Land Information Memorandum

Disclaimer

This document has been obtained on behalf of the Vendor and copies have been made available to prospective Purchasers and interested parties for general information purposes only. However, neither the Vendor nor Bayleys in the North (Mackys Real Estate Limited), warrant the accuracy of this copy and they accept no liability for any errors or omissions in the report. It is recommended to all prospective Purchasers and interested parties that they obtain and reply on their own reports and make their own independent enquiries for due diligence purposes.



LAND INFORMATION MEMORANDUM NO: LM2200573 Received: 08 Apr 2022 Issued: 26 Apr 2022 Section 44A, Local Government Official Information And Meetings Act 1987

APPLICANT

T A Green, A R Gardener 39 Maunu Estate Drive Maunu Whangarei 0110

SITE INFORMATION

Property ID: 103385

Street Address: 39 Maunu Estate Drive (Pvt)

Whangarei 0110

Legal Description: LOT 10 DP 198201

This is a Land Information Memorandum only.

Full payment has been made for this Land Information Memorandum.



1: PROPERTY DETAILS.

- Location Map
- Aerial Photo

Deposited Plan: DP198201 – 06/10/1999

Record of Title: NA127A/725 – 06/10/1999

This property is subject to a Consent Notice, information attached.

D433461.2 - 06/09/1999

2: INFORMATION IDENTIFYING EACH (IF ANY) SPECIAL FEATURE OR CHARACTERISTIC OF THE LAND CONCERNED, INCLUDING BUT NOT LIMITED TO POTENTIAL EROSION, AVULSION, FALLING DEBRIS, SUBSIDENCE, SLIPPAGE, ALLUVION, OR INUNDATION, OR LIKELY PRESENCE OF HAZARDOUS CONTAMINANTS, BEING A FEATURE OR CHARACTERISTIC THAT IS KNOWN TO THE WHANGAREI DISTRICT COUNCIL.

This property is in an area showing **low & high** stability hazard. Tonkin & Taylor Ltd have prepared a report on stability hazard potential in the District, see map attached and refer:

https://www.wdc.govt.nz/Services/Property/Planning/Property-Hazard-Reports-and-Map

Whangarei District is undergoing consultation on a proposed plan change for natural hazards, hazardous substances & esplanade areas. Refer: https://www.wdc.govt.nz/Whats-new/Have-your-say/Hazards-plan-change

This property is in an area identified in the Northland Regional Council Update to River Flood Maps areas to see how your property may be impacted by these changes, please refer:

Update to river flood maps - Northland Regional Council (nrc.govt.nz)

Regional Policy Statement

The Regional Policy Statement's role is to promote sustainable management of Northland's natural and physical resources. It does this by:

- Providing an overview of the region's resource management issues; and
- Setting out policies and methods to achieve integrated management of Northland's natural and physical resources.

Refer

https://www.nrc.govt.nz/resource-library-summary/plans-and-policies/regional-policy-statement



3: INFORMATION ON COUNCIL AND PRIVATE UTILITY (SEWERAGE, WATER & STORMWATER) SERVICES.

No Whangarei District Council services available in this area.

Service Sheet/s (e.g. As-Built, House Connection, House Drainage etc...) for this property from the building file is attached.

As Built Plan from BC1800892

4: INFORMATION RELATING TO VALUATION, LAND, AND WATER RATES. INFORMATION FROM WHANGAREI DISTRICT COUNCIL RECORDS.

Information on Valuation, Rates and Water Meter location (if applicable) for the current financial year, is attached.

5: INFORMATION CONCERNING ANY PERMIT, CONSENT, CERTIFICATE, NOTICE ORDER, OR REQUISITION AFFECTING THE LAND OR ANY BUILDING ON THE LAND PREVIOUSLY ISSUED BY THE WHANGAREI DISTRICT COUNCIL OR BUILDING CERTIFIER (WHETHER UNDER THE BUILDING ACT 1991 AND/OR 2004 OR ANY OTHER ACT).

Copy of Building Consents and Code Compliance Certificate issued for this property is attached.

BC1700426 – New Shed – Issued – 18/05/2017 This Building Consent has NOT had a Code Compliance Certificate issued.

BC1800892 – New Dwelling – Issued – 07/09/2018 Code Compliance Certificate Issued – 07/06/2019

Stormwater attenuation may be required on this property for new building work that results in an increase of > 30m² in impervious area including paving, driveways etc.

For the Stormwater Attenuation guidance notes refer https://www.wdc.govt.nz/Services/Water-services/Stormwater/Stormwater-flood-management

6: INFORMATION RELATING TO THE USE TO WHICH THE LAND MAY BE PUT AND ANY CONDITIONS ATTACHED TO THAT USE.

ENVIRONMENT:

<u>Please note:</u> This LIM only includes relevant information to your property from the Appeals Version District Plan. No information from the Operative District Plan is included in this LIM as the Appeals Version District Plan is now 'treated as operative', meaning that the Operative District Plan provisions are no longer relevant. There are unresolved appeals to the Appeals Version District Plan, which once resolved may result in the insertion of new rules into the Appeals Version District Plan. The Appeals Version District Plan is continually updated as appeals are resolved and will become operative at the time there remains no outstanding appeals.



Future Urban Zone, see map attached and refer to Part 3 Area Specific Matters - Zones.

https://www.wdc.govt.nz/Services/Property/Planning/Operative-District-Plan

For further information please contact the Policy Planner, 09 430 4200.

Please note: This property contains Northpower Grid Lines
For the Whangarei District Plan rules regarding CEL – Critical Electricity Lines & Substations refer to Part F
https://www.wdc.govt.nz/Services/Property/Planning/Operative-District-Plan

7: INFORMATION WHICH IN TERMS OF ANY OTHER ACT HAS BEEN NOTIFIED TO THE WHANGAREI DISTRICT COUNCIL BY ANY STATUTORY ORGANISATION HAVING THE POWER TO CLASSIFY LAND OR BUILDINGS FOR ANY PURPOSE.

Whangarei District Council is not aware of any classification attached to the land or building/s.

8: OTHER INFORMATION CONCERNING THE LAND AS WHANGAREI DISTRICT COUNCIL CONSIDERS, AT COUNCILS DISCRETION, TO BE RELEVANT.

Whangarei District Council recommends that all Whangarei District residents visit the Northland Regional Council website, https://www.nrc.govt.nz/ for information on Civil Defence hazard response. This information includes Tsunami evacuation zones, maps and community response plans for flooding and extreme weather events etc.

Copies of site plan, floor plan and elevations are attached for your information.

9: INFORMATION RELATING TO ANY UTILITY SERVICE OTHER THAN COUNCILS SUCH AS TELEPHONE, ELECTRICITY, GAS AND REGIONAL COUNCIL WILL NEED TO BE OBTAINED FROM THE RELEVANT UTILITY OPERATOR.

Further information may be available from other authorities; Northland Regional Council; Northpower; Spark; Vector Limited; etc.



DISCLAIMER

Land Information Memoranda (LIM) are prepared under the provisions of Section 44A of the Local Government Official Information and Meetings Act 1987. An inspection of the land or building(s) has not been completed for the purposes of preparing the LIM. It has been compiled from the records held by Whangarei District Council. The information contained in the LIM is correct at the date the LIM report is issued.

A LIM is prepared for the use of the Applicant and may not be able to be relied on by other parties.

Advice from an independent professional such as a lawyer or property advisor should be sought regarding the contents of this LIM and the information contained herewith. Additional information regarding the land or buildings (such as resource consents and other permissions and restrictions), which is not contained in this LIM, may also be held by the Northland Regional Council. The Northland Regional Council should be contacted for that information. Ph (09)4701200 or 0800 002 004 or www.nrc.govt.nz A LIM is not a suitable search of Council's records for the purposes of the National Environmental Standards (NES) for soil contamination of a potentially contaminated

Signed for and on behalf of Council:

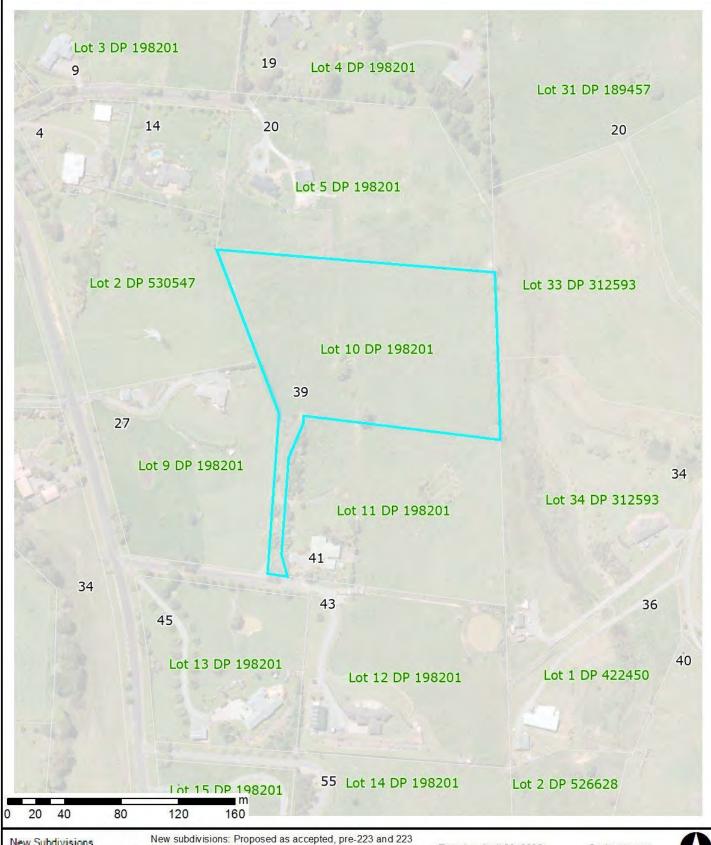
Lee Mitchell

site.

Property Assessment Officer

Property Map





New Subdivisions
Proposed Pre-223
223 Certificate

New subdivisions: Proposed as accepted, pre-223 and 223 Certificate with set Conditions.

Tuesday, April 26, 2022

Scale: 1:2,500



Land Parcel boundaries are indicative only and are not survey accurate. Area measurement is derived from the displayed geometry and is approximate. True accurate boundary dimensions can be obtained from LINZ survey and title plans

The information displayed is schematic only and serves as a guide. It has been compiled from Whangarei District Council records and is made available in good faith but its accuracy or completeness is not guaranteed. Cadastral Information has been derived from land Information New Zealands (LINZ) Core Record System Database (CRS). CROWN COPY RIGHT RESERVED. © Copyright Whangarei District Council.

Aerial Photography



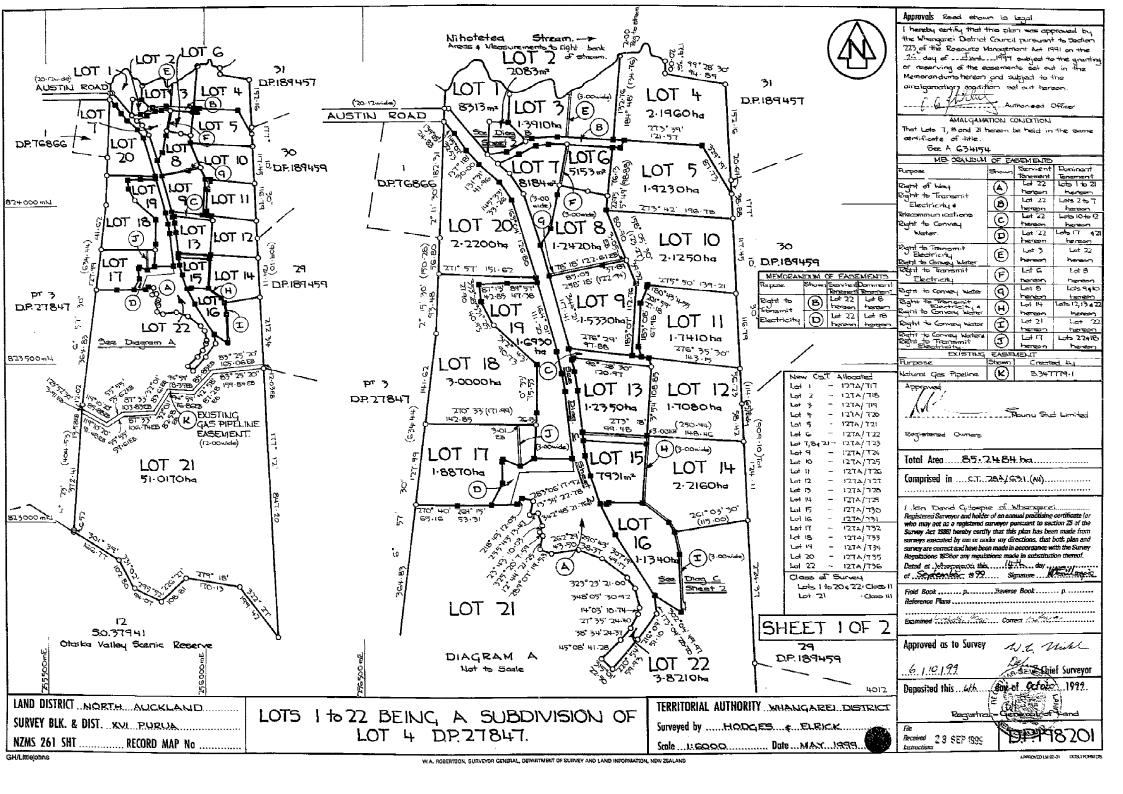


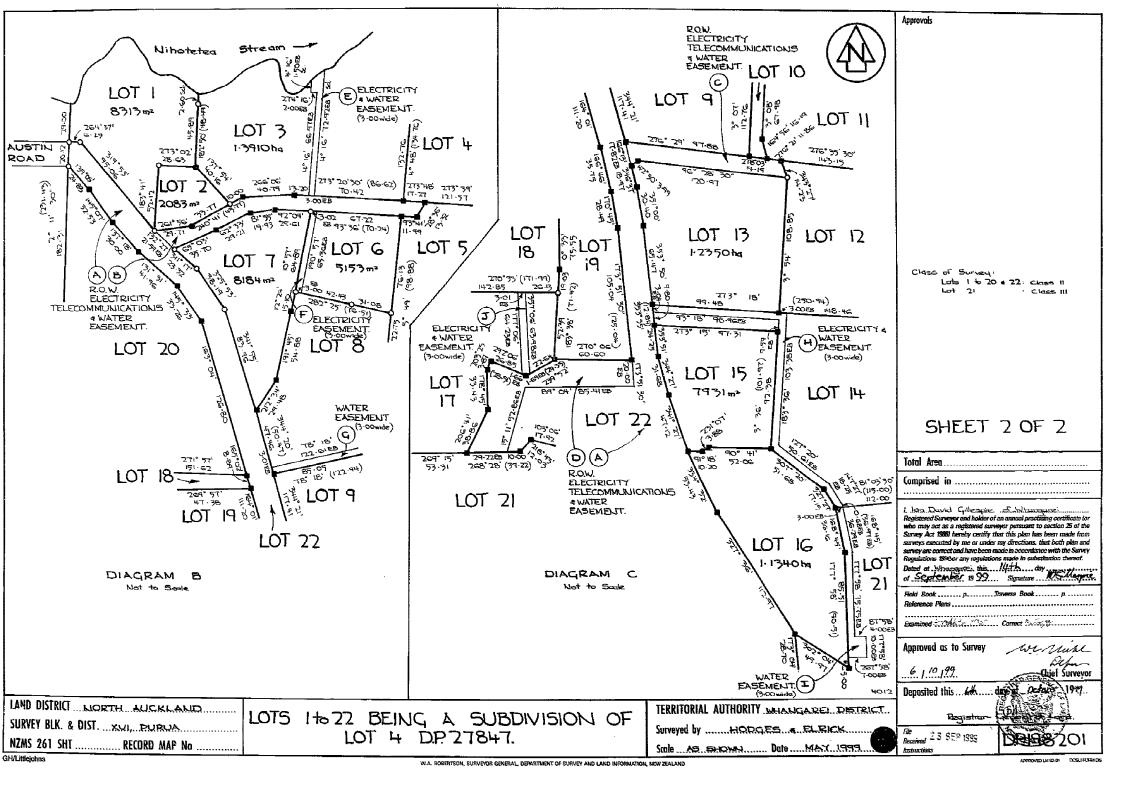
Tuesday, April 26, 2022

Scale:1:2,500

This map was last updated in 2018. It includes New Zealand's most current publicly owned aerial imagery and is sourced from the LINZ Data Service.

