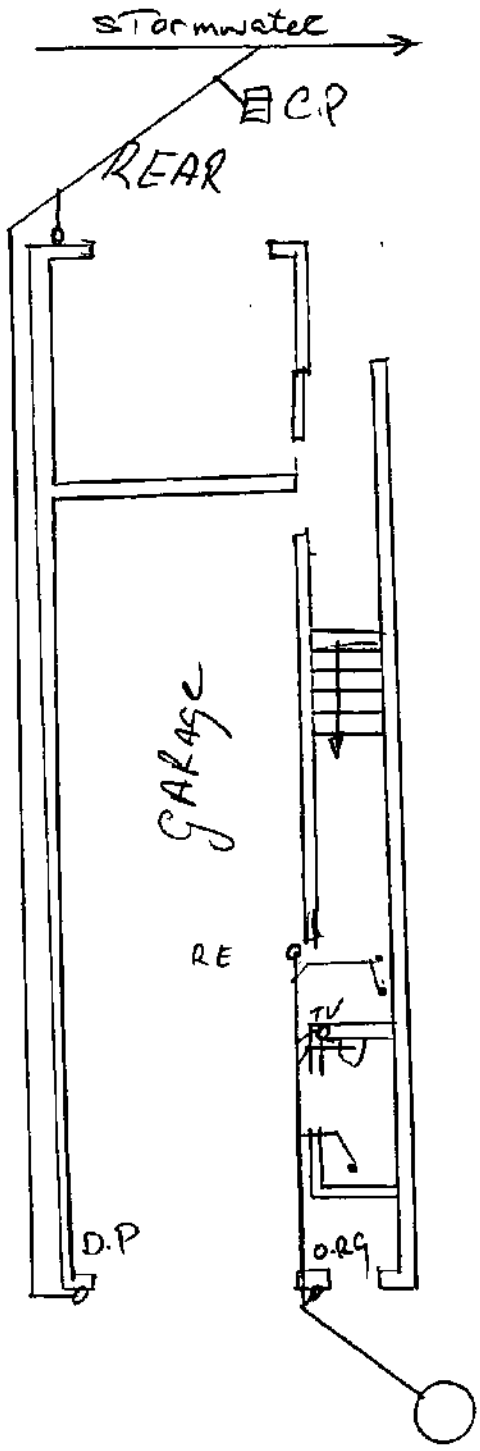
Address: 22 46 Carlos Drive Flat Bush

Drainlayer: Nigel Bowker **Signature:** [signature] **Reg No:** 11351

MBCL Use Only	Inspected by:	Signature:

NOTE: Please provide figured measurements from a defined point of reference in black ink

Plan:



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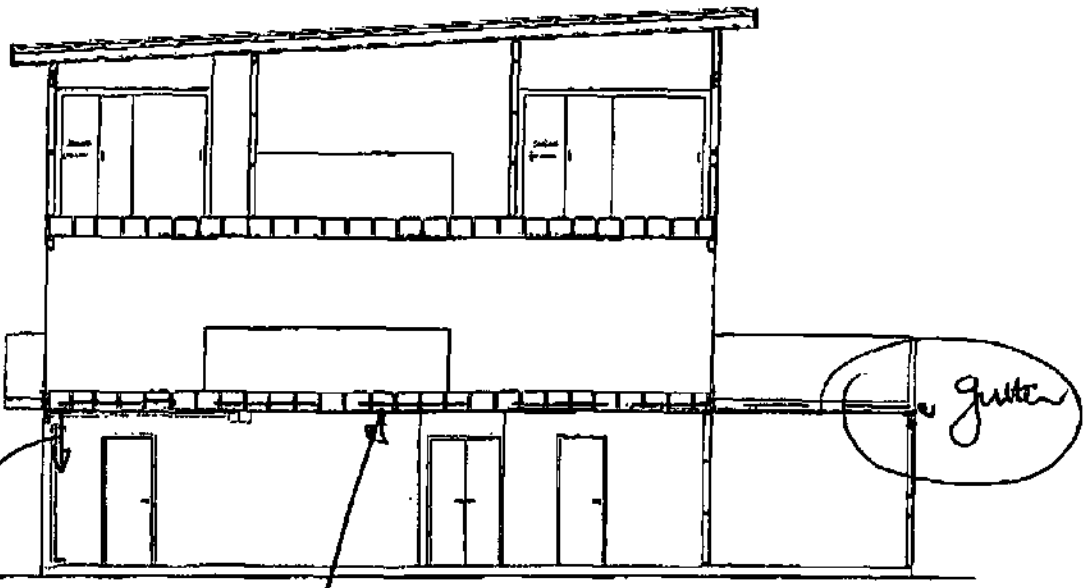
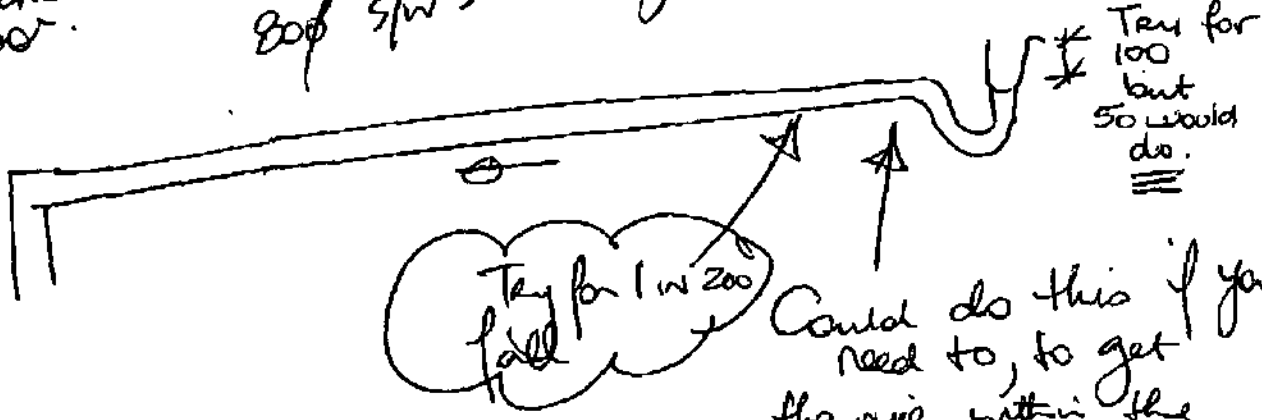


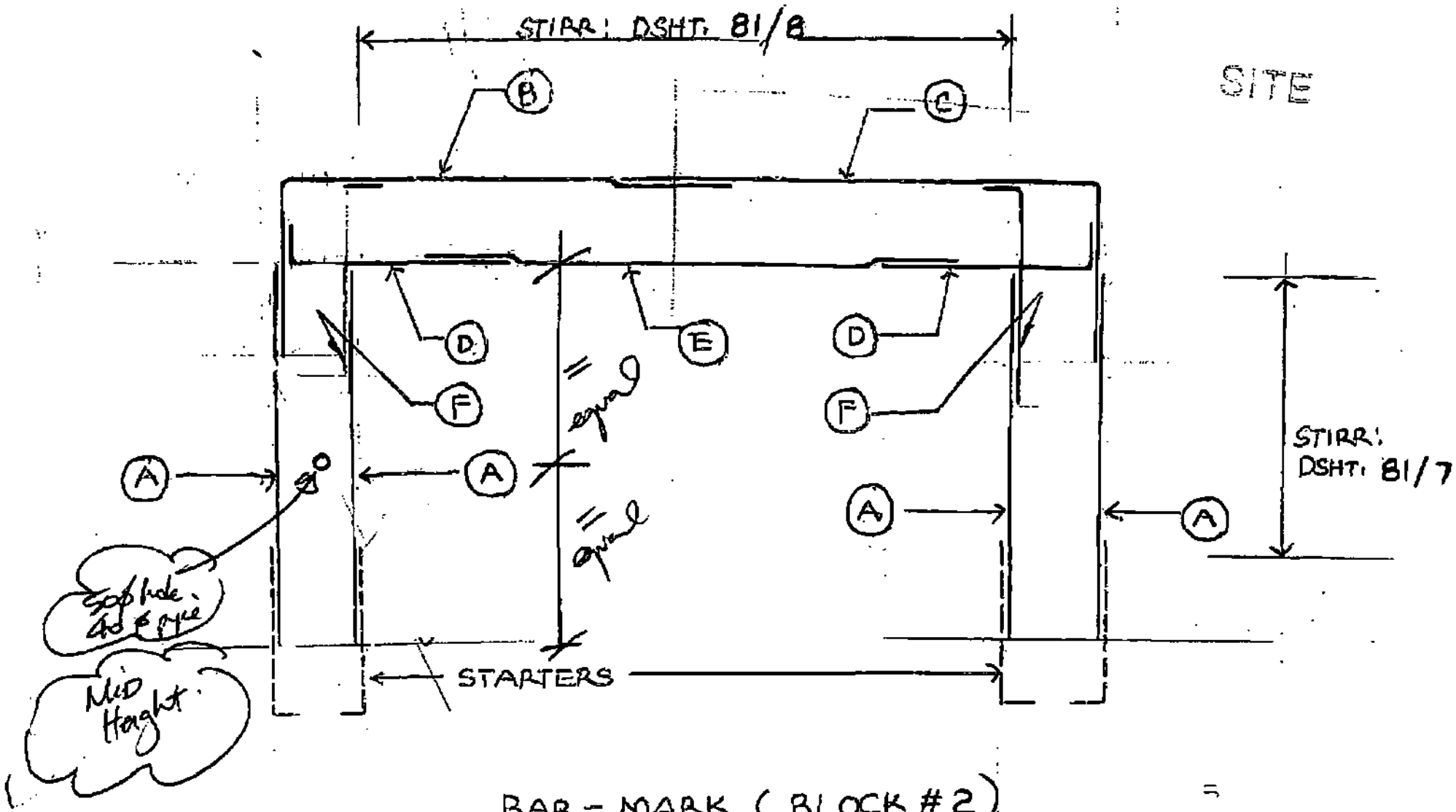
Section A-A
Scale 1:50

Come out by entrance door.

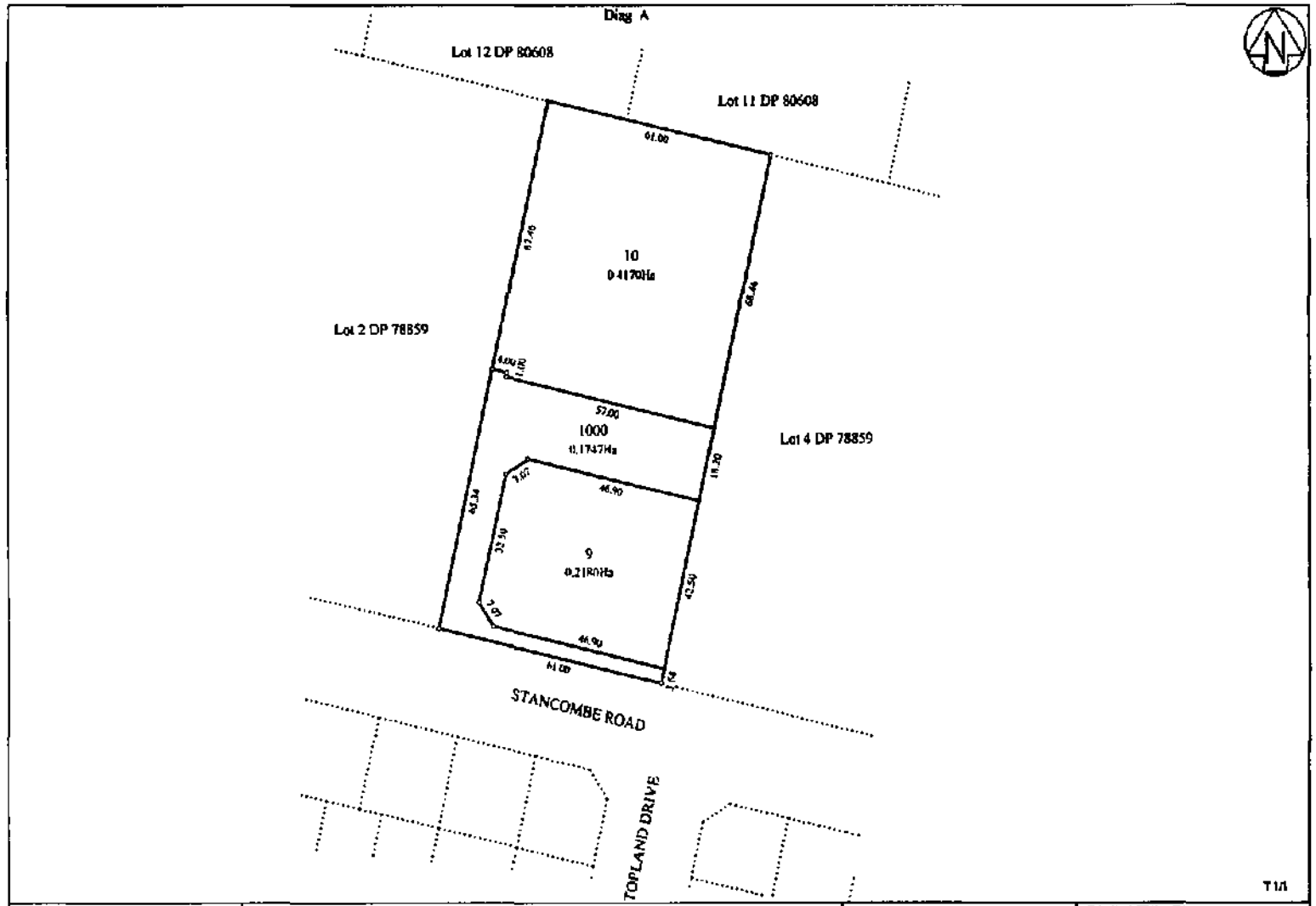
Roof S/W line through the floor



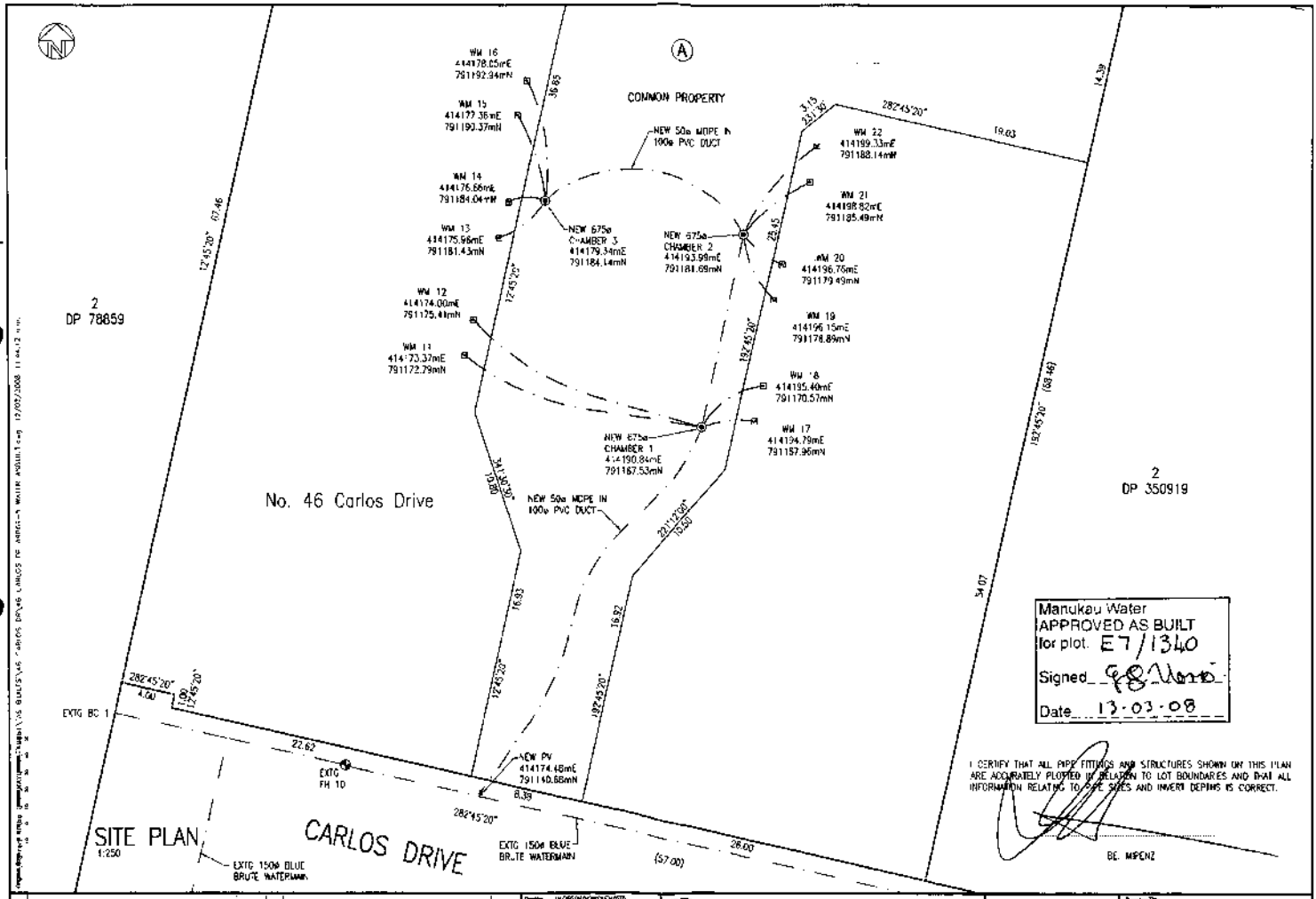
NOTE:- BEFORE YOU DRILL HOLES IN JOISTS I NEED TO KNOW WHERE THEY WILL GO.



BAR-MARK (BLOCK #2)



Land District North Auckland Digitally Generated Plan Generated on 05/05/2006 09:51am Page 2 of 2	LOTS 9, 10 & 1000 BEING A SUBDIVISION OF LOT 3 DP 78859	Surveyor Michael Stuart Lucas Firm: Eastdale Surveyors Ltd	Digital Title Plan DP 352580 Deposited on 18/04/2005


COMMON PROPERTY
A
WM 16
414178.05mE
791192.34mN
WM 15
414177.36mE
791190.37mN
WM 14
414176.66mE
791184.04mN
WM 13
414175.98mE
791181.43mN
WM 12
414174.00mE
791175.41mN
WM 11
414173.37mE
791172.79mN
WM 22
414189.33mE
791188.14mN
WM 21
414198.82mE
791185.49mN
WM 20
414196.76mE
791179.49mN
WM 19
414196.15mE
791178.89mN
WM 18
414195.40mE
791170.57mN
WM 17
414194.79mE
791167.96mN
NEW 50ø MOPE IN
100ø PVC DUCT
NEW 675ø
CHAMBER 3
414179.34mE
791184.14mN
NEW 675ø
CHAMBER 2
414193.99mE
791181.69mN
NEW 675ø
CHAMBER 1
414190.84mE
791167.53mN
NEW 50ø MOPE IN
100ø PVC DUCT
2
DP 78859
No. 46 Carlos Drive
2
DP 350919
EXTG BC 1
EXTG
FH 10
NEW PV
414174.48mE
791140.66mN
EXTG 150ø BLUE
BRUTE WATERMAIN
EXTG 150ø BLUE
BRUTE WATERMAIN
CARLOS DRIVE
SITE PLAN
1:250
Manukau Water
APPROVED AS BUILT
for plot. E7/1340
Signed
Date 13-03-08
I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LOT BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.
BE. MIPENZ
FINAL
'AS BUILT' WATERMAIN PLAN
FOR
CARLOS CONCEPTS LTD
46 CARLOS DRIVE
FLAT BUSH
AIREY CONSULTANTS LTD.
SITE PLAN
A9861/5
1

I CERTIFY THAT ALL PIPE FITTINGS AND STRUCTURES SHOWN ON THIS PLAN ARE ACCURATELY PLOTTED IN RELATION TO LO" BOUNDARIES AND THAT ALL INFORMATION RELATING TO PIPE SIZES AND INVERT DEPTHS IS CORRECT.

BE. NIPENZ

Manukau Water
APPROVED AS BUILT
for plot E7/1340
Signed G.B. Morris
Date 13-03-08

COMMON PROPERTY

10
DP 352580
No.46 Carlos Drive

2
DP 350919

2
DP 78859

NEW SWMH 27
NEW SWMH 29
NEW SSMH 30
EXTG SWMH 18
NEW SWMH 25
NEW SWMH 26
NEW SSMH 27
NEW SSMH 28
NEW SSMH 41
NEW SWMH 21
NEW SWMH 34
EXTG SSMH 26 (STAGE 1)
TO EXTG SSMH 12
TO EXTG SWMH 17
EXTG BC

31.8m OF NEW 150ø UPVC HWSG SW LINE
26.9m OF NEW 150ø UPVC HWSG SS LINE
11.7m OF NEW 225ø RCRRJ CLASS X SW LINE
13.9m OF NEW 150ø UPVC HWSG SS LINE
16.5m OF NEW 150ø UPVC HWSG SS LINE
27.1m OF NEW 150ø UPVC HWSG SS LINE
12.0m OF NEW 150ø UPVC HWSG SS LINE
15.8m OF NEW 150ø UPVC HWSG SW LINE
25.0m OF NEW 300ø RCRRJ CLASS X SW LINE
7.5m OF NEW 150ø UPVC HWSG SS LINE

EXTG 150ø UPVC HWSG SS LINE
EXTG 450ø SW LINE
EXTG 450ø SW LINE

NEW 675ø CHAMBER 1
NEW 675ø CHAMBER 2
NEW 675ø CHAMBER 3
NEW 675ø CHAMBER 4
NEW 675ø CHAMBER 5

NEW 150ø STUBS
NEW 150ø STUB
NEW 150ø UPVC HWSG PRIVATE SW LINES

NEW PVTE CP 21
NEW PVTE CP 22
NEW PVTE CP 23
NEW PVTE CP 24
NEW PRIVATE CP 25

NOTE:
1. ALL NEW STORMWATER CONNECTIONS ARE 100ø UPVC
2. ALL INVERT LEVELS OF NEW 100ø CONNECTIONS ARE INTO THE MANHOLE

TABLE OF CO-ORDINATES STORMWATER

SWMH 21	414210.59mE	791156.69mN	42.67
SWMH 25	414160.28mE	791168.34mN	41.51
SWMH 26	414172.72mE	791165.65mN	41.80
SWMH 27	414179.97mE	791197.71mN	42.58
SWMH 28	414134.04mE	791160.23mN	42.33
SWMH 34	414166.86mE	791140.32mN	42.04
PVTE CP21	414161.05mE	791167.96mN	41.32
PVTE CP22	414187.16mE	791170.50mN	41.97
PVTE CP23	414182.31mE	791171.51mN	41.95
PVTE CP24	414191.76mE	791161.06mN	42.24
PVTE CP25	414175.57mE	791142.43mN	41.23

TABLE OF CO-ORDINATES SEWER ASBUILT

EXTG SSMH 26	414159.01mE	791166.53mN	41.38
SSMH 27	414172.50mE	791163.01mN	41.84
SSMH 28	414190.57mE	791159.14mN	42.30
SSMH 29	414175.49mE	791190.29mN	42.51
SSMH 30	414196.52mE	791186.85mN	41.58
SSMH 41	414203.32mE	791156.46mN	42.74
675ø CHAMBER 1	414169.19mE	791162.54mE	41.59
675ø CHAMBER 2	414174.03mE	791174.34mN	42.11
675ø CHAMBER 3	414176.69mE	791182.92mN	42.33
675ø CHAMBER 4	414194.48mE	791169.84mN	42.54
675ø CHAMBER 5	414198.07mE	791178.59mN	42.56

SITE PLAN
1:250

CARLOS DRIVE

No.	Revision Details	Date	No.	Revision Details	Date

Design: R.ROGERS (HOMO-ENTECH)
Survey: EASTON P SURVEYORS LTD
Drawn: JOHN
Checked: BH
Date: MAR
Scale: 1:250
CAD Filename:
FINAL

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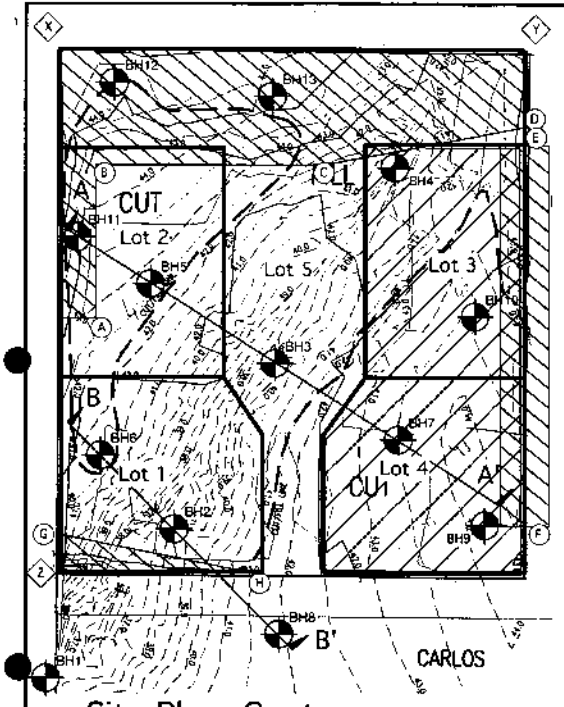
Job Title:
"AS BUILT DRAINAGE PLAN
FOR
CARLOS CONCEPTS LTD
46 CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD.
CONSULTING CIVIL & STRUCTURAL ENGINEERS
MANUKAU, AUCKLAND, NEW ZEALAND

Drawing Title:
SITE PLAN

File no: A9851/5
Rev.: -
Dwg. No.: 1



Site Plan- Contours

KEY

BH1 Hand augured borehole

Cross section

Specific Design Zone -Slopes steeper than 1V4;H.

Specific Design Zone -Soft Subsoils.

Specific Design Zone Triangulation. (m)

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
X	35	16	38	62.5	63	67.5	63.5	73.5
Y	67	58	31	10	12.5	62.5	88	77
Z	34.5	54.5	65	65	83.5	61.5	5.0	25

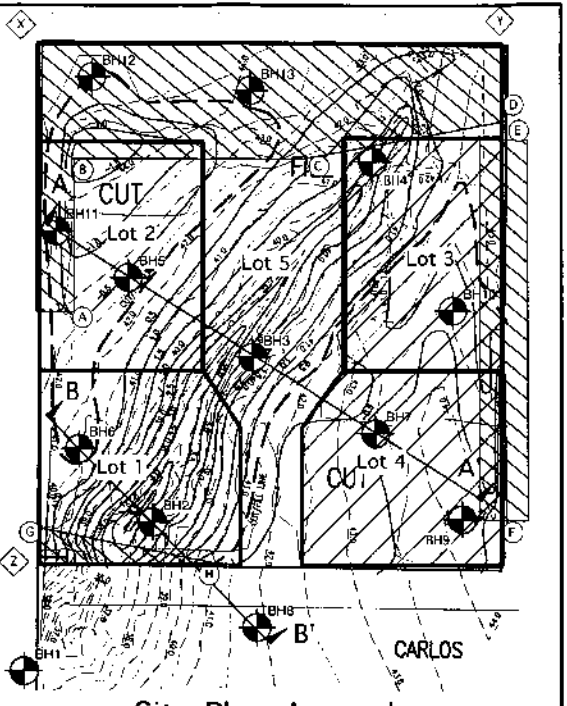
LEGEND

EXISTING CONTOURS

"AS BUILT" CONTOURS

ISOPACH

EXTENT OF CUT/FILL



Site Plan- Isopachs

Pre-Earthworks Borehole Locations, Proposed Subdivisional Scheme Plan and Specific Design Zone.

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

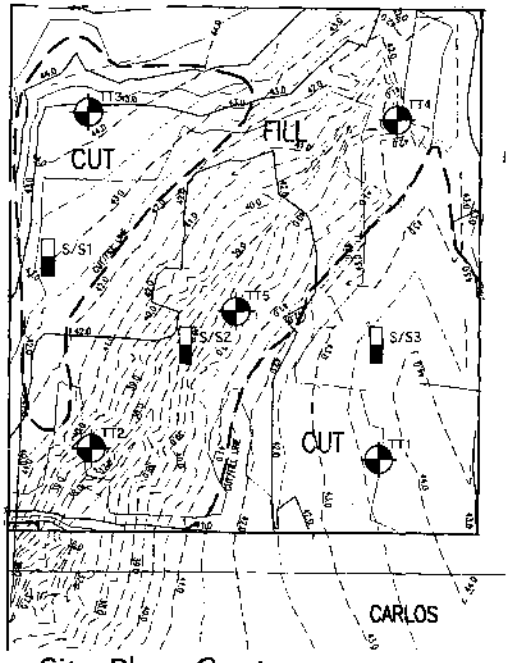
GEOTEK SERVICES LIMITED

One Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-3251 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION: North of Carlos Drive, 124 Stancombe Road Flatbush.

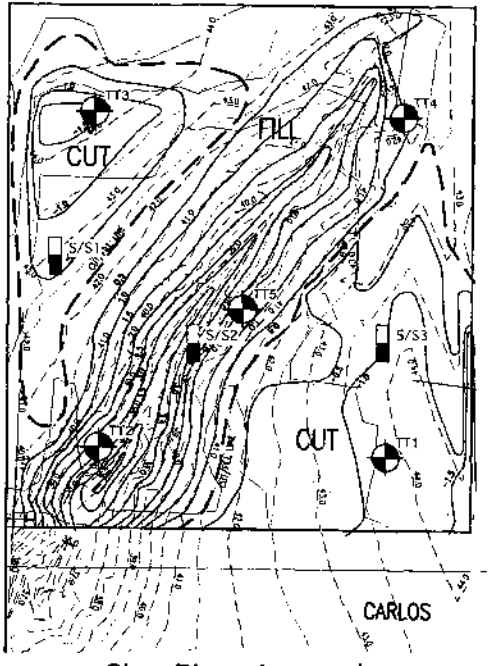
SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	1 OF 3



Site Plan- Contours

LEGEND

S/S1	Location of Shrink-Swell tests.
TT1	Depth of topsoil = 0.1metres
TT2	Depth of topsoil = 0.1metres
TT3	Depth of topsoil = 0.1metres
TT4	Depth of topsoil = 0.1metres
TT5	Depth of topsoil = 0.1metres



Site Plan- Isopachs

Post-Earthworks Topsoil Depths and Shrink-Swell Samples Location Plan

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

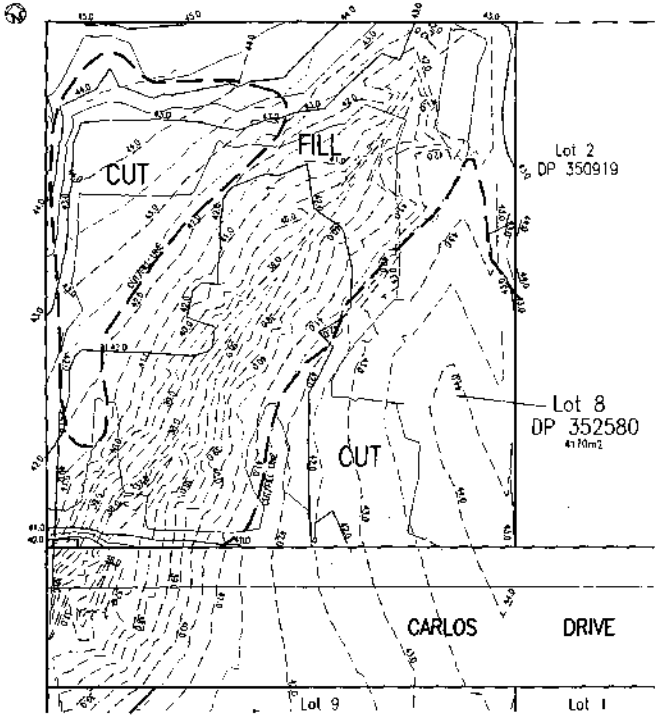
GEOTEK SERVICES LIMITED

Cnr Moore & Vincent Streets, PO Box 39-015, Ilowick, Auckland
Phone (64-9) 535-9834 Facsimile (64-9) 535-7243 E mail enquiries@geotek.co.nz

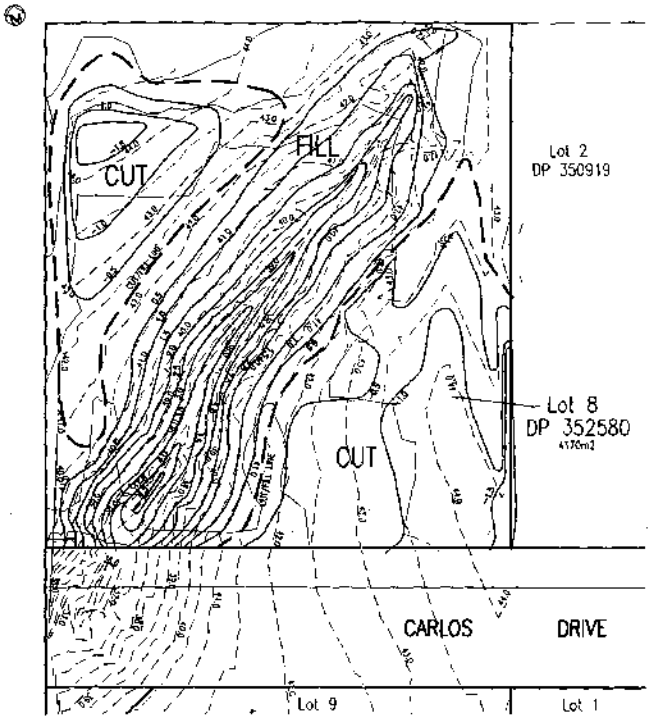
37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	3 OF 3



SITE PLAN–FINAL CONTOURS
1:500



SITE PLAN–ISOPACHS
1:500

LEGEND

- EXISTING CONTOURS
- 'AS BUILT' CONTOURS
- ISOPACH
- EXTENT OF CUT/FILL

No.	Revision Details	Date	No.	Revision Details	Date

FINAL

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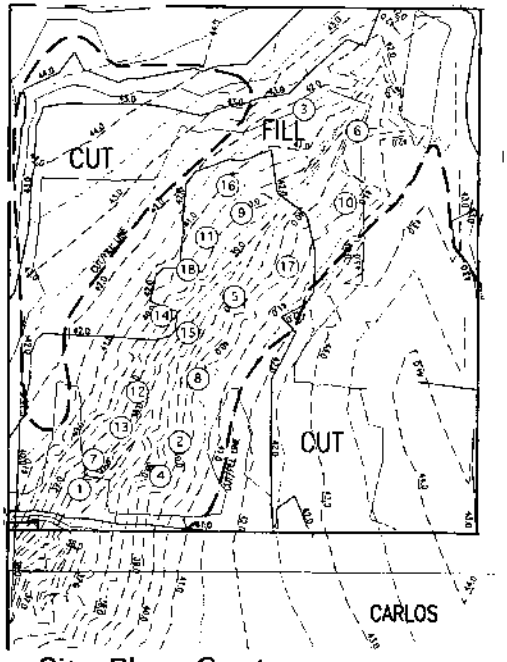
Title
'AS BUILT' CONTOUR PLAN
FOR
CARLOS CONCEPTS
124 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

Drawing Title
SITE PLAN

File No. A9861/5 | Rev. - | Dwg. No. 1 - 1

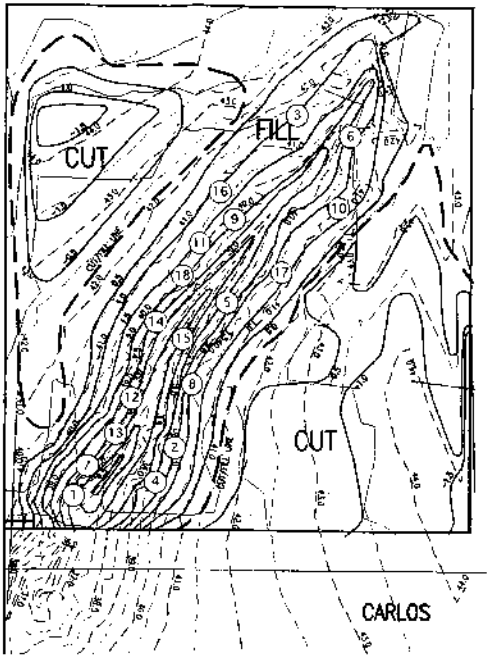


Site Plan- Contours

LEGEND

(1) Location of Compaction Test.

	Northing	Easting	RL
1	6469568	2681626	37.985
2	6469575	2681638	38.850
3	6469603	2681668	41.125
4	6469565	2681629	38.195
5	6469590	2681642	39.010
6	6469596	2681661	39.960
7	6469552	2681612	38.350
8	6469569	2681632	39.005
9	6469599	2681657	40.140
10	6469606	2681668	40.950
11	6469590	2681654	40.335
12	6469555	2681628	39.230
13	6469563	2681616	38.460
14	6469581	2681637	39.890
15	6469576	2681636	FL
16	6469586	2681638	FL
17	6469599	2681641	SGL
18	6469596	2681636	SGL



Site Plan- Isopachs

Location of Earthworks Tests.

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

GEOTEK SERVICES LIMITED
Cnr Moore & Vincent Streets, PO Box 39 015, Howick, Auckland
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Phone (64-9) 296-7741 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	2 OF 3

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City 2240
New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

COPY

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC018347

Invoice Date: 25 Jan 2008
Customer No: 0227616
Charge Ref: RC32828
Order No:

Concepts 124 Ltd
PO Box 58395
Greenmount
Auckland 1730

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5877*

Description	Quantity	Unit Price	Amount
PRC32828 46 Carlos Drive, BC			
Residential DEVCON04 LGA	22.00 Each	5,599.00	123,178.00

32828

Development Contribution Fees - 1176/46

Sub Total $123,178.00
GST $15,397.25

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	~~20 Feb 2008~~	AMOUNT DUE	~~$138,575.25~~

Te Kaunihera o
MANUKAU
City Council

Concepts 124 Ltd
PO Box 58395
Greenmount
Auckland 1730

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY 2240. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE.

Customer No: 0227616
Invoice No: RC018347
Charge Ref: RC32828

DUE DATE	20 Feb 2008
AMOUNT DUE	~~$138,575.25~~

Please note any change of postal address below:

Telephone:

AMOUNT PAID $ 138,575.25

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

19/06/2008 13:14 Trn 444905
Cashier MSCDTT

SUNDRY INVOICES
Invoice Number RC018347 $138575.25

Subtotal $138575.25
Total $138575.25

Payer: WESTPAC BANK CHQ
Received CHEQUE $138575.25
Cheque # 706758
Change $0.00

All charges are GST inclusive. Please
retain this receipt for your records

138,575.25

From the Directorate of:
Environment

Te Kaunihera o
MANUKAU
City Council

26 March 2010

Aireys Consultants
PO Box 39101
Howick
Manukau 2145

Attention: Ian Gibson
Your Reference: Carlos Concepts Limited (in liquidation) - Bond Release

Dear Ian

Proposal: P27046 SP8840
Site: 124 Stancombe Road, Clevedon
Applicant: Carlos Concepts Limited

Council is satisfied that the conditions contained in the bond valued at $43,761.00 have now been completed with the exception of planting a total of 14 street trees for which an amount of $3307.50 will be deducted from the bond amount and transferred to Manukau Parks to undertake the planting on behalf of the applicant.

The cost of processing this bond refund will be deducted from the bond money and the balance will be refunded shortly to the bank account Deloitte Recovery Trust – 03 0252 0602067 00. If this account number is incorrect, please inform us immediately.

Please direct all enquiries to Nicole Parker, the Compliance Officer, on 262 8900 ext 8275 and quote reference number P27046 Bond Refund.

Yours faithfully

Nicole Parker
Resource Compliance Officer

Nicole Parker

From: Nicole Parker
Sent: Friday, 26 March 2010 1:12 p.m.
To: Resource Consent Authority
Subject: (Bond Refund) Please create CREDIT invoice for RC and please create Compliance invoice and put on HOLD

Hey Girls,

Please **credit $40,453.50** invoice for Bond invoice number: **RC008738**

$3307.50 is to remain on the Bond invoice as it is to be transferred to Parks for Street Tree planting to be undertaken

There will be a compliance invoice raised to go with the Bond release documents over to FTU once it has been to Benedict for approval (will use the invoice request sheet for that invoice)

Proposal: P27046 SP8840
Site Address: 124 Stancombe Road, Flat Bush
Customer name: Carlos Concepts Limited
Customer address: PO Box 27029, Wellington
Customer Number: 0078476

Please reply to this email with the credited invoice to go with the bond release documentation :)

Kind Regards

Nicole Parker
Resource Compliance Officer
Resource Consents and Compliance

Environmental Directorate
T 09 262 8900 X8275 | F 09 262 5163
E nicole.parker@manukau.govt.nz

Manukau City Council | www.manukau.govt.nz

Please consider the environment before printing this email.

Nicole Parker

From: Nicole Parker
Sent: Monday, 29 March 2010 10:08 a.m.
To: Resource Consent Authority
Subject: RE: (Bond Refund) Please create CREDIT invoice for RC and please create Compliance invoice and put on HOLD

Hi Anau,

sorry I didn't mean to have an invoice put on hold for the processing fees (this was the old process and I hadn't updated my template...we now just do the invoice request sheet instead of putting invoice on hold).

The person responsible for the charges of the bond release is **Deloitte as the liquidators of Carlos Concepts Limited**. I have put their details below as Deloitte is where the bond money is being refunded to not Carlos Concepts Limited, **please amend the invoice on hold to**:

Deloitte
PO Box 1990
Wellington 6140

Please check customer number for Deloitte there may be one in the system, if not you need to create one please.

Thank you and sorry for the mix up, I have now updated my template :)

Kind Regards

Nicole Parker

Resource Compliance Officer
Resource Consents and Compliance

Environmental Directorate
T 09 262 8900 X8275 | F 09 262 5163
E nicole.parker@manukau.govt.nz

Manukau City Council | www.manukau.govt.nz

Please consider the environment before printing this email.

From: Resource Consent Authority
Sent: Monday, 29 March 2010 9:56 a.m.
To: Nicole Parker
Subject: RE: (Bond Refund) Please create CREDIT invoice for RC and please create Compliance invoice and put on HOLD

Hi,

Bond Invoice RC008738 has been credited RC008738CR

Bond Invoice RC025252 created for $3307.50 (payment of this amount from RC008738 will be transferred to this invoice)

New invoice on Hold for Bond processing fees RC025253

Naku noa na | Regards

Anau Tutai

Resource Consents & Compliance Administrator| Environment Directorate |Manukau City Council

T 9 262 8900 x 5877 |F 9 262 5168

anau.tutai@manukau.govt.nz | www.manukau.govt.nz

From: Resource Consent Authority
Sent: Friday, 26 March 2010 2:56 p.m.
To: Anau Tutai
Subject: FW: (Bond Refund) Please create CREDIT invoice for RC and please create Compliance invoice and put on HOLD

Naku noa na | Regards

Anau Tutai

Resource Consents & Compliance Administrator| Environment Directorate |Manukau City Council

T 9 262 8900 x 5877 |F 9 262 5168

anau.tutai@manukau.govt.nz | www.manukau.govt.nz

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Proposal: P27046 SP8840
Site Address: 124 Stancombe Road, Flat Bush
Customer name: Carlos Concepts Limited
Customer address: PO Box 27029, Wellington
Customer Number: 0078476

Please reply to this email with the credited invoice to go with the bond release documentation :)

Kind Regards

Nicole Parker

Resource Compliance Officer
Resource Consents and Compliance

Environmental Directorate

T 09 262 8900 X8275 | F 09 262 5163
E nicole.parker@manukau.govt.nz

Manukau City Council | www.manukau.govt.nz

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Nicole Parker

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Anau Tutai

Resource Consents & Compliance Administrator| Environment Directorate |Manukau City Council

T 9 262 8900 x 5877 |F 9 262 5168

anau.tutai@manukau.govt.nz | www.manukau.govt.nz

From: Resource Consent Authority
Sent: Friday, 26 March 2010 2:56 p.m.
To: Anau Tutai
Subject: FW: (Bond Refund) Please create CREDIT invoice for RC and please create Compliance invoice and put on HOLD

Naku noa na | Regards

Anau Tutai

Resource Consents & Compliance Administrator| Environment Directorate |Manukau City Council

T 9 262 8900 x 5877 |F 9 262 5168

anau.tutai@manukau.govt.nz | www.manukau.govt.nz

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Proposal: P27046 SP8840
Site Address: 124 Stancombe Road, Flat Bush
Customer name: Carlos Concepts Limited
Customer address: PO Box 27029, Wellington
Customer Number: 0078476

Please reply to this email with the credited invoice to go with the bond release documentation :)

Kind Regards

Nicole Parker

Resource Compliance Officer
Resource Consents and Compliance

Environmental Directorate

T 09 262 8900 X8275 | F 09 262 5163
E nicole.parker@manukau.govt.nz

Manukau City Council | www.manukau.govt.nz

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Proposal: P27046 SP8840
Site Address: 124 Stancombe Road, Flat Bush
Customer name: Carlos Concepts Limited
Customer address: PO Box 27029, Wellington
Customer Number: 0078476

Please reply to this email with the credited invoice to go with the bond release documentation :)

Kind Regards

Nicole Parker
Resource Compliance Officer
Resource Consents and Compliance

Environmental Directorate
T 09 262 8900 X8275 | F 09 262 5163
E nicole.parker@manukau.govt.nz

Manukau City Council | www.manukau.govt.nz

Please consider the environment before printing this email.

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC008738

Invoice Date: 07 Dec 2005
Customer No: 0078476
Charge Ref: PRC27046
Order No:

Carlos Concepts Limited
PO Box 27029
Wellington 6015

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone 262 8900 ext. 5877

COPY

Description	Quantity	Unit Price	Amount
PRC27046 124 Stancombe Rd, Clevedon			
Bonds/Refundable Deposit	1.00 Each	43,761.00	43,761.00
Bond 1 $18761.00 & Bond 2 $25,000.00			

P
40K

SP 8840 - Refundable bonds

Sub Total	$43,761.00
GST	$0.00

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Jan 2006	AMOUNT DUE	$43,761.00

Carlos Concepts Limited
PO Box 27029
Wellington 6015

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Customer No: 0078476
Invoice No: RC008738
Charge Ref: PRC27046

DUE DATE	20 Jan 2006
AMOUNT DUE	$43,761.00

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

From the Directorate of:
Environment

Te Kaunihera o
MANUKAU
City Council

Bond Release Authorisation Memo

Date: 24 MARCH 2010

Subject: **Application for Release of Bond**

Bond Reference: MINOR WORKS BOND

Proposal: 27046

Site: 124 STANCOMBE ROAD

Applicant: DELOITTE RECOVERY TRUST ALLOWST

Bond Amount: (1) $18,761.00 (2) $25,000.00 LESS $3307-50 for TREE'S & PLANTING FEE'S

[A] FULL RELEASE

I have checked the uncompleted works covered by the bond for the above project and can confirm that they have been completed to the satisfaction of Council. Accordingly the bond held by the Council can now be discharged. The total bond of $ 43761.00 can be refunded to the Owner. LESS

Resource Compliance Engineer / Officer _____ **Date** 24/03/10

[B] PARTIAL RELEASE

I have checked the uncompleted works covered by the bond for the above subdivision and can confirm that they have been **partially** completed to the satisfaction of Council. The works that have been completed are:

Description of Works _____

_____

The bond agreement shall remain in place until all the works detailed in the Bond have been completed to the satisfaction of the Council. The remaining uncompleted works are to remain bonded for at the cost of $ _____.

Resource Compliance Engineer / Officer _____ **Date** _____

Bond Amount	Completed Works Refund Amount	Compliance Fees	Balance to Refund to Owner	Bond Balance

Private Bag 76917 Manukau City 2104 New Zealand Ph +64 9 263 7100 www.manukau.govt.nz

Knowledge and Understanding Maatauranga me te mohiotanga Achievement Whaainga ki toona tutukitanga Accountability Whakatau tika

Deloitte.

Deloitte
Deloitte House
10 Brandon Street
Wellington 6011

PO Box 1990
Wellington 6140
New Zealand

Tel: +64 (0) 4 472 1677
Fax: +64 (0) 4 472 6023
www.deloitte.co.nz

17 March 2010

Ross Brakebush
Environmental Directorate
Manukau City Council
Private Bag 76917
Mamukau City
Manukau, 2241

Sent by Email: ross.brakebush@manukau.govt.nz

Dear Ross

Carlos Concepts Limited (In Liquidation) ("the Company")
File Reference: SP8840
Site: 124 Stancombe Road, Manukau

On 17 August 2009 David Vance and Barry Jordan were appointed Liquidators of the Company by the High Court at Wellington.

The director of the Company advised that there were two bonds held with the Manukau City Council ("the Council"). Fion Tang of the Council confirmed that there were two bonds held and we advised, in writing, that the Liquidators are the only party authorised to request a release of the bonds.

We arranged with Ian Gibson of Airey Consultants Limited to have the bond conditions completed. Ian has assisted us with the completion of the Application for Bond Release and has certified the works completed.

We have enclosed our Application for Bond Release, Ian Gibson's correspondence, certification and site plans, copies of the two bonds held by the Council and a bank deposit slip. From the Company records provided to us, we do not have Receipt of Payment or a Copy of Refundable Deposit Sheet as required on your Application for Bond Release. Please advise if this is an issue that may prevent the release of Company bonds held.

We understand that Condition 20 under Minor Works Bond 1 is to be satisfied by payment to the Council for the planting and maintenance of street trees ($2,362.50 incl. GST). We also are aware that fees are to be paid to the Council from the bonds held. Upon payment of the bonds can you please provide the Liquidators with a breakdown of costs paid.

Thank you for your assistance. If you require any further information please contact Michael Watson.

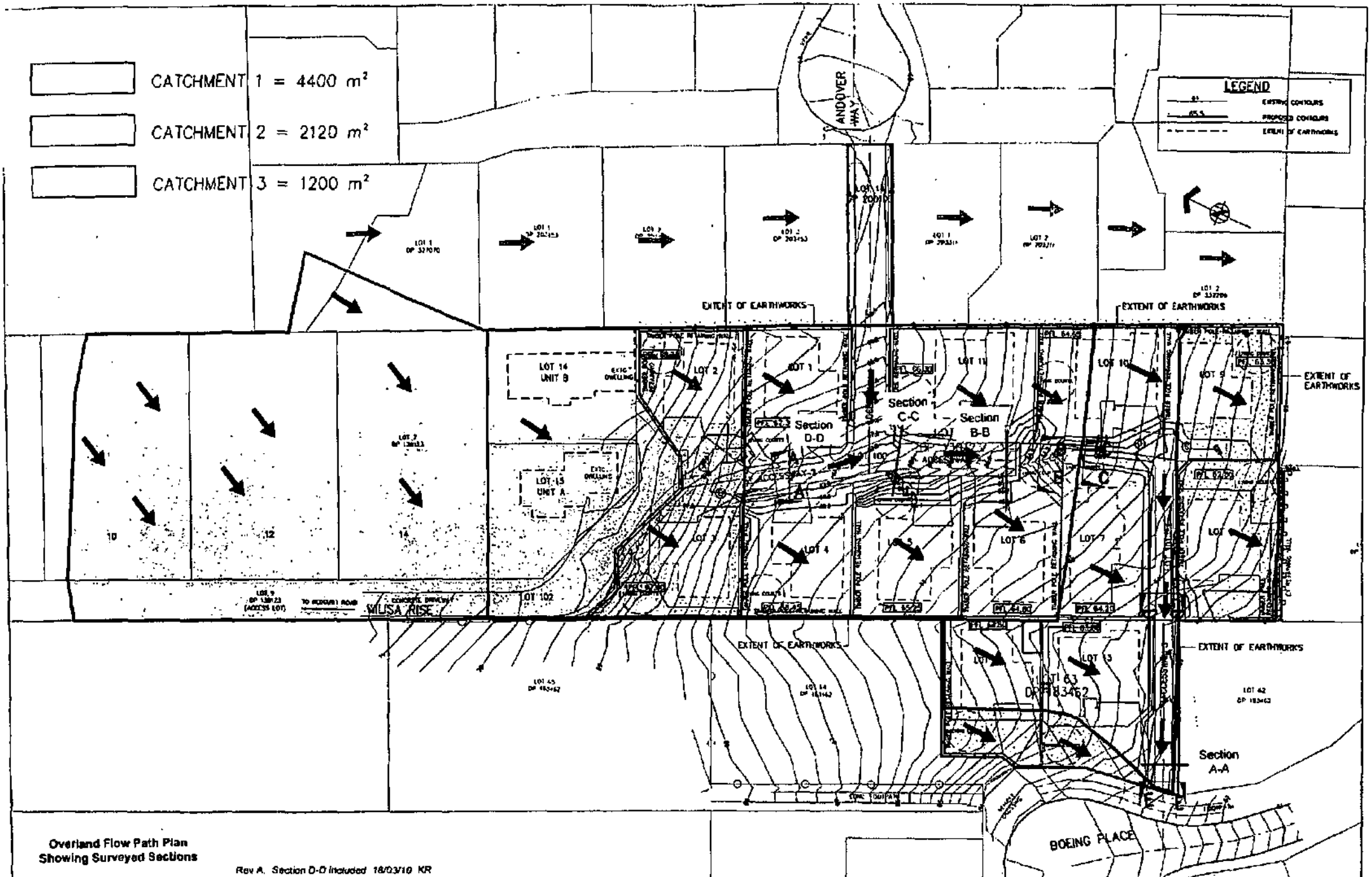
Deloitte refers to one or more of Deloitte Touche Tohmatsu, a Swiss Verein, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.com/nz/about for a detailed description of the legal structure of Deloitte Touche Tohmatsu and its Member Firms.

Member of Deloitte Touche Tohmatsu

Yours sincerely
Carlos Concepts Limited (In Liquidation)

David Vance
Liquidator

Michael Watson
DDI: *+64 4 470 3766*
Email: *micwatson@deloitte.co.nz*



Overland Flow Path Plan
Showing Surveyed Sections

Rev A. Section D-D included 18/03/10 KR

DRAWN	DATE 06/07		
DESIGN	DATE 06/07		
CHECKED	DATE 06/07		
APPROVED	DATE 06/07		

ASSOCIATION OF CONSULTING ENGINEERS NEW ZEALAND — ISO 9001 QUALITY ASSURED

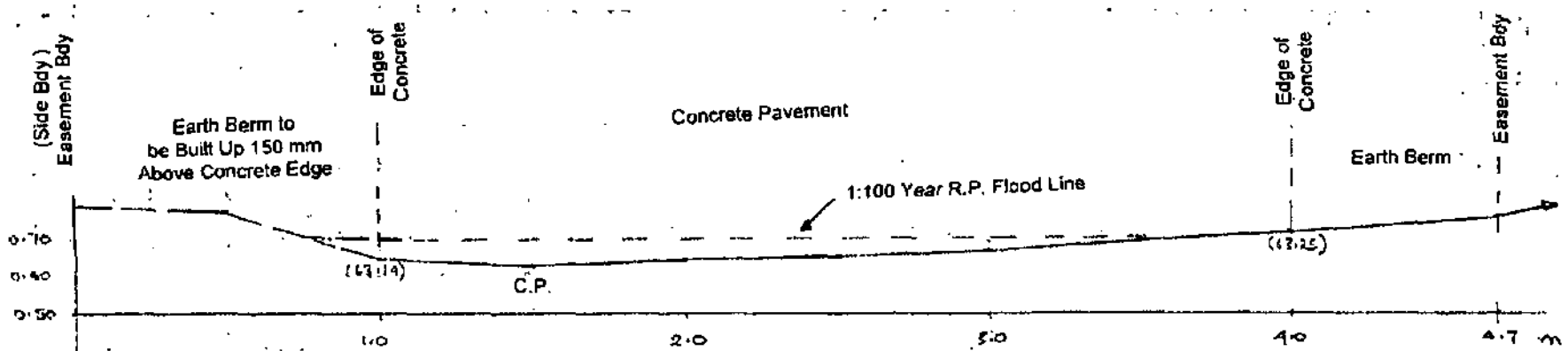
HARRISON GRIERSON
CONSULTING ENGINEERS SURVEYORS PLANNERS
75 Great South Road Auckland Ph 09 912 5000 Fax 09 912 5001

PROJECT: GRIFFIN PROPERTY (2004) LIMITED
16 WILISA RISE, MANUKAU HEIGHTS
DONNA AN GARDENS

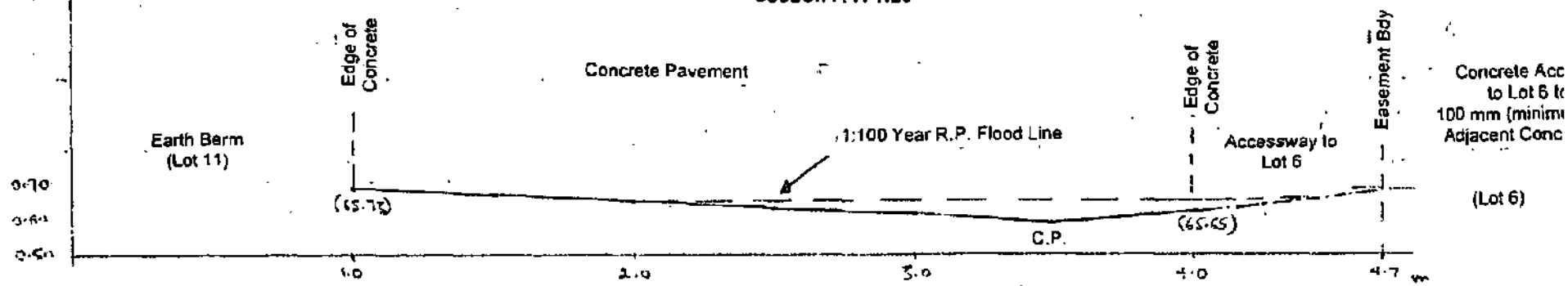
TITLE: OVERALL
OVERLAND FLOWPATH PLAN

SCALE: 1:250 1:500 (A3) — A1

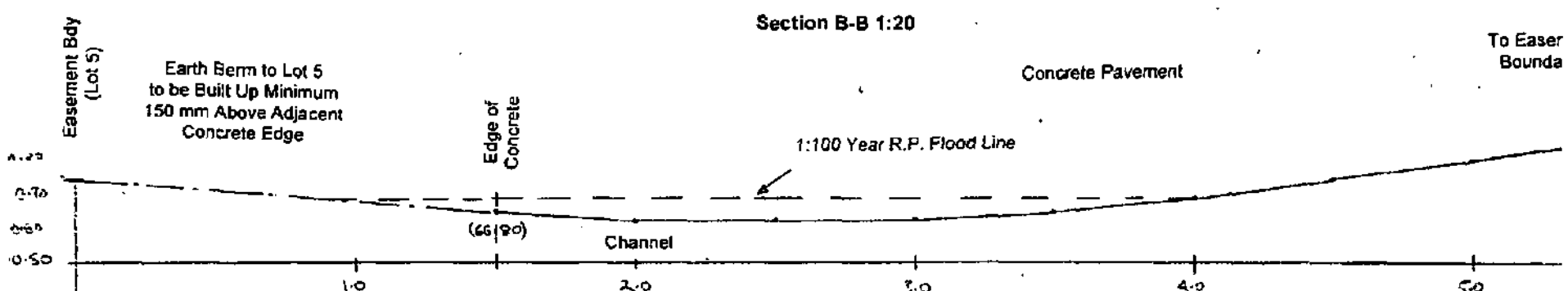
DRAWING NO. 120939-OFP — REV A



Section A-A 1:20

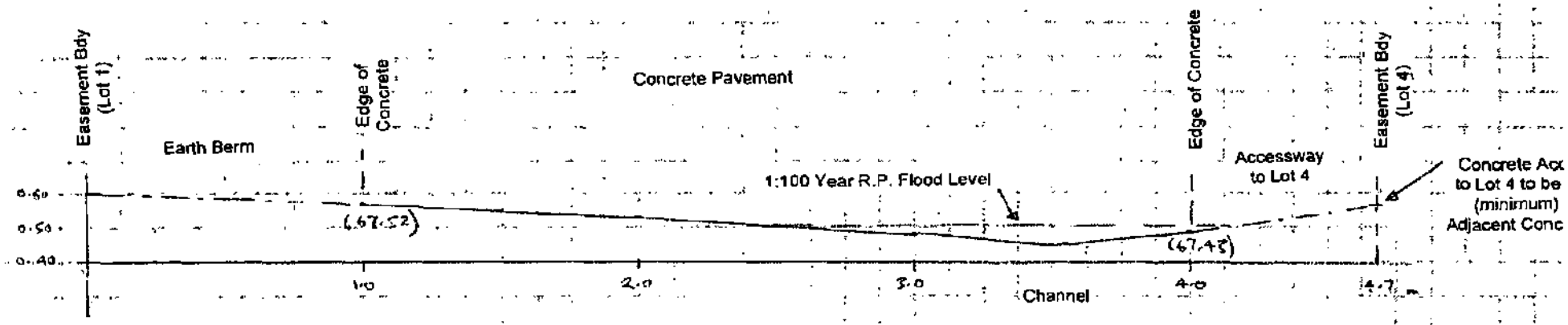


Section B-B 1:20



Section C-C 1:20

Flow Path Sections
16 Willsa Rise, Manukau Hei



Section D-D 1:20

Flow Path Section
16 Wilisa Rise, Manukau Heights

APPLICATION FOR BOND RELEASE

To: The City Manager
Manukau City Council
Private Bag 76917
MANUKAU CITY

Attention: **Resource Compliance**

Proposal P27046 SP 8840

Site Address: 124 Stancombe Rd

Date of 224c release: NOV 2005

I, we David Vance & Barry Jordan of Deloitte wish to apply for the release of the informal bond paid as part of my/ our application for Section 224c release for the above document.

Enclosed:

tick

☑ Supporting evidence showing compliance with bonded conditions for eg engineering certification, as-building plans

☑ Receipt of payment

☑ Copy of refundable deposit sheet } Bond Forms Enclosed

☑ Copy of bank deposit slip

No applications will be processed until all of the above requirements have been supplied

Applicant's name: Carlos Concepts LTD (In Liquidation)

Phone: 04 4703766 Fax: 04 4728023

I/we accept that charges may be incurred in processing the Bond Release and agree for these costs to be deduced from the security held.

Signed:

Print name: DAVID VANCE

Date: 19 March 2010

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O.Box 39101 Howick
Manukau 2145
Telephone: +64 9 534 6523
Facsimile: +64 9 537 5754
Email: iang@aireys.co.nz
www.aireys.co.nz
Members of ACENZ

AIREY CONSULTANTS LTD.

17 March 2010

In all correspondence please quote our ref : 9861/5

The Manager
Environmental Directorate
Manukau City Council
Private Bag 76917
Manukau City
MANUKAU 2241

Attn: Ross Brackebush

Dear Ross,

Re: Bond Release – Carlos Concepts Ltd (In Liquidation)
124 Stancombe Road

Further to our site visit recently, we wish to apply for the bond release for the following bond applicable to 124 Stancombe Road.

1. **Minor Works Bond 1**

   P27046, SP8840, 124 Stancombe Road, Flat Bush.

   Value - $18,761.00

2. **Minor Works Bond 2**

   P27046, SP8840, 124 Stancombe Road, Flat Bush

   Value - $25,000.00

We enclose a completion certificate for conditions 3, 8, 9b, 19, 21, 22 & 25. Completion of Condition 20 will be satisfied with payment for the street trees. We enclose a plan showing that 10 trees are applicable to 124 Stancombe Road. Please add the cost of these to the processing fees applicable, being $2,362.50 inclusive GST. We enclose a copy of the streetlight as-built. Please note that as agreed, the Chevron boards under Condition 25b were not installed.

In conclusion, we wish to apply for the above bond release totally $43,761.00 less fees and street tree cost. These funds need to be paid to the liquidators, namely David Vance and Barry Jordan of Deloitte, bank account number 03 0252 0602067 00 (Deloitte Recovery Trust Account).

Please contact the writer if you wish to discuss the matter.

Yours faithfully
AIREY CONSULTANTS LTD

I H GIBSON

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O.Box 39101 Howick
Manukau 2145
Telephone: +64 9 534 6523
Facsimile: +64 9 537 5754
Email: lang@aireys.co.nz
www.aireys.co.nz
Members of ACENZ

AIREY CONSULTANTS LTD.

CERTIFICATION UPON COMPLETION OF SUBDIVISIONAL WORK

ISSUED BY:	Ian Harold Gibson
TO:	Carlos Concepts Ltd
TO BE SUPPLIED TO:	Manukau City Council
IN RESPECT OF:	SP8840, P27046 Subdivisional Development Bonded Items 3, 8, 9b, 19, 21, 22 & 25 (Roading Works, Streetlighting & Street Trees)
AT:	124 Stancombe Road, Flat Bush

Airey Consultants Ltd has been engaged by Carlos Concepts Ltd to provide construction observation, review and certification services in respect of the above subdivisional work which is described in the specification and shown on the drawings numbered E7/27046, Sheets 1-21 and approved by Manukau City Council.

I have sighted the Manukau City Council consent and conditions of consent to the subdivisional works and the approved specification and drawings.

As an independent professional I, or personnel under my control, have carried out periodic reviews of the subdivisional work appropriate to the engagement and based upon these reviews and information supplied by the contractor during the course of the subdivisional works **I BELIEVE ON REASONABLE GROUNDS** that the subdivisional works have been completed in accordance with the above consent and sound engineering practice.

Date 9/2/10

I.H.GIBSON
BE (CIVIL) CPENG MIPENZ

Airey Consultants Ltd
PO Box 39 101
HOWICK

Note: Bonded condition 20 will be satisfied with payment to Council from bond monies held.

Te Kaunihera o
MANUKAU
City Council

MANUKAU CITY COUNCIL

MINOR WORKS BOND (1) (& MWB 2)

File reference	**SP8840**
Site	**124 Stancombe Road**
Applicant	**Carlos Concepts Ltd**

In order to satisfy the requirements of section 224(c) of the Resource Management Act 1991 a refundable deposit has been taken in respect to the following uncompleted conditions of consent.

Works to be Completed:

Condition 3 - The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements.

- Topsoil Berms and Batters North Side Carlos Drive
- Topsoil Berms and Batters around Front Site

Condition 8 - Street lighting facilities shall be supplied and in accordance with the approved engineering drawings referenced E7/27046 by Council to the satisfaction of the Manager – Resource Consents & Compliance.

Condition 9(b) - Road upgrading is required along the full frontage (on one half of the road only) to increase the width of Stancombe Road to that of a District Arterial Road with cycle lanes as detailed in Proposed Variation 13 Table 2 and Figure 17.10.3 Standard as defined in Rule 9.14.5.5.2 and appendix 2 of the Manukau Operative District Plan 2002. This work shall include:

The construction of a footpath along Stancombe Road as detailed on the approved engineering plans referenced E7/27046 (sheets 1-21) by Council.

- Footpath Northern Side Carlos Drive
- Footpath Front Site

Te Kaunihera o MANUKAU City Council

Condition 19 - That tree planting at the site frontage along the front berm of the roads shall be in accordance with the Robin Duncan Landscape Architect plan referenced 27046 by Council attached to and forming part of this consent.

Condition 20 - Street tree planting shall be undertaken in accordance with the requirements of Rule 17.10.11.6 of Proposed Variation 13 to the Manukau Operative District Plan 2002 with these relevant requirements restated below and forming conditions of consent:

- Street tree planting shall be undertaken in new developments once formation of the street has been completed;
- Street trees shall be planted in the front berm between the kerb and footpath. The front berm for street planting shall have a minimum width of 1.4 metres.
- Street trees are to be provided on both sides of the street at a minimum average spacing of 15 metres.
- Clear visibility of bus stops, pedestrian crossings, sign posts and road intersections (where they are known) are to be maintained.
- The consent holder shall be responsible for the routine maintenance and replacement of any street planting they provide including deadwooding, weed control, mulching and watering for a minimum period of 12 months from the time of planting.
- Trees that are vandalised or dead, or that are not of a suitable specimen form shall be replaced immediately at the cost of the consent holder.

Condition 21 - The street tree species on Stancombe Road shall be London Plane (Platanus acerifolia). The street tree species on "Proposed Road 1 and 2" shall be Sweet Gum (Liquidamber styraciflua).

Condition 22 - The street trees shall be suitably positioned so as not to obstruct intersection line of sight in accordance with MCC Quality Assurance Manual and shall be positioned 3.0m away from driveways at all times in accordance with MCC Quality Assurance Manual.

Term 3 months

Value $18,761.00

Te Kaunihera o
MANUKAU
City Council

The time taken to certify that the above works have been completed will be invoiced and will be payable prior to the refunding of the above deposit. Please keep a copy of the receipt and provide it when applying for release to avoid any delays in processing.

LORELLE IRWIN

Date 30 November 2005

ENVIRONMENTAL SERVICES

MANUKAU CITY COUNCIL

MINOR WORKS BOND (2)

File reference	**SP8840**
Site	**124 Stancombe Road**
Applicant	**Carlos Concepts Ltd**

In order to satisfy the requirements of section 224(c) of the Resource Management Act 1991 a refundable deposit has been taken in respect to the following uncompleted conditions of consent.

Works to be Completed:

Condition 3 - The works detailed on the approved plans referenced E7/27046 (sheets 1-21) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements.

- Roading Reseal

Condition 25 - That the following traffic signage and road markings be installed, to the extent practicable, in accordance with the Transit NZ Manual of Traffic Signs and Markings, as part of the road construction.

(a) A "Give Way " sign (RG-6) at the intersection with Stancombe Road.

(b) Two chevron boards (RC- 5) at the future bend in Carlos Drive,

(c) A 100mm wide continuous reflectorised white centreline around the bend extending 30 metres from the tangent points.(See MOTSAM Fig.2.1[a]) "

(d) "No Stopping At All Times" from the western side of the vehicle crossing of 122 Stancombe Road, around the corner, and along the western side of Carlos Drive to the northern most extent of this road.

Term	3 months
Value	$25,000.00

The time taken to certify that the above works have been completed will be invoiced and will be payable prior to the refunding of the above deposit. Please keep a copy of the receipt and provide it when applying for release to avoid any delays in processing.

Lorraine Irwin

Date 2 November 2005

ENVIRONMENTAL SERVICES

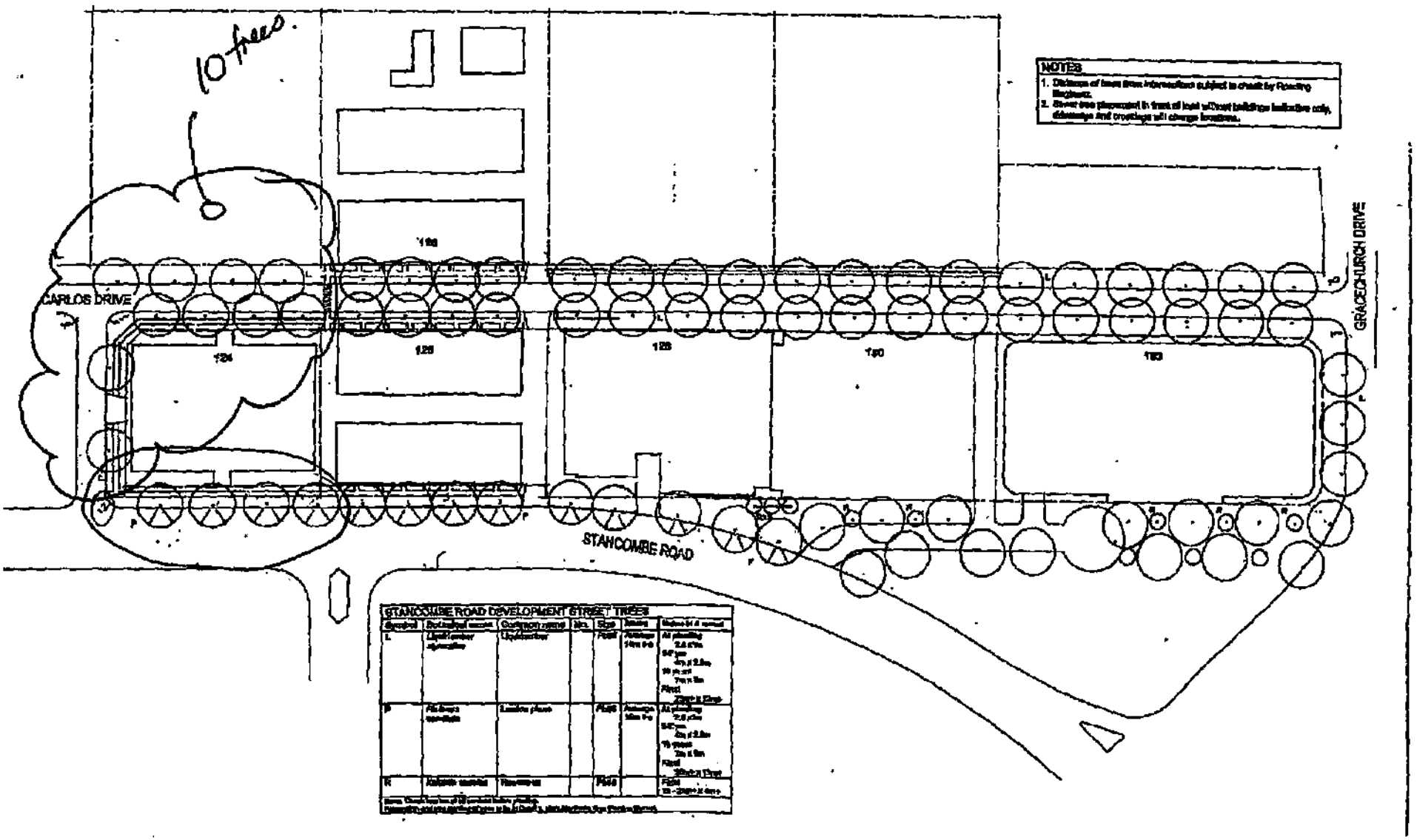
8/9/04

RECEIVED
07 SEP 2004
M.C.C.
BUILDING & RESOURCE SERVICES

STANCOMBE ESTATE — ***DRAFT* STREET TREE PLAN**

1:500 @ A1 — August 2004

1:1000 @ A3



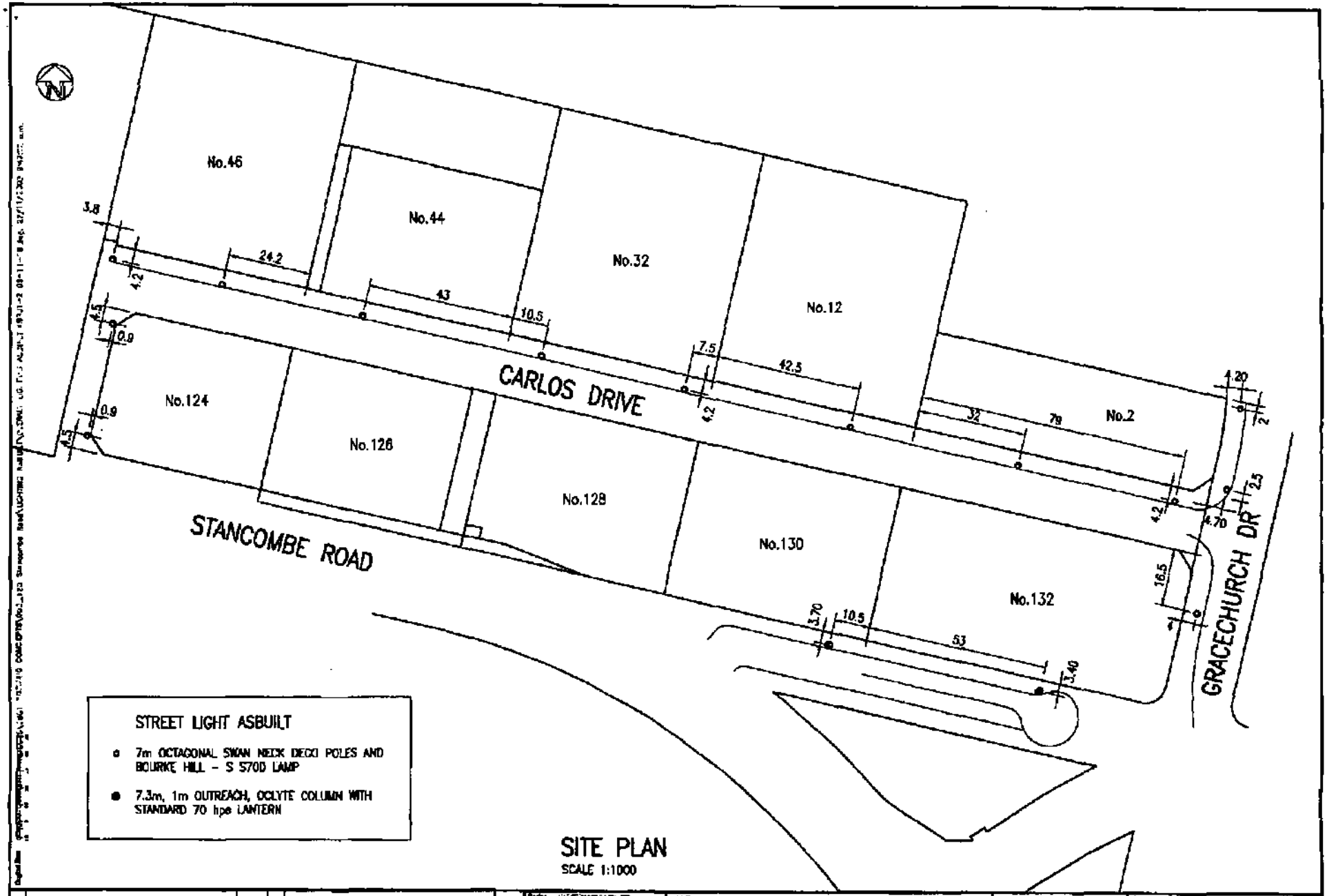
NOTES

1. Distance of trees from intersections subject to check by Roading Engineer.
2. Street tree placement in front of lead without buildings indicative only, driveways and crossings will change locations.

STANCOMBE ROAD DEVELOPMENT STREET TREES

Symbol	Botanical name	Common name	No.	Size	Status	Notes
L	Liquidamber styraciflua	Liquidamber		Feed	Average 14m x 6	At planting 2.4 x 1m; 54" pan 4m x 2.5m; 10 years 7m x 5m; Final 20m x 12m
P	Pinus nigra nigra	Austrian pines		Pine	Average 14m x 6	At planting 2.4 x 1m; 54" pan 4m x 2.5m; 10 years 7m x 5m; Final 20m x 12m
R	Kalmia mamma	Rowan ash		Pine		Pine 10 - 20m x 4m

Note: Check location of all services before planting.
Plantation and site planting of trees to be in Detail 1, [illegible]



SITE PLAN
SCALE 1:1000

FINAL

'AS BUILT' STREET LIGHT PLAN
FOR
WORKING CONCEPTS LTD
STANCOMBE ROAD/ CARLOS DRIVE
FLAT BUSH

AIREY CONSULTANTS LTD.

SITE PLAN

A5851/2 | - | 1

AssetCare *Limited*
Building Management Services

BUILDING WARRANT OF FITNESS

FORM 12 SECTION 108 BUILDING ACT 2004

FORM 12

BUILDING		
Street Address of Building: **46 Carlos Drive, Flat Bush**	Compliance Schedule No.: **3909**	BWOF Expiry Date: **24/06/2011**
Legal Description: **Lot 10 DP 352580**	Fire Hazard Category: **1** Used as: **Apartments SR** Year Construction: **2007**	Intended Life if <50yrs **N/a** Level/Unit #: **1-22**
Building Name: **n/a**	Location of Building within site block: **N/a**	
Maximum number occupants that can safely use this building is: **(132)** 6 occupants per unit		

OWNER	
Name of Owner: **Working Concepts c/- Zone Properties**	Contact Person: **N/a**
Mailing Address: **6/124 Stancombe Road, Flat Bush, Manuakau City**	Street Address/Registered Office: **N/a**
Telephone (day)#: **c/- (09) 633 0830** Telephone (a/h)#: **c/- (09) 633 0830** E-mail Address: gale@assetcare.co.nz	Mobile #: **N/a** Facsimile #: **c/- (09) 633 0266** Web Site: **N/a**

SPECIFIED SYSTEMS					
1.1		Automatic sprinkler system	10.1		Building Maintenance Units
1.2		Automatic gas / foam	11.1		Laboratory Fume Cupboards
2.1	✓	Emergency Warning Systems	13.1		Mechanical Smoke Control
3.1		Automatic Fire Doors	14		Emergency Power Systems
3.2		Access Controlled Doors	14.2	✓	Signs for Specified System(s) 1-13
4.1		Emergency lighting	15.1		Systems for Communicating spoken information intended to facilitate evacuation
5.1		Escape route pressurisation			
6.1		Riser mains for fire service use	15.2	✓	Final Exits/Means of Escape
7.1		Automatic backflow protection	15.3		Fire Separations
8.1		Lifts (passenger)	15.4		Signs for Communicating information intended to Facilitate Evacuation
8.2		Lifts (goods)			
8.3		Escalator, or other systems for moving people or goods within buildings	15.5		Smoke Separations
			15.6		Non-Standard Means of Escape
9.1		Mechanical ventilation or air-conditioning	16.1		Cable Cars attached to or serving a Building

The Compliance Schedule records are kept at: **46 Carlos Drive, Flat Bush**

The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of Owner / Agent	Print Name	Date
Gale Ward	**Gale Ward** *AssetCare Limited* **09 633 0830**	**24th June 2010**

Owner / agent on behalf of and with the authority of the owner

AssetCare *Limited*
Building Management Services

CERTIFICATE OF COMPLIANCE

INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

FORM 12A

Compliance Schedule No.: 3909	**BWOF Expiry Date:** 24/06/2011
Street Address of Building: **46 Carlos Drive, Flat Bush**	Legal Description of land where building is located: **Lot 10 DP 352580**
Building Name: **n/a**	
Level / Unit #: **1-22**	Location of Building within site block: **N/a**
OWNER	
Name of Owner: **Working Concepts c/- Zone Properties**	Contact Person: **N/a**
Mailing Address: **6/124 Stancombe Road, Flat Bush, Manuakau City**	Telephone: **c/- (09) 633 0830** Facsimile: **c/- (09) 633 0266**

SPECIFIED SYSTEMS

The inspection, maintenance, and reporting procedures of the compliance schedule have been fully complied with during the **12 months** prior to the date stated below in relation to the following specified system/s:

1.1		Automatic sprinkler system	10.1		Building Maintenance Units
1.2		Automatic gas / foam	11.1		Laboratory Fume Cupboards
2.1	✓	Emergency Warning Systems	13.1		Mechanical Smoke Control
3.1		Automatic Fire Doors	14		Emergency Power Systems
3.2		Access Controlled Doors	14.2	✓	Signs
4.1		Emergency lighting	15.1		Systems for Communicating spoken information intended to facilitate evacuation
5.1		Escape route pressurisation			
6.1		Riser mains for fire service use	15.2	✓	Final Exits/Means of Escape
7.1		Automatic backflow protection	15.3		Fire Separations
8.1		Lifts (passenger)	15.4		Signs for Communicating information intended to Facilitate Evacuation
8.2		Lifts (goods)			
8.2		Escalator, or other systems for moving	15.5		Smoke Separations
8.3		people or goods within buildings	15.6		Non-Standard Means of Escape
9.1		Mechanical ventilation or air-conditioning	16.1		Cable Cars attached to or serving a Building

Signature:	**Name of IQP:** **Peter Clark** **IQP No.:** **449**
Name of Company: *AssetCare Limited* **Telephone No.:** **09 633 0830**	**Date:** **24th June 2010**

AssetCare Limited
Building Management Services

PO Box 24-343, Royal Oak
43 Galway St
Onehunga
Auckland
Phone: 09 633 0830
Fax: 09 633 0266

RECEIVED
21 JUN 2010
M.C.C. (S)
MAIL ROOM

17th June 2010

Margaret McColl
Manukau City Council
Private Bag 76.917
MANUKAU CITY 2241

Dear Margaret,

Re: Building Warrant of Fitness

Please find enclosed a copy of the new Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush **CS 3909**

If you have any queries please do not hesitate to contact me.

Yours faithfully
AssetCare Limited

Gale Ward
Director

28885 SP9188
124 STANCOMBE RD FLAT BUSH
BOTANY-CLEVEDON 08/09/05

WORKING CONCEPTS LTD
PO BOX 58395 6923/124
GREENMOUNT $3 375.00
Att: Mr Bob Cummins Integrated Consent

22 TOWNHOUSE DEVELOPMENT & 5 LOT SUBDIVISION

BRYCE POMFRETT

CROSS REFERENCE
Previous / Associated Files

tage (if applicable): _____

Deposit Paid: _____ Invoice No: _____ Receipt No: _____ Date: _____
Plan Sealing Fee: _____ Receipt No: _____ Date: _____

BONDS

Type	Invoice No	Receipt No	Date	$	Expires	Discharged
Formal, with cash						
In-house						
In-house						
Refundable deposit						
Bond release fees						

UPGRADING CONTRIBUTIONS

Account	Invoice No	Receipt No	Date	$
Road Signs				
Roading				
Land Drainage				
Sanitary Drainage				
Water Supply				
Water Quality				
Comprehensive Water Right				
Development Contribution				
LGA				
Compliance Fees				
Barter Tax Y/N				

LT TITLE PLAN /STAGES

Lots	Sealed	Released

Release Procedure Completed ☐

PROJECT CHECKLIST

RCA to apply
application sticker

CROSS REFERENCE
Previous / Associated Files

_____
_____
_____
_____
_____
_____

Deposit Paid: _____ **Receipt No:** _____ **Date:** _____
Plan Sealing Fee: _____ **Receipt No:** _____ **Date:** _____

BONDS

Type	A/C No	Receipt No	Date	$	Expires	Discharged
Formal, with cash	0999-8124					
In-house	0999-8124					
In-house	0999-8124					
Refundable deposit	0999-8124					
Refundable deposit	0999-8124					

UPGRADING CONTRIBUTIONS

Account	A/C No	Receipt No	Date	$
Roading	0999-9832			
Land drainage	0999-9822			
Sanitary drainage	0999-9834			
Waer supply	0999-9844			
Water quality	0999-9846			
Comprehensive wtater right	0999-9817			
Reserve contribution	0999-9430 C250 020			

LT TITLE PLANS / STAGES

Lots	Sealed	Released

Release Procedure Completed ☐

FILE
SHEET 1

ENVIRONMENT DIRECTORATE
RESOURCE COMPLIANCE LAND USE SITE VISIT REPORT

Site Address:	124 Starcombe Rd, Flat Bush.				
Proposal No:	28885.	Consent Granted Date:	28.3.06	Officer:	Nicola
File Reference:	SP 9188	Compliance Status:		Site Visit Date:	18.2.08
Conditions Completed or Complying	*Cross out if not applicable and/or add more conditions if required* 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27				

☑ Photographs Taken ☐ Follow up Required ☐ Council Records Updated

Date: 18-2-08

Comments:
Still under construction

Contribution Levied on SP8840 on valuation of Lot 10	Contribution Levied on 27546 (Less Contribution Paid on SP8840)	Contribution for Subdivision SP9188	$
$32,400.00	$163,215.00	Avg Value Lots 1-4	$391,250.00
	*NB - Amount was deducted from development on original Lot 9 but as same developer is OK	Reserve Contribution Payable at 3/4 of avg value to be apportioned between all four allotments at Unit Title Stage	$70,425.00
		plus GST	**$79,228.13**
		Future Deduction From Each Lot on Unit Title subdivision (to apply to each of Lots 1-4)	**$19,807.03**

61 A Wellington Street, Freemans Bay
PO Box 91602, Auckland Mail Centre

Your ref: SP 9188 P 28885
Our ref: 36400/9603

Quotable Value Limited
www.quotable.co.nz

4 October 2005 - 6 OCT 2005 Fee: $900.00 (excl GST)

The City Manager
Manukau City Council
Private Bag
MANUKAU CITY

Attention: Bryce Pomfrett

re: **RESERVE CONTRIBUTION VALUATION – WORKING CONCEPTS LTD 124 STANCOMBE ROAD, FLAT BUSH.**

Further to your instructions of the 16 September 2005, I have inspected the above property to assess a current market value for reserve contribution purposes in accordance with the subdivision consent provisions of the Resource Management Act 1991, and report as follows.

LEGAL DESCRIPTION Lot 3 DP 78859

ZONING Land is zoned Flat Bush Residential 1 (General Precinct) under the Manukau City's Operative District Plan..

DATE OF VALUATION 4 October 2005.

VALUATION SP 9188

1) Valuation of Lots 1-4 as single unit residential sites together with a share of communal facilities on Lot 5:

Lot 1	**$400,000**
Lot 2	**$385,000**
Lot 3	**$385,000**
Lot 4	**$395,000**

2) Average notional site value of proposed:

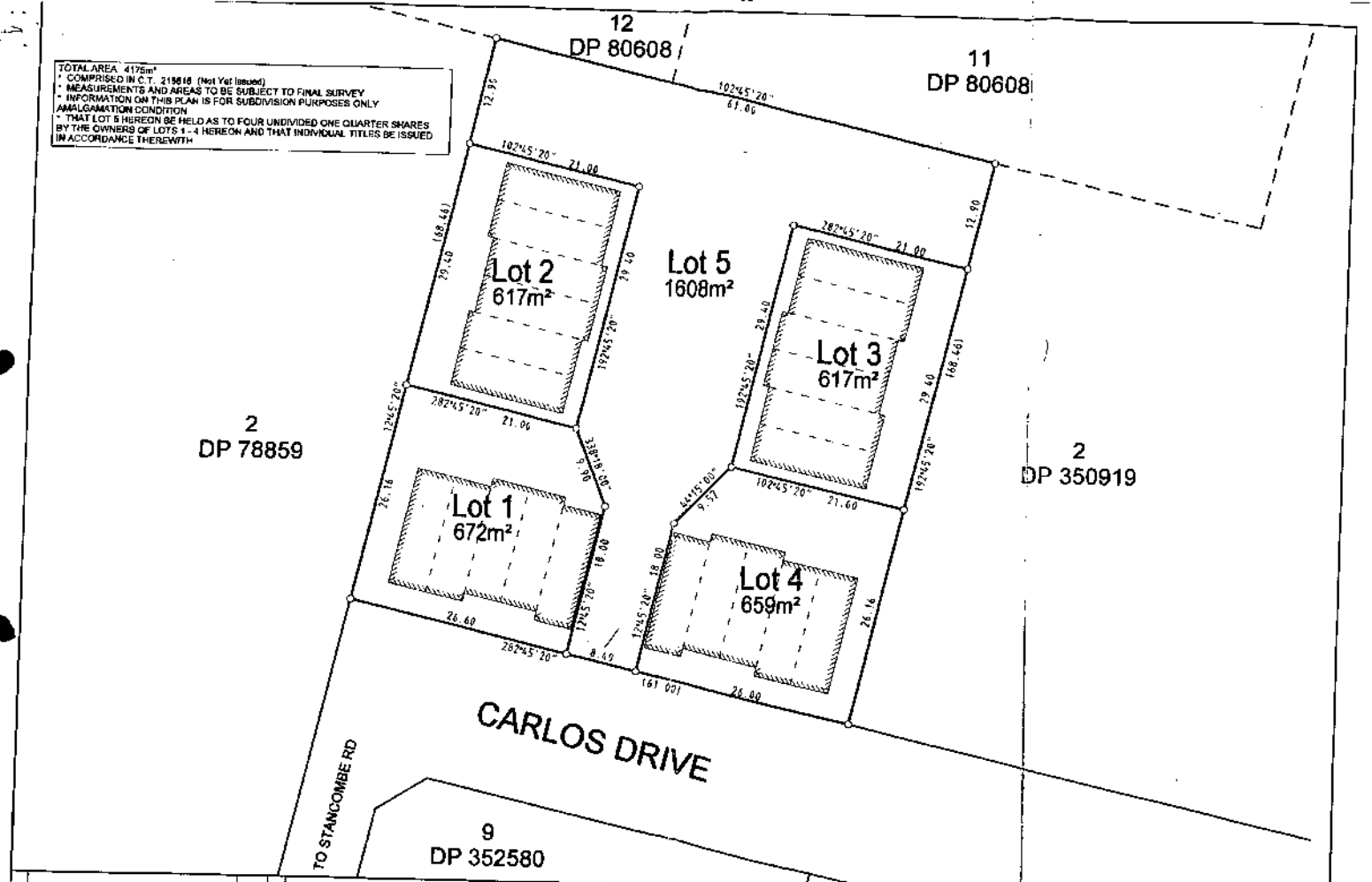
Units 1-22	**$120,000**

The values are inclusive of G.S.T., if any.

In accordance with your instructions this abbreviated report has been prepared for reserve contribution purposes only.

Yaqub Khan ANZIV.
Registered Valuer

TOTAL AREA 4175m²
* COMPRISED IN C.T. 215616 (Not Yet Issued)
* MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
* INFORMATION ON THIS PLAN IS FOR SUBDIVISION PURPOSES ONLY
AMALGAMATION CONDITION
* THAT LOT 5 HEREON BE HELD AS TO FOUR UNDIVIDED ONE QUARTER SHARES BY THE OWNERS OF LOTS 1 - 4 HEREON AND THAT INDIVIDUAL TITLES BE ISSUED IN ACCORDANCE THEREWITH



No.	Revision Details	Date	No.	Revision Details	Date

Design
Survey MSL
Drawn MSL
Checked
Date April 2005
Scale 1:400 (A3)

© Copyright 2004 Basdale Surveyors Ltd

Job Title
PROPOSED SUBDIVISION
FOR
CARLOS CONCEPTS LTD
CARLOS DRIVE, FLAT BUSH
LOT 10 DP 352580

Basdale Surveyors Ltd
31 Meadowlane Drive, Howick
Phone 09 534 9452
Fax 09 5376754
e-mail: surveyors@basdales.co.nz

Drawing Title
SCHEME PLAN

File No. 7793
Rev. 1
Dwg No.

Suggested method of determining the $ paid for each of lots 1 – 4

Calc FS subd contribution as on previous page.

$ paid for 4 lots – 6% + GST x 3 lots at average value of 1 – 4.

Calculate contribution $

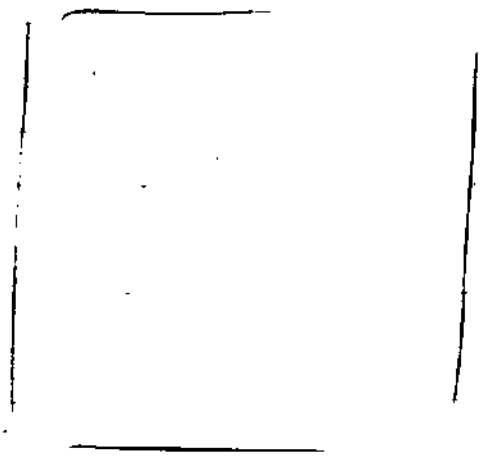
Divide contribution by 4 to apportion $ for each of 1 – 4 which can be deducted if appropriate ~~from~~ in the calculation under 15.15.2.3.4.1.

Document method + amount in advice note to the F.S. Subd.

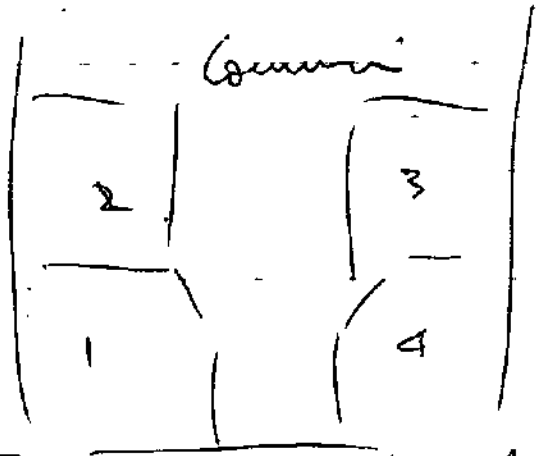
Dev + Subd of Lot 10 DP352580

Lot 10

No $ credit.



Subdivide into 4 + Common Access.



Res Cont = 6% + GST x value of 3 additional lots

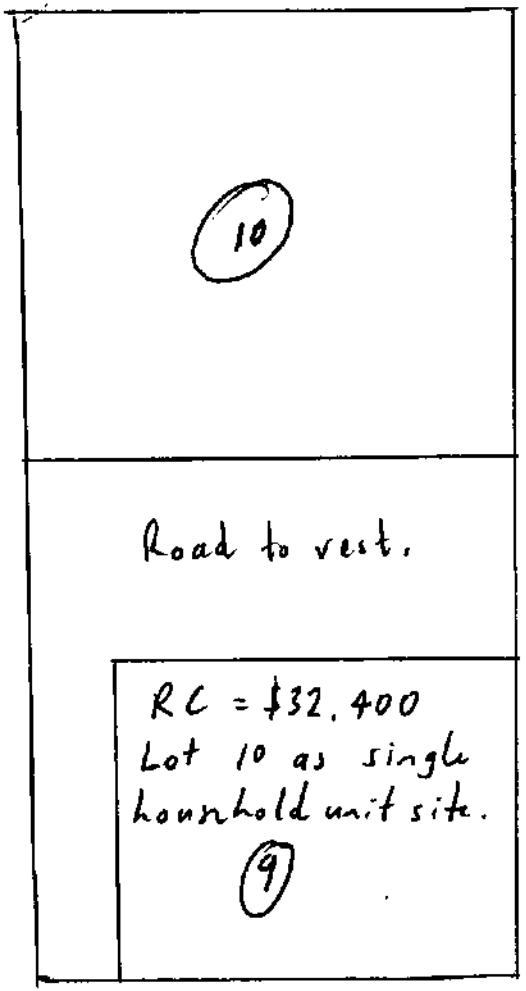
Resubd of Lot 2 (+1/4 share of 5). – into 6 units.
Using rule 15.15.2.3.3.1.
a) 6% + GST x value of 5 additional units. = $ x

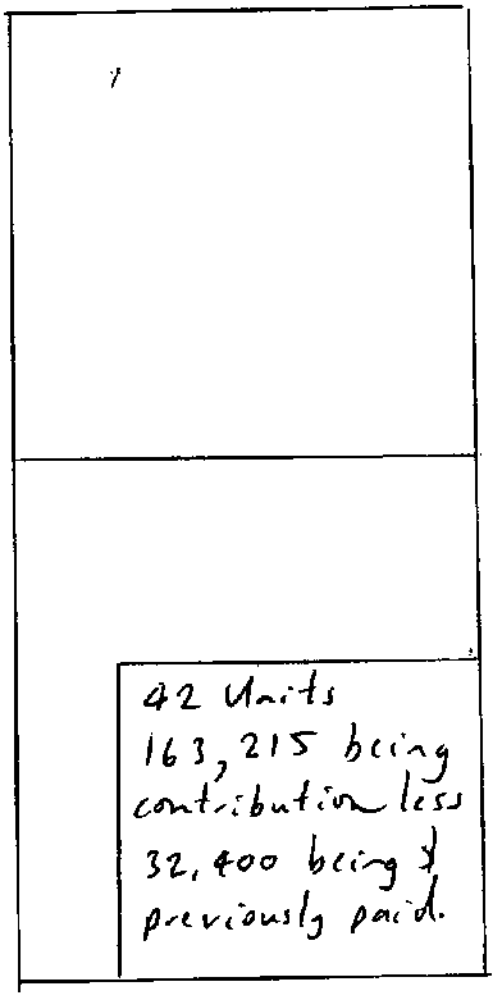
Check/compare with Res Cont calc'd from 15.15.2.3.4.1
b) 6% + GST x value of all 6 units on lot 2
less $ paid for lot 2 at F.S. subd stage.

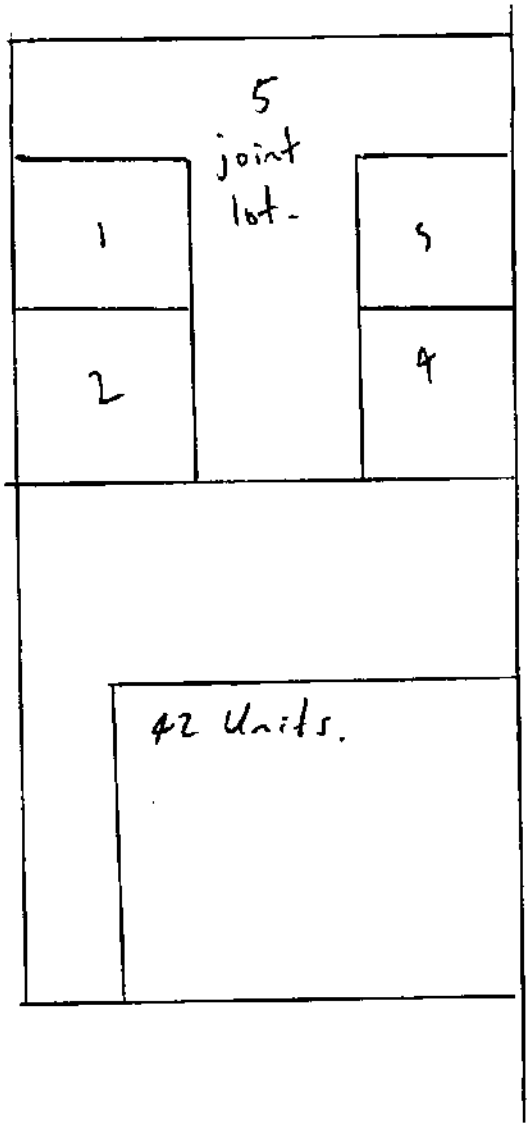
If (b) is less than (a) — charge (b).

SP8840
Prop: No: 27046.

27564.







61 A Wellington Street
Freemans Bay
PO Box 91602
Auckland Mail Centre
Auckland

Quotable Value Limited
www.quotable.co.nz

Your ref: SP8840 P27046
Our ref: 36400/9603

10 November 2004

Fee: $285.00 (excl GST)

The City Manager
Manukau City Council
Private Bag
MANUKAU CITY

Attention: Mr Bryce Pomfrett

re: **RESERVE CONTRIBUTION VALUATION – WORKING CONCEPTS, 124 STANCOMBE ROAD, FLAT BUSH**

Further to your instructions of the 4 November 2004, I have inspected the above property to assess a current market value for reserve contribution purposes in accordance with the subdivision consent provisions of the Resource Management Act 1991, and report as follows.

LEGAL DESCRIPTION	Lot 3 DP 78859
ZONING	Rural 3 in Manukau City's Operative District Plan 2002. Flat Bush Residential 1 Zone – Arterial and General Precinct in Variation 13.
DATE OF VALUATION	10 November 2004

VALUATION SP8840 P27046

Assessed market value of Lot 10 (as a single household unit site)

$480,000
(FOUR HUNDRED AND EIGHTY THOUSAND DOLLARS)

In accordance with your instructions this abbreviated report has been prepared for reserve contribution purposes only.

The value is inclusive of G.S.T., if any.

$\frac{480000}{100} \times 6\%$
+ GST
= 32,400

S.H. Lee
Senior Valuer

Environmental Services

4 November 2004

The Area Valuer
Quotable Value NZ Ltd
Registered Valuers
P.O. Box 91-602
AUCKLAND MAIL CENTRE

Dear Sir

APPLICATION FOR TWO LOT FEE SIMPLE SUBDIVISION (WITH ROAD TO VEST) AT 132 STANCOMBE ROAD, FLAT BUSH. PROPOSAL NO: 27046 (SP 8840). WORKING CONCEPTS.

The attached plan SP 8840 shows a proposed subdivision of the above land.

Would you please supply for reserve contribution assessment purposes a current value for proposed Lot 10 as if this proposed site is for a single household unit.

The land is zoned Flat Bush Residential 1 under Proposed Variation 13 to the Manukau Operative District Plan 2002, and Rural 3 under the Manukau Operative District Plan 2002.

The proposed allotment is serviced to normal urban standards.

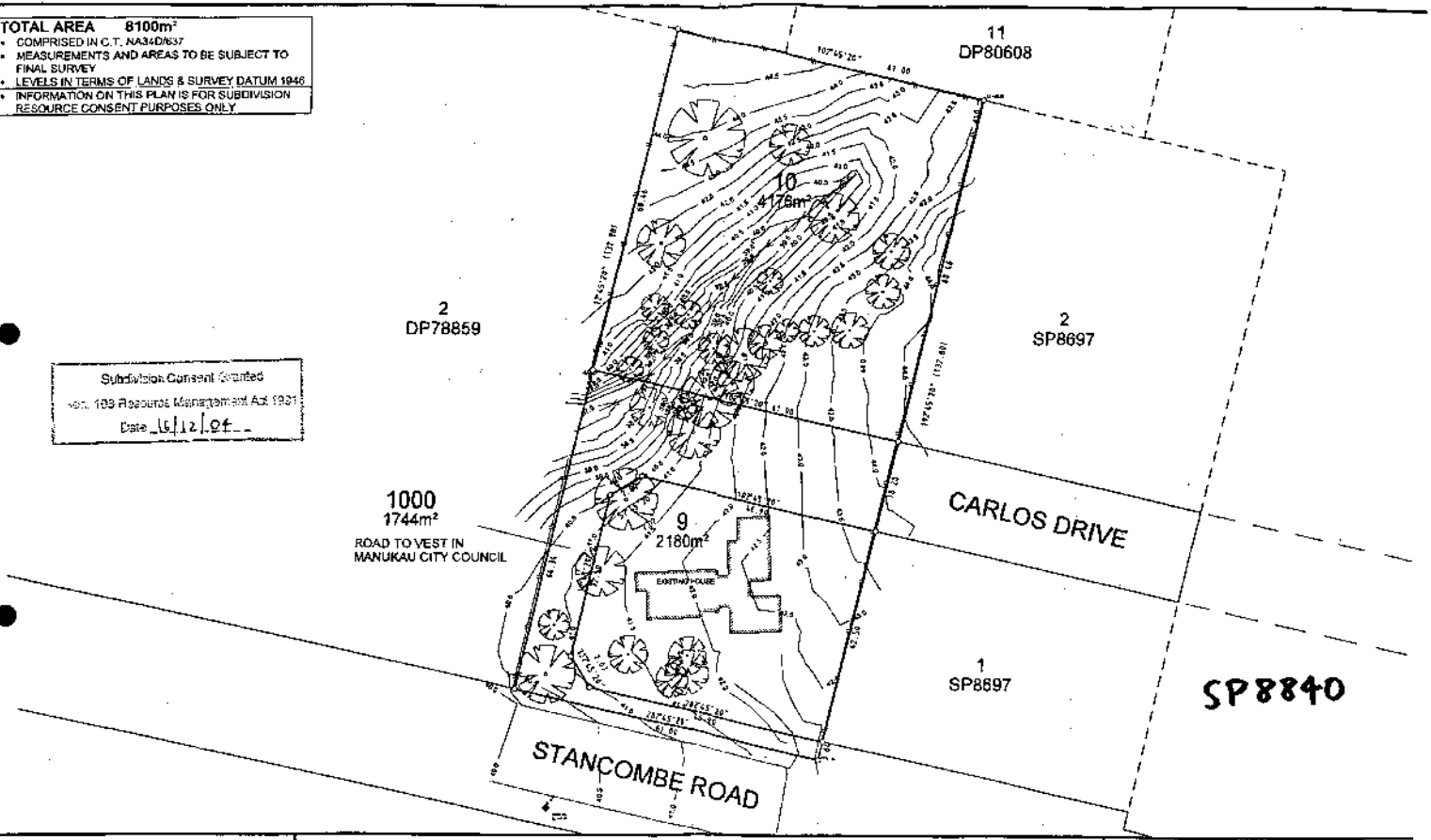
Please quote Purchase Order No. 35973 in your account.

Yours faithfully

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Reference: SP 8840 P 27046
Direct Dial: 262-8900, extn 5856

Enquiries to: Bryce Pomfrett
Direct Facsimile: 262-5168



Easdale Surveyors Ltd
REGISTERED SURVEYORS LAND DEVELOPMENT CONSULTANTS
39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 537 5754
e-mail: surveyors@easdales.co.nz

PROPOSED SUBDIVISION
124 STANCOMBE ROAD, FLAT BUSH
LOT 3 DP78859

FILE:	7576
SCALE:	1:500
DATE:	September 2004
SURVEYOR	MSL
REVISION	SCHEME 1

61 A Wellington Street, Freemans Bay
PO Box 91602, Auckland Mail Centre

Your ref: P 27564
Our ref: 36400/9603

RECEIVED
10 MAR 2005
M.C.C. (E)
MAIL ROOM

Quotable Value Limited
www.quotable.co.nz

8 March 2005

Fee: $1500.00 (excl GST)

The City Manager
Manukau City Council
Private Bag
MANUKAU CITY

Attention: Bryce Pomfrett

re: **RESERVE CONTRIBUTION VALUATION**
124 STANCOMBE ROAD, FLAT BUSH.

Further to your instructions of the 4 February 2005, I have inspected the above property to assess a current market value for reserve contribution purposes in accordance with the subdivision consent provisions of the Resource Management Act 1991, and report as follows.

LEGAL DESCRIPTION	Lot 9 DP 788859
ZONING	Land is zoned Rural 3 under the Manukau City's Operative District Plan. Flat Bush Residential 1 Zone – Arterial and General Precinct – Variation 13.
DATE OF VALUATION	8 March 2005.

VALUATION P27564

Average current notional site value of proposed Units:

Level 1 (Units 1-14)	**$70,000**
Level 2 (Units 15-28)	**$68,000**
Level 3 (Units 29-42)	**$69,000**

The values are inclusive of G.S.T., if any.

In accordance with your instructions this abbreviated report has been prepared for reserve contribution purposes only.

Yaqub Khan ANZIV.
Registered Valuer

124 Stancombe Road Reserve Contribution.

14 units 1st floor = 14 × 70,000 = 980,000
14 units 2nd floor = 14 × 68,000 = 952,000
14 units 3rd floor = 14 × 69,000 = 966,000

2898000 ÷ 100 × 6

= 173,880 + GST
= 195615

32,400 inc. GST paid on subdivision SP8840 based on value of site as one unit site.

195,615
− 32 400
163215

Environmental Services

4 February 2005

The Area Valuer
Quotable Value NZ Ltd
Registered Valuers
P.O. Box 91-602
AUCKLAND MAIL CENTRE

Dear Sir

PROPOSED UNIT TITLE SUBDIVISION OF 42 APARTMENT UNITS IN ONE "U-SHAPED" BLOCK.
PROPOSAL NO: 27564
ADDRESS: 124 STANCOMBE ROAD, FLAT BUSH

The attached plan P27564 shows a proposed unit title subdivision of the above land proposed to be undertaken for a "U-shaped" apartment block.

Would you please supply for reserve contribution assessment purposes current average notional site values for the units in each level of the development.

Attached for your assistance are the areas of these units.

The land is zoned Rural 3 under the Manukau Operative District Plan 2002 and located within the Flat Bush Residential 1 Zone (General and Arterial Precincts) of Variation 13 to the Manukau Operative District Plan 2002.

Please quote Purchase Order No. 42001 in your account.

Yours faithfully

Br Pomfrett

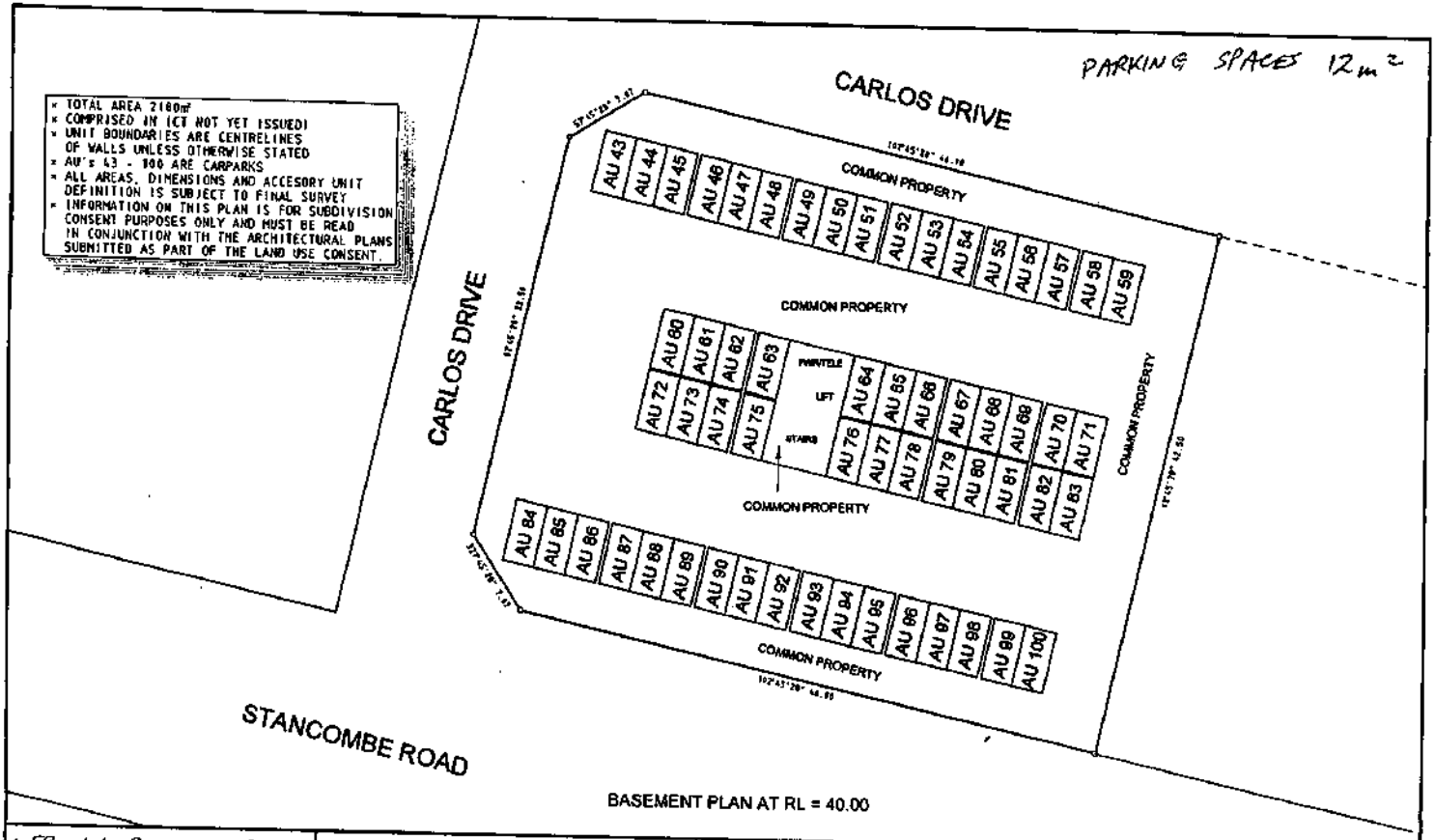
pp. Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Reference: Proposal: 27564
Direct Dial: 262-8900, extn 5856

Enquiries to: Bryce Pomfrett
Direct Facsimile: 262-5168

PARKING SPACES 12m²

- TOTAL AREA 2180m²
- COMPRISED IN ICT NOT YET ISSUED
- UNIT BOUNDARIES ARE CENTRELINES OF WALLS UNLESS OTHERWISE STATED
- AU's 43 - 100 ARE CARPARKS
- ALL AREAS, DIMENSIONS AND ACCESORY UNIT DEFINITION IS SUBJECT TO FINAL SURVEY
- INFORMATION ON THIS PLAN IS FOR SUBDIVISION CONSENT PURPOSES ONLY AND MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL PLANS SUBMITTED AS PART OF THE LAND USE CONSENT.



