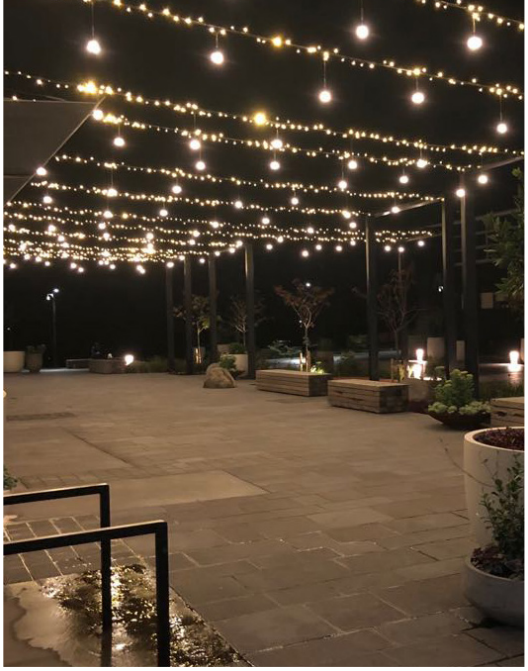
LAND INFORMATION MEMORANDUM

LIM REPORT

lims@hcc.govt.nz

Hamilton City Council
Te kaunihera o Kirikiriroa


Information in a LIM includes:

Building Consents Licenses and Requisitions

- Building Permits/Consents issued on the property.
- Any outstanding works, Code Compliance Certificates for consents issued since 1993.
- If a compliance schedule has been issued for the building and when the related Warrant of Fitness expires.
- Any other notice, order, or requisition affecting the land or any building on the land previously issued by Council.
- The status of the land in relation to the contamination of soil by hazardous substances.
- Whether the property has a licence relating to the sale of food, the sale of liquor or other licence (under Health Act 1956).

Rates

- Current rating valuation.
- Annual rates levy.
- Penalties charged during the year.
- Outstanding amounts for current instalment period.
- Rates arrears.
- Water charges (commercial only).

District Plan information

- Zoning of the property as defined by Operative and/or Proposed District Plans.
- Environmental Protection Overlay.
- Whether the site is listed as a Heritage Item, Heritage Precinct or Archaeological, Historic or Cultural.
- Registered historic and notable trees on the site.
- All Resource Consents approved in relation to property.
- Notified Resource Consents in process at the subject site and adjoining properties.

Public works

- Any proposed public works that may directly affect the property, where it is known.

Drainage/water

- Information on public stormwater and wastewater pipelines on the property as shown on Council's log plans.
- Water toby location.

Special features

- Such as erosion, subsidence, filling, flooding avulsion, falling debris, slippage, alluvion, or inundation and soil report in relation to the property, where Council has such information available.

Information NOT included in a LIM

- For information in relation to State Highways please contact New Zealand Transport Agency.
- Plans for and/or activities for any parks and/or reserves in the vicinity of the property – contact the Parks and Open Spaces Unit on 07 838 6622.
- Hamilton City Council does not hold any information concerning electricity and gas and telephone connections. Information may be obtained from the relevant companies.
- Non-notified Resource Consent applications in process on the subject site.
- Any decisions on adjacent property.

LIM Report

Hamilton City Council
Te kaunihera o Kirikiriroa

Property Address:	9 Dingwall Court Hamilton
Legal Description:	Lot 173 DP S81457
Applicant:	Jane Maree Pike
Date of Issue:	02 May 2025

Thank you for your application for a Land Information Memorandum on the above property. This report is a result of a detailed clerical search of Hamilton City Council's records.

Please note, no physical inspections have been carried out in relation to your request. If you require a physical inspection of the property, you will need to obtain the services of a qualified person from the private sector.

The information contained in this report is given without prejudice and is valid at the date of issue only. Hamilton City Council reserves the right to serve requisitions at any time should the need become apparent.

Customer Services - LIMs
260 Anglesea Street, Hamilton
Phone 07 838 6699
Email: lims2@hcc.govt.nz

PLEASE NOTE:
This Land Information Memorandum has been prepared for the purposes of Section 44A of the Local Government Official Information and Meetings Act 1987 and contains all the relevant information relating to the land held by Council. It is based on a search of Council's property records and there may be other information relating to the land which has not been specifically recorded against this property or known to the researcher. Other organisations may hold information relevant to this property, for example Waikato Regional Council and network utilities companies for electricity, gas and telephone information.

City Waters Information

Public Water & Waste Services:

A water connection is showing as serving the property.

The water supply is logged as being 4.5m from the left hand boundary.

A slotted storm water pipeline is located on the property right of way. This is installed for land drainage of low lying or wet areas, and not to be used for house connections.

A stormwater connection is shown on the log plan as serving the property.

A public stormwater pipeline is shown as passing through the right of way to the property.

A stormwater manhole number SWK19022 is shown on the log plan as located on the right of way to the property.

A wastewater connection is shown on the log plan as serving the property.

A public sanitary sewer pipeline is shown as passing through the right of way to the property.

A sanitary manhole number WWK19031 is shown on the log plan as located on the right of way to the property.

Refuse Collection Day: Wednesday

Trade Waste:

No information in relation to the discharge of Trade Waste are currently held in respect to this property/business premises.

Inundation/Flooding:

Flood data relevant to this property is shown on the map.

This flood data is the best available information Council holds for this property at this time.

People with an interest in the property should note the limitations below and obtain independent advice from a suitably qualified professional as to the suitability of the land for their purposes.

Our flood mapping information is updated from time to time and these updates can be found on the Floodviewer tool http://hamilton.govt.nz/floodviewer, along with other flood types and rainfall scenarios, full definitions of these flood types, and supporting information.

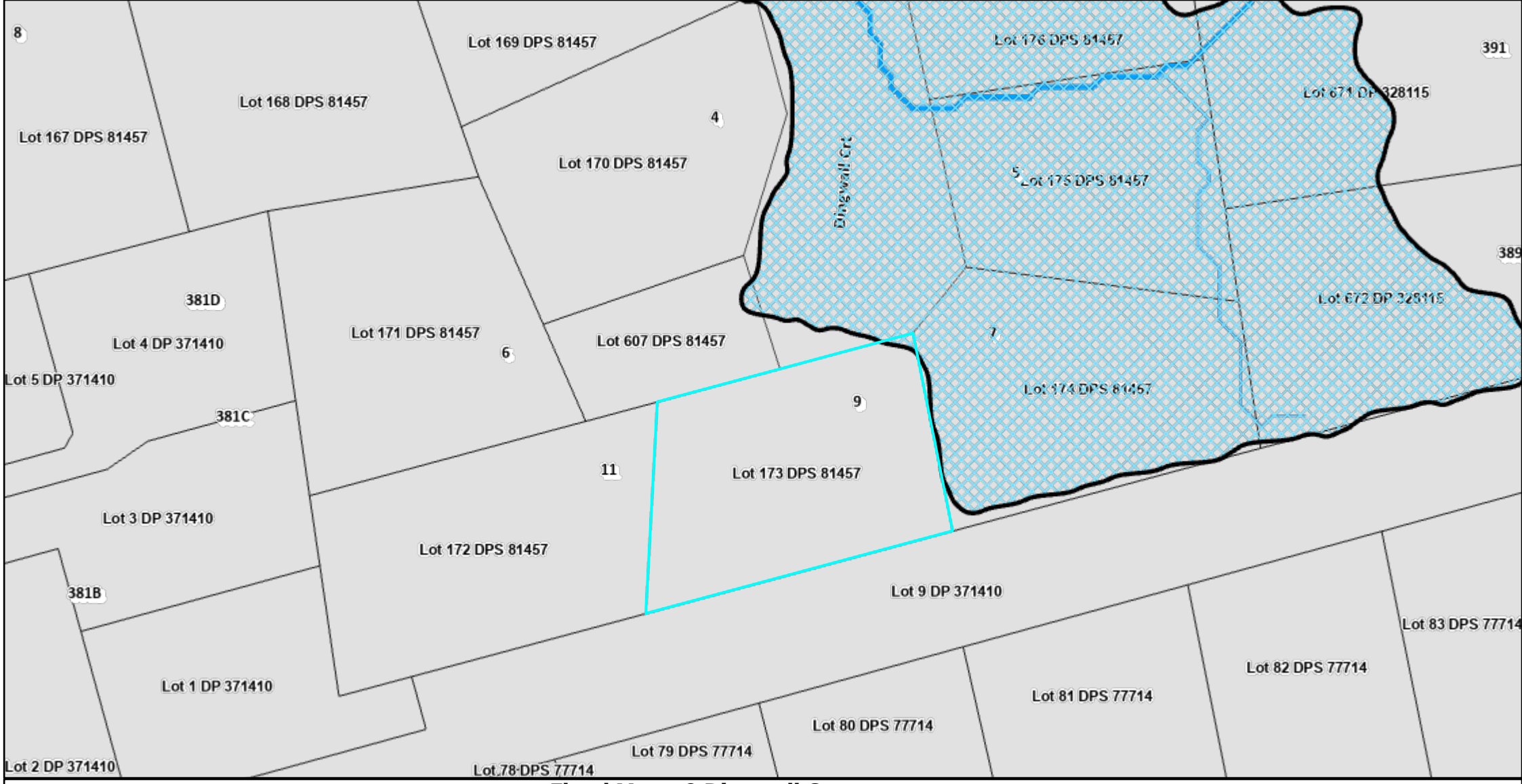
Our flood data is based on models that vary in age and levels of accuracy, which means the current data may have some limitations that affect its suitability for use for building or development design.

Properties in an earthworks area may have had changes made to the land after flood modelling was completed, which means the mapped flood hazards and extents may differ from what is shown.

Prospective purchasers should note the limitations disclosed above and obtain independent advice from a suitably qualified professional as to the suitability of the land for their purposes.

Special Features: None recorded for this property **(**Information on slips etc)

Please Note: Levels, locations and dimensions of drainage/water works shown on plans may not be accurate, due to circumstances not notified to Council. A physical check should be made on all levels, locations and dimensions before starting design or works.



Flood Map - 9 Dingwall Court

Flood Depressions 100yr Rainfall

Earthworks Area

100-year Flood Hazard

Low

Medium

High

100-year Flood Extent

100-year Flood Extent

Overland Flowpaths 2019 - Category

Major

Moderate

Minor

No Flood Data Mask

Flood data relevant to this property is shown on the map. This flood data is the best available information Council holds for this property at this time. People with an interest in the property should note the limitations below and obtain independent advice from a suitably qualified professional as to the suitability of the land for their purposes. Our flood mapping information is updated from time to time and these updates can be found on the Floodviewer tool (hamilton.govt.nz/floodviewer), along with other flood types and rainfall scenarios, full definitions of these flood types, and supporting information. Our flood data is based on models that vary in age and levels of accuracy, which means the current data may have some limitations that affect its suitability for use for building or development design. Properties in an earthworks area may have had changes made to the land after flood modelling was completed, which means the mapped flood hazards and extents may differ from what is shown.

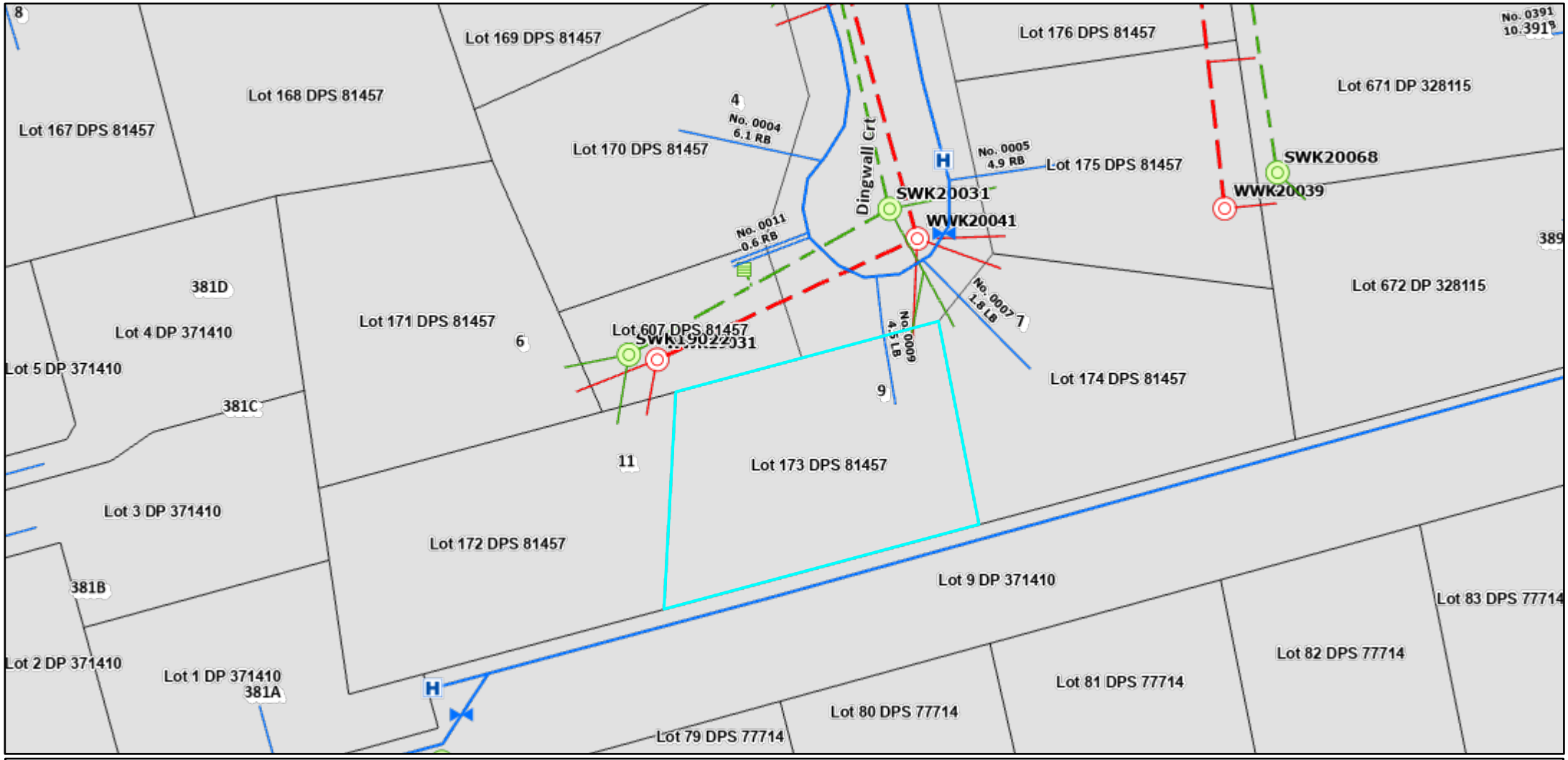
Hamilton City Council
Te kaunihera o Kirikiriroa