The information displayed is schematic only and serves as a guide. It has been compiled from Whangarei District Council records and is made available in good faith but its accuracy or completeness is not guaranteed. Cadastral Information has been derived from land Information New Zealands (LINZ) Core Record System Database (CRS). CROWN COPYRIGHT RESERVED. © Copyright Whangarei District Council.







RECORD OF TITLE UNDER LAND TRANSFER ACT 2017 FREEHOLD

Search Copy



Registrar-General of Land

Identifier NA127A/725

Land Registration District North Auckland

Date Issued 06 October 1999

Prior References NA28A/631

Estate Fee Simple

Area 2.1250 hectares more or less
Legal Description Lot 10 Deposited Plan 198201

Registered Owners

Terry Aaron Green as to a 1/2 share Amy Rebecca Gardener as to a 1/2 share

Interests

Subject to Section 59 Land Act 1948

D433461.2 Consent Notice pursuant to Section 221(1) Resource Management Act 1991 - produced 23.9.1999 at 4.00 pm and entered 6.10.1999 at 9.00 am

Appurtenant hereto is a right of way and rights to convey water, transmit electricity and telecommunications specified in Easement Certificate D433461.6 - produced 23.9.1999 at 4.00 pm and entered 6.10.1999 at 9.00 am

The easements specified in Easement Certificate D433461.6 are subject to Section 243 (a) Resource Management Act 1991 Appurtenant hereto is a right to convey water specified in Easement Certificate D654068.9 - 5.11.2001 at 2.19 pm

The easements specified in Easement Certificate D654068.9 are subject to Section 243 (a) Resource Management Act 1991 Land Covenant in Transfer 5920089.1 - 4.3.2004 at 9:00 am

11881055.3 Mortgage to Bank of New Zealand - 30.10.2020 at 10:44 am

D433461.2 CONO

IN THE MATTER

of the Resource Management Act 1991 ("the Act") 1.

AND

IN THE MATTER

of a subdivision consent as

evidenced by Land Transfer Plan

No. 198201

AND

IN THE MATTER

of a Consent Notice issued pursuant to Section 221 of the Act by THE WHANGAREI DISTRICT COUNCIL ("the Council")

The Council <u>HEREBY CERTIFIES</u> that the following conditions to be complied with on a continuing basis were imposed by the Council as conditions of approval for the subdivision as effected by Land Transfer I'lan No. 198201 ("the plan")

The registered proprietors for the time being of the properties being lots 1 to 20 on the plan ("the lots") will in undertaking any residential development thereon do so in accordance with the recommendations of Richardson Stevens Consultants (1996) Limited in its engineering report of 22 October 1998 as annexed hereto and in particular shall build so that:

- On site effluent disposal systems are subject to advice from engineering consultants experienced in this field;
- (ii) Stormwater from tank overflows is piped to watercourses or the road watertable;
- (iii) House sites are confined to the recommended areas for building as shown on the Hodges & Elrick scheme plan number 4012 Sheet 2 a attached hereto or otherwise be on sites approved following further investigation by a registered engineer; and

x9907620

(iv) Subsoil drainage is installed on lot 16 as shown on plan 980295 sheet 2.

DATED at Whangarei this

6 day of

September

1999

SIGNED for THE WHANGAREI DISTRICT COUNCIL pursuant to the authority of the Council given pursuant to the Local Government Act 1974



Email: tsthd@clear.net.nz



Grant Stevens Registered Engineer Registered Engineer

CIVIL & STRUCTURAL ENGINEERS, 2 SEAVIEW RD, WHANGAREL PH: 09 438 3273, FAX: 09 438 5734

File: 980295

22 October 1998

Hodaes & Elrick PO Box 1000 WHANGAREI

Attention: Mr M. Elrick

Dear Sir

MAUNU STUD SUBDIVISION - AUSTIN ROAD

Scope

This report is prepared to provide engineering information about the property and addresses its suitability for the proposed subdivision. It is based on a walkover survey, soil testing and reference to the survey plan prepared by your company.

Proposal

The proposal is to subdivide the 85.68 ha property into 22 lots. Lots 1 - 20 will be residential blocks varying in size from 0.2 ha to 3.59 ha.

Lot 21 will be the balance area of 54.78 ha and Lot 22 will be the access road.

Legal Description

The legal description is Lot 4 DP 27847 Blk XVI Purua SD.

Location

The subdivision is located at the end of Austins Road, Maunu.

Physical Description

The subdivision area is generally pasture land ranging from flat to gently rolling contour. The farm house, cottage and farm buildings occupy an area near the end of Austins Road. The Nihotetea Stream forms the northern boundary of the subdivision. An unnamed stream which drains most of the subdivision area discharges to the Nihotetea Stream through a culvert at the end of Austins Road.

Assessment for Subdivision

Access

A public road will be constructed from the end of Austins Road to provide access to the lots. A total of 5 right-of-ways will be required to access lots not directly accessible from the road. The road and right-of-ways will be constructed to Whangarei District Council Environmental Engineering Standards.

On-site Effluent Disposal

The soils are sandy clays and clay loams, with considerable variation over the site. Generally these soils would be classed as moderate to slow draining. Given the large size of the lots a standard septic tank with filter and shallow soakage trenches would provide for wastewater treatment and disposal. Special consideration will be required for lots close to streams or lots with wet areas unsuitable for soakage trenches. Aerated wastewater systems (e.g. Biocycle) with effluent irrigation to planted areas may be required at these lots.

Each lot will require a detailed design of the disposal system by a suitably qualified engineer at the time of Building Consent application.

House Sites

Suitable, stable house sites are indicated on Hodges & Elrick plan No. 4012 Sheet 2. Generally these sites are located on elevated areas within each lot. Other areas may be acceptable but should be the subject of further investigation by a Registered Engineer.

Stormwater Disposal

Rainwater will be collected in storage tanks for water supply. Overflows from storage tanks should be piped to adjoining streams/drains or to the road watertable.

Stability/Subsoil Drainage

No recent instability was observed on the natural slopes of the property. However at Lots 15 and 16 there is evidence of historical ground slumping. The recently constructed road excavation batter has slumped along much of the boundary with Lot 16. In order to improve the stability and drainage of Lot 16 and the adjoining road batters, subsoil drains will be installed as detailed on plan 980295 sheet 2. At all other lots the recommended house sites are considered stable and suitable for residential construction.

The property owner advises that subsoil drainage has previously been installed to drain wet areas over parts of Lots 11, 12, 13, 14 and 15.

Road Construction

The road pavement has been designed based on a CBR of 4, established from penetrometer tests. See attached sketch for the typical road cross-section.

During earthworks for the road construction local soft areas were encountered between distances 680 m and 940 m. These areas were undercut by 300 mm, geotextile placed and 300 mm of guarry-run brown rock placed.

Subsoil drainage will be placed along the edge of the road on the uphill side, between distances 680 m and 940 m.

Services

Power and telephone services will be available at the subdivision.

Conclusion

The engineering investigations we have carried out enable us to conclude that the land is suitable for the proposed subdivision subject to the following:

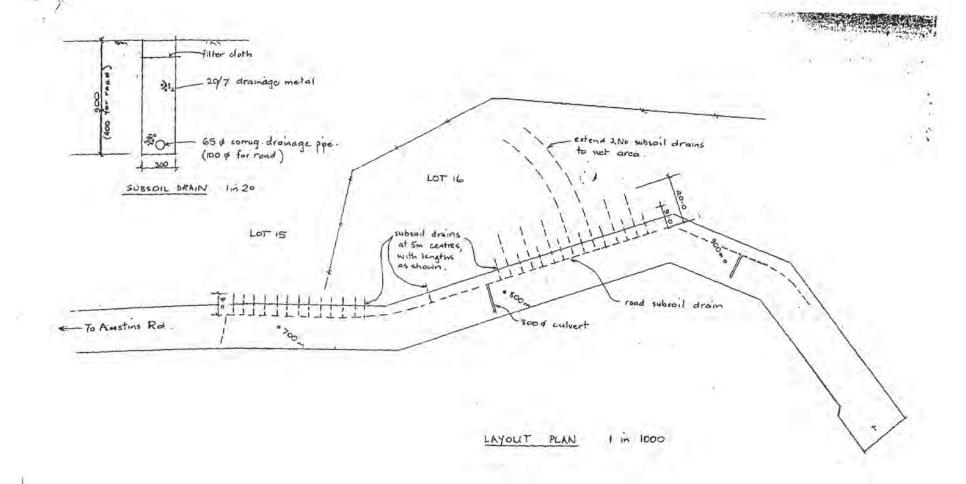
- That the access road and right-of-ways be constructed in compliance with the Whangarei District Council environmental engineering standards.
- That on-site effluent disposal systems be subject to advice from engineering consultants experienced in this field.
- That stormwater from tank overflows be piped to watercourses or the road watertable.
- That house sites be confined to the recommended areas on plan 4012 sheet 2, or specifically investigated.

That subsoil drainage be installed at Lot 16 and in the adjoining road reserve as shown on plan 980295 sheet 2.

Yours faithfully

M.J. Beazley RICHARDSON STEVENS CONSULTANTS (1996) LTD

Ardson, Stevens Consultants (1996) Ltd.
SULTING CIVIL & STRUCTURAL ENGINEERS
EAVIEW ROAD, WHANGAREI. PH (09) 438-3273. FAX (09) 438-5734. File No..... Calculated by Subdivision - Maunu Stud Hodges & Elrick. Client. 250 mm 3% crassfall TYPICAL 29 440 6.0m basecourse. T.Om ROAD 100mm GAP 40 carriageway CROSS - SECTION base course. seal, Grade 3 + Grade 5

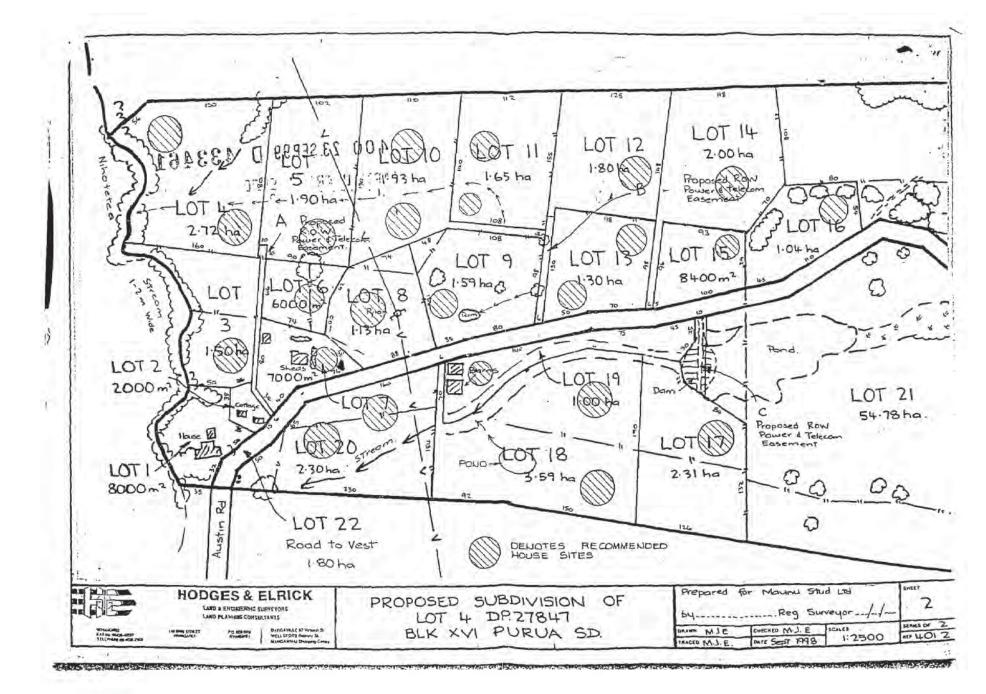


CONSULTING ENGINEERS
2 Scaview Road, Whangard

MAUNU STUD SUBDIVISION -

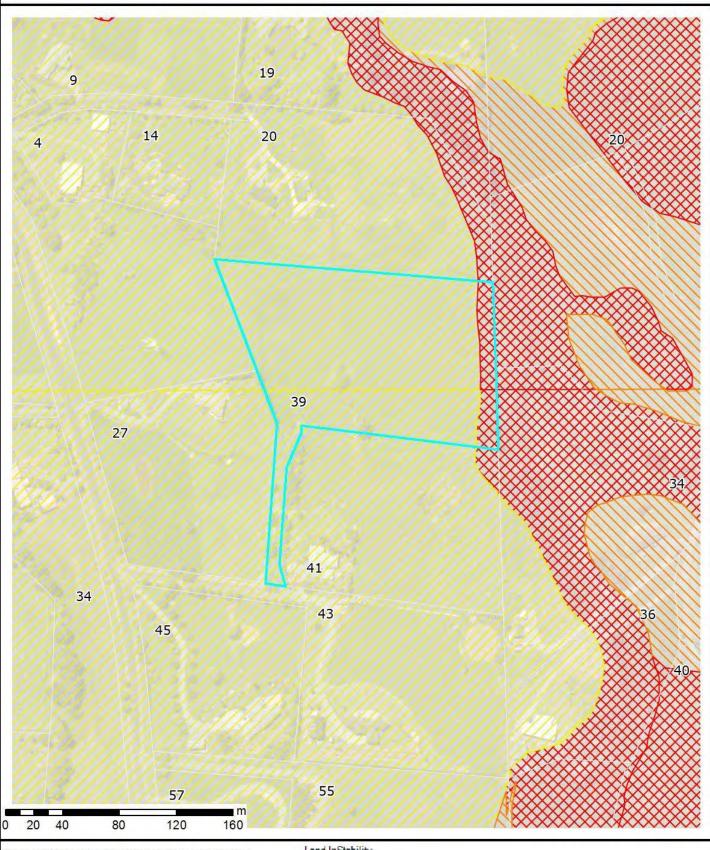
SUBSOIL DRAINS

October 1998 Ref : 980295 Sheet 2



Land Stability





This Land Stability hazard information was prepared by Tonkin and Taylor Engineers Ltd.

Hazard information as shown is approximate and should not be used as a replacement for site specific investigation and assessments. The absence of hazard information shown does not mean that there is none, only that the information may not yet have been collected.

