Te Kaunihera o Te Hiku o te Ika
Far North District Council

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

(Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Schedule 4). Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges — both available on the Council's web page.

1. Pre-Lodgement Meeting

Have you met with a council Resource Consent representative to discuss this application prior to lodgement? ◯ **Yes** ✔ **No**

2. Type of Consent being applied for

(more than one circle can be ticked):

- ◯ **Land Use**
- ◯ **Fast Track Land Use***
- ✔ **Subdivision**
- ◯ **Consent under National Environmental Standard** (e.g. Assessing and Managing Contaminants in Soil)
- ◯ **Discharge**
- ◯ **Change of Consent Notice (s.221(3))**
- ◯ **Extension of time (s.125)**
- ◯ **Other (please specify)** Cancellation of easements under s243e RMA 1991

** The fast track is for simple land use consents and is restricted to consents with a controlled activity status.*

3. Would you like to opt out of the Fast Track Process?

✔ **Yes** ◯ **No**

4. Consultation

Have you consulted with Iwi/Hapū? ◯ **Yes** ✔ **No**

If yes, which groups have you consulted with?	
Who else have you consulted with?	Top Energy, Chorus.

For any questions or information regarding iwi/hapū consultation, please contact Te Hono at Far North District Council tehonosupport@fndc.govt.nz

5. Applicant Details

Name/s: Jofe Lennard Sanderson Graham-Jenkins

Email: [redacted]

Phone number: Work [redacted] Home

Postal address:
(or alternative method of service under section 352 of the act)

[redacted]
[redacted]

Postcode [redacted]

6. Address for Correspondence

Name and address for service and correspondence (if using an Agent write their details here)

Name/s: Wendy Wickens

Email: [redacted]

Phone number: Work [redacted] Home

Postal address:
(or alternative method of service under section 352 of the act)

[redacted]
[redacted]

Postcode [redacted]

** All correspondence will be sent by email in the first instance. Please advise us if you would prefer an alternative means of communication.*

7. Details of Property Owner/s and Occupier/s

Name and Address of the Owner/Occupiers of the land to which this application relates (where there are multiple owners or occupiers please list on a separate sheet if required)

Name/s: Marion Jenkins

Property Address/ Location:

1202 Oromahoe Rd
Kawakawa

Postcode 0472

8. Application Site Details

Location and/or property street address of the proposed activity:

Name/s: Marion Rosalie Jenkins

Site Address/ Location: 1202 Oromahoe Rd
Kawakawa

Postcode 0472

Legal Description: See attached report **Val Number:** 00227-45000

Certificate of title: NA107D/965, NA107D/966, NA93D/222

Please remember to attach a copy of your Certificate of Title to the application, along with relevant consent notices and/or easements and encumbrances (search copy must be less than 6 months old)

Site visit requirements:

Is there a locked gate or security system restricting access by Council staff? ◯ **Yes** ✔ **No**

Is there a dog on the property? ✔ **Yes** ◯ **No**

Please provide details of any other entry restrictions that Council staff should be aware of, e.g. health and safety, caretaker's details. This is important to avoid a wasted trip and having to re-arrange a second visit.

Please contact applicant before undertaking site visit to ensure access and to secure dogs.

9. Description of the Proposal:

Please enter a brief description of the proposal here. Please refer to Chapter 4 of the District Plan, and Guidance Notes, for further details of information requirements.

See attached report.

If this is an application for a Change or Cancellation of Consent Notice conditions (s.221(3)), please quote relevant existing Resource Consents and Consent Notice identifiers and provide details of the change(s), with reasons for requesting them.

10. Would you like to request Public Notification?

◯ **Yes** ✔ **No**

11. Other Consent required/being applied for under different legislation

(more than one circle can be ticked):

- ◯ **Building Consent** Enter BC ref # here (if known)
- ◯ **Regional Council Consent (ref # if known)** Ref # here (if known)
- ◯ **National Environmental Standard consent** Consent here (if known)
- ◯ **Other (please specify)** Specify 'other' here

12. National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health:

The site and proposal may be subject to the above NES. In order to determine whether regard needs to be had to the NES please answer the following:

Is the piece of land currently being used or has it historically ever been used for an activity or industry on the Hazardous Industries and Activities List (HAIL) ◯ **Yes** ✔ **No** ◯ **Don't know**

Is the proposed activity an activity covered by the NES? Please tick if any of the following apply to your proposal, as the NESCS may apply as a result. ✔ **Yes** ◯ **No** ◯ **Don't know**

- ✔ **Subdividing land**
- ◯ **Changing the use of a piece of land**
- ◯ **Disturbing, removing or sampling soil**
- ◯ **Removing or replacing a fuel storage system**

13. Assessment of Environmental Effects:

Every application for resource consent must be accompanied by an Assessment of Environmental Effects (AEE). This is a requirement of Schedule 4 of the Resource Management Act 1991 and an application can be rejected if an adequate AEE is not provided. The information in an AEE must be specified in sufficient detail to satisfy the purpose for which it is required. Your AEE may include additional information such as Written Approvals from adjoining property owners, or affected parties.

Your AEE is attached to this application ✔ **Yes**

13. Draft Conditions:

Do you wish to see the draft conditions prior to the release of the resource consent decision? ● **Yes** ◯ **No**

If yes, do you agree to extend the processing timeframe pursuant to Section 37 of the Resource Management Act by 5 working days? ◯ **Yes** ✔ **No**

14. Billing Details:

This identifies the person or entity that will be responsible for paying any invoices or receiving any refunds associated with processing this resource consent. Please also refer to Council's Fees and Charges Schedule.

Name/s: (please write in full) Jofe Lennard Sanderson Graham-Jenkins

Email: [redacted]

Phone number: Work [redacted] Home

Postal address:
(or alternative method of service under section 352 of the act)

[redacted]
[redacted]

Postcode [redacted]

Fees Information
An instalment fee for processing this application is payable at the time of lodgement and must accompany your application in order for it to be lodged. Please note that if the instalment fee is insufficient to cover the actual and reasonable costs of work undertaken to process the application you will be required to pay any additional costs. Invoiced amounts are payable by the 20th of the month following invoice date. You may also be required to make additional payments if your application requires notification.

Declaration concerning Payment of Fees
I/we understand that the Council may charge me/us for all costs actually and reasonably incurred in processing this application. Subject to my/our rights under Sections 357B and 358 of the RMA, to object to any costs, I/we undertake to pay all and future processing costs incurred by the Council. Without limiting the Far North District Council's legal rights if any steps (including the use of debt collection agencies) are necessary to recover unpaid processing costs I/we agree to pay all costs of recovering those processing costs. If this application is made on behalf of a trust (private or family), a society (incorporated or unincorporated) or a company in signing this application I/we are binding the trust, society or company to pay all the above costs and guaranteeing to pay all the above costs in my/our personal capacity.

Name: (please write in full) Jofe Lennard Sanderson Graham-Jenkins

Signature:
(signature of bill payer) [redacted]

Date 19-Feb-2025

MANDATORY

15. Important Information:

Note to applicant
You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.
You may apply for 2 or more resource consents that are needed for the same activity on the same form.
You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

Fast-track application
Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement. A fast-track application may cease to be a fast-track application under section 87AAC(2) of the RMA.

Privacy Information:
Once this application is lodged with the Council it becomes public information. Please advise Council if there is sensitive information in the proposal. The information you have provided on this form is required so that your application for consent pursuant to the Resource Management Act 1991 can be processed under that Act. The information will be stored on a public register and held by the Far North District Council. The details of your application may also be made available to the public on the Council's website, www.fndc.govt.nz. These details are collected to inform the general public and community groups about all consents which have been issued through the Far North District Council.

15. Important information continued...

Declaration

The information I have supplied with this application is true and complete to the best of my knowledge.

Name: (please write in full) Wendy Wickens

Signature: [redacted] Date 18-Feb-2025

A signature is not required if the application is made by electronic means

Checklist (please tick if information is provided)

- [x] Payment (cheques payable to Far North District Council)
- [x] A current Certificate of Title (Search Copy not more than 6 months old)
- [ ] Details of your consultation with Iwi and hapū
- [ ] Copies of any listed encumbrances, easements and/or consent notices relevant to the application
- [x] Applicant / Agent / Property Owner / Bill Payer details provided
- [x] Location of property and description of proposal
- [x] Assessment of Environmental Effects
- [x] Written Approvals / correspondence from consulted parties
- [x] Reports from technical experts (if required)
- [ ] Copies of other relevant consents associated with this application
- [ ] Location and Site plans (land use) AND/OR
- [x] Location and Scheme Plan (subdivision)
- [ ] Elevations / Floor plans
- [ ] Topographical / contour plans

Please refer to Chapter 4 of the District Plan for details of the information that must be provided with an application. Please also refer to the RC Checklist available on the Council's website. This contains more helpful hints as to what information needs to be shown on plans.

PROPOSED SUBDIVISION

JLS Graham-Jenkins

1202 Oromahoe Road, Kawakawa

PLANNING REPORT &
ASSESSMENT OF ENVIRONMENTAL EFFECTS
to Far North District Council

Sapphire Surveyors Ltd
Surveyors and Land Development Specialists
PO Box 318, Mangonui 0442
Phone (09) 406-0001
Email: wendy@sapphiresurveyors.co.nz

Sapphire Surveyors
PUSHING THE BOUNDARIES IN DOUBTLESS BAY

1. Summary

Applicant:	Jofe Lennard Sanderson Graham-Jenkins
Location:	1202 Oromahoe Road, Kawakawa
Consent for:	Subdivision
Legal Description:	RT NA107D/965 – Lot 2 DP 175428 RT NA107D/966 – Lot 3 DP 175428 RT 93D/222 – Pt Lot 1 DP 8625
Zone:	Rural Production (ODP) Rural Production (PDP)
Resources/Overlays:	Outstanding Landscape (ODP) Outstanding Natural Landscape & River Flood Hazard Zone (100yr ARI) (PDP)
Activity Status:	Restricted Discretionary activity (ODP) Discretionary activity (PDP)
Consultation:	Chorus NZ Top Energy
Supporting Reports:	Archaeological Assessment (*Sunrise Archaeology*) Site Suitability Report (*Haigh Workman*) Geotechnical Assessment Report (*Haigh Workman*)
Pre-lodgment Discussions:	None
Other Resource Consents:	None required
Address for Service:	Wendy Wickens Sapphire Surveyors Ltd PO Box 318 Mangonui 0442 Ph. 09-406-0001 wendy@sapphiresurveyors.co.nz

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This assessment accompanies the Resource Consent Application made by our clients, and is provided in accordance to Section 88 of the Resource Management Act 1991.

It is intended to provide the necessary information for an understanding of the proposal and any actual or potential effects the proposed activity may have on the environment.

2. Overview of Proposal

2.1 Purpose of the Proposal

The purpose of the proposal is to divide the property into 3 rural residential blocks (Lots 4, 5 and 3/6), one rural block (Lot 2) and a large Maori Reservation (Lot 1).

*See Scheme Plan in **Appendix 1**.* All areas and dimensions are subject to final survey.

2.2 Activity Status

FNDC Operative District Plan

Subdivision:

Restricted Discretionary subdivision consent as the proposed lot sizes meet the minimum lot sizes specified in Rule 13.7.2.1 (i). Lots 1 (Maori Reservation) and 2 are in an Outstanding Landscape area and meet the minimum 20ha lots size rule in Rules 13.7.2.1 (xix) and 13.7.2.5.

FNDC Proposed District Plan

Whilst the relevant rules of the Proposed District Plan ("PDP") do not yet have legal effect, we note for completeness, the application for subdivision constitutes a Controlled activity under the PDP.

Overall, the proposal is classified as a restricted discretionary activity.

2.3 Main Issues or Unusual Aspects of the Application

The property contains an Outstanding Landscape Area, two areas of Opua Forest (SNAs) and significant archaeology and Maori history.

One smaller SNA area is to be protected by covenant by consent notice, but the main protection devise is to be the establishment of a large Maori Reservation which is intended to protect both the heritage values of the lot and the regenerating bush within, and subsequently the outstanding landscape.

The Applicant has specifically selected a Maori Reservation as the optimum protection method for Lot 1, as the Applicants family whakapapa back 100 years. The Applicant is of the view that this approach will provide for more appropriate and better protection than, for example, typical consent notice or covenant restrictions.

The application for the Maori Reservation was lodged with the Maori Land Court on 11 October, 2024. Confirmation of this application, together with some information from the Maori Land Court regarding Maori Reservations, is included in **Appendix 7**.

3. Site Description

3.1 Location & Site History

The application site is located on the northern side of Oromahoe Road, just before McIntyre Road and approximately four kilometres from the intersection with State Highway 10. *See Figure 1 (below).*

The site has road frontage to Oromahoe Road (formed and metalled) and an unformed legal road along the eastern boundary.

Figure 1: Location Map

3.2 Legal Description

Title 1:	Lot 2 DP 175428 RT NA1078D/965 Issued 26 November 1996
Title 2:	Lot 3 DP 175428 RT NA107D/966 Issued 26 November 1996
Title 3:	Part Lot 1 DP 8625 RT NA93D/222 Issued 24 September 1993

*There are no relevant encumbrances. See **Appendix 2** for Records of Title (RTs).*

3.3 Existing Uses, Structures & Topography

Dwellings:	Existing dwelling and sheds near south-eastern end of property.
Other Buildings:	An old milking shed and small shed in the southern part of the property.

Topography	Rolling to steep hills, in pasture but with a large area of bush over the northern side of the property. The Mania Stream goes through the farm from east to west.

3.4 Access

Roading:	Oromahoe Road is metalled and in good condition. The legal road to the east has a formed driveway over it, currently being used for access to a neighbouring property.
Vehicle Crossings (VC):	The existing house and the old milking shed have access off Oromahoe Road via metalled vehicle crossings.

3.5 Services

Reticulated Water	No – water supply is from roof catchment and water tanks on the site.
Reticulated Wastewater:	No
Reticulated Stormwater:	No
Electricity:	Yes – at house.
Telecommunications:	Yes – at house.

3.6 Natural & Recorded Features

NATURAL RESOURCES:

Natural Resource Features (ODP):	Outstanding Landscape *See Scheme Plan.*
Protected Natural Areas[1]:	On the property: Opua Forest P05/058 *See Scheme Plan.* In the vicinity (500m): Adjacent to DOC Reserve (Recreational Passive Outdoor) to the north.
Natural Environments Overlays (PDP)	Outstanding Natural Landscape *See Scheme Plan.*
Significant Natural Areas (PDP):	On the property: none. In the vicinity (500m): none.
Kiwi:	Present.

[1] Conning, L. and Miller, M. (1999): Natural areas of Kerikeri Ecological District Reconnaissance Survey Report for the Protected Natural Areas Programme. Department of Conservation Northland Conservancy, Whangarei, New Zealand.

CULTURAL RESOURCES:	
Cultural Resource Features (ODP):	None.
NZAA Registered Sites:	On the property: various. In the vicinity: various. *See Archaeological Assessment.*
Historical & Cultural Values Overlays (PDP):	None.
HAZARDS:	
Coastal Hazards & Flooding (ODP):	Flood Susceptible (s*ee Scheme Plan)*
NRC Natural Hazards:	River Flood Hazard Zone (10/50/100 Year extent)
NRC Proposed Regional Plan:	Not Erosion Prone Land
Natural Hazards and Risks Overlays (PDP):	River Flood Hazard Zone (100 Year ARI Event)
OTHER:	
Soils:	Soils classes are 3w1, 4s4 and 6e17.
Other Overlays/Designations (PDP):	None
Energy Infrastructure and Transport Overlays (PDP):	None
Coastal Environment (ODP/NRC RPS):	No

4. Details of Proposal & AEE

4.1 New Titles, Allotments & Boundaries

The proposed subdivision only creates two additional titles as the property presently contains three titles. Specifically, three rural residential blocks will be created (Lots 4, 5 and 3/6), plus one rural block (Lot 2) and a large Maori Reservation (Lot 1). All lots can contain the necessary 30x30m shape factor, although it is reiterated that Lot 1 will not be built upon.

The new boundaries follow topographical features in places, such as fences and stream edges. Existing services to the house are appropriately contained within the proposed lot boundaries.

4.2 Traffic & Property Access

Additional Traffic Movements:	10 – as no traffic movements will be created by Maori Reservation lot.
Lot 1 Access:	There is no physical access for vehicles within Lot 1 and the site is not to be developed. Therefore, no formed access required, but legal access is provided for off the legal road between Lots 3 and 6, as well as further up the road.
Lot 2 Access:	New proposed metalled VC off Oromahoe Road.
Lot 3&6 Access:	Existing metalled VC off Oromahoe Road
Lot 4 Access:	New proposed metalled VC off Oromahoe Road.
Lot 5 Access:	New proposed metalled VC off unformed road.
Right of Ways:	A new ROW over Area A is being created for stock access between Lots 3 and 6 over Lot 1. Since it is just for stock, no formation is required, especially since Lot 6 has legal and physical access of the legal road.

Refer to Section 4 of the *Site Suitability Report* prepared by Haigh Workman in **Appendix 5**. *Please note that since this report was written the posted speed limit in the area has been dropped to 60km/hr. A 80km/hr speed environment was used for the calculations, so sight distances are now very conservative.*

It is considered that the proposed subdivision provides safe and efficient vehicle access to each lot, and that the effects on the environment will be less than minor.

4.3 Hazards

The site is known to be affected by flooding along the stream, but the building platforms are high enough to be clear of flood levels. Refer to Section 3 of the *Site Suitability Report*.

The *Geotechnical Assessment Report* in **Appendix 6** recommends geotechnical investigations at the building consent stage on all lots and building line restrictions be in place for Lots 4 and 5 to provide setbacks from steeper ground.

No natural or other hazards will adversely affect any future development of either lot, and nor will the development exacerbate any natural hazards in the vicinity.

4.4 Water Supply

Rainwater tanks can be used on all lots to collect and store water from roof surfaces.

A fire-fighting water supply is required for any new development on Lots 2, 4 & 5

See Section 7 of the *Site Suitability Report*.

Lots 3 and 4 currently source water from Lot 1 and these pipes are covered by a water supply easement (Areas B and C) to ensure continuity of this supply.

4.5 Stormwater Disposal

Excess rainwater will drain away via the natural contours and drains present on the site to the streams and gully flowpaths running through the property. The building platforms are greater than 100 metres from the identified wetland area in Lot 1 and as such no issues with stormwater discharges and potential wetlands will arise.

Section 6.6 of the *Site Suitability Report* outlines recommendations to control stormwater flows, reduce scour and ensure compliance with relevant rules. These can be included in a consent notice for Lots 2-6.

Overall, it is considered that the effect of the proposal resulting from the disposal of stormwater will be less than minor, and will not result in any significant off-site environmental effects or effects on water quality.

4.6 Wastewater Disposal

Lot 1:	No wastewater disposal required.
Lots 2, 4 & 5:	Can accommodate compliant on-site wastewater disposal systems.
Lot 3/6:	Wastewater from the existing building is currently disposed of via a functioning wastewater disposal system contained within the new lot boundaries and the required offsets.

Refer to Section 8 of the *Site Suitability Report.*

Overall, it is considered that the effects of the proposal resulting from the disposal of wastewater will be less than minor, and will not result in any significant off-site environmental effects or effects on water quality.

4.7 Power & Telecommunications

Lot 1:	No connections to services required.
Lot 3/6:	Connected to power and telecommunications.
Lots 2, 4 & 5:	Require new power and telecommunications connections

As the subdivision is in the Rural Production zone in the ODP, power supply & telecommunications are not required to carry out the subdivision. However, Chorus and Top Energy have been consulted in the preparation of this consent application (*see **Appendix 3***).

4.8 Easements

Existing Easements:	There are no existing easements over the application site.
New Private Easements:	A new stock ROW easement is proposed, being Area A over Lot 1 in favour of the Lot 3 & 6 title. Water supply easements (Areas B & C) are proposed to retain stream supply for Lots 3 and 4, over Lots 1-3.
New Easements in Gross:	No new easements in gross are required to carry out the subdivision.

4.9 Heritage

There are several recorded heritage sites within the application site, but the building platforms have been checked. As a result of this survey, the Archaeologists recommend that the standard advice note is applied to the resource consent decision, outlining the procedures to be followed should there be any archaeological find, or suspected find.

Refer to *Archaeological Assessment* in **Appendix 4**.

The proposed name of the Maori Reservation composed of Lot 1 is *Taratara Otao Jenkins Reservation* to reflect the key feature and the locality. Its purpose is to provide Kaitiakitanga in the form of conservation, education and recreation, covering the significant visual area and the pre-contact archaeological sites, as well as wahi tapu.

4.10 Ecology

Vegetation Clearance:	None required.
Kiwi:	As kiwi are present, an informative consent notice on the new titles may be appropriate to inform future owners of the need for responsible management of animals on the property that may present a danger to Kiwi. *There is no justification for any restrictions on cats and dogs.*
Protection of Areas of National Significance (Biodiversity):	It is proposed that the SNA on Lot 2 (Area X) be protected through bush protection covenants by consent notice. *Due to the steep and rugged nature of the land, it is not practical to fence this area off.* The area of SNA contained within Lot 1, being a Maori Reservation, can be managed appropriately within this structure, so no consent notice is proposed,

With the proposed consent notices, we consider the adverse effect on ecological values as less than minor.

4.11 Reserves and Waterways

The stream that traverses proposed Lots 2 and 4 is of an average width of approximately 3m but neither lot is to be less than 4ha in size, so no esplanade strips are proposed.

4.12 Earthworks

Minimal earthworks (metaling) will be required to form/upgrade vehicle crossings and the unformed legal road.

See Section 5 of the *Site Suitability Report.*

The effect of this work will be nil / less than minor.

4.13 Land Use Compatibility

The surrounding environment mainly consists of rural and rural-residential allotments, some of which have been developed and others that are vacant. It is considered that the lots created by the proposal, and their anticipated rural and rural-residential use will be consistent with the existing pattern of subdivision and land uses present in the area. No incompatibility or reverse sensitivity issues are anticipated.

4.14 Visual Landscape, Character and Amenity

The application site is located within a rural environment that contains a number of lifestyle / rural residential sites, with associated development including houses, accessory buildings, fencing, driveways and other infrastructure. The new lots are already developed in a way that is complementary to the existing landscape and settlement pattern in this area.

The area subject to an Outstanding Landscape overlay is generally contained within proposed Lot 1 which is to be made into a Maori Reservation, and therefore will remain undeveloped and create no adverse effects on the visual landscape.

Overall, it is considered that the visual effects of the proposal, including effects on landscape, natural character and amenity values, will be less than minor.

4.15 Other Effects

The creation of the Maori Reservation provides significant positive effects due to the ongoing protection of the following aspects contained within it:

- the archaeological features on the property,
- the native bush and significant natural area,
- the outstanding natural landscape.

The proposal allows for people to provide for their economic and social wellbeing by providing blocks within the farm area for family to build on, so they can stay on the land that has been owned and occupied by the family for 10 years.

There are no cumulative or precedent effects of the proposal.

4.16 Summary of Environmental Effects

As discussed in Sections 4.1 – 4.15 above, the actual and potential adverse effects of the proposal have been minimised by the use of consent notices and covenants, by creating a large Maori Reservation lot and by utilising existing access where possible.

The necessary supporting engineering and archaeological reports have been prepared and submitted that support this assessment.

Overall, the adverse effects of the proposal are less than minor.

5. Activity Status

5.1 FNDC Operative District Plan (ODP)

5.1.1 Zone & Resources

The application site is zoned **Rural Production** and contains an **Outstanding Landscape** area as notated on page 35 of the Resource Maps.

5.1.2 Subdivision

Table 13.7.2.1 sets out minimum area requirements for subdivisions in the Rural Production Zone. As the titles included in the site were issued in 1993 and 1996, the application is a **restricted discretionary** activity according to this table, as shown here:

> ***RESTRICTED DISCRETIONARY ACTIVITY (Rural Production)***
>
> *4. A maximum of 5 lots in a subdivision (including the parent lot) where the minimum size of the lots is 2ha, and where the subdivision is created from a site that existed at or prior to 28 April 2000.*
>
> *Note 1: Reference should also be made to the minimum lot size applying to land within an outstanding Landscape, Outstanding Landscape Feature or Outstanding Natural Feature (see below in this Table and Rule 13.7.2.5).*
>
> ***CONTROLLED ACTIVITY (Outstanding Landscape)***
>
> *The minimum lot size is 20ha except in the General Coastal Zone.*

The exact boundary of the Outstanding Landscape area is unclear. A slight difference was found between the ODP resource maps and FNDC GIS Maps. NRC and the PDP seem to agree. These two sets of lines are shown in the Scheme Plan.

There is a portion of the ODP Landscape area that comes down into Lot 2 along its northern boundary onto grazing land. At this point the PDP/NRC boundary is 150m further north, well into the bush area. It seems safe to assume that including grazing land in the Outstanding Landscape was not intended, and going forward the entire Outsatnding Landscape are will be enclosed by the Lot 1 Reservation.

Rule 13.7.2.5 applies to those sites that are divided by an outstanding landscape notation shown on the Resource Maps. Since both Lots 1 and 2 (which contain parts of the Outstanding Landscape) are over 20ha in size, the proposal meets the requirements of this rule.

Rule	Comment
13.6.2 Relevant Sections of Act	Sections of the RMA relevant to this proposal are discussed in Sections 6.6-10 of this report.
13.6.3 Relevant Sections of the District Plan	Other relevant chapters of the District Plan are discussed below in Sections 5.1.3-5.
13.6.4 Other Legislation	Other relevant legislation is discussed in Section 6.4&5.
13.6.5 Legal Road Frontage	All new allotments will be provided with frontage to a legal road.
13.6.7 Consent Notices	We propose the addition of consent notices as listed in Section 6.10 of this report.

13.6.8 Subdivision Consent before Work Commences	Only minimal earthworks are required as part of the subdivision, with no vegetation clearance.
13.7.2.2 Allotment Dimensions	A shape factor of 30m by 30m that does not encroach into the permitted activity setbacks for the Rural Production Zone (10 metres) can be accommodated by each proposed allotment (see *Scheme Plan*), notwithstanding the location of the existing buildings.
13.7.2.8 Proximity to Top Energy Transmission Lines & 13.7.2.9 Proximity to the National Grid	N/A – there are no Top Energy Transmission lines (of 110kV or more) or National Grid transmission lines over the property. See *Top Energy correspondence*.
13.7.3.1 to 13.7.3.12	The application must make provision (where relevant) for these matters, and these matters are applicable to Council's consideration of this proposal. Where relevant, have been addressed in Section 4 of this report.

The following criteria (from **Rule 13.8.1**) are applicable to Council's consideration of this proposal:

In considering whether or not to grant consent on applications for restricted discretionary subdivision activities, the Council will restrict the exercise of its discretion to the following matters:

(ii) for applications under 13.8.1(b) or (c):

- *effects on the natural character of the coastal environment for proposed lots which are in the coastal environment;*
- *effects of the subdivision under (b) and (c) above within 500m of land administered by the Department of Conservation upon the ability of the Department to manage and administer its land;*
- *effects on areas of significant indigenous flora and significant habitats of indigenous fauna;*
- *the mitigation of fire hazards for health and safety of residents.*

In considering whether or not to impose conditions on applications for restricted discretionary subdivision activities the Council will restrict the exercise of its discretion to the following matters:

(1) the matters listed in 13.7.3;

(2) the matters listed in (i) and (ii) above.

These matters, where relevant, are addressed in Section 4 of this report. The site is adjacent to a DOC Reserve (Recreational Passive Outdoor) to the north, but is not coastal.

5.1.3 Rural Production Zone

Lot 3 is already developed in a manner generally consistent with the permitted standards of the zone. The remaining lots are currently vacant and can be developed consistent with the permitted standards of the zone.

5.1.4 Natural and physical resources

Relevant sections of Chapter 12 [Natural and Physical Resources] have been considered.

Section	Comment
12.1 Landscapes & Natural Features	The site contains an outstanding landscape feature. No earthworks, planting, tree removal or building is intended in this area.
12.2 Indigenous Flora and Fauna	N/A – No indigenous vegetation clearance is required.

12.3 Soils and Minerals	Can be complied with, as the volume and depth of any earthworks required to upgrade entrances will be within the permitted activity limits.
12.4 Natural Hazards	N/A – The site is not identified as a Coastal Hazard.
12.5 Heritage	The site contains heritage features but they are not listed in the ODP and in any case are all located in Lot 1 which is designed to protect them.
12.7 Lakes, Rivers, Wetlands and the Coastline	N/A – The site is not in the vicinity of notable water and only has one wetland area in Lot 1.

Therefore, the proposal complies with the permitted rules of Chapter 12.

5.1.5 Transportation

See Section 4 of the *Site Suitability Report.* A summary of access requirements can be found in Table 4-1.

Rule	Performance
15.1.6A Traffic	All lots (except Lot 1) either contain or will contain standard residential units and will theoretically generate 10 daily one-way vehicle movements, which will comply with the permitted activity standards.
15.1.6B Parking	The lots are of sufficient size and proportions to accommodate the required parking and maneuvering at building consent stage.
15.1.6C.1.1 Private Accessway in All Zones	a) ROW A has a legal width of 10m and requires no formation. b) Accessways can meet the requirements of this rule. c) ROW A serves 1 HE. d) N/A. e) New vehicle crossings are a suitable distance from other intersections.
15.1.6C.1.3 Passing Bays on Private Accessways in All Zones	The recommended passing bay on the legal road is to be provided in accordance with this requirement (see Section 4.2 of the *Site Suitability Report.*
15.1.6C.1.4 Access over Footpaths	N/A – there is no vehicle access over footpaths.
15.1.6C.1.5 Vehicle Crossing Standards in Rural & Coastal Zones	a) Vehicle crossings (VCs) can be constructed in accordance with the Council *Engineering Standards & Guidelines*. b) N/A – access is not off a sealed road. c) If combined, the VC for Lots 2 & 4 can be constructed to this standard.
15.1.6C.1.7 General Access Standards	a) Vehicle maneuvering within all lots will be addressed when the sites are developed with a residential dwelling and there is adequate area within the sites for this. b) N/A c) The sides of driveways will remain in grass. d) Stormwater will be managed on site.

15.1.6C.1.8 Frontage to Existing Roads	a) Oromahoe Road is already of the required legal width, so no widening is required. b) Oromahoe Road is already constructed to Council standards, so no improvements are required. c) The legal road to the east has been utilised where practical. d) The Oromahoe Road formation appears to be well within the legal road boundaries.
15.1.6C.1.9 New Roads	The legal road is to be upgraded according to the *Site Suitability Report*.

5.1.6 Overall Activity Status

Under the ODP, the proposal is a **restricted discretionary activity** in accordance with Rule 13.8.1(c), 13.7.2.1 (xix) and 13.7.2.5.

5.2 FNDC Proposed District Plan (PDP)

The Proposed District Plan is not yet fully operative. Within the Proposed District Plan, the site is zoned Rural Production. Under s86B of the Resource Management Act 1991 a rule in a Proposed District Plan has legal effect only once a decision on submissions have been made, unless the criteria under s.86B(3)(a) to (e) apply. An assessment of the relevant matters relating to the Proposed District Plan that have immediate legal effect has been undertaken below: There are no zone rules in the PDP with immediate legal effect that affect the proposal's activity status.

Rules/Standards	Performance
Natural Hazards	
No rules have legal effect.	
Heritage Area Overlays	
All rules have immediate legal effect (HA-R1 to HA-R14). *All standards have immediate legal effect (HA-S1 to HA-S3).*	N/A as the site is not located within a Heritage Area Overlay.
Historic Heritage	
All rules have immediate legal effect (HH-R1 to HH-R10). *Schedule 2 has immediate legal effect.*	N/A as the site does not contain any areas of historic heritage.
Notable Trees	
All rules have immediate legal effect (NT-R1 to NT-R9). *All standards have legal effect (NT-S1 to NT-S2).* *Schedule 1 has immediate legal effect.*	N/A as the site does not contain any notable trees.

Sites and Areas of Significance to Maori	
All rules have immediate legal effect (SASM-R1 to SASM-R7). *Schedule 3 has immediate legal effect.*	N/A as the site does not contain any sites or areas of significance to Maori.
Ecosystems and Indigenous Biodiversity	
All rules have immediate legal effect (IB-R1 to IB-R5).	N/A as the site does not contain any SNAs scheduled in the PDP or areas of indigenous vegetation, no indigenous vegetation removal is proposed. The site does contain an area of SNA (previously recorded, but not scheduled in the PDP), but no vegetation pruning, trimming, clearance or land disturbance within the area is proposed. As mentioned, these areas will be protected by a proposed bush protection land covenant and a Maori Reservation. No plantation forestry activities are proposed. Therefore, the proposal is not in breach of rules IB-R1 to IB-R5.
Natural Character	
No rules have legal effect.	
Natural Features & Landscapes	
No rules have legal effect.	
Public Access	
No rules have legal effect.	
Subdivision	
The following rules have immediate legal effect: SUB-R6, SUB-R13, SUB-R14, SUB-R15, SUB-R17.	N/A as the subdivision is not an Environmental Benefit Subdivision (SUB-R6), Subdivision of a site with heritage area overlay (SUB-R13), Subdivision of site that contains a scheduled heritage resource (SUB-R14), Subdivision of a site containing a scheduled site and area of significance to Maori (SUB-R15) or Subdivision of a site containing a scheduled SNA (SUB-R17).
Coastal Environment	
No rules have legal effect.	
Earthworks	
The following rules have immediate legal effect: EW-R12, EW-R13. *The following standards have immediate legal effect: EW-S3, EW-S5.*	Permitted. Earthworks as part of this proposal will be minor and will involve the upgrading of VCs and the legal road. Any earthworks will proceed under the guidance of an ADP and will be in accordance with the Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016, in accordance with Rules EW-12, EW-R13, EW-S3 and EW-S5.
Treaty Settlement Land	
No rules have legal effect.	
Mineral Extraction	
No rules have legal effect.	

5.3 Other Consents Required

No other consents are required for this proposal.

6. Statutory Assessment

6.1 Weighting of District Plans

Whilst hearings on the PDP have commenced, no decisions have yet been issued by the Hearings Commissioners. Hearings on the subdivision chapter are scheduled to take place at the end of 2025. Under s86B of the Resource Management Act 1991 a rule in a Proposed District Plan has legal effect only once a decision on submissions have been made, unless the criteria under s.86B(3)(a) to (e) apply.

A review of the Proposed District Plan shows that there are no provisions that relate to water, air or soil, significant indigenous vegetation, significant indigenous habitats of fauna, historic heritage or aquaculture activities that are relevant to this application and / or require resource consent.

Since no hearings on the subdivision chapter have been held on the PDP, and no other PDP rules are operative that would affect the activity status of this proposal, the ODP will hold the most weight in relation to this application.

6.2 Operative District Plan Objectives and Policies

The relevant Objectives and Policies of the Operative District Plan can be found in the Rural Environment, Rural Production zone and Subdivision Chapters. As a restricted discretionary activity, the proposal is considered consistent with the relevant Objectives and Policies. The immediate surrounding area is already in rural production/rural lifestyle use, and this proposed subdivision is consistent with that local character.

6.3 Proposed District Plan Objectives and Policies

As already stated, under s86B of the Resource Management Act 1991 a rule in a Proposed District Plan has legal effect only once a decision on submissions have been made, unless the criteria under s.86B(3)(a) to (e) apply. In the first instance, no decisions have yet been made on submissions under the Proposed District Plan. In the second instance, a review of both the application and Proposed District Plan shows that there are no provisions that relate to water, air or soil, significant indigenous vegetation, significant indigenous habitats of fauna, historic heritage or aquaculture activities that are relevant to this application and / or require resource consent.

Given the above, and until such time as the PDP advances further through the statutory process, the objectives and policies within the PDP have only peripheral relevance for the purposes of a s.104 assessment - and consequently are unlikely to be determinative. For the sake of completeness these are set out below.

6.3.1 Subdivision

SUB-01
Subdivision results in the efficient use of land, which: *a. achieves the objectives of each relevant zone, overlays and district wide provisions;* *b. contributes to the local character and sense of place;* *c. avoids reverse sensitivity issues that would prevent or adversely affect activities already established on land from continuing to operate;* *d. avoids land use patterns which would prevent land from achieving the objectives and policies of the zone in which it is located;* *e. does not increase risk from natural hazards or risks are mitigates and existing risks reduced; and* *f. manages adverse effects on the environment.*
Comments: The subdivision achieves the objective of the Rural Production zone. Providing properties for people wanting to live in the rural areas is anticipated within the PDP, and lifestyle blocks are not unusual in the area. Lot 2 is to be of a viable size to continue productive farming. The risk from flooding is away from building platforms. The proposed bush protection covenant and Maori Reservation mitigate any effects on natural and heritage features.
SUB-02
Subdivision provides for the: *a. Protection of highly productive land; and* *b. Protection, restoration or enhancement of Outstanding Natural Features, Outstanding Natural Landscapes, Natural Character of the Coastal Environment, Areas of High Natural Character, Outstanding Natural Character, wetland, lake and river margins, Significant Natural Areas, Sites and Areas of Significance to Māori, and Historic Heritage.*
Comments: Apart from a small area of land around the stream, which is covered in bush, the site is not highly productive land. SNAs, archaeological sites and the Outstanding Natural Landscape areas are to be covenanted by consent notice or protected within the Maori Reservation.
SUB-03
Infrastructure is planned to service the proposed subdivision and development where: *a. there is existing infrastructure connection, infrastructure should provided in an integrated, efficient, coordinated and future-proofed manner at the time of subdivision; and* *b. where no existing connection is available infrastructure should be planned and consideration be given to connections with the wider infrastructure network.*
Comments: Power and telecommunications are available in the area and can be connected to when lots are developed.
SUB-04
Subdivision is accessible, connected, and integrated with the surrounding environment and provides for: *a. public open spaces;* *b. esplanade where land adjoins the coastal marine area; and* *c. esplanade where land adjoins other qualifying waterbodies.*
Comments: The stream is not a qualifying waterbody and no esplanade strip is required.

SUB-P3
Provide for subdivision where it results in allotments that: *a. are consistent with the purpose, characteristics and qualities of the zone;* *b. comply with the minimum allotment sizes for each zone;* *c. have an adequate size and appropriate shape to contain a building platform; and* *d. have legal and physical access.*
Comments: Lots are consistent with other rural and rural-residential lots existing in the area. Minimum allotment sizes have been achieved, with a shape factor provided and a compliant vehicle access point. While the provided building platform on Lot 2 does not comply with the 30m setback from a metal road in RPROZ-3, if shifted to the northwest it is then able to comply while still being clear of any flooding issues.
SUB-P4
Manage subdivision of land as detailed in the district wide, natural environment values, historical and cultural values and hazard and risks sections of the plan.
Comments: SNAs, archaeological sites and the Outstanding Natural Landscape areas are to be covenanted by consent notice or protected within the Maori Reservation. The risk from flooding is away from building platforms.
SUB-P6
Require infrastructure to be provided in an integrated and comprehensive manner by: *a. demonstrating that the subdivision will be appropriately serviced and integrated with existing and planned infrastructure if available; and* *b. ensuring that the infrastructure is provided is in accordance the purpose, characteristics and qualities of the zone.*
Comments: Power and telecommunications can be provided to the new lots.
SUB-P7
Require the vesting of esplanade reserves when subdividing land adjoining the coast or other qualifying waterbodies.
Comments: The stream is not a qualifying waterbody and no esplanade strip is required.
SUB-P8
Avoid rural lifestyle subdivision in the Rural Production zone unless the subdivision: *a. will protect a qualifying SNA in perpetuity and result in the SNA being added to the District Plan SNA schedule; and* *b. will not result in the loss of versatile soils for primary production activities.*
Comments: The Maori Reservation and consent notice over Area X are intended to protect the SNAs on the property. The versatile soils located around the stream are to primarily remain in Lot 2 which remains of a size suitable for primary production.

SUB-P9
Avoid subdivision rural lifestyle subdivision in the Rural Production zone and Rural residential subdivision in the Rural Lifestyle zone unless the development achieves the environmental outcomes required in the management plan subdivision rule.
Comments: The proposed subdivision is not reliant on the management plan subdivision provisions.
SUB-P10
To protect amenity and character by avoiding the subdivision of minor residential units from principal residential units where resultant allotments do not comply with minimum allotment size and residential density.
Comments: The subdivision does not involve the separation of a minor household unit.
SUB-P11
Manage subdivision to address the effects of the activity requiring resource consent including (but not limited to) consideration of the following matters where relevant to the application: *a. consistency with the scale, density, design and character of the environment and purpose of the zone;* *b. the location, scale and design of buildings and structures;* *c. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; or the capacity of the site to cater for on-site infrastructure associated with the proposed activity;* *d. managing natural hazards;* *e. Any adverse effects on areas with historic heritage and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and* *f. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.*
Comments: Scale and design are consistent with other properties in the area. Lot sizes are sufficient to accommodate dwellings and on-site wastewater disposal. Building platforms are clear of flooding hazards and are geotechnically suitable for building. SNAs, archaeological sites and the outstanding natural landscape are to be covenanted/protected.

6.3.2 Rural Production Zone

RPROZ-O1
The Rural Production zone is managed to ensure its availability for primary production activities and its long-term protection for current and future generations.
Comments: Lot 2 is to remain a size suitable for primary production, while the other smaller lots allow the current family to remain on the land.
RPROZ-O3
Land use and subdivision in the Rural Production zone: *a. protects highly productive land from sterilisation and enables it to be used for more productive forms of primary production;* *b. protects primary production activities from reverse sensitivity effects that may constrain their effective and efficient operation;*

c. does not compromise the use of land for farming activities, particularly on highly productive land;

d. does not exacerbate any natural hazards; and

e. is able to be serviced by on-site infrastructure.

Comments:

Lot 2 (which contains a small bushed area of highly productive land) is to remain a size suitable for primary production. No reverse sensitivity is expected. There is no effect on the flooding hazard. New lots can be provided with power and telecommunications.

RPROZ-O4

The rural character and amenity associated with a rural working environment is maintained.

Comments:

The resulting lots are still of a size and character consistent with others in the area and typical for the rural production zone.

RPROZ-P4

Land use and subdivision activities are undertaken in a manner that maintains or enhances the rural character and amenity of the Rural Production zone, which includes:

a. a predominance of primary production activities;

b. low density development with generally low site coverage of buildings or structures;

c. typical adverse effects such as odour, noise and dust associated with a rural working environment; and

d. a diverse range of rural environments, rural character and amenity values throughout the District.

Comments:

Rural character and amenity will be maintained as the lots will result in relatively low density development and a productive area is to remain.

RPROZ-P6

Avoid subdivision that:

a. results in the loss of highly productive land for use by farming activities;

b. fragments land into parcel sizes that are no longer able to support farming activities, taking into account:

1. the type of farming proposed; and

2. whether smaller land parcels can support more productive forms of farming due to the presence of highly productive land.

c. provides for rural lifestyle living unless there is an environmental benefit.

Comments:

Land is not highly productive as it is mainly Class 4 and 6 land. The proposed subdivision provides for rural living with significant environmental, heritage and landscape benefits due to the creation of the Maori Reservation.

RPROZ-P7

Manage land use and subdivision to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:

a. whether the proposal will increase production potential in the zone;

b. whether the activity relies on the productive nature of the soil;

c. consistency with the scale and character of the rural environment;

d. location, scale and design of buildings or structures;

e. for subdivision or non-primary production activities:

i. scale and compatibility with rural activities;

ii. potential reverse sensitivity effects on primary production activities and existing infrastructure;

iii. the potential for loss of highly productive land, land sterilisation or fragmentation

f. at zone interfaces:

i. any setbacks, fencing, screening or landscaping required to address potential conflicts;

ii. the extent to which adverse effects on adjoining or surrounding sites are mitigated and internalised within the site as far as practicable;

g. the capacity of the site to cater for on-site infrastructure associated with the proposed activity, including whether the site has access to a water source such as an irrigation network supply, dam or aquifer;

h. the adequacy of roading infrastructure to service the proposed activity;

i. Any adverse effects on historic heritage and cultural values, natural features and landscapes or indigenous biodiversity;

j. Any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.

Comments:

The scale and intensity of the proposed subdivision is clearly as anticipated by the ODP. The block is currently not ideal for high production, with the grazing areas being on a long area of land which is traversed by the existing residential area, effectively cutting off a section of the farm. It is hard to achieve both good environmental outcomes and retain productivity and provide for people and the community. By creating the Maori Reservation, a number of aspects of the environment are protected and the remainder of the subdivision allows the family to stay on the land.