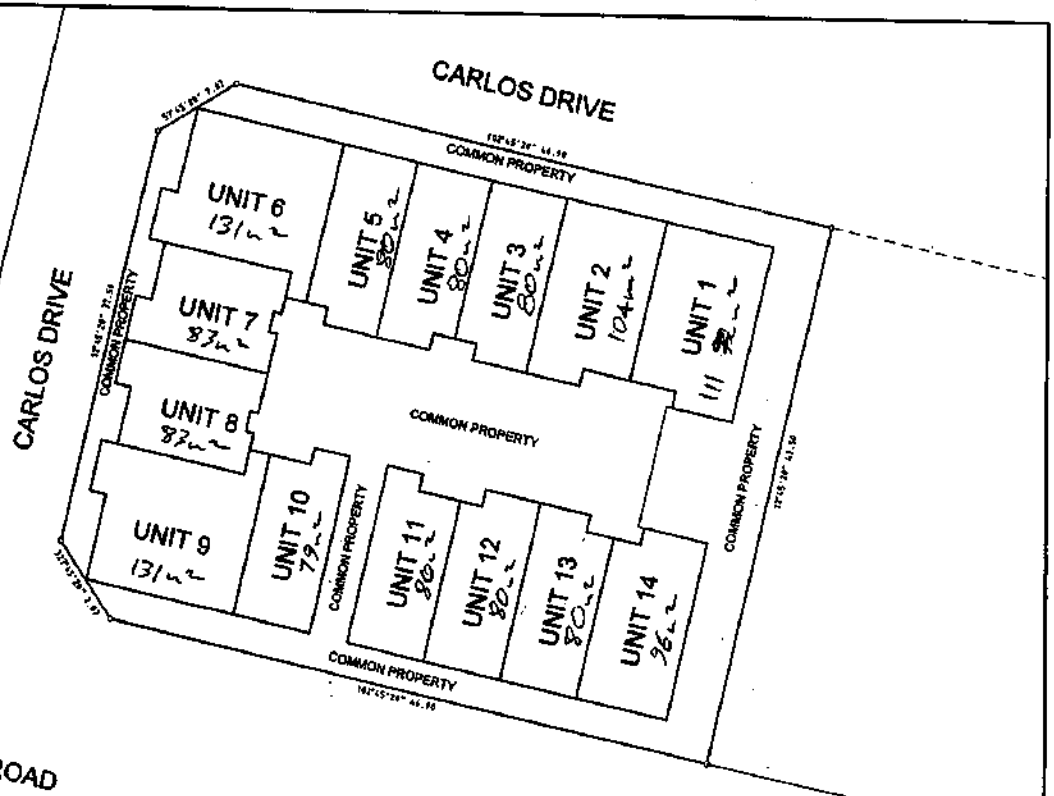
BASEMENT PLAN AT RL = 40.00

Easdale Surveyors Ltd
REGISTERED SURVEYORS - LAND DEVELOPMENT CONSULTANTS
59 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 537 5754
e-mail: surveyors@easdale.co.nz

PROPOSED UNIT DEVELOPMENT ON LOT 9 P 27046 STANCOMBE ROAD, FLAT BUSH

FILE:	7700
SCALE:	1:200(A2) 1:400 A3
DATE:	January 2005
SURVEYOR	RBH
REVISION	SCHEME 1

- TOTAL AREA 2180m²
- COMPRISED IN ICT NOT YET ISSUED!
- UNIT BOUNDARIES ARE CENTRELINES OF WALLS UNLESS OTHERWISE STATED
- AU's 43 - 100 ARE CARPARKS
- ALL AREAS, DIMENSIONS AND ACCESORY UNIT DEFINITION IS SUBJECT TO FINAL SURVEY
- INFORMATION ON THIS PLAN IS FOR SUBDIVISION CONSENT PURPOSES ONLY AND MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL PLANS SUBMITTED AS PART OF THE LAND USE CONSENT.



STANCOMBE ROAD

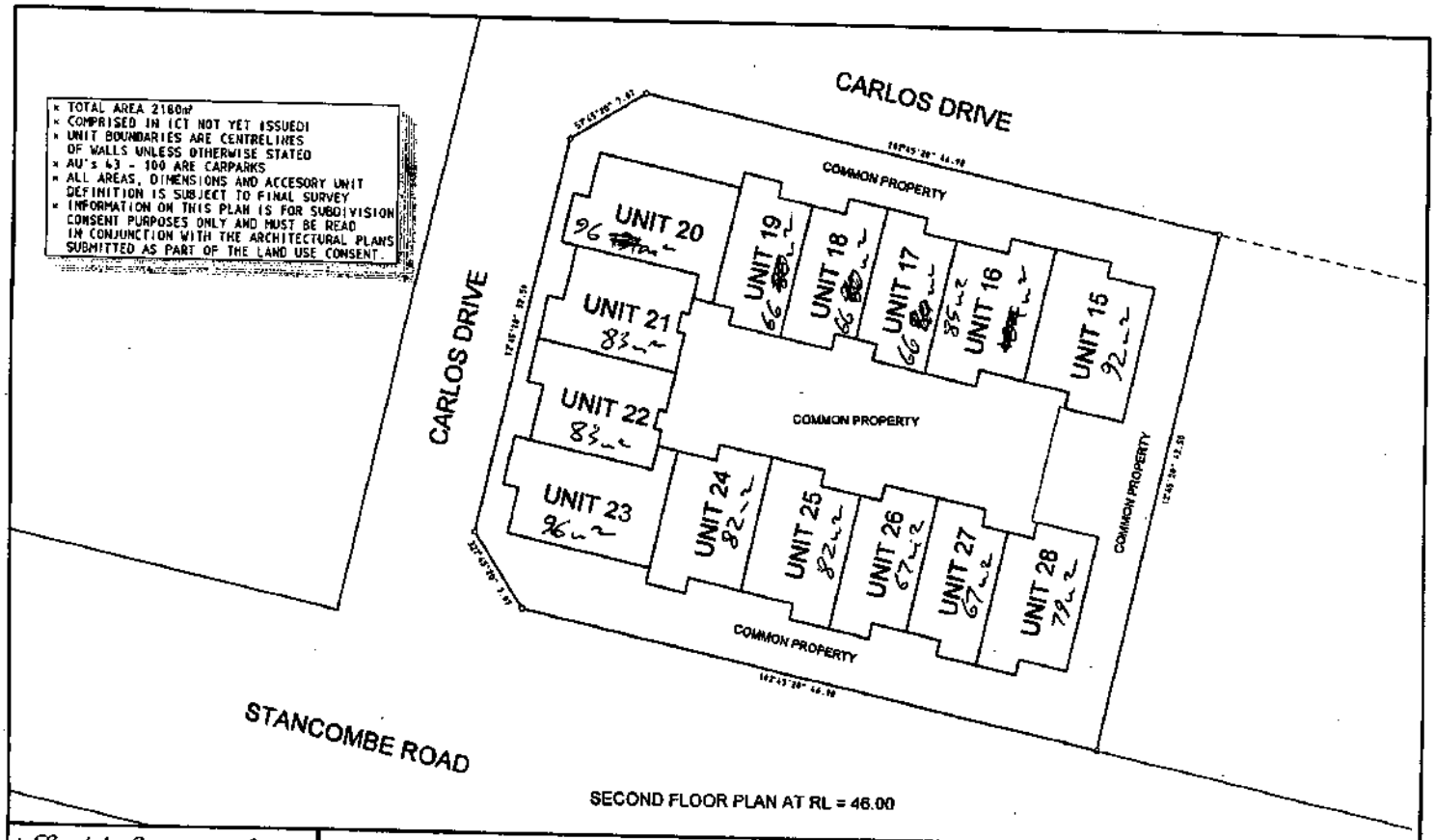
FIRST FLOOR PLAN AT RL = 43.00

Easdale Surveyors Ltd
REGISTERED SURVEYORS - LAND DEVELOPMENT CONSULTANTS
30 Meadowland Drive, Howick
Phone 09 634 8452
Fax 09 537 6764
e-mail: surveyors@easdales.co.nz

PROPOSED UNIT DEVELOPMENT ON LOT 9 P 27046 STANCOMBE ROAD, FLAT BUSH

FILE:	7700
SCALE:	1:200 (A2) 1:400 A3
DATE:	January 2005
SURVEYOR	RBH
REVISION	SCHEME 1

- TOTAL AREA 2180m²
- COMPRISED IN ICT NOT YET ISSUED!
- UNIT BOUNDARIES ARE CENTRELINES OF WALLS UNLESS OTHERWISE STATED
- AU's 43 - 100 ARE CARPARKS
- ALL AREAS, DIMENSIONS AND ACCESORY UNIT DEFINITION IS SUBJECT TO FINAL SURVEY
- INFORMATION ON THIS PLAN IS FOR SUBDIVISION CONSENT PURPOSES ONLY AND MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL PLANS SUBMITTED AS PART OF THE LAND USE CONSENT.



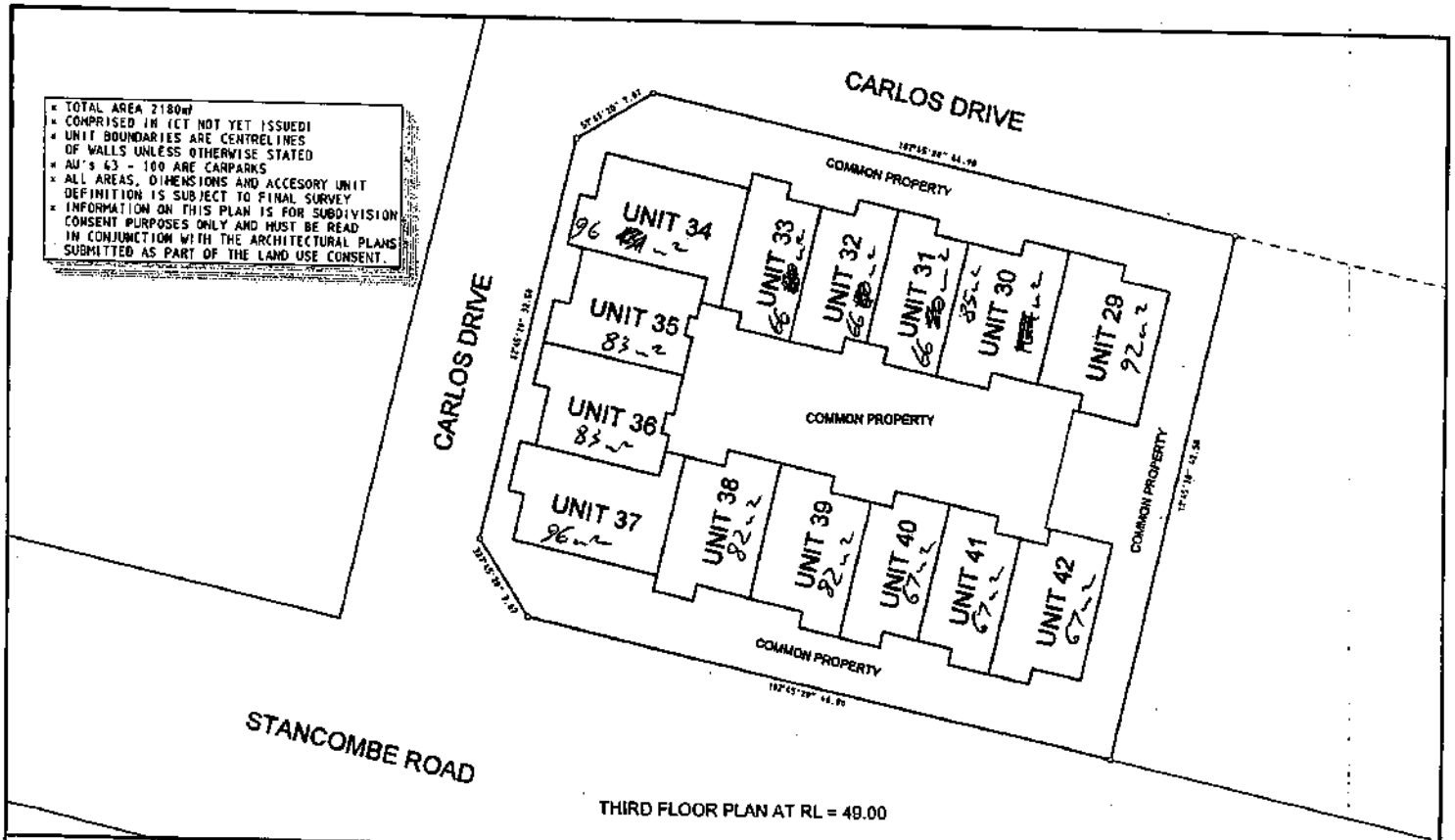
SECOND FLOOR PLAN AT RL = 46.00

Easdale Surveyors Ltd
REGISTERED SURVEYORS - LAND DEVELOPMENT CONSULTANTS
39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 537 0754
e-mail: surveyors@easdales.co.nz

PROPOSED UNIT DEVELOPMENT ON LOT 9 P 27046
1 STANCOMBE ROAD, FLAT BUSH

FILE:	7700
SCALE:	1:200 (A2) 1:400 A3 A4
DATE:	January 2005
SURVEYOR	RBH
REVISION	SCHEME 1

- TOTAL AREA 2180m²
- COMPRISED IN (CT NOT YET ISSUED)
- UNIT BOUNDARIES ARE CENTRELINES OF WALLS UNLESS OTHERWISE STATED
- AU's 43 - 100 ARE CARPARKS
- ALL AREAS, DIMENSIONS AND ACCESORY UNIT DEFINITION IS SUBJECT TO FINAL SURVEY
- INFORMATION ON THIS PLAN IS FOR SUBDIVISION CONSENT PURPOSES ONLY AND MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL PLANS SUBMITTED AS PART OF THE LAND USE CONSENT.



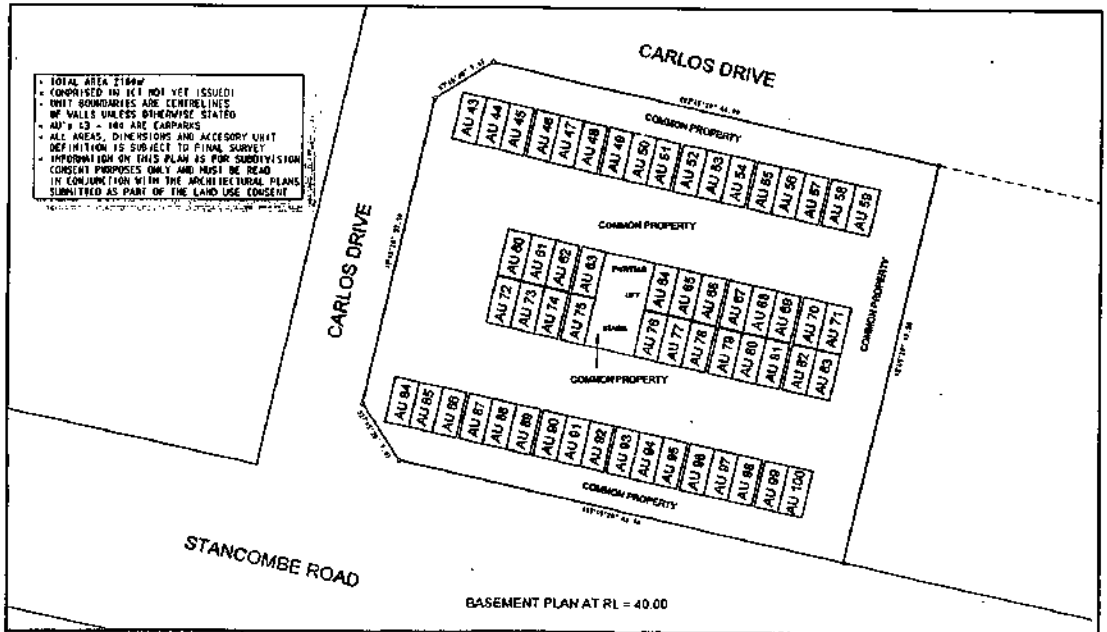
THIRD FLOOR PLAN AT RL = 49.00

Easdale Surveyors Ltd
REGISTERED SURVEYORS · LAND DEVELOPMENT CONSULTANTS
39 Meadowland Drive, Howick
Phone 09 534 8452
Fax 09 537 5754
e-mail surveyors@easdales.co.nz

PROPOSED UNIT DEVELOPMENT
ON LOT 9 P 27046
1[redacted] STANCOMBE ROAD, FLAT BUSH[redacted]

FILE:	7700
SCALE:	1:200 (A2) 1:400 A3 A4
DATE:	January 2005
SURVEYOR	RBH
REVISION	SCHEME 1

27564



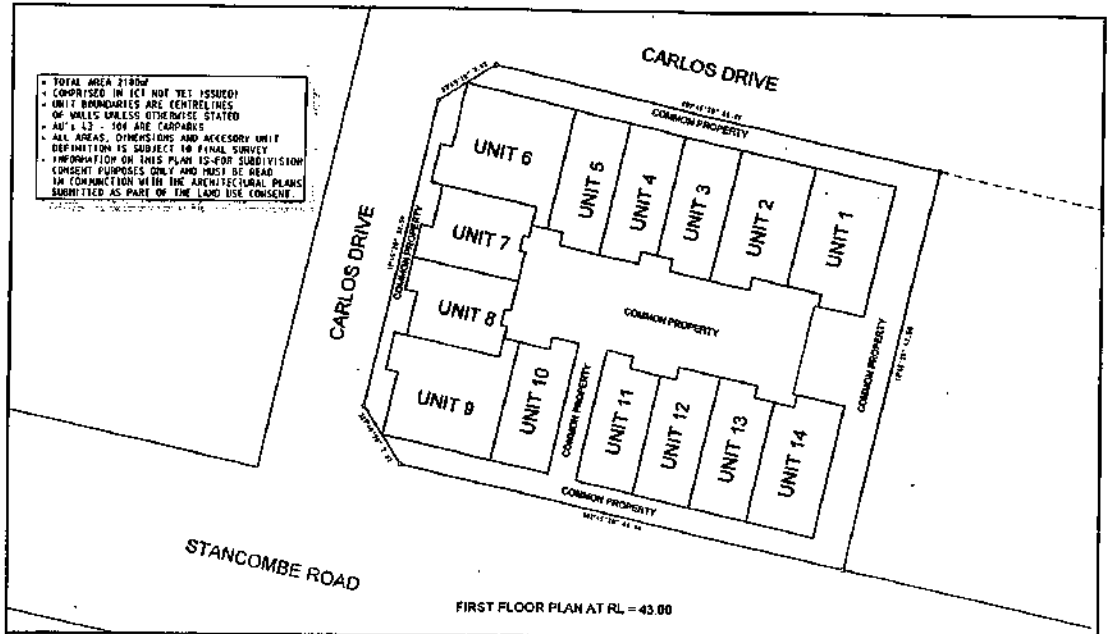
BASEMENT PLAN AT RL = 40.00

Eastdale Surveyors Ltd

PROPOSED UNIT DEVELOPMENT
ON LOT 9 P 27046
124 STANCOMBE ROAD, FLAT BUSH

FILE:	7700
SCALE:	1:200(A2) 1:400 A4
DATE:	January 2005
SURVEYOR	RBH
REVISION	SCHEME 1

27564



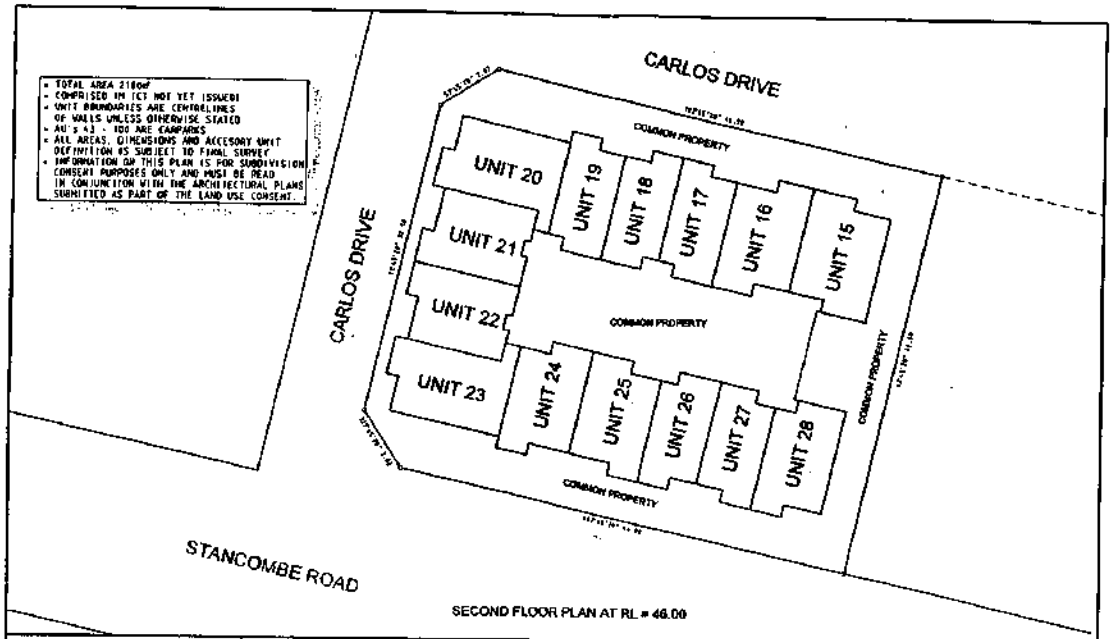
FIRST FLOOR PLAN AT RL = 43.00

Eastdale Surveyors Ltd

PROPOSED UNIT DEVELOPMENT
ON LOT 9 P 27046
124 STANCOMBE ROAD, FLAT BUSH

FILE:	7700
SCALE:	1:200(A2) 1:400 A3
DATE:	January 2005
SURVEYOR	RBH
REVISION	SCHEME 1

27564



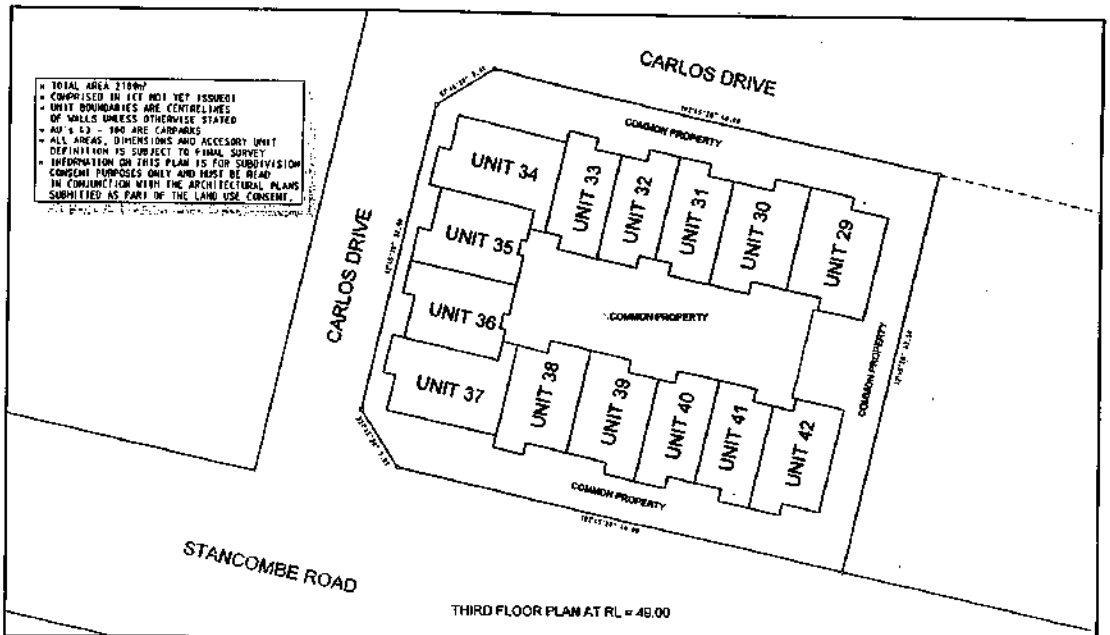
SECOND FLOOR PLAN AT RL = 46.00

Casdale Surveyors Ltd

PROPOSED UNIT DEVELOPMENT
ON LOT 9 P 27046
124 STANCOMBE ROAD, FLAT BUSH

FILE:	7700
SCALE:	1:200 (A2) 1:400 A4
DATE:	January 2005
SURVEYOR	RBH
REVISION	SCHEME 1

27564



Easdale Surveyors Ltd

PROPOSED UNIT DEVELOPMENT
ON LOT 9 P 27046
124 STANCOMBE ROAD, FLAT BUSH

FILE:	7700
SCALE:	1:200(A2) 1:400 A3 A4
DATE:	January 2005
SURVEYOR	RBH
REVISION	SCHEME 1

Environmental Services

16 September 2005

The Area Valuer
Quotable Value NZ Ltd
Registered Valuers
P.O. Box 91-602
AUCKLAND MAIL CENTRE

Attention: Yaqub Khan

Applicant:	**WORKING CONCEPTS LTD**
Application:	**RESOURCE CONSENT FOR FEE SIMPLE SUBDIVISION (ASSOCIATED WITH A MULTI-UNIT DEVELOPMENT).**
Location:	**124 STANCOMBE ROAD, FLAT BUSH**
MCC Reference:	**PROPOSAL NO: 28885, SP9188**
Legal Description:	**LOT 3 DP 78859**
Zone:	**FLAT BUSH RESIDENTIAL 1 (GENERAL PRECINCT)**

The attached plan (SP9188, Proposal No: 28885) shows the proposed subdivision of Lot 3 DP 78859 to create 4 allotments for residential purposes. The applicant has lodged a land use consent application for the construction of 22 residential units on these four allotments (footprints identified on the plan of proposed subdivision attached) and this is to be considered contemporaneously with the proposed subdivision. Lot 5 being a joint owned lot will be utilised for access and vehicle parking purposes, together with communal open space area (as identified on the attached plan).

Would you please supply for reserve contribution purposes:

1. A valuation for (each of) Lots 1-4 as single unit residential sites taking into account the amenity associated with the communal facilities proposed on Lot 5.

2. A notional site value for units 1-22 as identified on the attached land use plans (Nb: a Unit Title subdivision application has yet to be lodged, however, the applicant intends to make such an application in the future)

Please quote Purchase Order No. 58297 in your account.

Yours faithfully

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Reference: SP 9188, Proposal No: 28885
Direct Dial: 262-8900, extn 5856

Enquiries to: Bryce Pomfrett
Direct Facsimile: 262-5168

Step 1 FS subd

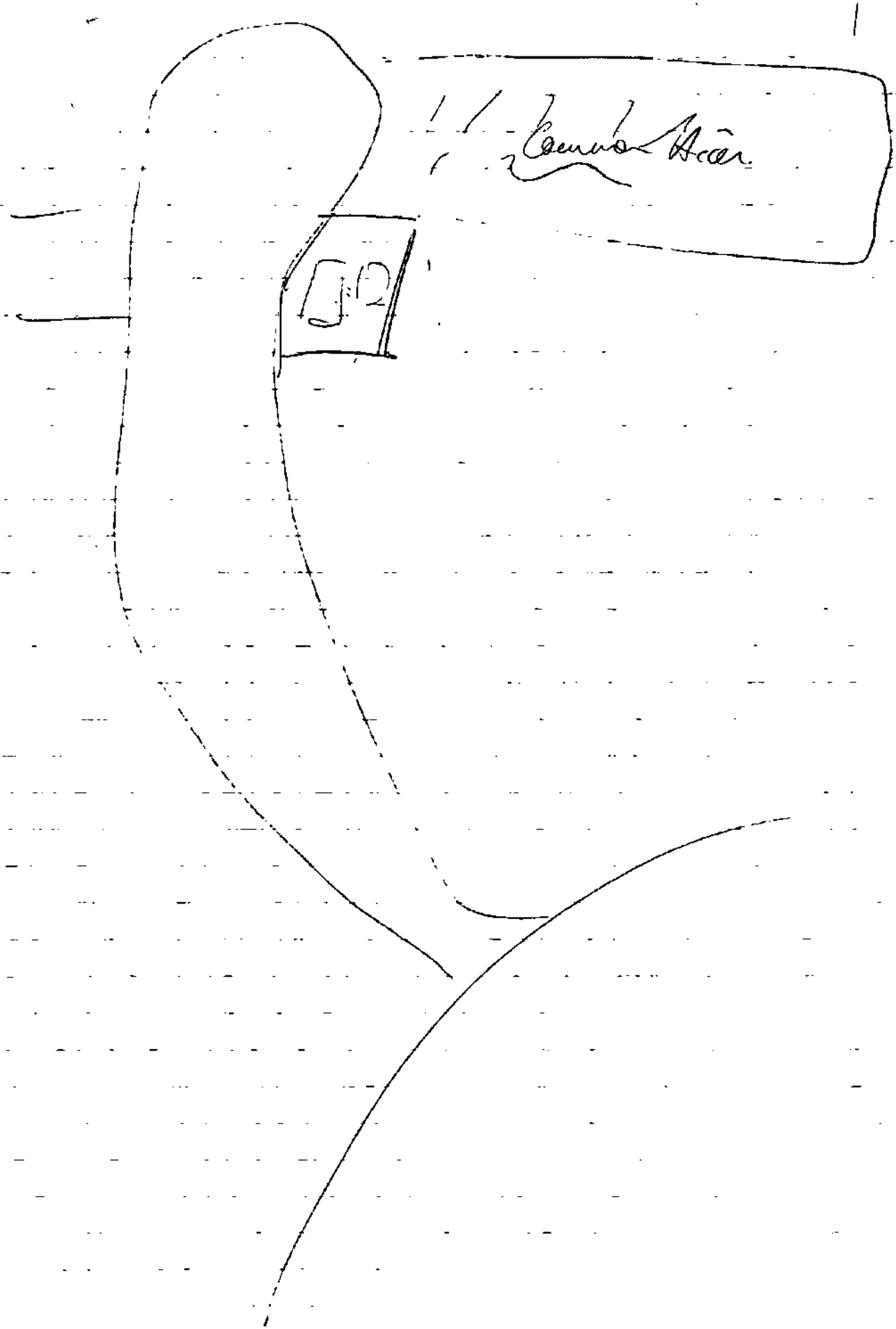
Description Lots 1 – 4 each for multi units

Lot 5 – parking + communal facilities as shown on plan 1.

Values of 1 – 4 as single unit sites.

Step 2 UT subds.

As notional site value of units 1 – 21



WASTE MANAGEMENT PLAN:

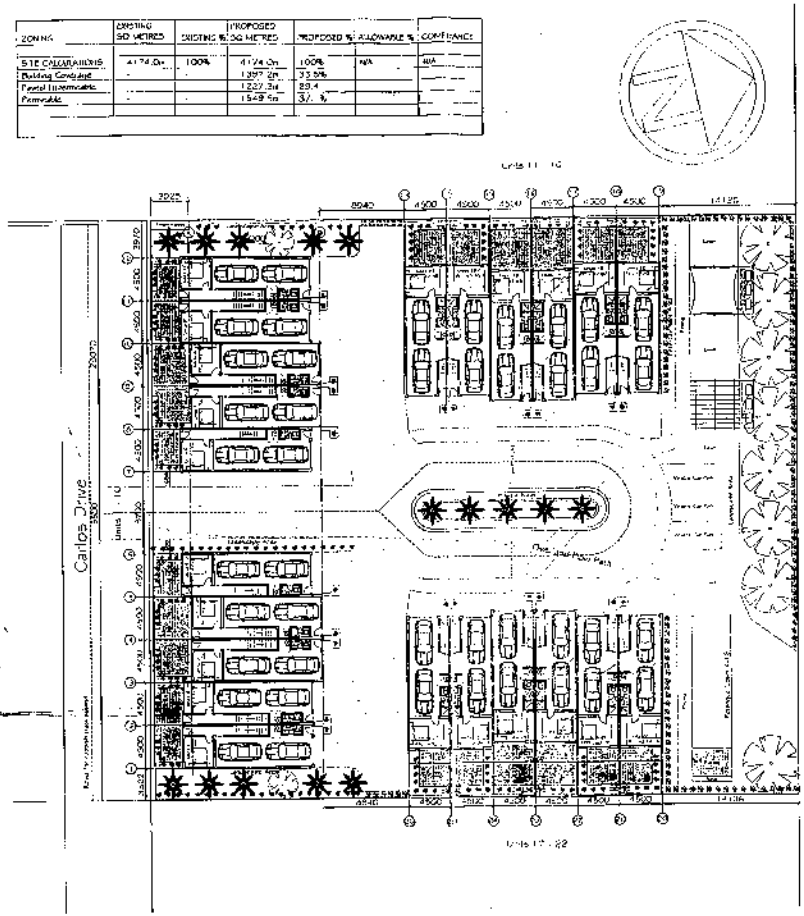
Property:	174 STAN COMBE	
1	**SPACE**	**PROPOSED ARRANGEMENTS:**
1.1	Number of units/dwellings	**22 @ 3 Bed Units**
1.2	Estimated refuse generated	**22 100l bins/wk for 3 bed units = 2200l/wk**
1.3	Estimated recycling generated	**22 14l bins /wk for 3 bed units = 308l/wk**
1.4	Describe the equipment & system to be used for managing refuse	**There are 22 off 240L wheelie bins located at each unit. Units 1 - 10 will have w/bins stored in court yard area. Units 11 - 22 will have w/bins stored out side of garage.**
1.5	Describe the equipment & system to be used for managing recyclables	**Each unit will be equiped with a 14L recycling bin for glass plastic and tins.**
1.6	Describe the equipment & system to be used for garden waste (if applicable)	**The Body Corp. will be responsible for arranging for any gardening required to the common areas. This waste would be removed at that time by the contractor.**
1.7	How much space has been allocated (highlight on plan)	~~N/A~~ Refer Plan Attached
2	**ACCESS**	
2.1	Describe the arrangements for access by residents to waste facilities (highlight on plan)	**Residents will place rubbish and recyclables in the bins provided.**
2.2	Describe the arrangements for access by collection contractors to waste facilities (highlight on plan)	**All refuse and recyclables will be collected kerb side by contractors. The Residents will be responsible for placing wheelie bins out and retrieving them once emptied**
2.3	Describe the arrangements if a private road is to be accessed by Council's contractors(s) (highlight on plan)	**Council contractors will access the site as allocated on the site map.**
3	**AMENITIES**	
3.1	Describe how noise associated with residents using the storage facility & contractors undertaking collections has been minimised	**Operation is similar to usual collection system, so no increase in noise is anticipated.**
3.2	Describe the ventilation of waste storage area(s) if in a confined area (highlight on plan)	**Refuse areas will be reliant on natural air movement.**
3.3	Describe the facilities for washing bins & waste storage areas (highlight on plan)	**A hose tap has been provided.**
3.4	Describe any features for preventing ingress of vermin into waste storage areas	**Paved base - solid fencing - solid door access**
3.5	Describe measures for protecting waste equipment from theft or vandalism	**Paved base - solid fencing - solid door access**

3.6	Describe measures taken to ensure storage areas are aesthetically consistent with the rest of the development	**Bins are kept within the confines of the residents property.**

WASTE MANAGEMENT PLAN:

4	MANAGEMENT	PROPOSED ARRANGEMENTS:
4.1	Identify each stage of waste & recyclable transfer between reasidents' units storage & loading into collection vehicles. Who is responsible for each transfer?	**Individual resident unit is responsible for taking their own rubbish to designated areas**
4.2	Describe the arrangements for cleaning waste/recycling storage areas & equipment	**A hose tap has been provided.**
4.3	Describe the arrangements for ensuring residents are aware of how to use the waste management system correctly	**Comprehensive written instructions will be given to all residents by the Body Corporate**

ZONING	EXISTING SQ METRES	EXISTING %	PROPOSED SQ METRES	PROPOSED %	ALLOWABLE %	COMPLIANCE
SITE CALCULATIONS	4174.0m	100%	4174.0m	100%	N/A	N/A
Building Coverage	-	-	1397.2m	33.5%		
Paved Impermeable			1227.3m	29.4		
Permeable	-		1549.5m	37.1%		



a|to

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

Sheet Title
AD1
Ground Floor
Site Plan

Drawing Scale
Date Printed
Drawn
Checked
Project No

124 Stancombe Road, Flatbush

Stancombe Estate - 124 Stancombe Road

Date. 20- 04 - 05

DRAWING ISSUE REGISTER

ISSUED TO		20 Mar 05	18 Apr 05							
		NUMBER OF COPIES :								
Client	Working Concepts Ltd									
Contractor	T B A									
Council	Mansfield City									
Electrical Eng	T B A									
Fire Planner	Peter Durbin	1								
Hydraulics Eng	Hydraulic Services									
Mechanical Eng	T B A									
Q.S	T B A									
Structural Eng	Jawa Structures Ltd									
Acoustics	John Cawley	1								
Town Planner	Carl Cook	1	2	3						

Total sheets :

REASON FOR ISSUE

ISSUE FORMAT

REASON FOR ISSUE 1 PRE-MINARY 2 INFORMATION 3 PERMIT 4 MARKETING 5 TENDER

6 CONTRACT 7 CONSTRUCTION 8 RECUCUTED 9 APPROVAL

ISSUE FORMAT A1 - HARDCOPY A3 - HARDCOPY D - DIVISION BASKETTE

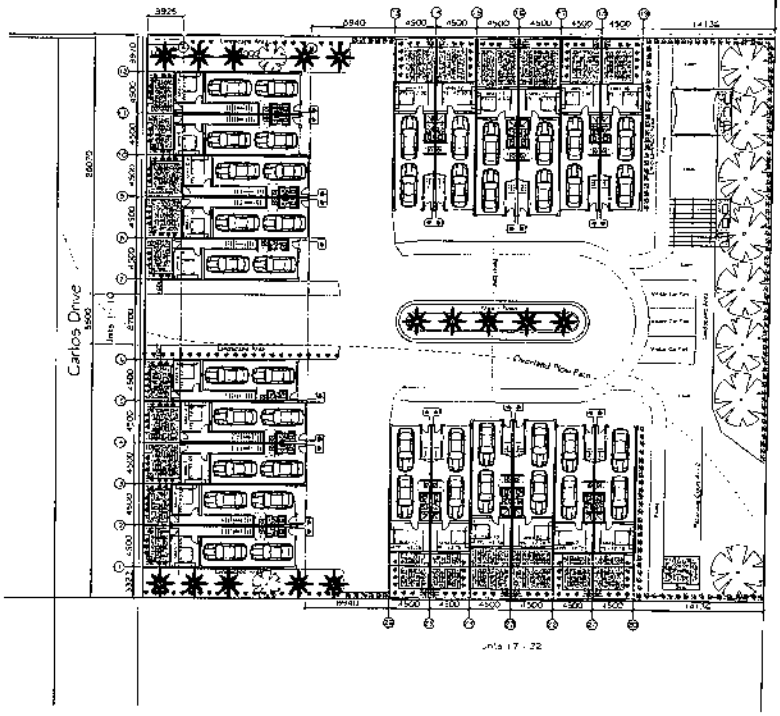
E - DIVISION EMAIL F - FAX

	DRAWING No AND TITLE	BUILDING CONSENT	A1	A3	REVISION							
A 00	Title Sheet		N/A	N/A								
A 01	Ground Level Site Plan		1 200	1 400								
A 02	First Floor Site Plan		1 200	1 400								
A 03	Second Floor Site Plan		1 200	1 400								
A 04	Roof Plan		1: 200	1: 400								
A 05	Proposed Floor Plans		1: 50	1: 100								
A 06	Proposed Floor Plans (Carlos Drive)		1 50	1 100								
A 07	Proposed Elevations (units 1-10)		1 100	1: 200								
A 08	Proposed Elevations (units 11-16)		1 100	1 200								
A 12	Proposed Elevations (units 17-22)		1 100	1: 200								
A 10	Elevations 11 & 17 / 18 & 22		1 100	1 200								
A 11	Elevation Notes		1 100	1: 200								
A 12	Sections		1: 25	1: 50								

a to

A

ZONING	EXISTING SQ METRES	EXISTING %	PROPOSED SQ METRES	PROPOSED %	ALLOWABLE %	COMPLIANCE
SITE CALCULATIONS	4174.0m	100%	4174.0m	100%	N/A	N/A
Building Coverage	-	-	1397.2m	33.5%		
Paved Impermeable	-	-	1227.3m	29.4		
Permeable	-	-	549.5m	37.1%		

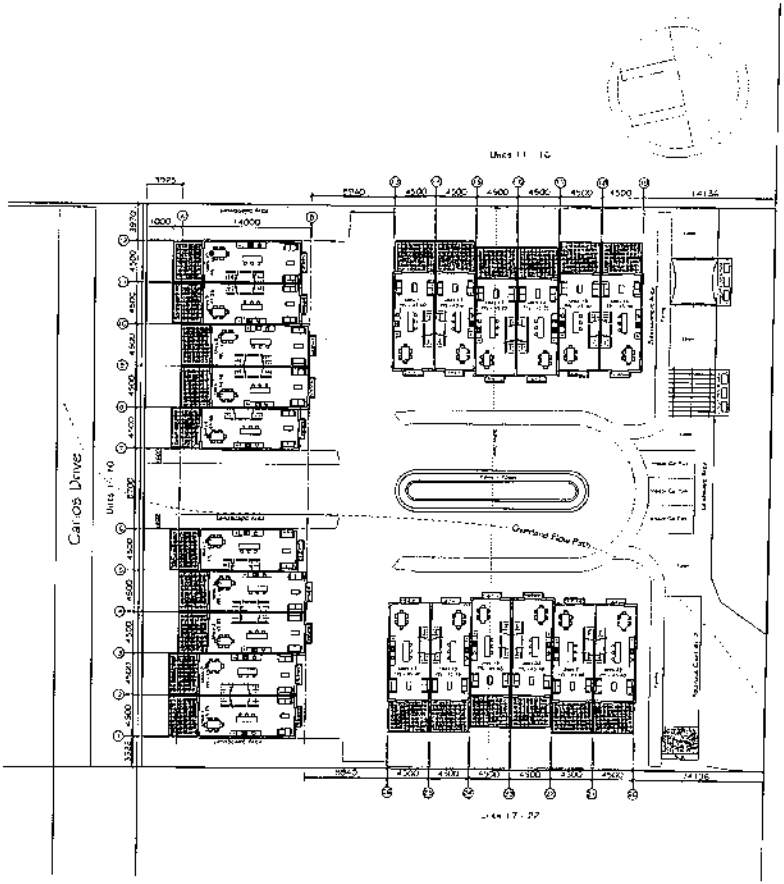


alto

Project:
Stancombe Estate
124 Stancombe Road
Rotany
Flat Bush

Sheet Title
A01
Ground Floor
Site Plan

Drawing Scale 1:200 - A1
1:400 - A3
Date Printed 26-04-05
Drawn A
Checked CB
Project No 1361



alto

Revisions

No.	Description	Date
A	Planning Consent	[illegible]

Project:
Stanborough Estate
124 Stanborough Road
Potters
Flat Bush

Drawing Title
A02
First Floor
Site Plan

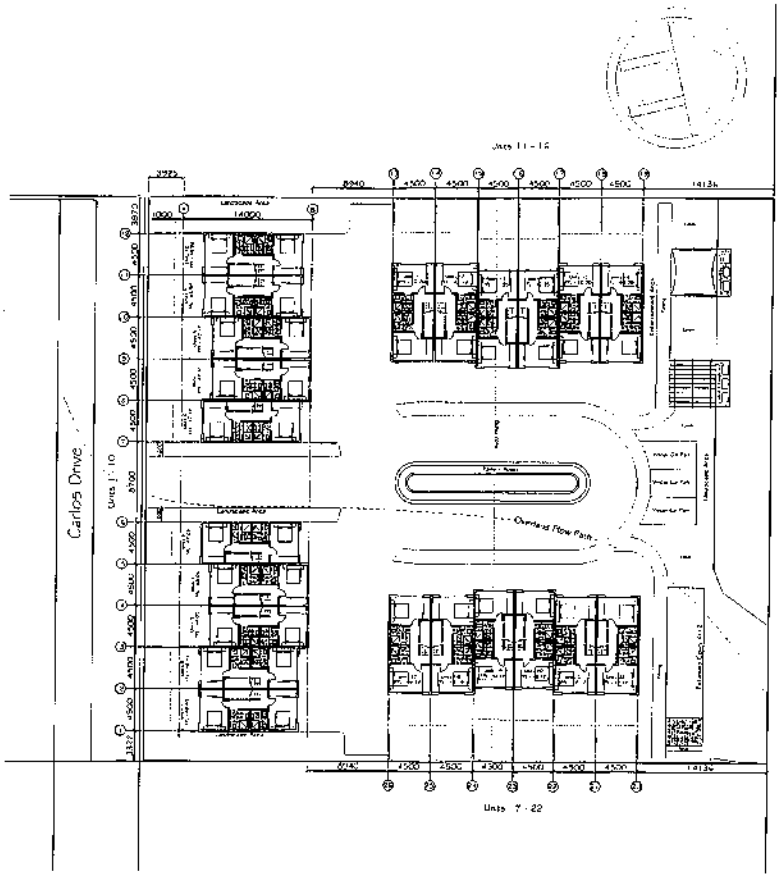
Drawing Scale 1:200 @ A1
1:400 @ A3

Date Printed 20.04.05

Drawn JL

Checked CB

Project No. 1281

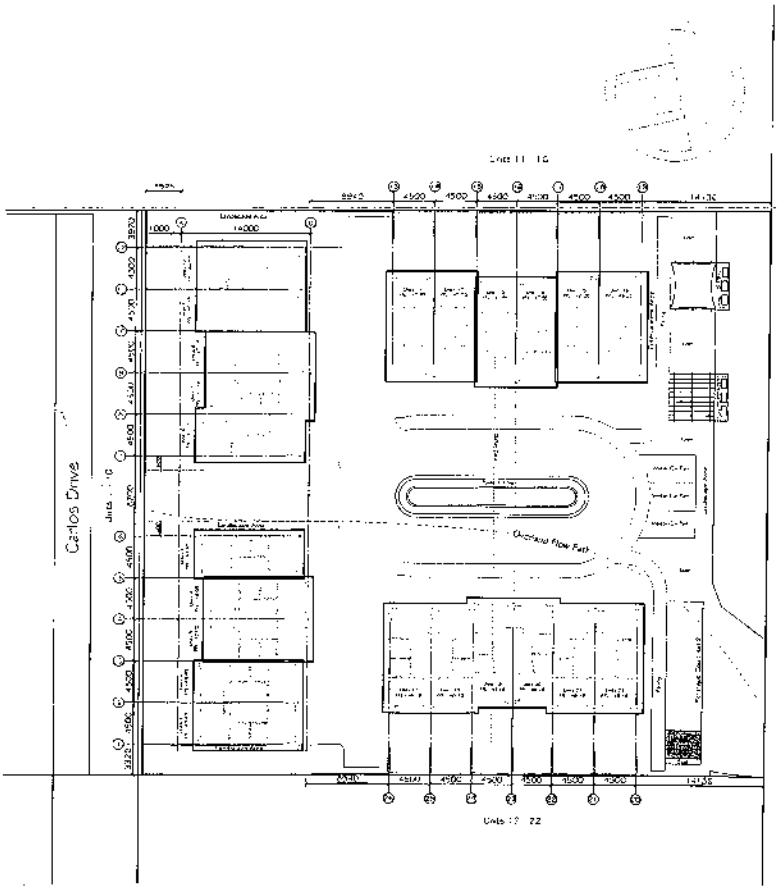


alto

Project:
Stancombe Estate
124 Stancombe Road
Delany
Fish Bush

Sheet Title
A03
Second Floor
Site Plan

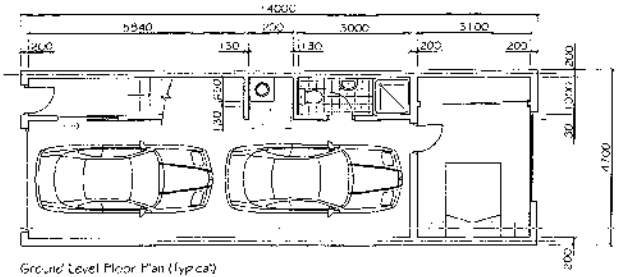
Drawing Scale
Date Drawn
Drawn
Checked
Project No



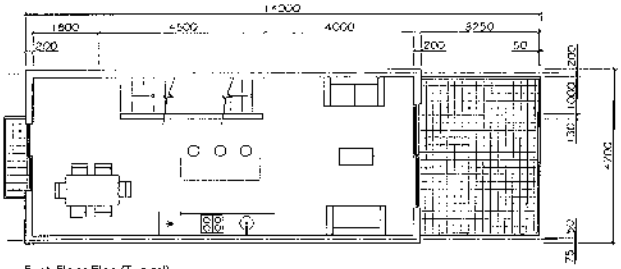
alto

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

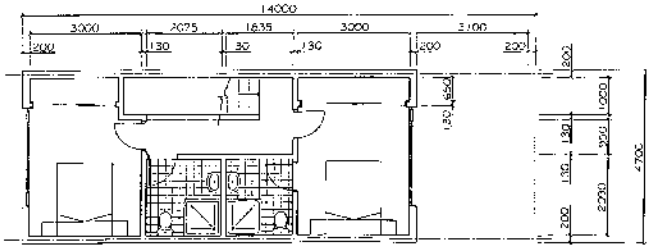
Sheet Title
A04
Roof Plan



Ground Level Floor Plan (Typical)
Scale 1:50



First Floor Plan (Typical)
Scale 1:50



Second Floor Plan (Typical)
Scale 1:50

14.0
4.7
980
5600
6580

65.5
x 7.0
0
460.6

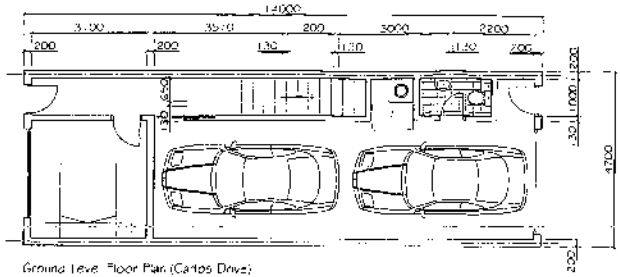
alto

Project:
Stancombe Estate
124 Stancombe River
Botany
Flat Bush

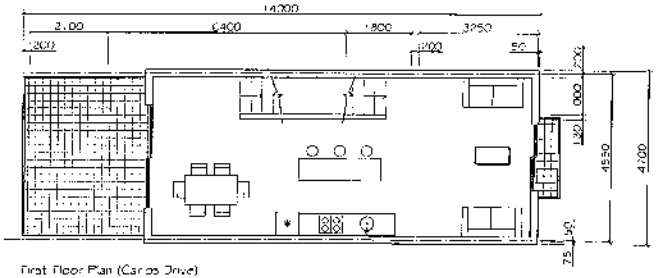
A05

Proposed
Floor Plans

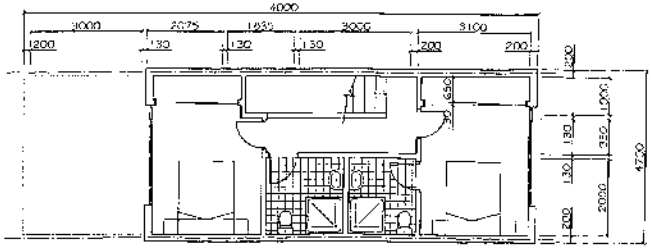
Drawing Scale 1:50 - A1
1:100 - A3
Date Printed 20.04.05
Drawn A
Checked
Project No. 1291



Ground Level Floor Plan (Carlos Drive)
Scale 1:50



First Floor Plan (Carlos Drive)
Scale 1:50



Second Floor Plan (Carlos Drive)
Scale 1:50

alto

Project:
Stanscombe Estate
124 Stanscombe Road
Botany
Full Build

Sheet No.
A06

Proposed
Floor Plans
(Carlos Drive)

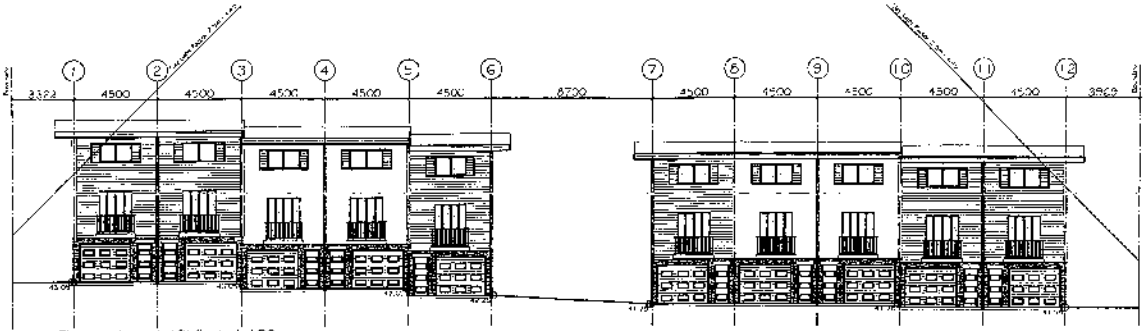
Drawing Scale 1:50 - A1
1:100 - A3

Date Issued 2024-02

Drawn A

Checked CB

Approved



North Elevation (units 1 - 10) Scale 1:100

South Elevation (units 1 - 10) Scale 1:100

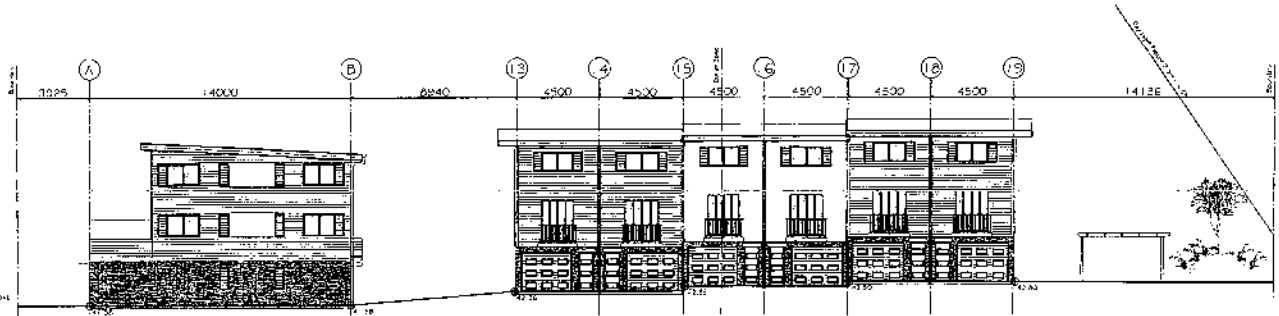
Carlos Drive

alto

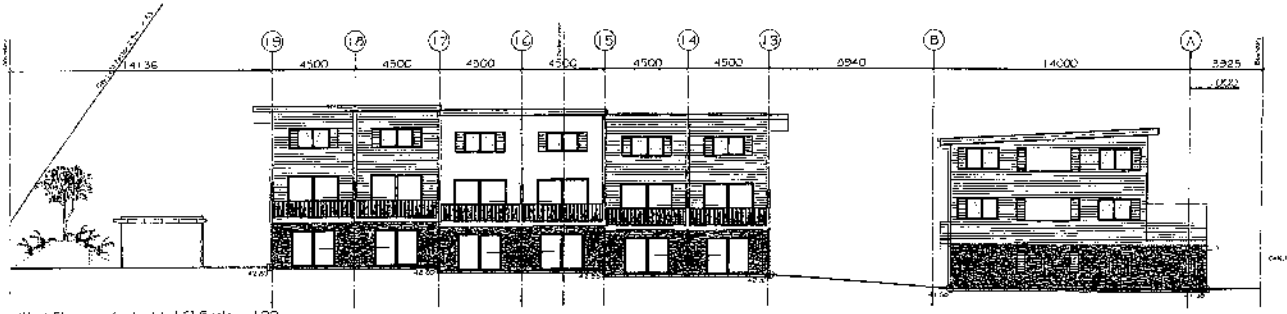
Project:
Slancombe Estate
124 Slancombe Road
Botany
East Bush

Sheet Title
A07

Elevations
Units 1 - 10



East Elevation (units 11-16) Scale 1:100



West Elevation (units 11-16) Scale 1:100

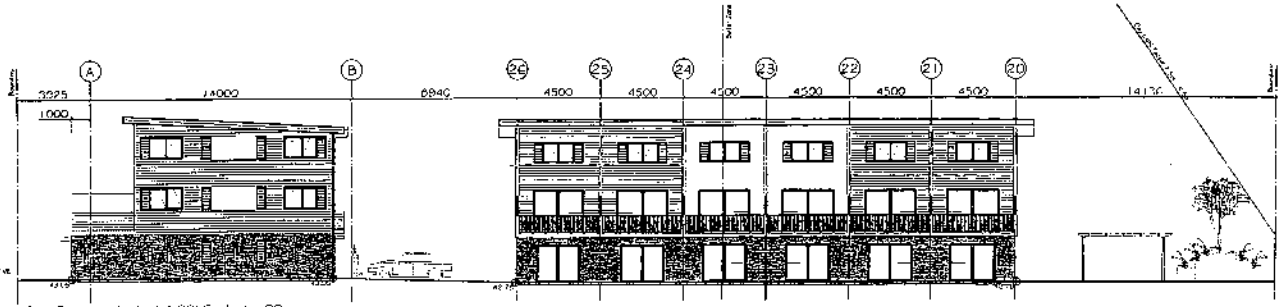
alto

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

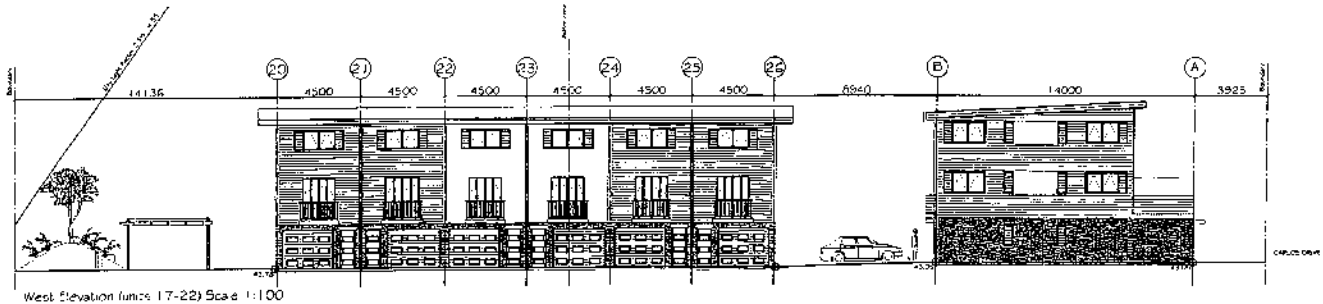
Sheet File
A08

Elevations
Units 11 - 16

Drawing Scale
Date Printed
Drawn
Checked
Project No



East Elevation (units 17-22) Scale 1:100

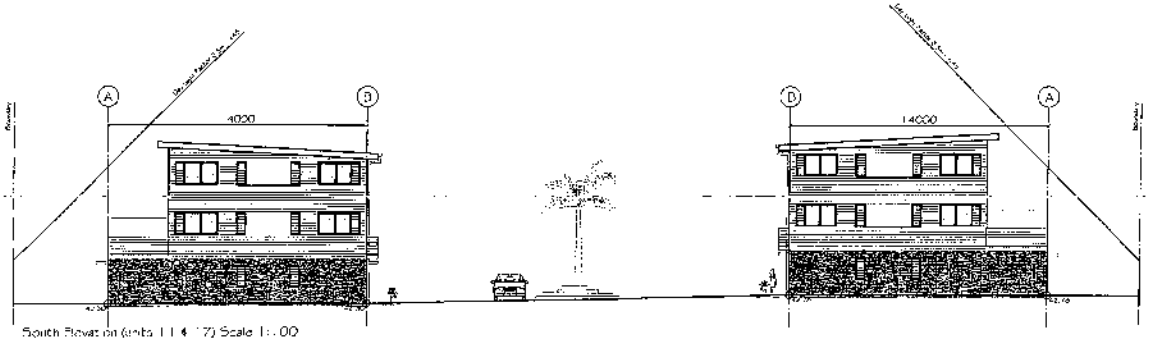


West Elevation (units 17-22) Scale 1:100

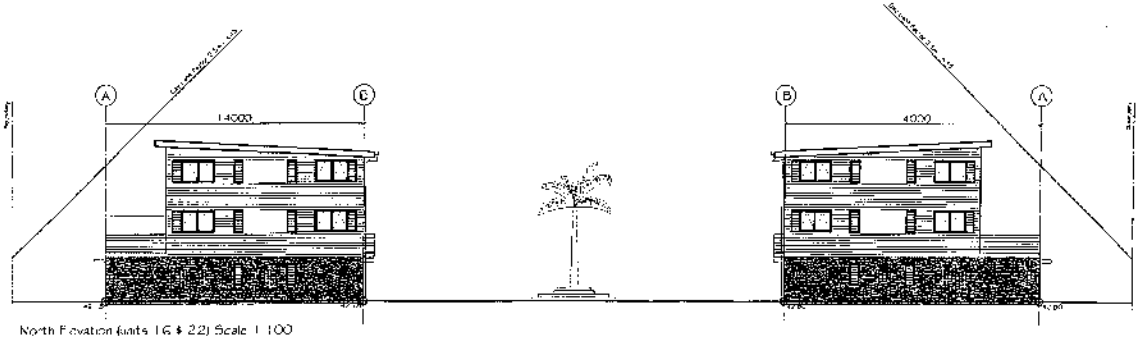
a)to

Project:
Stancombe Estate
24 Stancombe Road
Bonny
Flat Bush

A06
Elevations
Units 17 - 22



South Elevation (units 11 & 17) Scale 1:100



North Elevation (units 16 & 22) Scale 1:100

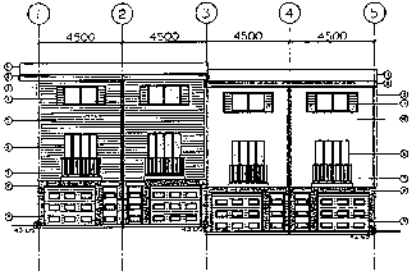
alto

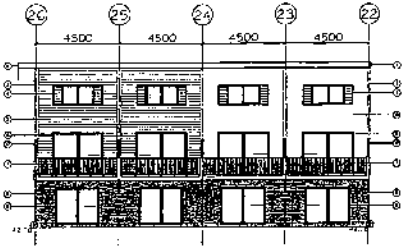
Project:
Stanco Site Estate
124 Stancombe Road
Botany
Flat Bush

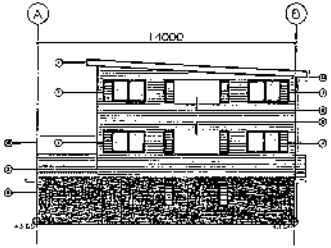
Sheet Title
A10

Elevations Units
11 & 17
16 & 22

Drawing Scale
Date Printed
Drawn
Checked
Projected





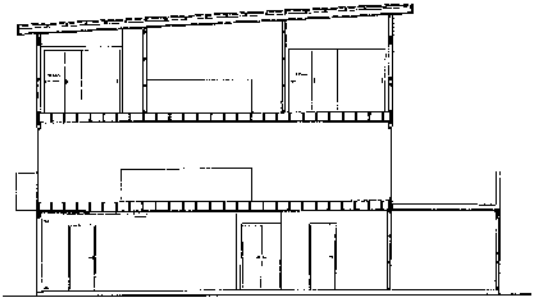


	Elevation Notes				
1	Steel and Tube trimlite colorsteel roofing	7	Selected Wrought iron belastrade	13	UPVC downpipes. Paint finish to specification
2	Colorsteel gutter on timber fascia. Paint finish to specification	8	Selected Schist	14	
3	Concrete tilt panel wall with selected paint finish lined with 25x50 battens and 10mm standard gib to interior walls	9	Selected garage sectional door installed to manufacturers specifications	15	
4	Selected powder coated aluminium windows and Louvers with 6mm glass	10	Solid plaster coating to exterior 20 series mansonry wall installed to manufacturers specifications	16	
5	Weatherboard on building paper installed to manufacturers specifications	11	Selected powder coated aluminium sliding doors with 6mm glass.	17	
6	Aluminium Bi-folds with 6mm glass intalled to manufactures specifications	12	Aluminium deck partitions installed to manufacturers specifications.	18	

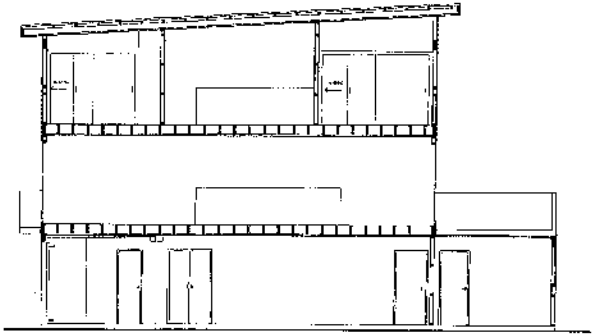
a|to

Project:
Stancombe Estate
174 Stancombe Road
Botany
Flat Bush

Sheet Title
A11
Elevations Notes



Section A-A
Scale 1:50



Carlos Drive

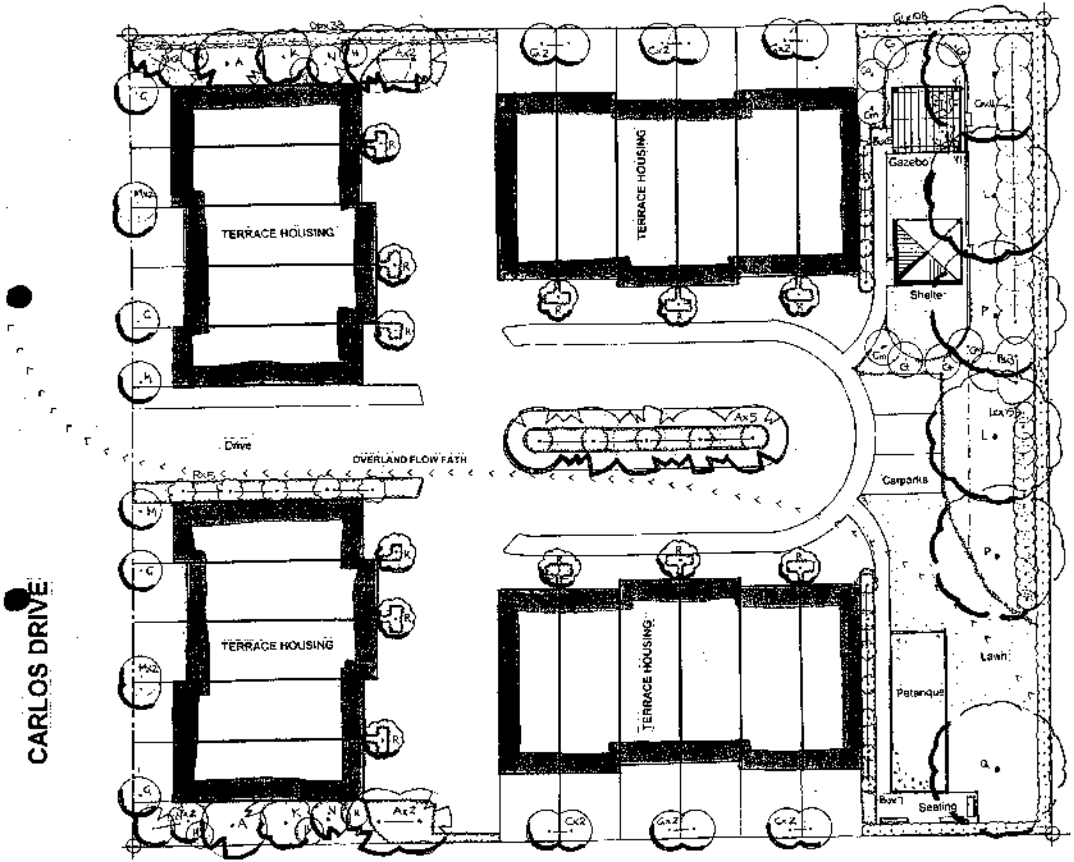
Section A-A
Scale 1:50

alto

Project:
Blancombe Estate
124 Blancombe Road
Botany
Flat Bush

Sheet Title
A12
Sections

Drawing Scale
Date Printed
Drawn
Checked
Project No



NOTES

+ Larger trees generally character species for the area in MCC Tree Policy (liquidamber, taraire, rewarewa). Pinoak selected for tolerance to flooding.
+ Palms and smaller trees include nikau, rhododendron, queen palms, Gordonia, citrus.
+ A 2-3m NZ broadleaf hedge encloses the rear of the property, and an Olearia hedge screens the front west side. The driveway area to the east is screened by a hedge on the neighbouring property.
+ Under-planting will include groundcover roses, rosemary, lavender. Patterning of groundcovers and gravel provides visual interest in narrow side-yard areas. Planting in yards fronting Carlos Drive defined with hedging and herbaceous planting to max 1m height.
+ Landscape allows for 3 different activity areas including petanque court, and 2 gazebos with BBQs.
+ Overland flow path traverses lawn and driveway.

PLANT SCHEDULE – 124 STANCOMBE ROAD N

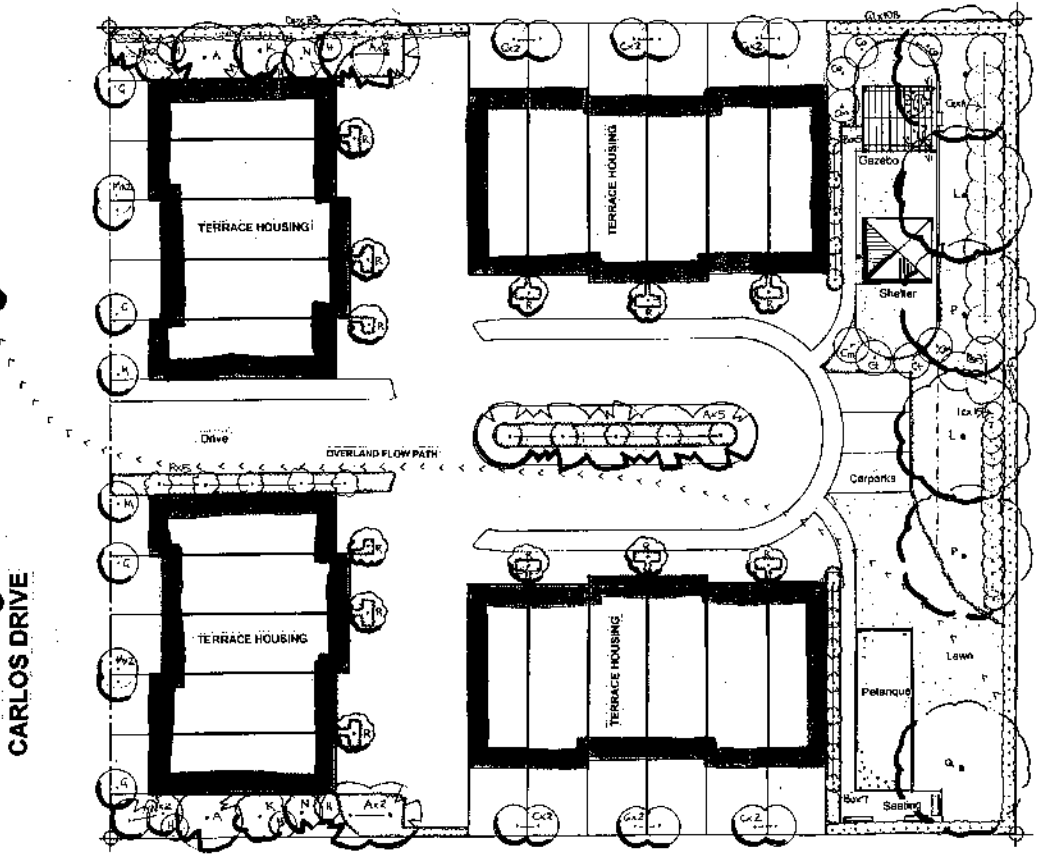
Symbol	Botanical name	Common name	No.	Size	Height & spread	Notes
A	*Arecastrum romanzoffianum*	Queen Palm	11	Pots of [illegible]	15m x 5m	
C	*Camellia* 'Plantation pink'	Or similar upright pink camellia	6	Pb40	3m x 2m	
G	*Gordonia axillaris*	White flowers	10	Pb95	3m x 2m	
H	*Rhododendron* 'Susan'	Tall, mauve flowers	8	Pb28	3m x 2m	
K	*Knightia excelsa*	Rewarewa	2	Pb95	20m x 4m	
L	*Liquidambar styraciflua*	Liquidamber	3	Pb95	10m+ x 10m	
M	*Michelia figo*	Port wine magnolia	6	Pb95	3m x 3m	
N	*Rhopalostylis sapida*	Nikau	6	Pb95	8m x 3m	
P	*Beilschmiedia tarairi*	Taraire	2	Pb95	10m+ x 10m	
Q	*Quercus palustris*	Pinoak	1	Pb95	10m+ x 10m	
R	*Radermachera sinica*	Canton lace / China doll	17	Pb95	4m x 3m	
Bu	*Buxus sempervirens*	Standard English box or similar as available	12	Pb8	1.5m as available	
Cs	*Cedrela sinensis*	Chinese toon	11	Pb8	3m x 2m	1.5m c-c
Cm	*Citrus* Mandarin Satsuma	Mandarin	3	Pb28	Hedged	600mm c-c
Co	*Citrus* Navel orange	Orange	3	Pb28	Hedged	600mm c-c
Ct	*Citrus* Tangelo	Tangelo	2	Pb28	Hedged	600mm c-c
Gl	*Griselinia littoralis*	NZ Broadleaf Hedged to approx. 2m	108	Pb8	Hedged	600mm c-c
Lc	*Loropetalum chinense*	Fringe flower	15	Pb5	1.5 x 1.5m	1m c-c
Op	*Olearia paniculata*	Akiraho Hedged to approx. 2m	33	Pb8	Hedged	600mm c-c
Pg	*Pseudopanax* 'Cyril Watson'	NZ Five finger variety	3	Pb18	3m x 3m	1m c-c
Vt	*Vitis* 'Albany surprise' & suitable white var	Edible grape – white & red	1 each	Pb3		As shown

Note: Check location of all services before planting. See separate planting plan for herbaceous planting. Plant and mulch trees to tree planting detail provided.
Any changes in cultivar to be discussed with Landscape Architect. All plants subject to approval by Landscape Architect for plant quality, also suitability shape and size.
Lay out plants prior to planting for approval by Landscape Architect.

STANCOMBE ESTATE **124 STANCOMBE ROAD (N)**

L01 PLANTING PLAN – STRUCTURAL PLANTING

1:200 @ A2 **April 20?5**



CARLOS DRIVE

NOTES

+ Larger trees generally character species for the area in MCC Tree Policy. (liquidamber, tarwire, rewarewa). Pinoak selected for tolerance to flooding.
+ Palms and smaller trees include nikau, rhododendron, queen palms, Gordonia, citrus.
+ A 2-3m NZ broadleaf hedge encloses the rear of the property, and an Olearia hedge screens the front west side. The driveway area to the east is screened by a hedge on the neighbouring property.
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+ Landscape allows for 3 different activity areas including petanque court, and 2 gazebos with BBQs.
+ Overland flow path traverses lawn and driveway

PLANT SCHEDULE – 124 STANCOMBE ROAD N

Symbol	Botanical name	Common name	No.	Size	Mature in 8 spread	Notes
A	*Arecastrum romanzoffianum*	Queen Palm	11	Pb95 or Pb128	15m x 5m	
C	Camellia 'Plantation pink'	Or similar upright pink camellia	6	Pb40	3m x 2m	
G	*Gordonia axillaris*	White flowers	10	Pb95	3m x 2m	
H	*Rhododendron 'Susan'*	Tall, mauve flowers	6	Pb28	3m x 2m	
K	*Knightia excelsa*	Rewarewa	2	Pb95	20m x 4m	
L	*Liquidamber styraciflua*	Liquidamber	3	Pb95	10m+ x 10m	
M	*Michelia figo*	Port wine magnolia	8	Pb95	3m x 3m	
N	*Rhopalostylis sapida*	Nikau	8	Pb95	8m x 3m	
P	*Beilschmiedia tarairie*	Tarairie	2	Pb95	10m+ x 10m	
Q	*Quercus palustris*	Pinoak	1	Pb95	10m+ x 10m	
R	*Rademachera sinica*	Canton face / Chino doll	17	Pb95	4m x 3m	
Bu	*Buxus sempervirens*	Standard English box or similar as available	12	Pb8	1.5m as available	
Ce	*Cedrela sinensis*	Chinese toon	11	Pb8	3m x 2m	1.5m o.c.
Cm	*Citrus Mandarin Satsuma*	Mandarin	3	Pb28	Hedged	600mm o.c.
Co	*Citrus Navel orange*	Orange	3	Pb28	Hedged	600mm o.c.
Ct	*Citrus Tangelo*	Tangelo	2	Pb28	Hedged	600mm o.c.
Gl	*Grisolina littoralis*	NZ Broadleaf Hedged to approx. 2m	108	Pb8	Hedged	600mm o.c.
Lc	*Lomatetum chinense*	Fringe flower	15	Pb5	1.5 x 1.5m	1m o.c.
Op	*Olearia paniculata*	Akeraho Hedged to approx. 2m	33	Pb8	Hedged	600mm o.c.
Ps	*Pseudopanax 'Cyril Watson'*	NZ fivefinger variety	3	Pb18	3m x 3m	1m o.c.
Vi	Vitis 'Albany surprise' & suitable white var.	Edible grape – white & red	1 each	Pb8		Arch/ers

Note: Check location of all services before planting. See separate planting plan for herbaceous planting. Plant and mulch trees to tree planting detail provided.
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Lay out plants prior to planting for approval by Landscape Architect.

NORTH

STANCOMBE ESTATE **124 STANCOMBE ROAD (N)**

L01 PLANTING PLAN – STRUCTURAL PLANTING

1:200 @ A2 **April 2005**

Easdale Surveyors Ltd
REGISTERED LAND SURVEYORS

DIRECTOR:
M.S. LUCAS, B.Surv., M.N.Z.I.S.

39 Meadowland Drive,
Howick, Auckland.
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e-mail: easdales@clear.net.nz

28 April 2005

In all correspondence please quote our ref : 7793

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

Attn: J Batty

Dear Madam

Re: Proposed Subdivision – Carlos Drive, Flat Bush
Lot 10 DP 352580 (Previously Lot 3 DP 78859).

Enclosed is an application for Resource Consent for the subdivision of the above property under the Resource Management Act 1991.

The proposed subdivision is part of an integrated Resource Consent application for the development of the property which is being currently being created under SP 8840 (P 27046).

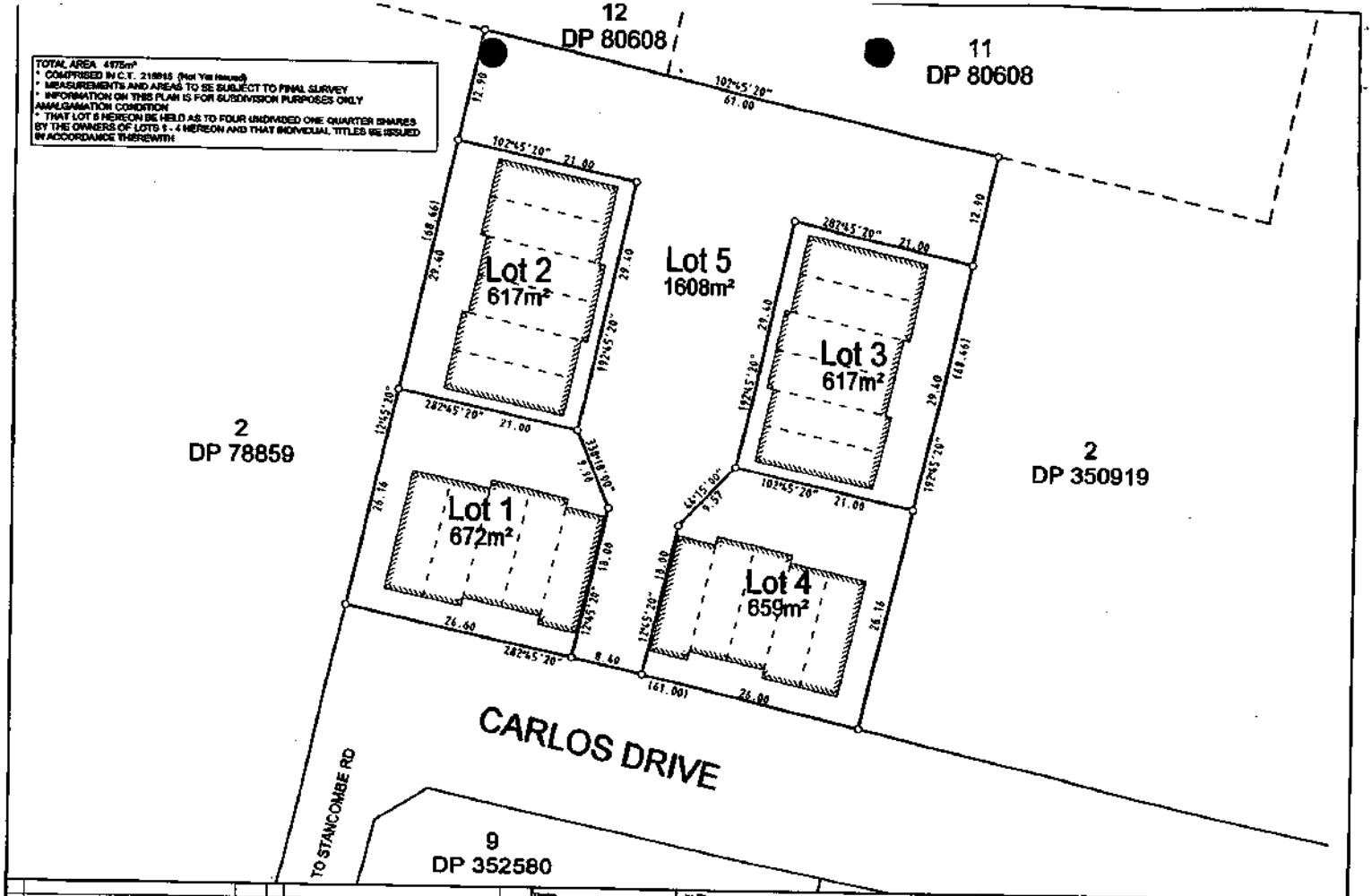
The Land Use aspects of the development relating to the proposed buildings are dealt with elsewhere in the application which also includes the engineering plans for the serving of the development as a whole.

The subdivision involves creation of four individual lots each containing one of the multi unit buildings. There is also a jointly owned lot which provides access and shared areas for entertaining and visitor parking. It is considered a better solution to the ownership of the buildings to hold as fee simple titles rather than subdivide the whole development as a Unit Title subdivision.

There are few if any environmental effects from the subdivision of the development beyond the effects of the Land Use component of the application. The non compliance of the percentage of rear lots has no effect as the reason for this rule relates to the spacing and intensity of development which is being assessed under the Land Use part of the application.

Yours faithfully
EASDALE SURVEYORS LTD

M S LUCAS



No.	Revision Details	Date	No.	Revision Details	Date

Design
Survey MSL
Drawn MSL
Checked
Date April 2006
Scale 1:400 (A3)

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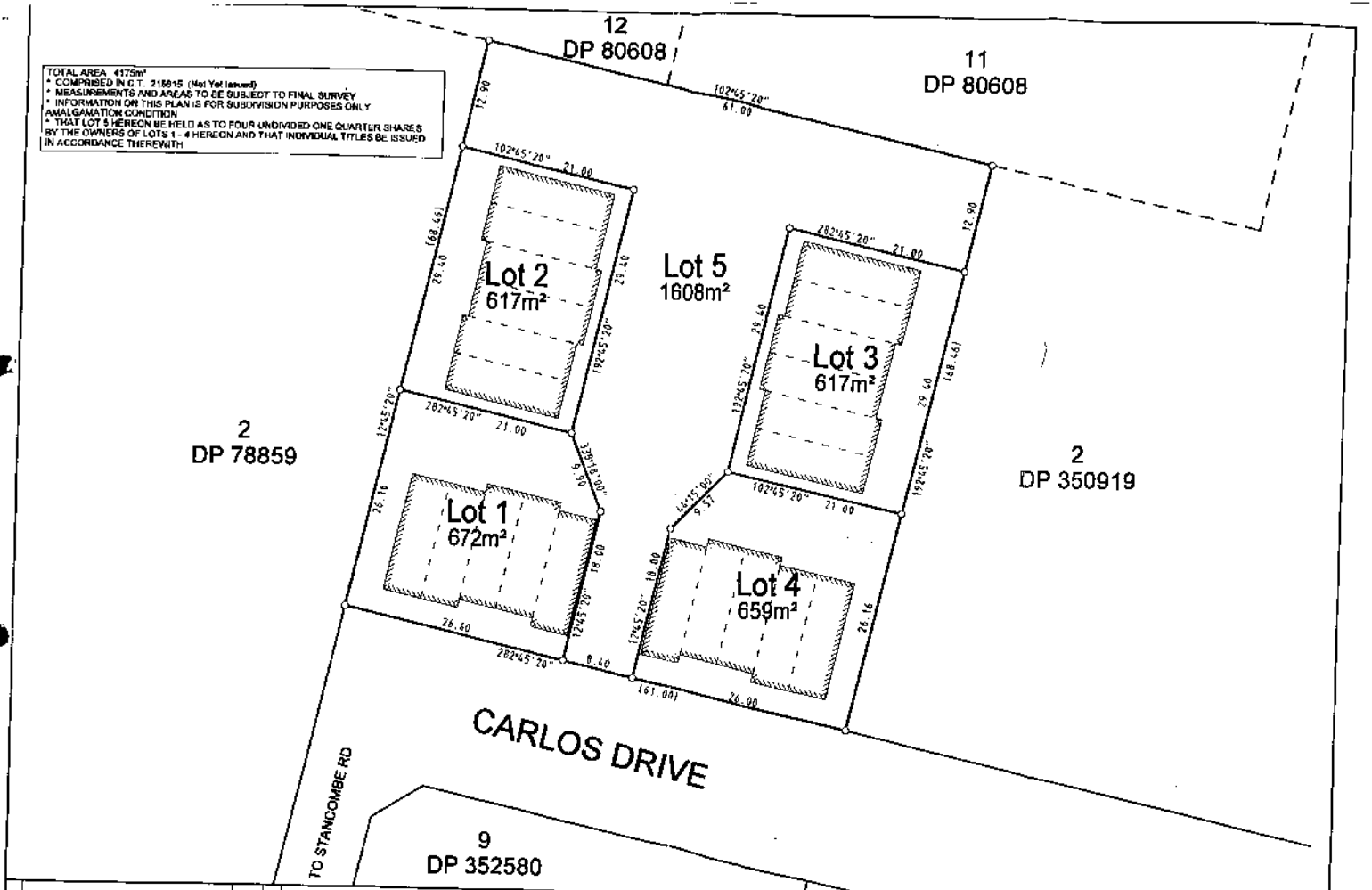
Job Title
PROPOSED SUBDIVISION
FOR
CARLOS CONCEPTS LTD
CARLOS DRIVE, FLAT BUSH
LOT 10 DP 352580

Eastdale Surveyors Ltd

Drawing Title
SCHEME PLAN

File No. 7793
Rev 1

TOTAL AREA 4175m²
* COMPRISED IN C.T. 215615 (Not Yet Issued)
* MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
* INFORMATION ON THIS PLAN IS FOR SUBDIVISION PURPOSES ONLY
AMALGAMATION CONDITION
* THAT LOT 5 HEREON BE HELD AS TO FOUR UNDIVIDED ONE QUARTER SHARES BY THE OWNERS OF LOTS 1 - 4 HEREON AND THAT INDIVIDUAL TITLES BE ISSUED IN ACCORDANCE THEREWITH



No. Revision Details Date	No. Revision Details Date	Design Survey MSL Drawn MSL Checked Date April 2001 Scale 1:250 (A3)	Job Title PROPOSED SUBDIVISION FOR CARLOS CONCEPTS LTD CARLOS DRIVE, FLAT BUSH LOT 10 DP 352580
		© Copyright 2004 Eardale Surveyors Ltd	

Eardale Surveyors Ltd
33 Meadowbank Drive, Howick
Phone 09 534 9652
Fax 09 5375754
e mail: surveyors@eardale.co.nz

Drawing Title
SCHEME PLAN

Job No. 7793 | Sheet No. 1 | Dwg No.

South Elevation (units 1-10)
ARTISTS' IMPRESSION ONLY
APRIL 05

124 STANCOMBE RD
STAGE II

PROPOSED RESIDENTIAL UNITS AT

PROPOSED LOT 2, 124 STANCOMBE ROAD
FLAT BUSH

FOR

CARLOS CONCEPTS LTD

ASSESSMENT OF ENVIRONMENTAL EFFECTS AND STATUTORY ANALYSIS

1.0 INTRODUCTION

This report has been prepared in relation to an application by or on behalf of Carlos Concepts Ltd, which seeks to gain approval for a residential development on proposed Lot 2 of a property located at 124 Stancombe Road, Flat Bush.

This assessment of environmental effects (AEE) has been prepared in accordance with the requirements of Section 88 of and the Fourth Schedule to the Resource Management Act 1991. It is intended to provide the information necessary for a full understanding of the activity for which consent is sought and any actual or potential effects the proposal may have on the environment.

To this end, this AEE contains the following information:

a) A description of the proposal;
b) A description of the site and the surrounding locality;
c) An outline of the reasons why resource consent is required;
d) An assessment of the effects of the activity on the environment;
e) An analysis of the provisions of the Resource Management Act 1991 and the district plans which are relevant to the application; and
f) Conclusions.

Appendices (for Council Reference)

1. Plans and Elevations
2. Landscape Plan and Planting Details
3. Engineering Plans
4. Arborist Report (reference purposes only)
5. Certificate of Title
6. Asbestos Investigation Report
7. Fire Report
8. Acoustic Report

3.0 THE SITE AND LOCALITY

The Site

The area of Lot 2 is 4174m^2 on a proposed road (Carlos Drive). It is located, on the northern side of Stancombe Road approximately 270 metres west from the intersection with Gracechurch Drive, Murphys Road and Jeffs Road. The subject site in accordance with the subdivision consent and in relation to the development of the surrounding sites is being cleared of vegetation and the necessary earthworks are to be undertaken to establish a flat site to develop on. The site was once undulating which is considered to reflect its original rural nature and was the rear garden area of the dwelling formerly located on the front of the site at 124 Stancombe Road. In the main, the land comprised of low level vegetation and grass with tree specimens sporadically located throughout the site.

The Locality

The site is located within an area formerly of a rural/rural residential character but which is changing and expanding as a residential oriented area. As such, it contains buildings that reflect this former type of use, but is speedily undergoing significant change. The land to the north of the site consists of individual residential properties on large lots. By contrast, land to the south west and east is currently under construction or undergoing preparation for development of new residential properties. For example, Stancombe Road itself has recently undergone improvements and expansion in order to accommodate an increase in traffic due to the future development within the locality.

Currently, there is a single dwelling on the neighbouring site of 122 Stancombe Road, and the neighbouring sites being lots 1 and 2, 126 Stancombe Road have been cleared in preparation for development of townhouses. The sites located to the rear, being 8 and 10 Inchinam Road comprise of single dwellings.

4.0 REASONS WHY RESOURCE CONSENT IS REQUIRED

Consents will be required in terms of the standards for development under the rules in section 17.10 of Variation 13. The following matters of consent are required for this proposal:

- Rule 17.10.12 of Variation 13 of the Manukau District Plan – Discretionary Activity consent is required for the construction of more than one household unit on a site of $2000m^2$ or greater.

- Rule 17.10.12.2(b) and 17.10.12.5(b) requires a maximum of 20% site coverage where the maximum height of all buildings is 8 metres in the Special Policy Area (Flat Bush Buffer). The proposal includes buildings with a maximum height of 8.8m with a site coverage of $1854m^2$ or 24.8% and therefore requires consent for a restricted discretionary activity.

- Rule 17.10.12.5(e) provides the maximum height, overshadowing and dominance requirements. The proposal infringes the following control:
    1. Height in Relation to Boundary – as it applies to the east, west and north elevations only, as the road frontages (being south) of the site are exempt as specified under the rule. On the eastern elevation the proposal infringes by 3m in height reducing to 2.4m over a total length of 10.8m (unit 10). On the western elevation the proposal infringes by 2.4m in height to 1.6m over a total length of 10.8m (unit 1).

  Consent is therefore required for this matter as restricted discretionary activity.

- Rule 17.10.12.8(a)(i) requires that all residential units on the ground floor level require a $24m^2$ area of private open space, in which a 4m diameter circle and 3m dimension measured at right angles can be accommodated within. The proposal provides the sufficient open space area for each unit but the layout and form of the proposal does not enable a 4m diameter circle and 3m dimension measured at right angles. Consent is therefore required for this matter as restricted discretionary activity.

- Rule 9.8.2 of the Manukau District Plan requires that any land modification or development (including that which involves earthworks) not otherwise permitted, is a restricted discretionary activity. The proposed scheme involves $1200m^3$ of earthworks and therefore is a matter for consent.

- Rule 17.10.12.1.3(e) states for earthworks required for the construction of buildings used for residential activities on sites that are identified within Area 2 of Figure 17.10.9 of Variation 13, which identifies areas of asbestos containing materials, that restricted discretionary consent is required.

Overall, these matters require resource consent for a discretionary activity.

5.0 ASSESSMENT OF EFFECTS

Section 88 of and the Fourth Schedule to the Act set out the matters to be considered when preparing an assessment of effects on the environment. The actual and potential effects of the proposal are considered to relate to:

- Positive Effects
- Character
- Amenity
- Parking and Traffic
- Noise
- Infrastructure and Servicing
- Construction and Development
- Trees and Vegetation

Positive Effects
The proposed development will result in positive effects on the physical, social and cultural environment. First of all, the development has been designed to adhere to Council's urban design guidelines, with townhouses fronting streets. As requested by Council, a road has been proposed (as part of a separate subdivision consent) that will eventually allow access across adjoining properties and improve permeability through the block.

The development will also increase the available choices for living opportunities in Manukau City. For example, the units proposed are based on a relatively small individual lot whilst providing a three-bedroomed unit on three levels and therefore this development will contribute to providing a range of housing within the locality. The nature of the proposal will provide an opportunity for people to reside near the proposed Flat Bush Town Centre, which may also be the place of work of the future residents. These factors will have a positive effect on the environment.

Character
The site and surrounding area will be subject to a significant change over the coming years. The site falls within the area of Flat Bush on the southern boundary of the Auckland Regional metropolitan urban limits, which is designated to provide a mix of urban and semi-urban development. What is proposed is significantly different from the sites original form being largely rural in nature, but the development of the immediately neighbouring sites provides a clear understanding of the approach and type of residential development that will be constructed. The District Plan by way of Variation 13 has designated this site and the surrounding for future residential development. The area had a relatively rural nature, which is particularly noted through the topography of the site, but is undergoing a rapid transition. The character of the proposed residential units consists of an intensive housing design by way of comprising 3 levelled townhouses. The overall site has been designed in order to meet the requirements of the residential zone and as such is considered that it has been designed to complement and form part of the future wider surroundings.

Amenity
The area where the site is located is presently bring transformed into an urban environment. There is vegetation within the area, consisting of a mix of mature and small tree specimens. However, this is changing with the development of the land and it is expected that the district plan requirements for yards and landscaping will set the benchmark of the amenity of the area. In this regard, the proposal provides landscaping

to the site boundaries as well as a large landscaped area central to the townhouses and along the rear boundary of the site, which will provide the level of amenity desired for the locality. It is noted in particular that amenity for the lots to the north will be maintained by the 14m separation distance between the closest units (16 and 22).

Security will also be achieved along the streets, which will be enabled by passive observation from all levels and elevations of the townhouses.

Parking and Traffic
Each townhouse is provided with two car parks. The parks are provided for in the garage at ground level and are in a stacked manner. On this basis, it is considered that sufficient parking spaces are provided on the site for occupants and there will be no undue on-street car parking demand resulting from the proposed activity. Three visitor car parks are provided on site, however any further requirements for parking on the street would be temporary as determined by the nature of the activity.

While the residential activity will create some traffic generation to and from the site, it is considered that there will be negligible adverse effects for the following reasons:

- The site will be predominately used by the occupants of and visitors to the 22 units that are proposed for the site. The site lies within a large residential zone and traffic of this nature is expected in this particular locality.
- Stancombe Road that the site has frontage to has been recently improved including widening, which is designed with sufficient capacity for the foreseeable residential activity anticipated for the land.

For these reasons, any adverse parking and traffic effects associated with the proposed activity are considered to be insignificant on the surrounding area.

Noise
Noise associated with the future use of the proposed residential development (once constructed) is considered not to conflict with the anticipated use of surrounding sites. Therefore any adverse effects on the surrounding environment in terms of noise would be limited to the construction period only on this site, which are addressed below. In terms of assessing the effects between the individual household units, a qualified and experienced acoustic engineer has provided an assessment and complying solutions in order to ensure that the scheme will meet the Rule 17.6.12.11 of the District Plan. (See report in appendix 8).

Infrastructure and Servicing
The necessary infrastructure and servicing accompanying the subdivision consent for proposed Lots 1 and 2 will be undertaken in accordance with the subdivision consent and Section 9 of the Manukau District Plan 2002. These matters are outlined in the infrastructure report. In particular, connections will be provided to waste water and stormwater lines, the road will meet Council's specifications and utility connections such as, water, telephone and electricity will be provided.

Construction and Development
As noted above, earthworks necessary for the establishment of the proposed road will be undertaken under the auspices of the subdivision consent. However the excavations required for the proposed scheme are to be dealt with under this land use consent. As demonstrated within the engineering details in Appendix 3, measures taken during these works such as siltation and dust control and stabilisation will avoid or mitigate effects. It is considered that in view of the type of development and the mitigating factors it involves,

the earthworks proposed will not have harmful effects on the locality. Similarly, construction of the development will be staged, coordinated and managed to control potential effects on the locality.

Trees and Vegetation
The subdivision of the site involved gaining consent (Proposal No. 27373) for the removal of a small group of protected trees central to the site, including Port Jackson Fig, Magnolia Laurel, Michelia and Moreton Bay Fig (as identified in the Arborists report, Appendix 4). Therefore this consent does not deal with any tree removal.

To mitigate effects from the loss of the existing tree cover on the site, a landscaping scheme will be implemented as shown in Appendix 2. The landscaping provided would be for a different environment to what the site is a present, and it is considered that the removal of the existing trees is an evitable outcome of the future development of this site and of the immediate locale.

Summary
For the reasons outlined above, it is considered that the proposed development will have no more than minor adverse effects on the surrounding environment.

6.0 DISTRICT PLAN MATTERS

As previously mentioned, the subject site is zoned as Flat Bush Residential 1 Zone under Variation 13 Flat Bush, of the Manukau District Plan 2002. This document is considered to contain the only applicable objectives, policies and other matters and the relevant provisions of the district plan are assessed below.

Variation 13 Flat Bush - Manukau District Plan

6.1 Objectives and Policies

The overall objectives for Flat Bush area are set out in order to establish a balanced and attractive environment in which to live and work. The objectives seek to:

- create a diversity of living and working environments, through facilitating the urbanisation of the area in a manner that will make efficient use of the diminishing land resource with appropriate levels of amenity for residents in the area;
- achieve a well connected, adaptable, safe, attractive, healthy environment for living and working within with an emphasis on the importance of the public realm;
- ensure the establishment of appropriate infrastructure and servicing; and
- to achieve a safe, efficient and well connected transport system that provides a choice of travel modes.

The proposal is considered to meet all the relevant objectives set for the Flat Bush area. The proposed residential development will involve the construction of medium-density residential townhouses alongside providing an attractive living environment. Emphasis has been placed on the quality of the public realm such as the attention to the existing and proposed streetscapes and further in this scheme communal leisure facilities and open spaces are provided.

The objectives and policies for the Flat Bush Residential 1 Zone may be summarised as seeking to maintain and enhance the quality of the environment whilst enabling residential development that allows for a range of living opportunities in the locality. Objective 17.10.9.3.1 and the supporting policies specifically concern facilitating development whilst maintaining the amenity values of high-density residential areas. For the reasons below, the proposed development is considered to be consistent with these provisions and the Flat Bush Residential 1 Zoning of the site and locality.

The relevant objectives and policies for the Flat Bush Residential 1 Zone and comment on each is as follows:

Objective 17.10.9.3.1 - To facilitate the development of an integrated, medium/higher density residential environment (while enabling higher density) which has high levels of amenity, supports a range of travel modes, allows for a range of living opportunities and incorporates opportunities for compatible small scale employment in appropriate locations.

This proposal will facilitate an integrated high density residential environment and will maintain amenity values as it is an attractive development which has applied the intensive housing design guidelines as set out within the Manukau District Plan 2002. The proposal will provide landscaping on the site, which will enhance the amenity value of the development of the site.

Policy 17.10.9.3.2
a) Buildings and structures should be designed and located in such a manner that they positively address the street and public places so as to contribute to neighbourhood amenity values including pedestrian accessibility and safety, and streetscape values such as diversity and attractiveness.
d) Residential development should include private outdoor space(s) that can function as attractive and useable outdoor living and service areas.
f) Connectivity/permeability of the street system shall be maximised wherever possible.
g) The highest residential densities shall be promoted in close proximity to the Town Centre/Neighbourhood Centres, main arterials and public open space including Barry Curtis Park.
h) Activities should not adversely affect the health and well being of the residential community.

In terms of the relevant sections of the policy outlined above, the proposed residential development has been designed so that all units have private outdoor living space. As well, an additional communal leisure facility including an entertainment area and a petanque court has been provided which also contributes to amenity values. Overall, the proposal is consistent with all the policies set out in Variation 13 Flat Bush of the District plan and it does not contravene any of the policies.

- It is noted that the Residential 1 Zone is broken down into various precincts. These precincts do not have individual objectives or policies. However in terms of this site, the description, detailed rules for subdivision and development and performance standards are as per individual precinct area. The precinct covering this site is the General Precinct.

6.2 Development and performance standards and Assessment Criteria

As a result of the consent matters identified in section 4.0, the relevant assessment criteria for discretionary and restricted discretionary activities in the zone are found under section 17.10.16.2 and 17.10.15.3 of Variation 13 Flat Bush of the District Plan and are addressed as follows:

Assessment Criteria: Discretionary Activities

Effects on People and Communities
The proposed development is not considered to have adverse effects with regard to this assessment criterion. The development will enable a community/neighbourhood to become established in this location within close proximity to the future Flat Bush town centre. As the proposal is on an undeveloped site surrounded by sites similar in nature, all subject to future development the proposal will not be to the detriment of any social, economic or cultural values.

Landscape and Visual Effects
Landscaping is proposed as an integral part of the proposed development. In the direct vicinity of the site there are no residential or public open space zones that could be adversely affected by the proposal. The proposal does include an open space including leisure facilities for the benefit of the occupiers, which positively contributes to the character and visual amenity of the development of the site. The proposed development will be at a similar scale to future surrounding development, so will not detract from the character of the area. The proposal will not generate unreasonable levels of noise, as only residents of the units and their visitors will use it.

Effects on Ecosystems
The subdivision of the land has resulted in the clearing of most of the site, which involves the removal of areas of vegetation and some tree specimens. The proposal will not have an adverse effect on water quality as the units will be connected to the main sewer and stormwater lines and the development will not produce any harmful substances as the proposal will only produce normal household waste.

Discharge of Contaminants to the Environment
The proposal will not generate any dust, smoke, fumes or other discharges to the air that could detract from amenity values in the area, as the proposal is for residential activity. There may be some discharge during construction works on site, however this would be limited to the construction period only. The site is identified to be within an area of management of asbestos containing material. As identified in the report (Appendix 6) there is low probability that ACM has been deposited on this subject site, as such there is not considered to be any harmful effects on the surrounding environment.

Effects on Traffic Safety
The proposal will not have an adverse effect on the safety and efficiency of the road network in the area, as the number of cars that will be entering in and out of the proposed development will consist of occupants of the 22 townhouses and their visitors. The roads have been sufficiently improved, in particular Stancombe Road, in advance of the future development on sites in this locality.

Additional Relevant Assessment Criteria – Discretionary Activities

Construction of More than one household unit on sites within the Flat Bush Residential Zones, Flat Bush Town Centre zone and Flat Bush Neighbourhood Centre zone.

Notwithstanding the overall status of the proposed activity on this site, there are additional criteria, which are considered to be relevant in this case. Rule 17.10.15.3.1 of Variation 13 provides the following assessment criteria:

Site Layout
The proposed development has adopted the guidelines outlined within the District Plan entitled, 'Design Code for Intensive Housing'. The guidelines emphasise neighbourhood and site design, which aim to provide desirable environments. The proposed development takes into account:

- Street layout – enabling ease of movement within the site for both the vehicle and pedestrian users;
- Service road – There is one single access into the site and parking is accessed from the rear of the units to enhance safety, security and privacy;
- Street frontages – residential units 1-10 have a frontage to Carlos Drive, enabling increased security and social interaction;
- Vehicle access – the parking is introduced by way of garaging to minimise detrimental impacts on the neighbourhood;
- Public open space – open space and communal leisure facilities are provided to the centre and rear of the site;
- Parking – sufficient off street parking is proposed for the occupants of the units;
- Landscape provision – a comprehensive landscaping of street frontages and the communal open space will be undertaken; and
- Private open space – each townhouse is provided with its own private outdoor areas,

which are well related to the living space within the units.

Building Design and External Appearance
The design of the buildings is repeated throughout the 4 blocks of townhouses, which is broken up with off-setting of unit facades in groups of two within each block, setback upper levels, detailing on the deck and balcony areas and the extensive use of varying materials on the site. The buildings will include schist stone at ground level, solid plaster finish or weatherboard cladding at first and second floor levels, wrought iron detailing for balustrade to the deck and balcony areas, aluminium joinery, tiled courtyards and balconies. This extensive use of materials emphasises the individual townhouses and relates to the scale and materiality of the surrounding proposed residential environment. The overall layout will provide an attractive environment, enabling permeability throughout the site, whereby the car does not dominant the streetscape and each townhouse has a landscaped courtyard.

Landscape Elements
The proposal will incorporate a landscaping scheme ensuring that the visual amenity of the site will be retained (see landscaping plan and details).

Servicing
Provisions will be adopted within the four townhouse blocks on site so that public servicing including rubbish and storage facilities will be easily serviced.

Summary
For the reasons outlined above, it is considered that the proposed development is consistent with the relevant objectives and policies, rules and other matters of the District Plan.

Additional Relevant Assessment Criteria – Restricted Discretionary Activities

Site Coverage and Maximum Height in the Special Policy Area
Assessment of exceeding the site coverage rule for the Special Policy Area 17.10.12.2(b) and 17.10.12.5(b) with the following assessment criteria outlined within 17.10.15.4.1 of Variation 13.

Scale and Bulk

- The proposed scheme does not comply with the added restrictions for site coverage in the Flat Bush Buffer Zone in that the townhouses reach a maximum of 8.8m in height with a coverage of 24.8% in this area. It is considered that with such a small coverage in comparison to the relatively high density development proposed in the immediate surroundings, the height of the townhouses proposed is consistent and sympathetic to the locality, especially given that the units will be 14.2m from the rear boundary of the site.
- The overall coverage for the entire site is 33.5%, which is 6.5% or 271.31m^2 less than the permitted coverage. In this instance it is considered that the scale and bulk of the elements located within Buffer Zone are consistent with the remainder of the site to provide a uniform and balanced scheme. In addition this provides a more spacious layout over the entire site and does not result in a 'void' area located along the rear boundary.
- The maximum height permitted for the general precinct is 9 metres and as such under the general maximum height provisions the site does comply. It is considered

that with the balance of a low coverage over the entire site that any infringement to height within the Buffer Zone will have less than minor effects upon dominance.

- The site has been designated within Variation 13 to be for residential activity. Therefore it is considered that the scale and bulk of the proposed townhouses are anticipated by the rules within Variation 13. The proposal complies with development controls, such as the general maximum height requirements for the precinct and building frontages.
- The design and layout of the townhouses and the extent of the earthworks required do not necessarily conform to the present character and topography of the site. Therefore it is considered that there would be a change to the site in terms of its amenity value. The area has an undulating landscape reflecting its previous rural nature, however under the provisions of the District Plan and Variation 13 the land has been designated for residential purposes. Therefore in order to achieve this, the land would require the proposed engineering works in order for a project of this type to reach fruition. The existing vegetation on site will be removed and it is considered that in order to mitigate and avoid any impacts upon the amenity value of the site a landscaping plan has been provided. To support this, planting schedule and tree growth plans for the site can be found in Appendix 2.

Landscape Elements

- A landscape plan, planting schedule and tree growth plans have been submitted as part of the proposal, attached in Appendix 2. The landscaping plan is considered to provide a variety of tree and shrub specimens into the scheme in which assists to mitigate any adverse effects from the proposal.
- This proposal provides a scheme of four blocks to the rear half of the site at 124 Stancombe Road. Between the townhouse blocks is a communal open space for use of the entire site.

Design and External Appearance

- The scheme incorporates four blocks of townhouses, which in comparison to the surrounding townhouses and apartments has a relatively low coverage of the site. The development forms part of a range of residential accommodation required within this locality and therefore will contribute to providing a range of living opportunities for people in Manukau City.
- In order for the townhouses to have architectural value, the buildings will include schist stone at ground level, solid plaster finish or weatherboard cladding at first and second floor levels, wrought iron detailing for balustrade to the deck and balcony areas, aluminium joinery, tiled courtyards and balconies. This extensive use of materials emphasises the individual townhouses and relates to the scale and materiality of the surrounding proposed residential environment.
- The increase in site coverage and maximum height controls within the Buffer Zone is not considered to cause any further adverse affects in terms of its design and external appearance on the adjoining sites or the surrounding environment. The reason being that alterations to the coverage will be made internally to the lot, which would have minimal external affects in terms of amenity value beyond the site boundary.
- The necessary infrastructure and servicing will be undertaken in accordance with the subdivision consent and Section 9 of the Manukau District Plan 2002. These matters are outlined within the subdivision consent. In particular connections will be provided to stormwater lines and will meet Council's specifications. It is considered that the increased site coverage will have less than minor effects on stormwater runoff.

Sunlight and Daylight

- The proposed townhouses within the Buffer Zone comply with the height in relation to boundary controls on the northern boundary of the site. The townhouses are located 14.1m from the rear boundary and as such are considered to cause less than minor effects in terms of loss of sunlight or shading due to this separation distance and that the neighbouring site is located north of the subject site.

Overall, it is considered that the proposed scheme is reasonably in accordance with the assessment criteria outlined above and that the site coverage infringement does not intend to offend against the rules of the District plan and Variation 13.

Height in Relation to Boundary
The proposed townhouses infringe the height in relation to boundary control on the eastern and western boundaries of the site. Assessment of exceeding this control is made under rules 17.10.15.4.3(e) of Variation 13.

On the eastern elevation the proposal infringes by 3m in height reducing to 2.4m over a total length of 10.8m (unit 10). On the western elevation the proposal infringes by 2.4m in height to 1.6m over a total length of 10.8m (unit 1). It is considered that the proposal is consistent with the relevant objectives, policies and rules in regards to the effects of this infringement because:

- The proposed townhouses retain a residential appearance and character that is in keeping with other proposed residential buildings in the surrounding area;
- The building in relation to boundary control is specifically concerned with the admission of sunlight to adjacent properties. While the resulting infringement on the eastern and western boundaries of the subject site may diminish some sunlight onto the adjacent properties as identified above, the owner and occupiers have given their written approval to the proposal;
- It is considered that the dominance experienced from the infringement over the abutting eastern and western boundaries will be minor, the owners have given their written approval to the proposal; and
- There will be less than minor effects on the loss of any potential views for the neighbours as it is anticipated that the development of the adjacent sites will be oriented in a northerly direction.

For the abovementioned reasons it is considered that Council should allow a modification of the Building in relation to Boundary control as the proposal satisfies rule 17.10.15.4.3(e) and 5.18.1.

Private Open Space
The proposed townhouses infringe the private open space control of the site. Assessment of exceeding this control is made under rules 17.10.15.4.8 of Variation 13. The proposed townhouses consist of outdoor areas ranging from 13.5m^2 to 24.75m^2. Only four townhouses comply with this rule, meaning that 18 units provide less than 24m^2. It is considered that the proposal is consistent with the relevant objectives, policies and rules in regards to the effects of this infringement because:

Amenity Values
- Private open space is provided by way of courtyards, decks and balconies to the proposed residential townhouses. The infringement of the private open space control is that 18 units cannot provide on single area of 24m^2, a 4m-diameter circle and 3m measurements taken at right angles. The units' private outdoor space is split

between a small courtyard area as well as an external deck area at first floor level. In addition, a large communal open space including an entertainment area and petanque court is provided.

- The private outdoor spaces, being external decks, are connected to the open plan living, dining and kitchen areas of the proposed townhouses, providing a large area in total for liveability.
- The areas of private open space provided reflect the scale and size of the townhouse and therefore not being able to provide the 4m-diameter circle does not mean that the private open space has any negative impacts upon the site or surroundings.
- All private open space areas proposed do not impact upon privacy. Each area is screened from adjoining units and due to separation distances from neighbouring sites on the eastern, western and northern boundaries, the private open spaces will not cause any adverse affects in terms of overlooking of adjacent sites.

Overall, it is considered that the proposed scheme is reasonably in accordance with the assessment criteria outlined above and that the open space infringement does not intend to offend against the rules of the District plan and Variation 13.

Asbestos Containing Material
The site is identified and located within an area of which the management of asbestos containing material is required under Variation 13. An assessment of this control under rule 17.10.15.4.11 is therefore required.

A report is appended to this resource consent application outlining the findings of a desktop and site inspection of an asbestos investigation at the subject site. This has been undertaken by Tonkin and Taylor which concludes that: *"The historical aerial photographs and investigations on adjacent properties indicate that there is a low probability that ACM has been deposited on any of the subject sites or in fill areas. No ACM was identified at any of the properties during the site walkover inspection or minor intrusive investigations in suspect areas and the land can be considered suitable for further development".*

Overall, it is considered that the proposed scheme will be reasonably in accordance with the assessment criteria for the management of asbestos containing material.

Earthworks
The proposed development of the site will involve the excavation of approximately 1200m^3, and therefore requires assessment under Rule 9.12.6 of the Manukau District Plan. With regards to the relevant assessment criteria I make the following comments:

Alteration to Natural Landscape
It is evitable that the earthworks will disturb the current natural landform of the site due to the proposed change in nature and activity of the site and the immediate surroundings. In order to develop the site, earthworks would be required in order to provide a building platform. It is considered that any adverse effects can be mitigated by the proposed development and associated landscaping.

Sedimentation/Runoff/Flooding
As identified within the engineering plans and details, appropriate silt control measures and drainage are to be undertaken on site to minimise any potential adverse effects on surrounding locality.

