



**Western
Bay of Plenty**
District Council



9 AUGUSTA RISE CENTRAL

LIM

Land Information Memorandum

Information in a LIM

Includes:

Rates and water rates

- Current Rating Valuation
- Annual Rates
- Outstanding Rates amounts
- Water Charges

Sewer and stormwater

- Whether the property has district sewer available and whether it is connected

Special land features

- Including potential erosion, filling, flooding avulsion, falling debris, slippage, alluvion, or inundation.
- The status of the land in relation to the contamination of soil by hazardous substances
- Weathertight Homes information (if relevant)
- Any relevant reports or information held by council in relation to the property

Archaeological sites

- Any relevant Archaeological sites.

Building consents, licences 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

Licences and environmental health

- Whether the property has a licence relating to the sale of food, the sale of liquor or any other licence (under Health Act 1956)

Enforcements and notices

- Any notice, order, or requisition affecting the land or any building on the land previously issued by Council

Planning and resource management

- Zoning of the property as defined by Operative and/or Proposed District Plans
- All Resource Consents approved in relation to the property
- Long term Community Plans
- Structure Plans

Drainage and water

- Information on public stormwater and wastewater pipelines on the property as shown on Councils log plans
- Water toby location

Maps

- Maps relating to the property including Aerial Photo, Land Information, District Plan and Deposited Plan.

Information not received in a LIM:

- Building Plans
- For information in relation to State Highways please contact Waka Kotahi NZ Transport Agency
- Western Bay of Plenty District Council does not hold any information concerning electricity, gas and telephone connections.
- Computer Registers (previously called Certificate of Title).

Land Information Memorandum

Section 44a, Local Government Official Information and Meetings Act 1987

16 September 2025

P/1327/15

CRENE, JAMES ALLAN
9 AUGUSTA RISE
OMOKOROA 3114

Kia orā

Thank you for your application for a Land Information Memorandum.

The original of this LIM has been prepared pursuant to S.44A of the Local Government Official Information and Meetings Act 1987, solely for the applicant, and contains information known to Council within its records and only relevant to the site requested. The reliance by other parties on the information within this LIM shall be at that other parties' sole risk. If any interpretation or explanation is required on any of the enclosed information or plans, the services of an independent advisor or consultant should be sought.

It is recommended that the Record of Title, which is not issued by Council, be searched by the purchaser. The LIM does not necessarily include information relating to private covenants or other memoranda affecting the title and those should be obtained from a Land Record search.

In preparing this report, no Council inspection of the property has been undertaken.

This Land Information Memorandum is valid as at the date of issue only.

Ngā mihi

The Consents Services Team (Environmental Consents)

limprocessors@westernbay.govt.nz

Applicant**Client Name:**

Applicant Name: CRENE, JAMES ALLAN
9 AUGUSTA RISE
OMOKOROA 3114

Postal Address: 9 AUGUSTA RISE
OMOKOROA 3114

Application Date: 05 Sep 2025

Issue Date: 16 September 2025

Property

Property Owner: CRENE, JAMES ALLAN
THOMAS, SUSAN RACHEL

Valuation No: 06881 583 35

Location: 9 AUGUSTA RISE CENTRAL

Legal Description: LOT 36 DP 527091

Area (hectares): 0.0463

Copies of any relevant deposited plans are included in the Map Section of this LIM.

Rates and Water Rates

The information provided on rates/financial details in this report may not reflect the current details of the legal description/valuation on your application form. This may be due to the property being under subdivision or that the information has not yet been provided or updated for the current valuation and improvements for this financial year.

Note: Rates, Rateable Valuation Details and Water Rates relate to a valuation number. This may be linked to other properties, or a parent property. For this Land Information Memorandum, the valuation number 06881 583 35 is linked to Lot 36 Deposited Plan 527091

Land Value:	\$480,000
Improvements:	\$770,000
Capital Value:	\$1,250,000
Tree Value:	\$0

Annual Rates:	\$4,884.55
Rates Owing:	\$1,637.52

Note: For the period until rates are "set" the Current Annual Rates and Rateable Valuation Details should not be relied upon and any queries should be directed to the Rates Team.

Rates are charged in two equal instalments for the period commencing 1 July and ending 30 June each year.

Water Rates – This information applies to Western Bay of Plenty District Council systems only. In some parts of Tauriko, Papamoa, Pyes Pa and Oropi, properties are served by Tauranga City Council system.

Metered Water	YES
Date of Last Reading	27 Mar 2025
Connected	YES
Available	YES
Owing	\$0.00

Water rates may be outstanding on this property as meter readings are completed six monthly.



Further information about Council's water supply and water quality is available from Council's website. Please refer to the Western Bay of Plenty District Council's Water Supply System Bylaw 2008: [Water Supply System Bylaw 2008](#)



Rates information and valuation history can be found online at the Western Bay of Plenty District Council website: [Rating Information Search](#)



For any information regarding Maori Land, please contact the Waiariki or Waikato/Maniapoto Office of the Maori Land Court or view their website and online records at: [Maori Land Court](#)

Building

This information is a record of details held on Council files and may not reflect the situation on site if work has been undertaken without consent. If Council holds any as-built drainage plans relevant to this property they will be included in the attachments section of this LIM.

Building Consents:		
BC	Project	Status of Consent
93879	NEW DWELLING WITH DOUBLE GARAGE	CCC FINAL ISSUED 20 Oct 2020

Building, Plumbing and Drainage Permits issued prior to 1993 will not have a Code Compliance Certificate as the requirement for this did not come into effect until 1 January 1993.

Any information held by council relating to Building Permits will be listed on the Historical Data page at the back of this section in your LIM.

Information regarding buildings where Council holds no records of consents:

The absence of records for building permits or consents may mean any of the following:

- The building was erected without a permit or consent.
- The building work may be exempt from requiring a permit/consent.
- A Council record is unable to be located.

If building work was carried out without a building permit prior to the 1991 Building Act, or without obtaining building consent under the Building Act 1991 or Building Act 2004, then there is no authority under those Acts for the Council to retrospectively issue a building consent for the work.

For buildings erected prior to the commencement of the Building Act 1991, without any building permit or for which Council holds no records, then Council is generally unlikely to take any action against the current owners of that building unless the building is unsafe or insanitary in terms of the Building Act 2004 or the Health Act 1956. This assumes that the building complies in all other respects with other statutory requirements.

For post-Building Act 1991/Building Act 2004 work, for which the Council holds no record, or the work is not exempt, it is likely that the building work was carried out without consent. If so, the property owner and the person who carried out the work may have contravened the Building Act 1991 and Building Act 2004, and enforcement action may be taken at the Council's discretion. However, some building work is exempt from requiring a permit/consent. This generally applies to small buildings or structures and minor alterations. Irrespective of whether consent is required the Building Act requires that all building work must comply with the Building Code. Potential purchasers of properties requiring further information on building work are advised to engage a qualified building professional to inspect and report.

A certificate of acceptance can be applied for when work is done without a building consent after 1 July 1992, or in specific circumstances when a code compliance certificate (CCC) can't be issued.

For further information go to – [Certificate of Acceptance Information](#)

Certificate of Acceptance:	
COA	Status
None Known	

Compliance Schedules / Building Warrant of Fitness:	
Premise	Notes
None Known	

Any other information affecting this Property is listed below:
-COUNCIL SERVICES There are Council Services on this property (refer to the Land Information Map in the Map Section of this LIM). It is Council policy that no building shall be built closer than the greater of: a. 1.5m from the centre of any public sewer, stormwater or water pipe. b. within 1.5m of rising main c. the depth of the pipe inverted from the ground surface. To construct a building within these requirements written permission must be granted by Councils Utilities Manager.

Environmental Health – Registrations and Licences

Premise Registration:		
Premises	Category	Licence Status
None Known		

Liquor Licences:			
Type	Status	Licence No	Date Issued
None Known			

Enforcements and Notices

Enforcements and Notices:				
Parcel ID	Notice Type	Comments	Date Issued	Date Complied
None Known				

Special Land Features

This section includes any special features of the property known to Council including potential erosion, fill, flooding, avulsion, falling debris, slippage, alluvium or inundation. It also includes the status of the land in relation to the contamination of soil by hazardous substances.

It is the landowner's responsibility to determine whether the property is suitable for any proposed activity or whether any proposed building site is suitable for development (and to undertake tests if necessary).

Any information relating to Weathertight Homes Resolution Services Act 2006 – Section 124 will be included in the attachments section of this LIM (if applicable).

Any relevant reports held by Council are included in the attachments.

Natural Hazards

Our region is exposed to a range of natural hazards including earthquakes, coastal erosion, volcanic eruption, landslides, tsunami and flooding.

These natural hazards can have major consequences on people, property and infrastructure. Regional Council is working to improve our understanding and management of these risks to support safe and resilient communities. Further information regarding Natural Hazards Specific to this property can be found here;

[Bay of Plenty Regional Council Website – Natural Hazards](#)

[Bay Hazards – Bay of Plenty Natural Hazards Viewer](#)

Further property specific Natural Hazard information can also be found under the 'Planning/ Resource Management' section of this LIM (inside the Operative District Plan 'identified features' and the 'other features' boxes).

Contaminated Land

Information about [Contaminated Land](#) can be found on the Bay of Plenty Regional Council's (BOPRC's) website.

Properties that are currently recorded on the BOPRC Land Use Register can be viewed via the BOPRC's [HAIL Site Viewer](#).

If the property is identified as a HAIL site, the BOPRC's land use register letter and/or land use site details will be included in the 'attachments section' of this LIM.

Any contaminated site investigations and/or site validation reports will also be included in the 'Attachments' section of this LIM (if available for this property).

Historic Heritage Features and Archaeological Sites

Please refer to the map section of this LIM. The Geographic Information Services (GIS) plan entitled 'Archaeological Sites' will identify any registered archaeological site(s) over the property (depicted as a "U" number in a red/pink box/circle). If a site(s) is recorded on the property, an 'archaeological sites report' will be attached.

Please also refer to the District Plan map, this will also identify any significant historic heritage features located on the property. If a significant historic heritage feature is recorded over the property, the provisions of Section 7 (Historic Heritage) of the Operative District Plan apply.

If the GIS plan or District Plan map does not identify any archaeological site(s) and/or historic heritage feature(s) it should not be assumed there are no sites or features, only that Council has no record of these. Property owners still have obligations under the Heritage New Zealand Pouhere Taonga Act 2014 in that it is an offence for anyone to destroy, damage or modify or cause to be destroyed, damaged or modified, the whole or part of any archaeological site, knowing or having reasonable cause to suspect it is an archaeological site.



Further information on Archaeological Sites and/or Historic Heritage Features in the Western Bay of Plenty District can be found here;

- [Operative District Plan](#)
- [NZAA Arch Site Hub](#)
- [Heritage New Zealand](#)

Sewer and Stormwater

Services: See attached Land Information map

District Sewer Connected: YES

District Sewer Available: YES

If a sewer is available, under the Local Government Act 1974, the property must connect to the sewer if it is within 30 metres of the property boundary or if the sewer is within 60 metres of the dwelling.

Septic Tanks and On-Site Effluent Treatment Systems (OSET)

Most septic tanks in the Western Bay of Plenty are permitted provided they are adequately maintained, however, when making dwelling additions you may need to upgrade the wastewater system, and this will require Building Consent under the Building Act 1991.

The removal and/or upgrade of existing septic tanks and/or OSET may also require Resource Consent from the Bay of Plenty Regional Council. Please contact Bay of Plenty Regional Council directly 0800 884 880 if you have any further questions about this.

OSET Maintenance Zones

In some areas where the environment is being adversely affected, the Bay of Plenty Regional Council has decided to include communities in maintenance zones. This requires more active management of systems to reduce the risk to the environment and to public health. Within the Western Bay of Plenty District, **Tanners Point** is located within one of these maintenance zones. A map showing the extent of this zone can be found in the On-Site Effluent Treatment Regional Plan:

[OSET Regional Plan](#)

Please note, Ongare Point and Te Puna West are now reticulated and are therefore no longer considered as maintenance zones.

If the land is located within the Tanners Point maintenance zone, you will need to employ a contractor to pump out and inspect the septic tank. A report on the size and condition of the system is prepared by the contractor. Any repairs that are required are the responsibility of the owner.

Please contact Bay of Plenty Regional Council directly 0800 884 880 if you have any further questions about this.

Network Utility Operators

Western Bay of Plenty District Council does not hold any information concerning electricity, telecommunication and gas connections. Information may be obtained from the relevant network utility providers.

Projects

We work to provide good-quality local infrastructure and local services to our communities. You can read about [Council Projects](#) here.

Planning/Resource Management

This property is zoned **MEDRES** for more information on this zone refer to the [Western Bay of Plenty Operative District Plan](#)

The District Plan including rules, maps and performance standards, plus any current (and previous) Plan Changes can be found here:



[Operative District Plan](#)

[District Plan Changes](#)

If you have any questions about the Operative District Plan, please contact Council's Customer Service Planner.

RC Number	Status	Consent Type	Date Issued
	None Known		-

Any information held by council relating to Historic Planning Consents will be listed on the Historical Data page at the back of this LIM.

If there are any Consent Notices, Memorandums of Encumbrance, Deeds of Covenant, Bush Protection Inspections and/or Yard Exemption Statements relevant to this property they will be included in the attachments section of this LIM.

Resource consents can lapse. Applicants are advised to verify the status of Resource Consents with Council staff.

If a Resource Consent(s) has been granted on this property it does not infer that the conditions of the consent have been met. Applicants are advised to verify the status of Resource Consent(s) with Council's Customer Service Planner.

Any features identified in the Operative District Plan are listed below:

Any other features are listed below:
-LIQUEFACTION Council holds a report from Tonkin + Taylor Ltd entitled "Bay of Plenty Regional Liquefaction Vulnerability Assessment" (2021) (Report). This Report presents the results of a liquefaction mapping exercise for the Bay of Plenty Region. Liquefaction can occur when some saturated soils (typically silts and sands) lose strength and stiffness (temporarily behaving as a liquid rather than a solid) in response to earthquake shaking. The Report was prepared in accordance with the Ministry for the Environment (MfE) and Ministry of Business, Innovation and Employment (MBIE) "Planning and Engineering Guidance for Potentially Liquefaction Prone Land" (2017) to a Level A (basic desktop assessment) level of detail. A figure showing the liquefaction vulnerability categories recommended for use in the "Planning and Engineering Guidance for Potentially Liquefaction Prone Land" (2017) can be viewed on Council's natural hazards webpage (liquefaction subpage). These categories are "liquefaction damage is unlikely", "liquefaction damage is possible" and "liquefaction category is undetermined". The Report is referred to in this LIM because the subject property is identified based on information contained in the Report as having one or more of these categories. The liquefaction maps from the Report are shown on the map contained in this LIM entitled "Natural Hazards (Not District Plan)" and shown on Council's interactive online natural hazard map. The latter allows a particular property to be searched for and can be viewed on Council's natural hazards webpage (liquefaction subpage). "Liquefaction damage is unlikely" means a probability of more than 85 percent that liquefaction-induced ground damage will be none to minor in a 1-in-500 year earthquake shaking event. At this stage there is not enough information to distinguish between Very Low and Low (liquefaction vulnerability). More detailed assessment would be required to assign a more specific liquefaction category. Following more detailed assessment a classification of Medium or High (liquefaction vulnerability) is also a possible categorisation but based on the information available this is considered very unlikely.

"Liquefaction damage is possible" means a probability of more than 15 percent that liquefaction-induced ground damage will be minor to moderate (or more) in a 1-in-500 year earthquake shaking event. At this stage there is not enough information to distinguish between Medium and High (liquefaction vulnerability). More detailed assessment would be required to assign a more specific liquefaction category. Following more detailed assessment a classification of Very Low or Low (liquefaction vulnerability) is also a possible categorisation but this is considered less likely.

"Liquefaction category is undetermined" means that a liquefaction vulnerability category is undetermined, either because a liquefaction assessment has not been undertaken for this area, or there is not enough information to determine the appropriate category with the required level of confidence.

Council will be introducing changes to its District Plan in due course to update its maps to reflect the information contained in the Report. In the interim, Council will be relying on the information contained in the Report to exercise statutory functions such as making decisions under the Building Act and Resource Management Act.

The Report can be viewed on Council's natural hazards webpage (liquefaction subpage). The Report includes a liquefaction vulnerability map for the Region in Figure 4.2 on page 52.

This liquefaction subpage also contains information and Frequently Asked Questions (FAQs) relating to liquefaction and how it may affect the use of a property.

It can be viewed at www.westernbay.govt.nz/liquefaction.

Property Adjoining Reserves

Under Council's Reserve Management Plan(s) any property adjoining a public reserve is not permitted to encroach onto that reserve. Where new encroachments occur, or if an existing encroachment exists, Council will give notice to the encroacher to remove the encroachment and reinstate the reserve at their own cost. Please refer to the Reserve Management Plan.



[Reserve Management Plans](#)

Community Plans

Council has a programme to help urban communities in the district develop long term plans that detail a vision for each community. Information regarding current Community Plans can be found here:



[Community Plans](#)

Other Useful information

Western Bay of Plenty District Council provides the following discretionary information which it considers to be relevant in accordance with Section 44A(3) of the Local Government Official Information and Meetings Act 1987 (LGOIMA).

Structure Plans

Structure plans have been created by Council to assist in managing the District's growth. These identify new areas for development and show required infrastructure (roading, water supply, wastewater disposal, stormwater and recreation) and associated costs. These structure plans are contained in [District Plan – Appendix 7 – Structure Plans](#) and shown on the Planning Maps.

Council Website

The Council's [Website](#) provides comprehensive information and resources, including details on building and resource consents topics such as natural hazards and zoning.

The Bay of Plenty Regional Council

Regional Council policies and plans may affect the use and management of land, water air and other natural and physical resources. These can be found here: [Bay of Plenty Regional Council Website](#)

For further information on whether a property is affected by any Regional Planning instrument or by some other function of the Regional Council please contact Regional Council.

The Ministry for the Environment

The Ministry for the Environment administer Acts, National Policy Statements, National Environmental Standards and other regulations. See [Act and Regulations](#).

HISTORICAL DATA

There are no historical planning consent documents held for this property

There are no historical planning consent documents held for this property

MAPS

Aerial Photography

Land Information

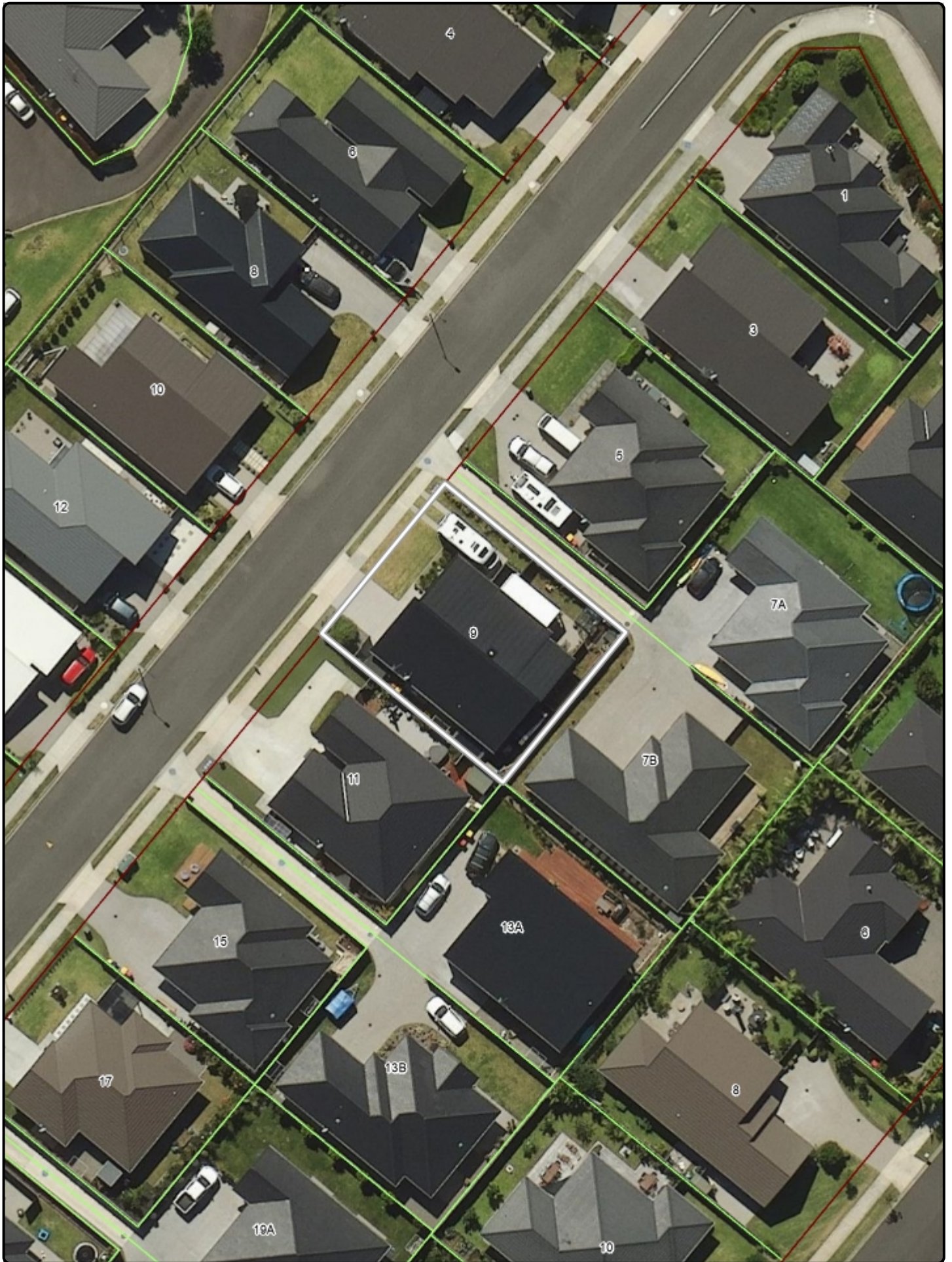
Land Information Legend

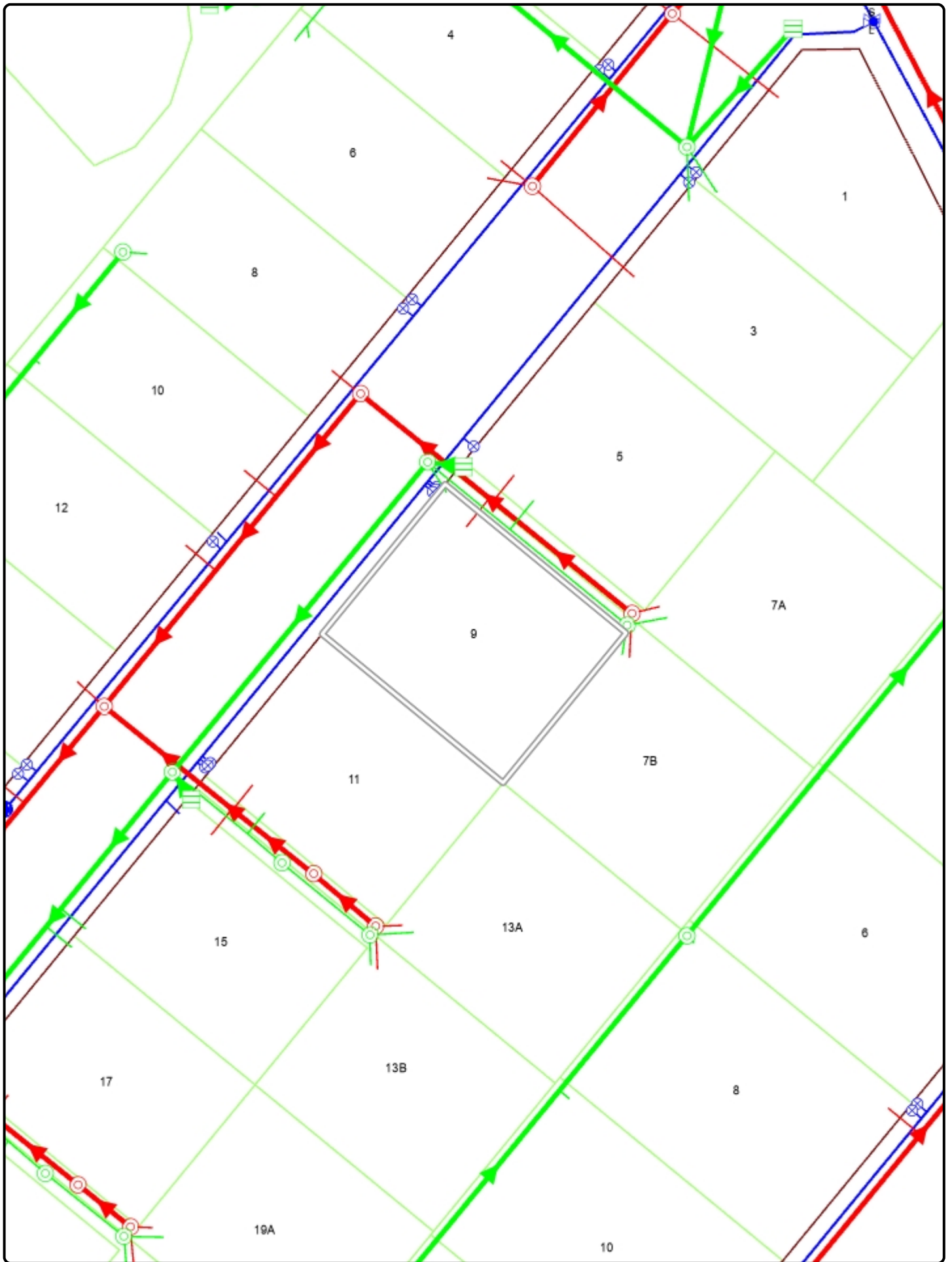
District Plan

District Plan Legend

Other Natural Hazards (not in District Plan)

Natural Hazards Legend





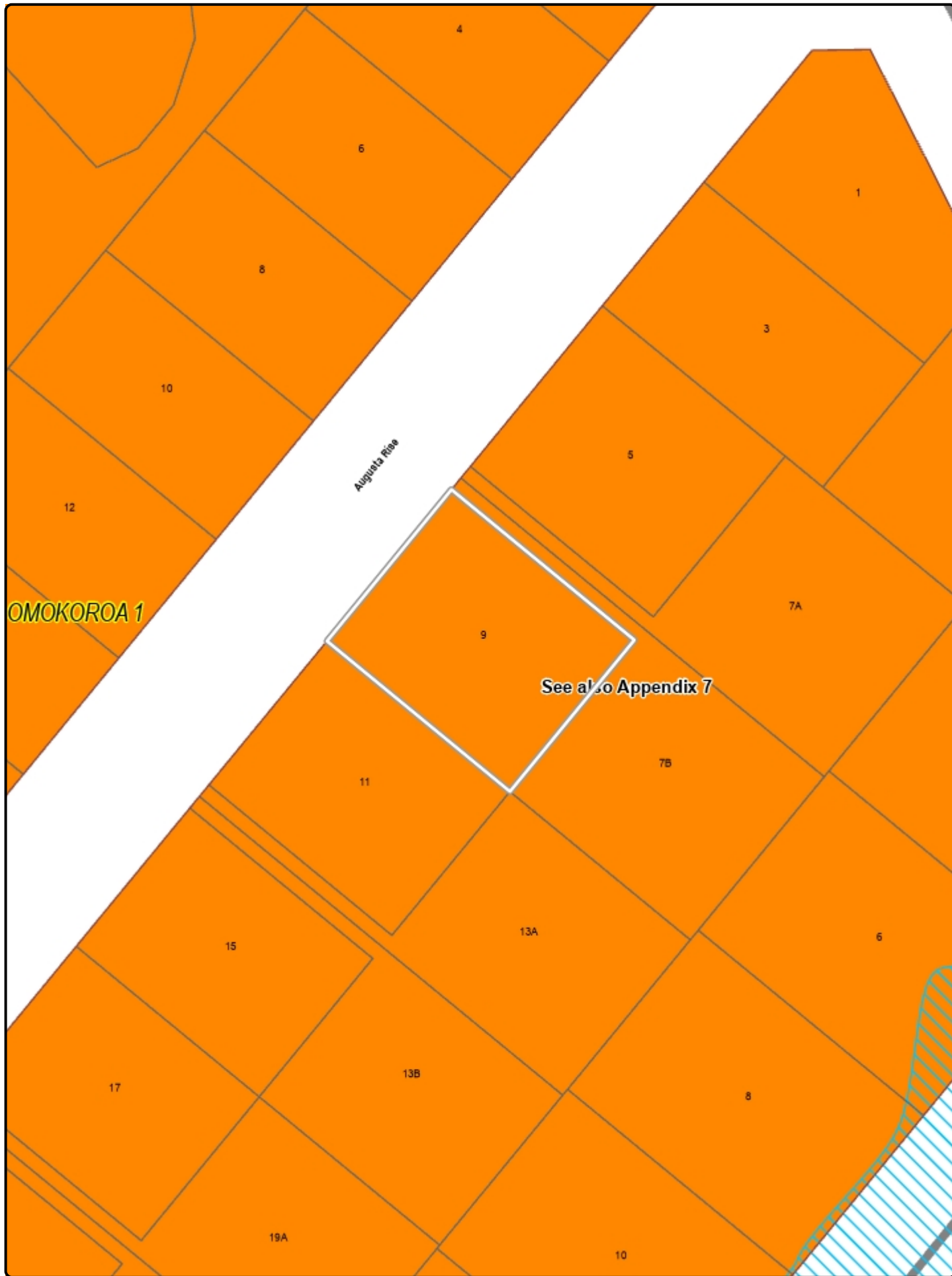
Water Supply		Main	Wastewater		Gravity Main
		Rider Main / Connection			Gravity Main (Below 1:2000)
		Instruments - Meter / Toby			Rising Main
		Valve - Air Release			Service Main / Connection
		Valve - Altitude			Chamber - Inspection Shaft
		Valve - Non Return / Backflow Preventer			Chamber - Manhole
		Valve - Butterfly			Mechanical - Grinder Pump
		Valve - Flow Control			Valve - Air / AirKnife
		Valve - Flow Meter			Valve - Non Return
		Valve - Hydrant			Valve - Pressure Reducing
		Valve - Normally Closed			Valve - Scour /Knife
		Valve - Pressure Reducing			Valve - Sluice
		Valve - Pressure Sustaining			Inlet
		Valve - Scour			Treatment Plant
		Valve - Sluice			Junction
	End Cap		Outlet		
	Junction		Instruments - Flow Meter		
	Treatment Plant		Pump		
	Containment Structure - Reservoir or Tank		Wastewater Pond		
	Pump		Paper Road		
	Well - Bore		Property or Restrictive Area		
Stormwater		Gravity Main	Property		Building
		Gravity Main (Below 1:2000)			Hydro
		Pressure Main			Railway
		Service Main / Connection			Road
		Open Drain			Parcel
		Grass Swale		TCC Water Catchment	
		Catchpit		Statutory Acknowledgement Areas	
		Chamber - Box		Consent Notice Covenant	
		Chamber - Inspection Shaft		Ecological	
		Chamber - Manhole		Conservation Covenant	
		Soakhole		QE II	
		Valve - Flood Gate	RAP		Class 1
		Valve - Sluice			Class 2
		Wing Wall			Class 3
		Inlet	WBOP		Other Councils
		Junction			Western Bay of Plenty
		Outlet			Ocean, River, Stream
		Pump		Selected Parcel	
		RAMM Culvert	Crown Copyright Reserved. LINZ Digital Licence No. HN/352200/03 & TD093522. Archaeological data supplied by NZ Historic Places Trust http://www.archsite.org.nz Location of Services is indicative only. Council accepts no liability for any error.		
		Stormwater Drainage Reserve			
		Stormwater Pond			