Printed from the HCC CityView

Map Printed on: 5/2/2025

N

0 0 0.01 0.01 Kilometers



LEGEND

Water Services

- Closed WS Valve
- Open WS Valve
- WS Hydrant
- WS Meter
- WS Service Line Valve
- WS Service Line/ Connection
- WS End of Pipe
- WS Main Offset
- WS Main Cross-over Jn
- WS Main Type
  - Bulk
  - Trunk
  - Main
  - Rider
- Other
- WS Main Abandoned
- WS Storage Unit
- WS Preliminary Plans

Wastewater Services

- WW Pump Station
- WW Manhole
- WW Abandoned Manhole
- WW Node
- WW Service Line
- WW Main by Size
  - < 150 mm
  - 150 - 199 mm
  - 200 - 299 mm
  - 300 - 374 mm
  - 375 - 600 mm
  - 601 - 1799 mm
  - 1800+ mm
- WW Main Flow Direction
- Main
- Aerial Main
- Rising Main
- Abandoned Main
- WW Preliminary Plans

Stormwater Services

- SW Manhole
- SW Abandoned Manhole
- SW Catchpit
- SW Catchpit Lead
- SW Node
- SW Inlet
- SW Outlet
- SW Soakage Trench
- SW Channel
- SW Culvert
- SW Subsoil Drain
- SW Service Line
- SW Main by Size
  - < 300 mm
  - 300 - 450 mm
  - 451 - 600 mm
  - 601 - 750 mm
  - 751 - 900 mm
  - 901 - 1050 mm
  - 1051 - 1250 mm
  - > 1250 mm
- Main
- Abandoned Main
- SW Main Flow Direction
- Planted SW Device
- SW Preliminary Plans

3 Waters - 9 Dingwall Court

Printed from the HCC CityView system

Print Date:02-05-2025

Scale 1:499

N

Building Information

With effect from 31st March 2005 Section 363 of the Building Act 2004 makes it an offence, in respect of any building intended for public use, to use or permit a person to use any part of that building that is affected by building work for which no building consent was obtained, or where a building consent was obtained, but no code compliance certificate was issued.

Building Consents on File:

Year	Number	Description	Issued	Code Compliance Certificate
2000	407	New Dwelling and Attached Garage	6/03/2000	13/07/2000

Plumbing and drainage is incorporated in the above consent.

Please Note: Building, Plumbing and Drainage Permits prior to 1993 will not have been issued with a Code Compliance Certificate, as this requirement did not come into effect until 1993.

Building Consents issued by Private Certifier: None recorded for this property.

Building Exemptions on file: None recorded for this property.

Certificate of Acceptance on file: None recorded for this property.

Notices and Requisitions: None recorded for this property.

Information provided to Council under section 362T(2) of the Building Act 2004:
None recorded for this property.

Information held under Section 124 of the Weathertight Homes Resolution Services Act 2006:
None recorded for this property.

General Information: None recorded for this property.

Record of Fill: Copies attached ☑

Legal File / Bonds / Encumbrances: None recorded for this property.

Earthquake Risk: None recorded for this property.

Wind Zone: Low.

Swimming Pool: None recorded for this property.

Building Warrant of Fitness: Not applicable to residential properties.

Important to Note:

In line with Local Government Official Information and Meetings Act 1987 as of October 2015, we no longer included building consent or building/drainage permit plans within the LIM report. If you require more information, please contact Customer Services Centre at Hamilton City Council.

Prior to the Building Act 1991, Council was not required to keep detailed records for building permits issued. As such, limited information is held and, in some cases, we are unable to identify building permits for particular properties.

The information provided in this application is in accordance with Section 44A (2) of the Local Government Official Information and Meetings Act 1987 (LGOIMA). In addition, Hamilton City Council informs the applicant that historic information (limited to basic consent details- no plans held) may, or may not, be contained in the 'Historic Building Register'. These registers have been archived at the Central Library (Garden Place) and are open for inspection in accordance with sec. 15 (1) (a) of the LGOIMA 1987.

If work has been carried out without a building consent:

With the introduction of the Building Act 2004, the service of providing what has been commonly known as "Safe and Sanitary" inspection has been discontinued. There is no longer the ability to make an application to Council for this service.

The Building Act 2004 allows for any person to apply for a "Certificate of Acceptance" for any work that has been completed without a building consent. This is however only applicable to work carried out after the inception of the Building Act 1991 (1 July 1992). A "Certificate of Acceptance" must be applied for on the appropriate form.

For any work completed without a building consent and prior to 1 July 1992 there is no process available through Council for acceptance or qualification of this work. Where such building work is the subject of a condition for a building report in a sale and purchase agreement, then you will need to obtain the services of a qualified person from the private sector.

Council is bound by the Building Act 2004 and has a role to ensure the health and safety of the public with regard to buildings is always maintained. If you are aware of a situation that you believe compromises the health and safety of building users, then you need to refer the matter to Council at the earliest date.

For access to forms and further information, please visit our website: www.buildwaikato.co.nz

Code Compliance Certificate No: 407/2000

Hamilton City Council
Te kaunihera o Kirikiriroa

Private Bag 3010
Hamilton
New Zealand

Phone 07 838 6699
www.hcc.govt.nz

Building Consent No. 407/2000
Section 43(3), Building Act 1991
Issued by the Hamilton City Council

Date:	13 July 2000
Applicant:	Ms E Percy
Mailing Address:	270 Bankwood Road HAMILTON 2001
Project	
Application Description:	New Dwelling And Attachd Garage
Stage:	
Work Type:	New Construction
Intended Life:	>50 years
Property	
Address:	9 Dingwall Crescent Hamilton 2001
Property Reference	Lot 173 DP S81457

This is:

[X] A final code compliance certificate issued in respect of the building work under the above building consent.

[ ] An interim code compliance certificate in respect of part only, as specified in the attached particulars, of the building work under the above building consent.

[ ] This Certificate is issued subject to the conditions specified in the attached ..... page(s) headed "Conditions of Code Compliance Certificate No. 407/2000" (being this certificate).

Signed for and on behalf of the Hamilton City Council:

PETER MARTENS
NZCB
BUILDING INSPECTOR
CO-ORDINATOR

Name: 13/7/2000
Position: Authorised Officer
Building Control Unit

WORLEY
CONSULTANTS

Worley Consultants Limited
240 Tristram Street
PO Box 434
Hamilton New Zealand
Telephone 64-7-834 8980
Fax 64-7-834 8981

Please reply to: Colin Jacobson
Our reference: 51 904 97\ckl02\cbj

C 38

8 May 1998

Callum Brae Ltd.
c/- CKL Surveys Ltd
PO Box 171
HAMILTON

Attention: Rod Keucke

Dear Sir

CALLUM BRAE SUBDIVISION STAGE II : NZS 4404 APPENDIX B CERTIFICATION

In accordance with your instructions, a soils investigation of the Callum Brae Subdivision, Stage II, has been undertaken so that a NZS 4404 Appendix B Certificate for the subdivision can be issued (ie confirming the land is suitable for building development).

1.0 Background

The Callum Brae Subdivision, Stage II, consists of 79 residential Lots assessed off the Callum Brae Stage 1 subdivision and was developed by Callum Brae Ltd. in late 1997/early 1998. The land on which the subdivision is constructed was previously flat to low-lying pasture land.

The Lots on the south-western side of the subdivision are adjacent to the site of the old Hamilton City Council Rototuna landfill which was in operation from 1974 to 1985. In 1985 the landfill area was capped and the site of the old landfill will now form a recreational reserve within the Callum Brae subdivision development.

The Callum Brae Stage II subdivision is bounded by the existing Callum Brae Stage 1 subdivision to the south, future residential development to the north, north-west and east and the recreational reserve to the west.

The legal description of the proposed subdivision is Lots 2, 4-6 & Pts 7-9 DPS 15280 and the general layout of the development is as shown on Plan 96417 prepared by CKL Surveys Ltd.

2.0 Site Topography and Subdivision Earthworks

The ground levels across the subdivision can be classified as flat to low-lying although the ground level does rise slightly on the northern side of the subdivision.

Prior to development of the subdivision, there were isolated slight depressions across the site and a network of shallow v-drains situated adjacent to the eastern boundary of the old landfill site and along the alignment of some of the fence lines which bisected the site.
These low areas and open drains were filled as the subdivision was developed and this filling was controlled and completed in accordance with NZS 4431. Details on the fill areas are discussed in section 6.0 below.

In addition to the fill areas noted above, the balance of the earthworks undertaken during the construction of the subdivision consisted of excavations to form the underground services and the construction of the road pavements.

3.0 Soils Investigation

To provide an indication of the subsoil conditions on the Callum Brae II subdivision, a total of 21 scala penetrometer tests and 12 hand augured boreholes (all to a depth of 2.4m below ground level) were undertaken at the locations shown on the attached site plan. These soil tests were undertaken in March 1997 (ie. before the subdivision was developed) but are directly applicable to this report as there was only minor filling on 4 of the lots.

The borehole results show the subsoils beneath the subdivision consist generally of 200 to 400mm of topsoil overlying alternating layers of moist, firm silt and fine/medium sands to a depth of at least 2.4m below ground level.

In some of the boreholes, thin silty clay or clay lenses were encountered as distinct bands within the materials noted above.

No water table was reached in any of the bore holes so the ground water table at the time of testing (late March 1997) must be at least 2.4m below ground level. However, the soils became noticeably wetter with increasing depth.

From our limited subsoil investigation (one borehole on approximately every 5th lot) it appears there has been no filling placed on subdivision site by the previous land owner other than some crushed metal placed on the topsoil layer on Lot 200 which was probably part of an old stock race system.

The scala penetrometer test results show the density and bearing capacity of the subsoils across the subdivision are generally sufficient to provide the 100 kPa allowable soil bearing pressure required for dwellings to be constructed in accordance with NZS 3604, "Light Timber Framed Buildings not requiring specific design", with the exception of the areas in the vicinity of the Lots described below.

The subsoils on Lots 169 and 191 have insufficient bearing capacity down to a depth of between 1.5m to 1.8m below ground level and Lots 163, 166, 172, 182, 187, 209, 219, and 226 have a layer of slightly soft soils, approximately 300mm thick, at a depth varying between 1200mm to 2400mm below ground level.

4.0 Foundation Recommendations

From the scala penetrometer test results, the required 100 kPa allowable soil bearing capacity is generally available on most of the Lots, once the upper 200mm to 400mm thick topsoil layer is removed, but dwelling foundations in the vicinity of Lots 169 and 191 will require over-excavation to a depth of between 1.5m to 1.8m below ground to remove the soft soil layers.

We therefore recommend that excavation and subsequent backfilling with an imported granular fill material would be the preferred foundation system for a typical concrete floor slab dwelling constructed on the Callum Brae Stage II subdivision.

In addition, on eight of the lots tested, (Lots 163, 166, 172, 182, 187, 209, 219, and 226) it was noted there were 300mm thick layers of softer materials at a depth of between 1.2m to 2.4m below ground level. However, as these lenses are relatively deep and are only slightly below the minimum density required for NZS 3604, we do not expect any excavation of these layers will be required unless scala penetrometers on the lots not tested in our preliminary investigation, indicates that the layer of softer material is closer to the ground surface.

5.0 Former HCC Landfill Site

The old Hamilton City Council Rototuna landfill site is on the western boundary of the subdivision. The landfill site will not form part of the **residential** development and will be left as a recreational reserve.

Under the Resource Management Act 1991, the owners of a closed landfill site (in this case the HCC) are responsible for the maintenance of the landfill site and any possible discharges from the closed landfill site. Discharges in this case could be landfill gases from the buried rubbish that can enter either the atmosphere or migrate laterally to the adjacent subdivision and/or leachate from the old landfill site which could contaminate groundwater in the vicinity.

The landfill was operated by the HCC from 1974 to 1985 using the standard practices of the day and hazardous materials were prohibited. We consider that there will be no detrimental impact on the adjacent subdivision from the closed landfill and can confirm the HCC have installed a cut-off drain along the eastern boundary of the old landfill site to intercept and collect any gas and/or leachate discharges from the site.

The HCC have advised they accept full responsibility for the on-going monitoring and containment measures adopted for the closed landfill site and the implementation of any subsequent containment measures if required.

6.0 Fill Areas

The filling undertaken during the construction of the Callum Brae Stage II subdivision consisted of the following:

- Filling of the shallow localised depressions on lot 181 and lots 186 to 188. The maximum depth of filling was approximately 1200mm.
- Filling of the shallow (900mm deep) farm drains which crossed through parts of the subdivision. The exact location of the filled drains is detailed on the as-built subdivision plans.

All of the fill areas were stripped of all vegetation, topsoil and soft spots prior to filling and the subgrade was then inspected and tested before the fill materials were placed.

All filling used on the subdivision consisted of a mixture of silts and fine/medium sands excavated from the road pavements. The fill material was placed, compacted, tested and certified in accordance with NZS 4431:1989 "Code of Practice for Earth Fill For Residential Development".