Slope and Land Stability

Due to the extent of earthworks proposed, retaining walls are to be used within the scheme, which will mitigate any potential effects from soil instability. This is identifiable within the documentation in Appendix 3.

Overall, it is considered that the proposed scheme will be reasonably in accordance with the assessment criteria for carrying out earthworks.

Summary
For the reasons outlined above, it is considered that the proposed development is consistent with the relevant objectives and policies, rule and other matters of the Operative Plan.

7.0 CONCLUSIONS

The proposal involves the development of 22 townhouses in four blocks on proposed Lot 2 of the site at 124 Stancombe Road, Botany, Flat Bush.

It is considered that any potential adverse effects on the surrounding environment will be mitigated by measures incorporated into the proposed development including landscaping and provision of communal open space. Further, it is considered that relevant objectives and policies of the District Plan will not be compromised by the development.

The proposal will have positive effects on the environment by providing a quality development incorporating buildings and landscaping that will increase the variety of choice for living opportunities in Manukau City. It is thus considered that the proposed development is consistent with the purpose and principles at Part II of the Resource Management Act 1991. It is concluded that the proposal satisfies all matters the consent authority is required to apply in terms of sections 93, 94 and 104 of the Act and that the application can be granted consent on a non-notified basis.

Dominique Carter
Resource Management Consultant

18th May 2005

Appendix 1

Plans and Elevations

Appendix 2

Landscaping plan and planting schedule

Appendix 3

Engineering Plans

Appendix 4

Arborist Assessment

Appendix 5

Certificate of Title

Appendix 6

Asbestos Investigation Report

Appendix 7

Fire Report

Appendix 8

Acoustic Report

Tonkin & Taylor

T&T job no: 21940
9 August 2004

Bishop Lenihan Concepts
C/- Easdale Surveyors Ltd
39 Meadowland Drive
Howick
Auckland

Attention: Michael Lucas

Dear Michael

Asbestos Investigation - 124, 130 and 132 Stancombe Road

Tonkin & Taylor Ltd (T&T) is pleased to present the findings of a desktop and site inspection asbestos investigation carried out for 124, 130 and 132 Stancombe Road, East Tamaki (Figure 1). This investigation was undertaken in accordance with our proposal dated 9 July 2004.

1 Introduction and Scope of Works

It is understood that Bishop Lenihan Concepts Ltd propose to redevelop the above sites, as well as that at 128 Stancombe Road. The latter property has been the subject of a previous asbestos investigation by T&T (Dempsey and Wood Civil Contractors Ltd, T&T ref. 20154, August 2004). The sites are located within the area covered under Variation No. 13 of the Proposed District Plan, Manukau City Council (MCC). In accordance with the variation, an investigation to identify the potential for the presence of any asbestos containing material (ACM) on the property is required, if the land is to be developed.

The objective of this investigation was to make an assessment of the potential presence of any ACM on site. The scope of investigations included;

- A review of the records held by MCC on the property;
- A review of historical aerial photographs held by Tonkin & Taylor to identify potential filling areas;
- A walkover inspection of the property and surface ground conditions; and
- Preparation of this report on the findings of the investigation.

The investigation has been undertaken in accordance with the MCC *Guide to Protocol for Site Investigation, Reports for Subdivision/Development and the Flat Bush Area*. The MCC *Attachment*

A Master Aerial Map – Analysis of Features (Potential Bulk ACM) has been reviewed as part of this assessment.

2 Site Location and Legal Description

The properties are located at 124, 130 and 132) Stancombe Road in East Tamaki, Auckland (Figure 1). The legal descriptions for the properties are as follows;

124 Stancombe Road: Lot 3, DP 78859.

130 Stancombe Road: Lot 6, DP78859.

132 Stancombe Road: Lot 7, DP78859.

3 Site Layout and Features

124 Stancombe Road (Figure 2) is rectangular in shape and covers an area of 8,100 m². The site contains an existing dwelling with a swimming pool on the northern side and an asphalted driveway on the southern side. The northern part of the property consists of a gully that runs in a north-east to south-west direction. The gully is grassed and contains a variety of large trees and small bushes. The rear portion of the property appears to be used for grazing and is gently sloping down to the north-west and generally steepens towards the gully.

130 Stancombe Road (Figure 2) is also rectangular in shape with an area of 8,100 m². A tree lined gravel driveway leads to an existing dwelling near the centre of the property. The land north, east and south of the dwelling is largely flat and consists of pasture used for grazing. A steep bank along the south-west boundary is overgrown and slopes down into the neighbouring property to the west. At the south-west corner a culvert releases water into a culverted gully onto the neighbouring property. The gully culvert extends out from the neighbouring property under Stancombe Road. An intake culvert is located upstream at the north-eastern corner of the property. Water flows into the culvert from a small gully located on the property north of the site. Along the eastern boundary the surface slopes steeply down into the neighbouring property to the east. A sewer manhole is located on the steep slope along the eastern boundary.

132 Stancombe Road (Figure 2) has an area of 8,221 m² and is roughly square in shape. An existing dwelling is located towards the southern boundary near Stancombe Road. The area south and west of the dwelling contains a gravel driveway and a car parking area. The area surrounding the house especially to the north has been landscaped. The northern portion of land and a strip running to the east of the dwelling consists of paddocks and is used for grazing. Pugging of the ground surface is evident in the paddock north east of the dwelling. The property surface slopes gently to the west.

4 Site History

The site history of the properties was established through the review of historical aerial photographs and MCC records.

The following aerial photographs were used to establish the site history: 1922/39 (1960), 4604/22 (1972), SN5783 Q/18 (1980), SN8772 P/9 (1988) and 449096 (1996).

A summary of the key details for each property is provided below:

An aerial photo taken in 1960 shows that the sites are part of a larger property used for stock grazing. Stancombe Road is present. Several buildings are located on what is now 132 Stancombe Road and one is probably the farm house. No buildings are evident at 124 and 130 Stancombe Road.

A gully in the south-west corner of 130 Stancombe Road is evident and extends upstream in a north-east direction diagonally across the property. The gully appears to fork into two with one gully travelling north on to the neighbouring property the other north-east onto the neighbouring property to the east. A gully is also evident that would extent in a north-east direction across the northern part of the 130 Stancombe Road property.

The 1972 aerial photograph is similar to the 1960 photograph, in that the site was used for stock grazing. No evidence of filling of the gully on either of the subject sites was observed.

MCC records from the early 1970s show that the sites would have been part of the Chapel Road Subdivision undertaken by Broadlands Properties Ltd.

At 124 Stancombe Road building permits were applied for in 1979 for a new one-story dwelling and for a septic tank. An additional building permit was applied for in 1984 for a swimming and spa pool. A building permit was applied for in 1977 at 130 Stancombe Road and later a pool in 1980. At 132 Stancombe Road a building permit for building extensions and alterations was applied for in 1981.

The 1981 aerial photograph shows that the land has been subdivided from a single property into lifestyle blocks including the subject sites and buildings and driveways are evident on all three subject sites. There is also evidence of infilling of the gully that runs diagonally across 130 Stancombe Road.

A review of the MCC Attachment A Master Aerial Map indicates that 132 Stancombe Road contains a feature observed on 1967 aerial photography that has the potential to contain ACM and should be considered in asbestos site investigations. This was not evident in any of the aerial photographs.

5 Field Investigations and Findings

Site walkover inspections were undertaken on 19 July 2004. The walkover comprised inspections of the three properties for features such as building material, driveways, tracks, depression areas and potential fill areas that my contain ACM.

The area of the gully at 130 Stancombe Road thought to be filled (as identified in the 1981 aerial photo) was closely inspected. Several shallow pits were dug along the steep bank by the culvert that released water by the south-eastern corner of the property. No ACM material was visually identified in any of the holes or any of the exposures within the gully. The fill material was found to be a mixture of clay and gravels ranging in size from fine through to coarse. The area at 132 Stancombe Road indicated on the MCC Attachment A Master Aerial Map, was also closely inspected for ACM containing material. Several shallow pits were dug in the area of the driveway and no ACM material was visually identified at these locations.

The published geology is described by Kermode (1992) as Pleistocene aged Tauranga Group sediments comprised of clays, silts and sand. Evidence of these soils was confirmed during the study.

6 Conclusion

The historical aerial photographs and investigations on adjacent properties indicate that there is a low probability that ACM has been deposited on any of the subject sites or in fill areas. No ACM was identified at any of the properties during the site walkover inspection or minor intrusive investigations in suspect areas and the land can be considered suitable for further development. However, this does not preclude the possibility that some ACM may be present and due care needs to be exercised during any earthworks.

7 Applicability

This report has been prepared for the benefit of (Bishop Lenihan Concepts) with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

TONKIN & TAYLOR LTD

Environmental and Engineering Consultants

Report prepared by: Authorised for Tonkin & Taylor by:

RStandish ....

Rachael Standish
Environmental Geologist

Gerard Bird
Environmental Group Manager

cc: MCC

URS

9-Aug-04
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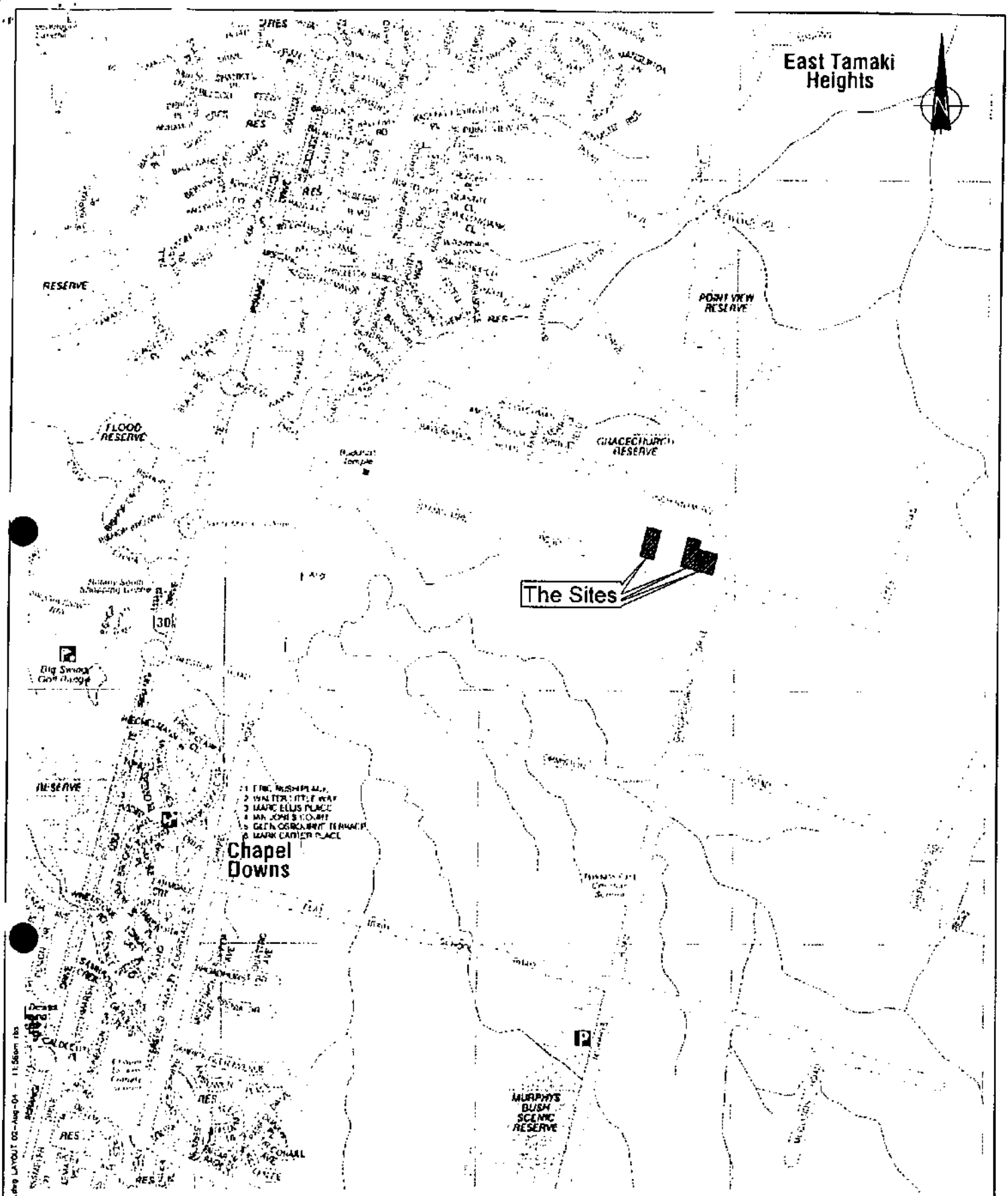

Location map courtesy of Wises Publications Ltd

SCALE 1: 20,000

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DRAFTING CHECKED		8/04	POTENTIAL ASBESTOS CONTAMINATION ASSESSMENT
APPROVED		13/8	124– 132 STANCOMBE RD, FLAT BUSH
CADFILE : L\21940\21940-S-F1			Location Plan
SCALES (AT A4 SIZE) 1: 20,000			
PROJECT No. 21940	FIG. No. Figure 1		REV. 0

Tonkin & Taylor
Environmental & Engineering Consultants
■ Auckland
□ Hamilton □ Christchurch
□ Nelson □ Wellington □ Whangarei

Tonkin & Taylor

RECEIVED 11-8-04

T&T job no: 21940
9 August 2004

Bishop Lenihan Concepts
C/- Easdale Surveyors Ltd
39 Meadowland Drive
Howick
Auckland

Attention: Michael Lucas

Dear Michael

Asbestos Investigation - 124, 130 and 132 Stancombe Road

Tonkin & Taylor Ltd (T&T) is pleased to present the findings of a desktop and site inspection asbestos investigation carried out for 124, 130 and 132 Stancombe Road, East Tamaki (Figure 1). This investigation was undertaken in accordance with our proposal dated 9 July 2004.

1 Introduction and Scope of Works

It is understood that Bishop Lenihan Concepts Ltd propose to redevelop the above sites, as well as that at 128 Stancombe Road. The latter property has been the subject of a previous asbestos investigation by T&T (Dempsey and Wood Civil Contractors Ltd, T&T ref. 20154, August 2004). The sites are located within the area covered under Variation No. 13 of the Proposed District Plan, Manukau City Council (MCC). In accordance with the variation, an investigation to identify the potential for the presence of any asbestos containing material (ACM) on the property is required, if the land is to be developed.

The objective of this investigation was to make an assessment of the potential presence of any ACM on site. The scope of investigations included;

- A review of the records held by MCC on the property;
- A review of historical aerial photographs held by Tonkin & Taylor to identify potential filling areas;
- A walkover inspection of the property and surface ground conditions; and
- Preparation of this report on the findings of the investigation.

The investigation has been undertaken in accordance with the MCC *Guide to Protocol for Site Investigation, Reports for Subdivision/Development and the Flat Bush Area.* The MCC *Attachment*

Tonkin & Taylor Ltd - Environmental & Engineering Consultants, 19 Morgan St, Newmarket, Auckland, New Zealand
PO Box 5271, Wellesley St, Auckland 1036, Ph: 64-9-355 6000, Fax: 64-9-307 0265, Email: auck@tonkin.co.nz, Website: www.tonkin.co.nz

A Master Aerial Map – Analysis of Features (Potential Bulk ACM) has been reviewed as part of this assessment.

2 Site Location and Legal Description

The properties are located at 124, 130 and 132) Stancombe Road in East Tamaki, Auckland (Figure 1). The legal descriptions for the properties are as follows;

124 Stancombe Road: Lot 3, DP 78859.

130 Stancombe Road: Lot 6, DP78859.

132 Stancombe Road: Lot 7, DP78859.

3 Site Layout and Features

124 Stancombe Road (Figure 2) is rectangular in shape and covers an area of 8,100 m². The site contains an existing dwelling with a swimming pool on the northern side and an asphalted driveway on the southern side. The northern part of the property consists of a gully that runs in a north-east to south-west direction. The gully is grassed and contains a variety of large trees and small bushes. The rear portion of the property appears to be used for grazing and is gently sloping down to the north-west and generally steepens towards the gully.

130 Stancombe Road (Figure 2) is also rectangular in shape with an area of 8,100 m². A tree lined gravel driveway leads to an existing dwelling near the centre of the property. The land north, east and south of the dwelling is largely flat and consists of pasture used for grazing. A steep bank along the south-west boundary is overgrown and slopes down into the neighbouring property to the west. At the south-west corner a culvert releases water into a culverted gully onto the neighbouring property. The gully culvert extends out from the neighbouring property under Stancombe Road. An intake culvert is located upstream at the north-eastern corner of the property. Water flows into the culvert from a small gully located on the property north of the site. Along the eastern boundary the surface slopes steeply down into the neighbouring property to the east. A sewer manhole is located on the steep slope along the eastern boundary.

132 Stancombe Road (Figure 2) has an area of 8,221 m² and is roughly square in shape. An existing dwelling is located towards the southern boundary near Stancombe Road. The area south and west of the dwelling contains a gravel driveway and a car parking area. The area surrounding the house especially to the north has been landscaped. The northern portion of land and a strip running to the east of the dwelling consists of paddocks and is used for grazing. Pugging of the ground surface is evident in the paddock north east of the dwelling. The property surface slopes gently to the west.

4 Site History

The site history of the properties was established through the review of historical aerial photographs and MCC records.

The following aerial photographs were used to establish the site history: 1922/39 (1960), 4604/22 (1972), SN5783 Q/18 (1980), SN8772 P/9 (1988) and 449096 (1996).

A summary of the key details for each property is provided below:

An aerial photo taken in 1960 shows that the sites are part of a larger property used for stock grazing. Stancombe Road is present. Several buildings are located on what is now 132 Stancombe Road and one is probably the farm house. No buildings are evident at 124 and 130 Stancombe Road.

A gully in the south-west corner of 130 Stancombe Road is evident and extends upstream in a north-east direction diagonally across the property. The gully appears to fork into two with one gully travelling north on to the neighbouring property the other north-east onto the neighbouring property to the east. A gully is also evident that would extent in a north-east direction across the northern part of the 130 Stancombe Road property.

The 1972 aerial photograph is similar to the 1960 photograph, in that the site was used for stock grazing. No evidence of filling of the gully on either of the subject sites was observed.

MCC records from the early 1970s show that the sites would have been part of the Chapel Road Subdivision undertaken by Broadlands Properties Ltd.

At 124 Stancombe Road building permits were applied for in 1979 for a new one-story dwelling and for a septic tank. An additional building permit was applied for in 1984 for a swimming and spa pool. A building permit was applied for in 1977 at 130 Stancombe Road and later a pool in 1980. At 132 Stancombe Road a building permit for building extensions and alterations was applied for in 1981.

The 1981 aerial photograph shows that the land has been subdivided from a single property into lifestyle blocks including the subject sites and buildings and driveways are evident on all three subject sites. There is also evidence of infilling of the gully that runs diagonally across 130 Stancombe Road.

A review of the MCC Attachment A Master Aerial Map indicates that 132 Stancombe Road contains a feature observed on 1967 aerial photography that has the potential to contain ACM and should be considered in asbestos site investigations. This was not evident in any of the aerial photographs.

5 Field Investigations and Findings

Site walkover inspections were undertaken on 19 July 2004. The walkover comprised inspections of the three properties for features such as building material, driveways, tracks, depression areas and potential fill areas that my contain ACM.

The area of the gully at 130 Stancombe Road thought to be filled (as identified in the 1981 aerial photo) was closely inspected. Several shallow pits were dug along the steep bank by the culvert that released water by the south-eastern corner of the property. No ACM material was visually identified in any of the holes or any of the exposures within the gully. The fill material was found to be a mixture of clay and gravels ranging in size from fine through to coarse. The area at 132 Stancombe Road indicated on the MCC Attachment A Master Aerial Map, was also closely inspected for ACM containing material. Several shallow pits were dug in the area of the driveway and no ACM material was visually identified at these locations.

The published geology is described by Kermode (1992) as Pleistocene aged Tauranga Group sediments comprised of clays, silts and sand. Evidence of these soils was confirmed during the study.

6 Conclusion

The historical aerial photographs and investigations on adjacent properties indicate that there is a low probability that ACM has been deposited on any of the subject sites or in fill areas. No ACM was identified at any of the properties during the site walkover inspection or minor intrusive investigations in suspect areas and the land can be considered suitable for further development. However, this does not preclude the possibility that some ACM may be present and due care needs to be exercised during any earthworks.

7 Applicability

This report has been prepared for the benefit of (Bishop Lenihan Concepts) with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

TONKIN & TAYLOR LTD

Environmental and Engineering Consultants

Report prepared by: Authorised for Tonkin & Taylor by:

Rachael Standish
Environmental Geologist

Gerard Bird
Environmental Group Manager

cc: MCC

URS

9-Aug-04
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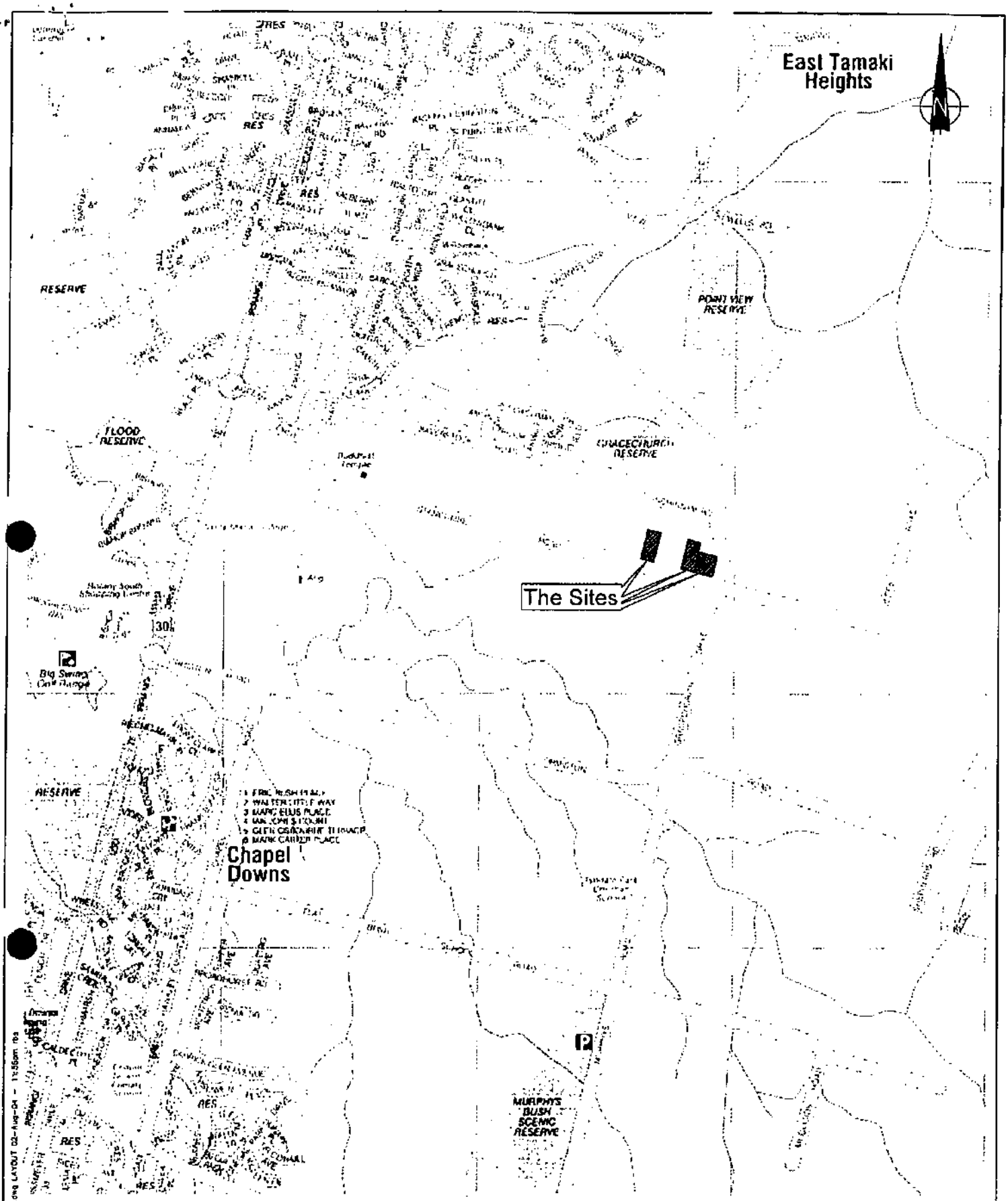


Location map courtesy of Wises Publications Ltd

DRAWN	RBS	Aug.04	BISHOP LENIHAN CONCEPTS
DRAFTING CHECKED		8/04	POTENTIAL ASBESTOS CONTAMINATION ASSESSMENT
APPROVED		8/04	124– 132 STANCOMBE RD, FLAT BUSH
CADFILE : L\2 1940\2 1940–S–F 1			Location Plan
SCALES (AT A4 SIZE) 1: 20,000			
PROJECT No. 2 1940			FIG. No. Figure 1 — REV. 0

Tonkin & Taylor
Environmental & Engineering Consultants
■ Auckland
□ Hamilton □ Christchurch
□ Nelson □ Wellington □ Whangarei

REFERENCE:
Aerial photo taken by
Precision Aerial Survey (2001)

SCALE 1: 1,250

0 10 20 30 40 50 60 70 80 (m)

Tonkin & Taylor
Environmental & Engineering Consultants
Ditchman Ditchman
Auckland
Wellington
Christchurch
Whangarei

DRAWN	RDS Jul 04
DRAFTING CHECKED	
APPROVED	
CADFILE	L:\21904\21904-5-F2
SCALES (AT A3 SIZE)	1: 1500
PROJECT No.	21940

BISHOP LENIHAN CONCEPTS
POTENTIAL ASBESTOS CONTAMINATION ASSESSMENT
124–132 STANCOMBE RD, FLAT BUSH
Site Plan

FIG. No. Figure 2 REV. 0

18 July 2005

Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU

Re: **Land Use Resource Consent Application –Stage 2, 124 Stancombe Rd, Flatbush Neighbours Consent – Limited Notification**

By way of background, despite extensive efforts to obtain the written approval from the owners of neighbouring sites, approvals have not been forthcoming. As an indication of contact made with affected neighbours, attached is a brief outline of the outcome of our attempts.

As the neighbours' comments appear to be more of an emotional as opposed to specific objection, there appears to be no avenue open to us for address or negotiation.

We therefore feel that the best option for us in this circumstance is to apply under the Resource Management Act 1991 (RMA) and proceed with the "limited notification" process that was introduced in August of 2003, as we believe the overall effects of the proposed development to be beneficial and in harmony with council's direction for the growth of the Flatbush area.

Regards

Jessica Kun Zhang
Sales & Development Manager

124 Stancombe			
Stage 11			
Address:	**Owner/Tenant Name:**	**Consent Obtained**	**Outline of Responses Received:**
122 Stancombe	Maurice Chandler		Initial presentation & follow-up phonecall resulted in propect of another mtg to cover concerns
126 Stancombe	Stancombe Concepts Ltd	√	
8 Inchiman	Tzyy-Yuan Shann & Shen-Der Shann Lee		**19/6** Forms presented **1/7** Neighbour phoned, had concerns. WCL suggested mtg to discuss. Neighbour would think about & call back. **4/7** Neighboured phoned, agreed to mtg 8/7. **8/7** Graeme spent approx 2 hrs going through plans etc with neighbour. Neighbour requested time to think about. **12/7** Neighbour phoned, said she had mtg with Graeme then laughed. She made the comment "Don't feel good, seems I have nothing to say as Graeme going to stick to proposal & I don't feel good." Neighbour told her she should give answer to WCL straight away - she said I don't feel good so I don't want to sign
10 Inchiman	Harry Alfred & Tui Marlene Semmens		**19/6** Forms presented **28/6** Neighbour left voicemail on mobile phone indicating they didn't want to sign & would object **30/6** Contacted neighbour to discuss objections. Neighbour advised they were going to sell property & felt development would impact hugely on privacy etc & devalue property. WCL suggested mtg to discuss concerns. Neighbour advised they would think about this & call back. **4/7** Neighbour phoned - had thought about things and didn't see how development was going to enhance his property so not interested in mtg

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **NA34D/637**
Land Registration District **North Auckland**
Date Issued 14 May 1976

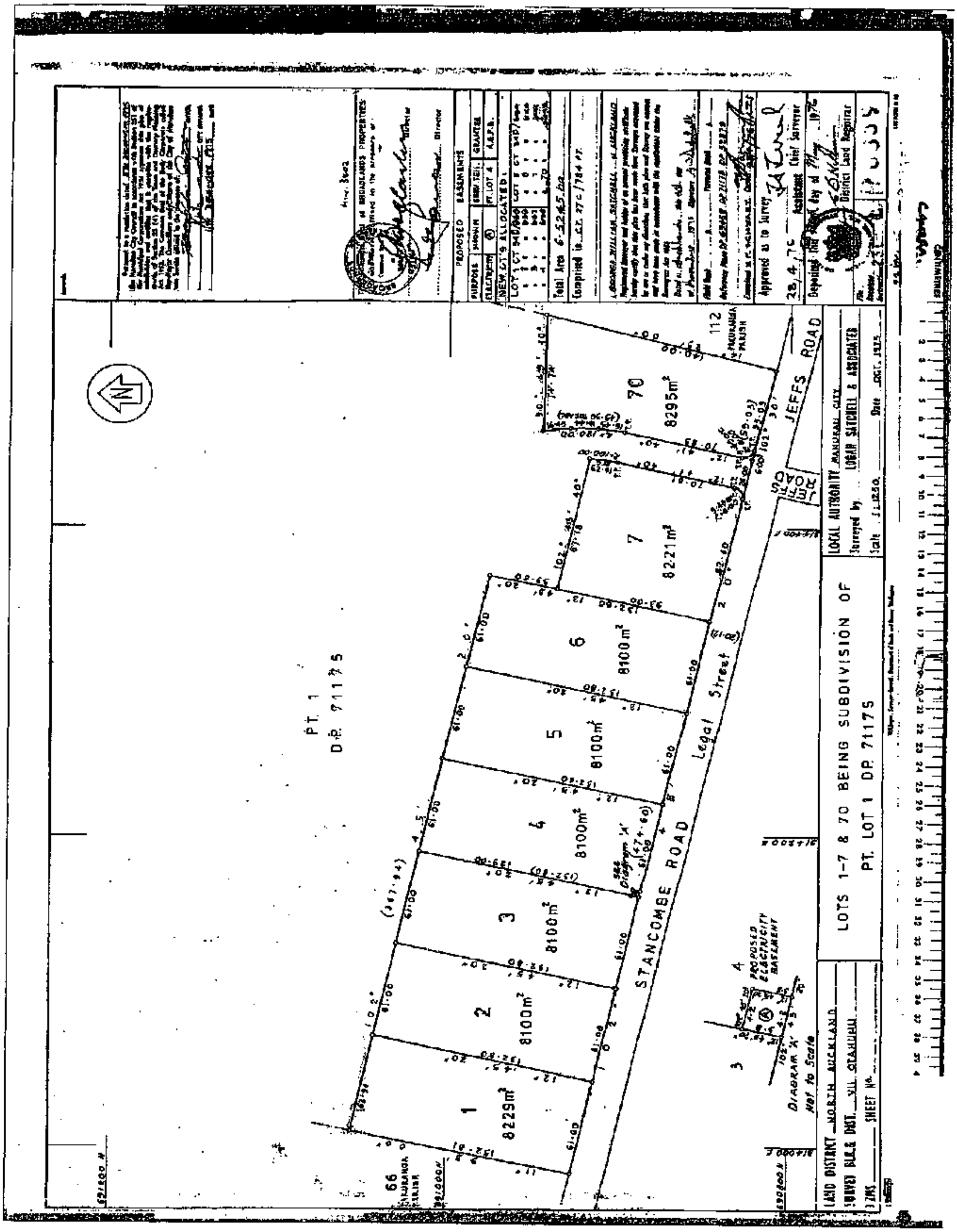
Prior References
NA27C/784

Estate Fee Simple
Area 8100 square metres more or less
Legal Description Lot 3 Deposited Plan 78859
Proprietors
Carlos Concepts Limited

Interests

6242732.3 Mortgage to Marac Finance Limited - 7.12.2004 at 9:00 am
6526012.1 Variation of Mortgage 6242732.3 - 8.8.2005 at 9:00 am

Identifier **NA34D/637**



Peter C. Dunkin
Designing into buildings
FIRE ENGINEERING & SAFETY CONSULTANTS
211 Peachgrove Road
PO Box 601, Hamilton
Phone: 07-855 0032
Fax: 07-855 1432
Email: peter@firedesigns.co.nz
Web: www.firedesigns.co.nz

REPORT FOR

FIRE SAFETY, ACCESS and SAFETY FROM FALLING

NEW RESIDENTIAL APARTMENTS

FOR

STANCOMBE ESTATE

124 STANCOMBE ROAD

BOTANY, FLAT BUSH

AUCKLAND

Prepared by: DAVID O'DONNELL
MNZFBI

Reviewed by: PETER C. DUNKIN
MIFireE FNZFBI

28 April 2005

Reference N° 17205

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Confidential *This document is confidential in accordance with the Building Act 2004, Section 217 (2)(b)*

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1.0 PURPOSE OF THIS REPORT

1.1 The purpose of this report is to satisfy the Territorial Authority that the proposed new apartment complex will satisfy Section 17 of the Building Act 2004,

1.1.1 **Section 17: All building work to comply with the building code.** – *All building work must comply with the building code to the extent required by this Act, whether or not a building consent is required in respect of that building work.*

1.2 The fire design issues detailed in this report are the minimum required to satisfy the requirements of the Building Code. Unless specifically stated, this report does not address matters in addition to the Building Act such as owners and/or tenants property and contents protection. The owner is advised to check the acceptability of the provisions of this report with the property insurer.

1.3 Section 21A of the Fire Service Act will apply to this building due to the number of occupants and/or use of the building. An evacuation scheme is to be implemented to meet the provisions of the Fire Safety and Evacuation of Buildings Regulations 1992. This is to be discussed directly with the Fire Service.

End of Section 1

2.0 DOCUMENTATION REVIEWED

2.1 The following information provided by Alto has been used to compile this report:

- Site plans, Proposed floor plans and elevation plans. Sheets A01-A08. Plans dated 29 March 2005.

2.2 The New Zealand Building Code and Approved Documents

C/AS1 Fire Safety Clauses
D1 Access routes
F4 Safety from falling

2.3 A site visit has not been carried out.

End of Section 2

3.0 THE DEVELOPMENT

3.1 The complex is designed as:
- Two blocks of five, three level apartments
- Two blocks of six, three level apartments.

3.2 Each apartment is on a separate Unit Title.

3.3 The primary method of construction is a combination of 200 series solid fill concrete block external walls. The mid floors are a timber flooring system with particleboard floors and Gib. board ceilings. The internal non-load bearing walls are timber frames with plasterboard wall and ceiling linings.

End of Section 3

4.0 PART 2: OCCUPANT NUMBERS AND PURPOSE GROUPS

4.1 Table 2.1: Purpose groups

SR 1 Residential Apartments

4.2 Table 2.2: Occupant densities

Block 1:	Apartments 1-5	3 double bedrooms	=	6 people/ apartment.
Block 2:	Apartments 6-10	3 double bedrooms	=	6 people/ apartment.
Block 1:	Apartments 11- 16	3 double bedrooms	=	6 people/ apartment
Block 1:	Apartments 17- 22	3 double bedrooms	=	6 people/ apartment.

End of Section 4

5.0 PART 3: MEANS OF ESCAPE

5.1 Table 3.1: Number of escape routes

A single means of escape is provided from each Apartment via the main front door.

The means of escape from the upper floors of each apartment is via the single internal stair to the ground floor and then out the main front door to a safe place outside.

5.2 Table 3.2: Width of escape routes

The minimum widths of the escape routes satisfy:

- 700 mm wide where the horizontal escape route is used by <50 people.
- 850 mm where the vertical escape route (stairs) are used by <50 people.

5.3 Table 3.3: Lengths of escape routes

Activity	Purpose Group	Dead End open path[1]		Total open path[1]	
		Permitted	Actual[2]	Permitted	Actual[2]
Apartments 1 - 10	SR	36	35	60	n/a
Apartments 11 - 22	SR	36	28	60	n/a

NOTES:

1. The lengths of the escape routes are in metres as measured from the top level and take into account a 50% increase in travel distances where smoke detectors are installed.
2. The distances of travel are the worst case from each area to a safe place outside

5.4 Paragraph 3.17 Doors subdividing escape routes

3.17.2 Locking devices: Locking devices fitted to doors subdividing escape routes shall not be capable of being locked from the inside with a key or other implement.

End of Section 5

6.0 PART 4: REQUIREMENTS FOR FIRECELLS

6.1 Table 4.1/5 Fire safety precautions (SR purpose group)

Firecell rating	F0
Alarm type	See note 1
Other precautions	nil

NOTE 1: Smoke detectors are required to allow for the increased distance of travel from the upper floor level to a safe place outside at ground level a minimum of automatic smoke detectors are required.

As an *alternative solution* install 240 volt interconnected smoke alarms with battery backup in each apartment. This will ensure that when one alarm activates, the alarms on all levels of the apartment will activate simultaneously.

As a minimum install smoke alarms in each apartment to the following:
- In every bedroom (3)
- At each stair landing on every level
- In the ground level entry foyer by the garage door

Each smoke alarm shall be provided with a test button and a hush facility having a minimum duration of 60 seconds.

End of Section 6

7.0 PART 5: FIRE RESISTANCE RATINGS

7.1 Paragraph 5.9 Structural stability during fire

Primary elements required to be fire rated shall provide sufficient structural stability to avoid premature failure under design dead loads, design live loads and any additional load caused by fire.

- Structural stability to the fire rated intertenancy walls is provided by the connecting walls of the adjacent apartment outside the firecell of fire origin.

End of Section 7

8.0 PART 6: CONTROL OF INTERNAL FIRE and SMOKE SPREAD

8.1 Paragraph 6.8 Purpose group SR (Apartments)

6.8.1 Every household unit in purpose group SR shall be a single firecell fire separated off from all other purpose groups by no less than 30/30/30, the F or S rating, whichever is the greater.

- Each apartment is a separate household unit. As the apartments are on separate Unit Titles the minimum FRR shall be no less than the S rating, which is calculated at 30 minutes. An acoustic value of no less than STC55 is also required between apartments.

  - The intertenancy walls are solid fill 20 series concrete block walls which has a FRR in excess of the 30 minute requirement. An Acoustics Engineer may be required to verify that the walls satisfy the STC55 acoustic value.

  - Where the Apartments are off-set, the 30/30/30 fire rated intertenancy walls shall continue to the outer edges of apartments. This is achieved by the concrete block walls.

8.2 Paragraph 6.17 Fire stopping

The continuity and effectiveness of fire separations shall be maintained by fire stops.

- All electrical sockets and switches penetrating fire rated walls to have approved fire rated switch boxes to a minimum 30 minute FRR.

- All PVC and plastic pipes penetrating fire rated walls are to be fitted with approved fire rated collars. (closers)

- All metal pipes penetrating fire rated walls are to be fitted with approved fire rated collars.

8.3 Paragraph 6.18 Concealed spaces

The spread of fire in concealed spaces shall be avoided by ensuring that extensive voids do not pass from one firecell to another.

- ALL fire rated walls shall terminate as close as possible to the underside of the roof cladding with any gaps fully fire stopped.

End of Section 8

9.0 PART 7: CONTROL OF EXTERNAL FIRE SPREAD

9.1 Paragraph 7.2 Separation of legal titles

When a building is subdivided into cross lease titles, company lease titles or unit titles, each title shall be separated from the adjacent title by fire separations of no less than the greater of the F or S rating.

- The intertenancy walls are also boundary walls, so are fire rated to a 30 minute FRR as detailed in Section 8.1 above.

9.2 Paragraph 7.10.7 Purpose groups SH and SR

Where a building contains purpose groups SH or, SR with household units located only side by side, and each firecell has no more than three floor levels, the external walls need not be fire rated except that, a FRR of no less than 30/30/30 shall apply to any external wall less than 1.0 m from the relevant boundary.

- As the apartments are no closer than 1.0 m to a relevant boundary, no FRRs are required to the external walls.

End of Section 9

10.0 D1: ACCESS ROUTES

10.1 Paragraph 4.0 Stairway

The stairs to the upper floors can be designed as main private stairs.

Pitch	37°	maximum
Riser	190 mm	maximum
Tread	280 mm	minimum

Handrail one side only

End of Section 10

11.0 F4 SAFETY FROM FALLING

11.1 Table 1: Barrier heights

The stairways and landings are to be fitted with 900 mm high barrier rails.
All other openings shall be fitted with 1000 mm high barrier rails.

11.2 Table 2: Barrier construction

Barriers shall have no openings which will permit the passage of a sphere greater than 100 mm dia. and no components between 150 mm and 760 mm above the level of the stair nosing which can provide a toehold. Except that perforated sheet, mesh or trellis rigidly fixed over the full barrier height is acceptable provided that openings have a maximum dimension of 50 mm.

- Barriers on the stairs, landings, decks and openings from the upper floor levels and any area where the fall is likely to be >1.0 m are to satisfy this requirement.

11.3 Paragraph 4.0.1 Opening windows

Where the possible height of a fall is greater than 1.0 m, measured from the adjacent floor level the windows shall have:

a) The lower edge of the opening no less than 760 mm above floor level and 610 mm above any toeholds, or
b) A window opening restrictor fitted to limit the opening to a maximum of 100 mm, or
c) A 760 mm high barrier in front of the window, with no toeholds above 150 mm from the floor, and with no openings that will allow the passage of a sphere greater than 100 mm.

- Opening windows on the upper levels are to meet this requirement.

End of Section 11

12.0 SUMMARY OF KEY POINTS

12.1 Each apartment is designed on a separate Unit Title.

12.2 Install 240 volt hardwired interconnected Domestic smoke alarms in each Apartment as detailed in Part 4 of this report.

12.3 Doors subdividing escape routes are to be fitted with night latches that are not capable of being locked from the inside.

12.4 Fire separate the intertenancy walls to a minimum of a 30 minute FRR and STC 55 acoustic value. The 30 minute FRR shall extend to the outer edge of each apartment firecell and to the underside of the roof cladding with all gaps fully firestopped.

12.5 Fire stop all penetrations made in fire rated walls such as plastic and metal pipes, electrical cables, ventilation ducts, sockets and switches.

12.6 The stairs may be designed as 'main private' stairs.

12.7 Barriers on stairs and landings to be 900 mm high. The barriers on the terraces are to be 1000 mm high. The spacing between all vertical barrier rails to be a max. of 100 mm dia.

12.8 Opening windows on the upper levels are to satisfy the provisions of Section 11.3 on page 9 of this report.

Prepared by: DAVID O'DONNELL
MNZFBI

Reviewed by: PETER C. DUNKIN
MIFireE FNZFBI

ATTACH BUSINESS CARD
AND RECEIPT HERE

Environmental Services

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

08/09/2005

Working Concepts Ltd
P.O. Box 58395
Greenmount
Auckland

Attention: Jessica Zhang

Dear Jessica

ACKNOWLEDGEMENT OF ACCEPTANCE OF RESOURCE CONSENT APPLICATION FOR
22 townhouse development and 5 lot subdivision.
AT 124 Stancombe Road, Flat Bush

Council acknowledges acceptance of your above application received at the lodgement meeting on 8/09/05

Your Consent Co-ordinator for this application is Bryce Pomfrett

Your application has been allocated the reference numbers noted at the bottom of this letter. Please quote the proposal number when making enquiries.

Should clarification or more detailed information be required, in accordance with Section 92 of the Resource Management Act 1991 you will be contacted within five (5) working days. Otherwise you are advised that the statutory time-frames for processing of non-notified resource consent applications require a written decision to be released no later than 20 working days after receipt of the application; or of any further information pursuant to the Section 92, or the date on which the approval of all affected persons (if any) have been obtained under Section 94, whichever is the later.

As advised above, it is important to note that assessment of this application can only commence once all the requested information has been provided.

~~Attached is~~ A receipt for $ 3375.00 being your application deposit. will be posted to you.

Yours faithfully

Consent Co-ordinator

Botany-Clevedon/Otara Team
ENVIRONMENTAL SERVICES

SP 9188

Customer Copy ☐
File Copy ☐

Reference: ES 6723/124 Proposal 28885
Enquiries to Bryce Pomfrett.

Facsimile 262-5109
Extension 5856

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT
Application

Section 88 Of The Resource Management Act 1991

FORM 9

Terms and Conditions of the Application and Charges

1 **A deposit must accompany this application:** The deposit is in accordance with the Manukau City Schedule of Administrative Charges in terms of Section 36 of the Resource Management Act 1991. Confirmed by Special Order by the Council on 30 September 1999 or any subsequent revision thereof.

Further charges may be imposed for processing the application and for compliance and supervision.

2 If this form has not been completed Council will not accept the application.

3 At the completion of processing your application [whether consent is granted or not] all outstanding fees are payable prior to the issuing of the resource consent decision.

Important!

Lodgement bookings must be made before 1.00pm the business day before you wish to hold the meeting at Citizen and Customer Centre.

Please phone 262-5227 to book the lodgement meeting.

All deposits should be by cheque and made out to Manukau City Council.

The person responsible for the charges incurred must sign this form. All financial transactions will be in the name indicated below.

I/we accept the Terms of our Resource Consent application and understand that at the completion of processing this application, **I/we are liable for all charges** incurred by the Council in accordance with Section 36 of the Resource Management Act 1991.

Please print all details neatly and clearly.

Mr ☑ Mrs ☐ Miss ☐ Ms ☐ or other _____

First Names: Bob (R.J)

Surname: Cummins

Company Name: Working Concepts Ltd.

Street Address: Unit 3, 12 Laidlaw Way, Botany
Auckland, New Zealand

Postal Address: P.O Box 58395, Greenmount
Auckland, New Zealand

Daytime Phone: (04) 801-6830 Facimile No: (04) 801-6870

Email: rjcummins@xtra.co.nz Mobile Phone: 0275801683

Signature: Date: 7/9/05

If you know your customer number, please assist the Council by completing the box

Customer Number: ☐☐☐☐☐☐☐

RC - 100A / Page 1 of 4 / 29.06.05
Resource Consent Application

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT
Application

Continued

FORM 9

To: City Manager
Manukau City Council
Private Bag 76917
Manukau City

Attention: Environmental Services

Applicant Details

Mr ☑ Mrs ☐ Miss ☐ Ms ☐ or other _____

First Name: Bob (R.J)

Surname: Cummins

Company Name: Working Concepts Ltd.

Mailing Address: PO Box 58395, Greenmount
Auckland, New Zealand

Street address / registered office: Unit 3, 12 Laidlaw Way, Botany
Auckland, New Zealand

Home Phone: _____ Mobile Phone: 027 5801683

Daytime Phone: (04) 8016830 Facimile No: (04) 801 6870

Email: Bcummins@xtra.co.nz Website: _____

Signature: _____ Date: 7/9/05

Agent Details

Mr ☐ Mrs ☐ Miss ☑ Ms ☐ or other _____

Company Name: Working Concepts Ltd.

Contact Person: Jessica Run Zhang

Mailing Address: PO Box 58395 Greenmount
Auckland, New Zealand.

Street address / registered office: Unit 3, 12 Laidlaw Way, Botany
Auckland, New Zealand

Home Phone: _____ Mobile Phone: 027 2807760

Daytime Phone: 09-271 3007 Facimile No: 09-271 4037

Email: Jessica@workingconcepts.co.nz Website: _____

Signature: _____ Date: 7/9/05

Important!

Please tick **one** of the following for all communication to go to:

Applicant ..... ☐
Agent ..... ☑

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT
Application

Continued...

FORM 9

1 Description of activity this application relates to

4 blocks of 3 level, 3 bedrooms with garaging on lower level on each townhouse
(22 townhouses in total)

2 Application is being made for the following consent or consents *[please place a tick in the appropriate box]*

Fee simple subdivision consent ..... ☐
Cross lease/unit title subdivision consent .. ☐
Land Use Consent ..... ☐
Other ..... ☑

For other please specify Limited Notification.

3 The location to which this application relates is

Street address of site 124 Stancombe Road / Carlos Drive Flat Bush

Legal Description:

Lot: 3 DP: 78859 C/T Number: NA34D/637

[Describe the location in a manner which will allow it to be readily identified e.g.. the street address, the legal description, the name of any stream, river or water body to which the application may relate, proximity to any well known landmark, the grid reference (if known) etc.]

4 The names and addresses of the owner(s) and occupier(s) [other than the applicant] of any land to which the application relates:

Owner(s) Working Concepts Limited

Occupier(s)

5 If other specific resource consents are required please indicate in the first column.

If you have already applied for this consent, please indicate in the second column.

Land Use Consent required	☑	already applied for	☐
Subdivision Consent required	☑	already applied for	☐
Coastal Permit required	☐	already applied for	☐
Water Permit required	☐	already applied for	☐
Discharge Permit (Air) required	☐	already applied for	☐

6 I attach, in accordance with the Fourth Schedule of the Resource Management Act 1991, an assessment of environmental effects in the detail that corresponds with the scale and significance of the effects that the proposed activity may have on the environment ..... ☐

FORM 9

7 I attach any information required by the District Plan, Regional Plan, the Resource Management Act 1991 or any regulations made under that Act, to be included in this application ..... ☐

8 Where the application is for a **subdivision** consent:

As this is an application for a subdivision consent, I attach information that is sufficient to adequately define:

The position of all new boundaries ..... ☐
The areas of new allotments [not required for cross-leases, company leases or unit plans] ..... ☐
The locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips ..... ☐
The locations and areas of any existing esplanade reserves, esplanade strips, and access strips ..... ☐
The locations and areas of land below mean high water springsof the sea or of any part of the bed or a river or lake to be vested in the Crown or local authority under section 237A of the Act ... ☐
The locations and areas of land to be vested as new roads ..... ☐

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT

Application Checklist

Resource Management Act 1991

Lodgement meeting date: ____/____/____ Proposal No: _____ ES: _____

Consent Co-ordinator: _____ Applicant/Agent Attending: _____

Site Address: 124B _____

You must bring this completed check list with you to the lodgement meeting as it will be checked by a council officer. Work through this list to ensure you have provided all information and documents for each section. If an item is not applicable in your case, place n/a in the comments column.

General Information Required

	Applicant	Council	Comments
RC100A completed correctly and signed by person responsible for charges	☑	☐	
Deposit cheque attached – refer to administrative charges	☑	☐	
♦ Affected parties' approval attached	☑	☐	
Right of entry obtained	☐	☐	
Certificate(s) of Title provided – less than 1 month old including details of title limitations	☑	☐	
Items on the Councils Land Information Register addressed	☐	☐	
Assessment of Environmental Effects provided	☐ ✓	☐	
♦ Details of iwi consultation provided	☐	☐	
♦ Contaminated site investigation	☑	☐	
Full explanation of application provided	☐ ✓	☐	
♦ Archaeological sites identified	☐	☐	
Specialist reports eg. arborist, traffic, archaeological etc.	☐	☐	

Plan Requirements

Provide 3 copies of plans to a scale of 1:100 [or 1:200 for sections larger than 1500m²]

	Applicant	Council	Comments
All levels supplied in terms of Lands and Survey Auckland Datum 1946	☑	☐	
Floor levels, and where appropriate, spots levels on the relevant boundaries	☑	☐	
Site Plans – refer to application guide for requirements	☐	☐	
For Land Use – 1 x A1 and 3 x A3 required	☑	☐	
Plans to scale – 1:50, 1:100 or 1:200 only	☑	☐	
For Subdivision – 3 x A3 and 1 x A4 required at appropriate scales	☐	☐	
For Engineering – 3 sets of A3 required at appropriate scales	☑	☐	
Plans legible; all existing structures shown	☐	☐	
Landscaping plans provided	☑	☐	
Building floor plans provided	☑	☐	
Dimensions – including distanced from all boundaries	☐	☐	
Position, dripline and identification of any protected trees shown	☐	☐	
♦ Retaining walls identified	☑	☐	

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT

Application Checklist

Continued

Planning

	Applicant	Council	Comments
♦ All relevant height in relation to boundary recession planes shown including all natural levels	☑	☐	
Any infringements – development and performance standards	☐	☐	
Parking spaces and loading bays shown	☐	☐	
Vehicle entry and exit shown	☑	☐	
Onsite pedestrian movement and vehicle manoeuvring shown	☑	☐	
Details of proposed signage including location and elevation(s)	☐	☐	
Rubbish storage area shown	☑	☐	

Subdivision

	Applicant	Council	Comments
Net site area of all the existing and proposed sites	☑	☐	
Site coverage of all buildings shown	☑	☐	
Area and dimensions of all proposed allotments and building platforms shown	☑	☐	
Positions of all new boundaries including unit and covenant boundaries	☑	☐	
Location and areas of all proposed reserves	☐	☐	
Mean High Water Spring tide mark shown	☐	☐	
Location and areas of land to be vested as new road shown	☑	☐	
Location and areas of any existing or proposed easements shown	☐	☐	
Memorandum of easement shown	☐	☐	
All watercourses with an average width greater than 3 metres	☒	☐	
♦ Proposed staging of the subdivision provided	☐	☐	
Area and dimensions of all access, private ways and common areas shown	☑	☐	
♦ Building height in relation to boundary details for all boundaries	☑	☐	
Position of any eaves in relation to a private way or driveways	☐	☐	
Existing high voltage electricity lines	☐	☐	
Geotechnical report [steep, filled or unstable sites]	☑	☐	

Engineering Plans

	Applicant	Council	Comments
MCC standard detail drawings appropriate to application	☑	☐	
Existing infrastructure shown	☑	☐	
Power and telephone services layout shown [existing and proposed]	☑	☐	

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT

Application Checklist

Continued

Wastewater & Stormwater

	Applicant	Council	Comments
Connections shown for all proposed lots/units	☑	☐	
Long-sections and all required details shown	☑	☐	
Minimum depth of service connections shown [1.2m]	☑	☐	
Existing and proposed onsite stormwater and wastewater disposal detailed	☑	☐	

Stormwater Design

	Applicant	Council	Comments
Appropriate stormwater calculations including catchment plan	☑	☐	
Design catering for the upstream catchment	☑	☐	
Assessment of downstream stormwater capacity	☑	☐	
♦ Overland flow location assessment and any proposed easements shown	☐	☐	

Wastewater Design

	Applicant	Council	Comments
For 40 lot subdivisions or larger, or if pump station proposed indicate catchment plan area	☐	☐	
Assessment of catchment population in 50 years Flow calculations	☐	☐	
Calculations with respect to adequacy of downstream system	☐	☐	

Water Reticulation

	Applicant	Council	Comments
Water connections shown for all lots	☑	☐	
All proposed valves, hydrants, bends shown	☑	☐	
Pipe materials specified	☑	☐	
Ducted rider mains for six or more lots served off access way	☐	☐	

Roading

	Applicant	Council	Comments
♦ Roading and access ways — plans, long-sections and typical cross-sections provided	☐	☐	
Road marking and signage shown	☐	☐	
Vehicle crossing [existing and proposed]	☐	☐	

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT

Application Checklist

Continued

Land Modification

	Applicant	Council	Comments
♦ Earthworks plans showing existing and proposed contours	☐	☐	
Cut and fill areas defined and shown on plan	☐	☐	
Quantity of cut/fill identified and shown on plan	☐	☐	
Proposed sediment control measures provided	☐	☐	
Has ARC consent been obtained [required if over 1 ha, or over 0.25 ha and over 15° and/or within 50m of stream or wetland]	☐	☐	
Geotechnical report [steep, filled or unstable sites]	☐	☐	
♦ Retaining walls identified and shown on plan and proposed contruction methodology included	☐	☐	

!

Important!

You must present a completed application form, deposit cheque written explanation, assessment of environmental effects, plans and check list at your lodgement meeting for the application to be accepted.

For Council Use Only

Is a building consent required ☐
If yes, has a Building Consent been lodged ☐
Has applicant been advised of any known financial and/or development contributions applicable ☐
Any requirements for site visit [eg. dogs on site, rural protocol] ☐

Notes: _____

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT

Application Checklist

Resource Management Act 1991

Lodgement meeting date: 8 / 09 / 05 Proposal No: 28885 ES: 6923/124

Consent Co-ordinator: Bryce Pomfrett Applicant/Agent Attending: Graeme Raymond

Site Address: 124 Stancombe Road, Flat Bush.

You must bring this completed check list with you to the lodgement meeting as it will be checked by a council officer. Work through this list to ensure you have provided all information and documents for each section. If an item is not applicable in your case, place n/a in the comments column.

General Information Required

	Applicant	Council	Comments
RC100A completed correctly and signed by person responsible for charges	☐	☑	
Deposit cheque attached refer to administrative charges	☐	☑	
♦ Affected partieapproval attached	☐	☐	limited notified.
Right of entry obtained	☐	☐	N/A.
Certificate(s) of Title provided less than 1 month old including details of title limitations	☐	☑	
Items on the Councils Land Information Register addressed	☐	☑	
Assessment of Environmental Effects provided	☐	☑	
♦ Details of iwi consultation provided	☐	☐	N/A.
♦ Contaminated site investigation	☐	☑	Asbestos Contamination Report.
Full explanation of application provided	☐	☑	
♦ Archaeological sites identified	☐	☐	No.
Specialist reports eg. arborist, traffic, archaeological etc.	☐	☑	

Plan Requirements

Provide 3 copies of plans to a scale of 1:100 [or 1:200 for sections larger than 1500m²]

	Applicant	Council	Comments
All levels supplied in terms of Lands and Survey Auckland Datum 1946	☐	☑	
Floor levels, and where appropriate, spots levels on the relevant boundaries	☐	☑	
Site Plans refer to application guide for requirements	☐	☑	
For Land Use 1 x A1 and 3 x A3 required	☐	☑	
Plans to scale 1:50, 1:100 or 1:200 only	☐	☑	
For Subdivision 3 x A3 and 1 x A4 required at appropriate scales	☐	☑	
For Engineering 3 sets of A3 required at appropriate scales	☐	☑	
Plans legible; all existing structures shown	☐	☑	
Landscaping plans provided	☐	☑	
Building floor plans provided	☐	☑	
Dimensions including distanced from all boundaries	☐	☑	
Position, dripline and identification of any protected trees shown	☐	☑	
♦ Retaining walls identified	☐	☑	

Te Kaunihera o
MANUKAU
City Council

Planning

	Applicant	Council	Comments
♦ All relevant height in relation to boundary recession planes shown including all natural levels	☐	☑	
Any infringements development and performance standards	☐	☑	
Parking spaces and loading bays shown	☐	☑	
Vehicle entry and exit shown	☐	☑	
Onsite pedestrian movement and vehicle manoeuvring shown	☐	☑	
Details of proposed signage including location and elevation(s)	☐	☑	
Rubbish storage area shown	☐	☑	12G Stage On.

Subdivision

	Applicant	Council	Comments
Net site area of all the existing and proposed sites	☐	☑	
Site coverage of all buildings shown	☐	☑	
Area and dimensions of all proposed allotments and building platforms shown	☐	☑	5 lots only
Positions of all new boundaries including unit and covenant boundaries	☐	☑	lots only. Units indicative.
Location and areas of all proposed reserves	☐	☐	
Mean High Water Spring tide mark shown	☐	☐	N/A
Location and areas of land to be vested as new road shown	☐	☑	No new road.
Location and areas of any existing or proposed easements shown	☐	☑	
Memorandum of easement shown	☐	☑	
All watercourses with an average width greater than 3 metres	☐	☐	N/A.
♦ Proposed staging of the subdivision provided	☐	☑	
Area and dimensions of all access, private ways and common areas shown	☐	☑	
♦ Building height in relation to boundary details for all boundaries	☐	☐	Refer Land Use.
Position of any eaves in relation to a private way or driveways	☐	☐	" " "
Existing high voltage electricity lines	☐	☐	N/A.
Geotechnical report [steep, filled or unstable sites]	☐	☑	

Engineering Plans

	Applicant	Council	Comments
MCC standard detail drawings appropriate to application	☐	☑	
Existing infrastructure shown	☐	☑	
Power and telephone services layout shown [existing and proposed]	☐	☐	

Te Kaunihera o
MANUKAU
City Council

RESOURCE CONSENT Application Checklist

Continued

Wastewater & Stormwater

	Applicant	Council	Comments
Connections shown for all proposed lots/units	☐	☑	
Long-sections and all required details shown	☐	☑	
Minimum depth of service connections shown [1.2m]	☐	☑	
Existing and proposed onsite stormwater and wastewater disposal detailed	☐	☐	

Stormwater Design

	Applicant	Council	Comments
Appropriate stormwater calculations including catchment plan	☐	☑	
Design catering for the upstream catchment	☐	☑	
Assessment of downstream stormwater capacity	☐	☐	
♦ Overland flow location assessment and any proposed easements shown	☐	☐	

Wastewater Design

	Applicant	Council	Comments
For 40 lot subdivisions or larger, or if pump station proposed, indicate catchment plan area	☐	☐	
Assessment of catchment population in 50 years Flow calculations	☐	☐	
Calculations with respect to adequacy of downstream system	☐	☐	

Water Reticulation

	Applicant	Council	Comments
Water connections shown for all lots	☐	☑	
All proposed valves, hydrants, bends shown	☐	☐	
Pipe materials specified	☐	☐	
Ducted rider mains for six or more lots served off access way	☐	☐	

Roading

	Applicant	Council	Comments
♦ Roading and access ways plans, long-sections and typical cross-sections provided	☐	☐	Underlying
Road marking and signage shown	☐	☐	
Vehicle crossing [existing and proposed]	☐	☐	Subdiv

Te Kaunihera o
MANUKAU
City Council

Land Modification

	Applicant	Council	Comments
♦ Earthworks plans showing existing and proposed contours	☐	☑	
Cut and fill areas defined and shown on plan	☐	☑	
Quantity of cut/fill identified and shown on plan	☐	☑	
Proposed sediment control measures provided	☐	☑	
Has ARC consent been obtained [required if over 1 ha, or over 0.25 ha and over 15° and/or within 50m of stream or wetland]	☐	☐	
Geotechnical report [steep, filled or unstable sites]	☐	☐	
♦ Retaining walls identified and shown on plan and proposed contruction methodology included	☐	☑	

Important!

You must present a completed application form, deposit cheque written explanation, assessment of environmental effects, plans and check list at your lodgement meeting for the application to be accepted.

For Council Use Only

Is a building consent required ☐
If yes, has a Building Consent been lodged ☐
Has applicant been advised of any known financial and/or development contributions applicable ☐
Any requirements for site visit [eg. dogs on site, rural protocol] ☐

Notes: _____

28885

ENVIRONMENTAL SERVICES RESOURCE CONSENT LODGEMENT MEETINGS

Proposal Number (Resource Consent Administrator to fill in)				
Meeting date & time Date	08.09.05	(dd/mm/yy) Time	10.45am	AM/PM
Meeting room	CCC Desk 5			
What is the name of the person attending the meeting?	Graham Raymond from Working Concepts			
What is the contact phone?	Bus/Res	2713007	Cellphone	0274940544
What is the site address? [no. and street]	124 B Stancombe Road			
What is the legal description of the property?	**Lot**	3	**DP**	78859
Ward (from screen)	Botany-Clevedon			

Previous meetings		
Has there been a pre-application meeting?	**Yes/No**	No
Have you already received advice from Council officers about this project?	**Yes/No**	Yes
If yes, can you tell me their names so we can try to liaise with them before the meeting:	Bryce Pomfrett	
Are there any specific Council officers you would like to attend?	**Yes/No**	No
If yes, who are they?	Bryce Pomfrett	
How many people will you bring to the meeting?		1

What type of Resource Consent are you applying for? X

Brief description of proposal (compulsory):

Land use consent for 22 townhouse development

Air Discharge Consent			
Integrated Consent (includes both subdivision and land use)			
Land Use Consent			x
	Further detail required for land use consent - Put X in all appropriate boxes.	Building Infringement	
		Land Modification	
		Air noise Area / Airport Outer Control	
		Tree Removal	
		Outline Plan of Works	
		Are there engineering works?	**Yes**
Subdivision Consent			
	Further detail for subdivision consent	Concept (Sub Division)	
		Crosslease	
		Fee Simple	
		Unit Title	
		Boundary Adjustment	
		Number of lots *(entry required)*	
		Are there any engineering works? *(enter Yes or No)*	

Manhole
Fire hydrant
Cesspit
Land Information Register

Sanitary Sewer
Stormwater
Water Main

This Plan is supplied for information only. The Council accepts no liability for any error whatsoever.

MANUKAU City Council

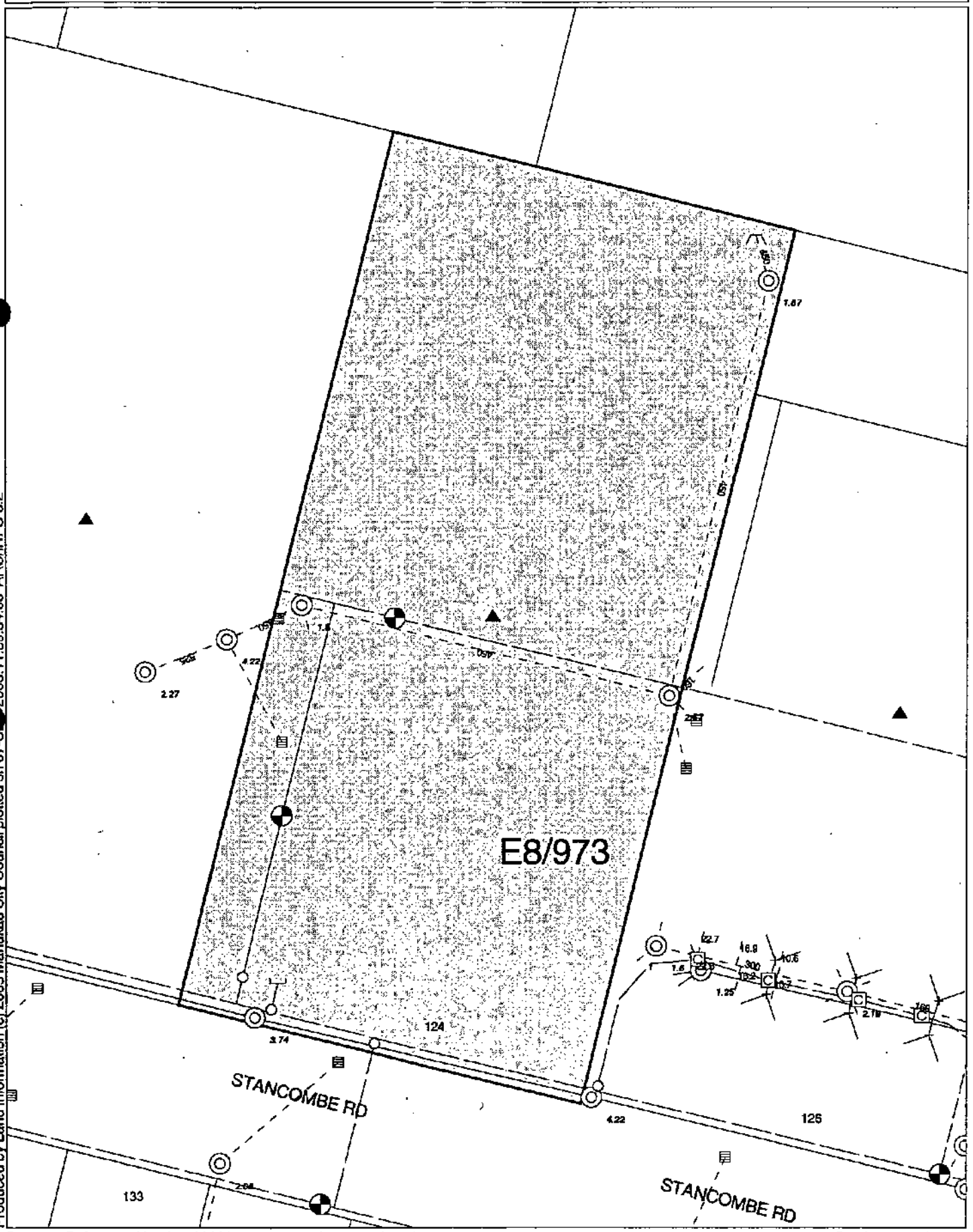
HEIGHT RESTRICTIONS APPLY –Contact Transpower (07) 838 0677
Main Overhead Powerlines
Outer Limit Restrictions
PYLON

WORK WITHIN EASEMENT OR WITHIN 10m REQUIRES PERMIT/APPROVAL
WSL Contact Watercare Services Limited (09) 634 7840
HGAS Contact Natural Gas Corp (0800) 734 567
HPOL Contact Natural Gas Corp (0800) 734 567
LPG Contact Liquigas (09) 277 7042

Scale 1:750
Area 8100 sq m
LOT 3 DP 78859

124 STANCOMBE ROAD FLAT BUSH

07 SEPTEMBER 2005



Produced by Land Information (c) 2005 Manukau City Council plotted on 07-Sep-2005:11:39:54.00 ARC/INFO 8.2

Property Reference Number 6923/124 requested at 11:37 by edugmore

Services are shown

Manukau City Council - LIS Internal Property Report generated at 10:10am 08/09/200 PRM REF 6923/124

!!! NOTE: For complete & up-to-date details see Hansen

BOTANY-CLEVEDON Ward

Owner/Ratepayer	WORKING CONCEPTS LIMITED
Address	124 STANCOMBE RD, FLAT BUSH
	(CHAPEL ROAD TO JEFFS ROAD)
Legal description	LOT 3 DP 78859

District Plan Details (incl. Public Works)

Operative	RURAL 3	Area	8100 Sq Metres
		MCC Map	8/61;7/72
		Dist. Plan	39D

Rates Account Number	60066281
Valuation number	36400-096-03

Household refuse collection day : Friday

Water account number **NOT ON SUPPLY** Meter last read

Miscellaneous Notes

Health	None known
Pool fencing	Registered on 13 MAR 1990, , Complies as at 02 APR 2001
	Registered on 02 APR 2001, , Complies as at 02 APR 2001

Following consents effect the whole site.

Resource Consents issued under Resource Management Act.

Decision Date	Description	Applicant	Decision Type	Status	As at Date	See Note
	OBJECTION TO PROPOSAL 27046	CARLOS CONCEPTS LTD		Unknown		1
	UNIT TITLE SUBDIVISION FOR 42	CARLOS CONCEPTS LTD		Unknown		1
	LMTG	GRAHAM RAYMOND FROM		Unknown		1
17/04/98	BUDDHIST TEMPLE & ASSOC BUILDI	INTERNATIONAL BUDDHI	Withdrawn	Not Applicable		2
31/05/01	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
25/01/02	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
25/01/02	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
16/12/04	TWO LOT FEE SIMPLE SUBDIVISION	CARLOS CONCEPTS LTD	Granted	Yet to Comply	31/07/05	4
22/12/04	TREE REMOVAL	CARLOS CONCEPTS LTD	Granted	Not Applicable		2
03/03/05	42 apartment complex	CARLOS CONCEPTS LTD	Granted	Yet to Comply	15/03/05	4

Notes

1) As this consent was issued prior to 1 July 1996, Council is not in a position to state whether building or activity on the property comply with conditions of the Resource Consent.
2) There may be conditions at this resource consent that require compliance before the commencement of the use, or on an ongoing basis. Details of such conditions are embodied in the original consent.
3) No Compliance checks have been undertaken by MCC due to either, MCC have not been formally advised of compliance, or the proposed use has not commenced. As Compliance is a condition of Consent approval, you are required to check the current activity and determine whether the original conditions have been complied with.
4) Some compliance conditions have been checked and found uncompleted /not started. As compliance is a condition of consent approval you are required to check the current activity and determine whether the original conditions of consent have been complied with.

Building Consents/PIM's/Permits issued. CCC = Code Compliance Certificate

Issued	Work Description	Status	CCC	Details	Area
	Dwellings		n/a	Stage 1 of 2: Shell only for 42 Apartments	3600.00 m2
	Commercial Buildings		n/a	42 Unit Apartment Building & CarparkStage to Ftout of Shell	0.00
19/12/79	Dwellings,Plumbing,Drainage	Finalised	n/a	DWELLING / GARAGE / WORKSHOP	326 m2
16/05/84	Swimming Pools,Plumbing	Finalised	n/a	SWIMMING POOL & SPA POOL	50 m2
	Drainage	Finalised			

* PLEASE NOTE - NO RECORD OF FIELD INSPECTIONS EXIST. FILE HAS NOW BEEN MICROFILMED.
* PLEASE NOTE - FIELD INSPECTION RECORDS ARE INCOMPLETE. FILE HAS NOW BEEN MICROFILMED.

IF REQUIRED COUNCIL WILL CARRY OUT AN INSPECTION WHERE THE DATE OF THE PERMIT IS OLDER THAN 10 YEARS. A FEE WILL BE APPLICABLE. PLEASE CONTACT FIELD OPERATIONS ON 2625108 QUOTING LIM 6923/124 - PLANS OF THE CONSTRUCTION ARE AVAILABLE THROUGH

THE LOCAL WARD CENTRE OR COUNCIL'S CUSTOMER SERVICE CENTRE, KOTUKU HOUSE, GROUND FLOOR, MANUKAU CITY. THESE PLANS ARE TO BE ON SITE FOR THE INSPECTION.

Land Information Register Report.

Information Category: FLOOD LEVELS/FLOODIN File Ref: * Register: C.2313
Consultant: YASENKO KRPO
Report: inter-office memo Ref: *
Instructions:

Sites may be subject to Flood Hazard in heavy rainfall events. Any Land modification activity within the flood hazard area is likely to require resource consent. For more details refer to the East Tamaki Catchment Management Plan,May 2000 prepared by Beca Carter,Hollings and Ferner Ltd.and District Plan and Variation 13. Prior to any subdivision or building consent the Council may require any or all of the following: 1 Detailed Flood assessment by a registered engineer. 2 Specific Floor Level Design. 3 The creation of an overland flowpath easement in favour of the Council. 4 The issue of a Section 36 (2) certificate in terms of the Building Act. 5 Specific design of any proposed site works. The above requirements may preclude the placement of earth-fill or additional buildings on the site or the resource consent for subdivision or cross-lease. For more information seek advice from the Council.

Information Category: REDEVELOPMENT/DEVELO File Ref: * Register: C.4660
Consultant: S.HEALY
Report: MEMO RE APPEALS & VAR.13 DISTRICT PLAN Ref: *
Instructions:

NOT OPERATIVE,REFER TO THE MANUKAU OPERATIVE DISTRICT PLAN 2002,FOR DETAILS.

Information Category: SITE CONTAMINATION File Ref: Register: C.2328
Consultant: L.FRANKS
Report: SITE CONTAMINATION REPORTS Ref:
Instructions:

SITE SUITABLE FOR RESIDENTIAL USE;||THIS SITE HAS BEEN SUBJECT TO INVESTIGATIONS BY AN INDEPENDENT CONSULTANT AND BASED ON AN INDEPENDENT REVIEW OF INVESTIGATIONS,THIS SITE IS DEEMED TO BE SUITABLE FOR RESIDENTIAL USE AND THERE ARE NO ADDITIONAL OR SPECIAL RESTRICTIONS ON ITS USE.THE RESTRICTIONS IMPOSED BY RULE 17.10.12.14 INVARIATION NO.13 FLAT BUSH SHALL NO LONGER APPLY TO THIS SITE IN ACCORDANCE WITH RULE 17.10.12.14 (F).RELEVANT REPORTS ARE AVAILABLE FROM THE CITIZEN & CUSTOMER CENTRE,KOTUKU HOUSE,MANUKAU CITY.||

Property Remarks : none present.

Manukau City Council - LIS Internal Property Report generated at 10:10am 08/09/200 PRM REF 6923/124

!!! NOTE: For complete & up-to-date details see Hansen

BOTANY-CLEVEDON Ward

Owner/Ratepayer	WORKING CONCEPTS LIMITED
Address	124 STANCOMBE RD, FLAT BUSH
	(CHAPEL ROAD TO JEFFS ROAD)
Legal description	LOT 3 DP 78859

District Plan Details (incl. Public Works) — Area · 8100 Sq Metres

Operative RURAL 3 — MCC Map 8/61;7/72

Dist. Plan 39D

Rates Account Number 60066281

Valuation number 36400-096-03

Household refuse collection day : Friday

Water account number **NOT ON SUPPLY** — Meter last read

Miscellaneous Notes

Health	None known
Pool fencing	Registered on 13 MAR 1990, , Complies as at 02 APR 2001
	Registered on 02 APR 2001, , Complies as at 02 APR 2001

Following consents effect the whole site.

Resource Consents issued under Resource Management Act.

Decision Date	Description	Applicant	Decision Type	Status	As at Date	See Note
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	LMTG	GRAHAM RAYMOND FROM		Unknown		1
17/04/98	BUDDHIST TEMPLE & ASSOC BUILDI	INTERNATIONAL BUDDHI	Withdrawn	Not Applicable		2
31/05/01	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
25/01/02	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
25/01/02	CHILDCARE FACILITY	MORRIS CHANDLER	Granted	Not Checked		3
16/12/04	TWO LOT FEE SIMPLE SUBDIVISION	CARLOS CONCEPTS LTD	Granted	Yet to Comply	31/07/05	4
22/12/04	TREE REMOVAL	CARLOS CONCEPTS LTD	Granted	Not Applicable		2
03/03/05	42 apartment complex	CARLOS CONCEPTS LTD	Granted	Yet to Comply	15/03/05	4

Notes

1) As this consent was issued prior to 1 July 1996, Council is not in a position to state whether building or activity on the property comply with conditions of the Resource Consent.
2) There may be conditions at this resource consent that require compliance before the commencement of the use, or on an ongoing basis. Details of such conditions are embodied in the original consent.
3) No Compliance checks have been undertaken by MCC due to either, MCC have not been formally advised of compliance, or the proposed use has not commenced. As Compliance is a condition of Consent approval, you are required to check the current activity and determine whether the original conditions have been complied with.
4) Some compliance conditions have been checked and found uncompleted /not started. As compliance is a condition of consent approval you are required to check the current activity and determine whether the original conditions of consent have been complied with.

Building Consents/PIM's/Permits issued. CCC = Code Compliance Certificate

Issued	Work Description	Status	CCC	Details	Area
	Dwellings		n/a	Stage 1 of 2: Shell only for 42 Apartments	3600.00 m2
	Commercial Buildings		n/a	42 Unit Apartment Building & CarparkStage to Ftout of Shell	0.00
19/12/79	Dwellings,Plumbing,Drainage	Finalised	n/a	DWELLING / GARAGE / WORKSHOP	326 m2
16/05/84	Swimming Pools,Plumbing	Finalised	n/a	SWIMMING POOL & SPA POOL	50 m2
	Drainage	Finalised			

* PLEASE NOTE - NO RECORD OF FIELD INSPECTIONS EXIST. FILE HAS NOW BEEN MICROFILMED.
* PLEASE NOTE - FIELD INSPECTION RECORDS ARE INCOMPLETE. FILE HAS NOW BEEN MICROFILMED.

IF REQUIRED COUNCIL WILL CARRY OUT AN INSPECTION WHERE THE DATE OF THE PERMIT IS OLDER THAN 10 YEARS. A FEE WILL BE APPLICABLE. PLEASE CONTACT FIELD OPERATIONS ON 2625108 QUOTING LIM 6923/124 - PLANS OF THE CONSTRUCTION ARE AVAILABLE THROUGH

THE LOCAL WARD CENTRE OR COUNCIL'S CUSTOMER SERVICE CENTRE, KOTUKU HOUSE, GROUND FLOOR, MANUKAU CITY. THESE PLANS ARE TO BE ON SITE FOR THE INSPECTION.

Land Information Register Report.

Information Category: FLOOD LEVELS/FLOODIN File Ref: * Register: C.2313
Consultant: YASENKO KRPO
Report: inter-office memo Ref: *
Instructions:

Sites may be subject to Flood Hazard in heavy rainfall events. Any Land modification activity within the flood hazard area is likely to require resource consent. For more details refer to the East Tamaki Catchment Management Plan,May 2000 prepared by Beca Carter,Hollings and Ferner Ltd.and District Plan and Variation 13. Prior to any subdivision or building consent the Council may require any or all of the following: 1 Detailed Flood assessment by a registered engineer. 2 Specific Floor Level Design. 3 The creation of an overland flowpath easement in favour of the Council. 4 The issue of a Section 36 (2) certificate in terms of the Building Act. 5 Specific design of any proposed site works. The above requirements may preclude the placement of earth-fill or additional buildings on the site or the resource consent for subdivision or cross-lease. For more information seek advice from the Council.

Information Category: REDEVELOPMENT/DEVELO File Ref: * Register: C.4660
Consultant: S.HEALY
Report: MEMO RE APPEALS & VAR.13 DISTRICT PLAN Ref: *
Instructions:

NOT OPERATIVE,REFER TO THE MANUKAU OPERATIVE DISTRICT PLAN 2002,FOR DETAILS.

Information Category: SITE CONTAMINATION File Ref: Register: C.2328
Consultant: L.FRANKS
Report: SITE CONTAMINATION REPORTS Ref:
Instructions:

SITE SUITABLE FOR RESIDENTIAL USE;||THIS SITE HAS BEEN SUBJECT TO INVESTIGATIONS BY AN INDEPENDENT CONSULTANT AND BASED ON AN INDEPENDENT REVIEW OF INVESTIGATIONS,THIS SITE IS DEEMED TO BE SUITABLE FOR RESIDENTIAL USE AND THERE ARE NO ADDITIONAL OR SPECIAL RESTRICTIONS ON ITS USE.THE RESTRICTIONS IMPOSED BY RULE 17.10.12.14 INVARIATION NO.13 FLAT BUSH SHALL NO LONGER APPLY TO THIS SITE IN ACCORDANCE WITH RULE 17.10.12.14 (F).RELEVANT REPORTS ARE AVAILABLE FROM THE CITIZEN & CUSTOMER CENTRE,KOTUKU HOUSE,MANUKAU CITY.||

Property Remarks : none present.

MANUKAU WATER

Manukau Water

INTER-OFFICE MEMO

MANUKAU
City Council

To:	Environmental Services	**Attention:**	Bryce Pomfrett
From:	Chris Allen	**Date:**	16 March 2006
Site Address:	124 STANCOMBE ROAD, FLAT BUSH		
Site Ref:	6923/124	**Proposal No:**	28885
Consent:	Land Use / Subdivision / Concept	**Number of buildings / lots:**	

Project Description:

NOTES TO CONSENT CO-ORDINATOR

1. If any condition or advice note requested herein is deemed to require amendment **that will either change the intent or value of the requirement** then please consult with the writer prior to amendment.

PART A - LAND USE CONSENT

The following conditions shall be completed prior to occupation / commencement of use unless otherwise stated.

ENGINEERING PLANS

- The works detailed on the accompanying approved plans referenced _____ (sheets ___) by Council, shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements;

  (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

  (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

  (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

  (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact the Council's Resource Consent Compliance Team - attention _____ .

  (v) All works on existing public wastewater drains and watermains, shall only be carried out by a Manukau City Council approved licensed contractor at the applicant's expense.

WASTEWATER DRAINAGE

- Adequate provision shall be made for the disposal of wastewater.

  This will include the extension of the existing public system to and within the site to provide each unit with individual connection points and provision for the upstream catchment. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and/or approved engineering drawings referenced _____ by Council, to the satisfaction of the Manager - Consents & Compliance, within six months of the commencement of these works **and/or** prior to occupation of the land (or proposed buildings).

- Adequate provision shall be made to protect wastewater lines that will be crossed over by a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled. Where clearance is less than 150mm, then 50mm thick high-density polystyrene packing shall be placed against the underside of the stormwater line. Where the clearance between the two lines is less that 300mm and bell jointed stormwater pipes shall be utilised, there shall be no bell joints placed directly over the wastewater lines.

- Adequate provision shall be made to protect wastewater lines that will cross over the top of a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled.

- A detailed structural design shall be undertaken of the retaining walls at the time of Building Consent application. Specific consideration to design shall be given where the retaining wall is to be constructed over the existing sanitary sewer pipes. This will include but not be limited to allowing 1m clearance between the pipe face and adjacent pile surrounds, the diameter of adjacent piles and the rail sizes between them, as well as increases to the embedment depth to allow a minimum of 300mm clearance below the bottom of pipe.

WATER SUPPLY

- Adequate provision shall be made for the supply of water.

  This will include the extension of the existing public system to / within **(delete as appropriate)** the site to provide each building / unit **(delete as appropriate)** with individual connection points and provision for the upstream catchment. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and/or approved engineering drawings referenced _____ by Council, to the satisfaction of the Manager - Consents & Compliance, within six months of the commencement of these works **and/or** prior to occupation of the land (or proposed buildings).

ADVICE NOTES

- Note that an application for a water meter is a separate application to Manukau Water.

- Manukau Water can confirm that in addition to meeting the requirements of the Manukau City Council District Plan, the proposed public water and/or wastewater system(s) are acceptable to the network utility operator as asset owner, and fulfil the requirements under the Local Government Act 1974.

- The reasonable and actual charges incurred in the field monitoring of these engineering works will be charged on a time spent basis and will be invoiced monthly until the completion of the work and will be payable by the 20th day of the month following invoicing.

From: Bryce Pomfrett
To: dick.quax@xtra.co.nz; Leggat, Graeme; maggiewb@clear.net.nz
Date: 4/19/06 8:16a.m.
Subject: Re: Carlos Drive decisions

Hi Graeme,

I have had confirmation from Maggie today subject to several typographical matters that she is happy with the decision. I can confirm that a 2.0 metre fence along the rear boundary will not require resource consent in itself.

Dick Quax has also confirmed acceptance without amendment.

On this basis I propose to have the decision released. Hope it didn't take up too much of your Easter!

Regards.

Bryce Pomfrett
Resource Management Planner
Environmental Services
Manukau City Council
Private Bag 76917
Manukau City
DXEP75557
Phone: 262-8900 ext 5856
Fax: 262-5168
Email: bpomfret@manukau.govt.nz

>>> "Graeme Leggat" <galeggat@gmail.com> 04/18/06 03:02p.m. >>>
Bryce,

I'm happy with the amended conditions other than minor comment below.
Please let me know if Dick or Maggie have any suggested changes

Re "Fencing" on both consents
a) I feel a 2 m high fence was suggested. I think it would be preferable for dust, seclusion and noise. It also matches fence height on west boundary

b) Line 6 needs "that" added as in - left in a manner *that* ensures this land - (in both 46 & 44 Carlos)

Stormwater drain entry structure OK

Regards Graeme Leggat

From: Howard Wright
To: Iang@aireys.co.nz
Date: Thursday, 16 March 2006 9:43a.m.
Subject: 124 & 126 Stancombe

Received 16/3/06 1.00pm

Hi Ian
124 Stancombe - Thanks for your response of 14 March for this consent. This resolves all matters except that we need an amended copy of your drawing No. 16 for this consent being the retaining wall cross section and schedule which need to be amended for the 12kPa surcharge.
126 Stancombe - We need the plan showing the retaining wall clear of the influence line, as you proposed in your e-mail of 1 March and also the same plan as mentioned above but with the reference for this site.

CC: Bryce Pomfrett

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz

AIREY CONSULTANTS LTD.

Members of ACENZ

14 March 2006

In all correspondence please quote our ref: 9861/5

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

Attn: Howard Wright

Dear Howard,

Re: 124 Stancombe Road, East Tamaki

We enclose plans and calculations for the overland flowpath for the above site. We trust this is the final outstanding item and look forward to approval of the engineering plans.

Please contact the writer if you wish to discuss the matter.

Yours faithfully
AIREY CONSULTANTS LTD

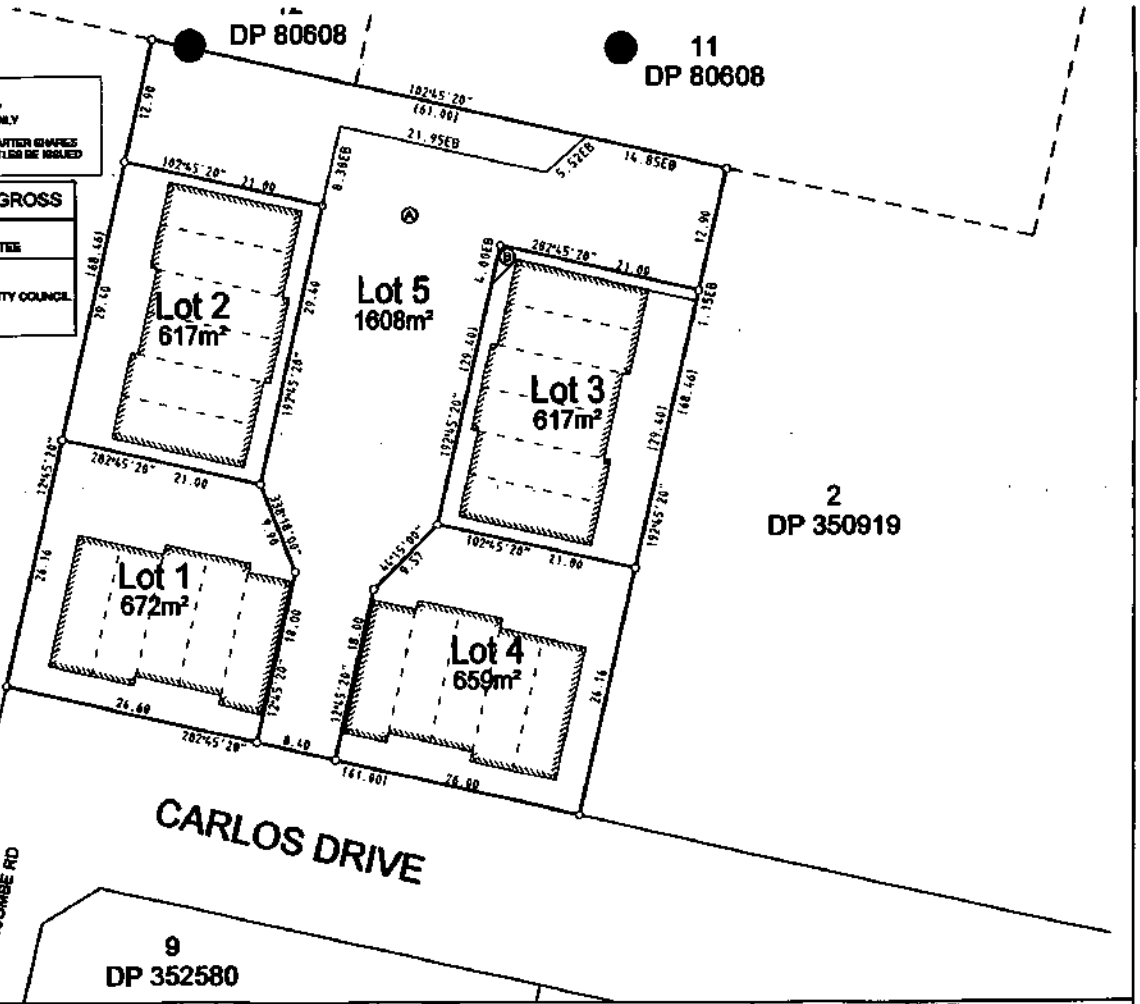
pp

I H GIBSON

TOTAL AREA 4175m²
* COMPRISED IN C.T. 213615 (Nil Yet Issued)
* MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
* INFORMATION ON THIS PLAN IS FOR SUBDIVISION PURPOSES ONLY
AMALGAMATION CONDITION
* THAT LOT 5 HEREON BE HELD AS TO FOUR UNDIVIDED ONE QUARTER SHARES BY THE OWNERS OF LOTS 1 - 4 HEREON AND THAT INDIVIDUAL TITLES BE ISSUED IN ACCORDANCE THEREWITH

MEMORANDUM OF EASEMENTS IN GROSS

PURPOSE	SHOWN	SERVIENT TENEMENT	GRANTEE
RIGHT TO DRAIN WATER	(A)	LOT 5 HEREON	MANUKAU CITY COUNCIL
	(B)	LOT 3 HEREON	



Job Title
PROPOSED SCHEME
FOR
CARLOS CONCEPTS LTD
CARLOS DRIVE, FLAT BUSH
LOT 10 DP 352580

Eastside Surveyors Ltd

Drawing Title
SCHEME PLAN 2

Job No. 7793

From: "Dominique Carter" <DominiqueC@Barker.co.nz>
To: <bpomfret@manukau.govt.nz>
Date: 11/3/05 5:33p.m.
Subject: 124b and 126b Stancombe Road

Hi Bryce

Following my conversation with both Jessica and Graeme from Working Concepts today I can confirm that in the AEEs submitted with both of the above consents, there were volumes of earthworks included in the proposal description in error.

Therefore I confirm the following details:
1. The earthworks for 124b Stancombe Road have already been consented to and the platforms were created alongside those for 124 Stancombe Road (front site). As such, no further consent for earthworks is required for this site.
2. For 126B Stancombe Road, further excavation of up to 1900m3 of earthworks will be required, as the site has not been excavated to the necessary platform levels. As such, this amount of earthworks requires consent and supersedes those provided in the original AEE.

I hope this provides you with enough information to continue with the limited notification procedure.

Regards
Dominique Carter
Resource Management Consultant
Barker & Associates Ltd
PO Box 37 806 Parnell
Auckland, NZL.
Ph 09/ 379-4631
Mb 021/ 306-023

CC: "Jessica Zhang" <sandy@workingconcepts.co.nz>

AIREY CONSULTANTS LTD.

Consulting Civil and Structural Engineers

Pukekohe Waiuku Takapuna Howick Orewa

CLIENT:		SHEET No.: 0
JOB:		JOB No.: A9861/5
CALCS. BY:	PHONE: 5396523	DATE: 9/3/05

Overload Footpath Assessment

124 Stancombe Rd

Flat Bush

Contents Page

Assessment 1-4

Floor Levels 5

Plan 6

AIREY CONSULTANTS LTD. Consulting Civil and Structural Engineers Pukekohe Waiuku Takapuna Howick Orewa	CLIENT:	SHEET No.: 1
	JOB:	JOB No.:
	CALCS. BY: PHONE:	DATE:

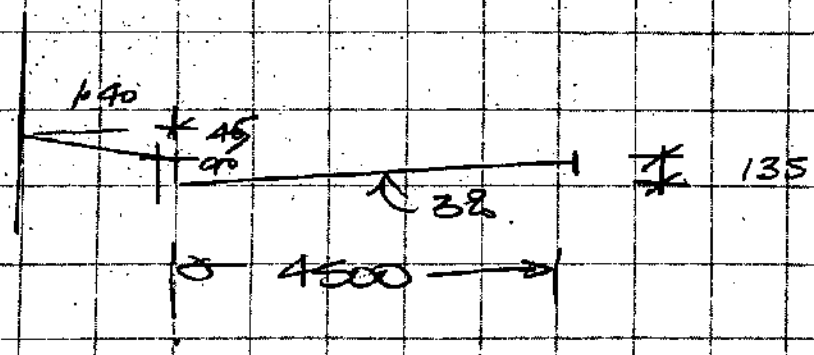
Overland Flowpath Assessment 124 Stonecombe Rd

Catchment – 1.7 Ha countryside living
.42 Ha high intensity

$Q_{100} = .3 \times 1.7 \times .40 = 204$ l/s
$+ .85 \times .42 \times .4 = 153$
357 l/s

$Q_{25} = .3 \times 1.7 \times .235 = 120$ l/s
$+ .85 \times .42 \times .235 = 84$ l/s
204

Difference = 153 l/s



Area = $.135 \times 45/2$
$+ .045 \times 1.4/2 = .335$

$P = 4.55 + .09 + 1.42$
$= 6.06$

$m = \frac{.335}{6.06} = .055$

If 1%

$$v = \frac{1}{.025} \times (.055)^{.667} (1\%)^{.5}$$

$$= .58$$

$$\Rightarrow Q_p = .58 \times .335 = 194$$

1.47P + 4500 carriageway at 1% say will cater for the overland flow

$\Rightarrow$ Depth of flow 135 mm, Cap 194 l/s

at 0.5%

$$v = \frac{1}{.025} (.055)^{.667} (.005)^{.5} = .41$$

$$Q_p = .41 \times .335 = 137 \text{ l/s}$$

$\Rightarrow$ 150 deep

$$A = .335 + .015 \times 5.9 = .423$$

$$P = 6.06 + .03 = 6.09$$

$$m = .069$$

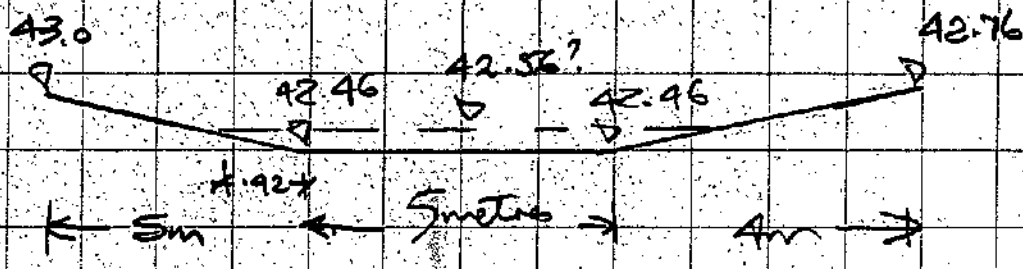
$$v = \frac{1}{.025} \times (.069)^{.667} (.005)^{.5} = .475$$

$$Q_p = .475 \times .423 = 200 \text{ l/s}$$

OK

150 deep @ 0.5%

Overland Flow across rear of site



Try 100 deep Area = 0.1x5 + .92x.1/2 + 1.33x.1/2 = .612

P = .95+5+1.35 = 7.3

m = .612 / 7.3 = .084

Gradient 0.11 / 16 = .69 %

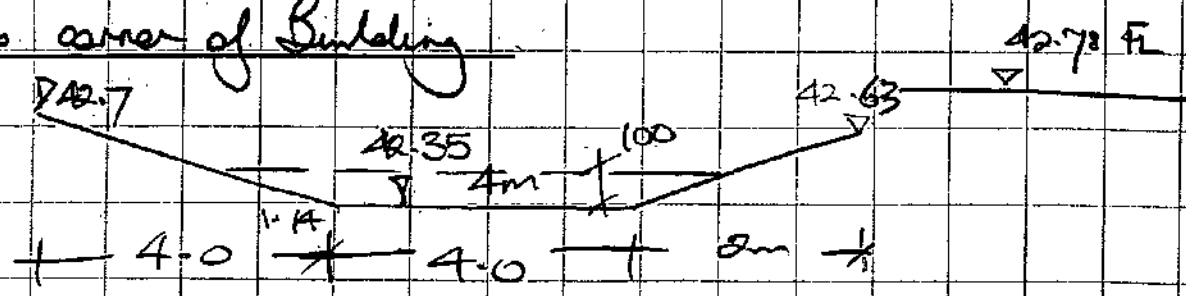
$V = \frac{1}{.035} \times (.084)^{.667} (.0069)^{.5} = 0.45$

Qp = .45x.612 = .275

⇒ Capacity OK

Reach 153 l/s

Across corner of Building



Area = 4x.1 + 1.14x.1/2 + .71x.1/2 = .493

P = 4 + 1.14 + .71 = 5.85 =

m = .084

Gradient $\frac{.05}{6} = 0.83\%$

$V = \frac{1}{.035} \times (.084)^{.667} (.0083)^{.5} = .49$

$Q = .49 \times 493$
$= 225 \, l/s$
Reqd 153 l/s

=> FLOOR LEVEL - FL = 42.45
=> Freeboard = 330mm
OK

Below Corner of building

- Profile wider than section at frontage
Gradient = 1% minimum
=> Capacity >> 124 l/s.

AIREY CONSULTANTS LTD.

Consulting Civil and Structural Engineers

Pukekohe Waiuku Takapuna Howick Orewa

CLIENT:	SHEET No.: 5
JOB:	JOB No.:
CALCS. BY: PHONE:	DATE:

Floor Levels

FLOOR LEVEL

Flood Plan level

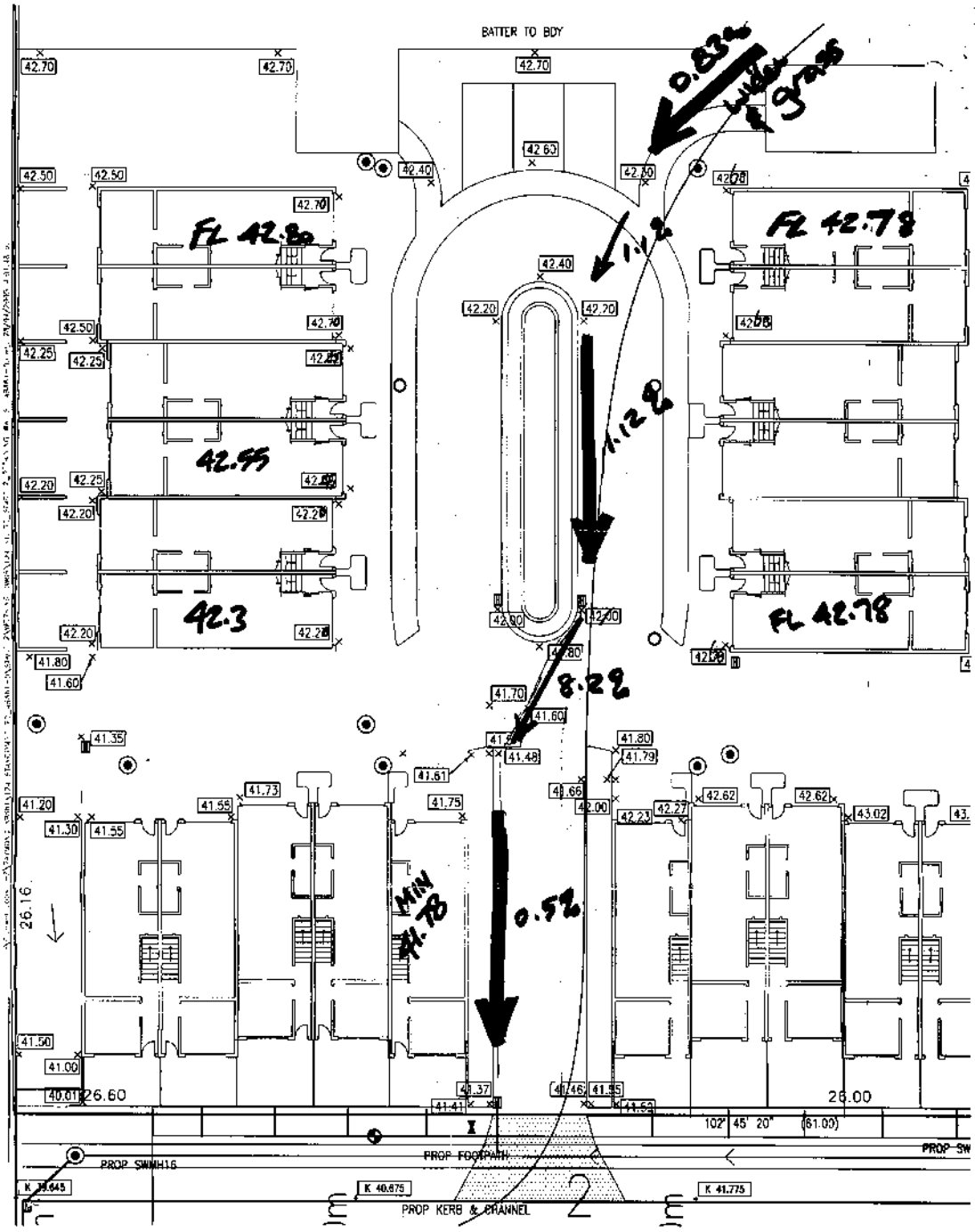
Rear Unit 42.3 + .15 + .15 = 42.6

=> 42.78

OK

Front Units 41.48 + .15 + .15 = 41.78

=> OK


BATTER TO BDY
FL 42.80
FL 42.78
42.55
42.3
FL 42.78
0.83
1.12
1.12
8.22
0.52
MIN 41.70
26.16
26.60
26.00
102' 45' 20" (61.00)
PROP SWMH16
PROP FOOTPATH
PROP KERB & CHANNEL
K 40.645
K 40.875
K 41.775

Memorandum

Environmental Services

To : Chris Allen – Manukau Water

Copies :

From : Bryce Pomfrett – Resource Management Planner – Kotuku 4

File : Proposal No: 28885

Date : 7 March 2006

SUBJECT: **124 STANCOMBE ROAD, FLAT BUSH. PROPOSAL NO: 28885**

Chris,

Please find attached amended plans submitted regarding the above site.

Regards,

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Encl. Airey Consultants Plans & Letter

Facsimile

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5168
(09) 262-5109
Email:bpomfret@manukau.govt.nz

To: Ian Gibson

Company: Airey Consultants Ltd

Fax No: 537-5754

CC:

From: Bryce Pomfrett

Date: 25 January 2006 No of Pages: 1

Subject: **MANUKAU WATER REQUEST – 124 STANCOMBE ROAD, FLAT BUSH. PROPOSAL NO: 28885**

Ian,

George K at Manukau Water has requested the following information on this job:

The following information / amendments are requested prior to Network Extensions Approval being granted by Manukau Water.

1. The proposed layout for sanitary sewer servicing is not acceptable by Manukau Water. Connection to each unit shall be from a manhole or 675mmØ chamber. Please re design.
2. All incoming wastewater lines shall connect at a minimum angle of 90° from the manhole outlet, if not connected to a drop connector.
3. Please provide a plan showing the exact location of water meters.

Regards

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied.

MANUKAU WATER

Manukau Water

INTER-OFFICE MEMO

MANUKAU
City Council

To:	Environmental Services	**Attention:**	Bryce Pomfrett
From:	George Kaithakkottil	**Date:**	23 September 2005
Site Address:	124 STANCOMBE ROAD, FLATBUSH		
Site REF:	6923/124	**Proposal No:**	28885

FURTHER INFORMATION AND AMENDMENT REQUEST

The following information/amendments are requested prior to Network Extensions Approval being granted by Manukau Water.

1. The proposed layout for sanitary sewer servicing is not acceptable by Manukau Water. Connection to each unit shall be from a manhole or 675mmØ chamber. Please re design.
2. All incoming wastewater lines shall connect at a minimum angle of 90° from the manhole outlet, if not connected to a drop connector.
3. Please provide a plan showing the exact location of water meters.

* * * Memory TX Result Report (25. Jan. 2006 12:54) * * *

1)
2)

Date/Time: 25. Jan. 2006 12:53

File No.	Mode	Destination	Pg(s)	Result	Page Not Sent
4031	Memory TX	15375754	P. 1	OK	

Reason for error
E. 1) Hang up or line fail
E. 2) Busy
E. 3) No answer
E. 4) No facsimile connection

Facsimile

Environmental Services

Private Bag 75917
Manukau City
New Zealand
DX 8975957
Fax (09) 263-5764
(09) 263-5768
[illegible]

To: Ian Gibson

Company: Airey Consultants Ltd

Fax No: 537-5754

CC:

From: Bryce Pomfrett

Date: 25 January 2006 No of Pages: 1

Subject: MANUKAU WATER REQUEST – 124 STANCOMBE ROAD, FLAT BUSH. PROPOSAL I/O: 28555

Ian,

George K at Manukau Water has requested the following information on this job:

The following information / amendments are requested prior to Network Extensions Approval being granted by Manukau Water.

1. The proposed layout for sanitary sewer servicing is not acceptable by Manukau Water. Connection to each unit shall be from a manhole or 675mmØ chamber. Please re design.
2. All incoming wastewater lines shall connect at a minimum angle of 90° from the manhole outlet, if not connected to a drop connector.
3. Please provide a plan showing the exact location of water meters.

Regards

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us accepted.

Facsimile

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5168
(09) 262-5109
Email:bpomfret@manukau.govt.nz

To: Jessica Zhang / Graeme Raymond

Company: Working Concepts Ltd

Fax No: 271-4037

From: Bryce Pomfrett

Date: 24 February 2006 No of Pages: 1

Subject: **124 STANCOMBE ROAD, FLAT BUSH. HEARING SCHEDULE.**

Graeme / Jessica

Unfortunately due to the unavailability of a Commissioner this hearing has been rescheduled to Tuesday 28 March 2006. The hearings panel will be Graeme Leggatt (Chair), Dick Quax, and Maggie Burrill.

Regards

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied.

* * * Memory TX Result Report (24. Feb. 2006 11:07) * * *

1)
2)

Date/Time: 24. Feb. 2006 11:06

File No.	Mode	Destination	Pg(s)	Result	Page Not Sent
4380	Memory TX	12714037	P. 2	OK	

Reason for error
E. 1) Hang up or line fail
E. 2) Busy
E. 3) No answer
E. 4) No facsimile connection

Facsimile

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP76237
Fax (09) 262-9183
(09) 262-5109
Email: bpomfrett@manukau.govt.nz

To: Jessica Zhang / Graeme Raymond

Company: Working Concepts Ltd

Fax No: 271-4037

From: Bryce Pomfrett

Date: 24 February 2006 No of Pages: 1

Subject: 124 STANCOMBE ROAD, FLAT BUSH. HEARING SCHEDULE.

Graeme / Jessica

Unfortunately due to the unavailability of a Commissioner this hearing has been rescheduled to Tuesday 28 March 2006. The hearings panel will be Graeme Leggett (Chair), Dick Quax, and Maggie Burrill.

Regards

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us accepted.

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz

AIREY CONSULTANTS LTD.

Members of ACENZ

3 March 2006

In all correspondence please quote our ref: 9861/5

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

RECEIVED
06 MAR 2006
M.C.C.
ENVIRONMENTAL SERVICES

Attn: Gary Clarke

Dear Gary,

Re: P28885, 124 Stancombe Road, Flat Bush

We enclose revised plans for the above site following requests from Manukau Water. We advise on your fax of 27/1/06 as follows.

a) We do not believe that our proposed levels will create a ponding area upstream. The piped system is installed to the invert of the upstream site as approved in the subdivisional consent. There is a minimal cover over the pipe at this point and overland flow will occur if the pipes entry capacity is exceeded. We certainly have not built up the land to create a problem upstream.

b) The detail R12 has been added as the appropriate common area detail.

We trust that these details allow release of the engineering plans.

Please contact the writer if you wish to discuss the matter.

Yours faithfully
AIREY CONSULTANTS LTD

I H GIBSON

Copy to
Howard Wright
7/03/06.

From: Gary Clarke
To: Bryce Pomfrett
Date: 2/21/06 2:55p.m.
Subject: 120 Stancombe

Hi there, further to our conversation I have attached the memo/fax I sent out regarding additional information items. This typed list was as result of 2 previous telephone conversations with Ian Gibson one (pre christmas break, one post) re engineering items to be resolved.

Concerning 120, and the additional info recieved, I advise that the items do not appear to be addressed relating to the memo by the submission.

regards
Gary

Comments

1. Phoned Ian Gibson 10:30 on 22/2.
He advised he had not recieved Fax but did have conversations with Gary and thought he had addressed discussion items in his last response. I faxed him Gary's fax for his comment.

2. Ian Phoned back and;
(i) Confirmed he had not seen the fax.
(ii) Recalls only item (a) as a matter discussed. (but vague on recall)
(iii) Said that item (b) - the OLFP was to be left until time of building. I said no as it must be addressed at time of subdivision, which he accepted
(iv) Items c, d & e - no problems - he will address.
(iv) Item f the Geotek report - Said that this was underway and would provide. Noted that they had organised this themselves and not at Council's request

Overall he was confident in following up all matters and coming back to us shortly.

22/2

ENVIRONMENTAL SERVICES
MEMO/FAX

TO	:	Ian Gibson - Airey Consultants FAX : 09 271-4037
FROM	:	Gary Clarke
DATE	:	27/1/06
REF	:	Stancombe Road Subdivision

Te Kaunihera o
MANUKAU
City Council

My review of the application has identified development requirements for clarification on the above application.

Application 120 Stancombe Road – P28886

Stormwater:

The design drawings and calculations require additional details to complete our assessment. Please provide the following details as necessary.

a) Please confirm channel depth/flows and pipe outlet volumes and velocities and confirm maximum velocities are less than 1.5m/s in order to minimise scouring. The proposed gabion mattress's are detailed at 1.5m in length and are considered to may be short given the flow from the pipe systems is calculated at 500 to 600 l/s.
b) Please provide an overland flow detail that provides for the overland flow predicted to cross the site after the gulley's are fill, eg thru Lot 1 and thru Lot ¾.
c) Please confirm that earthworks proposed will not cause stormwater/overland flows to pond in adjacent upstream neighbours properties when the gullies are filled to final levels.
d) Please detail sewer connections to all lots or if these are to be provided by others, eg Manwater with construction of new sewer line.
e) Please provide a detailed cross- section of the proposed realigned channel and how the embankments are to be protected from erosion.
f) Please provide a geotechnical assessment report for the earthworks proposed.

Application 124 Stancombe Road – P28885

a) Please confirm that earthworks proposed will not cause stormwater/overland flows entering across Lot 3 to pond in adjacent upstream neighbours properties when the gully is filled to final levels, and please confirm that final levels will allow overland flows to pass thru the immediate area as detailed on the overland flow plan.
b) Please provide a standard detail for the common area vehicle access construction serving Lots 1 thru 4.

Please provide this information at your earliest convenience.

Gary Clarke
Resource Management Engineer
ENVIRONMENTAL SERVICES
FAX 09 262-5168
DDI 09 262-8900 Extn 8441
MOBILE 021 718-759

0274 581 290
534 6523

From: Bryce Pomfrett
To: Howard Wright
Date: Friday, 3 March 2006 3:25p.m.
Subject: 124 Stancombe Road - P28885

Howard,

I think that there are a few engineering things I can think of which need to be reconciled for this job:
(1) Gary Clarke's comments in his fax are still outstanding;
(2) Since the original application was submitted the planning consultants have advised that the land mod works propsoed were approved under the subdivision consent. However, there are still going to need to be some earthworks for building platforms / retaining walls etc.
(3) There is shown a 1.2 metre retaining wall on the rear boundary. Like 126 Stancombe Rd this may be subject to the same zone of influence criteria.

The hearing for this is scheduled for the 28th of March so I would like to sort this out soon.
Thanks.

Bryce Pomfrett
Resource Management Planner
Environmental Services
Manukau City Council
Private Bag 76917
Manukau City
DXEP75557
Phone: 262-8900 ext 5856
Fax: 262-5168
Email: bpomfret@manukau.govt.nz

From: Howard Wright
To: Iang@aireys.co.nz
Date: Tuesday, 7 March 2006 1:08p.m.
Subject: 124 Stancombe - Further Sec 92 Request.

Hi Ian
Further to your advice to Gary Clarke of 3 March please provide the following:

1. Confirmation that the rear yard retaining wall is situated clear of the 'zone of influence' from the rear boundary by defining the levels and location on a plan. ✓ refer x Section on Plan

2. Provide a seperate overland flowpath plan detailing the full extent of the flowpath, design levels, associated minimum floor levels and the relationship to the proposed roading and also the facilities in the rear yard area(petanque court?). Also amend the scheme plan to define the associated easement. ✓

On another matter I presume you are still attending to the matters requested for 120 Stancombe Road.