Land InStability

High Hazard

Moderate Hazard

Tuesday, April 26, 2022

Scale:1:2,500



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Whangarei District Council Forum North - Private Bag 9023 Whangarei New Zealand Ph:0-9-430 4200 Fax:0-9-438 7632 Email: mailroom@wdc.govt.nz

Rates LIM Report

As at: Tuesday, 26 April, 2022

Property Number 103385

Legal Description LOT 10 DP 198201

Assessment Number 0035027722

Address 39 Maunu Estate Drive (Pvt) Whangarei 0110

Record of Title(s) 127A/725 Land Value \$440,000 Capital Value \$1,225,000 Date of Valuation 01-July-2021

Effective Date (used for rating purposes) 01-July-2022

Meter Location

Rates Breakdown (up to 30 June 2022)

Rates Charge	Charge Total
General Residential - Lifestyle	\$939.44
Uniform Annual General Charge	\$724.00
Regional Civil Defence & Hazard Management	\$37.88
Regional Council Services	\$132.69
Regional Economic Development	\$8.76
Regional Emergency Services Rate	\$11.84
Regional Flood Infrastructure	\$31.19
Regional Land and Fresh Water Management	\$138.52
Regional Pest Management	\$76.40
Regional River Management - General Catchment Area	\$42.22
Regional Sporting Facilities	\$16.95
Regional Transport Rate	\$23.07
Annual Charge Total	\$2,182.96

Opening Balance as at 01/07/2021

\$-229.92

Rates Instalments	Total
20/07/2021 Instalment	\$547.96
20/10/2021 Instalment	\$545.00
20/01/2022 Instalment	\$545.00
20/04/2022 Instalment	\$545.00
Rates Total	\$2,182.96

Balance to Clear \$172.30



Building Consent No: BC1700426

Section 51, Building Act 2004

Issued: 18 May 2017

The Building

Street address of building: 39 Maunu Estate Drive (Pvt)

Whangarei 0110

Legal description of land where building is located: LOT 10 DP 198201

LLP: 85146

Building name: N/A

Location of building within site/block number: N/A

Level/unit number: N/A

First point of contact for communications with Council/building consent authority

The Owner

R K Edwards PO Box 353

Whangarei 0140

Phone number: N/A

Mobile number: 021437665

Facsimile number: N/A

Email address: russell.e@hotmail.co.nz

Website: N/A

Street address/registered office: 39 Maunu Estate Drive (Pvt)

Whangarei 0110

Building Work

The following building work is authorised by this consent:

New Shed





This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

This building consent is subject to the following conditions:

Section 90 Building Act 2004

Under section 90 of the Building Act 2004, agents authorised by Council (acting as a Building Consent Authority) are entitled, at all times during normal working hours or while building work is being done, to inspect:

- ii) land on which building work is being or is proposed to be carried out; and
- iii) building work that has been or is being carried out on or off that building site; and
- iiii) any building.
- See attached schedule of site requirements for inspections and documentation required.
- Engineer to confirm with PS 4 of ground supporting foundation infill exceeding 600mm prior to slab or foundation inspection.
- All earthworks and foundation excavations are inspected by a Charted Professional Engineer or their agent who is familiar with the site and the contents of the Suitability Report. A Producer Statement - PS4 is required.
- Refer to Site suitability report by TMC Consulting Engineers (ref #S0244-J00389 dated 24/02/2017) and ensure Overflow is in accodane with Clause 4.4 of the report.

Compliance Schedule

A compliance schedule is not required for the building.

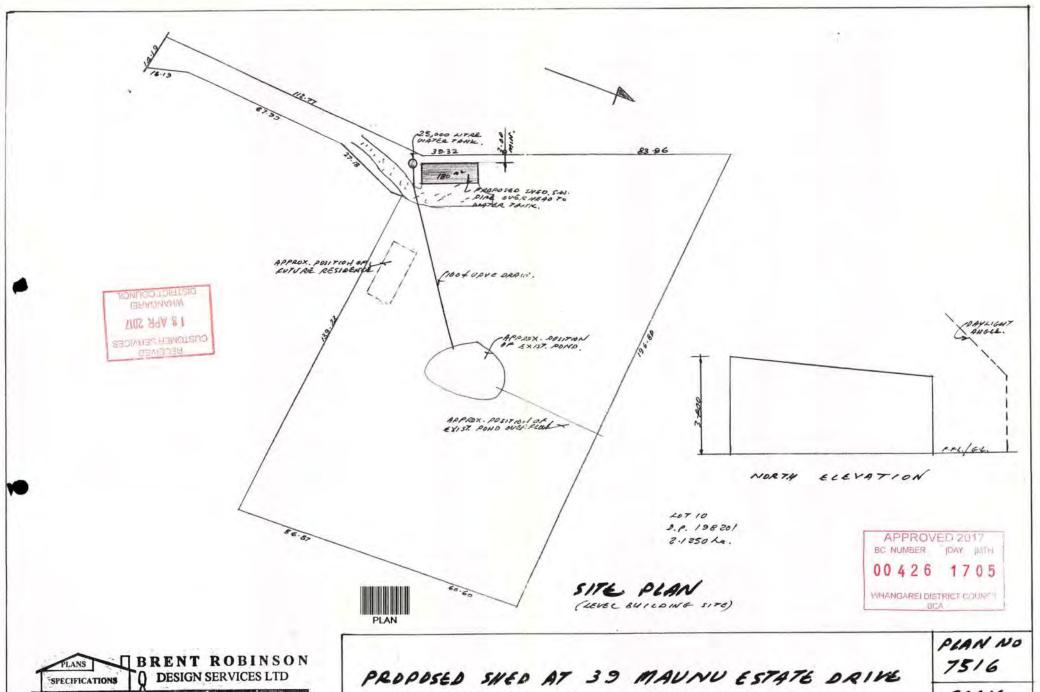
Attachments

No attachments.

Additional Information

- The applicant must control dust nuisance created by any site or building works.
- Toilet facilities must be provided within reasonable distance of the construction site. Ground discharge is no longer acceptable.
- Lapsing of building consent. For the purposes of S52(b) of the Building Act 2004, the period after which this consent will lapse if the building work to which it relates does not commence will be 12 months from the date of issue.

Eboylan.	18 May 2017
Enka Boylan Support Assistant – Building Processing	Date
On behalf of Whangarei District Council	



63 Mill Road

Telephone: 09-437 3508 09-437 3515 Whangarei

MAUNU - FOR R. EDWARDS

SCALE

1-100:1-1000



CUSTOMER SERVICES

1 3 APR 2017

WHANGAREI

DISTRICT COUNCIL

Job# S0244-J00389

39 Maunu Estate Drive Maunu

Site Suitability Report





24th February 2017

TMC Consulting Engineers Ltd 33 Norfolk Street PO Box 252 Whangarei APPROPh (09) 393 0337 BC NULWWW.Imcengineers.co.nz

WHANGAREI DISTRICT COUNCIL





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Task	Responsibility	Signature	Date
Prepared by	David Taylor Dip. Eng. (Civil)	200	24/02/2017
Reviewed by	Vinnie Marotta BE(Civil), MIPENZ, CPEng		8/03/2017
Revision		7	





1. INTRODUCTION

TMC Consulting Engineers Ltd were engaged by Russell Edwards to undertake a geotechnical investigation with the purpose of establishing foundation conditions for a new dwelling and associated storage outbuilding. This report outlines the findings of our investigation and provides recommendations regarding the development of the site including on-site wastewater disposal. This brief was detailed in a short form agreement dated 27th January 2017 and in a site meeting on 20th February 2017 (DT/RE).

We understand that the proposal is to construct a new single storey dwelling supported on a concrete slab type foundation on a levelled or partially levelled building platform. It is also intended that a pole barn outbuilding with gravel floor will be constructed within a short distance to the west of the dwelling. On the 20th February 2017 a site walkover and intrusive investigation was carried out on the proposed building site.

The findings of this report will be used to support any building consent or resource consent application for the development proposed in the brief.

1.1 PREVIOUS REPORTS

During the process of undertaking this investigation we have reviewed the following report;

Maunu Stud Subdivision – Austin Road, prepared by Richardson Stevens for Hodges & Elrick, dated 22 October 1998, File No. 980295.

2. SITE DESCRIPTION

2.1 DESCRIPTION

The property is legally described as Lot 10 DP 198201 located on the eastern side of Maunu Estate Drive. The property is sized at approximately 2.1250 ha and is an irregular polygon with a leg of strip between the southwest corner of the lot to an access way south of the property. The proposed building site is located within the south-western quarter of the Lot.

2.2 TOPOGRAPHY

The proposed site was assessed to be gently falling to the east at between three to eight degrees down to an overland flow path to the east of the site.

2.3 ACCESS

Access to the site from is provided via a leg of strip from the south-western corner of the property.

2.4 SITE HAZARDS

The proposed site is located in the south-western quarter of the Lot on gently sloping ground. The eastern boundary borders an area designated as at high risk of instability with the rest of the property including the site itself in a low risk instability area according to the Whangarei District Council GIS hazard maps.

Provided that the recommendations within this report are followed we believe on reasonable grounds that;

The land on which the building work is to take place is neither subject to, nor likely to be subject to inundation, erosion, subsidence or slippage; and

00426 1705

WHANGAREI DISTRICT COUNT BCA



The building work itself is not likely to accelerate, worsen or result in inundation, erosion, subsidence or slippage of that land or any other property.

3. GEOTECHNICAL INVESTIGATIONS

3.1 GEOLOGY

The soils and geology maps of the area indicate the following:

Edbrooke, S.W.; Brook, F.J. 2009: Geology of the Whangarei area: scale 1:250,000. Lower Hutt: GSN Science. Institute of Geological & Nuclear Sciences 1:250,000 geological map 2. The geological map of Whangarei indicates that the site lies within an area bordering unconsolidated to poorly consolidated mud, sand, gravel and peat deposits of alluvial, colluvial and lacustrine origins (Q1a) of the Tauranga Group and Whangarei Limestone (Otw) white to pink, stylolitic, bioclastic limestone, pebbly in places of the Te Kuiti Group.

Sutherland, C. F.; Cox, J. E.; Taylor, N. H.; Wright, A. C. S. 1981: Soil map of Hukerenui – Whangarei area (sheets Q06/07, R06/07), North Island, New Zealand. Scale 1:100,000 N.Z. Soil Bureau Map 187. The soils map of the area indicates that the site borders areas of Kara sandy loam, Riponui sandy clay loam and sandy loam, and Hukerenui sandy Loam.

3.2 SUB-SURFACE INVESTIGATIONS

Investigations undertaken included a walkover inspection and two 50 - 100 mm diameter hand auger boreholes drilled to depths of up to 3.0 m within the proposed building site. Insitu undrained shear vane strengths were measured at 300 mm intervals in these boreholes where practicable. The boreholes were supplemented with Scala Penetrometer testing to assess soil strength at depth. The Scala tests were undertaken to a depth of 1.5 m below ground level alongside the boreholes.

Two further Scala Penetrometer tests were carried out to a depth of 0.9 m to determine if homogeneous and uniform soil conditions exist across the building site. One additional borehole was undertaken within the area of the proposed effluent disposal field to determine soil and groundwater conditions.

The test logs and Scala results are attached to this report.

3.3 SUB-SURFACE FINDINGS

The augers identified moist to wet silt and clay across the proposed building area overlaid by approximately 100 to 300 mm of topsoil.

The underlying soils were generally firm to very stiff and provided reasonable shear strength readings and can be considered to have an ultimate bearing capacity of 225 kPa. Shear vane readings indicate a shear strength ratio of approximately two to seven indicating that some of the soils are sensitive.

The sub-surface conditions are outlined in this section and detailed on the bore logs attached. The observations noted in the investigations have been extrapolated between the various test locations to infer probable site conditions. It is noted that these inferences in no way guarantee the validity of these findings due to the inherent variability of natural soil deposits. The actual ground conditions discovered during the development of the site may vary from those assumed.

This report utilises the New Zealand Geotechnical Society's Field Description of Soil and Rock, dated December 2005.

Our Findings are as follows;

3.3.1 Site Stability

The walkover of the site and surrounding area and subsurface investigations undertaken indicate no signs of recent ground movement.

Job# S0244-J00389



3.3.2 Expansive Soils

We have assessed the in-situ soils as Class M, Moderately Expansive in terms of AS 2870:2011. This soil classification can experience characteristic surface movement (y_s) from moisture changes of up to 40 mm. Expansive soils are prone to shrinkage and swelling effects resulting from moisture changes within the soil. Several factors that can influence these properties are climatic conditions, variations in groundwater levels, vegetation water demand, water disposal systems and site coverage. Care must be taken when planning the development to mitigate the potential effects of shrink/swell on any structures or infrastructure.

3.3.3 Fill Suitability

Some of the sub-soils found on site should be acceptable as structural fill subject to controlled filling operations and moisture content at the time of construction. Any structural fill utilising hard fill over 600 mm in depth or alternate material of any fill depth will be subject to controlled filling operations and observation by an Engineer.

3.3.4 Stormwater & Groundwater

Groundwater was observed as being at a depth of 2.2 m below ground level in Borehole 1 which is adjacent to the overland flow path to the east of the house site. No groundwater was found in the other boreholes at the time of drilling.

4. DEVELOPMENT RECOMMENDATIONS

4.1 EARTHWORKS

All earthworks should be undertaken in accordance with good practice, relevant standards and the district and regional rules.

Cuts and fills in excess of 0.5 m and within 3.0 m of buildings should be either battered back at no greater than 1v:3h or retained by a suitably designed retaining structure unless approved otherwise by an engineer.

Earthworks should not be undertaken during inclement or wet conditions due to the sensitive and plastic nature of some of the soils. Excavation and reworking during wet conditions may result in the exposed materials being unsuitable for reuse as fill or reduce soil strengths below those originally designed for.

We strongly recommend all earthworks and foundation excavations are inspected by a chartered professional engineer or their agent who is familiar with this site and the contents of this suitability report. Preceding the placement of any fill or foundation construction a geotechnical engineer should be contacted to discuss the earthworks methodology, inspection requirements and testing frequency.

4.2 FOUNDATION OPTIONS

Based on our investigation and findings, the soils fall outside the scope of NZS 3604:2011 and therefore all foundations will require specific engineering design.

Shallow foundations should be designed for an ultimate bearing capacity of 225 kPa. Foundations other than stiffened raft type floors will require additional embedment to mitigate the swell/shrink effects that moisture changes may have on the soils. Subject to specific design and depending on structure type, shallow footings should be founded into natural soils at a depth of between 400 mm to 900 mm below cleared ground level into stiff natural soils as outlined in AS2870:2011.

Foundation excavations should be assessed and tested once exposed and before foundations are constructed to ensure design criteria are met.

Job# S0244-J00389 5



4.3 RETAINING

There may be a requirement for specifically designed retaining walls. Levels, retained heights and surcharge loads should be considered to determine the need for specific design. The proposed building site may require retaining depending on the final finished ground level chosen.

For design purposes the following soil parameters are considered appropriate:

Soil cohesion

c' = 0

Internal friction angle of soil

 $\phi' = 26^{\circ}$

Specific weight of soil

 $\gamma = 18 \text{ kN/m}^3$

For timber pole retaining wall design an undrained shear strength $S_u = 75$ kPa can be assumed for the soil in front of the wall. This may be increased subject to further assessment and depending on the finished ground level in front of the wall.