7.0 Summary

The Callum Brae Stage II subdivision will consist of 79 residential Lots. The legal description of the proposed subdivision is Lots 2, 4-6 & Pts 7-9 DPS 15280. The scope of development is as shown on the scheme plan 96417 prepared by CKL Surveys Ltd.

A soils and site investigation has been undertaken to confirm whether the subdivision is suitable for residential type building development in accordance with NZS 3604. Based on the results from this investigation, we can advise the requirements of Appendix B NZS 4404 are satisfied subject to the following:

(i) Generally, the subsoils within the proposed subdivision have sufficient density and bearing capacity for standard residential type building foundations. However, on some lots, excavation and sand filling will be needed to improve the bearing capacity of the near-surface subsoils.

(ii) The adjacent former HCC landfill site has been investigated by the HCC to determine the potential for be landfill gases and/or leachate from the buried rubbish to enter either the atmosphere or migrate laterally to the adjacent subdivision. As a result of this investigation the HCC have recently installed a venting/containment/control system on the eastern boundary of the old land fill to prevent discharges into the subdivision. The old landfill site will now form a recreational reserve within the Callum Brae subdivision development.

(iii) The isolated low-lying areas on lot 181 and lots 186 to 188 plus the shallow open drains have been control filled in accordance with NZS 4431, with all vegetation and topsoil stripped from the areas prior to being filled, and any weak materials appropriately dealt with.

An Appendix B NZS 4404 certificate stating the subdivision is suitable for residential building development is attached.

8.0 Limitations

The recommendations and options contained in this report are based upon data from a limited number of scala penetrometer tests and boreholes as described above. Inferences about the nature and continuity of the subsoils away from boreholes are considered reasonable, but cannot be guaranteed.

This report has been prepared for the particular project described in the owner's brief to us and no responsibility is accepted for the use of any part of this report in other contexts or for any other purposes.

Yours faithfully
WORLEY CONSULTANTS LIMITED

C. B. Jacobson

COLIN JACOBSON
CIVIL/STRUCTURAL ENGINEER

Enclosures:

1. Site Plan
2. Soil Test Results

APPENDIX B

To: The ~~Borough~~ / City / ~~County~~ Engineer

Hamilton City Council

Private Bag, Hamilton

STATEMENT OF PROFESSIONAL OPINION AS TO SUITABILITY OF LAND FOR BUILDING DEVELOPMENT

Subdivision Callum Brae Stage II

Owner Callum Brae Ltd

Location Hukanui Road, Hamilton

I Colin Barry Jacobson of Worley Consultants Limited
(Full Name)

PO Box 434, Hamilton
(Name and Address of Firm)

Hereby confirm that:

1. I am a Registered Engineer experienced in the field of soils engineering and was retained by the subdividing owner as the Soils Engineer on the above subdivision.

2. The extent of my inspections during construction, and the results of all tests carried out are described in my report dated May 1998.

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

* (a) The earth fills shown on the attached Plan No. 96417 have been placed in compliance with the Code of Practice of the Hamilton City Council.

* (b) The completed works give due regard to land slope and foundation stability considerations.

* (c) The filled ground is suitable for the erection thereon of residential buildings not requiring specific design in terms of NZS 3604 and related documents:

(i) .....

(ii) .....

(iii) .....

* (d) The original ground not affected by filling is suitable for the erection thereon of residential buildings not requiring specific design in terms of NZS 3604 and related documents providing that:

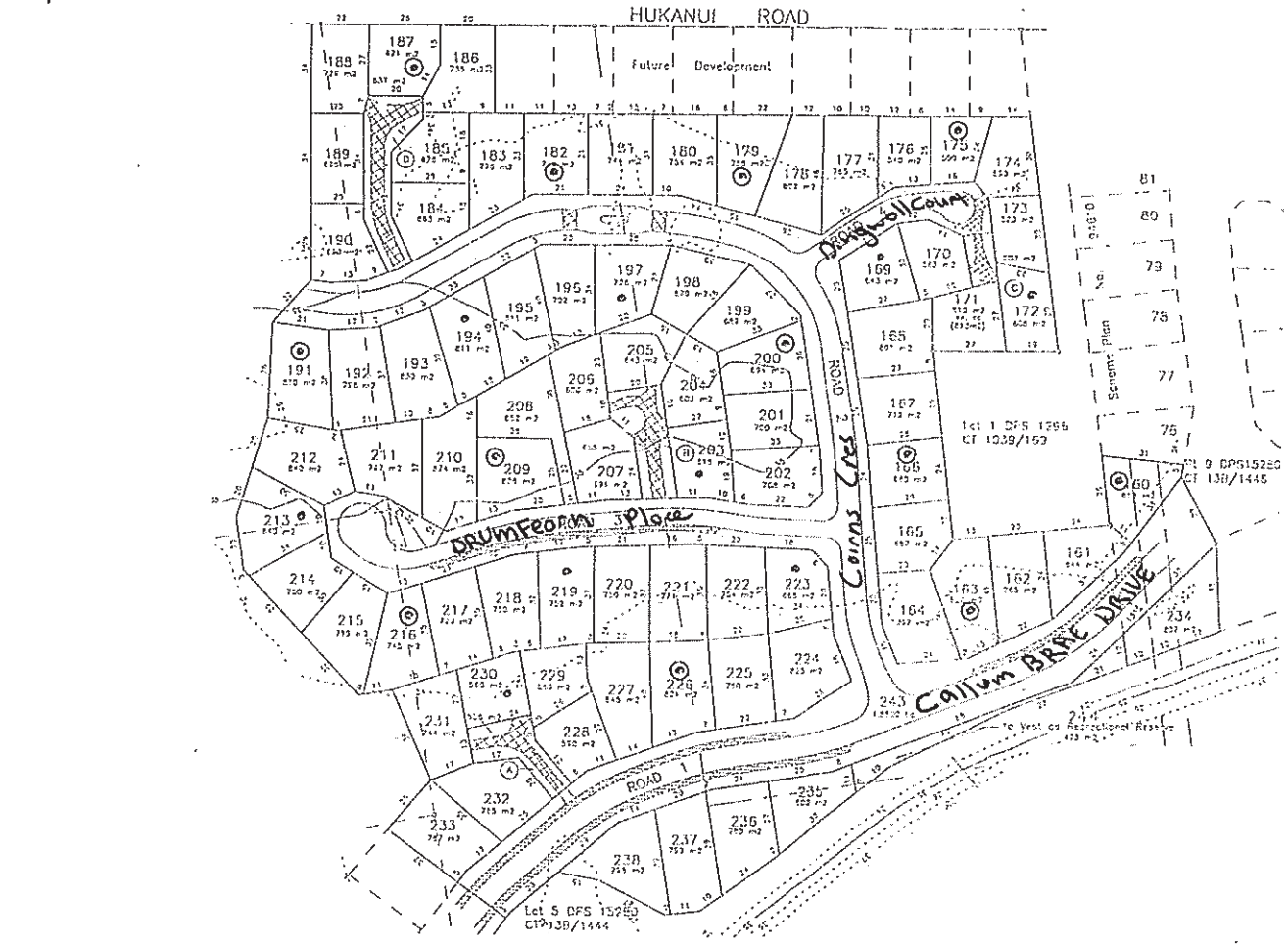
(i) Subsoil testing in accordance with NZS 3604 Appendix C is carried out on each lot and the foundations designed accordingly.

(ii) .....

(iii) .....

4. This professional opinion is furnished to the Council and the subdividing owner 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 dwelling.

Signed: C. B. Jacobson Date: 8 May 1998



KEY

Scala penetrometer Tests •
Scala Penetrometer and Hand Auger Tests ⊙

SOIL INVESTIGATION LOCATION PLAN

NOTES

NO	DESCRIPTION	DATE	CH'KD

REVISIONS

CONTRACTOR MUST VERIFY ALL DIMENSIONS ON THE JOB BEFORE COMMENCING WORK

DESIGN CJT	DATE May 1998	COPYRIGHT © WORLEY CONSULTANTS LTD
DRAWN CJT		
CHECKED		
APPROVED		
DATE PRINTED		

WORLEY

WORLEY GILLMAN LIMITED

Callum Brae Ltd.

SHEET TITLE

Callum Brae
Subdivision Stage II

0 10 20 30 40mm

ORIGINAL SCALE

DRAWING NO

51.904.97

JOB NO

Sheet 202

REV

WORLEY

WORLEY CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

PROJECT : Callum Brae - Stage 2
CLIENT : Paramount Developments Ltd
LOCATION : As shown on plan

JOB NO.: 51 904 97
DATE: 30 / 03 / 97

TEST SPEC
NZS 4402, Test 6.5.2 : 1988.
Determination of the penetration of a soil.
Hand method using a dynamic cone penetrometer

TEST RESULTS

LOT No. / DEPTH (m)	Lot 160	Lot 163	Lot 166	Lot 169	Lot 172	Lot 175	Lot 179	Lot 182	Lot 187	Lot 191	Lot 194	Lot 197
0.0 - 0.3	7	6	6	6	7	5	6	6	6	6	6	8
0.3 - 0.6	9	14	8	4	8	12	16	3	8	3	9	10
0.6 - 0.9	20	17	10	7	10	9	21	9	10	5	10	13
0.9 - 1.2	19	16	11	4	11	9	35	19	9	6	8	15
1.2 - 1.5	9	10	7	6	5	12	18	16	6	9	16	12
1.5 - 1.8	11	9	13	12	8	10	17	14	8	4	11	8
1.8 - 2.1	11	7	10	9	16	16	9	9	9	8	10	14
2.1 - 2.4	19	12	9	7	14	11	7	6	13	12	14	15
2.4 - 2.7												
2.7 - 3.0												
3.0 - 3.3												
3.3 - 3.6												

SOIL INVESTIGATION LOCATION PLAN

See plan attached

Comments: Scala penetrometer tests were stopped at 1.2m penetration and then recommenced in augered hole.

Transcribed by: PP Pheasant
Stacy Goldsworthy

WORLEY

WORLEY CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

PROJECT : Callum Brae - Stage 2
CLIENT : Paramount Developments Ltd
LOCATION : As shown on plan

JOB NO.: 51 904 97
DATE: 30 / 03 / 97

TEST SPEC
NZS 4402, Test 6.5.2 : 1988.
Determination of the penetration of a soil.
Hand method using a dynamic cone penetrometer

TEST RESULTS

TEST No. / DEPTH (m)	Lot 200	Lot 203	Lot 209	Lot 213	Lot 216	Lot 219	Lot 223	Lot 226	Lot 230			
0.0 - 0.3	13	9	5	6	6	7	5	7	8			
0.3 - 0.6	12	10	16	10	9	6	9	9	8			
0.6 - 0.9	10	8	13	18	16	11	14	8	13			
0.9 - 1.2	11	8	10	24	20	11	15	12	15			
1.2 - 1.5	8	14	7	9	10	12	16	10	11			
1.5 - 1.8	15	12	9	10	20	11	15	5	9			
1.8 - 2.1	11	14	6	12	24	6	14	4	10			
2.1 - 2.4	15	9	14	15	14	8	12	12	14			
2.4 - 2.7												
2.7 - 3.0												
3.0 - 3.3												
3.3 - 3.6												

SOIL INVESTIGATION LOCATION PLAN

See plan attached

Comments: Scala penetrometer tests were stopped at 1.2m penetration and then recommenced in augered hole.

Transcribed by: pp Stacy Goldsworthy

WORLEY

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LOG OF INVESTIGATION

PROJECT :	Soils Investigation	JOB No :	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30/3/97
LOCATION :	Lot 160 Callum Brae II	AUGER No.:	Lot 160

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		7	
0.300		Light greyish brown SILT, moist, loose.		9	
0.650		Light greyish brown fine SANDY SILT with rare fine pumiceous gravel, moist, loose, slightly plastic.		20	
1.0				19	
1.350		Light brown fine to medium SAND with some silt, with interbedded thin silty clays, moist, loose.		9	
				11	
2.0				11	
				19	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp Stacy Goldsworthy

COMMENTS:

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LOG OF INVESTIGATION

PROJECT :	Soils Investigation	JOB No :	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30/3/97
LOCATION :	Lot 163 Callum Brae II	AUGER No.:	Lot 163

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.200		Light greyish brown fine to medium SAND.		14	
				17	
1.0				16	
1.000		Greyish brown SAND, damp, loose, clean.		10	
1.500		Light yellowish brown fine to medium SAND with some silt, moist, loose.		9	
2.0				7	
2.050		Light grey SILTY CLAY, moist, firm.		12	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 166 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: Lot 166

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil),		6	
0.250		Orange brown fine to medium SAND with minor silt, damp, loose.		8	
0.650		Greyish brown fine SANDY SILT, moist, loose.		10	
1.0 1.000		Light grey CLAYEY SILT, moist, stiff, moderately plastic.		11	
1.200		Light greyish brown SILTY fine SAND, pumiceous, moist, loose.		7	
1.650		Light brown fine to medium SAND with minor silt, moist, loose.		13	
2.0				10	
2.200		Light grey SILTY CLAY, soft, wet, highly plastic.		9	
2.400		End Of Log at 2.4m		-	
3.0				-	
				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp A Pheasant Stacy Goldsworthy

COMMENTS:

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LOG OF INVESTIGATION

PROJECT :	Soils Investigation	JOB No :	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30/3/97
LOCATION :	Lot 175 Callum Brae II	AUGER No.:	Lot 175

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		5	
	0.200	Light brown SILTY fine SAND, moist, moderately dense.		12	
				9	
	0.750	Light grey fine SAND with some silt, moist, loose.			
1.0	0.950	Light grey CLAYEY SILT with pockets of silty fine sand, moist, firm.		9	
	1.300	Light greyish brown interbedded pumiceous SANDS, moist, loose.		12	
				10	
2.0				16	
				11	
	2.400	End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp A Pheasant Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	Soils Investigation	JOB No :	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30/3/97
LOCATION :	Lot 179 Callum Brae II	AUGER No.:	Lot 179