Thanks
Howard

CC: Bryce Pomfrett

Manukau City Council
Approval Subject to Conditions in attached Resource Consent

13 MAR 2006

Howard Wright
Proposal No

8. COMBINED WORK VOLUME AND SERVICE PERFORMANCE FOR MONTH OF DECEMBER 2005 - ENVIRONMENTAL SERVICES AND CITIZEN AND CUSTOMER SERVICES *(see Appendix "A")*

Purpose of Report	:	Statutory
Significance of Decision	:	Internal Procedure
Reporting Unit	:	Environmental Services and Citizen and Customer Services
Reporting Officer	:	Robin McDowall, Manager, Environmental Services Portfolio Andrew Thakurdas, Acting Portfolio Manager, Citizen and Customer Services Portfolio
Ward	:	Citywide

MINUTE NO. H/FEB/21/06 – COMMITTEE DECISION

That the Combined Environmental Services/Citizen and Customer Services Work Volume and Service Performance report for the months of November and December 2005 be received.

9. TIMING SCHEDULE *(see Appendix "B")*

Purpose of Report	:	Statutory
Significance of Decision	:	Addressed by the Resource Management Act 1991
Reporting Unit	:	Environmental Services
File Ref	:	Environmental Services/Timing Schedule
Reporting Officer	:	Rod Dissmeyer, Manager - Resource Consents and Compliance
Ward	:	Citywide

MINUTE NO. H/FEB/22/06 – COMMITTEE DECISION

1. ***That due to the nature of the proposal being primarily of interest to the local community, with the effects being considered of a localised nature to the neighbouring environment only, the following be heard by the appropriate Community Board Resource Consents Hearings Committee:***

   (a) ***Limited notification of application for land use and subdivision resource consents to construct a 22-unit housing development with five-lot residential subdivision by Working Concepts Ltd at 124 Stancombe Road, Flat Bush.***

   (b) ***Limited Notification of application for a land use resource consent to construct a 16-unit housing complex with on-site swimming pool and pool house facilities by Working Concepts Ltd at 126 Stancombe Road, Flat Bush.***

10. SUBDIVISION/LAND USE/VARIATIONS OF CONSENT *(see Appendix "C")*

MINUTE NO. H/FEB/23/06 – COMMITTEE DECISION

That the report of the subdivision/land use/variations of consent approved under delegated authority during the months of November and December 2005 be received.

11. LAND USE CONSENTS *(see Appendix "D")*

MINUTE NO. H/FEB/24/06 – COMMITTEE DECISION

That the Land Use Consents report and decision approved under delegated authority during the months of November and December 2005 be received.

12. UPDATE ON RESOURCE MANAGEMENT APPEALS TO THE ENVIRONMENT COURT AND BUILDING ACT MATTERS BEFORE THE DISTRICT COURT *(see Appendix "E")*

Purpose of Report	:	Information
Significance of Decision	:	Internal Procedure
Reporting Unit	:	Environmental Policy (Specifier) and Environmental Services (Service Provider)
File Ref	:	D9/41/6
Reporting Officers	:	Rod Dissmeyer, Manager, Resource Consents and Compliance Ian Godfrey, Senior Building Advisor Pat Holm, Senior Policy Analyst
Ward	:	Citywide

MINUTE NO. H/FEB/25/06 – COMMITTEE DECISION

That the update on Resource Management Appeals to the Environment Court and Building Act matters before the District Court be noted.

Environmental Services

FILE COPY

10 January 2005

Lee Shen-Der Shann
8 Inchinnam Road
East Tamaki
AUCKLAND

Dear Sir/Madam

LIMITED NOTIFIED APPLICATION FOR RESOURCE CONSENT UNDER THE RESOURCE MANAGEMENT ACT 1991 – APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 124 STANCOMBE ROAD, FLAT BUSH. PROPOSAL NO: 28885.

I acknowledge receipt of your submission to the above proposal. You will be advised in due course of the date and time of the public hearing of the application.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

FILE COPY

Environmental Services

10 January 2005

Morris Chandler
17 Oleander Point
PAKURANGA

Dear Sir

LIMITED NOTIFIED APPLICATION FOR RESOURCE CONSENT UNDER THE RESOURCE MANAGEMENT ACT 1991 – APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 124 STANCOMBE ROAD, FLAT BUSH. PROPOSAL NO: 28885.

I acknowledge receipt of your submission to the above proposal. You will be advised in due course of the date and time of the public hearing of the application.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

21/12/05

Attention: Bryce Pomfrett

Transportation Assessment for an integrated fee simple resource consent to establish 22 terraced dwellings at 124 Stancombe Road (Carlos Drive), Flat Bush.

Proposal 28885 – SP9188

Zoning – Flat Bush Residential 1 – Proposed Variation 13
– Secondary Road (Carlos Drive, Flat Bush)

The original site is located on the northern side of Stancombe Road approximately 140 metres west of the intersection Gracechurch Drive, Murphys Road and Jeffs Road. The site is a result of the recent subdivision (Proposal 27046, SP8840) that included the widening of Stancombe Road and the formation of Carlos Drive that runs along the western boundary to the centre of the site and then runs parallel to Stancombe Road. The subject site involves the land to the north of Carlos Drive that abuts 44 Carlos Drive to the east and is surrounded by a mix of newly developed residential apartment units and single household units as well as lots that are in the process of being developed for residential purposes.

The proposal involves the development of a 22 three stored, terraced houses in the form of four blocks with two blocks containing five units each and two containing six units each. The overall layout of the site includes two blocks fronting Carlos Drive with a shared access lot providing access through the centre of these two blocks. The remaining two blocks are to the rear at 90 degrees to Carlos Drive in order to provide all units access to the centre of the site. All four blocks of houses are to be separated into individual four fee simple lots whilst the access and communal facilities at the rear of the site with an area of 1608m^2 are to form Lot 5. Each unit contains three bedrooms and is accessed from Carlos Drive via the proposed shared access lot (Lot 5). The development includes double garaging at ground level in a stacked form that complies with the on-site parking and manoeuvring requirements of the Plan.

In accordance with 9.9.2.10 of the Plan, in order to provide a carriageway that is able to accommodate on-site manoeuvring for an 8 metre rigid truck rights of way in favour of Lot 2 and 3 over Lots 1 and 4 are required. Taking this into consideration, the private-way provides access to and from Carlos Drive to the south and complies with dimension and gradient standards within the Plan. It is also noted that three complying visitor carparking spaces are also located at the rear of the site within the shared access lot (Lot 5).

The application requires assessment as a Discretionary Activity under Rule 17.10.16.1 of Variation 13 of the Operative District Plan (the Plan).

17.10.16.2 Assessment Criteria – Discretionary Activities: Flat Bush Residential 1 Zone, Flat Bush Residential 2 Zone, Flat Bush Countryside Transition Zone, Flat Bush Town Centre Zone and Flat Bush Neighbourhood Centre Zone. In deciding whether to grant or refuse consent to a discretionary activity application and in imposing conditions if

consent is granted, the Council shall have regard to the following assessment criteria and any relevant matters in Section 104 of the Act.

(h) Effects on Traffic Safety

(i) Whether the proposal significantly detracts from traffic safety or efficiency having regard to the volume of traffic attracted, times of peak traffic generation, potential traffic conflict and proximity to major traffic intersections. (Refer to Assessment Criteria 8.25 Chapter 8 Transportation).

8.25 GENERAL ASSESSMENT CRITERIA: PARKING AND ACCESS

8.25.1 Any non-residential activity requiring controlled, restricted discretionary or discretionary consent within the plan for which parking and access has been listed as a matter for control

8.25.1.1 Matters for Discretion

Council reserves discretion over the following matters for the Plan for which parking and access has been listed as a matter for control for restricted discretionary activity resource consent applications for any non-residential activity and may impose conditions in respect of each:

(i) The location and design of cycle, pedestrian and vehicular access to a site.
(ii) The site layout as it relates to pedestrian paths, carparking and loading areas and internal circulation.
(iii) The scale, management and operation of an activity as it relates to its traffic, loading and parking generation.
(iv) The management and apportionment of use of parking and loading spaces within a site.
(v) Any works agreements or contributions required to mitigate parking and access effects on adjoining properties or roads.

8.25.1.2 Assessment Criteria

When assessing any application for controlled, restricted discretionary (for which parking and access have been listed as matters for control), or discretionary consent for non-residential activities, the Council will have regard to the following parking and access related criteria.

Whether:

(a) There is good, convenient circulation provided between carparking aisles and between entry and exits and carparking spaces that is clear to the intended user. Internal traffic volumes or characteristics dictate that main circulation aisles and access points need to be widened or traffic management devices such as parking controls, markings, signs and islands, medians or intersection controls, be employed to safely manage this traffic.
(b) Parking spaces are located so as to be attractive and convenient to the intended user having regard to their design, security, distance from entrances, and profile.

(c) Parking spaces and their associated manoeuvring area are located so as to adversely affect the safety and operation of entrances and exits and main circulation aisles and internal intersections. In particular, whether larger or high turnover carparks have adequate separation between parking spaces and entries or exits.

(d) There is likely to be conflict between any loading, drive-through or pick up facilities provided on site and traffic using entries, exits or the main internal circulation aisles.

(e) There is adequate provision for on-site pedestrian movements or whether there is likely to be conflict between on-site pedestrian and vehicular movements. In particular, this will apply to areas where there are likely to be concentrations of pedestrian and vehicles such as entrances to buildings and the main access points to a site.

(f) Any disabled parking spaces are located close to elevators, ramps, pedestrian paths and building entrances.

(g) There are particular staff, fleet, or visitor parking needs that need to be provided for in the design and management of a carpark.

(h) There is any likely adverse effect on the amenity of adjacent activities arising from the design of parking areas, including that from noise (including from loading areas), vibration and headlight glare.

(i) Those relevant assessment criteria relating to site access contained within 8.12.2 of the Plan.

In assessing the above, the Council will also have regard to the following:

- Existing and likely future traffic characteristics and volumes (including pedestrian) within the adjoining roads.
- The traffic generating characteristics of the activity including by vehicle type and time of day, the total likely number of turning movements into and out of the site, and the routes vehicles will take to or from the site.
- The existing and any likely future design of the adjoining roads and access arrangements.
- The availability of alternative access or design options and the practicability of a complying design with the above criteria.

In summary the proposal requires transportation assessment for the following;

- **Discretionary Activity for the construction of an integrated fee simple subdivision for 22 residential units under Rule 17.10.16.1(h) of Variation 13 and Rule 8.25 of the Operative District Plan**

ADVERSELY AFFECTED PARTIES

Assessment under Section 94B(3). **Note:** A person may be treated as not being adversely affected if 94B(3)(a) or 94B(3(b) or 94B(3)(c) apply

The adverse transportation effects of the proposed development are considered to be minor as the proposal provides for adequate off-street car parking and manoeuvring whilst the effects associated with the additional traffic flows have been previously anticipated within the Plan through the recent road widening and upgrading of

Stancombe Road as required within Variation 13 of the Plan as well as within the underlying subdivision (Proposal 27046, SP8840). Therefore no persons are considered to be directly adversely affected by the proposal for transportation reasons.

Rule 17.10.16.2(h) Effects on Traffic Safety

Assessment

The proposed 22 residential unit apartment block complies with on-site parking (44) and manoeuvring rules of the Plan and is therefore considered to be safe and efficient. The development is to be accessed via the two-way, access lot (Lot 5) which ensures adequate on-site manoeuvring for an 8 metre rigid truck for all dwellings within the proposed layout. Pedestrian access within the shared Lot 5 is provided along with three additional visitor carparking spaces.

It is noted that the additional traffic flows have been previously anticipated within the Plan through the recent road widening and upgrading of Stancombe Road as required within Variation 13 of the Plan as well as within the underlying subdivision (Proposal 27046, SP8840). The stacked double garage design with all garaging located to the rear of the road frontage is considered to be a convenient and attractive method for providing the required off-street parking. The surrounding area is residential in nature and all garages are accessed to the rear of the buildings away from Carlos Drive. Thus it is considered that there are no potential traffic conflicts anticipated from the development. Also the nearest intersection to the shared access lot is the intersection of Stancombe Road with Carlos Drive which is located approximately 60 metres away.

Therefore please attach the following conditions to an approval of the resource consent application.

Recommended Conditions

Land Use

1. The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to occupation of the household units and maintained thereafter to the satisfaction of the Manager - Resource Consents and Compliance.

2. That the width of the vehicle crossing shall be 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to the occupation of the household units to the satisfaction of the Manager - Resource Consents and Compliance.

Subdivision

1. The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate and maintained thereafter to the satisfaction of the Manager - Resource Consents and Compliance.

2. That the width of the vehicle crossing shall be 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate to the satisfaction of the Manager - Resource Consents and Compliance.

Should any amendments be made please provide a copy so that a reassessment of the proposal may be completed.

Regards

Craig Moriarty
Transportation Planner
ENVIRONMENTAL SERVICES

MANUKAU WATER

Manukau Water

INTER-OFFICE MEMO

MANUKAU
City Council

To:	Environmental Services	**Attention:**	Bryce Pomfrett
From:	George Kaithakkottil	**Date:**	23 September 2005
Site Address:	124 STANCOMBE ROAD, FLATBUSH		
Site REF:	6923/124	**Proposal No:**	28885

FURTHER INFORMATION AND AMENDMENT REQUEST

The following information/amendments are requested prior to Network Extensions Approval being granted by Manukau Water.

1. The proposed layout for sanitary sewer servicing is not acceptable by Manukau Water. Connection to each unit shall be from a manhole or 675mmØ chamber. Please re design.
2. All incoming wastewater lines shall connect at a minimum angle of 90° from the manhole outlet, if not connected to a drop connector.
3. Please provide a plan showing the exact location of water meters.

GEOTEK SERVICES LIMITED

Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

GEOTECHNICAL INVESTIGATION/ EARTHWORKS COMPLETION REPORT

ON

LOT 10

AT

124 STANCOMBE ROAD,
FLAT BUSH

FOR

CARLOS CONCEPTS LIMITED

Ref No. 2704

August 2, 2005

CONTENTS

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Appendices

- Pre-Earthworks Borehole Location and Specific Design Zones Plan-GSL Drawing No. 1 of 3
- Pre-Earthworks Borehole Records (18 sheets)
- As Built Final Contours and Isopachs- Airey Consultants Ltd, drawing no. A9861/5, dated 4/7/05
- Earthworks Test Locations and RL's - GSL Drawing No. 2 of 3
- Earthworks Test Results - Summary Sheets
- Diary Notes
- Post-Earthworks topsoil depths and shrink-swell sample location plan- GSL Drawing No.3 of 3
- Shrink Swell Test Results (3 sheets)

Introduction

This report covers both the geotechnical investigation and the earthworks construction monitoring carried out on the above property for Carlos Concepts Limited, in accordance with the appended Airey Consultants Limited 'As-Built' Contour Plan, numbered A9861/5, dated 04 July 2005.

Presented herein, are the results of our observations, geological appraisal, hand auger borehole investigation, including insitu testing, together with general comments, conclusions and recommendations pertaining to the satisfactory development of the land in accordance with accepted quality standards.

This report has been commissioned for the benefit of our client, Carlos Concepts Limited specifically in relation to the project and to the limit of our brief, as described herein. No liability is accepted by this firm or any of its directors, servants or agents, in respect of any other geotechnical aspects of this site, nor for its use by any other person, and any other person who relies upon any information contained herein does so entirely at their own risk, with the exception that the local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent. Where other parties may wish to rely on it, this permission may be extended, subject to our satisfactory review of their interpretation of the report. Moreover, any variations from the development proposals forming the basis of this appraisal should be referred back to us for further evaluation.

Although this report may be submitted to a local authority in connection with an application for a consent, permission, approval, or pursuant to any other requirement of law, this disclaimer shall still apply and require all other parties to use due diligence where necessary, and does not remove the necessity for the normal inspection of site conditions and the design of foundations as would be made under all normal circumstances.

Geology

Reference to the New Zealand Geological Survey, Geological Map Of New Zealand, 1:50000, sheet R11, indicates that the subject site is typical of a significant part of the Auckland Metropolitan area, in that it contains strata of the Puketoka Formation, which are a part of the Tauranga Group sedimentary lithology (Late Pliocene to Late Pleistocene age). Unconformably underlying these are weathered materials derived from strata of the East Coast Bays Formation (also known as Waitemata Formation), which are a part of the Waitemata Group sedimentary lithology (Miocene Epoch).

According to Searle, "City of Volcanoes", in those earlier times, the seas encroached upon the central Auckland area, and thick beds of sedimentary rocks were laid down in alternating sandstone, siltstone and mudstone sequences according to the prevailing eddies and currents at the time and place.

Over the centuries following the retreat of the seas, the normally dark-grey bedrock has weathered in most locations, to produce an overburden made up of clays, silts and sands, being predominantly orange brown in colour at the ground surface, and generally becoming more grey and more coarse grained with increasing depth and less transition from the bedrock. Interspersed within these weathering products, it is not unusual to find bands of hard dark-brown iron oxide (limonitic) concentrations.

Fluctuating sea levels which occurred throughout the Pleistocene period, eventually flooded valleys to form the Waitemata and Manukau Harbours, and it is likely that during these fluctuations, the upper Residual Waitemata Group Soils were partially eroded away, and these, together with pumiceous deposits from the Taupo district, began to fill the subsiding lowlands of Manukau Harbour and Hauraki Gulf. As a result, the lowlands were covered by swamps, volcanic derived alluvium, and coastal deposits (Tauranga Group).

These sediments were deposited in predominantly fluvial and lacustrine settings, but some older deposits were formed in estuarine and shallow conditions. As a result, they can often contain layers and/or lenses of quite peaty materials within the predominantly silty and clayey, but sometimes organic alluvium.

Previous Reports

A Desktop Study was prepared in July 2003 by Geotek Services Limited (GSL) reference number 2532, dated 30 June 2004, as a first pass appraisal of the suitability of the overall general area including the subject land, for residential development generally in terms of NZS 3604 type buildings. The study comprised a review of local geology and inspection of other geotechnical investigation reports conducted on nearby sites.

The conclusions and recommendations of that report were as follows:

> *"On the basis of our observations, research and local knowledge as described herein, we are of the opinion that the subject site is generally suitable for the proposed development, however the following discussion should be noted.*
>
> *The relatively flat topography of the site with respect to the adjacent land, coupled with the two small gullies requiring filling, suggests that to completely fill these gullies with locally cut materials would produce a shallowly south-southwest-sloping subdivision.*

However, given that soft horizons may be present at depths of several metres or more in possible areas of cut, and that it is preferable to maximise the depth of suitable materials over these deposits, a cut/fill budget deficit may occur if designing to completely fill all gullies.

It is our recommendation that an extensive field investigation be carried out prior to finalising any proposed project designs, and the commencement of development works. The aim of this investigation would be to establish a more detailed assessment of the nature of the materials present, and the extent of possible unsuitables across the site, allowing a more accurate quantification of locally available filling.

All subsequent earthworks should be subject to the appropriate standards and tests as specified by the Manukau City Council, under the control of a Chartered Professional Engineer experienced in geotechnical engineering practices, with a Geotechnical Completion Report being prepared at the completion of those works.

Subject to as-built contours, acceptable test results and existing/final ground conditions, we expect the completed development to be suitable for the construction of NZS 3604 type buildings.

This opinion does not, however, remove the necessity for the inspection of site conditions and design of foundations that should be made under all normal circumstances.

The Professional Opinion expressed within this report is furnished to the Stancombe Concepts Limited for their purposes alone, on the express condition that it will not be relied upon by any other person, with the exception that the Local Territorial Authority may rely on it to the extent of its appropriateness, when issuing the subject consent."

The site subject to this report was originally part of a large 8100m^2 property (DP78859), identified as number 124 (Lot 3), along the northern side of Stancombe Road in Flat Bush. The site has since been subdivided into two, (Lots 9 and 10) by a proposed through road, Carlos Drive, separating them into northern and southern lots. The southern, lot 9 was the subject of a recent Geotechnical Investigation Report undertaken by GSL (dated 17 November 2004, ref 2635) for a proposed multi-storey dwelling, which report identified some weak underlying natural materials that would be exposed by the proposed basement level of the development. With this in mind, we have tried to target such potentially problematic materials in our investigation, as discussed below.

Site Description Ante-Earthworks

Prior to the recent earthworks, the subject site's main topographical feature was a relatively deep and steep sided gully trending from the northeast to the southwest, around 100 metres in length. The gully head in the northeast corner of the site, was a shallow bowl-like depression, which steepened to the southwest with its invert around 3 metres below the crest of its flanks. The gully broadened out near the southwestern corner and crossed into the adjacent property. The gully flows were channelled below the neighbour's driveway through a small culvert before again continuing southwest as open channel flows. The ground either side of the gully, to the northwest and southeast, was gently sloping towards the invert. The earthworks proposal was to fill the gully and create a near level site.

Site Classification

Seasonal moisture variations and associated swelling and shrinking of the soil mass is a characteristic of the type of surface clay soils believed to exist in the area under consideration and hence, such movement could occur. Even well constructed houses on clay soils are likely to show minor cracking of plaster walls and ceilings, and in masonry. In extreme cases, distortion of building frames may cause doors and windows to jam, but, these effects usually only occur after a long dry summer, and commonly under the extra drying influences of nearby trees. Without considerable expenditure on the part of the individual responsible for building or financing any particular residential construction, it is generally not possible to entirely eliminate such troubles. In the past, the code for residential dwellings, NZS3604, has attempted to make provision for any such influences to be minimised by requiring a minimum foundation depth of 450 millimetres below final cleared ground level, although some shrinking and swelling of the soil under seasonal influences would probably continue to occur and may affect such residential construction.

The current issue of NZS3604:1999, recognises that while expansive clay soils can damage buildings on light strip footings or unstiffened rafts, that not all clays are expansive to the degree which will cause damage to buildings. Although 3604 also nominates liquid limit and linear shrinkage testing as a means of detecting the presence of reactive (expansive) clays, it acknowledges that reactive clays cannot be clearly evaluated by these engineering index properties on their own, which we surmise, may be due to the effects of certain types of clay minerals which may contain high quantities of adsorbed water. Therefore, NZS3604 nominates the Australian code, AS2870:1996, as a guide, whereby section 2 can be adopted for classifying the soils into class A, S, M, H or E, following which, the standard details of section 3, or the engineering principles according to section 4, can be used for foundation design.

The relevant sections of AS2870 are discussed in the Appendix hereto, and in light of the various options available, the basis for our site classification is provided later in this report.

Site Investigation

Our site investigation fieldwork involved the drilling of twelve, 50 millimetre diameter hand auger boreholes to depths of up to 5.2 metres, at the positions indicated on the attached site plan.

The purpose of the fieldwork has been twofold. Firstly, boreholes were drilled along the stripped invert of the gully to check the nature and consistency of the natural soils before filling could take place and to determine if any further undercutting might be needed. Secondly, boreholes have been drilled at the crest of the gully flanks and the adjacent level ground to check the nature and consistency of the natural soils.

As each borehole progressed, careful inspections were made of the materials observed, and soil shear strength and remould tests were performed insitu, at selected depths, using a hand-held shear vane. The materials identified are described in detail on the appended records, together with the results of the various tests undertaken, plus the groundwater conditions as determined during our time on site.

In addition, two cross sections were measured across the flanks and invert of the gully using a tape and electronic level.

Findings

Boreholes along the gully invert

Boreholes 1, 2, 3 and 4 were drilled along the gully invert. Borehole 1 was drilled outside of the property boundary to the southwest. Apart from a soft surficial crust, predominantly stiff sandy silts were encountered throughout the borehole. Boreholes 2 and 3 were drilled in the southwestern corner and near the centre respectively, and both encountered highly variable deposits consisting of clays, silts and sands with intermixed peat and organics. The material strengths were mostly marginally firm with some layers being softer or firmer. Borehole 4 encountered soft materials down to 1.5 metres depth, overlying very stiff uniform silts.

The groundwater was measured at depths of between 0.4 to 1.1 metres below the surface in all four boreholes.

Boreholes above and along the flanks of the gully - cut areas

Boreholes 5, 6, 11, 12 and 13 were drilled on the northwestern side of the gully, while boreholes 7, 8, 9 and 10 were located to the southeast. Generally, a firm to stiff crust was encountered extending to at least 1.2 metres depth below the surface in all boreholes. Below this crust, the materials became weaker and wetter with some layers becoming soft to marginally firm (22 to 50 kPa undrained shear strength). In all except boreholes 9 and 10, dense sandy materials were encountered near the end of the boreholes. The tables below summarise these findings of cut area boreholes:

Boreholes on the northwestern side of the gully:

Borehole No.	5	6	11	12	13
Ground RL	43.0	42.0	44.0	45.0	44.0
Firm to Stiff Crust	0.0 to 2.5m	0.0 to 2.5m	0.0 to 3.0m	0.0 to 2.9m	0.0 to 1.6m
Interbedded Soft Layer	2.5 to 3.3m	-	-	2.9 to 3.9m	1.6 to 2.3m
Dense Basement Layer	3.7m+	3.1m+	3.0m+	3.9m+	2.7m+

Boreholes on the southeastern side of the gully:

Borehole No.	7	8	9	10
Ground RL	43.5	41.5	44.0	43.5
Firm to Stiff Crust	0.0 to 1.6m	0.0 to 1.6m	0.0 to 1.5m	0.0 to 2.0m
Interbedded Soft Layer	1.6 to 3.3m	1.6 to 3.6m	1.5 to 5.0m	2.9 to 2.9m
Dense Basement Layer	3.3m+	3.6m+	-	-

Earthworks Operations

General earthworks construction over the site was carried out in accordance with part 2 of NZS4404:2004, "Code of Practice for Urban Land Subdivision" and its companion document, NZS4431:1989, "Code of Practice for Earth Fill for Residential Development."

Topsoil and unsuitables were stripped and initially stockpiled for later removal from the site. Where further unsuitable and/or weak materials were identified in the gully invert and along its flanks, they were undercut until suitable materials were exposed or, where their depth below the proposed finished fill was deemed to be greater than 3 metres, so as to be beyond the influence depth of shallow foundations, they were left in place.

Once the gully and its flanks had been cleaned as directed, a pad of hardfill consisting of run-of-pit rock, was placed along its invert up to a level that was slightly higher than its lowest outlet level, where a manhole had been placed adjacent to the existing culvert beneath the neighbour's driveway. Once this pad had been tamped down, a 160mm dia. perforated novacoil was laid along the invert and covered with SAP 50 scoria. Where seepages were encountered, they were tapped in a similar fashion and the area covered with scoria blanket.

The earthfill was then progressively placed and compacted under engineering monitoring, to the design subgrade levels, using material cut from the gully flanks and neighbouring site to the east.

Earthworks Specification and Control

General earthworks procedures and compaction testing were carried out in accordance with NZS4404:2004, part 2 and NZS4431:1989, where appropriate.

In order to provide the most flexibility for variations in soil types, the earthworks compaction criteria used for control were the maximum allowable air voids/minimum allowable shear strength figures, as follows:-

Air Voids and Shear Vane (for cohesive soils only)

	Air Voids Percentage (as defined in NZS 4402:1986)		Undrained Shear Strength (Measured insitu by IANZ calibrated vane)	
	Maximum Average Value %	Maximum Single Value %	Minimum Average Value kPa	Minimum Single Value kPa
General Fill	10	12	140	110
Within 500 mm of carriageway subgrade	8	10	150	120

Note: The average value was to be determined over any ten consecutive tests.

During the filling operations, Civil Lab Limited staff carried out Nuclear Densometer Testing of Field Dry Density to NZS 4407:1991; Test 4.2.1, and Field Water Content in accordance with NZS 4402:1986; Test 2.1, together with Vane Shear Strength Tests using a method based on NZGS2001.

Some tests failed to meet the required criteria, in which case the fill was reworked and retested until satisfactory results were obtained.

The final test results are summarised in the appendices, together with a copy of the cut/fill as-built plan, showing test locations, and the inspection diary notes.

Conclusions and Recommendations

On the basis of our borehole investigation, inspections, observations, earthworks monitoring, laboratory and insitu testing as described herein, it is our Professional Opinion, that the subject site, lot 10, 124 Stancombe Road, Flatbush, is generally suitable in terms of section 106 of the Resource Management Act, and Section 2.B.4.8 of the Manukau City Council's Engineering Quality Standards, for the development of conventional residential dwellings, constructed in accordance with the relevant portions of NZS3604:1999, subject to the following overall general recommendations, and provided that building in any of the identified zones on the appended plan (whether "non-specific design", "specific design", or "not for construction") should be subject to the specific requirements of that zone as given below:

A) General Requirements:

(a) There were stockpiles of topsoil and other unsuitable materials still lying near the northern boundary of the site, at the time of preparation of this report. We anticipate that these will be moved before or during building development.

(b) As discussed in the foregoing section on site classification, there are a number of ways of classifying the site soils. In this instance, we have adopted the AS2870 third method, using laboratory tests for soil reactivity and a knowledge of the soil profile. On this basis, foundation soils on this site are considered unlikely to lie outside the definition of 'good ground' as given in NZS3604:1999. We consider that they would lie in Site Class S (slightly expansive) as defined in AS2870:1996, with expected characteristic surface ground movements in the order of 0 to 20 mm, which movement is still within the allowable bounds of 'good ground'. However, this movement is closer to the upper limit of Class S range, therefore, as a precaution, care should be taken to mitigate against the potential seasonal shrinkage and swelling effects of expansive foundation soils on both superstructures and concrete slab-on-grade floors, as follows.

For the design of all foundations, these should extend to a minimum depth of 0.3 metres below the final cleared ground level.

Because of the importance of this issue, especially with regard to controlling potential for cracking in concrete slabs, we consider that when constructing slabs, and especially after the removal of a desiccated surface crust, the exposed subgrade should be covered with 100mm of basecourse as soon as possible, to avoid allowing underlying damp soils to dry out and shrink if they are likely to regain some of their moisture and swell again following pouring of the concrete. If this cannot be avoided and shrinkage cracks occur in the subgrade to the cumulative width of 15mm per metre distance, then prior to the placement of the under-slab hardfill, the subgrade should be hosed down to allow the cracks to close to at least that degree.

Future owners should also be aware of the detrimental effects that large trees can have by way of inducing differential consolidation settlements beneath foundations, through localised soil water deprivation. Accordingly, care should be taken to avoid having large trees positioned where their roots could migrate beneath the building foundations.

(c) All foundations located within the 45 degree envelope of influence rising from the invert of service trenches, should be extended to below that envelope, to avoid surcharging pipes and/or poorly compacted trench backfill.

(d) In accordance with the limitations imposed by NZS3604:1999, fills greater than 0.6 metres that have not been reviewed and approved herein, should not be undertaken on this site without the further review and express approval in writing of the Manukau City Council and that of a Chartered Professional Engineer experienced in geomechanics and familiar with the contents of this report, since such works may, in certain circumstances, disturb existing equilibrium conditions. In a like fashion, cuts should be restricted to no more than 0.6 metres.

(e) All stormwater runoff from roofs and paved areas, plus any water tank overflows, should be collected in sealed pipes and be disposed of into Council's reticulation system. Likewise, overland flows should be directed away from the building footprint.

Under no circumstances should concentrated flows from any source discharge into or onto the ground in an uncontrolled fashion.

(f) All excavations, including those for bulk earthworks, shallow foundations and any piles, should be inspected by a Geotechnical Engineer during construction to check

that the conditions encountered are consistent with those revealed by our isolated boreholes and to provide any additional advice that might be needed. In the event of unacceptable inconsistencies, we should then be in a position to provide appropriate recommendations in support of an application to Council to modify the Building Consent, or to issue an appropriate Producer Statement - Construction Review.

It is in all parties' interests that we be engaged to inspect all such excavations prior to the installation of any foundation materials to maintain continuity of knowledge. Where we are required to carry out inspections during construction and to provide certification or supply a Producer Statement Construction Review, we request that:

(i) Prior to commencement of the building work the Owner or Developer ensures that we are supplied with a copy of both Resource and/or Building Consent Conditions (as appropriate) which request our involvement during construction.

(ii) The Owner or Developer provides us with the appropriate siteworks plans at least 48 hours prior to our inspections, so that we can confirm that all works relevant to our engagement are carried out.

(iii) The Owner, Builder or Contractor makes arrangements for us to visit the site no less than 24 hours before inspections are required. In order for us to provide Producer Statements, where these are required, it is the owner's responsibility to ensure that we are advised when inspections are due.

It should be noted that inspections during construction and associated certification will result in additional costs to the client over and above those associated with the preparation of this report.

B) Non-specific Design Zone:

This area is considered to be generally suitable for any development works carried out in accordance with NZS3604:1999, subject to the general recommendations given above, and is defined as any area on site that is outside the Specific Design Zone. Any building proposals outside NZS3604 might require specific site investigation.

C) Specific Design Zones:

Specific design zones have been designated primarily on the basis of two criteria, viz those areas not containing at least 2 metres depth of engineered fill or stiff natural crust over known soft ground, and those with slopes steeper than 1V:4H or near vertical and greater than 0.6m high, which might present concerns with regard to slope stability. These areas are listed below:

(a) Steep cut batters in the northwestern area. These batters are up to 1.5m high and have gradients of up to 1V:2H. While these slopes are considered stable while undeveloped, any foundations on, or within a horizontal distance of 4m above the crest of the slope, should be designed to allow for lateral creep extending to a depth of 1.0m, and acting over a width of 3 pile diameters, unless the land is adequately retained by suitably designed and constructed retaining walls.

(b) Steep fill batter in the southwestern corner, is up to 1.5m high and is considered unstable in its present form, therefore this batter should be adequately supported at the time of any building development closer than 4 metres from the crest.

(c) Areas of stormwater inlet in the northeastern corner of the site were still to be tidied up at the time of preparation of this report. Any foundations in the vicinity should be specifically designed to mitigate the effects of remaining depressions, steep batters and trench backfills.

(d) The southeastern corner of the site has underlying soft deposits as identified in our boreholes 7 and 9. These are expected to have been rendered closer to the surface by removal of up to around 1.5m depth of cut during the earthworks. Therefore we recommend that for all shallow strip and pad foundations on proposed lots 3 and 4, the foundation depths should be limited to no deeper than 0.45m below the as-built levels, and the ultimate bearing pressures should be limited to no greater than 200 kPa, to which figure should be applied an appropriate factor of safety, such as 2.0 for Factored Load Design and 3.0 for Working Strength Design:

For any foundation loads which cannot be accommodated in the above constraints, we recommend the use of specifically designed piles.

Statement of Professional Opinion as to Suitability of Land for Building Development

Owner/Developer: Carlos Concepts Limited.

Location: Lot 10, 124 Stancombe Road, Flat Bush

Development: Residential Development.

I, S.J. Woodward of Geotek Services Limited, P.O. Box 39-015, Howick, hereby confirm that:

1. I am a Chartered Professional Engineer experienced in the field of geotechnical engineering and was retained by the Owner/Developer as the Geotechnical Engineer on the above development.

2. The extent of our desktop study is described in our Report number 2532, dated 30 June, 2004, and the conclusions and recommendations of that document have been re-evaluated in the preparation of this report. The results of our initial borehole investigation and all tests carried our during the works are also enclosed.

3. In my professional opinion, not to be construed as a guarantee, I consider that:

   (a) The earth fills placed where shown on the attached Airey Consultants plan, numbered A9861/5 dated 4 July, 2005, have been generally placed in compliance with NZS4431:1989.

   (b) The completed works give due regard to land slope and foundation stability considerations, subject to the provisions of the "Conclusions and Recommendations" section above, with regards to the steep batters left in the specific design zone.

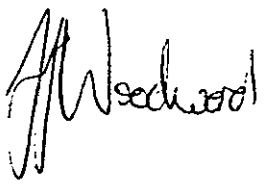
   (c) The areas of filled ground as shown on the attached plan are suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and related documents subject to the provisions of the "Conclusions and Recommendations" section above.

   (d) The original ground not affected by filling is suitable for the erection thereon of structures designed and built in accordance with the Building Code 2004, and

related documents, subject to the provisions of the "Conclusions and Recommendations" section above.

4. This Professional Opinion is furnished to the local Territorial Authority and the current owner/developer, for their purposes alone, on the express condition that it will not be relied upon by any other person, and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any structure.

GEOTEK SERVICES LIMITED.



S.J. Woodward,
M.E., MIPENZ(Geotechnical), CPEng, IntPE.

Report prepared by
Bevan Marr
B.A. (Geography)

CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 1 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 1
	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 37.33

Stratigraphy	SOIL DESCRIPTION	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Soft, slightly plastic, dark grey with occasional black specks slightly clayey SILT: very moist, frequent rootlets							
	-becoming stiff	0.5		92	31	3.0		
	Stiff, non plastic, light grey with orange specks, silty SAND, trace clay: wet		18/01/04	49	15	3.3		
	Firm, non plastic, grey, slightly clayey, slightly sandy SILT	1.0						
				108	32	3.4		
	-becoming stiff -becoming slightly plastic, greenish grey, slightly clayey, sandy SILT: saturated, fibrous wood and carbonaceous inclusions	1.5		138+				
	-@ 1.5: becoming very stiff, bluish green, root inclusions			138+				
	-becoming sandy SILT	2.0						
				120	40	3.0		
	-becoming stiff	2.5						
				138++		UTP		
	-becoming very stiff, non plastic greenish grey, very sandy SILT: saturated							Very poor sample recovery
		3.0		100	68			
	End of Borehole @ 3.1 metres. Groundwater encountered @ 1.4 metres depth during drilling. Standing groundwater @ 1.1 metres depth upon completion.	3.5						
		4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 2 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 2
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

GL(m) 37.22

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Firm, non-plastic, dark grey with orange brown and light grey streaks, sandy SILT: wet.		46	12	3.8		
	-becoming soft, dark blackish grey, some carbonaceous material.						
	-becoming grey, saturated @ 0.4m.	0.5	28	7	4.0		
	-becoming light greyish brown.						
	Loose, non-plastic, light greyish brown, silty SAND: saturated.		25	7	3.6		
		1.0					
	-becoming coarse.						
	-becoming very dense, white, pumiceous, silty SAND.		138++		UTP		
	Soft, non-plastic, black, amorphous, PEAT: saturated.	1.5	44	19	2.3		Poor material recovery.
	Firm, non-plastic, dark blackish brown, organic stained, SILT: saturated.						
	-becoming medium brown, SILT.	2.0	54	28	1.9		
	-some clay.						
	-minor woody organic material	2.5	50	20	2.5		
	-becoming slightly plastic, greyish black, organic stained, clayey SILT: abundant fibrous and woody organic material		42	18	2.3		
		3.0					
	End of Borehole @ 3.2 metres.		38	16	2.4		
	Groundwater encountered @ 0.4 metres depth during drilling.						
	Standing groundwater @ 0.9 metres depth upon completion.	3.5					
		4.0					

Water Level: 18/1/05

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 3 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.3
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 39.25

Stratigraphy	Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Soft, non plastic to very slightly plastic, grey with orange veins, slightly sandy SILT, trace clay: slightly wet							
	-becoming saturated			46	14	3.3		
	-becoming firm	0.5						
			18/01/04	108	58	1.9		
	-becoming stiff, slightly plastic, purple brown with bright orange mottles occasionally, slightly clayey, slightly sandy SILT	1.0						
	Soft to firm, moderately plastic, purplish grey with occasional orange mottles, very slightly sandy, very slightly silty CLAY: saturated, occasional fibrous organic inclusions of decaying vegetation			40	28	1.4		
		1.5						
	-becoming firm			60	38	1.6		
		2.0		52	34	1.5		
	-becoming light brownish, CLAY, trace sand, no organic inclusions							
	-becoming purple grey			40	22	1.8		
	-becoming soft to firm	2.5						
				70	40	1.8		
	-becoming firm, fibrous organic inclusions	3.0		54	26			
	End of Borehole @ 3.1 metres. Groundwater encountered @ .4 metres depth during drilling. Standing groundwater @ .9 metres depth upon completion.	3.5						
		4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 4 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 4
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 39.62

Water Level: 18/1/05

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Firm, non-plastic, streaked bluish grey, yellowish brown, SILT: moist.						
	-becoming soft.						
	-becoming wet.						
	-becoming firm, light grey with orange brown streaks, slightly sandy SILT: wet.	0.5	30	9	3.3		
	-becoming saturated.		56	23	2.4		
	-some clay.	1.0					
	-becoming moderately plastic, streaked light grey, orange brown, clayey SILT: trace sand.		40	24	1.7		
		1.5					
	Very stiff, non-plastic, light grey with yellowish brown and orange brown streaks, SILT: some sand.		138+				
	-becoming bluish grey, slightly sandy SILT.	2.0	138+				
	-lens of dark green, sandy SILT.						
	-becoming greenish grey, SILT: trace clay.	2.5	138+				
			138+				
	End of Borehole @ 3.0 metres. Groundwater encountered @ 0.7 metres depth during drilling. Standing groundwater @ 0.4 metres depth upon completion.	3.0					
		3.5					
		4.0					

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 5 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.5
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 42.75

Stratigraphy	SOIL DESCRIPTION	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: TOPSOIL							
	Stiff, non plastic, brown, SILT: dry, friable							
	Stiff, slightly plastic, tan brown with orange and grey specks, slightly clayey SILT: very slightly moist			130	64	2.0		Approx SGL
	-becoming siff, slightly plastic, grey with orange brown streaks, clayey SILT, trace sand: very slightly moist	0.5		106	70	1.5		
	-becoming stiff, slightly plastic, grey with occasional orange brown streaks, very clayey SILT, trace sand: slightly moist	1.0		118	72	1.6		
	-becoming slightly clayey SILT, trace sand Non plastic, brown and grey mottles, very slightly clayey SILT, trace sand, slightly moist	1.5		58	46	1.3		
	-becoming moderately plastic, grey, moist, slightly sandy							
	-becoming bright orange brown streaks in greyish brown, very clayey SILT, trace sand: moist	2.0		50	26	1.9		
	Firm, moderately plastic, greyish brown, silty CLAY: moist							
	Firm, slightly plastic, creamy grey, slightly sandy, slightly clayey SILT: moist	2.5		56	44			
	Firm, moderately plastic, slightly purple brown, slightly silty CLAY: moist			48	38	1.3		
		3.0						
			18/01/05	38	28	1.4		
	Slightly plastic, firm, dark blackish brown, organic SILT: very wet, no organic odour, rootlet inclusions	3.5	▽	64	35	1.8		
	-becoming brownish black, saturated							
	Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated			138++		UTP		Poor sample recovery
	Continued on next page.	4.0						

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 6 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 5
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy	SOIL DESCRIPTION (Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock)	Legend	GL(m) 42.75 Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
	Very stiff, non plastic, light grey with occasional brown specks, silty SAND: saturated				138++		UTP		Very difficult to penetrate
	Unable to penetrate with hand auger End of Borehole @ 4.3 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.		4.5						
			5.0						
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 7 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, non-plastic, light brown, SILT: friable, dry.						Approx SGL
	-becoming yellowish brown.						
	-becoming light grey with orange brown and yellowish brown streaks.	0.5	138+				
	-becoming slightly to moderately plastic, clayey SILT: trace sand, moist.		138+				
		1.0					
	-becoming non-plastic, slightly purplish grey with orange brown and yellowish brown streaks, slightly clayey SILT.		138+				
		1.5					
	-becoming very dense, SILT: friable.		138++		UTP		
	-becoming non-plastic to slightly plastic, grey with orange brown and yellow brown streaks, trace clay.	2.0	102	60	1.7		
	Stiff, highly plastic, streaked grey, purplish grey, orange brown, silty CLAY: moist.						
		2.5					
	-becoming firm, purplish brown.		66	36	1.8		
			62	36	1.7		
		3.0					
	Very dense, non-plastic, streaked brown, yellowish brown, light grey, pumiceous, slightly silty SAND: moist.		138++		UTP		
		3.5					
	-becoming whitish grey, very fine SAND: trace silt		138++		UTP		
		4.0					

Continued on next page.

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 8 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 6
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

GL(m) 42.33

Stratigraphy	Description	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very dense, non-plastic, whitish grey, very fine, SAND: trace silt, moist.			18/1/05	138++		UTP		
	-becoming moderately silty SAND.								
	-becoming wet @ 4.2m.		4.5		138++		UTP		
	End of Borehole @ 4.6 metres, unable to penetrate further.								
	Groundwater not encountered during drilling.								
	Standing groundwater @ 4.1 metres upon completion.		5.0						
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 9 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No.7
Flat Bush	WEIGHT	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) 43.57

SOIL DESCRIPTION	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials						
NATURAL: Very stiff, non plastic, tan brown, very slightly clayey SILT: dry						
-becoming tan brown with grey and orange brown streaks, slightly clayey SILT		115	64	1.8		
-becoming grey with occasional orange brown streaks	0.5					
-developing trace sand; slightly moist		88	70	1.3		Approx SGL
Stiff, slightly plastic, grey with orange brown streaks, slightly sandy, very clayey SILT: slightly moist	1.0	116	72	1.6		
Stiff, slightly plastic, purplish grey with occasional orange brown streaks, sandy, clayey SILT: slightly moist	1.5	73	46	1.6		
-becoming firm, slightly plastic to moderately plastic, creamy white, very slightly clayey SILT, trace sand						
-becoming soft	2.0	36	18	2.0		
Non plastic, soft, slightly pink white, SILT: wet						
-becoming slightly yellow white	2.5	25	18			
		28	20	1.4		
-becoming very wet	3.0					
Very stiff, non plastic, greyish white, fine silty SAND: very wet		138+				
	3.5	138++		UTP		
	4.0	138++		UTP		
Continued on next page.						

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 10 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 18/01/05	BOREHOLE No. 7
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Description	Legend	GL(m) 43.57 Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Non plastic, very stiff, greyish white, silty SAND: very wet			19/01/04	60	36	1.7		
-becoming firm								
-becoming very stiff, saturated		4.5		138++		UTP		
				138++		UTP		
Unable to penetrate with hand auger End of Borehole @ 4.7 metres. Groundwater encountered @ 4.7 metres depth during drilling. Standing groundwater @ 4.4 metres depth upon completion.		5.0						
		5.5						
		6.0						
		6.5						
		7.0						
		7.5						
		8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 11 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 18/1/05	BOREHOLE No. 8
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Stratigraphy	Soil description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, slightly plastic, brown with orange brown and greyish brown streaks, slightly clayey SILT: damp.							cut to road SGL
	-becoming moderately to highly plastic, streaked light grey, orange brown, very clayey SILT: trace sand.	0.5		112	70	1.6		
	-becoming whitish grey with some light brown streaks.			98	62	1.6		
	-becoming firm, yellowish white with some light orange and yellow streaks.	1.0		60	28	2.1		
	Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, wet.	1.5		50	20	2.5		Poor material recovery.
		2.0		32	16	2.0		
		2.5		26	16	1.6		
				28	18	1.6		
		3.0	18/1/05	28	18	1.6		
		3.5						
	Very dense, non-plastic, light grey, pumiceous, fine, silty SAND: wet.			138++		UTP		
	End of Borehole @ 4.1 metres. Unable to penetrate further. Standing groundwater @ 3.4 metres depth upon completion.	4.0		138++		UTP		

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 12 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No.9
	WEIGHT	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Stiff, slightly plastic, grey, brown and orange brown streaked, clayey SILT, trace sand: slightly moist			85	60	1.4		Major surface cracking
Stiff, slightly plastic, grey with orange brown streaks, very clayey SILT: slightly moist	0.5						
Stiff, moderately plastic, grey with occasional orange streaks, slightly sandy, clayey SILT: slightly moist			97	71	1.4		
Firm, moderately plastic, creamy white, very slightly sandy, clayey SILT: moist	1.0		77	60	1.3		
Firm, non plastic, creamy white, SILT: very moist							Approx SGL
	1.5		56	28	2.0		
-becoming wet							
-becoming soft	2.0		39	22	1.8		
			22	19	1.2		
	2.5						
			28	21	1.3		
	3.0		58	27			
-becoming firm							
	3.5		48	22	2.2		
	4.0		32	28	1.1		

Continued on next page.

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CLIENT: Carlos Concepts	LOGGED/ CHECKED: ML	SHEET 13 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 9
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

Description	Legend	GL(m) 42.9 / Depth (m)	Water Level	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Soft, non plastic, yellowish white, SILT: wet								
-becoming firm		4.5		52	25	2.1		
Very stiff, non plastic, white, fine silty SAND								
Soft, non plastic, black organic SILT: saturated				32	28	1.1		
		5.0						
-becoming firm				68	32	2.1		
End of Borehole @ 5.1 metres. Groundwater encountered @ 3.6 metres depth during drilling. Standing groundwater @ 3.5 metres depth upon completion.		5.5						
		6.0						
		6.5						
		7.0						
		7.5						
		8.0						

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CLIENT: Concepts Limited	LOGGED/ CHECKED: MK	SHEET 14 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

SOIL DESCRIPTION

Stratigraphy	Soil description	Legend	GL(m) 42.9 Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Very stiff, slightly to moderately plastic, light grey with orange brown streaks, very silty CLAY: trace sand, damp.				138++		UTP		Sun baked crust. Approx SCL
	-becoming stiff, moist.		0.5		105	54	1.9		
					88	49	1.8		
	-becoming brownish grey.		1.0						
	-becoming firm, brownish grey.				58	33	1.8		
	-becoming stiff, moderately plastic, greyish brown with grey streaks, very clayey SILT: some sand.		1.5		93	37	2.5		
	-becoming non-plastic, grey, SILT.		2.0		108	37	2.9		
	-becoming firm, highly plastic, yellowish brown with some grey and dark purplish brown streaks, very clayey SILT: some sand.		2.5		44	20	2.2		
					50	26	1.9		
	-becoming moderately clayey SILT.		3.0		78	30	2.6		
			3.5		77	39	2.0		
	-becoming moderately plastic, blueish grey to greyish brown, slightly clayey SILT: some sand.								
	Continued on next page.		4.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 15 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 10
	WEIGHT 30 kg	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

GL(m) 42.9

Stratigraphy	Soil description	Legend	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4802	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	NATURAL: Stiff, blueish grey to greyish brown with occasional dark purplish brown streaks, slightly clayey SILT: some sand, moist.				98	46	2.1		
			4.5		76	35	2.2		
					84	48	1.8		
	End of Borehole @ 5.0 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.		5.0						
			5.5						
			6.0						
			6.5						
			7.0						
			7.5						
			8.0						

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 16 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No. 11
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Stratigraphy: Topsoil, Fill, Clay, Silt, Sand, Gravel, Peat, Rock

GL(m) ~~44.19~~ 43.9

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Comments Samples Other Tests
	NATURAL: TOPSOIL					
Tauranga Group Materials	Stiff, non plastic, medium brown, SILT: damp, friable					
	Stiff, slightly plastic, orange brown, slightly clayey SILT: slightly moist		89	44	2.0	Approx SGL
		0.5				
	Stiff, slightly plastic, grey, orange brown and brown streaked, very clayey SILT, trace sand: slightly moist		96	64	1.5	
		1.0				
	-becoming predominantly grey with brown and orange brown streaks		114	68	1.7	
		1.5				
	-becoming very stiff		138+			
	-becoming grey	2.0	138+			
	-becoming slightly sandy					
	-becoming stiff, slightly to moderately plastic, grey, very clayey SILT: moist		93	58	1.6	
		2.5				
	-developing trace sand, very moist to slightly wet					
	-becoming very stiff		138+			
	Very stiff, non plastic, purplish grey, sandy SILT: very moist	3.0	138+			
	End of Borehole @ 3.2 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	3.5				
		4.0				

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: MK	SHEET 17 OF 18	JOB No. 2635
LOCATION: Lot 10, 124 Stancombe Road, Flat Bush	DIAMETER: 50mm	DATE 19/1/05	BOREHOLE No. 12
	WEIGHT 30 kg	DATE	PROBE No.

Stratigraphy: Tauranga Group Materials

SOIL DESCRIPTION

Topsoil / Fill — Clay / Silt — Sand / Gravel — Peat / Rock

Soil Description	Depth (m)	Water Level	Shear Vane Dial (kPa) DR4828	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
TOPSOIL.							Approx SGL
NATURAL: Firm, slightly plastic, streaked orange brown, greyish brown, slightly clayey SILT: moist. -becoming stiff @ 0.4m.	0.5		98	50	2.0		
Stiff, highly plastic, streaked orange brown, greyish brown, moderately silty CLAY: trace sand moist.	1.0		94	50	1.9		
-becoming streaked light grey, light orange, silty CLAY: some sand.	1.5		86	56	1.5		
-becoming very clayey SILT: some sand.	2.0		110	86	1.3		
-becoming light grey with light orange streaks.	2.5		92	68	1.4		
-becoming firm.			78	48	1.6		
Soft, non-plastic, yellowish white, SILT (pumicite): trace clay, moist.	3.0		52	28	1.9		
-becoming wet.	3.5		22	15	1.5		
Very dense, non-plastic, greyish white, pumiceous, silty SAND: moist.							
End of Borehole @ 4.2 metres. Unable to penetrate further. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	4.0		138++		UTP		

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CLIENT: Carlos Concepts Limited	LOGGED/ CHECKED: ML	SHEET 18 OF 18	JOB No. 2635
LOCATION: 124 Stancombe Road,	DIAMETER: 50mm	DATE 19/01/05	BOREHOLE No.13
Flat Bush	WEIGHT	DATE	PROBE No.

SOIL DESCRIPTION

Topsoil / Fill · Clay / Silt · Sand / Gravel · Peat / Rock

GL(m) 44.87

Stratigraphy	Description	Depth (m)	Shear Vane Dial (kPa)	Residual Strength (kPa)	Sensitivity	Probe Blows	Comments Samples Other Tests
Tauranga Group Materials	Stiff, non plastic, friable, SILT: dry						Appx = SGL
	Stiff, slightly plastic, orange brown and grey brown streaked, slightly clayey SILT: moist		121	60	2.0		
		0.5					
	-becoming moderately plastic, light grey and light orange streaked, moderately clayey SILT, trace sand		116	66	1.8		
		1.0					
	-becoming light brown grey with thin light orange veins		132	94	1.4		
	-becoming slightly plastic, slightly clayey SILT, some sand						
		1.5					
	-becoming moderately plastic, moderately clayey SILT		58	44	1.3		
	Soft, non plastic, yellow white, SILT (pumicite): very moist, poor recovery	2.0	28	18	1.6		
			58	32	1.8		
		2.5					
	Very stiff, non plastic, yellow white, silty SAND: very moist, very dense		138++		UTP		
	-becoming wet		138++		UTP		
	End of Borehole @ 3.0 metres. Groundwater not encountered during drilling. No standing groundwater identified upon completion.	3.0					
		3.5					
		4.0					

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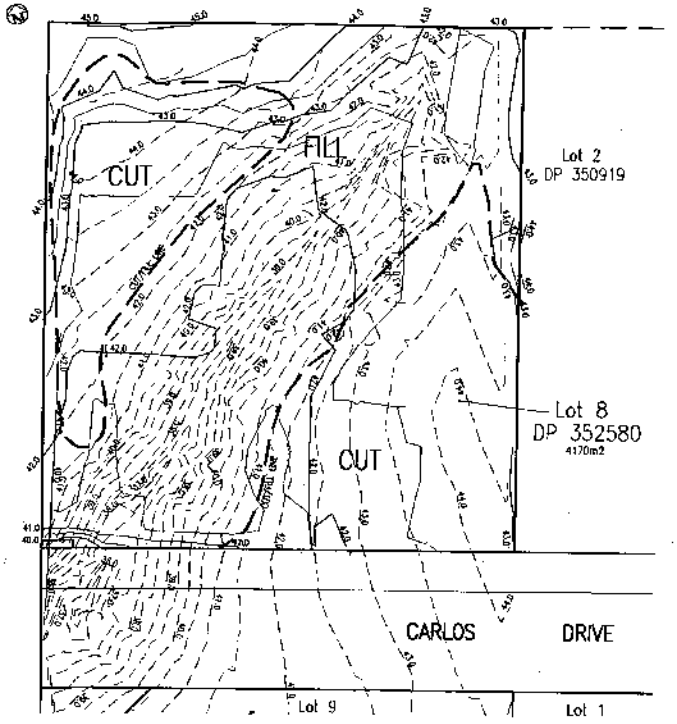
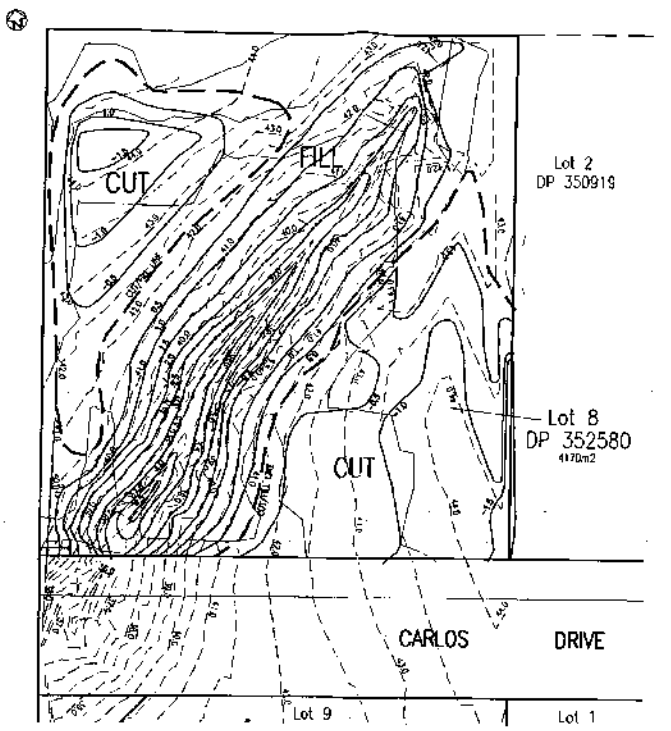


SITE PLAN–FINAL CONTOURS
1:500



SITE PLAN–ISOPACHS
1:500

LEGEND

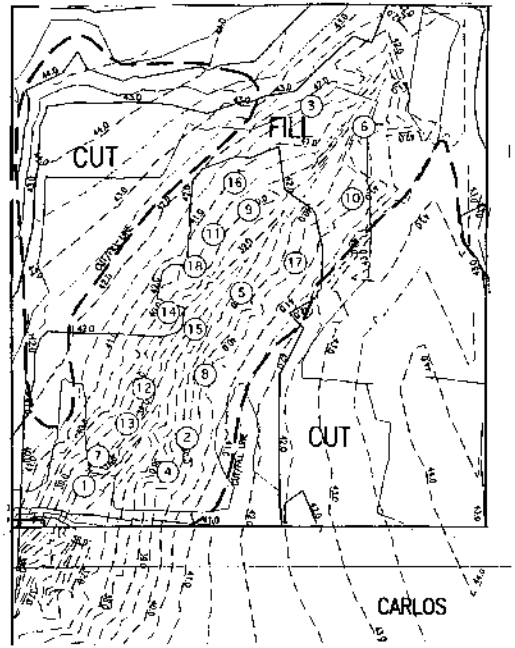
- EXISTING CONTOURS
- 'AS BUILT' CONTOURS
- ISOPACH
- EXTENT OF CUT/FILL

FINAL

'AS BUILT' CONTOUR PLAN
FOR
CARLOS CONCEPTS
124 STANCOMBE ROAD
FLAT BUSH

AIREY CONSULTANTS LTD.

SITE PLAN

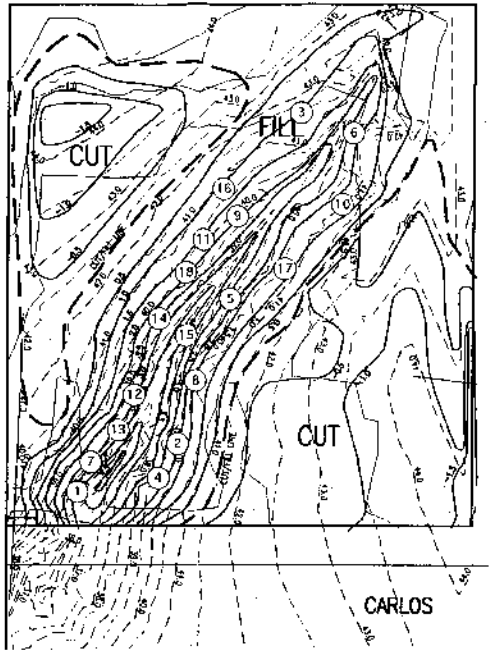


Site Plan- Contours

LEGEND

(1) Location of Compaction Test.

	Northing	Easting	RL
1	6469568	2681628	37.985
2	6469575	2681636	38.850
3	6469603	2681669	41.125
4	6469565	2681629	38.195
5	6469590	2681642	39.010
6	6469596	2681661	39.960
7	6469552	2681612	38.350
8	6469569	2681632	39.005
9	6469599	2681657	40.140
10	6469606	2681668	40.950
11	6469590	2681654	40.335
12	6469555	2681628	39.230
13	6469563	2681616	38.460
14	6469581	2681637	39.690
15	6469576	2681636	FL
16	6469586	2681636	FL
17	6469599	2681641	SGL
18	6469596	2681636	SGL



Site Plan- Isopachs

Location of Earthworks Tests.

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

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CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1:500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	2 OF 3

Report No: 21 5257 00
Page: 2 of 3

FILL SUMMARY SHEET

Job Name : **Stancombe Road**

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m^3)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m^3)	SOLID DENSITY (t/m^3) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH in kPa				NOTES
1	GC	24.1.05	See plan	1.90	24.6	1.52	2.7	6.1	199++	199++	199++	199++	
2				1.89	28.6	1.47	2.7	3.4	199++	199++	199++	199++	
3				1.78	34.4	1.32	2.7	5.5	153	199+	199+	199+	
4	CA & WF	25.1.05	See plan	1.87	34.6	1.39	2.7	0.5	179	199+	199+	199++	
5				1.82	38.8	1.31	2.7	0.7	182	188	199+	199+	
6				1.73	31.0	1.32	2.7	10	134	131	122	182	
7	CA	26.1.05	See plan	1.96	32.8	1.47	2.7	-2.9	171	199+	199++	199++	
8				1.98	25.7	1.57	2.7	1.3	199+	199+	199+	199+	
9				1.87	33.0	1.40	2.7	1.8	199+	199+	199+	199+	
10	CA	27.1.05am	See plan	1.94	24.2	1.56	2.7	4.3	188	185	199+	199+	
11				1.90	19.6	1.59	2.7	10	148	179	199+	199+	
12				1.87	33.9	1.40	2.7	0.8	199+	199++	199++	199++	
13	CA	27.1.05pm	See plan	1.93	20.5	1.60	2.7	7.8	199++	199++	199++	199++	
14				1.93	25.7	1.53	2.7	3.8	199++	199++	UTP	UTP	

Transpositions Checked By : TB Date: 03.02.05
Approved Signatory : Date: 02.02.05

Please see page 1 of this report for test standard information

FILL SUMMARY SHEET

Job Name : **124 Stancombe Road**

TEST NUMBER	TESTED BY	DATE TESTED	TEST LOCATION	WET DENSITY (t/m^3)	OVEN WATER CONTENT (%)	DRY DENSITY (t/m^3)	SOLID DENSITY (t/m^3) Assumed	AIR VOIDS %	FIELD SHEAR STRENGTH in kPa				NOTES
15	CA & RP	20.4.05	See plan	1.84	24.5	1.48	2.7	9.0	236++	236++	236++	236++	
16				1.82	20.4	1.51	27	13	236++	236++	236++	236++	
17	CA & RP	22.4.05	See plan	1.89	27.2	1.48	2.7	4.7	236+	236++	236++	236++	
18				1.92	29.8	1.48	27	1.2	236++	236++	236++	236++	

Transpositions Checked By : JM Date: 3.5.05
Approved Signatory : Date: 5.5.05

Please see page 1 of this report for test standard information

Ref: 2704

DIARY NOTES

North of Carlos Drive, 124 Stancombe Road, East Tamaki

Date: 17/1/05 GSL Staff

Ian Gibson (Aireys) rang for GSL to visit site and inspect gully cleanout. I (EC) visited site with knowledge that our initial site investigation was for the proposed apartments at the front of the site only (refer phone conversation note with Graham Raymond). We therefore needed to undertake site investigation for the remainder of the site. Gully had surficial materials mullocked out and flanks stripped of topsoil. Deep stormwater line trenches had been dug along the eastern boundary and to the south along the proposed road alignment. Very soft pumiceous materials, saturated the trench invert. Organise return visit to site next day with guys to drill holes.

Date: 18/1/05 GSL Staff

Site investigation/gully cleanout: I (EC) met Peter from Sharpe Civil. Discussed objectives of GSL and plan of attack for gully. Drill holes in current invert to ascertain depth of undercut. Some more materials need to be mucked out. Also noted heavy seepages along northwest back of gully.

Date: 19/1/05 GSL Staff

More gully muckout in invert.

Date: 26/1/05 GSL Staff

I (ML) and EC attended the site at approximately midday on a hot, dry day. We returned on the basis of Civil Lab fill testing from 25.1.05 showing a failure in one area of the gully infill. The results in this area showed 10% air voids and shear strengths as low as 122kPa by comparison to strengths well upward of 180kPa in most other parts. The location of this failure is marked on the attached plan.

At the surface, shear vane readings were all 138+. However, the gumspear highlighted soft spots about .5 metres deep in the otherwise well compacted fill. Eugene had the site guys dig up the fill to a depth of approx 0.5 metres in one part of the area of concern. This revealed an area of poor quality fill with limited compaction. Eugene advised the contractor that the fill above the soft region should be moved temporarily while the substandard fill was removed and discharged. This would then allow the replacement of the fill and continued compaction. Beyond this region of concern, the fill was all very stiff and well compacted, with a large sheepsfoot roller providing more than adequate compaction, with no signs of ground movement beneath its weight.

Date: 19/4/05 GSL Staff

I (PJ) visited the site and spoke to Brendon. They recommended placing the fill some two days ago after several months stand-down. I was told that more than a metre was already placed in the southwest corner but much less at the back. Informed Civil Lab to begin testing as soon as possible. Arranged with James to drill handaugers to test the new fill where it is deep.

Date: 24/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard, although some soft spots were observed and the contractor informed. Very little fill has been placed. One dozer, one compactor and two dump trucks at work on the site.

Date: 25/01/05 Civil Lab Staff

One compactor and one dozer at work. Material is a firm to stiff, highly plastic, silty clay.

Date: 26/01/05 Civil Lab Staff

Fill appears to be of a satisfactory standard. One digger and one compactor on site.

Date: 27/01/05 Civil Lab Staff

Morning: fill appears to be of a satisfactory standard. One dozer and one compactor at work. Material is firm to stiff, highly plastic, light grey and yellow/brown mixed, slightly silty clay and moist.

Date: 27/01/05 Civil Lab Staff

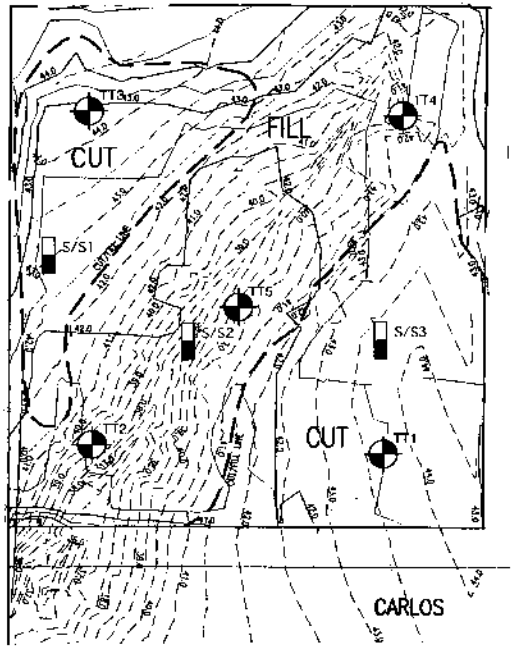
Afternoon: Fill appears to be of a satisfactory standard. One digger on site.

Date: 20/04/05 Civil Lab Staff

One compactor and one digger on site. Material is firm, highly plastic, light grey, cream, orange brown and yellow brown mixed slightly silty clay and moist.

Date: 22/04/05 Civil Lab Staff

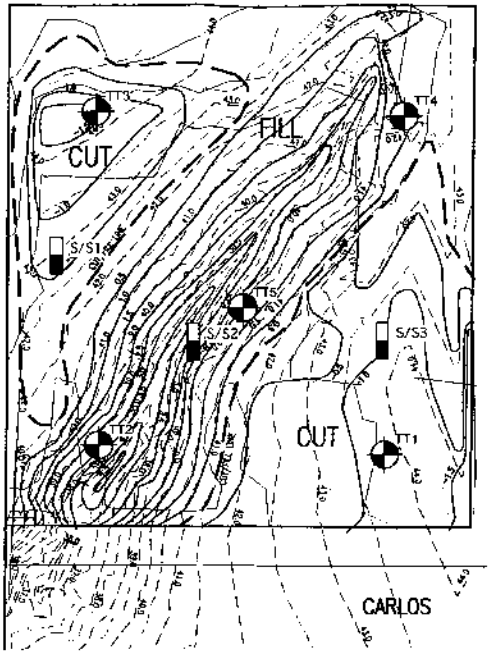
Fill appears to be of a satisfactory standard. One compactor on site. Fill is firm, highly plastic, light grey orange brown and yellow brown mixed silty clay and moist.



Site Plan- Contours

LEGEND

- S/S1 — Location of Shrink-Swell tests.
- TT1 — Depth of topsoil = 0.1metres
- TT2 — Depth of topsoil = 0.1metres
- TT3 — Depth of topsoil = 0.1metres
- TT4 — Depth of topsoil = 0.1metres
- TT5 — Depth of topsoil = 0.1metres



Site Plan- Isopachs

Post-Earthworks Topsoil Depths and Shrink-Swell Samples Location Plan

Plan as supplied to us by Airey Consultants, dated 04/07/05, numbered A9861/5.

GEOTEK SERVICES LIMITED
Cnr Moore & Vincent Streets, PO Box 39-015, Howick, Auckland
Phone (64-9) 535-9814 Facsimile (64-9) 535-7243 E-mail enquiries@geotek.co.nz

37 Elliott Street, PO Box 277-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

CLIENT: Carlos Concepts Limited.
LOCATION : North of Carlos Drive, 124 Stancombe Road Flatbush.

SCALE	1: 500 @ A3
JOB No.	2704
DRAWN BY	BM
DATE	22/07/05
SHEET	3 OF 3

FORM R8

AS1289:7.1.1. Shrink-Swell Index

Laboratory Test Report

Client:	Carlos Concepts Limited		
Job Name:	124 Stancombe Rd - North	**Job Number:**	2704
Date Sampled:	20.06.2005	**Date Tested:**	22.06.2005
Sample Number:	2	**Tested By:**	MK
Sampling Depth (m):	0.5	**Checked By:**	
Sample Condition:	Good		
Sample Description:	FILL: Moderately plastic, mottled orange brown, grey, dark purple, silty CLAY: white silt and topsoil inclusions.		
Inert Inclusions (%):	3		
Cracking (%):	2		
Crumbling (%):	0		

SWELL TEST

Initial Water content (%):	28.9
Final Water content (%):	34.2
ε_{sw} = Magnitude of Swelling Strain (%) :	0.54

(-ve value means sample has undergone consolidation)

SHRINK TEST

Water content (%):	26.7
ε_{sh} = Magnitude of Shrinkage Strain (%) :	3.21

SHRINK SWELL INDEX (Iss)

Formula

$$I_{ss} = \frac{(\varepsilon_{sw}/2) + \varepsilon_{sh}}{1.8}$$

Iss (%) : 1.9
strain per ΔpF

GEOTEK SERVICES LIMITED

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37 Elliott Street, PO Box 272-1217, Papakura, Auckland
Phone (64-9) 296-7241 Facsimile (64-9) 296-7243

File Copy 28/3/06 A.

BOTANY COMMUNITY BOARD RESOURCE CONSENTS HEARINGS COMMITTEE MEETING – 28 MARCH 2006

124 STANCOMBE ROAD (NOW 46 CARLOS DRIVE)

OUTLINE OF SUBMISSIONS FOR THE APPLICANT

Opening

The Council Officer (Bryce Pomfrett) has recommended that consent be granted subject to conditions.

The applicant accepts the recommended conditions and adopts the rationale of the report.

In doing so, the applicant wishes to record certain observations of a general nature.

General Comments

1. The proposal is considered to be consistent with the Flat Bush Residential 1 zoning. In particular, it respects the low intensity of activity that the buffer anticipates.

2. The development provides a high density residential environment, consistent with the emerging surrounding urban environment, whilst achieving high levels of amenity.

3. This high level of amenity is achieved through the adherence to basic urban design principles relating to layout, open spaces, choice of materials and extensive landscaping.

4. The extensive landscaping, particularly along the rear boundary, is the main source of mitigation of any adverse effects.

5. The overall layout has been designed to provide a suitable transition from the proposed high density urban development of the arterial strip to the existing lower density sites on Inchiman Rd.

6. In addition, the proposal adds a further range of living opportunities in close proximity to the new Ormiston Town Centre and the Flat Bush neighbourhood centres.

Objections

As noted, there are two objectors.

Morris Chandler.

Consultation with Mr Chandler has continued. His privacy objection can be met by screen planting on the western boundary (diagram).

It is to be remembered that his activity is a child care centre, predominantly operating during week days and day time hours. In terms of Mr Chandler's "reverse sensitivity" objection, it is unlikely that any person would object to the normal noise levels emanating from such an activity during those hours and on those days.

Lee Shan Der Shann.

The screen planting in the buffer zone, as recommended, is the better way to preserve privacy than a solid fence of significant height.

I cannot offer any comment on the pond issue other than to say that the open drain and gully that originally transversed the site were piped and filled in accordance with all relevant consents and best engineering practice to the best of my knowledge.

The general comments relating to the proposed residential type, density, height, style and layout are all dealt with in the applicant's AEE and the officer's report.

Conclusion

The proposal is consistent with what the Council is encouraging in the Flat Bush/Ormiston area.

The objectives and policies of this area are clearly to establish a range of multi unit residential activities in the arterial strip zone. Clearly Council policy is to provide a contrast to the sprawl of stand alone, bungalow style housing steadily spreading South from Botany. This is achieved in practice by encouraging developments of this type on one hand, and controlling it as far as possible with the other. High density housing cannot be constructed "as of right" within the Residential 1 zoning. Much is preserved for the discretion of the Council. In reality, the issues of urban design and traffic management are paramount.

The present proposal seeks to achieve, and does achieve, a balance between meeting the objectives and policies and the controls and should be granted.

R.J. Cummins.

File Copy 28/3/06

TO: Manukau City Council
Botany Community Board Resource Consents Hearings Committee

In the matter of Limited Notified Application for Land Use and Subdivision Consent to Construct a 22 Unit Housing Complex with 5 Lot residential Subdivision 124 Stancombe Road Botany

And

The objection submission made under the relevant sections of the Resource Management Act on the 28th November 2005
Objectors:
This submission is made on behalf of:
a) Morris D Chandler, Director of Farm Cove Holdings Ltd, owner of the property at 122 Stancombe Road Botany

b) Suzanne B Chandler, Proprietor of Early Impressions Leaning Centre, tenant occupying 122 Stancombe Road Botany as a Childcare Centre

c) The parents of the Children attending the above stated Childcare Centre
Preliminary:
The attention of the Board is drawn to the decisions of the Environment Court and subsequent mediation in the matters of the Appeals made under section 120 of the Act and recorded under file Reference: RMA 533/01 and RMA 514/01)

The above stated actions were laid with the courts in relation to the establishment of the Childcare Centre at 122 Stancombe Rd. Amongst the various issues raised in the objections laid by the persons named in the above referenced actions was that noise was a major factor and was likely to cause severe inconvenience.

In determining the final resolutions the Hearing identified that noise was a factor that required specific action to ensure that the quiet enjoyment of the neighboring properties was protected. This required amongst other actions that a 2m high close boarded fence be erected along the side and rear boundaries.

..... 2

2.....

Grounds for objection

We record our objections to the proposed construction as outlined on the submitted plans on the following grounds:

1. **If the proposed construction (specifically units numbered 11 – 16) proceeds in the manner planned the operators of the Childcare Centre have a concern that this same noise objection could cause occupiers of the proposed buildings to lay complaints with Council and**
2. **That the proposed construction which provides for units 11 – 16 to have balconies that will impose upon the privacy of the children in their play area environment and**
3. **That the parents of the children have expressed concern for the privacy and welfare of the children given the close proximity of the proposed units to the outdoor play area and**
4. **The parents have a right to expect their children to have privacy without risk of being viewed by persons of unknown character and**
5. **That the construction as detailed will affect the sun penetration to the outdoor play zone and**
6. **That it is possible to mitigate the impact of the proposed construction by repositioning the proposed units and ensuring soundproofing of the adjacent walls is included in the construction process and**
7. **That this was discussed with the applicant prior to the lodging of the objection, we understand from that discussion that the orientation of the building on the site is that recommended by council officers and**
8. **The Planning Officers report fails to address the impact that such development will have on these issues which were identified in our initial submission and further fails to examine alternative solutions.**

M D Chandler

AIREY CONSULTANTS LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
39 MEADOWLAND DRIVE,
P. O. BOX 39 101, HOWICK
PH: 09 534 6523 FAX: 09 537 5754
EMAIL:iang@aireys.co.nz

AIREY CONSULTANTS LTD.

FACSIMILE TRANSMISSION HEADER SHEET

To			
Attn	Bob Cummins		
Re.	Effect on 122 Stancombe	Date	27/7/05
From	Ian	Pages	3
Fax No.	04 8016870	File	896/5
CC: GIR 2714037		CC:	

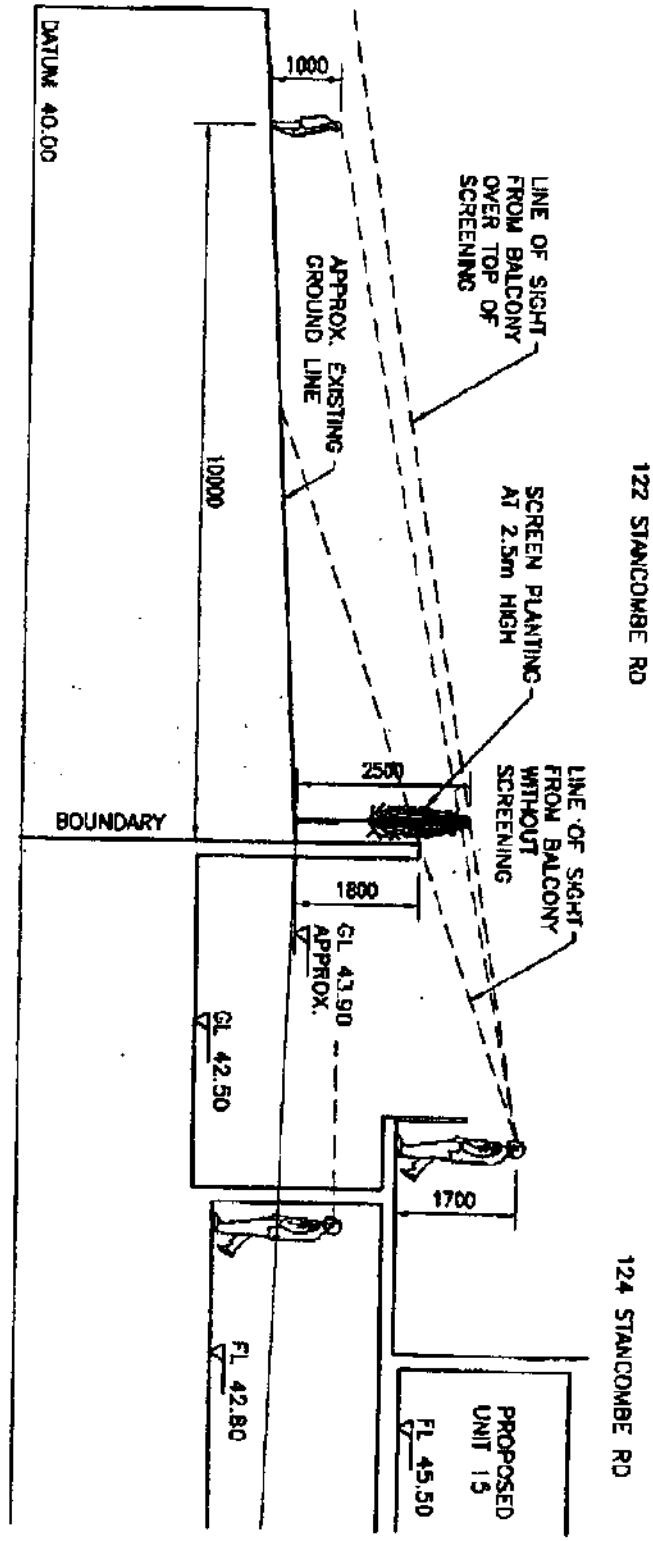
Dear Bob,

Enclosed is a cross section showing the effect that the units have. A 2.5m screen solves the issue I would suggest, given the children are less than 1m anyway and by the time they may be visible are >> 15 metres away. Do you want me to fax these through to Maree?

Regards

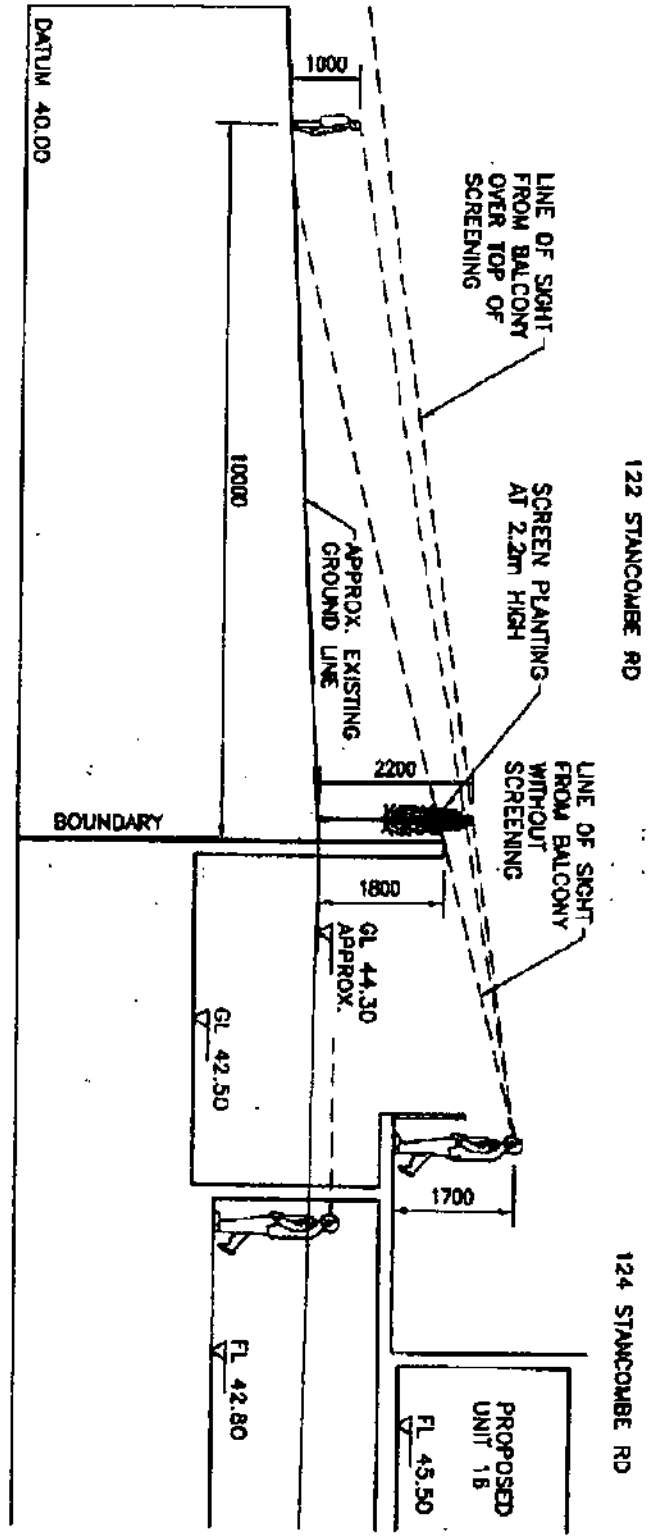
IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CONTACT US IMMEDIATELY.

The information contained in this fax is confidential between Airey Consultants Ltd and the intended recipient. Any other person receiving this fax is required to respect the confidentiality and may not disclose, copy or make use of its contents. If this fax has been received in error, would the recipient please notify Airey Consultants Ltd immediately and return it by mail. Airey Consultants will reimburse the cost incurred.



CROSS SECTION AT 23m BACK FROM NORTHERN BOUNDARY (SOUTHERN WALL OF UNIT 15)

1:100



CROSS SECTION AT 15m BACK FROM NORTHERN BOUNDARY (NORTHERN WALL OF UNIT 16)

1:100

Te Kaunihera o
MANUKAU
City Council

AGENDA

for the meeting of the

BOTANY COMMUNITY BOARD RESOURCE CONSENTS HEARINGS COMMITTEE

to be held on
TUESDAY, 28 MARCH 2006
at 9.30 am in the Totara Room
MANUKAU CIVIC CENTRE
Wiri Station Road
Manukau City

COMMITTEE

Graeme Leggat (Chairman)
Cr Dick Quax
Maggie Burrill, Botany Community Board

EMERGENCY EVACUATION

WHEN REQUESTED TO EVACUATE THIS BUILDING

Leave the building immediately by the nearest exit, which is:

Stairs Opposite the Totara Room

The alternative exit is:

Other End of Gallery

Please assemble at:

Council Car Parks

STAY AT THE ASSEMBLY POINT UNTIL THE "ALL CLEAR" IS GIVEN

WALK

DO NOT RUN

DO NOT USE LIFTS

The Fire Warden for this meeting is the:

Committee Advisor

Please follow her instructions

BOTANY COMMUNITY BOARD RESOURCE CONSENTS HEARINGS COMMITTEE MEETING

TUESDAY, 28 MARCH 2006

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COURTESY REMINDER: All those in attendance are reminded to turn off mobile phones.

1. APOLOGIES IN ACCORDANCE WITH STANDING ORDER NUMBER 2.10

2. CONFIRMATION OF MINUTES

RECOMMENDATION

That the minutes of the Botany Community Board Resource Consents Hearings Committee meeting dated 29 November 2005 (Minute Numbers RC/NOV/2246/05 to RC/NOV/2247/05 inclusive) be signed as a correct record of the proceedings at that meeting.

126 Stancombe

3. LIMITED NOTIFIED APPLICATION FOR RESOURCE CONSENT UNDER THE RESOURCE MANAGEMENT ACT 1991 – TO CONSTRUCT A 16 RESIDENTIAL UNIT TERRACED HOUSING COMPLEX WITH ONSITE SWIMMING POOL AND GYM/ POOL HOUSE FACILITIES ON THE SITE AT 44 CARLOS DRIVE (FORMERLY 126 STANCOMBE ROAD), FLAT BUSH

Purpose of Report	:	Statutory
Significance of Decision	:	Addressed by the Resource Management Act 1991
Reporting Unit	:	Environmental Services - Resource Consents & Compliance
File Ref	:	ES 1176/44
Reporting Officer	:	Bryce Pomfrett, Resource Management Planner
Ward	:	Botany-Clevedon

SUMMARY

The following report provides an assessment and recommendations on a land use resource consent application to construct a 16 residential unit housing complex on the site at 44 Carlos Drive (formerly 126 Stancombe Road), Flat Bush. In conjunction with the housing development it is also proposed to install network utilities, to construct retaining walls on the eastern, western and northern boundaries and undertake land modification works.

Overall, the application is considered as a Non-Complying Activity under the Manukau Operative District Plan 2002.

RECOMMENDATION

That subject to any contrary or additional evidence submitted at the hearing, the consent be GRANTED subject to the conditions recommended at the end of this report.

References

Proposal	:	27855
District Plan	:	Manukau Operative District Plan 2002 (former provisions of Variation 13 are now operative and included within the Manukau Operative District Plan 2002)
Planning Map	:	Figure 16.11A – Flat Bush Structure Plan
Date Received	:	8 September 2005
Date of Limited Notice	:	4 November 2005

Site Description and Context

Legal Description	:	Lot 2 DP 350919
Total Area	:	4174m^2
Zoning	:	Flat Bush Residential 1 Zone (Flat Bush Buffer Area) General Precinct.

The subject site is a generally rectangular in shape being 4174m^2 in area and located to the north of the recently constructed Carlos Drive. The site has been largely cleared of established vegetation through the preceding subdivisional works. The western boundary of the site is currently open between the subject site and the site to the west. A level drop of approximately 1.5 metres occurs between the two sites. Council is currently considering a terraced housing development on this adjoining site for 22 terraced housing units.

3. **Continued**

The site immediately to the east of the subject site is occupied by a substantial dwelling with well established landscaped grounds.

To the north of the site is located low density rural residential living accessed from Inchinnam Road. Sites in this area are in the order of 8000m^2 site size. These sites being within the "Flat Bush Countryside Transition Zone – Gracechurch Heights".

To the south-west of the site a new three storey apartment complex, with additional underground carparking area (total of 42 units) is nearing completion. Due south of the site is located a terraced housing complex of 16 units which has recently been completed and is being marketed for sale. The design of these units is the mirror image of the development proposed on the subject site.

Proposal

The applicant, through their consultant Barker & Associates Ltd, has outlined the proposal as follows:

"The applicant seeks consent to establish a 16-unit residential development including leisure facility [sic] *on proposed Lot 2 of a site located at 126 Stancombe Road, Flat Bush. The proposed development is shown on the attached plans in Appendix 1 titled "Stancombe Estate, 126 Stancombe Road, Botany, Flat Bush" Sheets A10, 20, 30, 40, 50, 60, 70, 80, 90, 100 prepared by Alto Architects.*

The 16 residential units are each of two storeys in height and comprise an open living and kitchen area, bathroom and double garaging at ground floor level and three bedrooms, on with ensuite and dressing room facilities, a second lounge / study and upper deck area at first floor level. Inter-tenancy return walls are provided between the decks of adjoining units. In addition, each unit has a small, front outdoor living area.

The units on site will lie between two rows of terraced housing that run parallel to Carlos Drive. These rows of housing will be divided by a proposed back lane. Parking is provided for the units with two spaces for each unit. Further parking for visitors would be available in Carlos Drive and on Stancombe Road.

Landscaping is to be provided, predominantly around the road frontages of the site and along the rear boundary and will include specimen trees. Further, to the rear of the site the proposal will include a communal pool, pool house and gazebo."

In addition to the works outlined above the applicant also proposes to undertake 1950m^3 of land modification works to establish building platforms on the site. A location plan is included at the end of this report.

Necessity for the Application

The proposal requires land use resource consent. Overall, the application is considered as a Non-Complying Activity, however, the individual components of the application which require resource consent are separated and identified below:

Non-Complying Activity for the construction of more than one household unit in the Special Policy Area (Flat Bush Buffer).

Discretionary Activity to construct a 16 residential unit complex on a 4,175m^2 site in the Flat Bush Residential 1 Zone.

3. **Continued**

Restricted Discretionary Activity for an infringement of the required site coverage of 40% in the Flat Bush Residential 1 (General Precinct), the proposal having an overall site coverage percentage of 52.9%.

Restricted Discretionary Activity for an infringement of the height in relation to boundary recession plane on the western boundary of 2.5m + 45^0 recession plane by a maximum of 3.6 metres horizontal distance over 30.6 metres (being the combined length of Units 17 and 25).

Restricted Discretionary Activity for provision of outdoor private open space which does not comply with Rule 17.10.12.8.

Restricted Discretionary Activity for earthworks on sites identified within Area 2 Asbestos Investigation Area.

Restricted Discretionary Activity for Restricted Discretionary Activity to undertake 1,950m^3 of earthworks in preparation of the site for residential development.

Restricted Discretionary Activity to undertake development requiring the provision and extension of public utility services to service the proposed development.

Restricted Discretionary Activity for the construction of a retaining wall on both the eastern and western boundaries of the site exceeding 1.5 metres in height.

Limited Notification Procedure

During preparation of the application for resource consent the applicant attempted to obtain the written approvals of adjoining property owners to the north of the site (the properties to the east and west are owned by the applicant and therefore, they provided written approval as an affected person). As a result of consultation to obtain the written approvals of adjoining owners to the north it became clear that at least two of the adjoining property owners were not prepared to provide their written approval as affected parties.

Upon a visit to the site and an assessment of the proposal, it was considered that all of the adjoining property owners would potentially be affected by the proposal and hence without written approvals from all of these parties, it was considered appropriate to proceed with notification in accordance with Section 94 of the Resource Management Act 1991. As the development is of significance to the immediate surrounds of the site only, full public notification was not deemed to be necessary.

Pursuant to the Resource Management Amendment Act 2003 becoming operative on 1 August 2003, there is now provision for limited notification under Section 94(1) as follows:

> ***"94. When public notification of consent applications is not required***
>
> *(1) If notification is not required under Section 93(1), the consent authority must serve notice of the application on all persons who, in the opinion of the consent authority, may be adversely affected by the activity, even if some of those persons have given their written approval to the activity.* [Limited notice]
>
> *(2) However, a consent authority is not required to serve notice of the application under subsection (1) if all persons who, in the opinion of the consent authority, may be adversely affected by the activity have given their written approval to the activity."*

Council considered that the application under consideration is subject to section 94(1) of the Resource Management Act 1991. Adjoining properties were accordingly served notice on 4 November 2005.

3. **Continued**

Submissions

No submissions were received as a consequence of the limited notification of the application which individually notified four adjoining property owners and two occupiers of the proposal.

1.0 Statutory Considerations

1.1 In this instance the Council, when considering the application for Resource Consent shall have regard to Sections 3, 5, 7, 104, 104A, 104B, 104C, 104D and 108 of the Resource Management Act 1991 (the Act).

1.1.1 Section 3 defines the term "effect" as follows:

"Meaning of 'effect'. In this Act, unless the context otherwise requires, the term 'effect' includes:

(a) Any positive or adverse effect; and

(b) Any temporary or permanent effect; and

(c) Any past, present, or future effect; and

(d) Any cumulative effect which arises over time or in combination with other effects regardless of the scale, intensity, duration or frequency of the effect and also includes:-

(e) Any potential effect of high probability; and

(f) Any potential effect of low probability which has a high potential impact."

1.1.2 Section 5 outlines the purpose of the Act as follows:

"(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act 'sustainable management' means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well being and for their health and safety while:

(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonable foreseeable needs of future generations; and

(b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and

(c) Avoiding, remedying or mitigating any adverse effects of activities on the environment."

1.1.3 Section 7 requires the consent authority to have particular regard, among other matters, to:

"(b) The efficient use and development of natural and physical resources

3. **Continued**

(c) The maintenance and enhancement of amenity values."

Section 7 matters are not expressly ranked in any order of priority. Therefore all aspects of this list are to be considered fully. Relevant matters are considered in the evaluation section of this report.

1.1.4 Section 104(1) states inter alia:

"(1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to:

(a) any actual or potential effects on the environment of allowing the activity; and

(b) any relevant provisions of –

(iii) a regional policy statement or proposed regional policy statement;

(iv) a plan or proposed plan; and

(c) any other matter the consent authority considers relevant and reasonably necessary to determine the application..."

1.1.5 Section 104A provides for the determination of applications for controlled activities stating as follows:

"After considering an application for a resource consent for a controlled activity, a consent authority –

(a) may grant or refuse the application; and
(b) if it grants the application, may impose conditions under section 108."

1.1.6 Section 104B provides for the determination of applications for discretionary activities stating as follows:

"After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority –

(a) may grant or refuse the application; and
(b) if it grants the application, may impose conditions under section 108."

1.1.7 Section 104C provides for the determination of applications for restricted discretionary activities stating as follows:

"When considering an application for a resource consent for a restricted discretionary activity, a consent authority –

(a) must consider only those matters specified in the plan or proposed plan to which it has restricted the exercise of its discretion; and
(b) may grant or refuse the application; and
(c) if it grants the application, may impose conditions under section 108 only for those matters specified in the plan or proposed plan over which it has restricted the exercise of its discretion."

1.1.8 Section 104D provides for the determination of applications for non-complying activities as follows:

3. **Continued**

104D. Particular restrictions for non-complying activities

(1) Despite any decision made for the purpose of section 93 in relation to minor effects, a consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either –

(a) the adverse effects of the activity on the environment (other than any effect to which section 104(3)(b) applies) will be minor; or

(b) the application is for an activity that will not be contrary to the objectives and policies of –

(i) the relevant plan, if there is a plan but no proposed plan in respect of the activity; or

(ii) the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or

(iii) both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.

(2) To avoid doubt, section 104(2) applies to the determination of an application for a non complying activity.

2.0 District Plan Considerations

2.1 The application was received on 8 September 2005 at which time Variation 13 (Flat Bush Structure Plan) had not been declared operative. In the period between the application being received and this hearing the provisions of Variation 13 have been declared operative (all outstanding appeals having been resolved) and is now considered part of the Manukau Operative District Plan 2002 ("Operative Plan"). Consideration of the application has been undertaken in accordance with the provisions applying to Flat Bush under Chapter 17.10.1 of the Operative Plan.

2.2 In addition to the Flat Bush provisions the provisions of Chapter 9 – Land Modification, Development and Subdivision of the Operative Plan are also relevant with the provisions of this chapter controlling the proposed earthworks component of the application, together with the proposed installation of public network utility services proposed.

2.3 Also relevant are the objectives, policies, rules and assessment criteria outlined in Chapter 8 – Transportation of the Operative Plan. Under these provisions consideration of the proposed access of the subdivision onto Carlos Drive, including consideration of pedestrian linkages is necessary.

3.0 Evaluation

The assessment of the environmental effects of the proposed application by Working Concepts Ltd. has been considered overall as a Non-Complying Activity. The environmental effects over which the Council has discretion are, therefore, unrestricted. The following evaluation addresses the environmental effects of the proposal on this basis. Despite application being made as a Discretionary Activity, Council may approve consent under the provisions of Section 104(5) of the Act regardless of what type of activity the application was expressed to be for.

3.1 <u>Interface between the Flat Bush Residential 1 Zone and the Transition Zone – Gracechurch Heights.</u>

3.1.1 The rear 30 metres of the subject site is affected by the Special Policy Area Boundary: Flat Bush Buffer Area ("Flat Bush Buffer"). At section 17.10.9.4.3 of the Manukau Operative District Plan 2002 it is identified, in relation to this Special Policy Area Boundary, that:

3. **Continued**

"A Special Policy Area (Flat Bush Buffer) of 30 metres in width, lies over an area of land within the Flat Bush Residential 2 Zone [and Flat Bush Residential 1 Zone] *where it adjoins the Flat Bush Countryside Transition zone. The Special Policy area establishes a buffer between the two zones in order to mitigate any potential adverse effects of the higher density urban development within the Flat Bush Residential 2 Zone on the residential amenity values of the Flat Bush Countryside Transition Zone."*

3.1.2 The key distinctions which apply between the Flat Bush Residential 1 Zone and the Flat Bush Buffer are identified in the following table (Table One):

Table One: Key Distinctions between Flat Bush Buffer Zone Rules and Flat Bush Residential 1 Zone (General Precinct) Rules.

Rule	Flat Bush Residential 1 Zone (General Precinct)	Flat Bush Residential 1 Zone with Special Policy Area - Flat Bush Buffer
Rule 17.10.12.2 – Site Coverage (Sites over 400m^2 net site area)	40%	35%
Rule 17.10.12.5 – Maximum Height	9 metres	8 metres
Rear Yard	1 metre	6 metres (from a Flat Bush Countryside Transition Zone)
Minimum Lot Size	125m^2 (with average of 250-425m^2)	750m^2

3.1.3 The proposed development includes a row of 8 residential units which fall marginally within the rear 30 metres of the subject site affected by the Flat Bush Buffer. Despite this it is considered that the layout and design of buildings on the site has been undertaken in a comprehensive manner to both meet the design objectives of the Flat Bush Residential 1 Zone, and to observe the buffer zone ideal of the Flat Bush Buffer. In this regard it is noted that a conventional subdivision of the rear 30 metre portion of the site could result in up to three 750m^2 sites with dwellings able to be built on each site with a floor area up to 262m^2 in footprint and constructed within 6 metres of the rear boundary of the site. When compared in this context the proposal well exceeds the 6 metre separation required from the rear-boundary with in excess of 25 metres separation provided. Communal facilities including a pool house/gym and pool are, however, located in the Flat Bush Buffer area.

3.1.4 The site coverage of buildings proposed within the rear 30 metres equates to approximately 13% which is well within the 35% which applies in this Flat Bush Buffer. Further, the proposal complies with the 8.0m maximum height for the extent that buildings protrude into the 30 metre Flat Bush Buffer. The buildings comply throughout the remainder of the site with the 9.0 metre maximum height limit which applies in the Flat Bush Residential 1 Zone (General Precinct) proper.

3.1.5 The separation of buildings from the northern site boundary, and proposed establishment of communal facilities in the buffer area assists in creating a transition from the larger rural residential sites on Inchinnam Road, to the more intensive urban development anticipated by the Flat Bush Residential 1 Zone.

3. **Continued**

This design, with the buffer planting of hedge species interspersed with large trees as proposed on the sites northern boundary with communal pool facilities (including pool house), is considered to provide a satisfactory transition between the rural residential environment of the Countryside Transition Zone, and the Flat Bush Residential 1 Zone. While this is not in strict conformity with the Special Policy Area – Flat Bush Buffer rules the specific circumstances of the application are considered to meet the transitional intention of this buffer.

3.2 Site Design

3.2.1 The configuration of the terraced units proposed provides for a primary orientation of 8 units, being the southern most row of units, to the street (Carlos Drive). Vehicle access is provided along the eastern boundary of the site servicing garaging associated with all units via a rear service lane. With this configuration garaging is discreetly located out of view from the street.

3.2.2 All units are of similar internal configuration providing double garaging on the ground floor with kitchen and living area, and second floor containing three bedrooms and additional "second lounge/study".

3.2.3 The external appearance of the proposed units is a mixture of solid plaster and weatherboard finish with concrete tile roofing. Windows are proposed to be finished with aluminium joinery. The units proposed will be a mirror image of the recently constructed units directly opposite on the southern side of Carlos Drive. The variation in external materials proposed is considered to provide a quality external appearance for these units. Further, the effect of unit bulk or repetitiveness on Carlos Drive is broken by the mixture of colour and external materials proposed.

3.2.4 The areas of private outdoor space are provided at ground level with courts of approximately $16m^2$ in area provided directly from the living room of the ground floor units. While this area is smaller than that specified under Rule 17.10.12.8 of the Manukau Operative District Plan 2002 ($24m^2$) the outdoor court is considered to provide efficient and functional space for future residents of these units. These courts are located in a manner where a compromise is attained between residents' privacy, and surveillance of the street. The courts are raised above the ground level by a minimum of 1.0 metre with semi transparent wrought iron balustrades provided above this. This vertical separation assists in providing a distinct differentiation between public and private space. In addition, residents also have rights to the communal pool and gym facilities on site.

3.2.5 While the site coverage for buildings on the site (in the Flat Bush Residential 1 General Precinct only) will be infringed this infringement arises as a consequence of the design of units on the site. The appropriate building orientation and form proposed together with landscape treatment is considered to result in adverse effects arising from the site coverage infringement that are minor in nature, while facilitating a positive street presence.

3.2.6 The proposed units infringe the height in relation to boundary recession plane on the western boundary despite a 4.0 metre setback from this boundary. The design of units on the site to the west (proposed) and those on the subject site such that the effects of this infringement are considered to be minor. The balconies on the northern side of the western most unit (in the southern block) will be required to have screening in place to ensure this unit does not overlook balconies on the site to the west. Moreover, in accordance with the provisions of Section 104(3)(b) of the Resource Management Act 1991 no account can be taken of the environmental effects of the proposal on this adjoining site, as the written approval of this adjoining owner has been obtained.

3. **Continued**

3.3 Landscaping

3.3.1 The applicant proposes to undertake comprehensive landscaping of the development as indicated in the planting plan submitted with the application. The planting of Queen Palm is proposed throughout the development with complementary plantings of both native and exotic specimens. The planting proposed is considered appropriate for the development form and will assist in complementing the visual appearance of the development.

3.4 Transportation

3.4.1 The original site is located on the northern side of Stancombe Road approximately 140 metres west of the intersection of Gracechurch Drive, Murphy's Road and Jeffs Road. The site is a result of the recent subdivision (Proposal 26164, SP 8799) that included the widening of Stancombe Road and the formation of Carlos Drive that runs parallel to Stancombe Road. The subject site (Lot 2 DP 350919) involves the land to the north of Carlos Drive which is surrounded by a mix of newly developed residential apartment units and single household units as well as lots that are in the process of being developed for residential purposes.

3.4.2 The proposal involves the development of 16 two-storey, terraced houses that run parallel to Carlos Drive in two rows of eight opposite one another and are separated by an 8.5 metre wide access lane. At the rear (north) of the site the four bedroom dwellings will have the services of a communal pool, pool house and gazebo. The development includes double garaging at ground level that for the most part complies with the on-site parking and manoeuvring requirements of the Operative Plan, however, the proposed garage doors widths each measure 4.5 metres and, therefore, do not meet the required 5.0 metres in accordance with Rule 8.24.5(d) of the Operative Plan.

3.4.3 The ground floor garaging is to be accessed from a formed and sealed private-way that runs northwards along the eastern boundary of the site past the first row of dwellings and then turns 90 degrees in between the two rows of dwellings. The private-way also continues northwards along side the second row of dwellings for a further 16 metres to provide an on-site truck reverse manoeuvring area. The private-way provides access to and from Carlos Drive to the south and complies with dimension and gradient standards within the Operative Plan.

3.4.4 It is also noted that the waste storage for the apartment units is to be stored adjacent to the two most eastern dwellings alongside the private-way.

3.5 Assessment

3.5.1 The proposed 16 residential unit apartment block complies with on-site parking rules of the Operative Plan (32 car parking spaces). Although the development includes double garaging with garage door widths of 4.5 metres that do not comply with the minimum width requirement of 5.0 metres it is considered that the 8.5 metre wide, on-site reverse manoeuvring aisle available for each apartment within the development and the complying internal dimensions of the garages will ensure that the non-standard garages will remain a safe and efficient means of on-site parking.

3.5.2 The development is to be accessed via the two-way shared access and manoeuvring area which ensures adequate on-site manoeuvring for an 8 metre rigid truck for all dwellings within the proposed layout. Pedestrian access is also via the shared area whilst the occupants of the front eight units will also have direct pedestrian access onto Carlos Drive.

3. **Continued**

3.5.3 It is noted that the additional traffic flows generated by the development have been previously anticipated within the Operative Plan through the recent road widening and upgrading of Stancombe Road as well as within the underlying subdivision (Proposal 27046, SP 8840). The double garage design with all garaging located to the rear of the road frontage is considered to be a convenient and attractive method for providing the required off-street parking. Consequently, it is considered that there are no potential traffic conflicts anticipated from the development. Also the nearest intersection to the shared access lot is the intersection of Stancombe Road with Carlos Drive which is located approximately 60 metres away.

3.6 **Engineering Assessment**

3.6.1 Stormwater Reticulation

The proposed stormwater reticulation system captures stormwater and drains it via a public pipe network which discharges either to the west, or east of the subject site. The design of the reticulation of stormwater on the site has been reviewed by Council's Resource Engineer and is determined to be acceptable subject to the imposition of conditions. A financial contribution was imposed on the underlying subdivision to account for wider infrastructure demands arising from discharge of stormwater from the site.

3.6.2 Wastewater Servicing

All proposed units in the development are proposed to be provided with individual connection points and wastewater it to be discharged to the public network. Council's Resource Engineers have reviewed the reticulation proposed and consider it provides a satisfactory method for disposing of wastewater from the subdivision. In addition to the reticulation works further payment of financial contributions has been required as a condition of the preceding subdivision consent in order to provide for network infrastructure beyond the site.

3.6.3 Water Supply

As for both stormwater and wastewater Council's Resource Engineer considers the water supply servicing proposed is satisfactory subject with the imposition of financial contributions having been levied as a condition of prior subdivision consent.

3.6.4 Electricity / Telecommunications

All units within the development will be required to be provided with connections for both electricity and telecommunications. These services will be required to be installed underground.

3.6.5 Land Modification / Retaining Walls / Geotechnical Suitability

The applicant proposes 1950m^3 of land modification works in conjunction with the application to provide level building platforms on the site. Subject to the imposition of conditions to ensure silt mitigation measures are installed, and that any trucks associated with these works do not deposit fill on the adjoining road, it is considered that these works are reasonably necessary to facilitate development of the site. No history of asbestos contamination of the site has been identified.

3. **Continued**

The applicant proposes the construction of retaining walls on each of the western, eastern and northern boundaries of the site. The construction of these retaining walls will serve to provide a level building platform, and to provide and even grade between the street (Carlos Drive) and the site. Council's Resource Engineer has reviewed the proposed design of these retaining walls and considers the design to be sufficient to stabilise the subject site and any foreseeable development on adjoining sites.

3.7 Development Contribution (Local Government Act 2002)

3.7.1 Under the Council's Development Contribution Policy, which applies under the Local Government Act 2002, payment of a development contribution (at a current rate of $4,505 + GST) will be required upon application for building consent to establish each of the residential units and levied at this stage. As this is a Local Government Act 2002 contribution an advice note has been recommended on the consent to draw the applicant's attention to this requirement.

4.0 Evaluation in accordance with Section 104 of the Act

Section 104 of the Act outlines those matters which the Council, as Consent Authority, shall have regard to when assessing the subject application, and is also subject to Part II (the Purpose and Principles of the Act). An evaluation of the proposal in accordance with section 104 is outlined below.

4.1 Part II of the Act "Purpose and Principles"

4.1.1 The purpose of the Resource Management Act 1991 is to promote the sustainable management of natural and physical resources (refer Section 1.1.1 of this report for full definition) and this is an overriding consideration under Section 104 assessment. In terms of giving effect to the purpose of the Act, it is considered that the proposed development will promote sustainable management by achieving efficient use of a scarce resource (being land) with development to proceed in a comprehensively designed manner.

4.2. Section 7 - Other Matters

4.2.1 Section 7 identifies a number of "other matters" to be given particular regard by Council in the consideration of any assessment for resource consent, and includes:

4.2.2 *"The efficient use and development of natural and physical resources"*.

4.2.3 The proposal constitutes efficient use of a site zoned for residential development. Infrastructure in terms of roading and network utilities is available in the surrounding area in anticipation of development of the site for residential purposes.

4.2.4 "*The maintenance and enhancement of amenity values*".

4.2.5 "Amenity Values" is defined in the RMA as:

"those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes".

4.2.6 It is considered that the proposed development is mindful of the need to provide an appropriate level of amenity for the transition between the Flat Bush Buffer and Flat Bush Countryside Transition Zone. Subsequently, the amenity values of the site or surrounding area will not be compromised.

3. **Continued**

4.3 Section 8 - Principles of the Treaty of Waitangi

4.3.1 It is considered that the principles of the Treaty of Waitangi have been satisfactorily taken into account with respect to this application and that there will be no adverse effects on tangata whenua as a result of granting consent.

4.4 Section 104(1)(a)

4.4.1 This section of the Act requires consideration of any actual or potential effects on the environment and has been addressed in Part 7.0 (inclusive) of this report. It is concluded that the proposal will have no more than minor actual or potential effects and that the impact of such effects are mitigated by the imposition of conditions on consent.

4.5 Section 104(1)(b)

4.5.1 The proposal does not have implications or impact on provisions of a national policy statement (of which none have yet been prepared); or the New Zealand Coastal Policy Statement.

4.5.2 Section 104(1)(b)(iii) of the Resource Management Act 1991 requires regard be had to any relevant provisions of a Regional Policy Statement. The Auckland Regional Policy Statement (ARPS) was notified in 1994 and decisions on submissions were incorporated in September 1995. This document became operative on 31 August 1999. Further plan changes have been notified to the ARPS as identified below:

(i) Proposed Plan Change 6 – Giving Effect To The Regional Growth Concept And Integrating Land Use And Transport.
(ii) Proposed Plan Change 7 – Changes to the Metropolitan Urban Limits
(iii) Proposed Plan Change 8 – Landscape and Volcanic Cones
(iv) Proposed Plan Change 9 – Include Reference to the Hauraki Gulf Marine Park Act 2000
(v) Proposed Plan Change 10 – Natural Hazards

4.5.3 The ARPS provides the overall direction and general strategy for management of resources in the Auckland region. Key issues for the region are identified within this document as the need to accommodate continued population growth in the foreseeable future, and the need to recognise that the effects of some uses in rural and coastal areas, including cumulative effects, can be significantly adverse. To achieve this, the ARPS promotes the containment of urban growth within defined Metropolitan Urban Limits (MUL).

4.5.4 Under the provisions of this definition, and as the land subject of this application has been afforded an urban zoning since 1995, this land is considered to fall within the MUL. On this basis the proposed subdivision and development of this land is considered to be consistent with the provisions of the ARPS. This being in line with the strategic objectives and policies under section 2.5 of the ARPS.

4.6 Section 104(1)(c)

4.6.1 This requires that any other matter the consent authority considers relevant and reasonably necessary to determine the application be considered. In this case there are no other matters that are considered necessary to determine the application.

3. **Continued**

5.0 Relevant Provisions of an Operative Plan

Section 104(b)(iv) requires that the Council have regard to any objectives, policies, rules or other provisions of any District Plan or Proposed District Plan when considering an application for resource consent. The site is subject to the provisions which apply under the Manukau Operative District Plan 2002, and particularly those which apply under Section 17.10 – Flat Bush Area. Relevant objectives and policies, and the consideration of the proposal against these relevant objectives and policies follows.

5.1 **Chapter 17.10.3 – Flat Bush**

5.1.1 Objective 17.10.3.1

"To create a diversity of living and working environments of high environmental quality within Flat Bush with an emphasis on the sustainable use of a scarce regional and district land resource."

The proposal, while entirely of a residential nature is considered to fulfil the intention of this objective by providing a form and scale of residential development which utilises the site in an efficient manner, with consideration of the relationship of the development with adjoining sites and the street. Further landscape planting will serve to augment the overall amenity values of the site.

5.1.2 Objective 17.10.3.2

"To facilitate the urbanisation of the area in a manner and at a rate which takes account of the demand for such urbanisation while ensuring the efficient use of the diminishing land resource commensurate with the provision of appropriate levels of amenity for residents in the area."

Design of the development at a density appropriate for the zone, together with the quality of external material proposed provides appropriately for the amenity of local residents, as well as prospective residents of the development itself. The density of development proposed also ensures efficient use of land as a diminishing resource.

5.1.3 Objective 17.10.3.3

"To facilitate the development of an appropriate range of densities of development and living and working environments of good amenity within Flat Bush."

The proposed development is a mirror image of a recent terraced housing development directly to the south. The development observes the fundamental principles of the Flat Bush Structure Plan by providing a positive street interface and density. This results in a density consistent with this objective.

5.1.4 Objective 17.10.3.4

"To achieve a well connected, adaptable, safe, attractive, healthy and pleasant environment for living and working and travelling with an emphasis on the importance of the public realm including parks, streets, civic areas, roads and the natural environment."

3. **Continued**

Provision is made within the development for interface with the street resulting in a pleasant environmental result recognising the relationship of the development with the only adjoining public realm (being Carlos Drive).

5.1.5 Policy 17.10.4.1

"Subdivision and settlement should be of a type, density and design that does not detract from, and is supportive of, the specific environmental outcomes identified for each zone as well as an integrated transport system which provides a choice of travel modes."

The density of development on the site will serve to support the movement of public transport along Stancombe Road and the nearest future public transport route. As previously identified, the design of the development is considered acceptable.