The lots are consistent with other lots in the area. Building platforms are located sufficiently separated to retain rural character. No reverse sensitivity is expected as all building platforms comply with the requisite setbacks. There are natural water sources for irrigation and stock. Vehicle access can be safely provided. Outstanding landscape, archaeology and SNAs are to be appropriately protected.

6.3.3 Natural Hazards

NH-O1

The risks from natural hazards to people, infrastructure and property are managed, including taking into account the likely long-term effects of climate change, to ensure the health, safety and resilience of communities.

Comments:

Building platforms are clear of the flood susceptible areas.

NH-02

Land use and subdivision does not increase the risk from natural hazards or risks are mitigated, and existing risks are reduced where there are practicable opportunities to do so.

Comments:

The proposed subdivision does not increase the risk of flooding.

NH-03

New infrastructure is located outside of identified natural hazard areas unless:

a. it has a functional or operational need to be located in that area;

b. it is designed to maintain its integrity and function, as far as practicable during a natural hazard event; and

c. adverse effects resulting from that location on other people, property and the environment are mitigated

Comments:

Infrastructure for the subdivision can be located outside of the flood susceptible area

NH-O4

Natural defences, such as natural systems and features, and existing structural mitigation assets are protected to maintain their functionality and integrity and used in preference to new structural mitigation assets to manage natural hazard risk.

Comments:

There is no change proposed to structures or features that may provide natural defense against natural hazards.

NH-P2

Manage land use and subdivision so that natural hazard risk is not increased or is mitigated, giving consideration to the following:

a. the nature, frequency and scale of the natural hazard;

b. not increasing natural hazard risk to other people, property, infrastructure and the environment beyond the site;

c. the location of building platforms and vehicle access;

d. the use of the site, including by vulnerable activities;

e. the location and types of buildings or structures, their design to mitigate the effects and risks of natural hazards, and the ability to adapt to long term changes in natural hazards;

f. earthworks, including excavation and fill;

g. location and design of infrastructure;

h. activities that involve the use and storage of hazardous substances;

i. aligning with emergency management approaches and requirements;

j. whether mitigation results in transference of natural hazard risk to other locations or exacerbates the natural hazard; and

k. reduction of risk relating to existing activities.

Comments:

The natural hazard risk is not increased by the proposed subdivision. Building platforms and vehicle access can be located clear of any land instability or flooding. Site specific geotechnical design is to be carried out at BC stage.

NH-P3

Take a precautionary approach to the management of natural hazard risk associated with land use and subdivision

Comments:

The natural hazard risk is not increased by the proposed subdivision. Building platforms and vehicle access can be located clear of any land instability or flooding. Site specific geotechnical design is to be carried out at BC stage.

NH-P4

Manage land use and subdivision so that the functionality and long-term integrity of existing structural mitigation assets are not compromised or degraded.

Comments:

There is no change proposed to structures or features that may provide mitigation against natural hazards.

NH-P5

Require an assessment of risk prior to land use and subdivision in areas that are subject to identified natural hazards, including consideration of the following:

a. the nature, frequency and scale of the natural hazard;

b. the temporary or permanent nature of any adverse effect;

c. the type of activity being undertaken and its vulnerability to an event, including the effects of climate change;

d. the consequences of a natural hazard event in relation to the activity;

e. any potential to increase existing risk or creation of a new risk to people, property, infrastructure and the environment within and beyond the site and how this will be mitigated;

f. the design, location and construction of buildings, structures and infrastructure to manage and mitigate the effects and risk of natural hazards including the ability to respond and adapt to changing hazards;

g. the subdivision/site layout and management, including ability to access and exit the site during a natural hazard event; and .

h. the use of natural features and natural buffers to manage adverse effects.

Comments:

Reports addressing flooding and geotechnical matters have been included in this report.

NH-P6

Manage land use and subdivision in river flood hazard areas to protect the subject site and its development, and other property, by requiring:

a. subdivision applications to identify building platforms that will not be subject to inundation and material damage (including erosion) in a 1 in 100 year flood event;

b. a minimum freeboard for all buildings designed to accommodate vulnerable activities of at least 500mm above the 1 in 100 year flood event and at least 300mm above the 1 in 100 year flood event for other new buildings;

c. commercial and industrial buildings to be constructed so they will not be subject to material damage in a 1 in 100 year flood event;

d. buildings within a 1 in 10 Year River Flood Hazard Area to be designed to avoid material damage in a 1 in 100 year flood event;

e. storage and containment of hazardous substances so that the integrity of the storage method will not be compromised in a 1 in 100 year flood event;

f. earthworks (other than earthworks associated with flood control works) do not divert flood flow onto surrounding properties and do not reduce flood plain storage capacity within a 1 in 10 Year River Flood Hazard area;

g. the capacity and function of overland flow paths to convey stormwater flows safely and without causing damage to property or the environment is retained, unless sufficient capacity is provided by an alternative method; and

h. the provision of safe vehicle access within the site.

Comments:

Building sites clear of the flooding hazard are available. Access is clear of the flood susceptible area. Proposed earthworks are clear of the flood susceptible area.

NH-P8
Locate and design subdivision and land use to avoid land susceptible to land instability, or if this is not practicable, mitigate risks and effects to people, buildings, structures, property and the environment
Comments: Geotechnical hazards have been assessed and mitigated in the attached *Geotechnical Assessment Report*.
NH-P9
Manage land use and subdivision that may be susceptible to wildfire risk by requiring: *a. setbacks from any contiguous scrub or shrubland, woodlot or forestry;* *b. access for emergency vehicles; and* *c. sufficient accessible water supply for firefighting purposes.*
Comments: Firefighting supply is to be provided at BC stage. Building sites are clear of bush areas. There is easy access for emergency vehicles.
NH-P12
Protect existing natural systems and features that buffer or protect development from the adverse effects of natural hazards by: *a. avoiding the modification, alteration or loss of natural systems and features that compromises their function, including as a defence against long term effects such as sea level rise and climate change; and* *b. promoting restoration and enhancement of such natural systems and features.*
Comments: There is no proposed change to existing features that buffer or protect development from natural hazards.
NH-P13
Consider new hard protection structures to protect existing development and existing and new infrastructure only where: *a. natural systems and features will not provide adequate protection from the natural hazard;* *b. the design is suitable for the location and does not transfer the risk and effects of natural hazards to other locations;* *c. any hard protection structures considered necessary to protect private assets are not located on public land unless there is significant public or environmental benefit in doing so;* *d. alternative responses to the hazard (including soft protection measures, restoration or enhancement of natural defences against coastal hazards and abandonment of assets) are demonstrated to be impractical or have significantly greater adverse effects on the environment; and* *e. they are the only practical means to protect:* *i. existing infrastructure or new infrastructure that has a functional or operational need to be in the location; or* *ii. existing settlements of vulnerable activities.*
Comments: Further protection of development on site is not required.

6.3.4 Historic Heritage

HH-P1
Identify Heritage Resources which contribute to an understanding of the Far North's history, identity and historic values and themes, and assess significance using the criteria in the Northland Regional Policy Statement.
Comments: The attached *Archaeological Assessment* adds to this resource.
HH-P2
Protect scheduled Heritage Resources by: *a. avoiding significant adverse effects and avoiding, remedying or mitigating any other adverse effects on the recognised heritage values of scheduled Heritage Resources;* *b. undertaking land use and subdivision in accordance with:* *i. any recognised heritage guidelines for that resource;* *ii. any iwi / hapū management plan lodged with Council;* *c. retaining buildings, structures or any other scheduled Heritage Resources that contribute to the values of the Heritage Resource; and* *d. restricting activities that compromise important spiritual, heritage or cultural values held by tangata whenua and/or the wider community.*
Comments: There are no scheduled Heritage Resources as shown in the PDP on the site but the Maori Reservation is intended to protect the archaeological sites on the property.
HH-P11
Protect archaeological sites where there is a reasonable cause to suspect they are present, by ensuring land and subdivision activities have regard to: *a. the outcomes of any consultation undertaken with tangata whenua and the need to undertake a Cultural Impact Assessment;* *b. any assessments or advice from a suitably qualified and experienced archaeological expert; and* *c. the outcomes of any consultation undertaken with Heritage New Zealand Pouhere Taonga and the Department of Conservation*
Comments: The attached *Archaeological Assessment* assessed the property and facilitates the protection of the sites found. Protection under the Maori Reservation ensures that this protection is in keeping with tangata whenua objectives.
HH-P14
Only allow subdivision of sites that contain a scheduled Heritage Resource where it can be demonstrated that: *a. the heritage values for which the Heritage Resource is scheduled are maintained and protected in the future;* *b. sufficient land is provided around the scheduled Heritage Resource to protect associated heritage values;* *c. there are measures to minimise obstruction of views of the scheduled Heritage Resource from adjoining and surrounding public spaces that may result from any future land use; and* *d. the remainder of the site associated with the scheduled Heritage Resource is of a size which continues to provide it with a suitable heritage setting to maintain the heritage values associated with the scheduled Heritage Resource.*

Comments:

While there are no scheduled heritage resources, the Maori Reservation ensures that the archaeological features and values of the area are maintained and protected.

HH-P15

Manage land use and subdivision involving a scheduled heritage resource to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:

a. the particular heritage values of the scheduled Heritage Resource and its significance;

b. the scheduled Heritage Resource's sensitivity to change or capacity to accommodate changes without compromising the heritage values;

c. any heritage alterations and additions to buildings or structures, including for an ongoing use or any adaptive re-use, are compatible with the form, character and scale and materials of the scheduled Heritage Resource and maintain its heritage values;

d. architectural features and details that contribute to the heritage values of the scheduled Heritage Resource are not lost or obscured by new materials or changes;

e. whether any new building or structure, including its location, form, design and materials, is compatible with the original architectural style, character and scale of the Heritage Resource and the impact of the new building or structure on the heritage setting;

f. the extent to which any adverse impacts on heritage values are necessary to enable the long term, practical, or feasible use of the scheduled Heritage Resource;

g. the reduction or loss of any heritage values, including the ability to interpret the place and its relationship with other features/items;

h. the extent or degree to which any changes are reversible;

i. any opportunities to enhance the heritage values of the scheduled Heritage Resource and any surrounding historic heritage;

j. the extent to which an activity affects or destroys any archaeological site; and

k. effects on landforms and cultural and heritage landscapes; and

l. the extent to which landscaping affects the heritage values, either visually or because of disturbance of archaeological sites;

m. any assessments or advice from a suitably qualified and experienced heritage expert or the need to require an expert report;

n. any consultation with tangata whenua and requirement to prepare a Cultural Impact Assessment;

o. any iwi / hapū management plan lodged with Council; and

p. any consultation with Heritage New Zealand Pouhere Taonga, Department of Conservation.

Comments:

Consultation with Heritage NZ and DOC can be undertaken as part of the processing of this application by the FNDC.

6.3.5 Sites & Areas of Significance to Maori

SASM-01

Sites and areas of significance to Māori are identified, recognised and managed, to ensure their long-term protection for future generations.

Comments:

Whilst there are no sites of significance to Maori shown on the PDP maps that affect this property, the Applicant has nonetheless taken cultural considerations into account and made this an integral

part of the application. The Maori Reservation on Lot 1 is intended to protect a large area of significance to Maori and its associated archaeological values.

SASM-O2

The relationship of tangata whenua with sites and areas of significance to Māori is recognised and provided for, to ensure its protection for future generations.

Comments:

The proposed Maori Reservation ensures protection of the area for future generations.

SASM-03

Sites and areas of significance to Māori are protected from inappropriate subdivision, use and development.

Comments:

The proposed Maori Reservation is not to be developed.

SASM-04

Sites and areas of significance to Māori are known to, appreciated by, and acknowledged as important to, the wider community.

Comments:

The desire for a Maori Reservation acknowledges the importance of this area to the community.

SASM-P2

Protect sites and areas of significance to Māori by:

- *a. ensuring that tangata whenua can actively participate in resource management processes which involve sites and areas of significance to Māori including those identified in Schedule 3 - Sites and areas of significance to Māori;*
- *b. requiring cultural impact assessments for activities likely to result in adverse effects on scheduled sites and areas of significance to Māori;*
- *c. recognition of the holistic nature of the Māori worldview and the exercise of kaitiakitanga;*
- *d. acknowledging matauranga Māori;*
- *e. having regard to Iwi/Hapū environmental management plans; and*
- *f. restricting activities that compromise important spiritual and cultural values held by tangata whenua and/or the wider community.*

Comments:

These items are the intent behind creating a Maori Reservation.

SASM-P4

Consider the following when assessing applications for land use and subdivision that may result in adverse effects on the relationship of tangata whenua with sites and areas of significance to Māori:

- *a. the outcomes of consultation undertaken with iwi, hapū or marae that has an association to the site or area;*
- *b. whether a cultural impact assessment has been undertaken by a suitably qualified person who is acknowledged/endorsed by the iwi, hapū or relevant marae, and any recommended conditions and/or monitoring to achieve desired outcomes;*
- *c. any iwi/hapū environmental management plans lodged with Council;*
- *d. that tangata whenua are specialists in the tikanga of their hapū or iwi, including when preparing or undertaking a cultural impact assessment; and*
- *e. any protection, preservation or enhancement proposed.*

Comments:

The development of the governing documents for the Maori Reservation will address these issues.

SASM-P5
Support land owners to manage, maintain and preserve sites and areas of significance to Māori by: *a. increasing awareness, understanding and appreciation within the community of the presence and importance of sites and areas of significance to Māori;* *b. encouraging land owners to engage with marae, whanau, hapū and iwi to develop positive working relationships in regard to the on-going management and/or protection of sites and areas of significance to Māori;* *c. providing assistance to land owners to preserve, maintain and enhance sites and areas of significance to Māori; and* *d. promoting the use of matauranga Māori, tikanga and kaitiakitanga, in collaboration with tangata whenua, to manage, maintain and preserve sites and areas of significance to Māori.*
Comments: The support of Council in this application would be gratefully accepted.
SASM-P6
Promote the provision or development of access for tangata whenua to sites and areas of significance to Māori through: *a. formal arrangements, such as co-management, joint management or relationship agreement, easements and land covenants, and access arrangements; and* *b. informal arrangements or understandings between land owners and tangata whenua.*
Comments: The development of the governing documents for the Maori Reservation will address these issues.
SASM-P8
Manage land use and subdivision involving sites and areas of significance to Māori to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application: *a. the particular cultural, spiritual and/or historical values, interests or associations of importance to tangata whenua that are associated with the site which may be affected;* *b. the extent to which the activity may compromise the relationship tangata whenua have with their ancestral lands, water,sites, wāhi tapu and other taonga, and/or the ability to protect, maintain or enhance sites and areas of significance to tangata whenua;* *c. the responsibility of tangata whenua as kaitiaki;* *d. opportunities for the relationship of tangata whenua with the site or area to be maintained or strengthened on an ongoing or long term basis, including practical mechanisms to access, use and maintain the identified site;* *e. the outcomes of any consultation with and/or cultural advice provided by tangata whenua, in particular with respect to mitigation measures and/or the incorporation of mātauranga Māori principles into the design, development and/or operation of activities that may affect the site; and* *f. where the site is also an archaeological site, the relevant objectives and policies in the Historic Heritage chapter.*
Comments: The development of the governing documents for the Maori Reservation will address these issues.
SASM-P9
Encourage protection, maintenance and restoration of scheduled sites and areas of significance to Māori, including consideration of the following additional measures: *a. reducing or waiving consent applications costs;* *b. providing funding, grants and other incentives; and* *c. obtaining, recording and sharing information about sites and areas of significance to Māori.*

Comments:
Refer to Section 7 of this report requesting a reduction in application fees.

6.3.6 Ecosystems & Indigenous Biodiversity

IB-01
Areas of significant indigenous vegetation and significant habitats of indigenous fauna (Significant Natural Areas) are identified and protected for current and future generations.
Comments: SNAs on the property are to be protected by consent notice or within the proposed Maori Reservation.
IB-02
Indigenous biodiversity is managed to maintain its extent and diversity in a way that provides for the social, economic and cultural well-being of people and communities.
Comments: The development of the governing documents for the Maori Reservation will address these issues.
IB-03
The relationship between tangata whenua and indigenous biodiversity, including taonga species and habitats, is recognised and provided for.
Comments: The proposed Maori Reservation supports this relationship.
IB-04
The role of tangata whenua as kaitiaki and landowners as stewards in protecting and restoring significant natural areas and indigenous biodiversity is provided for
Comments: The proposed Maori Reservation provides for this role.
IB-05
Restoration and enhancement of indigenous biodiversity is promoted and enabled
Comments: The development of the governing documents for the Maori Reservation will address this.
IB-P3
Outside the coastal environment: *a. avoid, remedy or mitigate adverse effects of land use and subdivision on Significant Natural Areas to ensure adverse effects are no more than minor; and* *b. avoid, remedy or mitigate adverse effects of land use and subdivision on areas of important and vulnerable indigenous vegetation, habitats and ecosystems to ensure there are no significant adverse effects.*
Comments: The proposed Maori Reservation mitigates these effects.
IB-P5
Ensure that the management of land use and subdivision to protect Significant Natural Areas and maintain indigenous biodiversity is done in a way that: *a. does not impose unreasonable restrictions on existing primary production activities, particularly on highly versatile soils;*

b. recognises the operational need and functional need of some activities, including regionally significant infrastructure, to be located within Significant Natural Areas in some circumstances;

c. allows for maintenance, use and operation of existing structures, including infrastructure; and

d. enables Māori land to be used and developed to support the social, economic and cultural well-being of tangata whenua, including the provision of papakāinga, marae and associated residential units and infrastructure.

Comments:

The proposed Maori Reservation leaves productive land free for rural purposes.

IB-P6

Encourage the protection, maintenance and restoration of indigenous biodiversity, with priority given to Significant Natural Areas, through non-regulatory methods including consideration of:

a. assisting landowners with physical assessments by suitably qualified ecologists to determine whether an area is a Significant Natural Area;

b. reducing or waiving resource consent application fees;

c. providing, or assisting in obtaining funding from other agencies and trusts;

d. sharing and helping to improve information on indigenous biodiversity; and

e. working directly with iwi and hapū, landowners and community groups on ecological protection and enhancement projects.

Comments:

Refer to Section 7 of this report requesting a reduction in application fees.

IB-P9

Require landowners to manage pets and pest species, including dogs, cats, possums, rats and mustelids, to avoid risks to threatened indigenous species, including avoiding the introduction of pets and pest species into kiwi present or high-density kiwi areas.

Comments:

The development of the governing documents for the Maori Reservation will address this.

IB-P10

Manage land use and subdivision to address the effects of the activity requiring resource consent for indigenous vegetation clearance and associated land disturbance, including (but not limited to) consideration of the following matters where relevant to the application:

a. the temporary or permanent nature of any adverse effects;

b. cumulative effects of activities that may result in loss or degradation of habitats, species populations and ecosystems;

c. the extent of any vegetation removal and associated land disturbance;

d. the effects of fragmentation;

e. linkages between indigenous ecosystems and habitats of indigenous species;

f. the potential for increased threats from pest plants and animals;

g. any downstream adverse effects on waterbodies and the coastal marine area;

h. where the area has been mapped or assessed as a Significant Natural Areas:

i. the extent to which the proposal will adversely affect the ecological significance, values and function of that area;

ii. whether it is appropriate or practicable to use biodiversity offsets or environmental biodiversity compensation to address more than minor residual adverse effects;

i. the location, scale and design of any proposed development;

j. the extent of indigenous vegetation cover on the site and whether it is practicable to avoid or reduce the extent of indigenous vegetation clearance;

k. the functional or operational needs of regionally significant infrastructure;

l. any positive contribution any proposed biodiversity offsets or environmental biodiversity compensation will have on indigenous biodiversity; and

m. any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.

Comments:

SNAs are to be appropriately protected. No vegetation removal is proposed. Informative Kiwi protection consent notices encourage protection of Kiwi in the area.

6.3.7 Natural Features & Landscapes

NFL-01
ONL and ONF are identified and managed to ensure their long-term protection for current and future generations.
Comments: Keeping the ONL within the proposed Maori Reservation provides this long term protection.
NFL-02
Land use and subdivision in ONL and ONF is consistent with and does not compromise the characteristics and qualities of that landscape or feature.
Comments: Keeping the ONL within the proposed Maori Reservation ensures that the characteristics and qualities are not compromised.
NFL-03
The ancestral relationships Tangata Whenua has with the land is recognised and provided for as a part of the characteristics and qualities of ONL and ONF.
Comments: The proposed Maori Reservation recognises and provides for this relationship.
NFL-P3
Avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of land use and subdivision on the characteristics and qualities of ONL and ONF outside the coastal environment.
Comments: The proposed Maori Reservation avoids any adverse effects on the ONL as a result of the subdivision.
NFL-P4
Provide for farming activities within ONL and on ONF where: *a. the use forms part of the characteristics and qualities that established the landscape or feature; and* *b. the use is consistent with, and does not compromise the characteristics and qualities of the landscape or feature.*
Comments: No farming is proposed within the Maori Reservation, unless on existing grazing land and where allowed under the governing documents.

NFL-P6
Encourage the restoration and enhancement of ONL and ONF where it is consistent with the characteristics and qualities.
Comments: The proposed Maori Reservation should enhance the ONL through effective management.
NFL-P8
Manage land use and subdivision to Protect ONL and ONF and address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application: *a. the presence or absence of buildings, structures or infrastructure;* *b. the temporary or permanent nature of any adverse effects;* *c. the location, scale and design of any proposed development;* *d. any means of Integrating the building, structure or activity;* *e. the ability of the environment to absorb change;* *f. the need for and location of earthworks or vegetation clearance;* *g. the operational or functional need of any regionally significant infrastructure to be sited in the particular location;* *h. any viable alternative locations for the activity or development outside the landscape or feature;* *i. any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6;* *j. the characteristics and qualities of the landscape or feature;* *k. the physical and visual integrity of the landscape or feature;* *l. the natural landform and processes of the location; and* *m. any positive contribution the development has on the characteristics and qualities.*
Comments: The ONL is not to be developed and the protection of SNAs, cultural/heritage assets and the ONL are part of the subdivision.

6.4 Regional Planning Documents

6.4.1 Regional Policy Statement for Northland

The Regional Policy Statement for Northland ("RPS") covers the management of natural and physical resources in the Northland region. The provisions within the RPS give guidance at a higher planning level in terms of significant regional issues, therefore providing guidance to consent applications and the development of District Plans on a regional level. Its policies have been used to help form the Operative and Proposed District Plans, of which the Objectives, Policies and Rules have been discussed in this application.

Given the nature and scale of the proposed subdivision, being a restricted discretionary activity, it is considered that this level of development is compatible with the intent of the RPS.

6.4.2 Proposed Regional Plan (NRC)

The property is not recorded as Erosion Prone, but is identified as being subject to flood hazard by the Northland Regional Council.

6.4.3 Regional Water & Soil Plan

The attached *Site Suitability Report* (Section 8) confirms that Lot 3's existing wastewater disposal system is contained within the required offsets and is functioning well, and Lots 2, 4 & 5 can accommodate compliant wastewater disposal systems when building consent is applied for.

We therefore believe that on-site wastewater disposal is sustainable in compliance with the permitted activity rules of the RWSP.

6.5 Other National Standards & Policy Documents

6.5.1 National Environmental Standard for Contaminants in Soil

In regard to the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011, we have been advised by the applicant that to the best of their knowledge, the application site is not currently, or has not historically been, used for an activity on the Hazardous Activities and Industries List (HAIL), other than the usual small farm petrol supply which was located on proposed Lot 3, which is already being used for residential purposes.

The property is not recorded as a HAIL site as on the Northland Regional Council Selected Land-use Register.

6.5.2 National Environmental Standard for Freshwater Management

The National Environmental Standard for Freshwater Management (NES-FM) addresses natural wetlands. There are no wetland areas on the property within 100 metres of the proposed building platforms or access and therefore the NPS-FM does not apply.

6.5.3 National Policy Standard for Highly Productive Land (Sept 2022)

The National Policy Standard for Highly Productive Land (NPS-HPL) addresses the protection of highly productive land for use in land-based primary production.

The application site does contain mapped highly productive land, but the application is restricted discretionary, so soils are not able to be part of the assessment for resource consent. Therefore, this NPS does not apply.

6.6 Part II Matters

6.6.1 Sustainable Management (Section 5)

The purpose of the RMA is the sustainable management of natural and physical resources by managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety.

The proposal achieves this purpose by allowing the family to continue residing on the land, but also to protect the cultural and natural resources of the land.

6.6.2 Matters of National Importance (Section 6)

The matters of national importance relevant to this application are:

(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development
(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna
(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga
(f) the protection of historic heritage from inappropriate subdivision, use, and development

These matters should be recognised and provided for in the consideration of this application.

The proposal achieves this through the creation of the Maori Reservation (and a separate consent notice) which provides for the protection of outstanding landscapes, SNAs and the significant Maori and archaeological value of the land.

6.6.3 Other Matters (Section 7)

Other matters relevant to this application are:

(a) kaitiakitanga
(aa) the ethic of stewardship
(b) the efficient use and development of natural and physical resources
(c) the maintenance and enhancement of amenity values
(d) intrinsic values of ecosystems
(f) maintenance and enhancement of the quality of the environment
(g) any finite characteristics of natural and physical resources
(i) the effects of climate change

Particular regard is to be given to these matters in the consideration of this application.

The proposal achieves these aims by

- the creation of the Maori Reservation (and an additional covenant area) to protect the natural and cultural value of the land, and maintaining the role of local Maori as stewards or the land.
- creating lots that are in keeping with the amenity and characteristics of the area.
- by providing engineering assessments that take into consideration climate change.

6.6.4 Treaty of Waitangi (Section 8)

The principles of the Treaty of Waitangi are to be taken into account in the consideration of this application.

These principles are integrated into the other planning documents that have been discussed in this application in relation to the proposal, the District Plan in particular. The site contains significant Maori heritage sites which are to be protected within a Maori Reservation.

6.6.5 Part II Considerations Summary

It is considered that the proposal has given due consideration to the Purpose and Principles in Part II of the RMA.

6.7 RMA Section 104 – Consideration of Applications

In terms of sections 104 and 104C of the Act, we consider that:

- Sufficient information has been provided for Council to assess the application.
- The effects of the proposal are considered to be less than minor.
- The matters over which Council has restricted the exercise of its discretion have been considered.
-

6.8 RMA Section 106 – Refusal of consent

Irrespective of consent activity status, a consent authority may refuse subdivision consent in certain circumstances. These circumstances are set out in s.106 of the Act.

> *(1) A consent authority may refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that—*
>
> *(a) there is a significant risk from natural hazards; or*
>
> *(b)* [Repealed]
>
> *(c) sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision.*

There is no evidence that the site is subject to any significant risks from natural hazards, and all lots have been provided with legal and physical access. No conflict with s.106 of the Act is anticipated (see Section 3.3 of the *Site Suitability Report*).

6.9 RMA Section 95 - Notification and Consultation

We suggest that Council consult with DOC and Heritage NZ as part of the consent processing.

No other parties require notification of this proposal or are adversely affected by this proposal.

Consent is sought on a non-notified basis as the sequential statutory tests within s.95 of the RMA are satisfied and no special circumstances are present.

6.10 RMA Section 220 Conditions of Consent

In addition to standard conditions of consent and advice notes, we suggest the following conditions for the subdivision consent are also included (some wording abridged):

(1) Prior to issue of s223 certificate:

(a) Show Areas A and X on title plan.

(b) Amalgamation condition as per *Scheme Plan*.

(2) Prior to issue of s224c certificate:

(a) Construction/upgrade (including required vegetation clearance) of vehicle crossings.

(b) Existing entrance to Lot 2 be permanently fenced off.

(c) Legal road to the east be upgraded in accordance with Section 4.2 of the *Site Suitability Report*, including proposed passing bay.

(d) secure s221 consent notices:

- Bush protection covenant (Lot 2).
- Firefighting supply (Lots 2, 4, 5).
- Wastewater requirements (Lots 2, 4, 5).
- Stormwater recommendations from *Site Suitability Report* (Lots 2-6).
- Requirement for geotechnical investigation at BC stage (Lots 2, 4, 5).
- Building line restriction in accordance with drawings in Appendix A of *Site Suitability Report* (Lots 4 & 5).
- The client has requested that the construction of the passing bay be a condition of consent rather than a consent notice on Lot 5's title.

Advice Notes:

- Earthworks to be carried out under an ADP.

It would be greatly appreciated if draft conditions of consent could be forwarded to wendy@sapphiresurveyors.co.nz prior to confirming the final resource consent wording.

7. Conclusion

The proposal is of a nature anticipated by the ODP. The proposal aligns with the relevant objectives and policies of the Operative District Plan and Proposed District Plan, and the relevant objectives and policies of the National and Regional Policy Statements. The proposal also aligns with Part 2 of the Resource Management Act. There is no District Plan rule or National Environmental Standard that requires the proposal to be publicly notified.

It is requested that the Council give favourable consideration to this application and grant consent on a non-notified basis.

In addition, in line with Rule SASM-P9(a) and IB-P6(b) in the Proposed District Plan, we seek a reduction in resource consent application fees given the considerable amount of land that is to be converted to a Maori Reservation, serving many purposes, including the protection a large site of significance to Maori, registered archaeological sites, an area of outstanding natural landscape and a large area of the Opua Forest.

8. Appendices

APPENDIX 1 SCHEME PLAN

APPENDIX 2 RECORDS OF TITLE

APPENDIX 3 CHORUS & TOP ENERGY CORRESPONDENCE

APPENDIX 4 ARCHAEOLOGICAL SURVEY & ASSESSMENT

APPENDIX 5 SITE SUITABILITY REPORT

APPENDIX 6 GEOTECHNICAL REPORT

APPENDIX 7 MAORI RESERVATION INFORMATION

Appendix 1

Scheme Plan

Schedule of Proposed Easements			
Purpose	Shown	Servient Tenement (Burdened Land)	Dominant Tenement (Benefitted Land)
ROW - Stock	A	Lot 1 hereon	Lots 3 & 6 hereon
Water Supply	B	Lot 1	Lots 3 & 4
	C	Lots 1-3	Lot 4

AMALGAMATION CONDITION:
That Lot 3 hereon and Lot 6 hereon
be held in the same Record of Title.

Area X is subject to a bush protection covenant.

30X30m Bld Platform (>10m from bdys)

LOCAL AUTHORITY: FAR NORTH DISTRICT COUNCIL

COMPRISED IN: RTs NA107D/965, NA107D/966 & NA93D/222
TOTAL AREA: 138.9286 HA

PLAN PREPARED FOR: JLS Graham-Jenkins

Sapphire Surveyors Ltd
Surveyors &
Land Development Specialists
Doubtless Bay, NZ
Ph. 09-406-0001
info@sapphiresurveyors.co.nz

Lots 1-6 being a Proposed Subdivision of Lots 2 & 3 DP 175428 and Pt Lot 1 DP 8625
1202 Oromahoe Rd, Kawakawa

Surveyed:			Job Ref 0116S
Drawn:	WW	31/01/2024	
Version:	C		
Status:	Final	07/04/2025	A3 1:6500
Sheet:	1 of 1		

Appendix 2

Records of Title

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

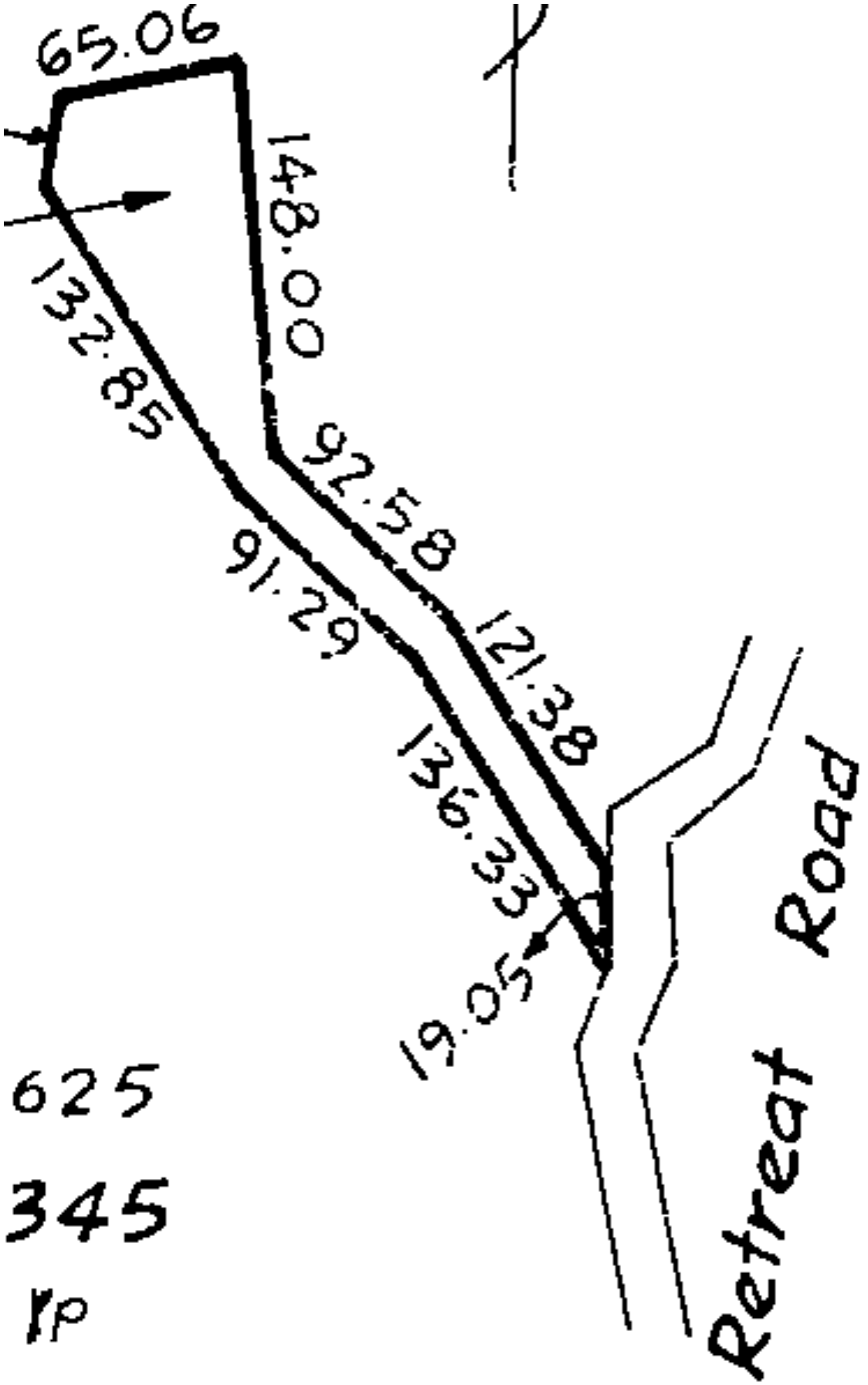
Identifier	**NA93D/222**
Land Registration District	**North Auckland**
Date Issued	24 September 1993

Prior References
PROC 19370

Estate	Fee Simple
Area	8971 square metres more or less
Legal Description	Part Lot 1 Deposited Plan 8625
Registered Owners	

Marion Rosalie Jenkins

Interests


65.06
148.00
132.85
92.58
91.29
121.38
136.33
19.05
Retreat Road
625
345
1p

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

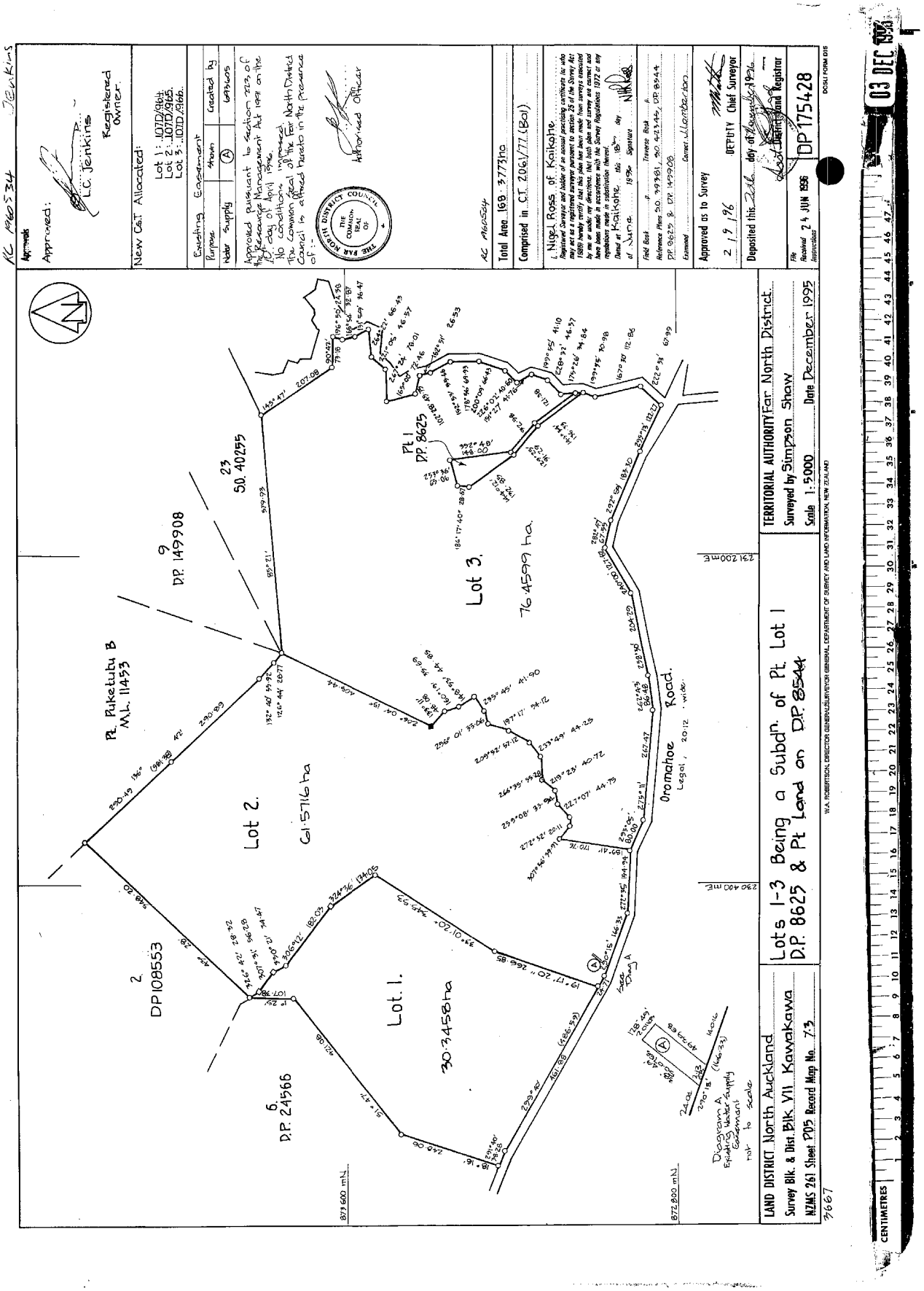
Identifier	**NA107D/966**
Land Registration District	**North Auckland**
Date Issued	26 November 1996

Prior References
NA2061/77

Estate	Fee Simple
Area	76.4599 hectares more or less
Legal Description	Lot 3 Deposited Plan 175428
Registered Owners	

Marion Rosalie Jenkins

Interests


Lots 1-3 Being a Subdn. of Pt Lot 1
D.P. 8625 & Pt Land on D.P. 8544
LAND DISTRICT North Auckland
Survey Blk. & Dist. Blk. VII Kawakawa
NZMS 261 Sheet P05 Record Map No. 7.3
TERRITORIAL AUTHORITY Far North District
Surveyed by Simpson Shaw
Scale 1:5000 Date December 1995
DP 175428
Lot 1. 30.3458ha
Lot 2. 61.5716ha
Lot 3. 76.4599 ha
Pt Pukatutu B M.L. 11453
Pt 1 D.P. 8625
Lot 2 DP 108553
Lot 6 D.P. 24566
Oromahoe Road.
Legal, 20.12 wide
Approved pursuant to Section 321 of the Resource Management Act 1991 on the 10th day of April 1996 subject to the condition imposed. The common seal of the Far North District Council is affixed hereto in the presence of:
Authorised Officer
THE FAR NORTH DISTRICT COUNCIL
Approved: L.C. Jenkins
Registered Owner
New Cert Allocated:
Lot 1: 107D/964
Lot 2: 107D/965
Lot 3: 107D/966
Existing Easement
Purpose Shown Created by
Water Supply A 149908
Approved as to Survey
2.9.96
DEPUTY Chief Surveyor
Deposited this 24th day of June 1996
Received 24 JUN 1996
03 DEC 1996
W.A. ROBERTSON, DIRECTOR GENERAL/SURVEYOR GENERAL, DEPARTMENT OF SURVEY AND LAND INFORMATION, NEW ZEALAND
DOSLI FORM 015
CENTIMETRES

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

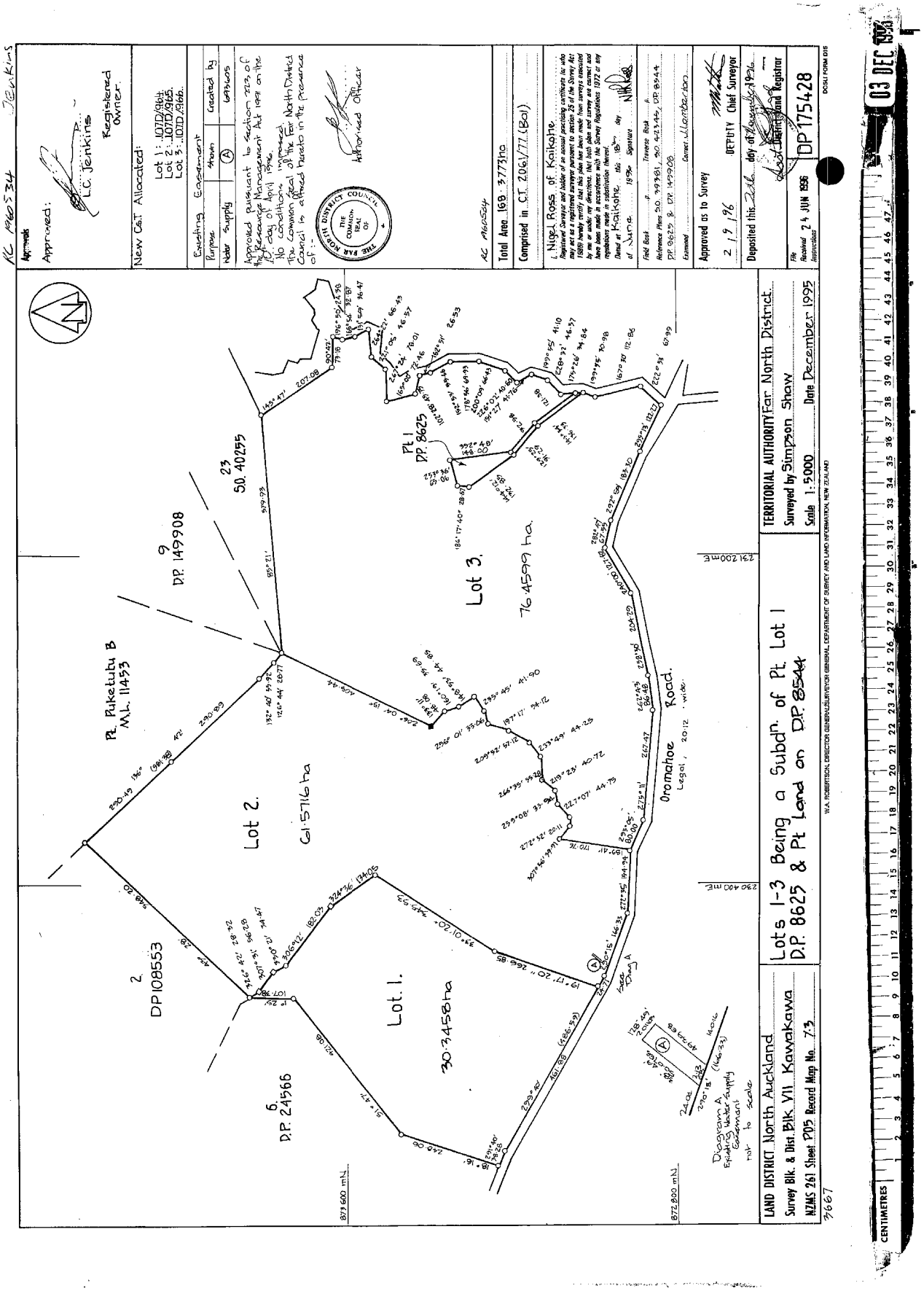
Identifier	**NA107D/965**
Land Registration District	**North Auckland**
Date Issued	26 November 1996

Prior References
NA2061/77

Estate	Fee Simple
Area	61.5716 hectares more or less
Legal Description	Lot 2 Deposited Plan 175428
Registered Owners	

Marion Rosalie Jenkins

Interests


Approvals
Approved: L.C. Jenkins
Registered Owner
New Cert Allocated:
Lot 1: 107D/964
Lot 2: 107D/965
Lot 3: 107D/966
Existing Easement
Purpose | Shown | Created by
Water Supply | A | 149908
Approved pursuant to Section 321 of the Resource Management Act 1991 on the 10th day of April 1996
No condition imposed
The common seal of the Far North District Council is affixed hereto in the presence of:
THE FAR NORTH DISTRICT COUNCIL
Authorised Officer
AC 466549
Total Area 168.3773ha
Comprised in C.T. 2061/77 (Bal)
I, Nigel Ross of Kaikohe
Registered Surveyor and holder of an annual practising certificate (as who may act as a registered surveyor pursuant to section 23 of the Survey Act 1986) hereby certify that this plan has been made from surveys executed by me or under my directions, that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972 or any regulations made in substitution thereof
Dated at Kaikohe this 18th day of June 1996
Signature
Field Book # Traverse Plan
Reference Plans SO. 40255, 423145, DP 8544, DP 8625 & DP 149908
Examined
Correct Accordance
Approved as to Survey
2.9.96
DEPUTY Chief Surveyor
Deposited this 24th day of September 1996
Land Transfer Registrar
File Received 24 JUN 1996
DP 175428
DOSLI FORM D15
03 DEC 1996
Pt Puketutu B M.L. 11453
Lot 2. 61.5716ha
Lot 1. 30.3458ha
Lot 3. 76.4599 ha
9 DP 149908
23 SO. 40255
Pt 1 DP. 8625
2 DP108553
6. D.P. 24566
Oromahoe Road. Legal, 20.12 wide
231200mE
290400mE
872600mN
872800mN
Diagram A Existing Water Supply Easement not to scale
LAND DISTRICT North Auckland
Survey Blk. & Dist. Blk. VII Kawakawa
NZMS 261 Sheet P05 Record Map No. 7.3
Lots 1-3 Being a Subdn. of Pt Lot 1 D.P. 8625 & Pt Land on D.P. 8544
TERRITORIAL AUTHORITY Far North District
Surveyed by Simpson Shaw
Scale 1:5000 Date December 1995
W.A. ROBERTSON, DIRECTOR GENERAL/SURVEYOR GENERAL, DEPARTMENT OF SURVEY AND LAND INFORMATION, NEW ZEALAND
9667
CENTIMETRES

Appendix 3

Chorus & Top Energy Correspondence

Wendy Wickens

From: Chorus Property Development Do Not Reply <npdnoreply@chorus.co.nz>
Sent: Thursday, 20 February 2025 10:45 AM
To: npdnoreply@chorus.co.nz
Subject: Chorus 11142026 : We can service your development

Hi

Your reference: 0116S Jenkins
Development address: 1202 Oromahoe Road , Kawakawa, Far North District, 0472

This email is to confirm that Chorus can provide our fibre network to your development. An indicative cost for the work we would need to do (noting that this excludes costs for any work you may be required to do inside the site boundary) is presented in the below notes:

A high level estimate to extend our fibre network to your development is in excess of $500,000 Incl. GST, as this would need to come approx. 3100m from SH 10.