Western
Bay of Plenty
District Council

For our
people

Land Information Legend

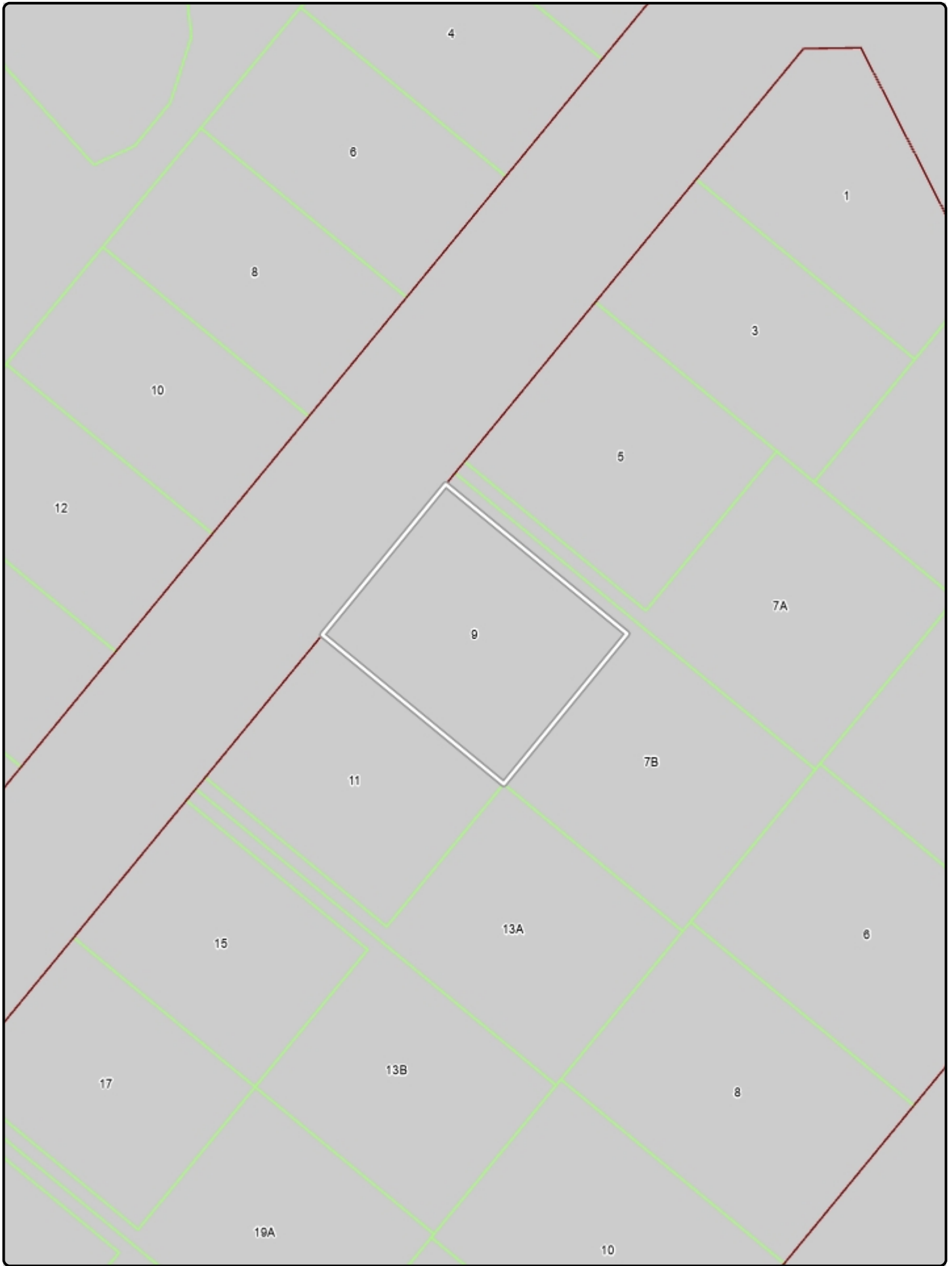




**Western
Bay of Plenty**
District Council

**For our
people**

District Plan Legend



**Western
Bay of Plenty**
District Council

**For our
people**

Produced using ArcMap by the Western BOP District Council GIS Team. Crown copyright reserved. LINZ digital license no. HN/352200/03 & TD093522. Location of services is indicative only. Council accepts no liability for errors.

Natural Hazards (not District Plan)

0 25

Meters

A4 Scale 1: 500



Other Natural Hazards

- Coastal Erosion Year 2080
- Coastal Erosion Year 2130
- Tauranga Harbour Coastal Inundation
- Katikati Floodable Area
- Te Puke Floodable Area
- Waihi Beach Floodable Area
- Wairoa Floodable Area
- Rural / Small Settlements Floodable Area
- Maketu/Pukehina Tsunami
- Liquefaction Damage is Possible
- Liquefaction Damage is Unlikely
- Liquefaction Category is Undetermined

Property

- Paper Road
- Property or Restrictive Area
- Building
- Lease
- Hydro
- Railway
- Road
- Parcel
- Selected Parcel



Western
Bay of Plenty
District Council

For our
people

Natural Hazards Legend



Title Plan - DP 527091

Survey Number DP 527091
Surveyor Reference 629313 - BARRETT HOMES LTD
Surveyor Dallas James Miller
Survey Firm Stratum Consultants Limited
Surveyor Declaration I Dallas James Miller, being a licensed cadastral surveyor, certify that:
(a) this dataset provided by me and its related survey are accurate, correct and in accordance with the Cadastral Survey Act 2002 and the Rules for Cadastral Survey 2010, and
(b) the survey was undertaken by me or under my personal direction.
Declared on 20 Feb 2019 04:37 PM

Survey Details

Dataset Description LOTS 1-10, 28, 31, 32, 35, 36, 39, 40, 42, 100 & 101 BEING A SUBDIVISION OF LOT 1 DPS 29449 & EASEMENTS OVER LOTS 1 & 2 DP 522664
Status Deposited
Land District South Auckland
Submitted Date 20/02/2019
Survey Class Class A
Survey Approval Date 25/02/2019
Deposit Date 20/02/2019

Territorial Authorities

Western Bay of Plenty District

Comprised In

RT 829688
RT SA26D/1269
RT 829689

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Area KC Deposited Plan 527091	Easement		
Lot 100 Deposited Plan 527091	Fee Simple Title	0.4602 Ha	848167
Area NJ Deposited Plan 527091	Easement		
Area OE Deposited Plan 527091	Easement		
Area OD Deposited Plan 527091	Easement		
Area NH Deposited Plan 527091	Easement		
Area R Deposited Plan 527091	Easement		
Area N Deposited Plan 527091	Easement		
Area NI Deposited Plan 527091	Easement		
Area MB Deposited Plan 527091	Easement		
Area KI Deposited Plan 527091	Easement		
Area V Deposited Plan 527091	Easement		
Area W Deposited Plan 527091	Easement		
Lot 1 Deposited Plan 527091	Fee Simple Title	0.0415 Ha	848138
Lot 2 Deposited Plan 527091	Fee Simple Title	0.0431 Ha	848139
Lot 3 Deposited Plan 527091	Fee Simple Title	0.0408 Ha	848140
Lot 4 Deposited Plan 527091	Fee Simple Title	0.0422 Ha	848141



Title Plan - DP 527091

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Lot 5 Deposited Plan 527091	Fee Simple Title	0.0417 Ha	848142
Lot 6 Deposited Plan 527091	Fee Simple Title	0.0411 Ha	848143
Lot 7 Deposited Plan 527091	Fee Simple Title	0.0413 Ha	848144
Lot 8 Deposited Plan 527091	Fee Simple Title	0.0405 Ha	848145
Lot 9 Deposited Plan 527091	Fee Simple Title	0.0420 Ha	848146
Lot 10 Deposited Plan 527091	Fee Simple Title	0.0420 Ha	848147
Lot 28 Deposited Plan 527091	Fee Simple Title	0.0423 Ha	848152
Lot 31 Deposited Plan 527091	Fee Simple Title	0.0440 Ha	848155
Lot 32 Deposited Plan 527091	Fee Simple Title	0.0423 Ha	848156
Lot 35 Deposited Plan 527091	Fee Simple Title	0.0440 Ha	848159
Lot 36 Deposited Plan 527091	Fee Simple Title	0.0463 Ha	848160
Lot 39 Deposited Plan 527091	Fee Simple Title	0.0491 Ha	848163
Lot 40 Deposited Plan 527091	Fee Simple Title	0.0456 Ha	848164
Lot 42 Deposited Plan 527091	Fee Simple Title	0.0457 Ha	848166
	Road	0.2456 Ha	
Area A Deposited Plan 527091	Easement		
Area B Deposited Plan 527091	Easement		
Area C Deposited Plan 527091	Easement		
Area D Deposited Plan 527091	Easement		
Area E Deposited Plan 527091	Easement		
Area F Deposited Plan 527091	Easement		
Area I Deposited Plan 527091	Easement		
Area KA Deposited Plan 527091	Easement		
Area KD Deposited Plan 527091	Easement		
Area KB Deposited Plan 527091	Easement		
Area MA Deposited Plan 527091	Easement		
Area J Deposited Plan 527091	Easement		
Area KE Deposited Plan 527091	Easement		
Area L Deposited Plan 527091	Easement		
Area NA Deposited Plan 527091	Easement		
Area NB Deposited Plan 527091	Easement		
Area NC Deposited Plan 527091	Easement		
Area ND Deposited Plan 527091	Easement		
Area NE Deposited Plan 527091	Easement		
Area NF Deposited Plan 527091	Easement		
Area NG Deposited Plan 527091	Easement		
Area OA Deposited Plan 527091	Easement		
Area OB Deposited Plan 527091	Easement		
Area OC Deposited Plan 527091	Easement		
Area KF Deposited Plan 527091	Easement		
Area S Deposited Plan 527091	Easement		
Area KG Deposited Plan 527091	Easement		



Title Plan - DP 527091

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Area KH Deposited Plan 527091	Easement		
Total Area		1.4813 Ha	

Schedule / Memorandum

Land Registration District

SOUTH AUCKLAND

Plan Number

DP 527091

Territorial Authority (the Council)

Western Bay of Plenty District Council

Memorandum of Easements

(Pursuant to s243 Resource Management Act 1991)

Purpose	Shown	Servient Tenement (Burdened Land)	Dominant Tenement (Benefited Land)
Right to Drain Water Right to Drain Sewage	A	Lot 100 DP 527091	Lots 36 & 39 DP 527091
	B		
	C	Lot 100 DP 527091	Lots 32 & 35 DP 527091
	D		
	E	Lot 100 DP 527091	Lots 28 & 31 DP 527091
	F		

Schedule of Easements

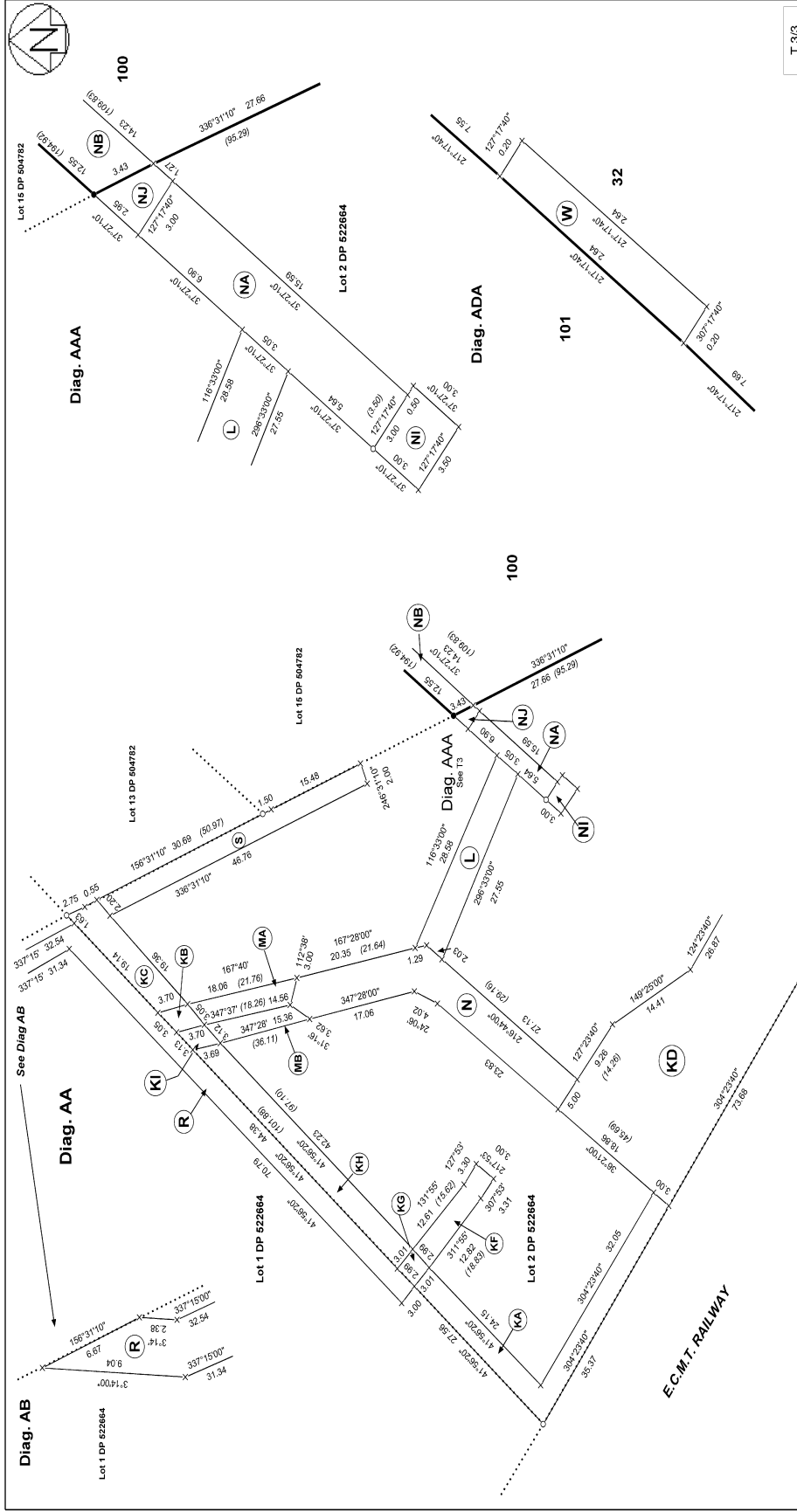
Purpose	Shown	Servient Tenement (Burdened Land)	Dominant Tenement (Benefited Land)
Right of Way	A	Lot 100 DP 527091	Lots 36 & 39 DP 527091
	B		
	C	Lot 100 DP 527091	Lots 32 & 35 DP 527091
	D		
	E	Lot 100 DP 527091	Lots 28 & 31 DP 527091
	F		

Schedule of Easements in Gross

Purpose	Shown	Servient Tenement (Burdened Land)	Grantee
Right to Convey Telecommunications	A B C D E F KE	Lot 100 DP 527091	Ultrafast Fibre Limited
	KD N	Lot 2 DP 522664	
Right to Convey Electricity	KE	Lot 100 DP 527091	Powerco Limited
	KD N	Lot 2 DP 522664	
	V	Lot 42 DP 527091	
	W	Lot 32 DP 527091	

Schedule / Memorandum

Memorandum of Easements in Gross (Pursuant to s243 Resource Management Act 1991)			
Purpose	Shown	Servient Tenement (Burdened Land)	Grantee
Right to Convey Water	KE	Lot 100 DP 527091	Western Bay of Plenty District Council
	KD	Lot 2 DP 522664	
Right to Drain Water Right to Drain Sewage	A B C D E F	Lot 100 DP 527091	Western Bay of Plenty District Council
Right to Drain Sewage	KA KB KC KD KG KH KI J I N S	Lot 2 DP 522664	Western Bay of Plenty District Council
	KE	Lot 100 DP 527091	
Right to Drain Water	KB KD KF KG L MA N NA NJ NI	Lot 2 DP 522664	Western Bay of Plenty District Council
	KE, NB	Lot 100 DP 527091	
	NC	Lot 10 DP 527091	
	ND	Lot 9 DP 527091	
	NE	Lot 8 DP 527091	
	NF	Lot 7 DP 527091	
	NG	Lot 6 DP 527091	
	NH	Lot 5 DP 527091	
	OA, OD	Lot 3 DP 527091	
	OB	Lot 2 DP 527091	
	OC	Lot 1 DP 527091	
	OE	Lot 4 DP 527091	
	R	Lot 1 DP 522664	
Right to Drain Water (Overland)	KE	Lot 100 DP 527091	
	KD N MA MB KB KI	Lot 2 DP 522664	



Land District: South Auckland Digitally Generated Plan Generated on: 12/03/2019 09:57 am Page 6 of 8	LOTS 1-10, 28, 31, 32, 35, 36, 39, 40, 42, 100 & 101 BEING A SUBDIVISION OF LOT 1 DPS 29449 & EASEMENTS OVER LOTS 1 & 2 DP 522664	Surveyor: Dallas James Miller Firm: Stratum Consultants Limited	Title Plan DP 527091 Deposited on: 20/02/2019
---	--	---	--

Attachments

A3316276: 2018-11-12 - RC10334S - Appendix 8 - Geotechnical Completion Report

A3391633: SUB12049 - 221 Consent Notice

A6236048: 2024-05-14 - HAIL Site Report

A6947571: BC93879- Site Plan with Drainage

Invoice



**Barrett Homes
Stage 1 Residential Subdivision
27 Kayelene Place, Omokoroa**

Geotechnical Completion Report

19 July 2018

Table of Contents

1. Introduction.....	3
2. Site Description	3
3. Proposed Subdivision Development	3
4. Previous Geotechnical Information	4
5. Site Investigation	4
6. Site Conditions	5
6.1. Published Geology.....	5
6.2. Subsoil Conditions	5
7. Extent of Works and Methodology	5
8. Quality Control.....	6
8.1. Quality Control Requirements.....	6
8.2. Supervision and Testing	6
9. Future Building Development.....	6
9.1. Foundation Bearing Capacity	6
9.2. Land Stability	7
9.3. Static Settlement.....	7
9.4. Liquefaction	7
10. Requirements for Building Development	7
10.1. General	7
10.2. Foundations	8
10.3. Building Platforms.....	8
10.4. Retaining Walls.....	8
10.5. Stormwater	9
10.6. Effluent Disposal.....	9
11. Lot Specific Recommendations	9
12. Conclusion	9
13. Limitations.....	9

Appendices

Appendix A	<i>Statement of Professional Opinion</i>
Appendix B	<i>Drawings</i>
Appendix C	<i>Previous Geotechnical Investigation Data</i>
Appendix D	<i>Quality Assurance and Lot by Lot Test Results</i>
Appendix E	<i>Lot Specific Recommendations</i>

1. Introduction

Stratum Consultants Ltd (Stratum) has been engaged by Barrett Homes to prepare a Geotechnical Completion Report (GCR) for Stage 1 of the residential subdivision at 27 Kayelene Place, Omokoroa (the site).

The purpose of this GCR is to record the monitoring and compliance testing undertaken during the earthworks and to certify that the land is suitable for residential building development. This report is part of the documentation to be submitted to the Western Bay of Plenty District Council (WBOPDC) to support a S.224 application.

2. Site Description

The site is located at 19 and 27 Kayelene Place, Omokoroa, as shown on Figure 1 below, legally described as Lot 1 DP 29449 and Lot 2 DP 522664. The site is an 'L shaped' residential zoned property that is approximately 2.14 ha. The site previously had a dwelling at the front of the section with the land primarily being used for an avocado orchard.



Figure 1: Site Location

3. Proposed Subdivision Development

Stage 1 will be the first of the two stage subdivision. Stage 1 of the subdivision consists of the creation of 29 residential lots (Lots 1 to 13 and Lot 27 to 42) in the north-eastern part of the site. The layout of the lots is shown on the drawings included in Appendix B.

Earthworks have been undertaken to create level platforms. The cut-fill plan for the site is shown on the drawing prepared by Stratum Consultants, ref '27 Kayelene Place, Omokoroa, Preliminary Earthworks and Cut Fills, 629313M-E-D006, Sheet 1, Issue A, dated 28 January 2018' presented in Appendix B.

4. Previous Geotechnical Information

A Geotechnical Report (GAR)¹ was prepared by Stratum Consultants to assess the geotechnical suitability of the property for subdivision and to support the resource consent application.

The site investigation for the GAR¹ involved drilling 18 boreholes to 3.0 m with shear vane tests. This report indicated that:

- The risk of slope instability is low.
- The upper soil layers generally do not comply with the definition of 'good ground' as defined in NZS3604:2011; and
- Foundations can be designed for a geotechnical ultimate bearing capacity of 225 kPa (75 kPa allowable bearing capacity).

Additionally, a geotechnical assessment report (GAR)² was prepared by Stratum Consultants to separately assess the suitability of Lot 2 for a show home within this subdivision.

The site investigations for the GAR² involved drilling four boreholes, four Scala penetrometers and shear vane tests down to 2.0m below ground level (bgl). This report indicated that:

- The sand fill overlying Lot 2 has been adequately compacted.
- The site complies with the definition of 'good ground' as per NZS 3604:211. Foundations can be designed for a geotechnical ultimate bearing capacity of 300kPa (100 kPa allowable bearing capacity).

The hand auger borehole logs from these previous investigations are presented in Appendix C.

5. Site Investigation

Additional site investigations were undertaken by Stratum Consultants between 22 June 2017 and 12 July 2018. These comprised of:

- 16 hand augered boreholes to between 0.9 – 2.0m depth and 11 Scala penetrometers to assess the fill compaction levels within Stage 1.
- A further 17 hand augered boreholes up to 2.1m depth and 14 Scala penetrometers were completed as part of the lot by lot testing.

Test location plans along with logs and test results are included in Appendix D.

¹ Geotechnical Assessment, Residential Development, 27 Kayelene Place, Omokoroa, Tauranga, Stratum Consultants, 629313-M-E-C001, dated 9 December 2016

² Geotechnical Assessment Report, Proposed House, Lot 2, 27 Kayelene Place, Omokoroa, Stratum Consultants, 629313-M-E-C009, dated 26 September 2017.

6. Site Conditions

6.1. Published Geology

The regional geological map³ indicates the site is underlain by Early to Middle Pleistocene river deposits which generally consist of poorly to moderately sorted gravel with minor sand and silt underlying terraces as well as minor fan deposits and loess.

6.2. Subsoil Conditions

Just under half the boreholes were conducted before any topsoil was laid.

The natural ground conditions encountered were typically consistent, generally comprising of stiff to very stiff silt and sandy silt overlying dense to loose pumiceous sand. A detailed description of the ground conditions of the site is provided in the GAR¹.

The additional site investigations encountered a buried topsoil layer from 0.2 to 0.4m bgl within Lot 28 beneath a 100mm layer of silt.

All filling encountered within the site is mentioned in Sections 7 and 8 below.

The groundwater table was not encountered within any boreholes.

The site has been assessed as being a Class D 'Deep or Soft Soil Site' in accordance with NZS 1170.5:2004.

7. Extent of Works and Methodology

The bulk earthworks for stage 1 of the subdivision were carried out by MATCO Civil Contractors between March 2017 to March 2018. Prior to the earthworks, the avocado trees were removed from the site.

Lots 1 to 11 and Lots 30 to 33 required filling up to 1.7m. These lots were inspected prior to any fill being placed to confirm a suitable level of root mass was observed with areas with large root mass percentages being required to undercut further. The fill within Lots 1 to 11 was compacted behind a 1.5m high retaining wall which was constructed on the north-western boundary of these lots.

Granular fill was used within Lots 1 to 6 whereas site sourced silts were used as fill within Lots 7 to 11 and Lot 28 to 33.

No filling earthworks were undertaken in Lots 12 to 13, Lot 27 to 29 and Lot 34 to 42.

The cut/fill earthwork operations were carried out with the use of a hydraulic excavators, trucks, and vibrating rollers.

Representatives of Stratum observed the cutting and filling process on a regular but not continuous basis. Stratum was also contracted to complete verification testing for the fill placed within the lots.

All fill material was placed in loose lifts up to 0.3 metres thick with cohesive fill being compacted using a sheep-foot vibrating roller, whereas granular fill was compacted using a smooth barrel roller. The filling operation was monitored by Stratum.

³ GNS Science, Geology of the Rotorua Area, Scale 1:250,000, 2010

The depth of earthworks varied from 1.0 metre cut to 1.7 metre fill as shown on the cut-fill plan prepared by Stratum Consultants '629313M-E-D006, Sheet 1, Issue A, dated 28 January 2018' presented in Appendix B.

At the completion of the earthworks and re-contouring, approximately 3,000 m³ of topsoil was re-spread across the site and grassed.

8. Quality Control

8.1. Quality Control Requirements

The performance criteria for the placement of engineered fill was based on the New Zealand Standard NZS4431:1989, "Code of Practice for Earth Fill for Residential Development" and the WBOPDC Development Code.

The specified minimum fill testing criteria are summarised below in Table 1.

Table 1: Fill Testing Specification of Compaction

Fill Test Type	Number of tests required	Minimum Requirement of Test Result
Cohesive soils – Shear Vane	Minimum 1 test per 500m ³ of filling	150 kPa average over 10 tests. Minimum single strength of 140 kPa
Cohesionless soils – Scala Penetrometer	Minimum 1 test per 500m ³ of filling	4 blows per 100mm

8.2. Supervision and Testing

The earthworks were monitored on a regular, but not continuous basis by a representative of Stratum to ensure topsoil and any unsuitable material was removed and that the clean fill was placed in an appropriate manner. Areas which required filling are discussed in Section 7.

Compaction verification testing by Stratum was carried out between 22 June 2016 and 13 March 2018 (inclusive). Testing consisted of shear vane tests and Scala penetrometer tests within the compacted fill.

Additionally, Stratum carried out compaction verification testing and lot by lot testing on the 12 July 2018, as noted in Section 5 above.

The site inspection report, fill test results and lot by lot borehole logs are presented in Appendix D.

9. Future Building Development

9.1. Foundation Bearing Capacity

The site investigation results indicate that the natural silts within the site typically have a geotechnical ultimate bearing capacity of 300 kPa (100 kPa allowable bearing capacity).

All fill within the building platforms has been adequately compacted to provide a

geotechnical ultimate bearing capacity of 300 kPa (allowable bearing capacity of 100 kPa).

All lots are either underlain by stiff natural silts or engineered fill and comply with the definition of ‘good ground’ as per NZS3604:2011 – Timber Framed Buildings.

Boreholes within Lot 28 encountered a buried topsoil layer to 0.4m bgl. This will need to be removed during preparation of the building platform for construction.

As this site originated from an avocado orchard, areas with minimal earthworks, specifically Lots 34 to 42, may have high root mass percentages beneath the topsoil layer, which will be required to be removed during preparation of the building platform.

Refer to Section 11 for a summary of the specific recommendations for each of the lots.

9.2. Land Stability

The land stability was addressed in the GAR¹ with no slopes of concern near Stage 1. Therefore the risk of slope instability affecting the house sites is considered to be very low.

Retaining walls were installed to support the fill within Lots 1 to 11. As discussed below in Section 10.4, the retaining walls were constructed in accordance with Stratum’s retaining wall design, referenced 629313, dated March 2017.

9.3. Static Settlement

Static load-induced settlements can occur where organic or compressible soils are subjected to static loading. The majority of the soil over the site is normally consolidated, and any areas with high percentages of root mass are required to be removed during construction.

Based on the soils identified and soil strength testing carried out, the anticipated loads from the houses are unlikely to exceed the allowable settlement limit of 25mm given in NZS3604:2011.

9.4. Liquefaction

Liquefaction is a term used to describe the strength loss experienced by a saturated cohesionless soil when subjected to cyclic loading (i.e. earthquakes). Soil that is susceptible to liquefaction tends to contract when subject to cyclic stresses, which induces excess pore water pressure that leads to a reduction in shear strength. Recently deposited and loose saturated natural soils and poorly compacted fills can be highly susceptible to liquefaction.

The surficial soils are volcanic in origin and not saturated and therefore not susceptible to liquefaction. Any liquefaction of the material below the groundwater table is not expected to be expressed at the surface due to the crust of non-liquefiable materials.

Based on our qualitative liquefaction hazard assessment, we consider that the risk of liquefaction induced damage is low.

10. Requirements for Building Development

10.1. General

There are 29 residential lots that have been created as part of Stage 1 of the

subdivision. The results of our fill compliance and verification testing indicate that all of the lots are suitable for construction of residential buildings in accordance with NZS3604:2011, provided that the recommendations within this report are complied with.

The following general recommendations apply to all lots unless specified stated otherwise.

Specific recommendations for each lot are summarised in Appendix E.

10.2. Foundations

As discussed in Section 9.1 above, the ground conditions of all lots within Stage 1 lots comply with the definition of 'good ground' as per NZS3604:2011. Standard foundations with a bearing capacity of 300 kPa can be designed for these lots in accordance with NZS3604:2011, provided any localised soft spots are remediated during construction.

10.3. Building Platforms

The majority of the earthworks has already been completed during the construction of the subdivision. However, any further earthworks, including excavation, preparation of subgrade, and backfill, should be performed in accordance with the geotechnical recommendations presented in this report, applicable portions of the New Zealand Standard 4431:1989 entitled, "Code of Practice for Earth Fill for Residential Development" prepared by Standards New Zealand and the WBOPDC Development Code.