4.4 STORMWATER & DRAINAGE

The stormwater disposal from developed surfaces should be collected into sealed pipes and discharged in a controlled manner and directed to the overland flow path to the east of the site.

Stormwater flows must not be allowed to run onto or saturate the ground to adversely affect slope stability or foundation conditions.

5. EFFLUENT DISPOSAL

The following section has been prepared in accordance with AS/NZS 1547:2012 and the Regional Water and Soil Plan for Northland (RWSPN).

5.1 SOIL AND GROUNDWATER INVESTIGATIONS

A soil and groundwater borehole was drilled to a depth of 0.9 m in the location of the proposed effluent disposal field (Borehole 5). Boreholes 1 and 2 were also used to assess soil profile and groundwater levels. The locations of the boreholes are noted on the attached site plan.

5.2 SITE ASSESSMENT

Feature	Comment
Topography	Linear divergent/linear convergent slope of between 6 to 13 degrees. Aspect – east facing.
Ground Cover	Pasture.
Geology	The geology and soils are noted above in Section 3.1. Investigations concur with the published information and we consider that the soil should be considered Category 5 terms of AS/NZS 1547:2012.
Seasonal Ground Water Variations	It is unlikely that there will be seasonal variations in soil drainage that will impact negatively on the disposal system. Groundwater was not observed in Borehole 5 during the investigation.
Fill	No fill was observed in the proposed location of the effluent field.
Drainage Control	Surface water from developed areas should be collected by drains or sumps and discharged as noted above. A surface water cut-off drain will be required directly above the field.
Rock Content	No rocks or boulders were observed within the site.

Job# S0244-J00389



Feature	Comment		
Site Stability	No recent instability was observed within the area of the proposed disposal field.		
Climate & Rainfall	Annual rainfall is in the order of 1400mm. Rainfall intensity is approximately 40 mm/hr for a storm with a 10% probability of occurring annually and of one-hour duration.		
Lot Size	The Lot is sized at approximately 2.1250 ha.		

5.3 PERMEATION TESTING

No permeation tests were carried out due to the topography and nature of the soils encountered in the boreholes.

5.4 DESIGN PARAMETERS

The Lot will be supplied by tank water supply.

For a household of four bedrooms with standard water reduction fixtures and we have used a per capita volume of 165 l/day resulting in a treated effluent loading rate of 990 litres/day based on a six-person occupancy. A Design Irrigation Rate of 3.0 mm per day for an irrigated system has been assumed. These rates are in accordance with AS/NZS1547:2012 in recognition of the field test results and brief provided.

Any proposed disposal field is required by The Regional Soil and Water Plan for Northland (RSWPN) and our recommendations to comply with the following minimum offsets:

Primary Disposal Field Offsets	Secondary Disposal Field Offsets	
1.5 m to boundaries	1.5 m to boundaries	
1.2 m to ground water	0.6 m to ground water	
3.0 m to buildings	3.0 m to buildings	
20 m to surface water	15 m to surface water	
20 m to ground water bores	20 m to ground water bores	

5.5 DISPOSAL SYSTEM RECOMMENDATIONS

Due to the soils encountered and topography of the site a secondary treatment system is recommended. An area adjacent to the western boundary was identified as a suitable site for effluent disposal.

5.5.1 Secondary wastewater treatment system

For design purposes, we have assumed an irrigation rate of 3.0 mm/day for a secondary treated wastewater irrigation system. These rates are in accordance with AS/NZS1547:2012 in recognition of the field test results.

We recommend that a secondary treated effluent system that complies with the RSWPN is used with disposal to a pressurised drip irrigation system. The drip irrigation system should be placed on the on the ground surface with a minimum 150 mm layer of mulch or 100 mm of topsoil placed over the lines. Vegetation should be planted above the dripper lines to increase efficiency; suggested plantings includes shrubs, flaxes and grasses or lawn grass for topsoil buried lines to provide evapotranspiration and nutrient removal.

For a flow rate of 990 litres/day, 330 m of dripper line will be required through an area of 330 m². A further 99 m² is to be set aside as a minimum 30 % reserve area as required by The Regional Soil and Water Plan for Northland. This should allow easy rejuvenation of the field should operational difficulties be experienced or field extension be required.

Job# S0244-J00389



With the area available on the subject property it is our opinion that a satisfactory effluent disposal system can be installed that will satisfy all of the parameters set out in AS/NZS 1547:2012. A producer statement should be provided by the supplier of the system selected by the owner/developer.

The manufacturers of treatment systems supply detailed maintenance schedules that must be adhered to. It is imperative that the operator of the system schedule and undertake maintenance of the system to ensure its effectiveness.

5.5.1 Assessment of Environmental Effects

The soils have been assessed as Category 5 in terms of AS/NZS 1547:2012. With a daily application rate of 3.0 mm/day, the soil should be capable of coping well with long-term application of wastewater. Similar systems around Northland produce no noticeable odour or noise impact on neighbours or the homeowners themselves if installed and maintained properly.

To protect against system failure, the system must provide at least 24 hours' buffer and a visible and audible alarm to alert the homeowners to any possible problem(s). To protect against any possible failure of the disposal area, the reserve area should be maintained with a vegetated surface ready for the possible installation of dripline into or onto it.

Provided the recommendations of this report are followed we believe on reasonable grounds that on-site effluent disposal on this property will have no adverse effect on the environment.

6. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our investigations we make the following conclusions and recommendations;

- Once the final location and scope of works for the dwelling has been finalised an engineer familiar with the site and contents of the report should review the plans to assess the suitability of the proposed development.
- 2) The soils do not meet the requirements of Good Ground in terms of NZS 3604:2011 and therefore foundations will require specific engineering design as detailed in Section 4.2 above.
- 3) Cuts and fills in excess of 0.5 m and within 3.0 m of buildings should be either battered back at no greater than 1v:3h or retained by a suitably designed retaining structure unless approved otherwise by an engineer.
- 4) We strongly recommend all earthworks and foundation excavations are inspected by a chartered professional engineer or their agent.
- 5) All stormwater runoff and overflow from developed surfaces is to be directed in a controlled manner to the overland flow path to the east of the site.
- 6) Specific designs will likely require an Engineer to supervise the construction of the design to ensure that the design criteria have been met and to issue a Producer Statement PS4 – Construction Review on completion.

7. LIMITATIONS

This report has been prepared for our client as identified above for the purpose of building consent or resource consent application with respect to the brief noted. It is not to be relied upon for any other purpose without reference to TMC Consulting Engineers Ltd. The reliance by other parties on the information or opinions contained in the report shall be at such parties' sole risk without our prior review and agreement in writing.

Recommendations and opinions in this report are based on data obtained from the investigations and site observations as detailed in this report. The nature and continuity of

Job# S0244-J00389 8



subsoil conditions at locations other than the investigation bores and tests are inferred and it should be appreciated that actual conditions could vary from the assumed model.

During the process of the site development and construction, an engineer competent to judge whether the conditions are compatible with the assumptions made in this report should examine the site. It is essential that this office be contacted if there is any variation in subsoil conditions from those described in this report as it may affect the design parameters recommended.

If there are any questions arising from the above or during construction, please call this office.

8. ATTACHMENTS

- Test results
- Site Plan
- WDC Hazards Map





9

BOREHOLE LOG 1 TMC Project: 39 Maunu Estate Drive, Maunu, Whangarei. Client: Russell Edwards ENGINEERS Job No: S0244-J00389 Graphic In situ shear vane reading Remoulded shear vane reading Symbol Scala Penetrometer Organic Soil Rock Clay Cobbles Gravel Silt Sand G.W.L Undrained Shear Strength Graphic Geologic Scala Penetrometer Depth mm Field Description (kPa) Corrected (Per NZGS (blows/ 100 mm) Unit Log guideline) ******* ******* Topsoil, moist, 200 mm Silty CLAY, light brownish orange mottled brown, slightly moist, slightly plastic moist, plastic, very stiff Fauranga Group (Q1a) & Whangarei Limestone (Otw) orange mottled grey and brown, moist, plastic, stiff, trace sand 1200 light grey mottled orange, very moist, very plastic, firm 1500 loses sand 1800 plastic, trace sand wet ¥ 2400 Auger terminated at 3.0 m. 3600 3900 4200 4500

		14
Test Date	20/02/2017	N
Test location	Refer to site plan	
Drill Method	50 - 100 mm hand at	iger.

Shear Vane No 1993

NOTE: The subsurface data described above has been determined at this specific borehole location. The data will not identify any variations away from this location

TMC Consulting Engineers Ltd, 33 Norfolk Street, Whangarel, www.tmcengineers.co.nz

BOREHOLE LOG 2 Project: 39 Maunu Estate Drive, Maunu, Whangarei. Client: Russell Edwards lob No: S0244-J00389 Graphic In situ shear vane reading Symbol Remoulded shear vane reading Scala Penetrometer Rock Clay Organic Soil Undrained Shear Strength G.W.L Geologic Graphic Depth mm Field Description (kPa) Corrected (Per NZGS Unit Log (blows/ 100 mm) guideline) Topsoil, brown, slightly moist 100 mm Silty CLAY, brown, slightly moist, trace rootlets. light brownish, orange mottled brown, slightly moist, slightly plastic, very stiff moist, plastic fauranga Group (Q1a) & Whangarei Limestone (Otw) light grey, mottled orange, moist, plastic, very stiff, trace sand >202 No groundwater observed slightly plastic orange mottled grey 2100 very moist dark grey mottled grey & orange, very moist, plastic, very stiff Clayey SILT, light grey, mottled orange, very moist, slightly plastic, very stiff Auger terminated at 3.0 m 3900 4200 4500 Drill Method 50 - 100 mm hand auger Refer to site plan Test location 20/02/2017 Test Date NOTE: The subsurface data described above has been determined at this specific borehole location. The data will not identify any TK Inspector variations away from this location Shear Vane No 1993 TMC Consulting Engineers Ltd, 33 Norfolk Street, Whangarel, www.tmcengineers.co.nz

SCALA PENETROMETER RESULTS

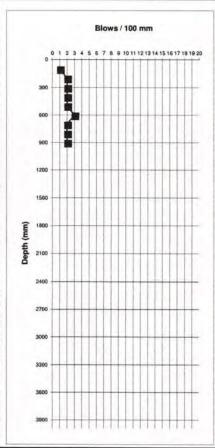
Client: Russell Edwards Job No: S0244-J00389 Date: 20/02/2017



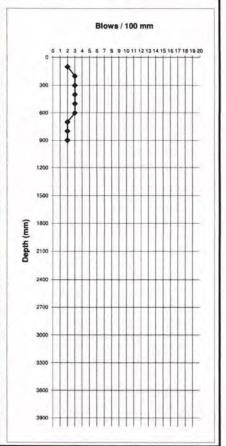


99	
Scala 3	
Depth of	Number of
reading	blows/100 mm
100	1
200	2
300	2
400	2
500	2
600	3
700	2
800	2
900	2
1000	
1100	
1200	
1300	
1400	
1500	
1600	
1700	
1800	
1900	
2000	
2100	
2200	
2300	
2400	
2500	
2600	
2700	
2800	
2900	
3000	
3100	
3200	
3300	
3400	
3500	
3600	
3700	
3800	

3900 4000



Scala 4	
Depth of	Number of
reading	blows/100 mm
100	2
200	3
300	3
400	3
500	3
600	3
700	2
800	2
900	2
1000	
1100	
1200	
1300	
1400	
1500	
1600	
1700	
1800	
1900	
2000	
2100	
2200	
2300	
2400	
2500	
2600	
2700	
2800	
2900	
3000	
3100	
3200	
3300	
3400	
3500	
3600	
3700	
3800	
3900	
4000	



SOIL & GROUNDWATER LOG 5 Project: 39 Maunu Estate Drive, Maunu, Whangarei. Client: Russell Edwards ENGINEERS Job No: S0244-J00389 Graphic In situ shear vane reading Symbol Remoulded shear vane reading Scala Penetrometer Fill Rock Cobbles Gravel Sand Clay Organic Soil Geologic Graphic Undrained Shear Strength Depth mm Field Description (kPa) Corrected (Per NZGS Unit Log (blows/ 100 mm) guideline) Topsoil, brown, 300 mm Tauranga Group (Q1a) & Whangarei Limestone (Otw) clayey, orangish brown No groundwater observed Silty CLAY, light brownish orange, moist plastic, very stiff light brownish orange mottled orange and grey 1200 trace sand grey mottled orange specked white 1500 Auger terminated at 1.5 m. 800 18 AFR 2017 2100 2400 2700 3000 3300 3900 4500 50 - 100 mm hand auger Refer to site plan 20/02/2017 Test Date NOTE: The subsurface data described above has been determined at this specific borehole location. The data will not identify any