Please note: The communications technology available to serve customers in our rural areas is rapidly changing. Copper is no longer the only option for customers, and is in some cases, not the best option. New Zealand runs on fibre, and the UFB roll-out has gone past 87 per cent of Kiwis. We would like to extend fibre further to enable more Kiwis to receive the best technology available. We will not be investing in extending the copper network further.

If you would like this formalised into a quote, then please log in to your account and let us know. If you need to amend the connection numbers or provide updated plans, you can also do that via your account.

Chorus New Property Development Team

Please do not reply to this email as this inbox is not monitored. For any follow up queries please visit www.chorus.co.nz/develop-with-chorus or log in to your account. If you do not yet have an account with us, you will need to create an account to view your job progress and documentation.

Top Energy Limited
Level 2, John Butler Centre
60 Kerikeri Road
P O Box 43
Kerikeri 0245
New Zealand
PH +64 (0)9 401 5440
FAX +64 (0)9 407 0611
www.topenergy.co.nz

1 October 2024

Sapphire Surveyors Ltd

Email: wendy@sapphiresurveyors.co.nz

To Whom It May Concern:

RE: PROPOSED SUBDIVISION
M R Jenkins – 1202 Oromahoe Road, Kawakawa. Lots 2 & 3 DP 175428 and Pt Lot 1 DP 8625.

Thank you for your recent correspondence with attached revised subdivision scheme plans.

Top Energy's requirement's for this subdivision are nil. Costs to make power available could be provided after application and an on-site survey have been completed.
Link to application: Top Energy | Top Energy.

In order to get a letter from Top Energy upon completion of your subdivision, a copy of the resource consent decision must be provided.

If you have any further queries, please do not hesitate to contact the writer.

Yours sincerely

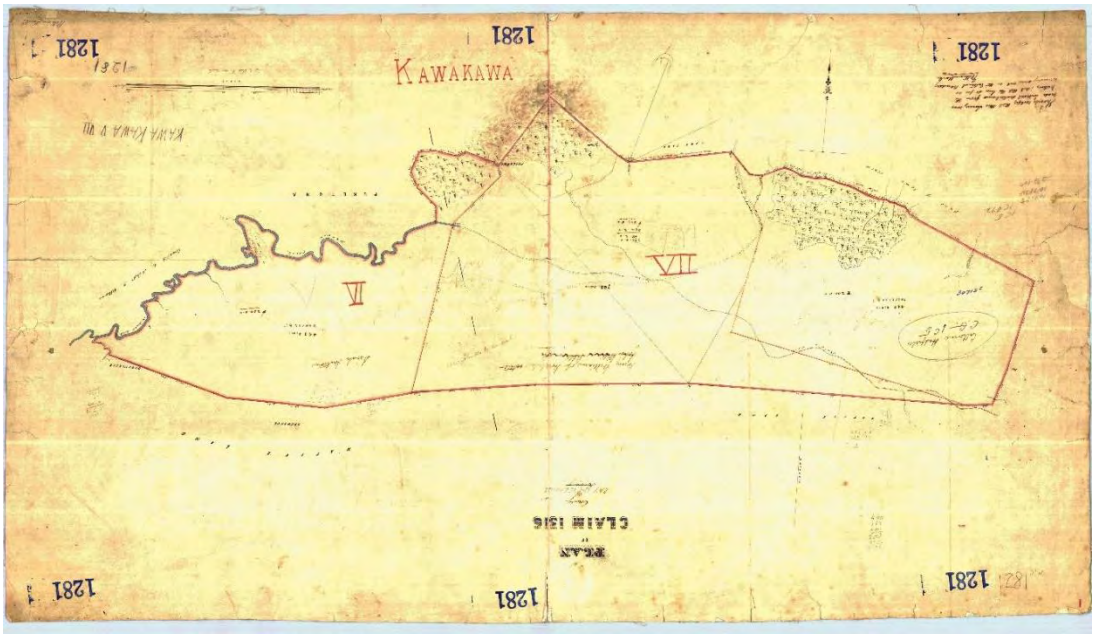
Aaron Birt
Planning and Design
T: 09 407 0685
E: aaron.birt@topenergy.co.nz

Appendix 4

Archaeological Survey & Assessment

Archaeological Survey and Assessment of Lots 2 and 3 DP 175428 and Pt Lot 1 DP 8625, 1202 Oromahoe Road, Kawakawa, Far North

Prepared for Jofe Graham-Jenkins



Justin Maxwell and Jennifer Huebert

Sunrise Archaeology Report No. 2024-05

February 2025

Sunrise Archaeology

Justin Maxwell & Jennifer Huebert

Phone 021 088 31418

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Table of Contents

List of Figures

List of Tables

Cover image: Map of Old Land Claim 1316 (SO 1281). Source: LINZ.

1 Introduction

Jofe Graham-Jenkins commissioned this archaeological survey and assessment of his property at 1202 Oromahoe Road, Kawakawa, Far North (Figure 1). The legal description of the sections involved are Lots 2 and 3 DP 175428 and Pt Lot DP 8625 (Figure 2).

The owner wishes to subdivide the properties as indicated in Figure 3.

This purpose of this work was to record archaeological sites or remains, and to identify potential house sites on the property that would not affect these remains. It was also done to advise the landowner as to their obligations under the *Heritage New Zealand Pouhere Taonga Act 2014*, in respect to any affected archaeological sites. The survey was undertaken by Justin Maxwell. This report outlines the results.

Figure 1. Location of subject property. Source: Google Earth, 2023.

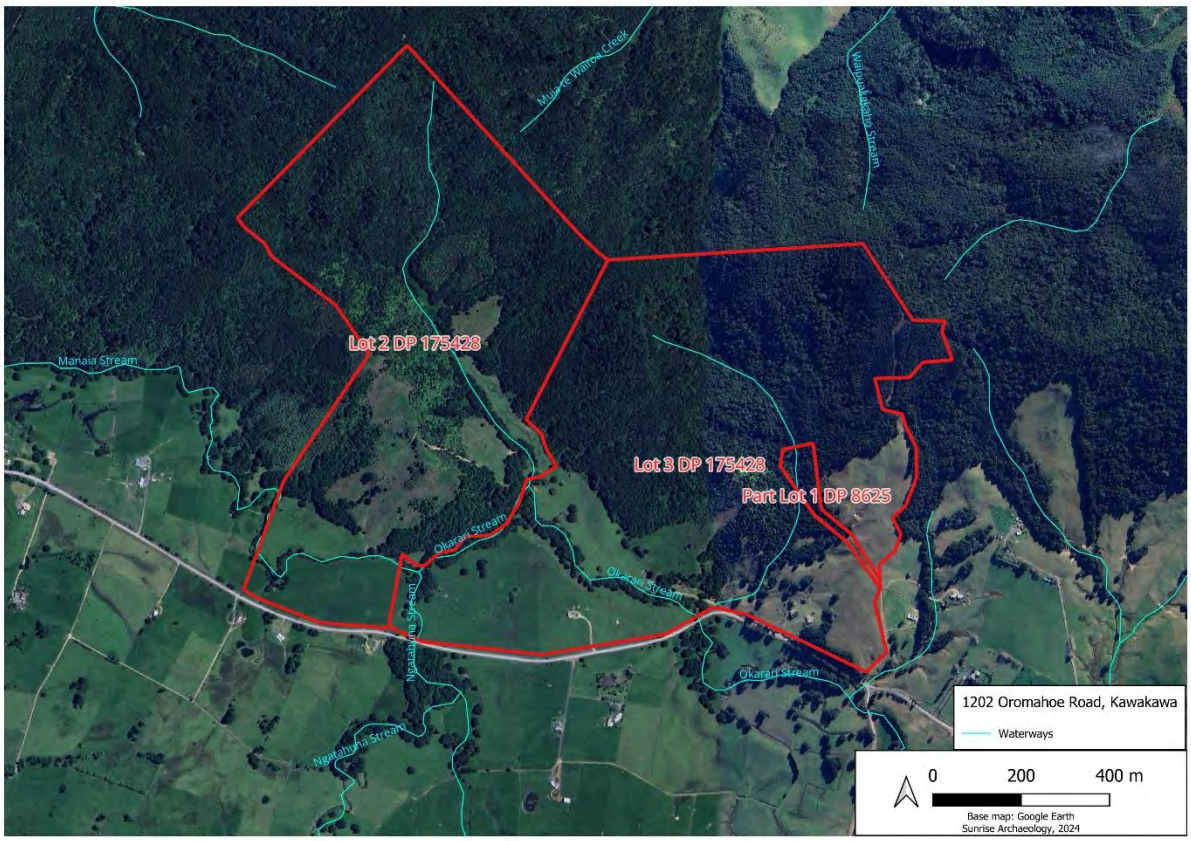

Figure 2. Boundaries and legal description of lots in the project area. Property outlines: LINZ.

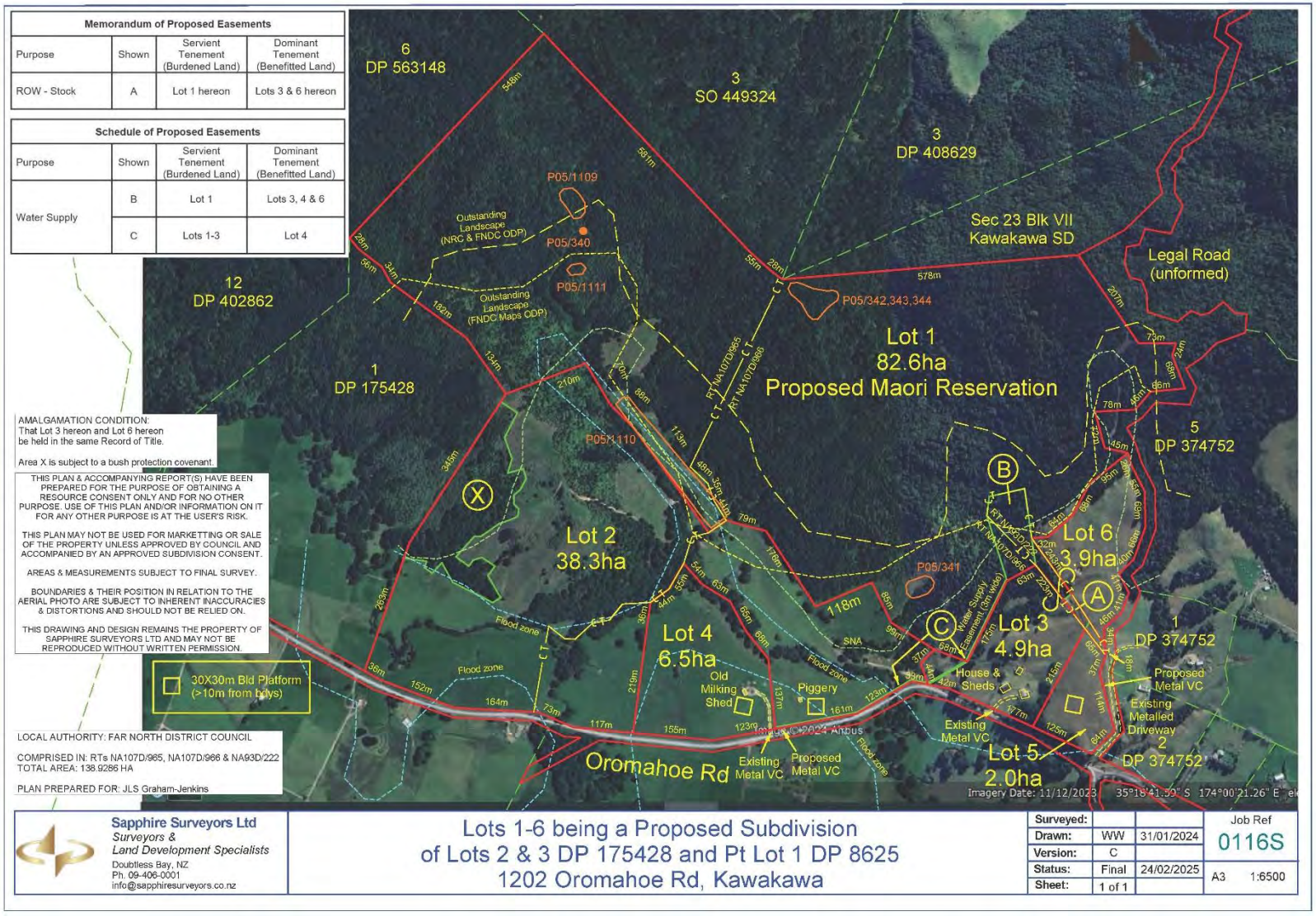

Figure 3. Overview of final subdivision plan. Dated 24/02/2025. Supplied by client.

2 Statutory Requirements

There are two main pieces of legislation in New Zealand that control work affecting archaeological sites. These are the *Heritage New Zealand Pouhere Taonga Act*, 2014 (HNZPTA), and the *Resource Management Act*, 1991 (RMA).

Heritage New Zealand Pouhere Taonga Act 2014 - Archaeological Provisions

Heritage New Zealand Pouhere Taonga (HNZPT) administers the *Heritage New Zealand Pouhere Taonga Act* (HNZPTA). All archaeological sites in New Zealand are protected under this act and may only be modified with the written authority of the HNZPT. The act contains a consent (commonly referred to as an "Authority") process for work of any nature affecting archaeological sites, which are defined as:

Any place in New Zealand, including any building or structure (or part of a building or structure), that:

> *(i) Was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and*
>
> *(ii) Provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and*

(b) Includes a site for which a declaration is made under section 43(1)

Any person who intends carrying out work that may damage, modify, or destroy an archaeological site must first obtain an authority from the HNZPT (Part 3 Section 44). The process applies to archaeological sites on all land in New Zealand irrespective of the type of tenure. The maximum penalty in the HNZPTA for un-authorised damage of an archaeological site is $120,000. The maximum penalty for un-authorised site destruction is $300,000.

The archaeological authority process applies to all sites that fit the Heritage New Zealand definition, regardless of whether:

- The site is recorded in the New Zealand Archaeological Association (NZAA) Site Recording Scheme or registered/declared by the Heritage New Zealand Pouhere Taonga,
- The site only becomes known about as a result of ground disturbance and /or,
- The activity is permitted under a district or regional plan, or resource or building consent has been granted.

HNZPT also maintains a Register of Historic Places, Historic Areas, Wahi Tapu and Wahi Tapu Areas. The register can include some archaeological sites (though the main database for archaeological sites is maintained independently by the NZAA). The purpose of the register is to inform members of the public about such places and to assist with their protection under the *Resource Management Act, 1991*.

The Resource Management Act 1991 - Archaeological Provisions

The RMA requires City, District and Regional Councils to manage the use, development, and protection of natural and physical resources in a way that provided for the well-being of today's communities while safeguarding the options for future generations. The protection of

historic heritage from inappropriate subdivision, use, and development is identified as a matter of national importance (section 6f).

Historic Heritage is defined as those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, derived from archaeological, architectural, cultural, historic, scientific, or technological qualities.

Historic heritage includes:

- historic sites, structures, places, and areas;
- archaeological sites;
- sites of significance to Māori, including wāhi tapu;
- surroundings associated with the natural and physical resources (RMA section 2).

These categories are not mutually exclusive, and some archaeological sites may include above ground structures or may also be places that are of significance to Māori.

Where resource consent is required for any activity, the assessment of effects is required to address cultural and historic heritage matters (RMA 4th Schedule and the District Plan assessment criteria (if appropriate).

3 Methodology

Sunrise Archaeology consulted local histories and other relevant archaeological literature in preparation of this assessment. The New Zealand Archaeological Association (NZAA) site recording scheme ArchSite (www.archsite.org.nz) was consulted to determine whether any previously known sites were present on or near the property. Historical land ownership records from LINZ, Archives New Zealand, and Turton's Index were consulted. Historic photograph and newspaper searches were also conducted, and other historic records and reference texts were also reviewed.

Prior to the site visit, aerial photos, Lidar imagery, and cartographic records were researched to indicate potential areas of interest. Old survey plans of the area were also examined for information relating to early structures and infrastructure in the area.

A foot survey was conducted. Shovel tests were done in select areas; soil probing was not possible. The location of archaeological features were recorded with a GPS unit (Garmin 64st). Some areas were recorded using Drone imagery. See Site Visit section for details of the survey.

This survey was conducted to locate and record archaeological remains. The survey and report do not aim to locate or identify wāhi tapu or other places of cultural or spiritual significance to Māori. Those assessments are to be made by Tangata Whenua, who may be approached independently for any information or concerns they may have.

4 Physical Setting

The properties are at 1202 Oromahoe Road, Kawakawa. The total area is 140 ha, more or less. This is a rural area approximately 8 km from Waitangi and the Bay of Islands. The closest small settlement is Oromahoe, approximately 2 km west. Kawakawa is more than 10 km south; Kerikeri is approximately 10 km northwest. The entrance to the property is off Oromahoe Road.

The Taratara trig station, a high point in the area at 226 m, is near the northeastern boundary of Lot 3. This lot borders the Opua Recreation Area, which covers a large wedge-shaped block of land stretching almost 2 km to the northeast. The project area is approximately 2 km from the western boundary of the old Opua State Forest.

The hilly northern portion of these properties are part of a long ridgeline stretching from the Opua Forest almost to Puketona. The ridges and slopes are covered in mature regenerating bush, much of which is designated an Outstanding Landscape (FNDC District Plan). Below to the south are wide flats that fringe Oromahoe Road. There are several streams that crisscross the flats; the main stream flowing through the south central project area is the Manaia Stream, which joins the Waiaruhe River to the east and eventually flows into the Waitangi River.

The soils of the project area mixed. Along the high ridges, soils are Te Ranga light brown clay loam, stony clay loam steepland soil (TRuS), a young greywacke soil that is shallow and prone to drought, and erosion even when forested. On lower slopes, soils are Marua clay loams (MRH, MRuH), also young greywacke soils which are moderately fertile, but pug easily when wet and are prone to landslips in heavy rain. At the transition from slopes to flat land, soils are Whareora clay (WO), a reasonably fertile terrace soil originally deposited by water but today are typically above flood levels. This soil type can be poorly drained, can crack in dry weather, and may be prone to pugging; slips can occur at edges. On the flat, the soils in this area are Hukerenui silt loam with yellow subsoil (HKr), an acidic old greywacke soil that developed under ancient kauri forests. These soils are low in fertility, can pug when wet, and are prone to erosion (Northland Regional Council, 2024).

5 Background

The following is a brief background of the area, including the large Opua State Forest to the east. For a history of the wider Bay of Islands area, the reader is referred to Lee (1983) and numerous other historical texts.

The project area was part of an old land claim (OLC 1316) made to several persons, with the portion of interest being the centre of the claim marked for Henry Williams. Williams was a key figure in the early European settlement of New Zealand, establishing the Mission station at Paihia for the Church Missionary Society (CMS) in 1823. He built and had his home in Paihia in the early 1830s, adjacent to his brother William Williams who was the first person to translate the Bible into Te Reo, among many other achievements.

The plan for the claim (Figure 4) contributes to our understanding of Henry Williams' claim here, and also shows several landmarks of note. One of the northern boundaries is marked "Taratara", which is a high point in the area and the location of a trig station today, and the northwest corner of what is today Lot 2 is labelled "Pukewha", probably the name of another high point or ridge. Between these points, the two the hills are depicted as wooded and a small stream (adjacent to the recorded archaeological site P05/340, a canoe findspot) flows south. The track marked "From the Bay of Islands to Pakaraka" passes through the western portion of Williams claim, turning west and appearing to end on the property. Pakaraka was Williams' farm, confirmed by an 1846 sketch map of the area made for the House of Commons (Figure 5). The area appears to have been surrounded by forests.

Pakaraka was mentioned also as the location of a Sports Day that took place sometime between 1835-38 (Fitzgerald 2004:231). The event attracted "Maoris from far and wide", including tests of horsemanship in the Old Tree Paddock at the farm.

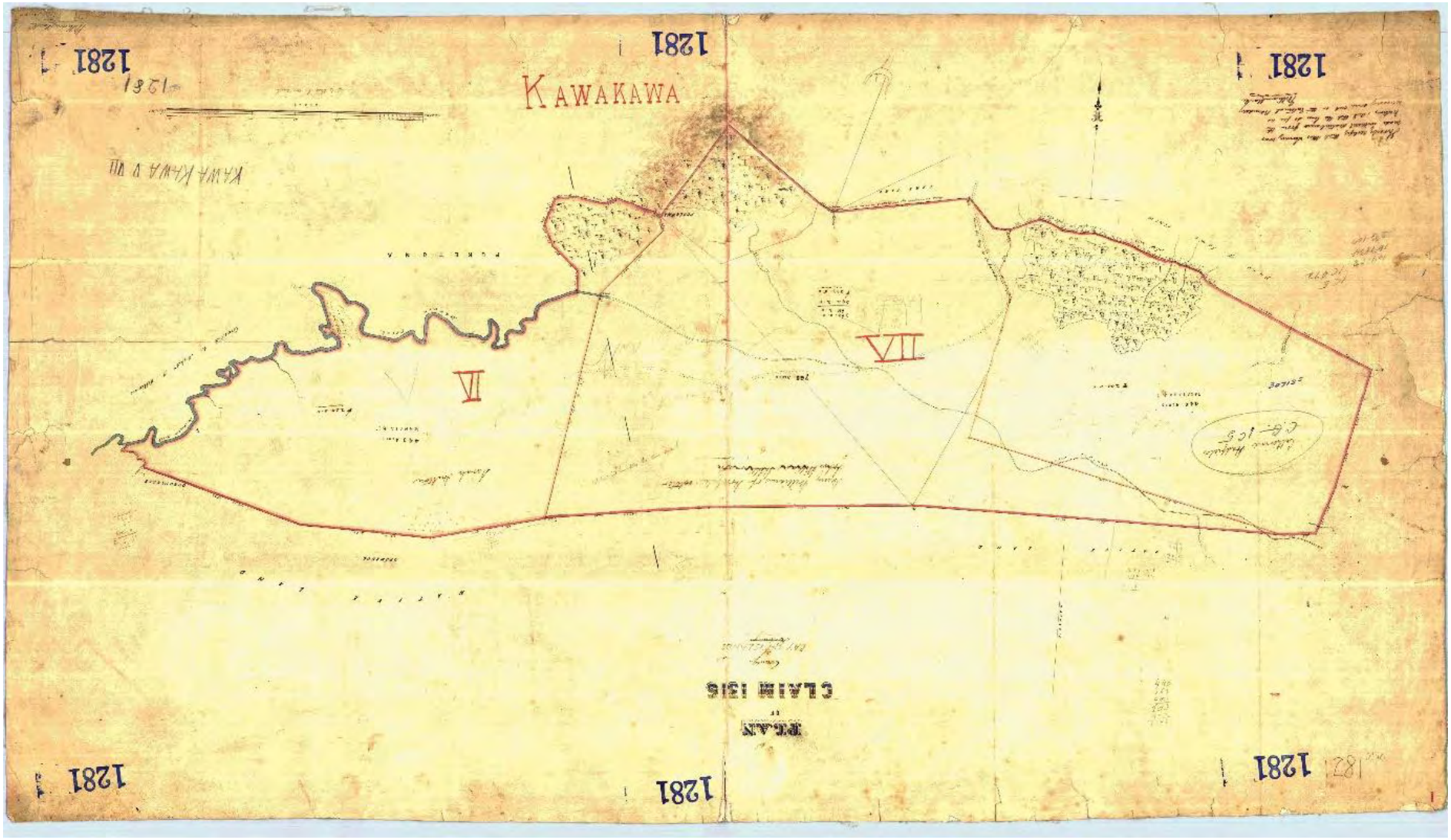

Figure 4. Old Land Claim 1316 (SO 1281); central portion marked "Henry Williams" is present project area. Note map is rotated so north faces up. Source: LINZ.

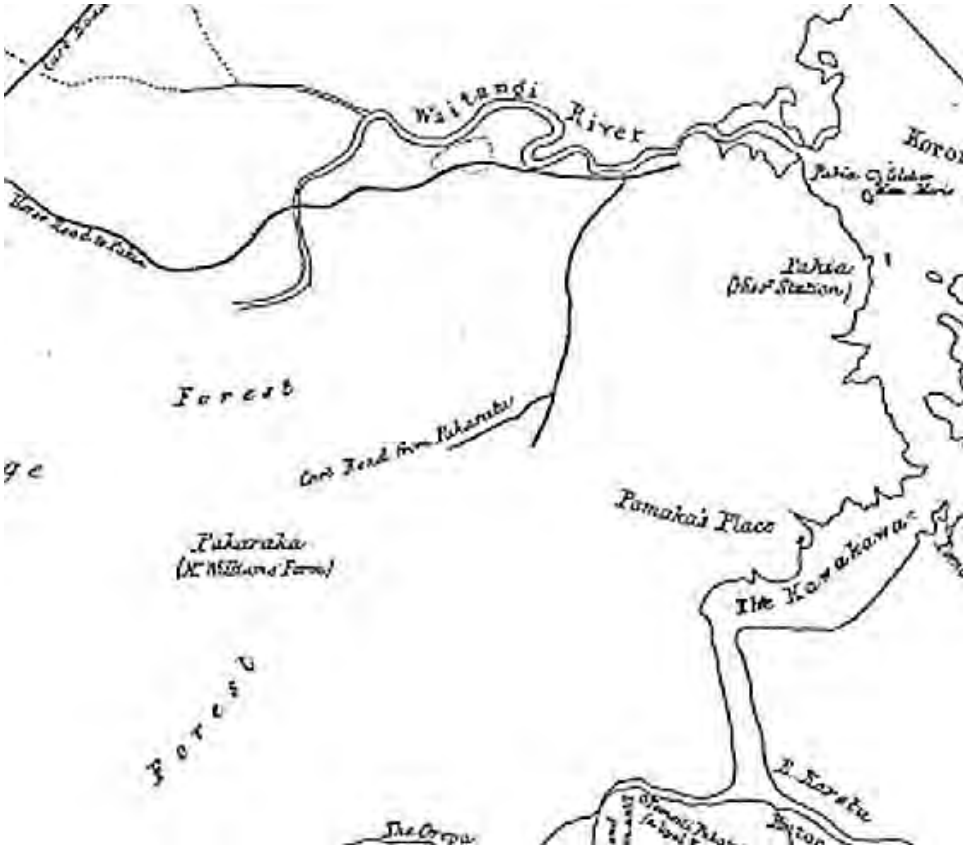

Figure 5. Portion of Map of the Bay of Islands, showing location of Pakaraka (H. Williams' Farm). Produced for the House of Commons, 29 June 1846. Source: Unknown.

6 Previous Archaeology

No reports on systematic archaeological surveys were located for this property, however a brief visit of the old Opua Forest Compartment 1, Taratara, was undertaken by J. Coster and G. Johnstone in 1979. Three pit sites were recorded in the vicinity of the trig station (Figure 7, Table 1) and over 20 pits were noted, similar to those observed in the main part of the Opua Forest which was surveyed at about the same time (all reported in Clark and Molloy 1978-79). Coster noted that these pits were unlikely to have been twentieth century in origin, nor rifle pits from the musket wars, and suggested they may have been for food storage in times of refuge. He noted that while the forest compartment could be surveyed, logging could have damaged or destroyed any sites that did exist. It was also noted that there were further sites on the neighbouring farmland.

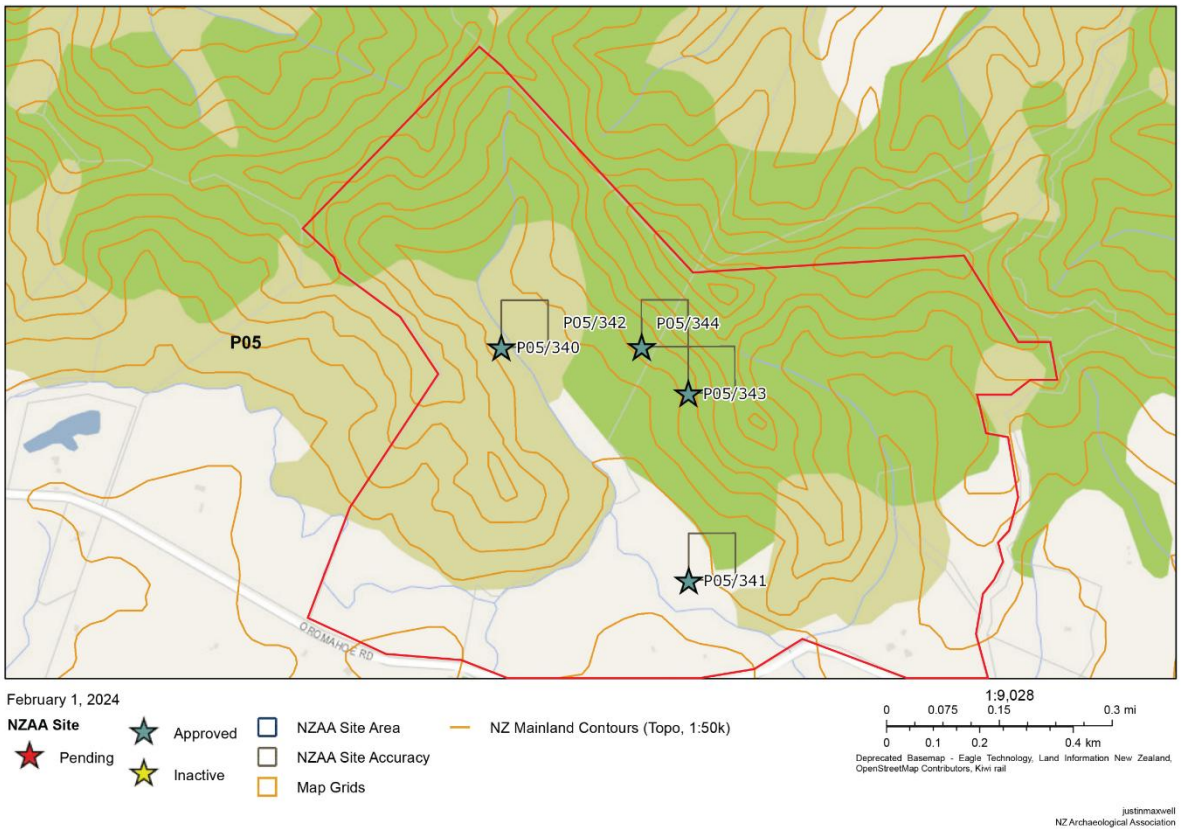

Figure 6. Recorded archaeological sites on the project area. Subject property outlined in red. Source: NZAA Archsite (www.archsite.org.nz).

Table 1. Recorded archaeological sites on the subject property. Source: NZAA Archsite 2023.

NZAA Site No. P05/	Site type	Recorded, Revisited	Description
340	Findspot	1977	Canoe first recorded in 1925
341	Terraces	1979	2 terraces on spur
342	Pits	1979	12 + pits on ridge

NZAA Site No. P05/	Site type	Recorded, Revisited	Description
343	Pits	1979	10 + pits on ridge adjacent 342
344	Pit	1979	Large pit

6.1 P05/340 (Findspot, Canoe)

This site is a findspot of a wooden canoe hull. It was found up a stream valley from Oromahoe Road, a minor tributary gully running westward into the main stream. A raupo swamp was a few metres below the canoe.

It was first seen in 1925 when it was said to have been in good condition and easy to recognise as worked material. At the time of recording in 1977, it had however become badly decayed, somewhat dried out and half buried in the bed of a small "rivulet" in an area badly trampled by stock.

It measured ~50 mm thick, 0.5 m wide, and 3-4 m long. The wood was said to be totara (*Podocarpus totara*), but it was badly rotted and barely recognisable as belonging to a canoe. A note in the site record suggests that part of it remained buried and was presumably in better condition.

6.2 P05/341 (Terraces)

This site is a rectangular terrace, 8 m by 4 m with a sloping back scarp 1.5 m high. A second less distinct terrace is 20 m higher on the spur.

The site is 100 m up a spur from its tip, overlooking a bend in the Oromahoe Road. At the time of recording, there was a bulldozed farm track across the southeast face of the spur.

The condition was noted to be in grass and some gorse (presumably good).

6.3 P05/342 (Pits)

This site is a series of 12 shallow, rounded pits along the ridgetop for 100 m. Dimensions ranged from 3 x 2 m to 2 x 1.5 m and most were 0.2-0.3 m deep. They were often indistinct. A local resident commented that pits extended farther along the main ridge and down a spur to the northeast.

The site is near the Taratara trig station, accessed from the south up the ridgetop track. It is immediately adjacent to P05/343 (Figure 7).

The condition was noted to be in secondary bush.

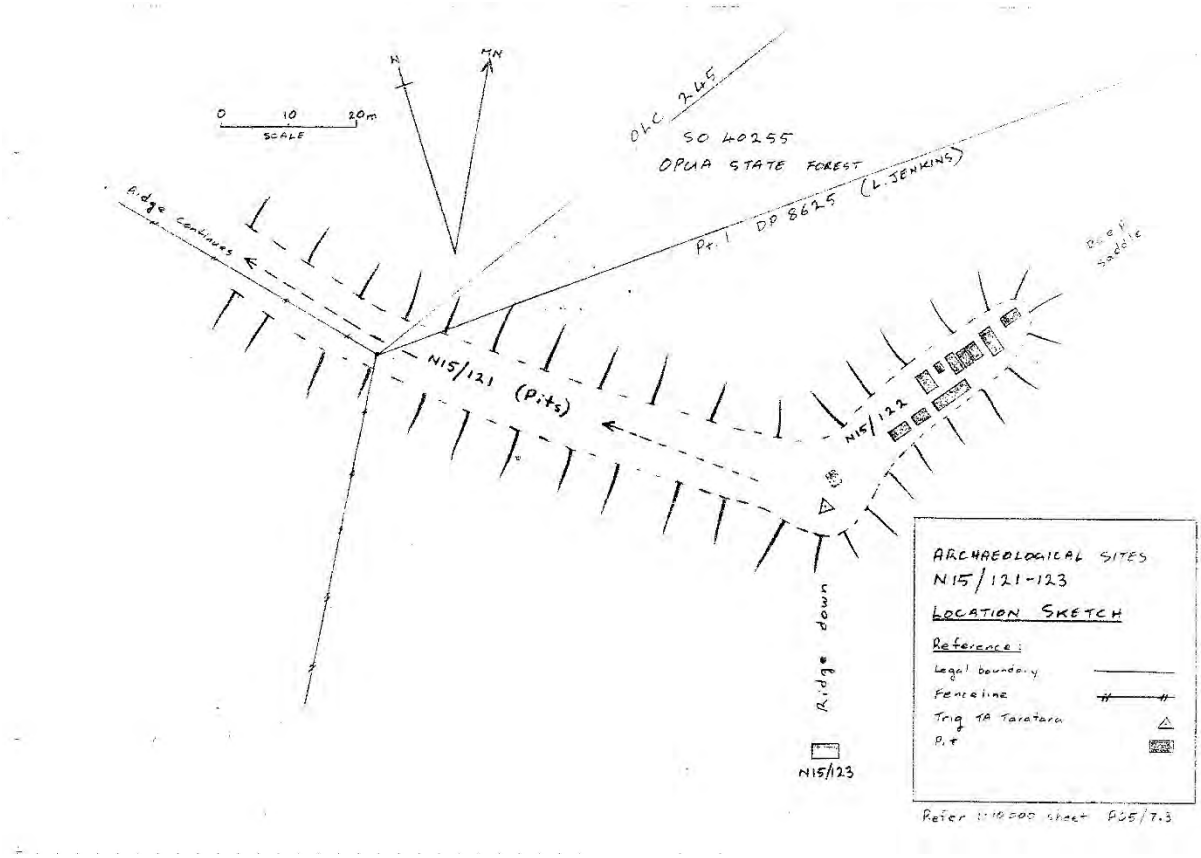

Figure 7. Sketch map of sites P05/342-44 (formerly N15/121-23). Source: Clark and Molloy 1978-79, Appendix V.

6.4 P05/343 (Pits)

This site is a cluster of at least 10 pits, up to 1 m deep. They were noted to have steep sides and sharp corners.

Local residents provided some commentary, remarking that these and other pits in the area had not been dug within the previous 50 years (i.e., after the late 1920s), and speculated they may have been riflepits from the Maori-European wars, but the recorder (J. Coster) consider that in form they did not differ from pits found elsewhere in the area, and were thus probably Māori storage pits.

The site extends along the main ridgetop for ~50 m. It is immediately adjacent to P05/342 (Figure 7). It was noted that former logging activities may have destroyed other features along the ridge.

The condition was reported to be in secondary bush.

6.5 P05/344 (Pit)

This site is a single, deep, and cleanly cut rectangular pit 4 x 2 m and 1 m deep.

It was noted to be in a transverse position, near P05/342 and 343 (Figure 7), about 35 m below the trig station on a spur running steeply downhill.

The condition was reported to be in secondary bush.

6.6 Imagery Search

Historical aerial photographs from 1953 (Crown 209/547/63, Figure 8) show little of archaeological interest on this property, though the image quality is low. Flat and sloping areas were grazed or in low scrub at the time; low bush and trees were growing near streams, and the slopes were covered in low scrub. Tracks appear along many ridgelines, as well as around some of the slopes.

By 1971 (Crown 3406/4483/3), the state forest north of the project area had been harvested. A large slip or quarry appears at the toe of the hill northwest of the homestead. Other vegetation cover is similar, with some clearance and a more distinct track following the steam that flows from the hills in Lot 2 down (southward) to the Manaia Stream.

Recent Lidar imagery (Figure 9) shows little additional information as large portions of the slopes are unresolved, probably due to dense vegetation cover. The ridgelines and streambeds are clearly outlined.

Figure 8. Historical aerial imagery of subject property, 1953. Source: Retrolens, Image No. 209/547/63.

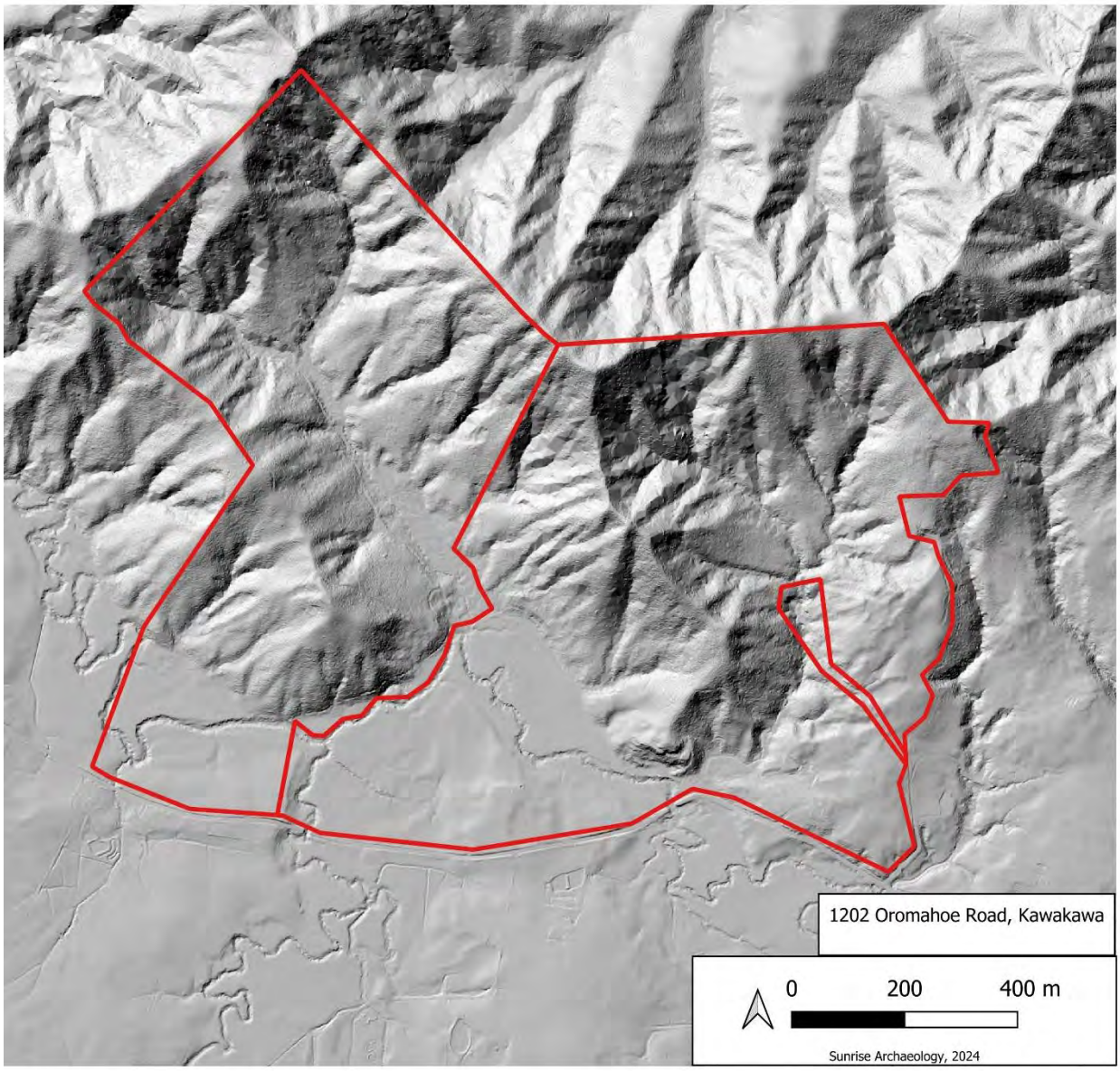

Figure 9. Lidar imagery of property (red outline) and surrounding land. Base figure source: LINZ.