During the earthworks, cuts within some of the lots may have intercepted soils of varying strengths and groundwater conditions. Therefore during the preparation of the building foundations any soft areas encountered will be required to be removed and backfilled with adequately compacted material. Additionally, any areas with high percentages of root mass will be required to be removed and backfilled with adequately compacted material. For cuts greater than 1.0m and fills greater than 0.6m, site works shall be designed and upon completion, certified by a geotechnical engineer familiar with this report.

Any cuts or fills greater than 0.5m in height shall be shaped to a gradient of no greater than 1:2 (vertical to horizontal), unless retained by an engineer designed structure.

10.4. Retaining Walls

A timber pole retaining wall has been constructed in accordance with Stratum's retaining wall design, ref '27 Kayelene Place, Omokoroa, 629313, dated March 2016' in the south western boundary of Lots 1 to 11 (retaining wall A). All other retaining walls are within stage 2.

The design of the retaining walls assumed a 2.5 kPa surcharge and a 5° bank upslope.

The location of the retaining wall is shown on the drawing prepared by Stratum Consultants, ref '27 Kayelene Place, Omokoroa, Proposed Retaining Wall, 629313-M-E-D002, Sheet 2, Issue B, dated 30 March 2017 and is presented in Appendix B.

During construction Stratum carried out regular retaining wall inspections. We confirm that the construction of the retaining walls on site are in accordance with our design.

The walls have not been designed for building loads, so buildings shall not be

constructed within 1.5 m of the top of the retaining wall.

10.5. Stormwater

Stormwater from roofs and hard surfaces should be collected and piped to the Council's reticulated stormwater system.

10.6. Effluent Disposal

Effluent is to be disposed through the Council reticulated sewer system.

11. Lot Specific Recommendations

Specific recommendations for each lot are summarised in Appendix E. Unless noted otherwise, all general recommendations contained within the lot specific table shall apply to each lot.

12. Conclusion

Provided the recommendations in Sections 10 and 11 of this report are complied with, it is our professional opinion that each of the proposed residential lots are suitable for building development in accordance with the requirements of the New Zealand Building Code and NZS3604:2011.

A Statement of Professional Opinion (10b) as to the Geotechnical Suitability of Land for Building is included in Appendix A.

13. Limitations

The assessment given in this report is based on limited site data from discrete test locations. Variations in ground conditions could exist across the site. The nature and continuity of subsoil conditions away from the test sites are inferred and it must be appreciated that actual conditions could vary from the assumed model.

This report has been prepared for the sole benefit of Barrett Homes for Stage 1 of the residential subdivision at 27 Kayelene Place, Omokoroa. It is not to be relied upon or used out of context by any other person without reference to Stratum Consultants Ltd. The reliance by other parties on the information or opinions contained in this report shall, without prior review and agreement in writing, be at such party's sole risk.

STRATUM CONSULTANTS LTD

Report Prepared By:



Jared Fox
Engineering Geologist

Reviewed and Approved By:



Elles Pearce-Danker
Geotechnical Engineer

Date: 19 July 2018

Appendix A

Statement of Professional Opinion



To: Western Bay of Plenty District Council

**STATEMENT OF PROFESSIONAL OPINION AS TO THE GEOTECHNICAL
SUITABILITY OF LAND FOR BUILDING**

Development: Stage 1 of Proposed Subdivision.....
Owner: Barrett Homes.....
Location: 27 Kayelene Place, Omokoroa.....
I, Elles Pearce-Danker..... of Stratum Consultants Ltd, 29 Grey St,
(full name)
Tauranga.....
(name and address of firm)

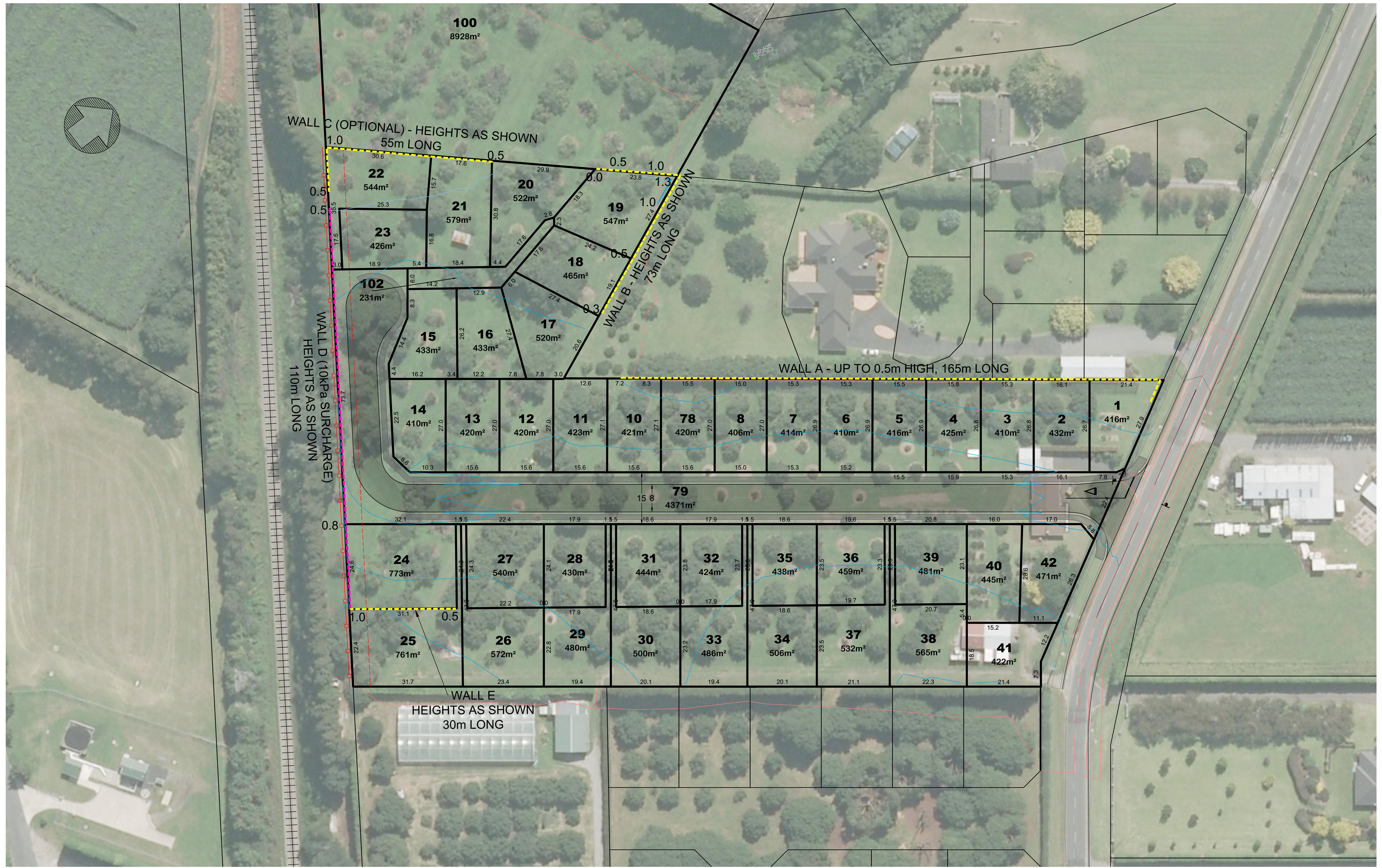
Hereby confirm that:

1. I am a professional person, appropriately qualified with experience in geotechnical engineering to ascertain the suitability of the land for building development and was retained as the Soils Engineer for the above development.
2. An appropriate level of site investigation and construction supervision has been carried out under my direction and is described in my development evaluation report dated: 19 July 2018.....
3. In my professional opinion, not to be construed as a guarantee, I consider that:
 - a. The areas shown in my report dated 19 July 2018..... of each new allotment or on the development site are suitable for the erection thereon of the building types appropriate to the zoning of the land, provided that:
The recommendations given in my report dated 19 July 2018 are followed.....
 - b. The completed works give due regard to all land slope and foundation stability considerations.
 - c. The earth fills shown on the attached Plan No. 629313-M-E-D006..... have been placed in accordance with the Subdivision and Development Code of Practice of the Western Bay of Plenty District Council.
 - d. The filled ground is suitable for the erection thereon of residential buildings not requiring specific design in terms of NZS 3604: 1999 and related documents provided that:
The recommendations given in my report dated 19 July 2018 are followed.....
 - e. 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: 1999 and related documents provided that:
The recommendations given in my report dated 19 July 2018 are followed.....
4. This professional opinion is furnished to the Council and the owner for their purpose 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 for any dwelling.

Signed: Elles PD..... Date: 19 July 2018.....

Appendix B

Drawings



C	-	-	-	-	-
B	30.03.17	KWT	FOR BUILDING CONSENT		
A	24.08.16	MJH	DRAFT		
No.	Date	By	Issue/Revision		

NOTES/KEY:	
1. AREAS AND MEASUREMENTS ARE APPROXIMATE AND SUBJECT TO SURVEY.	3. LEVELS IN TERMS OF MOTURIKI DATUM
2. APPURTENANT OR PROPOSED EASEMENTS IN RELATION TO THE SUBJECT LAND MAY NOT HAVE BEEN SHOWN IF NOT REQUIRED FOR COMPLIANCE OF THIS PROPOSAL.	4. SOURCE BOPLASS LIDAR 2011
	5. CONTOUR INTERVAL 5.1 MAJOR = 5.0m 5.2 MINOR = 1.0m

DRAWN:	KWT
CHECKED:	-
DESIGNED:	KWT
SURVEYED:	-
OFFICE:	TAURANGA
CONTACT:	07 571 4500

BARRETT HOMES
27 KAYELENE PLACE
OMOKOROA

PROPOSED RETAINING WALL
PLAN FOR BUILDING
CONSENT APPLICATION
SERVICES NOTE WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS LTD DOES NOT WARRANT THAT ALL, OR INDEED ANY SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.

ORIGINAL DWG. SIZE A1
SCALE: 1:500
DRAWING No. 629313-M-E-D002
SHEET No. 02
ISSUE B



Stratum
CONSULTANTS

Experience. Knowledge. Better Outcomes.

Planners | Engineers | Surveyors

Appendix C

Previous Geotechnical Investigation Data

Client: Barrett Homes
 Project Title: Land Development
 Site Address: 27 Kayelene Place
 City: Omokoroa
 File Number: 629313-M-E-S002

Page: 1
 No of Pages: 24

Date: 2/09/2016

Logged By: JNF

TGA REV 2 9/07/2010



Test Location Sketch



Client: Barrett Homes

Project Title: Land Development

Site Address: 27 Kayelene Place

City: Omokoroa

File Number: 629313-M-E-S002

Page: 2

No of Pages: 24

Date: 2/09/2016

Logged By: JNF/TNKS



Hand Augered Borehole

Borehole No : 1

Associated Penetrometer No : 1

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa) ◆ Undisturbed ✕ Remoulded 0200400600800100012001400160018002000220024002600280030003200340036003800400042004400460048005000 050100150200250 ◆ Undisturbed ✕ Remoulded
0.0m			TOPSOIL.		OL	
0.5m		+++ 				

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.

Vane # SN1875

Calibrated November 2015

Cohesive Material

Non Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**

Very Loose **VL** Loose **L** Medium Dense **MD**

Very Stiff **Vst** Hard **H**

Dense **D** Very Dense **D**

Verified:

Date:

Client: Barrett Homes
Project Title: Land Development
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Page: 3
No of Pages: 24

Date: 2/09/2016
Logged By: JNF/TNKS

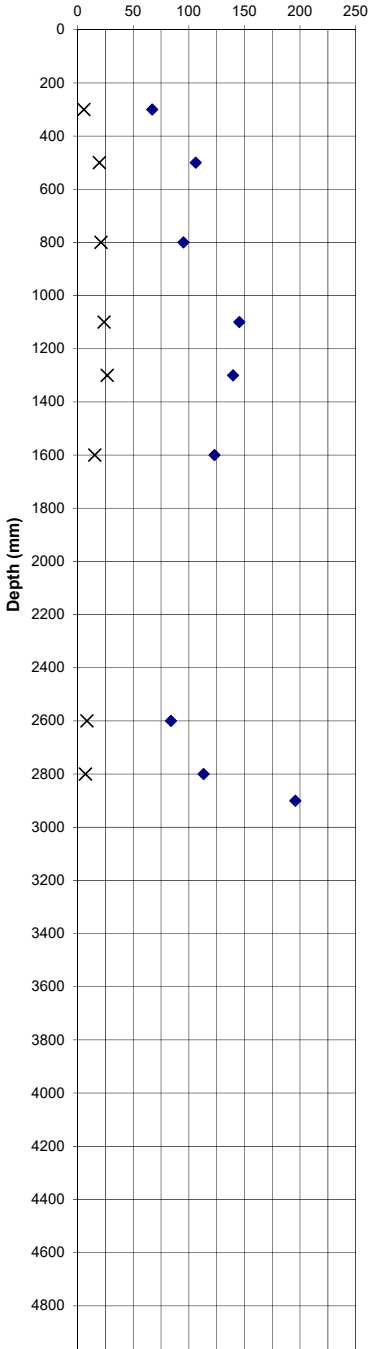


TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 2

Associated Penetrometer No : 2

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa) ◆ Undisturbed ✕ Remoulded 
0.0m			TOPSOIL.		OL	
0.5m		+++ +++	SILT minor medium - fine Sand, brownish orange, root inclusions, non-plastic, stiff, slightly moist.		ML	200
	1.0m	+++ +++				

NOTES:		Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated November 2015	
Groundwater not encountered.		Verified:	
Cohesive Material		Non Cohesive Material	
Very Soft VS Soft S Firm F Stiff St		Very Loose VL Loose L Medium Dense MD	
Very Stiff Vst Hard H		Dense D Very Dense D	
		Date:	

Client: Barrett Homes
 Project Title: Land Development
 Site Address: 27 Kayelene Place
 City: Omokoroa
 File Number: 629313-M-E-S002

Page: 4
 No of Pages: 24
 Date: 2/09/2016
 Logged By: JNF



TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 3

Associated Penetrometer No : 3

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			(FILL) TOPSOIL.		OL	
0.5m		+++	Sandy SILT medium, light brownish light orange, non-plastic, very stiff - firm, moist.	F	SM	◆ Undisturbed x Remoulded
		+++		Vst		
1.0m		+++	SILT minor coarse - fine Sand, light orangish light brown, non-plastic, very stiff, moist - very moist. Becomes medium - fine Sand, light brownish light orange.		ML	
		+++	Becomes coarse - fine Sand, light oranish light brown.	Vst		
1.5m		+++				
		+++	Sandy SILT coarse - fine, light orangish light brown, non-plastic, very stiff, moist - very moist.		SM	
2.0m		...	Pumiceous SAND coarse - fine, light orange, poorly graded, medium dense - dense, very moist.	MD	SP	
		...		D		
		...		MD		
2.5m		+++	SAND medium - fine, brownish black, poorly graded, very moist - wet.			
		+++	SILT minor medium - fine Sand, light orangish light brown mottled brown, orangish brown & black, non-plastic - slightly plastic, very stiff, very moist - wet.	Vst	ML	
3.0m		+++	Clayey SILT minor coarse - fine Sand, light orangish light brown mottled brown, orange & black, slightly plastic - moderately plastic, very moist.			
			Target Depth			
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.

Vane # SN1875

Calibrated November 2015

Cohesive Material

Non Cohesive Material

Very Soft VS Soft S Firm F Stiff St

Very Loose VL Loose L Medium Dense MD

Very Stiff Vst Hard H

Dense D Very Dense D

Verified:

Date:

Client: Barrett Homes
Project Title: Land Development
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Page: 5
No of Pages: 24
Date: 2/09/2016
Logged By: JNF



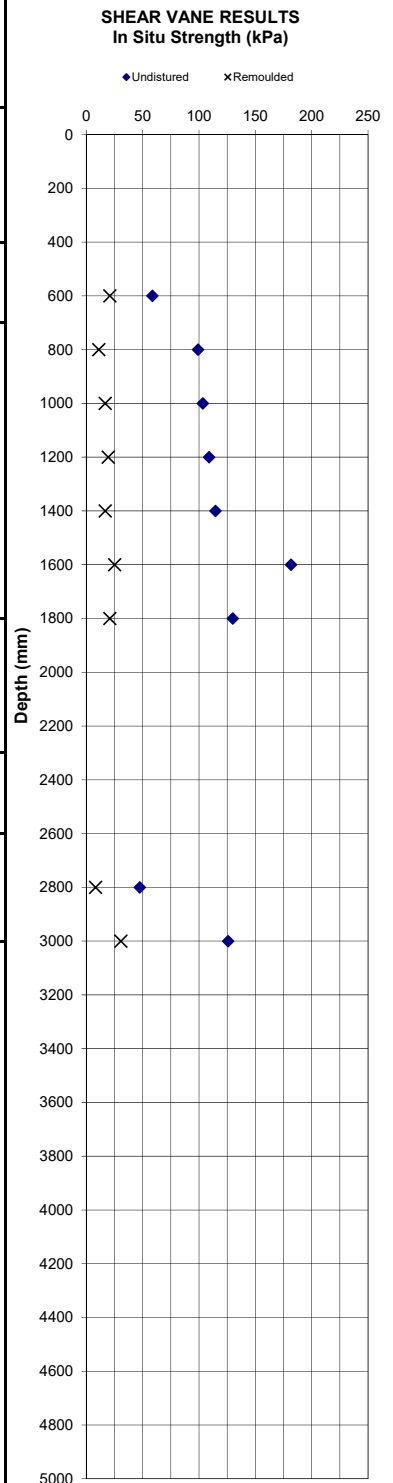
TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 4

Associated Penetrometer No : 4

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			(FILL) TOPSOIL.		OL	
0.5m		+++	Sandy SILT fine - medium, light orangish light brown, non-plastic, stiff, moist. Becomes minor medium - fine Sand.	St	SM	
1.0m		+++	Becomes moist - very moist.			
1.5m		+++	SILT rare medium - fine Sand, light brownish light orange, non-plastic, very stiff, moist - very moist.	Vst	ML	
		+++	Becomes minor coarse - fine Sand, non-plastic - slightly plastic.			
		+++	SILT minor coarse - fine Sand, light orangish light brown, non-plastic, very stiff, very moist.			
2.0m		...	Pumiceous SAND coarse - fine, light orange, poorly graded, medium dense, very moist.		SP	
		...				
		...				
		...				
		...				
2.5m		...	Silty SAND fine, light brown, uniformly graded, medium dense, very moist.		SM	
		...	Silty SAND fine - medium, brown, poorly graded, wet.			
		+++	Clayey SILT minor coarse - fine Sand, light brownish light orange mottled orange, black & brown, slightly plastic, firm, very moist - wet.	F	ML	
		+++	Clayey SILT minor coarse - fine Sand, light orangish light brown mottled orange, slightly plastic - moderately plastic, very stiff, very moist.	Vst		
3.0m			Target Depth			
3.5m						
4.0m						
4.5m						
5.0m						



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN1875
Calibrated November 2015

Cohesive Material

Non Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**

Very Loose **VL** Loose **L** Medium Dense **MD**

Very Stiff **Vst** Hard **H**

Dense **D** Very Dense **D**

Verified:

Date:

Client: Barrett Homes
Project Title: Land Development
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Page: 6
No of Pages: 24

Date: 2/09/2016
Logged By: JNF

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 5

Associated Penetrometer No : 5

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class (USCS)	SHEAR VANE RESULTS In Situ Strength (kPa) ◆ Undisturbed X Remoulded
0.0m			TOPSOIL. (FILL)		OL	
0.5m		• • •	Silty SAND fine - medium, brown, rare root inclusions, poorly graded, medium dense - very loose, moist.	VL	SM	
		• • •	Silty SAND fine - medium, light orangish light brown, poorly graded, medium dense, moist.	MD		
		• • •				
1.0m		+ + +	SILT minor fine - medium Sand, light orangish light brown, non-plastic, very stiff, moist.	Vst	ML	
		+ + +				
		+ + +				
1.5m		+ + +	SILT minor coarse - fine Sand, light orangish light brown, non-plastic, very stiff, moist.	MD	SP	
		+ + +				
		+ + +				
2.0m		• • •	Pumiceous SAND coarse - fine, light orange, poorly graded, medium dense - dense, very moist.	D	SM	
		• • •		MD		
		• • •				
2.5m		• • •	Silty SAND fine, light brown, uniformly graded, medium dense, very moist.		ML	
		+ + +	Clayey SILT minor coarse - fine Sand, brown mottled light grey & orange, non-plastic, stiff, wet.	St		
		+ + +	Clayey SILT minor coarse - fine Sand, orangish brown mottled dark orange, moderately plastic, very stiff, moist - very moist.	Vst		
3.0m			Target Depth			
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN1875
Calibrated November 2015
Verified:
Date:

Client: Barrett Homes
Project Title: Land Development
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Page: 7
No of Pages: 24

Date: 2/09/2016

Logged By: JNF

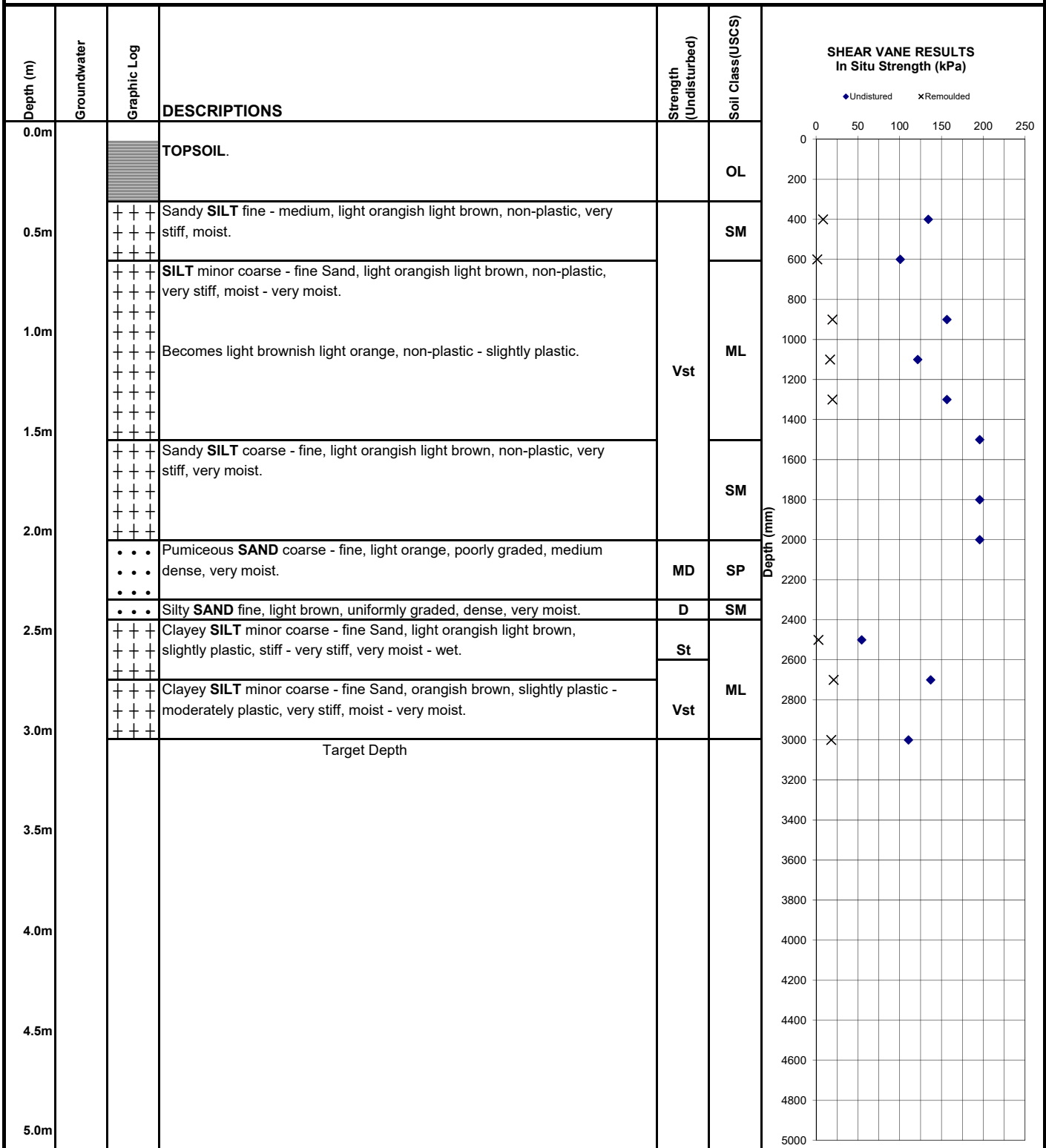


TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 6

Associated Penetrometer No : 6



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.

Vane # SN1875

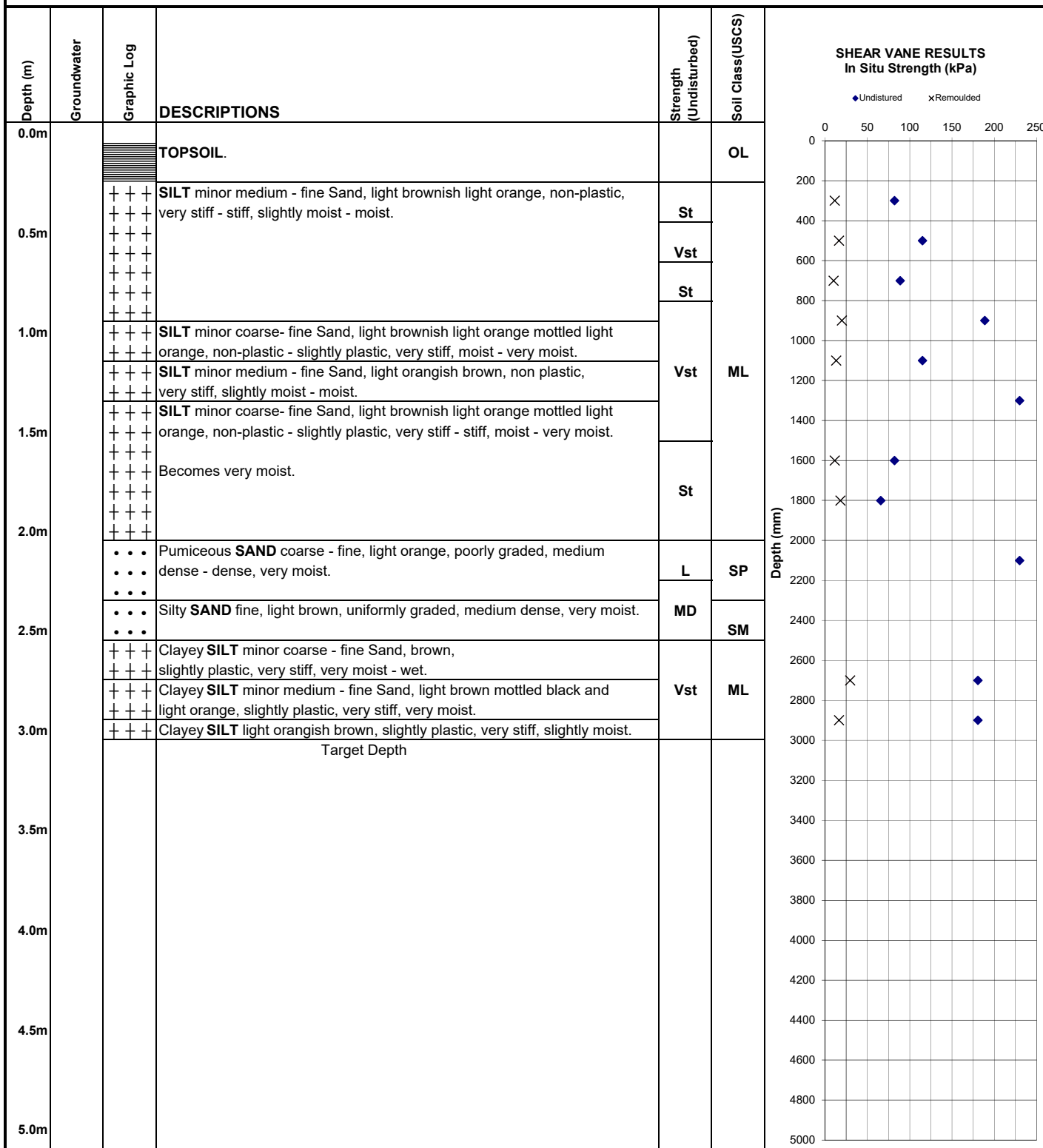
Calibrated November 2015

Cohesive Material
 Very Soft **VS** Soft **S** Firm **F** Stiff **St**
 Very Stiff **Vst** Hard **H**

Non Cohesive Material
 Very Loose **VL** Loose **L** Medium Dense **MD**
 Dense **D** Very Dense **D**

Verified:

Date:



Date:

Client: Barrett Homes
 Project Title: Land Development
 Site Address: 27 Kayelene Place
 City: Omokoroa
 File Number: 629313-M-E-S002

Page: 10
 No of Pages: 24
 Date: 2/09/2016
 Logged By: TNKS
 TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 9

Associated Penetrometer No : 9

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa) ◆ Undistured × Remoulded 0 50 100 150 200 250 0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000 Depth (mm)
0.0m			TOPSOIL.		OL	
0.5m		+++	Sandy SILT medium - fine, brown mottled black, non-plastic, stiff, slightly moist.	St	SM	
		+++	SILT minor medium - fine Sand, light brownish light orange, non-plastic, stiff- very stiff, slightly moist - moist.	Vst	ML	
1.0m		+++	Becomes non-plastic - slightly plastic.			
		+++				
1.5m		+++				
		+++	SILT minor coarse- fine Sand, light brownish light orange mottled light orange, non-plastic - slightly plastic, very stiff, moist - very moist.			
2.0m		...	Pumiceous SAND coarse - fine, light orange, poorly graded, dense - medium dense, very moist.	D	SP	
		...		MD		
		...		D		
2.5m		+++	SILT rare fine Sand, light orangish brown, non-plastic, very stiff, moist.	Vst	ML	
		+++	Clayey SILT minor coarse - fine Sand, brown, slightly plastic, very stiff, very moist - wet.			
		+++	Clayey SILT minor medium - fine Sand, light brown mottled black and light orange, slightly plastic, very stiff, very moist.			
3.0m		+++	Target Depth			
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN2033
Calibrated September 2016

Verified:
Date:

Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**
Very Stiff **Vst** Hard **H**

Non Cohesive Material

Very Loose **VL** Loose **L** Medium Dense **MD**
Dense **D** Very Dense **D**

Client: Barrett Homes
Project Title: Land Development
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Page: 11
No of Pages: 24