TK

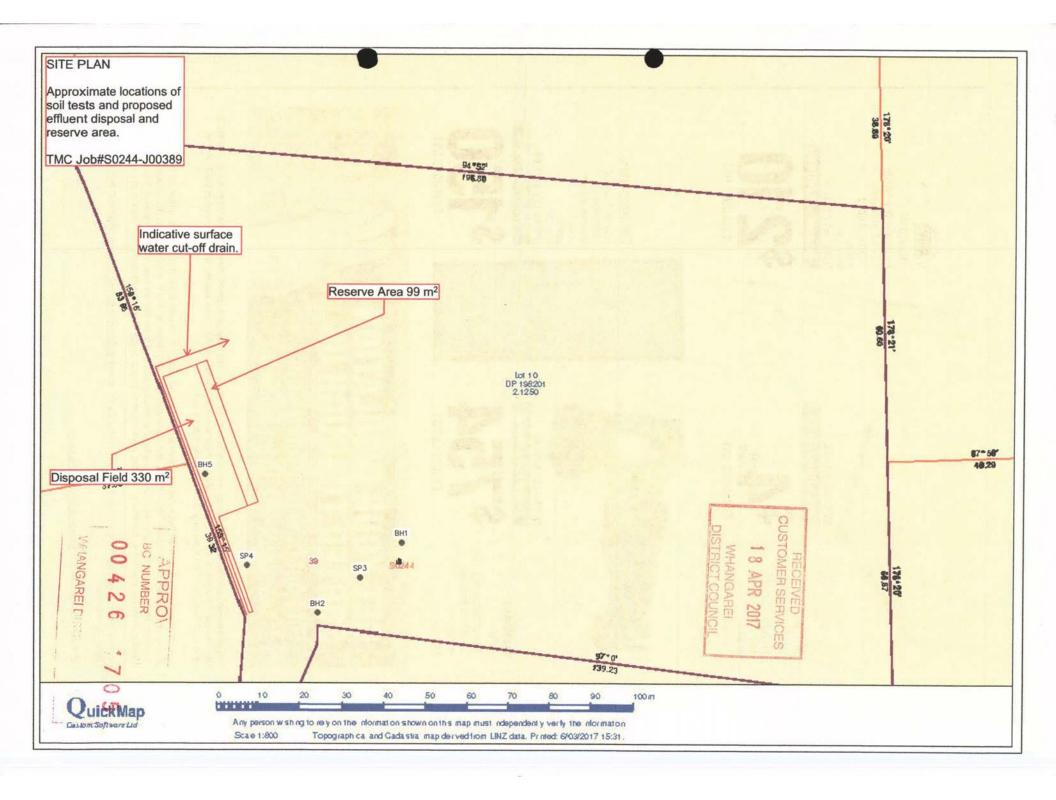
1993

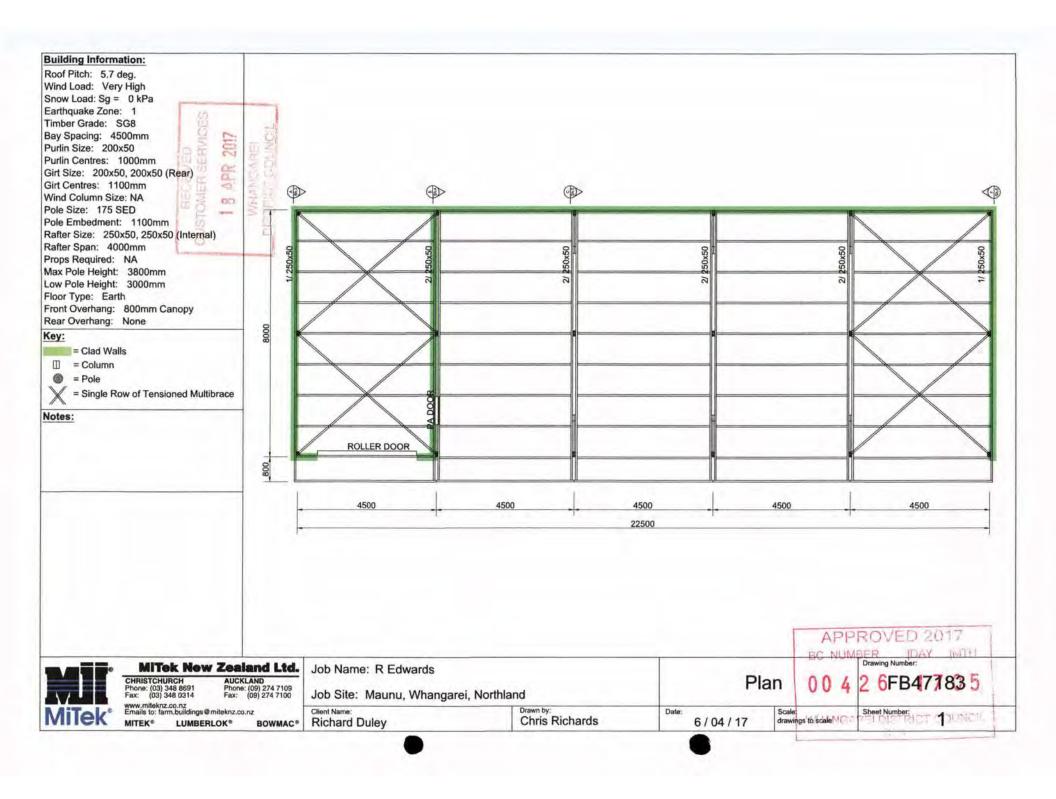
nspector

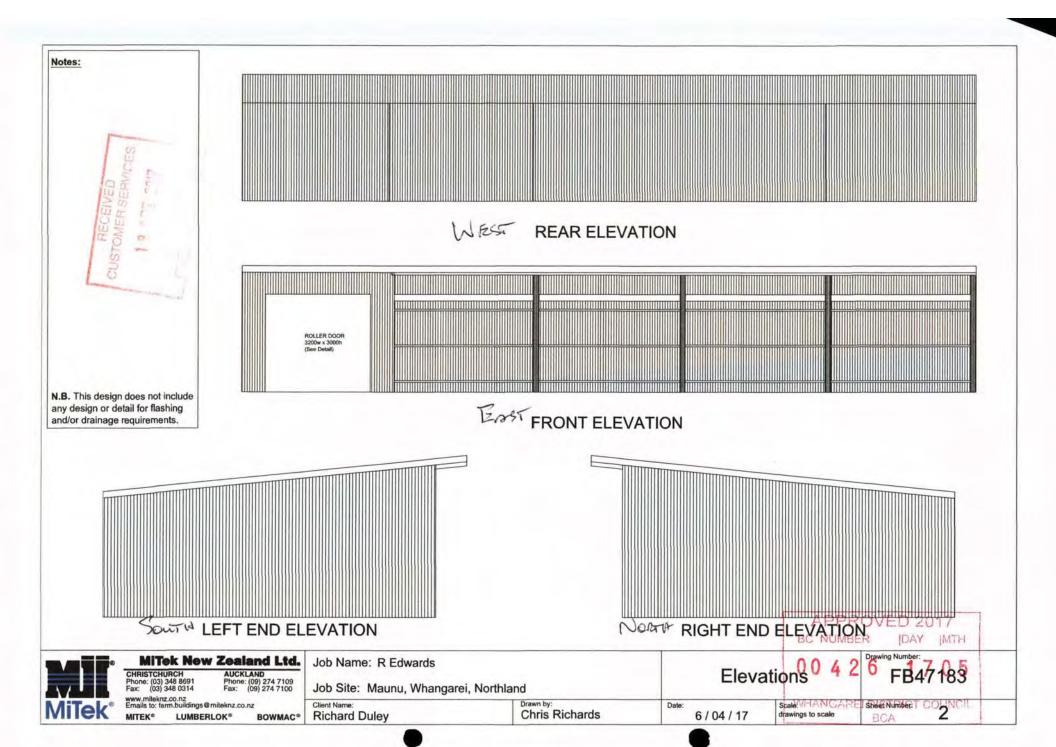
Shear Vane No

variations away from this location

TMC Consulting Engineers Ltd, 33 Norfolk Street, Whangarel, www.tmcengineers.co.nz









Private Bag 9023 | Whangarei 0148 | New Zealand T: 09 430 4200 | 0800 WDC INFO | 0800 932 463 | F: 09 438 7632 W: www.wdc.govt.nz | E: mailroom@wdc.govt.nz



Form 5

Building Consent No: BC1800892

Section 51, Building Act 2004

Issued: 7 September 2018

Project Information Memorandum No: PM1800136

The Building

Street address of building: 39 Maunu Estate Drive (Pvt)

Whangarei 0110

Legal description of land where building is located: LOT 10 DP 198201

LLP: 85146

Building name: N/A

Location of building within site/block number: N/A
Level/unit number: N/A

The Owner

D S Sayer R K Edwards PO Box 353 Whangarei 0140

Phone number: N/A

Mobile number: 021437665

Facsimile number: N/A

Email address: russell.e@hotmail.com

Website: N/A

Street address/registered office: 39 Maunu Estate Drive (Pvt)

Whangarei 0110

First point of contact for communications with Council/building consent authority

Contact Person

Harrison Construction Limited T/A Golden Homes PO Box 4126 Kamo Whangarei 0141

Phone number: 4377636

Mobile number: 021635316

Facsimile number: 4377639

Email address: whangarei@goldenhomes.co.nz
Website: www.goldenhomes.co.nz

Building Work

The following building work is authorised by this consent:

New Dwelling



This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

This building consent is subject to the following conditions:

Section 90 Building Act 2004

Section 90 Building Act 2004 Inspections by Building Consent Authorities applies. This building consent is subject to the condition that agents authorised by the building consent authority are entitled at all times during normal working hours or while work is being done to inspect land on which building work is being or is proposed to be carried out and building work that has been or is being carried out on or off the building site and any building.

Nominated Inspections are carried out to ensure that the building work is in accordance with the building consent. Completed Inspections will be classified as pass, or pass subject to remedial work or failed status.

- 1. See attached schedule of site requirements for inspections and documentation required.
- 2. To confirm compliance a Producer Statement 3 construction is required from a suitably qualified and experienced person (i.e.) the constructor/ contractor to ensure the building work performed is in accordance with the approved building consent for the onsite waste water disposal system, in addition to this the following is also required:
 - Commissioning statement
 - As built
 - Maintenance agreement
 - Energy works certificate (electrical)
- To confirm compliance an Energy Works Certificate will be required (Electrical).

Compliance Schedule

A compliance schedule is not required for the building.

Attachments

- 1. The Project Information Memorandum for the building work covered by this building consent.
- A notice issued under section 37 setting out the requirements for Resource Consent to be obtained for the building work prior to any works commencing.

Other Approvals Required

The following other approvals/authorisations are required:

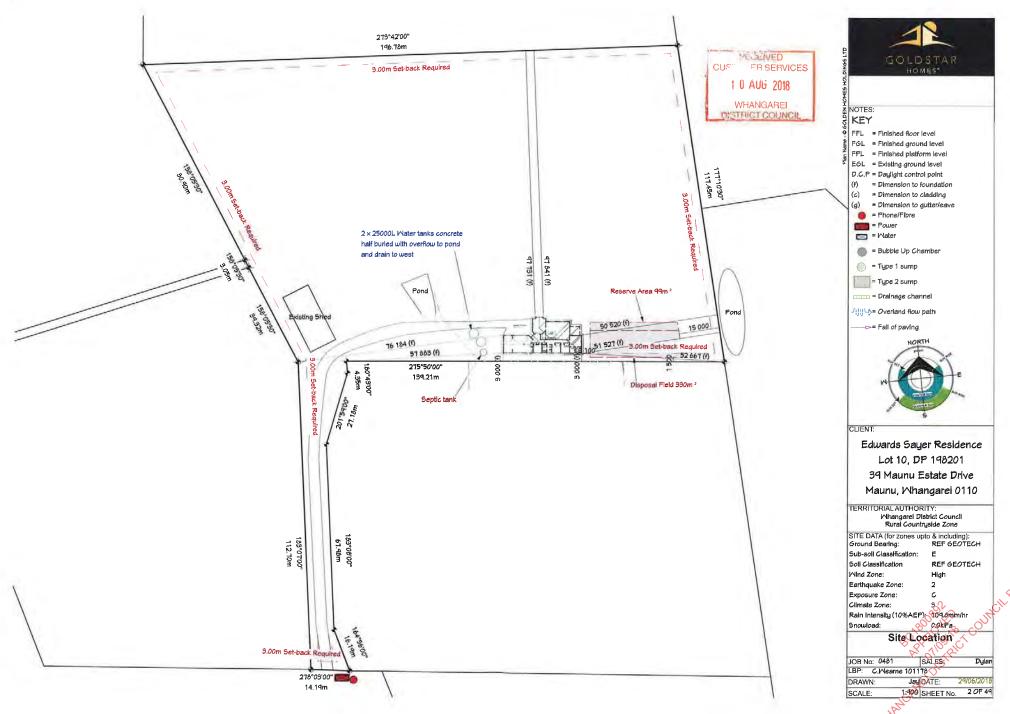
Section 37 Certificate

Additional Information

- The applicant must control dust nuisance created by any site or building works.
- Toilet facilities must be provided within reasonable distance of the construction site. Ground discharge is no longer acceptable.
- Lapsing of building consent. For the purposes of S52(b) of the Building Act 2004, the period after which this consent will lapse if the building work to which it relates does not commence will be 12 months from the date of issue.
- 4. Building advice that a maintenance schedule is recommended for the ongoing performance of the building elements to ensure they meet their serviceable life please consult with your designer to develop a specific maintenance programme or another helpful source of information is the BRANZ web site http://www.maintainingmyhome.org.nz/maintenance-guides/maintenance-schedule.
- The owner of the wastewater system shall enter into a service agreement with the installer and a copy of the agreement shall be given to the Inspector prior to issue of Code Compliance Certificate.

Eboylon.	
0	7 September 2018
Enka Boylan	Date

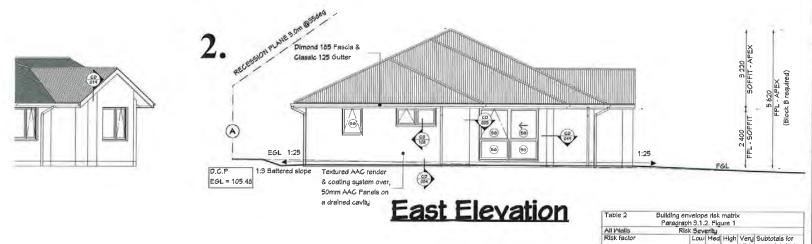
Support Assistant – Building Processing On behalf of Whangarei District Council Building Consent No BC1800892



L BCA









 If windows & doors are shown upto soffit, window and door sizes are to be measured on site prior to the manufacture of those units.

FFL = Finished Floor Level

FGL = Finished Ground Level

FPL = Finished Platform Level

EGL = Existing Ground Level

(56) Indicates safety glass

Safety Glazing

- All glazing is to be in accordance with the NZ Building Code Handbook and NZ5.4223, Parts 1, 2, & 3 Code of Practice for Glazing in Buildings.
- All glazing panels to bathrooms and tollets to have safety glazing to the interior panel only
 All gazing to be confirmed by the
- All gazing to be confirmed by the manufacturer prior to construction

Callout of Details

= Reference to Cladding Details CD###

CLIENT

Edwards Sayer Residence Lot 10, DP 198201 39 Maunu Estate Drive Maunu, Whangarei 0110

TERRITORIAL AUTHORITY: Whangarel District Council Rural Countryside Zone

SITE DATA (for zones upto & including):
Ground Bearing: REF GEOTECH

Sub-soll Classification:

Soil Classification REF GEOTECH
Wind Zone: High

Earthquake Zone: 2
Exposure Zone: C

Climate Zone:

High each risk factor

Wind zone (per NZS 3604) 0 0 1

Roof/wall Intersection design 0

0

Number of storeus

Envelope complexity Deck Design

Eaves width

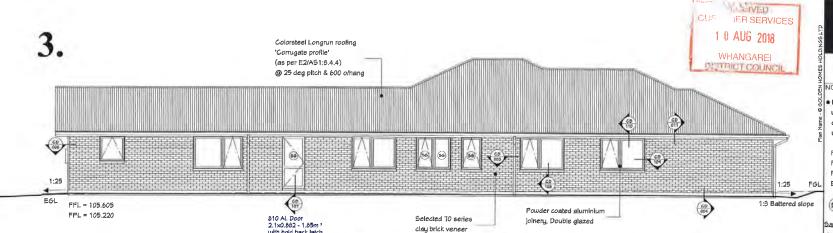
Rain Intensity (10%AEP) 109.6mm/hr Snowload: 0.0kPa

Elevations 1

JOB No: 0461 SALES Dylan
LBP: C.Wearne 1011172

DRAWN: Jay 5ATE: 29/06/2018
SCALE: 1.00 SHEET No. 10 0F 49

NHA



South Elevation

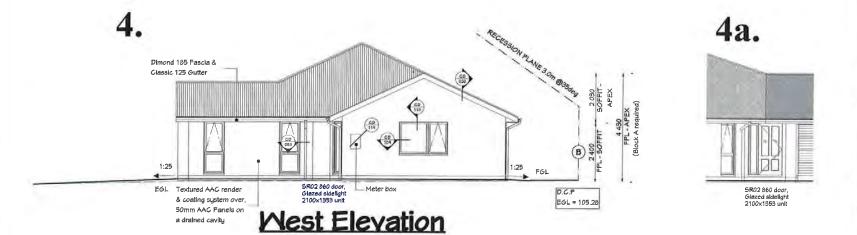


Table 2 Bullding en Paragrap				×	
All Walls Ris	k Sev	eritu			
Risk factor	Low	Med	High		Subtotals for each risk factor
Wind zone (per NZS 3604)	0	0	1	2	1.
Number of storeus	0	1	2	4	0
Roof/wall intersection design	0	1	3	5	1
Eaves width	0	1	2	5	5
Envelope complexity	0	1	3	6	1
Deck Design	0	2	4	6	0
	To	tal Ri	sk Sco	ore	8