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.300		Reddish brown SAND with minor silt, moist, moderately dense.		16	
				21	
1.0				35	
				18	
				17	
1.700		Light greyish brown fine to medium SAND, wet, loose.		9	
2.0				7	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: PP A Pheasant Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	Soils Investigation	JOB No :	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30/3/97
LOCATION :	Lot 182 Callum Brae II	AUGER No.:	Lot 182

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SiLT, damp, (Topsoil).		6	
0.200		Yellowish brown fine to medium SAND with some silt, loose.		3	
0.750		Brown interbedded SANDS and fine GRAVELS, moist, moderately dense.		9	
1.0				19	
				16	
				14	
2.0				9	
2.100		Light greyish brown, SiLTY fine to medium SAND, wet, loose.		6	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

PP

LOGGED BY: Stacy Goldsworthy

COMMENTS:

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 187 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: Lot 187

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.250		Light brown fine SANDY SILT, loose, moist.		8	
0.600		Light greyish brown fine to medium SAND with some silt, damp, loose.		10	
1.0				9	
1.050		Grey SILTY fine SAND with some clay, slightly plastic, wet, loose.		6	
				8	
1.900				9	
2.0		Light grey SILTY CLAY, moist, soft.		13	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp Stacy Goldsworthy

COMMENTS:

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 191 Calium Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: Lot 191

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0					
		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.200					
		Yellowish brown SILT with some fine sand, moist, loose.		3	
0.500					
		Light greyish brown SILTY fine to medium SAND, moist, loose.		5	
1.0				6	
0.100					
		Light greyish brown fine to medium SAND, moist, pumiceous, loose.		9	
1.500					
		Light grey mottled light orange CLAYEY SILT, moist, soft, moderately plastic.		4	
2.0				8	
2.100					
		Light greyish brown fine to medium SAND with some silt, wet, loose.		12	
2.400					
		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: PP APheasant
Stacy Goldsworthy

COMMENTS:

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	Soils Investigation	JOB No :	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30/3/97
LOCATION :	Lot 200 Callum Brae II	AUGER No.:	Lot 200

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil), some crushed gravel fill.		13	
0.400		Light brown SILTY fine SAND, damp, loose.		12	
0.650		Greyish brown SILT with some clay, moist, moderately dense.		10	
1.0				11	
				8	
				15	
1.900				11	
2.0		Light grey SILTY CLAY, moist, firm, moderately plastic.		16	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp A Pheasant Stacy Goldsworthy

COMMENTS:

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	Soils Investigation	JOB No :	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30/3/97
LOCATION :	Lot 209 Callum Brae II	AUGER No.:	Lot 209

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		5	
0.250		Light greyish brown SILT with some fine sand, damp, loose.		16	
				13	
1.0				10	
1.150		Light greyish brown fine to medium pumiceous SAND, moist, loose, clean.		7	
1.650		Light yellowish brown CLAYEY SILT, moist, firm, moderately plastic.		9	
2.0				6	
				14	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: PP A Thorpe Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 216 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: Lot 216

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.300		Light greyish brown fine SANDY SILT, moist, loose.		9	
0.700		Light greyish brown fine SAND, moist, moderately dense.		16	
1.0				20	
1.150		Light greyish brown CLAYEY SILT, moist.		10	
				20	
1.750		Light greyish brown fine SAND with some silt, moist, moderately dense, pumiceous.		24	
2.0				14	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: PP A Pheasant Stacy Goldsworthy

COMMENTS:

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	Soils Investigation	JOB No :	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30/3/97
LOCATION :	Lot 226 Callum Brae II	AUGER No.:	Lot 226

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		7	
0.250		Yellowish brown SILTY fine SAND, moist, loose.		9	
0.550		Light greyish brown SILTY fine SAND, moist, loose.		8	
1.0				12	
1.000		Light yellowish brown fine to medium SAND with minor silt, damp, loose.		10	
1.500		Light grey fine SAND with some silt.		5	
1.950				4	
2.0		Light greyish brown CLAY, soft, moist, highly plastic.			
2.050		Light greyish brown fine to medium SAND with some silt, wet, loose.		12	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp A Pleasant Stacy Goldsworthy

COMMENTS:

C 32

WORLEY
CONSULTANTS

Worley Consultants Limited
240 Tristram Street
PO Box 434
Hamilton New Zealand
Telephone 64-7-838 0069
Fax 64-7-839 1182

Please reply to: Colin Jacobson
Our reference: 51 904 97\ckl1\MGW

10 April 1997

Paramount Developments Ltd
c/- CKL Surveys Ltd
PO Box 171
HAMILTON

Attention: Mr Rod Keucke

Dear Sir

CALLUM BRAE SUBDIVISION STAGE II : NZS 4404 APPENDIX A CERTIFICATION

In accordance with your instructions, a soils investigation of the proposed Callum Brae Subdivision, Stage II, has been undertaken so that an NZS 4404 Appendix A Certificate for the subdivision can be issued (ie confirming the land is suitable for a residential type subdivision).

1.0 Background

The Callum Brae Subdivision, Stage II, will consist of 68 residential Lots assessed off Callum Brae Stage 1 and is being developed by Paramount Developments Ltd. The land on which the proposed subdivision will be constructed is currently pasture.

The Lots on the south-western side of the proposed subdivision are adjacent to the site of the old Hamilton City Council Rototuna landfill which was in operation from 1974 to 1985. In 1985 the landfill area was capped and the site of the old landfill will now form a recreational reserve within the proposed Callum Brae development.

The proposed subdivision will be bounded by the existing Callum Brae Stage 1 subdivision to the south and future residential development to the north, north-west and east.

The legal description of the proposed subdivision is Lots 4 to 8 DPS 15280 and the general layout of the development is as shown on the attached Scheme Plan 96417 prepared by CKL Surveys Ltd.

2.0 Existing Topography and Proposed Earthworks

As briefly outlined in Section 1.0 above, the proposed subdivision is located immediately north of the existing Callum Brae Stage 1 subdivision.

The existing ground levels are generally flat, although there are isolated slight depressions across the site and shallow v-drains at the toe of the old landfill boundary and along the alignment of some of the fence lines.
These low areas and open drains will be filled as the subdivision is developed and this filling will be controlled and completed in accordance with NZS 4431.

WORLEY

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SCALA PENETROMETER TEST RESULTS

PROJECT : Callum Brae - Stage 2
CLIENT : Paramount Developments Ltd
LOCATION : As shown on plan

JOB NO.: 51 904 97
DATE: 30 / 03 / 97

TEST SPEC
NZS 4402, Test 6.5.2 : 1988.
Determination of the penetration of a soil.
Hand method using a dynamic cone penetrometer

TEST RESULTS

TEST No. / DEPTH (m)	1 Lot 160	2 Lot 163	3 Lot 166	4 Lot 175	5 Lot 179	6 Lot 182	7 Lot 186	8 Lot 188	9 Lot 197	10 Lot 206	11 Lot 213	12 Lot 223
0.0 - 0.3	7	6	6	6	8	6	4	7	13	5	6	7
0.3 - 0.6	9	14	8	8	11	8	6	11	12	16	9	9
0.6 - 0.9	20	17	10	14	16	12	9	12	10	13	16	8
0.9 - 1.2	19	16	11	16	14	11	10	12	11	10	20	12
1.2 - 1.5	9	10	7	10	9	10	6	5	8	7	10	10
1.5 - 1.8	11	9	13	9	12	15	11	11	15	9	20	5
1.8 - 2.1	11	7	10	11	10	11	15	12	11	6	24	4
2.1 - 2.4	19	12	9	9	14	5	16	17	16	14	14	12
2.4 - 2.7												
2.7 - 3.0												
3.0 - 3.3												
3.3 - 3.6												

SOIL INVESTIGATION LOCATION PLAN

See plan attached

PLANNING GUIDANCE
2 3 APR 1997
TIME_____AM/PM

Comments:
Scala penetrometer tests were stopped at 1.2m penetration and then recommenced in augered hole.

Transcribed by: _____
Stacy Goldsworthy

3.0 Soils Investigation

To provide an indication of the subsoil conditions across the proposed subdivision site, a total of 20 scala penetrometer soundings and 12 hand augured boreholes (to a depth of 2.4m below ground level) were undertaken at the locations shown on the attached site plan.

The boreholes show the subsoils consist generally of 200 to 400mm of topsoil overlying alternating layers of moist, firm silt and fine/medium sands to a depth of at least 2.4m below ground level.

In some of the boreholes, thin silty clay or clay lenses were encountered with the above materials.

No water table was reached in any of the bore holes but the soils became noticeably wetter with increasing depth, however, the ground water table at the time of testing (late March 1997) must be at least 2.4m below ground level.

From our limited subsoil investigation (one borehole on approximately every 5th lot) it appears there has been no filling on the subdivision site other than some crushed metal placed on the topsoil layer on Lots 166, 175, and 197 which was probably part of the old stock race system.

The scala penetrometer test results show the density and bearing capacity of the subsoils across the site are generally sufficient to provide the 100 kPa allowable soil bearing pressure required for dwellings to be constructed in accordance with NZS 3604, with the exception of the areas in the vicinity of the Lots described below.

The subsoils on Lots 169 and 188 have insufficient bearing capacity down to a depth of 1.5m below ground level and Lots 163, 166, 172, 182, 186, 188, 206, 216, and 223 have a less firm layer, approximately 300mm thick, at a depth varying between 1200mm to 2400mm below ground level.

4.0 Foundation Recommendations

From the scala penetrometer test results, 100 kPa allowable soil bearing capacity is generally available on most of the Lots, once the upper 200mm to 400mm thick topsoil layer is removed, but dwelling foundations in the vicinity of Lots 169 and 188 will require over-excavation to a depth of 1.5m below ground to remove the soft soil layers.

We therefore recommend that over-excavation and backfilling with imported granular fill material would be the preferred foundation system for a typical concrete floor slab dwelling constructed on this proposed subdivision.

On nine of the lots tested, (Lots 163, 166, 172, 182, 186, 188, 206, 216, and 223) it was noted there were 300mm thick layers of softer materials but these lenses are relatively deep and only slightly below the minimum density required so we do not expect any over excavation of these layers will be required unless specific testing of the lots indicates that the layers of softer materials are closer to the ground surface in some places.

5.0 Roadway Construction

The subdivision will be accessed from Callum Brae by a system of local streets, cul-de-sacs and right-of-ways. Based on the scala penetrometer test results and assuming typical design traffic volumes, the **preliminary** pavements depths required for the road network in the proposed subdivision are as below:

ROAD TYPE	OVERALL PAVEMENT DEPTH	UNDERCUT DEPTH
Local Street	500mm - 525mm	250mm - 275mm
Cul-de-sac	425mm - 450mm	250mm - 300mm
Right-of-ways	350mm - 400mm	200mm - 250mm

Notes: 1. *Undercut depths are based on a 150mm thick M4/GAP 40 basecourse layer.*
2. *Overall pavement depth is from the subgrade to the top of the basecourse layer and so does not include the seal layer.*

6.0 Former HCC Landfill Site

The old Hamilton City Council Rototuna landfill site is on the south-western boundary of the proposed subdivision. The landfill site will not form part of the **residential** development and will be left as a recreational reserve.

Under the Resource Management Act 1991, the owners of a closed landfill site (in this case the HCC) are responsible for the maintenance of the landfill site and any possible discharges from the closed landfill site. Discharges in this case could be landfill gases from the buried rubbish that can enter either the atmosphere or migrate laterally to the adjacent properties and/or leachate from the old landfill site which could contaminate groundwater in the vicinity.

The landfill was operated by the HCC from 1974 to 1985 using the standard practices of the day and hazardous materials were prohibited. We consider that there will be no detrimental impact on the adjacent subdivision development from the closed landfill and understand that the HCC will soon instigate a testing programme to confirm this.

The HCC have advised they accept full responsibility for the testing and monitoring of the closed landfill site and the implementation of any subsequent measures to contain or reduce any discharges from the landfill.

If the testing programme indicated there could be a potential problem from either gas or leachate discharges, then the standard venting/containment options available should ensure there will be no impact on the adjacent subdivision and the requirements of the Resource Management Act would be complied with.

7.0 Fill Areas

The shallow localised depressions are intended to be control filled as will the shallow (0.5m deep) farm drains which cross through parts of the proposed subdivision.

There will be no areas of uncontrolled fill on the proposed Callum Brae Stage II subdivision. All proposed fill areas are to be stripped of all vegetation, topsoil and soft spots prior to filling.

All filling will be placed, tested and certified in accordance with NZS 4431:1989 "Code of Practice for Earth Fill For Residential Development".

8.0 Summary

The proposed Callum Brae Stage II subdivision is located off Callum Brae Stage 1 and will consist of 68 residential Lots. The legal description of the proposed subdivision is Lots 4 to 8 DPS 15280. The scope of proposed development is as shown on the attached scheme plan 96417 prepared by CKL Surveys Ltd.

A soils and site investigation has been undertaken to confirm whether the subdivision is suitable for residential type development in accordance with NZS 3604. Based on the results from this investigation, we can advise the requirements of Appendix A NZS 4404 are satisfied subject to the following:

(i) Generally, the subsoils within the proposed subdivision have sufficient density and bearing capacity for standard residential type building foundations. However, on some lots, over-excavation and sand filling will be needed to improve the bearing capacity of the near-surface subsoils.

(ii) The subsoils within the area of the proposed road network will require undercuts in the order of 200mm to 275mm to enable the pavements to be constructed.

(iii) The adjacent former HCC Landfill site will require an investigation programme to be implemented by the HCC to determine if there is a potential for gas/leachate migration into the proposed subdivision. The main concerns relate to potential lateral migration of gas. If the investigations indicate there is a possibility for contamination, then to comply with the Resource Management Act, the HCC will need to install a venting/containment/control system to prevent discharges onto the subdivision.

(iv) The shallow open drains and isolated depression areas on the proposed subdivision which are to be levelled are to be control filled in accordance with NZS 4431, with all vegetation and topsoil stripped from the areas prior to being filled, and any weak materials appropriately dealt with.