7 Site Visit

The author visited the project area 8 April 2024, accompanied by Jofe Graham-Jenkins. Visibility of the ground surface was generally good, being grazed pasture in the areas where building platforms are proposed or exiting structures are in place. There were no limitations to the survey. The forested areas to the north of the proposed building platforms were also surveyed.

The surveys of Lots 2, 4, and 5 were largely restricted to the areas defined as house platforms and the suggested house platforms. Lot 3 had an existing house and sheds within it, and will not be affected by the proposed works. Refer to Figure 3 for location of these and other details.

All of the recorded sites were relocated, and an additional two new sites were recorded (Figure 10). It was found that all of the coordinates for they previously recorded sites were incorrect in the NZAA ArchSite database, and they have been updated with the correct information.

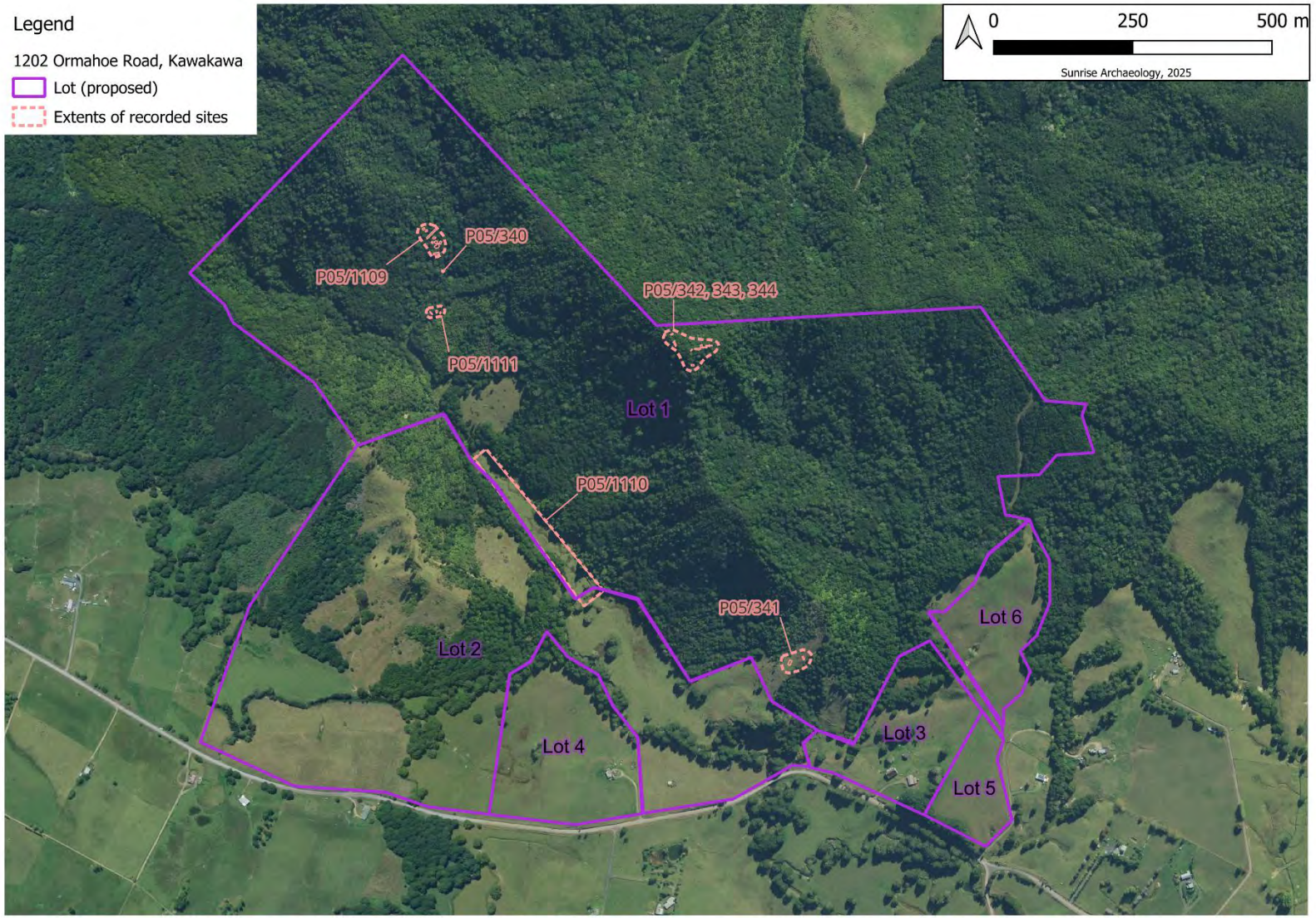

Figure 10. Sites identified and/or relocated in this survey. Base figure: Northland 0.3m Rural Aerial Photos (2023-2024).

7.1 Proposed Lot 1

Proposed Lot 1 was a mix of creeks, flats, and medium to steep terrain with intersecting ridges. Much of the proposed lot was currently in regenerating native bush, with small areas of scrub and in the lower areas pasture and creeks.

There are at least seven archaeological sites within this lot. A number of these sites are extensive and indicative of a permanent pre-contact Māori population in the area.

7.1.1 P05/1110 (Māori Horticulture) E1691070 N6091926 to E1691238 N6091731

This site is on the river flats that follow the creek that runs through this section of the block. It is currently in pasture. There is regenerating bush on both sides on medium to steep slopes.

The drone images suggest that Māori drains associated with gardening are present here (Figure 11, Figure 12). The area where drains are still present is ~350 m long. The drains are difficult to determine from ground level, but are clearly visible from above. To the south, the flats have probably been ploughed or disced in the past.

Figure 11. Dark vegetation through upper pasture is suspected Māori drains, P05/1110. Top is northwest.

Figure 12. Dark vegetation through lower pasture is suspected Māori drains, P05/1110. Top is northwest.

7.1.2 P05/1111 (Terraces) E1691636 N6092182

P05/1111 is a series of three terraces located on the slopes above a creek. It is probable that further terraces are present on the ridge above these terraces under what is a mix of invasive species and regenerating bush.

The largest of the terraces was ~6 by 2.5 m, another was ~5 by 3 m, and the other was 4 by 3 m.

The terraces face northwest and, given their size, location, and the soils found here, they are more likely to be living spaces than gardening terraces.

The terraces are in poor condition. The conditions are probably a combination of damage caused when the area was logged, slippage, and stock damage.

Figure 13. P05/1111 Lower terrace. Facing north. Scale units: 20 cm.

Figure 14. P05/1111, upper terrace. Facing east. Scale units: 20 cm.

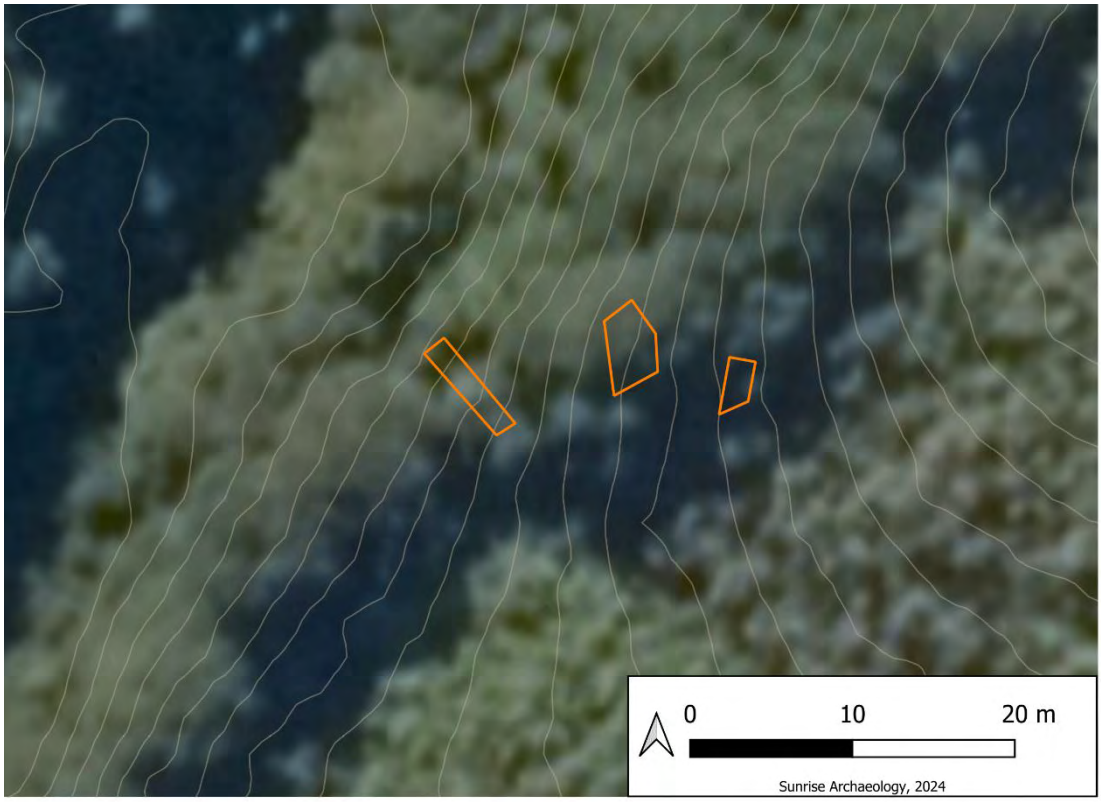

Figure 15. Outlines of P05/1111 terrace features. Base figure: Google Earth, with 1m contours.

7.1.3 P05/1109 (Kāinga, hamlet and Pātaka, storage huts) E1690995 N6092307

P05/1109 is located beside the intersection of two creeks. It is also located close to Site P04/340, where an incomplete waka was recorded in the early twentieth century. The eight terraces which make up the kāinga are small to medium terraces which face southeast.

A large central terrace ~8 by 6 m is flanked by two lower terraces 4 by 3 m and 6 by 4 m. Above the central terrace are three small terraces, each ~4 by 3 m. A large single posthole is present in each of these terraces, which is interpreted to be the central pole of a pātaka (storage hut). The pole holes were square, and each was ~300 by 300 mm and 600 mm deep. On the slope above the lower terraces there is a recent bulldozed track; two terraces are located above this track, each was ~3 by 4 m.

The location, terrace sizes, soil types, and type of neighbouring sites, which are a mix of cultivation, waka construction, habitation sites, and storage, suggest that this site was a kāinga and, given the presence of three pātaka, it was possibly the chiefly residence.

The site is in good condition, with some slumping and some damage from treefall and stock.

Figure 16. P05/1109. Lower terrace above creek. Facing southeast. Scale unts: 20 cm.

Figure 17. P05/1109. Large central terrace. Facing north.

Figure 18. P05/1109. Lower pātaka terrace and post hole. Facing south. Scale units: 20 cm.

Figure 19. P05/1109. Lower pātaka terrace post hole. Scale units: 20 cm.

Figure 20. P05/1109. Upper pātaka terrace and post hole. Scale units: 20 cm.

Figure 21. P05/1109. Upper pātaka terrace. Facing east. Scale units: 20 cm.

Figure 22. P05/1109. Terrace above bulldozer track. Facing west. Scale units: 20 cm.

Figure 23. P05/1109. Upper terrace. Facing north. Scale units: 20 cm.

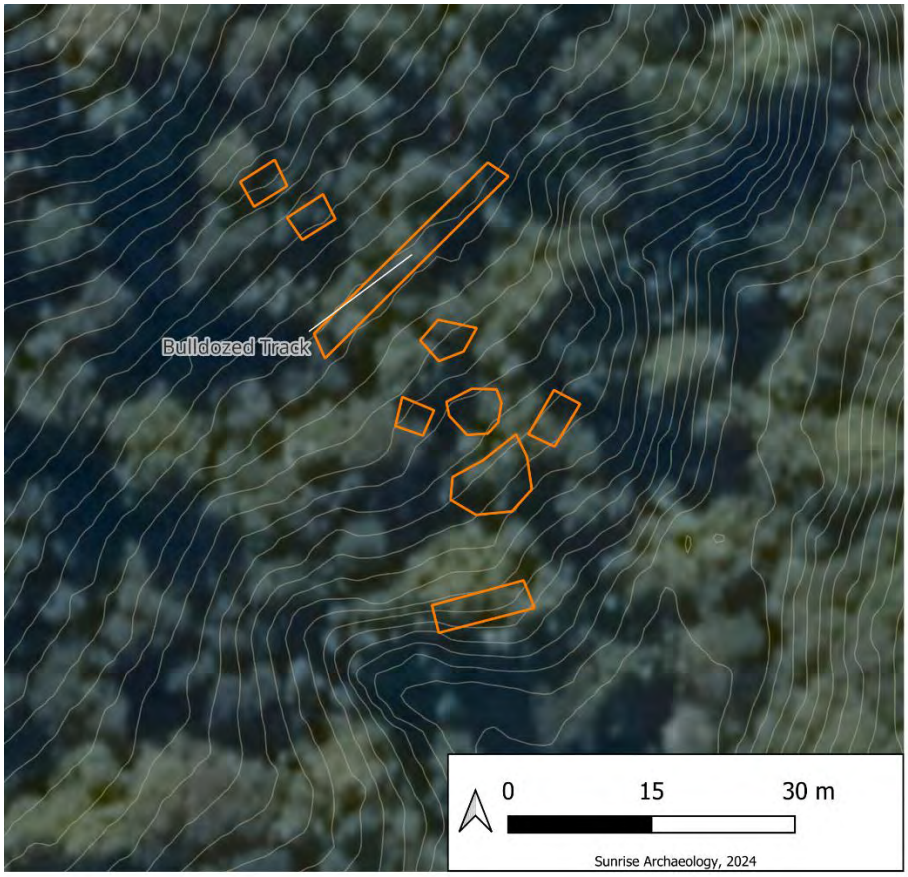

Figure 24. Outlines of P05/1109 terraces. Base figure: Google Earth, with 1 m contours.

7.1.4 P05/340 (Findspot, Canoe) E1691010 N6092256

This site was relocated partly following the site description, but also from the landowner's recollections. It is on a tributary of the creek, with a ridgeline above. It is believed that the tree used for the waka was felled in the area and was under construction in this location, in preparation for it to be taken downstream.

Nothing is visible above ground, but probing in the swamp suggests that there is a large wooden object below the mud/silt of the wetland and creek.

Figure 25. Site P05/340, area immediately above creek and likely the location of now-buried canoe. Scale units: 20 cm.

Figure 26. Site P05/340. Wetland and creek in area where canoe is likely to be located.

7.1.5 P05/341 (Terraces) E1691636 N6091554

Site P05/341 is two terraces that face north, located on a broad ridge. The larger terrace is ~8 by 4 m, the smaller ~4 by 2.5 m.

Both terraces are poorly defined, partly due to the current height of the vegetation, but also likely to be due to slippage, slumping and stock damage.

These terraces are to the south of the area identified as having Māori drains, but prior to European farming practices it is likely that the fertile flats to the immediate southeast were gardened (P05/1110).

Figure 27. Site P05/341, upper terrace. Facing west. Scale units: 20 cm.

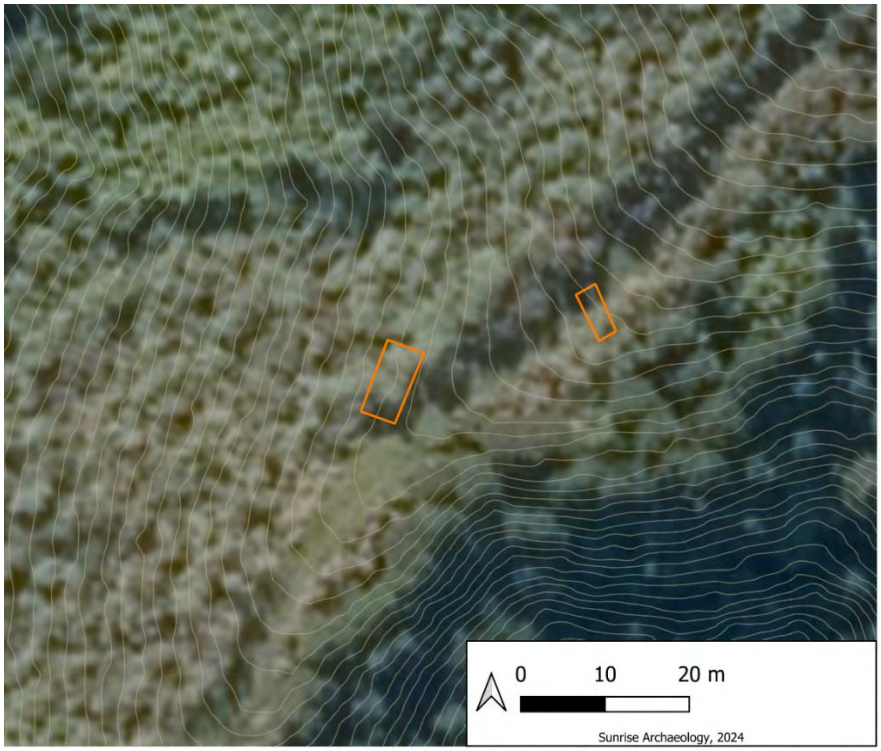

Figure 28. Outlines of P05/341 terraces. Base figure: Google Earth, with 1m contours.

7.1.6 P05/342, 343, 344 (Storage Pits)

- P05/342: E1691419 N6092143
- P05/343: E1691492 N6092122
- P05/344: E1691458 N6092086

These three sites should be considered a single site. P05/342 and 343 are on a single ridge, with a gap of only ~30 m between the two groups of pits originally recorded by Coster. Site P05/344 is ~30 m south of the main ridge, on a ridge that intersects the highest point of this range. Most of the pits recorded by Coster as P05/342 are on the neighbouring property, and were not investigated during this project.

The ridge is located on the high point of the range with 360^0 views. It is unlikely that any Māori cultivations were undertaken nearby, the gardening areas on the southern side of the range would have been along the creek and wetlands where Māori drains were noted during this survey. The cultivation areas were approximately 350 m downslope from the pit complex.

These sites are comprised almost entirely of pits, with one large terrace associated with the pits of P05/343. It is possible, given the very steep terrain, that the pits which make up site P05/343 were defended, though no ditch and bank is on the ridge.

The pits that comprise P05/343 and 344 are all in good/excellent condition, with most still retaining straight sides with minimal damage or slumping. Fortunately, the combination of remoteness and very steep terrain has made it difficult for the ridge to be utilised for forest access in the past. The pits range in size from small (1 by 1 m) to medium (3 by 1 m), to large (3 by 2.5 m) in size. The largest pit (P05/344) was ~5 by 3 m.

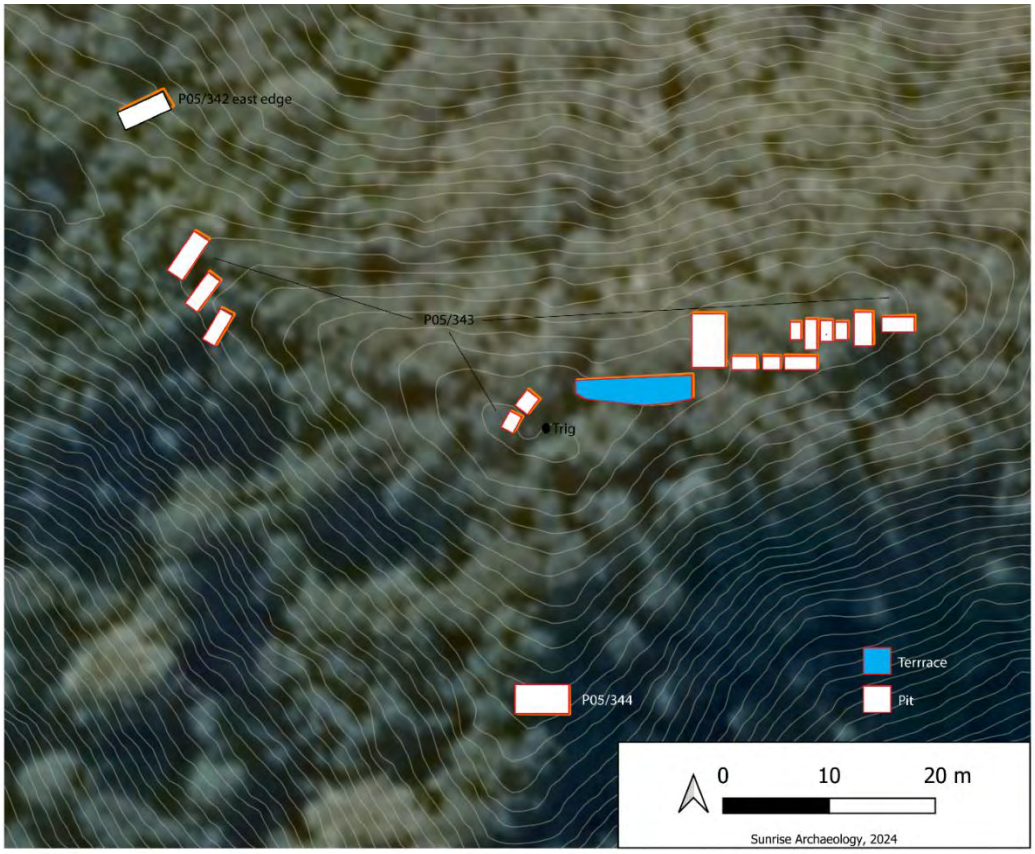

Figure 29. Outlines of P05/342, 343, and 344 features. Base figure: Google Earth, with 1m contours.

Figure 30. Large hand sawn totara stump on ridge below P05/343. Scale units: 20 cm.

Figure 31. P05/343. Lower, eastern pits.

Figure 32. P05/343. Central pits. Facing east. Scale units: 20 cm.

Figure 33. P05/343. Central pits. Facing east. Scale units: 20 cm.

Figure 34. P05/343. Two small pits to west of upper platform and trig. Facing north. Scale units: 20 cm.

Figure 35. Po5/342. Easternmost pit. Facing east toward P04/343.

Figure 36. Po5/344. Large pit. Facing north toward P04/343. Scale units: 20 cm.

7.2 Proposed Lot 2

The areas of Lot 2 proposed for a house platform, and the required access for the house site, have an existing cowshed and infrastructure within the proposed building platform. Exposed cuts in the topsoil indicate that the area has been previously modified and what remains is a thin topsoil overlaying clay. No above ground archaeological features were identified within the proposed building platform, or in the vicinity. The accessway is an existing gravel driveway.

Figure 37. Lot 2, Existing cowshed. Facing west.

Figure 38. Lot 2. Existing cowshed. Facing east.

7.3 Proposed Lot 4

Proposed Lot 4 is an area of medium slopes and natural terraces, which are currently grazed. Two shovel tests were excavated within the proposed building platform, which confirmed a thin topsoil overlay clay. The soils on the slopes are poor and unlikely to have been utilised by Māori for horticulture. No archaeological features were noted on the surface or within the proposed lot.

Figure 39. Lot 4, proposed building platform. Facing north. Scale units: 20 cm.

Figure 40. Lot 4, proposed building platform. Facing south. Scale units: 20 cm.

Figure 41. Typical soils within proposed Lots 3 and 4. Scale units: 20 cm.

7.4 Proposed Lot 5

Proposed Lot 5 is an area of medium slopes and natural terraces, which is currently grazed. No archaeological features were noted on the surface within the proposed lot. Two shovel tests were excavated within the proposed building platform, which confirmed a thin topsoil overlaying clay. The soils on the slopes are poor and unlikely to have been utilised by Māori for horticulture.

Figure 42. Lot 5, proposed building platform. Facing northeast.

8 Archaeological Significance

Heritage New Zealand Pouhere Taonga requires certain matters to be taken into account when assessing the archaeological value or significance of an archaeological site. These are: condition; rarity, unusualness, uniqueness; the context; information potential; amenity potential; and any cultural associations (HNZPT 2014).

The archaeological evidence indicates the land near Pakaraka, around what was known Old Land Claim 1316, was once home to a large Māori population. The sites found on this property, and their proximity to numerous other recorded sites in the area, are part of the extensive archaeological landscape of the Kawakawa area.

Five sites were previously recorded on the property, and three additional sites were recorded as part of this survey. Overall, it has been determined that at least eight intact archaeological sites remain on the property. Most are on ridges or are in close proximity to wetlands and waterways and have been evaluated as in good condition, with the majority of damage being from past forestry practices, stock damage, and erosion.

Table 2. Archaeological significance assessment.

Site/s	Criteria	Assessment
P05/ 340, 341, 342, 343, 344, 1109, 1110, 1111 Canoe findspot, terraces, pits, horticulture, **kāinga** (hamlet), **pātaka** (storage huts)	Condition	Fair/Good/Excellent. The sites on the upper ridges are in good-excellent condition. The terraces on the lower slopes are in fair to good condition. The waka was possibly relocated and is in an unknown condition.
	Rarity/ Uniqueness	Pits and terraces are common components of pre-contact Māori settlement. Intact kāinga with pātaka are rare.
	Contextual Value	These sites have value as part of the extensive archaeological landscape of the Kawakawa area. They provide evidence of Māori use of what was once a well-populated area.
	Information Potential	The sites have medium-high information potential due to the rareness and the age of materials found.
	Amenity Value	Being on private land, the sites have limited public amenity value. If in a Māori reservation, this may change.
	Cultural Associations	Pre-contact Māori.

The archaeological significance or value of sites recorded in the project area are associated with their condition, rarity, contextual value, information potential and/or amenity value. No ranking of sites is allowed or appropriate under the Act or HNZPT guidelines.

9 Heritage Significance

Heritage significance and values accounted for under the Resource Management Act 1991. The following matters must be taken into account when assessing Heritage significance/values include: historical, architectural, cultural, scientific, and technological qualities (RMA 1991).

Table 2. Heritage significance evaluation.

Location	Criteria	Assessment	Significance
Oromahoe Road, Kawakawa	Historical: the place reflects important or representative aspects of national, regional, or local history, or is associated with an important event, person, group or idea or early period of settlement within NZ, the region or locality.	This area forms part of a wider cultural/ archaeological landscape, associated with Māori occupation and cultivation, and also early 19th C Māori-European interactions.	Moderate
	Architectural attributes: the place is notable or representative example of its type, design or style, method of construction, craftsmanship or use of materials or the work of a notable architect, designer, engineer or builder.	The location has no architectural significance/value.	None
	Social: the place has a strong or special association with or is held in high esteem by a particular community or cultural group for its symbolic, spiritual, commemorative, traditional or other cultural value.	Significance to Māori be determined by the affected tangata whenua.	N/A
	Cultural/Mana whenua: the place has a strong or special association with or is held in high esteem by mana whenua for its symbolic, spiritual, commemorative, traditional or other cultural value.	This to be determined by the affected tangata whenua.	N/A

Location	Criteria	Assessment	Significance
	Scientific: the place has potential to provide knowledge through scientific or scholarly study or to contribute to an understanding of the cultural or national history of NZ, the region or locality.	Kāinga and pātaka sites, as well as pits, terraces, and evidence of past horticultural practices, have potential to provide scientific information on Māori activities. The buried waka also has scientific value (though it should not be disturbed).	High
	Technology: the place demonstrates technical accomplishment, innovation or achievement in its structure, construction, components, or use of materials.	Sites have no technological significance/value.	None
	Aesthetic: the place is notable or distinctive for its aesthetic, visual or landmark qualities.	The site has little outstanding aesthetic value.	None
	Context: the place contributes to or is associated with a wider historic or cultural context, streetscape, townscape, landscape or setting.	The sites on this property, along with the other recorded features in the area, contribute to the wider pre-contact settlement landscape of the Bay of Islands.	Moderate

Additional comments

Overall, the heritage value of the location/sites/area is of medium-high significance, at a local and regional level. No additional ranking is appropriate or required.

10 Assessment of Effects on Archaeological Features

This survey was undertaken to relocate and establish the extent of known archaeological sites on the property, and to determine whether the proposed building platforms and associated infrastructure would affect known or unidentified archaeological material or sites. The assessment was done to determine whether the sites would be damaged during the planned development, and advise as to how site damages could be mitigated.

Eight recorded archaeological sites were relocated or newly identified on the property during this survey.

The extent of known archaeological features on this property, and the density of sites in the nearby area, indicate the project area is part of an extensive archaeological landscape which was focused on the low-lying areas adjacent to wetlands and waterways, and the high ridges where food storage was practical and possibly defended.

The proposed house platforms, access, and surrounding areas of the Lots 2, 4, and 5 will have no effect on any of the identified archaeological sites or features. Overall, the proposed locations where ground disturbance might occur are assessed as having a low likelihood of encountering intact archaeological material or features. The proposed building platforms are unlikely to have been utilised by Māori for gardening.

The proposal to place Lot 1 into a Māori reservation is largely intended to protect both the heritage values of the Lot and the regenerating bush within.

This survey was conducted specifically to locate and record archaeological remains. The survey and report does not necessarily include the location and/or assessment of wāhi tapu or sites of cultural or spiritual significance to the local Māori community, who may be approached independently for any information or concerns they may have.

11 Recommendations and Conclusion

Sunrise Archaeology was commissioned by Jofe Graham-Jenkins to provide an archaeological assessment of his property at 1202 Oromahoe Road, Kawakawa, Far North (Figure 1). The legal description of the property is Lots 2 and 3 DP 175428 and Pt Lot DP 8625 (Figure 2).

Five previously recorded archaeological sites and three newly recorded sites are present on the property. All of these sites are within proposed Lot 1, which is not to be developed but is proposed to become a Māori Reservation.

It is determined that there is a low likelihood of encountering intact archaeological features or material at the proposed building platforms and areas of associated infrastructure.

The following recommendations are made:

1) The subdivision can proceed without requirement for a Heritage New Zealand Authority to damage, modify or destroy an archaeological site.

2) In the event that unrecorded subsurface archaeological remains are uncovered during the proposed groundworks for the subdivision, all work affecting such remains should cease immediately and a qualified archaeologist should be contacted so that appropriate action can be taken. This is referred to as an Accidental Discovery Protocol (ADP). An ADP should be in place prior to any groundworks occurring within the proposed subdivision.

3) Any alterations to the proposed works need to be reviewed for comment and/or assessment by an archaeologist.

The survey of the property was conducted specifically to locate and record archaeological remains. The survey and report does not necessarily include the location and/or assessment of wāhi-tapu or sites of cultural or spiritual significance to the local Māori community, who may be approached independently for any information or concerns they may have.

12 References

Clark, P. and Molloy, C. 1978-79. Archaeological Site Survey. Opua State Forest 117, Summer 1978-1979. Prepared for the Auckland Conservancy, New Zealand Forest Service.

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Appendix 5

Site Suitability Report

Engineering Report for Proposed Subdivision
1202 Oromahoe Road, Kawakawa
Lots 2 & 3 DP 175428 and Pt Lot 1 DP 8625
for
Jofe Graham-Jenkins

Supporting report for RC Applications to Far North District Council

Haigh Workman reference 24 041 Rev.B

27 March 2025

Revision History

Revision Nº	Issued By	Description	Date
A	Tom Adcock	For Resource Consent	26 June 2024
B	Tom Adcock	Revision to scheme plan	28 March 2025

Prepared by

Tom Adcock
Senior Civil Engineer
BEng Civil, MEngNZ)

Approved by

John Papesch
Senior Civil Engineer
BE (Civil Engineering),
CPEng, CMEngNZ

TABLE OF CONTENTS

TABLES

FIGURES

Executive Summary

Haigh Workman Ltd (Haigh Workman) was commissioned by Jofe Graham-Jenkins (the client) to undertake an engineering assessment of land at 1202 Oromahoe Road, Kawakawa (the site), for a proposed six lot subdivision.

The site is within the Rural Production zone and has an area of 137 ha and comprises bush clad steep hillsides running off to river flats laid to pasture.

This report assesses access, natural hazards, earthworks, stormwater, water supply and wastewater with specific regard to the local authority plans and subdivision rules contained. Lot 3 of the subdivision contains the existing homestead. The proposed subdivision is shown on Sapphire Surveyors Ltd Plan Ref. 0116S. Below is a synopsis of the key sections covered:

Geotechnical
Stable building platforms suitable for residential development were identified on vacant lots 2, 4 and 5. Refer Haigh Workman Geotechnical Assessment Report ref. 24 041. The nominated platforms on lots 2 and 4 are on gently sloping ground. On lot 4 a 'building restriction line' is recommended to provide setback from the edge of the river terrace. Lot 5 contains a number of historical instability features but are not considered to represent ongoing instability concerns and are sufficiently far from the proposed development area not to pose a risk, provided the recommended 'building restriction line' is applied.

Development on all lots shall be subject to site specific geotechnical investigations, including for lot 5 slope stability assessment being undertaken at Building Consent stage.

Natural Hazards
None of the nominated building platforms are impacted by natural hazards. The lot 2 and 4 building platforms which are closest to the mapped flood hazard achieve a freeboard elevation difference of 2.2 and 6.4m, respectively.

Vehicle Crossings
The lot 3 and 4 existing crossings can be retained with vegetation clearance and minor earthwork trimming within road berm. The lot 2 crossing is in a low-lying area and considered unsuitable, a new crossing on the western boundary is recommended which can be combined with the existing lot 4 crossing.

The existing intersection for the unformed legal road with Oromahoe Road also requires vegetation clearance within road berm

It is proposed that two existing accessways be upgraded to provide access to the site. The entrances can be made to comply with minor vegetation clearance.

Access & Parking
All sites have suitable land for driveway access plus parking and manoeuvring space for a minimum two cars.

Earthworks
Proposed earthworks at subdivision stage are for the will be upgrading of the Unformed Legal Road and vehicle crossings as required. All earthworks will be contained within the Council road reserve which are exempt from the District Plan limits.

All earthworks will comply with the proposed District Plan Rules EW-R12 and EW-R13, and Standards EW-S3 and EW-S5.

Stormwater Management
The anticipated impermeable surfaces following development are expected to be below 2%, except for the smaller 2ha lot 5 at 3.8%.

Due to the large lot sizes, minimal increase in catchment runoff, and well vegetated surrounding environment; no attenuation is proposed for this development.

To receive the maximum treatment benefits from overland flow and to enable stormwater from potential future buildings to return to sheet flow, stormwater should be piped away from the potential building sites and effluent disposal areas where it can be discharged via a level spreader type device.

Wastewater
For each of the vacant lots a suitable area of 600m2 has been identified for secondary treated effluent disposal plus reserve area. The soils were classified as AS/NZS 1547:2012 Category 5, generally silt based with varying levels of clay content, and can be expected to sustain a loading rate of 3 mm/day for surface laid dripper irrigation.

There is adequate suitable area and setback from the proposed subdivision boundaries for the existing wastewater system on lot 3.

Water Supply
Domestic water supply will be roof runoff collected in storage tanks.

Fire Fighting
Far North District Council Engineering Standards 2004 (2009 Rev.) require a water supply that is adequate for firefighting purposes. There is no reticulated water supply, so each lot will be responsible for providing an on-site firefighting supply.

1 Introduction

1.1 Project Brief and Scope

Haigh Workman Ltd (Haigh Workman) was commissioned by Jofe Graham-Jenkins (the client) to undertake an engineering assessment of land at 1202 Oromahoe Road, Kawakawa (the site), for a proposed six lot subdivision.

The scope of the report includes the following assessment items:

- General site assessment
- Natural hazards
- Vehicle access, parking and manoeuvring
- Earthworks
- Stormwater and wastewater
- Water supply and firefighting

Geotechnical considerations including building platform suitability is provided by the separate Haigh Workman Geotechnical Assessment Report ref. 24 041.

A proposed subdivision plan prepared by Sapphire Surveyors Ltd Reference 0116S Version B dated 5th June 2024 was made available at the time of writing this report. Refer copy appended.

The site is zoned 'Rural Production' under the Operative Far North District Plan.

1.2 Limitations

This report has been prepared for our Client Jofe Graham-Jenkins with respect to the brief outlined to us. This report is to be used by our Client and Consultants and may be relied upon by the Far North District Council (FNDC) when considering the application for the proposed subdivision and development. The information and opinions contained within this report shall not be used in any other context for any other purpose without prior review and agreement by Haigh Workman Ltd.

It has been assumed in the production of this report that the site is to be subdivided and subsequently developed at the potential house site identified. At the time of writing there was no information available for proposed future developments on either lot following subdivision. If any of these assumptions are incorrect, then amendments to the recommendations made in this report may be required.

The comments and opinions presented in this report are based on the findings of the desk study and ground conditions encountered during an intrusive site visit performed by Haigh Workman. There may be other conditions prevailing on the site which have not been revealed by this investigation and which have not been taken into account by this report. Responsibility cannot be accepted for any conditions not revealed by this investigation. Any diagram or opinion on the possible configuration of strata or other spatially variable features between or beyond investigation positions is conjectural and given for guidance only.

2 Site Description and Proposed Development

2.1 Site Identification

Site Address:	1202 Oromahoe Road, Kawakawa
Legal Description:	Lots 2 & 3 DP 175428 and Pt Lot 1 DP 8625 (SO 42345)
Area:	138.2 ha
Operative Far North District Plan Zone:	Rural Production

2.2 Site Description

The property is irregular in plan shape, located on the southern side of an extensive west to east trending ridge feature that extends from Puketona in the west to the steep hill country ranges, some 2.5km to the east. Branching off the west to east trending ridge feature are a series of ridge spurs and valleys which extend southwards draining into the Manaia Stream which flows westward crossing the southern part of the site.

The property forms a large block of rural land that comprises existing pasture across the lower rolling hills to the south and a mixture of mature and regenerating native bush across the steeper slopes to the north.

The property is located to the north of Oromahoe Road, with the road forming the southern property boundary. To the east, the property boundary is defined by an unformed legal road that extends northwards off Oromahoe Road.

Vehicle access to the property is gained via a number of formed vehicle crossings Oromahoe Road, plus the unformed legal road.

The property is predominantly undeveloped except for an existing dwelling and two medium sized farm sheds located on proposed lot 3. There are two further sheds at 400m and 500m to the west of the dwelling. The closest is an old piggery located on proposed lot 2, the furthest an old milking shed located on proposed lot 4.

Refer Figure 1 for site location. Proposed building platforms for lots 2, 4 and 5 are shown on Drawings 24 041/G02 and G03 appended.

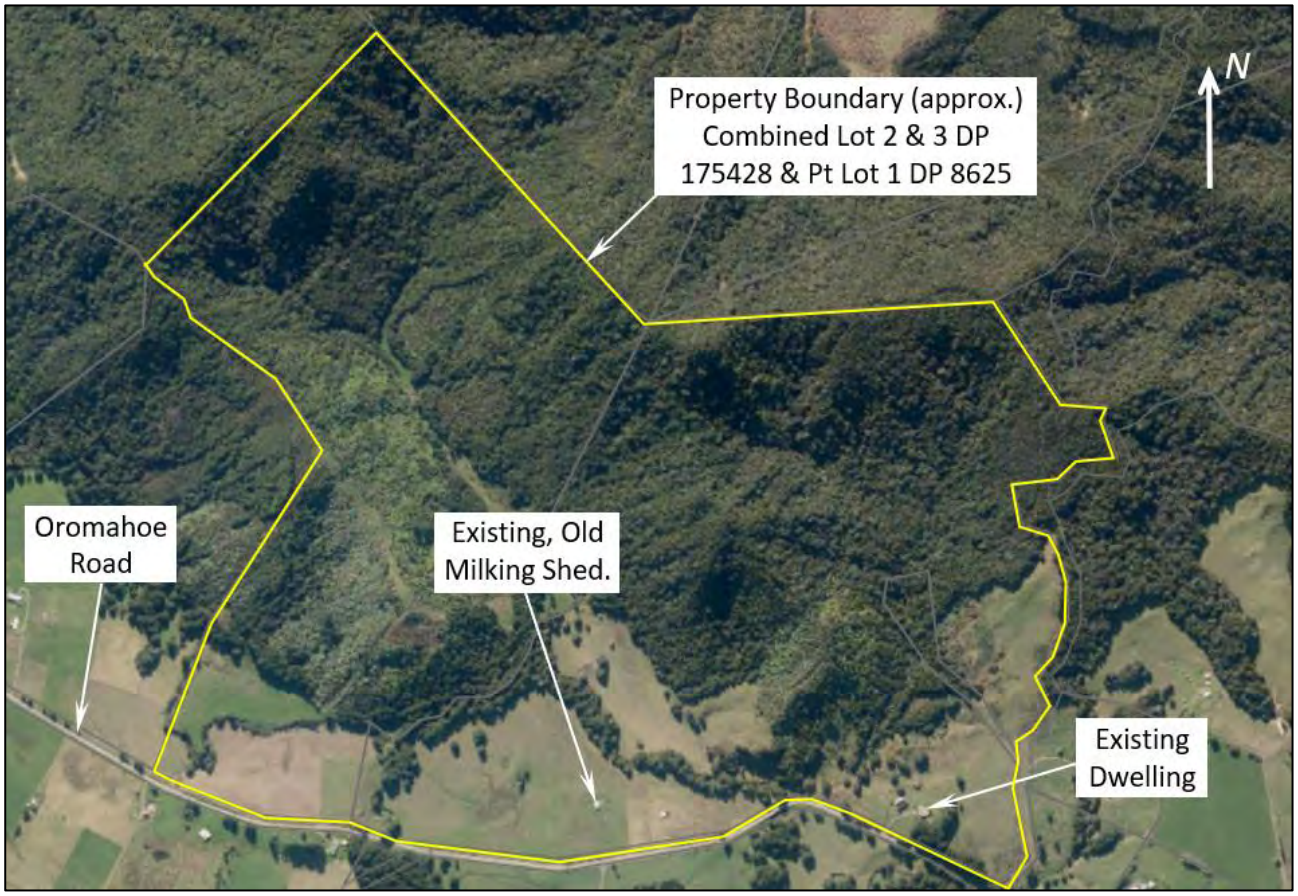


Figure 1: Site Location

2.3 Proposed Subdivision

A scheme plan has been provided, which identifies the intent to subdivide the property into five lots varying from 2.0 to 80.5 hectares in area.

Proposed Lots are described in Table 2-1 below and provided in Appendix A.

Table 2-1 Proposed Lots

Lots	Proposed Area (ha)	End-use
Lot 1	82.6	Maori Reserve
Lot 2	38.3	Rural residential
Lot 3	4.9	Rural residential
Lot 4	6.5	Rural residential
Lot 5	2.0	Rural residential
Lot 6	3.9	Rural residential
Total	**138.2**	

Lots 3 and 6 to be held in the same record of title.

3 Environmental Setting

3.1 Geology

Refer separate Haigh Workman Geotechnical Assessment Report ref. 24 041.

3.1.1 Weathered Geology (Soils)

Sources of information:

- NZMS Sheet 290 Q04/05, 1:100,000 scale map, Edition 1, 1980: "Bay of Islands" (Soils)

Further reference to the published New Zealand land inventory maps (Whangaroa-Kaikohe), indicates the site is underlain by 'soils of the rolling and hill land; well to moderately well drained Marua light brown clay loam (MRuH) across the northern part of the property, with the southern part of the property underlain by 'soils of the undulating terraces and lowlands; well to moderately well drained Whareora clay loam (WO) and Waipu clay loam (YU)'. The northern hill country is further underlain by weathered to soft, brown sandy clay with harder cores to depths of 30m.

An extract of the geological soils map is shown in Figure 2 below.