5.1.6 Policy 17.10.4.2

"Urbanisation in the area should occur in a staged manner based on proximity to existing development in the north of the catchment so as to minimise adverse effects on the environment and to ensure an appropriate transition between the various forms of development within and immediately outside the Flat Bush Structure Plan Area and by:

(i) providing through the Flat Bush Structure Plan, the land use framework for development of the future urban area including provision of the Town Centre, smaller commercial centres, schools and conveniently located public open space areas

(ii) establishing targets for overall average densities of development throughout the Flat Bush Structure Plan Area, with greater density of development being enabled for those areas closest to the Town Centre, Neighbourhood Centres and selected major transportation routes, consistent with the Auckland Regional Policy Statement

(iii) allowing higher densities of development throughout the area than are provided for in the Main Residential zone."

The density of development proposed will be generally in exceedence of the density of development which typically occurs in the Main Residential Zone. The development is considered to be in accordance with the provisions of this policy and is located within the first stage release of the Flat Bush Structure Plan.

5.1.7 Policy 17.10.4.6

"Subdivision and development activity should achieve urban design and sustainable management principles by:

(i) encouraging a sense of place and identity,

(ii) providing a high degree of 'connectivity' through well connected road networks based on block designs,

(iii) promoting social interaction through attention to the placement of buildings on sites,

(iv) facilitating safe walking and cycling, including through the identification of cycle routes,

3. **Continued**

(v) supporting or enabling opportunities for passenger transport services to establish,

(vi) reducing travel distances, providing access to amenities, and supporting an integrated transport system that provides a choice of travel modes,

(vii) maintaining contact between communities,

(viii) being compatible with the part of the roading hierarchy on which it is located in terms of the type and level of traffic generation,

(ix) designing local roads to ensure a safe low traffic speed environment,

(x) relating to the streetscape so as to enhance perceptions of safety,

(xi) providing separation buffers between incompatible activities, promoting biodiversity.

(xii) Ensuring there is provision for emergency services that takes account of strategic location requirements."

The development of the subject site progresses development alongside Carlos Drive which connects to Gracechurch Drive in a block formation. The proposed frontage of the southern most row of units to Carlos Drive achieves a design of buildings to overlook Carlos Drive optimising passive surveillance. The development proposed is considered to be compatible with this policy and is a logical extension of the development of the site facilitated by previous subdivision and road construction.

5.2 **17.10.9.3 Flat Bush Residential 1 Zone**

5.2.1 Objective 17.10.9.3.1

"To facilitate the development of an integrated, medium/ higher density residential environment (while enabling higher density) which has high levels of amenity, supports a range of travel modes, allows for a range of living opportunities and incorporates opportunities for compatible small scale employment in appropriate locations."

5.2.2 Policy 17.10.9.3.2

"a) Buildings and structures should be designed and located in such a manner that they positively address the street and public places so as to contribute to neighbourhood amenity values including pedestrian accessibility and safety, and streetscape values such as diversity and attractiveness.

b) Non residential buildings and structures should be sited and designed in a way which is in keeping with a residential context.

c) Carparking, particularly for non-residential purposes should be located to the rear or side of buildings rather than between buildings and the street.

d) Residential development should include private outdoor space(s) that can function as attractive and useable outdoor living and service areas.

e) Activities within residential areas should be in keeping with residential intensity, and residential character, and should not create nuisances such as objectionable noise, smoke, dust, fumes, odours, noxiousness or danger.

f) Connectivity/permeability of the street system shall be maximised wherever possible."

The proposed development will be completed in line with the density of development provided for in the Flat Bush Residential 1 Zone. Particularly, this is achieved by buildings providing a positive relationship with the street, vehicle parking at the rear of buildings fronting a public road and sufficient areas of on-site amenity for residents.

3. **Continued**

5.3 **Chapter 9 – Land Modification, Development and Subdivision**

5.3.1 Objective 9.3.5

"To ensure the provision of an adequate standard of infrastructure and public utility services at the time land is modified, developed or subdivided to avoid, remedy or mitigate any adverse effect on the environment, and to ensure that the cost of providing or upgrading services is borne by those undertaking land modification, development or subdivision to the extent that such works are necessitated by the proposed activity."

Provision of adequate network utility servicing of the development is proposed by the applicant, or has been provided for by payment of financial contributions on the preceding subdivision consent.

5.4 **Chapter 8 – Transportation**

5.4.1 Objective 8.3.2

"To maximise energy efficiency and accessibility within the transportation network and encourage the use of energy efficient modes of transport."

The design of access and vehicle circulation is compatible with the transport network with services the site. The surrounding transportation network has been designed and constructed in anticipation of development of the site. In time the density of development proposed will also support public transport networks.

6.0 Evaluation in Accordance with Section 104D of the Act

6.1 Under the Manukau Operative District Plan 2002 the application is assessed as a Non-Complying Activity. Accordingly, for Council to grant a consent for a Non-Complying Activity the Council must be satisfied that the adverse effects of the activity on the environment will be minor, and the application will not be contrary to the objectives and policies of the relevant district plan (commonly referred to as the "threshold test").

6.2 The preceding evaluation of the effects of the proposed activity, and analysis against the relevant objective and policies of the Manukau Operative District Plan has concluded that the proposal meets both limbs of the threshold test.

7.0 Submissions

7.1 No submissions were received in response to the limited notification of the application.

8.0 Conclusions

8.1 The applicant proposes to complete a 16 residential unit terraced housing development on the subject site with associated provision of shared communal facilities. In addition to the terraced house construction the applicant proposes to complete land modification works and network utility provision in conjunction with the development.

3. **Continued**

8.2 The proposed development is considered to be compatible with the objectives and policies which guide development in the Flat Bush Residential 1 Zone. While the application is not strictly in conformity with the intention of the Special Policy Area Flat - Bush Buffer Zone the design of development on the site is considered to provide a superior result than could otherwise be established as a permitted activity in the Special Policy Area - Flat Bush Buffer.

8.3 Overall the development provides a positive relationship with the street and makes efficient use of the subject site.

8.4 The proposal is considered to meet both limbs of the threshold test provided under Section 104D of the Resource Management Act 1991. This is because the environmental effects of the proposal are considered to be minor, and the proposal is considered to be consistent with the relevant objectives and policies which apply under the Manukau Operative District Plan 2002. Accordingly, consent is recommended, subject to the imposition of conditions on consent to further mitigate the effects of the proposal.

9.0 Officer's Recommendation to the Botany Community Board Resource Consents Hearings Committee

That the application for land use resource consent by Working Concepts Ltd received on 8 September 2005 for Council's consent to construct a 16 residential unit housing complex on the site at 44 Carlos Drive, Flat Bush Botany-Clevedon be determined as a Non-Complying Activity and that Council hereby grants its consent pursuant to Sections 104, 104A, 104B, 104C and 104D of the Resource Management Act 1991 and subject to the following conditions:

9.1 **Consent Conditions:**

9.1.1 **Land Use Conditions**

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing and granting of this Resource Consent are paid in full.

2. That the development shall be completed in accordance with the plans and documentation including Assessment of Environmental Effects (AEE) submitted with the application and numbered 27855 (Alto Architects Plans ref: A10, A20, A30, A40, A50, A60, A70, A80, A90 and A100) by Council unless otherwise amended by the following conditions of consent.

Design of Units

3. Additional profile shall be provided in association with the windows of the western and eastern building facades. As an example, this may take the form of sills or eves. A plan shall be submitted for the approval of the Manager Resource Consents and Compliance prior to occupation of any units on the site, demonstrating compliance with this condition.

4. Privacy screens shall be installed at the ends of all first floor balconies projecting a minimum of 1 metre forward of the face of each unit with the exception of Units 17 and 25 where these privacy screens shall extend over the full depth of the balcony.

3. **Continued**

5. That the external colour scheme of the apartments be consistent with the colour scheme plans (Coloured Renderings) numbered 27855 by the Council (1 Sheet).

Landscaping

6. The proposed landscape planting as identified on the planting plan and plant schedule submitted dated April 2005 (Amended) and numbered 27855 by the Council shall be implemented to the satisfaction of the Manager, Resource Consents and Compliance within 3 months of completion of construction of the units on the site. The landscaped areas shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state to the satisfaction of the Manager – Resource Consents and Compliance.

Noise Insulation Requirements

7. That the units shall be designed, constructed and pass field tests demonstrating compliance with the following standards:

   (i) The Sound Transmission Loss of common walls shall be no less than 60 and the Sound Transmission Loss of common floors and ceilings shall be no less than 55.

   (ii) The Impact Insulation Class of floors shall be no less than 55.

   (iii) The Verification Method shall be G6/VM1.

   (iv) When assessing Impact Insulation Class, all floors, hallways and stairs in a building outside a household unit are deemed to be common building elements to that household unit. The impact requirement shall therefore apply between any other unit or common space and the habitable space of the household unit irrespective of vertical or horizontal separation.

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been designed in accordance with the above standards shall be provided at building consent stage.

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been constructed and has passed field tests demonstrating compliance with the above standards shall be provided to the Manager, Resource Consents and Compliance prior to occupation of the units.

Walls/Fences forward of the Primary Building Frontage

8. Solid walls, fences or hedges forward of the primary building frontage shall not exceed 1200mm in height measured from the finished ground level of the front courtyards.

Letter Boxes

9. Letter boxes shall be provided for each unit fronting Carlos Drive at the street frontage. For the rear block of units a letter box shall be provided for each of these units in an accessible position, which meets the requirements of New Zealand Post.

3. **Continued**

Waste Management

10. That the management of domestic waste on the site shall be undertaken in accordance with the Waste Management Plan submitted with the application and numbered 27855 by the Council.

11. Every new owner, or tenant, within the apartment complex shall be advised in writing of the process for waste management storage and disposal. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

12. That the outdoor rubbish collection areas shall be screened from public view by the erection of a fence prior to the occupation of the household units and be thereafter maintained to the satisfaction of the Manager, Resource Consents and Compliance.

Washing Lines

13. That no washing lines, or airing of laundry shall occur at a level above the height of balcony balustrades on each floor.

    Every new owner, or tenant, within the apartment complex shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

Engineering

14. The works detailed on the approved plans referenced E7/27855 (sheets 1-14) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements:

    (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

    (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

    (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

    (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer, Compliance, (phone 262-8900 extension 5850).

    (v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

15. The works shall be completed to the satisfaction of the Manager, Resource Consents and Compliance **within six months of the commencement of these works and/or prior to occupation of the proposed buildings.**

3. **Continued**

Land Modification Works

16. The earthworks and silt control shall be undertaken in general accordance with the approved plans submitted with the application, referenced E8/27855 by Council. As the earthworks are progressively completed, the site shall be stabilised against erosion.

17. All land modification works shall be undertaken in such a manner as to ensure that beyond the boundary of the site there should be no 'dust' or 'soil erosion / siltation', which in the opinion of the Manager, Resource Consents and Compliance, is objectionable, offensive or has the potential to create an adverse effect on the receiving environment.

18. The consent holder shall be responsible to ensure that the land within the above site and the land on adjoining properties remains stable at all times in respect to the approved works.

19. Control measures shall be in place to ensure that any trucks leaving the site do not deposit soil or other debris on public roads. Any such material deposited on any public road shall be cleaned up immediately at the consent holder's expense.

20. Prior to development commencing, the consent holder shall provide Council's Manager - Environmental Health and Compliance with details of the level of communication with neighbouring property owners/occupiers and identification of the liaison person. The applicant shall ensure that, before commencement of the development, the owners of all adjoining properties are notified in writing of the development in general, its expected duration, the times at which it will be undertaken, and the name of a responsible person with whom neighbours can liaise if the need arises. (Any queries in the foregoing should be referred to the Manager - Environmental Health and Compliance).

21. A satisfactory foundation completion report for the site shall be submitted to Council for approval upon completion of the land modification works.

    (i) Where a foundation completion report states that a building constructed in compliance with NZS 3604:1999 does not need specific design for the building foundations, no record will be placed on Council's Land Information Register or covenant registered on the Certificate of Title requiring that the recommendations of that report be complied with.

    (ii) All other properties will be noted on Council's Land Information Register.

    (iii) Where 'Extremely Expansive Soils' [AS 2870 (1996) Class E or equivalent] or 'Specific Design Requirements' are indicated, a covenant in accordance with Section 108 of the Resource Management Act 1991 will also be required to be registered on the Certificate of Title for the site.

Retaining Walls

22. The retaining walls proposed shall be undertaken in such a manner as to ensure that the land within the site and the land on adjoining sites remains stable at all times. The consent holder shall ensure that prior to construction commencing, all necessary approvals for the retaining walls are obtained and that the retaining walls are completed in a timely manner and supervised by a Chartered Civil Engineer.

3. **Continued**

Wastewater

23. Adequate provision shall be made for the disposal of wastewater.

This will include the extension of the existing public system to and within the site to provide each stack of units with individual connection points and provision for the upstream catchment. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and the approved engineering drawings referenced E8/27855 by Council, to the satisfaction of the Manager, Resource Consents and Compliance within six months of the commencement of these works **and/or** prior to occupation of the proposed buildings.

24. Adequate provision shall be made to protect wastewater lines that will be crossed over by a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled. Where clearance is less than 150mm, then 50mm thick high-density polystyrene packing shall be placed against the underside of the stormwater line. Where the clearance between the two lines is less that 300mm and bell jointed stormwater pipes shall be utilised, there shall be no bell joints placed directly over the wastewater lines.

Adequate provision shall be made to protect wastewater lines that will cross over the top of a stormwater line. In all such cases, the area between the two lines shall be hardfill backfilled.

Water Supply

25. Adequate provision shall be made for the supply of water.

This will include the extension of the existing public system to / within the site to provide each unit with individual connection points. These extensions shall be constructed in accordance with Council's Engineering Performance Standards and the approved engineering drawings referenced E8/27855 by Council, to the satisfaction of the Manager, Resource Consents and Compliance within six months of the commencement of these works and/or prior to occupation of the proposed buildings.

Stormwater Drainage.

26. Adequate provision shall be made for the disposal of stormwater from the site. This will include the extension of the existing public systems to and within the site to provide each unit with public connection points and provision for the upstream catchment(s) in accordance with Council's engineering standards and the approved engineering drawings referenced E8/27855 by Council.

Roading

27. The proposed access way shall be constructed in accordance with the approved engineering drawings referenced E7/27855 by Council to the satisfaction of the Manager, Resource Consents & Compliance,

Vehicle Access

28. The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to occupation of the household units and maintained thereafter to the satisfaction of the Manager, Resource Consents and Compliance.

3. **Continued**

29. That the width of the vehicle crossing shall be 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to the occupation of the household units to the satisfaction of the Manager, Resource Consents and Compliance.

Network Utilities

30. Power and telephone services shall be installed underground within the common area to provide suitably located service connections to all proposed units.

31. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

9.1.2 Advice Notes

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However, the Council does have the power to extend this period in certain cases where a further application is made within three months of the consent lapsing.

2. This consent does not constitute authority to build or undertake private drainage works and it may be necessary to apply for a Project Information Memorandum and Building Consent if not already done so.

3. A copy of this consent and the associated approved drawings should accompany any application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of the application.

4. Each building is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. Although the proposed location of the earthworks do not contain any known archaeological sites, it is possible that unrecorded sites may exist. Under the Historic Places Act 1993, it is unlawful for any person to destroy, damage or modify an archaeological site unless the relevant consents have been obtained from the New Zealand Historic Places Trust.

3. **Continued**

In the event of archaeological features being uncovered (e.g. shell midden, hangi or oven stones, pit depressions, defensive ditches, artefact material or human bones) work is to cease in the vicinity of the discovery and the New Zealand Historic Places Trust and appropriate iwi authorities shall be contacted so that the appropriate action can be taken. This includes such persons being given reasonable time to record and recover archaeological features discovered before work may recommence.

The contact details of Ngai Tai Umupuia Kaumatua are as follows:

Nora Kingi	(09) 528 9344
Abe Turei	(09) 536 6674
James Brown (Trust CEO)	(09) 292 9020

6. Development Contributions under the Local Government Act 2002

Please note that under section 198(1)(a) of the Local Government Act 2002 a Development Contribution is applicable to all proposed residential dwellings proposed as part of this development.

The consent holder is advised that a Development Contribution will be calculated on 16 additional household equivalent units (HEU) for the development.

This contribution is currently $4,505 plus GST per additional HEU. The rate of contribution is subject to periodic review through the Council's Annual Plan process. The amount payable will be determined at the date of invoicing – **at the date of issue of building consent.**

Pursuant to section 208(1) of the Local Government Act 2002 until the development contribution is paid the Council may prevent the commencement of the resource consent or withhold a code compliance certificate under section 95 of the Building Act 2004 (from 31 March 2005). The Council may also register the development contribution under the Statutory Land Charges Registration Act 1928 as a charge on the title of the land.

7. A Building Consent is required for retaining walls unless exempted under the Third Schedule of the Building Act 1991. The minimum design load on retaining wall should be 12.0 kPa. This consent does not include any structural approval of the design/calculations submitted.

8. Any future subdivision of the units on the site by way of Unit Title subdivision will be subject to a requirement for payment of reserves contribution in accordance with Rule 15.15.2.3.3.2 of the Manukau Operative District Plan 2002.

9. Prior to any certification being issued under Section 224 of the Resource Management Act 1991 for any future Unit Title subdivision of the units subject of this consent, compliance will need to be achieved with the requirements of Section 224(f) of the RMA.

10. Applicable financial contributions have been paid on the preceding subdivision numbered 25182 and SP 8697 by the Council.

9.1.3 Reasons for the Decision

1. The proposal merits consent pursuant to Section 104, 104A, 104B, 104C and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan (2002).

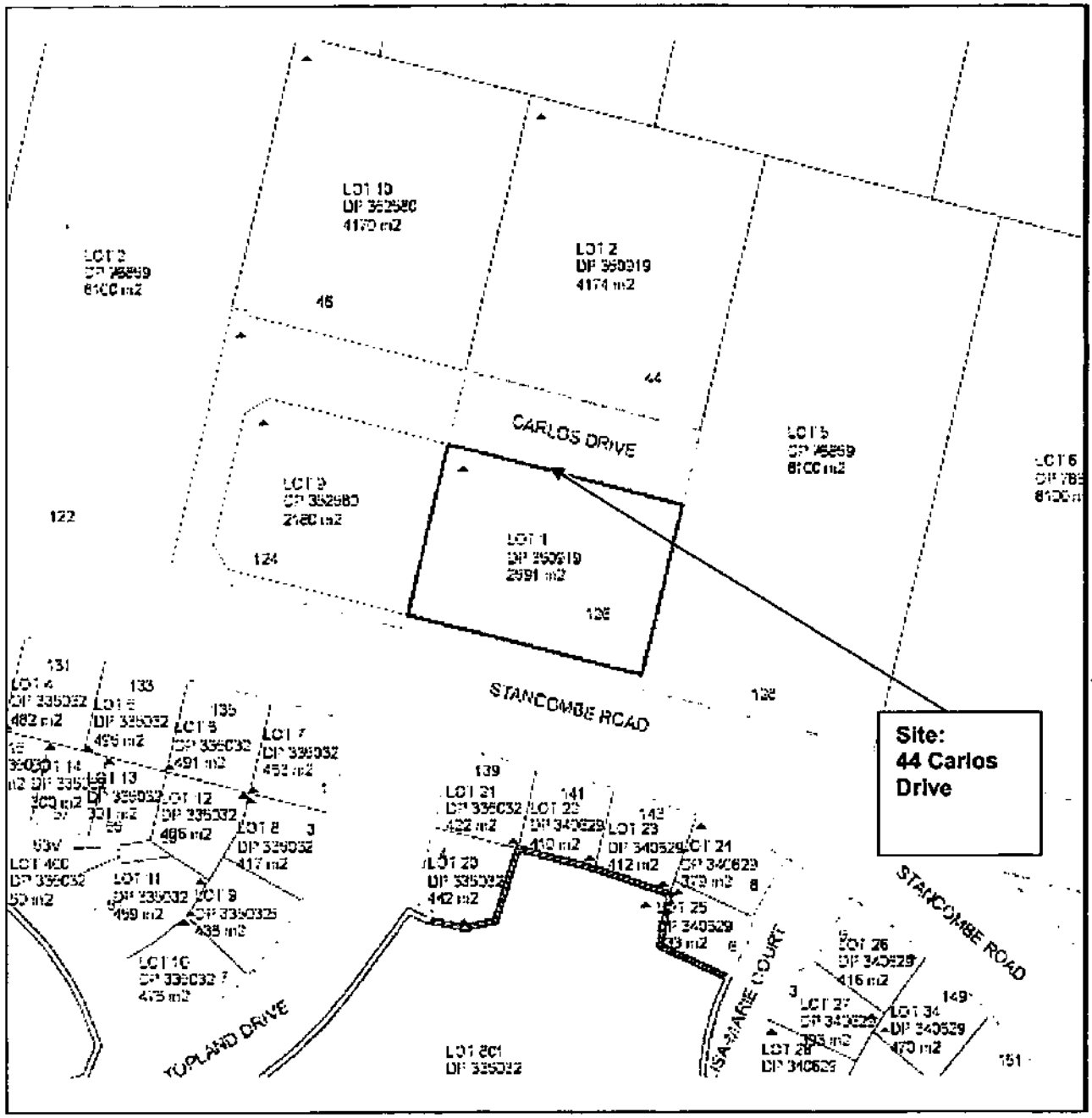
3. **Continued**

2. Overall, the proposed land use consent complies with the minimum density provisions as prescribed by the in the Flat Bush Residential 1 Zone. In this regard it is considered that the proposed units will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.

3. The design and external appearance of the proposed dwellings are generally in keeping with expected development in the vicinity.

4. The proposed layout of the site will provide for efficient use of resources providing for satisfactory on site amenity while preserving the amenity values of surrounding properties and the general streetscape and residential characteristics of the area.

5. The proposed development and the associated engineering works are in accordance with Council's engineering standards and would not result in any adverse effect on the environment.


CARLOS DRIVE
STANCOMBE ROAD
STANCOMBE ROAD
TOPLAND DRIVE
ISA MARIE COURT
Site:
44 Carlos
Drive

4. LIMITED NOTIFIED APPLICATION FOR RESOURCE CONSENT UNDER THE RESOURCE MANAGEMENT ACT 1991 – APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 46 CARLOS DRIVE (FORMERLY 124 STANCOMBE ROAD), FLAT BUSH

Purpose of Report	:	Statutory
Significance of Decision	:	Addressed by the Resource Management Act 1991
Reporting Unit	:	Environmental Services - Resource Consents & Compliance
File Ref	:	ES 1176/46, SP 9188
Reporting Officer	:	Bryce Pomfrett, Resource Management Planner
Ward	:	Botany-Clevedon

SUMMARY

The following report provides an assessment and recommendations on an integrated land use and subdivision resource consent application to construct a 22 residential unit housing complex on the site at 46 Carlos Drive ((formerly 124 Stancombe Road), Flat Bush. In conjunction with the housing development it is also proposed to install network utilities and to construct retaining walls on the eastern, western and northern boundaries. Additionally, the report provides and assessment and recommendations on an application for subdivision resource consent to create four new fee simple residential lots and an additional access lot to be completed when the land use consent has been given effect to.

Overall, the application is considered as a Non-Complying Activity under the Manukau Operative District Plan 2002.

RECOMMENDATION

That subject to any contrary or additional evidence submitted at the hearing, the consents be GRANTED subject to the conditions recommended at the end of this report.

References

Proposal	:	28885 (SP9188)
District Plan	:	Manukau Operative District Plan 2002 (former provisions of Variation 13 are now operative and included within the Manukau Operative District Plan 2002)
Planning Map	:	Figure 16.11A – Flat Bush Structure Plan
Date Received	:	8 September 2005
Date of Limited Notice	:	4 November 2005

Site Description and Context

Legal Description	:	Lot 10 DP 352580
Total Area	:	4176m^2.
Zoning	:	Flat Bush Residential 1 Zone (Flat Bush Buffer Area) General Precinct.

The subject site is generally rectangular in shape being 4176m^2 in area and located to the north of the recently constructed Carlos Drive. The site has been largely cleared of established vegetation through the preceding subdivisional works.

4. **Continued**

The western boundary of the site is defined by a 1.8 metre closely boarded timber fence, with a row of established pine trees defining the boundary between the subject site and rural-residential properties to the north. Recent lower level planting has also been undertaken parallel to this boundary on the site to the north. The western, northern and eastern boundaries of the site have batters at various heights which have resulted from the preceding land modification works.

The site immediately to the east of the subject site is currently vacant, although a development proposal has been submitted to the Council for the construction of 16 terraced houses on this site. To the immediate west of the site is located an 8100m^2 site which accommodates a childcare centre operating from a converted dwelling. The dwelling is located close to the boundary of the applicant's site being adjacent to the midpoint of the boundary separating the two sites.

To the north of the site is located low density rural residential living accessed from Inchinnam Road. Sites in this area are in the order of 8000m^2 site size. These sites being within the Flat Bush Countryside Transition Zone – Gracechurch Heights.

To the south of the site a new three storey apartment complex, with additional underground carparking area (total of 42 units) is nearing completion. To the east of this site a terraced housing complex of 16 units has recently been completed and is being marketed for sale.

Proposal

The applicant, through their consultant Barker & Associates Ltd, has outlined the proposal as follows:

> *"The applicant seeks consent to establish a 22 townhouse residential development on proposed Lot 2 of a site located at 124 Stancombe Road, Flat Bush. The proposed development is shown on the attached plans in Appendix 1 titled "Stancombe Estate, 124 Stancombe Road, Botany, Flat Bush" prepared by Alto Architects, sheets A01-A11.*
>
> *The development is in the form of four blocks, two containing five units each and two containing six units each. The occupants have the use of a communal space around these units, which includes an entertainment area, a petanque court and three visitor car parks. Each of these units comprises three bedrooms, two bathrooms with open plan living area including kitchen, lounge and dining areas which are connected to an outdoor deck and balcony. The ground level consists of garaging for two vehicles in a stacked manner, a bathroom, a laundry, and double bedroom. The first floor level is setback from the ground floor bedroom frontage and includes the open plan living area and balcony. The second level (also setback) includes two double bedrooms and two bathrooms.*
>
> *The overall layout of the site includes two blocks of five units fronting Carlos Drive with a shared driveway providing access through the centre of these two blocks. The remaining two blocks of units lie to the rear at 90 degrees, so all units have access from the centre of the site [with 6 units in each]. The site holds a central feature which is to be landscaped. The central feature enables a circular driveway for traffic movement on the site. To the rear of the site is where both the communal facilities are located in addition to a large landscaped area parallel to the rear boundary.*
>
> *Landscaping is to be provided, and will include specimen trees to the centre and rear of the site as well as some other low level shrubs on the perimeter of the driveway and overall site."*

4. **Continued**

In addition to the land use development proposed on the site it is proposed to subdivide the site into 5 allotments with an allotment boundary surrounding each of the four blocks of units proposed, and a further allotment containing access, parking and communal facilities (being a petanque court, and informal seating / covered areas).

Necessity for the Application

The proposal requires resource consent for both land use and subdivision consent components. Overall, the application is considered as a Non-Complying Activity, however, for clarity the individual components of the application which require resource consent are separated and identified below:

Part A - Land Use

Non-Complying Activity for the construction of more than one household unit in the Special Policy Area (Flat Bush Buffer).

Discretionary Activity to construct a 22 residential unit complex on a 4173m^2 site in the Flat Bush Residential 1 Zone.

Restricted Discretionary Activity for infringement of the 8.0 metre maximum height for units 13-16 and 19-22 (in the Special Policy Area Flat Bush Buffer) by a maximum of 0.8 metres.

Restricted Discretionary Activity for infringement of the height in relation to boundary recession plane on the western boundary of 2.5m + 45^0 recession plane by a maximum of 2.1 metres horizontal distance over 10.8 metres (Unit 10) and for infringement of the 2.5m + 45^0 recession plane on the eastern boundary by a maximum of 2.9 metres horizontal distance over 10.8 metres (Unit 1).

Restricted Discretionary Activity to undertake development requiring the provision and extension of public utility services to service the proposed development.

Restricted Discretionary Activity for the construction of a retaining wall on both the eastern and western boundaries of the site exceeding 1.5 metres in height.

Part B - Subdivision

Under the Manukau Operative District Plan 2002, provision is made for the consideration of the application for subdivision as a Controlled Activity, where construction of the dwellings in accordance with an approved land use consent precedes that subdivision. It is to be required that this subdivision occur as a consequence of the land use consent (Part A) as the shape and configuration of lots relates directly to this land use consent. It is not considered appropriate that titles for the proposed subdivision be possible without the land use consent being completed first as this may result in fragmented development. On this basis the subdivision is considered as a Controlled Activity.

Limited Notification Procedure

During preparation of the application for resource consent the applicant attempted to obtain the written approvals of adjoining property owners to both the north and west of the site (the property to the east is owned by the applicant and, therefore, they provided written approval as an affected person). As a result of consultation to obtain the written approvals of these adjoining owners to the north and west it became clear that at least two of the adjoining property owners were not prepared to provide their written approval as affected parties.

4. **Continued**

Upon a visit to the site and an assessment of the proposal, it was considered that all of the adjoining property owners would potentially be affected by the proposal and hence without written approvals from those parties it was considered appropriate to proceed with notification in accordance with Section 94 of the Resource Management Act 1991. As the development is of significance to the immediate surrounds of the site only, full public notification was not deemed to be necessary.

Pursuant to the Resource Management Amendment Act 2003 becoming operative on 1 August 2003, there is now provision for limited notification under Section 94 as follows:

> ***"94. When public notification of consent applications is not required***
>
> *(1) If notification is not required under Section 93(1), the consent authority must serve notice of the application on all persons who, in the opinion of the consent authority, may be adversely affected by the activity, even if some of those persons have given their written approval to the activity.*[Limited notice]
>
> *(2) However, a consent authority is not required to serve notice of the application under subsection (1) if all persons who, in the opinion of the consent authority, may be adversely affected by the activity have given their written approval to the activity."*

Council considered that the application under consideration is subject to section 94(1) of the Resource Management Act 1991. Adjoining properties were accordingly notified on 4 November 2005.

Submissions

A total of four property owners, and one occupier were individually notified of the application. Two submissions were received both of which are in opposition to the proposal. A locality plan identifying the subject site and the location of submitters is included. The reasons for opposition included within these submissions are outlined below:

Morris D Chandler (owner of 122 Stancombe Road)

The submitter opposes the proposed construction of Units 11-16 with balconies overlooking the play area of the adjacent childcare centre. The reasons for making this submission are identified by the submitter as:

"1. It is possible to avoid this by repositioning the units
2. Concern for the welfare of the children
3. Parental concern about child privacy
4. Later tenancy complaints from the units about noise from the play area."

The submitter seeks that the Council make the following decision:

"To require the units 11-16 to be rotated through ninety degrees to prevent balconies overlooking the adjoining children's play area (Unit 11 to run parallel to boundary with limited windows facing [the] boundary)."

Lee Shen Der Shann (owner 8 Inchinnam Road)

The particular parts of the application the submitter opposes are:

4. **Continued**

"The proposed residential type due to the high density of household units on the chosen lot site;
The high site coverage and maximum height of structure with in the special policy area (Flat Bush Buffer);
The proposed development style and site layout;
The proposed residential units infringe the height in relation to boundary control on eastern and western boundaries of the site.
Previous unsatisfactory earthwork procedures implemented for the development;
The "Assessment of Environmental Effects and Statutory Analysis" only provides misleading words and incomplete information to affected parties."

The submitter seeks that the Council make the following decision:

"I would like the consent authority to ensure that this development comply with all the Flat Bush Buffer Zone's lot coverage and height limitations in order to provide a good separation or transition area between the development and the affect party's property.

For the entire development, I would like that this authority consider building restrictions for Gracechurch heights and therefore request that the builder reduce the development scale to fit in the surrounding area.

Additionally, I would like that this authority ensure that the existing neighbourhood residents have their needs carefully considered and placed above those of the developers. In saying this, I would like to see that the appropriate remedy work is constructed as soon as possible so that we may retain the pond that was once and important feature to our property, and to prevent land fall towards developing land.

I would also like to see a fence constructed to separate the two distinctly different lifestyles in the area. By building a solid fence of significant height to border the development, unwanted weed growth can be eliminated, the noise from this development will be diminished for the rural neighbours and some privacy will be restored to the surrounding inhabitants."

1.0 Statutory Considerations

1.1 In this instance the Council, when considering the application for Resource Consent shall have regard to Sections 3, 5, 7, 104, 104A, 104B, 104C, 104D, 108 and 220 of the Resource Management Act 1991 (the Act).

1.1.1 Section 3 defines the term "effect" as follows:

"Meaning of 'effect'. In this Act, unless the context otherwise requires, the term 'effect' includes:

(a) Any positive or adverse effect; and

(b) Any temporary or permanent effect; and

(c) Any past, present, or future effect; and

(d) Any cumulative effect which arises over time or in combination with other effects regardless of the scale, intensity, duration or frequency of the effect and also includes:-

(e) Any potential effect of high probability; and

4. **Continued**

(f) Any potential effect of low probability which has a high potential impact."

1.1.2 Section 5 outlines the purpose of the Act as follows;

"(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act 'sustainable management' means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well being and for their health and safety while:

(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonable foreseeable needs of future generations; and

(b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and

(c) Avoiding, remedying or mitigating any adverse effects of activities on the environment."

1.1.3 Section 7 requires the consent authority to have particular regard, among other matters, to:

"(b) The efficient use and development of natural and physical resources

(c) The maintenance and enhancement of amenity values."

Section 7 matters are not expressly ranked in any order of priority. Therefore all aspects of this list are to be considered fully. Relevant matters are considered in the evaluation section of this report.

1.1.4 Section 104(1) states inter alia:

"(1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to:

(a) any actual or potential effects on the environment of allowing the activity; and

(b) any relevant provisions of –

...

(iii) a regional policy statement or proposed regional policy statement;

(iv) a plan or proposed plan; and

(c) any other matter the consent authority considers relevant and reasonably necessary to determine the application..."

1.1.5 Section 104A provides for the determination of applications for controlled activities stating as follows:

"After considering an application for a resource consent for a controlled activity, a consent authority –

4. **Continued**

(a) may grant or refuse the application; and
(b) if it grants the application, may impose conditions under section 108."

1.1.6 Section 104B provides for the determination of applications for discretionary activities stating as follows:

"After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority –

(a) may grant or refuse the application; and
(b) if it grants the application, may impose conditions under section 108."

1.1.7 Section 104C provides for the determination of applications for restricted discretionary activities stating as follows:

"When considering an application for a resource consent for a restricted discretionary activity, a consent authority –

(a) must consider only those matters specified in the plan or proposed plan to which it has restricted the exercise of its discretion; and
(b) may grant or refuse the application; and
(c) if it grants the application, may impose conditions under section 108 only for those matters specified in the plan or proposed plan over which it has restricted the exercise of its discretion."

1.1.8 Section 104D provides for the determination of applications for non-complying activities as follows:

104D. Particular restrictions for non-complying activities

(1) Despite any decision made for the purpose of section 93 in relation to minor effects, a consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either –
(a) the adverse effects of the activity on the environment (other than any effect to which section 104(3)(b) applies) will be minor; or
(b) the application is for an activity that will not be contrary to the objectives and policies of –
(i) the relevant plan, if there is a plan but no proposed plan in respect of the activity; or
(ii) the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or
(iii) both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.
(2) To avoid doubt, section 104(2) applies to the determination of an application for a non complying activity.

2.0 District Plan Considerations

2.1 The application was received on 8 September 2005 at which time Variation 13 (Flat Bush Structure Plan) had not been declared operative. In the period between the application being received and this hearing the provisions of Variation 13 have been declared operative (all outstanding appeals having been resolved) and is now considered part of the Manukau Operative District Plan 2002 ("Operative Plan"). Consideration of the application has been undertaken in accordance with the provisions applying to Flat Bush under Chapter 17.10.1 of the Operative Plan.

4. **Continued**

2.2 In addition to the Flat Bush provisions the provisions of Chapter 9 – Land Modification, Development and Subdivision are relevant with the provisions of this chapter controlling the proposed earthworks component of the application, together with the proposed installation of public network utility services proposed and consequential subdivision.

2.3 Also relevant are the objectives, policies, rules and assessment criteria outlined in Chapter 8 – Transportation of the Operative Plan. Under these provisions consideration of the proposed access for the development onto Carlos Drive, including consideration of pedestrian linkages is necessary.

2.4 Finally, Chapter 15 – Public Open Space of the Operative Plan deals with the provision and assessment of reserves contributions to be provided in conjunction with residential subdivisions.

3.0 Evaluation

The assessment of the environmental effects of the proposed application submitted by Working Concepts Ltd. has been considered overall as a Non-Complying Activity. The environmental effects over which the Council has discretion are, therefore, unrestricted. The following evaluation addresses the environmental effects of the proposal on this basis. Despite application being made as a Discretionary Activity, Council may approve consent under the provisions of Section 104(5) of the Act, regardless of what type of activity the application was expressed to be for.

3.1 Interface between the Flat Bush Residential 1 Zone and the Transition Zone – Gracechurch Heights.

3.1.1 The rear 30 metres of the subject site is affected by the Special Policy Area Boundary: Flat Bush Buffer Area ("Flat Bush Buffer"). At section 17.10.9.4.3 of the Manukau Operative District Plan 2002 it is identified, in relation to this Special Policy Area Boundary, that:

"A Special Policy Area (Flat Bush Buffer) of 30 metres in width, lies over an area of land within the Flat Bush Residential 2 Zone [and Flat Bush Residential 1 Zone] where it adjoins the Flat Bush Countryside Transition zone. The Special Policy area establishes a buffer between the two zones in order to mitigate any potential adverse effects of the higher density urban development within the Flat Bush Residential 2 Zone on the residential amenity values of the Flat Bush Countryside Transition zone."

3.1.2 The key distinctions which apply between the Flat Bush Residential 1 Zone and the Flat Bush Buffer are identified in the following table:

Table One: Key Distinctions Between Flat Bush Buffer Zone Rules and Flat Bush Residential 1 Zone (General Precinct) Rules.

Rule	Flat Bush Residential 1 Zone (General Precinct)	Flat Bush Residential 1 Zone with Special Policy Area Flat Bush Buffer
Rule 17.10.12.2 – Site Coverage (Sites over 400m^2 net site area)	40%	35%
Rule 17.10.12.5 – Maximum Height	9 metres	8 metres
Rear Yard	1 metre	6 metres (from a Flat Bush

		Countryside Transition Zone)
Minimum Lot Size	$125m^2$ (with average of $250\text{-}425m^2$)	$750m^2$

3.1.3 The proposed development includes 7 residential units (2 units are split by the buffer boundary and have been treated as one unit) within the rear 30 metres of the subject site affected by the Flat Bush Buffer. This equates to a unit density of $1:261m^2$ within the 30 metre Flat Bush Buffer area of the site. Despite this, the layout and design of buildings on the site has been undertaken in a comprehensive manner to both meet the design objectives of the Flat Bush Residential 1 Zone, and to observe the transitional objective of the Flat Bush Buffer Zone. In this regard it is noted that a conventional subdivision of the rear 30 metre portion of the site could result in up to three $750m^2$ sites with dwellings able to be built on each site with a floor area up to $262m^2$ in footprint and be constructed within 6 metres of the rear boundary of the site. When compared in this context the proposal well exceeds the 6 metre separation required from the rear boundary with separation in excess of 14 metres provided.

3.1.4 The site coverage of buildings within the Flat Bush Buffer equates to approximately 25.1% which is well within the 35% which applies in this Flat Bush Buffer. It is acknowledged, however, that the maximum height of units proposed will extend to 8.8 metres which exceeds the maximum permitted of 8.0 metres by 0.8 metres. Any effects of overshadowing or dominance of these buildings will be mitigated by the 14 metre separation from the rear boundary. Of further benefit, the internal circulation and vehicle access arrangement provided assists in creating a transition from the larger rural residential sites on Inchinnam Road, to the more intensive urban development of the Flat Bush Residential 1 Zone. This design, with the buffer planting of large trees proposed on the sites northern boundary, and the communal open space and associated outdoor activity areas, is considered to provide a satisfactory transition between the rural residential environment of the Countryside Transition Zone, and the Flat Bush Residential 1 Zone. While this is not in strict conformity with the Flat Bush Buffer rules the specific circumstances of the application are considered to meet the transitional objective of this Special Policy Area.

3.2 Site Design

3.2.1 The configuration of terraced units proposed provides for a primary orientation of units 1-10 to the street (Carlos Drive) with additional vehicle access to a further two residential blocks at the rear of these units. Garaging for units 1-10 is discreetly located at the rear allowing these units to have both ground level and upper level outdoor space overlooking the street. The central vehicle circulation area, while not vested as public road, will provide a similar function to a street, particularly with front door access for Units 11-16 and 17-22 being directly from this vehicle circulation area.

3.2.2 All units are of similar internal configuration providing 3 bedrooms, central living floor, and two-vehicle stacked garaging.

3.2.3 The external appearance of the proposed units is a mixture of schist on the lower level and either solid plaster or weatherboard finish on the two upper levels. Windows are proposed to be made from aluminium joinery with louvers on the upper end units and on the outer edge of upper storey clear windows. The variation and external materials proposed are considered to provide a quality external appearance for these units.

3.2.4 Further, the effect of unit bulk or repetitiveness on Carlos Drive is broken by the mixture of colour and external materials proposed and some recessing of central units approximately 1 metre behind the façade of the end units in each block fronting Carlos Drive.

4. **Continued**

3.2.5 Large areas of private outdoor space are provided on first floor balconies of each unit which comply comfortably with the minimum specifications in Flat Bush of $6m^2$ and minimum depth of 2 metres (first floor balconies being in the order of $15.275m^2$ in area with minimum depth of 3.25 metres). In addition, ground floor open space is provided with dimensions of the areas varying between units. The area of open space provided with each unit together with the communal facilities to be shared on site is considered satisfactory for future tenant requirements.

3.2.6 As identified by submitter Morris Chandler the balconies associated with Units 11-16 are positioned parallel to the sites western boundary. It is Mr Chandler's concern that the positioning of these balconies will allow residents of these units to overlook the outdoor play area of the childcare centre he operates on the adjoining site. It is considered that Mr Chandler's concerns are valid and that attempts to mitigate this effect should be incorporated into the development design. As previously outlined the configuration of units proposed is considered to be the optimum configuration of units on the site in meeting both internal design objectives and in providing a suitable transition between the Flat Bush Countryside Transition Zone – Gracechurch Heights and the site. As such, rotation of these units 90^0 as requested by Mr Chandler, is not considered appropriate. A substantial retaining wall is proposed to stabilise the existing batter on the western boundary of the site being in the order of 1.0m at the southern end of Units 11-16 rising to 2.0m at the northern end of Units 11-16. Above this wall is constructed a 1.8 metre fence which runs along the western boundary of this site. This means it is possible for persons standing on the Unit 16 balcony to overlook the play area on the adjoining site, despite the combined height of the retaining wall and fence above being approximately 3.8 metres high (being the highest point). The combined height of the retaining wall and fence drops to the south to a height of approximately 2.6 metres at Unit 11 (being the lowest point). The units most likely to look over the children's play area are units 14-16 although oblique views may be available from Units 11-13. To ensure protection of the privacy of the children's play area it is recommended that evergreen tree planting be provided along the western site boundary capable of reaching a minimum height of 5.0 metres. In addition to this, and should the adjoining owner at 122 Stancombe Road agree, screen planting could be provided at the applicant's cost on this adjoining site. In which case given the level drop between the properties a lower level of planting would be required to be established to provide the necessary screening on the adjoining site.

3.2.7 A further option would be to rotate the second floor of the units 180^0 to provide balconies on the eastern side of these units. This will require further consideration by the applicant, the submission of further plans for Council consideration, and will have consequential effects on these units design.

3.3 <u>Landscaping</u>

3.3.1 The applicant proposes to undertake comprehensive landscaping of the development as indicated in the planting plan submitted with the application. The key features of this landscaping plan are the planting of a row of tree specimens able to reach substantial size on the northern boundary of the site (notably *Liquidamber* and *Quercus*). In addition to this the planting of Queen Palm is proposed within the central manoeuvring island and framing both the eastern and western ends of Units 1-10. A range of further exotic plantings which establish to medium size are proposed within the outdoor courts and along the northern boundary of the site. Overall, the landscaping proposed is considered to complement the form of residential development proposed and assists in providing an integrated theme for the development. Provision of a landscaped transition between the Gracechurch Heights Countryside Transition Zone into the Flat Bush Buffer also results.

4. **Continued**

3.3.2 As previously noted, in addition to the planting proposed it is, however, considered appropriate that extra planting be provided on the boundary between 122 Stancombe Road and the subject site to assist in screening the outdoor balcony areas on the western side of Units 11-16. This requirement is proposed as a condition of consent.

3.4 Transportation

3.4.1 The original site is located on the northern side of Stancombe Road approximately 140 metres west of the intersection of Gracechurch Drive, Murphys Road and Jeffs Road. The site has resulted from completion of a recent subdivision (Proposal 27046, SP 8840) that included the widening of Stancombe Road and the formation of Carlos Drive that runs parallel to Stancombe Road. The subject site involves the land to the north of Carlos Drive that abuts 44 Carlos Drive to the east and is surrounded by a mix of newly developed residential apartment units and single household units as well as lots that are in the process of being developed for residential purposes.

3.4.2 The overall layout of the site includes two blocks fronting Carlos Drive with a shared access lot providing access through the centre of these two blocks. The remaining two blocks are to the rear at 90 degrees to Carlos Drive in order to provide all units access to the centre of the site. All four blocks of houses are to be separated into individual four fee simple lots whilst the access and communal facilities at the rear of the site with an area of 1608m^2 are to form Lot 5. Each unit contains three bedrooms and is accessed from Carlos Drive via the proposed shared access lot (Lot 5). The development includes double garaging at ground level in a stacked form that complies with the on-site parking and manoeuvring requirements of the Operative Plan.

3.4.3 In accordance with 9.9.2.10 of the Operative Plan, in order to provide a carriageway that is able to accommodate on-site manoeuvring for an 8 metre rigid truck rights of way in favour of Lot 2 and 3 over Lots 1 and 4 are required. Taking this into consideration, the private-way provides access to and from Carlos Drive to the south and complies with dimension and gradient standards within the Operative Plan. It is also noted that three complying visitor carparking spaces are also located at the rear of the site within the shared access lot (Lot 5).

3.5 Assessment

3.5.1 The proposed 22 residential unit apartment block complies with on-site parking spaces required (44) and manoeuvring rules of the Operative Plan and is, therefore, considered to be safe and efficient. The development is to be accessed via the two-way, access lot (Lot 5) which ensures adequate on-site manoeuvring for an 8 metre rigid truck for all dwellings within the proposed layout. Pedestrian access within the shared Lot 5 is provided along with three additional visitor carparking spaces.

3.5.2 It is noted that the additional traffic flows have been previously anticipated through the recent road widening and upgrading of Stancombe Road as well as within the underlying subdivision (Proposal 27046, SP 8840). The stacked double garage design with all garaging located to the rear of the road frontage is considered to be a convenient and attractive method for providing the required off-street parking. The surrounding area is residential in nature and all garages are accessed to the rear of the buildings away from Carlos Drive. Thus it is considered that there are no potential traffic conflicts anticipated from the development. Also the nearest intersection to the shared access lot is the intersection of Stancombe Road with Carlos Drive which is located approximately 60 metres away.

4. **Continued**

3.6 **Engineering Servicing**

3.6.1 Stormwater Reticulation

The proposed stormwater reticulation system captures stormwater and drains it via a public pipe network which discharges either to the west, or east of the subject site. The design of the reticulation of stormwater on the site has been reviewed by Council's Resource Engineer and is determined to be acceptable subject to the imposition of conditions. A financial contribution was imposed on the underlying subdivision to account for wider infrastructure demands arising from discharge of stormwater from the site.

3.6.2 Wastewater Servicing

All proposed units in the development are proposed to be provided with individual connection points and wastewater is to be discharged to the public network. Council's Resource Engineers have reviewed the reticulation proposed and consider it provides a satisfactory method for disposing of wastewater from the subdivision. In addition to the reticulation works further payment of financial contributions has been required as a condition of the preceding subdivision consent in order to provide for network infrastructure beyond the site.

3.6.3 Water Supply

As for both stormwater and wastewater Council's Resource Engineer considers the water supply servicing proposed is satisfactory subject with the imposition of financial contributions having been levied as a condition of prior subdivision consent.

3.6.4 Electricity / Telecommunications

All units within the development will be required to be provided with connections for both electricity and telecommunications. These services will be required to be installed underground.

3.7 Retaining Walls / Geotechnical Suitability

The applicant proposes the construction of retaining walls on each of the western, eastern and northern boundaries of the site. The construction of these retaining walls will serve to provide a level building platform, and to provide and even grade between the street (Carlos Drive) and the site.

3.8 Overland Flowpath

The applicant's engineer has proposed that an overland flowpath be established through the site with associated minimum floor levels for buildings on the site. Establishment of this overland flowpath together with prescribed floor levels has been recommended by Council's Resource Engineer for inclusion as a condition of both the land use and subdivision consent.

3.9 Development Contribution (Local Government Act 2002)

Under the Council's Development Contribution Policy, which applies under the Local Government Act 2002, payment of a development contribution (at a current rate of $4,505 + GST) will be required upon application for building consent to establish each of the residential units and levied at this stage. As this is a Local Government Act 2002 contribution an advice note has been recommended on the consent to draw the applicant's attention to this requirement.

4. **Continued**

3.9 Subdivision Assessment

3.9.1 It is proposed that the subdivision will be completed once implementation of the proposed land use consent is completed. Under such a scenario the subdivision component of the application would be considered as a Controlled Activity. The lots conform to the layout proposed for each block of units within the development, with an additional area of communal space which will be subject to the imposition of an amalgamation condition on the consent. The overall effects of the subdivision, in terms of servicing provision are considered to have been addressed under the preceding land use assessment.

3.9.2 Reserves Contribution

Under Rule 15.15.2.3.3.1 of the Manukau Operative Plan 2002 consideration of reserves contribution is required for residential subdivisions. This rule states:

"A reserve contribution may be required as a condition of a subdivision consent for residential purposes, the total value of which shall not exceed 6 percent of the assessed market value of the additional sites created by the subdivision.

Provided that in the case of sites capable of accommodating more than one household unit, the land shall be determined as if it was a site for a single household unit".

In this regard the Council has engaged Quotable Value to prepare a valuation of the allotments in the subdivision for the purposes of assessing the reserve contribution payable on the consent. Under the subdivision proposed by the applicant it is not considered that there are any extenuating circumstances which should facilitate a reduction in the percentage of reserves contribution payable, and accordingly a condition is recommended which requires payment of 6% (+GST, if any) of the value of three additional residential lots in the subdivision. Each of these sites have been treated as single household units sites. This reserve contribution will be utilised to provide for the acquisition of public open space in the future and serves to offset the additional demand for public open space created by the proposed subdivision works. Future subdivision of the 22 units on the site will further attract reserves contribution.

4.0 Evaluation in accordance with Section 104 of the Act

Section 104 of the Act outlines those matters which the Council, as Consent Authority, shall have regard to when assessing the subject application, and is also subject to Part II (the Purpose and Principles of the Act). An evaluation of the proposal in accordance with section 104 is outlined below.

4.1 Part II of the Act "Purpose and Principles"

4.1.1 The purpose of the Resource Management Act 1991 is to promote the sustainable management of natural and physical resources (refer Section 1.1.1 of this report for full definition). In terms of giving effect to the purpose of the Act, it is considered that the proposed development will promote sustainable management by achieving efficient use of a scarce resource (being land) with development to proceed in a comprehensively designed manner.

4.2 Section 7 - Other Matters

4.2.1 Section 7 identifies a number of "other matters" to be given particular regard by Council in the consideration of any assessment for resource consent, and includes:

4. **Continued**

4.2.2 *"The efficient use and development of natural and physical resources."*

4.2.3 The proposal constitutes efficient use of a site zoned for residential development. Infrastructure in terms of roading and network utilities is available in the surrounding area in anticipation of development of the site for residential purposes.

4.2.4 "*The maintenance and enhancement of amenity values*".

4.2.5 "Amenity Values" is defined in the RMA as:

"those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes".

4.2.6 It is considered that the proposed development is mindful of the need to provide an appropriate level of amenity for the transition between the Flat Bush Buffer and Flat Bush Countryside Transition Zone. Subsequently, the amenity values of the site or surrounding area will not be compromised.

4.3 Section 8 - Principles of the Treaty of Waitangi

4.3.1 It is considered that the principles of the Treaty of Waitangi have been satisfactorily taken into account with respect to this application and that there will be no adverse effects on tangata whenua as a result of granting consent.

4.4 Section 104(1)(a)

4.4.1 This requires consideration of any actual or potential effects on the environment and has been addressed in Part 7.0 (inclusive) of this report. It is concluded that the proposal will have no more than minor actual or potential effects and that the impact of such effects are mitigated by the imposition of conditions on consent.

4.5 Section 104(1)(b)

4.5.1 The proposal does not have implications or impact on provisions of a national policy statement (of which none have yet been prepared); or the New Zealand Coastal Policy Statement.

4.5.2 Section 104(1)(b)(iii) of the Resource Management Act 1991 requires regard be had to any relevant provisions of a Regional Policy Statement. The Auckland Regional Policy Statement (ARPS) was notified in 1994 and decisions on submissions were incorporated in September 1995. This document became operative on 31 August 1999. Further plan changes have been notified to the ARPS as identified below:

(i) Proposed Plan Change 6 – Giving Effect To The Regional Growth Concept And Integrating Land Use And Transport.
(ii) Proposed Plan Change 7 – Changes to the Metropolitan Urban Limits
(iii) Proposed Plan Change 8 – Landscape and Volcanic Cones
(iv) Proposed Plan Change 9 – Include Reference to the Hauraki Gulf Marine Park Act 2000
(v) Proposed Plan Change 10 – Natural Hazards

4.5.3 The ARPS provides the overall direction and general strategy for management of resources in the Auckland region.

4. **Continued**

Key issues for the region are identified within this document as the need to accommodate continued population growth in the foreseeable future, and the need to recognise that the effects of some uses in rural and coastal areas, including cumulative effects, can be significantly adverse. To achieve this, the ARPS promotes the containment of urban growth within defined Metropolitan Urban Limits (MUL).

4.5.4 Under the provisions of this definition, and as the land subject of this application has been afforded an urban zoning since 1995, this land is considered to fall within the MUL. On this basis the proposed subdivision and development of this land is considered to be consistent with the provisions of the ARPS. This being in line with the strategic objectives and policies under section 2.5 of the ARPS.

4.6 Section 104(1)(c)

This requires that any other matter the consent authority considers relevant and reasonably necessary to determine the application be considered. In this case there are no other matters that are considered necessary to determine the application.

5.0 Relevant Provisions of an Operative Plan

Section 104(b)(iv) requires that the Council have regard to any objectives, policies, rules or other provisions of any District Plan or Proposed District Plan when considering an application for resource consent. The site is subject to the provisions which apply under the Manukau Operative District Plan 2002, and particularly those which apply under Section 17.10 – Flat Bush Area. Relevant objectives and policies, and the consideration of the proposal against these relevant objectives and policies follow.

5.1 **Chapter 17.10.3 – Flat Bush**

5.1.1 Objective 17.10.3.1

"To create a diversity of living and working environments of high environmental quality within Flat Bush with an emphasis on the sustainable use of a scarce regional and district land resource."

The proposal, while entirely of a residential nature is considered to fulfil the intention of the intention of this objective by providing a form and scale of residential development which utilises the site in an efficient manner, with consideration of the relationship of the development with adjoining sites and the street. Further landscape planting will serve to augment the overall amenity values of the site.

5.1.2 Objective 17.10.3.2

"To facilitate the urbanisation of the area in a manner and at a rate which takes account of the demand for such urbanisation while ensuring the efficient use of the diminishing land resource commensurate with the provision of appropriate levels of amenity for residents in the area."

Design of the development at a density appropriate for the zone, together with the quality of external material proposed provides appropriately for the amenity of local residents, as well as prospective residents of the development itself. The density of development proposed also ensures efficient use of land as a diminishing resource.

4. **Continued**

5.1.3 Objective 17.10.3.3

"To facilitate the development of an appropriate range of densities of development and living and working environments of good amenity within Flat Bush."

The proposed development contrasts with other development types in the immediate vicinity (being apartments and rows of terraced housing parallel to the street) this being considered to provide an alternative design and living environment of good amenity.

5.1.4 Objective 17.10.3.4

"To achieve a well connected, adaptable, safe, attractive, healthy and pleasant environment for living and working and travelling with an emphasis on the importance of the public realm including parks, streets, civic areas, roads and the natural environment."

Provision is made within the development for interface with the street resulting in a pleasant environmental result recognising the relationship of the development with the only adjoining public realm (being Carlos Drive).

5.1.5 Policy 17.10.4.1

"Subdivision and settlement should be of a type, density and design that does not detract from, and is supportive of, the specific environmental outcomes identified for each zone as well as an integrated transport system which provides a choice of travel modes."

The density of development on the site will serve to support the movement of public transport along Stancombe Road and the nearest future public transport route.

5.1.6 Policy 17.10.4.2

"Urbanisation in the area should occur in a staged manner based on proximity to existing development in the north of the catchment so as to minimise adverse effects on the environment and to ensure an appropriate transition between the various forms of development within and immediately outside the Flat Bush Structure Plan Area and by:

(i) providing through the Flat Bush Structure Plan, the land use framework for development of the future urban area including provision of the Town Centre, smaller commercial centres, schools and conveniently located public open space areas
(ii) establishing targets for overall average densities of development throughout the Flat Bush Structure Plan Area, with greater density of development being enabled for those areas closest to the Town Centre, Neighbourhood Centres and selected major transportation routes, consistent with the Auckland Regional Policy Statement
(iii) allowing higher densities of development throughout the area than are provided for in the Main Residential zone."

The density of development proposed will be generally in exceedence of the density of development which typically occurs in the Main Residential Zone. The development is considered to be in accordance with the provisions of this policy and is located within the first stage release of the Flat Bush Structure Plan.

4. **Continued**

5.1.7 Policy 17.10.4.6

"Subdivision and development activity should achieve urban design and sustainable management principles by:

(i) encouraging a sense of place and identity,
(ii) providing a high degree of 'connectivity' through well connected road networks based on block designs,
(iii) promoting social interaction through attention to the placement of buildings on sites,
(iv) facilitating safe walking and cycling, including through the identification of cycle routes,
(v) supporting or enabling opportunities for passenger transport services to establish,
(vi) reducing travel distances, providing access to amenities, and supporting an integrated transport system that provides a choice of travel modes,
(vii) maintaining contact between communities,
(viii) being compatible with the part of the roading hierarchy on which it is located in terms of the type and level of traffic generation,
(ix) designing local roads to ensure a safe low traffic speed environment,
(x) relating to the streetscape so as to enhance perceptions of safety,
(xi) providing separation buffers between incompatible activities, promoting biodiversity.
(xii) Ensuring there is provision for emergency services that takes account of strategic location requirements."

The development of the subject site progresses development alongside Carlos Drive which connects to Gracechurch Drive in a block formation. The proposed frontage of units 1-10 to Carlos Drive achieves a design of buildings to overlook Carlos Drive optimising passive surveillance. The development proposed is considered to be compatible with this policy and is a logical extension of the development of the site facilitate by previous subdivision and road construction.

5.2 17.10.9.3 Flat Bush Residential 1 Zone

5.2.1 17.10.9.3.1 Objective

(i) "To facilitate the development of an integrated, medium/ higher density residential environment (while enabling higher density) which has high levels of amenity, supports a range of travel modes, allows for a range of living opportunities and incorporates opportunities for compatible small scale employment in appropriate locations."

5.2.2 17.10.9.3.2 Policies

"a) Buildings and structures should be designed and located in such a manner that they positively address the street and public places so as to contribute to neighbourhood amenity values including pedestrian accessibility and safety, and streetscape values such as diversity and attractiveness.
b) Non residential buildings and structures should be sited and designed in a way which is in keeping with a residential context.
c) Carparking, particularly for non-residential purposes should be located to the rear or side of buildings rather than between buildings and the street.

4. **Continued**

d) Residential development should include private outdoor space(s) that can function as attractive and useable outdoor living and service areas.
e) Activities within residential areas should be in keeping with residential intensity, and residential character, and should not create nuisances such as objectionable noise, smoke, dust, fumes, odours, noxiousness or danger.
f) Connectivity/permeability of the street system shall be maximised wherever possible."

The proposed development will be completed in line with the density of development provided for in the Flat Bush Residential 1 Zone. Particularly, this is achieved by buildings providing a positive relationship with the street, vehicle parking at the rear of buildings fronting a public road, sufficient areas of on-site amenity for residents.

5.3 Chapter 9 – Land Modification Development and Subdivision

5.3.1 Objective 9.3.5

"To ensure the provision of an adequate standard of infrastructure and public utility services at the time land is modified, developed or subdivided to avoid, remedy or mitigate any adverse effect on the environment, and to ensure that the cost of providing or upgrading services is borne by those undertaking land modification, development or subdivision to the extent that such works are necessitated by the proposed activity."

Provision of adequate network utility servicing of the development is proposed by the applicant, or is provided by the Council with the applicant required to offset the cost of Council providing this servicing by payment of a financial contribution to be required as a condition of consent.

5.4 **Chapter 8 – Transportation**

5.4.1 Objective 8.3.2

"To maximise energy efficiency and accessibility within the transportation network and encourage the use of energy efficient modes of transport."

The design of access and vehicle circulation is compatible with the transport network with services the site. The surrounding transportation network has been designed and constructed in anticipation of development of the site. In time, the density of development proposed will also support public transport networks.

6.0 Evaluation in Accordance with Section 104D of the Act

6.1 Under the Manukau Operative District Plan 2002 the application is assessed as a Non-Complying Activity. Accordingly, for Council to grant a consent for a Non-Complying Activity the Council must be satisfied that the adverse effects of the activity on the environment will be minor, and the application will not be contrary to the objectives and policies of the relevant district plan (commonly referred to as the "threshold test").

6.2 The preceding evaluation of the effects of the proposed activity, and analysis against the relevant objective and policies of the Manukau Operative District Plan has concluded that the proposal meets both limbs of the threshold test.

7.0 Submissions

Two submissions have been received in opposition to the proposal. Responses to each submission are addressed below.

4. **Continued**

7.1 Morris Chandler (122 Stancombe Road)

Concern expressed by Mr Chandler regarding privacy issues associated with balcony positioning on Units 11-16 are considered valid. Nevertheless, rotation of these units 90^0 is considered to compromise the design of development on the site, and the spacious transition the design provides from the Countryside Transition Zone to the north. To mitigate Mr Chandler's concerns it is recommended that screen planting be provided on the sites western boundary. This would be most effective where provided inside Mr Chandler's site although, naturally, this would require this submitter's agreement. Alternatively, it could be provided inside the subject site, although given the retaining wall height on this boundary it is unlikely planting would have immediate impact (needing to be a minimum of approximately 5 metres high to be effective). Rotation of the central floor of Units 11-16 by 180^0 may also be possible, subject to further design investigation by the applicant.

7.2 Lee Shen Der Shann (8 Inchinnam Road)

This submitter's concerns are in regard to the intensity of development proposed in the Flat Bush Buffer Zone, and loss of a pond on the submitter's site, caused in the submitter's view as a consequence of earthworks already completed on the subject site. Without provision of further technical evidence to support the submitter's concerns regarding the pond draining no recommendations are made at this stage. The retaining wall proposed on the northern boundary is considered to address the submitter's stability concerns.

The submitter requests the construction of a fence on the sites northern boundary to *"separate the two distinctly different lifestyles in the area"*. The construction of a solid fence on this boundary, while not opposed, is considered to result in more of a hard "urban" solution than what the submitter's objective is. Planting as proposed by the applicant is favoured to effectively screen this boundary.

8.0 Conclusions

8.1 The applicant proposes to construct a 22 residential unit terraced housing development on the subject site with associated provision of shared communal facilities. In addition to the terraced house construction the applicant proposes to complete land network utility provision in conjunction with the development and 5 allotment subdivision.

8.2 The proposed development is considered to be compatible with the objectives and policies which guide development in the Flat Bush Residential 1 Zone. While the application is not strictly in conformity with the intention of the Special Policy Area Flat - Bush Buffer Zone the design of development on the site is considered to provide a superior result than could otherwise be established as a permitted activity in the Special Policy Area - Flat Bush Buffer.

8.3 Overall the development provides a positive relationship with the street and makes efficient use of the subject site.

8.4 The proposal is considered to meet both limbs of the threshold test provided under Section 104D of the Resource Management Act 1991. This is because the environmental effects of the proposal are considered to be minor, and the proposal is considered to be consistent with the relevant objectives and policies which apply under the Manukau Operative District Plan 2002. Accordingly, consent is recommended, subject to the imposition of conditions on consent to further mitigate the effects of the proposal.

4. **Continued**

9.0 Officer's Recommendation to the Botany Community Board Resource Consents Hearings Committee

That the application for an integrated land use and subdivision resource consent by Working Concepts Ltd received on the 8 September 2005 for Council's consent to construct a 22 residential unit housing complex with consequential 5 allotment residential subdivision on the site at 124 Stancombe Road, Flat Bush be determined as a Non-Complying Activity (land use) and a Controlled Activity (subdivision) and that Council hereby grants its consent pursuant to Sections 104, 104A ,104C and 104D of the Resource Management Act 1991 and subject to the following conditions:

PART A - LAND USE CONSENT:

Land Use Conditions

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing and granting of this Resource Consent are paid in full.

2. That the development shall be completed in accordance with the plans and documentation including Assessment of Environmental Effects (AEE) submitted with the application and numbered 28885 by Council unless otherwise amended by the following conditions of consent.

Apartment Design and Construction

3. That prior to the commencement of construction on the site the following information shall be submitted to the satisfaction of the Manager Resource Consents and Compliance:

   (a) details including a schedule of materials, and elevations of the privacy screens to be erected at the end of all balconies identified in the application plans approved in condition (2) above. These screens shall be a maximum of 1.8 metres high where the screens meet the building, extending for a minimum of 1.5 metres at this height and stepping down to the balcony edge;

   (b) details including a schedule of materials and elevations of overhangs for second floor balconies to comply with Rule 17.10.12.9 of the Manukau Operative District Plan 2002.

   The items and works required to be shown in plans in (a) to (b) above shall be completed to the satisfaction of the Manager – Resource Consents and Compliance prior to occupation of any of the units on the site.

4. That the external colour scheme of the apartments be consistent with the colour scheme plans (Coloured Renderings) numbered 28885 by the Council (1 Sheet).

Landscaping

5. The proposed landscape planting as identified on the planting plan and plant schedule submitted (dated April 2005) and numbered 28885 by the Council shall be implemented to the satisfaction of the Manager, Resource Consents and Compliance within 3 months of completion of construction of the units on the site.

4. **Continued**

The landscaped areas shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state to the satisfaction of the Manager – Resource Consents and Compliance.

6. Prior to occupation of the units on the site the consent holder shall undertake specimen tree planting between proposed Units 11-16, capable of forming an unbroken 5 metre high screen between these units and the site to the west. This planting shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state to the satisfaction of the Manager – Resource Consents and Compliance.

Advice Note:

As an alternative the consent holder may undertake this planting within the adjoining site to the west with the agreement of the landowner concerned, in which case the screen planting would only be required to attain a minimum unbroken 3 metre high screen.

7. All buildings and construction works shall be undertaken in accordance with the Geotechnical investigation and completion report prepared by Geotek Services Ltd Ref: 2704 and dated 2 August 2005.

Noise Insulation Requirements

8. That the units shall be designed, constructed and pass field tests demonstrating compliance with the following standards:

   (i) The Sound Transmission Loss of common walls shall be no less than 60 and the Sound Transmission Loss of common floors and ceilings shall be no less than 55.

   (ii) The Impact Insulation Class of floors shall be no less than 55.

   (iii) The Verification Method shall be G6/VM1.

   (iv) When assessing Impact Insulation Class, all floors, hallways and stairs in a building outside a household unit are deemed to be common building elements to that household unit. The impact requirement shall therefore apply between any other unit or common space and the habitable space of the household unit irrespective of vertical or horizontal separation.

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been designed in accordance with the above standards shall be provided at building consent stage.

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been constructed and has passed field tests demonstrating compliance with the above standards shall be provided to the Manager – Resource Consents and Compliance prior to occupation of the units.

Waste Management

9. That the management of domestic waste on the site be undertaken in accordance with the Waste Management Plan submitted with the application and numbered 28885 by the Council.

4. **Continued**

10. Every new owner, or tenant, within the apartment complex shall be advised in writing of the process for waste management storage and disposal. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

11. That the outdoor rubbish collection areas shall be screened from public view by the erection of a fence prior to the occupation of the household units and be thereafter maintained to the satisfaction of the Manager - Resource Consents and Compliance.

Washing Lines

12. That no washing lines, or airing of laundry occur at a level above the height of balcony balustrades on each floor.

13. Every new owner, or tenant, within the apartment complex shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

Letter Boxes

14. Letter boxes shall be provided for each unit fronting Carlos Drive at the street frontage. For the rear two blocks of units a letter box shall be provided for each of these units in an accessible position, which meets the requirements of New Zealand Post.

Engineering

15. The works detailed on the approved plans referenced **E8/28885** (sheets 1-16) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements:

    (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

    (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

    (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

    (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

    (v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

16. The works shall be completed to the satisfaction of the Manager, Resource Consents and Compliance **within six months of the commencement of these works and/or prior to occupation of the proposed buildings or subdivision.**

4. **Continued**

Overland Stormwater Flowpath

17. The site has been identified as being subject to flooding from the overland flow of stormwater therefore an overland flowpath shall be provided in accordance with approved engineering drawings referenced E8/28885, and shall be protected by a 'right to drain water' easement in favour of the Council.

The 'right to drain water' easement shall be defined by the consent holder's registered surveyor and the subsequent easement documents prepared by the City Solicitor at the consent holder's expense. A copy of the Council's requirements for the preparation of legal documentation is attached in this regard. The easement documents shall include the provision that no buildings, structures, fences or filling be placed in the easement area or other works carried out thereon, except with specific Council approval; and that the level and profile of the overland flowpath area) shall remain unchanged thereafter. The easement documents shall also include as-built plans showing levels in terms of the Lands & Survey Auckland Datum, 1946 a suitably located datum mark and boundary dimensions for the proposed easement. One copy of the easement as built plan is required to be clearly printed, showing legible levels, within the box on the enclosed sheet.

Suitable benchmarks (Lands & Survey Auckland Datum, 1946) shall be established and shown on a suitable plan for inclusion in the easement documents to allow all future buildings to be constructed accordingly.

This information shall be recorded on Council's Land Information Register.

18. The following units have been identified as being susceptible to flooding from an overland stormwater flowpath.

In order to protect future building from the effects of flooding or the 1% AEP storm event the following minimum floor levels, identified by the consent holder on the approved plan referenced E8/28885 (Sheet 6) shall be established for the unit areas shown on this plan.

Unit	Minimum Floor Level
1	43.05
2	43.05
3	42.65
4	42.65
5	42.25
6	41.78
7	41.78
8	41.78
9	41.58
10	41.58
11	42.30
12	42.30
13	42.55
14	42.55
15	42.80
16	42.80
17	42.78
18	42.78
19	42.78
20	42.78
21	42.78
22	42.78

4. **Continued**

All levels are in terms of the Lands & Survey Auckland Datum, 1946 and the levels are in accordance with the approved plans referenced E/28885 (Sheet 6) by Council.

Compliance with this requirement shall be on a continuing basis and shall be registered as a covenant in accordance with Section 108 of the Resource Management Act 1991 on the Certificate of Title of Lot 10 DP 352580 (and recorded on Council's Land Information Register) both at no cost to Council.

Suitable benchmarks to the Lands & Survey Auckland 1946 datum shall be established to enable future buildings to be constructed accordingly.

The above information (floor levels and benchmarks) shall be shown on a plan on the attached form for inclusion in the covenant.

Public Drainage and Water Supply

19. Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each unit with individual connection points in accordance with the approved engineering drawings referenced E8/28885 by Council and to the satisfaction of the Manager – Resource Consents & Compliance.

20. Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hard fill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

21. A detailed structural design shall be undertaken of the retaining walls at the time of Building Consent application. Specific consideration to design shall be given where the retaining wall is to be constructed over the existing sanitary sewer pipes. This will include but not be limited to allowing 1m clearance between the pipe face and adjacent pile surrounds, the diameter of adjacent piles and the rail sizes between them, as well as increases to the embedment depth to allow a minimum of 300mm clearance below the bottom of pipe.

Roading

22. The proposed access way shall be constructed in accordance with the approved engineering drawings referenced E8/28885 by Council prior to the occupation of the units and maintained thereafter to the satisfaction of the Manager, Resource Consents and Compliance.

Vehicle Access

23. The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to occupation of the household units and maintained thereafter to the satisfaction of the Manager, Resource Consents and Compliance.

24. That the width of the vehicle crossing shall be 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to the occupation of the household units to the satisfaction of the Manager, Resource Consents and Compliance.

4. **Continued**

Retaining Walls

25. The retaining walls proposed shall be undertaken in such a manner as to ensure that the land within the site and the land on adjoining sites remains stable at all times. The consent holder shall ensure that prior to construction commencing, all necessary approvals for the retaining walls are obtained and that the retaining walls are completed in a timely manner and supervised by a Chartered Civil Engineer.

Network Utilities

26. Power and telephone services shall be installed underground within the common area to provide suitably located service connections to all proposed units.

27. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

Advice Notes

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However, the Council does have the power to extend this period in certain cases where a further application is made within three months of the consent lapsing.

2. This consent does not constitute authority to build or undertake private drainage works and it may be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany any application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of the application.

4. Each building is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. <u>Development Contributions under the Local Government Act 2002</u>

   Please note that under section 198(1)(a) of the Local Government Act 2002 a Development Contribution is applicable to all proposed residential dwellings proposed as part of this development.

4. **Continued**

The consent holder is advised that a Development Contribution will be calculated on 22 additional household equivalent units (HEU) for the development.

This contribution is currently $4,505 plus GST per additional HEU. The rate of contribution is subject to periodic review through the Council's Annual Plan process. The amount payable will be determined at the date of invoicing at the date of issue of building consent.

Pursuant to section 208(1) of the Local Government Act 2002 until the development contribution is paid the Council may prevent the commencement of the resource consent or withhold a code compliance certificate under section 95 of the Building Act 2004 (from 31 March 2005). The Council may also register the development contribution under the Statutory Land Charges Registration Act 1928 as a charge on the title of the land.

6. A Building Consent is required for retaining walls unless exempted under the Third Schedule of the Building Act 1991. The minimum design load on retaining wall should be 12.0 kPa. This consent does not include any structural approval of the design/calculations submitted.

7. Prior to any certification being issued under Section 224 of the Resource Management Act 1991 for any future Unit Title subdivision of the units subject of this consent, compliance will need to be achieved with the requirements of Section 224(f) of the RMA.

8. The requirements pursuant to Conditions 9 and 10 (Overland Flowpath) will be recorded on Council's Land Information Register.

Reasons for the Decision

1. The proposal merits consent pursuant to Section 104, 104A, 104B, 104C and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan (2002).

2. Overall, the proposed land use consent complies with the minimum density provisions as prescribed by the in the Flat Bush Residential 1 Zone. In this regard it is considered that the proposed units will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.

3. The design and external appearance of the proposed dwellings are generally in keeping with expected development in the vicinity.

4. The proposed layout of the site will provide for efficient use of resources providing for satisfactory on site amenity while preserving the amenity values of surrounding properties and the general streetscape and residential characteristics of the area.

5. The proposed development and the associated engineering works are in accordance with Council's engineering standards and would not result in any adverse effect on the environment.

4. **Continued**

PART B - SUBDIVISION CONSENT

Subdivision Conditions

General

1. That pursuant to Section 36 of the Resource management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing and granting of this Resource Consent are paid in full.

2. That the subdivision and development shall be in general accordance with the plans and information submitted with the application and numbered **28885 (SP9188)** by Council.

Commencement of Consent

3. Pursuant to Section 116 of the Resource Management Act 1991, the subdivision consent shall not commence, and the Council approval under Section 223 of the Resource Management Act 1991 shall not be issued, until the Land Use Consent - Part A of this consent for construction of the 22 dwellings referenced P28885 has been given effect to the extent that the exterior walls and roof of all the approved units have been constructed.

   Advice Note:

   The purpose of this condition is to ensure that the proposed subdivision, which closely aligns with the land use consent proposed, does not occur prior to the land use consent being implemented.

Amalgamation

4. That Lot 5 be held as to four undivided one quarter shares by the owners of Lots 1 to 4 hereon as and that individual Certificates of Title be issued in accordance therewith (RGL Ref A634857).

Parking and Manoeuvring Areas

5. The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate and maintained thereafter to the satisfaction of the Manager - Resource Consents and Compliance.

6. That the width of the vehicle crossing shall be formed at 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate to the satisfaction of the Manager - Resource Consents and Compliance.

Engineering

7. The works detailed on the approved plans referenced **E8/28885** (sheets 1-16) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements:

   (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

4. **Continued**

(ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

(iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

(iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

(v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

8. The works shall be completed to the satisfaction of the Manager, Resource Consents and Compliance **within six months of the commencement of these works and/or prior to occupation of the proposed buildings or subdivision.**

Overland Stormwater Flowpath

9. The site has been identified as being subject to flooding from the overland flow of stormwater therefore an overland flowpath shall be provided within Lots 3 and 5 in accordance with approved engineering drawings referenced E8/28885 (Sheet 6), and shall be protected by a 'right to drain water' easement in favour of the Council.

The 'right to drain water' easement shall be defined by the consent holder's registered surveyor and the subsequent easement documents prepared by the City Solicitor at the consent holder's expense. A copy of the Council's requirements for the preparation of legal documentation is attached in this regard. The easement documents shall include the provision that no buildings, structures, fences or filling be placed in the easement area or other works carried out thereon, except with specific Council approval; and that the level and profile of the overland flowpath area) shall remain unchanged thereafter. The easement documents shall also include as-built plans showing levels in terms of the Lands & Survey Auckland Datum, 1946 a suitably located datum mark and boundary dimensions for the proposed easement. One copy of the easement as built plan is required to be clearly printed, showing legible levels, within the box on the enclosed sheet.

Suitable benchmarks (Lands & Survey Auckland Datum, 1946) shall be established and shown on a suitable plan for inclusion in the easement documents to allow all future buildings to be constructed accordingly.

This information shall be recorded on Council's Land Information Register.

10. Lots 1-4 have been identified as being susceptible to flooding from the overland stormwater flowpath.

In order to protect future building on these lots from the effects of flooding or the 1% AEP storm event the following minimum floor levels, identified by the consent holder on the approved plan referenced E8/28885 (Sheet 6) shall be established for the proposed unit areas shown on this plan as follows.

4. **Continued**

Unit	Minimum Floor Level
1	43.05
2	43.05
3	42.65
4	42.65
5	42.25
6	41.78
7	41.78
8	41.78
9	41.58
10	41.58
11	42.30
12	42.30
13	42.55
14	42.55
15	42.80
16	42.80
17	42.78
18	42.78
19	42.78
20	42.78
21	42.78
22	42.78

All levels are in terms of the Lands & Survey Auckland Datum, 1946 and that the levels are in accordance with the approved plans referenced E/28885 (Sheet 6) by Council.

Compliance with this requirement shall be on a continuing basis and shall be registered as a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 on the Certificates of Title of the respective lots (and recorded on Council's Land Information Register) both at no cost to Council.

Suitable benchmarks to the Lands & Survey Auckland 1946 datum shall be established to enable future buildings to be constructed accordingly.

The above information (floor levels and benchmarks) shall be shown on a plan on the attached form for inclusion in the covenant.

Public Drainage and Water Supply

11. Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment with individual connection points in accordance with the approved engineering drawings referenced E8/28885 by Council to the satisfaction of the Manager, Resource Consents and Compliance.

12. Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

4. **Continued**

Network Utilities

13. Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed allotments.

The consent holder shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts. Confirmation shall also be provided that demonstrates all services for the each of the proposed dwellings lie within their respective common area.

Reserves Contribution

14. (a) A reserves contribution of **$79,228.13**(including 12.5%) GST being 6% plus GST of 3/4 x the assessed average market value of Lots 1 to 4, shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.

Note: The Reserve contribution payable specified above has been derived as follows:

Aggregate market value of Units 1-4	$391,250.00 (including GST)
Contribution: $391,250 x 6% x 3 = $70,425.00	$79,228.13 (including GST)

(b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

Section 224

15. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and the Land Transfer Plan number and a copy of the survey plan (showing co-ordinates) are supplied to the Council.

Advice Notes

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where an application under Section 125 is made before the consent lapses.

2. This Consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this letter MUST accompany any application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of the application.

4. **Continued**

4. Each building is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. A Building Consent is required for retaining walls unless exempted under the Schedule 1 of the Building Act 2004. This consent does not include any structural approval of the design/calculations submitted.

6. The requirements pursuant to conditions 9 and 10 will be recorded on Council's Land Information Register.

7. **Development Contributions under the Local Government Act 2002.**

   In terms of the Development Contribution under the Local Government Act 2002, it is expected that a contribution for 22 residential units would have been paid when building consent for these units are issued pursuant to Condition 3 of this subdivision consent.

8. Applicable financial contributions have been paid on the preceding subdivision numbered 27046 and SP 8840 by the Council.

9. Any future subdivision of the units on the site by way of Unit Title subdivision will be subject to a requirement for payment of reserves contribution in accordance with Rule 15.15.2.3.3.2 of the Manukau Operative District Plan 2002.

10. The existing Land Information Register (LIR) notes, and consent notices on Lot 10 DP 352580 shall be carried down to the new allotments.

Reasons for the Subdivision Decision

1. The application merits the granting of a resource consent pursuant to Sections 104 and 104A of the Resource Management Act 1991 and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan (2002).

2. The effects of the proposal on the surrounding environment will be no more than minor.

3. The proposal will provide for an efficient use of the land while maintaining the character and amenity values of the surrounding residential area.

4. The proposed development and engineering works are in accordance with Council's engineering standards and will not result in any adverse effect on the environment.

5. The reserve contribution has been imposed pursuant to Rule 15.15.2.3.3.1. There are no circumstances that warrant alleviation from the maximum contribution payable.

LIST OF SUBMITTERS

Submitter	Postal Address
Lee Shen-Der Shann	8 Inchinnam Road East Tamaki
Morris D. Chandler	17 Oleander Point Pakuranga

Non Complying Activity Resource Consent for a 22 Unit Terraced Housing Development and 5 Lot Subdivision:
Working Concepts Ltd.
Lot 10 DP 352580 46 Carlos Drive, Flat Bush

N

Subject Site

Submitter in Oppostition

Figure 16.11A
BOTANY-CLEVEDON WARD

DRAWN	C Fredrickson
CHECKED	
DATE	20/03/06

Rod Dissmeyer
Manager Resource Consents & Compliance

Te Kaunihera o
MANUKAU
City Council

SCALE	1:3,000
FILE	1176/46
Prop. NUMBER	28885
AMENDMENTS	

(A) **LIMITED NOTIFIED OF APPLICATION FOR LAND USE AND SUBDIVISION CONSENTS TO CONSTRUCT A 22-UNIT HOUSING COMPLEX WITH 5-LOT RESIDENTIAL SUBDIVISION: 124 STANCOMBE ROAD, BOTANY. APPLICANT: WORKING CONCEPTS LIMITED.**

(B) **LIMITED NOTIFIED OF APPLICATION FOR LAND USE CONSENT TO CONSTRUCT A 16-UNIT HOUSING COMPLEX WITH ON-SITE SWIMMING POOL AND POOL HOUSE FACILITIES: 126 STANCOMBE ROAD, BOTANY. APPLICANT: WORKING CONCEPTS LIMITED.**

Date and Time	Name	Contact
28 March 2006	Applicant: Working Concepts Ltd	
9:30am	Bob Cummins	
	Lee Shen-Der Shann	
	Maurice Chandler	

Council officers:

Robert Chieng, Team Leader, Resource Consents
Bryce Promfrett, Resource Consents Planner
Renee Sawyer, Committee Advisor

NAME OF SUBMITTER	ADDRESS	Support/ Oppose	To Be Heard	Date Received	Late
Lee Shen-Der Shann	8 Inchinnam Road East Tamaki	O	Y	5/12/05	
Morris D. Chandler	17 Oleander Point Pakuranga	O	N	30/11/05	
Mr Bob Cummins	Working Concepts Ltd P.O. Box 58-395 Greenmount				

Submissions to: Limited Notified Resource Consent – 124 Stancombe Road, Flat Bush	**Total Submissions**	**2**
	Opposition	**2**
Proposal no. 28885	**Support**	**0**
Applicant: Manukau City Council		
	Other	**0**
Agent: Working Concepts Ltd P.O. Box 58-395 Greenmount Attention: Mr Bob Cummins	**To Be Heard**	**2**
Consent Co-ordinator: Bryce Pomfrett Closing Date: 5/12/05	**Unspecified**	**0**

FORM 13

MANUKAU CITY COUNCIL
SUBMISSION ON AN APPLICATION FOR RESOURCE CONSENT
UNDER SECTIONS 96 OR 127(3) OF THE RESOURCE MANAGEMENT ACT 1991

TO: Manager
Resource Consents & Compliance
Manukau City Council
Private Bag 76917
MANUKAU CITY
Attention: Resource Consents, Level 4, Kotuku House

RECEIVED
- 5 DEC 2005
M.C.C. (J)
MAIL ROOM

Name of person(s) making submission: Lee Shen-Der Shann

Address (full postal address): 8 Inchinnam Road
East Tamaki Auckland

I/We ~~support or~~ oppose *(delete whichever does not apply)* the application of
Working Concepts Ltd (Carlos Concepts Ltd.)
(state name of applicant)

for a limited notification application
(state type of resource consent applied for) OR (change or cancellation of resource consent condition[s])

to construct a 22 residential unit housing complex
(state proposal or activity of applicant)

at Lot 2, 124 Stancombe Road Flat Bush. proposal s/o. 28885
(address to which the resource consent application relates)

The particular parts of the application I ~~support or~~ oppose are *(delete whichever does not apply)*:
please refer to attachment 1.0 (1.1 ~ 1.6)

The reasons for making my submission are:
please refer to attachment 2.0 (2.1 ~ 2.6)

(state in summary the nature of your submission, giving reasons)

I wish the consent authority to make the following decision:
please refer to attachment 3.0 (3.1 ~ 3.4)

(give details, including the nature of any conditions sought)

Please state whether you wish to be heard in support of your submission

YES	~~NO~~

(Delete whichever does not apply)

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Address for service of person making submission:
8 Inchinnan Road
East Tamaki
Auckland
Phone No. (Business):
Phone No. (Home): 2770007
Fax No. (Business):
Fax No. (Home):

Signature of person making submission or person authorised to sign on behalf of person making submission:

Shen-Pei L. Sh

Date: 2. Dec. 2005

Note:
1. A copy of your submission must be served on the applicant as soon as reasonably practicable after service of your submission on the consent authority.
2. Please use additional pages if you require more space to make your submissions.
3. Please notify the Council immediately in writing if you decide to withdraw your submission.
4. Please note that your submission is a public document and therefore may be made available to other interested parties.

1.0 **The particular parts of the application I oppose are:**

1.1 The proposed residential type due to the high density of household units on the chosen lot site;
1.2 The high site coverage and maximum height of structure within the special policy area (Flat Bush Buffer);
1.3 The proposed development style and site layout;
1.4 The proposed residential units infringe the height in relation to boundary control on eastern and western boundaries of the site.
1.5 Previous unsatisfactory earthwork procedures implemented for the development;
1.6 The "Assessment of Environmental Effects and Statutory Analysis" only provides misleading words and incomplete information to affected parties.

2.0 **The reasons for making my submission are:**

2.1 The development fails to provide appropriate separation buffers between incompatible activities.

The proposed residential units reside in the Flat Bush Residential 1 Zone General Precinct which has a Special Policy Area (Flat Bush Buffer) of 30 metres in width across the developing land where it adjoins the affected party's property. The affected party's property lies in the Flat Bush Countryside Transition Zone. Considering these zones, and cross referencing them to Variation 13 of the Manukau District Plan, Table 3 under 17.10.11.4, the average lot size (or density per household unit) for;

(1) General Precinct, Flat Bush Residential 1 Zone is 250m² to 400m²;
(2) Flat Bush Residential 2 zone is 375m² to 500m²
(3) Further more, under 17.10.12.2 (b) and (c), all lots in the Special Policy Area (Flat Bush Buffer) are restricted to either a maximum site coverage of 20% where the maximum height of all building is 8 meters, or a site coverage of 35% where the maximum height of all building is 6 meters.

The affect party's property sits in Flat Bush Countryside Transition (Gracechurch Height) where the average shall be 4000m² or greater.

We believe the developer and/or architect was aware of this difference and failed to consider the potential impact of this project on the neighboring rural environments. The proposed buildings have failed to allow for a gradual transition from a busy arterial area to a peaceful rural lifestyle farm. This abrupt transition into unappealing lot layout, unit density, size, structure and design of repetitive rectangle box units/townhouse will only function to devalue the affected party's property and disrupt their rural type lifestyle.

Furthermore, the development has gone ahead in absence of specific guidelines for the Flat Bush Buffer area and challenges the site coverage as well as the allowable height. There is good opportunity to produce a better solution for this site.

2.2 The 8.8m height building with narrow open space is of concern as this building structure has the potential to cause future wind nuisance due to the likelihood it may increase the existing uphill wind flow which will blow directly into the affected party's site. Additionally, building structures of this height will significantly diminish the horizon views from the affected party properties thereby violating our rural lifestyle, privacy and re-sale value.

2.3 The proposed residential units infringe the height in relation to boundary control on eastern and western boundaries of the site which is completely unacceptable. These structures will cast shadows to the eastern and western neighbor's property, which may create a gloomy impression and reduce the surrounding area's living quality.

2.4 Existing earthwork to flatten the site for development already directly affects our property. This excavation has caused our land to fall towards the developing site without any protection and the pre-existing fence is sitting on unstable ground. As a result, we need to restrain our sheep from utilizing this portion of our property. Not being able to utilize ones own property is an enormous inconvenience not too mention a waste of valuable land. Additionally, as a result of the existing excavation, the water pond on our property has dried up. This was an appealing portion of our property and a means to hydrate sheep. Disappearance of this pond greatly affects the pre-existing lifestyle we enjoyed prior to this development taking place.

2.5 Our property is sitting in the Gracechurch heights area, which consists of an area that is generally lower lying than other parts of the zone and was traditionally depicted by its relatively steep and dissected landscape, instability of land, and limited accessibility. Such a "rapid transition" to a busy, cluttered arrangement of high-rise town homes invades on this lifestyle. The "Assessment of Environmental Effects and Statutory Analysis" report ignores this situation by providing misleading impressions with statements such as; " The area had a relatively rural nature, which is particularly noted through the topography of the site, but is undergoing a rapid transition."

We also were looking for complete information about the site, including engineering reports, visual simulation, assessment and acoustic reports. We believe these aspects of the development are crucial for assessing the impact on our property and for making any conclusive decisions pertaining to the proposal. The information must provide enough evidence to ensure the development will protect not only the developing project but also the affected party's health, safety, lifestyle and rights.

2.6 The presented development doesn't provide much benefit to the surrounding countryside and will likely cause a more negative effect to the immediate neighborhood and existing lifestyle owing to physical infringements (water resource and farm land usage), visual infringements (unpleasant structures, diminished horizon views and incompatible activity), and financial infringements by which the surrounding properties will be devalued and less desired. Living next door to such a penetrating development also adds much stress to a once peaceful lifestyle.

3.0 **<u>I wish the consent authority to make the following decision:</u>**

3.1 I would like the consent authority to ensure that this development comply with all the Flat Bush Buffer Zone's lot coverage and height limitations in order to provide a good separation or transition area between the development and the affect party's property.

3.2 For the entire development, I would like that this authority consider building restrictions for Gracechurch heights and therefore request that the builder reduce the development scale to fit in the surrounding area.

3.3 Additionally, I would like that this authority ensure that the existing neighborhood residents have their needs carefully considered and placed above those of the developers. In saying this, I would like to see that the appropriate remedy work is constructed as soon as possible so that we may retain the pond that was once an important feature to our property, and to prevent land fall towards to developing land.

3.4 I would also like to see a fence constructed to separate the two distinctly different lifestyles in the area. By building a solid fence of significant height to border the development, unwanted weed growth can be eliminated, the noise from this development will be diminished for the rural neighbors and some privacy will be restored to the surrounding inhabitants.

RECEIVED
30 NOV 2005
M.C.C. (R)
MAIL ROOM

BP

FORM 13

MANUKAU CITY COUNCIL
SUBMISSION ON AN APPLICATION FOR RESOURCE CONSENT
UNDER SECTIONS 96 OR 127(3) OF THE RESOURCE MANAGEMENT ACT 1991

Manukau City Copy

TO: Manager
Resource Consents & Compliance
Manukau City Council
Private Bag 76917
MANUKAU CITY
Attention: Resource Consents, Level 4, Kotuku House

Name of person(s) making submission: Morris D CHANDLER

Address (full postal address): 17 OLEANDER POINT
PAKURANGA

We ~~support~~ or oppose *(delete whichever does not apply)* the application of Working Concepts Ltd - proposal no. 28885
(state name of applicant)

for a limited notification application for resource consent to
(state type of resource consent applied for) OR (change or cancellation of resource consent condition[s])

to construct a 22 unit housing complex
(state proposal or activity of applicant)

at 124 Stancombe Road Flat Bush
(address to which the resource consent application relates)

The particular parts of the application I ~~support~~ or oppose are *(delete whichever does not apply)*:
Construction of units 11-16 with balconies overlooking play area of adjacent childcare centre such that it will impact on the privacy of this area

The reasons for making my submission are:
1. It is possible to avoid this by repositioning the units
2. Concern for the welfare of the children
3. Parental concern about child privacy
4. Later tenancy complaints from the units about noise from the play area

(state in summary the nature of your submission, giving reasons)

I wish the consent authority to make the following decision: To require the units 11-16 to be rotated through ninety degrees to prevent balconies overlooking childrens play area (Unit 11 to run parallel to boundary with limited windows facing boundary)

(give details, including the nature of any conditions sought)

RECEIVED
30 NOV 2005
H.C.C. (R)

Please state whether you wish to be heard in support of your submission

YES | ~~NO~~

(Delete whichever does not apply)

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Address for service of person making submission:
17 OLEANDER POINT
PAKURANGA

Phone No. (Business): 5790104
Phone No. (Home): 5766912
Fax No. (Business):
Fax No. (Home): 5766626

Signature of person making submission or person authorised to sign on behalf of person making submission:

Date: 28-11-05

Note:
1. A copy of your submission must be served on the applicant as soon as reasonably practicable after service of your submission on the consent authority.
2. Please use additional pages if you require more space to make your submissions.
3. Please notify the Council immediately in writing if you decide to withdraw your submission.
4. Please note that your submission is a public document and therefore may be made available to other interested parties.

Te Kaunihera o
MANUKAU
City Council

Corporate Resources Group

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

16 March 2006

Mr Bob Cummins
Working Concepts Ltd
P.O. Box 58-395
Greenmount

Dear Mr Cummins

(A) LIMITED NOTIFIED OF APPLICATION FOR LAND USE AND SUBDIVISION CONSENTS TO CONSTRUCT A 22-UNIT HOUSING COMPLEX WITH 5-LOT RESIDENTIAL SUBDIVISION: 124 STANCOMBE ROAD, BOTANY. APPLICANT: WORKING CONCEPTS LIMITED.

(B) LIMITED NOTIFIED OF APPLICATION FOR LAND USE CONSENT TO CONSTRUCT A 16-UNIT HOUSING COMPLEX WITH ON-SITE SWIMMING POOL AND POOL HOUSE FACILITIES: 126 STANCOMBE ROAD, BOTANY. APPLICANT: WORKING CONCEPTS LIMITED.

Please find attached a copy of the Planning Officer's report on the above application. For your information I also attach a copy of a leaflet setting out the planning hearing procedures.

I confirm that the hearing is scheduled to be held before the Botany Community Board Resource Consents Hearings Committee on Tuesday 28 March 2006 at 9:30am in the Totara Room, Manukau Civic Centre, Wiri Station Road, Manukau City.

You will note that the attached report includes a recommendation to the application. I wish to stress that this recommendation is the Planning Officer's suggestion to the Committee as to how the application should be treated and will only form part of the Committee's consideration. The Committee will make a decision on the application after it has received and heard all the evidence and submissions.

For administrative purposes, it would be appreciated if you would confirm your intention to appear at the hearing by contacting the writer (telephone 262 5425).

Yours faithfully

Reneé Sawyer

Reneé Sawyer
COMMITTEE ADVISOR

In your reply please quote Proposal No. 28885

Te Kaunihera o
MANUKAU
City Council

Corporate Resources Group

Private Bag 76917
Manukau City
New Zealand
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Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

16 March 2006

Morris D. Chandler
17 Oleander Point
Pakuranga

Dear Mr Chandler

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Yours faithfully

Reneé Sawyer

Reneé Sawyer
COMMITTEE ADVISOR

In your reply please quote Proposal No. 28885

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Corporate Resources Group

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New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

16 March 2006

Lee Shen-Der Shann
8 Inchinnam Road
East Tamaki

Dear Sir/Madam

(A) LIMITED NOTIFIED OF APPLICATION FOR LAND USE AND SUBDIVISION CONSENTS TO CONSTRUCT A 22-UNIT HOUSING COMPLEX WITH 5-LOT RESIDENTIAL SUBDIVISION: 124 STANCOMBE ROAD, BOTANY. APPLICANT: WORKING CONCEPTS LIMITED.

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Yours faithfully

Reneé Sawyer

Reneé Sawyer
COMMITTEE ADVISOR

In your reply please quote Proposal No. 28885

Corporate Resources Group

20 March 2006

«NAME_OF_SUBMITTER»
«ADDRESS»

Dear Sir/Madam

(A) LIMITED NOTIFIED OF APPLICATION FOR LAND USE AND SUBDIVISION CONSENTS TO CONSTRUCT A 22-UNIT HOUSING COMPLEX WITH 5-LOT RESIDENTIAL SUBDIVISION: 124 STANCOMBE ROAD, BOTANY. APPLICANT: WORKING CONCEPTS LIMITED.

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Yours faithfully

Reneé Sawyer

Reneé Sawyer
COMMITTEE ADVISOR

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MANUKAU
City Council

Corporate Resources Group

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

28 February 2006

«Name»
«Address»

Dear «Salutation»

(A) LIMITED NOTIFIED OF APPLICATION FOR LAND USE AND SUBDIVISION CONSENTS TO CONSTRUCT A 22-UNIT HOUSING COMPLEX WITH 5-LOT RESIDENTIAL SUBDIVISION: 124 STANCOMBE ROAD, BOTANY. APPLICANT: WORKING CONCEPTS LIMITED.

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A meeting of the Botany Community Board Resource Consents Hearings Committee has been scheduled for 9.30 am on Tuesday, 28 March 2006 in the Totara Room, Level 3, Manukau Civic Centre, Wiri Station Road, Manukau City.

Please advise me if you are unable to attend so that I may contact your deputy.

An agenda will be forwarded to you in the next couple of weeks.

If I can be of any assistance, please do not hesitate to contact the writer on 262 5425.

Yours faithfully

Reneé Sawyer

Reneé Sawyer
COMMITTEE ADVISOR

*In your reply please quote Proposal No. **

Proposal No: **28885** File Ref: **SP9188**

SITE ADDRESS **124 STANCOMBE RD FLAT BUSH** LEGAL DESCRIPTION

WARD **BOTANY-CLEVEDON** **LOT 3 DP 78859**

APPLICATION: **22 TOWNHOUSE DEVELOPMENT & 5 LOT SUBDIVISION**

Applicant:	WORKING CONCEPTS LTD	**Agent:**	WORKING CONCEPTS LTD
Address:	PO BOX 58395 GREENMOUNT Att: Mr Bob Cummins	**Address:**	PO BOX 58395 GREENMOUNT Att: Jessica Zhang
Contact:	JESSICA 2713007		

Consent Type	**Integrated Consent**	Consent Co-ordinator	**BRYCE POMFRETT**
Operative Zone	**RURAL 3**	Proposed Zone	
Cadastral Map	**8/61;7/72**	District Plan Map	

Discipline	**Does not require vetting (tick ✓)**	**Vetting comments. Please select option and if necessary provide details over leaf**				
		NFA	Have taken copy and will provide written conditions	Comments (more space over leaf)	**Signed**	**Date**
Planning				Refer to Urban Design - Yes/No Refer to Transportation - Yes/No		
Subdivision						
Engineering				Financial contributions - Yes/No		
Manukau Water			✓		GK	13/9
Environmental Health		✓	Send copy to Environmental Health - Genesis 3 - Yes/No		VL	13/9
Transportation				Refer to Roading - Yes/No		
Urban Design						

Received 08/09/05 **Twenty days** _____ **Fast Track** Yes/No **Ten days** _____

Section 94 assessment Notified/ Non-notified **Five days** _____ **Site inspection** _____

Section 92 requests		**Information received**	**Internal referrals to**		**Response**
	☐			☐	

Decision status	Granted/Refused/Withdrawn	**District Plan**	**Activity Type**
Decision date	_____	**Operative** **Proposed**	*PE/CA/DA/RD/NC/PR* *PE/CA/DA/RD/NC/PR*

NOTES

Comments

Planning

Subdivision

Engineering

Manukau Water

Transportation

Urban Design

Environmental Health

2638071.

Maggie Burrill
rc
124-126 Stancombe

(1)

height fence 1.8 or 2.0 m.
will not req

* 46 Carlos.
para 27 3rd line fm bottom
that / which ensures
9.1.2 para 5. dev con.
3rd para. 1 or other

weed
19/4/6.

9.2.1 sub
para 14 reserves con.
top line (units or lot) in gnd

(2)

9.2.2 a/n
para 3 letter / consent.

* 126 Stancombe / 44 Carlos
9.1.1 para 3 sills or eaves
9.1.2 a/n para 6 dev con
3rd para. date of invoice or
issue of bldg consent

9.1.3 para 2 10.4.8 [illegible]
prescribed in / by 7
by the / in the

(3)

[illegible]

Facsimile

Te Kaunihera o
MANUKAU
City Council

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5168
(09) 262-5109
Email: .....@manukau.govt.nz

To: Graeme Leggat

Company:

Fax No: 530 - 8782

From: Bryce Pomfrett

Date: 18/04/06 No of Pages: 2

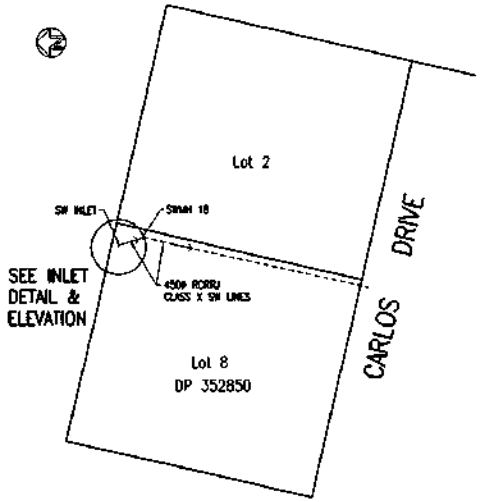
Subject: Proposed Stormwater Inlet Structure

Graeme,

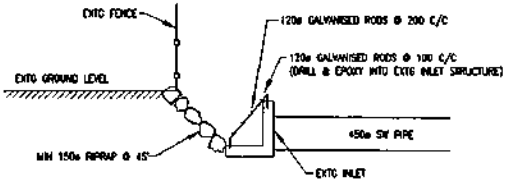
Proposed stormwater inlet structure plan.

Regards - Bryce Pomfrett.

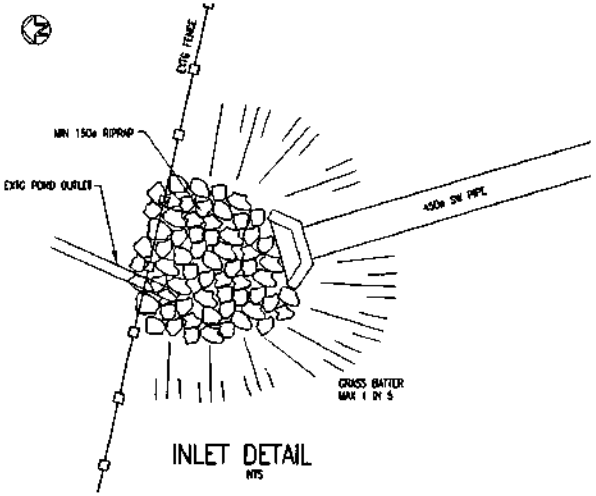
All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied.



LOCATION PLAN
SCALE 1:1000



INLET ELEVATION
NTS



INLET DETAIL
NTS

CONSENT

PROPOSED ENGINEERING WORK
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 2
LAND USE

AIREY CONSULTANTS LTD.

PROPOSED INLET GRILL AND STRUCTURE

A9861/5

19

* * * Memory TX Result Report (18. Apr. 2006 9:20) * * *

1)
2)

Date/Time: 18. Apr. 2006 9:19

File No.	Mode	Destination	Pg(s)	Result	Page Not Sent
4900	Memory TX	15308782	P. 2	OK	

Reason for error
E. 1) Hang up or line fail
E. 2) Busy
E. 3) No answer
E. 4) No facsimile connection

Facsimile

Te Kaunihera o
MANUKAU
City Council

Environmental Services

Private Bag 18917
Manukau City
New Zealand
Fax (09) 263-0163
(09) 263-5400
@manukaucgovt.nz

To: Graeme Leggat

Company:

Fax No: 530 - 8782

From: Bryce Pomfrett

Date: 18/04/06 No of Pages: 2

Subject: Proposed Stormwater Inlet Structure

Graeme,

Proposed stormwater inlet structure plan.

Regards - Bryce Pomfrett.

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28/03/06.

BOTANY COMMUNITY BOARD RESOURCE CONSENTS HEARINGS COMMITTEE MEETING – 28 MARCH 2006

124 STANCOMBE ROAD (NOW 46 CARLOS DRIVE)

OUTLINE OF SUBMISSIONS FOR THE APPLICANT

Opening

The Council Officer (Bryce Pomfrett) has recommended that consent be granted subject to conditions.

The applicant accepts the recommended conditions and adopts the rationale of the report.

In doing so, the applicant wishes to record certain observations of a general nature.

General Comments

1. The proposal is considered to be consistent with the Flat Bush Residential 1 zoning. In particular, it respects the low intensity of activity that the buffer anticipates.

2. The development provides a high density residential environment, consistent with the emerging surrounding urban environment, whilst achieving high levels of amenity.

3. This high level of amenity is achieved through the adherence to basic urban design principles relating to layout, open spaces, choice of materials and extensive landscaping.

4. The extensive landscaping, particularly along the rear boundary, is the main source of mitigation of any adverse effects.

5. The overall layout has been designed to provide a suitable transition from the proposed high density urban development of the arterial strip to the existing lower density sites on Inchiman Rd.

6. In addition, the proposal adds a further range of living opportunities in close proximity to the new Ormiston Town Centre and the Flat Bush neighbourhood centres.

Objections

As noted, there are two objectors.

Morris Chandler.

Consultation with Mr Chandler has continued. His privacy objection can be met by screen planting on the western boundary (diagram).

It is to be remembered that his activity is a child care centre, predominantly operating during week days and day time hours. In terms of Mr Chandler's "reverse sensitivity" objection, it is unlikely that any person would object to the normal noise levels emanating from such an activity during those hours and on those days.

Lee Shan Der Shann.

The screen planting in the buffer zone, as recommended, is the better way to preserve privacy than a solid fence of significant height.

I cannot offer any comment on the pond issue other than to say that the open drain and gully that originally transversed the site were piped and filled in accordance with all relevant consents and best engineering practice to the best of my knowledge.

The general comments relating to the proposed residential type, density, height, style and layout are all dealt with in the applicant's AEE and the officer's report.

Conclusion

The proposal is consistent with what the Council is encouraging in the Flat Bush/Ormiston area.

The objectives and policies of this area are clearly to establish a range of multi unit residential activities in the arterial strip zone. Clearly Council policy is to provide a contrast to the sprawl of stand alone, bungalow style housing steadily spreading South from Botany. This is achieved in practice by encouraging developments of this type on one hand, and controlling it as far as possible with the other. High density housing cannot be constructed "as of right" within the Residential 1 zoning. Much is preserved for the discretion of the Council. In reality, the issues of urban design and traffic management are paramount.

The present proposal seeks to achieve, and does achieve, a balance between meeting the objectives and policies and the controls and should be granted.

R.J. Cummins.

AIREY CONSULTANTS LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
39 MEADOWLAND DRIVE,
P. O. BOX 39 101, HOWICK
PH: 09 534 6523 FAX: 09 537 5754
EMAIL:iang@aireys.co.nz

AIREY CONSULTANTS LTD.

FACSIMILE TRANSMISSION HEADER SHEET

To			
Attn	Bob Cummins		
Re.	Effect on 122 Stancombe	Date	27/7/05
From	Ian	Pages	3
Fax No.	04 8016870	File	861/5
CC: GR 2714037		CC:	

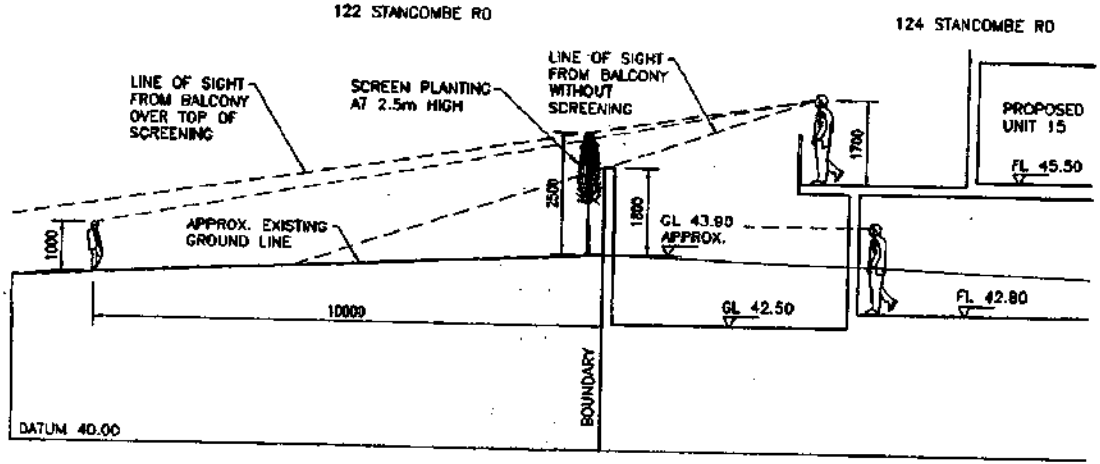
Dear Bob,

Enclosed is a cross section showing the effect that the units have. A 2.5m screen solves the issue I would suggest, given the children are less than 1m anyway and by the time they may be visible are >> 15 metres away. Do you want me to pass these through to Maree?

Regds

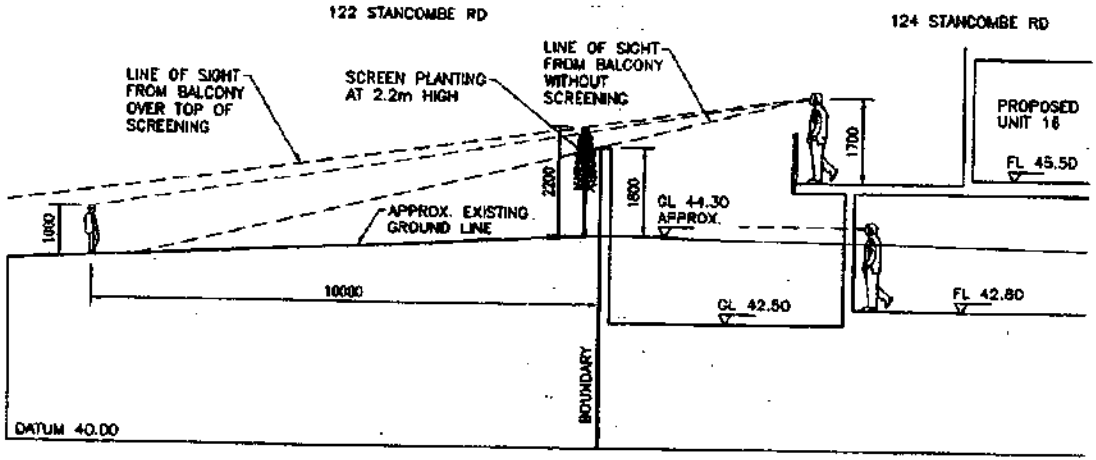
IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CONTACT US IMMEDIATELY.

The information contained in this fax is confidential between Airey Consultants Ltd and the intended recipient. Any other person receiving this fax is required to respect the confidentiality and may not disclose, copy or make use of its contents. If this fax has been received in error, would the recipient please notify Airey Consultants Ltd immediately and return it by mail. Airey Consultants will reimburse the cost incurred.



CROSS SECTION AT 23m BACK FROM NORTHERN BOUNDARY (SOUTHERN WALL OF UNIT 15)

1:100



CROSS SECTION AT 15m BACK FROM NORTHERN BOUNDARY (NORTHERN WALL OF UNIT 16)

1:100

TO: Manukau City Council
Botany Community Board Resource Consents Hearings Committee

In the matter of Limited Notified Application for Land Use and Subdivision Consent to Construct a 22 Unit Housing Complex with 5 Lot residential Subdivision 124 Stancombe Road Botany

And

The objection submission made under the relevant sections of the Resource Management Act on the 28th November 2005
Objectors:
This submission is made on behalf of:
a) Morris D Chandler, Director of Farm Cove Holdings Ltd, owner of the property at 122 Stancombe Road Botany

b) Suzanne B Chandler, Proprietor of Early Impressions Leaning Centre, tenant occupying 122 Stancombe Road Botany as a Childcare Centre

c) The parents of the Children attending the above stated Childcare Centre
Preliminary:
The attention of the Board is drawn to the decisions of the Environment Court and subsequent mediation in the matters of the Appeals made under section 120 of the Act and recorded under file Reference: RMA 533/01 and RMA 514/01)

The above stated actions were laid with the courts in relation to the establishment of the Childcare Centre at 122 Stancombe Rd. Amongst the various issues raised in the objections laid by the persons named in the above referenced actions was that noise was a major factor and was likely to cause severe inconvenience.

In determining the final resolutions the Hearing identified that noise was a factor that required specific action to ensure that the quiet enjoyment of the neighboring properties was protected. This required amongst other actions that a 2m high close boarded fence be erected along the side and rear boundaries.