- If windows & doors are shown upto soffit. window and door sizes are to be measured on site prior to the manufacture of those
- FFL = Finished Floor Level
- FGL = Finished Ground Level
- FPL = Finished Platform Level
- EGL = Existing Ground Level
- (SG) Indicates safety glass

- · All glazing is to be in accordance with the NZ Bullding Gode Handbook and NZS.4223, Parts 1, 2, & 3 Code of Practice for Glazing in Bulldings.
- All glazing panels to bathrooms and toilets to have safety glazing to the interior panel only
- All gazing to be confirmed by the manufacturer prior to construction

Callout of Details



CLIENT:

Edwards Sauer Residence Lot 10, DP 198201 39 Maunu Estate Drive Maunu, Whangarei 0110

TERRITORIAL AUTHORITY: Whangarei District Council

Rural Countryside Zone SITE DATA (for zones upto & including):
Ground Bearing: REF GEOTECH

Sub-soll Classification:

Soll Classification REF GEOTECH Mind Zone: High

Earthquake Zone: Exposure Zone:

Climate Zone: 302 Rain Intensity (10%AEP): 109.8mm/hr

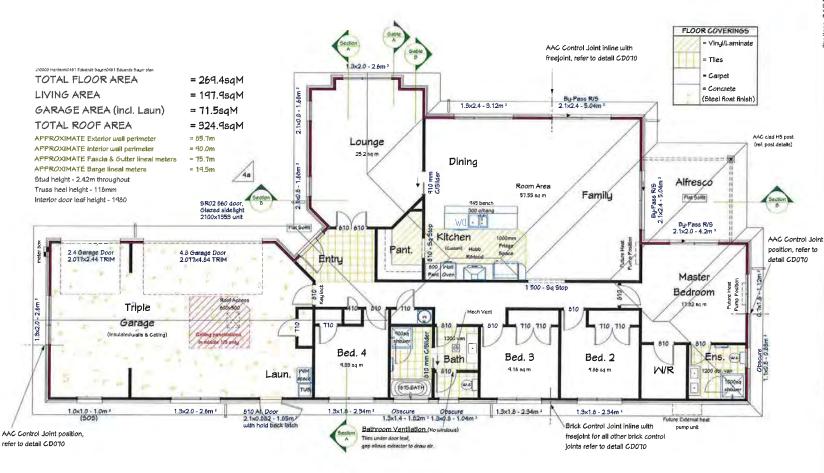
Snowload: O.OkPao Elevations 2

JOB No: 0481 SALE LBP: C.Mearne 101178 SALES:

Dylan

DRAWN: Jay DATE: 29/06/2018 1:100 SHEET No. 11 OF 49 SCALE:







NOTES

89x41mm ZOG® framing

- Natural lighting is provided via glazing to 10% of floor areas for individual rooms
- Natural ventilation is provided via exterior openings of no less than 5% of floor area for individual rooms
- Internal and external walking surfaces to comply with NZBC D1/AS1 2.1.1 - 2.1.3, and Table 2
- External Access Routes surface is either; brushed concrete, exposed crushed aggregate concrete, profiled timber with the profile across the direction of travel, or be flooring selected by the client with a wet slip coefficient of no less than 0.4, refer to the specification for compliance procedure in such situations



CLIENT:

Edwards Sayer Residence Lot 10, DP 198201 39 Maunu Estate Drive Maunu, Whangarel 0110

TERRITORIAL AUTHORITY: Whangaret District Council Rural Countryside Zone

SITE DATA (for zones upto & including):
Ground Bearing: REF GEOTECH
Sub-soll Classification: E
Soll Classification REF GEOTECH

Hìgh

2

С

Soil Classification Mind Zone:

Earthquake Zone: Exposure Zone: Climate Zone:

Rain Intensity (10%AEP): 104.6mm/hr Snowload: 0.0kPa

Floor Plan

JOB No: 0481 SALES Dylan
LBP: C.J.Vearner 101175
DRAWN: Jay 5ATE: 29/06/2018
SCALE: 1100 SHEET No. 12 0F 49

NHI

-IL BCP

In reply please quote Or ask for

BCA180202 Jessica Berridge



Forum North, Private Bag 9023 Whangarei 0148, New Zealand Telephone: +64 9 430 4200 Facsimile: +64 9 438 7632 Email: mailroom@wdc.govt.nz Website: www.wdc.govt.nz

24 September 2018

Harrison Construction Limited T/A Golden Homes PO Box 4126 Kamo Whangarei 0141

Dear Sir/Madam

Amendment to Building Consent: BC1800892

Description of Work: Alterations to Proposed New Dwelling - Boundary Set backs

Site Address: 39 Maunu Estate Drive (Pvt) Whangarei 0110

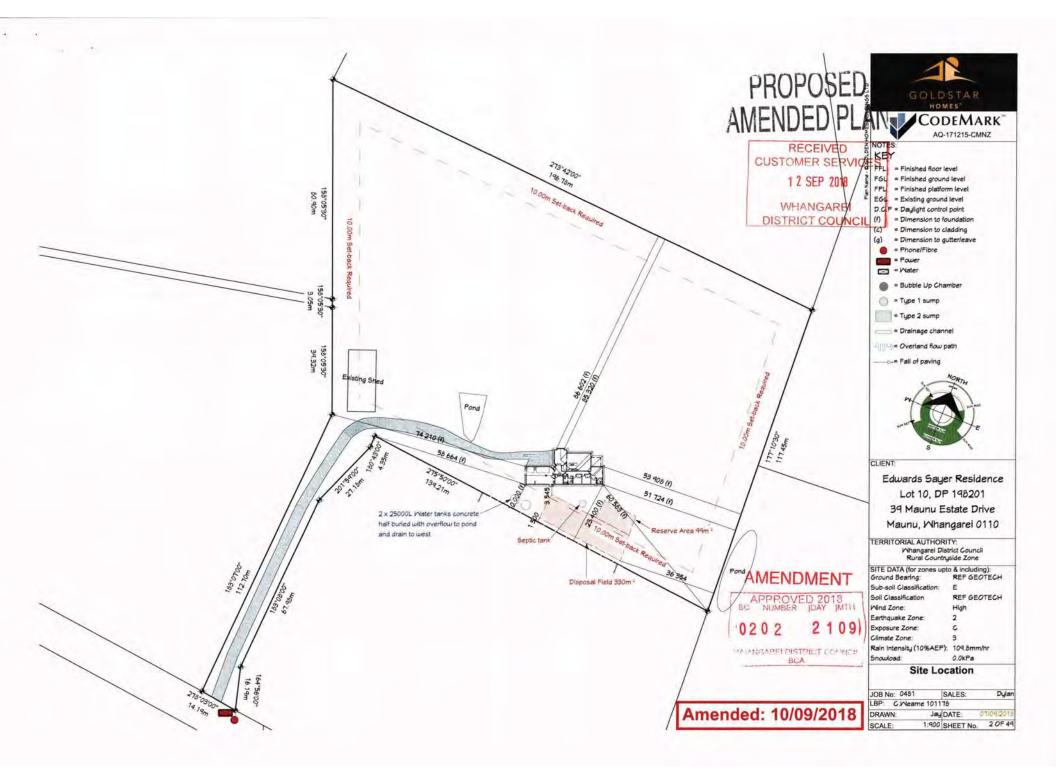
Your application for an amendment to the above building consent has been approved. Please find your approved amended plans enclosed.

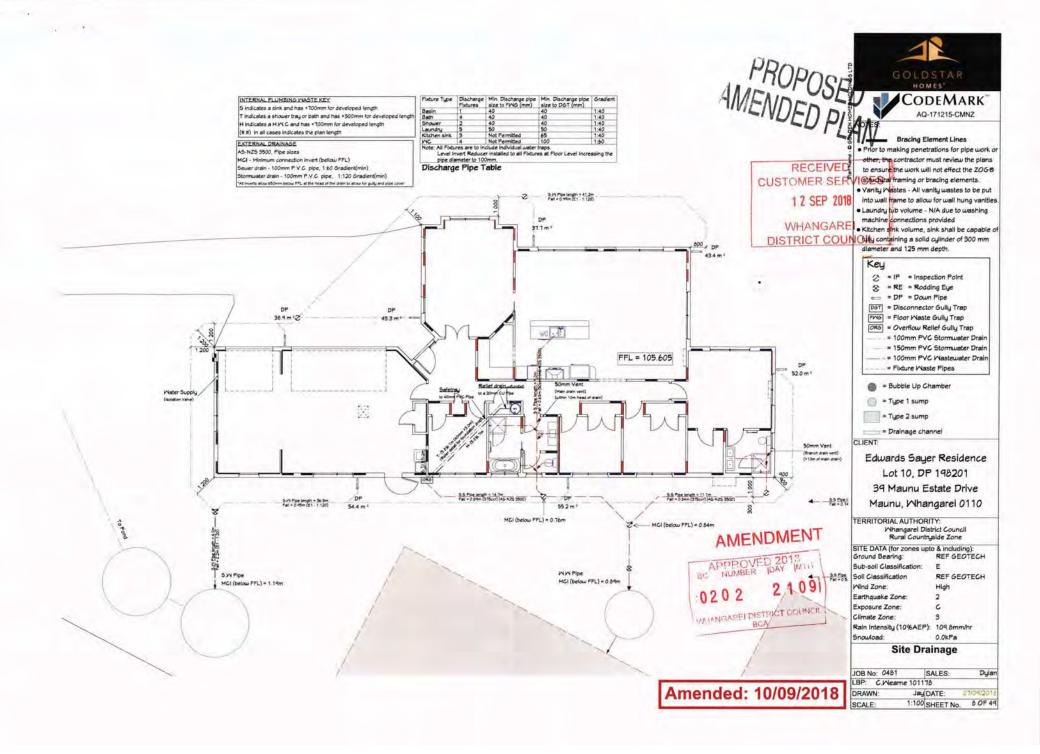
Please place these in your onsite building pack.

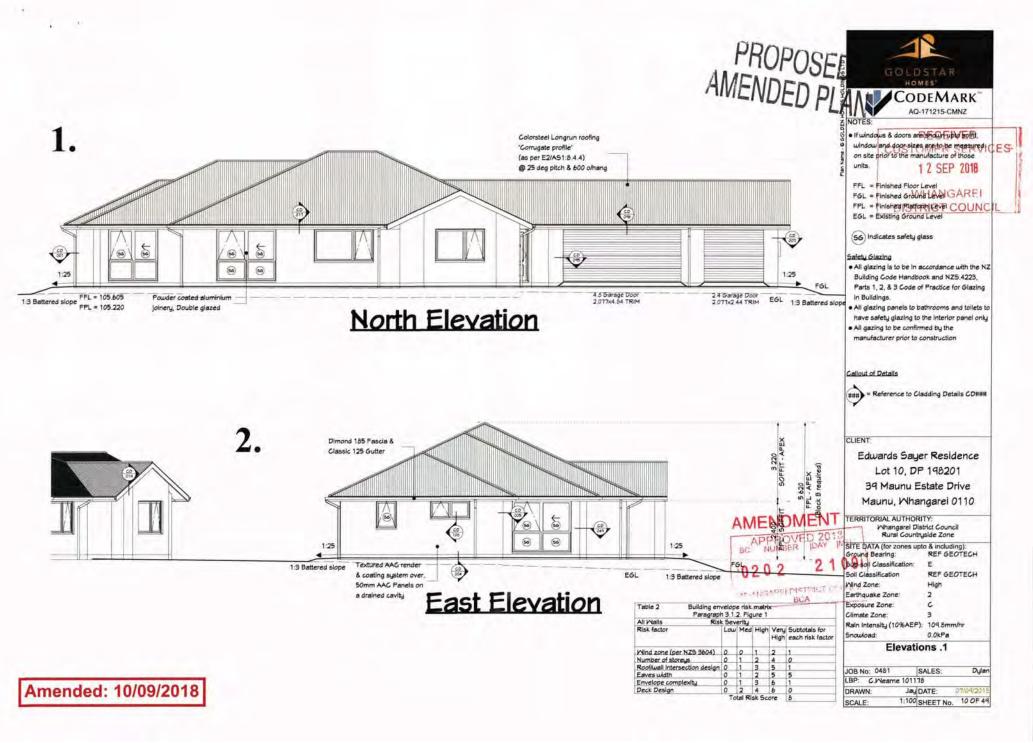
Yours faithfully

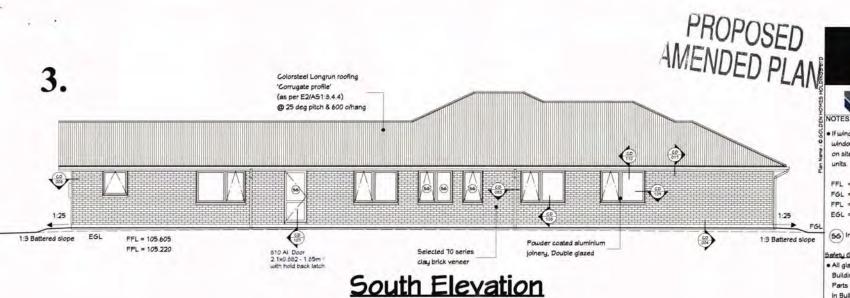
Tilly Selwyn

Support Assistant - Building Processing











Building envelope risk matrix
Paragraph 3.1.2. Figure 1
Risk Severity
Low Med High Very Subtotals for Table 2 All Mails High each risk factor Wind zone (per NZS 3604) 0 0 1 2 0 0 1 2 1 0 1 0 1 0 1 2 5 5 1 0 1 2 5 5 5 1 0 1 3 6 1 0 2 4 6 0 Total Risk Score 8 Number of storeys Roofiwall Intersection design 0 Eaves width Envelope complexity Deck Design

0202

WATENGAREI DISTRICT COLUMN

BOA

4a.