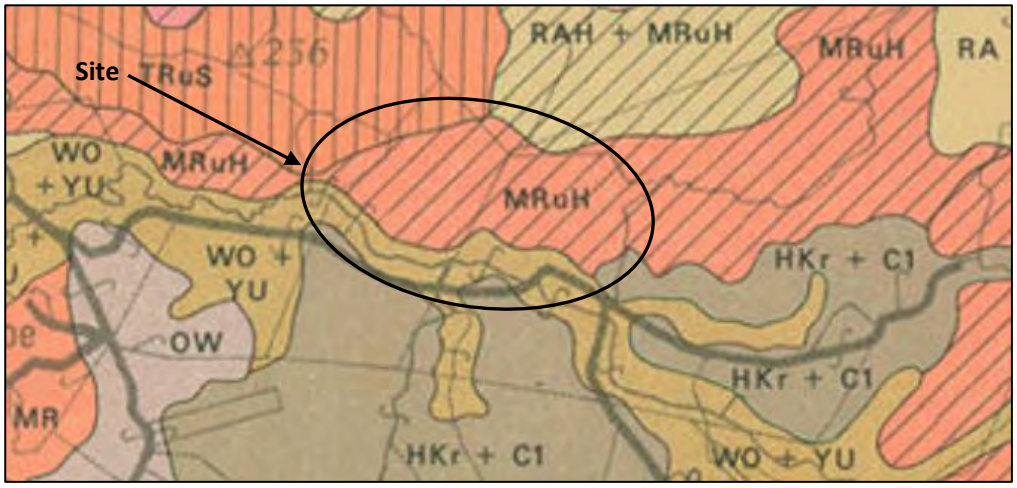


Figure 2: NZMS Soils Map

Table 3-1 Soils Legend

Symbol	Unit Name	Drainage Properties
MRuH	Marua light brown clay loam	well to moderately well drained
HKr + C1	Hukernui silt loam with yellow subsoil + Otao-Waitemata-Albany-Coastville-Otanga complex	Imperfectly to poorly drained well to moderately well drained
WO + YU	Whareora clay loam + Waipu clay	well to moderately well drained Imperfectly to very poorly drained

3.2 Natural Hazards

Under Section 2 of the Resource management Act 1991, **natural hazard** means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.

Natural hazards listed in Section 71(3) of the Building Act 2004 include: erosion, falling debris, subsidence, inundation and slippage. We assess the susceptibility of this site to these potential hazards in Table 3-2 below.

Table 3-2: Natural Hazards

Natural Hazard	Risk
Erosion (including coastal erosion, bank erosion, and sheet erosion)	No, subject to installation of erosion & sediment controls during earthworks operations.
Falling debris (including soil, rock, snow, and ice)	No, land does not feature boulders or exposed rocks that could otherwise become dislodged.
Subsidence (vertical settlement)	No, subject to meeting geotechnical requirements given in Haigh Workman Geotechnical Assessment Report ref. 24 041.
Inundation (including flooding, overland flow, storm surge, tidal effects, and ponding)	Yes, proposed lot 2 and 4 contain NRC river flood hazards. However, the proposed building platforms have sufficient distance and elevation from the proposed hazard not to be affected.
Slippage	No, subject to meeting geotechnical requirements given in Haigh Workman Geotechnical Assessment Report ref. 24 041.

In respect of Section 71(2) of the Building Act 2004, adequate provision can be made to protect the land and buildings from natural hazards. Subject to the conditions recommended in this report, there is no significant risk from natural hazards that would cause Section 106 of the Resource Management Act to apply.

3.2.1 NRC Flood Mapping

Parts of proposed lots 2 and 4 are modelled as being subject to flooding in the 10, 50 and 100-yr. + CC priority river flooding events. Refer Figures 3 and 4 below and NRC flood hazard report appended.

The height difference between the existing natural ground level at the proposed building platforms and respective flood hazard is tabulated below. Both platforms have more than 0.5m freeboard form the 100yr. + CC flood hazard.

Table 3-3: Lots 2 and 4 flood levels

Lot	Platform level	Flood hazard level	Freeboard
2	61m	58.8m	2.2m
4	65m	58.6m	6.4m

On lot 3 the proposed building platform is elevated some 15m above the valley bottom.

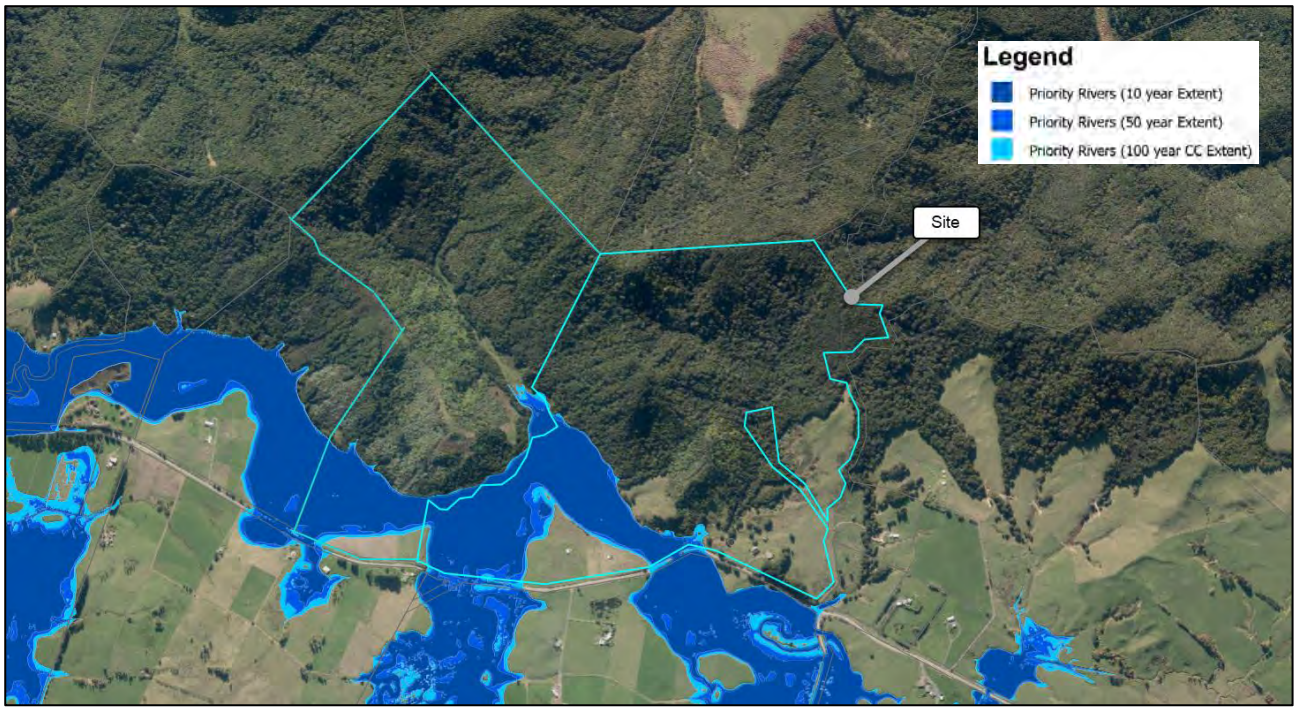


Figure 3 NRC Priority Rivers Flood Hazard Map

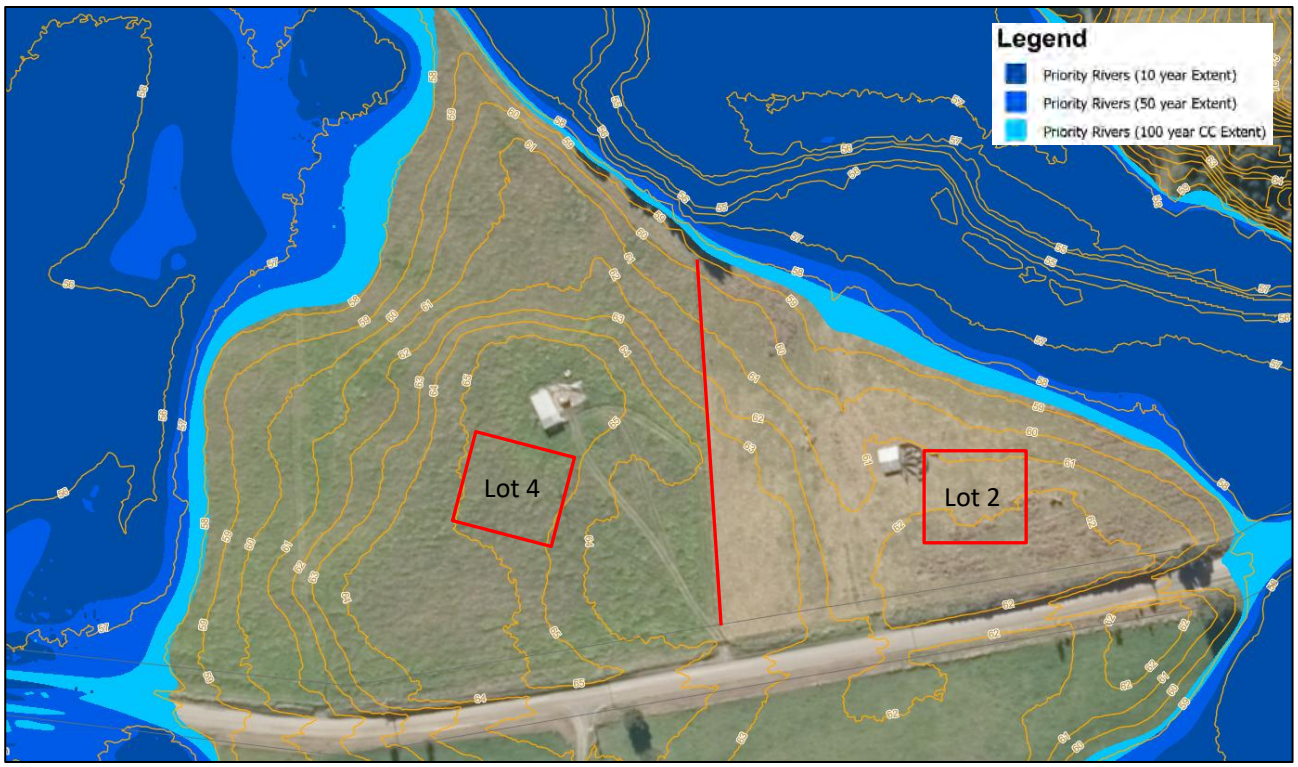


Figure 4 Proposed Lots 2 and 4 Building Platform in Relation to Mapped Flood Hazard

4 Site Access

4.1 Vehicle Crossings

Vehicle crossing stopping sight distances (SSDs) were assessed for all lots. Refer Section 4.3 for photographs and tabulated SSDs. A summary is provided by Table 4.1 below.

Table 4-1 Access Summary

Lot	Existing Access	Proposed Access
1	No existing formed access	Lot 1 has legal access available via the unformed legal road. The site is a proposed Maori Reservation and is not expected to become developed. Forming a vehicular access can be carried out at a future date should the need arise.
4	Existing paddock crossing off unsealed Oromahoe Road leading to old milking shed	SSD looking east is adequate. SSD looking west requires vegetation clearance and minor earthworks trimming within the road berm. Exiting crossing meets FNDC Engineering Standards 2023 Drawing Sheets 21 & 22 Type 1A - Light Vehicle (2 lots or less). The road has no formed water table, so a culvert is not required.
2	Existing paddock crossing off unsealed Oromahoe Road leading to old piggery	The existing crossing coincides with a localised natural low point between two gentle knolls. There is no formed drainage for the carriageway which has resulted in potholes forming in the road. We recommend a new crossing be formed on the western boundary and the existing crossing be abandoned and permanently fenced off. SSD looking west requires vegetation clearance and minor earthworks trimming within the road berm as per lot 4 crossing. Crossing to be formed to Type 1A - Light Vehicle standard. The road has no formed water table, so a culvert is not required. Lots 2 and 4 crossings may be combined. The standard would remain the same Type 1A - Light Vehicle standard (2 lots or less).
3	Existing farm crossing off unsealed Oromahoe Road leading to homestead	Vegetation clearance is required in both directions plus minor earthworks trimming to the east to achieve adequate SSD. No other work required. The road has no formed water table, so a culvert is not required.
5	None	Form new access 150m from start of unformed legal road to Type 1A- Light Vehicle standard (2 lots or less). The crossing shall include a culvert minimum 300mm diameter.
6	Existing paddock entrance off unformed legal road	No work required.

	Existing intersection for unformed legal road with sealed Oromahoe Road	A total of four lots (Lots 1 & 2 DP 374752 plus proposed lots 5 & 6) gain access off the unformed legal road. The intersection shall be upgraded to Type 1A- Light Vehicle standard (2 lots or less). The Oromahoe/McIntyres Road intersection is sealed so the unformed legal road intersection shall also be sealed or concreted. This will help prevent aggregate tracking onto the sealed Oromahoe Road. SSDs in both directions are adequate, a sight bench has been cut to improve the sightline looking west.

FNDC Engineering Standards and Guidelines 2023 Clause 3.2.27.4 specifies that a rural access with less than 80 (i.e 8 household equivalents) movements a day connected to an Access Road with less than 1,000 vehicles per day shall be formed in accordance with Drawing Type 1A Sheet 21 'Vehicle Crossing – Rural'. For 3-5 lots a Type 1A crossing shall be 4m wide with 5m radii.

4.2 Unformed Legal Road

The unformed legal road provides access for existing Lots 1 and 2 DP 374752 and proposed lots 5 and 6, plus occasional access to the proposed Maori Reservation. Proposed lots 5 and 6 are to be under the same title and it is unlikely that lot 6 will ever be developed. Hence, the effective number of lots gaining access is three. FNDC Engineering Standards and Guidelines 2023 Clause 3.2.28.1 states that vehicular accesses that serve eight or less lots shall be private accessways. Furthermore, as per FNDC Policy #4103 Council is unlikely to maintain a road serving less than 5 properties.

Table 3.16 requires that a rural private accessway serving 3 – 5 lots has a carriageway width of 4.0m plus shoulders. The Operative District Plan Appendix 3B-1 for the Rural Production zone for 3-4 Household Equivalents requires a carriageway width of 3.0m plus passing bays, which in the rural zone shall be spaced at not less than 100m intervals.

The existing access on the unformed legal road has a 3m single lane gravel surface plus a formation width and geometric alignment that can accommodate fire truck access. Grass has grown between the wheel tracks and on the shoulders due to low usage and lack of maintenance. The upslope water table drain is poorly defined and needs cleansing. Cross road culvert occurs at approximately 45m from the start of the road where a natural spring on lot 5 discharges. A second culvert occurs at the start at the intersection with Oromahoe Road.

In conclusion, we recommend for following:

- The 3m carriageway width is adequate and meets the District Plan requirements for a private access.
- A passing bay shall be formed to coincide with the first bend at 90m from the start. This will only be required once lot 5 is developed so can be made a condition of consent at time of building.
- The upslope water table drain should be cleansed including the cross road culverts.
- The carriageway surface and shoulders be graded to remove buildup of grass and a maintenance running coat applied.

Passing bays shall be at least 15m long and provide a minimum usable width of 5.5m. We recommend a 5m long bay with 5m long tapers at either end.

4.3 Sight Distance Standards

Minimum sight distances from vehicle crossings are specified in the Far North District Council Engineering Standards and Guidelines 2023 Drawing Sheet 4.

Oromahoe Road is classified as a secondary collector road with an open speed limit and an estimated ADT of 254.[1]

The Standards require a minimum sight distance of 210m for access to a Secondary Collector Road with a 100km/hr posted speed limit. Haigh Workman have assessed the operating speed for each crossing location as per Table 4.2 below. As allowed by Note 2 (Drawing Sheet 4), a site specific Austroads calculation for each crossing has been carried out which takes into consideration the road surface type, gradient and operating speed in each direction.

Table 4-2 Sight Distance Summary

Lot Number	Description	Direction of Approaching Traffic	Operating Speed (km/h)	Gradient	Austroads Sight Dist. Calculation (m)	FNDC Sight Dist. (Drawing Sheet 4) (m)	Sight Dist. Achieved (m)	Notes
4	Existing crossing old milking shed	East	80	flat	114	145	150	
		West	70	flat	92	120	100	Vegetation clearance & minor earthworks trimming required within road berm
3	Existing crossing house	East	80	+5%	106	145	180+	Vegetation clearance required in both directions plus minor earthworks trimming to the east
		West	80	+5%	106	145	150	
Unformed legal road serving lots 5 & 6	Intersection with Oromahoe Road	East	70	-5%	101	120	110	
		West	80	-5%	126	145	180+	Vegetation clearance required within road berm

[1] Estimate provided by Mobile Road website, March 2024.

4.3.1 Lot 4 Existing Crossing

The sight distance to the west of the existing crossing at Lot 2 is partially obstructed by a vertical curve in the road geometry and berm. With trimming of the berm and vegetation clearance, approximately 100m sight distance to the west can be achieved.

Figure 5 Lot 4 Existing Crossing

Figure 6 Visibility West of Lot 4 Crossing – Requires Berm Trimming and Vegetation Clearance to Improve Visibility

4.3.2 Lot 2 Existing Crossing

The existing crossing leading to the old piggery coincides with a localised natural low point between two gentle knolls. There is no formed drainage for the carriageway which has resulted in potholes forming in the road.

We recommend that a new crossing be formed on the western boundary and that the existing crossing be abandoned and permanently fenced off. The new crossing on the western boundary may be combined with the existing lot 4 crossing.

Figure 7 Lot 2 Existing Crossing

4.3.3 Lot 3 Existing Crossing

Vegetation clearance is required in both directions plus minor earthworks trimming to the east.

Figure 8 Lot 3 Existing vehicle crossing

Figure 9 Lot 3 vehicle crossing visibility east- berm to be trimmed

Figure 10 Lot 3 crossing visibility west - vegetation clearance required

4.3.4 Lot 3 Stock Easement

Lots 3 and 6 will be held under the same title, a stock easement has been allowed across the Lot 1 dividing strip in favour of the two lots.

4.3.5 Unformed Legal Road Access to Lots 5 & 6 including Lots 1 & 2 DP 374752

The Unformed Legal Road currently serves two residential lots which will increase to four following subdivision, plus the proposed lot 1 Maori Reservation which will only require occasional access. Proposed lots 3 and 6 are to be held under the same title and it is unlikely that lot 6 will ever be developed. Hence, the effective number of lots gaining access is three. The road is not maintained by Council and according to FNDC Policy #4103 Council is unlikely to maintain a road serving less than 5 properties.

Figure 11 Unformed Legal Road Intersection off Oromahoe Road

Figure 12 Unformed Legal Road Visibility to West - Berm Trimming & Vegetation Clearance Required

4.4 Parking and Manoeuvring

Parking in accordance with District Plan Rule 15.1.6B and associated manoeuvring can be accommodated within the proposed lots for a minimum of two vehicles.

5 Earthworks

5.1 Proposed Earthworks

Proposed earthworks at subdivision stage are for the upgrading of the Unformed Legal Road and vehicle crossings as required. All earthworks will be contained within the Council road reserve which are exempt from the District Plan limits.

6 Stormwater Management

6.1 Existing Site Drainage

The wooded hillsides on the northern side of the property drain via three main large gullies into the Manaia Stream which flows westward crossing the southern part of the site. Two of the gullies are wholly within the site, the third lies beyond the eastern boundary, east of the Unformed Legal Road. The areas of the site to be developed comprise farm pasture.

The lot 2 and 4 building platforms are on gently sloping ground and drain northwards directly to the Manaia Stream.

The existing homestead on lot 3 is located on moderately steep sloping ground and drains directly into one of the main gullies on site.

The lot 5 building platform is on moderately steep ground sloping towards the south-eastward such that any runoff drains to the third gully on the eastern side of the Unformed Legal Road. Runoff from the lot 5 building platform will be intercepted by the Unformed Legal Road so measures will be required to ensure that the flow is directed to the natural gully flowpath and not onto Oromahoe Road.

6.2 Regulatory Framework

6.2.1 Far North District Plan Provisions

The site is zoned as Rural Production. The relevant activity rules for impermeable surfaces are as follows:

8.6.5.1.3 STORMWATER MANAGEMENT – Permitted Activity
The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 15%.

The proposed subdivision will be Restricted Discretionary under Operative District Plan Rule 13.8.1. With respect to stormwater Council will restrict the exercise of its discretion to those matters listed in 13.7.3.4. The essential elements of Rule 13.7.3.4 are:

All allotments shall be provided, within their net area, with a means for the disposal of collected stormwater from the roof of all potential or existing buildings and from all impervious surfaces, in such a way so as to avoid or mitigate any adverse effects of stormwater runoff on receiving environments, including downstream properties. This shall be done for a rainfall event with a 10% Annual Exceedance Probability (AEP).

The provision of grass swales and other water retention devices such as ponds and depressions in the land surface may be required by the Council in order to achieve adequate mitigation of the effects of stormwater runoff.

Where flow rate control is required to protect downstream properties and/or the receiving environment then the stormwater disposal system shall be designed in accordance with the onsite control practices as contained in "Technical Publication 10, Stormwater Management Devices – Design Guidelines Manual" Auckland Regional Council (2003).

6.2.2 Regional Plan Provisions

Proposed Rule C.6.4.2 provides for the diversion and discharge of stormwater from outside a public stormwater network provided (amongst other conditions); the diversion and discharge does not cause or increase flooding of

land on another property in a storm event of up to and including a 10% Annual Exceedance Probability (AEP) or flooding of buildings on another property in a storm event of up to and including a 1% AEP.

6.3 Impermeable Surfaces

The proposed subdivision provides for, but does not include rural-residential / lifestyle development. It is anticipated that houses when they are built will be of a similar scale to the existing residential / lifestyle development in other rural-residential land in the Oromahoe area.

Typical impermeable surfaces once fully developed are estimated as follows:

Table 6-1: Potential Surface Coverage

Proposed Lot	Area (ha)	Estimate Driveway & Yard Area (m^2)	Estimated Roof Area (m^2)	Total Impermeable Surface Area (m^2)	Estimated Coverage
1	82.6	N/A	N/A	N/A	zero
2	38.3	555	330	885	0.2%
3 & 6*	4.9+3.9	350	565	915	1.0%
4	6.5	420	330	750	1.2%
5	2.0	435	330	765	3.8%

*Lots 3 & 6 will be held under the same title

Anticipated impermeable surface coverage on any lot is not expected to exceed the 15% threshold permitted by the District Plan rules.

6.4 Catchment & Flooding

The site lies at the upper reaches of the manaia Stream, which is a tributary of the Wairaruhe River which confluences with the Waitangi River at Puketona.

Flooding is an issue in the mid to lower reaches of the Waitangi River. The flood hazard has been mapped by Northland Regional Council, refer Figure 13 below.

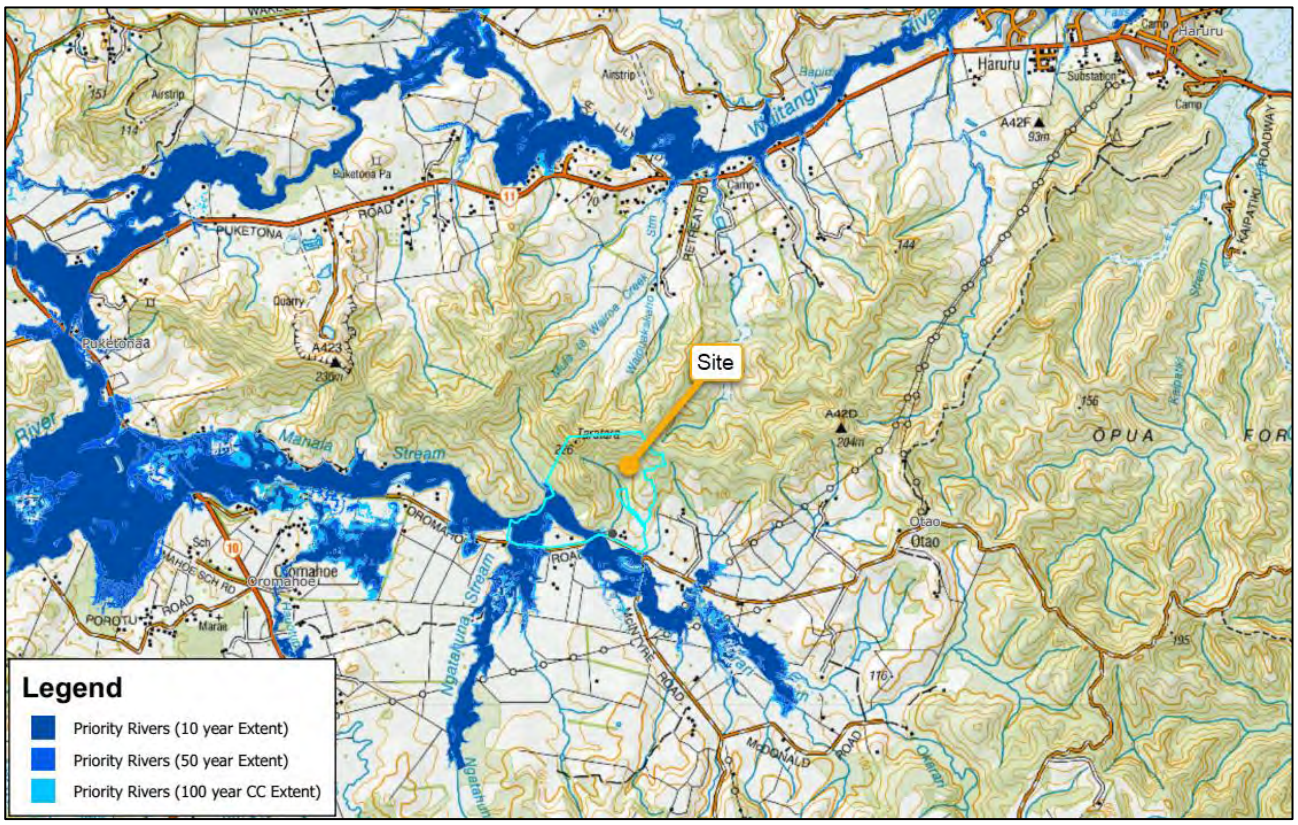


Figure 13: A topographical map of the Waitangi River Catchment Overlaid with NRC Flood Hazard Mapping

6.5 Discussion

For a Restricted Discretionary Council will restrict the exercise of its discretion to those matters listed in 13.7.3.4.

(i) control of water-borne contaminants, litter and sediments;
(ii) the capacity of existing and proposed stormwater disposal systems (refer also to the Council's various urban stormwater management plans and any relevant Northland Regional Council stormwater discharge consents);
(iii) the effectiveness and environmental impacts of any measures proposed for avoiding or mitigating the effects of stormwater runoff, including low impact design principles;
(iv) the location, scale and construction of stormwater infrastructure;
(v) measures that are necessary in order to give effect to any drainage or catchment management plan that has been prepared for the area.

Lifestyle lots are not expected to result in water-borne contaminants, litter or sediments. By discharging to ground within the lots in a dispersive manner these affects can be avoided.

The Regional Council Waitangi Catchment Management Plan June 2017, Table 5 list a number of catchment objectives grouped under Ecosystem health, Recreation, Cultural values and Natural character. With respect to flooding, the catchment specific objective was to minimise damage to land and/or infrastructure from flood debris and streambank erosion.

The proposed lots are all large, over 2ha. Runoff from developed surfaces will be discharged to ground onto gentle slopes in a dispersive manner where the water will be absorbed by the well to moderately well drained soils. During very heavy rainfall events surplus runoff will drain as sheet flow, congregating in the natural gully features before entering the wetland and bush area downstream of the property.

Rule 13.7.3.4 references Technical Publication 10 which has now been superseded by Stormwater Management Devices in the Auckland Region GD01 December 2017 and refers to the Countryside Living suite of documents for rural development. GD01 identifies the key approach to managing the impact of stormwater and associated pollutants is to reduce the need through prevention and considers non-structural approaches to minimise the impacts of the development on stormwater. This standard is appropriate for the low-density rural development consider for this site.

Examples of non-structural approaches that can be adopted for this site are:

- Preserve and using existing site features such as watercourses, depressions, wetlands, vegetation and permeable areas that contribute to the current hydrological cycle balance.
- Reduce impervious surfaces by using pervious channels or infiltration practices, placing houses closer to the main roading network to minimise driveway lengths, shared ROWs, grass swales to encourage infiltration, pervious paving or gravel driveways and parking areas.
- Minimise site disturbance and bulk earthwork areas, particular areas that are to remain undeveloped and permeable. Earthwork compaction produces high strength, but higher density and reduced permeability which reduces infiltration and increases runoff.

6.6 Subdivision Stormwater Management

Stormwater management within the proposed subdivision is designed to control stormwater flows, reduce scour and ensure compliance with District and Regional Plan rules.

- To receive the maximum treatment benefits from overland flow stormwater shall be dispersed via a spreader bar device onto a gently sloping grassed or well vegetated surface. Refer standard details appended.
- Rainwater collection tanks on each Lot, with overflows piped to dispersed outlets.
- Dispersed surface flows from driveways and other impermeable surfaces. For driveways on gentle grades, we recommend grass lined swales with crossroad culverts at approximately 100m intervals including any low points. On steeper grades (greater than 8%) water table drains may require rip rap scour protection using 100 to 150mm rock.
- Drainage from developed surfaces be directed to natural flow paths wherever practicable.

7 Potable Water

7.1 Potable Water Supply

There is no public water supply available at the site. Domestic water supply may be provided using roof runoff collected in storage tanks.

7.2 Fire Fighting

Council Engineering Standards require a water supply that is adequate for firefighting purposes. Where there is no reticulated water supply, then each residential lot will be responsible for providing adequate on-site firefighting supply.

For a single-family home without a sprinkler system in a non-reticulated supply area, the New Zealand Fire Service (NZFS) Fire Fighting Water Supplies Code of Practice SNZ PAS 4509:2008 recommends a minimum firefighting water storage capacity of 45 m^3 within 90 m of the dwelling, fitted with an adequate means for extracting the water from the tank. If the water bore is desired for use as a firefighting supply, it would generally need to provide 750 Litres of water per minute (in line with a reticulated water supply), along with the appropriate fittings under discussion with the NZFS National Commander's representative.

7.3 Alternative to Fire Fighting Supply

The Code (SNZ PAS 4509:2008) specifically allows for alternative methods to be used in meeting the Code requirements, as long as there is approval from an appropriate person nominated by the NZFS National Commander. Clause 4.4 of the Code states that:

- Fire engineers or similar competent persons may use alternative methods to determine firefighting water supplies. To comply with this code of practice, such alternatives must be submitted for approval to the person(s) nominated by the National Commander. The person(s) so nominated will approve these cases on confirmation that the method and calculations used are correctly applied.
- Alternative methods will need to show that the calculated firefighting water supply makes allowances for tactical flow rates (that is, the amount needed above a theoretical amount to absorb the released heat for operational effectiveness).

The procedure to be followed in the case of an alternative fire-fighting supply is as follows:

- The competent person should submit a firefighting facilities checklist (FFFC), with a scale site map showing contours and proposed alternatives to Table 2 with rationale for assessment to NZFS.

If the proposed supply is approved by a nominated NZFS person, Council will accept the FFFC and compliance with the Code will be achieved.

NZFS considers that a 'one size fits all' volume is not appropriate in all circumstances. There are alternatives to firefighting couplings but firefighters are not expected to lift pumps or hoses onto the top of water tanks.

8 On-site Effluent Disposal

8.1 Regulatory Framework

8.1.1 Regional Plan

The discharge of wastewater effluent to land is regulated by the permitted activity Rule C.6.1.3 of the Regional Plan for Northland. Table 9 of the plan specifies exclusion areas and set-back distances as follows:

Table 9: Exclusion areas and setback distances for on-site domestic wastewater systems

Feature	Primary treated domestic type wastewater	Secondary and tertiary treated domestic type wastewater	Greywater
Exclusion areas			
Floodplain	5% annual exceedance probability	5% annual exceedance probability	5% annual exceedance probability
Horizontal setback distances			
Identified stormwater flow path (including a formed road with kerb and channel, and water-table drain) that is down-slope of the disposal area	5 metres	5 metres	5 metres
River, lake, stream, pond, dam or natural wetland	20 metres	15 metres	15 metres
Coastal marine area	20 metres	15 metres	15 metres
Existing water supply bore	20 metres	20 metres	20 metres
Property boundary	1.5 metres	1.5 metres	1.5 metres
Vertical setback distances			
Winter groundwater table	1.2 metres	0.6 metres	0.6 metres

Additional requirements under the Rule also state:

1) The on-site system is designed and constructed in accordance with the Australian/New Zealand Standard. On-site Domestic Wastewater Management (AS/NZS 1547:2012), and

2) The volume of wastewater discharged does not exceed two cubic metres per day, and

5) For wastewater that has received secondary treatment or tertiary treatment, it is discharged via:

a) a trench or bed system in soil categories 3 to 5 that is designed in accordance with Appendix L of AS/NZS 1547:2012; or

b) an irrigation line system that is dose loaded and covered by a minimum of 50 mm of topsoil, mulch, or bark, and

9) The following reserve disposal areas are available at all times:

a) one hundred percent of the existing effluent disposal area where the wastewater has received primary treatment or is only comprised of greywater, or

b) thirty percent of the existing effluent disposal area where the wastewater has received secondary treatment or tertiary treatment

8.2 Lots 2,4 and 5 Wastewater Management

8.2.1 Design Occupancy Rating

The onsite wastewater disposal for the proposed development of the Lots has been assessed.

It has been assumed for the purpose of this site suitability report that Lots 2, 4 and 5 will each contain a three-bedroom residential unit. In reference to TP58 Section 6.3.1, it is recommended that the design occupancy of five people is adopted for this report.

8.2.2 Design Flow Volumes

It is assumed that the proposed residential units will be designed to meet category 'C' according to TP58 Section 6.3.1, '*households with 11/5.5 or 6/3 Flush Toilet(s) and Standard Fixtures, low water use dishwasher and NO garbage grinder'.* A category C property accounts for up to 180 litres/person/day of wastewater generation for bore water and onsite roof water supply.

Total daily wastewater generation of the proposed development is calculated as follows;

$$Total\ daily\ wastewater\ generation = Daily\ occupancy\ number \times design\ flow\ allowances$$

$$= 5\ persons \times (180\ litres/person/day)$$

$$= \underline{\mathbf{900\ litres/day}}$$

Design flows of 900 litres per day for a three-bedroom household shall be adopted for the purpose of this report.

8.2.3 Effluent Disposal

Effluent disposal systems will need to be situated to avoid surface runoff and natural seepage from higher ground, or protected by using interception drains. In addition, site restrictions listed in Section 8.1 of this report will need to be adhered to, to ensure a suitable setback from the identified overland flow paths, boundaries and buildings.

Standard separation distances can be applied with regard to site slope, which is below 10° on all three Lots assessed. Lot 5 has the steepest slopes but do not exceed 7 degrees.

8.2.4 Land Disposal System Sizing and Design

The suitable building platform on Lots 2, 4 and 5 are on raised ground above the mapped flood hazard. With allowances for the required setback distances associated with the Regional Plan, potential effluent disposal areas have been shown on the Wastewater Management Plan appended.

Exploratory borehole investigations were carried out for the by Haigh Workman Geotechnical Report. Two hand augured boreholes were sunk on each building platform to depths between 2 and 3m below ground level. Refer BH logs 4 to 9 appended. The soils encountered are summarised as follows.

Table 8-1: Borehole Summary

Lot	Borehole	Topsoil depth (m)	Soil Description (top 1m)
2	8	0.20	Silt low plasticity becoming medium plastic silty clayey silt after 0.7m

2	9	0.20	Silt low plasticity becoming highly plastic silty clay after 0.4m
4	6	0.20	Silt no plasticity becoming high plastic silty clayey silt after 0.7m
4	7	Fill (0.20m deep)	Silt no plasticity becoming medium low plasticity after 0.6m
5	4	0.20	Silt no plasticity becoming highly plastic silty clayey silt after 0.4m
5	5	0.20	Silt low plasticity

The NZMS soils map records variable soil types across all 3 lots with drainage properties ranging between '*well to moderately well drained'* and *'Imperfectly to very poorly drained*'. For assessment purposes we conservatively categorise the soils as AS/NZS1547 Category 5. These soils are categorised as light clay, poor drainage with a daily irrigation rate (DIR) of 3 mm/day.

For poor drainage soils surface dripper lines are recommended for secondary treated effluent.

The total length of the trickle irrigation system required (UniBioline or similar) is calculated as follows;

$$Total\ area\ of\ dripper\ irrigation\ field = \frac{Total\ daily\ wastewater\ generation}{Design\ irrigation\ rate}$$

$$= \frac{900}{3}$$

$$\underline{= \mathbf{300\ m^2}}$$

The Wastewater Management Plan appended indicates there is space available for dripper fields a 100% reserve area on each lot.

8.2.5 Treatment Plant Design Sizing

The naming of a proprietary secondary treatment plant will be decided by the new owner at the building consent stage, when the position and scale of the building are known.

The system is to meet the quality output of AS/NZS 1546.3:2003, producing effluent of less than 20 g/m^3 of 5-day biochemical oxygen demand (BOD_5) and no greater than 30 g/m^3 total suspended solids (TSS) at the estimated wastewater generation rate for the proposed development.

8.3 Lot 3 Wastewater Management

The onsite wastewater disposal for the existing dwelling on proposed Lot 3 comprises a traditional septic tank with effluent disposal to soakage trenches. A walkover inspection of the treatment and disposal area identified no performance issues such as surface wetness and breakout or olfactory odour. There is adequate setback for the primary and reserve disposal areas from the proposed subdivision boundaries.

Appendix A – Drawings

Drawing No.	Title	Scale
0116S	Sapphire Surveyors Ltd - Lots 1-6 being a Proposed Subdivision of Lots 2 and 3 DP 175428 and Pt Lot 1 DP 8625 - 1202 Oromahoe Road, Kawakawa (dated 24 February 2025)	1: 6,500
24 041 - G02	Site Investigation Plan Proposed Lots 2 and 4	1: 1,000
24 041 - G032	Haigh Workman Ltd - Site Investigation Plan Proposed Lot 5	1: 1,000
24 041 – SW01	Haigh Workman Ltd - Wastewater Management Plan Proposed Lots 2 and 4	1: 1,000
24 041 – WW01	Haigh Workman Ltd - Wastewater Management Plan Proposed Lots 2 and 4	1: 1,000
24 041 – WW02	Haigh Workman Ltd - Wastewater Management Plan Proposed Lot 5	1: 1,000

Memorandum of Proposed Easements			
Purpose	Shown	Servient Tenement (Burdened Land)	Dominant Tenement (Benefitted Land)
ROW - Stock	A	Lot 1 hereon	Lots 3 & 6 hereon

Schedule of Proposed Easements			
Purpose	Shown	Servient Tenement (Burdened Land)	Dominant Tenement (Benefitted Land)
Water Supply	B	Lot 1	Lots 3, 4 & 6
	C	Lots 1-3	Lot 4

AMALGAMATION CONDITION:
That Lot 3 hereon and Lot 6 hereon be held in the same Record of Title.

Area X is subject to a bush protection covenant.

THIS PLAN & ACCOMPANYING REPORT(S) HAVE BEEN PREPARED FOR THE PURPOSE OF OBTAINING A RESOURCE CONSENT ONLY AND FOR NO OTHER PURPOSE. USE OF THIS PLAN AND/OR INFORMATION ON IT FOR ANY OTHER PURPOSE IS AT THE USER'S RISK.

THIS PLAN MAY NOT BE USED FOR MARKETTING OR SALE OF THE PROPERTY UNLESS APPROVED BY COUNCIL AND ACCOMPANIED BY AN APPROVED SUBDIVISION CONSENT.

AREAS & MEASUREMENTS SUBJECT TO FINAL SURVEY.

BOUNDARIES & THEIR POSITION IN RELATION TO THE AERIAL PHOTO ARE SUBJECT TO INHERENT INACCURACIES & DISTORTIONS AND SHOULD NOT BE RELIED ON.

30X30m Bld Platform (>10m from bdys)

LOCAL AUTHORITY: FAR NORTH DISTRICT COUNCIL

COMPRISED IN: RTs NA107D/965, NA107D/966 & NA93D/222
TOTAL AREA: 138.9286 HA

PLAN PREPARED FOR: JLS Graham-Jenkins

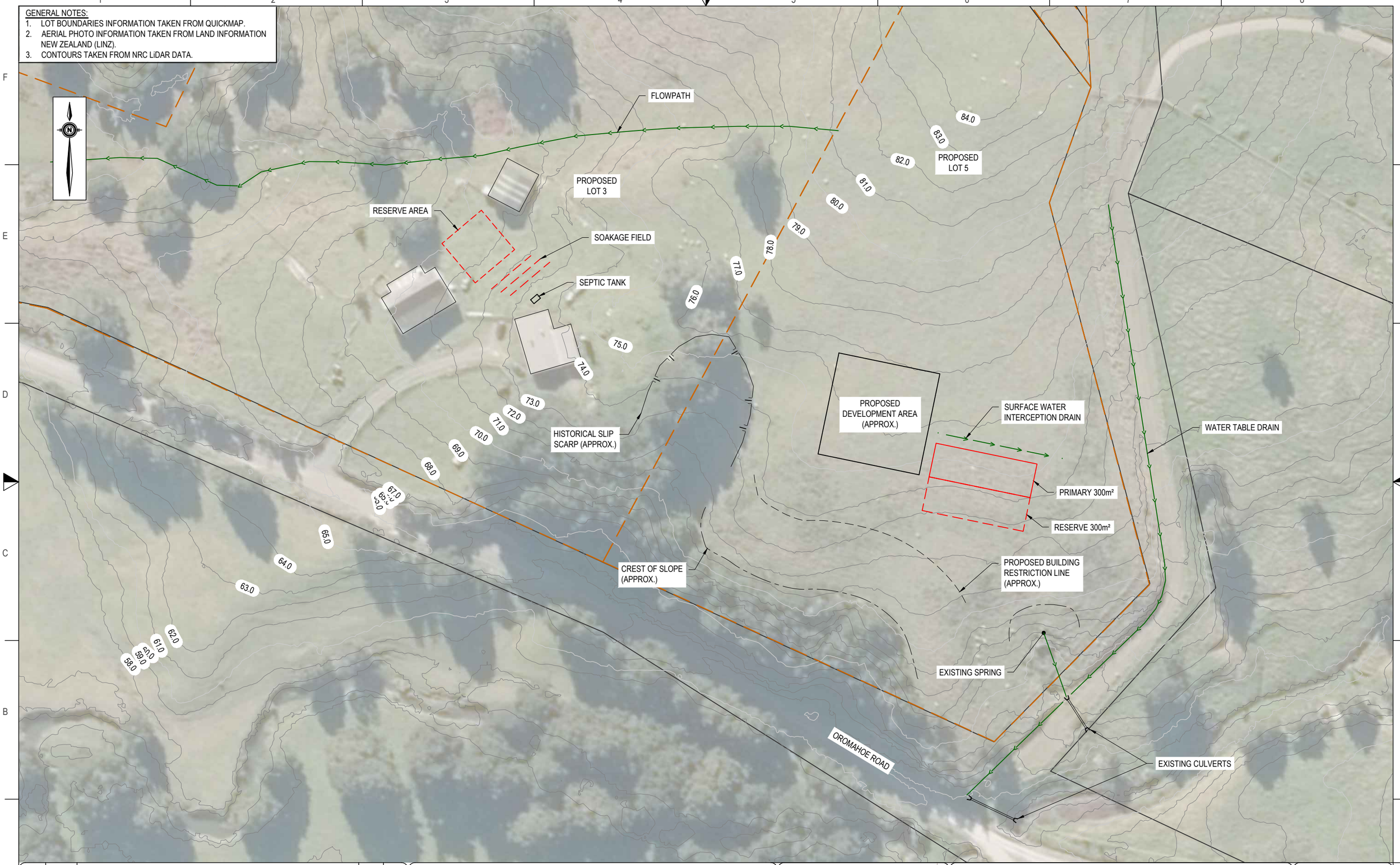
6 DP 563148
3 SO 449324
3 DP 408629
Sec 23 Blk VII Kawakawa SD
Legal Road (unformed)
12 DP 402862
1 DP 175428
Lot 1 82.6ha Proposed Maori Reservation
5 DP 374752
Lot 2 38.3ha
Lot 4 6.5ha
Lot 3 4.9ha
Lot 6 3.9ha
Lot 5 2.0ha
1 DP 374752
2 DP 374752
P05/1109
P05/340
P05/1111
P05/342,343,344
P05/1110
P05/341
Outstanding Landscape (NRC & FNDC ODP)
Outstanding Landscape (FNDC Maps ODP)
RT NA107D/965
RT NA107D/966
RT NA93D/222
Water Supply Easement (3m wide)
Flood zone
SNA
Old Milking Shed
Piggery
House & Sheds
Existing Metal VC
Proposed Metal VC
Existing Metalled Driveway
Oromahoe Rd
Image © 2024 Airbus
Imagery Date: 11/12/2023 35°18'41.59" S 174°00'21.26" E

Sapphire Surveyors Ltd
Surveyors &
Land Development Specialists
Doubtless Bay, NZ
Ph. 09-406-0001
info@sapphiresurveyors.co.nz

Lots 1-6 being a Proposed Subdivision of Lots 2 & 3 DP 175428 and Pt Lot 1 DP 8625
1202 Oromahoe Rd, Kawakawa

Surveyed:			Job Ref 0116S
Drawn:	WW	31/01/2024	
Version:	C		
Status:	Final	24/02/2025	A3 1:6500
Sheet:	1 of 1		

GENERAL NOTES:
1. LOT BOUNDARIES INFORMATION TAKEN FROM QUICKMAP.
2. AERIAL PHOTO INFORMATION TAKEN FROM LAND INFORMATION NEW ZEALAND (LINZ).
3. CONTOURS TAKEN FROM NRC LiDAR DATA.