..... 2

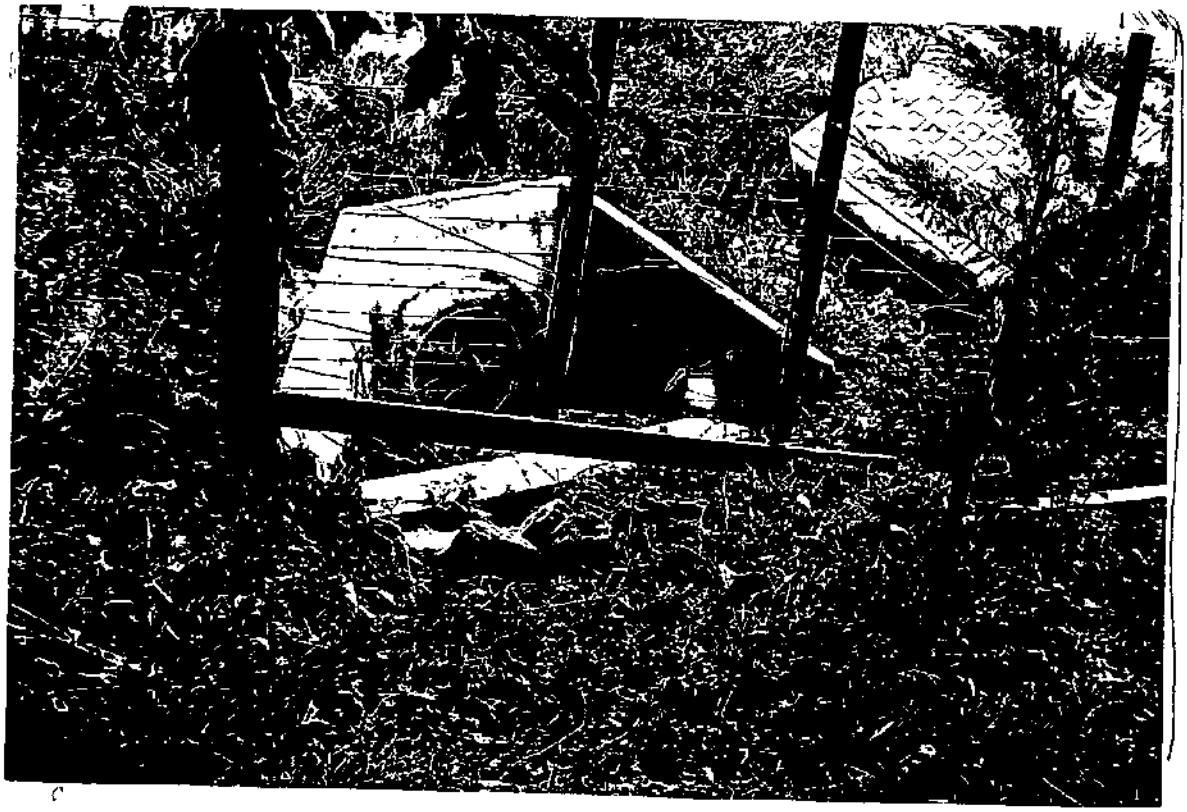
2.....

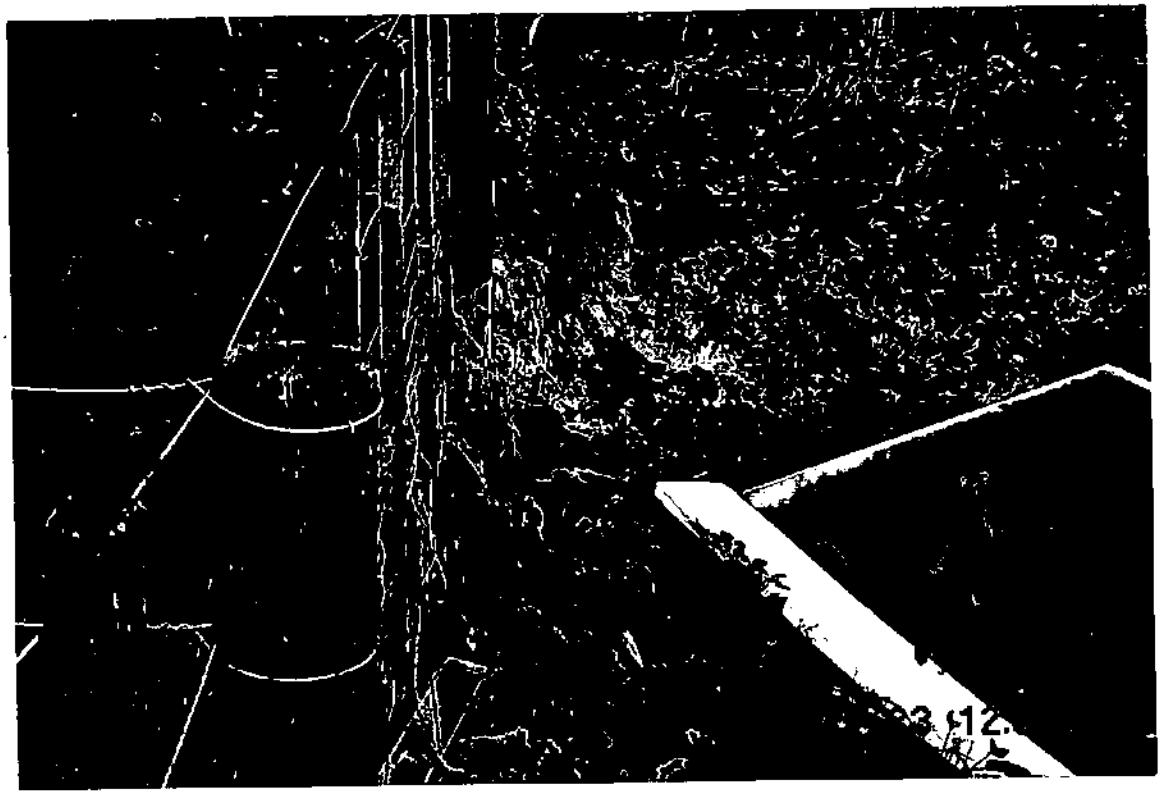
Grounds for objection

We record our objections to the proposed construction as outlined on the submitted plans on the following grounds:

1. **If the proposed construction (specifically units numbered 11 – 16) proceeds in the manner planned the operators of the Childcare Centre have a concern that this same noise objection could cause occupiers of the proposed buildings to lay complaints with Council and**
2. **That the proposed construction which provides for units 11 – 16 to have balconies that will impose upon the privacy of the children in their play area environment and**
3. **That the parents of the children have expressed concern for the privacy and welfare of the children given the close proximity of the proposed units to the outdoor play area and**
4. **The parents have a right to expect their children to have privacy without risk of being viewed by persons of unknown character and**
5. **That the construction as detailed will affect the sun penetration to the outdoor play zone and**
6. **That it is possible to mitigate the impact of the proposed construction by repositioning the proposed units and ensuring soundproofing of the adjacent walls is included in the construction process and**
7. **That this was discussed with the applicant prior to the lodging of the objection, we understand from that discussion that the orientation of the building on the site is that recommended by council officers and**
8. **The Planning Officers report fails to address the impact that such development will have on these issues which were identified in our initial submission and further fails to examine alternative solutions.**

M D Chandler





4. LIMITED NOTIFIED APPLICATION FOR RESOURCE CONSENT UNDER THE RESOURCE MANAGEMENT ACT 1991 – APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 46 CARLOS DRIVE (FORMERLY 124 STANCOMBE ROAD), FLAT BUSH

Purpose of Report	:	Statutory
Significance of Decision	:	Addressed by the Resource Management Act 1991
Reporting Unit	:	Environmental Services - Resource Consents & Compliance
File Ref	:	ES 1176/46, SP 9188
Reporting Officer	:	Bryce Pomfrett, Resource Management Planner
Ward	:	Botany-Clevedon

SUMMARY

The following report provides an assessment and recommendations on an integrated land use and subdivision resource consent application to construct a 22 residential unit housing complex on the site at 46 Carlos Drive ((formerly 124 Stancombe Road), Flat Bush. In conjunction with the housing development it is also proposed to install network utilities and to construct retaining walls on the eastern, western and northern boundaries. Additionally, the report provides and assessment and recommendations on an application for subdivision resource consent to create four new fee simple residential lots and an additional access lot to be completed when the land use consent has been given effect to.

Overall, the application is considered as a Non-Complying Activity under the Manukau Operative District Plan 2002.

RECOMMENDATION

That subject to any contrary or additional evidence submitted at the hearing, the consents be GRANTED subject to the conditions recommended at the end of this report.

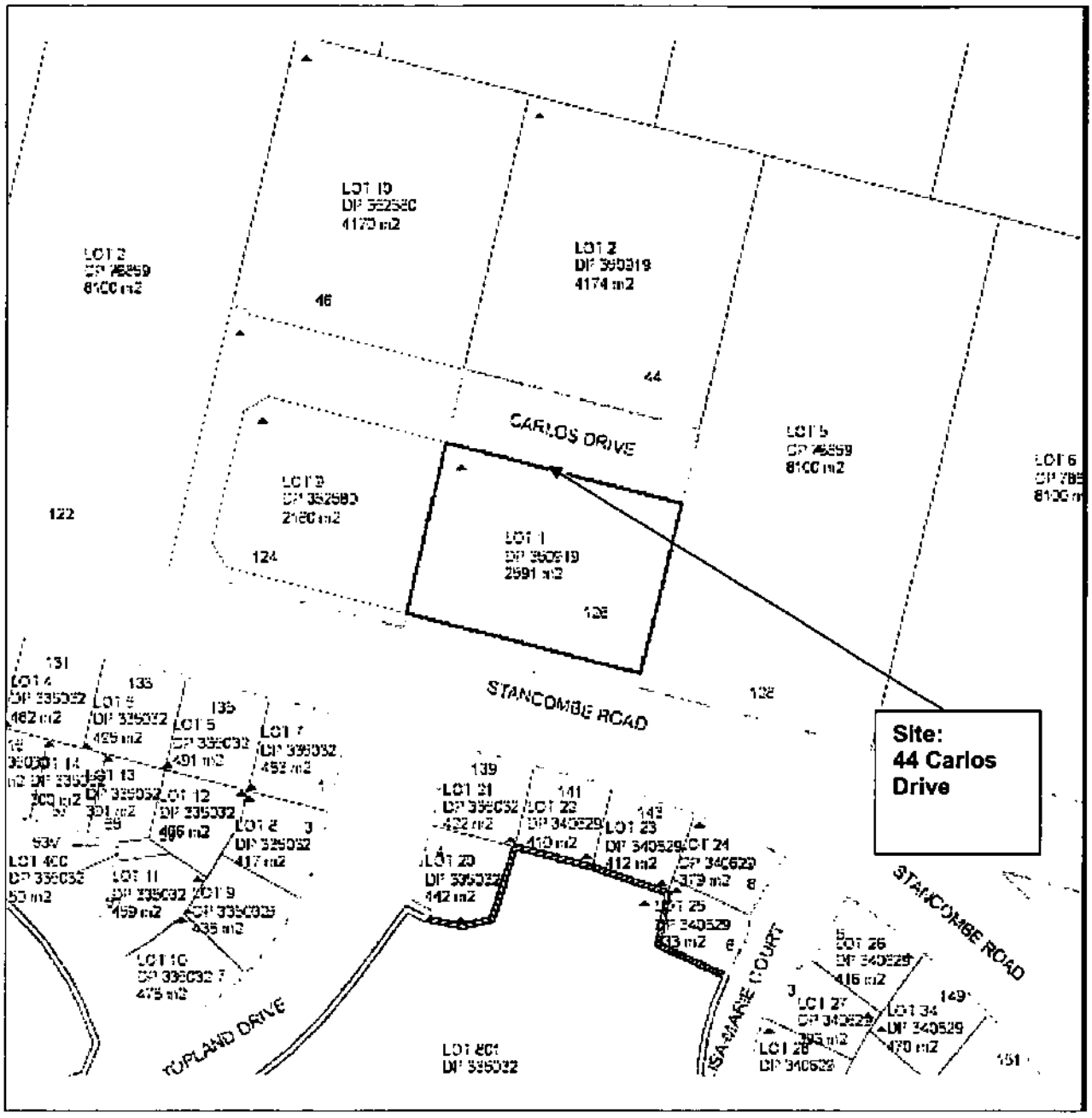
References

Proposal	:	28885 (SP9188)
District Plan	:	Manukau Operative District Plan 2002 (former provisions of Variation 13 are now operative and included within the Manukau Operative District Plan 2002)
Planning Map	:	Figure 16.11A – Flat Bush Structure Plan
Date Received	:	8 September 2005
Date of Limited Notice	:	4 November 2005

Site Description and Context

Legal Description	:	Lot 10 DP 352580
Total Area	:	4176m^2.
Zoning	:	Flat Bush Residential 1 Zone (Flat Bush Buffer Area) General Precinct.

The subject site is generally rectangular in shape being 4176m^2 in area and located to the north of the recently constructed Carlos Drive. The site has been largely cleared of established vegetation through the preceding subdivisional works.


CARLOS DRIVE
STANCOMBE ROAD
STANCOMBE ROAD
TOPLAND DRIVE
Site:
44 Carlos
Drive

4. **Continued**

The western boundary of the site is defined by a 1.8 metre closely boarded timber fence, with a row of established pine trees defining the boundary between the subject site and rural-residential properties to the north. Recent lower level planting has also been undertaken parallel to this boundary on the site to the north. The western, northern and eastern boundaries of the site have batters at various heights which have resulted from the preceding land modification works.

The site immediately to the east of the subject site is currently vacant, although a development proposal has been submitted to the Council for the construction of 16 terraced houses on this site. To the immediate west of the site is located an 8100m^2 site which accommodates a childcare centre operating from a converted dwelling. The dwelling is located close to the boundary of the applicant's site being adjacent to the midpoint of the boundary separating the two sites.

To the north of the site is located low density rural residential living accessed from Inchinnam Road. Sites in this area are in the order of 8000m^2 site size. These sites being within the Flat Bush Countryside Transition Zone – Gracechurch Heights.

To the south of the site a new three storey apartment complex, with additional underground carparking area (total of 42 units) is nearing completion. To the east of this site a terraced housing complex of 16 units has recently been completed and is being marketed for sale.

Proposal

The applicant, through their consultant Barker & Associates Ltd, has outlined the proposal as follows:

> *"The applicant seeks consent to establish a 22 townhouse residential development on proposed Lot 2 of a site located at 124 Stancombe Road, Flat Bush. The proposed development is shown on the attached plans in Appendix 1 titled "Stancombe Estate, 124 Stancombe Road, Botany, Flat Bush" prepared by Alto Architects, sheets A01-A11.*
>
> *The development is in the form of four blocks, two containing five units each and two containing six units each. The occupants have the use of a communal space around these units, which includes an entertainment area, a petanque court and three visitor car parks. Each of these units comprises three bedrooms, two bathrooms with open plan living area including kitchen, lounge and dining areas which are connected to an outdoor deck and balcony. The ground level consists of garaging for two vehicles in a stacked manner, a bathroom, a laundry, and double bedroom. The first floor level is setback from the ground floor bedroom frontage and includes the open plan living area and balcony. The second level (also setback) includes two double bedrooms and two bathrooms.*
>
> *The overall layout of the site includes two blocks of five units fronting Carlos Drive with a shared driveway providing access through the centre of these two blocks. The remaining two blocks of units lie to the rear at 90 degrees, so all units have access from the centre of the site [with 6 units in each]. The site holds a central feature which is to be landscaped. The central feature enables a circular driveway for traffic movement on the site. To the rear of the site is where both the communal facilities are located in addition to a large landscaped area parallel to the rear boundary.*
>
> *Landscaping is to be provided, and will include specimen trees to the centre and rear of the site as well as some other low level shrubs on the perimeter of the driveway and overall site."*

4. **Continued**

In addition to the land use development proposed on the site it is proposed to subdivide the site into 5 allotments with an allotment boundary surrounding each of the four blocks of units proposed, and a further allotment containing access, parking and communal facilities (being a petanque court, and informal seating / covered areas).

Necessity for the Application

The proposal requires resource consent for both land use and subdivision consent components. Overall, the application is considered as a Non-Complying Activity, however, for clarity the individual components of the application which require resource consent are separated and identified below:

Part A - Land Use

Non-Complying Activity for the construction of more than one household unit in the Special Policy Area (Flat Bush Buffer).

Discretionary Activity to construct a 22 residential unit complex on a 4173m^2 site in the Flat Bush Residential 1 Zone.

Restricted Discretionary Activity for infringement of the 8.0 metre maximum height for units 13-16 and 19-22 (in the Special Policy Area Flat Bush Buffer) by a maximum of 0.8 metres.

Restricted Discretionary Activity for infringement of the height in relation to boundary recession plane on the western boundary of 2.5m + 45^0 recession plane by a maximum of 2.1 metres horizontal distance over 10.8 metres (Unit 10) and for infringement of the 2.5m + 45^0 recession plane on the eastern boundary by a maximum of 2.9 metres horizontal distance over 10.8 metres (Unit 1).

Restricted Discretionary Activity to undertake development requiring the provision and extension of public utility services to service the proposed development.

Restricted Discretionary Activity for the construction of a retaining wall on both the eastern and western boundaries of the site exceeding 1.5 metres in height.

Part B - Subdivision

Under the Manukau Operative District Plan 2002, provision is made for the consideration of the application for subdivision as a Controlled Activity, where construction of the dwellings in accordance with an approved land use consent precedes that subdivision. It is to be required that this subdivision occur as a consequence of the land use consent (Part A) as the shape and configuration of lots relates directly to this land use consent. It is not considered appropriate that titles for the proposed subdivision be possible without the land use consent being completed first as this may result in fragmented development. On this basis the subdivision is considered as a Controlled Activity.

Limited Notification Procedure

During preparation of the application for resource consent the applicant attempted to obtain the written approvals of adjoining property owners to both the north and west of the site (the property to the east is owned by the applicant and, therefore, they provided written approval as an affected person). As a result of consultation to obtain the written approvals of these adjoining owners to the north and west it became clear that at least two of the adjoining property owners were not prepared to provide their written approval as affected parties.

4. **Continued**

Upon a visit to the site and an assessment of the proposal, it was considered that all of the adjoining property owners would potentially be affected by the proposal and hence without written approvals from those parties it was considered appropriate to proceed with notification in accordance with Section 94 of the Resource Management Act 1991. As the development is of significance to the immediate surrounds of the site only, full public notification was not deemed to be necessary.

Pursuant to the Resource Management Amendment Act 2003 becoming operative on 1 August 2003, there is now provision for limited notification under Section 94 as follows:

> ***"94. When public notification of consent applications is not required***
>
> *(1) If notification is not required under Section 93(1), the consent authority must serve notice of the application on all persons who, in the opinion of the consent authority, may be adversely affected by the activity, even if some of those persons have given their written approval to the activity.*[Limited notice]
>
> *(2) However, a consent authority is not required to serve notice of the application under subsection (1) if all persons who, in the opinion of the consent authority, may be adversely affected by the activity have given their written approval to the activity."*

Council considered that the application under consideration is subject to section 94(1) of the Resource Management Act 1991. Adjoining properties were accordingly notified on 4 November 2005.

Submissions

A total of four property owners, and one occupier were individually notified of the application. Two submissions were received both of which are in opposition to the proposal. A locality plan identifying the subject site and the location of submitters is included. The reasons for opposition included within these submissions are outlined below:

<u>Morris D Chandler (owner of 122 Stancombe Road)</u>

The submitter opposes the proposed construction of Units 11-16 with balconies overlooking the play area of the adjacent childcare centre. The reasons for making this submission are identified by the submitter as:

"1. It is possible to avoid this by repositioning the units
2. Concern for the welfare of the children
3. Parental concern about child privacy
4. Later tenancy complaints from the units about noise from the play area."

The submitter seeks that the Council make the following decision:

"To require the units 11-16 to be rotated through ninety degrees to prevent balconies overlooking the adjoining children's play area (Unit 11 to run parallel to boundary with limited windows facing [the] boundary)."

<u>Lee Shen Der Shann (owner 8 Inchinnam Road)</u>

The particular parts of the application the submitter opposes are:

4. **Continued**

"The proposed residential type due to the high density of household units on the chosen lot site;
The high site coverage and maximum height of structure with in the special policy area (Flat Bush Buffer);
The proposed development style and site layout;
The proposed residential units infringe the height in relation to boundary control on eastern and western boundaries of the site.
Previous unsatisfactory earthwork procedures implemented for the development;
The "Assessment of Environmental Effects and Statutory Analysis" only provides misleading words and incomplete information to affected parties."

The submitter seeks that the Council make the following decision:

"I would like the consent authority to ensure that this development comply with all the Flat Bush Buffer Zone's lot coverage and height limitations in order to provide a good separation or transition area between the development and the affect party's property.

For the entire development, I would like that this authority consider building restrictions for Gracechurch heights and therefore request that the builder reduce the development scale to fit in the surrounding area.

Additionally, I would like that this authority ensure that the existing neighbourhood residents have their needs carefully considered and placed above those of the developers. In saying this, I would like to see that the appropriate remedy work is constructed as soon as possible so that we may retain the pond that was once and important feature to our property, and to prevent land fall towards developing land.

I would also like to see a fence constructed to separate the two distinctly different lifestyles in the area. By building a solid fence of significant height to border the development, unwanted weed growth can be eliminated, the noise from this development will be diminished for the rural neighbours and some privacy will be restored to the surrounding inhabitants."

1.0 Statutory Considerations

1.1 In this instance the Council, when considering the application for Resource Consent shall have regard to Sections 3, 5, 7, 104, 104A, 104B, 104C, 104D, 108 and 220 of the Resource Management Act 1991 (the Act).

1.1.1 Section 3 defines the term "effect" as follows:

"Meaning of 'effect'. In this Act, unless the context otherwise requires, the term 'effect' includes:

(a) Any positive or adverse effect; and

(b) Any temporary or permanent effect; and

(c) Any past, present, or future effect; and

(d) Any cumulative effect which arises over time or in combination with other effects regardless of the scale, intensity, duration or frequency of the effect and also includes:-

(e) Any potential effect of high probability; and

4. **Continued**

(f) Any potential effect of low probability which has a high potential impact."

1.1.2 Section 5 outlines the purpose of the Act as follows;

"(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act 'sustainable management' means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well being and for their health and safety while:

(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonable foreseeable needs of future generations; and

(b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and

(c) Avoiding, remedying or mitigating any adverse effects of activities on the environment."

1.1.3 Section 7 requires the consent authority to have particular regard, among other matters, to:

"(b) The efficient use and development of natural and physical resources

(c) The maintenance and enhancement of amenity values."

Section 7 matters are not expressly ranked in any order of priority. Therefore all aspects of this list are to be considered fully. Relevant matters are considered in the evaluation section of this report.

1.1.4 Section 104(1) states inter alia:

"(1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to:

(a) any actual or potential effects on the environment of allowing the activity; and

(b) any relevant provisions of –

...

(iii) a regional policy statement or proposed regional policy statement;

(iv) a plan or proposed plan; and

(c) any other matter the consent authority considers relevant and reasonably necessary to determine the application..."

1.1.5 Section 104A provides for the determination of applications for controlled activities stating as follows:

"After considering an application for a resource consent for a controlled activity, a consent authority –

4. **Continued**

(a) may grant or refuse the application; and
(b) if it grants the application, may impose conditions under section 108."

1.1.6 Section 104B provides for the determination of applications for discretionary activities stating as follows:

"After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority –

(a) may grant or refuse the application; and
(b) if it grants the application, may impose conditions under section 108."

1.1.7 Section 104C provides for the determination of applications for restricted discretionary activities stating as follows:

"When considering an application for a resource consent for a restricted discretionary activity, a consent authority –

(a) must consider only those matters specified in the plan or proposed plan to which it has restricted the exercise of its discretion; and
(b) may grant or refuse the application; and
(c) if it grants the application, may impose conditions under section 108 only for those matters specified in the plan or proposed plan over which it has restricted the exercise of its discretion."

1.1.8 Section 104D provides for the determination of applications for non-complying activities as follows:

104D. Particular restrictions for non-complying activities

(1) Despite any decision made for the purpose of section 93 in relation to minor effects, a consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either –
(a) the adverse effects of the activity on the environment (other than any effect to which section 104(3)(b) applies) will be minor; or
(b) the application is for an activity that will not be contrary to the objectives and policies of –
(i) the relevant plan, if there is a plan but no proposed plan in respect of the activity; or
(ii) the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or
(iii) both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.
(2) To avoid doubt, section 104(2) applies to the determination of an application for a non complying activity.

2.0 District Plan Considerations

2.1 The application was received on 8 September 2005 at which time Variation 13 (Flat Bush Structure Plan) had not been declared operative. In the period between the application being received and this hearing the provisions of Variation 13 have been declared operative (all outstanding appeals having been resolved) and is now considered part of the Manukau Operative District Plan 2002 ("Operative Plan"). Consideration of the application has been undertaken in accordance with the provisions applying to Flat Bush under Chapter 17.10.1 of the Operative Plan.

4. **Continued**

2.2 In addition to the Flat Bush provisions the provisions of Chapter 9 – Land Modification, Development and Subdivision are relevant with the provisions of this chapter controlling the proposed earthworks component of the application, together with the proposed installation of public network utility services proposed and consequential subdivision.

2.3 Also relevant are the objectives, policies, rules and assessment criteria outlined in Chapter 8 – Transportation of the Operative Plan. Under these provisions consideration of the proposed access for the development onto Carlos Drive, including consideration of pedestrian linkages is necessary.

2.4 Finally, Chapter 15 – Public Open Space of the Operative Plan deals with the provision and assessment of reserves contributions to be provided in conjunction with residential subdivisions.

3.0 Evaluation

The assessment of the environmental effects of the proposed application submitted by Working Concepts Ltd. has been considered overall as a Non-Complying Activity. The environmental effects over which the Council has discretion are, therefore, unrestricted. The following evaluation addresses the environmental effects of the proposal on this basis. Despite application being made as a Discretionary Activity, Council may approve consent under the provisions of Section 104(5) of the Act, regardless of what type of activity the application was expressed to be for.

3.1 Interface between the Flat Bush Residential 1 Zone and the Transition Zone – Gracechurch Heights.

3.1.1 The rear 30 metres of the subject site is affected by the Special Policy Area Boundary: Flat Bush Buffer Area ("Flat Bush Buffer"). At section 17.10.9.4.3 of the Manukau Operative District Plan 2002 it is identified, in relation to this Special Policy Area Boundary, that:

"A Special Policy Area (Flat Bush Buffer) of 30 metres in width, lies over an area of land within the Flat Bush Residential 2 Zone [and Flat Bush Residential 1 Zone] where it adjoins the Flat Bush Countryside Transition zone. The Special Policy area establishes a buffer between the two zones in order to mitigate any potential adverse effects of the higher density urban development within the Flat Bush Residential 2 Zone on the residential amenity values of the Flat Bush Countryside Transition zone."

3.1.2 The key distinctions which apply between the Flat Bush Residential 1 Zone and the Flat Bush Buffer are identified in the following table:

Table One: Key Distinctions Between Flat Bush Buffer Zone Rules and Flat Bush Residential 1 Zone (General Precinct) Rules.

Rule	Flat Bush Residential 1 Zone (General Precinct)	Flat Bush Residential 1 Zone with Special Policy Area Flat Bush Buffer
Rule 17.10.12.2 – Site Coverage (Sites over 400m^2 net site area)	40%	35%
Rule 17.10.12.5 – Maximum Height	9 metres	8 metres
Rear Yard	1 metre	6 metres (from a Flat Bush

		Countryside Transition Zone)
Minimum Lot Size	125m^2 (with average of 250-425m^2)	750m^2

3.1.3 The proposed development includes 7 residential units (2 units are split by the buffer boundary and have been treated as one unit) within the rear 30 metres of the subject site affected by the Flat Bush Buffer. This equates to a unit density of 1:261m^2 within the 30 metre Flat Bush Buffer area of the site. Despite this, the layout and design of buildings on the site has been undertaken in a comprehensive manner to both meet the design objectives of the Flat Bush Residential 1 Zone, and to observe the transitional objective of the Flat Bush Buffer Zone. In this regard it is noted that a conventional subdivision of the rear 30 metre portion of the site could result in up to three 750m^2 sites with dwellings able to be built on each site with a floor area up to 262m^2 in footprint and be constructed within 6 metres of the rear boundary of the site. When compared in this context the proposal well exceeds the 6 metre separation required from the rear boundary with separation in excess of 14 metres provided.

3.1.4 The site coverage of buildings within the Flat Bush Buffer equates to approximately 25.1% which is well within the 35% which applies in this Flat Bush Buffer. It is acknowledged, however, that the maximum height of units proposed will extend to 8.8 metres which exceeds the maximum permitted of 8.0 metres by 0.8 metres. Any effects of overshadowing or dominance of these buildings will be mitigated by the 14 metre separation from the rear boundary. Of further benefit, the internal circulation and vehicle access arrangement provided assists in creating a transition from the larger rural residential sites on Inchinnam Road, to the more intensive urban development of the Flat Bush Residential 1 Zone. This design, with the buffer planting of large trees proposed on the sites northern boundary, and the communal open space and associated outdoor activity areas, is considered to provide a satisfactory transition between the rural residential environment of the Countryside Transition Zone, and the Flat Bush Residential 1 Zone. While this is not in strict conformity with the Flat Bush Buffer rules the specific circumstances of the application are considered to meet the transitional objective of this Special Policy Area.

3.2 Site Design

3.2.1 The configuration of terraced units proposed provides for a primary orientation of units 1-10 to the street (Carlos Drive) with additional vehicle access to a further two residential blocks at the rear of these units. Garaging for units 1-10 is discreetly located at the rear allowing these units to have both ground level and upper level outdoor space overlooking the street. The central vehicle circulation area, while not vested as public road, will provide a similar function to a street, particularly with front door access for Units 11-16 and 17-22 being directly from this vehicle circulation area.

3.2.2 All units are of similar internal configuration providing 3 bedrooms, central living floor, and two-vehicle stacked garaging.

3.2.3 The external appearance of the proposed units is a mixture of schist on the lower level and either solid plaster or weatherboard finish on the two upper levels. Windows are proposed to be made from aluminium joinery with louvers on the upper end units and on the outer edge of upper storey clear windows. The variation and external materials proposed are considered to provide a quality external appearance for these units.

3.2.4 Further, the effect of unit bulk or repetitiveness on Carlos Drive is broken by the mixture of colour and external materials proposed and some recessing of central units approximately 1 metre behind the façade of the end units in each block fronting Carlos Drive.

4. **Continued**

3.2.5 Large areas of private outdoor space are provided on first floor balconies of each unit which comply comfortably with the minimum specifications in Flat Bush of $6m^2$ and minimum depth of 2 metres (first floor balconies being in the order of $15.275m^2$ in area with minimum depth of 3.25 metres). In addition, ground floor open space is provided with dimensions of the areas varying between units. The area of open space provided with each unit together with the communal facilities to be shared on site is considered satisfactory for future tenant requirements.

3.2.6 As identified by submitter Morris Chandler the balconies associated with Units 11-16 are positioned parallel to the sites western boundary. It is Mr Chandler's concern that the positioning of these balconies will allow residents of these units to overlook the outdoor play area of the childcare centre he operates on the adjoining site. It is considered that Mr Chandler's concerns are valid and that attempts to mitigate this effect should be incorporated into the development design. As previously outlined the configuration of units proposed is considered to be the optimum configuration of units on the site in meeting both internal design objectives and in providing a suitable transition between the Flat Bush Countryside Transition Zone – Gracechurch Heights and the site. As such, rotation of these units 90^0 as requested by Mr Chandler, is not considered appropriate. A substantial retaining wall is proposed to stabilise the existing batter on the western boundary of the site being in the order of 1.0m at the southern end of Units 11-16 rising to 2.0m at the northern end of Units 11-16. Above this wall is constructed a 1.8 metre fence which runs along the western boundary of this site. This means it is possible for persons standing on the Unit 16 balcony to overlook the play area on the adjoining site, despite the combined height of the retaining wall and fence above being approximately 3.8 metres high (being the highest point). The combined height of the retaining wall and fence drops to the south to a height of approximately 2.6 metres at Unit 11 (being the lowest point). The units most likely to look over the children's play area are units 14-16 although oblique views may be available from Units 11-13. To ensure protection of the privacy of the children's play area it is recommended that evergreen tree planting be provided along the western site boundary capable of reaching a minimum height of 5.0 metres. In addition to this, and should the adjoining owner at 122 Stancombe Road agree, screen planting could be provided at the applicant's cost on this adjoining site. In which case given the level drop between the properties a lower level of planting would be required to be established to provide the necessary screening on the adjoining site.

3.2.7 A further option would be to rotate the second floor of the units 180^0 to provide balconies on the eastern side of these units. This will require further consideration by the applicant, the submission of further plans for Council consideration, and will have consequential effects on these units design.

3.3 <u>Landscaping</u>

3.3.1 The applicant proposes to undertake comprehensive landscaping of the development as indicated in the planting plan submitted with the application. The key features of this landscaping plan are the planting of a row of tree specimens able to reach substantial size on the northern boundary of the site (notably *Liquidamber* and *Quercus*). In addition to this the planting of Queen Palm is proposed within the central manoeuvring island and framing both the eastern and western ends of Units 1-10. A range of further exotic plantings which establish to medium size are proposed within the outdoor courts and along the northern boundary of the site. Overall, the landscaping proposed is considered to complement the form of residential development proposed and assists in providing an integrated theme for the development. Provision of a landscaped transition between the Gracechurch Heights Countryside Transition Zone into the Flat Bush Buffer also results.

4. **Continued**

3.3.2 As previously noted, in addition to the planting proposed it is, however, considered appropriate that extra planting be provided on the boundary between 122 Stancombe Road and the subject site to assist in screening the outdoor balcony areas on the western side of Units 11-16. This requirement is proposed as a condition of consent.

3.4 Transportation

3.4.1 The original site is located on the northern side of Stancombe Road approximately 140 metres west of the intersection of Gracechurch Drive, Murphys Road and Jeffs Road. The site has resulted from completion of a recent subdivision (Proposal 27046, SP 8840) that included the widening of Stancombe Road and the formation of Carlos Drive that runs parallel to Stancombe Road. The subject site involves the land to the north of Carlos Drive that abuts 44 Carlos Drive to the east and is surrounded by a mix of newly developed residential apartment units and single household units as well as lots that are in the process of being developed for residential purposes.

3.4.2 The overall layout of the site includes two blocks fronting Carlos Drive with a shared access lot providing access through the centre of these two blocks. The remaining two blocks are to the rear at 90 degrees to Carlos Drive in order to provide all units access to the centre of the site. All four blocks of houses are to be separated into individual four fee simple lots whilst the access and communal facilities at the rear of the site with an area of 1608m^2 are to form Lot 5. Each unit contains three bedrooms and is accessed from Carlos Drive via the proposed shared access lot (Lot 5). The development includes double garaging at ground level in a stacked form that complies with the on-site parking and manoeuvring requirements of the Operative Plan.

3.4.3 In accordance with 9.9.2.10 of the Operative Plan, in order to provide a carriageway that is able to accommodate on-site manoeuvring for an 8 metre rigid truck rights of way in favour of Lot 2 and 3 over Lots 1 and 4 are required. Taking this into consideration, the private-way provides access to and from Carlos Drive to the south and complies with dimension and gradient standards within the Operative Plan. It is also noted that three complying visitor carparking spaces are also located at the rear of the site within the shared access lot (Lot 5).

3.5 Assessment

3.5.1 The proposed 22 residential unit apartment block complies with on-site parking spaces required (44) and manoeuvring rules of the Operative Plan and is, therefore, considered to be safe and efficient. The development is to be accessed via the two-way, access lot (Lot 5) which ensures adequate on-site manoeuvring for an 8 metre rigid truck for all dwellings within the proposed layout. Pedestrian access within the shared Lot 5 is provided along with three additional visitor carparking spaces.

3.5.2 It is noted that the additional traffic flows have been previously anticipated through the recent road widening and upgrading of Stancombe Road as well as within the underlying subdivision (Proposal 27046, SP 8840). The stacked double garage design with all garaging located to the rear of the road frontage is considered to be a convenient and attractive method for providing the required off-street parking. The surrounding area is residential in nature and all garages are accessed to the rear of the buildings away from Carlos Drive. Thus it is considered that there are no potential traffic conflicts anticipated from the development. Also the nearest intersection to the shared access lot is the intersection of Stancombe Road with Carlos Drive which is located approximately 60 metres away.

4. **Continued**

3.6 **Engineering Servicing**

3.6.1 Stormwater Reticulation

The proposed stormwater reticulation system captures stormwater and drains it via a public pipe network which discharges either to the west, or east of the subject site. The design of the reticulation of stormwater on the site has been reviewed by Council's Resource Engineer and is determined to be acceptable subject to the imposition of conditions. A financial contribution was imposed on the underlying subdivision to account for wider infrastructure demands arising from discharge of stormwater from the site.

3.6.2 Wastewater Servicing

All proposed units in the development are proposed to be provided with individual connection points and wastewater is to be discharged to the public network. Council's Resource Engineers have reviewed the reticulation proposed and consider it provides a satisfactory method for disposing of wastewater from the subdivision. In addition to the reticulation works further payment of financial contributions has been required as a condition of the preceding subdivision consent in order to provide for network infrastructure beyond the site.

3.6.3 Water Supply

As for both stormwater and wastewater Council's Resource Engineer considers the water supply servicing proposed is satisfactory subject with the imposition of financial contributions having been levied as a condition of prior subdivision consent.

3.6.4 Electricity / Telecommunications

All units within the development will be required to be provided with connections for both electricity and telecommunications. These services will be required to be installed underground.

3.7 Retaining Walls / Geotechnical Suitability

The applicant proposes the construction of retaining walls on each of the western, eastern and northern boundaries of the site. The construction of these retaining walls will serve to provide a level building platform, and to provide and even grade between the street (Carlos Drive) and the site.

3.8 Overland Flowpath

The applicant's engineer has proposed that an overland flowpath be established through the site with associated minimum floor levels for buildings on the site. Establishment of this overland flowpath together with prescribed floor levels has been recommended by Council's Resource Engineer for inclusion as a condition of both the land use and subdivision consent.

3.9 Development Contribution (Local Government Act 2002)

Under the Council's Development Contribution Policy, which applies under the Local Government Act 2002, payment of a development contribution (at a current rate of $4,505 + GST) will be required upon application for building consent to establish each of the residential units and levied at this stage. As this is a Local Government Act 2002 contribution an advice note has been recommended on the consent to draw the applicant's attention to this requirement.

4. **Continued**

3.9 Subdivision Assessment

3.9.1 It is proposed that the subdivision will be completed once implementation of the proposed land use consent is completed. Under such a scenario the subdivision component of the application would be considered as a Controlled Activity. The lots conform to the layout proposed for each block of units within the development, with an additional area of communal space which will be subject to the imposition of an amalgamation condition on the consent. The overall effects of the subdivision, in terms of servicing provision are considered to have been addressed under the preceding land use assessment.

3.9.2 Reserves Contribution

Under Rule 15.15.2.3.3.1 of the Manukau Operative Plan 2002 consideration of reserves contribution is required for residential subdivisions. This rule states:

"A reserve contribution may be required as a condition of a subdivision consent for residential purposes, the total value of which shall not exceed 6 percent of the assessed market value of the additional sites created by the subdivision.

Provided that in the case of sites capable of accommodating more than one household unit, the land shall be determined as if it was a site for a single household unit".

In this regard the Council has engaged Quotable Value to prepare a valuation of the allotments in the subdivision for the purposes of assessing the reserve contribution payable on the consent. Under the subdivision proposed by the applicant it is not considered that there are any extenuating circumstances which should facilitate a reduction in the percentage of reserves contribution payable, and accordingly a condition is recommended which requires payment of 6% (+GST, if any) of the value of three additional residential lots in the subdivision. Each of these sites have been treated as single household units sites. This reserve contribution will be utilised to provide for the acquisition of public open space in the future and serves to offset the additional demand for public open space created by the proposed subdivision works. Future subdivision of the 22 units on the site will further attract reserves contribution.

4.0 Evaluation in accordance with Section 104 of the Act

Section 104 of the Act outlines those matters which the Council, as Consent Authority, shall have regard to when assessing the subject application, and is also subject to Part II (the Purpose and Principles of the Act). An evaluation of the proposal in accordance with section 104 is outlined below.

4.1 Part II of the Act "Purpose and Principles"

4.1.1 The purpose of the Resource Management Act 1991 is to promote the sustainable management of natural and physical resources (refer Section 1.1.1 of this report for full definition). In terms of giving effect to the purpose of the Act, it is considered that the proposed development will promote sustainable management by achieving efficient use of a scarce resource (being land) with development to proceed in a comprehensively designed manner.

4.2 Section 7 - Other Matters

4.2.1 Section 7 identifies a number of "other matters" to be given particular regard by Council in the consideration of any assessment for resource consent, and includes:

4. **Continued**

4.2.2 *"The efficient use and development of natural and physical resources."*

4.2.3 The proposal constitutes efficient use of a site zoned for residential development. Infrastructure in terms of roading and network utilities is available in the surrounding area in anticipation of development of the site for residential purposes.

4.2.4 "*The maintenance and enhancement of amenity values*".

4.2.5 "Amenity Values" is defined in the RMA as:

"those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes".

4.2.6 It is considered that the proposed development is mindful of the need to provide an appropriate level of amenity for the transition between the Flat Bush Buffer and Flat Bush Countryside Transition Zone. Subsequently, the amenity values of the site or surrounding area will not be compromised.

4.3 Section 8 - Principles of the Treaty of Waitangi

4.3.1 It is considered that the principles of the Treaty of Waitangi have been satisfactorily taken into account with respect to this application and that there will be no adverse effects on tangata whenua as a result of granting consent.

4.4 Section 104(1)(a)

4.4.1 This requires consideration of any actual or potential effects on the environment and has been addressed in Part 7.0 (inclusive) of this report. It is concluded that the proposal will have no more than minor actual or potential effects and that the impact of such effects are mitigated by the imposition of conditions on consent.

4.5 Section 104(1)(b)

4.5.1 The proposal does not have implications or impact on provisions of a national policy statement (of which none have yet been prepared); or the New Zealand Coastal Policy Statement.

4.5.2 Section 104(1)(b)(iii) of the Resource Management Act 1991 requires regard be had to any relevant provisions of a Regional Policy Statement. The Auckland Regional Policy Statement (ARPS) was notified in 1994 and decisions on submissions were incorporated in September 1995. This document became operative on 31 August 1999. Further plan changes have been notified to the ARPS as identified below:

(i) Proposed Plan Change 6 – Giving Effect To The Regional Growth Concept And Integrating Land Use And Transport.
(ii) Proposed Plan Change 7 – Changes to the Metropolitan Urban Limits
(iii) Proposed Plan Change 8 – Landscape and Volcanic Cones
(iv) Proposed Plan Change 9 – Include Reference to the Hauraki Gulf Marine Park Act 2000
(v) Proposed Plan Change 10 – Natural Hazards

4.5.3 The ARPS provides the overall direction and general strategy for management of resources in the Auckland region.

4. **Continued**

Key issues for the region are identified within this document as the need to accommodate continued population growth in the foreseeable future, and the need to recognise that the effects of some uses in rural and coastal areas, including cumulative effects, can be significantly adverse. To achieve this, the ARPS promotes the containment of urban growth within defined Metropolitan Urban Limits (MUL).

4.5.4 Under the provisions of this definition, and as the land subject of this application has been afforded an urban zoning since 1995, this land is considered to fall within the MUL. On this basis the proposed subdivision and development of this land is considered to be consistent with the provisions of the ARPS. This being in line with the strategic objectives and policies under section 2.5 of the ARPS.

4.6 Section 104(1)(c)

This requires that any other matter the consent authority considers relevant and reasonably necessary to determine the application be considered. In this case there are no other matters that are considered necessary to determine the application.

5.0 Relevant Provisions of an Operative Plan

Section 104(b)(iv) requires that the Council have regard to any objectives, policies, rules or other provisions of any District Plan or Proposed District Plan when considering an application for resource consent. The site is subject to the provisions which apply under the Manukau Operative District Plan 2002, and particularly those which apply under Section 17.10 – Flat Bush Area. Relevant objectives and policies, and the consideration of the proposal against these relevant objectives and policies follow.

5.1 **Chapter 17.10.3 – Flat Bush**

5.1.1 Objective 17.10.3.1

"To create a diversity of living and working environments of high environmental quality within Flat Bush with an emphasis on the sustainable use of a scarce regional and district land resource."

The proposal, while entirely of a residential nature is considered to fulfil the intention of the intention of this objective by providing a form and scale of residential development which utilises the site in an efficient manner, with consideration of the relationship of the development with adjoining sites and the street. Further landscape planting will serve to augment the overall amenity values of the site.

5.1.2 Objective 17.10.3.2

"To facilitate the urbanisation of the area in a manner and at a rate which takes account of the demand for such urbanisation while ensuring the efficient use of the diminishing land resource commensurate with the provision of appropriate levels of amenity for residents in the area."

Design of the development at a density appropriate for the zone, together with the quality of external material proposed provides appropriately for the amenity of local residents, as well as prospective residents of the development itself. The density of development proposed also ensures efficient use of land as a diminishing resource.

4. **Continued**

5.1.3 Objective 17.10.3.3

"To facilitate the development of an appropriate range of densities of development and living and working environments of good amenity within Flat Bush."

The proposed development contrasts with other development types in the immediate vicinity (being apartments and rows of terraced housing parallel to the street) this being considered to provide an alternative design and living environment of good amenity.

5.1.4 Objective 17.10.3.4

"To achieve a well connected, adaptable, safe, attractive, healthy and pleasant environment for living and working and travelling with an emphasis on the importance of the public realm including parks, streets, civic areas, roads and the natural environment."

Provision is made within the development for interface with the street resulting in a pleasant environmental result recognising the relationship of the development with the only adjoining public realm (being Carlos Drive).

5.1.5 Policy 17.10.4.1

"Subdivision and settlement should be of a type, density and design that does not detract from, and is supportive of, the specific environmental outcomes identified for each zone as well as an integrated transport system which provides a choice of travel modes."

The density of development on the site will serve to support the movement of public transport along Stancombe Road and the nearest future public transport route.

5.1.6 Policy 17.10.4.2

"Urbanisation in the area should occur in a staged manner based on proximity to existing development in the north of the catchment so as to minimise adverse effects on the environment and to ensure an appropriate transition between the various forms of development within and immediately outside the Flat Bush Structure Plan Area and by:

(i) providing through the Flat Bush Structure Plan, the land use framework for development of the future urban area including provision of the Town Centre, smaller commercial centres, schools and conveniently located public open space areas
(ii) establishing targets for overall average densities of development throughout the Flat Bush Structure Plan Area, with greater density of development being enabled for those areas closest to the Town Centre, Neighbourhood Centres and selected major transportation routes, consistent with the Auckland Regional Policy Statement
(iii) allowing higher densities of development throughout the area than are provided for in the Main Residential zone."

The density of development proposed will be generally in exceedence of the density of development which typically occurs in the Main Residential Zone. The development is considered to be in accordance with the provisions of this policy and is located within the first stage release of the Flat Bush Structure Plan.

4. **Continued**

5.1.7 Policy 17.10.4.6

"Subdivision and development activity should achieve urban design and sustainable management principles by:

(i) encouraging a sense of place and identity,
(ii) providing a high degree of 'connectivity' through well connected road networks based on block designs,
(iii) promoting social interaction through attention to the placement of buildings on sites,
(iv) facilitating safe walking and cycling, including through the identification of cycle routes,
(v) supporting or enabling opportunities for passenger transport services to establish,
(vi) reducing travel distances, providing access to amenities, and supporting an integrated transport system that provides a choice of travel modes,
(vii) maintaining contact between communities,
(viii) being compatible with the part of the roading hierarchy on which it is located in terms of the type and level of traffic generation,
(ix) designing local roads to ensure a safe low traffic speed environment,
(x) relating to the streetscape so as to enhance perceptions of safety,
(xi) providing separation buffers between incompatible activities, promoting biodiversity.
(xii) Ensuring there is provision for emergency services that takes account of strategic location requirements."

The development of the subject site progresses development alongside Carlos Drive which connects to Gracechurch Drive in a block formation. The proposed frontage of units 1-10 to Carlos Drive achieves a design of buildings to overlook Carlos Drive optimising passive surveillance. The development proposed is considered to be compatible with this policy and is a logical extension of the development of the site facilitate by previous subdivision and road construction.

5.2 17.10.9.3 Flat Bush Residential 1 Zone

5.2.1 17.10.9.3.1 Objective

(i) "To facilitate the development of an integrated, medium/ higher density residential environment (while enabling higher density) which has high levels of amenity, supports a range of travel modes, allows for a range of living opportunities and incorporates opportunities for compatible small scale employment in appropriate locations."

5.2.2 17.10.9.3.2 Policies

"a) Buildings and structures should be designed and located in such a manner that they positively address the street and public places so as to contribute to neighbourhood amenity values including pedestrian accessibility and safety, and streetscape values such as diversity and attractiveness.
b) Non residential buildings and structures should be sited and designed in a way which is in keeping with a residential context.
c) Carparking, particularly for non-residential purposes should be located to the rear or side of buildings rather than between buildings and the street.

4. **Continued**

d) Residential development should include private outdoor space(s) that can function as attractive and useable outdoor living and service areas.

e) Activities within residential areas should be in keeping with residential intensity, and residential character, and should not create nuisances such as objectionable noise, smoke, dust, fumes, odours, noxiousness or danger.

f) Connectivity/permeability of the street system shall be maximised wherever possible."

The proposed development will be completed in line with the density of development provided for in the Flat Bush Residential 1 Zone. Particularly, this is achieved by buildings providing a positive relationship with the street, vehicle parking at the rear of buildings fronting a public road, sufficient areas of on-site amenity for residents.

5.3 Chapter 9 – Land Modification Development and Subdivision

5.3.1 Objective 9.3.5

"To ensure the provision of an adequate standard of infrastructure and public utility services at the time land is modified, developed or subdivided to avoid, remedy or mitigate any adverse effect on the environment, and to ensure that the cost of providing or upgrading services is borne by those undertaking land modification, development or subdivision to the extent that such works are necessitated by the proposed activity."

Provision of adequate network utility servicing of the development is proposed by the applicant, or is provided by the Council with the applicant required to offset the cost of Council providing this servicing by payment of a financial contribution to be required as a condition of consent.

5.4 **Chapter 8 – Transportation**

5.4.1 Objective 8.3.2

"To maximise energy efficiency and accessibility within the transportation network and encourage the use of energy efficient modes of transport."

The design of access and vehicle circulation is compatible with the transport network with services the site. The surrounding transportation network has been designed and constructed in anticipation of development of the site. In time, the density of development proposed will also support public transport networks.

6.0 Evaluation in Accordance with Section 104D of the Act

6.1 Under the Manukau Operative District Plan 2002 the application is assessed as a Non-Complying Activity. Accordingly, for Council to grant a consent for a Non-Complying Activity the Council must be satisfied that the adverse effects of the activity on the environment will be minor, and the application will not be contrary to the objectives and policies of the relevant district plan (commonly referred to as the "threshold test").

6.2 The preceding evaluation of the effects of the proposed activity, and analysis against the relevant objective and policies of the Manukau Operative District Plan has concluded that the proposal meets both limbs of the threshold test.

7.0 Submissions

Two submissions have been received in opposition to the proposal. Responses to each submission are addressed below.

4. **Continued**

7.1 Morris Chandler (122 Stancombe Road)

Concern expressed by Mr Chandler regarding privacy issues associated with balcony positioning on Units 11-16 are considered valid. Nevertheless, rotation of these units 90^0 is considered to compromise the design of development on the site, and the spacious transition the design provides from the Countryside Transition Zone to the north. To mitigate Mr Chandler's concerns it is recommended that screen planting be provided on the sites western boundary. This would be most effective where provided inside Mr Chandler's site although, naturally, this would require this submitter's agreement. Alternatively, it could be provided inside the subject site, although given the retaining wall height on this boundary it is unlikely planting would have immediate impact (needing to be a minimum of approximately 5 metres high to be effective). Rotation of the central floor of Units 11-16 by 180^0 may also be possible, subject to further design investigation by the applicant.

7.2 Lee Shen Der Shann (8 Inchinnam Road)

This submitter's concerns are in regard to the intensity of development proposed in the Flat Bush Buffer Zone, and loss of a pond on the submitter's site, caused in the submitter's view as a consequence of earthworks already completed on the subject site. Without provision of further technical evidence to support the submitter's concerns regarding the pond draining no recommendations are made at this stage. The retaining wall proposed on the northern boundary is considered to address the submitter's stability concerns.

The submitter requests the construction of a fence on the sites northern boundary to *"separate the two distinctly different lifestyles in the area"*. The construction of a solid fence on this boundary, while not opposed, is considered to result in more of a hard "urban" solution than what the submitter's objective is. Planting as proposed by the applicant is favoured to effectively screen this boundary.

8.0 Conclusions

8.1 The applicant proposes to construct a 22 residential unit terraced housing development on the subject site with associated provision of shared communal facilities. In addition to the terraced house construction the applicant proposes to complete land network utility provision in conjunction with the development and 5 allotment subdivision.

8.2 The proposed development is considered to be compatible with the objectives and policies which guide development in the Flat Bush Residential 1 Zone. While the application is not strictly in conformity with the intention of the Special Policy Area Flat - Bush Buffer Zone the design of development on the site is considered to provide a superior result than could otherwise be established as a permitted activity in the Special Policy Area - Flat Bush Buffer.

8.3 Overall the development provides a positive relationship with the street and makes efficient use of the subject site.

8.4 The proposal is considered to meet both limbs of the threshold test provided under Section 104D of the Resource Management Act 1991. This is because the environmental effects of the proposal are considered to be minor, and the proposal is considered to be consistent with the relevant objectives and policies which apply under the Manukau Operative District Plan 2002. Accordingly, consent is recommended, subject to the imposition of conditions on consent to further mitigate the effects of the proposal.

4. **Continued**

9.0 Officer's Recommendation to the Botany Community Board Resource Consents Hearings Committee

That the application for an integrated land use and subdivision resource consent by Working Concepts Ltd received on the 8 September 2005 for Council's consent to construct a 22 residential unit housing complex with consequential 5 allotment residential subdivision on the site at 124 Stancombe Road, Flat Bush be determined as a Non-Complying Activity (land use) and a Controlled Activity (subdivision) and that Council hereby grants its consent pursuant to Sections 104, 104A ,104C and 104D of the Resource Management Act 1991 and subject to the following conditions:

PART A - LAND USE CONSENT:

Land Use Conditions

General

1. That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing and granting of this Resource Consent are paid in full.

2. That the development shall be completed in accordance with the plans and documentation including Assessment of Environmental Effects (AEE) submitted with the application and numbered 28885 by Council unless otherwise amended by the following conditions of consent.

Apartment Design and Construction

3. That prior to the commencement of construction on the site the following information shall be submitted to the satisfaction of the Manager Resource Consents and Compliance:

   (a) details including a schedule of materials, and elevations of the privacy screens to be erected at the end of all balconies identified in the application plans approved in condition (2) above. These screens shall be a maximum of 1.8 metres high where the screens meet the building, extending for a minimum of 1.5 metres at this height and stepping down to the balcony edge;

   (b) details including a schedule of materials and elevations of overhangs for second floor balconies to comply with Rule 17.10.12.9 of the Manukau Operative District Plan 2002.

   The items and works required to be shown in plans in (a) to (b) above shall be completed to the satisfaction of the Manager – Resource Consents and Compliance prior to occupation of any of the units on the site.

4. That the external colour scheme of the apartments be consistent with the colour scheme plans (Coloured Renderings) numbered 28885 by the Council (1 Sheet).

Landscaping

5. The proposed landscape planting as identified on the planting plan and plant schedule submitted (dated April 2005) and numbered 28885 by the Council shall be implemented to the satisfaction of the Manager, Resource Consents and Compliance within 3 months of completion of construction of the units on the site.

4. **Continued**

The landscaped areas shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state to the satisfaction of the Manager – Resource Consents and Compliance.

6. Prior to occupation of the units on the site the consent holder shall undertake specimen tree planting between proposed Units 11-16, capable of forming an unbroken 5 metre high screen between these units and the site to the west. This planting shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state to the satisfaction of the Manager – Resource Consents and Compliance.

   Advice Note:

   As an alternative the consent holder may undertake this planting within the adjoining site to the west with the agreement of the landowner concerned, in which case the screen planting would only be required to attain a minimum unbroken 3 metre high screen.

7. All buildings and construction works shall be undertaken in accordance with the Geotechnical investigation and completion report prepared by Geotek Services Ltd Ref: 2704 and dated 2 August 2005.

Noise Insulation Requirements

8. That the units shall be designed, constructed and pass field tests demonstrating compliance with the following standards:

   (i) The Sound Transmission Loss of common walls shall be no less than 60 and the Sound Transmission Loss of common floors and ceilings shall be no less than 55.

   (ii) The Impact Insulation Class of floors shall be no less than 55.

   (iii) The Verification Method shall be G6/VM1.

   (iv) When assessing Impact Insulation Class, all floors, hallways and stairs in a building outside a household unit are deemed to be common building elements to that household unit. The impact requirement shall therefore apply between any other unit or common space and the habitable space of the household unit irrespective of vertical or horizontal separation.

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been designed in accordance with the above standards shall be provided at building consent stage.

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been constructed and has passed field tests demonstrating compliance with the above standards shall be provided to the Manager – Resource Consents and Compliance prior to occupation of the units.

Waste Management

9. That the management of domestic waste on the site be undertaken in accordance with the Waste Management Plan submitted with the application and numbered 28885 by the Council.

4. **Continued**

10. Every new owner, or tenant, within the apartment complex shall be advised in writing of the process for waste management storage and disposal. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

11. That the outdoor rubbish collection areas shall be screened from public view by the erection of a fence prior to the occupation of the household units and be thereafter maintained to the satisfaction of the Manager - Resource Consents and Compliance.

Washing Lines

12. That no washing lines, or airing of laundry occur at a level above the height of balcony balustrades on each floor.

13. Every new owner, or tenant, within the apartment complex shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

Letter Boxes

14. Letter boxes shall be provided for each unit fronting Carlos Drive at the street frontage. For the rear two blocks of units a letter box shall be provided for each of these units in an accessible position, which meets the requirements of New Zealand Post.

Engineering

15. The works detailed on the approved plans referenced **E8/28885** (sheets 1-16) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements:

    (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

    (ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

    (iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

    (iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

    (v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

16. The works shall be completed to the satisfaction of the Manager, Resource Consents and Compliance **within six months of the commencement of these works and/or prior to occupation of the proposed buildings or subdivision.**

4. **Continued**

Overland Stormwater Flowpath

17. The site has been identified as being subject to flooding from the overland flow of stormwater therefore an overland flowpath shall be provided in accordance with approved engineering drawings referenced E8/28885, and shall be protected by a 'right to drain water' easement in favour of the Council.

The 'right to drain water' easement shall be defined by the consent holder's registered surveyor and the subsequent easement documents prepared by the City Solicitor at the consent holder's expense. A copy of the Council's requirements for the preparation of legal documentation is attached in this regard. The easement documents shall include the provision that no buildings, structures, fences or filling be placed in the easement area or other works carried out thereon, except with specific Council approval; and that the level and profile of the overland flowpath area) shall remain unchanged thereafter. The easement documents shall also include as-built plans showing levels in terms of the Lands & Survey Auckland Datum, 1946 a suitably located datum mark and boundary dimensions for the proposed easement. One copy of the easement as built plan is required to be clearly printed, showing legible levels, within the box on the enclosed sheet.

Suitable benchmarks (Lands & Survey Auckland Datum, 1946) shall be established and shown on a suitable plan for inclusion in the easement documents to allow all future buildings to be constructed accordingly.

This information shall be recorded on Council's Land Information Register.

18. The following units have been identified as being susceptible to flooding from an overland stormwater flowpath.

In order to protect future building from the effects of flooding or the 1% AEP storm event the following minimum floor levels, identified by the consent holder on the approved plan referenced E8/28885 (Sheet 6) shall be established for the unit areas shown on this plan.

Unit	Minimum Floor Level
1	43.05
2	43.05
3	42.65
4	42.65
5	42.25
6	41.78
7	41.78
8	41.78
9	41.58
10	41.58
11	42.30
12	42.30
13	42.55
14	42.55
15	42.80
16	42.80
17	42.78
18	42.78
19	42.78
20	42.78
21	42.78
22	42.78

4. **Continued**

All levels are in terms of the Lands & Survey Auckland Datum, 1946 and the levels are in accordance with the approved plans referenced E/28885 (Sheet 6) by Council.

Compliance with this requirement shall be on a continuing basis and shall be registered as a covenant in accordance with Section 108 of the Resource Management Act 1991 on the Certificate of Title of Lot 10 DP 352580 (and recorded on Council's Land Information Register) both at no cost to Council.

Suitable benchmarks to the Lands & Survey Auckland 1946 datum shall be established to enable future buildings to be constructed accordingly.

The above information (floor levels and benchmarks) shall be shown on a plan on the attached form for inclusion in the covenant.

Public Drainage and Water Supply

19. Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each unit with individual connection points in accordance with the approved engineering drawings referenced E8/28885 by Council and to the satisfaction of the Manager – Resource Consents & Compliance.

20. Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hard fill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

21. A detailed structural design shall be undertaken of the retaining walls at the time of Building Consent application. Specific consideration to design shall be given where the retaining wall is to be constructed over the existing sanitary sewer pipes. This will include but not be limited to allowing 1m clearance between the pipe face and adjacent pile surrounds, the diameter of adjacent piles and the rail sizes between them, as well as increases to the embedment depth to allow a minimum of 300mm clearance below the bottom of pipe.

Roading

22. The proposed access way shall be constructed in accordance with the approved engineering drawings referenced E8/28885 by Council prior to the occupation of the units and maintained thereafter to the satisfaction of the Manager, Resource Consents and Compliance.

Vehicle Access

23. The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to occupation of the household units and maintained thereafter to the satisfaction of the Manager, Resource Consents and Compliance.

24. That the width of the vehicle crossing shall be 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to the occupation of the household units to the satisfaction of the Manager, Resource Consents and Compliance.

4. **Continued**

Retaining Walls

25. The retaining walls proposed shall be undertaken in such a manner as to ensure that the land within the site and the land on adjoining sites remains stable at all times. The consent holder shall ensure that prior to construction commencing, all necessary approvals for the retaining walls are obtained and that the retaining walls are completed in a timely manner and supervised by a Chartered Civil Engineer.

Network Utilities

26. Power and telephone services shall be installed underground within the common area to provide suitably located service connections to all proposed units.

27. The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:

Table - Residential Zone and Dwellings in Rural Zones						
Time period	**Weekdays** (dBA)		**Saturdays** (dBA)		**Sundays and Public Holidays** (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

Advice Notes

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However, the Council does have the power to extend this period in certain cases where a further application is made within three months of the consent lapsing.

2. This consent does not constitute authority to build or undertake private drainage works and it may be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent and the associated approved drawings should accompany any application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of the application.

4. Each building is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. <u>Development Contributions under the Local Government Act 2002</u>

   Please note that under section 198(1)(a) of the Local Government Act 2002 a Development Contribution is applicable to all proposed residential dwellings proposed as part of this development.

4. **Continued**

The consent holder is advised that a Development Contribution will be calculated on 22 additional household equivalent units (HEU) for the development.

This contribution is currently $4,505 plus GST per additional HEU. The rate of contribution is subject to periodic review through the Council's Annual Plan process. The amount payable will be determined at the date of invoicing at the date of issue of building consent.

Pursuant to section 208(1) of the Local Government Act 2002 until the development contribution is paid the Council may prevent the commencement of the resource consent or withhold a code compliance certificate under section 95 of the Building Act 2004 (from 31 March 2005). The Council may also register the development contribution under the Statutory Land Charges Registration Act 1928 as a charge on the title of the land.

6. A Building Consent is required for retaining walls unless exempted under the Third Schedule of the Building Act 1991. The minimum design load on retaining wall should be 12.0 kPa. This consent does not include any structural approval of the design/calculations submitted.

7. Prior to any certification being issued under Section 224 of the Resource Management Act 1991 for any future Unit Title subdivision of the units subject of this consent, compliance will need to be achieved with the requirements of Section 224(f) of the RMA.

8. The requirements pursuant to Conditions 9 and 10 (Overland Flowpath) will be recorded on Council's Land Information Register.

Reasons for the Decision

1. The proposal merits consent pursuant to Section 104, 104A, 104B, 104C and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan (2002).

2. Overall, the proposed land use consent complies with the minimum density provisions as prescribed by the in the Flat Bush Residential 1 Zone. In this regard it is considered that the proposed units will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.

3. The design and external appearance of the proposed dwellings are generally in keeping with expected development in the vicinity.

4. The proposed layout of the site will provide for efficient use of resources providing for satisfactory on site amenity while preserving the amenity values of surrounding properties and the general streetscape and residential characteristics of the area.

5. The proposed development and the associated engineering works are in accordance with Council's engineering standards and would not result in any adverse effect on the environment.

4. **Continued**

PART B - SUBDIVISION CONSENT

Subdivision Conditions

General

1. That pursuant to Section 36 of the Resource management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing and granting of this Resource Consent are paid in full.

2. That the subdivision and development shall be in general accordance with the plans and information submitted with the application and numbered **28885 (SP9188)** by Council.

Commencement of Consent

3. Pursuant to Section 116 of the Resource Management Act 1991, the subdivision consent shall not commence, and the Council approval under Section 223 of the Resource Management Act 1991 shall not be issued, until the Land Use Consent - Part A of this consent for construction of the 22 dwellings referenced P28885 has been given effect to the extent that the exterior walls and roof of all the approved units have been constructed.

   Advice Note:

   The purpose of this condition is to ensure that the proposed subdivision, which closely aligns with the land use consent proposed, does not occur prior to the land use consent being implemented.

Amalgamation

4. That Lot 5 be held as to four undivided one quarter shares by the owners of Lots 1 to 4 hereon as and that individual Certificates of Title be issued in accordance therewith (RGL Ref A634857).

Parking and Manoeuvring Areas

5. The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate and maintained thereafter to the satisfaction of the Manager - Resource Consents and Compliance.

6. That the width of the vehicle crossing shall be formed at 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate to the satisfaction of the Manager - Resource Consents and Compliance.

Engineering

7. The works detailed on the approved plans referenced **E8/28885** (sheets 1-16) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements:

   (i) All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.

4. **Continued**

(ii) All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).

(iii) On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.

(iv) A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).

(v) All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.

8. The works shall be completed to the satisfaction of the Manager, Resource Consents and Compliance **within six months of the commencement of these works and/or prior to occupation of the proposed buildings or subdivision.**

Overland Stormwater Flowpath

9. The site has been identified as being subject to flooding from the overland flow of stormwater therefore an overland flowpath shall be provided within Lots 3 and 5 in accordance with approved engineering drawings referenced E8/28885 (Sheet 6), and shall be protected by a 'right to drain water' easement in favour of the Council.

The 'right to drain water' easement shall be defined by the consent holder's registered surveyor and the subsequent easement documents prepared by the City Solicitor at the consent holder's expense. A copy of the Council's requirements for the preparation of legal documentation is attached in this regard. The easement documents shall include the provision that no buildings, structures, fences or filling be placed in the easement area or other works carried out thereon, except with specific Council approval; and that the level and profile of the overland flowpath area) shall remain unchanged thereafter. The easement documents shall also include as-built plans showing levels in terms of the Lands & Survey Auckland Datum, 1946 a suitably located datum mark and boundary dimensions for the proposed easement. One copy of the easement as built plan is required to be clearly printed, showing legible levels, within the box on the enclosed sheet.

Suitable benchmarks (Lands & Survey Auckland Datum, 1946) shall be established and shown on a suitable plan for inclusion in the easement documents to allow all future buildings to be constructed accordingly.

This information shall be recorded on Council's Land Information Register.

10. Lots 1-4 have been identified as being susceptible to flooding from the overland stormwater flowpath.

In order to protect future building on these lots from the effects of flooding or the 1% AEP storm event the following minimum floor levels, identified by the consent holder on the approved plan referenced E8/28885 (Sheet 6) shall be established for the proposed unit areas shown on this plan as follows.

4. **Continued**

Unit	Minimum Floor Level
1	43.05
2	43.05
3	42.65
4	42.65
5	42.25
6	41.78
7	41.78
8	41.78
9	41.58
10	41.58
11	42.30
12	42.30
13	42.55
14	42.55
15	42.80
16	42.80
17	42.78
18	42.78
19	42.78
20	42.78
21	42.78
22	42.78

All levels are in terms of the Lands & Survey Auckland Datum, 1946 and that the levels are in accordance with the approved plans referenced E/28885 (Sheet 6) by Council.

Compliance with this requirement shall be on a continuing basis and shall be registered as a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 on the Certificates of Title of the respective lots (and recorded on Council's Land Information Register) both at no cost to Council.

Suitable benchmarks to the Lands & Survey Auckland 1946 datum shall be established to enable future buildings to be constructed accordingly.

The above information (floor levels and benchmarks) shall be shown on a plan on the attached form for inclusion in the covenant.

Public Drainage and Water Supply

11. Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment with individual connection points in accordance with the approved engineering drawings referenced E8/28885 by Council to the satisfaction of the Manager, Resource Consents and Compliance.

12. Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.

4. **Continued**

Network Utilities

13. Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed allotments.

The consent holder shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts. Confirmation shall also be provided that demonstrates all services for the each of the proposed dwellings lie within their respective common area.

Reserves Contribution

14. (a) A reserves contribution of **$79,228.13**(including 12.5%) GST being 6% plus GST of 3/4 x the assessed average market value of Lots 1 to 4, shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.

Note: The Reserve contribution payable specified above has been derived as follows:

Aggregate market value of Units 1-4	$391,250.00 (including GST)
Contribution: $391,250 x 6% x 3 = $70,425.00	$79,228.13 (including GST)

(b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

Section 224

15. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and the Land Transfer Plan number and a copy of the survey plan (showing co-ordinates) are supplied to the Council.

Advice Notes

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where an application under Section 125 is made before the consent lapses.

2. This Consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this letter MUST accompany any application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of the application.

4. **Continued**

4. Each building is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. A Building Consent is required for retaining walls unless exempted under the Schedule 1 of the Building Act 2004. This consent does not include any structural approval of the design/calculations submitted.

6. The requirements pursuant to conditions 9 and 10 will be recorded on Council's Land Information Register.

7. **Development Contributions under the Local Government Act 2002.**

   In terms of the Development Contribution under the Local Government Act 2002, it is expected that a contribution for 22 residential units would have been paid when building consent for these units are issued pursuant to Condition 3 of this subdivision consent.

8. Applicable financial contributions have been paid on the preceding subdivision numbered 27046 and SP 8840 by the Council.

9. Any future subdivision of the units on the site by way of Unit Title subdivision will be subject to a requirement for payment of reserves contribution in accordance with Rule 15.15.2.3.3.2 of the Manukau Operative District Plan 2002.

10. The existing Land Information Register (LIR) notes, and consent notices on Lot 10 DP 352580 shall be carried down to the new allotments.

Reasons for the Subdivision Decision

1. The application merits the granting of a resource consent pursuant to Sections 104 and 104A of the Resource Management Act 1991 and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan (2002).

2. The effects of the proposal on the surrounding environment will be no more than minor.

3. The proposal will provide for an efficient use of the land while maintaining the character and amenity values of the surrounding residential area.

4. The proposed development and engineering works are in accordance with Council's engineering standards and will not result in any adverse effect on the environment.

5. The reserve contribution has been imposed pursuant to Rule 15.15.2.3.3.1. There are no circumstances that warrant alleviation from the maximum contribution payable.

LIST OF SUBMITTERS

Submitter	Postal Address
Lee Shen-Der Shann	8 Inchinnam Road East Tamaki
Morris D. Chandler	17 Oleander Point Pakuranga

Non Complying Activity Resource Consent for a 22 Unit Terraced Housing Development and 5 Lot Subdivision:
Working Concepts Ltd.
Lot 10 DP 352580 46 Carlos Drive, Flat Bush

N

Subject Site

Submitter in Oppostition

Figure 16.11A
BOTANY-CLEVEDON WARD

DRAWN C Fredrickson
CHECKED
DATE 20/03/06

Rod Dissmeyer
Manager Resource Consents & Compliance

Te Kaunihera o
MANUKAU
City Council

SCALE 1:3,000
FILE 1176/46
Prop. NUMBER 28885
AMENDMENTS

3 0 NOV 2005

BP

FORM 13

MANUKAU CITY COUNCIL
SUBMISSION ON AN APPLICATION FOR RESOURCE CONSENT
UNDER SECTIONS 96 OR 127(3) OF THE RESOURCE MANAGEMENT ACT 1991

TO: Manager
Resource Consents & Compliance
Manukau City Council
Private Bag 76917
MANUKAU CITY
Attention: Resource Consents, Level 4, Kotuku House

Manukau City Copy

Name of person(s) making submission: Morris D CHANDLER

Address (full postal address): 17 OLEANDER POINT
PAKURANGA

I/We ~~support or~~ oppose *(delete whichever does not apply)* the application of Working Concepts Ltd - proposal no 28885
(state name of applicant)

for a Limited notification application for resource consent to
(state type of resource consent applied for) OR (change or cancellation of resource consent condition[s])

to construct a 22 unit housing complex
(state proposal or activity of applicant)

at 124 Stancombe Road Flat Bush
(address to which the resource consent application relates)

The particular parts of the application I ~~support or~~ oppose are *(delete whichever does not apply)*:
Construction of units 11-16 with balconies overlooking play area of adjacent childcare centre such that it will impact on the privacy of this area

The reasons for making my submission are:
1. It is possible to avoid this by repositioning the units
2. Concern for the welfare of the children
3. Parental concern about child privacy
4. Later tenancy complaints from the units about noise from the play area
(state in summary the nature of your submission, giving reasons)

I wish the consent authority to make the following decision: To require the units 11-16 to be rotated through ninety degrees to prevent balconies overlooking childrens play area (Unit 11 to run parallel to boundary with limited windows facing boundary)

(give details, including the nature of any conditions sought)

30 NOV 2005

Please state whether you wish to be heard in support of your submission

YES | ~~NO~~

(Delete whichever does not apply)

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Address for service of person making submission:
17 OLEANDER POINT
PAKURANGA

Phone No. (Business): 5790104
Phone No. (Home): 5766912
Fax No. (Business):
Fax No. (Home): 5766626

Signature of person making submission or person authorised to sign on behalf of person making submission:

Date: 28-11-05

Note:
1. A copy of your submission must be served on the applicant as soon as reasonably practicable after service of your submission on the consent authority.
2. Please use additional pages if you require more space to make your submissions.
3. Please notify the Council immediately in writing if you decide to withdraw your submission.
4. Please note that your submission is a public document and therefore may be made available to other interested parties.

FORM 13

MANUKAU CITY COUNCIL
SUBMISSION ON AN APPLICATION FOR RESOURCE CONSENT
UNDER SECTIONS 96 OR 127(3) OF THE RESOURCE MANAGEMENT ACT 1991

TO: Manager
Resource Consents & Compliance
Manukau City Council
Private Bag 76917
MANUKAU CITY
Attention: Resource Consents, Level 4, Kotuku House

RECEIVED
- 5 DEC 2005
M.C.
MAIL ROOM

Name of person(s) making submission: Lee Shen-Der Shann

Address (full postal address): 8 Inchinnan Road
East Tamaki Auckland

I/~~We~~ ~~support or~~ oppose *(delete whichever does not apply)* the application of
Working Concepts Ltd (Carlos Concepts Ltd.)
(state name of applicant)

for a limited notification application
(state type of resource consent applied for) OR (change or cancellation of resource consent condition[s])

to construct a 22 residential unit housing complex
(state proposal or activity of applicant)

at Lot 2, 124 Stancombe Road Flat Bush. proposal No. 28885
(address to which the resource consent application relates)

The particular parts of the application I ~~support or~~ oppose are *(delete whichever does not apply)*:
please refer to attachment 1.0 (1.1 ~ 1.6)

The reasons for making my submission are:
please refer to attachment 2.0 (2.1 ~ 2.6)

(state in summary the nature of your submission, giving reasons)

I wish the consent authority to make the following decision:
please refer to attachment 3.0 (3.1 ~ 3.4)

(give details, including the nature of any conditions sought)

Please state whether you wish to be heard in support of your submission

YES	~~NO~~

(Delete whichever does not apply)

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Address for service of person making submission:
8 Inchinnan Road
East Tamaki
Auckland
Phone No. (Business):
Phone No. (Home): 2770007
Fax No. (Business):
Fax No. (Home):

Signature of person making submission or person authorised to sign on behalf of person making submission:

Shen-Der L. Sh

Date: 2. Dec. 2005

Note:
1. A copy of your submission must be served on the applicant as soon as reasonably practicable after service of your submission on the consent authority.
2. Please use additional pages if you require more space to make your submissions.
3. Please notify the Council immediately in writing if you decide to withdraw your submission.
4. Please note that your submission is a public document and therefore may be made available to other interested parties.

1.0 **<u>The particular parts of the application I oppose are</u>:**

1.1 The proposed residential type due to the high density of household units on the chosen lot site;
1.2 The high site coverage and maximum height of structure within the special policy area (Flat Bush Buffer);
1.3 The proposed development style and site layout;
1.4 The proposed residential units infringe the height in relation to boundary control on eastern and western boundaries of the site.
1.5 Previous unsatisfactory earthwork procedures implemented for the development;
1.6 The "Assessment of Environmental Effects and Statutory Analysis" only provides misleading words and incomplete information to affected parties.

2.0 **<u>The reasons for making my submission are:</u>**

2.1 The development fails to provide appropriate separation buffers between incompatible activities.

The proposed residential units reside in the Flat Bush Residential 1 Zone General Precinct which has a Special Policy Area (Flat Bush Buffer) of 30 metres in width across the developing land where it adjoins the affected party's property. The affected party's property lies in the Flat Bush Countryside Transition Zone. Considering these zones, and cross referencing them to Variation 13 of the Manukau District Plan, Table 3 under 17.10.11.4, the average lot size (or density per household unit) for;

(1) General Precinct, Flat Bush Residential 1 Zone is 250m² to 400m²;
(2) Flat Bush Residential 2 zone is 375m² to 500m²
(3) Further more, under 17.10.12.2 (b) and (c), all lots in the Special Policy Area (Flat Bush Buffer) are restricted to either a maximum site coverage of 20% where the maximum height of all building is 8 meters, or a site coverage of 35% where the maximum height of all building is 6 meters.

The affect party's property sits in Flat Bush Countryside Transition (Gracechurch Height) where the average shall be 4000m² or greater.

We believe the developer and/or architect was aware of this difference and failed to consider the potential impact of this project on the neighboring rural environments. The proposed buildings have failed to allow for a gradual transition from a busy arterial area to a peaceful rural lifestyle farm. This abrupt transition into unappealing lot layout, unit density, size, structure and design of repetitive rectangle box units/townhouse will only function to devalue the affected party's property and disrupt their rural type lifestyle.

Furthermore, the development has gone ahead in absence of specific guidelines for the Flat Bush Buffer area and challenges the site coverage as well as the allowable height. There is good opportunity to produce a better solution for this site.

2.2 The 8.8m height building with narrow open space is of concern as this building structure has the potential to cause future wind nuisance due to the likelihood it may increase the existing uphill wind flow which will blow directly into the affected party's site. Additionally, building structures of this height will significantly diminish the horizon views from the affected party properties thereby violating our rural lifestyle, privacy and re-sale value.

2.3 The proposed residential units infringe the height in relation to boundary control on eastern and western boundaries of the site which is completely unacceptable. These structures will cast shadows to the eastern and western neighbor's property, which may create a gloomy impression and reduce the surrounding area's living quality.

2.4 Existing earthwork to flatten the site for development already directly affects our property. This excavation has caused our land to fall towards the developing site without any protection and the pre-existing fence is sitting on unstable ground. As a result, we need to restrain our sheep from utilizing this portion of our property. Not being able to utilize ones own property is an enormous inconvenience not too mention a waste of valuable land. Additionally, as a result of the existing excavation, the water pond on our property has dried up. This was an appealing portion of our property and a means to hydrate sheep. Disappearance of this pond greatly affects the pre-existing lifestyle we enjoyed prior to this development taking place.

2.5 Our property is sitting in the Gracechurch heights area, which consists of an area that is generally lower lying than other parts of the zone and was traditionally depicted by its relatively steep and dissected landscape, instability of land, and limited accessibility. Such a "rapid transition" to a busy, cluttered arrangement of high-rise town homes invades on this lifestyle. The "Assessment of Environmental Effects and Statutory Analysis" report ignores this situation by providing misleading impressions with statements such as; " The area had a relatively rural nature, which is particularly noted through the topography of the site, but is undergoing a rapid transition."

We also were looking for complete information about the site, including engineering reports, visual simulation, assessment and acoustic reports. We believe these aspects of the development are crucial for assessing the impact on our property and for making any conclusive decisions pertaining to the proposal. The information must provide enough evidence to ensure the development will protect not only the developing project but also the affected party's health, safety, lifestyle and rights.

2.6 The presented development doesn't provide much benefit to the surrounding countryside and will likely cause a more negative effect to the immediate neighborhood and existing lifestyle owing to physical infringements (water resource and farm land usage), visual infringements (unpleasant structures, diminished horizon views and incompatible activity), and financial infringements by which the surrounding properties will be devalued and less desired. Living next door to such a penetrating development also adds much stress to a once peaceful lifestyle.

3.0 **<u>I wish the consent authority to make the following decision:</u>**

3.1 I would like the consent authority to ensure that this development comply with all the Flat Bush Buffer Zone's lot coverage and height limitations in order to provide a good separation or transition area between the development and the affect party's property.

3.2 For the entire development, I would like that this authority consider building restrictions for Gracechurch heights and therefore request that the builder reduce the development scale to fit in the surrounding area.

3.3 Additionally, I would like that this authority ensure that the existing neighborhood residents have their needs carefully considered and placed above those of the developers. In saying this, I would like to see that the appropriate remedy work is constructed as soon as possible so that we may retain the pond that was once an important feature to our property, and to prevent land fall towards to developing land.

3.4 I would also like to see a fence constructed to separate the two distinctly different lifestyles in the area. By building a solid fence of significant height to border the development, unwanted weed growth can be eliminated, the noise from this development will be diminished for the rural neighbors and some privacy will be restored to the surrounding inhabitants.

LIS255.v2.1 RC1 - Resource Consent Application Maintenance 09.09.05

Proposal No. 28885 Internal ID 30437
01) Desc 22 TOWNHOUSE DEVELOPMENT & 5 LOT SUBDIVISION
02) Applicant Name WORKING CONCEPTS LTD
03) Address 1 PO BOX 58395
2 GREENMOUNT
3 Att: Mr Bob Cummins
04) Agent Name WORKING CONCEPTS LTD
05) Address 1 PO BOX 58395
2 GREENMOUNT
06) Agent Address Flag Y
07) Monthly Billing
08) Contact JESSICA 2713007
09) Date Received 08.09.05
10) Consent Type IC Integrated Consent
11) Deposit Fee $3,375.00
12) Misc.
13) Involved Properties
14) File/SP RefNo SP9188
1 6923/124 124 STANCOMBE RD
16) Meeting Date 08.09.05
17) Meeting Time 10:45
* More Property Details of 6923/124
18) Team No 3 Team 3
Legal Description
Zone
Ward
LOT 3 DP 78859
RURAL 3
BOTANY-CLEVED

Enter screen-ref(nn) to modify, FI to file, HCOPY, DELETE, RCn, or EX : .....

CRM Number: 0043196

CRM Client: WORKING CONCEPTS LIMITED

Project: ☑ tick Ref 12 #: ☑ tick

DEPOSIT RC #: 007657

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

14/09/2005 10:13 Trn 213919
Cashier ABUNN

SUNDRY INVOICES
Invoice Number RC007657 $3375.00

Subtotal $3375.00
Total $3375.00

Payer: SHUTTLEWORTH PROPERTIES
Received CHEQUE $3375.00
Cheque # 456618
Change $0.00

All charges are GST inclusive. Please
retain this receipt for your records

BP

LIS255.v2.1 RC1 - Resource Consent Application Maintenance 09.09.05

Proposal No. 28885 Internal ID 30437
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1 6923/124 124 STANCOMBE RD
16) Meeting Date 08.09.05
17) Meeting Time 10:45
* More Property Details of 6923/124
18) Team No 3 Team 3
Legal Description
Zone
Ward
LOT 3 DP 78B59
RURAL 3
BOTANY-CLEVED

Enter screen-ref(nn) to modify, FI to file, HCOPY, DELETE, RCn, or EX : .....

CRM Number: 0043196

CRM Client: WORKING CONCEPTS LIMITED

Project: ☑ tick Ref 12 #: ☑ tick

DEPOSIT RC #: 007657

** Duplicate Receipt **

Manukau City Council
GST No. 51-963-660

14/09/2005 10:13 Trn 213919
Cashier ABUNN

SUNDRY INVOICES
Invoice Number RC007657 $3375.00

Subtotal $3375.00
Total $3375.00

Payer: SHUTTLEWORTH PROPERTIES
Received CHEQUE $3375.00
Cheque # 456618
Change $0.00

All charges are GST inclusive. Please retain this receipt for your records

ASB BANK

ASB BANK LIMITED
BUSINESS BANKING

Date 08 / 09 / 05

Pay Manukau City Council or ~~bearer~~

The sum of Three thousand three hundred seventy five dollars only $ 3,375.

SHUTTLEWORTH PROPERTIES LTD

3209 CHEQUE DUTY PAID

⑈456618 ⑈123030⑆ 0642577⑈00 ⑈

Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City, New Zealand
Phone 0-9-263 7100
Fax 0-9-262 5151

Tax Invoice

GST Reg. No. 51-963-660

Tax Invoice No	RC007657

Invoice Date:	13 Sep 2005
Customer No:	0043196
Charge Ref:	RC28885
Order No:	

Working Concepts Limited
Attn: Mr Bob Cummins
P O Box 58395
Greenmount
Manukau 1730

For inquiries on this account please e-mail
accounts_receivable@manukau.govt.nz
or phone *262 8900 ext. 5455*

Description	Quantity	Unit Price	Amount
PRC28885 124 STANCOMBE RD, BOTANY-CLEVE			
Deposit	1.00 Each	3,000.00	3,000.00

Payment for this DEPOSIT has been received

Sub Total	$3,000.00
GST	$375.00

Any query on this charge must be lodged with Council within 10 days of receipt of this invoice.

DUE DATE	20 Oct 2005	AMOUNT DUE	$3,375.00

Working Concepts Limited
Attn: Mr Bob Cummins
P O Box 58395
Greenmount
Manukau 1730

Please make cheques payable to Manukau City Council and return this slip with your payment by the due date to MANUKAU CITY COUNCIL, PRIVATE BAG 76917, MANUKAU CITY. Payment can be made in person at: CITIZEN & CUSTOMER CENTRE, KOTUKU HOUSE, MANUKAU CITY CENTRE

Te Kaunihera o
MANUKAU
City Council

Customer No:	0043196
Invoice No:	RC007657
Charge Ref:	RC28885
DUE DATE	20 Oct 2005
AMOUNT DUE	$3,375.00

Please note any change of postal address below:

Telephone:

AMOUNT PAID $

Te Kaunihera o
MANUKAU
City Council

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

4 November 2005

Working Concepts Ltd
P.O. Box 58-395
Greenmount
AUCKLAND

Attention: Bob Cummins

Dear Sir

SECTION 94(1) – RESOURCE MANAGEMENT AMENDMENT ACT 2003

NOTICE OF LIMITED NOTIFICATION OF APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 124 STANCOMBE ROAD, FLAT BUSH - PROPOSAL No. 28885

CONSENT CO-ORDINATOR: Bryce Pomfrett

Since it has been determined that the above proposal should be treated as a limited notification application, we enclose a list of persons to whom notice has been served.

These persons have 20 working days to make written submissions to Council. As required by Section 94(1), notice has been served on all affected persons whether they have or have not given written approval to the application. The Council will hold a hearing of the application no later than 25 working days after the close of submissions. When a hearing date is scheduled you will be advised accordingly.

Also enclosed is a copy of the notification pack for your information.

Please do not hesitate to contact the Consent Coordinator – Bryce Pomfrett by telephone on 262-8900 ext 5856 should you require further assistance relating to your application.

Yours faithfully

B Pomfrett

pp Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

Affected Party List – for Proposed Development at 124 Stancombe Road – Flat Bush.
Proposal No: 28885

Name	Postal Address	Site affected	Legal Description
Stancombe Concepts Limited	P.O. Box 27029 Wellington 6030	126 Stancombe Road, Flat Bush	Lot 4 DP 78859
Farm Cove Holdings Ltd	P.O. Box 12728 Penrose AUCKLAND	122 Stancombe Road, Flat Bush	Lot 2 DP 78859
Harry Semmens & Tui Arnesen	10 Inchinnam Road, Flat Bush	10 Inchinnam Road, Flat Bush	Lot 12 DP 80608
Tzyy-Yuan Shan and Lee Shen-Der Shann	P.O. Box 64243 Botany Downs MANUKAU 1705	8 Inchinnam Road, Flat Bush	Lot 11 DP 80608
The Occupier	8 Inchinnam Road, Flat Bush	8 Inchinnam Road, Flat Bush	Lot 11 DP 80608

FORM 13

MANUKAU CITY COUNCIL
SUBMISSION ON AN APPLICATION FOR RESOURCE CONSENT
UNDER SECTIONS 96 OR 127(3) OF THE RESOURCE MANAGEMENT ACT 1991

TO: Manager
Resource Consents & Compliance
Manukau City Council
Private Bag 76917
MANUKAU CITY
Attention: Resource Consents, Level 4, Kotuku House

Name of person(s) making submission: _____

_____

_____

Address (full postal address): _____

_____

I/We support or oppose *(delete whichever does not apply)* the application of _____

_____
(state name of applicant)

for a _____
(state type of resource consent applied for) OR (change or cancellation of resource consent condition[s])

to _____
(state proposal or activity of applicant)

at _____
(address to which the resource consent application relates)

The particular parts of the application I support or oppose are *(delete whichever does not apply)*:

_____

_____

_____

_____

The reasons for making my submission are: _____

_____

_____

_____

_____

(state in summary the nature of your submission, giving reasons)

_____

I wish the consent authority to make the following decision: _____

_____

_____

_____

_____

_____

(give details, including the nature of any conditions sought)

Please state whether you wish to be heard in support of your submission

YES	NO

(Delete whichever does not apply)

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Address for service of person making submission:

_____

_____

_____

Phone No. (Business): _____

Phone No. (Home): _____

Fax No. (Business): _____

Fax No. (Home): _____

Signature of person making submission or person authorised to sign on behalf of person making submission:

_____

Date: _____

Note:

1. A copy of your submission must be served on the applicant as soon as reasonably practicable after service of your submission on the consent authority.
2. Please use additional pages if you require more space to make your submissions.
3. Please notify the Council immediately in writing if you decide to withdraw your submission.
4. Please note that your submission is a public document and therefore may be made available to other interested parties.

FORM 13

MANUKAU CITY COUNCIL
SUBMISSION ON AN APPLICATION FOR RESOURCE CONSENT
UNDER SECTIONS 96 OR 127(3) OF THE RESOURCE MANAGEMENT ACT 1991

TO: Manager
Resource Consents & Compliance
Manukau City Council
Private Bag 76917
MANUKAU CITY
Attention: Resource Consents, Level 4, Kotuku House

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(give details, including the nature of any conditions sought)

Please state whether you wish to be heard in support of your submission

YES	NO

(Delete whichever does not apply)

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PROPOSED RESIDENTIAL UNITS AT

PROPOSED LOT 2, 124 STANCOMBE ROAD
FLAT BUSH

FOR

CARLOS CONCEPTS LTD

ASSESSMENT OF ENVIRONMENTAL EFFECTS AND STATUTORY ANALYSIS

1.0 INTRODUCTION

This report has been prepared in relation to an application by or on behalf of Carlos Concepts Ltd, which seeks to gain approval for a residential development on proposed Lot 2 of a property located at 124 Stancombe Road, Flat Bush.

This assessment of environmental effects (AEE) has been prepared in accordance with the requirements of Section 88 of and the Fourth Schedule to the Resource Management Act 1991. It is intended to provide the information necessary for a full understanding of the activity for which consent is sought and any actual or potential effects the proposal may have on the environment.

To this end, this AEE contains the following information:

a) A description of the proposal;
b) A description of the site and the surrounding locality;
c) An outline of the reasons why resource consent is required;
d) An assessment of the effects of the activity on the environment;
e) An analysis of the provisions of the Resource Management Act 1991 and the district plans which are relevant to the application; and
f) Conclusions.

Appendices (for Council Reference)

1. Plans and Elevations
2. Landscape Plan and Planting Details
3. Engineering Plans
4. Arborist Report (reference purposes only)
5. Certificate of Title
6. Asbestos Investigation Report
7. Fire Report
8. Acoustic Report

2.0 THE PROPOSAL

The applicant seeks consent to establish a 22 townhouse residential development on proposed Lot 2 of a site located at 124 Stancombe Road, Flat Bush. The proposed development is shown on the attached plans in Appendix 1 titled *"Stancombe Estate, 124 Stancombe Road, Botany, Flat Bush"* prepared by Alto Architects, sheets A01 – A11.

The development is in the form of four blocks, two containing five units each and two containing six units each. The occupants have the use of a communal space around these units, which includes an entertainment area, a petanque court and three visitor car parks. Each of these units comprises three bedrooms, two bathrooms with open plan living area including kitchen, lounge and dining areas which are connected to an outdoor deck and balcony. The ground level consists of garaging for two vehicles in a stacked manner, a bathroom, a laundry, and double bedroom. The first floor level is setback from the ground floor bedroom frontage and includes the open plan living area and balcony. The second level (also setback) includes two double bedrooms and two bathrooms.

The overall layout of the site includes two blocks of five units fronting Carlos Drive with a shared driveway providing access through the centre of these two blocks. The remaining two blocks of units lie to the rear at 90 degrees, so all units have access from the centre of the site. The site holds a central feature which is to be landscaped. The central feature enables a circular driveway for traffic movement on site. To the rear of the site is where both the communal facilities are located in addition to a large landscaped area parallel to the rear boundary.

Landscaping is to be provided, and will include specimen trees to the centre and rear of the site as well as some other low level shrubs on the perimeter of the driveway and overall site.

The earthworks required for the development will be undertaken as part of this application. The amount of excavation works equates to approximately 1200m^3 to obtain a level building platform.

3.0 THE SITE AND LOCALITY

The Site

The area of Lot 2 is 4174m^2 on a proposed road (Carlos Drive). It is located, on the northern side of Stancombe Road approximately 270 metres west from the intersection with Gracechurch Drive, Murphys Road and Jeffs Road. The subject site in accordance with the subdivision consent and in relation to the development of the surrounding sites is being cleared of vegetation and the necessary earthworks are to be undertaken to establish a flat site to develop on. The site was once undulating which is considered to reflect its original rural nature and was the rear garden area of the dwelling formerly located on the front of the site at 124 Stancombe Road. In the main, the land comprised of low level vegetation and grass with tree specimens sporadically located throughout the site.

The Locality

The site is located within an area formerly of a rural/rural residential character but which is changing and expanding as a residential oriented area. As such, it contains buildings that reflect this former type of use, but is speedily undergoing significant change. The land to the north of the site consists of individual residential properties on large lots. By contrast, land to the south west and east is currently under construction or undergoing preparation for development of new residential properties. For example, Stancombe Road itself has recently undergone improvements and expansion in order to accommodate an increase in traffic due to the future development within the locality.

Currently, there is a single dwelling on the neighbouring site of 122 Stancombe Road, and the neighbouring sites being lots 1 and 2, 126 Stancombe Road have been cleared in preparation for development of townhouses. The sites located to the rear, being 8 and 10 Inchinam Road comprise of single dwellings.

4.0 REASONS WHY RESOURCE CONSENT IS REQUIRED

Consents will be required in terms of the standards for development under the rules in section 17.10 of Variation 13. The following matters of consent are required for this proposal:

- Rule 17.10.12 of Variation 13 of the Manukau District Plan – Discretionary Activity consent is required for the construction of more than one household unit on a site of $2000m^2$ or greater.

- Rule 17.10.12.2(b) and 17.10.12.5(b) requires a maximum of 20% site coverage where the maximum height of all buildings is 8 metres in the Special Policy Area (Flat Bush Buffer). The proposal includes buildings with a maximum height of 8.8m with a site coverage of $1854m^2$ or 24.8% and therefore requires consent for a restricted discretionary activity.

- Rule 17.10.12.5(e) provides the maximum height, overshadowing and dominance requirements. The proposal infringes the following control:
    1. Height in Relation to Boundary – as it applies to the east, west and north elevations only, as the road frontages (being south) of the site are exempt as specified under the rule. On the eastern elevation the proposal infringes by 3m in height reducing to 2.4m over a total length of 10.8m (unit 10). On the western elevation the proposal infringes by 2.4m in height to 1.6m over a total length of 10.8m (unit 1).

  Consent is therefore required for this matter as restricted discretionary activity.

- Rule 17.10.12.8(a)(i) requires that all residential units on the ground floor level require a $24m^2$ area of private open space, in which a 4m diameter circle and 3m dimension measured at right angles can be accommodated within. The proposal provides the sufficient open space area for each unit but the layout and form of the proposal does not enable a 4m diameter circle and 3m dimension measured at right angles. Consent is therefore required for this matter as restricted discretionary activity.

- Rule 9.8.2 of the Manukau District Plan requires that any land modification or development (including that which involves earthworks) not otherwise permitted, is a restricted discretionary activity. The proposed scheme involves $1200m^3$ of earthworks and therefore is a matter for consent.

- Rule 17.10.12.1.3(e) states for earthworks required for the construction of buildings used for residential activities on sites that are identified within Area 2 of Figure 17.10.9 of Variation 13, which identifies areas of asbestos containing materials, that restricted discretionary consent is required.

Overall, these matters require resource consent for a discretionary activity.

5.0 ASSESSMENT OF EFFECTS

Section 88 of and the Fourth Schedule to the Act set out the matters to be considered when preparing an assessment of effects on the environment. The actual and potential effects of the proposal are considered to relate to:

- Positive Effects
- Character
- Amenity
- Parking and Traffic
- Noise
- Infrastructure and Servicing
- Construction and Development
- Trees and Vegetation

Positive Effects
The proposed development will result in positive effects on the physical, social and cultural environment. First of all, the development has been designed to adhere to Council's urban design guidelines, with townhouses fronting streets. As requested by Council, a road has been proposed (as part of a separate subdivision consent) that will eventually allow access across adjoining properties and improve permeability through the block.

The development will also increase the available choices for living opportunities in Manukau City. For example, the units proposed are based on a relatively small individual lot whilst providing a three-bedroomed unit on three levels and therefore this development will contribute to providing a range of housing within the locality. The nature of the proposal will provide an opportunity for people to reside near the proposed Flat Bush Town Centre, which may also be the place of work of the future residents. These factors will have a positive effect on the environment.

Character
The site and surrounding area will be subject to a significant change over the coming years. The site falls within the area of Flat Bush on the southern boundary of the Auckland Regional metropolitan urban limits, which is designated to provide a mix of urban and semi-urban development. What is proposed is significantly different from the sites original form being largely rural in nature, but the development of the immediately neighbouring sites provides a clear understanding of the approach and type of residential development that will be constructed. The District Plan by way of Variation 13 has designated this site and the surrounding for future residential development. The area had a relatively rural nature, which is particularly noted through the topography of the site, but is undergoing a rapid transition. The character of the proposed residential units consists of an intensive housing design by way of comprising 3 levelled townhouses. The overall site has been designed in order to meet the requirements of the residential zone and as such is considered that it has been designed to complement and form part of the future wider surroundings.

Amenity
The area where the site is located is presently bring transformed into an urban environment. There is vegetation within the area, consisting of a mix of mature and small tree specimens. However, this is changing with the development of the land and it is expected that the district plan requirements for yards and landscaping will set the benchmark of the amenity of the area. In this regard, the proposal provides landscaping

to the site boundaries as well as a large landscaped area central to the townhouses and along the rear boundary of the site, which will provide the level of amenity desired for the locality. It is noted in particular that amenity for the lots to the north will be maintained by the 14m separation distance between the closest units (16 and 22).

Security will also be achieved along the streets, which will be enabled by passive observation from all levels and elevations of the townhouses.

Parking and Traffic
Each townhouse is provided with two car parks. The parks are provided for in the garage at ground level and are in a stacked manner. On this basis, it is considered that sufficient parking spaces are provided on the site for occupants and there will be no undue on-street car parking demand resulting from the proposed activity. Three visitor car parks are provided on site, however any further requirements for parking on the street would be temporary as determined by the nature of the activity.

While the residential activity will create some traffic generation to and from the site, it is considered that there will be negligible adverse effects for the following reasons:

- The site will be predominately used by the occupants of and visitors to the 22 units that are proposed for the site. The site lies within a large residential zone and traffic of this nature is expected in this particular locality.
- Stancombe Road that the site has frontage to has been recently improved including widening, which is designed with sufficient capacity for the foreseeable residential activity anticipated for the land.

For these reasons, any adverse parking and traffic effects associated with the proposed activity are considered to be insignificant on the surrounding area.

Noise
Noise associated with the future use of the proposed residential development (once constructed) is considered not to conflict with the anticipated use of surrounding sites. Therefore any adverse effects on the surrounding environment in terms of noise would be limited to the construction period only on this site, which are addressed below. In terms of assessing the effects between the individual household units, a qualified and experienced acoustic engineer has provided an assessment and complying solutions in order to ensure that the scheme will meet the Rule 17.6.12.11 of the District Plan. (See report in appendix 8).

Infrastructure and Servicing
The necessary infrastructure and servicing accompanying the subdivision consent for proposed Lots 1 and 2 will be undertaken in accordance with the subdivision consent and Section 9 of the Manukau District Plan 2002. These matters are outlined in the infrastructure report. In particular, connections will be provided to waste water and stormwater lines, the road will meet Council's specifications and utility connections such as, water, telephone and electricity will be provided.

Construction and Development
As noted above, earthworks necessary for the establishment of the proposed road will be undertaken under the auspices of the subdivision consent. However the excavations required for the proposed scheme are to be dealt with under this land use consent. As demonstrated within the engineering details in Appendix 3, measures taken during these works such as siltation and dust control and stabilisation will avoid or mitigate effects. It is considered that in view of the type of development and the mitigating factors it involves,

the earthworks proposed will not have harmful effects on the locality. Similarly, construction of the development will be staged, coordinated and managed to control potential effects on the locality.

Trees and Vegetation
The subdivision of the site involved gaining consent (Proposal No. 27373) for the removal of a small group of protected trees central to the site, including Port Jackson Fig, Magnolia Laurel, Michelia and Moreton Bay Fig (as identified in the Arborists report, Appendix 4). Therefore this consent does not deal with any tree removal.

To mitigate effects from the loss of the existing tree cover on the site, a landscaping scheme will be implemented as shown in Appendix 2. The landscaping provided would be for a different environment to what the site is a present, and it is considered that the removal of the existing trees is an evitable outcome of the future development of this site and of the immediate locale.

Summary
For the reasons outlined above, it is considered that the proposed development will have no more than minor adverse effects on the surrounding environment.

6.0 DISTRICT PLAN MATTERS

As previously mentioned, the subject site is zoned as Flat Bush Residential 1 Zone under Variation 13 Flat Bush, of the Manukau District Plan 2002. This document is considered to contain the only applicable objectives, policies and other matters and the relevant provisions of the district plan are assessed below.

Variation 13 Flat Bush - Manukau District Plan

6.1 Objectives and Policies

The overall objectives for Flat Bush area are set out in order to establish a balanced and attractive environment in which to live and work. The objectives seek to:

- create a diversity of living and working environments, through facilitating the urbanisation of the area in a manner that will make efficient use of the diminishing land resource with appropriate levels of amenity for residents in the area;
- achieve a well connected, adaptable, safe, attractive, healthy environment for living and working within with an emphasis on the importance of the public realm;
- ensure the establishment of appropriate infrastructure and servicing; and
- to achieve a safe, efficient and well connected transport system that provides a choice of travel modes.

The proposal is considered to meet all the relevant objectives set for the Flat Bush area. The proposed residential development will involve the construction of medium-density residential townhouses alongside providing an attractive living environment. Emphasis has been placed on the quality of the public realm such as the attention to the existing and proposed streetscapes and further in this scheme communal leisure facilities and open spaces are provided.

The objectives and policies for the Flat Bush Residential 1 Zone may be summarised as seeking to maintain and enhance the quality of the environment whilst enabling residential development that allows for a range of living opportunities in the locality. Objective 17.10.9.3.1 and the supporting policies specifically concern facilitating development whilst maintaining the amenity values of high-density residential areas. For the reasons below, the proposed development is considered to be consistent with these provisions and the Flat Bush Residential 1 Zoning of the site and locality.

The relevant objectives and policies for the Flat Bush Residential 1 Zone and comment on each is as follows:

Objective 17.10.9.3.1 - To facilitate the development of an integrated, medium/higher density residential environment (while enabling higher density) which has high levels of amenity, supports a range of travel modes, allows for a range of living opportunities and incorporates opportunities for compatible small scale employment in appropriate locations.

This proposal will facilitate an integrated high density residential environment and will maintain amenity values as it is an attractive development which has applied the intensive housing design guidelines as set out within the Manukau District Plan 2002. The proposal will provide landscaping on the site, which will enhance the amenity value of the development of the site.

Policy 17.10.9.3.2
a) Buildings and structures should be designed and located in such a manner that they positively address the street and public places so as to contribute to neighbourhood amenity values including pedestrian accessibility and safety, and streetscape values such as diversity and attractiveness.
d) Residential development should include private outdoor space(s) that can function as attractive and useable outdoor living and service areas.
f) Connectivity/permeability of the street system shall be maximised wherever possible.
g) The highest residential densities shall be promoted in close proximity to the Town Centre/Neighbourhood Centres, main arterials and public open space including Barry Curtis Park.
h) Activities should not adversely affect the health and well being of the residential community.

In terms of the relevant sections of the policy outlined above, the proposed residential development has been designed so that all units have private outdoor living space. As well, an additional communal leisure facility including an entertainment area and a petanque court has been provided which also contributes to amenity values. Overall, the proposal is consistent with all the policies set out in Variation 13 Flat Bush of the District plan and it does not contravene any of the policies.

- It is noted that the Residential 1 Zone is broken down into various precincts. These precincts do not have individual objectives or policies. However in terms of this site, the description, detailed rules for subdivision and development and performance standards are as per individual precinct area. The precinct covering this site is the General Precinct.

6.2 Development and performance standards and Assessment Criteria

As a result of the consent matters identified in section 4.0, the relevant assessment criteria for discretionary and restricted discretionary activities in the zone are found under section 17.10.16.2 and 17.10.15.3 of Variation 13 Flat Bush of the District Plan and are addressed as follows:

Assessment Criteria: Discretionary Activities

Effects on People and Communities
The proposed development is not considered to have adverse effects with regard to this assessment criterion. The development will enable a community/neighbourhood to become established in this location within close proximity to the future Flat Bush town centre. As the proposal is on an undeveloped site surrounded by sites similar in nature, all subject to future development the proposal will not be to the detriment of any social, economic or cultural values.

Landscape and Visual Effects
Landscaping is proposed as an integral part of the proposed development. In the direct vicinity of the site there are no residential or public open space zones that could be adversely affected by the proposal. The proposal does include an open space including leisure facilities for the benefit of the occupiers, which positively contributes to the character and visual amenity of the development of the site. The proposed development will be at a similar scale to future surrounding development, so will not detract from the character of the area. The proposal will not generate unreasonable levels of noise, as only residents of the units and their visitors will use it.

Effects on Ecosystems
The subdivision of the land has resulted in the clearing of most of the site, which involves the removal of areas of vegetation and some tree specimens. The proposal will not have an adverse effect on water quality as the units will be connected to the main sewer and stormwater lines and the development will not produce any harmful substances as the proposal will only produce normal household waste.

Discharge of Contaminants to the Environment
The proposal will not generate any dust, smoke, fumes or other discharges to the air that could detract from amenity values in the area, as the proposal is for residential activity. There may be some discharge during construction works on site, however this would be limited to the construction period only. The site is identified to be within an area of management of asbestos containing material. As identified in the report (Appendix 6) there is low probability that ACM has been deposited on this subject site, as such there is not considered to be any harmful effects on the surrounding environment.

Effects on Traffic Safety
The proposal will not have an adverse effect on the safety and efficiency of the road network in the area, as the number of cars that will be entering in and out of the proposed development will consist of occupants of the 22 townhouses and their visitors. The roads have been sufficiently improved, in particular Stancombe Road, in advance of the future development on sites in this locality.

Additional Relevant Assessment Criteria – Discretionary Activities

Construction of More than one household unit on sites within the Flat Bush Residential Zones, Flat Bush Town Centre zone and Flat Bush Neighbourhood Centre zone.

Notwithstanding the overall status of the proposed activity on this site, there are additional criteria, which are considered to be relevant in this case. Rule 17.10.15.3.1 of Variation 13 provides the following assessment criteria:

Site Layout
The proposed development has adopted the guidelines outlined within the District Plan entitled, 'Design Code for Intensive Housing'. The guidelines emphasise neighbourhood and site design, which aim to provide desirable environments. The proposed development takes into account:

- Street layout – enabling ease of movement within the site for both the vehicle and pedestrian users;
- Service road – There is one single access into the site and parking is accessed from the rear of the units to enhance safety, security and privacy;
- Street frontages – residential units 1-10 have a frontage to Carlos Drive, enabling increased security and social interaction;
- Vehicle access – the parking is introduced by way of garaging to minimise detrimental impacts on the neighbourhood;
- Public open space – open space and communal leisure facilities are provided to the centre and rear of the site;
- Parking – sufficient off street parking is proposed for the occupants of the units;
- Landscape provision – a comprehensive landscaping of street frontages and the communal open space will be undertaken; and
- Private open space – each townhouse is provided with its own private outdoor areas,

which are well related to the living space within the units.

Building Design and External Appearance
The design of the buildings is repeated throughout the 4 blocks of townhouses, which is broken up with off-setting of unit facades in groups of two within each block, setback upper levels, detailing on the deck and balcony areas and the extensive use of varying materials on the site. The buildings will include schist stone at ground level, solid plaster finish or weatherboard cladding at first and second floor levels, wrought iron detailing for balustrade to the deck and balcony areas, aluminium joinery, tiled courtyards and balconies. This extensive use of materials emphasises the individual townhouses and relates to the scale and materiality of the surrounding proposed residential environment. The overall layout will provide an attractive environment, enabling permeability throughout the site, whereby the car does not dominant the streetscape and each townhouse has a landscaped courtyard.

Landscape Elements
The proposal will incorporate a landscaping scheme ensuring that the visual amenity of the site will be retained (see landscaping plan and details).

Servicing
Provisions will be adopted within the four townhouse blocks on site so that public servicing including rubbish and storage facilities will be easily serviced.

Summary
For the reasons outlined above, it is considered that the proposed development is consistent with the relevant objectives and policies, rules and other matters of the District Plan.

Additional Relevant Assessment Criteria – Restricted Discretionary Activities

Site Coverage and Maximum Height in the Special Policy Area
Assessment of exceeding the site coverage rule for the Special Policy Area 17.10.12.2(b) and 17.10.12.5(b) with the following assessment criteria outlined within 17.10.15.4.1 of Variation 13.

Scale and Bulk

- The proposed scheme does not comply with the added restrictions for site coverage in the Flat Bush Buffer Zone in that the townhouses reach a maximum of 8.8m in height with a coverage of 24.8% in this area. It is considered that with such a small coverage in comparison to the relatively high density development proposed in the immediate surroundings, the height of the townhouses proposed is consistent and sympathetic to the locality, especially given that the units will be 14.2m from the rear boundary of the site.
- The overall coverage for the entire site is 33.5%, which is 6.5% or 271.31m^2 less than the permitted coverage. In this instance it is considered that the scale and bulk of the elements located within Buffer Zone are consistent with the remainder of the site to provide a uniform and balanced scheme. In addition this provides a more spacious layout over the entire site and does not result in a 'void' area located along the rear boundary.
- The maximum height permitted for the general precinct is 9 metres and as such under the general maximum height provisions the site does comply. It is considered

that with the balance of a low coverage over the entire site that any infringement to height within the Buffer Zone will have less than minor effects upon dominance.

- The site has been designated within Variation 13 to be for residential activity. Therefore it is considered that the scale and bulk of the proposed townhouses are anticipated by the rules within Variation 13. The proposal complies with development controls, such as the general maximum height requirements for the precinct and building frontages.
- The design and layout of the townhouses and the extent of the earthworks required do not necessarily conform to the present character and topography of the site. Therefore it is considered that there would be a change to the site in terms of its amenity value. The area has an undulating landscape reflecting its previous rural nature, however under the provisions of the District Plan and Variation 13 the land has been designated for residential purposes. Therefore in order to achieve this, the land would require the proposed engineering works in order for a project of this type to reach fruition. The existing vegetation on site will be removed and it is considered that in order to mitigate and avoid any impacts upon the amenity value of the site a landscaping plan has been provided. To support this, planting schedule and tree growth plans for the site can be found in Appendix 2.

Landscape Elements

- A landscape plan, planting schedule and tree growth plans have been submitted as part of the proposal, attached in Appendix 2. The landscaping plan is considered to provide a variety of tree and shrub specimens into the scheme in which assists to mitigate any adverse effects from the proposal.
- This proposal provides a scheme of four blocks to the rear half of the site at 124 Stancombe Road. Between the townhouse blocks is a communal open space for use of the entire site.

Design and External Appearance

- The scheme incorporates four blocks of townhouses, which in comparison to the surrounding townhouses and apartments has a relatively low coverage of the site. The development forms part of a range of residential accommodation required within this locality and therefore will contribute to providing a range of living opportunities for people in Manukau City.
- In order for the townhouses to have architectural value, the buildings will include schist stone at ground level, solid plaster finish or weatherboard cladding at first and second floor levels, wrought iron detailing for balustrade to the deck and balcony areas, aluminium joinery, tiled courtyards and balconies. This extensive use of materials emphasises the individual townhouses and relates to the scale and materiality of the surrounding proposed residential environment.
- The increase in site coverage and maximum height controls within the Buffer Zone is not considered to cause any further adverse affects in terms of its design and external appearance on the adjoining sites or the surrounding environment. The reason being that alterations to the coverage will be made internally to the lot, which would have minimal external affects in terms of amenity value beyond the site boundary.
- The necessary infrastructure and servicing will be undertaken in accordance with the subdivision consent and Section 9 of the Manukau District Plan 2002. These matters are outlined within the subdivision consent. In particular connections will be provided to stormwater lines and will meet Council's specifications. It is considered that the increased site coverage will have less than minor effects on stormwater runoff.

Sunlight and Daylight

- The proposed townhouses within the Buffer Zone comply with the height in relation to boundary controls on the northern boundary of the site. The townhouses are located 14.1m from the rear boundary and as such are considered to cause less than minor effects in terms of loss of sunlight or shading due to this separation distance and that the neighbouring site is located north of the subject site.

Overall, it is considered that the proposed scheme is reasonably in accordance with the assessment criteria outlined above and that the site coverage infringement does not intend to offend against the rules of the District plan and Variation 13.

Height in Relation to Boundary
The proposed townhouses infringe the height in relation to boundary control on the eastern and western boundaries of the site. Assessment of exceeding this control is made under rules 17.10.15.4.3(e) of Variation 13.