An Appendix A NZS 4404 certificate stating the subdivision is suitable for residential development is attached.

The recommendations and options contained in this report are based upon data from the limited number of Scala tests and boreholes described above. Inferences about the nature and continuity of subsoil away from boreholes are considered reasonable, but cannot be guaranteed.

This report has been prepared for the particular project described in the owner's brief to us and no responsibility is accepted for the use of any part of this report in other contexts or for any other purposes.

Yours faithfully
WORLEY CONSULTANTS LIMITED

ROGER B COTTER
ENGINEERING MANAGER

COLIN JACOBSON
CIVIL/STRUCTURAL ENGINEER

Enclosures:

1. Site Plan
2. Soil Test Results

APPENDIX A

To: The Borough / City / County Engineer

Hamilton City Council, Private Bag, Hamilton

STATEMENT OF PROFESSIONAL OPINION AS TO SUITABILITY OF LAND FOR SUBDIVISION

Subdivision: Callum Brae Stage II

Owner: Paramount Developments Limited

Location: Hukanui Road, Hamilton

I Colin Barry Jacobson of Worley Consultants Limited
(Full Name)

PO Box 434, Hamilton
(Name and Address of Firm)

Hereby confirm that:

1. I am a Registered Engineer experienced in the field of soils engineering and more particularly land slope and foundation stability as applicable and was retained by the subdividing owner as the Soils Engineer on the above subdivision.

2. Site investigations have been carried out under my direction and are described in my report dated April 1997.

3. I am aware of the details of the proposed scheme of subdivision, and of the general nature of proposed engineering works as shown on the following drawings:

   CKL Scheme Plan 96417

   (Insert references to all drawings including dates of latest amendments).

4. In my professional opinion, not to be construed as a guarantee, I consider that the proposed works give due regard to land slope and foundation stability considerations and that the land is suitable for the proposed subdivision provided that:

   (a) The subsoils within the proposed subdivision generally have sufficient density and bearing capacity for standard residential type building foundations. However, on some lots over excavation and sand filling will be needed to improve the bearing capacity of the near surface subsoils.

   We recommend therefore that subsoil testing in accordance with NZS 3604 Appendix C is carried out on each lot, prior to construction, to confirm that 100 kPa allowable bearing pressures can be provided by the subsoils.

   (b) The subsoils within the area of the proposed road network will require undercuts in the order of 200mm to 275mm to enable the pavements to be constructed.

   (c) The adjacent former HCC Landfill site will require an investigation programme to be implemented by the HCC to determine if there is a potential for gas/leachate migration into the proposed subdivision. The main concerns relate to potential lateral migration of gas. If the investigations indicate there is a possibility for contamination, then to comply with the Resource Management Act, the HCC will need to install a venting/containment/control system to prevent discharges into the subdivision.

   (d) The areas of the proposed subdivision which are to be filled are to be control filled in accordance with NZS 4431 with all vegetation and topsoil stripped from the areas prior to being filled and any weak materials appropriately dealt with.

5. This professional opinion is furnished to the Council and the subdividing owner 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 further inspection during the course of the works.

Signed C. B. Jacobson Date 3 April 1997

WORLEY

WORLEY CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

PROJECT : Callum Brae - Stage 2
CLIENT : Paramount Developments Ltd
LOCATION : As shown on plan

JOB NO.: 51 904 97
DATE: 30 / 03 / 97

TEST SPEC
NZS 4402, Test 6.5.2 : 1988.
Determination of the penetration of a soil.
Hand method using a dynamic cone penetrometer

TEST RESULTS

TEST No. / DEPTH (m)	13 Lot 169	14 Lot 172	15 Lot 191	16 Lot 194	17 Lot 200	18 Lot 210	19 Lot 220	20 Lot 216	21 Lot 226			
0.0 - 0.3	6	7	6	8	9	6	5	7	8			
0.3 - 0.6	4	8	9	10	10	10	9	6	8			
0.6 - 0.9	7	10	10	13	8	18	14	11	13			
0.9 - 1.2	4	11	8	15	8	24	15	11	15			
1.2 - 1.5	6	5	16	12	14	9	16	12	11			
1.5 - 1.8	12	8	11	8	12	10	15	11	9			
1.8 - 2.1	9	16	10	14	14	12	14	6	10			
2.1 - 2.4	7	14	14	15	9	15	12	8	14			
2.4 - 2.7												
2.7 - 3.0												
3.0 - 3.3												
3.3 - 3.6												

SOIL INVESTIGATION LOCATION PLAN

See plan attached

PLANNING GUIDANCE
2 3 APR 1997
TIME_____AM/PM

Comments:
Scala penetrometer tests were stopped at 1.2m penetration and then recommenced in augered hole.

Transcribed by: _____
Stacy Goldsworthy

/ORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 160 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 1

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		7	
0.300		Light greyish brown SILT, moist, loose.		9	
0.650		Light greyish brown fine SANDY SILT with rare fine pumiceous gravel, moist, loose, slightly plastic.		20	
1.0				19	
1.350		Light brown fine to medium SAND with some silt, with interbedded thin silty clays, moist, loose.		9	
				11	
2.0				11	
				19	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

PLANNING GUIDANCE
2 3 APR 1997
TIME_____AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 163 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 2

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.200		Light greyish brown fine to medium SAND.		14	
				17	
1.0				16	
1.000		Greyish brown SAND, damp, loose, clean.		10	
1.500		Light yellowish brown fine to medium SAND with some silt, moist, loose.		9	
				7	
2.0					
2.050		Light grey SILTY CLAY, moist, firm.		12	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

PLANNING GUIDANCE
2 3 APR 1997
TIME_____AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 166 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 3

DEPTH (m)		GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0			Dark brown organic SANDY SILT, damp, (Topsoil),		6	
	0.250		Orange brown fine to medium SAND with minor silt, damp, loose.		8	
	0.650		Greyish brown fine SANDY SILT, moist, loose.		10	
1.0	1.000		Light grey CLAYEY SILT, moist, stiff, moderately plastic.		11	
	1.200		Light greyish brown SILTY fine SAND, pumiceous, moist, loose.		7	
					13	
	1.650		Light brown fine to medium SAND with minor silt, moist, loose.		10	
2.0						
	2.200		Light grey SILTY CLAY, soft, wet, highly plastic.		9	
	2.400		End Of Log at 2.4m		-	
					-	
3.0					-	
					-	
					-	
4.0						

PLANNING GUIDANCE
2 3 APR 1997
TIME AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 175 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 4

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		5	
0.200		Light brown SILTY fine SAND, moist, moderately dense.		12	
				9	
0.750		Light grey fine SAND with some silt, moist, loose.			
0.950		Light grey CLAYEY SILT with pockets of silty fine sand, moist, firm.		9	
1.0				12	
1.300		Light greyish brown interbedded pumiceous SANDS, moist, loose.		10	
				16	
2.0				11	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

PLANNING GUIDANCE
23 APR 1997
TIME_____AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 179 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 5

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.300		Reddish brown SAND with minor silt, moist, moderately dense.		16	
				21	
1.0				35	
				18	
				17	
1.700		Light greyish brown fine to medium SAND, wet, loose.		9	
2.0				7	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

PLANNING GUIDANCE
23 APR 1997
TIME AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 182 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 6

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.200		Yellowish brown fine to medium SAND with some silt, loose.		3	
0.750		Brown interbedded SANDS and fine GRAVELS, moist, moderately dense.		9	
1.0				19	
				16	
				14	
2.0				9	
2.100		Light greyish brown, SILTY fine to medium SAND, wet, loose.		6	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

PLANNING GUIDANCE
2 3 APR 1997
TIME AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Solls Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 186 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 7

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.250		Light brown fine SANDY SILT, loose, moist.		8	
0.600		Light greyish brown fine to medium SAND with some silt, damp, loose.		10	
1.0				9	
1.050		Grey SILTY fine SAND with some clay, slightly plastic, wet, loose.		6	
				8	
1.900		Light grey SILTY CLAY, moist, soft.		9	
2.0				13	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

PLANNING GUIDANCE
2 3 APR 1997
TIME _____ AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 188 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 8

DEPTH (m)		GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0			Dark brown organic SANDY SILT, damp, (Topsoil).		6	
	0.200		Yellowish brown SILT with some fine sand, moist, loose.		3	
	0.500		Light greyish brown SILTY fine to medium SAND, moist, loose.		5	
1.0	0.100		Light greyish brown fine to medium SAND, moist, pumiceous, loose.		6	
					9	
	1.500		Light grey mottled light orange CLAYEY SILT, moist, soft, moderately plastic.		4	
2.0					8	
	2.100		Light greyish brown fine to medium SAND with some silt, wet, loose.		12	
	2.400		End Of Log at 2.4m		-	
					-	
3.0					-	
					-	
					-	
4.0						

PLANNING GUIDANCE
23 APR 1997
TIME _____ AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 197 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 9

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil), some crushed gravel fill.		13	
0.400		Light brown SILTY fine SAND, damp, loose.		12	
0.650		Greyish brown SILT with some clay, moist, moderately dense.		10	
1.0				11	
				8	
				15	
1.900		Light grey SILTY CLAY, moist, firm, moderately plastic.		11	
2.0				16	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 213 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 11

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.300		Light greyish brown fine SANDY SILT, moist, loose.		9	
0.700		Light greyish brown fine SAND, moist, moderately dense.		16	
1.0				20	
1.150		Light greyish brown CLAYEY SILT, moist.		10	
				20	
1.750		Light greyish brown fine SAND with some silt, moist, moderately dense, pumiceous.		24	
2.0				14	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

PLANNING GUIDANCE
2 3 APR 1997
TIME AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT : Soils Investigation
CLIENT : Paramount Developments Ltd
LOCATION : Lot 223 Callum Brae II

JOB No : 51 904 97
DATE: 30/3/97
AUGER No.: 12

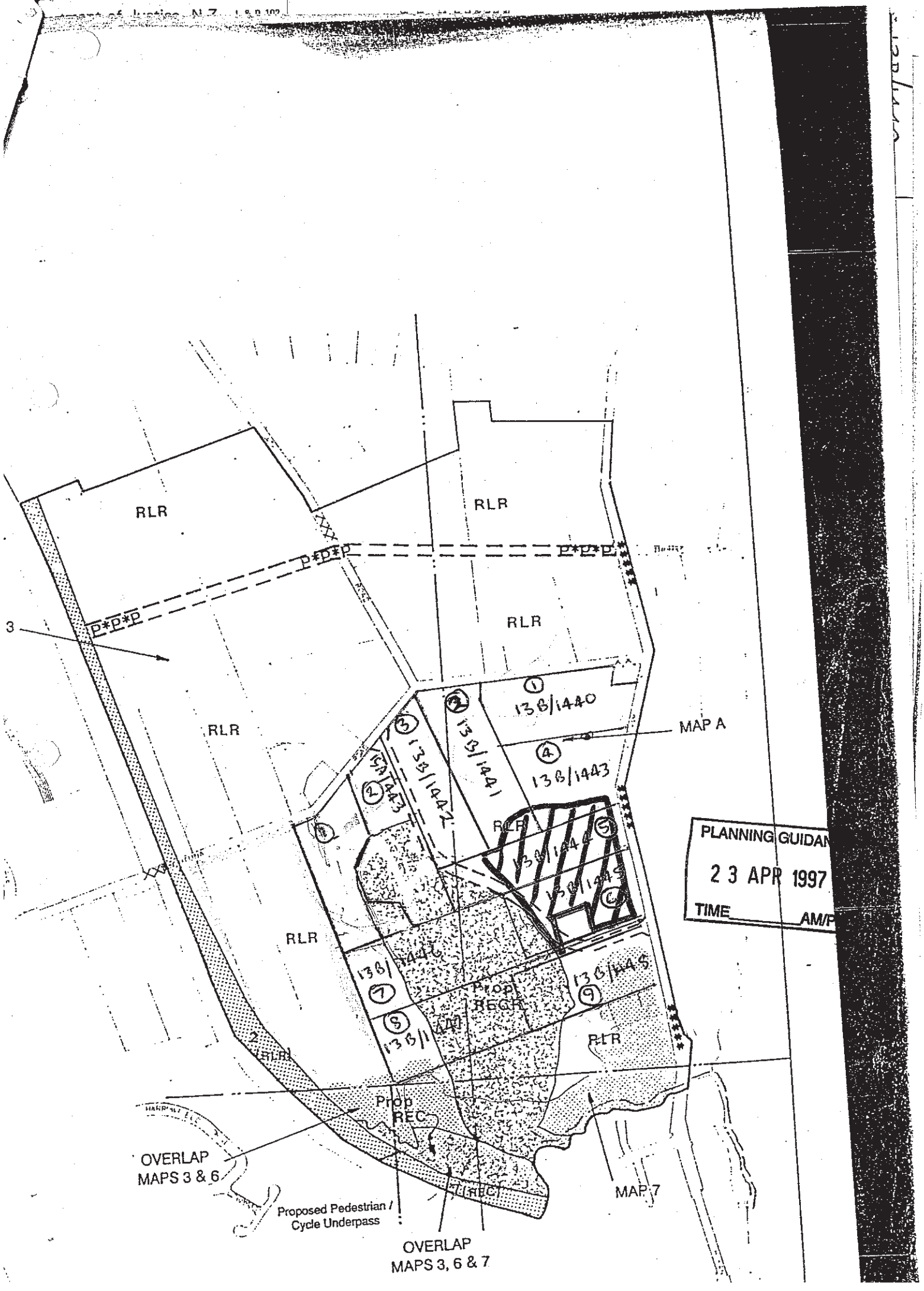
DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		7	
0.250		Yellowish brown SILTY fine SAND, moist, loose.		9	
0.550		Light greyish brown SILTY fine SAND, moist, loose.		8	
1.0				12	
1.000		Light yellowish brown fine to medium SAND with minor silt, damp, loose.		10	
1.500		Light grey fine SAND with some silt.		5	
1.950				4	
2.0		Light greyish brown CLAY, soft, moist, highly plastic.			
2.050		Light greyish brown fine to medium SAND with some silt, wet, loose.		12	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

PLANNING GUIDANCE
2 3 APR 1997
TIME_____AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:


RLR
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3
2
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138/1440
138/1441
138/1442
138/1443
138/1444
138/1445
138/1446
138/1447
MAP A
Prop REC
Prop REC
OVERLAP
MAPS 3 & 6
Proposed Pedestrian / Cycle Underpass
OVERLAP
MAPS 3, 6 & 7
MAP 7
PLANNING GUIDAN
23 APR 1997
TIME
AM/P

KEY

Scala penetrometer Tests ●
Scala Penetrometer and Hand Auger Tests ⊙

SOIL INVESTIGATION LOCATION PLAN

PLANNING GUIDANCE
23 APR 1997
TIME ____ AM/PM

NOTES

NO	DESCRIPTION	DATE	CH'KD

REVISIONS

CONTRACTOR MUST VERIFY ALL DIMENSIONS ON THE JOB BEFORE COMMENCING WORK.