Rev	Date	Description	By	Checked
A	18/06/2024	FIRST ISSUE	JT	TA

DWG WASTEWATER MANAGEMENT PLAN
PROPOSED LOTS 3 AND 5

A3 SCALE 1:1000 0 20m 50m Date 18/06/2024

Drawn JT Checked TA Approved TA

File C:\USERS\JASONTIGARONITA\HAIGH WORKMAN LIMITED\SUITEFILES - 24 041 - OROMAHOE ROAD, OROMAHOE\ENGINEERING\DRAWINGS\CIVIL\24_041_CIVIL_DESIGN_C3D.DWG

HAIGH WORKMAN LTD
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Project PROPOSED SUBDIVISION
1202 OROMAHOE ROAD, KAWAKAWA

Client JOFE GRAHAM-JENKINS

Project No. 24 021

RC no.

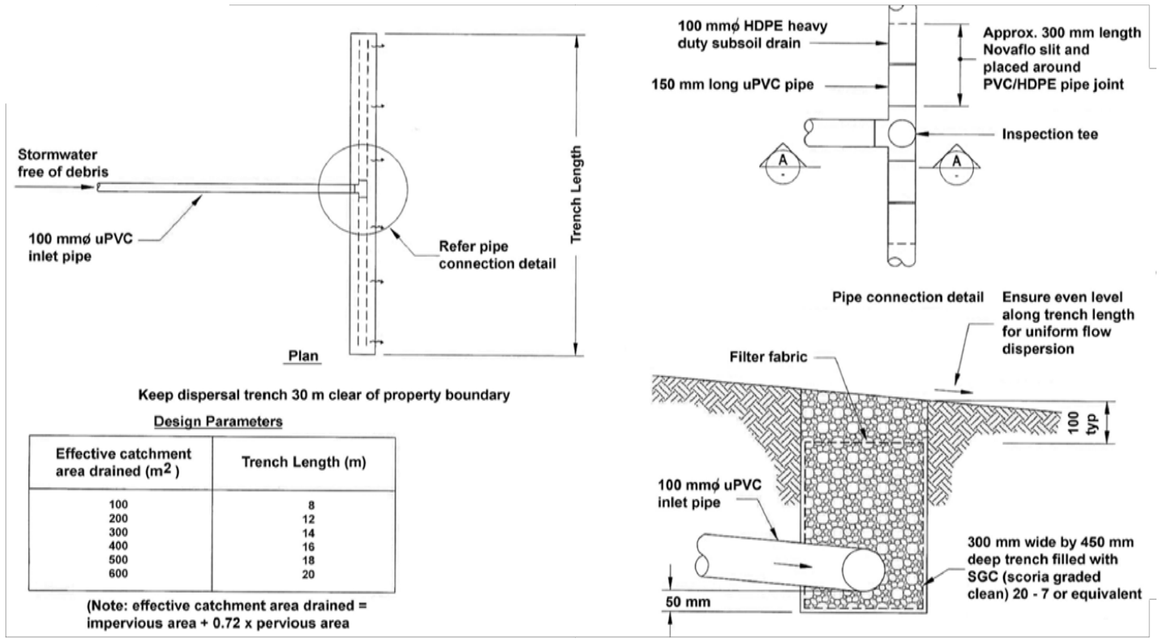
Stage

Dwg No. WW02

Sheet No. 2 of 2

NOTE:

1. FOR THIS SITE, USE Ø200 PVC PIPE WITH Ø30 HOLES AT 300 CENTRES.

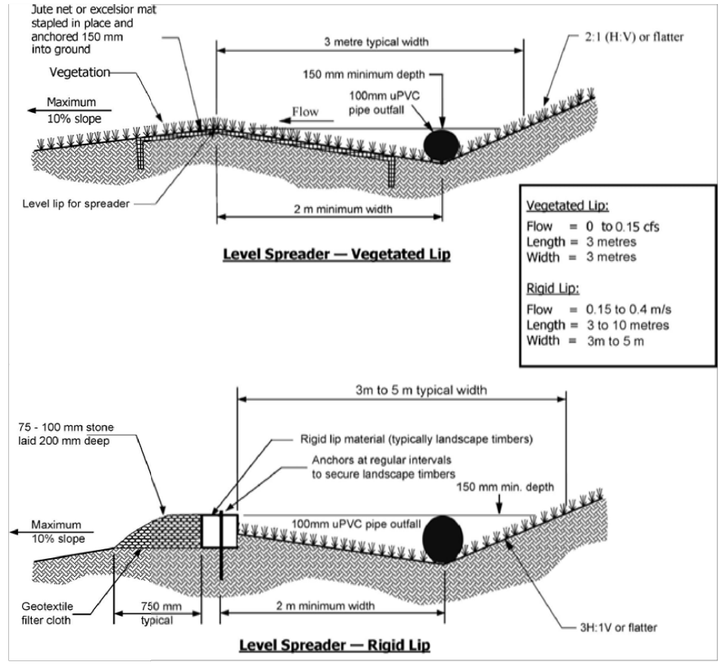


Keep dispersal trench 30 m clear of property boundary

Design Parameters

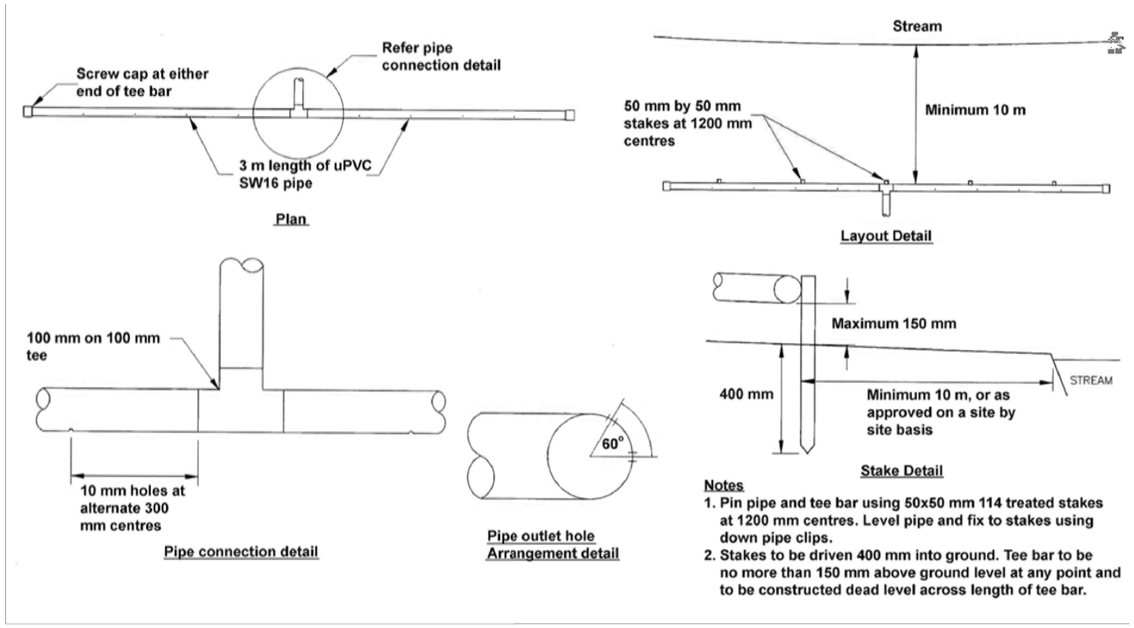
Effective catchment area drained (m^2)	Trench Length (m)
100	8
200	12
300	14
400	16
500	18
600	20

(Note: effective catchment area drained = impervious area + 0.72 x pervious area



Level Spreader — Vegetated Lip

Level Spreader — Rigid Lip



Notes

1. Pin pipe and tee bar using 50x50 mm 114 treated stakes at 1200 mm centres. Level pipe and fix to stakes using down pipe clips.
2. Stakes to be driven 400 mm into ground. Tee bar to be no more than 150 mm above ground level at any point and to be constructed dead level across length of tee bar.

Issue	Date	Revision
A	14/04/2024	FOR CONSENT

DWG Level Spreader Details

Scale N.T.S. | Date 13/06/2024

Drawn AP | Checked TMA | Approved TMA

File

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Project: Proposed Subdivision
1202 Oromahoe Road, Kawakawa

Client: JOFE GRAHAM-JENKINS

Project No. 24 041 | RC no.

DWG No. **SW01**

Sheet No. of

Plotted By Akira Kepu at 4/12/2017 2:54:04 PM

Appendix B – Borehole Logs

PO Box 89, 0245
6 Fairway Drive
Kerikeri, 0230
New Zealand

HAIGH WORKMAN LTD
Civil & Structural Engineers

Phone 09 407 8327
Fax 09 407 8378
www.haighworkman.co.nz
info@haighworkman.co.nz

Borehole Log - BH01

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; light brown to brown. Very stiff, dry, no plasticity. Minor rootlets. [Topsoil]

Clayey **SILT**; light orange, mottled light brown. Very stiff, dry, low to medium plasticity. [Waipapa Group]

From 0.5m: Becomes light orange, streaked orange.

From 0.8m: Becomes light orange to orange, streaked light pinkish red. Dry to moist.

From 1.2m: Becomes pinkish orange and orange, speckled light yellow.

SILT, some clay; pinkish orange, streaked orange and pinkish red. Very stiff, moist, low plasticity.

SILT, minor clay, trace fine gravel; light orange and light yellowish brown, streaked orange, speckled black. Very stiff, moist, low plasticity. Gravel: weakly cemented.

From 2.1m: Becomes light orange and white, streaked dark orange and black.

From 2.6m: Becomes moist to wet, low plasticity.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity: 7, 3, 4

Vane Shear and Remoulded Vane Shear Strengths (kPa): 202, 28; UTP; UTP; UTP; 110, 37; 172, 49

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1617. Groundwater not encountered.

PO Box 89, 0245
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Borehole Log - BH02

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JC
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; brown. Very stiff, dry, no plasticity (friable). Minor rootlets. [Topsoil]

SILT, yellowish brown. Very stiff to hard, dry, no plasticity. [Waipapa Group]

Silty **CLAY**; yellowish brown. Very stiff to hard, dry, high plasticity.

From 0.7m: Becomes orangish brown, mottled yellowish brown. Moist.

Clayey **SILT**; light grey and light yellowish brown, mottled orangish brown. Very stiff to hard, moist, low plasticity.

End of Hole at 2.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Water Level: Groundwater not encountered.

Sensitivity

Vane Shear and Remoulded Vane Shear Strengths (kPa): 250, 250, 250, 250

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1698. Groundwater not encountered.

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Borehole Log - BH03

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; brown to dark brown. Very stiff, dry, no plasticity. Minor rootlets. [Topsoil]

SILT, some clay; light brownish orange, streaked brown, mottled orange. Very stiff, dry, low plasticity. [Waipapa Group]

Clayey **SILT**, trace fine gravel; light orange and orange, mottled white, speckled black. Very stiff, dry, low plasticity. Gravel: weakly cemented.

From 1.2m: Becomes orange and light orange, streaked yellowish white, speckled black. Low to medium plasticity.

From 1.4m: Becomes orange, streaked dark orange. Moist.

SILT, minor clay; light orange and light yellowish white, streaked black and dark orange. Very stiff, dry to moist, low plasticity.

End of Hole at 2.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity: 7

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP, 28, 202, UTP, 49, 199, 215

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1617. Groundwater not encountered.

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Borehole Log - BH04

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JC
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; brown. Very stiff, dry, no plasticity (friable). Minor rootlets. [Topsoil]

SILT, yellowish brown, mottled greyish brown. Very stiff to hard, dry, no plasticity. [Tauranga Group (Colluvium)]

Silty **CLAY**; yellowish brown. Very stiff to hard, dry, high plasticity.

From 0.8m: Becomes moist.

From 1.2m: Becomes yellowish brown, streaked orangish brown.

From 2.0m: Becomes light pinkish grey, minor brown streaks. Very stiff, wet.

Clayey **SILT**; light grey, streaked orangish brown. Very stiff, wet, low plasticity.

From 2.8m: Becomes dark orangish brown, mottled light grey.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity: 2, 4, 3

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP; 0 / 250; 0 / 250; 57 / 139; 36 / 125; 46 / 153

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1698. Groundwater not encountered.

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Borehole Log - BH05

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; light brown to brown. Very stiff, dry, no plasticity. Minor rootlets. [Topsoil]

SILT, some clay; light brownish orange and light brown. Very stiff, dry, low plasticity. [Tauranga Group (Colluvium)]

From 0.4m: Becomes light orange to orange, streaked light brown.

From 0.7m: Becomes light orange, streaked orange.

Clayey **SILT**; light orange and light yellowish white, mottled orange. Very stiff, dry to moist, medium plasticity.

From 1.7m: Becomes light orange, mottled dark orange, streaked yellowish white, speckled black. Moist.

SILT, some clay; light orange and light yellowish white, mottled orange, speckled black. Very stiff, moist, low to medium plasticity.

From 2.6m: Becomes light orange and light pinkish orange, streaked white and black. Low plasticity.

From 2.8m: Becomes light pink and light orange, speckled black. Moist to wet, low to medium plasticity.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity: 5, 5

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP, 215, UTP, 215, 169, 37, 153, 31

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1617. Groundwater not encountered.

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Borehole Log - BH06

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JC
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; brown. Very stiff, dry, no plasticity (friable). Minor rootlets. [Topsoil]

SILT, brownish yellow. Very stiff to hard, dry, no plasticity. [Tauranga Group]

Silty **CLAY**; orangish brown. Very stiff to hard, dry, high plasticity.

From 0.8m: Becomes light orangish brown and light grey. Moist.

From 1.7m: Becomes light grey, streaked orangish brown (sharp colour change)

Clayey **SILT**, trace fine sand; light grey, streaked orangish brown. Very stiff to hard, moist, low plasticity.

End of Hole at 2.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP, 250, 250, 210, 71, 250

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1698. Groundwater not encountered.

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Borehole Log - BH07

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT, trace fine gravel; light brown to brown, speckled orange and black. Very stiff, dry, no plasticity. Minor rootlets. [Topsoil & Fill]

SILT, minor clay, trace fine gravel; light brown to orangish brown, speckled orange. Very stiff, dry, no plasticity. [Tauranga Group]

SILT, some clay, minor fine to medium gravel; light brownish orange, streaked orange. Very stiff, dry, low plasticity. Gravel: weakly cemented, limonite staining on joint surfaces.

SILT, minor clay, trace fine gravel; light orange to whitish grey, streaked orange. Very stiff, dry, low plasticity.

From 1.2m: Becomes light whitish grey, streaked light orange.

From 1.5m: Becomes dry to moist.

SILT, minor clay; light whitish grey, streaked orange. Very stiff, moist, low plasticity.

End of Hole at 2.0m. (Target Depth)

Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
0.0	FILL		Groundwater not encountered.		UTP	0 2 4 6 8 10
0.5	TAURANGA GROUP				UTP	
1.0					UTP	
1.5					UTP	
2.0						
2.5						
3.0						
3.5						
4.0						
4.5						

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1617. Groundwater not encountered.

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Borehole Log - BH08

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	02/05/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	02/05/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; light brown to light greyish brown, mottled orange. Very stiff, dry, no plasticity. Rootlets. [Topsoil]

SILT, minor clay; light brown to light yellowish brown. Very stiff, dry, low plasticity. [Tauranga Group]

SILT, some clay; light orange, streaked light brownish grey. Very stiff, dry to moist, low plasticity.

Clayey **SILT**; light brownish grey, streaked light orange. Very stiff, moist, medium plasticity.

From 0.9m: Becomes light grey, streaked light orange.

SILT, some clay; light grey, streaked light orange. Very stiff, moist, low plasticity.

From 1.5m: Becomes light orange, streaked light grey.

SILT, trace fine sand; light whitish grey, streaked light orange. Very stiff, dry to moist, low plasticity.

From 1.9m: Trace fine gravel (weakly cemented).

SILT, minor fine gravel, trace fine to coarse sand; orange, mottled light greenish grey. Very stiff, moist, no plasticity.

SILT, some fine to medium gravel and coarse sand; light grey and greenish grey, mottled orange. Very stiff, moist, no plasticity. Gravel: weakly cemented.

From 2.5m: Becomes moist to wet.

SILT, trace fine gravel, trace clay; light whitish grey and light greenish grey. Very stiff, moist, low to medium plasticity.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Water Level: Groundwater not encountered.

Sensitivity: 6

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP, UTP, 227, 186, 31, 227, UTP

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR2278. Groundwater not encountered.

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Borehole Log - BH09

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	02/05/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	02/05/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; dark brown. Firm, moist, no plasticity (friable). Rootlets. [Topsoil]

SILT, trace clay; light brown. Very stiff, moist, low plasticity. [Tauranga Group]

Silty **CLAY**; yellowish brown. Very stiff, moist, high plasticity.

From 1.0m: Becomes light grey, streaked yellowish brown and orangish brown.

Clayey **SILT**, trace fine sand; light grey, streaked orangish brown. Very stiff, moist to wet, low plasticity.

SILT, minor fine gravel, trace clay; light grey, streaked minor orangish brown. Very stiff, wet, low plasticity.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Water Level: Groundwater not encountered.

Sensitivity: 2, 6

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP; 201; 201; 201; 198; 100; 161; 29

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

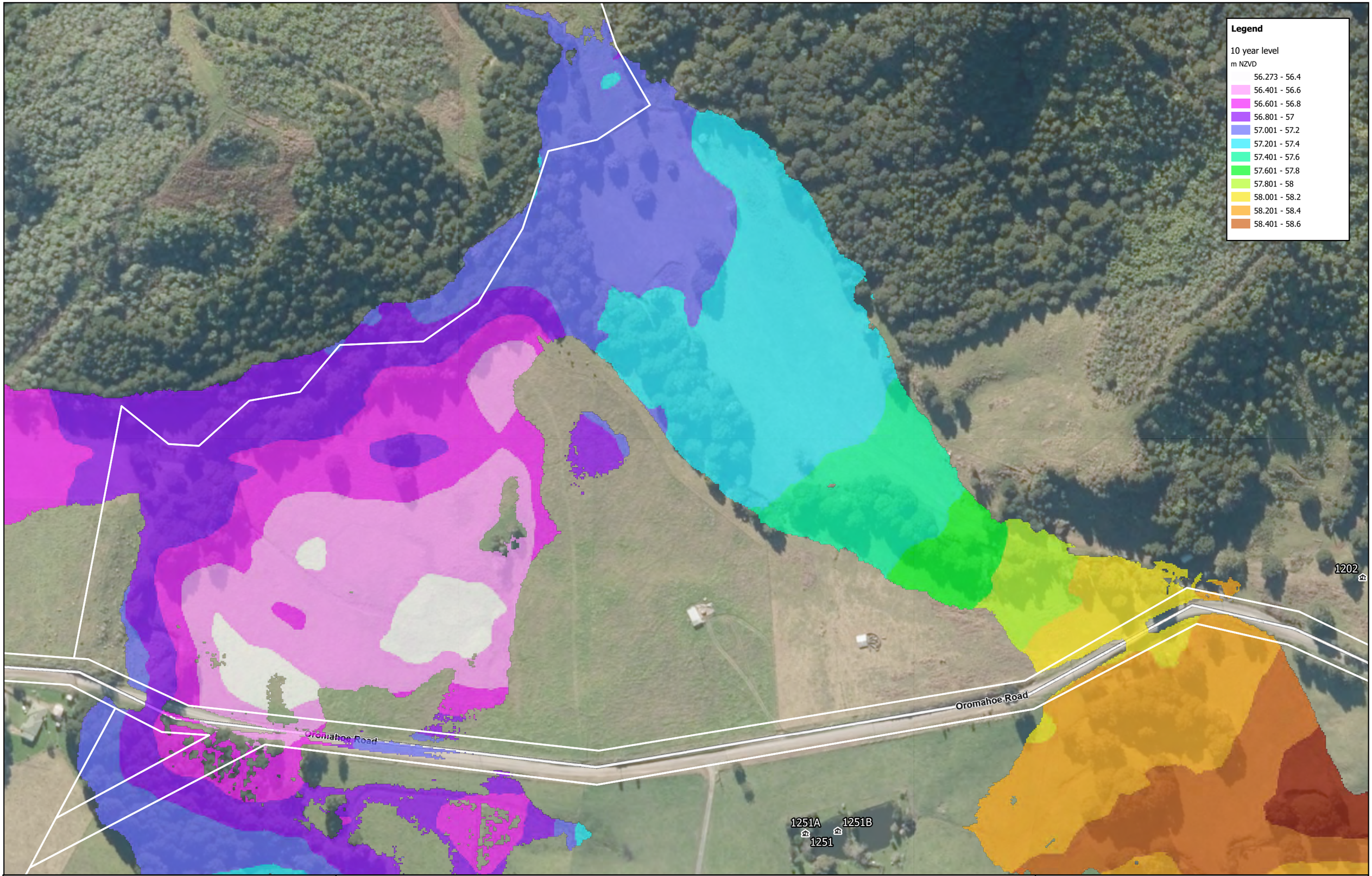
LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR2222. Groundwater not encountered.

Appendix C – NRC Flood Hazard Report



Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

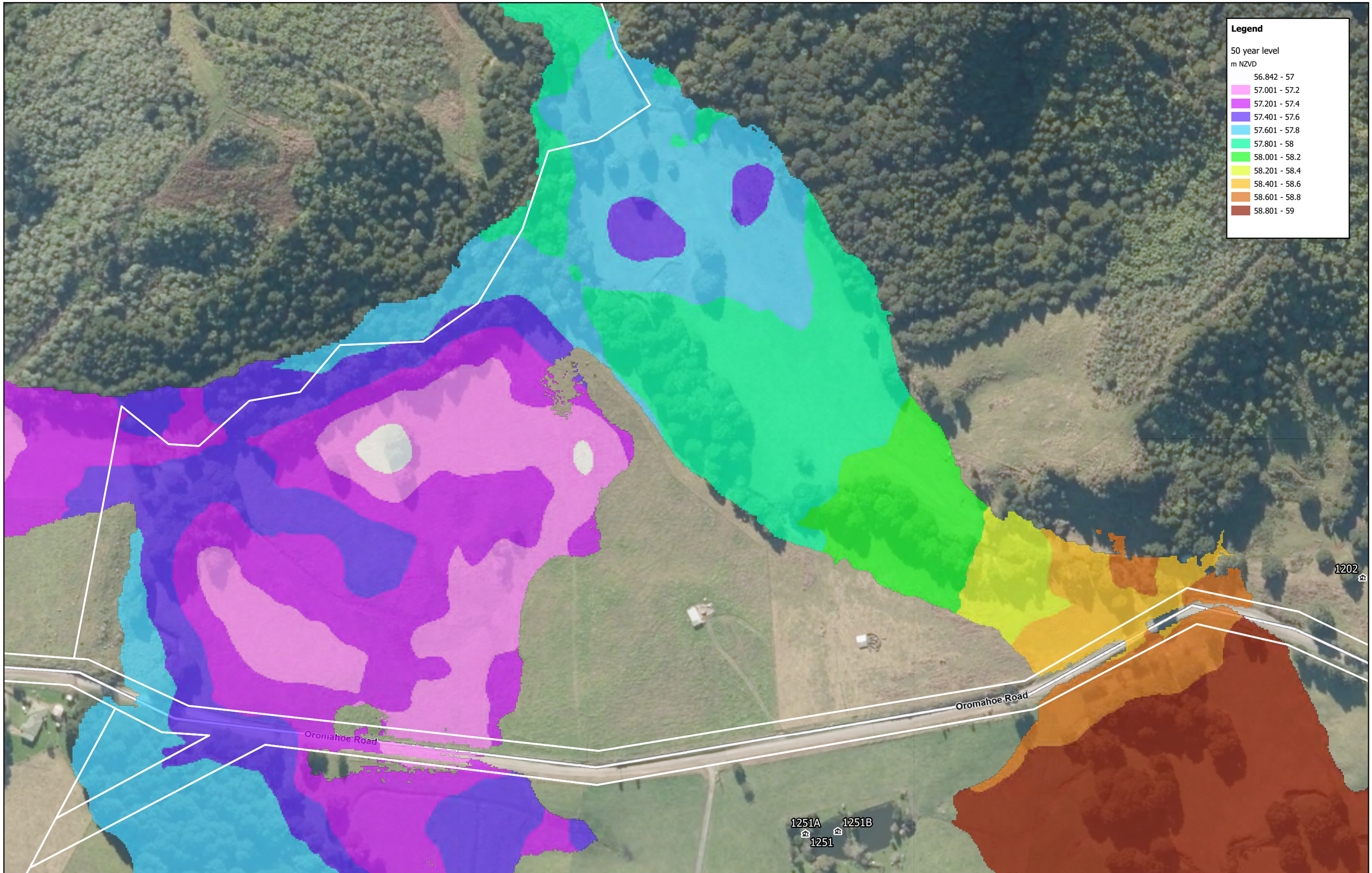
Lots 2 & 3 DP 175428
10 year Priority River Flood Levels (m NZVD) in 0.2m intervals
Scale: 1:1400

Projection NZTM. Datum NZTM2000.
DISCLAIMER:
The Northland Regional Council cannot guarantee that the information shown is accurate and should not be reused in any manner without proper consultation with its owner.

N

0 40 80 160 Meters

June 19 2024



Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

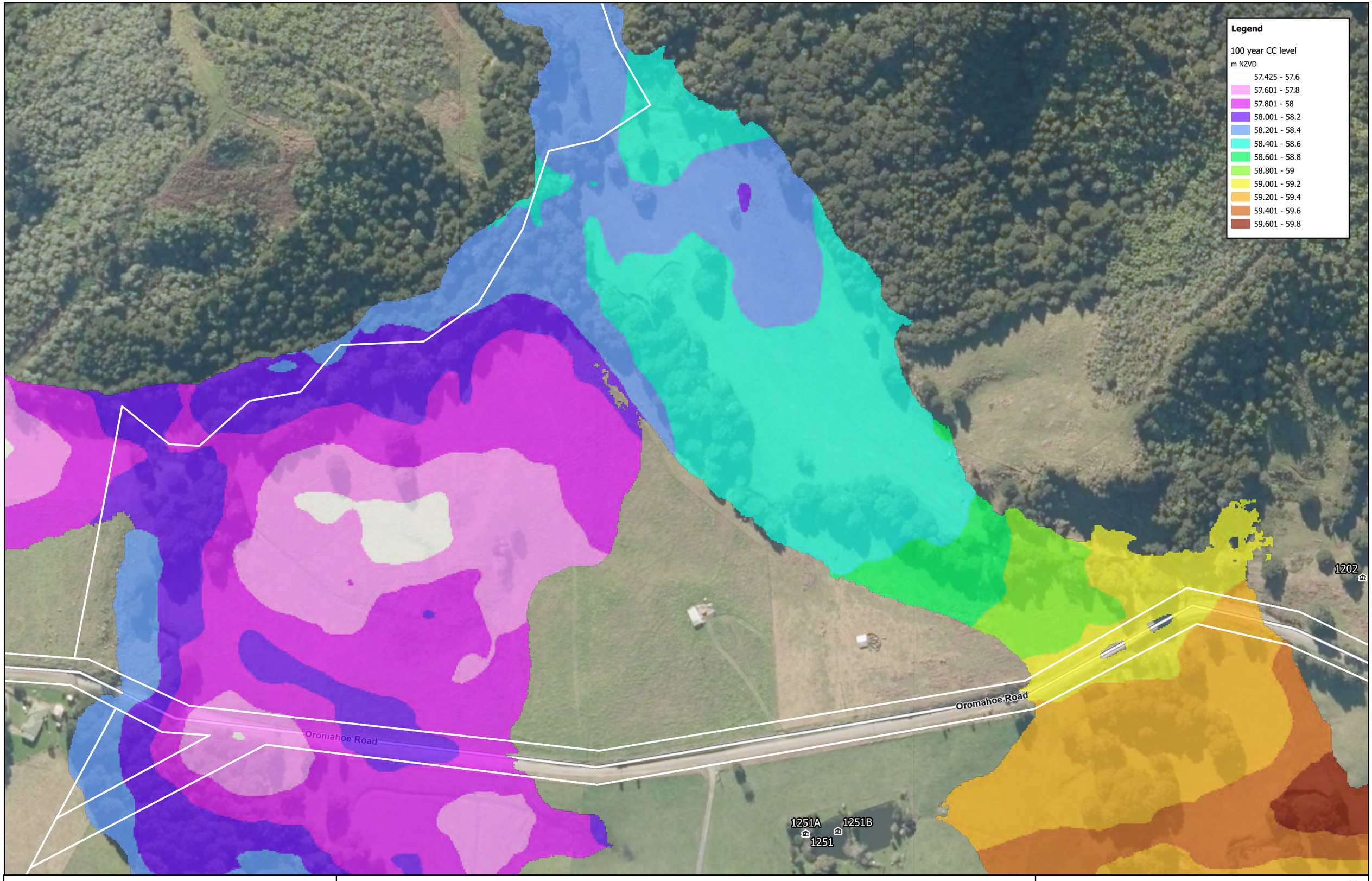
Lots 2 & 3 DP 175428
50 year Priority River Flood Levels (m NZVD) in 0.2m intervals
Scale: 1:1400

Projection NZTM. Datum NZTM2000.
DISCLAIMER:
The Northland Regional Council cannot guarantee that the information shown is accurate and should not be reused in any manner without proper consultation with its owner.

N

0 40 80 160 Meters

June 19 2024



Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

Lots 2 & 3 DP 175428
100 year CC Priority River Flood Levels (m NZVD) in 0.2m intervals
Scale: 1:1400

Projection NZTM. Datum NZTM2000.
DISCLAIMER:
The Northland Regional Council cannot guarantee that the information shown is accurate and should not be reused in any manner without proper consultation with its owner.

N

0 40 80 160
Meters

June 19 2024

Appendix 6

Geotechnical Report

Geotechnical Assessment Report

1202 Oromahoe Road, Oromahoe

Lots 2 & 3 Deposited Plan 175428 & Part Lot 1 Deposited Plan 8625 (SO42345)

For

Jofe Graham-Jenkins

Haigh Workman reference 24 041

May 2024

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Revision History

Revision Nº	Issued By	Description	Date
A	John Power	First Issue	May 2024

Prepared By

John Power

Geologist
Member NZGS

Reviewed By

Wayne Thorburn

Senior Geotechnical Engineer
CPEng, CMEngNZ

TABLE OF CONTENTS

TABLES

FIGURES

Executive Summary

Haigh Workman Ltd (Haigh Workman) have been engaged by Jofe Graham-Jenkins to prepare a geotechnical assessment report for use in support of a Resource Consent application for a proposed six Lot subdivision of Lot 2 and Lot 3, Deposited Plan 175428 and Part Lot 1 Deposited Plan 8625 (SO 42345), at 1202 Oromahoe Road, Oromahoe. This report contains information required for subdivisional earthworks, as well as outlining geotechnical design issues that need to be considered for subsequent building design and construction on proposed Lot 2, Lot 4 and Lot 5. This report is not intended to support building consent and further investigations may be required when concept plans are developed.

Based on the results of the geotechnical investigation conducted by Haigh Workman and review of published geological maps, it is considered the soils directly underlying proposed Lot 6 comprise the natural soils of the Waipapa Group while the proposed Lot 5 is considered to be underlain by Tauranga Group colluvium with proposed Lot 2 and Lot 4 being underlain by alluvial and colluvial soils of the Tauranga Group.

Based on our site investigations and laboratory testing, the foundation soils lie outside the definition of 'good ground' in NZS3604:2011 due to the presence of expansive soils and sloping ground. Soils are considered to lie within Site Class H (highly expansive) as defined in New Zealand Building Code B1/AS1.

All residential Lots will be subject to specific engineering design and site-specific geotechnical investigations. Based on the in-situ vane shear testing, an ultimate bearing capacity of 300kPa for limit state design should be available.

A detailed liquefaction potential assessment was outside the scope of this ground investigation. The results of our investigation show proposed Lot 2, Lot 4 and Lot 5 are underlain by cohesive soils that are considered too plastic to liquify under seismic conditions.

Subject to issues outlined in Sections 4, 5 and 6, proposed Lot 2, Lot 4 and Lot 5 are considered to be stable and the subsoil properties are appropriate for residential development.

Provided the recommendations within this report are followed, the subject site is capable of being developed across proposed Lot 2, Lot 4 and Lot 5. All works should be carried out under the guidance of a Chartered Professional Engineer familiar with the contents of this report.

1 Introduction

1.1 Project Brief and Scope

Haigh Workman Ltd (Haigh Workman) have been commissioned by Jofe Graham-Jenkins (the Client) to prepare a geotechnical assessment report for a proposed six Lot subdivision of Lot 2 and Lot 3, Deposited Plan 175428 and Part Lot 1 Deposited Plan 8625 (SO 42345), at 1202 Oromahoe Road, Oromahoe. This report presents the information gathered during the site investigation, interpretation of data obtained and site-specific geotechnical recommendations relevant to the site.

The scope of this report encompasses the geotechnical suitability in the context of the proposed end use as defined in the Short Form Agreement dated 23 February 2024. This appraisal has been designed to assess the subsoil conditions for foundation design and identify geotechnical constraints for the proposed end use. As part of this assessment, the following work has been undertaken:

- A walkover inspection of the site with surface mapping of the geomorphological features.
- Reference to geological maps to assess the likely underlying geology and subsoil conditions.
- A review of aerial photographs.
- Intrusive site investigation for evaluation of subsurface conditions.
- Laboratory testing to confirm soil properties.
- Slope stability analyses to provide comment on ground stability, and,
- Identification of any additional geotechnical risks and/or hazards.

This report summarises our findings and recommendations in relation to the proposed subdivision plans provided by Sapphire Surveyors Limited. The principal objectives of the investigation are to develop geotechnical models of the site so that geotechnical constraints to the proposed end use can be identified and to provide assurance to Council that a stable building platform is available or can be made available for each proposed Lot.

1.2 Site Description

The site is legally described as Lot 2 and Lot 3, Deposited Plan 175428 and Part Lot 1 Deposited Plan 8625 (SO 42345) with a total combined land area of 138.93ha. The property is irregular in plan shape, located on the southern side of an extensive west to east trending ridge feature that extends from Puketona in the west to the steep hill country ranges, some 2.5km to the east. Branching off the west to east trending ridge feature, a series of ridge spurs extend southwards into the subject property forming a series of south trending valley and ridge features. The property forms a large block of rural land that comprises existing pasture across the lower rolling hills to the south and a mixture of mature and regenerating native bush across the steeper hills to the north.

The property is located to the north of Oromahoe Road, with Oromahoe Road forming the southern property boundary. To the east, the property boundary is defined by an existing paper road the extends northwards over the steep bush covered slopes to the northern extent of the property.

From here, the property boundary, loosely follows the east to west trending ridge for 1.5km (approx.) before descending to the south across the bush clad slopes and across the lower slopes to Oromahoe Road. Vehicle access to the property can be gained at various locations off Oromahoe Road with several formed vehicle crossings available.

The property is predominantly undeveloped except for an existing dwelling and two large farm sheds located near the southeastern corner of the property. The existing dwelling is contained within proposed Lot 3 on generally southwest facing rolling hill country to the north of Oromahoe Road. Approximately 500m to the west of the existing dwelling, an old milking shed and associated farm structures are located on generally flat to gently sloping ground immediately north of Oromahoe Road. The existing, old milking shed is contained within proposed Lot 4 (6.04ha), with the existing dwelling and sheds contained within proposed Lot 3 (4.87ha). Within proposed Lot 2 (44.83ha), an abandoned pig shed is located 110m (approx.) to the east of the existing old milking shed of Lot 4, refer Figure 1 & 2.

In general, the northern hills of the property drain to the south through a series of small streams and tributaries that follow the existing gully features, flowing southwards and then west into the Manaia Stream that extends across the low-lying farm country, draining to the west and the Waiaruhe River near Puketona.

1.3 Proposed Works

A draft scheme plan for the proposed subdivision has been produced by Sapphire Surveyors Limited (Lots 1-6 being a Proposed Subdivision of Lot 2 & 3 DP 175428 and Pt Lot 1 DP8625, 1202 Oromahoe Road, Kawakawa). The draft plan indicates a total of six proposed Lots, with Lot 1 forming a proposed Māori Reserve of 80.01ha and Lot 2 to Lot 6 creating new Lots of between 2.0ha (Lot 5) and 44.83ha (Lot 2), refer Figure 2 below. We understand the Client intends to develop Lot 2, Lot 4 and Lot 5 only.

An earlier draft scheme plan showing five proposed Lots was originally intended with the majority of geotechnical investigations completed based on the now obsolete, five Lot plan. As a result, additional geotechnical investigations were completed within the now proposed Lot 6 (formerly Lot 4). We understand that no development within proposed Lot 6 is intended. We also understand that the proposed Lot 6 is to be amalgamated with proposed Lot 3, i.e., to fall under the same title as Lot 3.

Figure 1 - Site Location Showing Combined Property Boundaries.

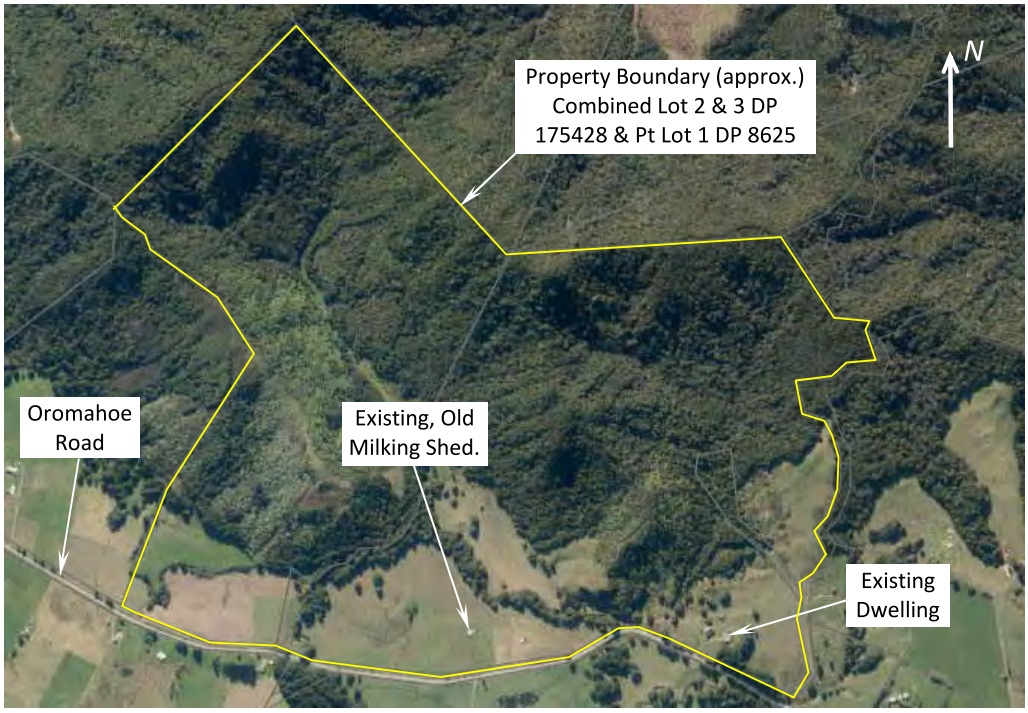
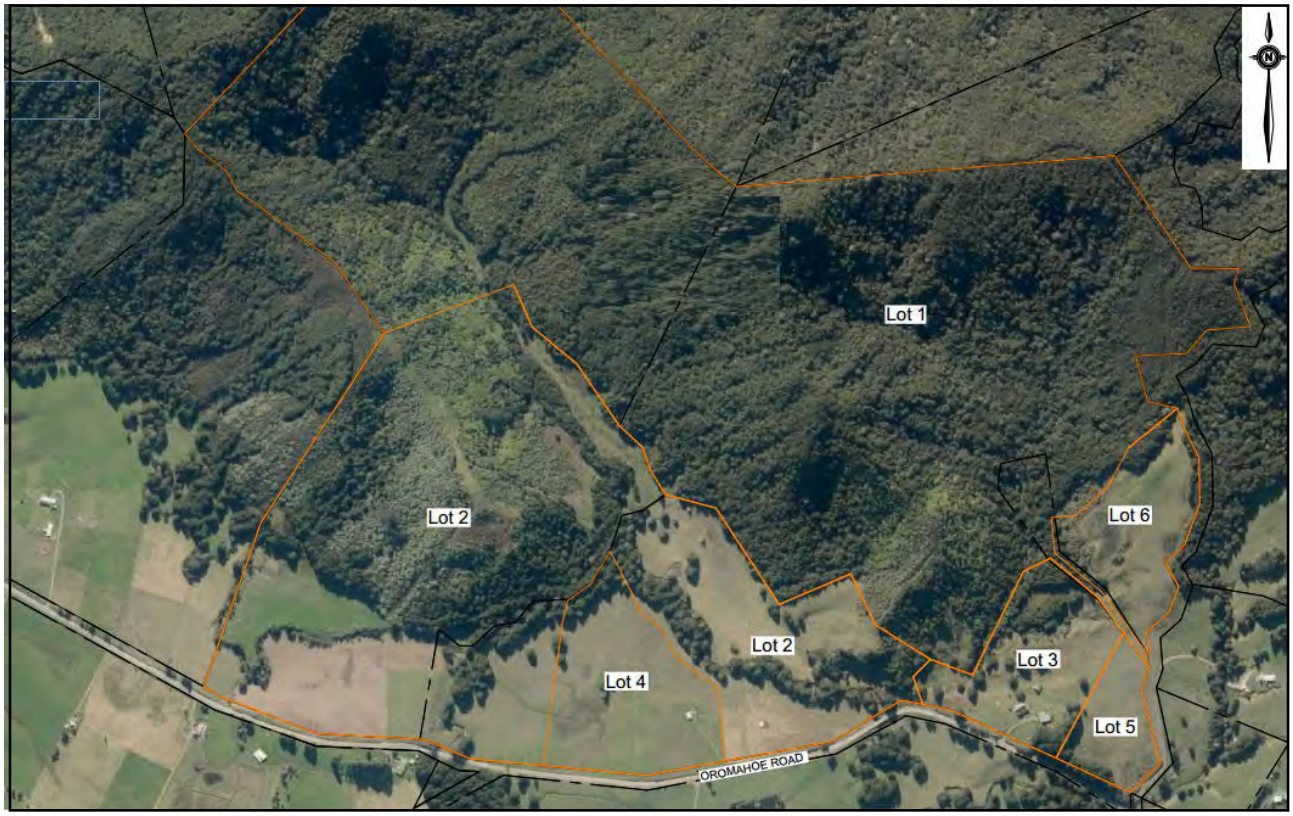


Figure 2 - Proposed Subdivision with Proposed Lot Boundaries



2 Geology

2.1 Published Geology

Sources of Information:

- Institute of Geological & Nuclear Sciences 1:250,000 Geological Map 2, 2009: "*Whangarei*".
- NZMS 290 Sheet P04/05, 1: 100,000 scale, 1982: *"Whangaroa-Kaikohe" Rock Types.*
- NZMS 290 Sheet P04/05, 1: 100,000 scale, 1980: *"Whangaroa-Kaikohe" Soils*.

The site is within the bounds of the GNS Geological Map 2 "Geology of the Whangarei area", 1:250,000 scale*. The published geology indicates the majority of the site to be underlain by the Waipapa Group (TJw) with the southern, low lying part of the site being underlain by younger deposits of the Tauranga Group (Q1a and eQa). The Waipapa Group comprises massive to thin bedded, lithic volcaniclastic sandstone and argillite and is of Permian to Jurassic age. The Tauranga Group comprises younger deposits of poorly to moderately consolidated mud, sand, gravel and peat or lignite of alluvial, colluvial, lacustrine, swamp and estuarine origin of Early to Middle Pleistocene age and more recent unconsolidated to poorly consolidated mud, sand, gravel and peat deposits of alluvial, colluvial and lacustrine origins of Holocene age. An extract of the geological map is shown in Figure 3, with geological units presented in Table 1 below.