On the eastern elevation the proposal infringes by 3m in height reducing to 2.4m over a total length of 10.8m (unit 10). On the western elevation the proposal infringes by 2.4m in height to 1.6m over a total length of 10.8m (unit 1). It is considered that the proposal is consistent with the relevant objectives, policies and rules in regards to the effects of this infringement because:

- The proposed townhouses retain a residential appearance and character that is in keeping with other proposed residential buildings in the surrounding area;
- The building in relation to boundary control is specifically concerned with the admission of sunlight to adjacent properties. While the resulting infringement on the eastern and western boundaries of the subject site may diminish some sunlight onto the adjacent properties as identified above, the owner and occupiers have given their written approval to the proposal;
- It is considered that the dominance experienced from the infringement over the abutting eastern and western boundaries will be minor, the owners have given their written approval to the proposal; and
- There will be less than minor effects on the loss of any potential views for the neighbours as it is anticipated that the development of the adjacent sites will be oriented in a northerly direction.

For the abovementioned reasons it is considered that Council should allow a modification of the Building in relation to Boundary control as the proposal satisfies rule 17.10.15.4.3(e) and 5.18.1.

Private Open Space
The proposed townhouses infringe the private open space control of the site. Assessment of exceeding this control is made under rules 17.10.15.4.8 of Variation 13. The proposed townhouses consist of outdoor areas ranging from 13.5m^2 to 24.75m^2. Only four townhouses comply with this rule, meaning that 18 units provide less than 24m^2. It is considered that the proposal is consistent with the relevant objectives, policies and rules in regards to the effects of this infringement because:

Amenity Values
- Private open space is provided by way of courtyards, decks and balconies to the proposed residential townhouses. The infringement of the private open space control is that 18 units cannot provide on single area of 24m^2, a 4m-diameter circle and 3m measurements taken at right angles. The units' private outdoor space is split

between a small courtyard area as well as an external deck area at first floor level. In addition, a large communal open space including an entertainment area and petanque court is provided.

- The private outdoor spaces, being external decks, are connected to the open plan living, dining and kitchen areas of the proposed townhouses, providing a large area in total for liveability.
- The areas of private open space provided reflect the scale and size of the townhouse and therefore not being able to provide the 4m-diameter circle does not mean that the private open space has any negative impacts upon the site or surroundings.
- All private open space areas proposed do not impact upon privacy. Each area is screened from adjoining units and due to separation distances from neighbouring sites on the eastern, western and northern boundaries, the private open spaces will not cause any adverse affects in terms of overlooking of adjacent sites.

Overall, it is considered that the proposed scheme is reasonably in accordance with the assessment criteria outlined above and that the open space infringement does not intend to offend against the rules of the District plan and Variation 13.

Asbestos Containing Material
The site is identified and located within an area of which the management of asbestos containing material is required under Variation 13. An assessment of this control under rule 17.10.15.4.11 is therefore required.

A report is appended to this resource consent application outlining the findings of a desktop and site inspection of an asbestos investigation at the subject site. This has been undertaken by Tonkin and Taylor which concludes that: *"The historical aerial photographs and investigations on adjacent properties indicate that there is a low probability that ACM has been deposited on any of the subject sites or in fill areas. No ACM was identified at any of the properties during the site walkover inspection or minor intrusive investigations in suspect areas and the land can be considered suitable for further development".*

Overall, it is considered that the proposed scheme will be reasonably in accordance with the assessment criteria for the management of asbestos containing material.

Earthworks
The proposed development of the site will involve the excavation of approximately 1200m^3, and therefore requires assessment under Rule 9.12.6 of the Manukau District Plan. With regards to the relevant assessment criteria I make the following comments:

Alteration to Natural Landscape
It is evitable that the earthworks will disturb the current natural landform of the site due to the proposed change in nature and activity of the site and the immediate surroundings. In order to develop the site, earthworks would be required in order to provide a building platform. It is considered that any adverse effects can be mitigated by the proposed development and associated landscaping.

Sedimentation/Runoff/Flooding
As identified within the engineering plans and details, appropriate silt control measures and drainage are to be undertaken on site to minimise any potential adverse effects on surrounding locality.

Slope and Land Stability

- Due to the extent of earthworks proposed, retaining walls are to be used within the scheme, which will mitigate any potential effects from soil instability. This is identifiable within the documentation in Appendix 3.

- Overall, it is considered that the proposed scheme will be reasonably in accordance with the assessment criteria for carrying out earthworks.

Summary
For the reasons outlined above, it is considered that the proposed development is consistent with the relevant objectives and policies, rule and other matters of the Operative Plan.

7.0 CONCLUSIONS

The proposal involves the development of 22 townhouses in four blocks on proposed Lot 2 of the site at 124 Stancombe Road, Botany, Flat Bush.

It is considered that any potential adverse effects on the surrounding environment will be mitigated by measures incorporated into the proposed development including landscaping and provision of communal open space. Further, it is considered that relevant objectives and policies of the District Plan will not be compromised by the development.

The proposal will have positive effects on the environment by providing a quality development incorporating buildings and landscaping that will increase the variety of choice for living opportunities in Manukau City. It is thus considered that the proposed development is consistent with the purpose and principles at Part II of the Resource Management Act 1991. It is concluded that the proposal satisfies all matters the consent authority is required to apply in terms of sections 93, 94 and 104 of the Act and that the application can be granted consent on a non-notified basis.

Dominique Carter
Resource Management Consultant

18th May 2005

Easdale Surveyors Ltd
REGISTERED LAND SURVEYORS

DIRECTOR:
M.S. LUCAS, B.Surv., M.N.Z.I.S.

39 Meadowland Drive,
Howick, Auckland.
Phone: 0-9-534-8452
Fax: 0-9-537 5754
e-mail: easdales@clear.net.nz

28 April 2005

In all correspondence please quote our ref : 7793

The Manager
Environmental Services
Manukau City Council
Private Bag 76917
MANUKAU CITY

Attn: J Batty

Dear Madam

Re: Proposed Subdivision – Carlos Drive, Flat Bush
Lot 10 DP 352580 (Previously Lot 3 DP 78859).

Enclosed is an application for Resource Consent for the subdivision of the above property under the Resource Management Act 1991.

The proposed subdivision is part of an integrated Resource Consent application for the development of the property which is being currently being created under SP 8840 (P 27046).

The Land Use aspects of the development relating to the proposed buildings are dealt with elsewhere in the application which also includes the engineering plans for the serving of the development as a whole.

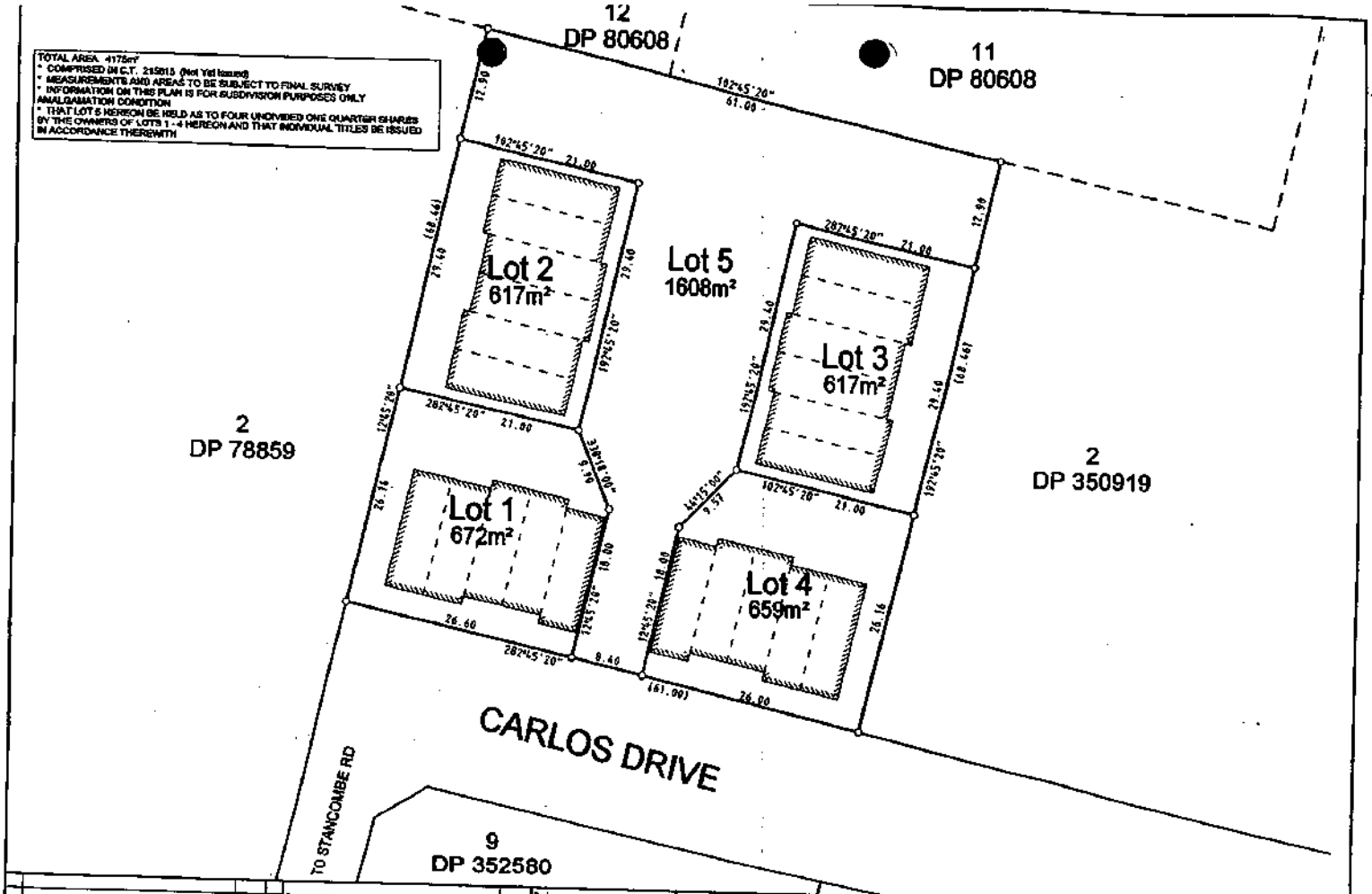
The subdivision involves creation of four individual lots each containing one of the multi unit buildings. There is also a jointly owned lot which provides access and shared areas for entertaining and visitor parking. It is considered a better solution to the ownership of the buildings to hold as fee simple titles rather than subdivide the whole development as a Unit Title subdivision.

There are few if any environmental effects from the subdivision of the development beyond the effects of the Land Use component of the application. The non compliance of the percentage of rear lots has no effect as the reason for this rule relates to the spacing and intensity of development which is being assessed under the Land Use part of the application.

Yours faithfully
EASDALE SURVEYORS LTD

M S LUCAS

TOTAL AREA 4175m²
* COMPRISED IN C.T. 215013 (Not Yet Issued)
* MEASUREMENTS AND AREAS TO BE SUBJECT TO FINAL SURVEY
* INFORMATION ON THIS PLAN IS FOR SUBDIVISION PURPOSES ONLY
AMALGAMATION CONDITION
* THAT LOT 5 HEREON BE HELD AS TO FOUR UNDIVIDED ONE QUARTER SHARES BY THE OWNERS OF LOTS 1 - 4 HEREON AND THAT INDIVIDUAL TITLES BE ISSUED IN ACCORDANCE THEREWITH



Design	MSL	Job Title	PROPOSED SUBDIVISION FOR CARLOS CONCEPTS LTD CARLOS DRIVE, FLAT BUSH LOT 10 DP 352580
Survey	MSL		
Drawn	MSL		
Checked			
Date	June 2005		
Scale	1 : 400 (A3)		
©	Copyright 2004 Excelsior Surveyors Ltd		

Excelsior Surveyors Ltd
39 Remembrance Drive, Manurewa
Phone 09 634 9427
Fax 09 6376294
e-mail: surveyors@excelsior.co.nz

Drawing Title: SCHEME PLAN

Job No. 7793 | Sheet No. 1 | Rev No.

No.	Revision Details	Date	No.	Revision Details	Rev

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 2
LAND USE

JOB No A9861/5

AIREY CONSULTANTS LTD.
ACENZ
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

ISSUED 29.4.05

PROPOSED ENGINEERING WORKS
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 2
LAND USE

DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
	COVER
	INDEX
1	SITE PLAN, 1:8000
-	
3	SITE PLAN - SS DRAINAGE, 1:500
4	SITE PLAN - SW DRAINAGE, 1:500
5	SITE PLAN - WATERMAIN, 1:500
-	
7	LOT 10 - PROPOSED FINISHED LEVELS SW DRAINAGE, 1:250
15	BOUNDARY RETAINING WALLS - ELEVATIONS
16	BOUNDARY RETAINING WALLS - DETAIL
21	SW LONGSECTION 1
22	SW LONGSECTION 2
31	SS LONGSECTION 1
32	SS LONGSECTION 2
33	SS LONGSECTION 3 & 4
	APPENDIX
A1	STANDARD DETAILS - SHEET 1
A2	STANDARD DETAILS - SHEET 2

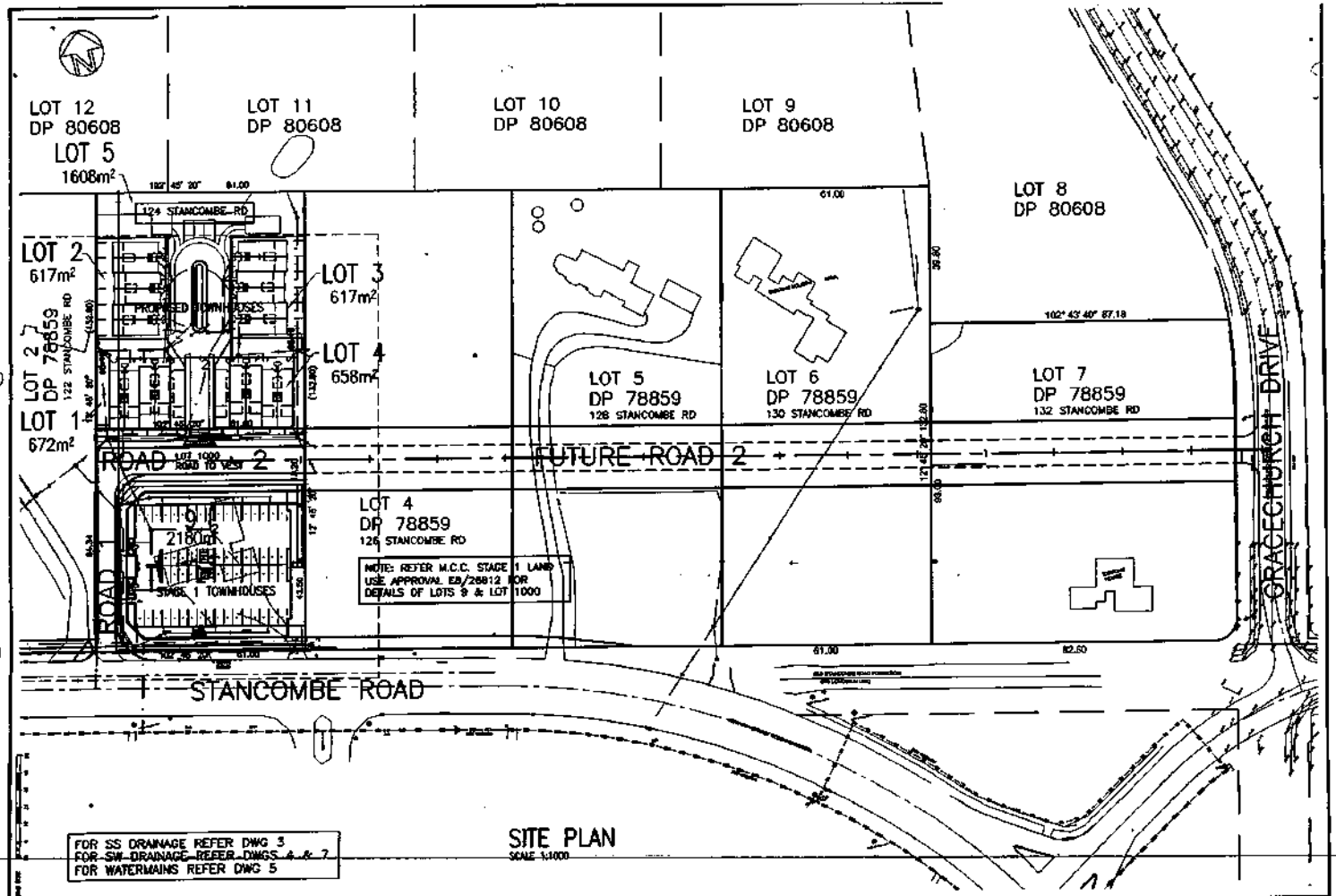
JOB No A9861/5

AIREY CONSULTANTS LTD.

ACENZ

CONSULTING CIVIL & STRUCTURAL ENGINEERS
Takapuna, Pukekohe, Howick, Waiuku, Orewa

ISSUED 29.4.05



SITE PLAN
SCALE 1:1000

CONSENT

PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 2
LAND USE

AIREY CONSULTING GROUP

SITE PLAN

A98615

NOTES

ALL WORK TO BE CARRIED OUT TO M.C.C ENGINEERING STANDARDS.

CONTRACTOR TO LOCATE ALL SERVICES PRIOR TO COMMENCEMENT OF WORK.

STORMWATER, SANITARY SEWER AND WATERMAIN CONNECTIONS SHALL BE INSTALLED BY A M.C.C APPROVED LICENSED CONTRACTOR AT THE APPLICANTS EXPENSE.

CONTRACTOR TO CONFIRM ALL DIMENSIONS ON SITE.

ALL PVC PIPES AND CONNECTIONS TO BE HEAVY WALL SEWER GRADE.

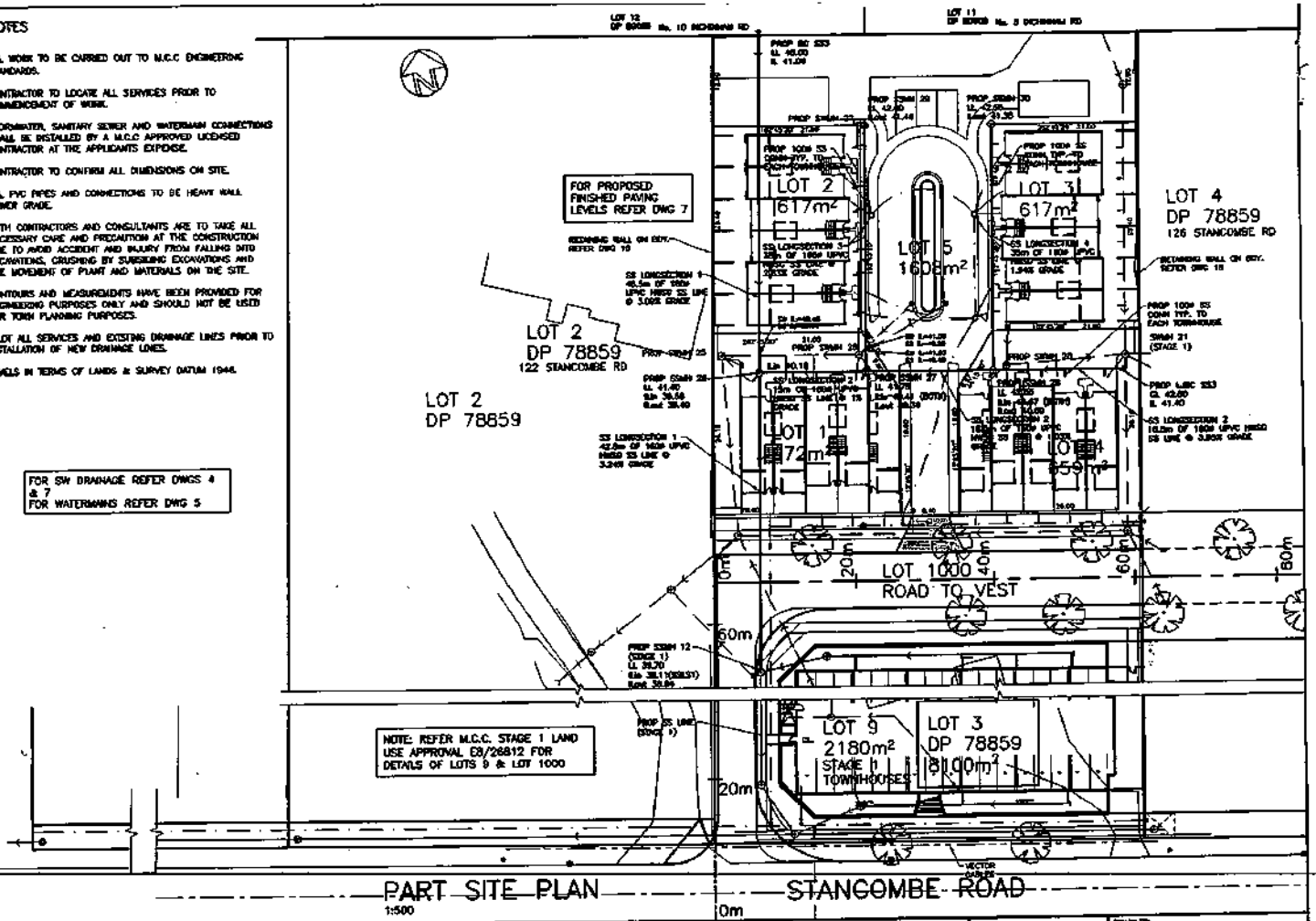
BOTH CONTRACTORS AND CONSULTANTS ARE TO TAKE ALL NECESSARY CARE AND PRECAUTION AT THE CONSTRUCTION SITE TO AVOID ACCIDENT AND INJURY FROM FALLING INTO EXCAVATIONS, CRUSHING BY SUBSIDING EXCAVATIONS AND THE MOVEMENT OF PLANT AND MATERIALS ON THE SITE.

CONTOURS AND MEASUREMENTS HAVE BEEN PROVIDED FOR ENGINEERING PURPOSES ONLY AND SHOULD NOT BE USED FOR TOWN PLANNING PURPOSES.

PILOT ALL SERVICES AND EXISTING DRAINAGE LINES PRIOR TO INSTALLATION OF NEW DRAINAGE LINES.

LEVELS IN TERMS OF LANDS & SURVEY DATUM 1946.

FOR SW DRAINAGE REFER DWGS 4 & 7
FOR WATERMAINS REFER DWG 5



Design:	1 M DESIGN (HAMILTON) LTD		
Survey:	EARCHER SURVEYORS LTD		
Drawn:	UFP		
Checked:			
Date:	APRIL '08		
Scale:	AS 1:500		
CAD Reference:			

CONSENT

Job Title:
PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 2
LAND USE

AIREY CONSULTANTS LTD.

Drawing Title:
SITE PLAN
- SS DRAINAGE

File No. A9861/5 | Rev. - | Dwg. No. 3

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FOR PROPOSED FINISHED PAVING LEVELS REFER DWG 7

NOTE: FOR SW DETAIL SEE SHEET 7

LOT 2
617m²

LOT 3
617m²

LOT 5
1608m²
PROPOSED TOWNHOUSES

LOT 1
72m²

LOT 4
60m²

LOT 2
DP 78859
122 STANCOMBE RD

LOT 4
DP 78859

LOT 5
DP 78859

LOT 1000
ROAD TO VEST

STAGE 1
2180m²
TOWNHOUSES

LOT 3
DP 78859
8100m²

NOTE: REFER M.C.C. STAGE 1 LAND USE APPROVAL E8/26812 FOR DETAILS OF LOTS 9 & LOT 1000

FUTURE BOUNDARY

FUTURE BOUNDARY

FOR SS DRAINAGE REFER DWG 3
FOR WATERMAINS REFER DWG 5

STANCOMBE ROAD — PART SITE PLAN

1:500

CONSENT

PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

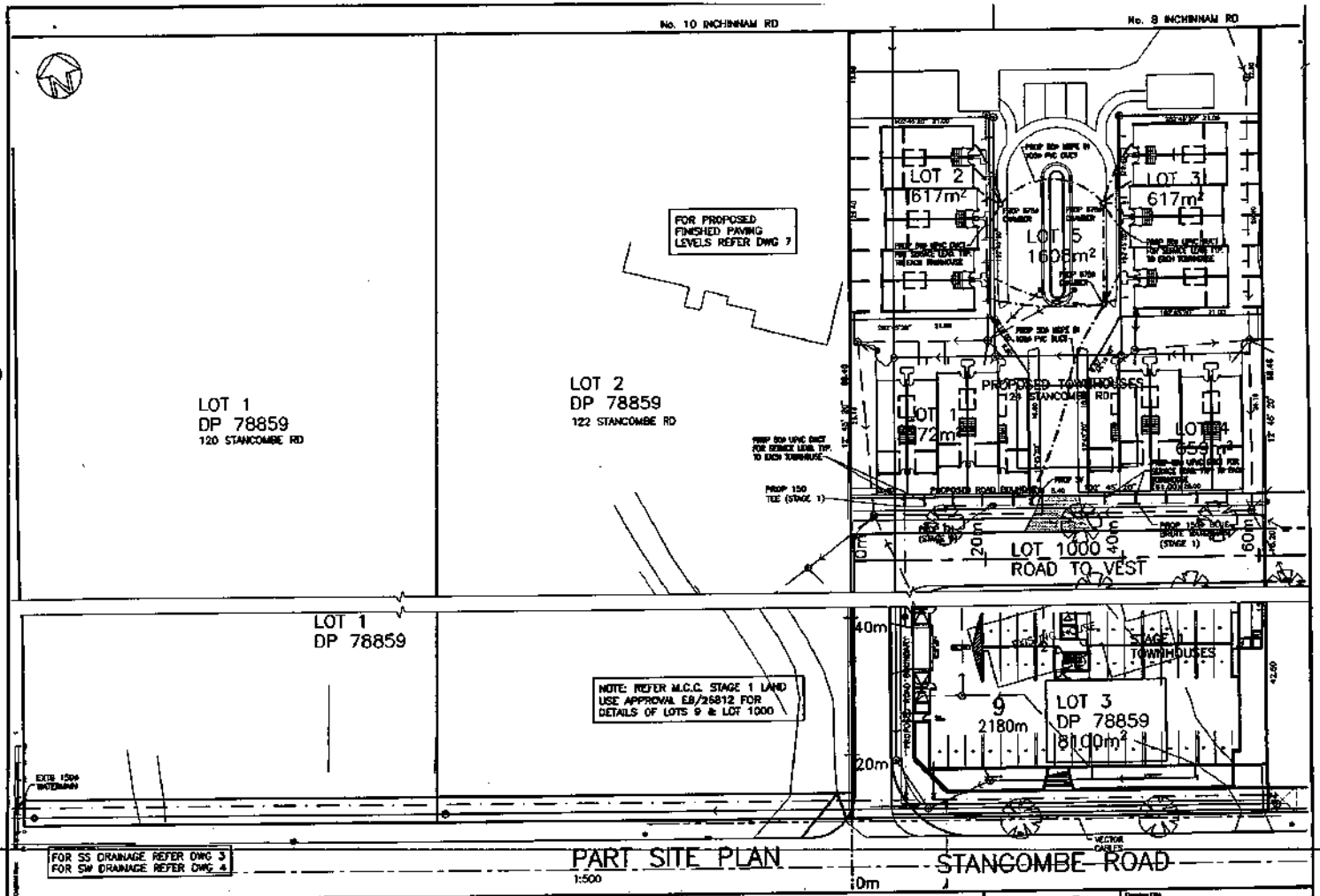
STAGE 2
LAND USE

AIREY CONSULTANTS LTD.

SITE PLAN
- SW DRAINAGE

A806165

4



CONSENT

PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

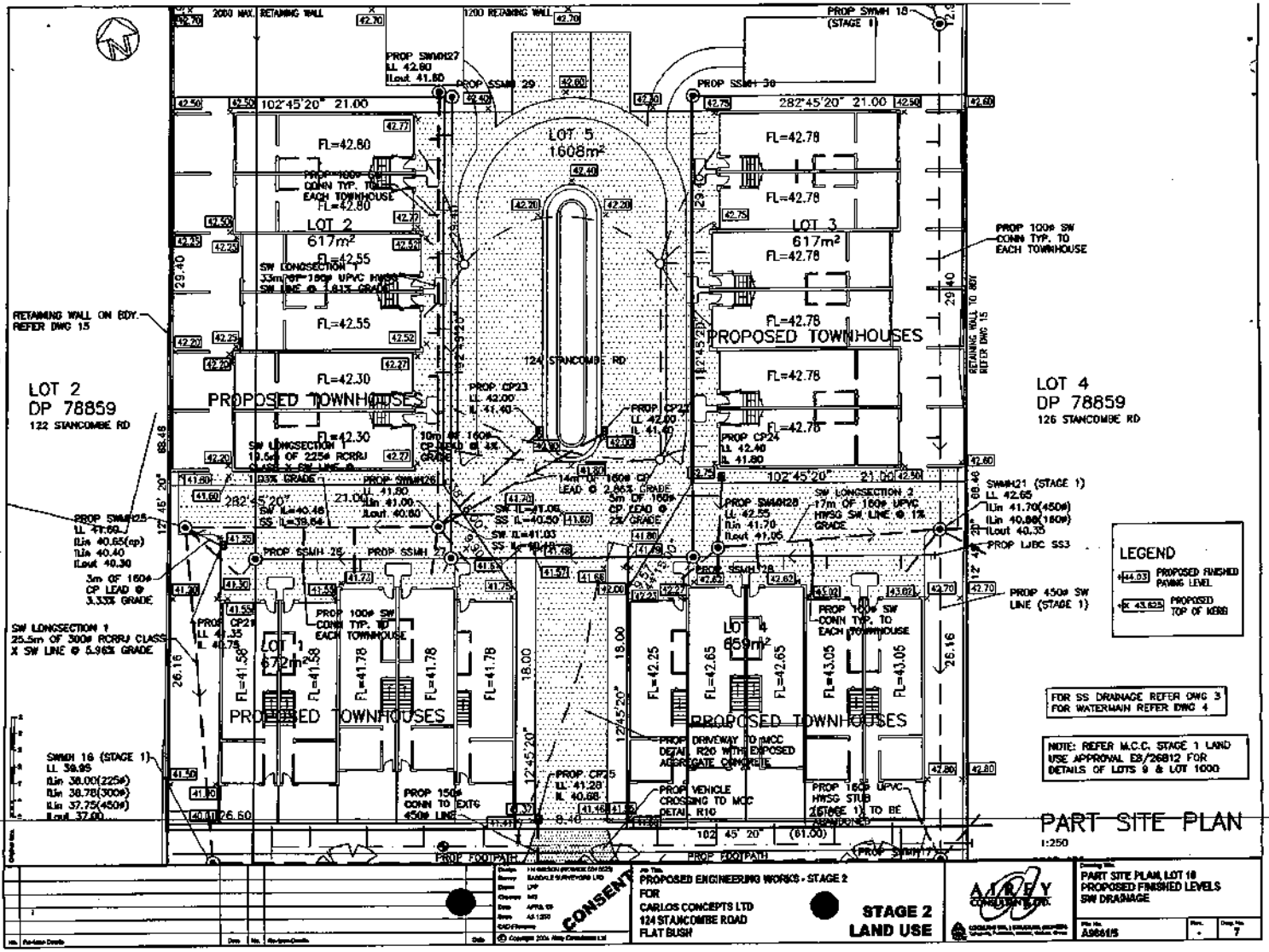
STAGE 2 LAND USE

AIREY CONSULTANTS LTD.

SITE PLAN - WATERMAIN

A98801/5

5



CONSENT

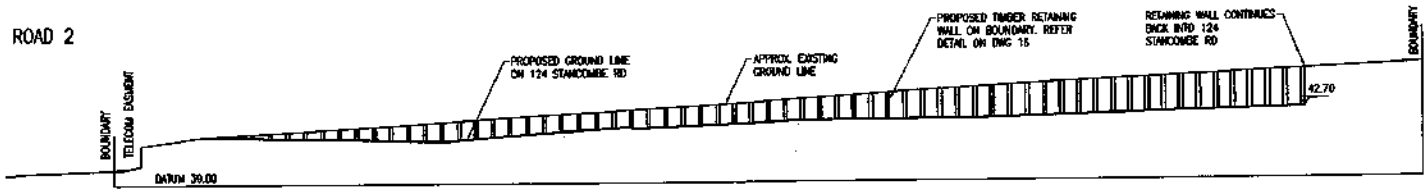
PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 2
LAND USE

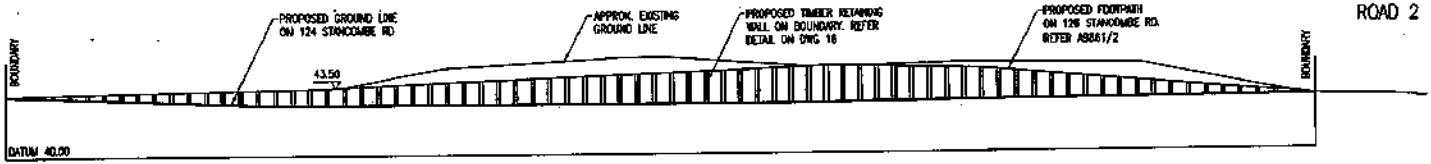
AIREY CONSULTANTS LTD.

PART SITE PLAN, LOT 10
PROPOSED FINISHED LEVELS
SW DRAINAGE

A9661/5 | Rev. - | Dwg. No. 7



WEST BOUNDARY RETAINING WALL ELEVATION
VIEWED FROM INSIDE 124 STANCOMBE RD
1:200



EAST BOUNDARY RETAINING WALL ELEVATION
VIEWED FROM INSIDE 124 STANCOMBE RD
1:200

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Drawn	[illegible]				Rev. -
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Scale	[illegible]				
CAD Filename					
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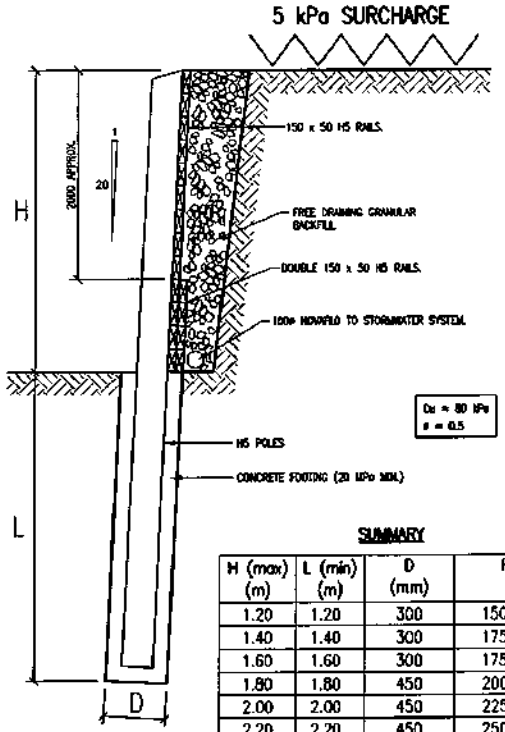

TIMBER POLE
RETAINING WALL DETAIL

SUMMARY

H (max) (m)	L (min) (m)	D (mm)	POLE SIZE (SED)
1.20	1.20	300	150ø @ 900crs
1.40	1.40	300	175ø @ 900crs
1.60	1.60	300	175ø @ 900crs
1.80	1.80	450	200ø @ 900crs
2.00	2.00	450	225ø @ 900crs
2.20	2.20	450	250ø @ 900crs
2.40	2.40	450	250ø @ 900crs
2.60	2.60	450	275ø @ 900crs
2.80	2.80	450	300ø @ 900crs
3.00	3.00	450	325ø @ 900crs

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PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 2
LAND USE

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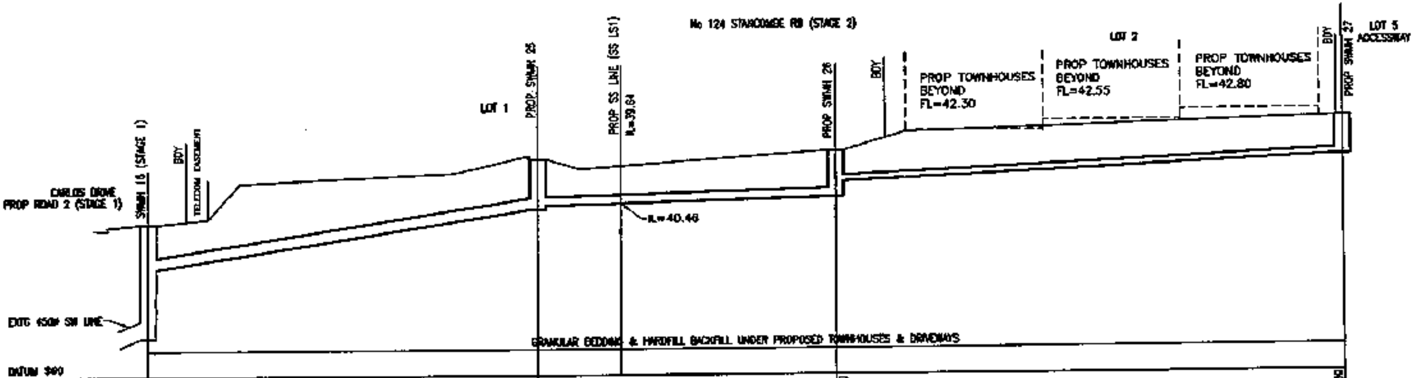
BOUNDARY RETAINING WALLS DETAIL

A5881/5 | Rev. - | Dwg. No. 15



GROUND LEVEL	39.95	41.60	41.80	42.60
INVERT LEVEL	37.00 / 38.78	40.30 / 40.40	40.60 / 41.20	41.60
CUT TO INVERT	2.95 / 1.17	1.30 / 1.20	1.20 / 0.60	1.00
DISTANCE	00.00	25.50	45.00	78.00
PIPE SIZE & GRADE	25.5m OF 300ø RCRRJ CLASS X SW LINE @ 5.96% GRADE	19.5m OF 225ø RCRRJ CLASS X SW LINE @ 1.03% GRADE	33m OF 160ø UPVC HWSG SW LINE @ 1.81% GRADE	

SW LONGSECTION 1

VERT 1:100
HORIZ 1:250

CONSENT

Job Title
PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 2
LAND USE

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Drawing Title
SW LONGSECTION 1

File No. A3961/5 | Rev. - | Dwg. No. 21

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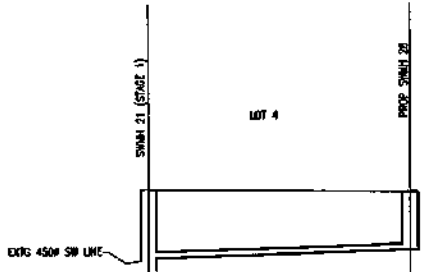


DATUM 39.00

GROUND LEVEL		42.85	42.50
INVERT LEVEL	40.55	40.68	41.05
CUT TO INVERT	2.30	1.77	1.50
DISTANCE		00.00	17.00
PIPE SIZE & GRADE	17m OF 160ø UPVC HWSC SW LINE @ 1% GRADE		

SW LONGSECTION 2

VERT 1:100
HORIZ 1:250

CONSENT

PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

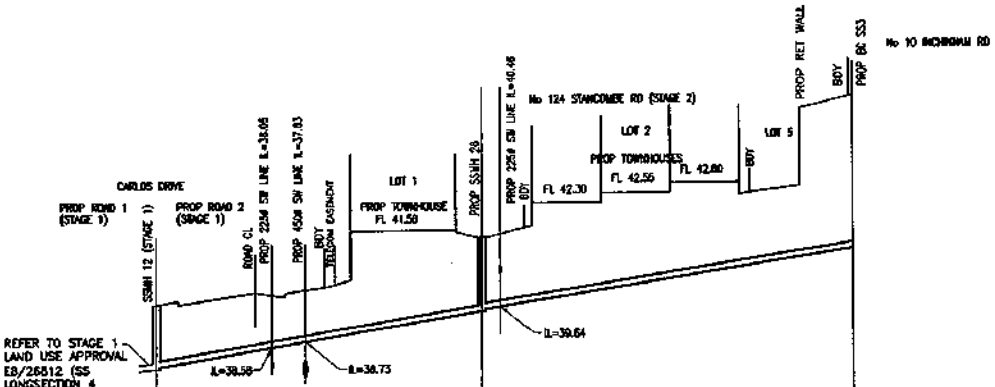
STAGE 2
LAND USE

AIREY CONSULTANTS LTD

SW LONGSECTION 2

A9661/5

22



DATUM 35.00

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INVERT LEVEL	38.04	38.11			39.49	39.58				41.06
CUT TO INVERT	1.66	1.59			1.91	1.84				3.94
DISTANCE	00.00				42.50					91.00
PIPE SIZE & GRADE	42.5m OF 160ø UPVC HWSG SS LINE @ 3.24% GRADE				48.5m OF 160ø UPVC HWSG SS LINE @ 3.09% GRADE					

SS LONGSECTION 1

VERT 1:100
HORIZ 1:500

No.	Revision Details	Date	No.	Revision Details	Date

Design: THE BRIDGE ENGINEERING GROUP
Survey: CARLOS SURVEYORS LTD
Drawn: DJ
Checked: MB
Date: SEPT 04
Scale: AS AB SHOWN
CAD Filename:
CONSENT
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Job Title:
PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

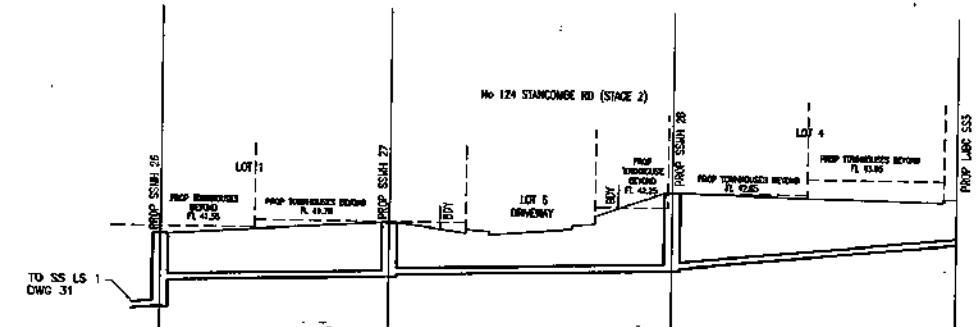
1

STAGE 2
LAND USE

ARRAY CONSULTANTS LTD.
CONSULTING CIVIL, INFRASTRUCTURE, ENVIRONMENTAL
Telephone, Facsimile, Mobile, Email

Drawing Title:
SS LONGSECTION 1

File No.: A8361/5
Rev.: -
Drwg. No.: 31



DATUM 37.00

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CUT TO INVERT	1.91	1.21			1.41	1.34		2.05	1.98			1.20
DISTANCE	00.00				15.00			33.50				52.00
PIPE SIZE & GRADE	15m OF 160ø UPVC HWSG SS LINE @ 1% GRADE				18.5m OF 160ø UPVC HWSG SS LINE @ 1.03% GRADE			18.5m OF 160ø UPVC HWSG SS LINE @ 3.95% GRADE				

SS LONGSECTION 2

VERT 1:100
HORIZ 1:250

No.	Revision Details	Date	No.	Revision Details	Date

Design: I H BREDOW (NZIAHS) Sen REPW
Survey: FAIRBAIN SURVEYORS LTD
Drawn: DJ
Checked: BRD
Date: 30/07/06
Scale: AS AB SHOWN
CAD Filename:
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CONSENT

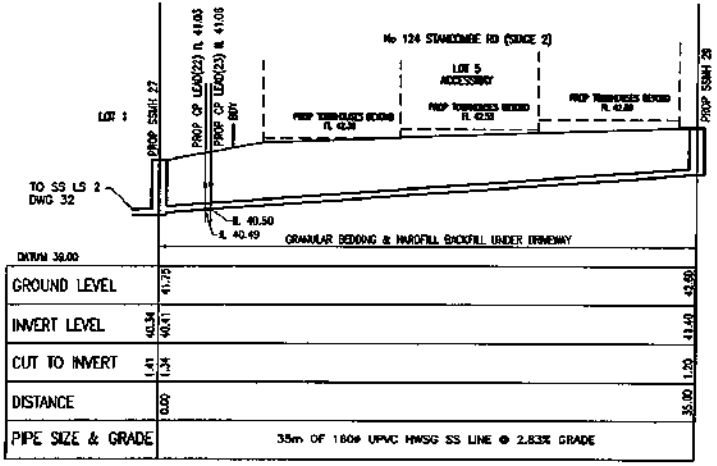
Job Title:
PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLAT BUSH

STAGE 2
LAND USE

AIREY CONSULTANTS LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
Auckland, Pukekohe, Hamilton, Whakatane, Gisborne

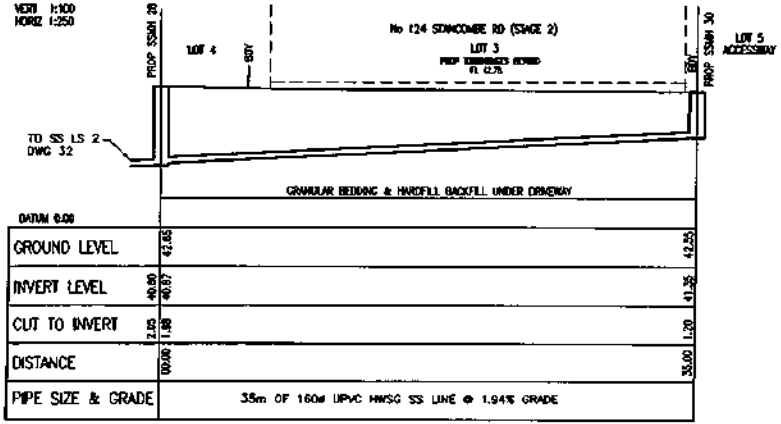
Drawing Title:
SS LONGSECTION 2

File No.: A9881/5
Rev.: -
Dwg. No.: 33



SS LONGSECTION 3

VERT 1:100
HORIZ 1:250



SS LONGSECTION 4

VERT 1:100
HORIZ 1:250

No.	Revision Details	Date	No.	Revision Details	Date

CONSENT

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Job Title
PROPOSED ENGINEERING WORKS - STAGE 2
FOR
CARLOS CONCEPTS LTD
124 STANCOMBE ROAD
FLATBUSH

AIREY CONSULTANTS LTD.

Drawing Title
SS LONGSECTIONS 3 & 4

File No. A9661/5
Rev. -
Drwg. No. 33

124 Stancombe Road, Flatbush

Stancombe Estate - 124 Stancombe Road

Date. 20-04-05

DRAWING ISSUE REGISTER

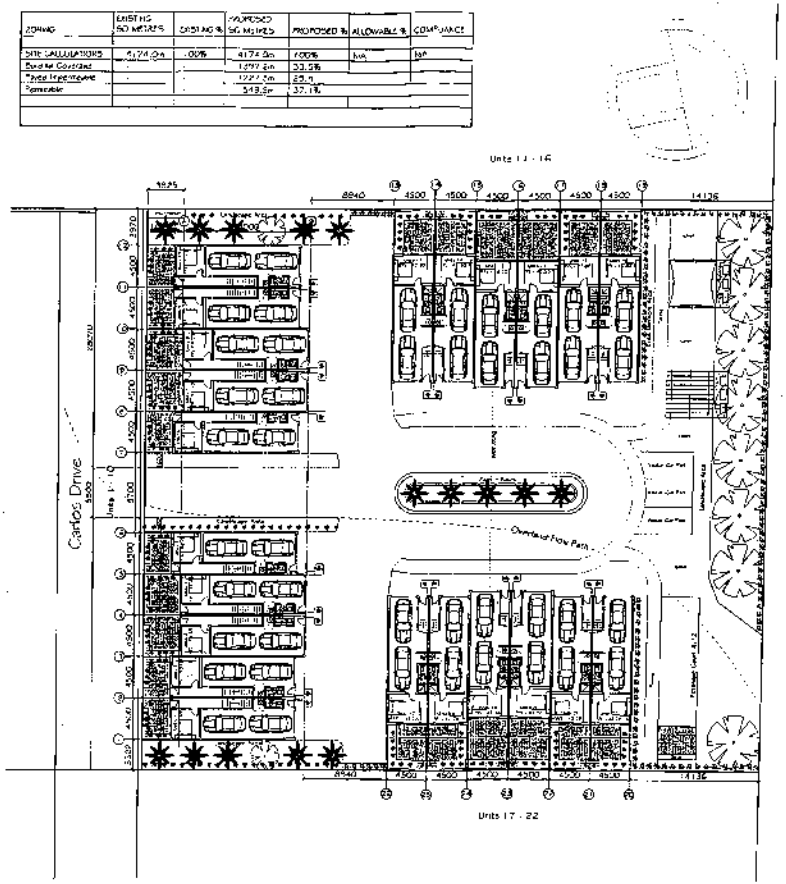
ISSUED TO		29 Mar 05	18 Apr 05							
		NUMBER OF COPIES:								
Client	Working Concepts Ltd									
Contractor	T.B.A									
Council	Manukau City									
Electrical Eng	T.B.A									
Site Planner	Peter Gurnett	1								
Hydraulics Eng	Hydraulic Services									
Mechanical Eng	T.B.A									
Q.S.	T.B.A									
Structural Eng	Tavo Structural Ltd									
Acoustics	John Cawley	1								
Town Planner	Carl Cook	1	2	2						
	Total sheets:									
	REASON FOR ISSUE									
	ISSUE FORMAT									

REASON FOR ISSUE: 1. PRELIMINARY 2. INFORMATION 3. PERMIT 4. MARKETING 5. TENDER
6. CONTRACT 7. CONSTRUCTION 8. REVISED 9. APPROVAL
ISSUE FORMAT: E-FORMAT. H-HARDCOPY AS-STANDCOPY O. DWG/DFT TRACE-TIFF
E. DWG/DFT EMAIL F-FAX

	DRAWING NO AND TITLE	BUILDING CONSENT	A1	A0	REVISION							
A 00	Title Sheet		N/A	N/A								
A 01	Ground Level Site Plan		1:200	1:400								
A 02	First Floor Site Plan		1:200	1:400								
A 03	Second Floor Site Plan		1:200	1:400								
A 04	Roof Plan		1:200	1:400								
A 05	Proposed Floor Plans		1:50	1:100								
A 06	Proposed Floor Plans (Carlos Drive)		1:50	1:100								
A 07	Proposed Elevations (units 1-10)		1:100	1:200								
A 08	Proposed Elevations (units 11-16)		1:100	1:200								
A 12	Proposed Elevations (units 17-22)		1:100	1:200								
A 10	Elevations 11 & 17 / 18 & 22		1:100	1:200								
A 11	Elevation Notes		1:100	1:200								
A 12	Sections		1:25	1:50								

a to

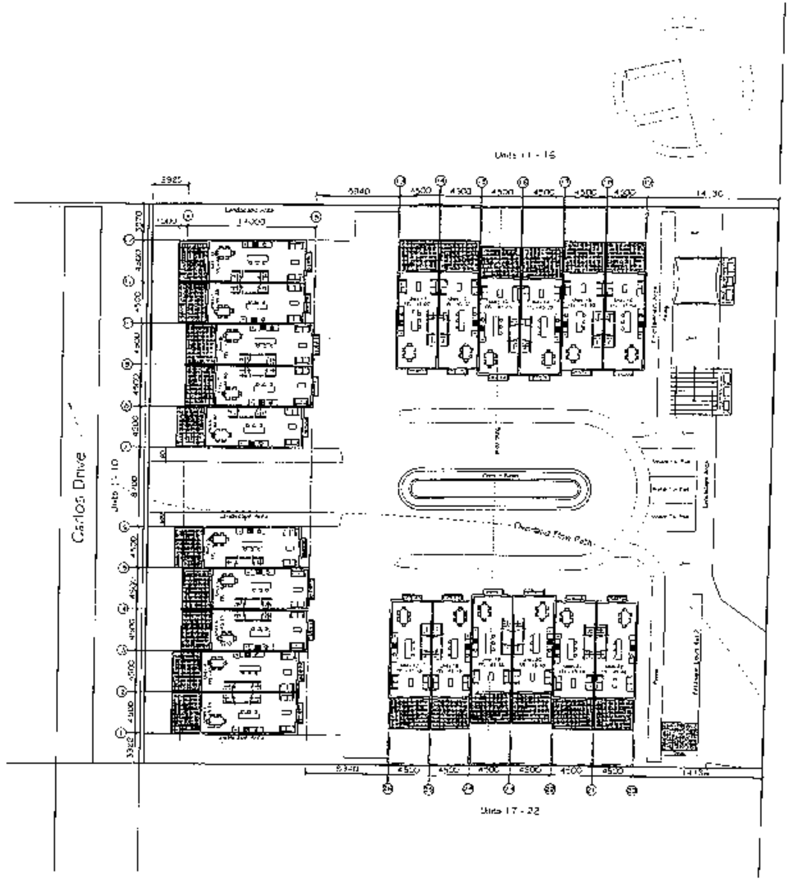
ZONING	EXISTING SQ METRES	EXISTING %	PROPOSED SQ METRES	PROPOSED %	ALLOWABLE %	COMPLIANCE
SITE CALCULATIONS	4174.0m	100%	4174.0m	100%	N/A	N/A
Building Coverage			1397.0m	33.5%		
Paved Impervious			1227.0m	29.4		
Permeable			548.5m	37.1%		



a|to

Project:
Stercombe Estate
124 Stercombe Road
Botany
Flor Bush

A01
Ground Floor
Site Plan

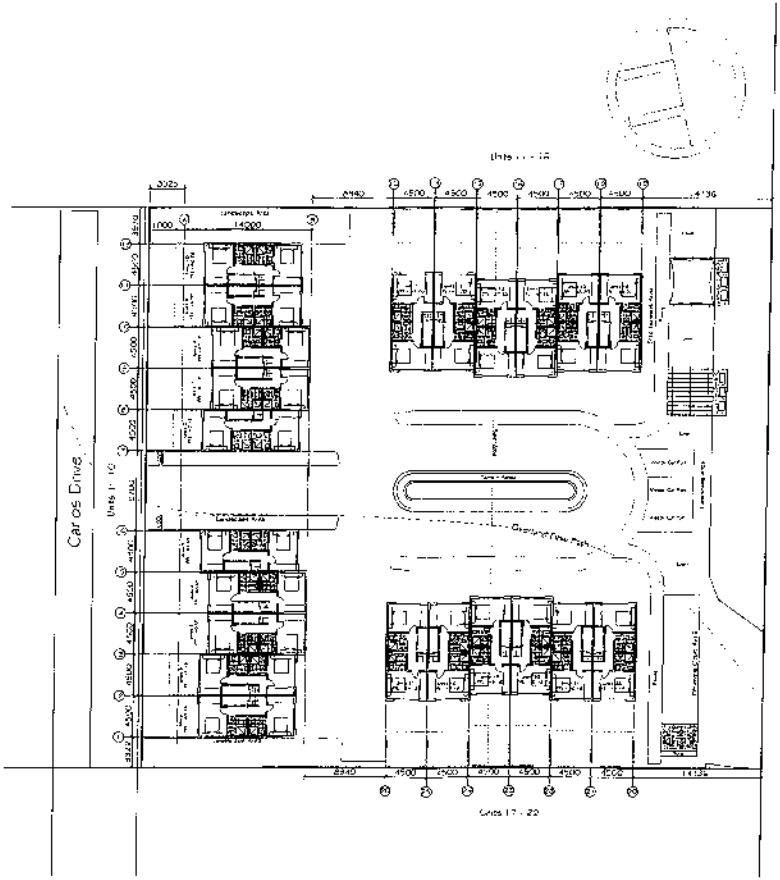


alto

Project;
Stuncombe Estate
124 Stuncombe Road
Botany
Flat Buse

A02

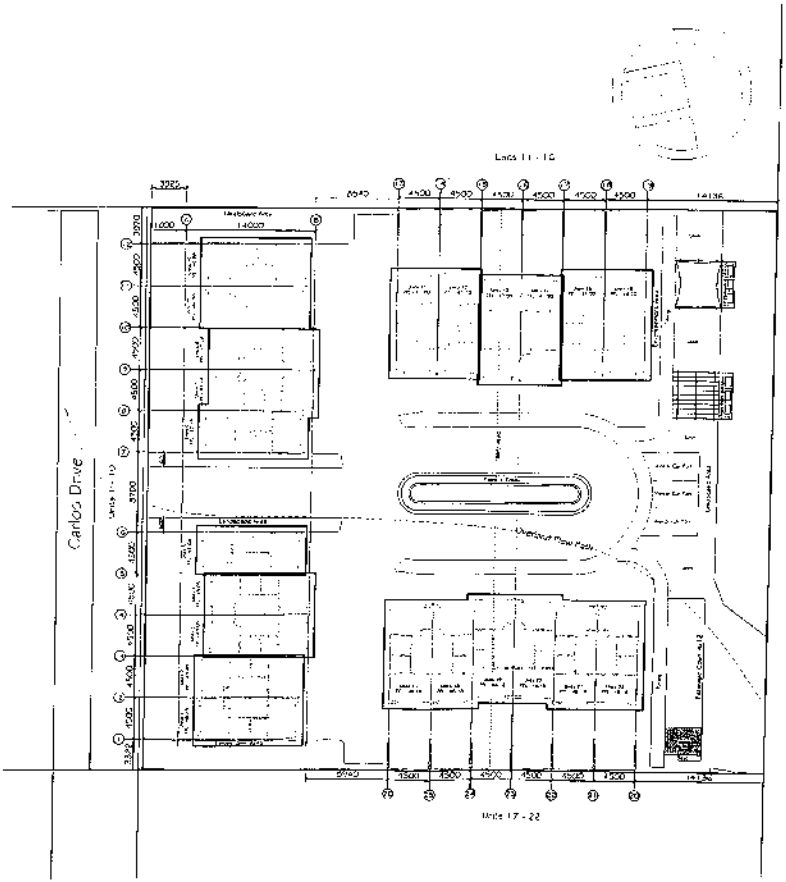
First Floor
Site Plan



a|to

Project:
Starcombe Estate
124 Somerville Road
Botany
First Floor

Sheet Title
A03
Second Floor
Site Plan

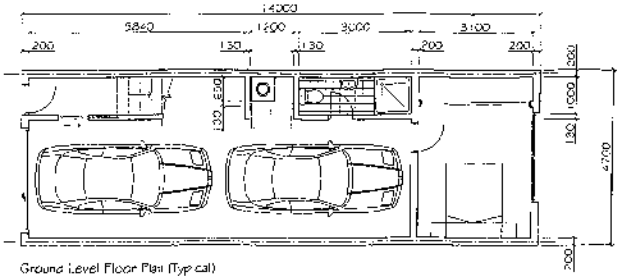


alto

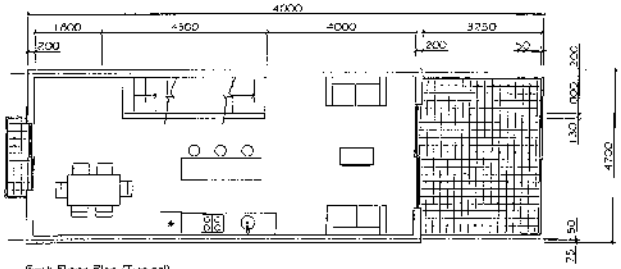
Project:
Stancombe Estate
124 Stancombe Road
Bellary
Flat Bush

Sheet Title
A04
Roof Plan

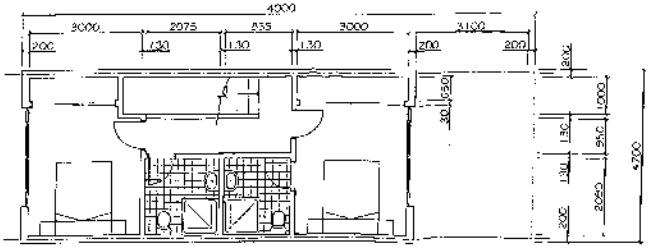
Drawing Scale
Date Plotted
Drawn
Checked
Projected



Ground Level Floor Plan (Typical)
Scale 1:50



First Floor Plan (Typical)
Scale 1:50



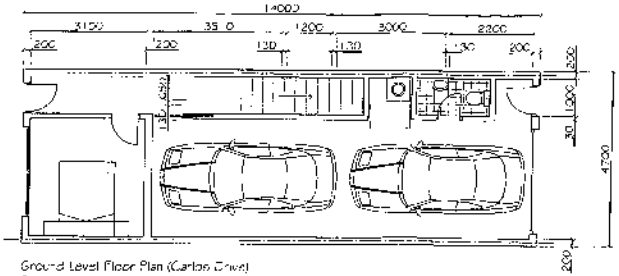
Second Floor Plan (Typical)
Scale 1:50

alto

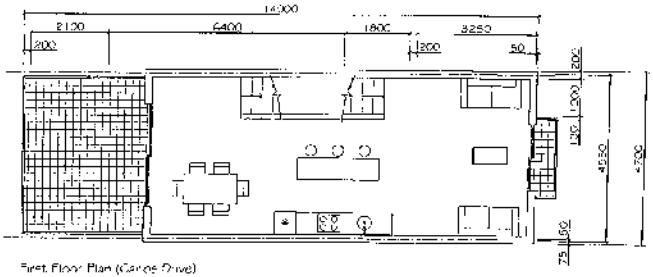
Project:
Shancombe Estate
124 Shancombe Road
Botany
Flat Bush

Sheet No
A05

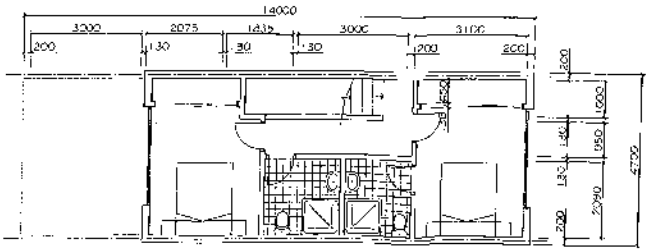
Proposed
Floor Plans



Ground Level Floor Plan (Carlos Drive)
Scale 1:50



First Floor Plan (Carlos Drive)
Scale 1:50



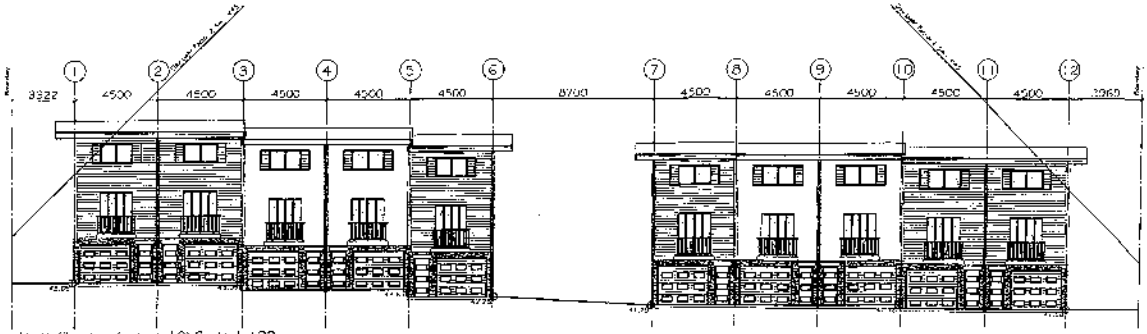
Second Floor Plan (Carlos Drive)
Scale 1:50

a to

Project:
Stanmore Estate
724 Stanmore Road
Botany
Flat Bush

Sheet Title
A06

Proposed
Floor Plans
(Carlos Drive)



North Elevation (units 1-10) Scale 1:100

South Elevation (units 1-10) Scale 1:100

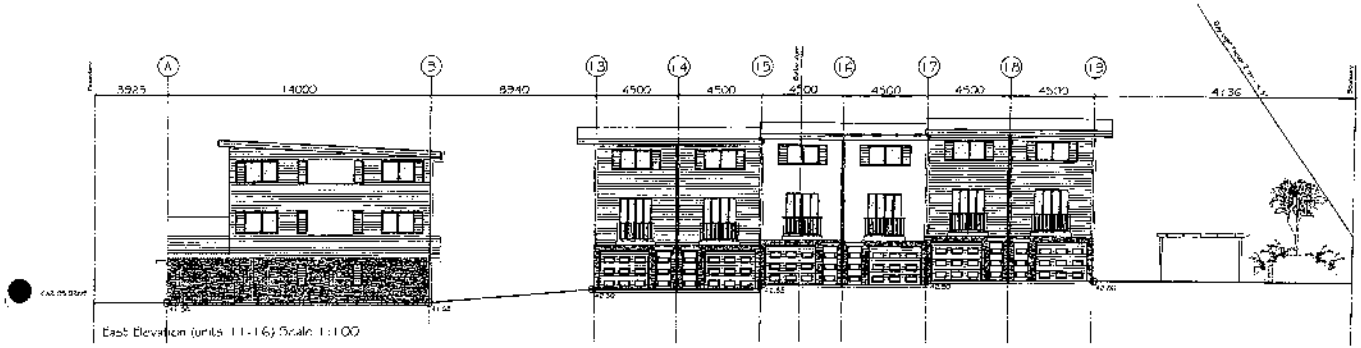
Carlos Drive

alto

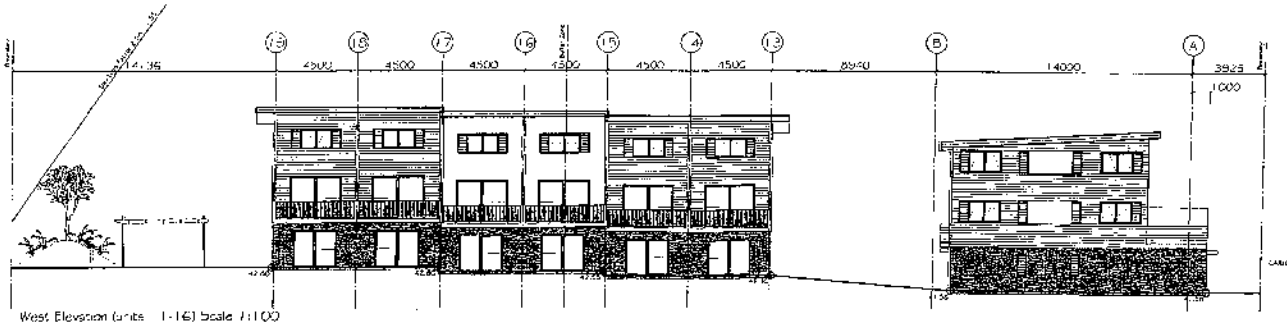
Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

Sheet Title
A07
Elevations
Units 1 - 10

Drawing Scale 1:100 - 1:200 - 1:50
Date Printed 29-04-03
Drawn JL
Checked GB
Project No 7.81



East Elevation (units 11-16) Scale 1:100

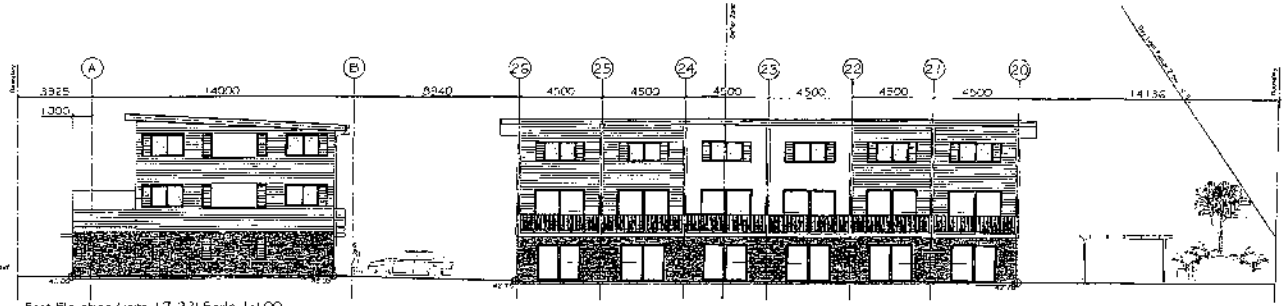


West Elevation (units 1-16) Scale 1:100

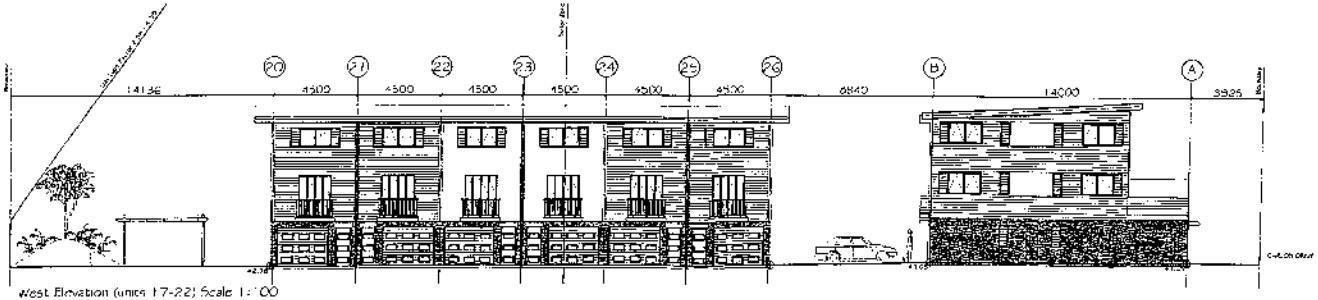
alto

Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Bush

A08
Elevations
Units 11 - 16



East Elevation (units 17-22) Scale 1:100



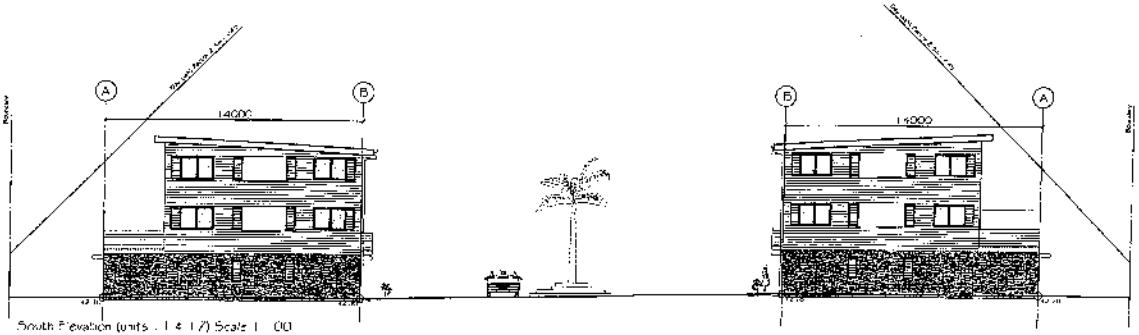
West Elevation (units 17-22) Scale 1:100

alto

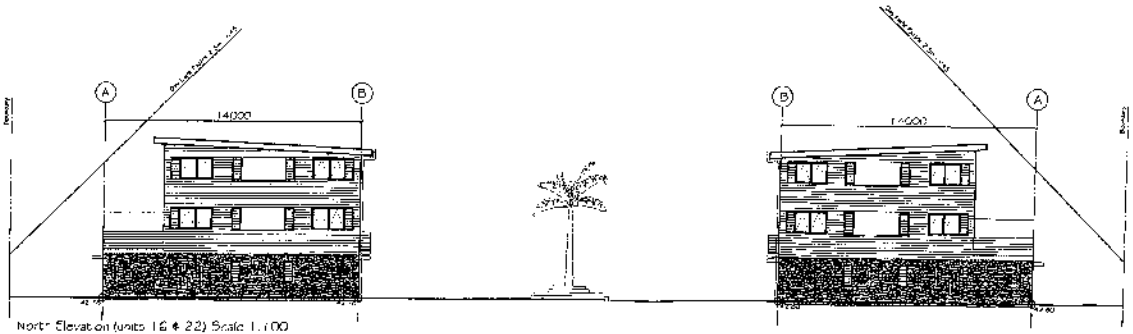
Project:
Stancombe Estate
124 Stancombe Road
Botany
Flat Roofs

Sheet No
A09

Elevations
Units 17 - 22



South Elevation (units 1 & 17) Scale 1:100



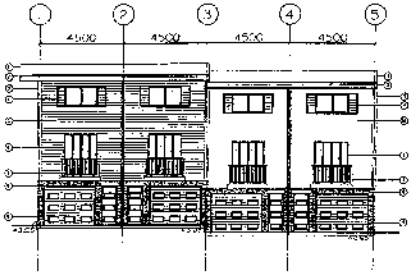
North Elevation (units 16 & 22) Scale 1:100

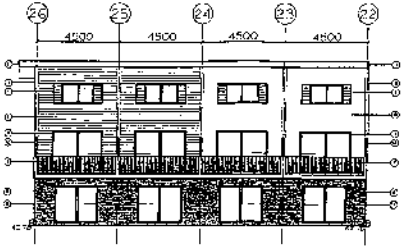
a|to

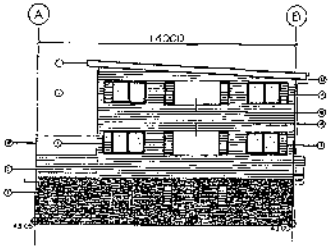
Project:
Stancombe Estate
124 Stancombe Road
Botany
Hat Bath

A10

Elevations Units
1 & 17
16 & 22







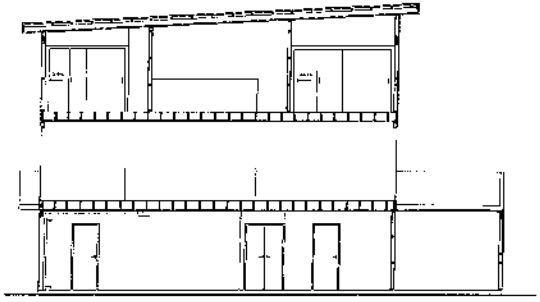
Elevation Notes

1	Steel and Tube : mline colour steel roofing	7	Selected Wrought iron balustrade	13	UPVC downpipes. Paint finish to specification
2	Colour steel gutter or timber fascia. Paint finish to specification	8	Selected Schist	14	
3	Concrete tilt panel wall with selected paint finish lined with 25x50 battens and 10mm standard gib to interior walls	9	Selected garage sectional door installed to manufacturers specifications	15	
4	Selected powder coated aluminium windows and louvers with 6mm glass	10	Solid plaster coating to exterior 20 series masonry wall installed to manufacturers specifications	16	
5	Weathertbeard or building paper installed to manufacturers specifications	11	Selected powder coated aluminium sliding doors with 6mm glass.	17	
6	Aluminium Bi folds with 6mm glass installed to manufactures specifications	12	Aluminium cook partitions installed to manufacturers specifications.	18	

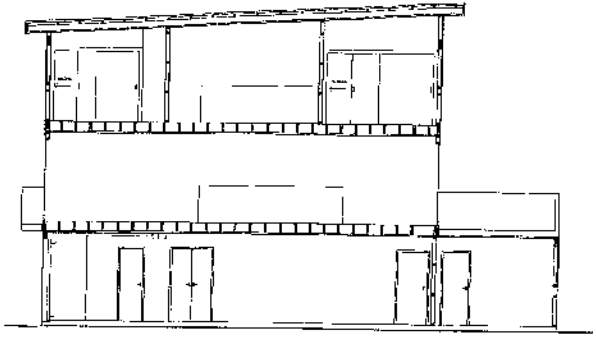
alto

Project:
Stancombe Estate
124 Stancombe Road
Botany
For: Bush

A11
Elevations Notes



Section A-A
Scale 1:50



Carlos Drive

Section A-A
Scale 1:50

aito

Project:
Stancombe Estate
124 Stancombe Road
Bothny
Flat Roofs

Sheet Title
A12
Sections

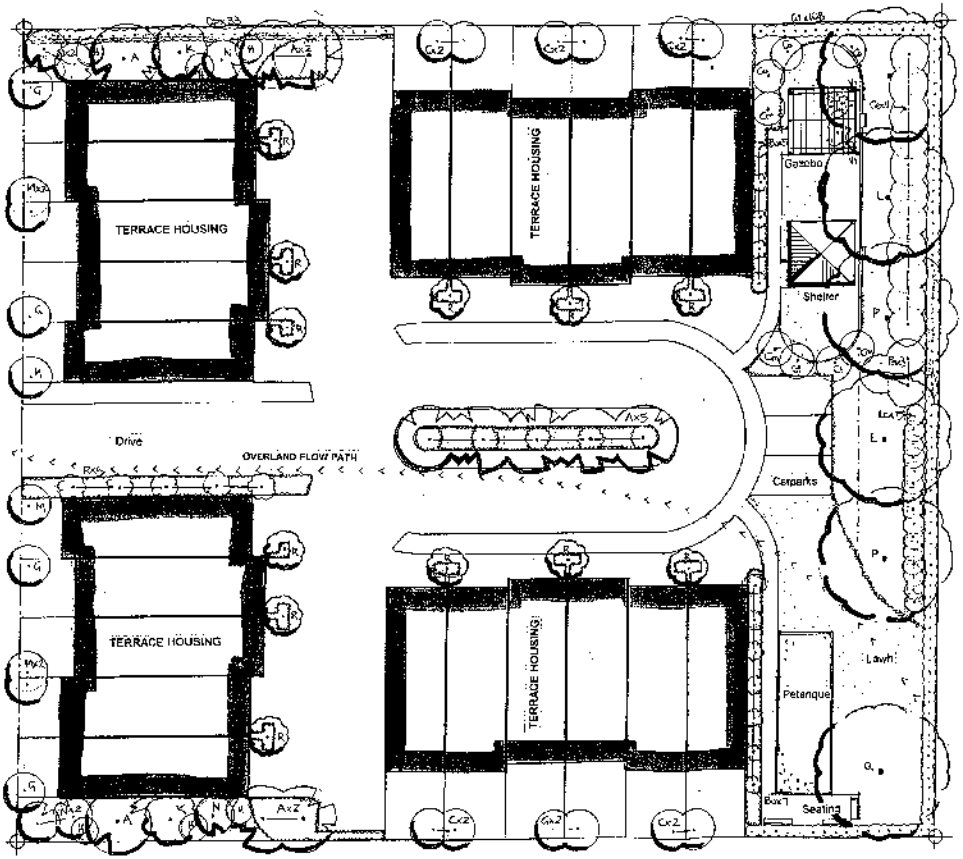
Drawing Scale 1:50 - A1
1:50 - A3

Date Printed 30-04-03

Drawn JL

Checked

Project No 1281



NOTES

- Larger trees generally character species for the area in MCC Tree Policy, (liquidamber, laralie rewarewa). Pinoak selected for tolerance to flooding
- Palms and smaller trees include nikau, rhododendron, queen palms, Cordonia, citrus.
- A 2-3m NZ broadleaf hedge encloses the rear of the property, and an Olearia hedge screens the front west side. The driveway area to the east is screened by a hedge on the neighbouring property.
- Under-planting will include groundcover roses, rosemary, lavender. Patterning of groundcovers and gravel provides visual interest in narrow side-yard areas. Planting in yards fronting Carlos Drive defined with hedging and herbaceous planting to max 1m height.
- Landscape allows for 3 different activity areas including petanque court, and 2 gazebos with BBQs
- Overland flow path traverses lawn and driveway.

PLANT SCHEDULE – 124 STANCOMBE ROAD N

Symbol	Botanical name	Common name	No.	Size	Mature height & spread	Notes
A	*Arecastrum romanzoffianum*	Queen Palm	11	Pb35 or Pb75/65	15m x 5m	
C	*Camellia* 'Plantation pink'	Or similar upright pink camellia	6	Pb40	3m x 2m	
G	*Gardenia jasminoides*	White flowers	10	Pb95	3m x 2m	
H	*Rhododendron* 'Susan'	Tall, mauve flowers	8	Pb78	3m x 2m	
K	*Knightia excelsa*	Rewarewa	2	Pb95	30m x 5m	
L	*Liquidamber styraciflua*	Liquidamber	3	Pb95	10m x 10m	
M	*Michelia figo*	Port wine magnolia	6	Pb95	3m x 3m	
N	*Rhopalostylis sapida*	Nikau	6	Pb95	6m x 3m	
P	*Beschorneria tenuiflora*	Tweena	2	Pb95	10m x 10m	
Q	*Quercus palustris*	Pinoak	1	Pb95	10m x 10m	
R	*Rhaphiolepis umbellata*	Castor-bean / China rose	17	Pb95	4m x 3m	
Bu	*Buxus sempervirens*	Standard English box or similar as available	12	Pb8	1.5m ea available	
Ca	*Cordyline australis*	Chinese toon	11	Pb95	3m x 2m	1.5m ea
Cm	*Citrus Mandarin* Satsuma	Mandarin	3	Pb20	Hedged	600mm o.c
Cs	*Citrus Navel* orange	Orange	3	Pb20	Hedged	600mm o.c
Ct	*Citrus tangelo*	Tangelo	2	Pb20	Hedged	600mm o.c
Gl	*Griselinia littoralis*	NZ broadleaf. Hedged to approx. 2m	108	Pb6	Hedged	400mm o.c
Lc	*Loropetalum chinense*	Fringe flower	15	Pb5	1.5 x 1.5m	1m o.c
Op	*Olearia paniculata*	Akiraho. Hedged to approx. 2m	33	Pb8	Hedged	400mm o.c
Ps	*Pseudopanax* 'Cyril Watson'	NZ lifeforge variety	3	Pb35	4m x 3m	1m o.c
Vl	*Vitis* 'Albany surprise' & suitable white var.	Edible grape – white & red	1 each	Pb8		As shown

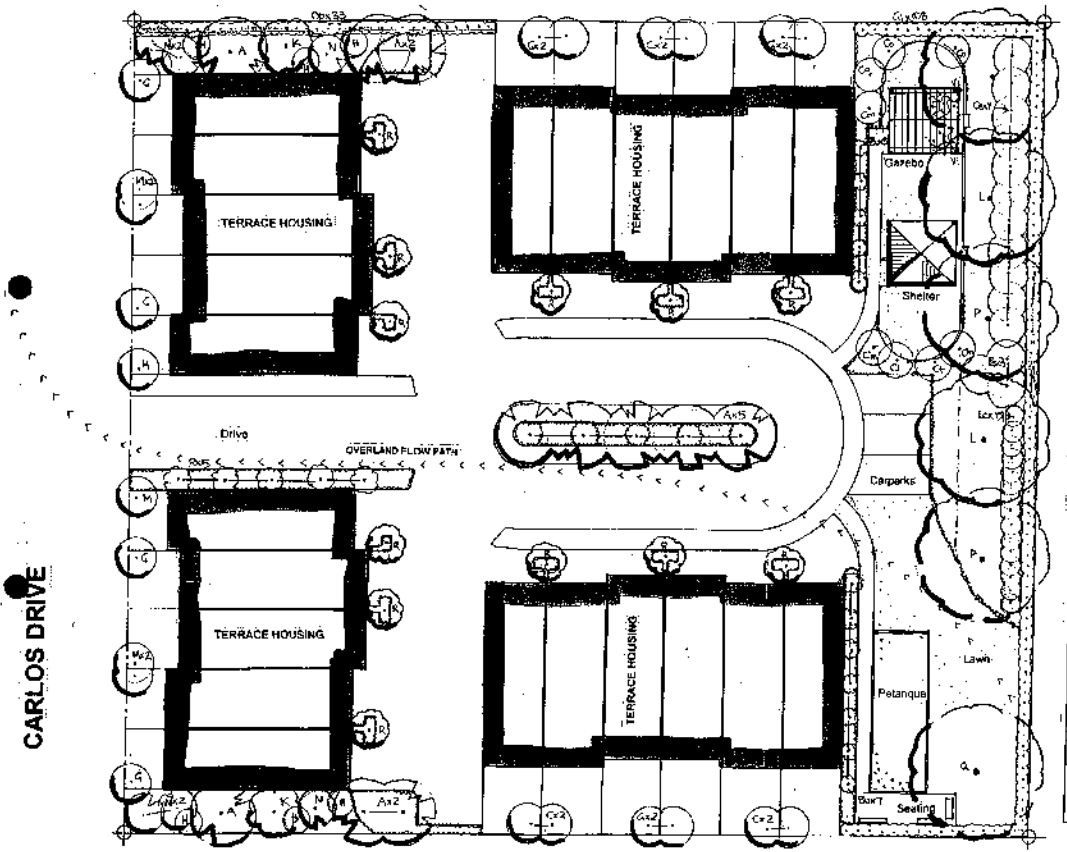
Note: Check location of all services before planting. See separate planting plan for herbaceous planting. Plant and mulch trees to drip planting detail provided.
Any changes in cultivar to be discussed with Landscape Architect. All plants subject to approval by Landscape Architect for plant quality, also suitability shape and size.
Lay out plants prior to planting for approval by Landscape Architect.

NORTH

STANCOMBE ESTATE — 124 STANCOMBE ROAD (N)

L01 PLANTING PLAN – STRUCTURAL PLANTING

1:200 @ A2 — April 2006



CARLOS DRIVE

NOTES

+ Larger trees generally character species for the area in MCC Tree Policy, (liquidamber, tarsia, rewarewa). Pinoak selected for tolerance to flooding.
+ Palms and smaller trees include nikau, rhododendron, queen palms, Gordonia, citrus.
+ A 2-3m NZ broadleaf hedge encloses the rear of the property, and an Olearia hedge screens the front west side. The driveway area to the east is screened by a hedge on the neighbouring property.
+ Under-planting will include groundcover roses, rosemary, lavender. Patterning of groundcovers and gravel provides visual interest in narrow side-yard areas. Planting in yards fronting Carlos Drive defined with hedging and herbaceous planting to max 1m height.
+ Landscape allows for 3 different activity areas including petanque court, and 2 gazebos with BBQs.
+ Overland flow path traverses lawn and driveway.

PLANT SCHEDULE – 124 STANCOMBE ROAD N

Symbol	Botanical name	Common name	No.	Size	Mature in Exposure	Notes
A	*Arecastrum romanzoffianum*	Queen Palm	11	Pb95 x 8 Pb150-5	15m x 5m	
C	Camellia 'Plantation pink'	Or similar upright pink camellia	6	Pb40	3m x 2m	
G	*Gordonia axillaris*	White flowers	10	Pb95	3m x 2m	
H	*Rhododendron 'Susan'*	Tall, mauve flowers	6	Pb28	3m x 2m	
K	*Knightia excelsa*	Rewarewa	2	Pb95	20m x 4m	
L	*Liquidamber styraciflua*	Liquidamber	3	Pb95	10m+ x 10m	
M	*Michelia figo*	Port wine magnolia	8	Pb95	3m x 3m	
N	*Rhopalostylis sapida*	Nikau	5	Pb95	8m x 3m	
P	*Beilschmiedia tarairo*	Tarairo	2	Pb95	10m+ x 10m	
Q	*Quercus palustris*	Pinoak	1	Pb95	10m+ x 10m	
R	*Radermachona sinica*	Canton lace / China doll	17	Pb95	4m x 3m	
Bu	*Buxus sempervirens*	Standard English box or similar as available	17	Pb6	1.5m as available	
Co	*Cedrela sinensis*	Chinese toon	11	Pb6	3m x 2m	2.5m o.c.
Cm	*Citrus Mandarin Salsuma*	Mandarin	3	Pb28	Hedged	600mm o.c.
Co	*Citrus Navel orange*	Orange	3	Pb28	Hedged	600mm o.c.
Ct	*Citrus Tangelo*	Tangelo	2	Pb28	Hedged	600mm o.c.
Gl	*Griselinia littoralis*	NZ Broadleaf Hedged to approx. 2m	108	Pb6	Hedged	600mm o.c.
Lc	*Lampetalum chinense*	Fringe flower	15	Pb5	1.5 x 1.5m	1m o.c.
Op	*Olearia paniculata*	Akeraho Hedged to approx. 2m	33	Pb6	Hedged	500mm o.c.
Pa	*Pseudopanax 'Cyril Watson'*	NZ Fivefinger variety	3	Pb16	3m x 3m	1m o.c.
Vl	*Vitis 'Albany surprise' & suitable white vitis*	Edible grape – white & red	1 each	Pb6		As shown

Note: Check location of all services before planting. See separate planting plan for herbaceous planting. Plant and mulch trees to tree planting detail provided.
Any changes in cultivar to be discussed with Landscape Architect. All plants subject to approval by Landscape Architect for plant quality, also suitability shape and size.
Lay out plants prior to planting for approval by Landscape Architect.

NORTH

STANCOMBE ESTATE 124 STANCOMBE ROAD (N)

L01 PLANTING PLAN – STRUCTURAL PLANTING

1:200 @ A2 April 2005

MANUKAU CITY COUNCIL

NOTICE OF LIMITED NOTIFICATION OF APPLICATION FOR A RESOURCE CONSENT under Section 94 (1)

RESOURCE MANAGEMENT ACT 1991

4 November 2005

<Address>

Dear Sir/Madam

SECTION 94(1) – RESOURCE MANAGEMENT AMENDMENT ACT 2003

NOTICE OF LIMITED NOTIFICATION OF APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 124 STANCOMBE ROAD, FLAT BUSH.

PROPOSAL No. 28885

CONSENT CO-ORDINATOR: Bryce Pomfrett

The Manukau City Council, Private Bag 76917, Manukau City, has received the attached application for resource consent. In accordance with Section 94(1) of the Act, a copy is sent to you as a person whom Council considers may be adversely affected by the application (including all persons who may have previously given written approval to the application).

If you wish to make a submission on this application, you may do so by sending a written submission to the Council addressed to the Manager - Resource Consents & Compliance, Manukau City Council, Private Bag 76917, Manukau City - Attention: Resource Consents Team, Level 4, Kotuku House, to reach him no later than: **Monday 5 December 2005**. The submission must be on Form 13 (3 copies) dated and signed by you.

Please send completed form to:

1. Manager - Resource Consents & Compliance, Manukau City Council, Private Bag 76917, Manukau City, Attention: Resource Consents Team, Level 1, Kotuku House.

2. The Applicant - address for service: Working Concepts Ltd
   P.O. Box 58-395
   Greenmount
   AUCKLAND

3. You should retain the third copy of the submission for your own records.

A copy of the application and plans are attached and additional copies are to be held at the Council's Citizen & Customer Centre, Kotuku House, Manukau Court, Manukau City Centre, and may be inspected there during normal office hours. Please contact Bryce Pomfrett on telephone (09) 262-8900 ext 5856 if you have any questions about the application.

Yours faithfully

AD R Dissmeyer
Manager - Resource Consents and Compliance
ENVIRONMENTAL SERVICES

Reference: ES 6923/124, Proposal 28885 | *Facsimile 262-5168*
Enquiries to Bryce Pomfrett | *Extension 5856*

Affected Party List – for Proposed Development at 126 Stancombe Road – Flat Bush.
Proposal No: 28885

Name	Postal Address	Site affected	Legal Description
Stancombe Concepts Limited	P.O. Box 27029 Wellington 6030	126 Stancombe Road, Flat Bush	Lot 4 DP 78859
Farm Cove Holdings Ltd	P.O. Box 12728 Penrose AUCKLAND	122 Stancombe Road, Flat Bush	Lot 2 DP 78859
Harry Semmens & Tui Arnesen	10 Inchinnam Road, Flat Bush	10 Inchinnam Road, Flat Bush	Lot 12 DP 80608
Tzyy-Yuan Shan and Lee Shen-Der Shann	P.O. Box 64243 Botany Downs MANUKAU 1705	8 Inchinnam Road, Flat Bush	Lot 11 DP 80608
The Occupier	8 Inchinnam Road, Flat Bush	8 Inchinnam Road, Flat Bush	Lot 11 DP 80608

Environmental Services

4 November 2005

Working Concepts Ltd
P.O. Box 58-395
Greenmount
AUCKLAND

Attention: Bob Cummins

Dear Sir

SECTION 94(1) – RESOURCE MANAGEMENT AMENDMENT ACT 2003

NOTICE OF LIMITED NOTIFICATION OF APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 124 STANCOMBE ROAD, FLAT BUSH.

PROPOSAL No. 28885

CONSENT CO-ORDINATOR: Bryce Pomfrett

Since it has been determined that the above proposal should be treated as a limited notification application, we enclose a list of persons to whom notice has been served.

These persons have 20 working days to make written submissions to Council. As required by Section 94(1), notice has been served on all affected persons whether they have or have not given written approval to the application. The Council will hold a hearing of the application no later than 25 working days after the close of submissions. When a hearing date is scheduled you will be advised accordingly.

Also enclosed is a copy of the notification pack for your information.

Please do not hesitate to contact the Consent Coordinator – Bryce Pomfrett by telephone on 262-8900 ext 5856 should you require further assistance relating to your application.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

Affected Party List – for Proposed Development at 124 Stancombe Road – Flat Bush. Proposal No: 28885

Name	Postal Address	Site affected	Legal Description
Stancombe Concepts Limited	P.O. Box 27029 Wellington 6030	126 Stancombe Road, Flat Bush	Lot 4 DP 78859
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The Occupier	8 Inchinnam Road, Flat Bush	8 Inchinnam Road, Flat Bush	Lot 11 DP 80608

Environmental Services

4 November 2005

Dear Sir/Madam

SECTION 94(1) – RESOURCE MANAGEMENT AMENDMENT ACT 2003

NOTICE OF LIMITED NOTIFICATION OF APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 124 STANCOMBE ROAD, FLAT BUSH.

PROPOSAL No. 28885

CONSENT CO-ORDINATOR: Bryce Pomfrett

Please be advised that the above application is being treated by the Council as a limited notification application. As you have been deemed a person who may be adversely affected by the proposed activity, Council is required to serve notice to you whether you have or have not given written approval to the proposal when approached by the applicant.

This notice enables you to make submissions in writing to the above application. A submission form is enclosed herewith for your use and to be returned to Council. Further information pertaining to the application is also enclosed. You have 20 working days from the date of this notice to make your submission.

The Council will hold a hearing of the application no later than 25 working days after the close of submissions. When a hearing date is scheduled you will be advised about it.

Should you require any further assistance regarding any matter relating to this application including the making of submissions, please do not hesitate to contact the Consent Co-ordinator Bryce Pomfrett by phone on 262-8900 ext 5856.

Yours faithfully

Robert Chieng
Team Leader - Resource Consents
ENVIRONMENTAL SERVICES

Affected Party List – for Proposed Development at 124 Stancombe Road – Flat Bush. Proposal No: 28885

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Te Kaunihera o
MANUKAU
City Council

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Ph 09 263 7100
Fax 09 262 5151
www.manukau.govt.nz

MANUKAU CITY COUNCIL RESOURCE CONSENT APPLICATION

SITE VISIT RECORD

1. REFERENCES:

Applicant: Working Concepts Ltd

Application: To construct a 22 residential unit apartment complex with consequential 5 allotment residential subdivision on the site at 124 Stancombe Road, Flat Bush constituting the following activity status:

Part A – Land Use Consent

Variation 13

Discretionary Activity to construct a 22 residential unit complex on a 4173m^2 site. Additional infringements also occur as itemised below:

- Infringement of the 8.0 metre maximum height for units 13-16 and 19-22 (in the Special Policy Area Flat Bush Buffer) by a maximum of 0.8 metres constituting a Restricted Discretionary Activity.
- Infringement of the height in relation to boundary recession plane on the western boundary of 2.5m + 45^0 recession plane by a maximum of 2.1 metres horizontal distance over 10.8 metres (Unit 10) and infringes the 2.5m + 45^0 recession plane on the eastern boundary by a maximum of 2.9 metres horizontal distance over 10.8 metres (Unit 1) constituting a Restricted Discretionary Activity.
- Provision of outdoor private open space which does not comply with Rule 17.10.12.8.

Restricted Discretionary Activity for earthworks on sites identified within Area 2 Asbestos Investigation Area.

Manukau Operative District Plan 2002

Non-complying activity to construct a 22 residential unit apartment complex in the Rural 3 Zone.

Restricted Discretionary Activity to undertake 1200m^3 of earthworks in preparation of the site for residential development.

Restricted Discretionary Activity to undertake development requiring the provision and extension of public utility services to service the proposed development.

Restricted Discretionary Activity for the construction of a retaining wall on both the eastern and western boundaries of the site exceeding 1.5 metres in height.

Part B – Subdivision Consent

Controlled Activity for a 5 allotment subdivision undertaken in accordance with a land use consent for development which requires the provision of public utility services which has been approved as a Restricted Discretionary Activity.

Site: 124 Stancombe Road, Flat Bush

Legal Description: Lot 3 DP 78859

Zone: Flat Bush Residential 1 Zone (Flat Bush Buffer Area), General Precinct – Variation 13
Rural 3 – Manukau Operative District Plan 2002

Proposal: Proposal No: 28885, SP9188

ES Ref: 6923/124

LOCATION

2. SITE VISIT RECORD: 27/10/05

Topography /Site features (e.g., trees, fencing, roading, existing buildings etc):

The subject site is 4173m^2 in area being rectangular in shape with frontage to the newly constructed Carlos Drive. The site is relatively level, following recent earthworks, although the site rises on both the eastern and western boundaries where retaining walls are proposed within the development. A footpath has been established on the northern side of Carlos Drive together with the formed vehicle crossing proposed to provide access to the site.

Character of the site, surrounding amenity and heritage values:

The site has a reasonable level of amenity being on the transition between the Flat Bush Residential 1 Zone to the south and the Flat Bush Countryside Transition Zone to the north.

Development Standards /Multiple household Provisions (e.g., storage, parking, etc):

Resource consent is required for the proposed development as a Discretionary Activity under Variation 13 and a Non-Complying Activity under the Manukau Operative District Plan 2002.

Surrounding Property (adjacent, in the vicinity, including across the road):

To the north of the site are located large lifestyle blocks accessed from Inchinnam Road. The property border between these sites is defined by large and established pine trees on this boundary. To the west is located a large property at 122 Stancombe Road which is occupied by a large dwelling which has been converted for use as a childcare centre. To the east of the site is located a vacant site which has been cleared and earthworked. To the south-east of the site is located a recently constructed terraced housing development which is currently being advertised for sale. Directly to the south is a four storey apartment complex currently under construction, which will provide perimeter frontage to both Carlos Drive and Stancombe Road.

Persons who may be affected:

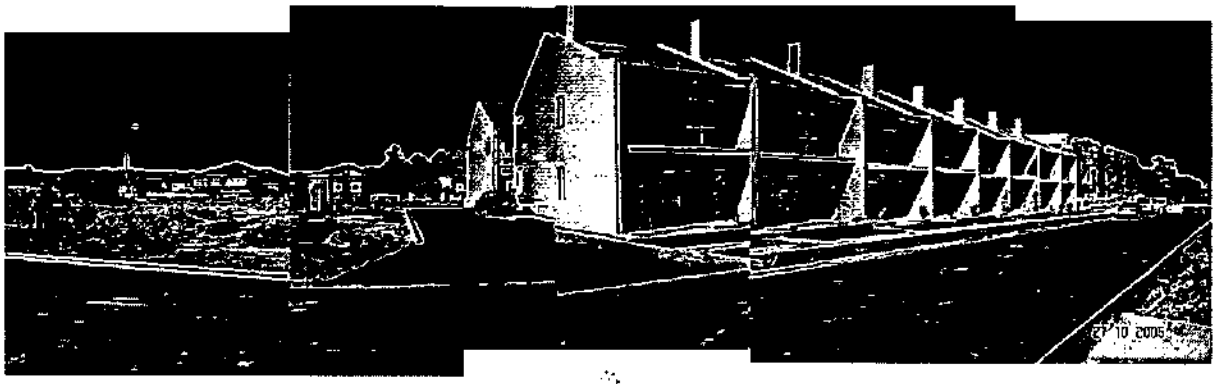
See attached Section 93 and 94 report.

Additional Comments:

N/A

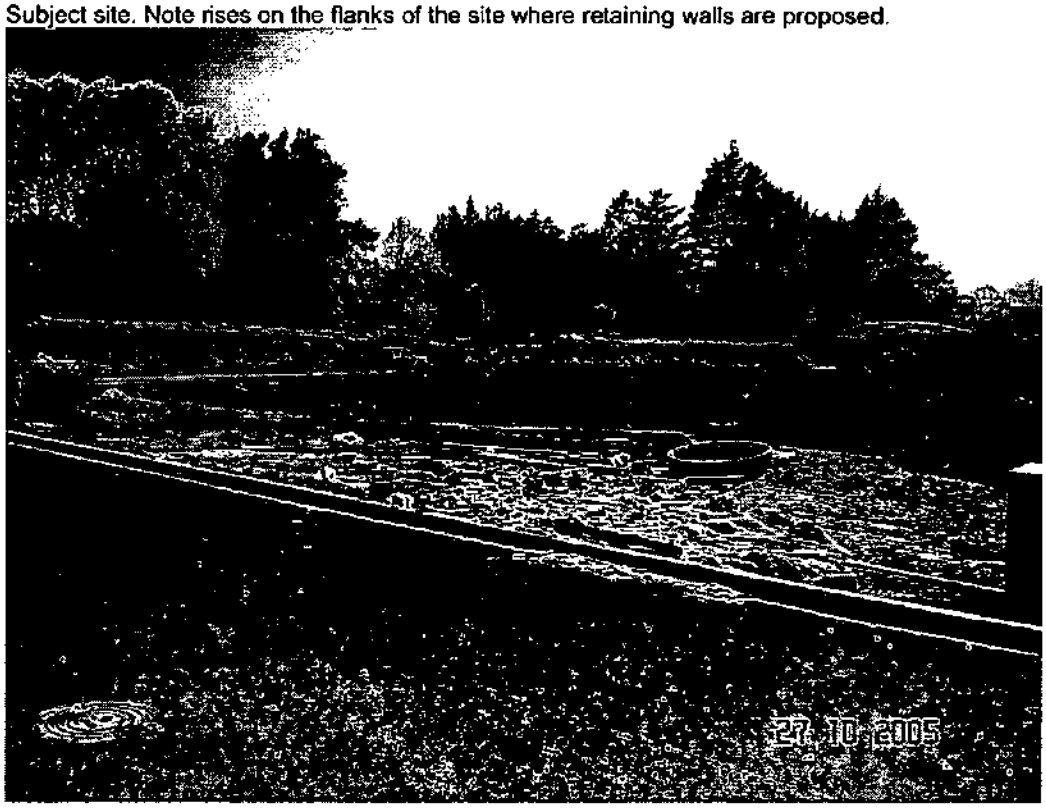
Sketch of the subject site (photographs should be attached to this page):

Terraced housing development to the south-east of the site.

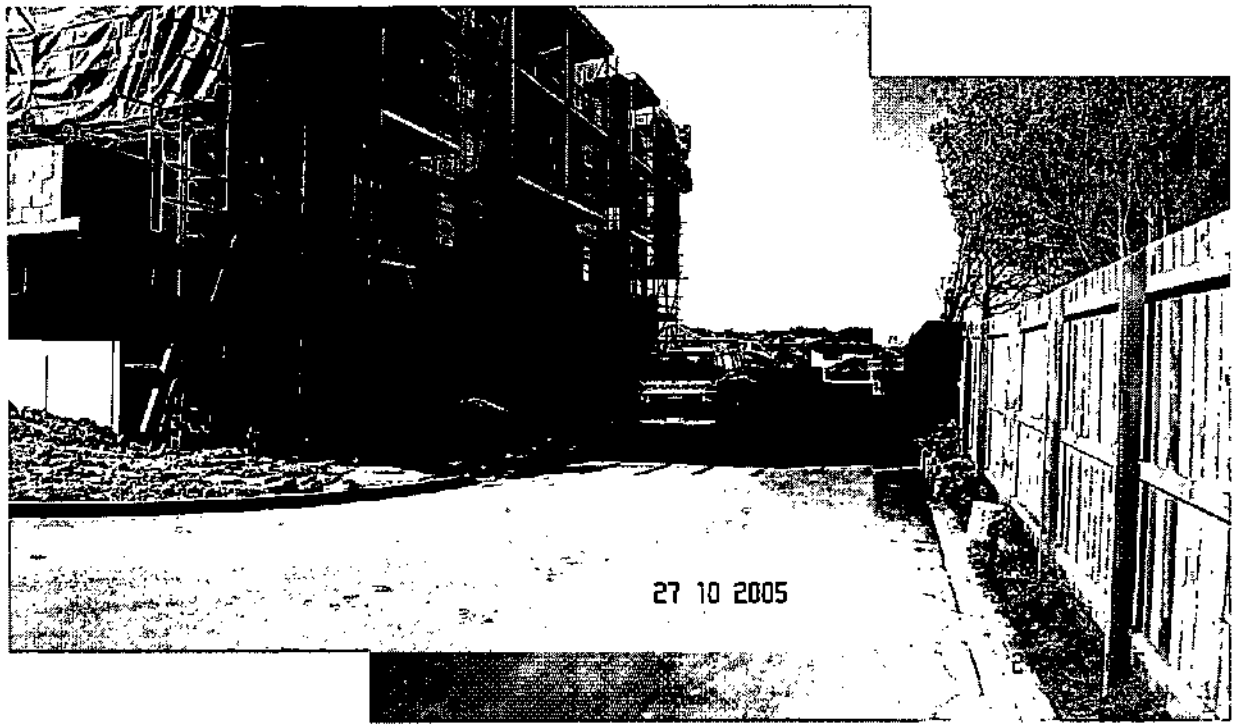


Rear of terraced housing development fronting Carlos Drive.

Subject site. Note rises on the flanks of the site where retaining walls are proposed.



Site at 128 Stancombe Road looking across shared accessway on 126 Stancombe Road.



Apartment complex under construction at 124 Stancombe (front allotment)

Date of Visit: 27 October 2005

Signed: _____
Consent Co-ordinator

DETERMINATION AS TO WHETHER A RESOURCE CONSENT APPLICATION SHOULD BE NOTIFIED UNDER SECTION 93 OR NOTICE SERVED UNDER SECTION 94 (INCORPORATING SECTIONS 94 AND 94A TO D) OF THE RESOURCE MANAGEMENT ACT 1991

(a) **REFERENCE**

Applicant: Working Concepts Ltd

Application: To construct a 22 residential unit apartment complex with consequential 5 allotment residential subdivision on the site at 124 Stancombe Road, Flat Bush constituting the following activity status:

Part A – Land Use Consent

Variation 13

Discretionary Activity to construct a 22 residential unit complex on a 4173m^2 site. Additional infringements also occur as itemised below:

- Infringement of the 8.0 metre maximum height for units 13-16 and 19-22 (in the Special Policy Area Flat Bush Buffer) by a maximum of 0.8 metres constituting a Restricted Discretionary Activity.
- Infringement of the height in relation to boundary recession plane on the western boundary of 2.5m + 45^0 recession plane by a maximum of 2.1 metres horizontal distance over 10.8 metres (Unit 10) and infringes the 2.5m + 45^0 recession plane on the eastern boundary by a maximum of 2.9 metres horizontal distance over 10.8 metres (Unit 1) constituting a Restricted Discretionary Activity.
- Provision of outdoor private open space which does not comply with Rule 17.10.12.8.

Restricted Discretionary Activity for earthworks on sites identified within Area 2 Asbestos Investigation Area.

Manukau Operative District Plan 2002

Non-complying activity to construct a 22 residential unit apartment complex in the Rural 3 Zone.

Restricted Discretionary Activity to undertake 1200m^3 of earthworks in preparation of the site for residential development.

Restricted Discretionary Activity to undertake development requiring the provision and extension of public utility services to service the proposed development.

Restricted Discretionary Activity for the construction of a retaining wall on both the eastern and western boundaries of the site exceeding 1.5 metres in height.

Part B – Subdivision Consent

Controlled Activity for a 5 allotment subdivision undertaken in accordance with a land use consent for development which requires the provision of public utility services which has been approved as a Restricted Discretionary Activity.

Site: 124 Stancombe Road, Flat Bush

Legal Description: Lot 3 DP 78859

Zone: Flat Bush Residential 1 Zone (Flat Bush Buffer Area), General Precinct – Variation 13
Rural 3 – Manukau Operative District Plan 2002

Proposal: Proposal No: 28885, SP9188

ES Ref: 6923/124

(b) **DESCRIPTION OF PROPOSAL**

The applicant proposes to construct a 22 unit terraced housing development on a site 4173m^2 in area (once the subdivision of this land has been completed as approved under SP8840). The development is proposed to be completed in four blocks two of which contain 5 units each, and the remaining two blocks contain 6 units each. All units are three bedroom units, which provide two vehicle stacked garaging at ground level.

The development includes comprehensive landscaping, and communal facilities adjacent to the northern boundary of the site, together with three visitor carparking spaces.

The application includes the provision of and extension to public network utility systems, 1200m^3 of earthworks, and construction of substantial retaining walls on both the eastern and western boundaries of the site.

Following construction of the proposed units the applicant proposes to subdivide each block of units by way of fee simple subdivision, with a further common lot containing the communally owned facilities.

(c) **ACTIVITY STATUS**
(based on the description of the proposal and relevant Activity List Table)

Land Use Consent

Variation 13

Rule	**Requires**
17.10.10.2 – Activity Table	Falls under activity status: *Construction of more than one household unit on lots of more than 2000m^2 or greater complying with Household Density Rule 17.10.12.1 in the Flat Bush Residential 1* (FBR1) *and Flat Bush Residential 2 zones.* **Proposal = Discretionary Activity**
17.10.12.2 – Site Coverage	40% unless in the Special Policy Area - Flat Bush Buffer (FBB) where the site coverage of 35% applies. **Proposal = 1397.2m^2 being 33.20% site coverage = Complies**
17.10.12.3 – Front Yards	2 metres in the FBR1 Zone unless in the FBB where the front yard is also 2 metres. **Proposal = Complies**
17.10.12.5 – Maximum Height	9 metres in the FBR1 Zone, and 8 metres in the FBB. **Proposal = Infringes in FBB by a maximum of 0.8m in the FBB only = Restricted Discretionary Activity.**
Table 8A	Buildings and structures on front sites $\geq$ 400m^2 to comply with Rule 5.18.1. **Proposal = Infringes on western boundary of 2.5m + 45^0 recession plane by a maximum of 2.1 metres horizontal distance over 10.8 metres (Unit 10) and infringes the 2.5m + 45^0 recession plane on the eastern boundary by a maximum of 2.9 metres horizontal distance over 10.8 metres (Unit 1) constitutes a Restricted Discretionary Activity.** All buildings in the FBB shall be set back no less than 6.0 metres from the Flat Bush Countryside Transition Zone. **Proposal = Complies**
17.10.12.6 Active Building Frontages	**Proposal complies. All garages are accessed via a service lane or jointly owned common access lot.**
Rule 17.10.12.9 – Residential Private Outdoor Space	Required to have at least 24m^2 of contiguous private outdoor space which shall be capable of containing a 4m diameter circle shape factor and have minimum dimensions of 3 metres measured at right angles to the perimeter of any part of the private open space. Required to be immediately adjacent (with less than 1m level vertical difference to a kitchen, living, family, or dining room with direct pedestrian access via a door, and shall have an average slope in any direction of not greater than 1:10. **Proposal = Infringes.**

17.10.12.10	➢ Back yards or court yards shall have walls or screens (which are at least 80% solid) and to a height of 1.8m. These walls shall be located between dwellings, but no further forward than the primary building frontage. **Proposal = Complies** ➢ Any window above the ground floor level that faces a rear boundary and is closer than 7.5m to that boundary shall meet the following: (i) have a window sill level at least 1.6m above the floor level or: (ii) be fitted with opaque glass. **Proposal = Only separated by 4.0 metres from eastern and western boundaries and, therefore, infringes and constitutes a Restricted Discretionary Activity.**

Manukau Operative District Plan 2002

Overall, under the Rural 3 provisions of the Manukau Operative District Plan 2002 the proposed activity constitutes a Non-Complying Activity. Additional resource consent is also required under this plan for earthworks, utility service provision and retaining walls.

Subdivision

The proposed application constitutes a Controlled Activity, where the subdivision proposed follows grant of the land use resource consent identified above.

(d) **ADVERSE EFFECTS ARE MINOR OR MORE THAN MINOR (Section 94A)**

Overall, the application is considered as a Non-Complying Activity, and consequently, consideration of the proposal is not limited to matters over which the Council has restricted exercise of discretion or reserved control.

(e) **DETAILED ASSESSMENT OF THE EFFECTS OF THE PROPOSED ACTIVITY AS A NON-COMPLYING ACTIVITY.**

Possible Effects	Scale of Effect / Mitigation/Neighbours' Consent/Other Comments
Flora and fauna	Extensive earthworks and vegetation clearance of the site has already occurred through previous subdivisional works on the site. Comprehensive landscaping of the site is proposed in conjunction with the multi-unit development and this planting is considered to have a positive effect in providing structured landscape planting of the site. These effects are considered minor.
Landscape	Earthworks and retaining walls are proposed as part of the application, to prepare the site for residential development as proposed. The site is not considered to have present any significant landscape features adversely affected by the proposed works and these works are considered to have minor environmental effects.
Water bodies	All run off and waste discharge from the site is proposed to be treated acceptably through the public reticulation network.
Site stability	A satisfactory earthworks completion report has been submitted and reviewed by Council's Resource Engineer and considered to be acceptable.
Shadowing/Sunlight	Height in relation to boundary infringements occur on both the western and eastern boundaries of the site, which have the potential to adversely effect the receipt of daylight and sunlight to adjoining sites.
Privacy	Upper level balconies are located close to both the eastern and western boundaries of the site and have the potential to adversely affect the privacy of adjoining sites.
Visual	The proposed development will provide for relatively intensive development of the site, although, with the exception of the part of the land included within the Flat Bush Buffer this level of intensity is provided for under the zoning applied to the site under Variation 13. The visual effects of the proposed development are considered to be minor.
Amenity/Character	The site is affected by the Special Policy Area - Flat Bush Buffer (FBB)

	which places limitations on the intensity of development adjoining the Flat Bush Countryside Transition Zone. A minimum site size of 750m^2 applies in this Buffer area. A household density of approximately 1 unit per 305m^2 is proposed in the rear 30 metres of the site affected by the FBB. Given the intensity of household units proposed beyond the intensity identified within Variation 13 it is considered that the written approvals of adjoining owners to the north within the Flat Bush Countryside Zone should be obtained.
Noise	Noise will result from proposed construction works, however, it is considered that the effects of this noise can be adequately addressed through the construction noise controls which apply in the Manukau Operative District Plan 2002.
Smell	Nil
Pollution	Nil
Infrastructure	Council's Engineers have concluded that, subject to detailed design analysis, the infrastructure network serving the site is viable to cope with the proposed development.
Traffic and Parking	Adequate on site parking and access arrangements are available to the proposed development to ensure that the effects on the safe and efficient operation of the adjoining transportation network can will not be more than minor.
Cultural	No known archaeological or waahi tapu sites are recorded on this property.
Socio-economic	Nil
Open space	The proposal does provide for some communal open space on the site, and additionally, reserves contribution will be required in conjunction with the subdivision proposed.
Reverse sensitivity	Nil
Other (specify)	Nil

Overall the adverse effects are considered no more than minor.

(f) **FORMING OPINION AS TO WHO MAY BE ADVERSELY AFFECTED (Section 94B)** (All Activities)

(i) There is no relevant statutory acknowledgement which applies in Manukau.
(ii) There is no rule in either the Manukau Operative District Plan 2002 or Variation 13 for the activity type identified which permits a proposal, with the activity status identified, to be considered without any requirement to obtain the written approval of affected parties, or to consider without public notification, or limited notification.