Date: 2/09/2016
Logged By: TNKS
TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 10

Associated Penetrometer No : 10

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			TOPSOIL.		OL	
0.5m		+++	Sandy SILT medium - fine, light brown, non-plastic, very stiff, slightly moist.		SM	SHEAR VANE RESULTS In Situ Strength (kPa) Legend: ◆ Undisturbed, ✕ Remoulded Depth (mm) scale: 0 to 5000
		+++	SILT minor medium - fine Sand, light brownish light orange, non-plastic, stiff- very stiff, slightly moist - moist.	Vst		
1.0m		+++	Becomes non-plastic - slightly plastic, moist - very moist.	St	ML	
1.5m		+++		Vst		
		+++	SILT minor coarse - fine Sand, light brownish light orange mottled light orange, non-plastic - slightly plastic, very stiff, moist - very moist.			
2.0m		...	Pumiceous SAND coarse - fine, light orange, poorly graded, medium dense, very moist.	MD	SP	
		...	Silty SAND fine, light brown, uniformly graded, medium dense, very moist.			
2.5m		+++	Clayey SILT minor coarse - fine Sand, brown, slightly plastic, very stiff, very moist - wet.	Vst	ML	
3.0m		...	SAND coarse - fine, orangish brown, poorly graded, dense, very moist - wet.	D	SP	
			Target depth			
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN2033
Calibrated September 2016

Cohesive Material

Non Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**
Very Stiff **Vst** Hard **H**

Very Loose **VL** Loose **L** Medium Dense **MD**
Dense **D** Very Dense **D**

Verified:

Date:

Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Date: 2/09/2016
Logged By: TNKS

Logged By: TNKS

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 11

Associated Penetrometer No : 11

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)
0.0m			TOPSOIL.		OL
0.5m		++++	SILT minor medium - fine Sand, light brownish light orange, non-plastic, very stiff - hard, slightly moist - moist.	Vst	ML
1.0m		++++		H	
1.5m		++++		Vst	
2.0m		+++	SILT minor coarse- fine Sand, light brownish light orange mottled light orange, non-plastic - slightly plastic, very stiff, moist - very moist. Pumiceous SAND coarse - fine, light orange, poorly graded, medium dense, very moist.	MD	
2.5m		+++ ...	SILT minor fine Sand, light orangish brown, non-plastic, very stiff, slightly plastic. SAND coarse - medium, light brown, poorly graded, moist - very moist.	Vst MD	
3.0m		+++ +++ +++ +++	Clayey SILT minor coarse - fine Sand, brown, slightly plastic, very stiff, very moist - wet. Clayey SILT minor medium - fine Sand, light brown mottled black and light orange, slightly plastic, very stiff, very moist.	Vst	
3.5m			Target depth		
4.0m					
4.5m					
5.0m					
NOTES: Groundwater not encountered.				Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2033 Calibrated September 2016 Verified: Date:	

SHEAR VANE RESULTS
In Situ Strength (kPa)

◆ Undistured x Remoulded

Depth (mm)	In Situ Strength (kPa) - Undistured	In Situ Strength (kPa) - Remoulded
400	150	20
700	150	20
1000	150	20
1500	150	20
2200	120	20
3000	120	20

Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Date: 15/11/2016
Logged By: JNF/SKB

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 12

Associated Penetrometer No : 12

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)	
0.0m			TOPSOIL.			◆Undisturbed xRemoulded	
0.5m		+++	Silty SAND fine - medium, light orangish light brown, rare root inclusions, poorly graded, slightly moist.		SM		
		+++	SILT minor fine - medium Sand, light orangish light brown, non-plastic, very stiff, moist.	Vst			ML
		+++					
		+++					
1.0m		+++	SILT minor medium - fine Sand, light brownish light orange, non-plastic - slightly plastic, very stiff - hard, moist.				
		+++					
1.5m		+++	Sandy SILT fine - medium, light orangish light brown, non-plastic, hard, moist.	MD	D		SP
		+++					
		+++	Becomes very moist.				
2.0m		...	Silty SAND fine - coarse, light orangish brown, poorly graded, medium dense, very moist.	MD	D		SM
		...	Pumiceous SAND coarse - fine rare Silt, light orangish brown, poorly graded, medium dense - dense, very moist.				
		...	Becomes light orange, very moist - wet.				
2.5m		...	Silty SAND fine - coarse, light brown, uniformly graded, very moist - wet.	MD	SP		
		...	SAND fine - medium, light grey, poorly graded, medium dense, very moist - wet.				
		+++	Clayey SILT minor coarse - fine Sand rare fine Gravel, light orangish brown, non-plastic - slightly plastic, very stiff, wet.				Vst
3.0m		+++	Clayey SILT minor fine Sand, orange streaked dark orange, moderately plastic, very stiff, very moist.				
	3.5m		Target Depth				
4.0m							
		4.5m					
			5.0m				
	NOTES: Groundwater not encountered.				Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated October 2016		
Cohesive Material				Non Cohesive Material		Verified:	
Very Soft VS Soft S Firm F Stiff St		Very Loose VL Loose L Medium Dense MD		Date:			
Very Stiff Vst Hard H		Dense D Very Dense D					

Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

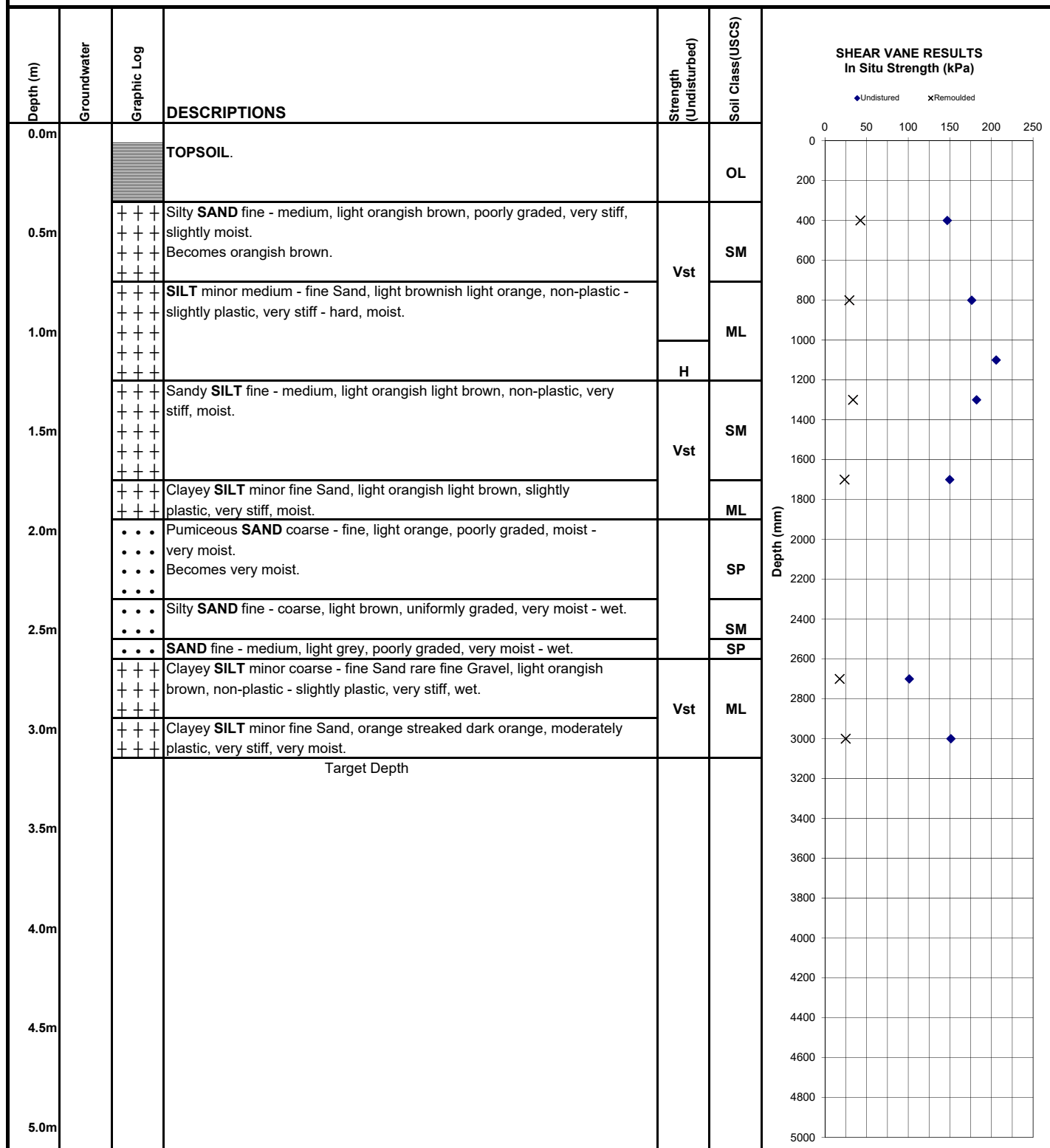
Date: 15/11/2016
Logged By: JNF/SKB
TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 13

Associated Penetrometer No : 13



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN1875

Calibrated October 2016

Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**
Very Stiff **Vst** Hard **H**

Non Cohesive Material

Very Loose **VL** Loose **L** Medium Dense **MD**
Dense **D** Very Dense **D**

Verified:	
-----------	--

Date:

Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

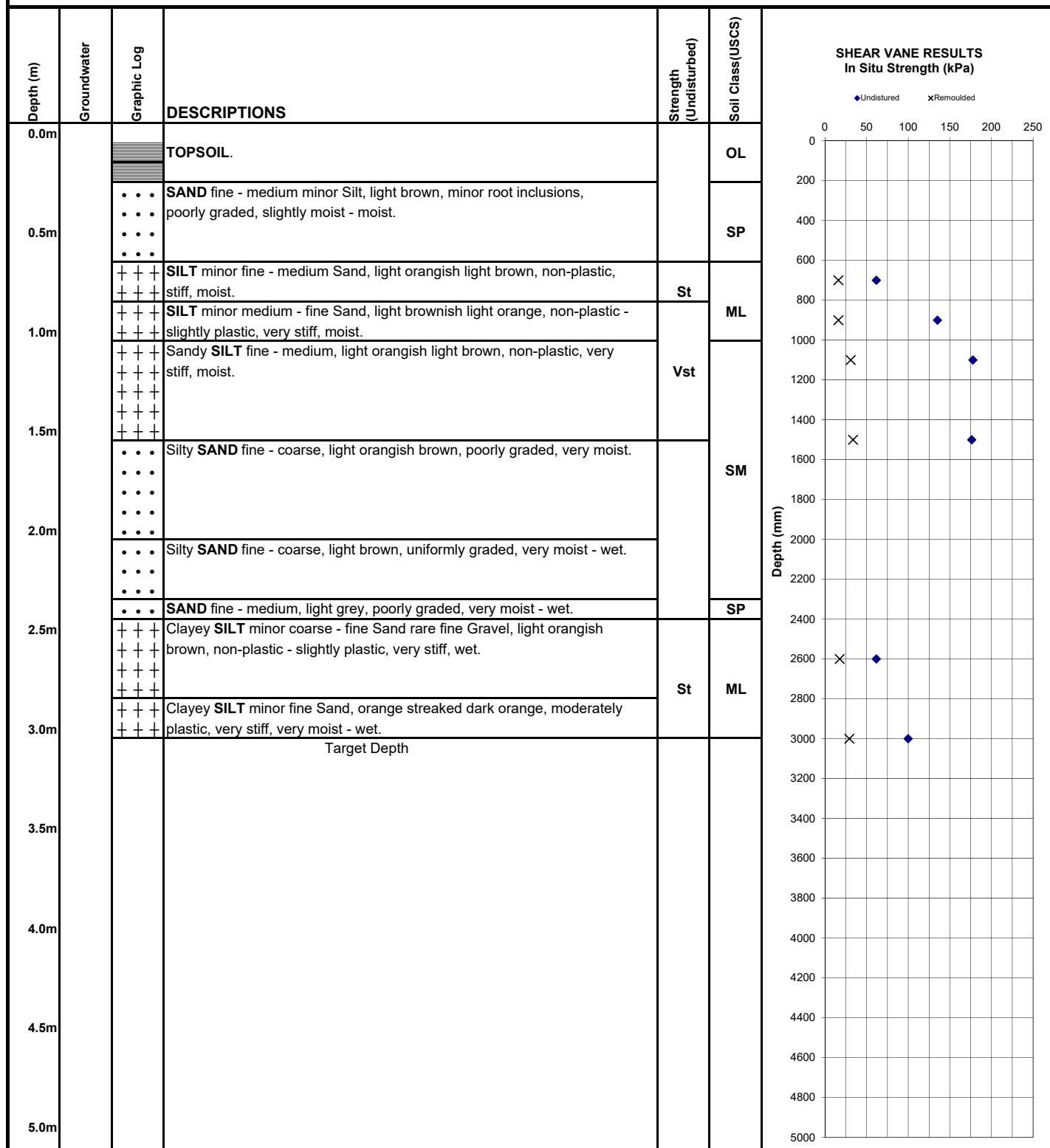
Date: 15/11/2016
Logged By: JNF/SKB



Hand Augered Borehole

Borehole No : 14

Associated Penetrometer No : 14



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN1875

Calibrated October 2016

Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**
Very Stiff **Vst** Hard **H**

Non Cohesive Material

Very Loose **VL** Loose **L** Medium Dense **MD**
Dense **D** Very Dense **D**

Verified:	
-----------	--

Date:

Client: Barrett Homes
Project Title: Land Development
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Page: 16
No of Pages: 24

Date: 16/11/2016
Logged By: TS/CH
TGA REV 2 9/07/2010



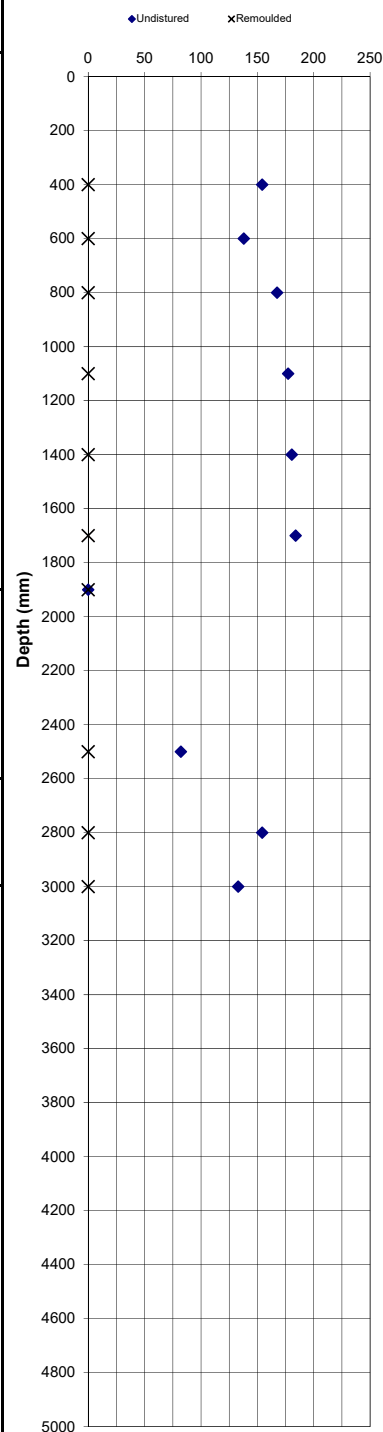
Hand Augered Borehole

Borehole No : 15

Associated Penetrometer No : 15

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	
0.0m			TOPSOIL.	OL		
0.5m			SILT minor medium - fine Sand, orangish brown, non-plastic - slightly plastic, very stiff, slightly moist.			
1.0m			Clayey SILT minor medium - fine Sand, light brown, slightly plastic - moderately plastic, very stiff, slightly moist - moist.	Vst	ML	
1.5m			Coarse - fine Pumicous SAND minor Silt, (HAUPARU TEPHRA) light brown, poorly graded, dense - medium dense, moist - very moist.	D		
2.0m				MD		
2.5m				D		
				MD	SP	
3.0m			SILT minor fine Sand, light brown, non-plastic, stiff, very moist - wet.	St		
			Clayey SILT minor fine Sand, light brown, slightly plastic, very stiff, very moist - wet.	Vst	ML	
			Target Depth			
3.5m						
4.0m						
4.5m						
5.0m						

SHEAR VANE RESULTS In Situ Strength (kPa)



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN2033

Calibrated September 2016

Cohesive Material
Very Soft **VS** Soft **S** Firm **F** Stiff **St**
Very Stiff **Vst** Hard **H**

Non Cohesive Material
Very Loose **VL** Loose **L** Medium Dense **MD**
Dense **D** Very Dense **D**

Verified:
Date:

Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Date: 15/11/2016
Logged By: TS

Logged By: TS

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 16

Associated Penetrometer No : 16

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa) ◆Undisturbed ✕Remoulded
0.0m			TOPSOIL.	OL	ML	
0.5m		+++ +++ +++	SILT minor medium - fine Sand, light brown, non-plastic, stiff, moist.	St		
1.0m		+++ +++ +++ +++ +++ +++	Medium - fine Sandy SILT, light orangish brown, non-plastic, very stiff slightly moist. Becomes slightly moist - moist	Vst	ML	
1.5m		+++ +++ +++ +++ +++ +++	Clayey SILT minor medium - fine Sand, light brown, non-plastic - slightly plastic, very stiff, slightly moist. Becomes slightly moist - moist			
2.0m			Coarse - fine Pumiceous SAND minor Silt, (HAUPARU TEPHRA) orangish light brown, poorly graded, loose - medium dense, very moist - wet.	L	SP	
				MD		
2.5m		+++ +++ +++	SILT rare fine Sand, whitish light brown, non-plastic, hard, slightly moist - moist.	H	ML	
			SAND medium - fine, dark brown mottled greyish light brown, poorly graded, very moist - wet.		SP	
3.0m		+++ +++ +++ +++ +++ +++	Clayey SILT minor fine Sand, light brown, slightly plastic, very stiff, very moist - wet.	Vst	ML	
3.5m			Target Depth			
4.0m						
4.5m						
5.0m						
NOTES:				Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2033		
Groundwater not encountered.				Calibrated September 2016		
Cohesive Material			Non Cohesive Material			
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD			
Very Stiff Vst Hard H			Dense D Very Dense D			
				Verified:		
				Date:		

Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Date: 15/11/2016
Logged By: TS

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 17

Associated Penetrometer No : 17

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa) ◆Undisturbed ✕Remoulded 0200400600800100012001400160018002000220024002600280030003200340036003800400042004400460048005000 050100150200250
0.0m			TOPSOIL.	OL	ML	
0.5m		+++ 				

Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S002

Date:
Logged By:



Hand Augered Borehole

Borehole No : 18

Associated Penetrometer No : 18

TGA REV 2 9/07/2010

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength (Undisturbed)	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa) ◆Undisturbed ✕Remoulded 0 50 100 150 200 250 0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000 Depth (mm)	
0.0m			TOPSOIL.	OL	ML		
0.5m		+ + + + + +	Silty SAND medium - fine, orange brown black mottling, poorly graded, very stiff, slightly moist.	Vst			
		1.0m	+ + + + + + + + + + + +	Medium - fine Sandy SILT , light orangish brown, non-plastic - slightly plastic, very stiff - hard, slightly moist - moist. Becomes Clayey SILT , minor root inclusions. Becomes Moist.		H	
1.5m			+ + + + + + + +	Clayey SILT minor medium - fine Sand, slightly plastic - medium plastic, hard, moist.	MD		
			2.0m	• • • • • • • •		Coarse - fine Pumiceous SAND minor Silt, light brown, poorly graded, medium dense - dense, moist - very moist.	D
				2.5m	+ + + + + +	SILT rare fine Sand, light orangish brown, non-plastic, very stiff, moist.	Vst
• • • • • •			SAND brown, coarse - fine, minor Silt, poorly graded, dense, very moist.		D		
3.0m		+ + + + + + + +	Clayey SILT minor fine Sand, light brown, slightly plastic, very stiff - stiff, very moist - wet.		St		
		3.5m		Target Depth			
4.0m							
			4.5m				
				5.0m			
NOTES:				Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2033 Calibrated September 2016			
Groundwater not encountered.							
Cohesive Material			Non Cohesive Material				
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD				
Very Stiff Vst Hard H			Dense D Very Dense D				
				Verified: Date:			

Client: Barrett Homes

Project Title: Land Development

Page: 20

No of Pages: 24

Site Address: 27 Kayelene Place

City: Omokoroa

Date: 2/09/2016

File Number: 629313-M-E-S002

Logged By: TNKS



Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows GL Start	Test 1		Test 2		Test 3		Test 4	
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
0	0		0		0		0	
5	340	340	310	310	330	330	350	350
10	550	210	600	290	580	250	560	210
15	790	240	880	280	790	210	840	280
20	1000	210	1050	170	1020	230	1100	260
25	1260	260	1180	130	1190	170	1330	230
30	1300	40	1300	120	1360	170	1480	150
35	1410	110	1450	150	1550	190	1610	130
40	1520	110	1590	140	1690	140	1740	130
45	1650	130	1740	150	1810	120	1900	160
50	1780	130	1860	120	1910	100	2020	120
55	1890	110	1950	90	2010	100	2120	100
60	1980	90	2030	80	2080	70	2280	160
65	2090	110	2110	80	2140	60	2390	110
70	2200	110	2180	70	2200	60	2500	110
75	2310	110	2290	110	2290	90	2620	120
80	2360	50	2410	120	2440	150	2760	140
85	2420	60	2520	110	2540	100	2910	150
90	2480	60	2680	160	2650	110		
95	2520	40	2780	100	2760	110		
100	2650	130	2870	90	2850	90		
105	2780	130						
110	2910	130						
115								
120								
Number of Blows GL Start	Test 5		Test 6		Test 7		Test 8	
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
0	0		0		0		0	
5	350	350	310	310	400	400	250	250
10	510	160	560	250	740	340	480	230
15	670	160	800	240	1020	280	700	220
20	830	160	950	150	1300	280	930	230
25	980	150	1110	160	1410	110	1110	180
30	1110	130	1250	140	1550	140	1240	130
35	1250	140	1400	150	1710	160	1370	130
40	1400	150	1510	110	1950	240	1500	130
45	1540	140	1630	120	2180	230	1650	150
50	1710	170	1750	120	2330	150	1780	130
55	1850	140	1850	100	2480	150	1880	100
60	1900	50	1930	80	2650	170	1980	100
65	1950	50	2000	70	2780	130	2040	60
70	2000	50	2090	90	2830	50	2090	50
75	2080	80	2180	90	2890	60	2140	50
80	2160	80	2280	100			2200	60
85	2250	90	2350	70			2310	110
90	2360	110	2440	90			2440	130
95	2470	110	2530	90			2590	150
100	2600	130	2630	100			2710	120
105	2720	120	2730	100			2810	100
110	2810	90	2810	80			2950	140
115	2960	150	2900	90				
120								
125								

Notes:

Client: Barrett Homes

Project Title: Land Development

Page: 21

No of Pages: 24

Site Address: 27 Kayelene Place

City: Omokoroa

Date: 2/09/2016

File Number: 629313-M-E-S002

Logged By: TNKS

TGA REV 2 9/07/2010



Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows GL Start	Test 9		Test 10		Test 11		Test 12	
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
0	0		0		0		0	
5	390	390	390	390	320	320	180	180
10	700	310	690	300	510	190	350	170
15	950	250	840	150	790	280	510	160
20	1140	190	1010	170	1050	260	690	180
25	1310	170	1170	160	1270	220	840	150
30	1440	130	1320	150	1420	150	1020	180
35	1630	190	1490	170	1560	140	1140	120
40	1770	140	1650	160	1730	170	1270	130
45	1860	90	1790	140	1820	90	1410	140
50	1930	70	1890	100	1920	100	1550	140
55	2010	80	1980	90	2010	90	1660	110
60	2090	80	2090	110	2110	100	1740	80
65	2190	100	2200	110	2200	90	1830	90
70	2260	70	2330	130	2300	100	1940	110
75	2350	90	2440	110	2450	150	2030	90
80	2450	100	2620	180	2610	160	2090	60
85	2580	130	2760	140	2770	160	2160	70
90	2700	120	2830	70	2870	100	2220	60
95	2810	110	2900	70			2280	60
100	2910	100					2350	70
105							2470	120
110							2560	90
115							2690	130
120							2780	90
125							2860	80
130								
135								
Number of Blows GL Start	Test 13		Test 14		Test 15		Test 16	
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
0	0		0		0		0	
5	340	340	280	280	390	390	330	330
10	610	270	480	200	640	250	640	310
15	900	290	680	200	820	180	760	120
20	1110	210	920	240	1020	200	1060	300
25	1280	170	1110	190	1170	150	1330	270
30	1450	170	1270	160	1350	180	1390	60
35	1620	170	1410	140	1530	180	1540	150
40	1820	200	1550	140	1690	160	1720	180
45	1940	120	1710	160	1800	110	1870	150
50	2070	130	1800	90	1870	70	2040	170
55	2160	90	1870	70	1940	70	2160	120
60	2280	120	1980	110	2020	80	2240	80
65	2440	160	2040	60	2100	80	2330	90
70	2620	180	2120	80	2160	60	2470	140
75	2780	160	2160	40	2200	40	2630	160
80	2930	150	2210	50	2330	130	2730	100
85			2280	70	2370	40	2800	70
90			2400	120	2440	70	2890	90
95			2550	150	2580	140		
100			2710	160	2680	100		
105			2850	140	2770	90		
110					2850	80		
115					2920	70		

Client: Barrett Homes

Project Title: Land Development

Site Address: 27 Kayelene Place

City: Omokoroa

File Number: 629313-M-E-S002

Page: 22

No of Pages: 24

Date: 17/11/2016

Logged By: TS/CH

TGA REV 2 9/07/2010



Stratum

CONSULTANTS

Experience. Knowledge. Better Outcomes.

Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows	Test 17		Test 18		Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)				
GL Start								
0	0		0					
5	190	190	350	350				
10	380	190	630	280				
15	590	210	860	230				
20	810	220	1060	200				
25	1020	210	1240	180				
30	1150	130	1390	150				
35	1270	120	1520	130				
40	1400	130	1610	90				
45	1540	140	1720	110				
50	1690	150	1810	90				
55	1840	150	1900	90				
60	1950	110	1990	90				
65	2070	120	2070	80				
70	2150	80	2150	80				
75	2240	90	2220	70				
80	2330	90	2290	70				
85	2440	110	2370	80				
90	2550	110	2430	60				
95	2640	90	2500	70				
100	2740	100	2640	140				
105	2820	80	2730	90				
110	2890	70	2860	130				
115								
120								
125								
130								
135								
140								
145								
150								
155								
160								
165								
170								
175								
180								
185								
190								
195								
200								
205								
210								
215								
220								
225								
230								
235								
240								
245								
250								
255								
260								
265								
270								

Notes:

Client: Barrett Homes

Project Title: Land Development

Page: 23

No of Pages: 24

Site Address: 27 Kayelene Place

City: Omokoroa

Date: 2/09/2016

File Number: 629313-M-E-S002

Logged By: JNF



TGA REV 2 9/07/2010

Shear Vane Test Results

Notes: UTP: Unable to Penetrate.

SN1875

Borehole 1		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
300	54	75	St	9	13
500	79	SAND			
700	72	101	Vst	9	13
900	116	162	Vst	20	28
1100	119	166	Vst	20	28
1300	112	157	Vst	19	27
1600	100	140	Vst	16	22
1700	97	136	Vst	8	11
2400	140	SAND			
2800	114	159	Vst	26	36
3000	106	148	Vst	32	45

SN1875

Borehole 2		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
300	48	67	St	4	6
500	76	106	Vst	14	20
800	68	95	St	15	21
1100	104	145	Vst	17	24
1300	100	140	Vst	19	27
1600	88	123	Vst	11	15
2600	60	84	St	6	8
2800	81	113	Vst	5	7
2900	UTP	-	-	-	-

SN1875

Borehole 3		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
400	30	42	F	10	14
600	91	127	Vst	10	14
800	123	172	Vst	16	22
1000	121	169	Vst	21	29
1200	118	165	Vst	17	24
1400	99	138	Vst	15	21
1700	90	126	Vst	10	14
1900	118	165	Vst	14	20
2600	112	157	Vst	1	1
2800	78	109	Vst	12	17
3000	90	126	Vst	23	32

SN1875

Borehole 4		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
600	42	59	St	15	21
800	71	99	St	8	11
1000	74	103	Vst	12	17
1200	78	109	Vst	14	20
1400	82	115	Vst	12	17
1600	130	182	Vst	18	25
1800	93	130	Vst	15	21
2800	34	48	F	6	8
3000	90	126	Vst	22	31

Shear Vane SN1875
Calibrated Nov-15
Constant 1.398

Client: Barrett Homes

Project Title: Land Development

Page: 24

No of Pages: 24

Site Address: 27 Kayelene Place

City: Omokoroa

Date: 2/09/2016

File Number: 629313-M-E-S002

Logged By: JNF



TGA REV 2 9/07/2010

Shear Vane Test Results

Notes: UTP: Unable to Penetrate.

SN1875

Borehole 5		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
300	98	SAND			
700	108	151	Vst	16	22
900	140	196	Vst	0	0
1100	140	196	Vst	0	0
1300	118	165	Vst	16	22
1500	121	169	Vst	18	25
1700	130	182	Vst	18	25
2600	37	52	St	1	1
2800	66	92	St	4	6
3000	126	176	Vst	36	50

SN1875

Borehole 6		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
400	96	134	Vst	6	8
600	72	101	Vst	1	1
900	112	157	Vst	14	20
1100	87	122	Vst	12	17
1300	112	157	Vst	14	20
1500	140	196	Vst	0	0
1800	140	196	Vst	0	0
2000	140	196	Vst	0	0
2500	39	55	St	2	3
2700	98	137	Vst	15	21
3000	79	110	Vst	13	18

SN2033

Borehole 7		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
300	50	82	St	7	11
500	70	115	Vst	10	16
700	54	89	St	6	10
900	115	189	Vst	12	20
1100	70	115	Vst	8	13
1300	UTP	-	-	-	-
1600	50	82	St	7	11
1800	40	66	St	11	18
2100	UTP	SAND			
2700	110	181	Vst	18	30
2900	110	181	Vst	10	16

DR4525

Borehole 8		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
400	73	109	Vst	5	7
600	87	130	Vst	7	10
900	118	176	Vst	10	15
1300	130	194	Vst	17	25
1600	140	209	H	0	0
2100	110	164	Vst	8	12
2500	90	134	Vst	5	7
2800	100	149	Vst	7	10
3000	98	146	Vst	7	10

Shear Vane
Calibrated
Constant
DR4525
Oct-15
1.491

Shear Vane
Calibrated
Constant
SN1875
Nov-15
1.4

Shear Vane
Calibrated
Constant
SN2033
Sep-16
1.64

Shear Vane
Calibrated
Constant
DR4525
Oct-15
1.491

Client: Barrett Homes

Project Title: Land Development

Page: 24

No of Pages: 24

Site Address: 27 Kayelene Place

City: Omokoroa

Date: 2/09/2016

File Number: 629313-M-E-S002

Logged By: JNF



TGA REV 2 9/07/2010

Shear Vane Test Results

Notes: UTP: Unable to Penetrate.