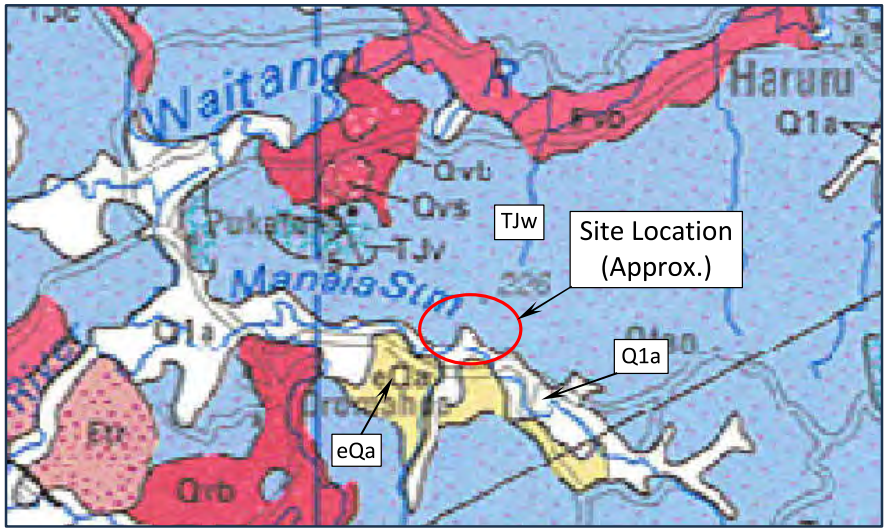


Figure 3 – Geological Map Extract

* Edbrooke, S.W; Brook, F.J. (compilers) 2009. Geology of the Whangarei area. Institute of Geological and Nuclear Sciences 1:250 000 geological Map 2. 1 sheet + 68 p. Lower Hutt, New Zealand: Institute of GNS Science.

Table 1 - Geological Legend

Symbol	Unit Name	Description
TJw	Waipapa Group	Greywacke. Massive to thin-bedded, lithic volcaniclastic sandstone and argillite. (Permian to Jurassic)
eQa	Tauranga Group	Poorly to moderately consolidated mud, sand, gravel and peat or lignite of alluvial, colluvial, lacustrine, swamp and estuarine origin. Early to Middle Pleistocene age.
Q1a	Tauranga Group	Unconsolidated to poorly consolidated mud, sand, gravel and peat deposits of alluvial, colluvial and lacustrine origins. Holocene age.

Further reference to the published New Zealand land inventory maps (Whangaroa-Kaikohe), indicates the site is underlain by *'soils of the rolling and hill land; well to moderately well drained Marua light brown clay loam (MRuH)* across the northern part of the property, with the southern part of the property underlain by *'soils of the undulating terraces and lowlands; well to moderately well drained Whareora clay loam (WO) and Waipu clay loam (YU)'.* The northern hill country is further underlain by *weathered to soft, brown sandy clay with harder cores to depths of 30m.*

3 Ground Investigations

3.1 Subsurface Investigations

Haigh Workman undertook geotechnical investigations on 14 March 2024 and 2 May 2024. The investigations comprised the drilling of nine hand augered boreholes (BH01 to BH09) and five Cone Penetration Tests (CPT01 to CPT06) located across proposed subdivision Lot 2, Lot 4, Lot 5 and Lot 6. Future development is intended within proposed Lot 2, Lot 4 and Lot 5 only.

3.1.1 *Hand Auger Boreholes*

Hand auger boreholes were located within each of the proposed lots in what is considered to be the most suitable location for future development. The boreholes were drilled to a maximum of 3.0 metres below ground level (mbgl). Investigations were logged in accordance with The New Zealand Geotechnical Society, "Guidelines for the Field Classification and Description of Soil and Rock for Engineering Purposes" (2005). Investigation locations are shown on the drawings in Appendix A. All shear strengths shown on the appended logs are Vane Shear Strengths in accordance with the NZGS; "Test Method for determining the Vane Shear Strength of a Cohesive Soil using a Hand-held Shear Vane", 2001.

3.1.2 *Cone Penetrometer Tests*

Cone penetrometer tests (CPTs) were undertaken by Underground Investigation Limited using a rubber tracked machine to test and record ground information. Testing was undertaken to refusal (anchors pulling out of the ground) or until maximum allowable friction was reached during testing. A maximum depth of 13.397m was achieved at CPT06 within proposed Lot 4. CPT soundings are presented in Appendix C.

3.1.3 *Laboratory Testing*

A single disturbed bag sample was collected for Atterberg limit testing from BH06 (0.7m to 1.2m). Laboratory test results are presented within Appendix C and are further discussed in Section 5.1 of this report.

3.2 Ground Conditions

Based on the results of the geotechnical investigation conducted by Haigh Workman and review of published geological maps, it is considered the soils directly underlying proposed Lot 6 comprise the natural soils of the Waipapa Group while the proposed development site within proposed Lot 5 is considered to be underlain by Tauranga Group colluvium, underlain by Waipapa Group soils at depth. The proposed development locations within proposed Lot 2 and Lot 4 are underlain by alluvial and colluvial soils of the Tauranga Group. For the purposes of this report, subsoil conditions on the site have been interpolated between the boreholes and some variation between borehole positions are likely. Detailed hand auger borehole logs are presented in Appendix B. Table 2 summarises the materials encountered with depth to the base of each unit provided.

Table 2 - Summary of Borehole Results

Borehole I.D.	Topsoil (mbgl)	Non-certified Fill Material (mbgl)	Tauranga Group Soils (mbgl)	Waipapa Group Soils (mbgl)	Soil Moisture and Groundwater Observations
BH01 (Lot 6)	0.0 - 0.2	NE	NE	0.2 to >3.0	Groundwater not encountered.
BH02 (Lot 6)	0.0 - 0.2	NE	NE	0.2 to >2.0	Groundwater not encountered.
BH03 (Lot 6)	0.0 - 0.2	NE	NE	0.2 to >2.0	Groundwater not encountered.
BH04 (Lot 5)	0.0 - 0.2	NE	0.2 to >3.0	NE	Groundwater not encountered.
BH05 (Lot 5)	0.0 - 0.2	NE	0.2 to >3.0	NE	Groundwater not encountered.
BH06 (Lot 4)	0.0 - 0.2	NE	0.2 to >2.0	NE	Groundwater not encountered.
BH07 (Lot 4)	NE	0.0 - 0.2	0.2 to >2.0	NE	Groundwater not encountered.
BH08 (Lot 2)	0.0 - 0.2	NE	0.2 to >3.0	NE	Groundwater not encountered.
BH09 (Lot 2)	0.0 - 0.2	NE	0.2 to >3.0	NE	Groundwater not encountered.

Note: Depths measured from existing ground surface level.
NE = Not Encountered.

The ground surface across the proposed development areas and nearby slopes were drawn from LINZ Data Service LiDAR contours. Table 3 summarises the depth to the inferred geological boundaries within CPT soundings. CPT soundings are presented in Appendix C.

Table 3 - Summary of Cone Penetrometer Results

Borehole I.D.	Topsoil (mbgl)	Non-certified Fill Material (mbgl)	Tauranga Group Colluvium (mbgl)	Waipapa Group Soils (mbgl)	Soil Moisture and Groundwater Observations
CPT01 (Lot 6)	NA	NA	NA	0.0 to >8.02*	NE
CPT02 (Lot 6)	NA	NA	NA	0.0 to >8.76*	NE
CPT03 (Lot 6)	NA	NA	NA	0.0 to >13.222*	NE
CPT04 (Lot 6)	NA	NA	NA	0.0 to >8.847*	NE
CPT05 (Lot 5)	NA	NA	0.0 to 7.0	7.0 to >11.985*	Wet at 11.7m. (CPT hole dipped on completion)
CPT06 (Lot 4)	NA	NA	0.0 to 7.0	7.0 to >13.397*	NE (CPT hole dipped on completion, collapse at 4.65m)

Note: Depths measured from existing ground surface level.
NA = Not Applicable (no physical sample).
NE = Not Encountered.
* = Inferred from CPT data (cannot be confirmed due to no physical sample).

3.2.1 *Topsoil*

A veneer of topsoil was encountered within boreholes BH01 to BH06 (inclusive) to a maximum encountered depth of 0.2mbgl. The topsoil typically comprised a very stiff silt that has been described as light brown to brown in colour, dry and of having no plasticity with minor fibrous organic content (rootlets). Natural soils of the Waipapa Group were encountered below the topsoil veneer within boreholes BH01, BH02 and BH03. Natural soils considered to comprise colluvial soils of the Tauranga Group were encountered below the topsoil within boreholes BH04 and BH05, with natural soils comprising alluvial soils of the Tauranga Group encountered below the topsoil within boreholes BH06, BH07, BH08 and BH09.

3.2.2 *Fill*

A thin veneer of fill was encountered within BH07 (proposed Lot 4) to a depth of 0.2mbgl. The origins of the fill material encountered is unknown but is likely to be a result of historical activity associated with the existing, old cow shed located to the northwest of borehole BH07. The fill material typically comprised a light brown to brown silt with trace fine gravel content that has been described as very stiff, dry and having no plasticity. For the purposes of reporting, the fill material has been classified as non-certified fill material.

3.2.3 *Tauranga Group Soils*

The natural soils encountered within boreholes BH04 and BH05 (proposed Lot 5) have been interpreted as Tauranga Group colluvial soils deposited as a result of historic landslide activity with slope debris deposited at or near the toe of the existing hill country. The colluvial deposits are inferred to be derived from Waipapa Group soils that underlie the hill country to the north of proposed Lot 5.

The colluvial material that underlies proposed Lot 5 represents historic slope instability that is now considered to be inactive and does not represent any ongoing instability concerns. CPT05 indicates the colluvial soils of the Tauranga Group underlie the site to a depth of 7.0m (approx.), with weathered rock of the Waipapa Group encountered below 7.0m (approx.).

The Tauranga Group colluvial deposits have been described as silt, clayey silt and silty clay that is yellowish brown to light brownish orange, light orange and light grey in colour. The soils were very stiff, dry, becoming moist to wet with increasing depth and of having low to high plasticity. Natural soil and rock of the Waipapa Group underlie the Tauranga Group colluvial soils. CPT05 indicates that the Tauranga Group soils tend to comprise a very stiff (>100kPa) crustal layer in the order of 3.0m thick with weaker (<100kPa) soils encountered at depth.

Tauranga Group soils were encountered within BH06, BH07, BH08 and BH09 of proposed Lot 2 and Lot 4. The Tauranga Group soils were encountered below a veneer of topsoil (BH06, BH08 & BH09) and non-certified fill material (BH07) to a maximum depth of 3.0mbgl. The Tauranga Group soils encountered within boreholes BH06 to BH09 are considered to comprise soils deposited from alluvial and colluvial depositional processes within the low-lying valley floor. CPT06 indicates the alluvial and colluvial soils of the Tauranga Group underlie the site to a depth of 7.0m (approx.), with a very stiff (>100kPa) crustal layer in the order of 3.0m thick, underlain by weaker (<100kPa) soils around 4.5m deep. The Tauranga Group deposits are further underlain by weathered rock of the Waipapa Group that is inferred to be encountered below 7.0m (approx.).

The recovered soils were typically described as very stiff silt, clayey silt and silty clay that was orangish brown, light orange and light grey in colour. The soils were further described as being dry, becoming moist with increasing depth and having variable plasticity depending on clay content.

3.2.4 *Waipapa Group Soils*

Below a veneer of topsoil, natural soils of the Waipapa Group were encountered within boreholes BH01, BH02 and BH03 of Lot 6 to depths of 3.0mbgl. The soils were generally described as being very stiff silty clay, clayey silt and silt. The natural soils were variable in colour from light orange to orange, yellowish brown, light grey and white with variably coloured streaks and mottles throughout. The soils were further described as being generally dry, becoming moist to wet with increasing depth and of having low to high plasticity. CPT soundings across proposed Lot 6 indicate very stiff to hard residual soils to depths of up to 9.0m (approx.) with underlying material inferred to comprise weathered rock of the Waipapa Group.

Vane shear strength results indicated very stiff soils with recorded vane shear strengths greater than 100kPa. Unsuccessful tests where soils were too stiff to penetrate with the shear vane were recorded as ‘unable to penetrate’ (UTP) and are inferred to represent soils with the vane shear strengths in excess of 100kPa. Recorded vane shear strengths are shown on the appended borehole logs.

3.2.5 *Groundwater*

Groundwater was not encountered during our site investigations. No evidence of groundwater seepage or static groundwater level was observed near the ground surface during the drilling of the hand auger boreholes. Soil moisture observations were recorded within the hand auger boreholes, with soils noted as being dry, becoming moist to wet with increasing depth. Testing was completed at the end of a dry summer period when groundwater levels are expected to be at a seasonal low. Groundwater levels can and do fluctuate and higher/perched groundwater levels may be encountered following periods of prolonged or heavy rainfall.

4 *Geotechnical Assessment*

4.1 Slope Stability (Visual Assessment)

The draft plan for the proposed subdivision has outlined the proposed Lots. Based on discussions with the Client, we have identified proposed building locations within Lot 2, Lot 4 and Lot 5, with a potential alternative building location within proposed Lot 6 if required, refer Drawings in Appendix A. It is considered that suitable development areas can be achieved within each of the proposed Lots, being proposed Lot 2, Lot 4 and Lot 5. An alternative development location has also been identified within proposed Lot 6.

It is considered that at present, the proposed development areas for Lot 2, Lot 4 and Lot 5 are currently stable and suitable for development, subject to site specific investigations and slope stability assessment being undertaken at Building Consent stage.

4.1.1 *Proposed Lot 2*

The contour across the area investigated comprised generally flat to gentle north to northeast sloping ground. No signs of instability were observed within the proposed development area of Lot 2. The site is located on an elevated alluvial terrace to the south of the river flood plains, approximately 50m north of Oromahoe Road. Based on LiDAR survey data, the difference in elevation from the river flats to the proposed development area is in the order of 5.0m, with slope angles of 5° to 6° to the north of the proposed site. We envisage that any future building platform within proposed Lot 2 will remain on the gentle to flat terrace area of proposed Lot 2, refer Appendix A.

4.1.2 *Proposed Lot 4*

The contour across the area investigated comprised generally flat to gentle north to west sloping ground. No signs of instability were observed within the proposed development area of Lot 4. The site is located on an elevated area that forms part of an alluvial terrace within the greater valley floor. Steeper slopes along the northern and western edges of the terrace descend to the lower flats and river flood plains below. Slope angles along the terrace edges were in the order of 10°.

Due to the presence of the steeper slopes to the north and west of the proposed development area, we recommend that a ‘building restriction line’ be established with a minimum setback of 10m from the crest of the slopes to the north and west of the proposed development site.

The recommended building restriction line is shown on the appended drawing within Appendix A. Based on our site walkover and observations, no slope instability features were identified across the natural slopes. We envisage that any future building platform within proposed Lot 4 will remain on the gentle to flat terrace area of proposed Lot 4, refer Appendix A.

4.1.3 *Proposed Lot 5*

Proposed Lot 5 is located immediately to the north of Oromahoe Road and comprises a generally broad, gentle to moderately steep, south facing site with slope angles across the proposed development area in the order of 2° to 4°. Steeper slopes to the south, close to the property boundary and Oromahoe Road were generally vegetated with mature native and exotic trees.

Slope angles adjacent to the road boundary were estimated to be up to 25°. It is considered that the steeper slopes adjacent the road boundaries have probably been partly over steepened during cut and fill process associated with the construction of Oromahoe Road.

Based on our investigations and site observations, we conclude that historic slope instability has been identified on proposed Lot 5, with historic slope debris soils (colluvium) identified on the gentle to moderate south facing slopes that underly the proposed development area. The colluvial soils are considered to comprise material derived from Waipapa Group soils deposited as a result of historical landslide activity with slope debris deposited at or near the toe of the existing hill country. The colluvial material that underlies proposed Lot 5 represents historic slope instability that is now considered to be inactive and does not represent any ongoing instability concerns.

No obvious signs of instability were observed within the proposed Lot 5 development location. However, some instability features were observed along the steeper slopes adjacent Oromahoe Road. To the east of the proposed development location, a natural spring surfaces near the eastern property boundary with some localised slope instability features observed around the spring location. Approximately 20m to the west of the proposed development area, a shallow, gently sloping arcuate shaped depression extends down to Oromahoe Road. This feature represents an old landslip head scarp that is now inactive with the slopes below the head scarp now vegetated with a mixture of native and exotic trees. Due to the instability features observed, we recommend a 'building restriction line' be established with a minimum setback of 16m from the crest of slopes steeper than 20°. The recommended building restriction line is shown on the appended drawing within Appendix A.

The instability features observed to the west, south and east of the proposed development location are considered to be sufficiently far enough from the proposed development area to pose no risk of instability provided the recommended 'building restriction line' is applied. Depending on the final proposed building platform location, further site-specific investigation and stability analysis may be required at the Building Consent stage. Based on our site walkover and observations, no observable slope instability features could be identified across the natural slopes in or around the proposed development location.

It is considered that at present, the proposed development areas for Lot 2, Lot 4 and Lot 5 are currently stable and suitable for development, subject to site specific investigations and slope stability assessment being undertaken at Building Consent stage.

4.1.4 *Proposed Lot 6*

Proposed Lot 6 comprises a parcel of land located on undulating south to southwest facing slopes that are predominantly in pasture with bush to the west and east of the proposed Lot. A small ridge spur extends down the eastern side of the Lot with generally steep slopes to the east that descend beyond the property boundary through bush covered slopes to a small stream below. A small farm dam to the west of the ridge spur appears to be spring fed with additional overland flow from the slopes above during wetter seasons. An old cut track extends across the south facing slopes and forms the southern limit of proposed Lot 4, with Lot 3 immediately to the southwest. The track originally provided access to a now abandoned quarry site located immediately to the west of proposed Lot 6. Exposures of the underlying weathered rock can be seen along parts of the cut track and at the quarry face.

Investigations were undertaken within proposed Lot 6 (formerly Lot 4) as part of the original subdivision layout plan with two potential development locations identified within proposed Lot 6, a northern and southern site. The northern site is located near the crest of the existing ridge spur with moderately steep to steep slopes to the west, south and east of the proposed development location. A second development area was identified 60m (approx.) to the south, on gentle to moderate, south facing slopes below the ridge spur. Testing was undertaken at both locations with testing comprising hand auger boreholes and CPT testing.

After the initial Geotechnical investigations that were, based on a five Lot subdivision, an updated subdivision layout plan was developed for a six Lot subdivision. Based on discussions with the Client and the updated subdivision layout plan, we understand the Client intends to develop proposed Lot 2, Lot 4 and Lot 5 only, and that no development within proposed Lot 6 is intended at this stage. We also understand that the proposed Lot 6 is to be amalgamated with proposed Lot 3, i.e., to fall under the same title as Lot 3. If required, an alternative build location has been identified within proposed Lot 6.

Based on our site observations and discussions with the Client, the southern site was chosen as the most appropriate location for future development if required. The alternative development location is situated on broad, gentle to moderate sloping, south facing slopes with slope angles in the order of 8° to 10°. Steeper slopes of up to 15° were noted downslope, to the southeast of the alternative development location. However, these steeper slopes are more than 20m from the alternative development location and are considered to be sufficiently far enough from the development location to pose no risk of instability. Based on our site walkover and observations, no observable slope instability features could be identified across the natural slopes of the alternative development location of proposed Lot 6.

4.2 Geotechnical Design Parameters

Geotechnical design parameters recommended in this report are based on in-situ test results, empirical relationships, and back analysis. Back analysis was carried out for proposed Lot 5 and Lot 6 along cross sections A-A' and B-B' respectively, with both cross sections extending north to south, perpendicular to the overall slope at each development site. Sensitivity analyses was carried out for the residual soil layers to obtain a factor of safety of 1.0 for worst case groundwater conditions.

Refer to Table 4 below for soil parameters adopted within this report. Depths for the geological units are shown in Table 3 above and on the geological cross sections, Drawings 24 041 G05 & G06.

Table 4 - Geotechnical Parameters (Lot 5 and Lot 6)

Geological Unit	Bulk Unit Weight, γ (kN/m3)	Peak Undrained Shear Strength S_u (kPa)	Effective Cohesion, c' (kPa)	Effective Friction Angle, φ' (degrees)	Groundwater Conditions (Ru)*
Tauranga Group Soils (Colluvium)(Stiff to very stiff)	17.5	50-100	3	28	0.25 (0.40)
Waipapa Group Soils (Very stiff)	17.5	100-200	5	30	0.25 (0.40)
Waipapa Group Soils (Completely weathered rock)	18	200-500	7	30	0.25 (0.40)
Waipapa Group Rock (Highly weathered rock)	20	>500	10	34	0.25 (0.40)

**Parentheses indicate worst case/elevated groundwater conditions (worst credible).*

4.2.1 *Stability Analysis*

Stability modelling was carried out using Slide (Version 9.031), with the ground model developed for proposed Lot 5 and Lot 6 using the geotechnical investigation data from the hand auger boreholes and data from CPT testing. The soil parameters used are presented in Table 4. The models were developed with the primary purpose of determining a safe building platform on the proposed development location for both Lot 5 and Lot 6. The purpose of the stability modelling was to assess the overall global stability for the proposed development area, including prevailing/static groundwater conditions, elevated groundwater, and during a ULS seismic event. A 10kPa uniformly distributed load has been applied to represent the dwelling load.

Groundwater has been modelled using a pore pressure coefficient for each layer (Ru). This develops a porewater pressure profile specific to each slip surface and is appropriate for the short term / transient pore water pressures that are expected to develop following rainfall onsite and the groundwater flow conditions that will result due to the sloping topography. For the elevated groundwater scenario (and back analysis), an Ru of 0.4 has been used to simulate elevated groundwater conditions (winter) within the clayey soils.

The criteria adopted for assessing the global stability is outlined in Table 5 below.

Table 5 - Design Factors of Safety (FOS)

Load Case	Design Factor of Safety
Static - Proposed development	≥ 1.5
Elevated groundwater	≥ 1.3
Seismic loading, 0.13 g	≥ 1.1

4.2.2 *Geological Ground Model*

A geological ground model has been developed based on the site investigation data and the LiDAR survey data from the Northland Regional Council GIS database. A single geological section was developed for each Lot (Lot 5 and Lot 6) for use in stability analyses (Section A-A' and B-B'), refer Appendix A. The cross sections used during stability analysis has been adapted from the geological sections.

4.2.3 *Seismic Criteria*

Anticipated peak ground accelerations have been estimated assuming Site Class C, as per NZS 1170.5. The seismic coefficients for geotechnical design are based on the NZTA Bridge Manual SP/M/022 (NZBM) and NZS1170. Assuming a design working life of 50 years with an importance level 2, the return period of an earthquake would be 1 in 500 years. Accordingly, the ULS peak ground acceleration for seismic analysis is 0.13g.

4.2.4 *Stability Analyses Results*

Slope stability analyses were analysed to assess the global stability of the site, taking into account the proposed development location for both Lot 5 and an alternative development location within Lot 6. Results of the stability modelling are summarised in Table 6 and selected outputs are presented in Appendix E.

With respect to Section 71 of the Building Act and subject to the recommendations in this report including stormwater, foundation and earthworks design recommendations being followed, we consider that the proposed works are not likely to accelerate, worsen or result in slippage on the site or any other property.

Table 6 - Stability Results

Section I.D.	Scenario	Result (FOS)	Required (FOS)	Outcome
A-A' (Lot 5)	Static conditions. (Normal groundwater condition)	2.27*	1.5	OK – specific analysis may be required at Building Consent stage. (Recommend a minimum building setback of 16m from slopes greater than 20°, i.e., existing slope crest).
	Proposed – Static conditions. (Normal groundwater condition)	2.30*	1.5	
	Proposed – Elevated. (Worst credible groundwater)	1.84*	1.3	
	Proposed – Seismic (0.13g)	1.37*	1.1	
B-B' (Lot 6)	Static conditions. (Normal groundwater condition)	3.01	1.5	OK – specific analysis may be required at Building Consent stage.
	Proposed – Static conditions. (Normal groundwater condition)	2.51*	1.5	
	Proposed – Elevated. (Worst credible groundwater)	2.48*	13.01	
	Proposed – Seismic (0.13g)	1.69	1.1	

* FOS at proposed development location.

The results of the stability analysis indicate that Lot 5 and Lot 6 can provide a suitable building location provided any proposed development is not located outside of the proposed development areas as shown on Drawings 24 041 G03 & G04. If any proposed dwelling or any other ancillary structures are to be located outside of the proposed development areas as shown on the appended drawings, then further stability analysis and possible ground improvements may be required. Further site-specific investigations and slope stability assessment will be required to be undertaken at Building Consent stage.

We recommend that the proposed development on Lots 5 should be setback a minimum of 16.0m from slopes steeper than 20°, i.e., from the crest of the existing slopes to the south. We have nominated a development area to the north of the recommended building restriction line, as shown on the appended drawings.

To safeguard against soil creep, it is also recommended that buildings on proposed Lot 4 are setback a minimum distance of 10.0m from the crest of the slopes to the north and west, refer Drawings 24 041 G02. Building within the recommended 10.0m building restriction line of proposed Lot 4 is possible. However, building within the building restriction line will require foundations to be designed to mitigate the effects of soil creep and would be subject to site specific investigation and design at building consent stage.

The recommended building setback distances for proposed Lot 4 ands Lot 5 as shown in the Appended drawings allow for an additional amenity zone around the proposed development areas of not less than 8.0m, i.e., the 8.0m amenity zones have adequate factors of safety.

5 Building Design Considerations

5.1 Shrink/Swell Behaviour

Based on our findings, we consider the natural ground conditions below the topsoil and non-certified fill (where encountered) are expected to be consistent across the proposed development locations, comprising generally very stiff cohesive soils. The reactivity and the typical range of movement that could be expected from soils underlying any given building site depend on the amount of clay present, clay mineral type, proportion, depth and distribution of clay throughout the soil profile.

Moisture changes tend to occur slowly in clays and produce swelling upon wetting and shrinkage upon drying. In addition, subsequent building damage can be limited by good building practice, including wetting of clay subgrade at least 48 hours ahead of base filling and slab preparation. Apart from seasonal moisture change (wet winters / dry summers), other factors that can influence soil moisture content include:

- Influence of garden watering and site drainage.
- The presence of large trees.
- Initial soil moisture content conditions at construction time.

Visually, expansive soils are noted for developing extensive cracking during dry periods (especially summer through autumn in Northland) and can be locally identified by this feature when sites are excavated and left to dry out.

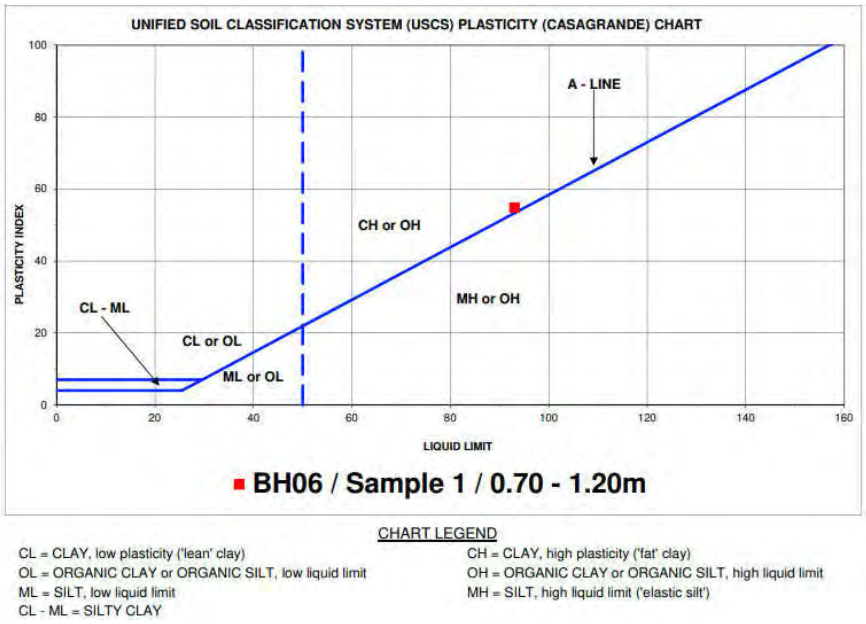
The New Zealand Building Code outlines expansive soils are those with a liquid limit greater than 50% and a linear shrinkage greater than 15%. Case histories of shrink-swell cases indicates soils with a liquid limit (LL) greater than 50% and plasticity index (PI) greater than 30% are considerably more susceptible to shrinkage and therefore considered as expansive soils. Atterberg limits test results on the sample collected during the site investigation are presented in Table 7 below.

Table 7 – Atterberg Limits and Linear Shrinkage Test Results

Sample I.D.	Depth (m)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	Linear Shrinkage (%)
BH06	0.7 to 1.2	35.6	93	38	55	16

The results indicate that the natural soils of the Tauranga Group underlying proposed Lot 4 are expansive and subject to seasonal volume change, predominantly shrinkage during summer which can result in surface settlements due to volume change. The laboratory test results are considered to be representative of the Tauranga Group soils that underlying proposed Lot 2, Lot 4 and Lot 5. Based on the laboratory results, it is our opinion that the site soils for proposed Lot 2, Lot 4 and Lot 5 can be classified as Class H, highly expansive (in accordance with the New Zealand Building Code, B1/AS1) and deepened foundations will be necessary to mitigate the effects of prolonged dry seasons. Results are plotted on the Casagrande Chart in Figure 4 below, with the sample plotting above the A-Line, which further reinforces the engineering behaviour of the soil (Wesley, 2010[†]).

Figure 4 - Casagrande Chart



Based on laboratory testing, the foundation soils lie outside the definition of 'good ground' as outlined in NZS3604:2011. In terms of B1/AS1, the soils present are considered to lie within Site Class H (highly expansive).

Accordingly, any future subdivision and building foundations on this site will be subject to specific foundation design by a Chartered Professional Engineer familiar with the contents of this report and subject to further site/lot specific testing to determine Site Class. Reference should be made to the New Zealand Building Code (B1/AS1) for assistance.

5.2 Seismic Hazard and Site Subsoil Category

The site conditions have been assessed to be consistent with seismic subsoil Class C (Shallow site soils) in accordance with NZS1170.5.

[†] Geotechnical Engineering in Residual Soils, Laurence, D. Wesley (2010).

5.3 Liquefaction Potential

A detailed liquefaction potential assessment was outside the scope of this ground investigation. At the time of building development, further assessment to determine seismic site class should be completed.

The results of our investigation show proposed Lot 2, Lot 4 and Lot 5 development locations are underlain by cohesive soils with a generally deep groundwater level (>3.0m) and plasticity index (PI) of greater than 12. Based on the results it is considered that the site soils are considered too plastic to liquify under seismic conditions. On this basis, we do not consider the proposed development locations to be at risk of liquefaction.

5.4 Shallow Foundations

Foundation conditions fall outside the definition of 'good ground' as outlined in NZS3604:2011 due to the presence of expansive soils and sloping ground. Ground investigations at Lot, 2, Lot 4 and Lot 5 identified that the ground conditions at each proposed development location is suitable for shallow foundations, provided foundations are designed for expansive soils and the subsequent volume change during seasonal changes. Soils are considered to lie in Site Class H (highly expansive) as defined in B1/AS1.

Site specific geotechnical investigations are required at all proposed Lots, with investigations tailored to suit the proposed developments. Based on the in-situ vane shear testing, an ultimate bearing capacity of 300kPa for limit state design should be available.

5.5 Piled Foundations

Proposed development sites on Lot 2, Lot 4 and Lot 5 are located on sloping ground. In this instance, any proposed dwelling may need to be supported on piled foundations.

Due to the sloping ground, the foundations will need to be deepened to account for any reduction in passive support and the potential for lateral loading on the piles. Foundations will be subject to specific structural design or confirmation by geotechnical engineer that the site is stable. As a guide, where the slopes exceed 10 degrees, we recommend that the foundation piles are designed to accommodate lateral loading on the piles and will be subject to site specific design and recommendations by a Chartered Geotechnical Engineer. The recommended minimum requirements would include the upper 1.0m of the soil column (not including topsoil) applying lateral earth pressures onto the pile and designed using at-rest earth pressure coefficient (k_0) and the passive earth pressure coefficient calculated to account for sloping ground. Earth pressure coefficient's for design, active and passive, will need to be estimated based on the site topography, e.g. charts from NAVAC DM7 (1971).

The minimum foundation embedment for slopes less than 10°, subject to site specific geotechnical investigation and reporting, will be 1.2m into very stiff natural soils.

5.6 Settlement

In accordance with the New Zealand Building Code (Clause B1.0), residential dwellings shall be designed to tolerate angular distortion as a result of consolidation settlement of up to 1:240 (approximately 25mm over a 6.0m length). We recommend that filling be avoided due to the potential for settlement within the underlying soils and the potential to destabilise the slopes.

CPT06 indicates the alluvial and colluvial soils of the Tauranga Group that underlie proposed Lot 4 comprise a very stiff crustal layer in the order of 3.0m thick, underlain by weaker soils of less than 100kPa below 3.0m (approx.). Due to the weaker soils encountered at depth, we recommend that no filling is undertaken on proposed Lot 4 due to the potential for settlement within the underlying weaker soils below the crustal layer.

Should filling be proposed, then we recommend that a site specific settlement and stability analysis be undertaken, prior to the placement of any proposed fill to validate the stability of the site. Any earthworks undertaken shall remove all grass coverings, topsoil and unsuitable material and be approved by a Chartered Professional Engineer.

The soils encountered in our investigation were generally found to be stiff to very stiff fine-grained residual soils and are expected to be of low compressibility. Furthermore, we do not anticipate any filling will be carried out beneath the building platforms and the structures will be of lightweight construction. As such, any building settlement is expected to be within the building code tolerable limits.

6 Construction

6.1 Site Formation Works

We are not aware of any proposed earthworks required to form the subdivision. Any formation works will be subject to approval by a Chartered Professional Engineer familiar with the contents of this report.

Based on our site observations, we consider that site formation works for the proposed development locations (excluding site access) are expected to be nominal based on the current site conditions. Nevertheless, where applicable, unsuitable materials should be stripped from any areas of earthworks and stockpiled well clear of earthwork operations or removed from the site. We envisage that any future sub-divisional earthworks will be minimal.

All earthworks should be carried out to the requirements of NZS 4404:2010 'Land Development and Subdivision Infrastructure' and NZS 4431:2022, 'Code of Practice for Earthfilling for Residential Development'. It is recommended that any unsuitable material identified during excavation be removed and replaced with granular hardfill or engineered cohesive fill, as approved by a Chartered Professional Engineer. If fills are proposed as part of the site formation works (i.e., a level building platform is to be constructed for shallow foundations), it will be subject to site specific design and approval by a Chartered Professional Engineer. Any fill placed beneath or within 1.0m of any dwelling or proposed structure will need verification of compaction has been completed to an engineered standard and confirmation by the Engineer that filling will not have a negative impact on stability with confirmation that settlement caused by filling will not cause adverse effects to any proposed structure.

6.2 Erosion and Sediment Control

Prior to commencing earthworks, a sediment control system needs to be constructed to ensure the Territorial and Regional Authority requirements are met. Typical details can be found in the ARC publication TP 90. Erosion and sediment control should be undertaken as early as possible before soil particles become dislodged and mobilised. The use of contour drains, mulching and earth bunds to control erosion during the construction phase is recommended, as is maintaining vegetation cover where possible to reduce erosion potential.

6.3 Stormwater Disposal

Concentrated stormwater flows from all impermeable areas must be collected, carried in sealed pipes and discharged in a manner that will not affect the stability of the ground. Concentrated stormwater flows must not be allowed to saturate the ground so as to adversely affect foundation conditions.

Design of devices to collect, transport and discharge concentrated flows should be engineered. Devices associated with subdivision development (paved access etc.) should be designed as part of the Subdivision Consent works. However, design for future house construction can only be carried out as part of Building Consent activities as the design is pertinent to the house and site coverage proposal. Further details on stormwater management are contained within the Haigh Workman Site Suitability Report, dated May 2024, reference 24 041.

6.4 Service Connections

All services should be accurately located on site and the depth to invert be determined prior to the commencement of foundation excavations. External service connections (power, water supply, stormwater, sewer, telecom and others) should be detailed for seasonal movement such as the use of rubber ring joints for stormwater and wastewater or looped power and water connections.

Building foundations within a 45-degree zone of influence from the invert level of any service pipe shall adopt the standard engineering details within the Far North District Council plan and NZS4404:2010.

6.5 Retaining Walls

At the time of writing, no known retaining walls were intended as part of the property development. However, it is considered that future retaining walls may be included at the detailed design stage. Should future retaining walls be intended, then, all retaining walls should be designed by a Chartered Professional Engineer familiar with the contents of this report. Loading from any adjacent structures, traffic, slope surcharges above and/or below retaining wall cuts and fills shall be taken into account during wall design.

Battering of cut slopes may be considered as an alternative to retaining walls. Cut slopes may become unstable if left exposed for extended periods of time. Cut sloes should either be battered back to a safe angle of 1V:2H with a maximum height of 2.0m or be retained by a retaining wall designed by a Chartered Professional Engineer with relevant experience in soil mechanics.

6.6 Unexpected Ground Conditions

Areas of unsuitable ground could be encountered anywhere on the site during site excavations. If unsuitable material is encountered, the Engineer responsible for providing certification of the earthworks and Geotechnical Completion Report should be contacted immediately to provide advice.

7 Conclusion

Geotechnical investigations indicate that the proposed subdivision is suitable, and that the subsoil properties are appropriate for residential development.

The extent of the geotechnical investigations is outlined within this report. The development will need to be undertaken in accordance with current best engineering practice and the following guidelines are applicable to all Lots, being proposed Lot 2, Lot 4 and Lot 5:

- The natural ground underlying the property is considered generally suitable for residential development of residential buildings not requiring specific design in terms of NZS3604:2011, subject to the following conditions:
    - Foundation soils lie outside the definition of 'good ground' in NZS3604:2011 due to the presence of expansive soils and sloping ground. Soils are considered to lie within Site Class H (highly expansive) as defined in New Zealand Building Code B1/AS1. All residential Lots will be subject to specific engineering design and site-specific geotechnical investigations. Specific design may be undertaken by first principles or by reference to AS2870:2011-Section 4 and related documents and updated with the B1/AS1 return periods.
    - Due to gently sloping ground across proposed Lot 2, Lot 4 and Lot 5, slab on grade construction will likely require minor earthworks with recommendations outlined in Section 6. Problems can occur with slab construction on shrink/swell sensitive soils. In soils which become desiccated in summer, subsequent capillary moisture rise may cause dry soils to wet up and swell, causing slab uplift and building distress. Conversely, construction during winter may result in subgrade soils with high moisture contents drying out through summer, with subsequent soil shrinkage and possible building deformation. The structural engineer should take likely construction timeframes into account and confirm that their design, or construction methodologies, will accommodate the soil shrinkage or swelling that may occur.
- No building or building platform earthworks involving fills or unsupported cuts in excess of 600mm should take place unless endorsed by a suitable design undertaken by a Chartered Professional Engineer with suitable geotechnical experience familiar with the contents of this report and responsible for design of structural elements of the building.
- No filling is to be undertaken on proposed Lot 4 due to the potential for settlement within the underlying weaker soils encountered below the stiff crustal layer.

- Any building or building platform earthworks conducted at the site should be undertaken and tested in accordance with NZS4431:2022. Any unsuitable material identified during excavation shall be removed and replaced with granular hardfill in accordance with NZS4431:2022. Granular hardfill is recommended to be GAP40 or GAP65, compacted to 95% MDD.
- All other earthworks shall be undertaken in accordance with FNDC District Plan and Bylaws.
- The proposed development sites as shown within Appendix A, will require site specific geotechnical investigations for all proposed Lots, being Lot 2, Lot 4 and Lot 5, with confirmation by a Chartered Professional Engineer (CPEng, Geotechnical) or Professional Engineering Geologist (PEngGeol) that each Lot can provide a suitable and stable build platform.
- Our assessment is based on interpolation between borehole positions and site observations. Local variations in ground conditions may occur. Unfavourable ground conditions may be encountered during earthworks. It is important that we are contacted in this eventuality or in the event that any variation in subsoil conditions from this described in this report are found. Design assistance is available as required to accommodate any unforeseen ground conditions present.

Provided the recommendations within this report are followed, the subject site is capable of being developed across proposed Lot 2, Lot 4 and Lot 5. All works should be carried out under the guidance of a Chartered Professional Engineer familiar with the contents of this report.

This report is not intended to be used for foundation design, other than provide general framework for building platform suitability. Specific geotechnical investigations are recommended to confirm the subsoil conditions, confirm the soil expansivity and provide site specific geotechnical recommendations for foundation design.

Summary of specific site investigation and foundation design requirements			
Lot No.	**Comments on Nominated Building Platform**	**Shallow Bearing Capacity / Expansive Class**	**Anticipated scope of additional works following specific investigation and design. [Comments are given as a guide only – specific engineering to be undertaken by a Chartered Professional Engineer]**
LOT 2	Specific site investigation to confirm AS2870 or B1/AS1 design with minimum shallow foundation depth 600mm. Piled foundations to account for sloping ground, minimum embedment depth of 1.2m.	300kPa/ Class H	Site specific geotechnical report to be undertaken at Building Consent stage to confirm the soil conditions assumed within this report.
LOT 4	Specific site investigation to confirm AS2870 or B1/AS1 design with minimum shallow foundation depth 600mm. Piled foundations to account for sloping ground and unsuitable material (fill), minimum embedment of 1.2m into very stiff natural soils. 'Building restriction line' with minimum setback of 10.0m from the crest of the slopes to the north and west of the proposed development site. No filling is to be undertaken on proposed Lot 4.	300kPa/ Class H	Site specific geotechnical report to be undertaken at Building Consent stage to confirm the soil conditions assumed within this report.
LOT 5	Specific site investigation to confirm AS2870 or B1/AS1 design with minimum shallow foundation depth 600mm. Piled foundations to account for sloping ground, minimum embedment depth of 1.2m. 'Building restriction line' with minimum setback of 16.0m from the crest of slopes steeper than 15°.	300kPa/ Class H	Site specific geotechnical report to confirm the soil conditions assumed within this report. Site specific investigations and slope stability assessment will be required to be undertaken at Building Consent stage.

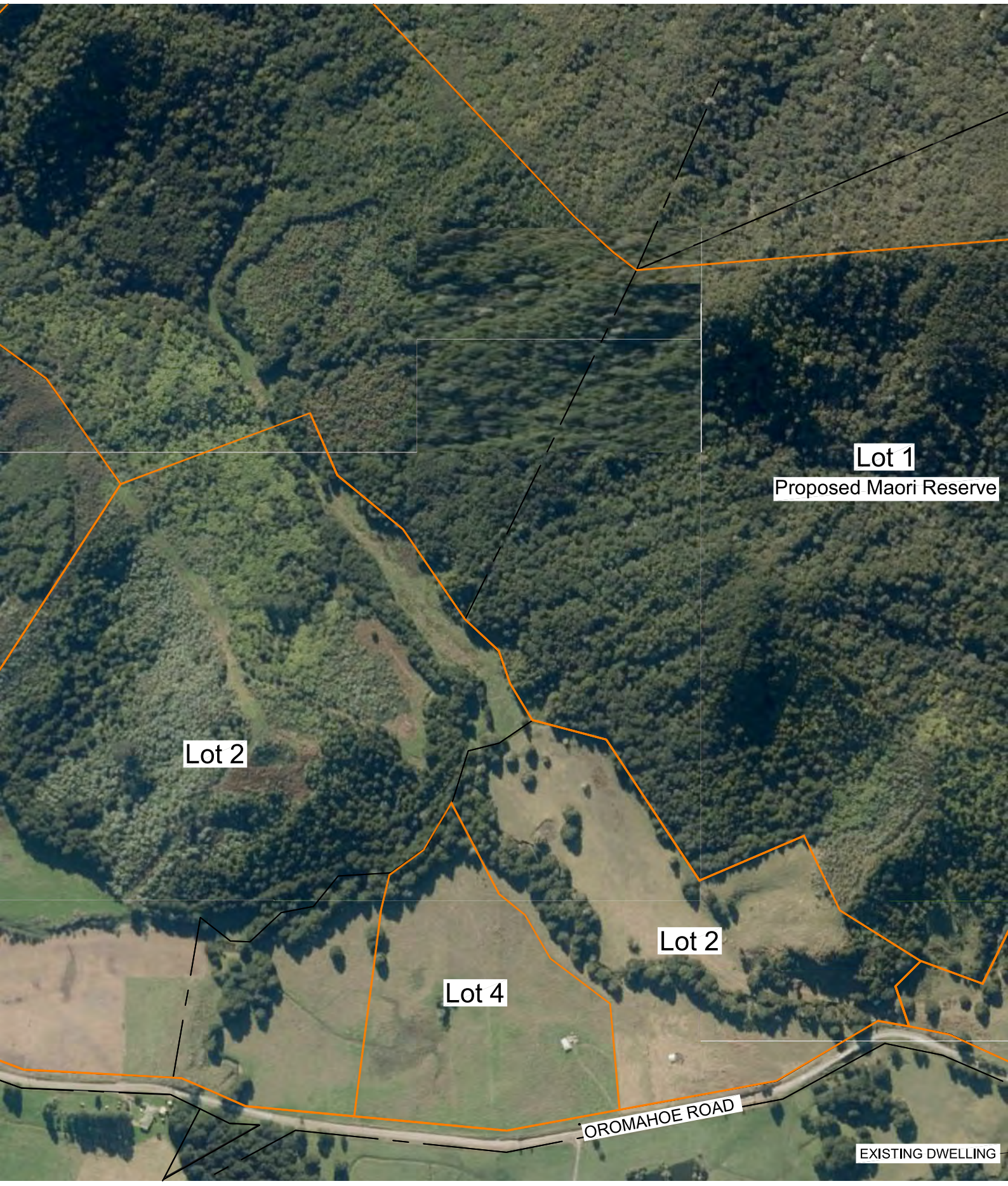
8 Limitations

This report has been prepared for the use of Jofe Graham-Jenkins with respect to the particular brief outlined to us. This report is to be used by our Client and their Consultants and may be relied upon when considering geotechnical advice. Furthermore, this report may be utilised in the preparation of building and/or resource consent applications with local authorities. The information and opinions contained within this report shall not be used in other context for any other purpose without prior review and agreement by Haigh Workman Ltd.