. If windows & doors are should unto softing window and door sizes are to be measured on site prior to the manufacture of those

1 2 SEP 2018

FFL = Finished Floor Level

FGL = Finished Ground Level GAREI

FPL = Finished flatform Level COUNC

(56) Indicates safety glass

Safety Glazing

- · All glazing is to be in accordance with the NZ Building Code Handbook and NZS.4223, Parts 1, 2, & 3 Code of Practice for Glazina in Buildings. All glazing panels to bathrooms and toilets to
- have safety glazing to the interior panel only
- · All gazing to be confirmed by the manufacturer prior to construction

Callout of Details

= Reference to Cladding Details CD###

Edwards Sauer Residence Lot 10, DP 198201 39 Maunu Estate Drive Maunu, Whangarei 0110

MENDMENT THRRITORIAL AUTHORITY: Whangarel District Council Rural Countryside Zone

SITE DATA (for zones upto & including):
Ground Bearing: REF GEOTECH Sub-soil Classification Soil Classification REF GEOTECH

Wind Zone: High Earthquake Zone:

Exposure Zone: Climate Zone Rain Intensity (10%AEP): 109.8mm/nr

0.0kPa

Elevations .2

JOB No: 0481	7.76	SALES:	Dylan
LBP: C.Weame	1011	78	
DRAWN:	Jay	DATE:	0710912015
SCALE:	1:100	SHEET No.	11 OF 49

Amended: 10/09/2018

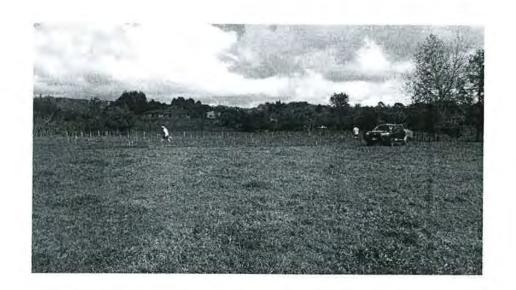




Job# S0244-J01374 (Revision 02)

41 Maunu Estate Drive Maunu

Site Suitability Report



20th April 2018

TMC Consulting Engineers Ltd
41 Norfolk Street
PO Box 252
Whangarel
Ph. (09) 393 0337
www.tmcengineers.cg.n2



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Task	Responsibility	Signature	Date
Prepared by	Trent Knox Dip. Eng. (Civil)	Hhr	20/04/2018
Reviewed by	David Taylor Dip. Eng. (Civil)	Dem	24/05/2018
Approved by	Vinnie Marotta BE(Civil), MEngNZ, CPEng		24/04/2018
Revision 01	Site location change from	m original brief.	24/04/2018
Revision 02	Section 4.5 added for N	NZS 3604:2011 Wind Zone Assessment.	02/05/2018

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1. INTRODUCTION

TMC Consulting Engineers Ltd were engaged by Russell Edwards to undertake a geotechnical investigation with the purpose of establishing foundation conditions for a new dwelling in a different location than previously investigated. This report outlines the findings of our investigation and provides recommendations regarding the development of the site including on-site wastewater disposal. This brief was detailed in a short form agreement dated 9th April 2018 and in a site meeting on that day.

We understand that the proposal is to construct a new single storey dwelling supported on a concrete slab type foundation on a levelled or partially levelled building platform. On the 9th April 2018 a site walkover and intrusive investigation was carried out on the proposed building site.

The findings of this report will be used to support any building consent or resource consent application for the development proposed in the brief.

1.1 PREVIOUS REPORTS

During the process of undertaking this investigation we have reviewed the following reports;

Site Suitability Report, 39 Maunu Estate Drive Maunu, dated 24th February 2017, TMC Report reference S0244-J00389.

Maunu Stud Subdivision – Austin Road, prepared by Richardson Stevens for Hodges & Elrick, dated 22 October 1998, File No. 980295.

2. SITE DESCRIPTION

2.1 DESCRIPTION

The property is legally described as Lot 10 DP 198201 located on the eastern side of Maunu Estate Drive. The property is sized at approximately 2.1250 ha and is an irregular polygon with a leg of strip between the southwest corner of the lot to an access way south of the property. The new proposed building site is located within the eastern half of the property close to the southern boundary.

2.2 TOPOGRAPHY

The proposed site was assessed to be sub-horizontal with gentle fall to the north-west. Ground cover across the site was pasture.

2.3 ACCESS

Access to the site from is provided via a leg of strip from the south-western corner of the property.

2.4 SITE HAZARDS

The eastern boundary borders an area designated as at high risk of instability with the rest of the property including the site itself in a low risk instability area according to the Whangarei District Council GIS Hazard Maps.

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3



GEOTECHNICAL INVESTIGATIONS 3.

3.1 **GEOLOGY**

The soils and geology maps of the area indicate the following:

The geological map of Whangarei indicates that the site lies within an area bordering unconsolidated to poorly consolidated mud, sand, gravel and peat deposits of alluvial, colluvial and lacustrine origins (Q1a) of the Tauranga Group and Whangarei Limestone (Otw) white to pink, stylolitic, bioclastic limestone, pebbly in places of the Te Kuiti Group. Edbrooke, S.W.; Brook, F.J. 2009: Geology of the Whangarei area: scale 1:250,000. Lower Hutt: GSN Science. Institute of Geological & Nuclear Sciences 1:250,000 geological map 2.

The soils map of the area indicates that the site borders areas of Kara sandy loam, Riponui sandy clay loam and sandy loam, and Hukerenui sandy Loam. Sutherland, C. F.; Cox, J. E.; Taylor, N. H.; Wright, A. C. S. 1981: Soil map of Hukerenui – Whangarei area (sheets Q06/07, R06/07), North Island, New Zealand. Scale 1:100,000 N.Z. Soil Bureau Map 187.

SUB-SURFACE INVESTIGATIONS 3.2

Investigations undertaken included a walkover inspection and two 50 - 100 mm diameter hand auger boreholes drilled to depths of up to 2.1 m within the proposed building site. Insitu undrained shear vane strengths were measured at 300 mm intervals in these boreholes where practicable. The boreholes were supplemented with Scala Penetrometer testing to assess soil strength at depth. The Scala tests were undertaken to a depth of 1.5 m below ground level alongside the boreholes and then restarted in the base of the holes for a further 0.8 m.

Two further Scala Penetrometer tests were carried out to a depth of 0.9 m to determine if homogeneous and uniform soil conditions exist across the building site. One additional borehole was undertaken within the area of the proposed effluent disposal field to determine soil and groundwater conditions.

The test logs and Scala results are attached to this report.

SUB-SURFACE FINDINGS 3.3

The augers identified moist to very moist silt and clay across the proposed building area overlaid by approximately 100 to 300 mm of topsoil.

The underlying soils were generally firm to stiff and provided reasonable to poor shear strength readings. These soils can be considered to have an ultimate bearing capacity of 150 kPa. Shear vane readings indicate a shear strength ratio of approximately two to five indicating that some of the soils are sensitive.

The sub-surface conditions are outlined in this section and detailed on the bore logs attached. The observations noted in the investigations have been extrapolated between the various test locations to infer probable site conditions. It is noted that these inferences in no way guarantee the validity of these findings due to the inherent variability of natural soil deposits. The actual ground conditions discovered during the development of the site may vary from those assumed.

This report utilises the New Zealand Geotechnical Society's Field Description of Soil and Rock, dated December 2005.

Our Findings are as follows;

Site Stability

The walkover of the site and surrounding area and subsurface investigations undertaken

We have assessed the in-situ soils as Class H1, Highly Expansive in terms of AS 2870:2011.

This soil classification can experience characteristic surface movement (v.) from 2011.



changes of up to 60 mm. Expansive soils are prone to shrinkage and swelling effects resulting from moisture changes within the soil. Several factors that can influence these properties are climatic conditions, variations in groundwater levels, vegetation water demand, water disposal systems and site coverage. Care must be taken when planning the development to mitigate the potential effects of shrink/swell on any structures or infrastructure.

3.3.3 Fill Suitability

Some of the sub-soils found on site should be acceptable as structural fill subject to controlled filling operations and moisture content at the time of construction. Any structural fill utilising hard fill over 600 mm in depth or alternate material of any fill depth will be subject to controlled filling operations and observation by an Engineer.

3.3.4 Stormwater & Groundwater

No groundwater was observed in the boreholes at the time of drilling. An overland flow path and pond are located some distance to the west of the site.

The neighbouring property to the east has a pond located directly adjacent to the boundary.

4. DEVELOPMENT RECOMMENDATIONS

4.1 EARTHWORKS

All earthworks should be undertaken in accordance with good practice, relevant standards and the district and regional rules.

Cuts and fills in excess of 0.5 m and within 3.0 m of buildings should be either battered back at no greater than 1v:3h or retained by a suitably designed retaining structure unless approved otherwise by an engineer.

Earthworks should not be undertaken during inclement or wet conditions due to the sensitive and plastic nature of some of the soils. Excavation and reworking during wet conditions may result in the exposed materials being unsuitable for reuse as fill or reduce soil strengths below those originally designed for.

All earthworks and foundation excavations shall be inspected by a chartered professional engineer or their agent who is familiar with this site and the contents of this suitability report. Preceding the placement of any fill or foundation construction a geotechnical engineer should be contacted to discuss the earthworks methodology, inspection requirements and testing frequency.

4.2 FOUNDATION OPTIONS

Based on our investigation and findings, the soils fall outside the scope of NZS 3604:2011 and therefore all foundations will require specific engineering design.

Shallow foundations should be designed for an ultimate bearing capacity of 150 kPa. Foundations other than stiffened raft type floors will require additional embedment to mitigate the swell/shrink effects that moisture changes may have on the soils. Subject to specific design and depending on structure type, shallow footings should be founded into natural soils at a depth of between 500 mm to 1,100 mm below cleared ground level into stiff natural soils as outlined in AS2870:2011.

Foundation excavations should be assessed and tested once exposed and before foundations are constructed to ensure design criteria are met.

4.3 **RETAINING**

There may be a requirement for specifically designed retaining walls. Levels, retained heights and surcharge loads should be considered to determine the need for specific design.

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The proposed building site may require retaining depending on the final finished ground level chosen.

For design purposes the following soil parameters are considered appropriate:

Soil cohesion C' = 0Internal friction angle of soil $\phi' = 26^{\circ}$

Specific weight of soil $\gamma = 18 \text{ kN/m}^3$

For timber pole retaining wall design an undrained shear strength $S_u = 50$ kPa can be assumed for the soil in front of the wall. This may be increased subject to further assessment and depending on the finished ground level in front of the wall.

4.4 STORMWATER & DRAINAGE

The stormwater disposal from developed surfaces should be collected into sealed pipes and discharged in a controlled manner in the direction to the pond and drain to the west of the site. As this drain is at a gentle grade scour protection around pipe outlets is unlikely required. Stormwater flows must not be allowed to run onto or saturate the ground to adversely affect slope stability or foundation conditions.

4.5 WIND ZONE ASSESSMENT

The following matrix illustrates our assessment of the wind zone at the site in terms of NZS3604:2011.

FACTORS	OPTIONS	POINTS	SCORE
Region	A	0	0
	W	1	
Terrain	Urban	0	
	Open	1	1
Exposure	Sheltered	0	
	Exposed	1	1
Topography	T1	0	0
	T2	1	
	T3	1	
	T4	2	
		TOTAL	2

TOTAL POINTS	WIND ZONE	TICK
0	Low (32 m/s)	
1	Medium (37 m/s)	
2	High (44 m/s)	1
3	Very High (50 m/s)	
4	Extra High (55 m/s)	
5	Requires Specific design	4-

Notes: T3 = 2 for (A, Urban, Sheltered)

T4 = 3 for (W, Urban, Sheltered) & (W, Open, Sheltered)

The wind zone is assessed as being High (44 m/s) in terms of NZS 3604:2011.

5. EFFLUENT DISPOSAL

The following section has been prepared in accordance with AS/NZS 1547:2012 and the Regional Water and Soil Plan for Northland (RWSPN).

5.1 SOIL AND GROUNDWATER INVESTIGATIONS

A soil and groundwater borehole was drilled to a depth of 0.9 m in the location of the proposed effluent disposal field (Borehole 5). Boreholes 1 and 2 were also used to assess soil profile and groundwater levels. The locations of the boreholes are noted on the attached site plan.

5.2 SITE ASSESSMENT

Feature	Comment	
Topography	Sub-horizontal. Aspect – north to north-east facing.	(1808) KD

6



Feature	Comment
Ground Cover	Pasture.
Geology	The geology and soils are noted above in Section 3.1. Investigations concur with the published information and we consider that the soil should be considered Category 5 terms of AS/NZS 1547:2012.
Seasonal Ground Water Variations	It is unlikely that there will be seasonal variations in soil drainage that will impact negatively on the disposal system. Groundwater was not observed in Borehole 5 during the investigation.
Fill	No fill was observed in the proposed location of the effluent field.
Drainage Control	Surface water from developed areas should be collected by drains or sumps and discharged as noted above. A surface water cut-off drain will unlikely be required due to the area being sub-horizontal.
Rock Content	No rocks or boulders were observed within the site.
Site Stability	No recent instability was observed within the area of the proposed disposal field.
Climate & Rainfall	Annual rainfall is in the order of 1400mm. Rainfall intensity is approximately 40 mm/hr for a storm with a 10% probability of occurring annually and of one-hour duration.
Lot Size	The Lot is sized at approximately 2.1250 ha.

5.3 PERMEATION TESTING

No permeation tests were carried out due to the topography and nature of the soils encountered in the boreholes.

5.4 **DESIGN PARAMETERS**

The Lot will be supplied by tank water supply.

For a household of four bedrooms with standard water reduction fixtures, we have used a per capita volume of 165 l/day resulting in a treated effluent loading rate of 990 litres/day based on a six-person occupancy. A Design Irrigation Rate of 3.0 mm per day for an irrigated system has been assumed. These rates are in accordance with AS/NZS1547:2012 in recognition of the field test results and brief provided.

Summary of Design Parameters		
Number of bedrooms / maximum occupancy	4 bedroom / 6 persons	
Wastewater design flow	165 L/person/day	
Treated Effluent Loading Rate	990 L/day	
Soil category	5	
Design Irrigation Rate (DIR)	3 mm/day	
Disposal Area	330 m²	
Reserve Area	99 m²	
Total Area	329 m²	

Any proposed disposal field is required by The Regional Soil and Water Plan for Northland (RSWPN) and our recommendations to comply with the following minimum offsets:

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Primary Disposal Field Offsets	Secondary Disposal Field Offsets				
1.5 m to boundaries	1.5 m to boundaries				
1.2 m to ground water	0.6 m to ground water				
3.0 m to buildings	3.0 m to buildings				
20 m to surface water	15 m to surface water				
20 m to ground water bores	20 m to ground water bores				

5.5 **DISPOSAL SYSTEM RECOMMENDATIONS**

Due to the soils encountered and topography of the site a secondary treatment system is recommended. An area adjacent to the eastern boundary was identified as a suitable site for effluent disposal.

Secondary wastewater treatment system

For design purposes, we have assumed an irrigation rate of 3.0 mm/day for a secondary treated wastewater irrigation system. These rates are in accordance with AS/NZS1547:2012 in recognition of the field test results.

We recommend that a secondary treated effluent system that complies with the RSWPN is used with disposal to a pressurised drip irrigation system. The drip irrigation system should be placed on the on the ground surface with a minimum 150 mm layer of mulch or 100 mm of topsoil placed over the lines. Vegetation should be planted above the dripper lines to increase efficiency; suggested plantings includes shrubs, flaxes and grasses or lawn grass for topsoil buried lines to provide evapotranspiration and nutrient removal. Topsoil can be used from the excavations of the driveway and dwelling and spread within the disposal area as to attain a minimum topsoil depth of 250 mm where necessary.

For a flow rate of 990 litres/day, 330 m of dripper line will be required through an area of 330 m². A further 99 m² is to be set aside as a minimum 30 % reserve area as required by The Regional Soil and Water Plan for Northland. This should allow easy rejuvenation of the field should operational difficulties be experienced or field extension be required.

With the area available on the subject property it is our opinion that a satisfactory effluent disposal system can be installed that will satisfy all of the parameters set out in AS/NZS 1547:2012. A producer statement should be provided by the supplier of the system selected by the owner/developer.

The manufacturers of treatment systems supply detailed maintenance schedules that must be adhered to. It is imperative that the operator of the system schedule and undertake maintenance of the system to ensure its effectiveness.