SN2033

Borehole 9		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
400	41	67	St	8	13
600	40	66	St	7	11
800	110	181	Vst	14	23
1000	90	148	Vst	16	26
1200	70	115	Vst	11	18
1400	81	133	Vst	10	16
1600	117	192	Vst	16	26
1900	UTP	SAND			
2400	UTP	SAND			
2900	120	197	Vst	17	28

SN2033

Borehole 10		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
500	100	164	Vst	18	30
800	102	167	Vst	13	21
1000	56	92	St	4	7
1400	110	181	Vst	13	21
1600	88	144	Vst	17	28
1800	UTP	SAND			

SN2033

Borehole 11		Undisturbed		Remoulded	
Depthmm	Reading	kPa	Strength	Reading	kPa
400	95	156	Vst	10	16
700	98	161	Vst	10	16
1000	101	166	Vst	18	30
1300	UTP	-	-	-	-
1500	97	159	Vst	12	20
2200	65	107	Vst	10	16
3000	70	115	Vst	10	16

Shear Vane SN2033
Calibrated Sep-16
Constant 1.642

Client: Barrett Homes Ltd
Project Title: Residential Subdivision
Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S007

Page: 1
No of Pages: 7

Date: 22/06/2017
Logged By: JNF/TS

TGA REV 2 9/07/2010



Test Location Sketch



Client: Barrett Homes Ltd

Project Title: Residential Subdivision

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

629313-M-E-S007 629313-M-E-S007

Page: 2

No of Pages: 7

Date: 22/06/2017

Logged By: JNF/TS

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 1

Associated Penetrometer No : 1

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		• • •	(FILL) SAND coarse - fine rare fine Pumiceous Gravel, light grey, poorly graded, dense - loose, moist.	L	SP	
0.5m		• • •	(FILL) Silty SAND fine - medium rare fine Pumiceous Gravel, whitish light grey, poorly graded, dense, moist.	D	SM	
1.0m		+ + +	SILT minor fine - medium Sand, light brown, non-plastic, very stiff, slightly moist - moist.			
1.5m		+ + +		Vst	ML	
2.0m		+ + +	Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:	Borehole began at finished platform level. Groundwater not encountered.	Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2033 Calibrated February 2017
Cohesive Material	Non Cohesive Material	Verified:
Very Soft VS Soft S Firm F Stiff St	Very Loose VL Loose L Medium Dense MD	Date:
Very Stiff Vst Hard H	Dense D Very Dense D	

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga

629313-M-E-S007 629313-M-E-S007

Date: 22/06/2017
Logged By: JNF/TS

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 2

Associated Penetrometer No : 2

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa) 00000 050100150200250 0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000 Depth (mm)
0.0m		••• ••• ••• ••• (FILL) SAND coarse - fine rare fine Pumiceous Gravel, light grey, poorly graded, medium dense - dense, moist.	MD	SP		
0.5m		••• ••• ••• (FILL) SAND fine - medium rare fine Pumiceous Gravel, whitish light grey, poorly graded, dense, moist.	D	SM		
1.0m		+ Vst SILT minor fine - medium Sand, light brown, non-plastic, very stiff - hard, slightly moist - moist.	Vst	ML		
1.5m		+ H	H			
2.0m		+ Target Depth				
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						
NOTES:			Borehole began at finished platform level. Groundwater not encountered.		Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2033 Calibrated February 2017	
Cohesive Material			Non Cohesive Material		Verified: Date:	
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD			
Very Stiff Vst Hard H			Dense D Very Dense D			

Client: Barrett Homes Ltd
Project Title: Residential Subdivision

Page: 4
No of Pages: 7

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
629313-M-E-S007 629313-M-E-S007

Date: 22/06/2017
Logged By: JNF/TS



TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 3

Associated Penetrometer No : 3

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)	
0.0m		. .	(FILL) SAND coarse - fine minor fine Pumiceous Gravel rare Silt, light grey, poorly graded, dense - loose, wet. Becomes very moist.	L	SP	0 50 100 150 200 250 0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000	
0.5m				D			
				MD			
1.0m			D	(FILL) Silty SAND fine - medium occasional fine Pumiceous Gravel, light grey, poorly graded, dense, very moist.	SM		
				(FILL) SAND coarse - fine minor fine Pumiceous Gravel, light grey, poorly graded, dense, very moist.	SP		
1.5m			Vst	+++ SILT minor coarse - fine Sand, light brownish light orange, non-plastic - slightly plastic, very moist. Becomes non-plastic. +++ Becomes non-plastic - slightly plastic.	ML		
2.0m							H
							Vst
2.5m <							

Client: Barrett Homes Ltd
Project Title: Residential Subdivision

Page: 5
No of Pages: 7

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
629313-M-E-S007 629313-M-E-S007

Date: 22/06/2017
Logged By: JNF/TS



TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 4

Associated Penetrometer No : 4

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		• • •	(FILL) SAND coarse - fine minor fine Pumiceous Gravel rare Silt, light grey, poorly graded, dense - loose, wet. Becomes very moist.	L	SP	
0.5m		• • •				
1.0m		• • •	(FILL) Silty SAND fine - medium occasional fine Pumiceous Gravel, light grey, poorly graded, dense, very moist. Becomes mottled orange & brown.	D	SM	
1.5m		• • •				
2.0m		+ + +	SILT minor coarse - fine Sand, light brownish light orange, non-plastic - slightly plastic, very stiff - hard, very moist.	Vst	ML	
		+ + +		H		
			Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						
NOTES:			Borehole began at finished platform level. Groundwater not encountered.	Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated October 2016 Verified: Date:		
Cohesive Material			Non Cohesive Material			
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD			
Very Stiff Vst Hard H			Dense D Very Dense D			

Client: Barrett Homes Ltd

Project Title: Residential Subdivision

Page: 6

No of Pages: 7

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

Date: 22/06/2017

File Number: 629313-M-E-SC 629313-M-E-S007

Logged By: JNF/TS



Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 1 blow

Number of Blows GL Start	Test 1		Test 2		Test 3		Test 4	
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
0	0							
5	180	180	150	150	190	190	190	190
10	250	70	230	80	260	70	260	70
15	300	50	280	50	310	50	330	70
20	350	50	330	50	380	70	390	60
25	400	50	400	70	400	20	440	50
30	440	40	440	40	450	50	480	40
35	490	50	480	40	490	40	540	60
40	530	40	500	20	520	30	610	70
45	570	40	540	40	550	30	650	40
50	600	30	570	30	640	90	710	60
55	650	50	600	30	690	50	780	70
60	690	40	730	130	740	50	810	30
65	720	30	930	200	790	50	830	20
70	760	40			840	50	850	20
75	810	50			870	30	900	50
80	850	40			920	50	930	30
85	930	80			960	40	960	30
90					1000	40	1000	40
95					1050	50	1030	30
100					1090	40	1050	20
105					1120	30	1090	40
110					1150	30	1110	20
115					1190	40	1150	40
120					1220	30	1210	60
125					1260	40	1280	70
130					1310	50	1310	30
135					1360	50	1360	50
140					1440	80	1410	50
145					1610	170	1480	70
150							1550	70
155							1700	150
160								
165								
170								
175								
180								
185								
190								
195								
200								
205								
210								
215								
220								
225								
230								
235								
240								
245								
250								
255								
260								
265								
270								

Notes:

Client: Barrett Homes Ltd
Project Title: Residential Subdivision
Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S007

Page: 7
No of Pages: 7
Date: 22/06/2017
Logged By: JNF/TS



TGA REV 2 9/07/2010

Shear Vane Test Results

Notes:

Location	Borehole 1 SN2033		
Depthmm	Reading	kPa	Strength
900	113	166	Vst
1200	97	142	Vst
1500	121	178	Vst
1700	112	165	Vst
2000	120	176	Vst

Location	Borehole 2 SN2033		
Depthmm	Reading	kPa	Strength
800	124	182	Vst
100	81	119	Vst
1200	125	184	Vst
1400	120	176	Vst
1600	101	148	Vst
1800	140	206	H
2000	140	206	H

Location	Borehole 3 SN1875		
Depthmm	Reading	kPa	Strength
1500	100	147	Vst
1700	118	173	Vst
1900	140	206	H
2100	114	167	Vst

Location	Borehole 4 SN1875		
Depthmm	Reading	kPa	Strength
1600	112	165	Vst
1800	82	120	Vst
2000	140	206	H

Shear Vane
Calibrated
Constant

SN1875
Oct-16
1.469

Shear Vane
Calibrated
Constant

SN2033
Feb-17
1.429

Appendix D

Quality Assurance and Lot by Lot Test Results

SITE INSPECTION REPORT

Project:	27 Kaylene Place, Omokoroa	File No:	629313
Contractor:	Barrett Homes Ltd	Subcontractor:	MATCO Contractors
Subcontract:		Attention:	
Site report No:	01	Weather:	Fine/Sunny
Date:	5-05-2017	Time:	3:15 pm

Feature Description / Location:

Residential subdivision at 27 Kaylene Place, Omokoroa.

Reason for Inspection:

Confirmation all topsoil and unsuitable material has been removed.

Previous inspection by a member of Stratum noted that further clearance was required in areas with an unsuitable amount of root mass.

Inspection Report:

Lots 1 through to 6 have been adequately cleared of any unsuitable material with all root mass hotspots having been removed.

Three stockpiles remained on site from cutting down the lots. Matt Paget requested we use these stockpiles for fill on the cleared lots, however on further inspection, the fill contained too much organics to be suitable.

Fill used will now be imported Sand for lots 1 – 6.

Work passed:

Lots 1 – 6 have been cleared of all unsuitable material. Filling may begin on these lots.

OK – Passed.

Work to be reinspected:

All other lots require an inspection before any fill is placed.

Photographic Evidence:

As attached

Samples / materials collected:

No

Recommendations:

Nil -

Note: This is an inspection report only and does not authorise a Contract Variation or Extension of Time to the Contract. Any Claims or extensions of Time shall be made in accordance with the Terms of the contract.

Inspected by

Jared Fox – Geotechnical Technician

SITE INSPECTION REPORT



Figure 1: Photo taken facing south west.

SITE INSPECTION REPORT

Project:	27 Kaylene Place, Omokoroa	File No:	629313-M-E-S006
Contractor:	Barrett Homes Ltd	Subcontractor:	MATCO Contractors
Subcontract:		Attention:	
Site report No:	03	Weather:	Rain
Date:	22-06-2017	Time:	10:30 am

Feature Description / Location:

Residential subdivision at 27 Kaylene Place, Omokoroa.

Reason for Inspection:

Confirmation engineered fill has reached an adequate level of compaction.

Inspection Report:

Fill has been placed on lots 1 – 6. On the western end of the lots fill has been battered back, to allow for a retaining wall which will require further filling against it. The top of the fill batter to the edge of the lot ranges from ≈3 meters at lot 6 to ≈4.5 meters at lot 2. Lot 6 has yet to be completely filled with 3 meters remaining on its southern boundary.

Tested the fill, which was Sand, using the Scala Penetrometer.

Fill has been compacted using a smoothed barrel 10T roller.

See the attached results.

Work passed:

Engineered fill placed on lots 1 through to 6 have reached adequate compaction.

OK – Passed.

Work to be reinspected:

Nil -

Photographic Evidence:

As attached

Samples / materials collected:

No

Recommendations:

Nil -

Note: This is an inspection report only and does not authorise a Contract Variation or Extension of Time to the Contract. Any Claims or extensions of Time shall be made in accordance with the Terms of the contract.

Inspected by

Jared Fox – Geotechnical Technician

SITE INSPECTION REPORT



Figure 1: Stake showing boundary for lots 6/7. Photo facing north west.



Figure 2: Photo facing north.

SITE INSPECTION REPORT



Figure 3: Battered fill behind lots 1 - 6. Photo facing north east.



Figure 4: 10T roller used.

Client: Barrett Homes Ltd
Project Title: Residential Subdivision

Page: 2
No of Pages: 4

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

File Number: 629313-M-E-S006

Date: 22/06/2017
Logged By: JNF/NJB



TGA REV 2 9/07/2010

Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows	Test 1 ≈ 600mm Fill		Test 2 ≈ 700mm Fill		Test 3 ≈ 1400mm Fill		Test 4 ≈ 1400mm Fill	
	Reading	Penetration	Reading	Penetration	Reading	Penetration	Reading	Penetration
GL Start	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
0	0		0		0		0	
5	180	180	150	150	190	190	260	260
10	250	70	230	80	260	70	330	70
15	310	60	280	50	310	50	390	60
20	350	40	330	50	380	70	440	50
25	390	40	400	70	400	20	480	40
30	430	40	440	40	450	50	540	60
35	450	20	480	40	490	40	610	70
40	510	60	500	20	520	30	650	40
45	540	30	540	40	550	30	710	60
50	600	60	570	30	640	90	780	70
55	840	240	600	30	690	50	810	30
60	1130	290	730	130	740	50	830	20
65	1270	140	930	200	790	50	850	20
70	1400	130			840	50	900	50
75	1480	80			870	30	930	30
80	1550	70			920	50	960	30
85					960	40	1000	40
90					1000	40	1030	30
95					1050	50	1050	20
100					1090	40	1090	40
105					1120	30	1110	20
110					1150	30	1150	40
115					1190	40	1210	60
120					1220	30	1280	70
125					1260	40	1310	30
130					1310	50	1360	50
135					1360	50	1410	50
140					1440	80	1480	70
145					1610	170	1550	70
150							1700	150
155								
160								
165								
170								
175								
180								
185								
190								
195								
200								
205								
210								
215								
220								
225								
230								
235								
240								
245								
250								
255								
260								
265								
270								

Notes:

Testing began at finished platform level.

Client: Barrett Homes Ltd

Project Title: Residential Subdivision

Page: 3

No of Pages: 4

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

Date: 22/06/2017

File Number: 629313-M-E-S006

Logged By: JNF/NJB

TGA REV 2 9/07/2010



Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows	Test 5 ≈ 800mm Fill		Test 6 ≈ 1400mm Fill		Test 7 ≈ 1500mm Fill		Test 8 ≈ 1300mm Fill	
	Reading	Penetration	Reading	Penetration	Reading	Penetration	Reading	Penetration
GL Start	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
0	0		0		0		0	
5	180	180	200	200	150	150	170	170
10	250	70	260	60	200	50	240	70
15	300	50	310	50	250	50	290	50
20	350	50	350	40	300	50	340	50
25	400	50	370	20	350	50	380	40
30	440	40	390	20	400	50	410	30
35	490	50	400	10	450	50	430	20
40	530	40	430	30	480	30	460	30
45	570	40	450	20	500	20	480	20
50	600	30	480	30	550	50	520	40
55	650	50	500	20	580	30	550	30
60	690	40	530	30	610	30	570	20
65	720	30	550	20	650	40	610	40
70	760	40	580	30	680	30	640	30
75	810	50	610	30	700	20	660	20
80	850	40	630	20	740	40	690	30
85	930	80	650	20	760	20	720	30
90			680	30	780	20	750	30
95			700	20	800	20	770	20
100			720	20	830	30	800	30
105			740	20	850	20	820	20
110			750	10	860	10	850	30
115			770	20	880	20	870	20
120			780	10	900	20	910	40
125			800	20	950	50	940	30
130			820	20	980	30	970	30
135			840	20	1020	40	1020	50
140			860	20	1050	30	1060	40
145			880	20	1080	30	1130	70
150			900	20	1110	30	1210	80
155			920	20	1120	10	1310	100
160			950	30	1150	30	1420	110
165			980	30	1200	50	1500	80
170			1010	30	1250	50	1560	60
175			1050	40	1300	50	1620	60
180			1150	100	1320	20	1660	40
185			1240	90	1350	30	1730	70
190			1330	90	1380	30	1770	40
195			1440	110	1460	80	1810	40
200			1600	160	1550	90		
205					1680	130		
210					1800	120		
215					1900	100		
220								
225								
230								
235								
240								
245								
250								
255								
260								
265								
270								

Notes:

Testing began at finished platform level.

Client: Barrett Homes Ltd
Project Title: Residential Subdivision
Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S006

Page: 4
No of Pages: 4

Date: 22/06/2017
Logged By: JNF/NJB



TGA REV 2 9/07/2010

Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows	Test 9 ≈ 1400mm Fill		Test 10 ≈ 1000mm Fill		Test 11 ≈ 800mm Fill		Reading (mm)	Penetration (mm)
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)		
GL Start								
0	0		0		0			
5	150	150	190	190	180	180		
10	230	80	260	70	250	70		
15	280	50	330	70	330	80		
20	330	50	390	60	380	50		
25	380	50	450	60	450	70		
30	420	40	500	50	510	60		
35	460	40	540	40	580	70		
40	520	60	650	110	650	70		
45	560	40	700	50	740	90		
50	610	50	750	50	980	240		
55	660	50	800	50	1240	260		
60	700	40	840	40				
65	730	30	890	50				
70	760	30	930	40				
75	800	40	980	50				
80	830	30	1080	100				
85	860	30	1400	320				
90	900	40	1520	120				
95	930	30						
100	960	30						
105	980	20						
110	1010	30						
115	1030	20						
120	1050	20						
125	1060	10						
130	1090	30						
135	1120	30						
140	1140	20						
145	1160	20						
150	1190	30						
155	1230	40						
160	1270	40						
165	1310	40						
170	1420	110						
175	1570	150						
180	1600	30						
185	1680	80						
190	1750	70						
195	1830	80						
200								
205								
210								
215								
220								
225								
230								
235								
240								
245								
250								
255								
260								
265								
270								

Notes:

Testing began at finished platform level.

SITE INSPECTION REPORT

Project:	27 Kaylene Place, Omokoroa	File No:	629313
Contractor:	Barrett Homes Ltd	Subcontractor:	MATCO Contractors
Subcontract:		Attention:	
Site report No:	04	Weather:	Sunny
Date:	24-11-2017	Time:	4:00 pm

Feature Description / Location:

Residential subdivision at 27 Kaylene Place, Omokoroa.

Reason for Inspection:

Confirmation topsoil within Lots 7 to 11 and 28 to 33 has been removed.

Inspection Report:

Topsoil still shown in localised areas which require further remediation.
See attached drawing for areas which have had the topsoil adequately removed.

Work passed:

See attached drawing for areas passed.

Work to be reinspected:

Fill being placed within these lots will require testing to confirm it is reaching an adequate level of compaction.

Photographic Evidence:

As attached

Samples / materials collected:

No

Recommendations:

Nil -

Note: This is an inspection report only and does not authorise a Contract Variation or Extension of Time to the Contract. Any Claims or extensions of Time shall be made in accordance with the Terms of the contract.

Inspected by

Jared Fox – Geotechnical Technician

SITE INSPECTION REPORT



Figure 1: Photo taken facing south east.



Figure 2: Photo taken facing north west.

SITE INSPECTION REPORT



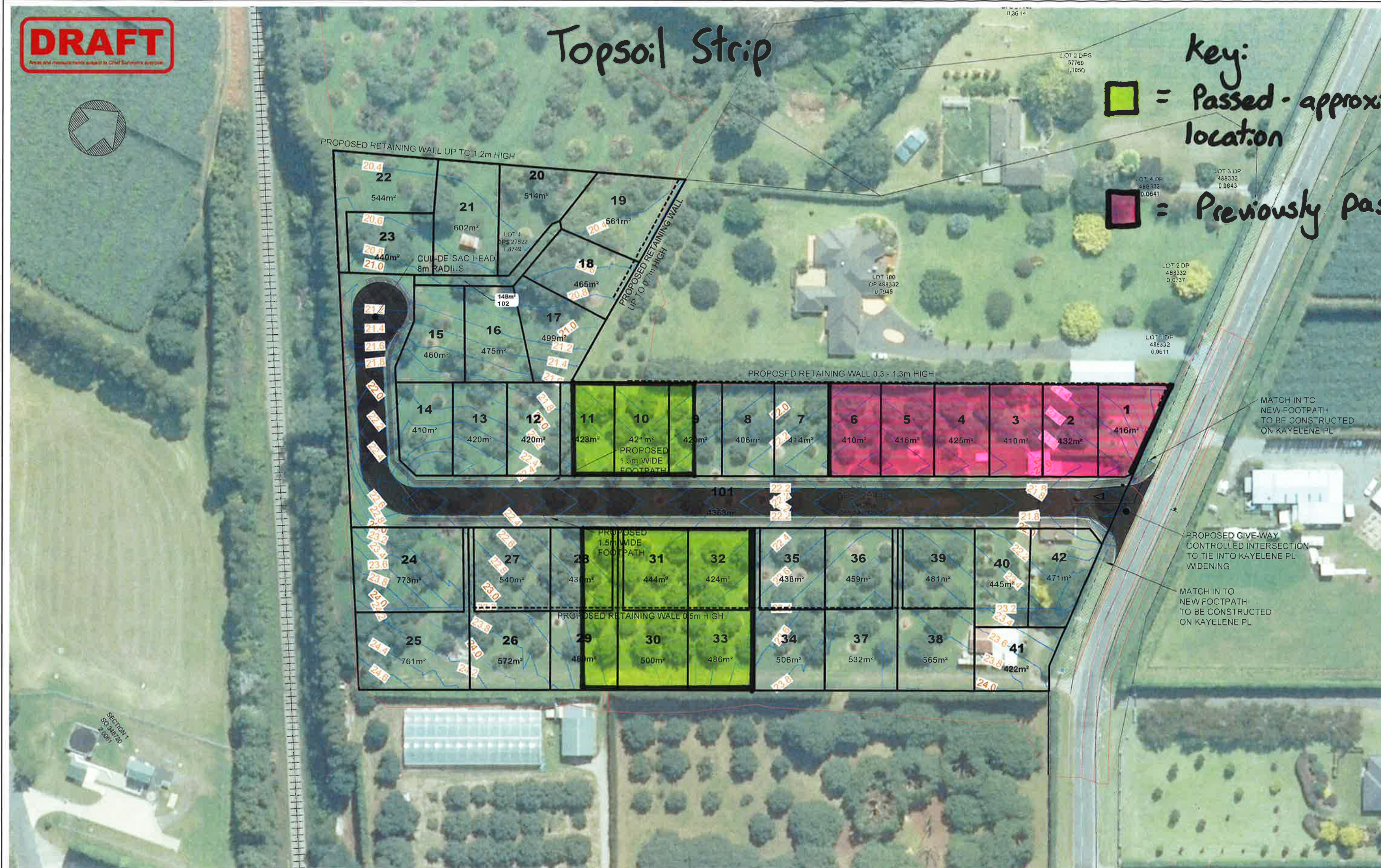
Figure 3: Photo taken facing north.

DRAFT



Topsoil Strip

Key:
[Green Box] = Passed - approximate location
[Pink Box] = Previously passed



NOTES/KEY:

1. AREAS AND MEASUREMENTS ARE APPROXIMATE AND SUBJECT TO SURVEY.
2. APPURTENANT OR PROPOSED EASEMENTS IN RELATION TO THE SUBJECT LAND MAY NOT HAVE BEEN SHOWN IF NOT REQUIRED FOR COMPLIANCE OF THIS PROPOSAL.

3. LEVELS IN TERMS OF MOTURIKI DATUM
4. SOURCE BOPLASS LIDAR 2011
5. CONTOUR INTERVAL
5.1 MAJOR = 1.0m
5.2 MINOR = 0.2m

DRAWN: KWT
CHECKED: *
DESIGNED: KWT
SURVEYED: *
OFFICE: TAURANGA
CONTACT: 07 571 4500

BARRETT HOMES
27 KAYELENE PLACE
OMOKORO

PROPOSED ROAD
AND PROPOSED
FINISHED SURFACE CONTOURS

SERVICES NOTE

WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. STRATUM CONSULTANTS LTD DOES NOT WARRANT THAT ALL OF THESE SERVICES ARE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.

ORIGINAL DWG. SIZE A1

SCALE: 1:500

DRAWING No:
629313-M-E-D001

SHEET No:
02

ISSUE
B



Planners | Engineers | Surveyors

SITE INSPECTION REPORT

Project:	27 Kaylene Place, Omokoroa	File No:	629313
Contractor:	Barrett Homes Ltd	Subcontractor:	MATCO Contractors
Subcontract:		Attention:	
Site report No:	05	Weather:	Sunny
Date:	29-11-2017	Time:	1:00 pm

Feature Description / Location:

Residential subdivision at 27 Kaylene Place, Omokoroa.

Reason for Inspection:

Confirmation topsoil within Lots 7 to 9 has been removed.

Inspection Report:

Topsoil has been removed within lots 7 to 9.

Work passed:

Topsoil has been suitably stripped in Lots 7 to 9.

Work to be reinspected:

Fill being placed within these lots will require testing to confirm it is reaching an adequate level of compaction.

Photographic Evidence:

As attached

Samples / materials collected:

No

Recommendations:

Nil -

Note: This is an inspection report only and does not authorise a Contract Variation or Extension of Time to the Contract. Any Claims or extensions of Time shall be made in accordance with the Terms of the contract.

Inspected by

Jared Fox – Geotechnical Technician

SITE INSPECTION REPORT



Figure 1: Photo taken facing North East.



Figure 2: Photo taken facing south. Stockpile in photo fell within Lot 9 and was removed after photo was taken to confirm no topsoil was underlying it.

SITE INSPECTION REPORT

Project:	27 Kaylene Place, Omokoroa	File No:	629313-M-E-S009
Contractor:	Barrett Homes Ltd	Subcontractor:	MATCO Contractors
Subcontract:		Attention:	
Site report No:	06	Weather:	Overcast
Date:	22-01-2018	Time:	2:00 pm

Feature Description / Location:

Residential subdivision at 27 Kaylene Place, Omokoroa.

Reason for Inspection:

Confirmation fill has reached an adequate level of compaction.

Inspection Report:

Fill has been placed on lots 7 – 11.

Tested the fill, which was site sourced silts, using the Hand Auger and Shearvane.

See the attached results.

Work passed:

Fill placed on lots 7 through to 11 have reached adequate compaction.

OK – Passed.

Work to be reinspected:

Nil -

Photographic Evidence:

As attached

Samples / materials collected:

No

Recommendations:

Nil -

Note: This is an inspection report only and does not authorise a Contract Variation or Extension of Time to the Contract. Any Claims or extensions of Time shall be made in accordance with the Terms of the contract.

Inspected by

Travis Scott – Geotechnical Technician

SITE INSPECTION REPORT

Figure 1: Photo showing extent of fill Photo facing north.



Figure 2: Photo facing north.