DESIGN	DATE	
DRAWN CC	4/4/97	
CHECKED		
APPROVED		
DATE PRINTED		

WORLEY
WORLEY GILLMAN LIMITED

Paramount Developments Ltd.

SHEET TITLE
Proposed Subdivision Callum Brae Stage 2

0 10 20 30 40mm
ORIGINAL SCALE

DRAWING NO.
51.904.97 Sheet 201
JOB NO SHEET NO. REV

C 3C continued

COPY

WORLEY
CONSULTANTS

Worley Consultants Limited
240 Tristram Street
PO Box 434
Hamilton New Zealand
Telephone: 64-7-834 8980
Fax: 64-7-834 8981

Please reply to: Colin Jacobson
Our reference: 51 904 97\ckl1\MGW

15 September 1997

Amended Soils Report

Paramount Developments Ltd
c/- CKL Surveys Ltd
PO Box 171
HAMILTON

Attention: Mr Rod Keucke

Dear Sir

CALLUM BRAE SUBDIVISION STAGE II : NZS 4404 APPENDIX A CERTIFICATION

In accordance with your instructions, a soils investigation of the proposed Callum Brae Subdivision, Stage II, has been undertaken so that an NZS 4404 Appendix A Certificate for the subdivision can be issued (ie confirming the land is suitable for a residential type subdivision).

1.0 Background

The Callum Brae Subdivision, Stage II, will consist of 79 residential Lots assessed off Callum Brae Stage 1 and is being developed by Paramount Developments Ltd. The land on which the proposed subdivision will be constructed is currently pasture.

The Lots on the south-western side of the proposed subdivision are adjacent to the site of the old Hamilton City Council Rototuna landfill which was in operation from 1974 to 1985. In 1985 the landfill area was capped and the site of the old landfill will now form a recreational reserve within the proposed Callum Brae development.

The proposed subdivision will be bounded by the existing Callum Brae Stage 1 subdivision to the south and future residential development to the north, north-west and east.

The legal description of the proposed subdivision is Lots 2, 4-6 & Pts 7-9 DPS 15280 and the general layout of the development is as shown on the attached Scheme Plan 96417A prepared by CKL Surveys Ltd.

2.0 Existing Topography and Proposed Earthworks

As briefly outlined in Section 1.0 above, the proposed subdivision is located immediately north of the existing Callum Brae Stage 1 subdivision.

The existing ground levels are generally flat, although there are isolated slight depressions across the site and shallow v-drains at the toe of the old landfill boundary and along the alignment of some of the fence lines.
These low areas and open drains will be filled as the subdivision is developed and this filling will be controlled and completed in accordance with NZS 4431.

3.0 Soils Investigation

To provide an indication of the subsoil conditions across the proposed subdivision site, a total of 21 scala penetrometer soundings and 12 hand augured boreholes (to a depth of 2.4m below ground level) were undertaken at the locations shown on the attached site plan.

The boreholes show the subsoils consist generally of 200 to 400mm of topsoil overlying alternating layers of moist, firm silt and fine/medium sands to a depth of at least 2.4m below ground level.

In some of the boreholes, thin silty clay or clay lenses were encountered with the above materials.

No water table was reached in any of the bore holes but the soils became noticeably wetter with increasing depth, however, the ground water table at the time of testing (late March 1997) must be at least 2.4m below ground level.

From our limited subsoil investigation (one borehole on approximately every 5th lot) it appears there has been no filling on the subdivision site other than some crushed metal placed on the topsoil layer on Lot 200 which was probably part of the old stock race system.

The scala penetrometer test results show the density and bearing capacity of the subsoils across the site are generally sufficient to provide the 100 kPa allowable soil bearing pressure required for dwellings to be constructed in accordance with NZS 3604, with the exception of the areas in the vicinity of the Lots described below.

The subsoils on Lots 169 and 191 have insufficient bearing capacity down to a depth of 1.5m below ground level and Lots 163, 166, 172, 182, 187, 191, 209, 219, and 226 have a less firm layer, approximately 300mm thick, at a depth varying between 1200mm to 2400mm below ground level.

4.0 Foundation Recommendations

From the scala penetrometer test results, 100 kPa allowable soil bearing capacity is generally available on most of the Lots, once the upper 200mm to 400mm thick topsoil layer is removed, but dwelling foundations in the vicinity of Lots 169 and 191 will require over-excavation to a depth of 1.5m below ground to remove the soft soil layers.

We therefore recommend that over-excavation and backfilling with imported granular fill material would be the preferred foundation system for a typical concrete floor slab dwelling constructed on this proposed subdivision.

On nine of the lots tested, (Lots 163, 166, 172, 182, 187, 191, 209, 219, and 226) it was noted there were 300mm thick layers of softer materials but these lenses are relatively deep and only slightly below the minimum density required so we do not expect any over excavation of these layers will be required unless specific testing of the lots indicates that the layers of softer materials are closer to the ground surface in some places.

5.0 Roadway Construction

The subdivision will be accessed from Callum Brae by a system of local streets, cul-de-sacs and right-of-ways. Based on the scala penetrometer test results and assuming typical design traffic volumes, the **preliminary** pavements depths required for the road network in the proposed subdivision are as below:

ROAD TYPE	OVERALL PAVEMENT DEPTH	UNDERCUT DEPTH
Local Street	500mm - 525mm	250mm - 275mm
Cul-de-sac	425mm - 450mm	250mm - 300mm
Right-of-ways	350mm - 400mm	200mm - 250mm

Notes: 1. *Undercut depths are based on a 150mm thick M4/GAP 40 basecourse layer.*
2. *Overall pavement depth is from the subgrade to the top of the basecourse layer and so does not include the seal layer.*

6.0 Former HCC Landfill Site

The old Hamilton City Council Rototuna landfill site is on the south-western boundary of the proposed subdivision. The landfill site will not form part of the **residential** development and will be left as a recreational reserve.

Under the Resource Management Act 1991, the owners of a closed landfill site (in this case the HCC) are responsible for the maintenance of the landfill site and any possible discharges from the closed landfill site. Discharges in this case could be landfill gases from the buried rubbish that can enter either the atmosphere or migrate laterally to the adjacent properties and/or leachate from the old landfill site which could contaminate groundwater in the vicinity.

The landfill was operated by the HCC from 1974 to 1985 using the standard practices of the day and hazardous materials were prohibited. We consider that there will be no detrimental impact on the adjacent subdivision development from the closed landfill and understand that the HCC will soon instigate a testing programme to confirm this.

The HCC have advised they accept full responsibility for the testing and monitoring of the closed landfill site and the implementation of any subsequent measures to contain or reduce any discharges from the landfill.

If the testing programme indicated there could be a potential problem from either gas or leachate discharges, then the standard venting/containment options available should ensure there will be no impact on the adjacent subdivision and the requirements of the Resource Management Act would be complied with.

7.0 Fill Areas

The shallow localised depressions are intended to be control filled as will the shallow (0.5m deep) farm drains which cross through parts of the proposed subdivision.

There will be no areas of uncontrolled fill on the proposed Callum Brae Stage II subdivision. All proposed fill areas are to be stripped of all vegetation, topsoil and soft spots prior to filling.

All filling will be placed, tested and certified in accordance with NZS 4431:1989 "Code of Practice for Earth Fill For Residential Development".

8.0 Summary

The proposed Callum Brae Stage II subdivision is located off Callum Brae Stage 1 and will consist of 79 residential Lots. The legal description of the proposed subdivision is Lots 2, 4-6 & Pts 7-9 DPS 15280. The scope of proposed development is as shown on the attached scheme plan 96417A prepared by CKL Surveys Ltd.

A soils and site investigation has been undertaken to confirm whether the subdivision is suitable for residential type development in accordance with NZS 3604. Based on the results from this investigation, we can advise the requirements of Appendix A NZS 4404 are satisfied subject to the following:

(i) Generally, the subsoils within the proposed subdivision have sufficient density and bearing capacity for standard residential type building foundations. However, on some lots, over-excavation and sand filling will be needed to improve the bearing capacity of the near-surface subsoils.

(ii) The subsoils within the area of the proposed road network will require undercuts in the order of 200mm to 275mm to enable the pavements to be constructed.

(iii) The adjacent former HCC Landfill site will require an investigation programme to be implemented by the HCC to determine if there is a potential for gas/leachate migration into the proposed subdivision. The main concerns relate to potential lateral migration of gas. If the investigations indicate there is a possibility for contamination, then to comply with the Resource Management Act, the HCC will need to install a venting/containment/control system to prevent discharges onto the subdivision.

(iv) The shallow open drains and isolated depression areas on the proposed subdivision which are to be levelled are to be control filled in accordance with NZS 4431, with all vegetation and topsoil stripped from the areas prior to being filled, and any weak materials appropriately dealt with.

An Appendix A NZS 4404 certificate stating the subdivision is suitable for residential development is attached.

The recommendations and options contained in this report are based upon data from the limited number of Scala tests and boreholes described above. Inferences about the nature and continuity of subsoil away from boreholes are considered reasonable, but cannot be guaranteed.

This report has been prepared for the particular project described in the owner's brief to us and no responsibility is accepted for the use of any part of this report in other contexts or for any other purposes.

Yours faithfully
WORLEY CONSULTANTS LIMITED

ROGER B COTTER
ENGINEERING MANAGER

COLIN JACOBSON
CIVIL/STRUCTURAL ENGINEER

Enclosures:

1. Site Plan
2. Soil Test Results

APPENDIX A

To: The Borough / City / County Engineer

Hamilton City Council, Private Bag, Hamilton

STATEMENT OF PROFESSIONAL OPINION AS TO SUITABILITY OF LAND FOR SUBDIVISION

Subdivision Callum Brae Stage II

Owner Paramount Developments Limited

Location Hukanui Road, Hamilton

I Colin Barry Jacobson of Worley Consultants Limited
(Full Name)

PO Box 434, Hamilton
(Name and Address of Firm)

Hereby confirm that:

1. I am a Registered Engineer experienced in the field of soils engineering and more particularly land slope and foundation stability as applicable and was retained by the subdividing owner as the Soils Engineer on the above subdivision.

2. Site investigations have been carried out under my direction and are described in my report dated September 1997

3. I am aware of the details of the proposed scheme of subdivision, and of the general nature of proposed engineering works as shown on the following drawings:

   CKL Scheme Plan 96417A

   (Insert references to all drawings including dates of latest amendments).

4. In my professional opinion, not to be construed as a guarantee, I consider that the proposed works give due regard to land slope and foundation stability considerations and that the land is suitable for the proposed subdivision provided that:

   (a) The subsoils within the proposed subdivision generally have sufficient density and bearing capacity for standard residential type building foundations. However, on some lots over excavation and sand filling will be needed to improve the bearing capacity of the near surface subsoils.

   We recommend therefore that subsoil testing in accordance with NZS 3604 Appendix C is carried out on each lot, prior to construction, to confirm that 100 kPa allowable bearing pressures can be provided by the subsoils.

   (b) The subsoils within the area of the proposed road network will require undercuts in the order of 200mm to 275mm to enable the pavements to be constructed.

   (c) The adjacent former HCC Landfill site will require an investigation programme to be implemented by the HCC to determine if there is a potential for gas/leachate migration into the proposed subdivision. The main concerns relate to potential lateral migration of gas. If the investigations indicate there is a possibility for contamination, then to comply with the Resource Management Act, the HCC will need to install a venting/containment/control system to prevent discharges into the subdivision.

   (d) The areas of the proposed subdivision which are to be filled are to be control filled in accordance with NZS 4431 with all vegetation and topsoil stripped from the areas prior to being filled and any weak materials appropriately dealt with.

5. This professional opinion is furnished to the Council and the subdividing owner 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 further inspection during the course of the works.