Assessment of Environmental Effects 5.5.1

The soils have been assessed as Category 5 in terms of AS/NZS 1547:2012. With a daily application rate of 3.0 mm/day, the soil should be capable of coping well with long-term application of wastewater. Similar systems around Northland produce no noticeable odour or noise impact on neighbours or the homeowners themselves if installed and maintained properly.

To protect against system failure, the system must provide at least 24 hours' buffer and a visible and audible alarm to alert the homeowners to any possible problem(s). To protect against any possible failure of the disposal area, the reserve area should be maintained with a vegetated surface ready for the possible installation of dripline into or onto it.

Provided the recommendations of this report are followed we believe on reasonable grounds that on-site effluent disposal on this property will have no adverse effect on the environment



6. CONCLUSIONS AND RECOMMENDATIONS

Provided that the recommendations within this report are followed we believe on reasonable grounds that;

The land on which the building work is to take place is neither subject to, nor likely to be subject to slippage; and

The building work itself is not likely to accelerate, worsen or result in slippage of that land or any other property.

- 1) Once the final location and scope of works for the dwelling has been finalised an engineer familiar with the site and contents of the report should review the plans to assess the suitability of the proposed development.
- 2) The soils do not meet the requirements of Good Ground in terms of NZS 3604:2011 and therefore foundations will require specific engineering design as detailed in Section 4.2 above.
- 3) Cuts and fills in excess of 0.5 m and within 3.0 m of buildings should be either battered back at no greater than 1v:3h or retained by a suitably designed retaining structure unless approved otherwise by an engineer.
- 4) We strongly recommend all earthworks and foundation excavations are inspected by a chartered professional engineer or their agent.
- 5) The wind zone is assessed as being High (44 m/s) in terms of NZS 3604:2011.
- 6) All stormwater runoff and overflow from developed surfaces is to be directed in a controlled manner to the overland flow path to the east of the site.
- 7) Specific designs will likely require an Engineer to supervise the construction of the design to ensure that the design criteria have been met and to issue a Producer Statement PS4 Construction Review on completion.

7. LIMITATIONS

This report has been prepared for our client as identified above for the purpose of building consent or resource consent application with respect to the brief noted. It is not to be relied upon for any other purpose without reference to TMC Consulting Engineers Ltd. The reliance by other parties on the information or opinions contained in the report shall be at such parties' sole risk without our prior review and agreement in writing.

Recommendations and opinions in this report are based on data obtained from the investigations and site observations as detailed in this report. The nature and continuity of subsoil conditions at locations other than the investigation bores and tests are inferred and it should be appreciated that actual conditions could vary from the assumed model.

During the process of the site development and construction, an engineer competent to judge whether the conditions are compatible with the assumptions made in this report should examine the site. It is essential that this office be contacted if there is any variation in subsoil conditions from those described in this report as it may affect the design parameters recommended.

If there are any questions arising from the above or during construction, please call this office.

8. ATTACHMENTS

- Test Results
- Site Plan
- WDC Hazards Map

WHAMERER DESTREET COUNCIL BER

BOREHOLE LOG 1 TMC Project: 39 Maunu Estate Dr Client: Russell Edwards CONSULTING Job No: S0244-J01374 (Revision 01) In situ shear vane reading Graphic Remoulded shear vane reading Symbol Scala Penetrometer Organic Soil Fill Rock Cobbles Gravel Clay Undrained Shear Strength Scala Penetrometer G.W.L Geologic Graphic Field Description Depth mm (kPa) Corrected (Per NZGS (blows/ 100 mm) Unit Log guideline) Silty Topsoil, 100 mm Silty CLAY, orangish brown mottled grey, moist, plastic, stiff Tauranga Group (Q1a) & Whangarei Limestone (Otw) No groundwater observed orangish brown, moist to very moist, stiff orangish brown mottled reddish brown light grey mottled orange & reddish brown, very plastic firm 2100 Auger terminated at 2.1 m. 2400 2700 3000 1200 1500 50 - 100 mm hand auger Drill Method Test location Refer to site plan 9/04/2018 NOTES 1) The subsurface data described above has been determined at this specific borehole location. The data will not identify Test Date ΤK The data will not identify any variations away from this location. Inspector Shear Vane No 2090 2) UTP - Unable to penetrate TMC Consulting Engineers Ltd, 41 Norfolk Street, Whangarei, www.tmcengineers.co.nz

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BOREHOLE LOG 2

Project: 39 Maunu Estate Dr Client: Russell Edwards

Job No: S0244-J01374 (Revision 01)



Graphic Symbol

Shear Vane No 2090

















In situ shear vane reading Remoulded shear vane reading Scala Penetrometer

Geologic Graphic Undrained Shear Strength Scala Penetrometer G.W. Depth mm Field Description (kPa) Corrected (Per NZGS Unit Log guideline) Silty Topsoil, brown, moist, 300 mm Tauranga Group (Q1a) & Whangare! Limestone (Otw) Silty CLAY, orange mottled light grey & dark orange, moist, plastic, very stiff stiff No groundwater observed light grey mottled orange, very moist, very plastic, stiff 1200 CLAY, grey mottled orange, very moist, very plastic, stiff 1500 firm 1800 Auger terminated at 2.1 m. 2700 3000 900 1200 Drill Method 50 - 100 mm hand auger Test location Refer to site plan Test Date 9/04/2018 NOTES 1) The subsurface data described above has been determined at this specific borehole location. The data will not identify Inspector ΤK

TMC Consulting Engineers Ltd, 41 Norfolk Street, Whangarel, www.tmcengineers.co.nz

any variations away from this location.

2) UTP - Unable to penetrate

SCALA PENETROMETER RESULTS

Client: Russell Edwards

Job No: S0244-J01374 (Revision 01)

Date: 9/04/2018

Logged: TK



Scala 3			Scala 4							-	
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SOIL & GROUNDWATER LOG 5

Project:

39 Maunu Estate Dr

Client:

Russell Edwards

Job No:

Inspector

Shear Vane No 2090

TK

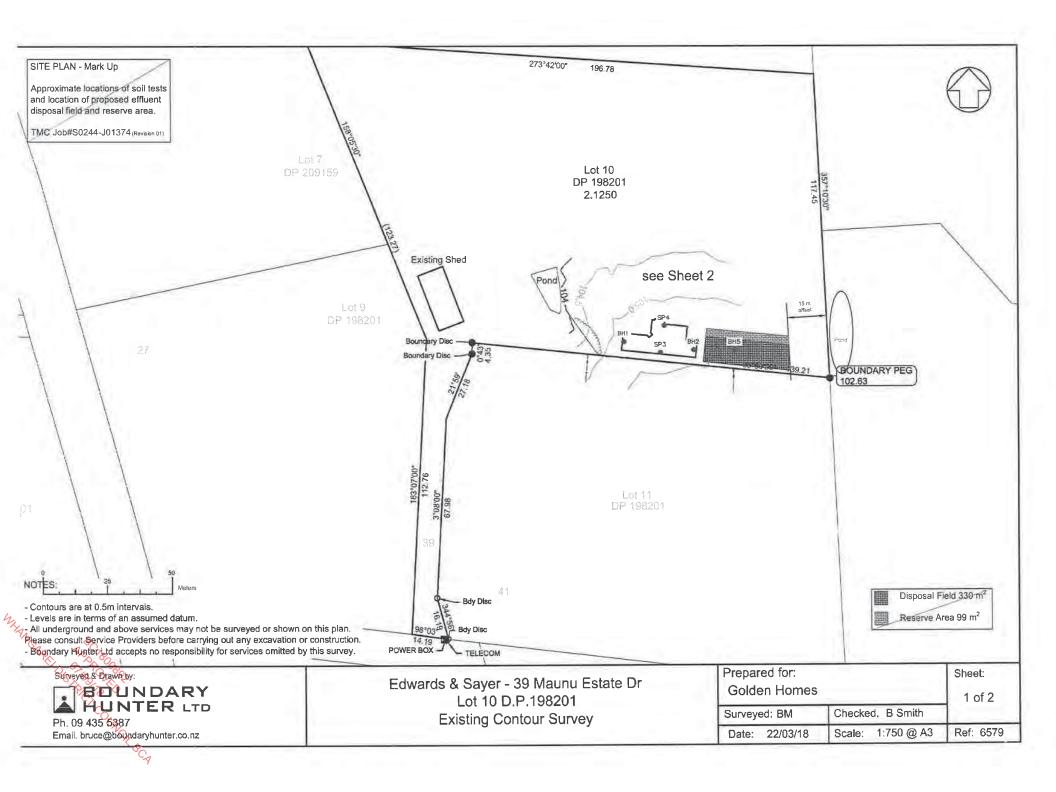
S0244-J01374 (Revision 01)



Graphic Symbol	F	in	Rock	Cobbles	Gravel	Sand	Silt	Clay	Organ	In situ shear vane re Remoulded shear va Scala Penetrometer	
Depth mm	G.W.L	Geologic Unit	Graphic Log	T X		Field Descr	iption			Undrained Shear Strength (kPa) Corrected (Per NZGS guideline)	Scala Penetrometo (blows/ 100 mm)
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est Date		9/04/2018	N	OTES 1) The subsui	rface data de	scribed above h	s been determin	ned at this specifi	borehole	location. The data will no	t identify

2) UTP - Unable to penetrate
TMC Consulting Engineers Ltd, 41 Norfolk Street, Whangarei, www.tmcengineers.co.nz

any variations away from this location.





Form 7

Code Compliance Certificate BC1800892

Section 95, Building Act 2004

Issued: 07 June 2019

The Building

Street address of building: 39 Maunu Estate Drive (Pvt)

Whangarei 0110

Legal description of land where building is located: LOT 10 DP 198201

LLP: 85146

Building name: N/A

Location of building within site/block number: N/A
Level unit number: N/A

Current, lawfully established use: Detached Dwelling

Year first constructed: 2018

The Owner

D S Sayer R K Edwards PO Box 353 Whangarei 0140

Phone number: N/A

Mobile number: 021437665

Facsimile number: N/A

Email address: russell.e@hotmail.com

Website: N/A

First point of contact for communications with the building consent authority:

Contact Person

Harrison Construction Limited T/A Golden Homes PO Box 4126 Kamo Whangarei 0141

Phone number: 4377636

Mobile number: 021635315

Facsimile number: N/A

Email address: whangarei@goldenhomes.co.nz

Website: www.goldenhomes.co.nz

Street address/registered office: 39 Maunu Estate Drive (Pvt)

Whangarei 0110





Building Work

Building Consent Number:

Building Consent Amendment:

Issued by:

New Dwelling

BC1800892

BCA180202 - Alterations to Proposed New Dwelling

- Boundary Set Backs

Whangarei District Council

Code Compliance

The building consent authority named below is satisfied, on reasonable grounds, that -

(a) The building work complies with the building consent.

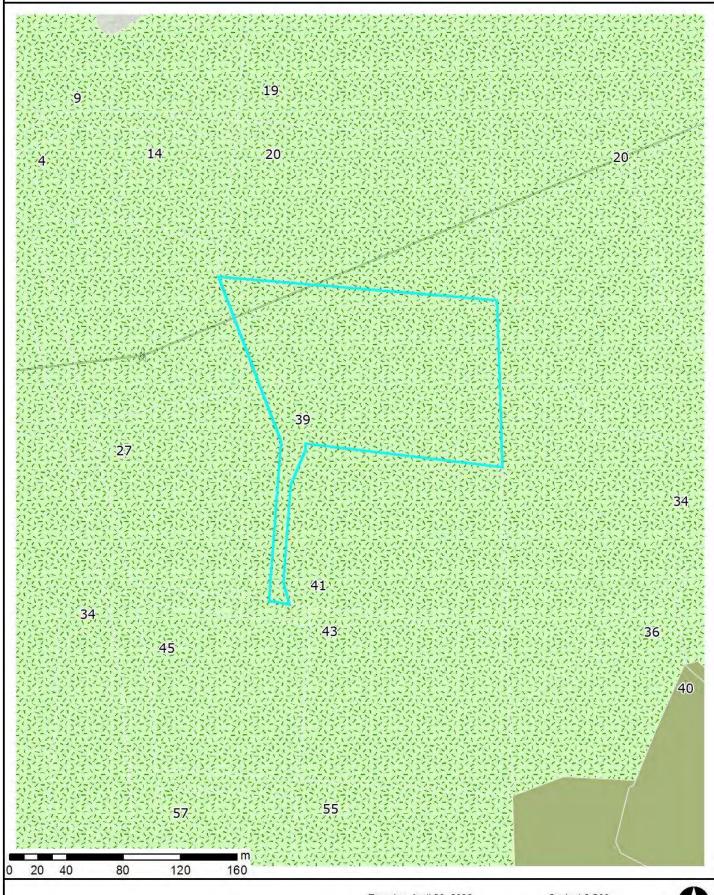
arecon

Stephanie Brown Support Assistant – Building Processing On behalf of Whangarei District Council 07 June 2019

Date

District Plan Appeals Version - Zones





Tuesday, April 26, 2022

Scale: 1:2,500



District Plan Appeals Version - Map Legend



Zone Maps



Resource Areas Maps



Appeals

NZTA and KiwiRail

Kainga Ora

Other

Coastal Areas Maps



All District Plan Maps

Northpower Tower CEL-Cat1

National Grid Tower

Northpower Overhead Critical Line Cel-Cat1

National Grid Line

Coastline

Coast, rivers and streams

The information displayed is schematic only and serves as a guide.

It has been compiled from Whangarei District Council records and is made available in good faith but its accuracy or completeness is not guaranteed.

Cadastral Information has been derived from Land Information New Zealand's (LINZ) Core Record System Database (CRS).

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Form 7

Code Compliance Certificate BC1700426

Section 95, Building Act 2004

Issued: 19 May 2022

The Building

Street address of building: 39 Maunu Estate Drive (Pvt)

Whangarei 0110

Legal description of land where building is located: LOT 10 DP 198201

LLP: 85146

Building name: N/A
Location of building within site/block number: N/A
Level unit number: N/A

Current, lawfully established use: Outbuildings

Year first constructed: 2017

The Owner

T A Green A R Gardener 10 Taiko Street Whangarei 0110

Phone number: N/A

Mobile number: 0220140581

Facsimile number: N/A

Email address: argardener@yahoo.co.nz

Website N/A

Street address/registered office: 39 Maunu Estate Drive (Pvt)

Whangarei 0110

First point of contact for communications with the building consent authority: Owner



Building Consent Number: Issued by:	BC1700426 Whangarei District Council									
Code Compliance The building consent authority named below is satisfied, on reasonable grounds, that - (a) The building work complies with the building consent.										
	19 May 2022									
Lolly Muliipu Support Assistant – Building Processing On behalf of Whangarei District Council	Date									

New Shed

Building Work



19 May 2022

T A Green A R Gardener 10 Taiko Street Whangarei 0110 Forum North, Private Bag 9023 Whangarei 0148, New Zealand P +64 9 430 4200 F +64 9 438 7632 E mailroom@wdc.govt.nz

www.wdc.govt.nz

Building Consent number BC1700426

Building Work New Shed

Site Address 39 Maunu Estate Drive (Pvt)

Whangarei 0110

Issue of Code Compliance Certificate

Congratulations on successfully completing your building project.

A Code Compliance Certificate (CCC) has now been issued for your new building.

This brings the consent process to its conclusion and your property files have been updated accordingly.

Thank you for choosing to build in the Whangarei District.

Yours faithfully

Lolly Muliipu

Building Support – Building Control Department