Client: Barret Homes

Project Title: Fill testing

Site Address: 27 Kayeleene Place

City: Omokoroa

File Number: 629313-M-E-S009

Page: 1

No of Pages: 9

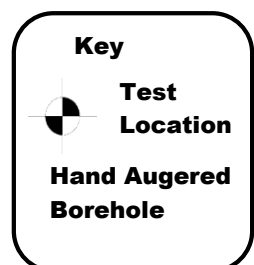
Date: 22/01/2018

Logged By: TS/HD/NJB

TGA REV 2 9/07/2010



Test Location Sketch



Client: Barret Homes

Project Title: Fill testing

Site Address: 27 Kayeleene Place

City: Omokoroa

File Number: 629313-M-E-S009

Page: 2

No of Pages: 9

Date: 22/01/2018

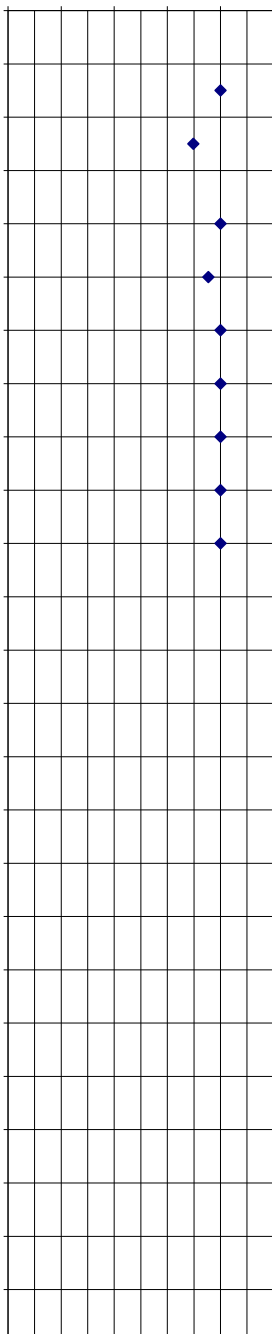
Logged By: TS/HD/NJB

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 1 LOT 7

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)	
0.0m		+++ +++ +++ +++ +++ +++ +++ +++ +++ +++ +++ +++	(FILL) Sandy SILT fine, light brown - light grey - pink, hard - very stiff, moist, non-plastic.	H	ML	0200400600800100012001400160018002000220024002600280030003200340036003800400042004400460048005000 050100150200250 	
0.5m		Vst					
1.0m		H					
		Vst					
1.5m		H					
2.0m							
				Target Depth			
2.5m							
3.0m							
3.5m							
4.0m							
4.5m							
5.0m							
NOTES:				Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2033 Calibrated February 2017			
Groundwater not encountered.							
Cohesive Material			Non Cohesive Material				
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD				
Very Stiff Vst Hard H			Dense D Very Dense D				
				Verified: Date:			

Client: Barret Homes

Project Title: Fill testing

Site Address: 27 Kayeleene Place

City: Omokoroa

File Number: 629313-M-E-S009

Page: 3

No of Pages: 9

Date: 22/01/2018

Logged By: TS/HD/NJB



TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 2 **LOT 8**

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) Sandy SILT fine, light brown - light grey - pink, hard, moist, non-plastic.			
0.5m		+++	Becomes moist - very moist.			
1.0m		+++	SILT minor medium - fine Sand, light brownish light orange, hard, moist, non-plastic.	H	ML	
1.5m		+++				
2.0m		+++	Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # DR4525
Calibrated October 2017

Verified:
Date:

Cohesive Material	Non Cohesive Material
Very Soft VS Soft S Firm F Stiff St	Very Loose VL Loose L Medium Dense MD
Very Stiff Vst Hard H	Dense D Very Dense D

Client: Barret Homes
Project Title: Fill testing
Site Address: 27 Kayeleene Place
City: Omokoroa
File Number: 629313-M-E-S009

Page: 4
No of Pages: 9
Date: 22/01/2018
Logged By: TS/HD/NJB

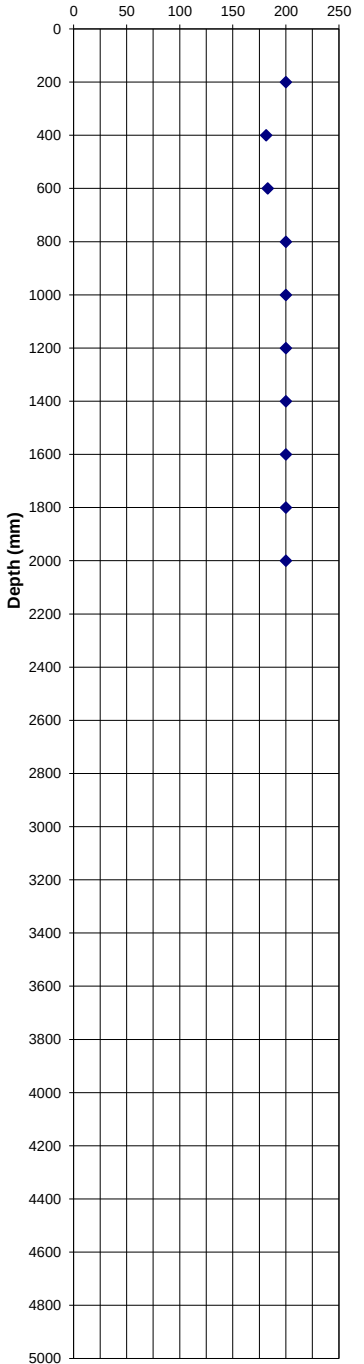


TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 3 **LOT** 9

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) Sandy SILT fine, light brown - light grey - pink, hard - very stiff, moist, non-plastic.	H		
0.5m		+++		Vst		
1.0m		+++	(FILL) SILT minor medium - fine Sand, light brownish light orange mottled black, hard, moist, non-plastic.		ML	
1.5m		+++	SILT minor medium - fine Sand, light brownish light orange, hard, moist, non-plastic.	H		
2.0m		+++	Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES: Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN2033
Calibrated February 2017

Verified:
Date:

Cohesive Material	Non Cohesive Material
Very Soft VS Soft S Firm F Stiff St	Very Loose VL Loose L Medium Dense MD
Very Stiff Vst Hard H	Dense D Very Dense D

Client: Barret Homes
Project Title: Fill testing
Site Address: 27 Kayeleene Place
City: Omokoroa
File Number: 629313-M-E-S009

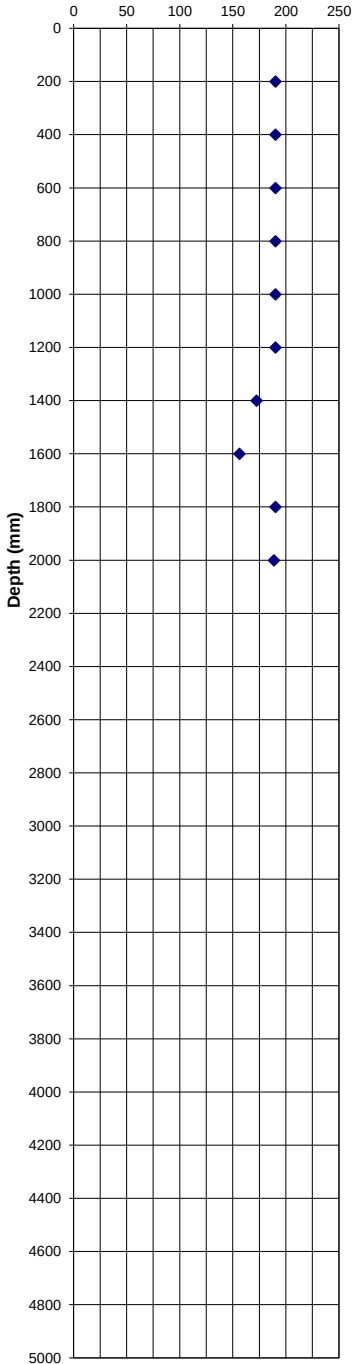
Page: 5
No of Pages: 9
Date: 22/01/2018
Logged By: TS/HD/NJB
TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 4 **LOT** 9

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) Sandy SILT fine, light brown - light grey - pink, very stiff, moist, non-plastic.			
0.5m		+++				
1.0m		+++	(FILL) SILT minor medium - fine Sand, light brownish light orange mottled black, very stiff, moist non-plastic.	Vst	ML	
1.5m		+++	Becomes dark brown - black.			
2.0m		+++	SILT minor medium - fine Sand, light brownish light orange, very stiff, moist, non-plastic.			
			Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES: Groundwater not encountered.			Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated August 2017		
Cohesive Material		Non Cohesive Material		Verified:	
Very Soft VS Soft S Firm F Stiff St		Very Loose VL Loose L Medium Dense MD		Date:	
Very Stiff Vst Hard H		Dense D Very Dense D			

Client: Barret Homes

Project Title: Fill testing

Site Address: 27 Kayeleene Place

City: Omokoroa

File Number: 629313-M-E-S009

Page: 6

No of Pages: 9

Date: 22/01/2018

Logged By: TS/HD/NJB

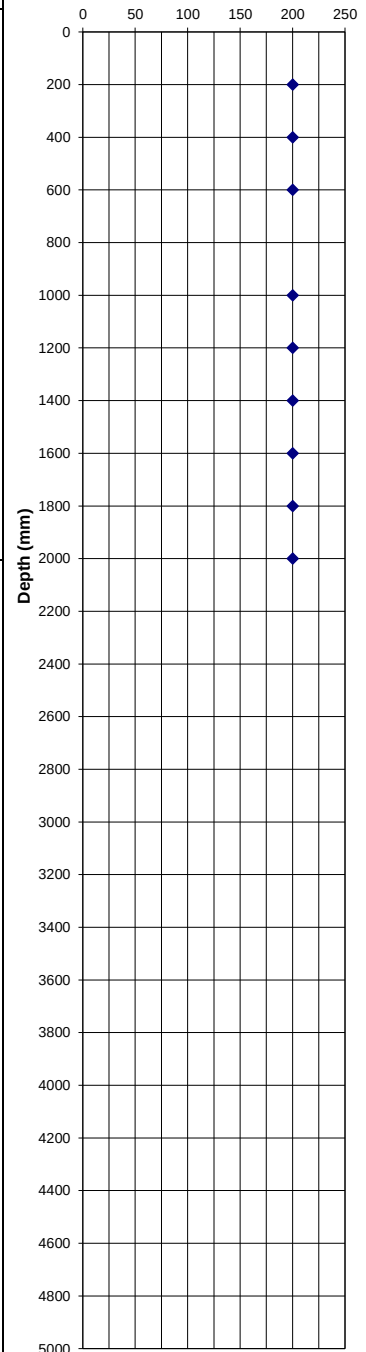


TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 5 **LOT 10**

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) Sandy SILT fine, light brown - light grey - pink, hard, moist, non-plastic.			
0.5m		+++				
1.0m		+++	(FILL) SILT minor medium - fine Sand, light brownish light orange mottled black, hard, moist, non-plastic.	H	ML	
1.5m		+++	SILT minor medium - fine Sand, light brownish light orange, hard, moist, non-plastic.			
2.0m		+++	Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES:			Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2033 Calibrated February 2017		
Groundwater not encountered.			Verified:		
Cohesive Material			Date:		
Very Soft VS Soft S Firm F Stiff St					
Very Stiff Vst Hard H					
Non Cohesive Material					
Very Loose VL Loose L Medium Dense MD					
Dense D Very Dense D					

Client: Barret Homes
Project Title: Fill testing
Site Address: 27 Kayeleene Place
City: Omokoroa
File Number: 629313-M-E-S009

Page: 7
No of Pages: 9
Date: 22/01/2018
Logged By: TS/HD/NJB

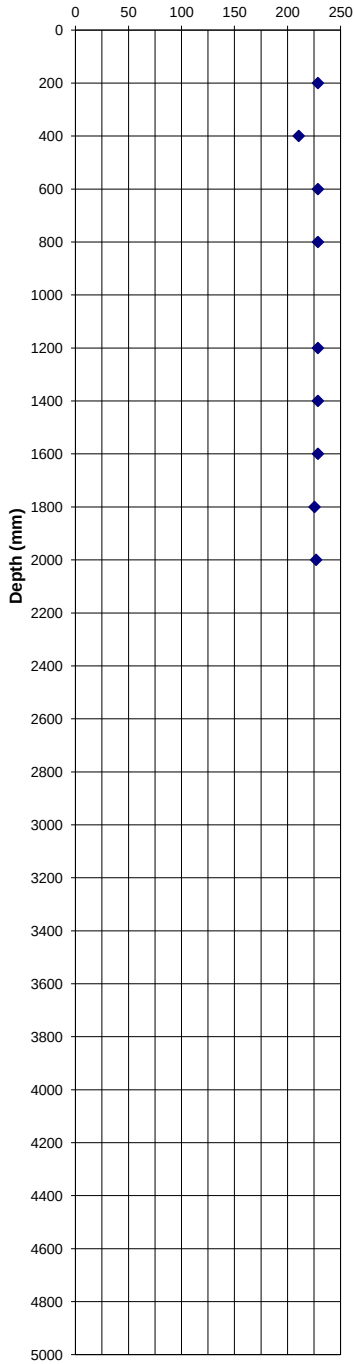


TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 6 **LOT 10**

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) Sandy SILT fine, light brown - light grey - pink, hard, moist, non-plastic.			
0.5m		+++				
1.0m		+++	(FILL) SILT minor medium - fine Sand, light brownish light orange mottled black, hard, moist non-plastic. Becomes dark brown - black.	H	ML	
1.5m		+++	SILT minor medium - fine Sand, light brownish light orange, hard, moist, non-plastic.			
2.0m		+++	Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES: Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # DR4525
Calibrated October 2017

Verified:
Date:

Cohesive Material	Non Cohesive Material
Very Soft VS Soft S Firm F Stiff St	Very Loose VL Loose L Medium Dense MD
Very Stiff Vst Hard H	Dense D Very Dense D

Client: Barret Homes
Project Title: Fill testing

Page: 8
No of Pages: 9



Site Address: 27 Kayeleene Place
City: Omokoroa
File Number: 629313-M-E-S009

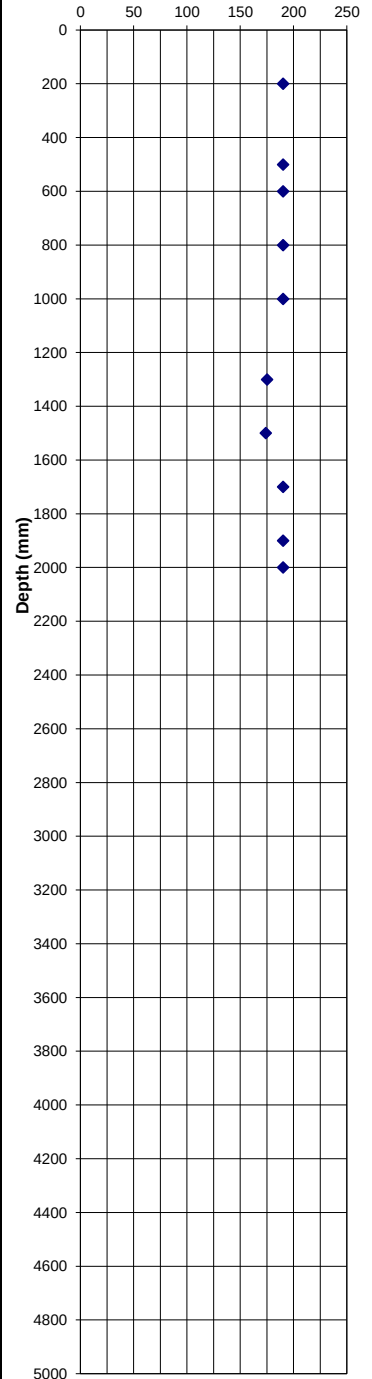
Date: 22/01/2018
Logged By: TS/HD/NJB

TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 7 **LOT** 11

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) Sandy SILT fine, light brown - light grey - pink, very stiff, moist, non-plastic.			
0.5m		+++				
1.0m		+++	SILT minor medium - fine Sand, light brownish light orange, very stiff, moist, non-plastic.	Vst	ML	
1.5m		+++				
2.0m		+++				
2.5m			Target Depth			
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES: Groundwater not encountered.				Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated August 2017	
Cohesive Material		Non Cohesive Material		Verified:	
Very Soft VS	Soft S	Firm F	Stiff St	Very Loose VL	Loose L
Very Stiff Vst	Hard H			Dense D	Very Dense D
				Date:	

Client: Barret Homes

Project Title: Fill testing

Site Address: 27 Kayeleene Place

City: Omokoroa

File Number: 629313-M-E-S009

Page: 9

No of Pages: 9

Date: 22/01/2018

Logged By: TS/HD/NJB

TGA REV 2 9/07/2010



Shear Vane Test Results

Notes: UTP: Unable to penetrate

Location	Borehole 1		SN2033
Depthmm	Reading	kPa	Strength
100	UTP		SILT
300	140	200	H
500	122	174	Vst
700	UTP		SILT
800	140	200	H
1000	132	189	Vst
1200	140	200	H
1400	140	200	H
1600	140	200	H
1800	140	200	H
2000	140	200	H

Location	Borehole 3		SN2033
Depthmm	Reading	kPa	Strength
200	140	200	H
400	127	181	Vst
600	128	183	Vst
800	140	200	H
1000	140	200	H
1200	140	200	H
1400	140	200	H
1600	140	200	H
1800	140	200	H
2000	140	200	H

Location	Borehole 5		SN2033
Depthmm	Reading	kPa	Strength
200	140	200	H
400	140	200	H
600	140	200	H
800	UTP		SILT
1000	140	200	H
1200	140	200	H
1400	140	200	H
1600	140	200	H
1800	140	200	H
2000	140	200	H

Location	Borehole 7		SN1875
Depthmm	Reading	kPa	Strength
200	140	190	Vst
400	UTP		SILT
500	140	190	Vst
600	140	190	Vst
800	140	190	Vst
1000	140	190	Vst
1300	129	175	Vst
1500	128	174	Vst
1700	140	190	Vst
1900	140	190	Vst
2000	140	190	Vst

Location	Borehole 2		DR4525
Depthmm	Reading	kPa	Strength
200	UTP		SILT
400	140	229	H
600	140	229	H
800	140	229	H
1000	140	229	H
1200	140	229	H
1400	140	229	H
1600	140	229	H
1800	140	229	H

Location	Borehole 4		SN1875
Depthmm	Reading	kPa	Strength
200	140	190	Vst
400	140	190	Vst
600	140	190	Vst
800	140	190	Vst
1000	140	190	Vst
1200	140	190	Vst
1400	127	172	Vst
1600	115	156	Vst
1800	140	190	Vst
2000	139	189	Vst

Location	Borehole 6		DR4525
Depthmm	Reading	kPa	Strength
200	140	200	H
400	140	200	H
600	140	200	H
800	UTP		SILT
1000	140	200	H
1200	140	200	H
1400	140	200	H
1600	140	200	H
1800	140	200	H
2000	140	200	H

Shear Vane
Calibrated
Constant
DR4525
Oct-17
1.633

Shear Vane
Calibrated
Constant
SN1875
Aug-17
1.358

Shear Vane
Calibrated
Constant
SN2033
Feb-17
1.429

SITE INSPECTION REPORT

Project:	27 Kaylene Place, Omokoroa	File No:	629313-M-E-S011
Contractor:	Barrett Homes Ltd	Subcontractor:	MATCO Contractors
Subcontract:		Attention:	
Site report No:	07	Weather:	Fine/Overcast
Date:	13-03-2018	Time:	11:00 am

Feature Description / Location:

Residential subdivision at 27 Kaylene Place, Omokoroa.

Reason for Inspection:

Confirmation fill has reached an adequate level of compaction.

Inspection Report:

Fill has been placed on lots 28 to 33.

Tested the fill, which was site sourced silts, using the Hand Auger and Shearvane.

See the attached results.

Work passed:

Fill placed on lots 28 to 33 have reached adequate compaction.

OK – Passed.

Work to be reinspected:

Nil -

Photographic Evidence:

As attached

Samples / materials collected:

No

Recommendations:

Nil -

Note: This is an inspection report only and does not authorise a Contract Variation or Extension of Time to the Contract. Any Claims or extensions of Time shall be made in accordance with the Terms of the contract.

Inspected by

Jared Fox – Geotechnical Technician

SITE INSPECTION REPORT



Client: Barrett Homes
Project Title: Proposed subdivision
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S011

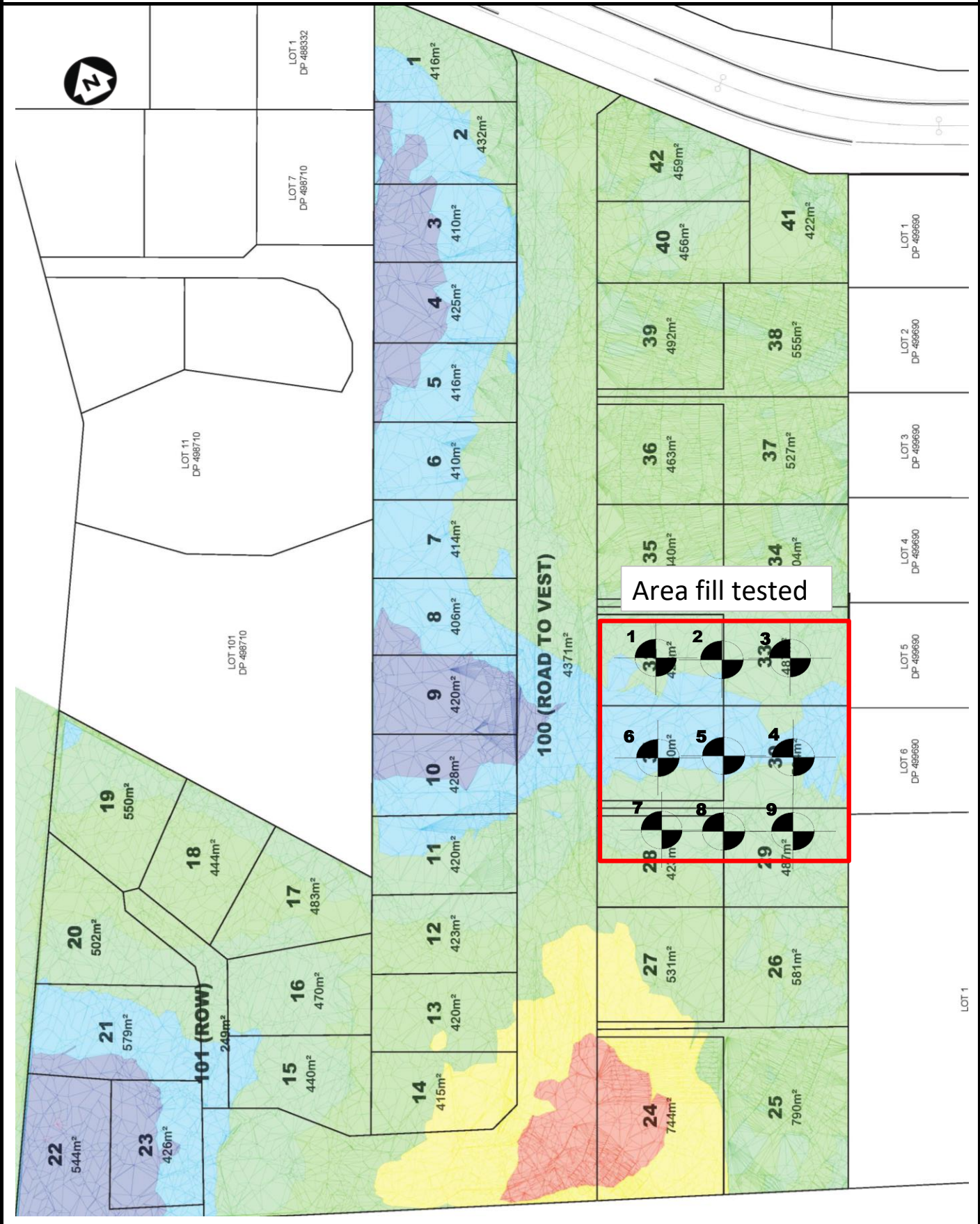
Page: 1
No of Pages: 11

Date: 13/03/2018
Logged By: TETS/JNF

TGA REV 2 9/07/2010



Test Location Sketch



Client: Barrett Homes

Project Title: Proposed subdivision

Site Address: 27 Kayelene Place

City: Omokoroa

File Number: 629313-M-E-S011

Page: 2

No of Pages: 11

Date: 13/03/2018

Logged By: TETS/JNF

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 1

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) SILT minor fine Sand, light brownish light orange occasional black mottle, very stiff, moist, non-plastic.			
0.5m		+++				
1.0m		+++	SILT minor fine - medium Sand, light brownish light orange, very stiff, moist, non-plastic.	Vst	ML	
1.5m		+++				
2.0m		+++	SILT minor fine - coarse Sand, light brownish orange, very stiff, moist - very moist, non-plastic.			
2.0m		+++	Becomes very moist.			
2.5m			Target Depth			
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:			Groundwater not encountered.			Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated August 2017		
Cohesive Material			Non Cohesive Material			Verified:		
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD			Date:		
Very Stiff Vst Hard H			Dense D Very Dense D					

Client: Barrett Homes
Project Title: Proposed subdivision
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S011

Page: 3
No of Pages: 11

Date: 13/03/2018
Logged By: TETS/JNF



TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 2

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) SILT minor fine Sand, light brownish light orange occasional black mottle, very stiff, moist, non-plastic.			
0.5m		+++		Vst	ML	
1.0m		+++	SILT minor fine - medium Sand, light brownish light orange, very stiff, moist, non-plastic.			
1.0m			Target Depth			
1.5m						
2.0m						
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:			Groundwater not encountered.			Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated August 2017		
Cohesive Material			Non Cohesive Material			Verified:		
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD			Date:		
Very Stiff Vst Hard H			Dense D Very Dense D					



Client: Barrett Homes
Project Title: Proposed subdivision
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S011

Page: 6
No of Pages: 11

Date: 13/03/2018
Logged By: TETS/JNF

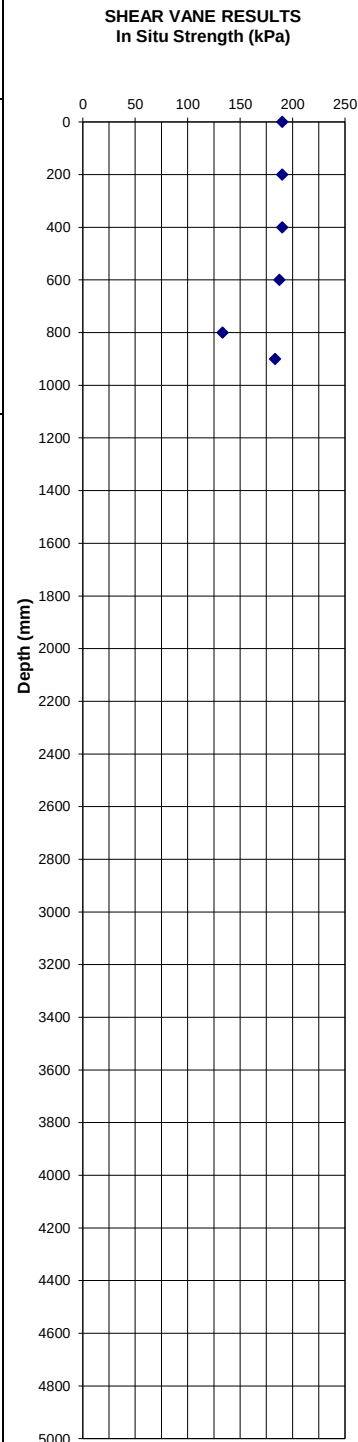


TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 5

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) SILT minor fine Sand, light brownish light orange occasional black mottle, very stiff, moist, non-plastic.			
0.5m		+++		Vst	ML	
1.0m		+++	SILT minor fine - medium Sand, light brownish light orange, very stiff, moist, non-plastic.			
1.5m			Target Depth			
2.0m						
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES:			Groundwater not encountered.			Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated August 2017		
Cohesive Material			Non Cohesive Material			Verified:		
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD			Date:		
Very Stiff Vst Hard H			Dense D Very Dense D					

Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S011

Date: 13/03/2018
Logged By: TETS/JNF



Hand Augered Borehole

Borehole No : 6

[illegible]

Client: Barrett Homes

Project Title: Proposed subdivision

Site Address: 27 Kayelene Place

City: Omokoroa

File Number: 629313-M-E-S011

Page: 8

No of Pages: 11

Date: 13/03/2018

Logged By: TETS/JNF

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 7

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) SILT minor fine Sand, light brownish light orange occasional black mottle, very stiff, moist, non-plastic.	Vst	ML	
0.5m		+++	SILT minor fine - medium Sand, light brownish light orange, very stiff, moist, non-plastic.			
			Target Depth			
1.0m						
1.5m						
2.0m						
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN1875

Calibrated August 2017

Cohesive Material

Non Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**

Very Loose **VL** Loose **L** Medium Dense **MD**

Very Stiff **Vst** Hard **H**

Dense **D** Very Dense **D**

Verified:

Date:

Client: Barrett Homes

Project Title: Proposed subdivision

Site Address: 27 Kayelene Place

City: Omokoroa

File Number: 629313-M-E-S011

Page: 9

No of Pages: 11

Date: 13/03/2018

Logged By: TETS/JNF

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 8

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) SILT minor fine - coarse Sand rare fine Gravel, purplish grey, very stiff, very moist, non-plastic.	Vst	ML	
		+++	SILT minor fine - medium Sand, light brownish light orange, moist. (FILL)			
0.5m		+++	SILT minor fine - medium Sand, light brownish light orange, very stiff, moist, non-plastic.			
			Target Depth			
1.0m						
1.5m						
2.0m						
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN1875

Calibrated August 2017

Cohesive Material

Non Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**

Very Loose **VL** Loose **L** Medium Dense **MD**

Very Stiff **Vst** Hard **H**

Dense **D** Very Dense **D**

Verified:

Date:

Client: Barrett Homes
Project Title: Proposed subdivision
Site Address: 27 Kayelene Place
City: Omokoroa
File Number: 629313-M-E-S011

Page: 10
No of Pages: 11
Date: 13/03/2018
Logged By: TETS/JNF



TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 9

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) SILT minor fine - coarse Sand rare fine Gravel, purplish, grey, very stiff, very moist, non-plastic.	Vst	ML	
		+++	(FILL) SILT minor fine Sand, light brownish light orange occasional black mottle, very stiff, moist, non-plastic.			
0.5m		+++	SILT minor fine - medium Sand, light brownish light orange, very stiff, moist, non-plastic.			
			Target Depth			
1.0m						
1.5m						
2.0m						
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN1875
Calibrated August 2017

Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**
Very Stiff **Vst** Hard **H**

Non Cohesive Material

Very Loose **VL** Loose **L** Medium Dense **MD**
Dense **D** Very Dense **D**

Verified:

Date:

Client: Barrett Homes

Project Title: Proposed subdivision

Site Address: 27 Kayelene Place

City: Omokoroa

File Number: 629313-M-E-S011

Page: 11

No of Pages: 11

Date: 13/03/2018

Logged By: TETS/JNF

TGA REV 2 9/07/2010



Shear Vane Test Results

Notes: UTP = Unable To Penetrate.