Signed C.B. Jacobson Date 15 September 1997

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WORLEY CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

PROJECT :	Callum Brae - Stage 2	JOB NO.:	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30 / 03 / 97
LOCATION :	As shown on plan		

TEST SPEC
NZS 4402, Test 6.5.2 : 1988.
Determination of the penetration of a soil.
Hand method using a dynamic cone penetrometer

TEST RESULTS

LOT No. / DEPTH (m)	Lot 160	Lot 163	Lot 166	Lot 169	Lot 172	Lot 175	Lot 179	Lot 182	Lot 187	Lot 191	Lot 194	Lot 197
0.0 - 0.3	7	6	6	6	7	5	6	6	6	6	6	8
0.3 - 0.6	9	14	8	4	8	12	16	3	8	3	9	10
0.6 - 0.9	20	17	10	7	10	9	21	9	10	5	10	13
0.9 - 1.2	19	16	11	4	11	9	35	19	9	6	8	15
1.2 - 1.5	9	10	7	6	5	12	18	16	6	9	16	12
1.5 - 1.8	11	9	13	12	8	10	17	14	8	4	11	8
1.8 - 2.1	11	7	10	9	16	16	9	9	9	8	10	14
2.1 - 2.4	19	12	9	7	14	11	7	6	13	12	14	15
2.4 - 2.7												
2.7 - 3.0												
3.0 - 3.3												
3.3 - 3.6												

SOIL INVESTIGATION LOCATION PLAN

See plan attached

Comments: Scala penetrometer tests were stopped at 1.2m penetration and then recommenced ~~in augered hole~~

PLANNING GUIDANCE
18 SEP 1997
TIME AM/PM

Transcribed by: PP Stacy Goldsworthy

WORLEY

WORLEY CONSULTANTS LTD

SCALA PENETROMETER TEST RESULTS

PROJECT : Callum Brae - Stage 2
CLIENT : Paramount Developments Ltd
LOCATION : As shown on plan

JOB NO.: 51 904 97
DATE: 30 / 03 / 97

TEST SPEC
NZS 4402, Test 6.5.2 : 1988.
Determination of the penetration of a soil.
Hand method using a dynamic cone penetrometer

TEST RESULTS

TEST No. / DEPTH (m)	Lot 200	Lot 203	Lot 209	Lot 213	Lot 216	Lot 219	Lot 223	Lot 226	Lot 230			
0.0 - 0.3	13	9	5	6	6	7	5	7	8			
0.3 - 0.6	12	10	16	10	9	6	9	9	8			
0.6 - 0.9	10	8	13	18	16	11	14	8	13			
0.9 - 1.2	11	8	10	24	20	11	15	12	15			
1.2 - 1.5	8	14	7	9	10	12	16	10	11			
1.5 - 1.8	15	12	9	10	20	11	15	5	9			
1.8 - 2.1	11	14	6	12	24	6	14	4	10			
2.1 - 2.4	15	9	14	15	14	8	12	12	14			
2.4 - 2.7												
2.7 - 3.0												
3.0 - 3.3												
3.3 - 3.6												

SOIL INVESTIGATION LOCATION PLAN

See plan attached

Comments: Scala penetrometer tests were stopped at 1.2m penetration and then recommenced in augered hole.

Transcribed by: pp Rhoasant
Stacy Goldsworthy

PLANNING GUIDANCE
18 SEP 1997
TIME AM/PM

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 160 Callum Brae II**	**AUGER No.:**	**Lot 160**

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		7	
0.300		Light greyish brown SILT, moist, loose.		9	
0.650		Light greyish brown fine SANDY SILT with rare fine pumiceous gravel, moist, loose, slightly plastic.		20	
1.0				19	
				9	
1.350		Light brown fine to medium SAND with some silt, with interbedded thin silty clays, moist, loose.		11	
2.0				11	
				19	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME _____ AM/PM

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 163 Callum Brae II**	**AUGER No.:**	**Lot 163**

DEPTH (m)		GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0			Dark brown organic SANDY SILT, damp, (Topsoil).		6	
	0.200		Light greyish brown fine to medium SAND.		14	
					17	
1.0					16	
	1.000		Greyish brown SAND, damp, loose, clean.		10	
	1.500		Light yellowish brown fine to medium SAND with some silt, moist, loose.		9	
2.0					7	
	2.050		Light grey SILTY CLAY, moist, firm.		12	
	2.400		End Of Log at 2.4m		-	
					-	
3.0					-	
					-	
					-	
4.0						

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME_____AM/PM

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 166 Callum Brae II**	**AUGER No.:**	**Lot 166**

DEPTH (m)		GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0			Dark brown organic SANDY SILT, damp, (Topsoil),		6	
	0.250		Orange brown fine to medium SAND with minor silt, damp, loose.		8	
	0.650		Greyish brown fine SANDY SILT, moist, loose.		10	
1.0	1.000		Light grey CLAYEY SILT, moist, stiff, moderately plastic.		11	
	1.200		Light greyish brown SILTY fine SAND, pumiceous, moist, loose.		7	
	1.650		Light brown fine to medium SAND with minor silt, moist, loose.		13	
2.0					10	
	2.200		Light grey SILTY CLAY, soft, wet, highly plastic.		9	
	2.400		End Of Log at 2.4m		-	
3.0					-	
					-	
					-	
					-	
4.0						

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME_____AM/PM

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 175 Callum Brae II**	**AUGER No.:**	**Lot 175**

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		5	
0.200		Light brown SILTY fine SAND, moist, moderately dense.		12	
				9	
0.750		Light grey fine SAND with some silt, moist, loose.			
1.0 0.950		Light grey CLAYEY SILT with pockets of silty fine sand, moist, firm.		9	
1.300		Light greyish brown interbedded pumiceous SANDS, moist, loose.		12	
				10	
2.0				16	
				11	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME _____ AM/PM

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 179 Callum Brae II**	**AUGER No.:**	**Lot 179**

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.300		Reddish brown SAND with minor silt, moist, moderately dense.		16	
				21	
1.0				35	
				18	
				17	
1.700		Light greyish brown fine to medium SAND, wet, loose.		9	
2.0				7	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: PP A Pheasant Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME_____AM/PM

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	Soils Investigation	JOB No :	51 904 97
CLIENT :	Paramount Developments Ltd	DATE:	30/3/97
LOCATION :	Lot 182 Callum Brae II	AUGER No.:	Lot 182

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.200		Yellowish brown fine to medium SAND with some silt, loose.		3	
0.750		Brown interbedded SANDS and fine GRAVELS, moist, moderately dense.		9	
1.0				19	
				16	
				14	
2.0				9	
2.100		Light greyish brown, SILTY fine to medium SAND, wet, loose.		6	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp A'Pheasant Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME AM/PM

WORLEY

WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 187 Callum Brae II**	**AUGER No.:**	**Lot 187**

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.250		Light brown fine SANDY SILT, loose, moist.		8	
0.600		Light greyish brown fine to medium SAND with some silt, damp, loose.		10	
1.0				9	
1.050		Grey SILTY fine SAND with some clay, slightly plastic, wet, loose.		6	
				8	
1.900		Light grey SILTY CLAY, moist, soft.		9	
2.0				13	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: pp A Pheasant Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME_____AM/PM

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 191 Callum Brae II**	**AUGER No.:**	**Lot 191**

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.200		Yellowish brown SILT with some fine sand, moist, loose.		3	
0.500		Light greyish brown SILTY fine to medium SAND, moist, loose.		5	
1.0				6	
0.100		Light greyish brown fine to medium SAND, moist, pumiceous, loose.		9	
1.500		Light grey mottled light orange CLAYEY SILT, moist, soft, moderately plastic.		4	
2.0				8	
2.100		Light greyish brown fine to medium SAND with some silt, wet, loose.		12	
2.400		End Of Log at 2.4m		-	
3.0				-	
				-	
				-	
				-	
4.0					

LOGGED BY: PP APheasant Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME_____AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 200 Callum Brae II**	**AUGER No.:**	**Lot 200**

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil), some crushed gravel fill.		13	
0.400		Light brown SILTY fine SAND, damp, loose.		12	
0.650		Greyish brown SILT with some clay, moist, moderately dense.		10	
1.0				11	
				8	
				15	
1.900				11	
2.0		Light grey SILTY CLAY, moist, firm, moderately plastic.		16	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: PP A Pheasant Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME _____ AM/PM

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LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 209 Callum Brae II**	**AUGER No.:**	**Lot 209**

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		5	
0.250		Light greyish brown SILT with some fine sand, damp, loose.		16	
				13	
1.0				10	
1.150		Light greyish brown fine to medium pumiceous SAND, moist, loose, clean.		7	
1.650		Light yellowish brown CLAYEY SILT, moist, firm, moderately plastic.		9	
2.0				6	
				14	
2.400		End Of Log at 2.4m		-	
				-	
3.0				-	
				-	
				-	
4.0					

LOGGED BY: PP A Pheasant Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME_____AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

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LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 216 Callum Brae II**	**AUGER No.:**	**Lot 216**

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0		Dark brown organic SANDY SILT, damp, (Topsoil).		6	
0.300		Light greyish brown fine SANDY SILT, moist, loose.		9	
0.700		Light greyish brown fine SAND, moist, moderately dense.		16	
1.0				20	
1.150		Light greyish brown CLAYEY SILT, moist.		10	
				20	
1.750		Light greyish brown fine SAND with some silt, moist, moderately dense, pumiceous.		24	
2.0				14	
2.400		End Of Log at 2.4m		-	
				-	
3:0				-	
				-	
				-	
4.0					

PLANNING GUIDANCE
18 SEP 1997
TIME_____AM/PM

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

PP AGhezzi

LOGGED BY: Stacy Goldsworthy

COMMENTS:

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WORLEY CONSULTANTS LTD

LOG OF INVESTIGATION

PROJECT :	**Soils Investigation**	**JOB No :**	**51 904 97**
CLIENT :	**Paramount Developments Ltd**	**DATE:**	**30/3/97**
LOCATION :	**Lot 226 Callum Brae II**	**AUGER No.:**	**Lot 226**

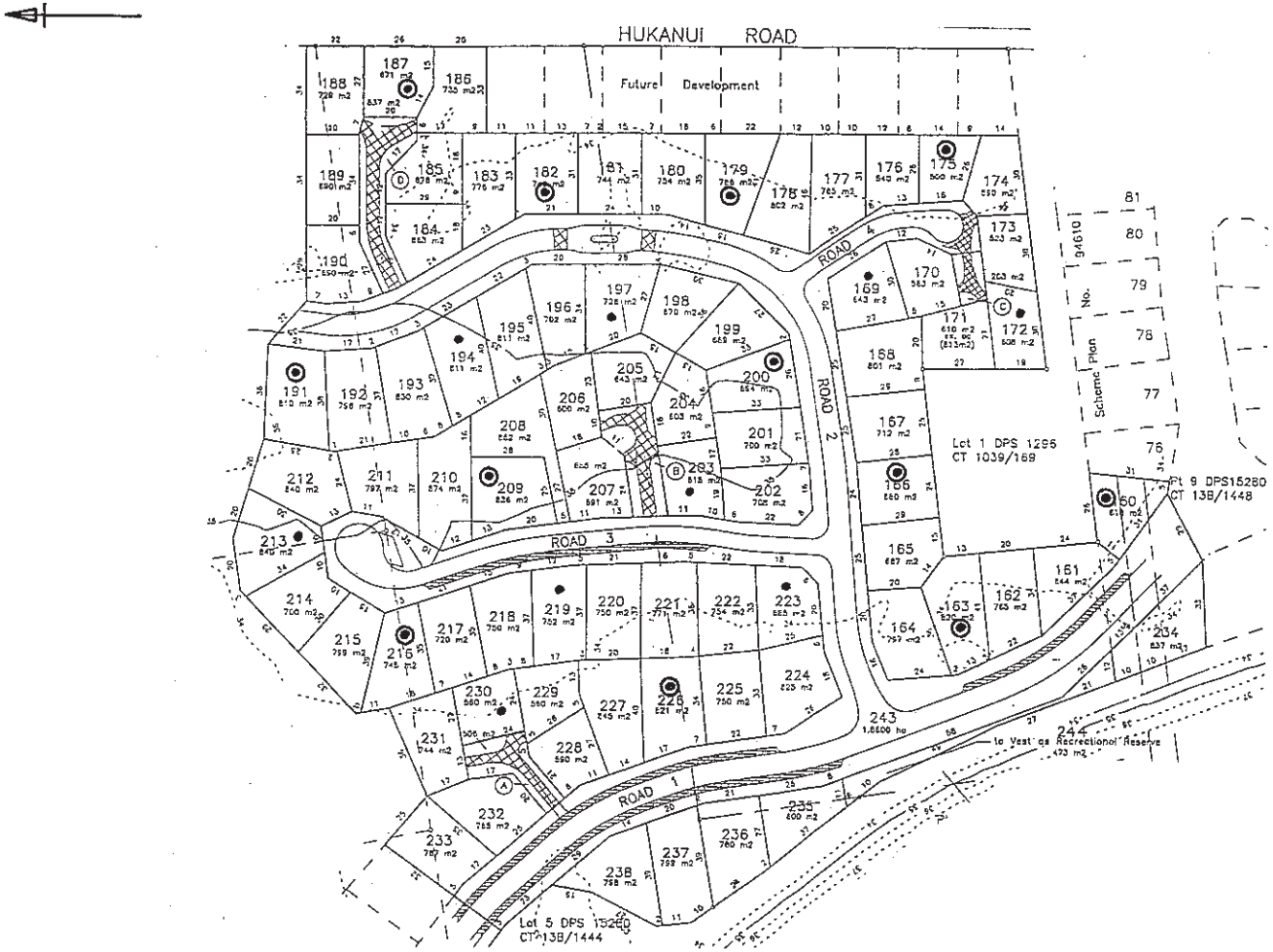
DEPTH (m)		GRAPHIC LOG	MATERIAL DESCRIPTION	SHEAR VANE	SCALA PENETROMETER	WATER LEVEL
0.0			Dark brown organic SANDY SILT, damp, (Topsoil).		7	
	0.250		Yellowish brown SILTY fine SAND, moist, loose.		9	
	0.550		Light greyish brown SILTY fine SAND, moist, loose.		8	
1.0	1.000		Light yellowish brown fine to medium SAND with minor silt, damp, loose.		12	
					10	
	1.500		Light grey fine SAND with some silt.		5	
					4	
2.0	1.950					
	2.050		Light greyish brown CLAY, soft, moist, highly plastic.			
			Light greyish brown fine to medium SAND with some silt, wet, loose.		12	
	2.400		End Of Log at 2.4m		-	
3.0					-	
					-	
					-	
					-	
4.0						

SCALA NUMBERS ARE BLOWS PER 300mm DEPTH

LOGGED BY: PP A Pheasant
Stacy Goldsworthy

COMMENTS:

PLANNING GUIDANCE
18 SEP 1997
TIME AM/PM



KEY

Scala penetrometer Tests ●
Scala Penetrometer and Hand Auger Tests ⊙

SOIL INVESTIGATION LOCATION PLAN

NOTES

PLANNING GUIDANCE
18 SEP 1997
TIME AM/PM

NO	DESCRIPTION	DATE	CH'KD

REVISIONS

CONTRACTOR MUST VERIFY ALL DIMENSIONS ON THE JOB BEFORE COMMENCING WORK

DESIGN CBJ	DATE April 1997	COPYRIGHT © WORLEY CONSULTANTS LTD
DRAWN CBJ		
CHECKED		
APPROVED		
DATE PRINTED		

WORLEY
WORLEY GILLMAN LIMITED

Paramount Developments Ltd.