(g) **LIMITED NOTIFICATION** (Refer Section 94)

Owner / Occupier	Address	Consent Obtained
Farm Cove Holdings Ltd	122 Stancombe Road, Flat Bush	No
Stancombe Concepts Ltd	126 Stancombe Road, Flat Bush	Yes
Harry Semmens and Tui Arnesen	10 Inchinnam Road, Flat Bush	No
Tzyy-Yuan Shan and Lee Shen-Der Shann	8 Inchinnam Road, Flat Bush	No

The above listed parties are considered to be adversely affected by the proposed development as:

- In the case of the owners and occupiers of the sites at 8 and 10 Inchinnam Road, the proposal involves development within the Flat Bush Buffer at an intensity greater than that provided for under the subdivision rules for this buffer area.
- In the case of the site at 122 Stancombe Road, Flat Bush the proposed development is considered to potentially cause reverse sensitivity effects given the existing childcare centre established on this site, together with the large retaining wall proposed on the boundary adjoining this site.

- In the case of the site at 126 Stancombe Road, a large retaining wall is proposed on the boundary adjoining this site.

(h) **PUBLIC NOTIFICATION OF PROPOSAL IF REQUESTED BY APPLICANT OR IF SPECIAL CIRCUMSTANCES EXIST** (Refer Section 94C)

(i) The applicant has not requested public notification of the proposal.
(ii) Special circumstances which warrant public notification are not considered to exist.

(i) **CONCLUSION**

- Taking into account the effects of the proposal, the adverse effect on the environment of the activity for which consent is sought will be no more than minor.
- All affected persons **have not** given their written approval to the activity.
- Special circumstances requiring notification do not exist.
- The applicant has not requested public notification of the proposal.

SIGNED:

_____ Date: 31/10/05
(Consent Co-ordinator)

DECISION:

Pursuant to Section 8.4.2 of the Delegations Register (Minute No 2203/01) the above application has been considered under delegated authority and has been determined to be processed:

With limited notification (not public notification (s.93) but Service of Notice (s.94)

Reasons:

(i) Effects are minor (s.93); and

(ii) Not all necessary consents have been obtained from persons who may be adversely affected (s.94); and

(iii) There are no special circumstances [s.94C(2)]; and

(iv) The applicant has not requested public notification [s.94C(1)];

_____ Date: 31/10/05
(Team Leader - Resource Consents)

Facsimile

Environmental Services

Private Bag 76917
Manukau City
New Zealand
DX EP75557
Fax (09) 262-5168
(09) 262-5109
Email:bpomfret@manukau.govt.nz

To: Jessica Zhang

Company:

Fax No: 271-4037

From: Bryce Pomfrett

Date: 31 October 2005 No of Pages: 1

Subject: **124 and 126 Stancombe Road, Flat Bush. Proposal No's 28885 and 27855**

Jessica,

I am currently arranging for the limited notification of the above two applications. On reviewing these proposals I seek clarification of the following matters for each of the consents identified above:

(1) The areas of private open space allocated to each of the dwellings in the development. This can be satisfied by providing a plan showing the dimensioned areas of private open space associated with each dwelling.

(2) The Barker and Associates AEE supplied for both applications identifies additional earthworks on both sites, however, no earthworks plans have been supplied. Can you please confirm whether it is intended to undertake further earthworks beyond those already approved for the sites, and if so please supply an earthworks plan to identify this.

The limited notification of these applications is still planned to be completed at the end of this week and will not be dependant on receipt of the above requested clarification prior to the limited notice occurring.

Yours faithfully,

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

All the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of your having received this message and return it to us uncopied.

* * * Memory TX Result Report (31. Oct. 2005 12:16) * * *

Date/Time: 31. Oct. 2005 12:16

File No.	Mode	Destination	Pg(s)	Result	Page Not Sent
3093	Memory TX	12714037	P. 1	OK	

Reason for error
E. 1) Hang up or line fail
E. 2) Busy
E. 3) No answer
E. 4) No facsimile connection

Facsimile

Environmental Services

To:	Jessica Zhang		Private Bag 75217 Manukau City New Zealand
Company:			DX EP75557
Fax No:	271-4037		Fax (09) 262-5168 (09) 262-5109
From:	Bryce Pomfret		Email:bpomfret@manukau.gov.nz
Date:	31 October 2005	No of Pages:	1

Subject: 124 and 126 Stancombe Road, Flat Bush. Proposal No's 28885 and 27885

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Yours faithfully,

Bryce Pomfret
Resource Management Planner
ENVIRONMENTAL SERVICES

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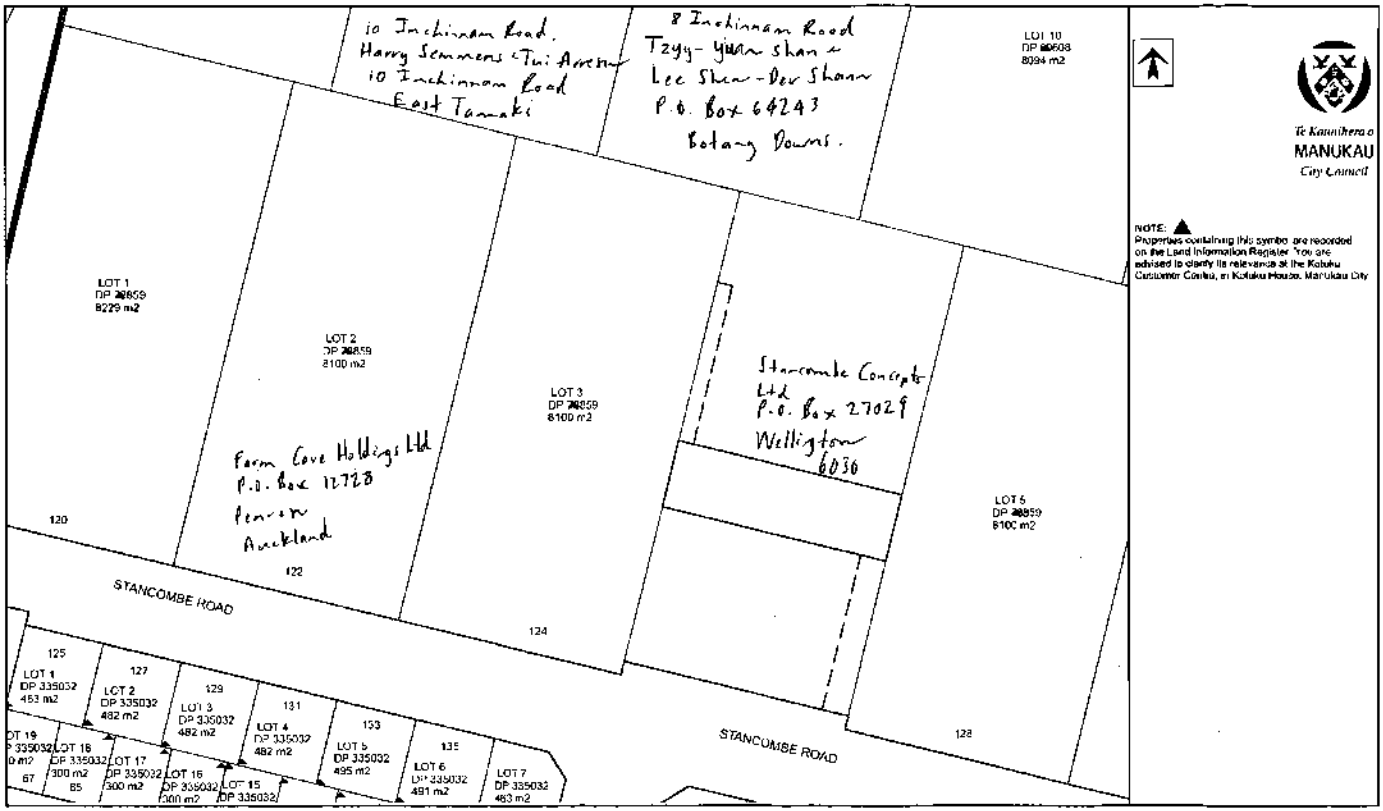

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This plan is suitable for information only. The Council accepts no liability for any error whatsoever.

Produced by 10 1:34:32 at 14:01 26/10/2005

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124 Stancombe Road Flat Bush.
Proposal No: 28885.

Proposed 22 townhouse development.

Zone: Flat Bush Residential 1 Zone (Flat Bush Buffer Area).
General Precinct.
Rural 3 - MODP 2002.

Buffer Zone: 750m² minimum lot size.

Needs S.V.

Section 93 & 94 - Limited Notified.

Activity Status.

Land Use - site size = 4173m². NB: subdivision not yet completed.

* Construction of more than one HHU of lots of 2000m² or greater complying with HHU density rule 17.10.12.1 = Discretionary Act. 400m² min net.
NB: excludes lots in Special Policy Area - FB Buffer).

17.10.12.2 - Site Cover: 40% unless FBB = 35%.

17.10.12.3 - Front Yard setback - 2m. in General precinct and FB Buffer Area.

17.10.12.5 - Max Height 9m except FB Buffer = 8m.

Table 8A - All buildings in FBB setback no less than 6.0m from Transition Zone.

Private Open Space - Can't tell.

Memorandum

Te Kaunihera o
MANUKAU
City Council

Environmental Services

To : Gary Clarke – Consultant Engineer

Copies :

From : Bryce Pomfrett – Resource Management Planner – Kotuku 1

File : 28885 – 124 Stancombe Road, Flat Bush

Date : 20/10/05

SUBJECT: **APPLICATION FOR MULTI-UNIT DEVELOPMENT AND ASSOCIATED SUBDIVISION AT 124 STANCOMBE ROAD, FLAT BUSH. PROPOSAL NO: 28885.**

Gary,

Attached is copy of the relevant information pertaining to the above application for your review. Please complete a review and advise of any further information requests you may have in conjunction with the Manukau Water request attached.

Regards,

Bryce Pomfrett
Resource Management Planner
ENVIRONMENTAL SERVICES

Encl. Plans – Proposed Engineering Works – Airey Consultants Ltd
AEE – Barker and Associates Ltd
Geotek Services Ltd – Earthworks Completion Report
Stormwater Calculations – Airey Consultants Ltd
Plan of Proposed Subdivision – Easdale Surveyors Ltd.
Further Information Request – Manukau Water

AssetCare *Limited*
Building Management Services

BUILDING WARRANT OF FITNESS

FORM 12 SECTION 108 BUILDING ACT 2004

FORM 12

BUILDING		
Street Address of Building: **46 Carlos Drive, Flat Bush**	Compliance Schedule No.: **3909**	BWOF Expiry Date: **24/06/2012**
Legal Description: **Lot 10 DP 352580**	Fire Hazard Category: **1** Used as: **Apartments SR** Year Construction: **2007**	Intended Life if <50yrs **N/a** Level/Unit #: **1-22**
Building Name: **n/a**	Location of Building within site block: **N/a**	
Maximum number occupants that can safely use this building is: (**132**) 6 occupants per unit		

OWNER	
Name of Owner: **Body Corporate 400961**	Contact Person: **N/a**
Mailing Address: **c/- Mountfort Estate Agents Ltd, PO Box 38206 Howick, AUCKLAND 2145**	Street Address/Registered Office: **N/a**
Telephone (day)#: **c/- (09) 633 0830** Telephone (a/h)#: **c/- (09) 633 0830** E-mail Address: gale@assetcare.co.nz	Mobile #: **N/a** Facsimile #: **c/- (09) 633 0266** Web Site: **N/a**

SPECIFIED SYSTEMS					
1.1		Automatic sprinkler system	10.1		Building Maintenance Units
1.2		Automatic gas / foam	11.1		Laboratory Fume Cupboards
2.1	✓	Emergency Warning Systems	13.1		Mechanical Smoke Control
3.1		Automatic Fire Doors	14		Emergency Power Systems
3.2		Access Controlled Doors	14.2	✓	Signs for Specified System(s) 1-13
4.1		Emergency lighting	15.1		Systems for Communicating spoken information intended to facilitate evacuation
5.1		Escape route pressurisation			
6.1		Riser mains for fire service use	15.2	✓	Final Exits/Means of Escape
7.1		Automatic backflow protection	15.3		Fire Separations
8.1		Lifts (passenger)	15.4		Signs for Communicating information intended to Facilitate Evacuation
8.2		Lifts (goods)			
8.3		Escalator, or other systems for moving people or goods within buildings	15.5		Smoke Separations
			15.6		Non-Standard Means of Escape
9.1		Mechanical ventilation or air-conditioning	16.1		Cable Cars attached to or serving a Building

The Compliance Schedule records are kept at: **Mountford Estate Agents: 12 Uxbridge Road, Howick**

The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of Owner / Agent	Print Name	Date
Gdelo d	**Gale Ward** *AssetCare Limited* **09 633 0830**	**24th June 2011**

Owner / agent on behalf of and with the authority of the owner

AssetCare *Limited*
Building Management Services

CERTIFICATE OF COMPLIANCE

INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

FORM 12A

Compliance Schedule No.: 3909	**BWOF Expiry Date:** 24/06/2012
Street Address of Building: **46 Carlos Drive, Flat Bush**	Legal Description of land where building is located: **Lot 10 DP 352580**
Building Name: **n/a**	
Level / Unit #: **1-22**	Location of Building within site block: **N/a**
OWNER	
Name of Owner: **Body Corporate 400961**	Contact Person: **N/a**
Mailing Address: **PO Box 38206 Howick, AUCKLAND 2145**	Telephone: **c/- (09) 633 0830** Facsimile: **c/- (09) 633 0266**

SPECIFIED SYSTEMS

The inspection, maintenance, and reporting procedures of the compliance schedule have been fully complied with during the **12 months** prior to the date stated below in relation to the following specified system/s:

1.1		Automatic sprinkler system	10.1		Building Maintenance Units
1.2		Automatic gas / foam	11.1		Laboratory Fume Cupboards
2.1	✓	Emergency Warning Systems	13.1		Mechanical Smoke Control
3.1		Automatic Fire Doors	14		Emergency Power Systems
3.2		Access Controlled Doors	14.2	✓	Signs
4.1		Emergency lighting	15.1		Systems for Communicating spoken information intended to facilitate evacuation
5.1		Escape route pressurisation			
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8.1		Lifts (passenger)	15.4		Signs for Communicating information intended to Facilitate Evacuation
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8.2		Escalator, or other systems for moving	15.5		Smoke Separations
8.3		people or goods within buildings	15.6		Non-Standard Means of Escape
9.1		Mechanical ventilation or air-conditioning	16.1		Cable Cars attached to or serving a Building

Signature:	**Name of IQP:** **Peter Clark** **IQP No.:** **449**
Name of Company: *AssetCare Limited* **Telephone No.:** **09 633 0830**	**Date:** **24th June 2011**

AssetCare Limited
Building Management Services

P O Box 2[illegible]
43 Galway St
Onehunga
Auckland
Phone: 09 633 0830
Fax: 09 633 0266

20th June 2011

AUCKLAND COUNCIL
21 JUN 2011
[illegible]

Eric Potts
Building Warrants/ Compliance Schedules
Southern Building Control
Auckland Council
Private Bag 92 300
AUCKLAND 1142

Dear Eric

Re: Building Warrant of Fitness

Please find enclosed a copy of the new Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush **CS 3909**

If you have any queries please do not hesitate to contact me.

Yours faithfully
AssetCare Limited

Gale Ward
Director

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Environment Directorate

26 June 2012

WORKING CONCEPTS LIMITED
PO BOX 58395
GREENMOUNT
MANUKAU, 2141

Dear Sir / Madam

AMENDMENT TO COMPLIANCE SCHEDULE

BUILDING WARRANT OF FITNESS - COMPLIANCE SCHEDULE No: 3909
BUILDING ADDRESS: 46 CARLOS DRV FLAT BUSH 2016
LEGAL DESCRIPTION: LOT 10 DP 352580

Please find enclosed amended Compliance Schedule No. 3909 for the above property.

The amendment to the Schedule is detailed under "Amendments" Revision No. 2

If your Compliance Schedule is managed by another party, you must ensure that they are promptly made aware of any changes.

Should you have any questions in regard to this letter, you may contact the Building Warrant of Fitness department on phone 09 262 5766 and follow the automated prompts.

Yours faithfully

Eric Potts
Technical Officer, Building Warrant of Fitness
Building
Environmental Operations
On behalf of: **Auckland Council**
In Your Reply Please Quote: CS No. 3909

Private Bag 92300, Auckland 1142 | aucklandcouncil.govt.nz | Ph 09 301 0101

Auckland Council
Te Kaunihera o Tāmaki Makaurau

COMPLIANCE SCHEDULE No. 3909

Issued by Auckland Council 24 June 2008

Section 105, Building Act 2004

Correspondence:
Private Bag 92300
Auckland 1142
New Zealand

Telephone: (09) 301 0101
Facismile: (09) 301 0100
DX CX10032

THE BUILDING

Street address of building:	46 CARLOS DRV FLAT BUSH 2016
Legal description of land where building is located:	LOT 10 DP 352580
Level/Unit No:	UNIT 1 TO UNIT 22
Current lawfully established use:	RESIDENTIAL APARTMENTS
Building Purpose Group	SR
Year first constructed:	2007
Highest fire hazard category for building use:	1
Maximum Occupancy:	6 OCCUPANTS PER UNIT
	132 OCCUPANTS TOTAL
Building Consent No.:	07/1556

THE OWNER

Name of owner:	WORKING CONCEPTS LIMITED
Mailing address:	PO BOX 58395 GREENMOUNT MANUKAU, 2141
Street address/ Registered office:	8 MOANA ROAD DAYS BAY LOWER HUTT, 5013

SPECIFIED SYSTEM

The following specified systems are covered by the compliance schedule for this building:

SS 2/1	- Automatic or Manual Emergency Warning Systems	SS 14/2	- Signs for Specified System(s) 1 - 13
SS 15.2	- Final Exits/Means of Escape	SS 15.3	- Fire separation (as so defined)
SS 15.4	- Signs - Means of Escape		

AMENDMENTS

Revision No.	Revision Date	Revision Comment
2	26/06/2012	Amendment to Compliance Schedule – add SS 15/3 15/4 as per Form 11 – Application for Amendment to Compliance Schedule approval by Building Warrant of Fitness Co-ordinator
1	24/06/2008	ORIGINAL ISSUE OF COMPLIANCE SCHEDULE

Records

Records shall be kept for all the aforementioned systems and features indication:

(i) Date of inspection
(ii) Type of inspection
(iii) Any repairs maintenance found to be done
(iv) Action taken
(v) Systems acceptability as meeting compliance
(vi) Name of person undertaking inspection

Records must be kept for a minimum of 2 years

The compliance schedule is kept: ON THE PREMISES

Signature: .....

Ian McCormick

Position: Manager Building Control

On behalf of: **Auckland Council**

Date: 24 June 2008

System or feature	Inspection, Maintenance and Reporting Procedures
Automatic or Manual Emergency Warning Systems	A.INSPECTIONS Emergency warning systems shall be inspected regularly to ensure continued effective operation. Content of the inspections for the different inspection frequencies shall be in accordance with the following referenced Standards: (i)Automatic fire alarms - monthly, annually - NZS 4512. (ii)Manual fire alarms - monthly - NZS 4561or NZS 4512. (iii)Emergency intercommunication systems - monthly, 6 monthly - AS 2220 and AS 1851.10. In buildings, with no more than 3 floors, the "monthly" inspections required by NZS 4561 for manual alarm systems, may be performed at no more than 3 monthly intervals: (v)Where there is no provision for sleeping, and total occupant load does not exceed 100 in a single floor building or 50 in a two floor building, or (vi)Where the building contains SA or SR purpose groups and has: a)only a single floor level, or b)two or three floor levels and contains no more than 10 beds or four suites for SA occupants, or four household units for SR occupants. (vii)During the off-season, for a building a building erected especially for seasonal use, provided that the only use of sleeping accommodation is by maintenance staff. Interface Inspections and Testing Where an emergency warning system is interfaced with other specified features listed in this compliance schedule inspection and testing shall be undertaken in accordance with the specified system it is connected to, to ensure correct operation. B.MAINTENANCE Emergency warning systems shall be maintained in accordance with the appropriate Standard referenced above. Planned preventative maintenance and responsive maintenance shall be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure the system will operate as required in the event of a fire or other danger. Defects that directly have an effect on the performance of the system shall be remedied immediately they become apparent. C.PERSONS RESPONSIBLE Monthly inspection and maintenance procedures shall be undertaken by the building owner or the building owner's authorised agent for Type 1 manual fire alarm systems installed before January 1993. All other fire alarm systems shall be inspected by independent qualified persons. Annual inspection and maintenance procedures shall be undertaken by independent qualified persons. Revised 22/02/06 Revised 01/08/07

Signs for Specified System(s) 1 - 13

A.SCOPE
Signs are required on a compliance schedule where:
(i)The sign has been installed to aid evacuation of people in the building in the event of an emergency; and
(ii)The sign is installed in a means of escape from fire; and
(iii)That means of escape from fire contains one or more of the specified systems 1-6, 9 and 13 and 14/2.

EXAMPLES
a)Exit sign
b)Arrow direction signs
c)Manual call point location signs

SIGNS RELATING TO SPECIFIED SYSTEMS 1 TO 13 INCLUDE, BUT ARE NOT LIMITED TO:
a)SS 2 – sign instruction on how to operate a fire alarm call point
b)SS 3 – sign showing location of automatic door for accessibility
c)SS 8 – sign advising not to use the lift in the event of fire
d)SS 8 – sign indicating the lift's rated load in persons and kilograms
e)SS 8 – sign showing location of lift for accessibility
f)SS 12 – international symbol for deafness.

SIGNS TO FACILITATE EVACUATION INCLUDE, BUT ARE NOT LIMITED TO:
a)Exit sign
b)Directional sign
c)No exit sign.

B.INSPECTIONS
Signs shall be inspected regularly to ensure continued effectiveness.

FREQUENCY
Inspections of signs required for emergency purposes to be illuminated shall be done monthly and annually. For other signs inspections shall be done annually.

MONTHLY INSPECTION
Illuminated signs shall be inspected to ensure they are:
(i)Of the correct type
(ii)Present and in the right locations
(iii)Legible
(iv)Illuminated.

ANNUAL INSPECTION
Signs not required to be illuminated shall be inspected to ensure they are:
(v)Of the correct type
(vi)Present and in the right locations
(vii)Legible

ILLUMINATED SIGNS SHALL BE INSPECTED TO ENSURE THEY:
(viii)Are illuminated
(ix)Remain illuminated and visible in the event of a power failure of the main lighting supply, for the same duration as required by Clause F6 Lighting for Emergency.

C.MAINTENANCE
Signs shall be:
(i)Replaced if not of the correct type.
(ii)Replaced immediately shall they be missing.
(iii)Refurbished before they become illegible.
(iv)Refurbished if they fail to operate

Responsive maintenance shall be carried out in accordance with the nominated performance and inspection Standard of the associated system, and to ensure signs remain correctly-positioned and legible and where appropriate ensure the escape route is identified.

Defects that directly have an effect on the performance of the system shall be remedied immediately they become apparent.

D.PEOPLE RESPONSIBLE

Monthly inspection and maintenance procedures shall be undertaken by the owner.

Annual inspection and maintenance procedures shall be undertaken by independent qualified persons.

Revised 01/08/07

Final Exits/Means of Escape

A.INSPECTIONS
Final exits located in a escape route shall be inspected to ensure occupants are not prevented from leaving the building in the event of an emergency.

FREQUENCY
Final exits located in a escape route shall be inspected:

•Daily when the building is in use, for crowd occupancies (Purpose Groups: CS, CL, CO & CM)
•Monthly in other occupancies
•Annual for all occupancies

DAILY & MONTHLY & QUARTERLY INSPECTIONS
Inspections shall ensure the door(s) are not:

(i)Locked
(ii)Barred
(iii)Blocked

Inspections shall ensure door locking devices:

(iv)Are clearly visible
(v)Are easily operated without a key or other security device
(vi)Do not prevent or override the direct operation of panic bolts fitted to any door
(vii)Quarterly inspections for any electromechanical locking device to ensure that in the event of a power failure, fire alarm activation or door malfunctions, either:

a)Automatically switch to the unlocked (fail-safe) condition, or
b)Be readily opened by an alternative method.

Monthly inspections for purpose groups: CS & CM where the occupancy is less than 50 persons and dead end is not exceeded.

ANNUAL INSPECTIONS

(viii)Check log book held by the building owner.
(ix)Carry out the procedures specified under 'Daily & Monthly & Quarterly inspections.

B.MAINTENANCE
In particular final exit/s and escape routes shall be maintained to ensure they are;

(i)Clearly identified
(ii)Free of obstructions
(iii)Unlocked
(iv)Easily used
(v)Free of stored goods

Responsive maintenance shall be carried out to ensure continual safe operation of escape route(s), final exit(s) and that occupants are not prevented from leaving the building in the event of an emergency.

Defects that directly have an effect on the performance of the system shall be remedied immediately they become apparent.

C.PEOPLE RESPONSIBLE
Daily & Monthly inspection and maintenance procedures shall be undertaken by the owner.

Annual inspection and maintenance shall be undertaken by independent qualified persons.

Quarterly and annual inspection and maintenance procedures for electro-mechanical door locking devices shall be undertaken by independent qualified persons.

Revised 08/11/06
Revised 01/08/07

Fire separation (as so defined)

A. INSPECTIONS

Fire Separations require regular inspection to ensure they prohibit the spread of fire and, in the case of fire doors, occupants are not prevented from leaving the building in the event of an emergency.

Fire Separations: (reference ASNZS 1905)
A system which forms part of a means of escape from fire which contains one or more of the specified systems 1-6, 9 and 13

B. MAINTENANCE

Means of escape shall be maintained at all times in a safe condition including stairwells and safe paths with particular attention to:

•Fire and Smoke separations, operation of fire and smoke control doors, and any door leading to escape routes and final exits.
•Any defect shall be remedied immediately that they become apparent. Maintenance shall be undertaken by the owner.

Planned preventative maintenance and responsive maintenance shall be carried out in accordance with the nominated performance and inspection standard, to ensure effective operation in an emergency. Defects shall be remedied immediately that the become apparent Checks: Visual Daily (when occupied) Monthly (recorded) six monthly and annually for purpose groups CL CM CO and CS. All other occupancies Monthly and Annually

C. PERSONS RESPONSIBLE

Monthly inspections by the owner and six monthly and annually by an Independent Qualified Person

D. RECORDS

Shall be kept indicating:

i) Date of inspection
ii) Type of inspection
iii) Any repairs or maintenance found to be required
iv) Action taken to repair or maintain the system
v) The system inspected complies with the requirements of the compliance schedule
vi) Name of person undertaking inspection

Records are required to be retained for a period of 2 years, on the premises, or other location as agreed by the Territorial Authority.

Signs - Means of Escape

A. INSPECTIONS

Fire Separations require regular inspection to ensure they prohibit the spread of fire and, in the case of fire doors, occupants are not prevented from leaving the building in the event of an emergency.

Fire Separations: (reference ASNZS 1905)
A system which forms part of a means of escape from fire which contains one or more of the specified systems 1-6, 9 and 13

B. MAINTENANCE

Means of escape shall be maintained at all times in a safe condition including stairwells and safe paths with particular attention to:

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C. PERSONS RESPONSIBLE

Monthly inspections by the owner and six monthly and annually by an Independent Qualified Person

D. RECORDS

Shall be kept indicating:

i) Date of inspection
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iv) Action taken to repair or maintain the system
v) The system inspected complies with the requirements of the compliance schedule
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Records are required to be retained for a period of 2 years, on the premises, or other location as agreed by the Territorial Authority.

AssetCare *Limited*
Building Management Services

APPLICATION FOR AMENDMENT TO COMPLIANCE SCHEDULE

FORM 11 SECTION 106 BUILDING ACT 2004

FORM 11

BUILDING			
Street address of Building: **46 Carlos Drive, Flat Bush**		Compliance Schedule **No. 3909**	BWOF Expiry Date: **24/6/2012**
Legal Description: **Lot 10 DP 352580**	Level/Unit Number: **N/A**	Location of Building within site block **N/A**	
Building Name: **N/A**		Used as: **Apartments SR**	

OWNER	
Name of Owner: **Body Corporate 400961**	Contact Person: **N/A**
Mailing Address: **c/- Mountfort Estate Agents Ltd, PO Box 38206 Howick, AUCKLAND 2145**	
Telephone No. (Daytime): **N/A** Telephone NO. (After-hours): **N/A**	Mobile No. **N/A** Facsimile No.: **N/A**

AGENT	
Name of Agent: (if application being made on behalf of the owner): **Peter Clark**	Mailing Address: **P.O. Box 24 – 343, Royal Oak, Auckland** Street Address/Regd office: **43 Galway St, Onehunga, Auckland**
Company Name: **AssetCare Limited**	Phone Numbers: Work: **09 633 0830** Mobile: **021 849 339**
Details of Authorisation from owner to act on behalf: **Signed Contract**	Facsimile: **09 633 0266** Email: **gale@assetcare.co.nz**

APPLICATION

I request that the compliance schedule for the above building be amended as follows:

Specified System for amendment	Amendment	Reason
Means of Escape	Delete	Update due to Building Act amendment 2012
Final Exits	Add	Update due to Building Act amendment 2012
Fire Separation	Add	Update due to Building Act amendment 2012

15.4 ADD

Signature of Owner / Agent	Print Name:	Date:
	Peter Clark *AssetCare Limited* **Phone:** *09 633 0830*	18th June 2012

Owner / agent on behalf of and with the authority of the owner:

AMENDMENT APPROVED
DATE: 20/06/12
SIGN:

AssetCare Limited
Building Management Services

BUILDING WARRANT OF FITNESS

FORM 12 SECTION 108 BUILDING ACT 2004

FORM 12

BUILDING		
Street Address of Building: **46 Carlos Drive, Flat Bush**	Compliance Schedule No.: **3909**	BWOF Expiry Date: **24/06/2013**
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Building Name: **n/a**	Location of Building within site block: **N/a**	
Maximum number occupants that can safely use this building is: (**132**) 6 occupants per unit		

OWNER	
Name of Owner: **Body Corporate 400961**	Contact Person: **N/a**
Mailing Address: **c/- Mountfort Estate Agents Ltd, PO Box 38206 Howick, AUCKLAND 2145**	Street Address/Registered Office: **N/a**
Telephone (day)#: **c/- (09) 633 0830** Telephone (a/h)#: **c/- (09) 633 0830** E-mail Address: gale@assetcare.co.nz	Mobile #: **N/a** Facsimile #: **c/- (09) 633 0266** Web Site: **N/a**

SPECIFIED SYSTEMS

1.1		Automatic sprinkler system	10.1		Building Maintenance Units
1.2		Automatic gas / foam	11.1		Laboratory Fume Cupboards
2.1	✓	Emergency Warning Systems	13.1		Mechanical Smoke Control
3.1		Automatic Fire Doors	14		Emergency Power Systems
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9.1		Mechanical ventilation or air-conditioning	16.1		Cable Cars attached to or serving a Building

The Compliance Schedule records are kept at: **Mountford Estate Agents: 12 Uxbridge Road, Howick**

The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of Owner / Agent	Print Name	Date
	Gale Ward *AssetCare Limited* **09 633 0830**	**24th June 2012**

Owner / agent on behalf of and with the authority of the owner

AssetCare Limited
Building Management Services

CERTIFICATE OF COMPLIANCE

INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

FORM 12A

Compliance Schedule No.: 3909	**BWOF Expiry Date:** 24/06/2013
Street Address of Building: **46 Carlos Drive, Flat Bush**	Legal Description of land where building is located: **Lot 10 DP 352580**
Building Name: **n/a**	
Level / Unit #: **1-22**	Location of Building within site block: **N/a**
OWNER	
Name of Owner: **Body Corporate 400961**	Contact Person: **N/a**
Mailing Address: **PO Box 38206 Howick, AUCKLAND 2145**	Telephone: **c/- (09) 633 0830** Facsimite: **c/- (09) 633 0266**

SPECIFIED SYSTEMS

The inspection, maintenance, and reporting procedures of the compliance schedule have been fully complied with during the **12 months** prior to the date stated below in relation to the following specified system/s:

1.1		Automatic sprinkler system	10.1		Building Maintenance Units
1.2		Automatic gas / foam	11.1		Laboratory Fume Cupboards
2.1	✓	Emergency Warning Systems	13.1		Mechanical Smoke Control
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9.1		Mechanical ventilation or air-conditioning	16.1		Cable Cars attached to or serving a Building

Signature:	**Name of IQP:** **Peter Clark** **IQP No.:** **449**
Name of Company: *AssetCare Limited* **Telephone No.:** **09 633 0830**	**Date:** **24th June 2012**

AssetCare Limited
Building Management Services

P O Box 24-343, Royal Oak
43 Galway St
Onehunga
Auckland
Phone: 09 633 0830
Fax: 09 633 0266

AUCKLAND COUNCIL
22 JUN 2012
HENDERSON - MC

18th June 2012

Eric Potts
Building Warrants/ Compliance Schedules
Southern Building Control
Auckland Council
Private Bag 92 300
AUCKLAND 1142

Dear Eric

Re: Building Warrant of Fitness

Please find enclosed a copy of the new Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush **CS 3909**

Please note: We have enclosed a Form 11 – Application for Amendment to update the Compliance Schedule.

If you have any queries please do not hesitate to contact me.

Yours faithfully
AssetCare Limited

Gale Ward
Director

AssetCare Limited
Building Management Services

BUILDING WARRANT OF FITNESS

FORM 12 SECTION 108 BUILDING ACT 2004

FORM 12

BUILDING		
Street Address of Building: **46 Carlos Drive, Flat Bush 2016**	Compliance Schedule No.: **N/a**	BWOF Expiry Date: **24/06/2014**
Legal Description: **LOT 10 DP 352580**	Fire Hazard Category: **1** Used as: Residential Appartments SR Year Construction: **2007**	Intended Life if <50yrs **N/a** Level/Unit #: **N/a**
Building Name: **Unit 1-22**	Location of Building within site block: **N/a**	
Maximum number occupants that can safely use this building is: (**132**) LEV LEV LEV		

OWNER	
Name of Owner: **Working Concepts Ltd**	Contact Person: **N/a**
Mailing Address: **PO Box 58395, Greenmount, Manukau 2141**	Street Address/Registered Office: **N/a**
Telephone (day)#: **c/- (09) 633 0830** Telephone (a/h)#: **c/- (09) 633 0830** E-mail Address: gale@assetcare.co.nz	Mobile #: **N/a** Facsimile #: **c/- (09) 633 0266** Web Site: **N/a**

SPECIFIED SYSTEMS	
Automatic Sprinkler system	Laboratory Fume Cupboards
Automatic protection gas / foam	Audio Loops or other listening systems
✓ Emergency Warning System for fire or other dangers	FM Radio Frequency / Infrared systems
Automatic Gas Detection	Smoke Control System - Mechanical
Automatic Doors	Smoke Control System - Natural
Access Controlled Doors	Smoke Control System - Smoke Curtains
Interfaced Fire/ Smoke Doors/ Windows	Emergency Power Systems - Generator
Emergency Lighting Systems	✓ Signs for Specified Systems 1-13
Pressurisation System: Esc Route / Liftshaft	✓ Final Exits
Riser Mains for Fire Service use	✓ Fire Separations
Automatic Backflow Preventer	Smoke Separations
Lifts (passenger)	✓ Signs for communicating information intended to facilitate evacuation
Lifts (goods)	
Escalator, or moving walks	Systems for communicating spoken information intended to facilitate evacuation
Mechanical ventilation or air-conditioning	
Building Maintenance Units - exterior or interior	Cable Cars

The Compliance Schedule records are kept at: **46 Carlos Drive, Flat Bush 2016**

The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of Owner / Agent	Print Name	Date
Gale Ward	**Gale Ward** *AssetCare Limited* **09 633 0830**	**24th June 2013**

Owner / agent on behalf of and with the authority of the owner

AssetCare Limited
Building Management Services

CERTIFICATE OF COMPLIANCE

INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

FORM 12A

Compliance Schedule No.: N/a	**BWOF Expiry Date:** 24/06/2014
Street Address of Building: **46 Carlos Drive, Flat Bush 2016**	Legal Description of land where building is located: **LOT 10 DP 352580**
Building Name: **Unit 1-22**	
Level / Unit #: **N/a**	Location of Building within site block: **N/a**
OWNER	
Name of Owner: **Working Concepts Ltd**	Contact Person: **N/a**
Mailing Address: **PO Box 58395, Greenmount, Manukau 2141**	Telephone: **c/- (09) 633 0830** Facsimile: **c/- (09) 633 0266**

SPECIFIED SYSTEMS

The inspection, maintenance, and reporting procedures of the compliance schedule have been fully complied with during the **12 months** prior to the date stated below in relation to the following specified system/s:

	Automatic Sprinkler system		Laboratory Fume Cupboards
	Automatic protection gas / foam		Audio Loops or other listening systems
✓	Emergency Warning System for fire or other dangers		FM Radio Frequency / Infrared systems
	Automatic Gas Detection		Smoke Control System - Mechanical
	Automatic Doors		Smoke Control System - Natural
	Access Controlled Doors		Smoke Control System - Smoke Curtains
	Interfaced Fire/ Smoke Doors/ Windows		Emergency Power Systems - Generator
	Emergency Lighting Systems	✓	Signs for Specified Systems 1-13
	Pressurisation System: Esc Route / Liftshaft	✓	Final Exits
	Riser Mains for Fire Service use	✓	Fire Separations
	Automatic Backflow Preventer		Smoke Separations
	Lifts (passenger)	✓	Signs for communicating information intended to facilitate evacuation
	Lifts (goods)		
	Escalator, or moving walks		Systems for communicating spoken information intended to facilitate evacuation
	Mechanical ventilation or air-conditioning		
	Building Maintenance Units - exterior or interior		Cable Cars

Signature:	**Name of IQP:** **Peter Clark** **IQP No.:** **449**
Name of Company: *AssetCare Limited* **Telephone No.:** **09 633 0830**	**Date:** **24th June 2013**

AssetCare *Limited*
Building Management Services

P O Box 24-343, Royal Oak
43 Galway St
Onehunga
Auckland
Phone: 09 633 0830
Fax: 09 633 0266

16th July 2013

Keita Tofilau
Building Warrants/ Compliance Schedules
Southern Building Control
Auckland Council
Private Bag 92 300
AUCKLAND 1142

RECEIVED
18 JUL 2013
AUCKLAND CITY COUNCIL

Dear Keita

Re: Building Warrant of Fitness

Please find enclosed a copy of the new Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush **CS 3909**

If you have any queries please do not hesitate to contact me.

Yours faithfully
AssetCare Limited

Gale Ward
Director

Taylor Taniora

From: Gale Ward <gale@assetcare.co.nz>
Sent: Thursday, 8 May 2014 6:56 a.m.
To: Taylor Taniora
Subject: RE: 3909 Owner details.

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Taylor

It is
Body Corporate 400961
c/- Khoo & Associates
PO Box 64 086
Botany
Contact: Sun Khoo
Ph 271 2338
Mobile 021 546610

Kind regards
Gale

From: Taylor Taniora [mailto:Taylor.Taniora@aucklandcouncil.govt.nz]
Sent: 7 May 2014 4:30 p.m.
To: Gale Ward
Subject: RE: 3909 Owner details.

Hi Gale,

46 CARLOS DRV FLAT BUSH 2016

Cheers
Taylor.

From: Gale Ward [mailto:gale@assetcare.co.nz]
Sent: Wednesday, 7 May 2014 3:11 p.m.
To: Taylor Taniora
Subject: RE: 3909 Owner details.

Hi Taylor

What is the address of the property
Regards
Gale

From: Taylor Taniora [mailto:Taylor.Taniora@aucklandcouncil.govt.nz]
Sent: 7 May 2014 2:02 p.m.
To: Gale Ward
Cc: Prashant Patel
Subject: CS: 3909 Owner details.
Importance: High

Hi Gale.

The supposed Owner details for the above CS still correct? It seems there is a different owner for each individual unit but only one CS provided for all of them. Owner details on the BWOF shows Carlos and Working Concepts Limited however they are refusing to pay as they have advised they are no longer the owners.

I need to know who to charge as far as I can see there are 22 units with 22 different owners. Is there a body corporate looking after this site? May I please have the updated details of your client so that I may process councils charge.

Naku noa na| Regards:

Taylor Taniora | Building Control Administrator
Building Control South
Ph 09 261 8239 | Auckland Council, First Floor South, 4 Orsterly Way, Auckland
Visit our website: www.aucklandcouncil.govt.nz

Please consider the environment before printing this e-mail

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EMAIL

To:	Poonam		
Email:	poonam@newtonlaw.co.nz		
From:	Sarah Patterson	**Telephone No.**	09 262 8900 xtn; 8355
Date:	6/08/2013	**No. of Pages** (including this one)	3
Subject:	**Proposals 32828, 28885, 27404, 27373, 27046 – 46 Carlos Drive, Flat Bush**		

Resource consent 32828, granted 30th October 2007, was a consent for a unit title subdivision only, no land use conditions were imposed current status is **Not Applicable** with a note 29 attached.

Resource consent 27404, granted 15th September 2005, was a consent for an objection to the subdivision 27046, no land use conditions were imposed current status is **Not Applicable** with a note 29 attached.

Resource consent 27373, granted 22nd December 2004 was a resource consent for tree removal all conditions **comply** as at 18th July 2007.

Resource consent 27046, granted 16th December 2004, was a consent for a subdivision only, no land use conditions were imposed current status is **Not Applicable** with a note 29 attached.

Explanation of Note 29:
Note 29 is a generic notation and is applied to any site with Resource Consent/s for subdivision attached. Subdivision consents do not have a 'Land use compliance status' (as there are no land use conditions for the subdivision consent). The 'land use compliance status' is the status referenced in a LIM. Therefore, a LIM will not show the current 'status' for any listed subdivision consents and 'Note 29' is attached instead.

Resource consent 28885, granted 21st April 2006 was an integrated consent for a town house development and a 5 lot subdivision. The subdivision component of this consent has been superseded by the later unit title subdivision consent 32828. The land use component of this consent has a status of **On Going Compliance** (see conditions that has ongoing monitoring below).

Landscaping

5. ***The proposed landscape planting as identified on the planting plan and plant schedule submitted (dated April 2005) and numbered 28885 by the Council shall be implemented to the satisfaction of the Manager – Resource Consents and Compliance within 3 months of completion of construction of the units on the site. The landscaped areas shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state to the satisfaction of the Manager, Resource Consents and Compliance.***

6. ***Prior to occupation of the units on the site the consent holder shall undertake specimen tree planting between proposed Units 11-16 being:***

   (a) capable of forming an unbroken 5 metre high screen between these units and the site to the west, with planting being provided within the boundary of the site at 46 Carlos Drive. These specimen trees shall be planted at a minimum height of 2.5 metres; or

   (b) where the agreement of the adjoining owner to the west is obtained, capable of forming an unbroken 3 metre high screen on the western side of the existing fence on the boundary at 122 Stancombe Road. These specimen trees shall be planted at a minimum height of 2.5 metres.

   This planting shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state at the entire cost of the consent holder and to the satisfaction of the Manager – Resource Consents and Compliance.

   Every new owner, or tenant, within Units 11-16 shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs, and that the obligations specified in this condition shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

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Waste Management

9. ***That the management of domestic waste on the site be undertaken in accordance with the Waste Management Plan submitted with the application and numbered 28885 by the Council.***

10. ***Every new owner, or tenant, within the apartment complex shall be advised in writing of the process for waste management storage and disposal. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.***

11. ***That the outdoor rubbish collection areas shall be screened from public view by the erection of a fence prior to the occupation of the household units and be thereafter maintained to the satisfaction of the Manager, Resource Consents and Compliance.***

Washing Lines

12. ***That no washing lines, or airing of laundry occur at a level above the height of balcony balustrades on each floor.***

13. ***Every new owner, or tenant, within the apartment complex shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.***

Historic consents must remain linked to the property records as they relate to the newly created property and are a vital part of the Council Records.

Under the Local Government Act 2002 (for LIMs) and Building Act 2004 (for PIMs), the Council is required to keep full and accurate records for all developments undertaken and supply that information promptly when required to do so.

Please direct all enquiries to Sarah Patterson, on 262 8900 ext 8355 and quote reference number **P11117**.

Yours faithfully

Sarah Patterson
Resource Management – Monitoring Advisor

All of the material in this message is confidential to the addressee. If the reader is not the intended recipient, please note that you may not use any material in this message nor pass it on to others. Please notify us promptly of you having received this message and return it to us uncopied.

07155 6A1

Poonam@newtonlaw.co.nz
Pratimadhav@gmail.com

30/10/07
32828 - unit title SUB.
21/4/06
28885 - Sub supervised & C - OCK.
15/9/05
27404
N/A
22/12/04
27373
complies:
16/12/04
27046
N/A

MINUTE NO. RC/APR/532/06 - COMMITTEE DECISION

LIMITED NOTIFIED APPLICATION FOR RESOURCE CONSENT UNDER THE RESOURCE MANAGEMENT ACT 1991 – APPLICATION FOR RESOURCE CONSENT TO CONSTRUCT A 22 RESIDENTIAL UNIT HOUSING COMPLEX WITH CONSEQUENTIAL 5 ALLOTMENT RESIDENTIAL SUBDIVISION ON THE SITE AT 46 CARLOS DRIVE (FORMERLY 124 STANCOMBE ROAD), FLAT BUSH

PART A – LAND USE CONSENT:

18/7/07

Land Use Conditions

General

1. ***That pursuant to Section 36 of the Resource Management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing and granting of this Resource Consent are paid in full.***

2. ***That the development shall be completed in accordance with the plans and documentation including Assessment of Environmental Effects (AEE) submitted with the application and numbered 28885 by Council unless otherwise amended by the following conditions of consent.***

Apartment Design and Construction

3. ***That prior to the commencement of construction on the site the following information shall be submitted to the satisfaction of the Manager Resource Consents and Compliance:***

   (a) ***details including a schedule of materials, and elevations of the privacy screens to be erected at the end of all balconies identified in the application plans approved in condition (2) above. These screens shall be a maximum of 1.8 metres high where the screens meet the building, extending for a minimum of 1.5 metres at this height and stepping down to the balcony edge;***

   (b) ***details including a schedule of materials and elevations of overhangs for second floor balconies to comply with Rule 17.10.12.9 of the Manukau Operative District Plan 2002.***

   The items and works required to be shown in plans in (a) to (b) above shall be completed to the satisfaction of the Manager, Resource Consents and Compliance prior to occupation of any of the units on the site.

4. ***That the external colour scheme of the apartments be consistent with the colour scheme plans (Coloured Renderings) numbered 28885 by the Council (1 Sheet).***

Landscaping

5. ***The proposed landscape planting as identified on the planting plan and plant schedule submitted (dated April 2005) and numbered 28885 by the Council shall be implemented to the satisfaction of the Manager – Resource Consents and Compliance within 3 months of completion of construction of the units on the site. The landscaped areas shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state to the satisfaction of the Manager, Resource Consents and Compliance.***

OCR

6. *Prior to occupation of the units on the site the consent holder shall undertake specimen tree planting between proposed Units 11-16 being:*

   (a) *capable of forming an unbroken 5 metre high screen between these units and the site to the west, with planting being provided within the boundary of the site at 46 Carlos Drive. These specimen trees shall be planted at a minimum height of 2.5 metres; or*

   OCR

   (b) *where the agreement of the adjoining owner to the west is obtained, capable of forming an unbroken 3 metre high screen on the western side of the existing fence on the boundary at 122 Stancombe Road. These specimen trees shall be planted at a minimum height of 2.5 metres.*

   This planting shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state at the entire cost of the consent holder and to the satisfaction of the Manager – Resource Consents and Compliance.

   Every new owner, or tenant, within Units 11-16 shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs, and that the obligations specified in this condition shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

   OCR

7. *All buildings and construction works shall be undertaken in accordance with the Geotechnical investigation and completion report prepared by Geotek Services Ltd Ref: 2704 and dated 2 August 2005.*

Noise Insulation Requirements

8. *That the units shall be designed, constructed and pass field tests demonstrating compliance with the following standards:*

   (i) *The Sound Transmission Loss of common walls shall be no less than 60 and the Sound Transmission Loss of common floors and ceilings shall be no less than 55.*

   (ii) *The Impact Insulation Class of floors shall be no less than 55.*

   (iii) *The Verification Method shall be G6/VM1.*

   (iv) *When assessing Impact Insulation Class, all floors, hallways and stairs in a building outside a household unit are deemed to be common building elements to that household unit. The impact requirement shall therefore apply between any other unit or common space and the habitable space of the household unit irrespective of vertical or horizontal separation.*

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been designed in accordance with the above standards shall be provided at building consent stage.

   A report from a suitably qualified and experienced acoustic engineer stating that the units have been constructed and has passed field tests demonstrating compliance with the above standards shall be provided to the Manager, Resource Consents and Compliance prior to occupation of the units.

Waste Management

9. *That the management of domestic waste on the site be undertaken in accordance with the Waste Management Plan submitted with the application and numbered 28885 by the Council.*

OCK

10. *Every new owner, or tenant, within the apartment complex shall be advised in writing of the process for waste management storage and disposal. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.*

OCK

11. *That the outdoor rubbish collection areas shall be screened from public view by the erection of a fence prior to the occupation of the household units and be thereafter maintained to the satisfaction of the Manager, Resource Consents and Compliance.*

OCK

Washing Lines

12. *That no washing lines, or airing of laundry occur at a level above the height of balcony balustrades on each floor.*

OCK

13. *Every new owner, or tenant, within the apartment complex shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.*

OCK

Letter Boxes

14. *Letter boxes shall be provided for each unit fronting Carlos Drive at the street frontage. For the rear two blocks of units a letter box shall be provided for each of these units in an accessible position, which meets the requirements of New Zealand Post.*

Engineering

15. *The works detailed on the approved plans referenced E8/28885 (sheets 1-16) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements:*

    (i) *All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.*

    (ii) *All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).*

    (iii) *On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.*

    (iv) *A 'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).*

(v) *All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.*

16. *The works shall be completed to the satisfaction of the Manager - Resource Consents & Compliance within six months of the commencement of these works and/or prior to occupation of the proposed buildings or subdivision.*

Overland Stormwater Flowpath

17. *The site has been identified as being subject to flooding from the overland flow of stormwater therefore an overland flowpath shall be provided in accordance with approved engineering drawings referenced E8/28885, and shall be protected by a 'right to drain water' easement in favour of the Council.*

The 'right to drain water' easement shall be defined by the consent holder's registered surveyor and the subsequent easement documents prepared by the City Solicitor at the consent holder's expense. A copy of the Council's requirements for the preparation of legal documentation is attached in this regard. The easement documents shall include the provision that no buildings, structures, fences or filling be placed in the easement area or other works carried out thereon, except with specific Council approval; and that the level and profile of the overland flowpath area) shall remain unchanged thereafter. The easement documents shall also include as-built plans showing levels in terms of the Lands & Survey Auckland Datum, 1946 a suitably located datum mark and boundary dimensions for the proposed easement. One copy of the easement as built plan is required to be clearly printed, showing legible levels, within the box on the enclosed sheet.

Suitable benchmarks (Lands & Survey Auckland Datum, 1946) shall be established and shown on a suitable plan for inclusion in the easement documents to allow all future buildings to be constructed accordingly.

This information shall be recorded on Council's Land Information Register.

18. *The following units have been identified as being susceptible to flooding from an overland stormwater flowpath.*

In order to protect future building from the effects of flooding or the 1% AEP storm event the following minimum floor levels, identified by the consent holder on the approved plan referenced E8/28885 (Sheet 6) shall be established for the unit areas shown on this plan.

Unit	Minimum Floor Level
1	43.05
2	43.05
3	42.65
4	42.65
5	42.25
6	41.78
7	41.78
8	41.78
9	41.58
10	41.58
11	42.30
12	42.30

13	42.55
14	42.55
15	42.80
16	42.80
17	42.78
18	42.78
19	42.78
20	42.78
21	42.78
22	42.78

All levels are in terms of the Lands & Survey Auckland Datum, 1946 and the levels are in accordance with the approved plans referenced E/28885 (Sheet 6) by Council.

Compliance with this requirement shall be on a continuing basis and shall be registered as a covenant in accordance with Section 108 of the Resource Management Act 1991 on the Certificate of Title of Lot 10 DP352580 (and recorded on Council's Land Information Register) both at no cost to Council.

Suitable benchmarks to the Lands & Survey Auckland 1946 datum shall be established to enable future buildings to be constructed accordingly.

The above information (floor levels and benchmarks) shall be shown on a plan on the attached form for inclusion in the covenant.

Stormwater Inlet / Rock Apron

19. *That the wing wall flanking the stormwater outlet near the northern boundary of the site be backfilled to ensure an even transition with the surrounding ground level. This stormwater inlet shall be covered by a grille the objective of which is to prevent access of any children into the stormwater inlet while continuing to allow stormwater flows to be unobstructed by any debris which may become trapped in the grille.*

    A plan of the proposed grille shall be submitted for the approval of the Manager Resource Consents and Compliance prior to its installation. The grille shall be installed in accordance with this approved plan prior to occupation of any units on the site.

    In addition to these works the consent holder shall ensure that boundary between the subject site and the site to the north is stabilised and any erosion at this boundary repaired and regrassed to ensure permanent protection of the adjoining land to the north from any effects of stormwater flows. These works shall be completed to the satisfaction of the Manager – Resource Consents and Compliance prior to the occupation of any units on the site.

Public Drainage and Water Supply

20. *Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each unit with individual connection points in accordance with the approved engineering drawings referenced E8/28885 by Council and to the satisfaction of the Manager – Resource Consents & Compliance.*

21. *Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall be hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.*

22. *A detailed structural design shall be undertaken of the retaining walls at the time of Building Consent application. Specific consideration to design shall be given where the retaining wall is to be constructed over the existing sanitary sewer pipes. This will include but not be limited to allowing 1m clearance between the pipe face and adjacent pile surrounds, the diameter of adjacent piles and the rail sizes between them, as well as increases to the embedment depth to allow a minimum of 300mm clearance below the bottom of pipe.*

Roading

23. *The proposed access way shall be constructed in accordance with the approved engineering drawings referenced E8/28885 by Council prior to the occupation of the units and maintained thereafter to the satisfaction of the Manager – Resource Consents & Compliance.*

Vehicle Access

24. *The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to occupation of the household units and maintained thereafter to the satisfaction of the Manager - Resource Consents and Compliance.*

25. *That the width of the vehicle crossing shall be 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to the occupation of the household units to the satisfaction of the Manager - Resource Consents and Compliance.*

Visitor Carparking

26. *That the three visitor carparks identified on the Ground Floor site plan submitted and numbered 28885 by the Council shall remain for the exclusive use of visitors to the site only. This requirement shall be conveyed by the erection of a sign alongside and clearly visible from all three of these carparking spaces.*

    Every new owner, or tenant, within the apartment complex shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

Fencing

27. *That prior to occupation of any unit on the site the consent holder shall complete the erection of a 2.0 metre high closely boarded wooden fence along the entire length of the northern boundary of the site. This fencing shall be constructed in addition to the landscaping required under condition (5) of this consent. Following completion of this fencing work the consent holder shall ensure that all land on this boundary is left in a manner that ensures this land remains stable, and is provided with an appropriate batter and regrassed as necessary to the satisfaction of the Manager, Resource Consents and Compliance.*

Retaining Walls

28. *The retaining walls proposed shall be undertaken in such a manner as to ensure that the land within the site and the land on adjoining sites remains stable at all times. The consent holder shall ensure that prior to construction commencing, all necessary approvals for the retaining walls are obtained and that the retaining walls are completed in a timely manner and supervised by a Chartered Civil Engineer.*

Network Utilities

29. *Power and telephone services shall be installed underground within the common area to provide suitably located service connections to all proposed units.*

30. *The noise from construction works, (including maintenance and demolition works), shall be measured, assessed and controlled in accordance with the procedures and limits set out in NZS 6803:1999 being the New Zealand Standard for Acoustics - Construction Noise and shall not exceed the following limits:*

Table - Residential Zone and Dwellings in Rural Zones						
Time period	Weekdays (dBA)		Saturdays (dBA)		Sundays and Public Holidays (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
0630-0730	60	75	45	75	45	75
0730-1800	75	90	75	90	55	85
1800-2000	70	85	45	75	45	75
2000-0630	45	75	45	75	45	75

Covenant

31. *That the consent holder and its successors in title shall not make or lodge, be party to, finance or contribute to the cost of any complaint, application, appeal or other proceeding (either pursuant to the Resource Management Act 1991 or otherwise) designed to limit, prohibit or restrict any permitted activity or any activity authorised by resource consent, or any lawfully established existing uses undertaken at 122 Stancombe Road, Flat Bush by the owners or occupiers of those properties, provided that such activity is carried out in accordance with the terms, standards or conditions applicable to such permitted activity, resource consent or lawfully established existing uses.*

Compliance with this condition shall be secured by the registration of a covenant on the Certificate of Title of Units 11-16 authorised by this consent in favour of the owners or occupiers of 122 Stancombe Road, Flat Bush. This covenant shall be registered prior to occupation of any units on the site.

Advice Notes

1. *In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However, the Council does have the power to extend this period in certain cases where a further application is made within three months of the consent lapsing.*

2. *This consent does not constitute authority to build or undertake private drainage works and it may be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.*

3. *A copy of this consent and the associated epproved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.*

4. *Each building is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.*

5. *<u>Development Contributions under the Local Government Act 2002</u>*

   Please note that under section 198(1)(a) of the Local Government Act 2002 a Development Contribution is applicable to all proposed residential dwellings proposed as part of this development.

   The consent holder is advised that a Development Contribution will be calculated on 22 additional household equivalent units (HEU) for the development.

   This contribution is currently $4,505 plus GST per additional HEU. The rate of contribution is subject to periodic review through the Council's Annual Plan process. The amount payable will be determined and invoiced at the date of issue of building consent.

   Pursuant to section 208(1) of the Local Government Act 2002 until the development contribution is paid the Council may prevent the commencement of the resource consent or withhold a code compliance certificate under section 95 of the Building Act 2004 (from 31 March 2005). The Council may also register the development contribution under the Statutory Land Charges Registration Act 1928 as a charge on the title of the land.

6. *A Building Consent is required for retaining walls unless exempted under the Third Schedule of the Building Act 1991. The minimum design load on retaining wall should be 12.0 kPa. This consent does not include any structural approval of the design/calculations submitted.*

7. *Prior to any certification being issued under Section 224 of the Resource Management Act 1991 for any future Unit Title subdivision of the units subject of this consent, compliance will need to be achieved with the requirements of Section 224(f) of the RMA.*

8. *The requirements pursuant to Conditions 9 and 10 (Overland Flowpath) will be recorded on Council's Land Information Register.*

Reasons for the Decision

1. *The proposal merits consent pursuant to Section 104, 104A, 104B, 104C and 104D of the Resource Management Act and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan (2002).*

2. *Overall, the proposed land use consent complies with the minimum density provisions as prescribed by the in the Flat Bush Residential 1 Zone. In this regard it is considered that the proposed units will be consistent with the anticipated urban form of the zone and the effects of the proposal on the surrounding environment will be no more than minor.*

3. *The design and external appearance of the proposed dwellings are generally in keeping with expected development in the vicinity.*

4. *The proposed layout of the site will provide for efficient use of resources providing for satisfactory on site amenity while preserving the amenity values of surrounding properties and the general streetscape and residential characteristics of the area.*

5. *The proposed development and the associated engineering works are in accordance with Council's engineering standards and would not result in any adverse effect on the environment.*

PART B - SUBDIVISION CONSENT

Subdivision Conditions

General

1. *That pursuant to Section 36 of the Resource management Act 1991, this consent (or any part thereof) shall not be exercised until such time as all charges in relation to the receiving, processing and granting of this Resource Consent are paid in full.*

2. *That the subdivision and development shall be in general accordance with the plans and information submitted with the application and numbered 28885 (SP9188) by Council.*

Commencement of Consent

3. *Pursuant to Section 116 of the Resource Management Act 1991, the subdivision consent shall not commence, and the Council approval under Section 223 of the Resource Management Act 1991 shall not be issued, until the Land Use Consent - Part A of this consent for construction of the 22 dwellings referenced P28885 has been given effect to the extent that the exterior walls and roof of all the approved units have been constructed.*

Advice Note:

The purpose of this condition is to ensure that the proposed subdivision, which closely aligns with the land use consent proposed, does not occur prior to the land use consent being implemented.

Amalgamation

4. ***That Lot 5 be held as to four undivided one quarter shares by the owners of Lots 1 to 4 hereon as and that individual Certificates of Title be issued in accordance therewith (RGL Ref A634857).***

Parking and Manoeuvring Areas

5. ***The proposed driveway, parking and manoeuvring areas shall be formed, sealed, and drained to Council's "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate and maintained thereafter to the satisfaction of the Manager - Resource Consents and Compliance.***

6. ***That the width of the vehicle crossing shall be formed at 5.5 metres at the boundary and 8.5 metres at the road kerb and be constructed in accordance with Drawing R10 (refer update February 2000) of the "Manual of Engineering Quality Standards" prior to issue of Section 224(c) Certificate to the satisfaction of the Manager - Resource Consents and Compliance.***

Engineering

7. ***The works detailed on the approved plans referenced E8/28885 (sheets 1-16) by Council shall be constructed to the satisfaction of and at no cost to the Council and are subject to the following requirements:***

   (i) ***All materials, workmanship and testing shall be in accordance with the current Manukau City Council Engineering Quality and MANARC Standards.***

   (ii) ***All construction work, shown on the attached plans, shall be supervised by an engineering representative appointed by the owner (refer to MCC Engineering Quality Standards).***

   (iii) ***On completion of the work, as-built plans and a completion certificate, in accordance with the Council's Quality Assurance Manual, shall be forwarded to Council's appointed field officer.***

   (iv)A ***'pre-construction' meeting shall be arranged 48 hours prior to commencement of the works. Please contact Council's Resource Management Engineer - Compliance, (phone 262-8900 extension 5850).***

   (v) ***All works on existing public wastewater, stormwater and watermains shall be carried out by a Manukau City Council approved licensed contractor at the consent holder's expense.***

8. ***The works shall be completed to the satisfaction of the Manager - Resource Consents & Compliance within six months of the commencement of these works and/or prior to occupation of the proposed buildings or subdivision.***

Overland Stormwater Flowpath

9. *The site has been identified as being subject to flooding from the overland flow of stormwater therefore an overland flowpath shall be provided within Lots 3 and 5 in accordance with approved engineering drawings referenced E8/28885 (Sheet 6), and shall be protected by a 'right to drain water' easement in favour of the Council.*

   The 'right to drain water' easement shall be defined by the consent holder's registered surveyor and the subsequent easement documents prepared by the City Solicitor at the consent holder's expense. A copy of the Council's requirements for the preparation of legal documentation is attached in this regard. The easement documents shall include the provision that no buildings, structures, fences or filling be placed in the easement area or other works carried out thereon, except with specific Council approval; and that the level and profile of the overland flowpath area) shall remain unchanged thereafter. The easement documents shall also include as-built plans showing levels in terms of the Lands and Survey Auckland Datum, 1946 a suitably located datum mark and boundary dimensions for the proposed easement. One copy of the easement as built plan is required to be clearly printed, showing legible levels, within the box on the enclosed sheet.

   Suitable benchmarks (Lands & Survey Auckland Datum, 1946) shall be established and shown on a suitable plan for inclusion in the easement documents to allow all future buildings to be constructed accordingly.

   This information shall be recorded on Council's Land Information Register.

10. *Lots 1 to 4 have been identified as being susceptible to flooding from the overland stormwater flowpath.*

    In order to protect future building on these lots from the effects of flooding or the 1% AEP storm event the following minimum floor levels, identified by the consent holder on the approved plan referenced E8/28885 (Sheet 6) shall be established for the proposed unit areas shown on this plan as follows.

Unit	Minimum Floor Level
1	43.05
2	43.05
3	42.65
4	42.65
5	42.25
6	41.78
7	41.78
8	41.78
9	41.58
10	41.58
11	42.30
12	42.30
13	42.55
14	42.55
15	42.80
16	42.80
17	42.78

18	42.78
19	42.78
20	42.78
21	42.78
22	42.78

All levels are in terms of the Lands and Survey Auckland Datum, 1946 and that the levels are in accordance with the approved plans referenced E/28885 (Sheet 6) by Council.

Compliance with this requirement shall be on a continuing basis and shall be registered as a Consent Notice in accordance with Section 221 of the Resource Management Act 1991 on the Certificates of Title of the respective lots (and recorded on Council's Land Information Register) both at no cost to Council.

Suitable benchmarks to the Lands & Survey Auckland 1946 datum shall be established to enable future buildings to be constructed accordingly.

The above information (floor levels and benchmarks) shall be shown on a plan on the attached form for inclusion in the covenant.

Public Drainage and Water Supply

11. *Adequate provision shall be made for the disposal of stormwater, wastewater and the provision of a water supply. This involves extending the existing public systems to provide each allotment with individual connection points in accordance with the approved engineering drawings referenced E8/28885 by Council to the satisfaction of the Manager – Resource Consents & Compliance.*

12. *Adequate provision shall be made for the protection of wastewater lines that will be crossed over by a stormwater line. In all such cases the area between the lines shall ba hardfill backfilled. Where clearance is less than 150 mm, 50 mm thick polystyrene packing shall be placed against the underside of the stormwater line. Where clearance is less than 300 mm and bell jointed stormwater pipes are used, there shall be no bell joints placed directly over the wastewater line.*

Network Utilities

13. *Power and telephone services shall be installed underground within road reserve or common area to provide suitably located service connections to all proposed allotments.*

    The consent holder shall supply completion certificates from the utility service providers and certified as-built plans giving locations of all plinths, cables and ducts. Confirmation shall also be provided that demonstrates all services for the each of the proposed dwellings lie within their respective common area.

Reserves Contribution

14. (a) *A reserves contribution of $79,228.13(including 12.5%) GST being 6% plus GST of 3/4 x the assessed average market value of Lots 1 to 4, shall be paid within two years or prior to the issue of the Section 224 certificate for the subdivision, whichever is the sooner.*

Note: The Reserve contribution payable specified above has been derived as follows:

Aggregate market value of Lots 1-4	*$391,250.00 (including GST)*
Contribution: $391,250 x 6% x 3 = $70,425.00	*$79,228.13 (including GST)*

(b) If the reserve contribution determined in accordance with this condition has not been paid within two years of the date of this consent, the Council may at any time thereafter review this condition pursuant to Section 128 of the Resource Management Act 1991 to reassess the reserve contribution required by this condition on the basis of new valuation(s) undertaken at the time of review. Any such valuation shall be undertaken at the consent-holder's expense.

Section 224

15. That Council's certification pursuant to Section 224(c) of the Resource Management Act 1991 shall not be issued until all conditions of consent are fully complied with, and the Land Transfer Plan number and a copy of the survey plan (showing co-ordinates) are supplied to the Council.

Advice Notes

1. In accordance with Section 125 of the Resource Management Act 1991 this consent will lapse five years after the date on which it was granted unless it has been given effect to before the end of that period. However the Council does have the power to extend this period in certain cases where an application under Section 125 is made before the consent lapses.

2. This Consent does not constitute authority to build or undertake private drainage works and it will be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.

3. A copy of this consent MUST accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.

4. Each building is required to be individually metered for water supply. Please note that the application for a water meter is a separate application and the installation of a water connection is not part of this consent.

5. A Building Consent is required for retaining walls unless exempted under the Schedule 1 of the Building Act 2004.This consent does not include any structural approval of the design/calculations submitted.

6. The requirements pursuant to Conditions 9 and 10 will be recorded on Council's Land Information Register.

7. <u>Development Contributions under the Local Government Act 2002.</u>

In terms of the Development Contribution under the Local Government Act 2002, it is expected that a contribution for 22 residential units would have been paid when building consent for these units are issued pursuant to Condition 3 of this subdivision consent.

8. *Applicable financial contributions have been paid on the preceding subdivision numbered 27046 and SP8840 by the Council.*

9. *Any future subdivision of the units on the site by way of Unit Title subdivision will be subject to a requirement for payment of reserves contribution in accordance with Rule 15.15.2.3.3.2 of the Manukau Operative District Plan 2002.*

10. *The existing Land Information Register (LIR) notes, and consent notices on Lot 10 DP 352580 shall be carried down to the new allotments.*

Reasons for the Subdivision Decision

1. *The application merits the granting of a resource consent pursuant to Sections 104 and 104A of the Resource Management Act 1991 and is not contrary to the relevant objectives and policies of the Manukau Operative District Plan (2002).*

2. *The effects of the proposal on the surrounding environment will be no more than minor.*

3. *The proposal will provide for an efficient use of the land while maintaining the character and amenity values of the surrounding residential area.*

4. *The proposed development and engineering works are in accordance with Council's engineering standards and will not result in any adverse effect on the environment.*

5. *The reserve contribution has been imposed pursuant to Rule 15.15.2.3.3.1. There are no circumstances that warrant alleviation from the maximum contribution payable.*

AssetCare Limited
Building Management Services

AUCKLAND COUNCIL
- 7 AUG 2014
MANUKAU - MC

P O Box 24-343, Royal Oak
43 Galway St, Onehunga
Auckland
Phone: 09 633 0830 Fax: 09 633 0266

31 July 2014

Prashant Patel
Auckland Council - Southern
Building Control - BWOF
Level 1, Kotuku House
4 Osterley Way
Manukau, 2104

RECEIVED
7 AUG 2014
AUCKLAND COUNCIL
BUILDING - SOUTHERN

Dear Prashant

Re: Building Warrant of Fitness

Please find enclosed a copy of the renewed Building Warrant of Fitness for:

46 Carlos Dr, Flat Bush **3909**

If you have any queries please do not hesitate to contact us.

Regards

AssetCare Limited

Gale Ward
Director

AssetCare Limited
Building Management Services

BUILDING WARRANT OF FITNESS

FORM 12 Section 108, Building Act 2004

Form **12**

BUILDING

Street Address:	46 Carlos Dr, Flat Bush	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2015
Building Name:		**Fire Hazard Category:**	1
Location of Building within site/block number:		**Intended Life** (if <50yrs) **:**	
		Used as:	Residential Apartments
Level / Unit #:	Unit 1 to Unit 22		
Maximum Occupancy:	132	**Year Of Construction:**	2007

OWNER

Name of Owner:	Body Corporate 400961	**Telephone:**	(09) 633 0830
Contact Person:		**E-mail:**	gale@assetcare.co.nz
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163		

SPECIFIED SYSTEMS

- ✓ **Emergency Warning System for Fire or Other Dangers**
- ✓ **Signs for Specified Systems 1-13**
- ✓ **Final Exits/Means of Escape**
- ✓ **Fire Separations**

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**
The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of Owner's Agent	**Gale Ward** *AssetCare Limited* **09 633 0830**	**24 June 2014**

AssetCare Limited
Building Management Services

CERTIFICATE OF COMPLIANCE
WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Dr, Flat Bush	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2015
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Emergency Warning System for Fire or Other Dangers

Signed: Liam Moss **Name of IQP:** Liam Moss. **IQP Number:** 110182

Company: AssetCare Limited **Date:** 24 June 2014

AssetCare Limited
Building Management Services

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Dr, Flat Bush	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2015
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Signs for Specified Systems 1-13
Final Exits/Means of Escape
Fire Separations

Signed: _____ **Name of IQP:** Peter Clark **IQP Number:** 110184

Company: AssetCare Limited **Date:** 24 June 2014

Auckland Council
Te Kaunihera o Tāmaki Makaurau

EMAIL

To:	Rachael Hudson		
Company:	Mike Lucas Law		
Email:	rachaelh@mikelucaslaw.co.nz		
From:	Stacey Lee	**Telephone No.**	09 262 8900 xtn; 8219
Date:	5 November 2012	**No. of Pages** (including this one)	2
Subject:	**Proposals 27046, 27373, 27404, 26812 and 27564 – 38/124 Stancombe Road, Flat Bush**		

Good Afternoon Rachael

Proposal 27046 – Two lot subdivision and road to vest
This resource consent was for a subdivision only, and therefore there were no land use conditions imposed, and this is reflected in the current status of **not applicable**.

All other subdivision conditions were deemed to have been complied with at 224 (c) release (dated 7 December 2005).

Proposal 27404 – Objection to proposal 27046
This resource consent was an objection to the original proposal (27046), and therefore there were no land use conditions imposed, and this is reflected in the current status of **not applicable**.

All other subdivision conditions were deemed to have been complied with at 224 (c) release (dated 7 December 2005).

Proposal 27373 – Tree removal
This is to inform you that the above mentioned resource consent granted on the 22 December 2004 has been **complied** with to the satisfaction of Auckland Council.

Proposal 26812 – 42 unit apartment complex
There is currently one outstanding consent condition, and I have listed this below. Until this condition has been satisfied, the current status of **monitoring** will be applicable.

7. That basement carparking spaces 21 and 22 identified on the Jawa Structures Plan (Ref – Job No: 2086, Drawing A110 Rev B) numbered **26812** by the Council be provided as disabled carparking spaces in accordance with NZS 4121:2001.

Please note that there are several consent conditions that require compliance on a continuing basis – for your information I have listed these below;

4. The proposed landscape planting as identified on the planting plan and plant schedule submitted dated October 2004 and numbered **26812** by the Council shall be implemented to the satisfaction of the Manager – Resource Consents and Compliance within 3 months of completion of construction of the units on the site. The landscaped areas shall be mulched where appropriate, irrigated, and maintained (including any replacement planting as necessary) thereafter in a healthy state to the satisfaction of the Manager – Resource Consents and Compliance.

15. That the management of domestic waste on the site be undertaken in accordance with the Waste Management Plan submitted with the application and numbered 26812 by the Council. In this regard the waste management storage area identified on the plan attached to the Waste Management Plan shall be used for waste storage and not that area identified within the plans identified in Condition (2) of this consent.

    Every new owner, or tenant, within the apartment complex shall be advised in writing of the process for waste management storage and disposal. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

16. That no washing lines, or airing of laundry occur at a level above the height of balcony balustrades on each floor.

    Every new owner, or tenant, within the apartment complex shall be advised in writing of the requirements of this condition. Where the complex is subdivided by way of Unit Title subdivision the responsibility for ensuring this occurs shall sit with the Body Corporate. Until such time as this occurs, this responsibility shall sit with the consent holder.

Proposal 27564 – Unit title subdivision for 42 units
This resource consent was for a subdivision only, and therefore there were no land use conditions imposed, and this is reflected in the current status of **not applicable**.

All other subdivision conditions were deemed to have been complied with at 224 (c) release (dated 13 July 2006).

Please direct all enquiries to Stacey Lee, on 262 8900 ext 8219 and quote reference number **P27046**.

Yours faithfully

S.LEE

Stacey Lee
Resource Management – Monitoring Advisor

Southern Resource Consents & Compliance

LIM QUERY REPORT

RESOURCE CONSENTS COMPLIANCE STATUS

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Query received Date: 05·11·12. Time:		**Completed:** 15.11.12	Processing Days ✓
Caller:	Rachael Hudson - mike Lucas Law		
Relationship to Land:		**Phone**	2691142
Email	rachaelh@mikelucaslaw.co.nz	**Fax**	

Callers must be informed that:

1. *Consents that were issued prior to 1999 may accrue a Compliance fee of $300.00 + GST.*
2. *LIM Queries processing period is approx 3 days.*

Site Address:	38/124 Stancombe Rd Flat Bush							**Updated Status:**
Proposal: (1)	SD 27046	File ref:		Consent date:		Status:		
Proposal: (2)	LU 27373 ✓	File ref:		Consent date:		Status:		
Proposal: (3)	27404 ✓	File ref:		Consent date:		Status:		
Proposal: (4)	26812	File ref:		Consent date:		Status:		
Proposal: (5)	27564	File ref:		Consent date:		Status:		
Proposal: (6)	28885.	File ref:		Consent date:		Status:		

Notes:

P27046 ✓	2 LOT SD + road to vest
	224c issued 07.12.05 = N/A
P27373 ✓	Tree removal
	Complies 18.07.07.
P27404 ✓	OBJ to 27046
	224c issued under P27046 = N/A
P26812 ✓	42 apartment Complex
	Con 8 = YTC = NON
	Con's 4, 15 + 16 DCR

P27564	UT SD for 42 units
	224c issued 13.07.06 = N/A.
P28885	& 22 Townhouses + 5 lot SD } This has been
	SUPERSEDED by P32828 } tagged to this
	property incorrectly
	I have had them removed
	EMAIL SENT.

AssetCare Limited
Building Management Services

P O Box 24-343, Royal Oak
43 Galway St, Onehunga
Auckland
Phone: 09 633 0830 Fax: 09 633 0266

9 June 2015

Prashant Patel
Auckland Council - Southern
Central Building Control - BWOF
Private Bag 92 300
Auckland, 1142

AUCKLAND COUNCIL
11 JUN 2015
CBD - CIVIC

Dear Prashant

Re: Building Warrant of Fitness

Please find enclosed a copy of the renewed Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush, Auckland, 2016 **3909**

If you have any queries please do not hesitate to contact us.

Regards

AssetCare Limited

Gale Ward

Gale Ward
Director

AssetCare *Limited*
Building Management Services

BUILDING WARRANT OF FITNESS

FORM 12 Section 108, Building Act 2004

Form **12**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2016
Building Name:		**Fire Hazard Category:**	1
Location of Building within site/block number:		**Intended Life** (If <50yrs) **:**	
		Used as:	Residential Apartments
Level / Unit #:	Unit 1 to Unit 22		
Maximum Occupancy:	132	**Year Of Construction:**	2007

OWNER

Name of Owner:	Body Corporate 400961	**Telephone:**	(09) 633 0830
Contact Person:		**E-mail:**	gale@assetcare.co.nz
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163		

SPECIFIED SYSTEMS

- ✓ **Emergency Warning System for Fire or Other Dangers**
- ✓ **Signs Relating to Specified Systems 1-13**
- ✓ **Other Fire Systems (Means of Escape) - Final Exits**
- ✓ **Other Fire Systems (Means of Escape) - Fire Separations**

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**
The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of Owner's Agent	**Gale Ward** *AssetCare Limited* **09 633 0830**	**24 June 2015**

AssetCare *Limited*
Building Management Services

CERTIFICATE OF COMPLIANCE
WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

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Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Emergency Warning System for Fire or Other Dangers

Signed: Liam Moss **Name of IQP:** Liam Moss **IQP Number:** 110182

Company: AssetCare Limited **Date:** 24 June 2015

AssetCare *Limited*
Building Management Services

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

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Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Signs Relating to Specified Systems 1-13
Other Fire Systems (Means of Escape) - Final Exits
Other Fire Systems (Means of Escape) - Fire Separations

Signed: _____ **Name of IQP:** Peter Clark **IQP Number:** 110184

Company: AssetCare Limited **Date:** 24 June 2015

Shannon Gallardo

From: Asmira Alic <Asmira@assetcare.co.nz>
Sent: Monday, 20 June 2016 1:43 p.m.
To: BWOF
Subject: RE: CS# 3909 - 46 CARLOS DRV FLAT BUSH 2016
Attachments: BWOF2016.pdf; 12Acerts2016.pdf

Good Afternoon,

Please find attached a copy of the amended documents.

We will also send a copy to our client.

Kind Regards,

Asmira Alic | Building Compliance Consultant

AssetCare Limited
P 09 633 0830
F 09 633 0266
E asmira@assetcare.co.nz
W www.assetcare.co.nz
43 Galway Street, Onehunga, 1061 | P.O. Box 24-343, Royal Oak 1345

Fire Systems Testing, Maintenance & Installation | Fire Engineering Design | Building Warrant of Fitness | Fire Equipment | IQP Registered

From: Shannon Gallardo [mailto:Shannon.Gallardo@aucklandcouncil.govt.nz] **On Behalf Of** BWOF
Sent: Monday, 20 June 2016 12:20 p.m.
To: Asmira Alic <Asmira@assetcare.co.nz>
Cc: BWOF <BWOF@aucklandcouncil.govt.nz>
Subject: CS# 3909 - 46 CARLOS DRV FLAT BUSH 2016

Good afternoon Asmira,

Thank you for the supplying the attached BWOF documentation.

I have noted that the form 12 does not list SS15D and that no documentation has been received for SS15D despite this being currently listed on the CS.

Can you please supply valid documentation for SS15D and also amend the form 12 to reflect this.

I have now placed this application on hold until the above is received.

Kind regards,
Shannon Gallardo | Building Control Administrator | Building Control Central
Ph 09 353 9034 | Extn (46) 9034
Auckland Council, Ground Floor, Graham Street Service Centre, 35 Graham Street Auckland
Visit our website: www.aucklandcouncil.govt.nz

CAUTION: This email message and any attachments contain information that may be confidential and may be LEGALLY PRIVILEGED. If you are not the intended recipient, any use, disclosure or copying of this message or attachments is strictly prohibited. If you have received this email message in error please notify us immediately and erase all copies of the message and attachments. We do not accept responsibility for any viruses or similar carried with our email, or any effects our email may have on the recipient computer system or network. Any views expressed in this email may be those of the individual sender and may not necessarily reflect the views of Council.

G

AUCKLAND COUNCIL
17 JUN 2016

P O Box 24-343, Royal Oak
43 Galway St, Onehunga
Auckland
Phone: 09 633 0830 Fax: 09 633 0266

15 June 2016

Sulu Enosa
Auckland Council - Southern
Central Building Control - BWOF
Private Bag 92 300
Auckland, 1142

Dear Sulu

Re: Building Warrant of Fitness

Please find enclosed a copy of the renewed Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush, Auckland, 2016 **3909**

If you have any queries please do not hesitate to contact us.

Regards

AssetCare Limited

Gale Ward
Director

ASSETCARE

BUILDING WARRANT OF FITNESS

FORM 12 Section 108, Building Act 2004

Form **12**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
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Building Name:		**Fire Hazard Category:**	1
Location of Building within site/block number:		**Intended Life** (if <50yrs) :	
		Used as:	Residential Apartments
Level / Unit #:	Unit 1 to Unit 22		
Maximum Occupancy:	132	**Year Of Construction:**	2007

OWNER

Name of Owner:	Body Corporate 400961	**Telephone:**	(09) 633 0830
Contact Person:		**E-mail:**	gale@assetcare.co.nz
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163		

SPECIFIED SYSTEMS

Emergency Warning System for Fire or Other Dangers

Signs Relating to Specified Systems 1-13

Other Fire Systems (Means of Escape) - Final Exits

Other Fire Systems (Means of Escape) - Fire Separations Protecting a Means of Escape

Other Fire Systems (Means of Escape) - Signs for Communicating Information for Evacuation

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**
The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the above, have been fully complied with during the **12 months** prior to the date stated below.

Gale Ward **Signature of Owner's Agent**	**Gale Ward** *AssetCare Limited* **09 633 0830**	**20 June 2016**

ASSETCARE

BUILDING WARRANT OF FITNESS

Form **12**

FORM 12 Section 108, Building Act 2004

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
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Name of Owner:	Body Corporate 400961	**Telephone:**	(09) 633 0830
Contact Person:		**E-mail:**	gale@assetcare.co.nz
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163		

SPECIFIED SYSTEMS

Emergency Warning System for Fire or Other Dangers

Signs Relating to Specified Systems 1-13

Other Fire Systems (Means of Escape) - Final Exits

Other Fire Systems (Means of Escape) - Fire Separations Protecting a Means of Escape

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**

The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of Owner's Agent	**Gale Ward** *AssetCare Limited* **09 633 0830**	**15 June 2016**

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2017
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Emergency Warning System for Fire or Other Dangers

Signed: Liam Moss **Name of IQP:** Liam Moss **IQP Number:** 110182

Company: AssetCare Limited **Date:** 08 June 2016

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2017
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Signs Relating to Specified Systems 1-13
Other Fire Systems (Means of Escape) - Final Exits
Other Fire Systems (Means of Escape) - Fire Separations Protecting a Means of Escape

Signed: _____ **Name of IQP:** Peter Clark **IQP Number:** 110184

Company: AssetCare Limited **Date:** 08 June 2016

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2017
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Signs Relating to Specified Systems 1-13
Other Fire Systems (Means of Escape) - Final Exits
Other Fire Systems (Means of Escape) - Fire Separations Protecting a Means of Escape
Other Fire Systems (Means of Escape) - Signs for Communicating Information for Evacuation

Signed: _____ **Name of IQP:** Peter Clark **IQP Number:** 110184

Company: AssetCare Limited **Date:** 20 June 2016

ASSETCARE

AUCKLAND COUNCIL
15 JUL 2019
16 00
CBD - ALBERT ST

P O Box 24-343, Royal Oak
45 Fairfax Ave, Penrose
Auckland, 1061
Phone: 09 633 0830 Fax: 09 633 0266

9 July 2019

Sulu Enosa
Auckland Council - Southern
Central Building Control - BWOF
Private Bag 92 300
Auckland, 1142

Dear Sulu

Re: Building Warrant of Fitness

Please find enclosed a copy of the renewed Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush, Auckland, 2016 **3909**

If you have any queries please do not hesitate to contact us.

Regards

AssetCare Limited

Gale Ward
Director

ASSETCARE

BUILDING WARRANT OF FITNESS

FORM 12 Section 108, Building Act 2004

Form **12**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24/06/2020
Building Name:		**Fire Hazard Category:**	1
Location of Building within site/block number:		**Intended Life** (if <50yrs) :	
		Used as:	Residential Apartments
Level / Unit #:	Unit 1 to Unit 22		
Maximum Occupancy:	132	**Year Of Construction:**	2007
		Purpose Group:	SR

OWNER

Name of Owner:	Body Corporate 400961	**Telephone:**	(09) 633 0830
Contact Person:		**E-mail:**	gale@assetcare.co.nz
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163		

SPECIFIED SYSTEMS

Emergency Warning System for Fire or Other Dangers

Signs Relating to Specified Systems 1-13

Final Exits

Fire Separations - Protecting the Means of Escape

Signs for Communicating Information for Evacuation

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**
The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of agent on behalf of and with the authority of the owner	**Gale Ward** *AssetCare Limited* **09 633 0830**	**9 July 2019**

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form 12A

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24 June
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Emergency Warning System for Fire or Other Dangers
Type 5 - Pertronic F100

Signed: Liam Moss **Name of IQP:** Liam Moss **IQP Number:** 110182

Company: AssetCare Limited **Date:** 09 July 2019

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24 June
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Signs Relating to Specified Systems 1-13
Final Exits
Fire Separations - Protecting the Means of Escape
Signs for Communicating Information for Evacuation

Signed: _____ **Name of IQP:** Peter Clark **IQP Number:** 110184

Company: AssetCare Limited **Date:** 09 July 2019

RECEIVED
1/06/2022 3:37 pm
Auckland Council

BUILDING WARRANT OF FITNESS

FORM 12 Section 108, Building Act 2004

Form **12**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	WOF20604871
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24/06/2023
Building Name:		**Fire Hazard Category:**	1
Location of Building within site/block number:		**Intended Life** (if <50yrs) **:**	
Level / Unit #:	Unit 1 to Unit 22	**Current, lawfully established, use:**	Residential Apartments
Maximum Occupancy:	132	**Year Of Construction:**	2007
		Purpose Group:	SR

OWNER

Name of Owner: Body Corporate 400961
Mailing Address: c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163
Telephone: N/A

AGENT

Name of Agent: AssetCare Ltd
Mailing Address: PO Box 24343, Royal Oak, Auckland, 1345
Telephone: (09) 633 0830

SPECIFIED SYSTEMS

Emergency Warning System for Fire or Other Dangers
Signs Relating to Specified Systems 1-13
Final Exits
Fire Separations - Protecting the Means of Escape
Signs for Communicating Information for Evacuation

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**
The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **10 months** prior to the date stated below.

Signature of agent on behalf of and with the authority of the owner	**Gale Ward** ***AssetCare Limited*** **09 633 0830**	**1 June 2022**

REPORT IN LIEU OF FORM 12A – CLARIFICATION LETTER

Compliance Schedule: WOF20604871	**BWOF Expiry Date: 24th June**
Street Address of Building: **46 Carlos Drive, Flat Bush, Auckland, 2016**	Legal Description of land where building is located: **LOT 10 DP 352580**
Building Name:	
OWNER	
Name of Owner: **Body Corporate 400961**	Postal Address: **c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163**

Specified System(s)	*Fire Alarm (Type 5 - Pertronic F100)*

Reasons for not completing Form 12A:

A full explanation of why the required inspection, maintenance or reporting procedures have not been carried out for the 12 months prior to the anniversary date of the Compliance Schedule and what corrective action has been undertaken to eliminate any reoccurrence.

August and September 2021 monthly testing could not be completed due to Covid-19 lockdown restrictions.

Annual Survey was completed and the system was found to be operational.

Testing has recommenced as per our service agreement.

A statement that any remedial work on the specified system/ feature has been carried out and that the specified system/ feature is now in a compliant state and fully operational.

No other outstanding faults noted.

A statement that an Independent Qualified Person has been and will continue to be engaged to inspect, maintain and report on the specified feature /system.

AssetCare will continue to carry out the testing of the Fire Alarm as per our service agreement.

A statement that the ongoing inspection, maintenance and reporting procedures will be carried out to permit a 12A certificate to be issued for that specified system/ feature on the next and subsequent anniversaries of the issued Compliance Schedule.

AssetCare will continue to carry out the testing of the Fire Alarm as per our service agreement.

Owner / Agent to confirm above details are correct and sign below:

Owner's / Agent's Signature:	Print Name:	IQP #:	Date:
	Peter Clark	**110184**	**31st May 2022**

REPORT IN LIEU OF FORM 12A – CLARIFICATION LETTER

Compliance Schedule: WOF20604871	**BWOF Expiry Date: 24th June**
Street Address of Building: **46 Carlos Drive, Flat Bush, Auckland, 2016**	Legal Description of land where building is located: **LOT 10 DP 352580**
Building Name:	
OWNER	
Name of Owner: **Body Corporate 400961**	Postal Address: **c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163**

Specified System(s)	*Signs Relating to Specified Systems 1-13, Final Exits, Signs for Communicating Information for Evacuation, Fire Separations - Protecting the Means of Escape*

Reasons for not completing Form 12A:

A full explanation of why the required inspection, maintenance or reporting procedures have not been carried out for the 12 months prior to the anniversary date of the Compliance Schedule and what corrective action has been undertaken to eliminate any reoccurrence.

August and September 2021 monthly inspection could not be completed due to Covid-19 lockdown restrictions.

Building Warrant of Fitness inspection was completed and monthly passive inspections have resumed as per our service agreement.

A statement that any remedial work on the specified system/ feature has been carried out and that the specified system/ feature is now in a compliant state and fully operational.

No other outstanding faults noted.

A statement that an Independent Qualified Person has been and will continue to be engaged to inspect, maintain and report on the specified feature /system.

AssetCare will continue to carry out the monthly passive and annual Building Warrant of Fitness inspections as per our service agreement.

A statement that the ongoing inspection, maintenance and reporting procedures will be carried out to permit a 12A certificate to be issued for that specified system/ feature on the next and subsequent anniversaries of the issued Compliance Schedule.

AssetCare will continue to carry out the monthly passive and annual Building Warrant of Fitness inspections as per our service agreement.

Owner / Agent to confirm above details are correct and sign below:

Owner's / Agent's Signature:	Print Name:	IQP #:	Date:
	Peter Clark	**110184**	**31st May 2022**

Ian Bun

From: Asmira Alic <Asmira@assetcare.co.nz>
Sent: Wednesday, 1 June 2022 3:37 pm
To: RegsupportBWOF
Subject: WOF20604871 - Body Corporate 400961 - 46 Carlos Drive, Flat Bush, Auckland, 2016
Attachments: BWOF.pdf; 12A Certs.pdf

Categories: Dalvinton

Hi,

Please find attached the BWOF for the above site.

I would appreciate if you could confirm once accepted in your system.

Look forward to hearing from you.

Kind Regards,

Asmira Alic
Building Compliance Consultant

ASSETCARE
45 Fairfax Ave, Penrose
Auckland, 1061
DDI: 09 394 1493
Tel: 09 633 0830
Fax: 09 633 0266
Web: www.assetcare.co.nz

Fire System Testing, Maintenance & Installation
Fire Engineering Design | Building Warrant of Fitness
Fire Equipment | IQP Registered

Auckland Council
Te Kaunihera o Tāmaki Makaurau

5 October 2018

Dear Sir or Madam

Building Warrant of Fitness:	WOF20604871
Address:	46 Carlos Drive Flat Bush Auckland 2016
Description:	LOT 10 DP 352580
Area office:	Manukau

Building Warrant of Fitness (BWOF) renewal approved

We refer to the building warrant of fitness for the above property and building and are pleased to advise that the assessment decision to renew your Building Warrant of Fitness has been made.

This decision confirms that the Building Warrant of Fitness has been received and approved for renewal for the 2018 – 2019 period.

We are currently experiencing some delays for reconciliation of BWOF renewal applications and also the finalisation of invoice documentation, we thank you in advance for your patience while we have worked through these and we do apologise for the delays in finalising this matter.

Yours faithfully

Desmond Lee
BWOF Technical Officer
BUILDING CONSENTS – FIELD SURVEYING
09 301 0101

ASSETCARE

P O Box 24-343, Royal Oak
45 Fairfax Ave, Penrose
Auckland, 1061
Phone: 09 633 0830 Fax: 09 633 0266

RECEIVED
04/06/2021 2:16 pm
Auckland Council

27 May 2021

Sulu Enosa
Auckland Council - Southern
Central Building Control - BWOF
Private Bag 92 300
Auckland, 1142

Dear Sulu

Re: Building Warrant of Fitness

Please find enclosed a copy of the renewed Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush, Auckland, 2016 **3909**

If you have any queries please do not hesitate to contact us.

Regards

AssetCare Limited

Gale Ward
Director

ASSETCARE

BUILDING WARRANT OF FITNESS

FORM 12 Section 108, Building Act 2004

Form **12**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24/06/2022
Building Name:		**Fire Hazard Category:**	1
Location of Building within site/block number:		**Intended Life** (If <50yrs) :	
Level / Unit #:	Unit 1 to Unit 22	**Current, lawfully established, use:**	Residential Apartments
Maximum Occupancy:	132	**Year Of Construction:**	2007
		Purpose Group:	SR

OWNER		AGENT	
Name of Owner:	Body Corporate 400961	**Name of Agent:**	AssetCare Ltd
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163	**Mailing Address:**	PO Box 24343, Royal Oak, Auckland, 1345
Telephone:	N/A	**Telephone:**	(09) 633 0830

SPECIFIED SYSTEMS

Emergency Warning System for Fire or Other Dangers

Signs Relating to Specified Systems 1-13

Final Exits

Fire Separations - Protecting the Means of Escape

Signs for Communicating Information for Evacuation

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**
The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **12 months** prior to the date stated below.

Gale Ward		
Signature of agent on behalf of and with the authority of the owner	**Gale Ward** *AssetCare Limited* **09 633 0830**	**27 May 2021**

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24 June
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Emergency Warning System for Fire or Other Dangers
Type 5 - Pertronic F100

Signed: Liam Moss **Name of IQP:** Liam Moss **IQP Number:** 110182

Company: AssetCare Limited **Date:** 27 May 2021

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24 June
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Signs Relating to Specified Systems 1-13
Final Exits
Fire Separations - Protecting the Means of Escape
Signs for Communicating Information for Evacuation

Signed: _____ **Name of IQP:** Peter Clark **IQP Number:** 110184

Company: AssetCare Limited **Date:** 27 May 2021

PO Box 24 343, Royal Oak 1345 | Ph: 09 633 0830 | Fx: 09 633 0266 | www.assetcare.co.nz

CKLAND COUNCIL
2 6 JUN 2020
CBD - ALBERT ST

ASSETCARE

P O Box 24-343, Royal Oak
45 Fairfax Ave, Penrose
Auckland, 1061
Phone: 09 633 0830 Fax: 09 633 0266

18 June 2020

Sulu Enosa
Auckland Council - Southern
Central Building Control - BWOF
Private Bag 92 300
Auckland, 1142

Dear Sulu

Re: Building Warrant of Fitness

Please find enclosed a copy of the renewed Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush, Auckland, 2016 **3909**

If you have any queries please do not hesitate to contact us.

Regards

AssetCare Limited

Gale Ward
Director

ASSETCARE

BUILDING WARRANT OF FITNESS

FORM 12 Section 108, Building Act 2004

Form **12**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24/06/2021
Building Name:		**Fire Hazard Category:**	1
Location of Building within site/block number:		**Intended Life** (if <50yrs) **:**	
Level / Unit #:	Unit 1 to Unit 22	**Current, lawfully established, use:**	Residential Apartments
Maximum Occupancy:	132	**Year Of Construction:**	2007
		Purpose Group:	SR

OWNER / AGENT

Name of Owner:	Body Corporate 400961	**Name of Agent:**	AssetCare Ltd
Contact Person:			
Email:	N/A		
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163	**Mailing Address:**	PO Box 24343, Royal Oak, Auckland, 1345
Telephone:	N/A	**Telephone:**	(09) 633 0830

SPECIFIED SYSTEMS

Emergency Warning System for Fire or Other Dangers

Signs Relating to Specified Systems 1-13

Final Exits

Fire Separations - Protecting the Means of Escape

Signs for Communicating Information for Evacuation

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**

The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of agent on behalf of and with the authority of the owner	**Gale Ward** ***AssetCare Limited*** **09 633 0830**	**18 June 2020**

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24 June
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Emergency Warning System for Fire or Other Dangers
Type 5 - Pertronic F100

Signed: Liam Moss **Name of IQP:** Liam Moss **IQP Number:** 110182

Company: AssetCare Limited **Date:** 18 June 2020

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 352580	**Expiry Date:**	24 June
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Signs Relating to Specified Systems 1-13
Final Exits
Fire Separations - Protecting the Means of Escape
Signs for Communicating Information for Evacuation

Signed: _____ **Name of IQP:** **Peter Clark** **IQP Number:** **110184**

Company: **AssetCare Limited** **Date:** **18 June 2020**

Desmond Lee

From: Desmond Lee on behalf of BWOF
Sent: Friday, 5 October 2018 9:41 a.m.
To: Asmira Alic (Asmira@assetcare.co.nz)
Cc: BWOF
Subject: WOF20604871 (Legacy# 3909) - 46 Carlos Drive Flat Bush Auckland 2016

Follow Up Flag: Follow up
Flag Status: Completed

Good morning Asmira,

Thank you for supplying the renewal paperwork. I confirm that the Building WOF is processed in the Auckland Council system.

Please kindly update your records for the legal description which currently has an additional 5 in the middle. Correct legal description is: LOT 10 DP 352580

Thank you.

Kind regards,

Desmond Lee | Building Wof Officer
Field Surveying | Building Consents
Ph (09) 301 0101 | Fax (09) 301 0100 Extn (46) 9672
Auckland Council, Ground Floor, Graham Street Service Centre, 35 Graham Street, Auckland
Visit our website: www.aucklandcouncil.govt.nz

Please note: To request a copy of a compliance schedule, please send your request through to compliancesschedules@aucklandcouncil.govt.nz

ASSETCARE

AUCKLAND COUNCIL
27 JUN 2018
13:00
CBD - ALBERT ST

C

P O Box 24-343, Royal Oak
45 Fairfax Ave, Penrose
Auckland, 1061
Phone: 09 633 0830 Fax: 09 633 0266

21 June 2018

Sulu Enosa
Auckland Council - Southern
Central Building Control - BWOF
Private Bag 92 300
Auckland, 1142

Dear Sulu

Re: Building Warrant of Fitness

Please find enclosed a copy of the renewed Building Warrant of Fitness for:

46 Carlos Drive, Flat Bush, Auckland, 2016 **3909**

If you have any queries please do not hesitate to contact us.

Regards

AssetCare Limited

Gale Ward
Director

Auckland Council
Te Kaunihera o Tāmaki Makaurau

COMPLIANCE SCHEDULE No. 3909

Issued by Auckland Council 24 June 2008

Section 105, Building Act 2004

Correspondence:
Private Bag 92300
Auckland 1142
New Zealand

Telephone: (09) 301 0101
Facismile: (09) 301 0100
DX CX10032

THE BUILDING

Street address of building:	46 CARLOS DRV FLAT BUSH 2016
Legal description of land where building is located:	LOT 10 DP 352580
Level/Unit No:	UNIT 1 TO UNIT 22
Current lawfully established use:	RESIDENTIAL APARTMENTS
Building Purpose Group	SR
Year first constructed:	2007
Highest fire hazard category for building use:	1
Maximum Occupancy:	6 OCCUPANTS PER UNIT
	132 OCCUPANTS TOTAL
Building Consent No.:	07/1556

THE OWNER

Name of owner:	WORKING CONCEPTS LIMITED
Mailing address:	PO BOX 58395 GREENMOUNT MANUKAU, 2141
Street address/ Registered office:	8 MOANA ROAD DAYS BAY LOWER HUTT, 5013

SPECIFIED SYSTEM

The following specified systems are covered by the compliance schedule for this building:

SS 2/1	- Automatic or Manual Emergency Warning Systems	SS 14/2	- Signs for Specified System(s) 1 - 13
SS 15.2	- Final Exits/Means of Escape	SS 15.3	- Fire separation (as so defined)
SS 15.4	- Signs - Means of Escape		

AMENDMENTS

Revision No.	Revision Date	Revision Comment
2	26/06/2012	Amendment to Compliance Schedule – add SS 15/3 15/4 as per Form 11 – Application for Amendment to Compliance Schedule approval by Building Warrant of Fitness Co-ordinator
1	24/06/2008	ORIGINAL ISSUE OF COMPLIANCE SCHEDULE

Records

Records shall be kept for all the aforementioned systems and features indication:

(i) Date of inspection
(ii) Type of inspection
(iii) Any repairs maintenance found to be done
(iv) Action taken
(v) Systems acceptability as meeting compliance
(vi) Name of person undertaking inspection

Records must be kept for a minimum of 2 years

The compliance schedule is kept: ON THE PREMISES

Signature: .....

Ian McCormick

Position: Manager Building Control

On behalf of: **Auckland Council**

Date: 24 June 2008

Laura Wyllie

From: Litarina Fale on behalf of RegsupportBWOF
Sent: Tuesday, 8 June 2021 6:35 AM
To: Laura Wyllie
Cc: Tricia Selio; Sagisarah Sagatu
Subject: FW: BWOF - 1st lot
Attachments: BWOF_4600897_4_06_2021_1_19_00 p.m..pdf; BWOF_4600898_4_06_2021_1_19_01 p.m..pdf; BWOF_4600899_4_06_2021_1_19_01 p.m..pdf; BWOF_4600900_4_06_2021_1_19_01 p.m..pdf; BWOF_4600901_4_06_2021_1_19_02 p.m..pdf; BWOF_4600902_4_06_2021_1_19_02 p.m..pdf; BWOF_4600903_4_06_2021_1_19_02 p.m..pdf; BWOF_4600904_4_06_2021_1_19_03 p.m..pdf; BWOF_4600905_4_06_2021_1_19_03 p.m..pdf; BWOF_4600906_4_06_2021_1_19_03 p.m..pdf; BWOF_4600907_4_06_2021_1_19_04 p.m..pdf; BWOF_4600908_4_06_2021_1_19_04 p.m..pdf; BWOF_4600909_4_06_2021_1_19_04 p.m..pdf; BWOF_4600910_4_06_2021_1_19_04 p.m..pdf; BWOF_4600911_4_06_2021_1_19_05 p.m..pdf; BWOF_4600912_4_06_2021_1_19_05 p.m..pdf; BWOF_4600887_4_06_2021_1_18_56 p.m..pdf; BWOF_4600888_4_06_2021_1_18_57 p.m..pdf; BWOF_4600889_4_06_2021_1_18_57 p.m..pdf; BWOF_4600890_4_06_2021_1_18_58 p.m..pdf; BWOF_4600891_4_06_2021_1_18_58 p.m..pdf; BWOF_4600892_4_06_2021_1_18_58 p.m..pdf; BWOF_4600893_4_06_2021_1_18_59 p.m..pdf; BWOF_4600894_4_06_2021_1_18_59 p.m..pdf; BWOF_4600895_4_06_2021_1_18_59 p.m..pdf; BWOF_4600896_4_06_2021_1_19_00 p.m..pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning Laura

Hope you had a nice long weekend – 1st lot to process please

Kind regards

From: Desmond Lee <Desmond.Lee@aucklandcouncil.govt.nz> **On Behalf Of** BWOFTechnicalQueries
Sent: Friday, 4 June 2021 2:22 PM
To: RegsupportBWOF <regsupportbwof@aucklandcouncil.govt.nz>
Subject: FW: BWOF

Hi Team,

BWOF renewals for lodgement please.

Thank you.

Kind regards,

Desmond Lee | Building Wof Officer
Field Surveying | Building Consents
Ph (09) 353 9511 | Extn (46) 9511
Auckland Council, Level 5, South, 135 Albert Street, Auckland
Visit our website: www.aucklandcouncil.govt.nz

From: Rochelle Lal <rochelle.lal@aucklandcouncil.govt.nz> **On Behalf Of** Res Mailcentre
Sent: Friday, 4 June 2021 2:16 pm
To: BWOFTechnicalQueries <bwoftechnicalqueries@aucklandcouncil.govt.nz>
Subject: BWOF

Hi,

Attached PDF is a scanned copy of mail received by Auckland Council mail room which has been addressed to yourself or to your team.
We will hold the original mail in mailroom for two month. if you require original copy please request by emailing MailCentre@aucklandcouncil.govt.nz.

Regards

Auckland Council Mailroom

Changes to Mail & Distribution services effective 24th March 2020

Incoming postal Mail:

1. All incoming mails addressed to individuals would be scanned and delivered to their council e-mail ID
2. All mail addressed "Private& Confidential" and "Subscriptions or Advertising material" will be held in mailroom and delivered in next mail run. If your teams require Private and confidential mail to be included in scanned delivery please email MailCentre@aucklandcouncil.govt.nz
3. Physical copies of mail will be held in mailroom for a period of 2months and teams can request physical copy if required.

Personal couriers and parcels:

- We would no longer be delivering personal couriers to staff ongoing.
- Please do not request personal courier deliveries to office address in future.

Outgoing Mail:

Outgoing mail will be collected and lodged with NZ post every working day
For staff working from home who need to post documents please contact mailroom by email on MailCentre@aucklandcouncil.govt.nz,
We have a solution to centralise outgoing mail utilising our print & mailroom facility.

Please refer to article on Kotahi for detail information.
https://acintranet.aklc.govt.nz/EN/News/NewsArticles/Pages/20200731supportservicechanges.aspx

Key Contacts
Ketan Bedekar – Print & Distribution Manager
Rajiv Masrani – Team Leader Mail & Courier Services

WOF 20604871

ASSETCARE

BUILDING WARRANT OF FITNESS

Form 12

FORM 12 Section 108, Building Act 2004

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24/06/2019
Building Name:		**Fire Hazard Category:**	1
Location of Building within site/block number:		**Intended Life** (if <50yrs) **:**	
		Used as:	Residential Apartments
Level / Unit #:	Unit 1 to Unit 22		
Maximum Occupancy:	132	**Year Of Construction:**	2007
		Purpose Group:	SR

OWNER

Name of Owner:	Body Corporate 400961	**Telephone:**	(09) 633 0830
Contact Person:		**E-mail:**	gale@assetcare.co.nz
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163		

SPECIFIED SYSTEMS

Emergency Warning System for Fire or Other Dangers	2.1
Signs Relating to Specified Systems 1-13	14.2
Final Exits	15b
Fire Separations - Protecting the Means of Escape	15c
Signs for Communicating Information for Evacuation	15d.

The Compliance Schedule records are kept at: **AssetCare Ltd, 43 Galway St, Onehunga**
The inspection, maintenance, and reporting procedures of the compliance schedule for the building above, have been fully complied with during the **12 months** prior to the date stated below.

Signature of Owner's Agent	**Gale Ward** *AssetCare Limited* 09 633 0830	21 June 2018

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form **12A**

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24 June
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the ~~12~~ months prior to the date stated below in relation to the following specified systems:

Emergency Warning System for Fire or Other Dangers 2.1
Type 5 - Pertronic F100

Signed: Liam Moss **Name of IQP:** Liam Moss **IQP Number:** 110182

Company: AssetCare Limited **Date:** 21 June 2018

ASSETCARE

CERTIFICATE OF COMPLIANCE

WITH INSPECTION, MAINTENANCE & REPORTING PROCEDURES

FORM 12A Section 108 (3)(c), Building Act 2004

Form 12A

BUILDING

Street Address:	46 Carlos Drive, Flat Bush, Auckland, 2016	**Compliance Schedule #:**	3909
Legal Description:	LOT 10 DP 3525580	**Expiry Date:**	24 June
Building Name:			
Location of Building within site/block number:			
Level / Unit #:	Unit 1 to Unit 22		

OWNER

Name of Owner:	Body Corporate 400961
Contact Person:	
Mailing Address:	c/- Khoo and Associates Limited, PO Box 64-086, Botany, AUCKLAND, 2163

COMPLIANCE

The inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with during the 12 months prior to the date stated below in relation to the following specified systems:

Signs Relating to Specified Systems 1-13 14:2
Final Exits 15b
Fire Separations - Protecting the Means of Escape 15c
Signs for Communicating Information for Evacuation 15d

Signed: _____ **Name of IQP:** Peter Clark **IQP Number:** 110184

Company: AssetCare Limited **Date:** 21 June 2018

10 May 2018

Body Corporate 400961
C/O Kho & Associates
PO Box 64086
Botany
Auckland 2163

Dear Sir/Madam

Compliance schedule number:	WOF20604871
Address:	46 Carlos Drive Flat Bush Auckland 2016
Expiry date:	24 June 2018
Usage:	RESIDENTIAL APARTMENTS
Area office:	Manukau

Building Warrant of Fitness

This letter serves as a reminder that the Building Warrant of Fitness for the above building will expire as indicated above and requires your prompt attention prior to this date. Failure to provide a Building Warrant of Fitness places the building owner in breach of the Building Act 2004 (the Act).

Owners should engage an independent qualified person (IQP) during the year (as required by the Building Act) to confirm that specified systems meet the performance requirements of the Compliance Schedule.

Council does not provide templates for a Building Warrant of Fitness; please refer to the Building (Forms) Regulations 2004, or obtain a copy from your IQP.

Under s.108 of the Act, it is the owner's responsibility to:

- provide Council with a copy of the renewed Building Warrant of Fitness (Form 12) on the anniversary date of the issue of the Compliance Schedule together with all certification from IQP's (using Form 12A) indicating that the performance standards for the specified systems have been fully complied with for the previous 12 months; and
- ensure that a copy of the Building Warrant of Fitness is displayed in a position where the users of the building have ready access

If you have any further queries regarding this matter, please contact the undersigned on 09 301 0101 or email quoting the above compliance schedule number.

Yours faithfully

Sulu Enosa
Technical B-Wof Officer
BUILDING CONTROL
Email: SULU.ENOSA@AUCKLANDCOUNCIL.GOVT.NZ

3 July 2017

Working Concepts Limited
Po Box 27029
Marion Square
Wellington 6141

Dear Sir/Madam

Compliance schedule number:	WOF20604871
Address:	46 Carlos Drive Flat Bush Auckland 2016
Expiry date:	24 June 2017
Usage:	
Area office:	Manukau

Building Warrant of Fitness

This letter serves as a reminder that the Building Warrant of Fitness for the above building will expire as indicated above and requires your prompt attention prior to this date. Failure to provide a Building Warrant of Fitness places the building owner in breach of the Building Act 2004 (the Act).

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- ensure that a copy of the Building Warrant of Fitness is displayed in a position where the users of the building have ready access

If you have any further queries regarding this matter, please contact the undersigned on 09 301 0101 or email quoting the above compliance schedule number.

Yours faithfully

Sulu Enosa
Technical B-Wof Officer
BUILDING CONTROL
Email: SULU.ENOSA@AUCKLANDCOUNCIL.GOVT.NZ

27 May 2022

Working Concepts Limited
Po Box 27029
Marion Square
Wellington 6141

Dear Sir or Madam

Compliance schedule number:	WOF20604871
Address:	46 Carlos Drive Flat Bush Auckland 2016
Expiry Date:	24 June 2022
Further details of building (if applicable):	RESIDENTIAL APARTMENTS

Building Warrant of Fitness

This letter serves as a reminder that the Building Warrant of Fitness for the above building will expire as indicated above and requires your prompt attention prior to this date. Failure to provide a Building Warrant of Fitness places the building owner in breach of the Building Act 2004 (the Act).

Owners should engage an independent qualified person (IQP) during the year (as required by the Building Act) to confirm that specified systems meet the performance requirements of the Compliance Schedule.

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Under s.108 of the Act, it is the owner's responsibility to:

1. provide Council with a copy of the renewed Building Warrant of Fitness (Form 12) on the anniversary date of the issue of the Compliance Schedule together with all certification from IQPs (using Form 12A) indicating that the performance standards for the specified systems have been fully complied with for the previous 12 months; and

2. ensure that a copy of the Building Warrant of Fitness is displayed in a position where the users of the building have ready access.

If you have any further queries regarding this matter, please contact the BWOF team on (09) 301 0101 or email quoting the above compliance schedule number.

Yours faithfully

The Building Warrants of Fitness Team
BUILDING CONSENTS
Email: bwoftechnicalqueries@aucklandcouncil.govt.nz

29 June 2018

Body Corporate 400961
C/O Kho & Associates
PO Box 64086
Botany
Auckland 2163

Dear Sir/Madam

Compliance schedule number:	WOF20604871
Address:	46 Carlos Drive Flat Bush Auckland 2016
Expiry date:	24 June 2018
Usage:	RESIDENTIAL APARTMENTS
Area office:	Manukau

Building Warrant of Fitness

The above property is now without a current Building Warrant of Fitness. Failing to renew the Building Warrant of Fitness and provide Council with a copy of this notice and supporting documents by the expiry date places the building owner in breach of the Building Act 2004 (the Act) and constitutes an offence under s.108.

The Act requires the owner to:

- provide Council with a copy of the renewed Building Warrant of Fitness (Form 12) on the anniversary date of the issue of the Compliance Schedule together with all certification from IQP's (using Form 12A) indicating that the performance standards for the specified systems have been fully complied with for the previous 12 months; and
- ensure that a copy of the Building Warrant of Fitness is displayed in a position where the users of the building have ready access

Please treat this matter with some urgency and provide the above documentation.

If you have any further queries regarding this matter, please contact the undersigned on 09 301 0101 or email quoting the above compliance schedule number.

Yours faithfully

Sulu Enosa
Technical B-Wof Officer
BUILDING CONTROL
Email: SULU.ENOSA@AUCKLANDCOUNCIL.GOVT.NZ

3 July 2017

Working Concepts Limited
Po Box 27029
Marion Square
Wellington 6141

Dear Sir/Madam

Compliance schedule number:	WOF20604871
Address:	46 Carlos Drive Flat Bush Auckland 2016
Expiry date:	24 June 2017
Usage:	
Area office:	Manukau

Building Warrant of Fitness

The above property is now without a current Building Warrant of Fitness. Failing to renew the Building Warrant of Fitness and provide Council with a copy of this notice and supporting documents by the expiry date places the building owner in breach of the Building Act 2004 (the Act) and constitutes an offence under s.108.

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- ensure that a copy of the Building Warrant of Fitness is displayed in a position where the users of the building have ready access

Please treat this matter with some urgency and provide the above documentation.

If you have any further queries regarding this matter, please contact the undersigned on 09 301 0101 or email quoting the above compliance schedule number.

Yours faithfully

Sulu Enosa
Technical B-Wof Officer
BUILDING CONTROL
Email: SULU.ENOSA@AUCKLANDCOUNCIL.GOVT.NZ