Location	Borehole 1		
Depthmm	Reading	kPa	Strength
100	140	190	Vst
300	140	190	Vst
500	140	190	Vst
600	UTP	-	-
700	UTP	-	-
900	140	190	Vst
1100	140	190	Vst
1300	114	155	Vst
1500	140	190	Vst
1700	140	190	Vst
1900	88	120	Vst

Location	Borehole 2		
Depthmm	Reading	kPa	Strength
0	UTP	-	-
200	140	190	Vst
400	140	190	Vst
600	140	190	Vst
800	140	190	Vst

Location	Borehole 3		
Depthmm	Reading	kPa	Strength
100	UTP	-	-
400	140	190	Vst
600	140	190	Vst
900	121	164	Vst
1100	77	105	Vst
1300	115	156	Vst
1600	117	159	Vst
1800	140	190	Vst
2000	108	SAND	

Location	Borehole 4		
Depthmm	Reading	kPa	Strength
0	UTP	-	-
200	140	190	Vst
400	UTP	-	-
600	140	190	Vst
800	132	179	Vst
1100	124	168	Vst
1300	109	148	Vst
1500	115	156	Vst
1700	113	153	Vst
2000	86	117	Vst

Location	Borehole 5		
Depthmm	Reading	kPa	Strength
0	UTP	-	-
200	140	190	Vst
400	140	190	Vst
600	138	187	Vst
800	98	133	Vst
900	135	183	Vst

Location	Borehole 6		
Depthmm	Reading	kPa	Strength
100	140	190	Vst
200	UTP	-	-
400	140	190	Vst
600	135	183	Vst
800	140	190	Vst
1000	131	178	Vst
1300	117	159	Vst
1500	140	190	Vst
1800	122	166	Vst
2000	140	190	Vst

Location	Borehole 7		
Depthmm	Reading	kPa	Strength
0	UTP	-	-
300	140	190	Vst
500	140	190	Vst

Location	Borehole 8		
Depthmm	Reading	kPa	Strength
100	140	190	Vst
300	140	190	Vst
500	140	190	Vst

Location	Borehole 9		
Depthmm	Reading	kPa	Strength
100	111	151	Vst
300	114	155	Vst
500	140	190	Vst

Shear Vane
Calibrated
Constant

SN1875
Aug-17
1.358

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: JNF

TGA REV 2 9/07/2010



Test Location Sketch



Client: Barrett Homes

Project Title: Proposed Subdivision

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

File Number: 629313-M-E-S012

Page: 2

No of Pages: 24

Date: 12/07/2018

Logged By: JNF

TGA REV 2 9/07/2010

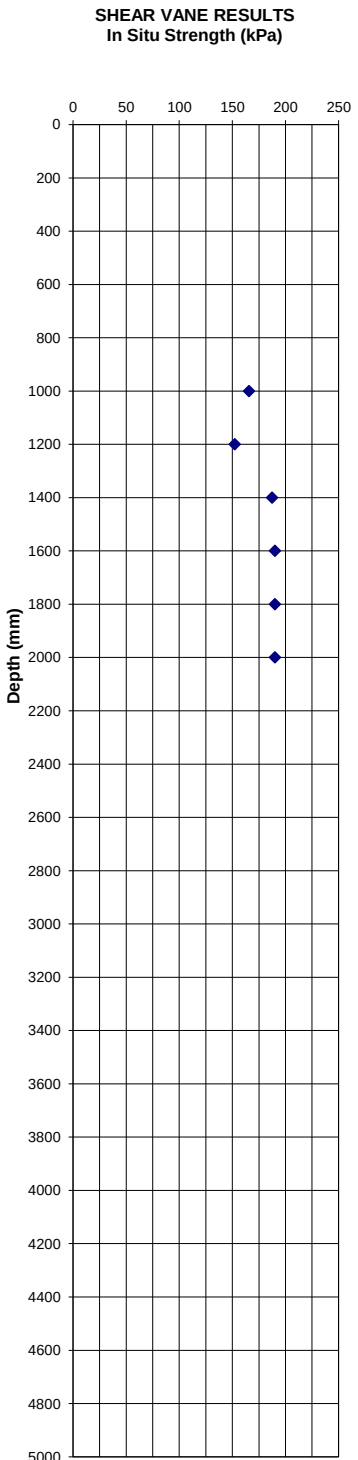


Hand Augered Borehole

Borehole No : 1 **Lot 1**

Associated Penetrometer No : 1

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		○°○°○°	(FILL) GRAVEL fine minor coarse - fine Sand, grey, poorly graded.	MD	GP	
0.5m		•••••	(FILL) SAND coarse - fine rare fine Pumiceous Gravel, whitish light grey, loose - dense, moist, poorly graded.	L	SP	
		•••••		D		
		•••••		L		
1.0m		+++++	SILT minor fine - medium Sand, brownish orange, very stiff, moist, non-plastic.	Vst	ML	
1.5m		+++++	Becomes light brownish light orange.			
2.0m		+++++	SILT minor fine - coarse Sand, light brownish light orange, very stiff, moist, non-plastic.			
			Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES:				Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.	
Groundwater not encountered.				Vane # SN1875	
				Calibrated August 2017	
Cohesive Material		Non Cohesive Material		Verified:	
Very Soft VS	Soft S	Firm F	Stiff St	Date:	
Very Stiff Vst	Hard H	Very Loose VL	Loose L		
		Medium Dense MD	Dense D		
		Very Dense D			

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 3
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: JNF



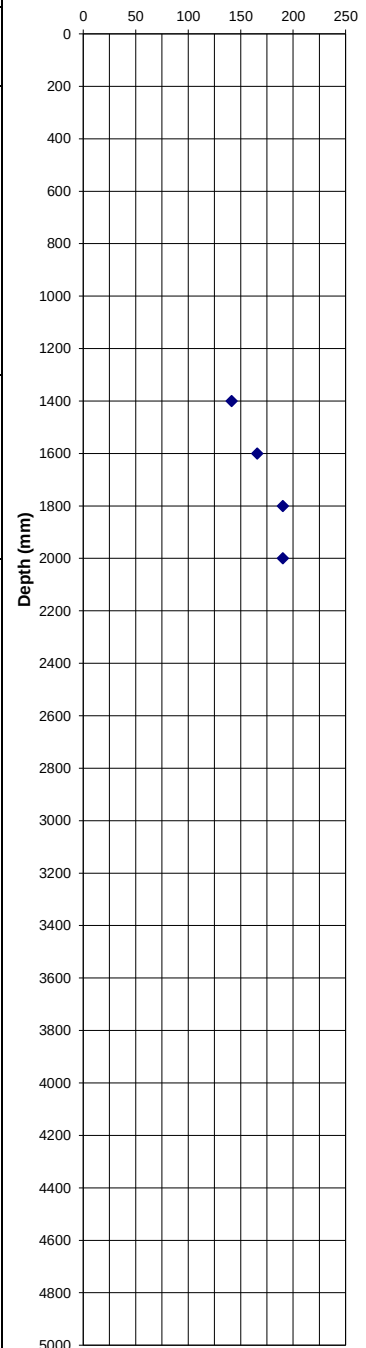
TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 5 **Lot 5**

Associated Penetrometer No : 5

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			(FILL) TOPSOIL.		OL	
0.5m		• • •	(FILL) SAND coarse - fine rare fine Pumiceous Gravel, whitish light grey, dense - medium dense, moist, poorly graded.	MD	SP	
1.0m		• • •		D		
1.5m		• • •				
2.0m		+++	SILT rare fine - medium Sand, light brownish light orange, very stiff, moist, non-plastic.	Vst	ML	
2.5m			Target Depth			
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES:			Groundwater not encountered.			Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875		
Cohesive Material			Non Cohesive Material			Calibrated August 2017		
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD			Verified:		
Very Stiff Vst Hard H			Dense D Very Dense D			Date:		

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 4
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: JNF



TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 6 **Lot** 6

Associated Penetrometer No : 6

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			(FILL) TOPSOIL.		OL	
0.5m		• •	(FILL) SAND coarse - fine rare fine Pumiceous Gravel, whitish light grey, dense - loose, moist, poorly graded.	L MD D	SP	
1.0m		+ + + + + + + + + + + + + + +	SILT minor fine - coarse Sand, light brownish light orange, very stiff, moist, non-plastic. Root inclusion (20mm)	Vst	ML	
1.5m		+ + + + + + + + + + + + + + +	SILT rare fine Sand, light brownish light orange, very stiff, moist, non-plastic.			
2.0m		+ + + + + +	SILT minor fine - coarse Sand, light brownish light orange, very stiff, moist - very moist, non-plastic.			
2.5m			Target Depth			
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES: Groundwater not encountered.			Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated August 2017
Cohesive Material Very Soft VS Soft S Firm F Stiff St Very Stiff Vst Hard H	Non Cohesive Material Very Loose VL Loose L Medium Dense MD Dense D Very Dense D	Verified: Date:	

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 5
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: RJB



TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 12 **Lot 12**

Associated Penetrometer No : 12

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	(FILL) SILT minor fine - medium Sand, light grey mottled whitish light brown.	H	ML	050100150200250 0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000 Depth (mm) 0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000
		+++	(FILL) SILT minor fine - medium Sand, light brown mottled dark brown - black, hard, moist, non-plastic.			
0.5m		+++	SILT rare fine - medium Sand, light brown, very stiff, moist, non-plastic.			
		+++				
		+++				
		+++				
1.0m		+++				
		+++				
		+++				
		+++				
1.5m		+++				
		+++				
		+++				
		+++				
		+++				
		+++				
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					
	+++					

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

File Number: 629313-M-E-S012

Date: 12/07/2018

Logged By: AS

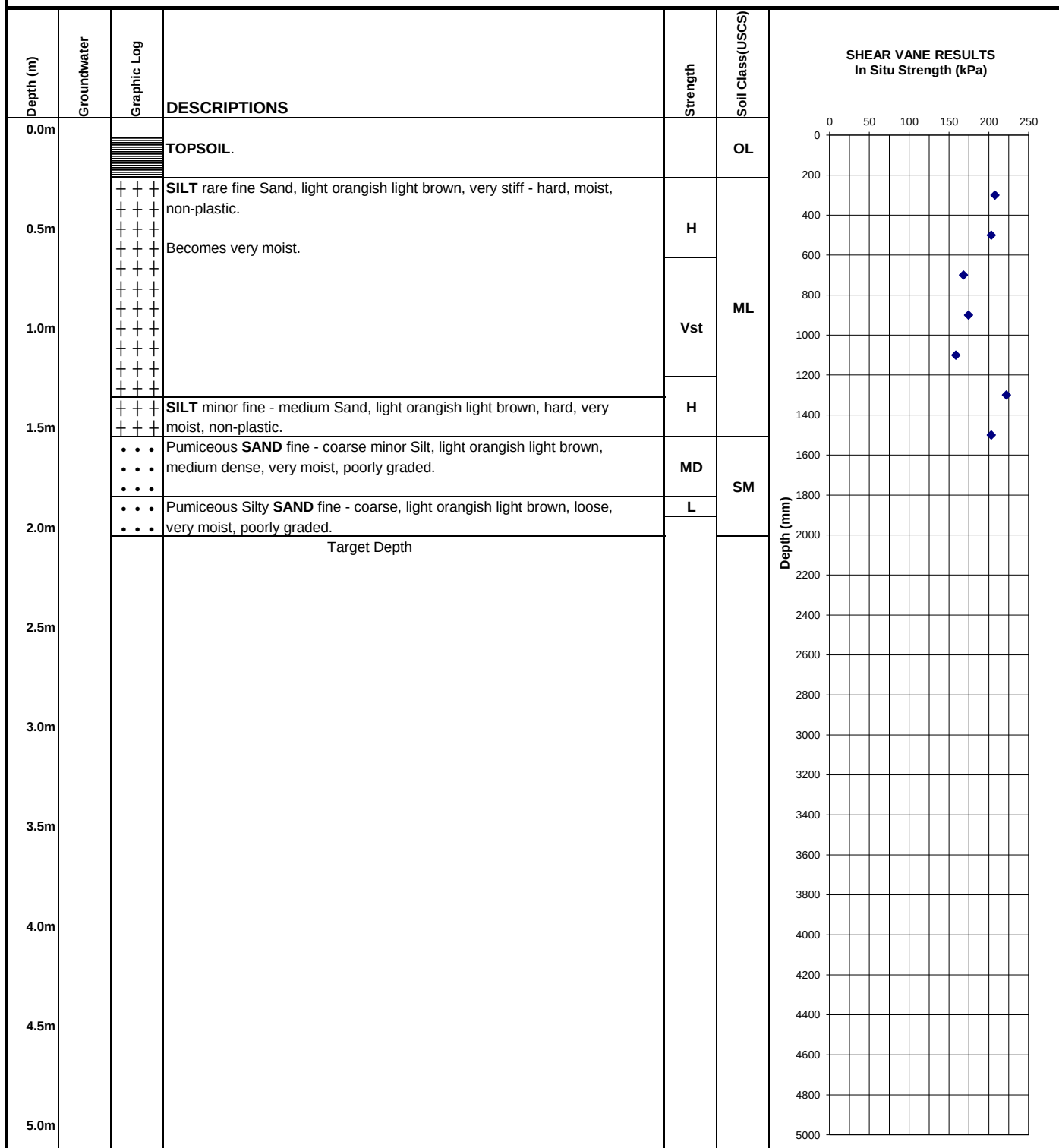
TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 13 Lot 13

Associated Penetrometer No : 13



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.

Vane # SN2033

Calibrated February 2018

Cohesive Material

Non Cohesive Material

Very Soft VS	Soft S	Firm F	Stiff St
---------------------	---------------	---------------	-----------------

Very Loose VL	Loose L	Medium Dense MD
----------------------	----------------	------------------------

Very Stiff **Vst** Hard **H**

Dense **D** Very Dense **D**

Verified:	
-----------	--

Date:

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 7
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: JNF



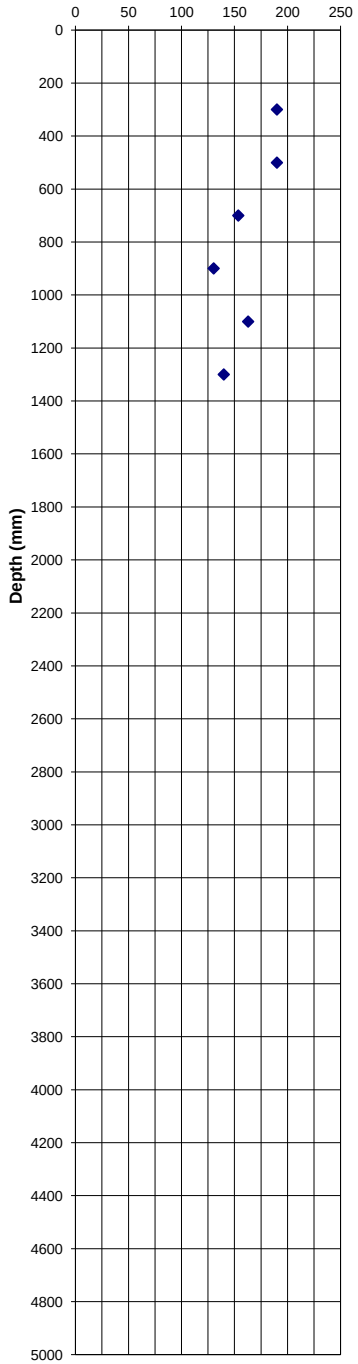
TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 27 **Lot 27**

Associated Penetrometer No : 27

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			TOPSOIL.		OL	
0.5m		++++	SILT rare fine - medium Sand, light brownish light orange, very stiff, moist, non-plastic - slightly plastic.	Vst	ML	
1.0m		++++	SILT minor fine - medium Sand, light brownish light orange, very stiff, moist, non-plastic - slightly plastic.			
1.5m			Pumiceous SAND fine - coarse minor Silt, light orangish light brown, dense, very moist, poorly graded.	D	SM	
2.0m			Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES:			Groundwater not encountered.			Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875 Calibrated August 2017		
Cohesive Material			Non Cohesive Material			Verified:		
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD			Date:		
Very Stiff Vst Hard H			Dense D Very Dense D					

Client: Barrett Homes

Project Title: Proposed Subdivision

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

File Number: 629313-M-E-S012

Page: 8

No of Pages: 24

Date: 12/07/2018

Logged By: JNF

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 28

Lot 28

Associated Penetrometer No : 28

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			(FILL)		OL	
		+++	SILT minor fine - medium Sand, purplish grey, very moist. (FILL)		ML	
			BURIED TOPSOIL.		OL	
0.5m		+++	SILT minor fine - medium Sand, light brownish light orange, very stiff, moist - very moist, non-plastic - slightly plastic.	Vst	ML	
		+++				
		+++				
		+++				
1.0m		+++	Becomes non-plastic.	St	ML	
		+++				
		+++				
		+++				
1.5m		+++	Sandy SILT fine - coarse, light brownish light orange, very stiff - stiff, very moist, non-plastic.	MD	SM	
		+++				
		+++				
		+++				
2.0m		+++	Sandy SILT fine - coarse, whitish light brown, stiff, very moist, non-plastic.	St	ML	
			Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN1875

Calibrated August 2017

Cohesive Material

Non Cohesive Material

Very Soft VS Soft S Firm F Stiff St

Very Loose VL Loose L Medium Dense MD

Very Stiff Vst Hard H

Dense D Very Dense D

Verified:

Date:

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

Date: 12/07/2018

File Number: 629313-M-E-S012

Logged By: AS

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 29

Lot 29

Associated Penetrometer No : 29

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa) <
------------	-------------	-------------	--------------	----------	------------------	--

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2033

Calibrated February 2018

Cohesive Material

Very Soft	VS	Soft	S	Firm	F	Stiff	St
-----------	-----------	------	----------	------	----------	-------	-----------

Non Cohesive Material

Very Loose VL	Loose L	Medium Dense MD
----------------------	----------------	------------------------

Very Stiff **Vst** Hard **H**

Dense **D** Very Dense **D**

Verified:

Date:

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 10
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: RJB

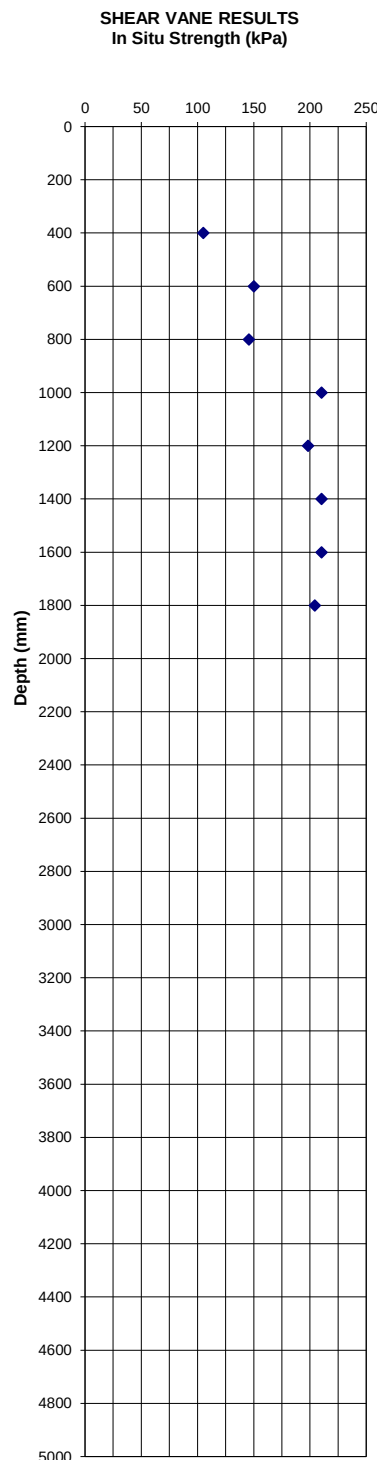
TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 34 **Lot** 34

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			TOPSOIL.		OL	
0.5m			SILT rare fine - medium Sand, light brown, very stiff - hard, moist, non-plastic.	Vst	ML	
1.0m				H		
1.5m				Vst		
2.0m			Pumiceous SAND fine - coarse minor Silt, light orangish light brown.	H		
			Target Depth		SM	
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN2435
Calibrated March 2018

Cohesive Material

Very Soft **VS** Soft **S** Firm **F** Stiff **St**
Very Stiff **Vst** Hard **H**

Non Cohesive Material

Very Loose **VL** Loose **L** Medium Dense **MD**
Dense **D** Very Dense **D**

Verified:

Date:

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 11
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: AS



TGA REV 2 9/07/2010

Hand Augered Borehole

Borehole No : 35 **Lot** 35

Associated Penetrometer No : 35

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			TOPSOIL.		OL	
0.5m			SILT rare fine Sand, light orangish light brown, very stiff - stiff, moist, non-plastic.	Vst	ML	
1.0m				St		
1.5m			SILT minor fine - coarse Sand, light brownish light orange, very stiff - hard, very moist, non-plastic.	Vst		
2.0m			Pumiceous SAND fine - coarse rare Silt, light orangish light brown, medium dense, very moist, poorly graded.	H		
2.0m			Target Depth	MD	SP	
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN2033
Calibrated February 2018

Cohesive Material
Very Soft **VS** Soft **S** Firm **F** Stiff **St**
Very Stiff **Vst** Hard **H**

Non Cohesive Material
Very Loose **VL** Loose **L** Medium Dense **MD**
Dense **D** Very Dense **D**

Verified:
Date:

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 12
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: RJB

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 36 **Lot** 36

Associated Penetrometer No : 36

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m		+++	SILT rare fine - medium, light brown, very stiff, moist, non-plastic.			
0.5m		+++				
1.0m		+++		Vst	ML	
1.5m		+++	SILT minor fine - medium Sand, light brown, very stiff, moist, non-plastic.			
2.0m		...	Pumiceous SAND fine - coarse, light orangish light brown, medium dense, moist - very moist, poorly graded.	MD	SP	
2.5m			Target Depth			
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:			Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2435 Calibrated March 2018		
Groundwater not encountered.			Verified:		
Cohesive Material			Date:		
Very Soft VS Soft S Firm F Stiff St					
Very Stiff Vst Hard H					
Non Cohesive Material					
Very Loose VL Loose L Medium Dense MD					
Dense D Very Dense D					

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: JNF

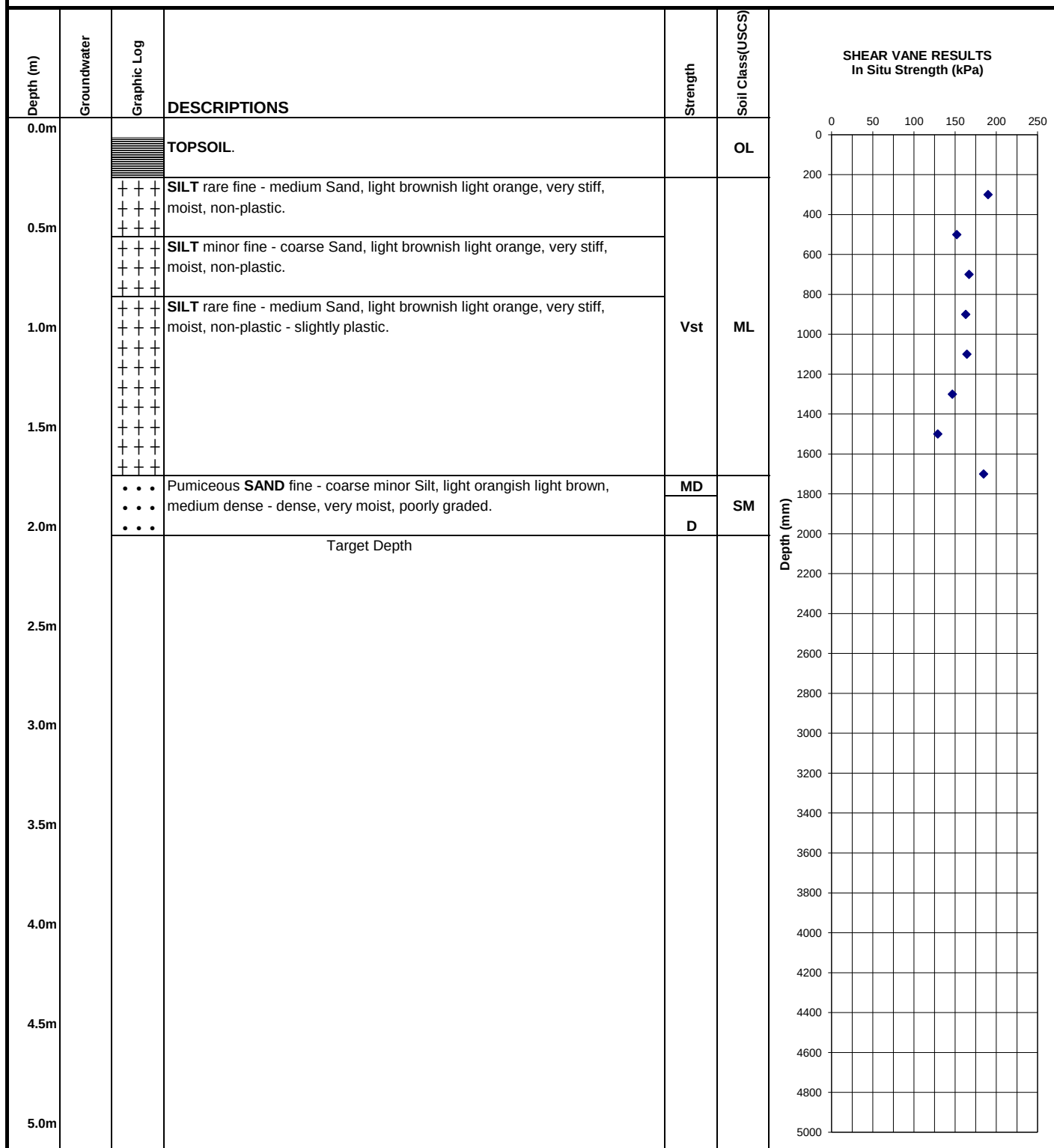
TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : **37** **Lot 37**

Associated Penetrometer No : 37



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN1875
Calibrated August 2017

Cohesive Material			
Very Soft VS	Soft S	Firm F	Stiff St
Very Stiff Vst	Hard H		

Non Cohesive Material
Very Loose VL Loose L Medium Dense MD Dense D Very Dense D

Verified:
Date:

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 14
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: AS

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 38 **Lot** 38

Associated Penetrometer No : 38

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			TOPSOIL.		OL	
0.5m			SILT rare fine Sand, light orangish light brown, very stiff - hard, slightly moist, non-plastic.	Vst	ML	0 50 100 150 200 250 Depth (mm)
1.0m				H		
1.5m				Vst		
2.0m			Pumiceous SAND fine - coarse rare Silt, light orangish light brown, medium dense - dense, very moist, poorly graded.	MD	SP	
				D		
			Target Depth			
2.5m						
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN2033
Calibrated February 2018

Cohesive Material

Very Soft VS Soft S Firm F Stiff St
Very Stiff Vst Hard H

Non Cohesive Material

Very Loose VL Loose L Medium Dense MD
Dense D Very Dense D

Verified:

Date:

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 15
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: JNF
TGA REV 2 9/07/2010

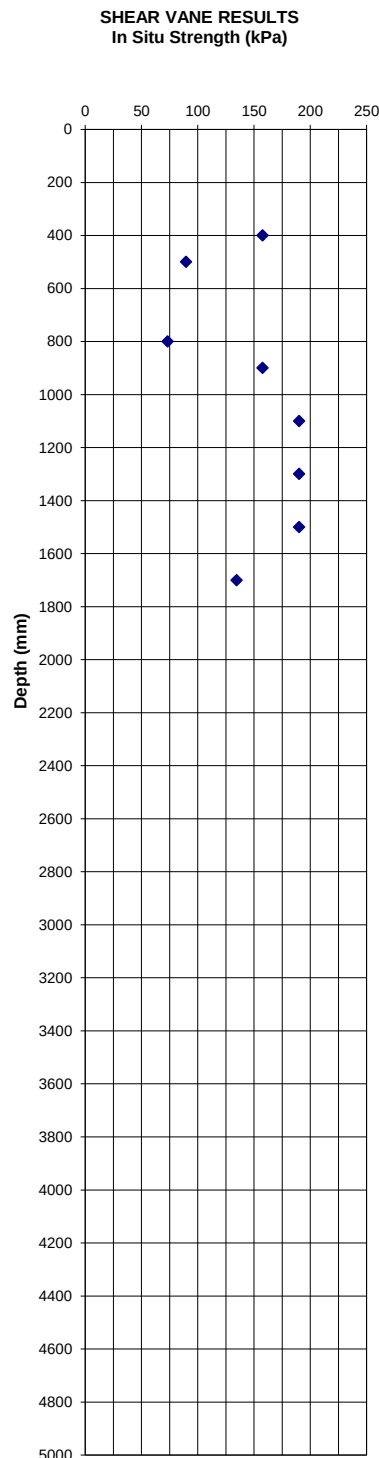


Hand Augered Borehole

Borehole No : 39 **Lot** 39

Associated Penetrometer No : 39

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			TOPSOIL.		OL	
0.5m		+++ +++ +++ +++ +++ +++	SILT minor fine - medium Sand, light brownish light orange, stiff - very stiff, moist - very moist, non-plastic.	Vst	ML	
1.0m		+++ +++ +++ +++ +++ +++	SILT minor fine - coarse Sand, light brownish light orange, very stiff, moist, non-plastic.	St		
1.5m		+++ +++ +++ +++ +++ +++	Becomes non-plastic - slightly plastic.	Vst		
2.0m			Pumiceous SAND fine - coarse rare Silt, light orangish light brown, medium dense - dense, very moist, poorly graded.	D	SP	
2.5m			Target Depth			
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN1875
Calibrated August 2017

Cohesive Material

Very Soft VS Soft S Firm F Stiff St
Very Stiff Vst Hard H

Non Cohesive Material

Very Loose VL Loose L Medium Dense MD
Dense D Very Dense D

Verified:

Date:

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

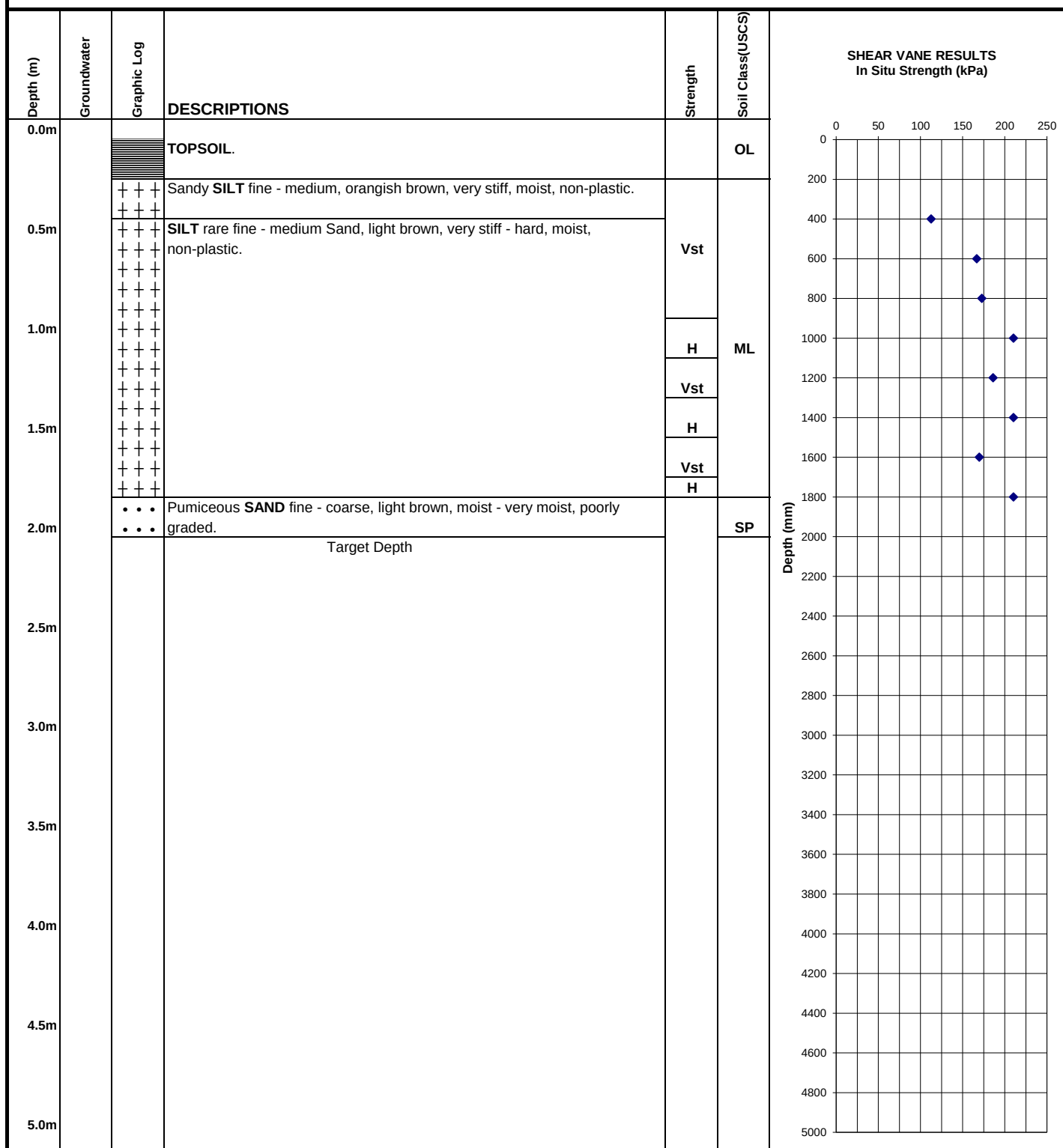
Date: 12/07/2018
Logged By: RJB

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 40 **Lot** 40



NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2435 Calibrated March 2018

Cohesive Material			
Very Soft VS	Soft S	Firm F	Stiff St
Very Stiff Vst	Hard H		

Non Cohesive Material
Very Loose VL Loose L Medium Dense MD Dense D Very Dense D

Calibrate	
Verified:	
Date:	

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 17
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: AS

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 41 **Lot** 41

Associated Penetrometer No : 41

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			TOPSOIL.		OL	
0.5m			SILT rare fine Sand, light orangish light brown, stiff - very stiff, slightly moist, non-plastic.	St	ML	
1.0m				Vst		
1.5m						
2.0m			Pumiceous SAND fine - coarse rare Silt, light orangish light brown, medium dense - dense, very moist, poorly graded.	D MD D	SP	
2.5m			Target Depth			
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						

NOTES:

Groundwater not encountered.

Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength.
Vane # SN2033
Calibrated February 2018

Cohesive Material

Very Soft VS Soft S Firm F Stiff St
Very Stiff Vst Hard H

Non Cohesive Material

Very Loose VL Loose L Medium Dense MD
Dense D Very Dense D

Verified:
Date:

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: RJB

TGA REV 2 9/07/2010



Hand Augered Borehole

Borehole No : 42 **Lot** 42

Depth (m)	Groundwater	Graphic Log	DESCRIPTIONS	Strength	Soil Class(USCS)	SHEAR VANE RESULTS In Situ Strength (kPa)
0.0m			TOPSOIL. (FILL)		OL	050100150200250 0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000 Depth (mm)
0.5m			SILT rare fine - medium Sand, dark brown mottled black - light brown, (FILL)	Vst	ML	
			SILT rare fine - medium Sand, light brown, very stiff - hard, moist, non-plastic.			
1.0m				H		
				Vst		
1.5m				H		
						
2.0m			Pumiceous SAND fine - coarse rare Silt, light orangish light brown, medium dense - dense, very moist, poorly graded.		SP	
2.5m			Target Depth			
3.0m						
3.5m						
4.0m						
4.5m						
5.0m						
NOTES:				Shear Vane: 19mm Blade. Vane reading calibrated to give in situ shear strength. Vane # SN2435 Calibrated March 2018		
Groundwater not encountered.						
Cohesive Material			Non Cohesive Material			
Very Soft VS Soft S Firm F Stiff St			Very Loose VL Loose L Medium Dense MD			
Very Stiff Vst Hard H			Dense D Very Dense D			
				Verified: Date:		

Client: Barrett Homes

Project Title: Proposed Subdivision

Page: 19

No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

Date: 12/07/2018

File Number: 629313-M-E-S012

Logged By: JNF



Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows GL Start	Test 1		Test 5		Test 6		Test 12	
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
0	0		200		200		0	
5	100	100	370	170	380	180	80	80
10	280	180	440	70	450	70	220	140
15	350	70	490	50	530	80	320	100
20	410	60	540	50	580	50	530	210
25	450	40	580	40	650	70	710	180
30	490	40	610	30	710	60	860	150
35	530	40	630	20	780	70	1020	160
40	550	20	660	30	850	70	1110	90
45	610	60	680	20	940	90	1210	100
50	640	30	720	40	1180	240	1290	80
55	700	60	750	30	1440	260	1370	80
60	940	240	770	20			1470	100
65	1230	290	810	40			1580	110
70	1370	140	840	30			1690	110
75	1500	130	860	20			1790	100
80	1580	80	890	30			1870	80
85	1650	70	920	30			1950	80
90			950	30				
95			970	20				
100			1000	30				
105			1020	20				
110			1050	30				
115			1070	20				
120			1110	40				
125			1140	30				
130			1170	30				
135			1220	50				
140			1260	40				
145			1330	70				
150			1410	80				
155			1510	100				
160			1620	110				
165			1700	80				
170			1760	60				
175			1820	60				
180			1860	40				
185			1930	70				
190			1970	40				
195			2010	40				
200								
205								
210								
215								
220								
225								
230								
235								
240								
245								
250								
255								
260								
265								
270								

Notes:

Client: Barrett Homes

Project Title: Proposed Subdivision

Page: 20

No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

Date: 12/07/2018

File Number: 629313-M-E-S012

Logged By: JNF

TGA REV 2 9/07/2010



Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows	Test 13		Test 27		Test 28		Test 29	
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
GL Start								
0	0		0		0		0	
5	40	40	300	300	190	190	190	190
10	100	60	480	180	320	130	320	130
15	250	150	650	170	530	210	530	210
20	460	210	870	220	890	360	890	360
25	590	130	950	80	1120	230	1120	230
30	800	210	1060	110	1280	160	1280	160
35	940	140	1160	100	1400	120	1400	120
40	1080	140	1240	80	1510	110	1510	110
45	1230	150	1320	80	1640	130	1600	90
50	1340	110	1380	60	1770	130	1730	130
55	1430	90	1430	50	1950	180	1830	100
60	1520	90	1480	50			1900	70
65	1630	110	1530	50			1980	80
70	1770	140	1600	70				
75	1890	120	1660	60				
80	3 Blows		1720	60				
85			1790	70				
90			1850	60				
95			1900	50				
100			1950	50				
105								
110								
115								
120								
125								
130								
135								
140								
145								
150								
155								
160								
165								
170								
175								
180								
185								
190								
195								
200								
205								
210								
215								
220								
225								
230								
235								
240								
245								
250								
255								
260								
265								
270								

Notes:

Client: Barrett Homes

Project Title: Proposed Subdivision

Page: 21

No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

Date: 12/07/2018

File Number: 629313-M-E-S012

Logged By: JNF

TGA REV 2 9/07/2010



Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows GL Start	Test 35		Test 36		Test 37		Test 38	
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
0	0		0		0		0	
5	130	130	250	250	280	280	220	220
10	320	190	520	270	490	210	400	180
15	530	210	770	250	680	190	620	220
20	740	210	1000	230	850	170	820	200
25	920	180	1120	120	1020	170	980	160
30	1070	150	1220	100	1140	120	1140	160
35	1180	110	1320	100	1280	140	1260	120
40	1300	120	1410	90	1420	140	1330	70
45	1420	120	1520	110	1580	160	1420	90
50	1560	140	1680	160	1740	160	1520	100
55	1680	120	1800	120	1820	80	1610	90
60	1750	70	1950	150	1880	60	1700	90
65	1850	100			1920	40	1790	90
70	1940	90			1960	40	1890	100
75							1950	60
80							4 Blows	
85								
90								
95								
100								
105								
110								
115								
120								
125								
130								
135								
140								
145								
150								
155								
160								
165								
170								
175								
180								
185								
190								
195								
200								
205								
210								
215								
220								
225								
230								
235								
240								
245								
250								
255								
260								
265								
270								

Notes:

Client: Barrett Homes

Project Title: Proposed Subdivision

Page: 22

No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

Date: 12/07/2018

File Number: 629313-M-E-S012

Logged By: JNF

TGA REV 2 9/07/2010



Scala Penetrometer Results

Probe description: 9kg hammer falling 500mm striking a steel anvil driving a 16mm diameter rod fitted with a 20mm diameter cone

Depth of penetration begins at the existing ground level

Readings taken in mm. Penetration is given in mm per 5 blows

Number of Blows	Test 39		Test 41					
	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)	Reading (mm)	Penetration (mm)
GL Start								
0	0		0					
5	160	160	290	290				
10	270	110	570	280				
15	420	150	730	160				
20	570	150	890	160				
25	790	220	1020	130				
30	1040	250	1120	100				
35	1140	100	1230	110				
40	1230	90	1360	130				
45	1310	80	1530	170				
50	1410	100	1680	150				
55	1500	90	1740	60				
60	1610	110	1790	50				
65	1670	60	1880	90				
70	1700	30	1950	70				
75	1740	40						
80	1770	30						
85	1800	30						
90	1830	30						
95	1850	20						
100	1900	50						
105	1950	50						
110								
115								
120								
125								
130								
135								
140								
145								
150								
155								
160								
165								
170								
175								
180								
185								
190								
195								
200								
205								
210								
215								
220								
225								
230								
235								
240								
245								
250								
255								
260								
265								
270								

Notes:

Client: Barrett Homes

Project Title: Proposed Subdivision

Site Address: 27 Kayelene Place, Omokoroa

City: Tauranga

File Number: 629313-M-E-S012

Page: 23

No of Pages: 24

Date: 12/07/2018

Logged By: JNF



TGA REV 2 9/07/2010

Shear Vane Test Results

Notes: UTP: Unable to penetrate.

Location	Borehole 1 SN1875		
Depthmm	Reading	kPa	Strength
1000	122	166	Vst
1200	112	152	Vst
1400	138	187	Vst
1600	140	190	Vst
1800	140	190	Vst
2000	140	190	Vst

Location	Borehole 5 SN1875		
Depthmm	Reading	kPa	Strength
1400	104	141	Vst
1600	122	166	Vst
1800	140	190	Vst
2000	140	190	Vst

Location	Borehole 6 SN1875		
Depthmm	Reading	kPa	Strength
1000	140	190	Vst
1200	88	120	Vst
1400	125	170	Vst
1600	140	190	Vst
1800	140	190	Vst
2000	136	185	Vst

Location	Borehole 12 SN2435		
Depthmm	Reading	kPa	Strength
200	140	210	H
300	UTP	-	-
600	121	182	Vst
800	127	191	Vst
1000	120	180	Vst
1200	112	168	Vst
1400	108	162	Vst
1600	105	158	Vst

Location	Borehole 13 SN2033		
Depthmm	Reading	kPa	Strength
300	131	208	H
500	128	203	H
700	106	168	Vst
900	110	174	Vst
1100	100	159	Vst
1300	140	222	H
1500	128	203	H

Location	Borehole 27 SN1875		
Depthmm	Reading	kPa	Strength
300	140	190	Vst
500	140	190	Vst
700	113	153	Vst
900	96	130	Vst
1100	120	163	Vst
1300	103	140	Vst

Location	Borehole 28 SN1875		
Depthmm	Reading	kPa	Strength
300	140	190	Vst
500	140	190	Vst
700	130	177	Vst
900	140	190	Vst
1100	138	187	Vst
1300	122	166	Vst
1500	60	81	St
2000	55	75	St

Location	Borehole 29 SN2033		
Depthmm	Reading	kPa	Strength
500	90	143	Vst
600	65	103	Vst
800	81	128	Vst
1000	91	144	Vst
1200	121	192	Vst
1400	140	222	H
1600	100	159	Vst
1800	99	157	Vst
2000	90	143	Vst

Location	Borehole 34 SN2435		
Depthmm	Reading	kPa	Strength
400	70	105	Vst
600	100	150	Vst
800	97	146	Vst
1000	140	210	H
1200	132	198	Vst
1400	140	210	H
1600	140	210	H
1800	136	204	H

Location	Borehole 35 SN2033		
Depthmm	Reading	kPa	Strength
300	84	133	Vst
500	75	119	Vst
700	58	92	St
900	71	113	Vst
1100	69	109	Vst
1300	80	127	Vst
1500	118	187	Vst
1700	140	222	H

Shear Vane SN1875
Calibrated Aug-17
Constant 1.358

Shear Vane SN2033
Calibrated Feb-18
Constant 1.586

Shear Vane SN2435
Calibrated Mar-18
Constant 1.502

Client: Barrett Homes
Project Title: Proposed Subdivision

Page: 24
No of Pages: 24

Site Address: 27 Kayelene Place, Omokoroa
City: Tauranga
File Number: 629313-M-E-S012

Date: 12/07/2018
Logged By: JNF



TGA REV 2 9/07/2010

Shear Vane Test Results

Notes:

Location	Borehole 36		SN2435
Depthmm	Reading	kPa	Strength
200	110	165	Vst
400	108	162	Vst
600	116	174	Vst
800	95	143	Vst
1000	114	171	Vst
1200	100	150	Vst
1400	101	152	Vst
1600	102	153	Vst

Location	Borehole 37		SN1875
Depthmm	Reading	kPa	Strength
300	140	190	Vst
500	112	152	Vst
700	123	167	Vst
900	120	163	Vst
1100	121	164	Vst
1300	108	147	Vst
1500	95	129	Vst
1700	136	185	Vst

Location	Borehole 38		SN2033
Depthmm	Reading	kPa	Strength
400	121	192	Vst
600	108	171	Vst
800	110	174	Vst
1000	105	167	Vst
1200	140	222	H
1400	135	214	H
1600	91	144	Vst

Location	Borehole 39		SN1875
Depthmm	Reading	kPa	Strength
400	116	158	Vst
500	66	90	St
800	54	73	St
900	116	158	Vst
1100	140	190	Vst
1300	140	190	Vst
1500	140	190	Vst
1700	99	134	Vst

Location	Borehole 40		SN2435
Depthmm	Reading	kPa	Strength
400	75	113	Vst
600	111	167	Vst
800	115	173	Vst
1000	140	210	H
1200	124	186	Vst
1400	140	210	H
1600	113	170	Vst
1800	140	210	H

Location	Borehole 41		SN2033
Depthmm	Reading	kPa	Strength
300	49	78	St
500	89	141	Vst
700	110	174	Vst
900	101	160	Vst
1100	95	151	Vst
1300	119	189	Vst
1500	111	176	Vst
1700	119	189	Vst

Location	Borehole 42		SN2435
Depthmm	Reading	kPa	Strength
400	118	177	Vst
500	76	114	Vst
700	80	120	Vst
900	140	210	H
1100	140	210	H
1300	132	198	Vst
1500	140	210	H
1700	140	210	H

Shear Vane SN1875
Calibrated Aug-17
Constant 1.358

Shear Vane SN2033
Calibrated Feb-18
Constant 1.586

Shear Vane SN2435
Calibrated Mar-18
Constant 1.502

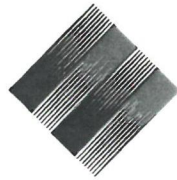
Appendix E

Lot Specific Recommendations

Lot No:	Area (m²)	Subsurface Data						Foundations		Building Restriction Line	S/W Specific Design	S/W Soakage	S/W Reticulate	Designated Building Platform	Minimum Building Platform Level	Compressible Soils	On-site Effluent Disposal	Consent Notice	
		Allowable Bearing Capacity (kPa)	Subdivision Filling		Natural Topography Unworked	Natural Topography Earthworked (Cut)*		Conventional Shallow Foundation to NZS 3604:2011	Specific Design										
			Y/N	Depth (m)		Y/N	Depth (m)												
Comment																			
1	416	100	Y	0.9	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
2	432	100	Y	1.5	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
3	410	100	Y	1.3	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
4	425	100	Y	1.5	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
5	416	100	Y	1.3	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
6	410	100	Y	0.9	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
7	414	100	Y	1.7	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
8	406	100	Y	0.8	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
9	420	100	Y	1.7	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
10	421	100	Y	1.4	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
11	423	100	Y	0.7	N	N	-	Y	N	Y	N	N	Y	N	N/A	N	N	N/A	1.5m offset for all significant structures from the retaining wall.
12	420	100	Y	0.4	N	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
13	420	100	N	-	N	Y	0.5	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
27	540	100	N	-	N	Y	0.4	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
28	430	100	N	-	Y	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	Buried topsoil encountered down to 0.4m.
29	480	100	Y	0.7	N	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	

Lot No:	Area (m²)	Subsurface Data						Foundations		Building Restriction Line	S/W Specific Design	S/W Soakage	S/W Reticulate	Designated Building Platform	Minimum Building Platform Level	Compressible Soils	On-site Effluent Disposal	Consent Notice	
		Allowable Bearing Capacity (kPa)	Subdivision Filling		Natural Topography Unworked	Natural Topography Earthworked (Cut)*		Conventional Shallow Foundation to NZS 3604:2011	Specific Design										
			Y/N	Depth (m)		Y/N	Y/N												
30	500	100	Y	0.8	N	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
31	444	100	Y	1.0	N	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
32	424	100	Y	0.7	N	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
33	486	100	Y	0.6	N	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
34	506	100	N	-	Y	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
35	438	100	N	-	N	Y	0.2	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
36	459	100	Y	0.2	N	Y	0.5	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
37	532	100	N	-	Y	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
38	481	100	N	-	Y	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
39	565	100	N	-	Y	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
40	445	100	N	-	Y	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
41	422	100	N	-	Y	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	
42	471	100	N	-	Y	N	-	Y	N	N	N	N	Y	N	N/A	N	N	N/A	

*Cut and fill depths are approximate only.



**Western Bay of Plenty
District Council**

**Consent Notice Pursuant to Section 221
Resource Management Act 1991**

File Ref: S/B/12049
Stage 1

IN THE MATTER OF: Deposited Plan 527091

A N D

IN THE MATTER OF: Subdivision Consent pursuant
to Sections 108, 220 and 221
of the Resource Management
Act 1991.

I, CHRIS WATT, Authorised Officer of the Western Bay of Plenty District Council, hereby certify that by way of resolution passed under delegated authority on 12 April 2017, the following condition was imposed on the subdivision consent for Lot 4 Deposited Plan S 27522 and Lot 1 Deposited Plan S 29449:

THAT pursuant to section 221 of the Resource Management Act 1991 consent notices are registered against the titles of Lot(s) 1-10, 28, 31-32, 35-36, 39-40, 42 such that:

- a) any future building development be in accordance with the recommendations of the geotechnical report prepared by Stratum Consultants Ltd dated 19 July 2018 reference: 629313-M-E-C024 or subsequent geotechnical reports prepared by a Chartered Professional Engineer or Engineering Geologist, suitably experienced to the satisfaction of the Principal Administrative Officer.

Dated at Tauranga this 24th day of January

2019



Authorised Officer

Land Use Site Details



Site ID :	LUR-WBP-00367	Printed :	14/05/2024
Site Address(es) :	27 KAYELENE PL, Kaimai, Western Bay of Plenty District 18 Augusta Rise, Omokoroa, Western Bay of Plenty District 12 Augusta Rise, Omokoroa, Western Bay of Plenty District 11 Augusta Rise, Omokoroa, Western Bay of Plenty District 13A Augusta Rise, Omokoroa, Western Bay of Plenty District 20 Augusta Rise, Omokoroa, Western Bay of Plenty District 23 Augusta Rise, Omokoroa, Western Bay of Plenty District 7A Augusta Rise, Omokoroa, Western Bay of Plenty District 9 Augusta Rise, Omokoroa, Western Bay of Plenty District 25A Augusta Rise, Omokoroa, Western Bay of Plenty District 25B Augusta Rise, Omokoroa, Western Bay of Plenty District 14 Augusta Rise, Omokoroa, Western Bay of Plenty District 5 Augusta Rise, Omokoroa, Western Bay of Plenty District 6 Augusta Rise, Omokoroa, Western Bay of Plenty District 10 Augusta Rise, Omokoroa, Western Bay of Plenty District 15 Augusta Rise, Omokoroa, Western Bay of Plenty District 16 Augusta Rise, Omokoroa, Western Bay of Plenty District 19A Augusta Rise, Omokoroa, Western Bay of Plenty District 19B Augusta Rise, Omokoroa, Western Bay of Plenty District 17 Augusta Rise, Omokoroa, Western Bay of Plenty District 8 Augusta Rise, Omokoroa, Western Bay of Plenty District 21 Augusta Rise, Omokoroa, Western Bay of Plenty District 13B Augusta Rise, Omokoroa, Western Bay of Plenty District 7B Augusta Rise, Omokoroa, Western Bay of Plenty District		
Parcel(s)/Lot(s) :	7952565 : 7952566 : 7952567 : 7952568 : 7952569 : 7952570 : 7952571 : 7952572 : 7952573 : 7952574 : 7952575 : 7952576 : 7952577 :		

7952578 :
7952579 :
7952580 :
8057797 :
8057798 :
8057803 :
8057804 :
8057805 :
8057806 :
8057807 :
8057808 :
8249967 :
8249968 :
8249969 :
8249970 :
8249972 :
Site Classification : Suitable for Land Use - Residential

Description

The land use history has been confirmed. The site has been confirmed as one that appears on the Hazardous Activities and Industries List (<https://www.mfe.govt.nz/land/hazardous-activities-and-industries-list-hail>). The information used in making this classification of the site contamination status is available in file held by Western Bay of Plenty District and file held by Bay of Plenty Regional Council.

Land Use

Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds

Site Information

December 2014: A review of aerial photographs from 2003, 2007 & 2011 has confirmed an orchard is located on this property, where persistent pesticides have been stored or used.

21 December 2016: Barrett Homes Ltd applied to Western Bay of Plenty District Council for subdivision consent (42 lots) and land use consent to construct more than one dwelling on the underlying properties prior to the completion of the subdivision at 19 - 27 Kaylene Place, Ōmokoroa (RC10334S). As part of the application, a Detailed Site Investigation (DSI) was prepared by Geo & Hydro – K8 Ltd and dated 12 October 2016. BOPRC had a number of concerns with the DSI report supplied including no testing at an accredited laboratory for targeted samples and reporting standards.

12 April 2017: Western Bay of Plenty District Council consent RC10334S was granted. Consideration has been given to the NES. The application site was used for pastoral purposes until about 1959, between 1959 and 1974 the site was converted to horticultural use and has remained as such to the present day. The proposal includes activities that will cause soil disturbance and which will change the use of the land to residential purposes. The site has been used historically as an orchard which is identified as a HAIL. A DSI has been undertaken for the site by Geo & Hydro - KB Ltd and dated 12 October 2016. The principal risk of soil contamination is associated with the historic spraying with agrichemicals (primarily pesticides and fertilisers). The DSI confirms that all contaminant concentrations are below human health and environmental guideline screening criteria. There is an elevated concentration of cadmium above background values. The NES permits a change of use where compliance with the requirements under Regulation 8(4) is met. The DSI report confirms it is highly unlikely to be a risk to human health from the proposed activity (subdivision and earthworks). No further investigation or remediation is required to be undertaken to support the current development proposal.

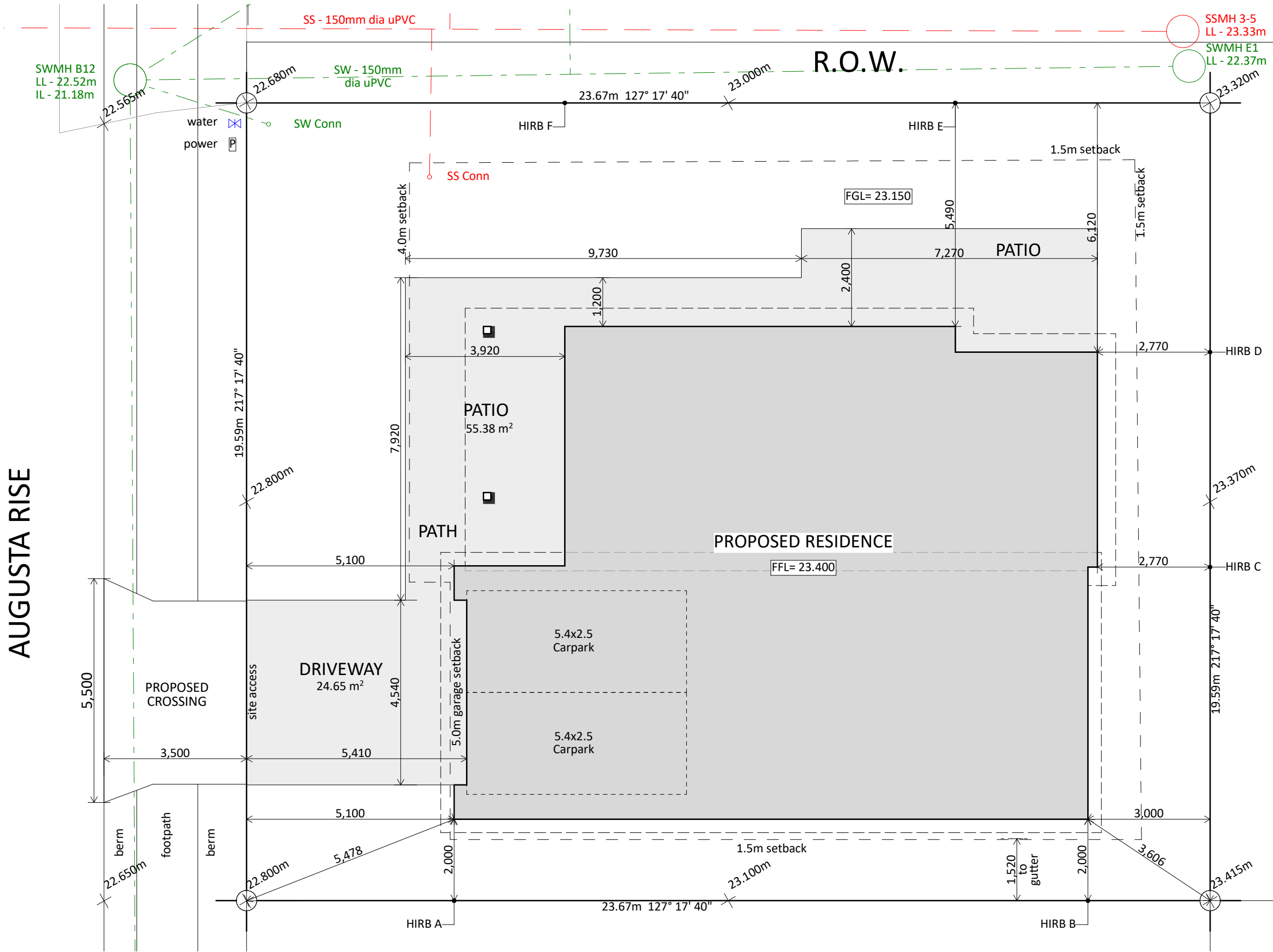
Other Information

The enclosed information is derived from the Western Bay of Plenty District Council and Bay of Plenty Regional Council's Selected Land Use register and is made available to you under the Local Government Official and Information Meetings Act 1987 (LGOIMA), Building Act 1991 or Privacy Act 2020.

The database has been established by the Western Bay of Plenty District Council and Bay of Plenty Regional Council for the purpose of performing its functions under the Resource Management Act 1991.

It has been compiled in accordance with national Site Classification and Information Management Protocols for Land Contamination.

This information reflects the Western Bay of Plenty District Council and Bay of Plenty Regional Council's current understanding of this site. The Western Bay of Plenty District Council, the Bay of Plenty Regional Council and their officers, employees and agents accept no liability for any inaccuracy in, or omission from, this information; or liability for any loss of damage suffered by any person which may directly or indirectly result from any person acting or refraining from acting on this information. This information has been prepared for the recipient to whom it is addressed and is intended for the recipient's use only. This is not intended to be relied on by any other party.



General notes:

Any encroachments shown are to be confirmed by a registered surveyor prior to commencement of foundations. No liability shall be held by designer with this confirmation.

Siteworks notes:

Ensure final building platform and finished ground have an even fall away from building. All rubbish, noxious matter and organic matter shall be removed from the area to be covered by the building. Any fill to be dry and approved by engineer & compacted down in accordance with NZS.3604.2011.

- Contractor to confirm on site all boundary bearings, lengths and peg locations on site prior to commencement of works, to ensure house position is correct.
- Contractor to locate all service connections points on site prior to commencement of works. Check invert levels or pipes and manholes.
- Contractor to confirm plumbing routes and fixture positions on site prior to commencement of works. Any discrepancies found from consented plans, alert design@barretthomes.co.nz prior to continuation of site works.

All dimensions shown are to building foundations (unless stated otherwise)

Construction and Demolition Hazards

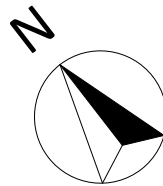
Contractor to install galvanised chainlink netting or hoarding barrier, 2m min height to site perimeter to comply with NZBC:F5 Construction and Demolition Hazards, prior to commencing construction.

Toeboards to be installed for prevention of objects falling off storage or access platforms as per NZBC F5 1.4

Sediment Control Notes:

Sediment and runoff control shall be designed and installed by the licensed building practitioner prior to, or, during the siteworks for the project. The sediment controls shall be installed in accordance with the requirements of the District Plan/Council requirements.

Site is flat.
All finished floor and ground levels are relative to Moturiki datum.



Site Info:
LOT: 36
DP: 527091
AREA: 436m ²
Site Coverage:
170.16m ² (House area) + 7.90m ² (eaves over 1m) / 436m ² (site area) = 0.408 = 41%
Living Zone = Residential
Max coverage = 50% RC10334v01S



design@barretthomes.co.nz	Project No: TGA-140	Plan Name: New Design	Sheet: 3	Rev: -
Wind: HIGH	Designed: TG	Drawing: SITE PLAN	Council: WBDC	
EQ: 1	Drawn: TG	Client Name: CHRISTOPHER & NERISSA SIMMONS		
Exposure: C	Check: CW	Site Address: LOT 36, STAGE 1		
Date: 25/02/2020	Scale: 1:100	9 AUGUSTA RISE, OMOKOROA		



Head Office: 1484 Cameron Road, Greerton, Tauranga 3143
Private Bag 12803, Tauranga Mail Centre, Tauranga 3143
Telephone: 07 571 8008. **F:** 07 577 9820
Email: customerservice@westernbay.govt.nz
Offices at: Waihi Beach, Katikati, Omokoroa and Te Puke

TAX INVOICE
REGISTRATION NO. 52-544-300

CRENE, JAMES ALLAN
9 AUGUSTA RISE
OMOKOROA 3114

Invoice No: 405982
Date: 05 Sep 2025
Customer No: 208112
Your Reference: LIM25525

DETAILS	GST	Excl	Amount
LIM APPLICATION AND DELIVERY FEES LIM Address: 9 AUGUSTA RISE CENTRAL			
LIM FEE	48.26	321.74	370.00
LESS DEPOSIT FEE ALREADY PAID (RECEIPT NO: 2026 38521)	48.26cr	321.74cr	370.00cr
Standard 10 working day service			
Please pay on this invoice. No statement will be issued.			

EXCL	0.00
GST	0.00
TOTAL	\$0.00

Less already paid

TOTAL NOW DUE \$

REMITTANCE ADVICE: Online payments can be made by credit card at www.westernbay.govt.nz/invoice-payment or deposit to: **ANZ Tauranga 010434 0180600 00**, please enter **SI405982** in your payment reference. If paying by post, please detach and return with your payment to Private Bag 12803, Tauranga 3143.

CUSTOMER: CRENE, JAMES ALLAN
INVOICE NO: 405982
TOTAL DUE: \$
PAYMENT MADE: \$