SHEET TITLE
Proposed Subdivision Callum Brae Stage 2

0 10 20 30 40mm
ORIGINAL SCALE

DRAWING NO.
51.904.97 Sheet 201

Planning Guidance Information

1.0 Status of District Plans:

Status of Hamilton City Operative District Plan

- The Hamilton City District Plan became operative on 18 October 2017.

Where to find the District Plans

To view the Hamilton City District Plan and Planning Maps on line go to
http://www.hamilton.govt.nz/operativedistrictplan

2.0 District Plan details applicable to this property:

Operative District Plan:

Zone: General Residential Zone

Features:

• Significant Archaeological, Historic and Cultural Sites:	None recorded for this property
• Natural Environment:	None recorded for this property
• Electricity Transmission Corridors:	None recorded for this property
• Natural Hazard Area:	None recorded for this property
• Airport Protection Overlay:	None recorded for this property
• Areas:	None recorded for this property
• Other Features:	Infrastructure capacity overlay
• Designations on this Property:	None recorded for this property
• Alterations to Designations and Notices of Requirement for this property:	None recorded for this property

For further information regarding Alterations to Existing Designations, and Notices of Requirement for new Designations please contact the Planning Guidance Unit on 838 6699.

3.0 Resource Consents in regard to this property:

Resource Consents currently In Progress for this Property: None recorded for this property.

Resource Consents granted for this Property: None recorded for this property.

4.0 Active complaints in relation to this property:

None recorded for this property.

5.0 Heritage New Zealand registered items in relation to this property:

None recorded for this property.

6.0 Information on land adjoining this property

Designations Adjoining this Property:
Existing Designations adjoining this property:
Operative District Plan: None recorded for this property.

Alterations to Designations and Notices of Requirement adjoining this property:
Operative District Plan: None recorded for this property.

For further information regarding Alterations to Existing Designations, and Notices of Requirement for new Designations please contact the City Planning Unit on 838 6699.

Notified Resource Consents currently in progress at adjoining Properties:

Notified Resource consent applications that are currently being processed at adjoining properties: None recorded for this property.

COMMENTS

The District Plan includes Flood Hazard overlays which identify Low, Medium and High Flood Hazard Areas, identified where applicable in Section 2.0 above under Natural Hazard Areas. This is based on flood data available at the time of development of the District Plan (notified to the public December 2012). In some cases, this may differ to that identified in the City Waters section of this LIM report which includes any relevant 'best available' flood data for this property.

Environmental Health Information

Note:- No inspection of the subject business premises/property has been carried out as a result of this application.

Information concerning any consent, certificate, notice, order, or requisition affecting the land or any building on the land previously issued by Council:

No information in relation to consents, certificates, notices, orders or requisitions are currently held in respect of this business premises/property. This does not preclude the possibility of consents, certificates, notices, orders or requisitions being issued in the future.

Likely presence of hazardous contaminants known to Council:

Council holds records of properties where certain hazardous activity and industrial landuses (HAIL) that are considered likely to cause land contamination are known to be occurring, may have occurred, or have occurred in the past.

As at the date of issue of this LIM report Council holds no information for the land that is the subject of this LIM in relation to activities and industries that are considered likely to cause land contamination, or in relation to the likely presence of hazardous contaminants.

Important notes:

The absence of information does not necessarily mean that no hazardous activity or industrial landuse is occurring or has occurred on the land, or the absence of hazardous contaminants on the land, but simply means that no information is currently held by Council.

Council is concerned with human receptors only. You are advised to contact the Waikato Regional Council, who may or may not have further information in relation to HAIL activity and the likely presence of hazardous contaminants for this land, particularly in relation to ecological receptors.

Disclaimer:

Hamilton City Council accepts no liability for any inaccuracy in, or omission from, the information provided above, or for any consequence of that inaccuracy or omission.

Any person who wishes to make any commercial decisions that involves an assessment of whether the site is impacted by hazardous contaminants should make their own enquiries and decisions.

Further information:

More information on hazardous activities and industries that are considered likely to cause land contamination can be found at:- https://environment.govt.nz/publications/hazardous-activities-and-industries-list-hail/

City Transportation Information

Road Works:

Council has an ongoing programme of minor road works, and larger projects that can, from time to time, impact on access to properties and amenity. Generally, we will let neighbouring property owners know when we have work planned through a letter drop. If planned roadworks are of interest to you, information can be found as follows:

- Council regularly updates information on events, projects and major works requiring lane or road closures in Hamilton on its website. You can check this information on our 'Week on the street' page at https://hamilton.govt.nz/your-council/news/on-the-move/week-on-our-streets
- Council regularly updates information on minor roadworks on its website. These works require lane or road closures in Hamilton. You can check this information on our Minor Roadworks page at https://hamilton.govt.nz/your-council/news/on-the-move/hamilton-city-minor-roadworks

Rights Of Way / Shared Access:

It is probable that a 'right-of-way' or 'Shared Access' serve this property. You are advised to check with your legal adviser as to what your responsibilities would be with regard to the maintenance of the 'right-of-way' or 'Shared Access' and associated services (including any lighting).

Vehicle Crossing:

For vehicle access it is necessary that this property is served by a properly formed vehicle crossing. If you are unsure as to the adequacy of the crossing, Please contact us as below. More information can be found at https://hamilton.govt.nz/do-it-online/apply-for-it/apply-for-a-vehicle-crossing/

Road Resurfacing:

If the road this property is located on is surfaced with hotmix, the road may be resurfaced with chipseal when the current surfacing material reaches the end of its useful life. The end of its life will be when it no longer provides waterproof cover for the underlying pavement layers.

If you require more information on this, please contact the City Infrastructure Transportation Unit team (07) 838 6699.

Hamilton City Council
Te kaunihera o Kirikiriroa

PHONE 07 838 6688
EMAIL rates@hcc.govt.nz

RATING INFORMATION

RM

RATING UNIT DETAILS

Rates number	46902	HCC website
Valuation number	04203-507-14	Map
Property address	9 Dingwall Court	
Rate category *	Residential General	
Separate parts (SUIPs) *	1	
Land value *	$500,000	
Capital value *	$930,000	

* *This is our current record and may have changed since rates were set.*

Legal description	Area (hectares)	Record of title
Lot 173 DPS 81457	0.0523	SA63D/834

RATES BALANCES

Balance on 1 July 2024	$0.00	
2024/2025 annual rates	$3,613.92	*This is not an estimate for next year's rates*
Rates penalties	$0.00	
Payments received	($3,006.96)	
Balance to 30 June 2025	**$606.96**	

AMOUNT NOW DUE	**$606.96**	*To the end of Instalment 4.*

2024/2025 RATES INSTALMENTS

Instalment	Instalment period	Due date	Instalment amount	Balance outstanding
1	1/7/2024 to 30/9/2024	5/9/2024	$903.48	$0.00
2	1/10/2024 to 31/12/2024	28/11/2024	$903.48	$0.00
3	1/1/2025 to 31/3/2025	20/2/2025	$903.48	$0.00
4	1/4/2025 to 30/6/2025	22/5/2025	$903.48	$606.96

DETAILS FOR PAYMENT

Hamilton City Council bank account 02-0316-0030142-06 **Particulars** Rates **Code** 46902 **Reference** 9DingwallCou

Residential properties in Hamilton do not usually pay for water by meter.

If the property changes ownership any rates due should be paid by the lawyer in settlement.

Separate rates are set and invoiced by Waikato Regional Council waikatoregion.govt.nz/rates rates@waikatoregion.govt.nz

Parks and Recreation Information

If you require information on the use of the management, development and current and potential use of parks in the area please contact the Parks and Recreation Unit at parksadmin@hcc.govt.nz

Network Utility Operators

Hamilton City Council does not hold any information concerning electricity, gas or telephone connections. Information may be obtained from the relevant companies.

Please Note:

- Some categories of information are based on records supplied to Council by property owners or developers or trades people. This information may not be accurate.
- Persons intending to make decisions in relation to the property to which this land information relates are urged to take appropriate professional advice including legal, survey, engineering and land use planning advice.
- No inspection of the property has been made for the purpose of this memorandum; it deals only with those matters which it specifically addresses and is not a general warranty of fitness.

Additional Information

If you require further information about the content of the Land Information Memorandum, please contact Hamilton City Council.

Phone: 07 838 6699
Email: lims2@hcc.govt.nz

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**SA63D/834**
Land Registration District	**South Auckland**
Date Issued	28 July 1998

Prior References
SA63A/72

Estate	Fee Simple
Area	523 square metres more or less
Legal Description	Lot 173 Deposited Plan South Auckland 81457

Registered Owners
Jane Maree Pike and KLB No1 Trustees Limited

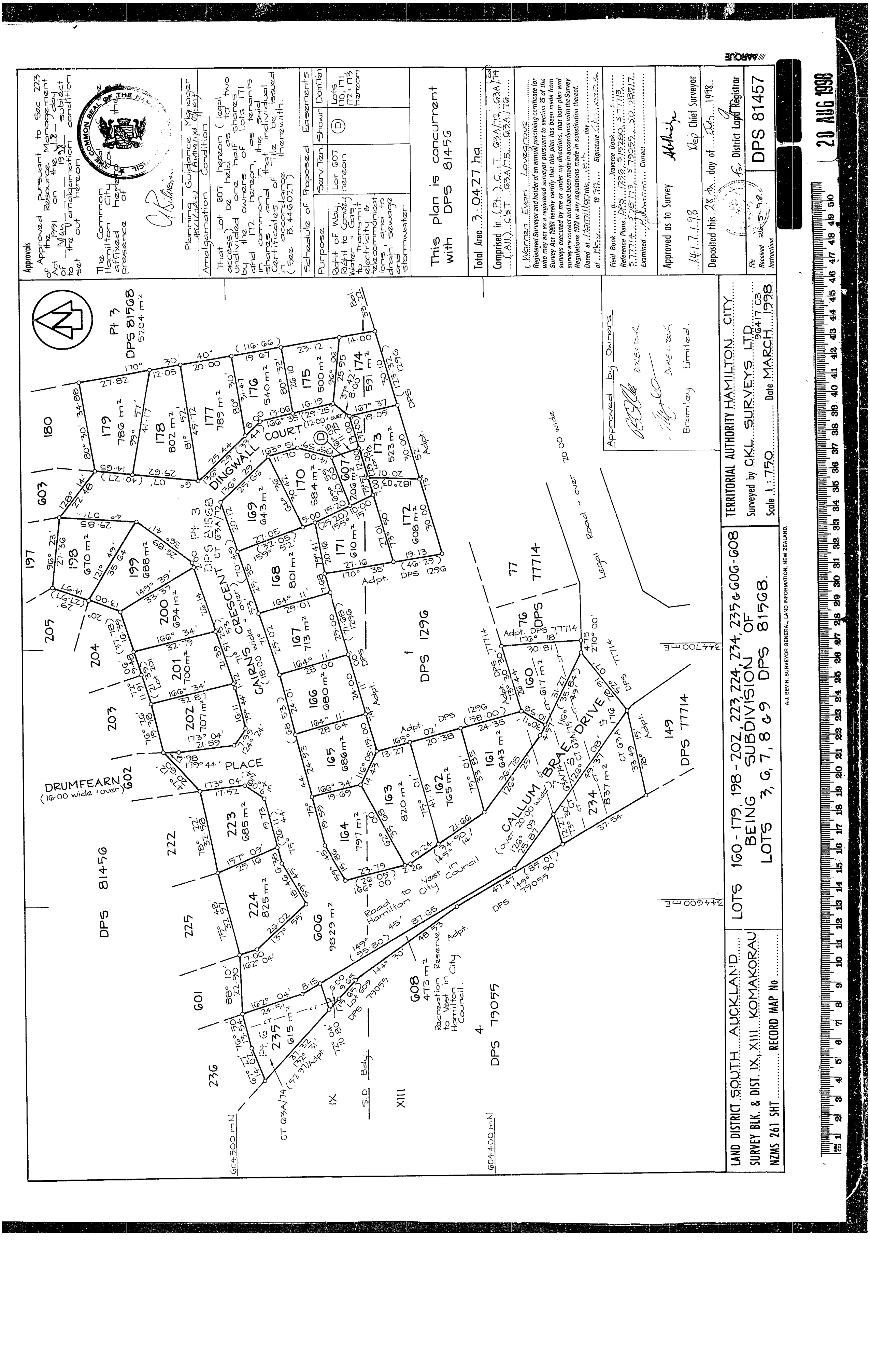
Interests

Appurtenant hereto is a right of way and rights to convey water and gas, transmit electricity and telecommunications and drain sewage and stormwater specified in Easement Certificate B494295.13 - 28.7.1998 at 11.08 am

Fencing Covenant in Transfer B555223.2 - 12.7.1999 at 2.35 pm

Land Covenant in Transfer B555223.2 - 12.7.1999 at 2.35 pm

11568737.3 Mortgage to ASB Bank Limited - 7.10.2019 at 3:42 pm


LAND DISTRICT SOUTH AUCKLAND
SURVEY BLK. & DIST. IX, XIII KOMAKORAU
NZMS 261 SHT .... RECORD MAP No ....
LOTS 160 - 179, 198 - 202, 223, 224, 234, 235 & 606 - 608
BEING SUBDIVISION OF
LOTS 3, 6, 7, 8 & 9 DPS 81568
TERRITORIAL AUTHORITY HAMILTON CITY
Surveyed by CKL SURVEYS LTD
Scale 1 : 750
Date MARCH 1998
This plan is concurrent with DPS 81456
DPS 81457
20 AUG 1998