The recommendations given in this report are based on site data from discrete locations across proposed Lot 2, Lot 4 and Lot 5 only. Should the proposal to develop these Lots commence, further investigations and reporting is required for Building Consent. If any changes are made, we must be allowed to review the new development proposal to ensure that the recommendations of this report remain valid. Inferences about the subsoil conditions away from the test locations have been made but cannot be guaranteed. We have inferred an appropriate geotechnical model that can be applied for our analyses. However, variations in ground conditions from those described in this report could exist across the site. Should conditions encountered differ to those outlined in this report we ask that we be given the opportunity to review the continued applicability of our recommendations.

Appendix A – Drawings

Drawing No.	Title
24 041/G01	Site Location Plan
24 041/G02	Site Investigation Plan – Proposed Lot 2 and Lot 4
24 041/G03	Site Investigation Plan – Proposed Lot 5
24 041/G04	Site Investigation Plan – Proposed Lot 6
24 041/G05	Geological Cross Section A-A’
24 041/G06	Geological Cross Section B-B’



DWG

SITE LOCATION PLAN AND PROPOSED LOT BOUNDARIES

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Drawn JMC	Checked WT	Approved WT	
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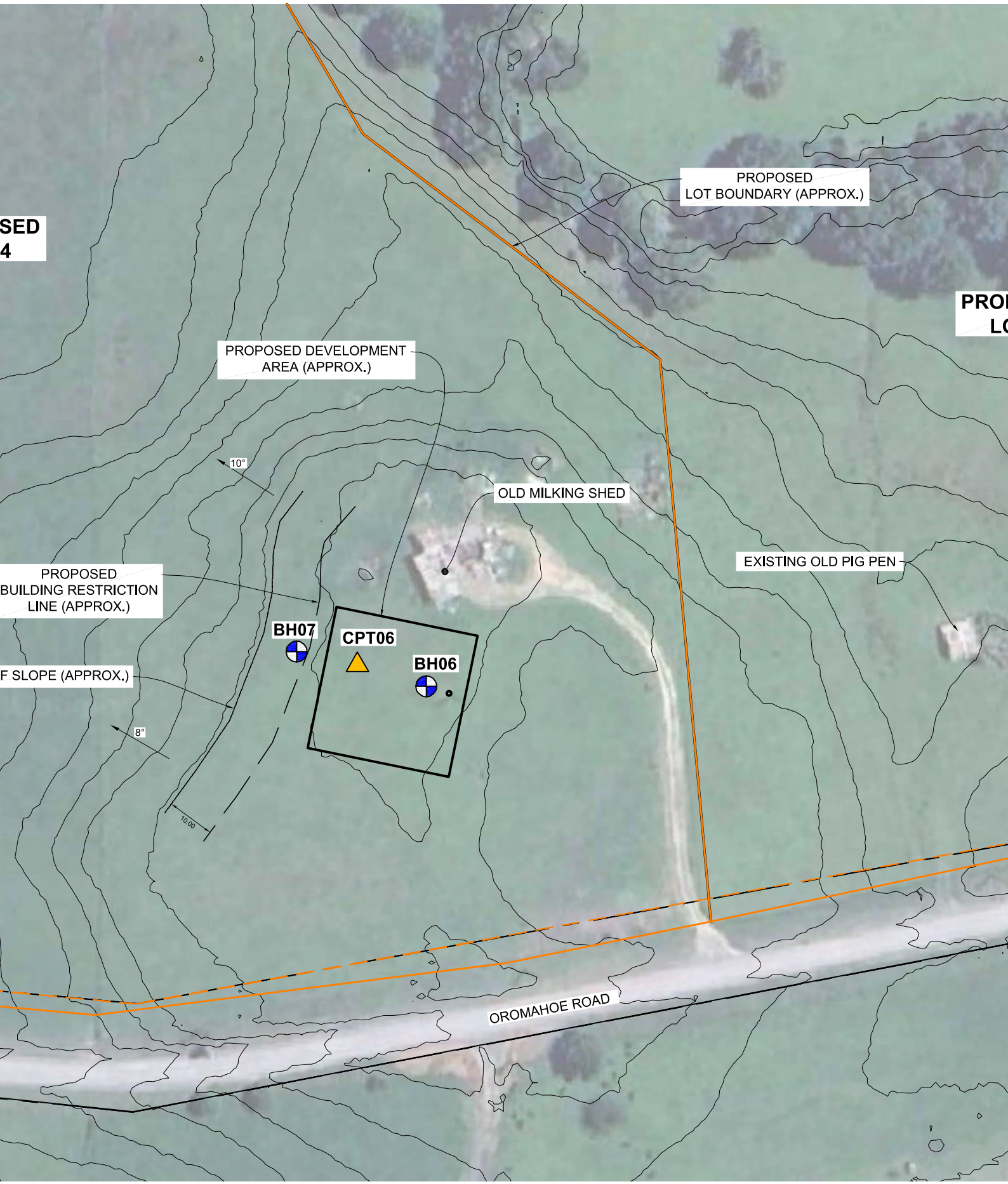
Project	GEOTE
Client	JOFE
Project No.	24



DWG

SITE INVESTIGATION PLAN
PROPOSED LOT 2 AND Lot 4

Scale 1:1000 @A3		Date APR 2024	
Drawn JMC	Checked WT	Approved WT	
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SITE INVESTIGATION PLAN
PROPOSED LOT 5

Scale 1:1000 @A3		Date APR 2024	
Drawn JMC	Checked WT	Approved WT	
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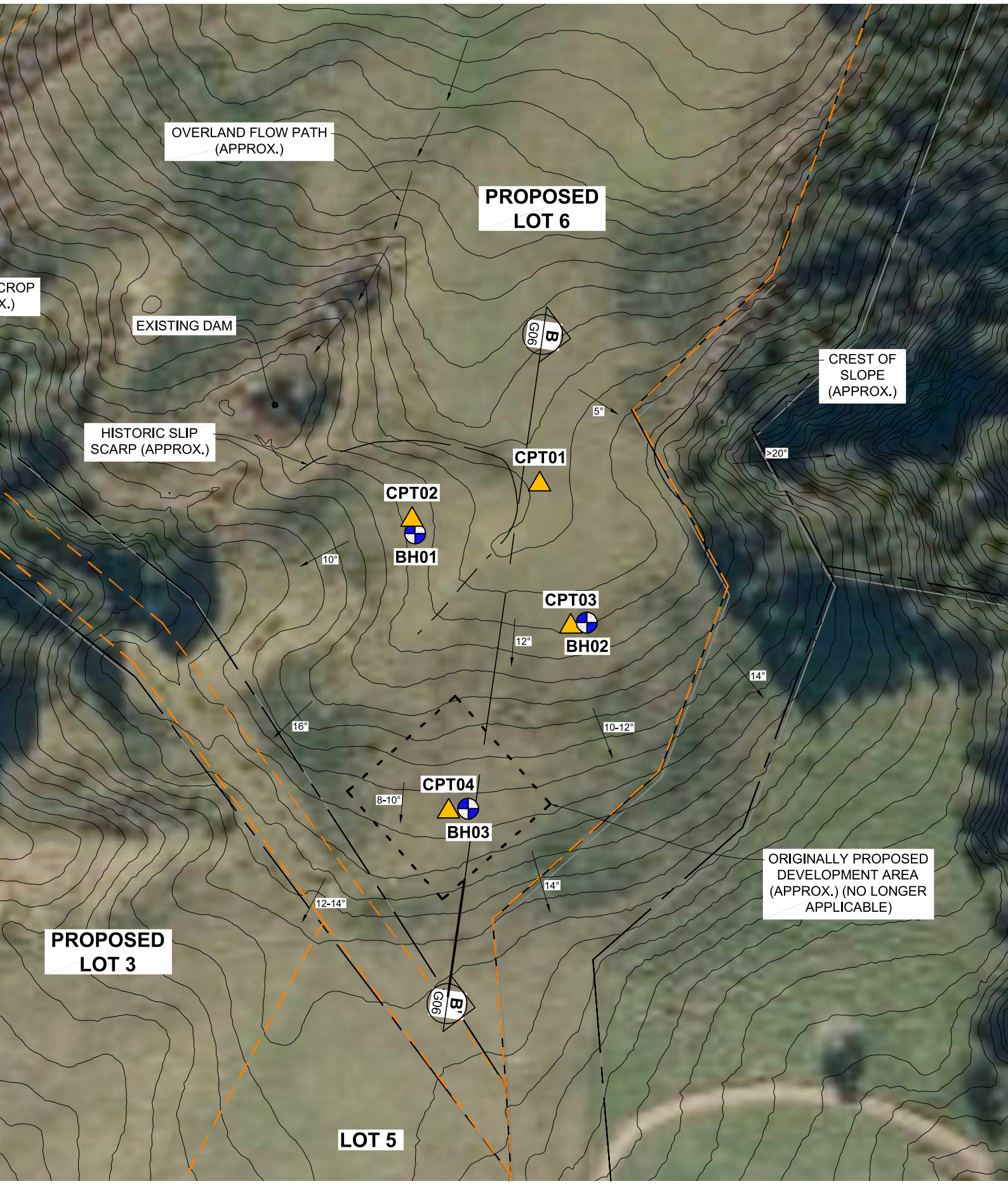

DWG	PROPOSED LOT 6			HAIGH WORKMAN LTD Civil & Structural Engineers	Project GEOTE
Scale 1:1000 @A3		Date APR 2024		6 Fairway Drive, Kerikeri, BOI T: 09 407 8327 F: 09 407 8378 E: info@haighworkman.co.nz	Client JOF
Drawn JMC	Checked WT	Approved WT		DIMENSIONS MUST NOT BE SCALE MEASURED FROM THESE DRAWINGS. THE CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS INCLUDING, SITE LEVELS, HEIGHTS AND ANGLES ON SITE PRIOR TO COMMENCING ANY WORK. THE COPYRIGHT TO THESE DRAWINGS AND ALL PARTS THERE OF REMAIN THE PROPERTY OF HAIGH WORKMAN LTD. ©2020	Project No. 24
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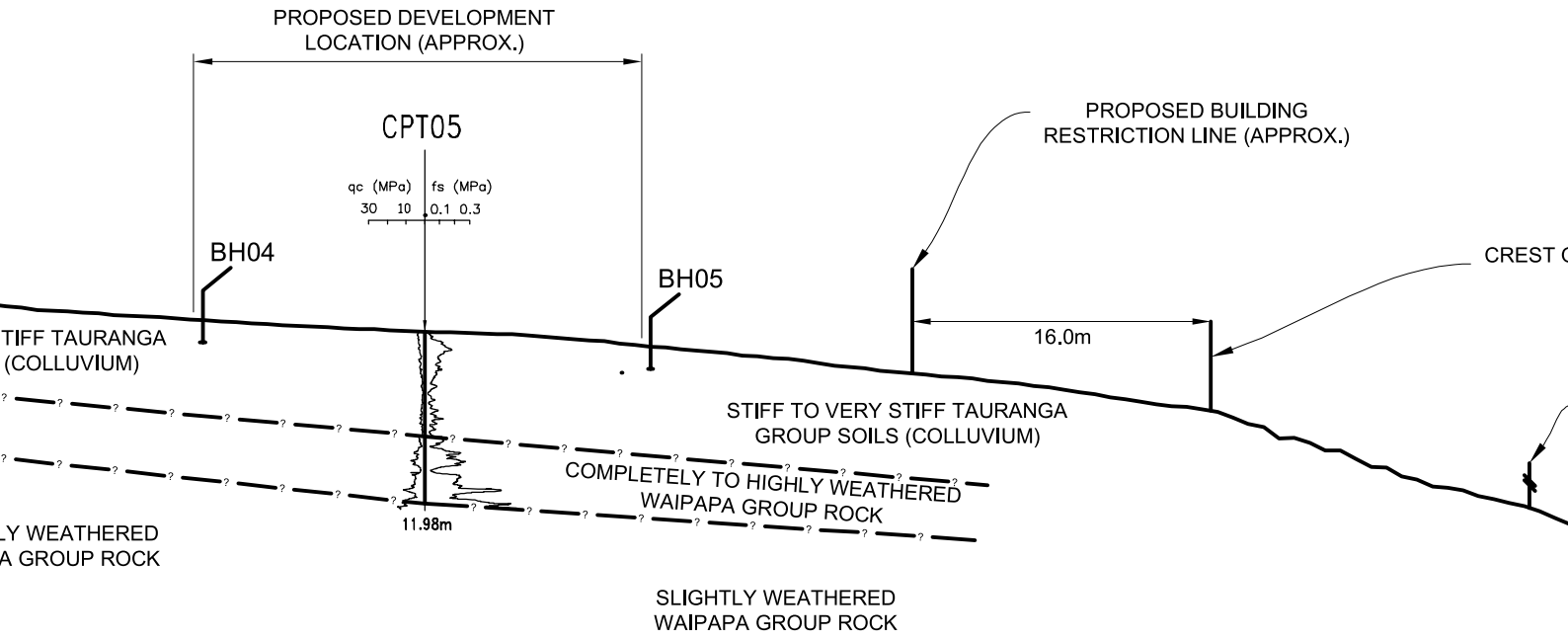

DWG GEOLOGICAL CROSS SECTION A-A'
PROPOSED LOT 5

Scale 1:500 @A3 | Date APR 2024
Drawn JMC | Checked WT | Approved WT
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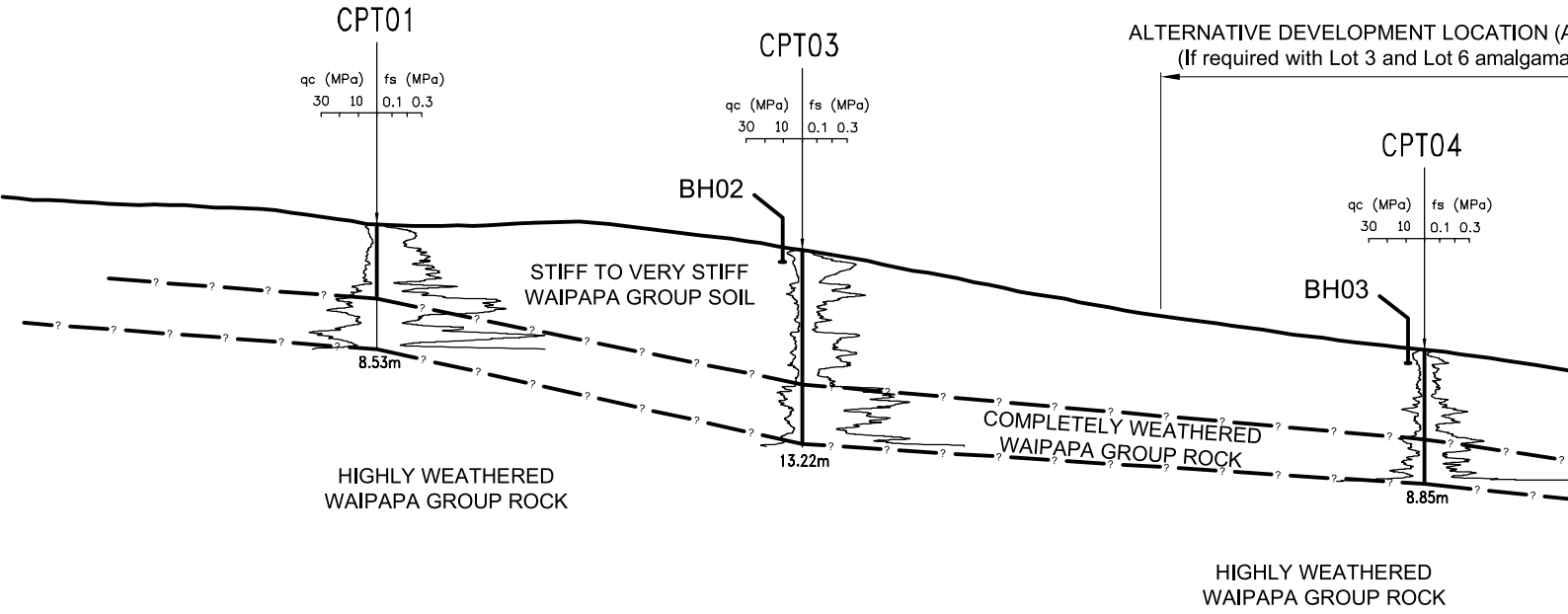

DWG GEOLOGICAL CROSS SECTION B-B'
PROPOSED LOT 6

Scale 1:500 @A3 | Date APR 2024
Drawn JMC | Checked WT | Approved WT
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Appendix B – Hand Auger Logs

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Borehole Log - BH01

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; light brown to brown. Very stiff, dry, no plasticity. Minor rootlets. [Topsoil]

Clayey **SILT**; light orange, mottled light brown. Very stiff, dry, low to medium plasticity. [Waipapa Group]

From 0.5m: Becomes light orange, streaked orange.

From 0.8m: Becomes light orange to orange, streaked light pinkish red. Dry to moist.

From 1.2m: Becomes pinkish orange and orange, speckled light yellow.

SILT, some clay; pinkish orange, streaked orange and pinkish red. Very stiff, moist, low plasticity.

SILT, minor clay, trace fine gravel; light orange and light yellowish brown, streaked orange, speckled black. Very stiff, moist, low plasticity. Gravel: weakly cemented.

From 2.1m: Becomes light orange and white, streaked dark orange and black.

From 2.6m: Becomes moist to wet, low plasticity.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity: 7, 3, 4

Vane Shear and Remoulded Vane Shear Strengths (kPa): 202, 28, UTP, UTP, UTP, 110, 37, 172, 49

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1617. Groundwater not encountered.

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Borehole Log - BH02

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JC
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; brown. Very stiff, dry, no plasticity (friable). Minor rootlets. [Topsoil]

SILT, yellowish brown. Very stiff to hard, dry, no plasticity. [Waipapa Group]

Silty **CLAY**; yellowish brown. Very stiff to hard, dry, high plasticity.

From 0.7m: Becomes orangish brown, mottled yellowish brown. Moist.

Clayey **SILT**; light grey and light yellowish brown, mottled orangish brown. Very stiff to hard, moist, low plasticity.

End of Hole at 2.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / WAIPAPA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity

Vane Shear and Remoulded Vane Shear Strengths (kPa): 250, 250, 250, 250

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1698. Groundwater not encountered.

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Borehole Log - BH03

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description (Based on NZGS Logging Guidelines 2005)	Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
SILT; brown to dark brown. Very stiff, dry, no plasticity. Minor rootlets. [Topsoil]	0.0	T.S.		Groundwater not encountered.	7	UTP 28 / 202	0 2 4 6 8 10
SILT, some clay; light brownish orange, streaked brown, mottled orange. Very stiff, dry, low plasticity. [Waipapa Group]		WAIPAPA GROUP					
Clayey **SILT**, trace fine gravel; light orange and orange, mottled white, speckled black. Very stiff, dry, low plasticity. Gravel: weakly cemented.	0.5						
	1.0					UTP	
From 1.2m: Becomes orange and light orange, streaked yellowish white, speckled black. Low to medium plasticity. From 1.4m: Becomes orange, streaked dark orange. Moist.						49 / 199	
	1.5						
SILT, minor clay; light orange and light yellowish white, streaked black and dark orange. Very stiff, dry to moist, low plasticity.						215	
End of Hole at 2.0m. (Target Depth)	2.0						
	2.5						
	3.0						
	3.5						
	4.0						
	4.5						

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1617. Groundwater not encountered.

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Borehole Log - BH04

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JC
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; brown. Very stiff, dry, no plasticity (friable). Minor rootlets. [Topsoil]

SILT, yellowish brown, mottled greyish brown. Very stiff to hard, dry, no plasticity. [Tauranga Group (Colluvium)]

Silty **CLAY**; yellowish brown. Very stiff to hard, dry, high plasticity.

From 0.8m: Becomes moist.

From 1.2m: Becomes yellowish brown, streaked orangish brown.

From 2.0m: Becomes light pinkish grey, minor brown streaks. Very stiff, wet.

Clayey **SILT**; light grey, streaked orangish brown. Very stiff, wet, low plasticity.

From 2.8m: Becomes dark orangish brown, mottled light grey.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity: 2, 4, 3

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP; 0 / 250; 0 / 250; 57 / 139; 36 / 125; 46 / 153

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1698. Groundwater not encountered.

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Borehole Log - BH05

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; light brown to brown. Very stiff, dry, no plasticity. Minor rootlets. [Topsoil]

SILT, some clay; light brownish orange and light brown. Very stiff, dry, low plasticity. [Tauranga Group (Colluvium)]

From 0.4m: Becomes light orange to orange, streaked light brown.

From 0.7m: Becomes light orange, streaked orange.

Clayey **SILT**; light orange and light yellowish white, mottled orange. Very stiff, dry to moist, medium plasticity.

From 1.7m: Becomes light orange, mottled dark orange, streaked yellowish white, speckled black. Moist.

SILT, some clay; light orange and light yellowish white, mottled orange, speckled black. Very stiff, moist, low to medium plasticity.

From 2.6m: Becomes light orange and light pinkish orange, streaked white and black. Low plasticity.

From 2.8m: Becomes light pink and light orange, speckled black. Moist to wet, low to medium plasticity.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Water Level: Groundwater not encountered.

Sensitivity: 5, 5

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP, 215, UTP, 215, 169, 37, 153, 31

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1617. Groundwater not encountered.

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Borehole Log - BH06

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JC
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT; brown. Very stiff, dry, no plasticity (friable). Minor rootlets. [Topsoil]

SILT, brownish yellow. Very stiff to hard, dry, no plasticity. [Tauranga Group]

Silty **CLAY**; orangish brown. Very stiff to hard, dry, high plasticity.

From 0.8m: Becomes light orangish brown and light grey. Moist.

From 1.7m: Becomes light grey, streaked orangish brown (sharp colour change)

Clayey **SILT**, trace fine sand; light grey, streaked orangish brown. Very stiff to hard, moist, low plasticity.

End of Hole at 2.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Water Level: Groundwater not encountered.

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP, 250, 250, 210, 71, 250

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1698. Groundwater not encountered.

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Borehole Log - BH07

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	14/03/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	14/03/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description
Based on NZGS Logging Guidelines 2005

SILT, trace fine gravel; light brown to brown, speckled orange and black. Very stiff, dry, no plasticity. Minor rootlets. [Topsoil & Fill]

SILT, minor clay, trace fine gravel; light brown to orangish brown, speckled orange. Very stiff, dry, no plasticity. [Tauranga Group]

SILT, some clay, minor fine to medium gravel; light brownish orange, streaked orange. Very stiff, dry, low plasticity. Gravel: weakly cemented, limonite staining on joint surfaces.

SILT, minor clay, trace fine gravel; light orange to whitish grey, streaked orange. Very stiff, dry, low plasticity.

From 1.2m: Becomes light whitish grey, streaked light orange.

From 1.5m: Becomes dry to moist.

SILT, minor clay; light whitish grey, streaked orange. Very stiff, moist, low plasticity.

End of Hole at 2.0m. (Target Depth)

Depth (m)	Geology	Graphic Log	Water Level	Sensitivity	Vane Shear and Remoulded Vane Shear Strengths (kPa)	Scala Penetrometer (blows/100mm)
0.0	FILL		Groundwater not encountered.		UTP	0 2 4 6 8 10
0.5	TAURANGA GROUP				UTP	
1.0					UTP	
1.5					UTP	
2.0						
2.5						
3.0						
3.5						
4.0						
4.5						

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR1617. Groundwater not encountered.

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Borehole Log - BH08

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	02/05/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	02/05/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; light brown to light greyish brown, mottled orange. Very stiff, dry, no plasticity. Rootlets. [Topsoil]

SILT, minor clay; light brown to light yellowish brown. Very stiff, dry, low plasticity. [Tauranga Group]

SILT, some clay; light orange, streaked light brownish grey. Very stiff, dry to moist, low plasticity.

Clayey **SILT**; light brownish grey, streaked light orange. Very stiff, moist, medium plasticity.

From 0.9m: Becomes light grey, streaked light orange.

SILT, some clay; light grey, streaked light orange. Very stiff, moist, low plasticity.

From 1.5m: Becomes light orange, streaked light grey.

SILT, trace fine sand; light whitish grey, streaked light orange. Very stiff, dry to moist, low plasticity.

From 1.9m: Trace fine gravel (weakly cemented).

SILT, minor fine gravel, trace fine to coarse sand; orange, mottled light greenish grey. Very stiff, moist, no plasticity.

SILT, some fine to medium gravel and coarse sand; light grey and greenish grey, mottled orange. Very stiff, moist, no plasticity. Gravel: weakly cemented.

From 2.5m: Becomes moist to wet.

SILT, trace fine gravel, trace clay; light whitish grey and light greenish grey. Very stiff, moist, low to medium plasticity.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Water Level: Groundwater not encountered.

Sensitivity: 6

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP, UTP, 227, 186, 31, 227, UTP

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR2278. Groundwater not encountered.

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Borehole Log - BH09

Hole Location: Refer to Site Plan

JOB No. 24 041

CLIENT:	Jofe Graham-Jenkins	**SITE:**	Oromahoe Road, Oromahoe (Lots 2 & 3 DP 175428 & Part Lot 1 DP 8625(SO42345)).		
Date Started:	02/05/2024	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	JP
Date Completed:	02/05/2024	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	WT

Soil Description

Based on NZGS Logging Guidelines 2005

SILT; dark brown. Firm, moist, no plasticity (friable). Rootlets. [Topsoil]

SILT, trace clay; light brown. Very stiff, moist, low plasticity. [Tauranga Group]

Silty **CLAY**; yellowish brown. Very stiff, moist, high plasticity.

From 1.0m: Becomes light grey, streaked yellowish brown and orangish brown.

Clayey **SILT**, trace fine sand; light grey, streaked orangish brown. Very stiff, moist to wet, low plasticity.

SILT, minor fine gravel, trace clay; light grey, streaked minor orangish brown. Very stiff, wet, low plasticity.

End of Hole at 3.0m. (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5

Geology: T.S. / TAURANGA GROUP

Graphic Log

Water Level: Groundwater not encountered.

Sensitivity: 2, 6

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP; 201; 201; 201; 198 / 100; 161 / 29

Scala Penetrometer (blows/100mm): 0 2 4 6 8 10

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable To Penetrate. T.S. = Topsoil.
Scala penetrometer testing not undertaken.
Hand Held Shear Vane S/N: DR2222. Groundwater not encountered.

Appendix C – Cone Penetration Tests Outputs

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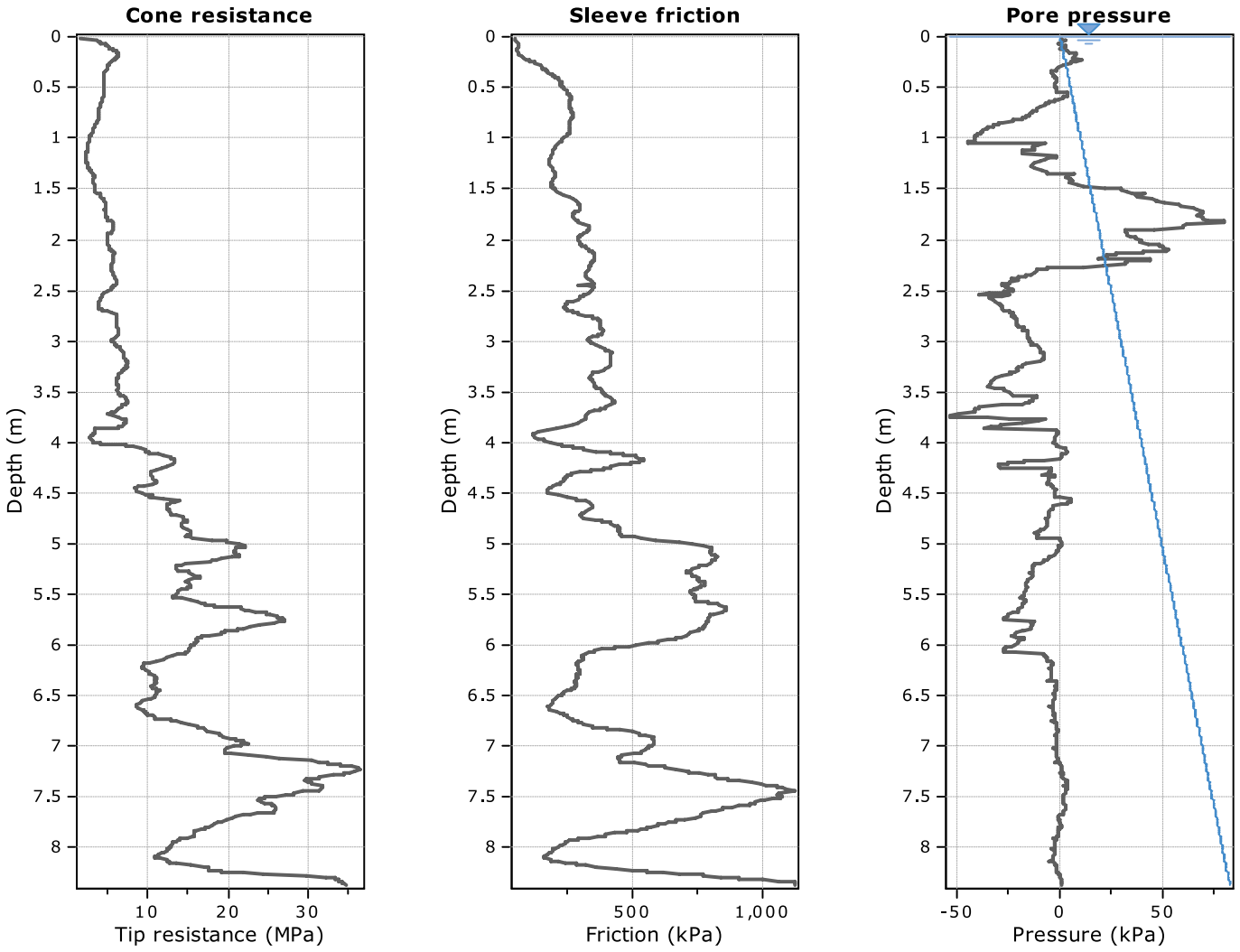
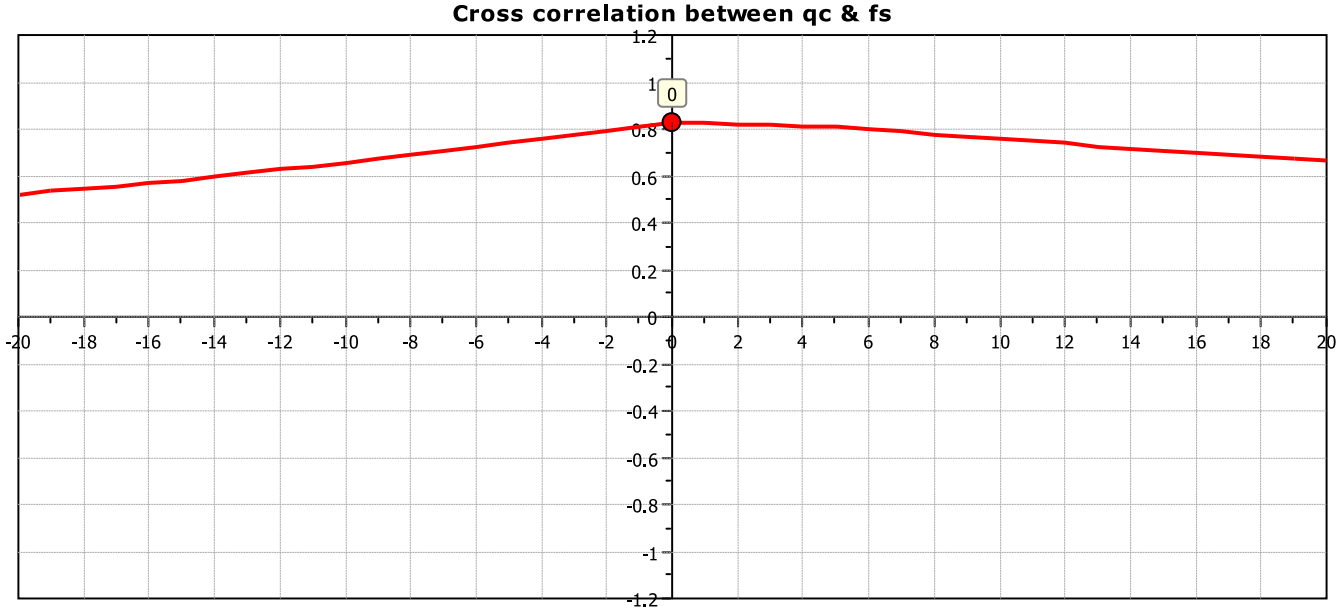
CPT: CPT01

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 8.38 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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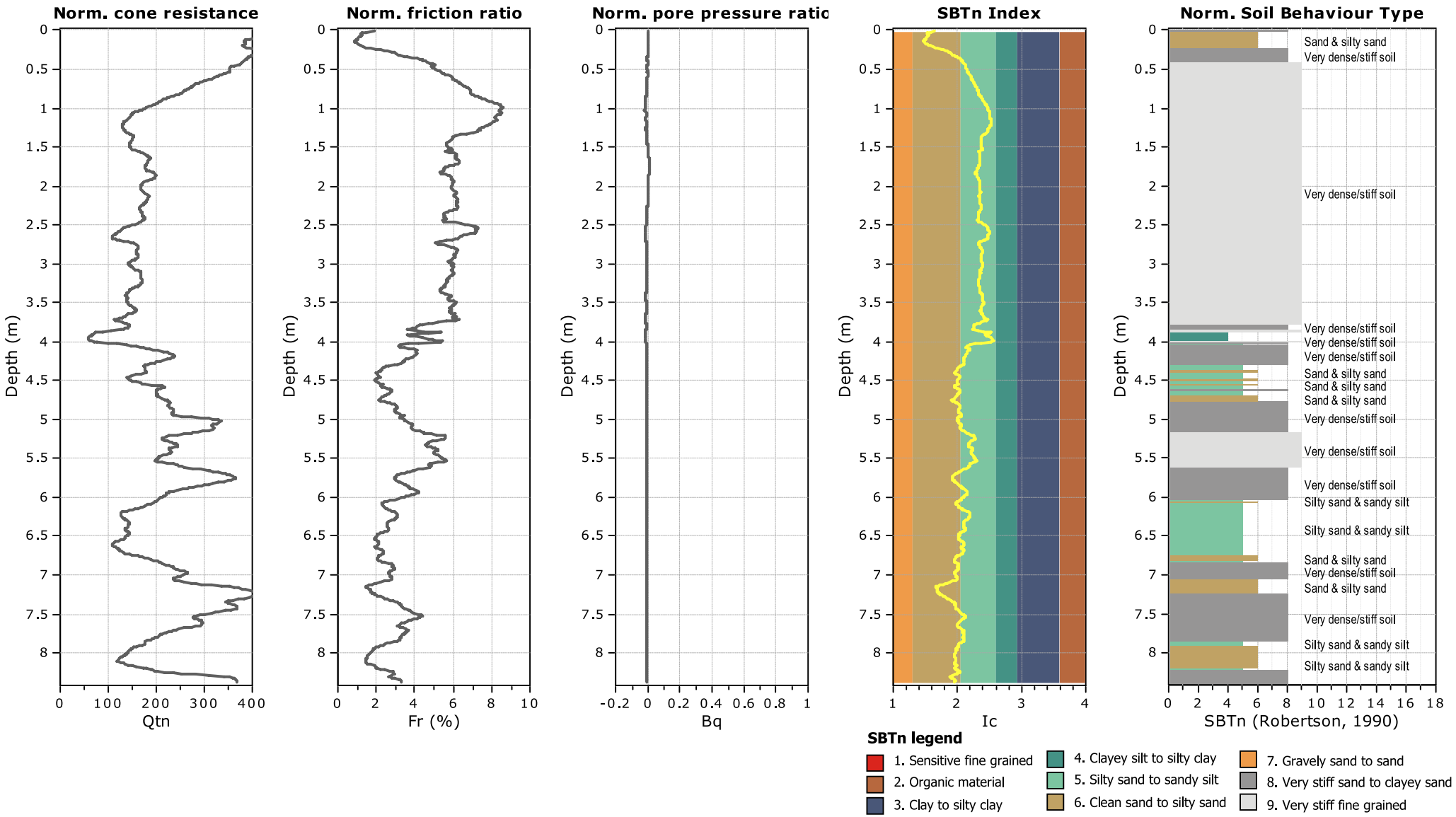
CPT: CPT01

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 8.38 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



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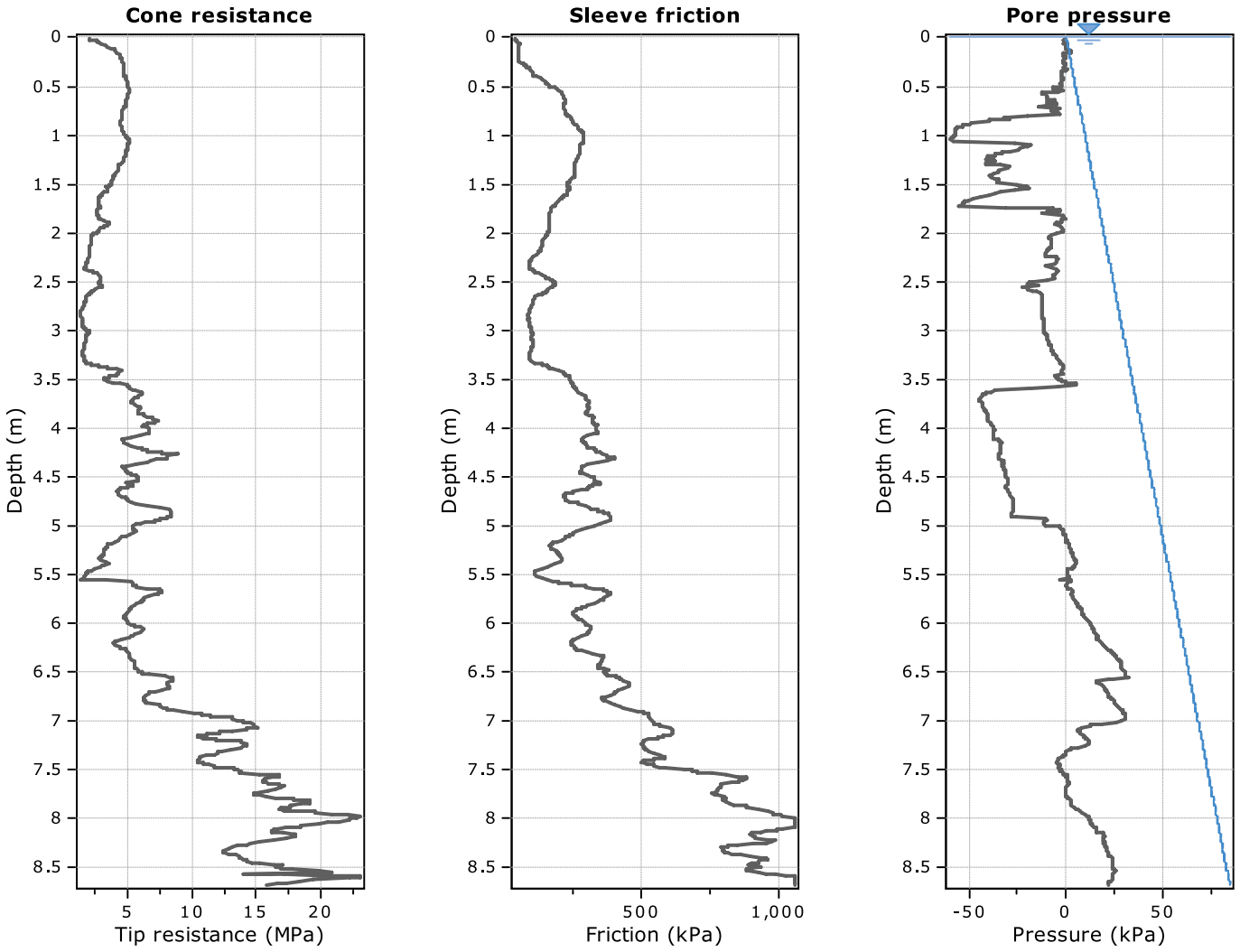
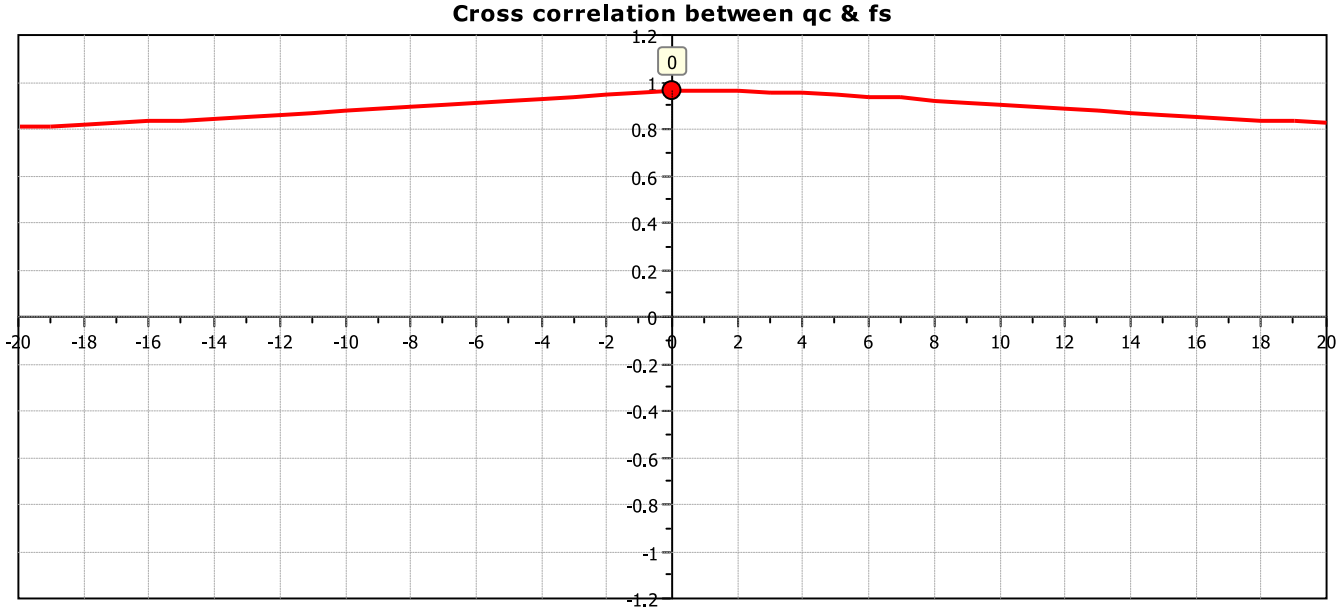
CPT: CPT02

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 8.68 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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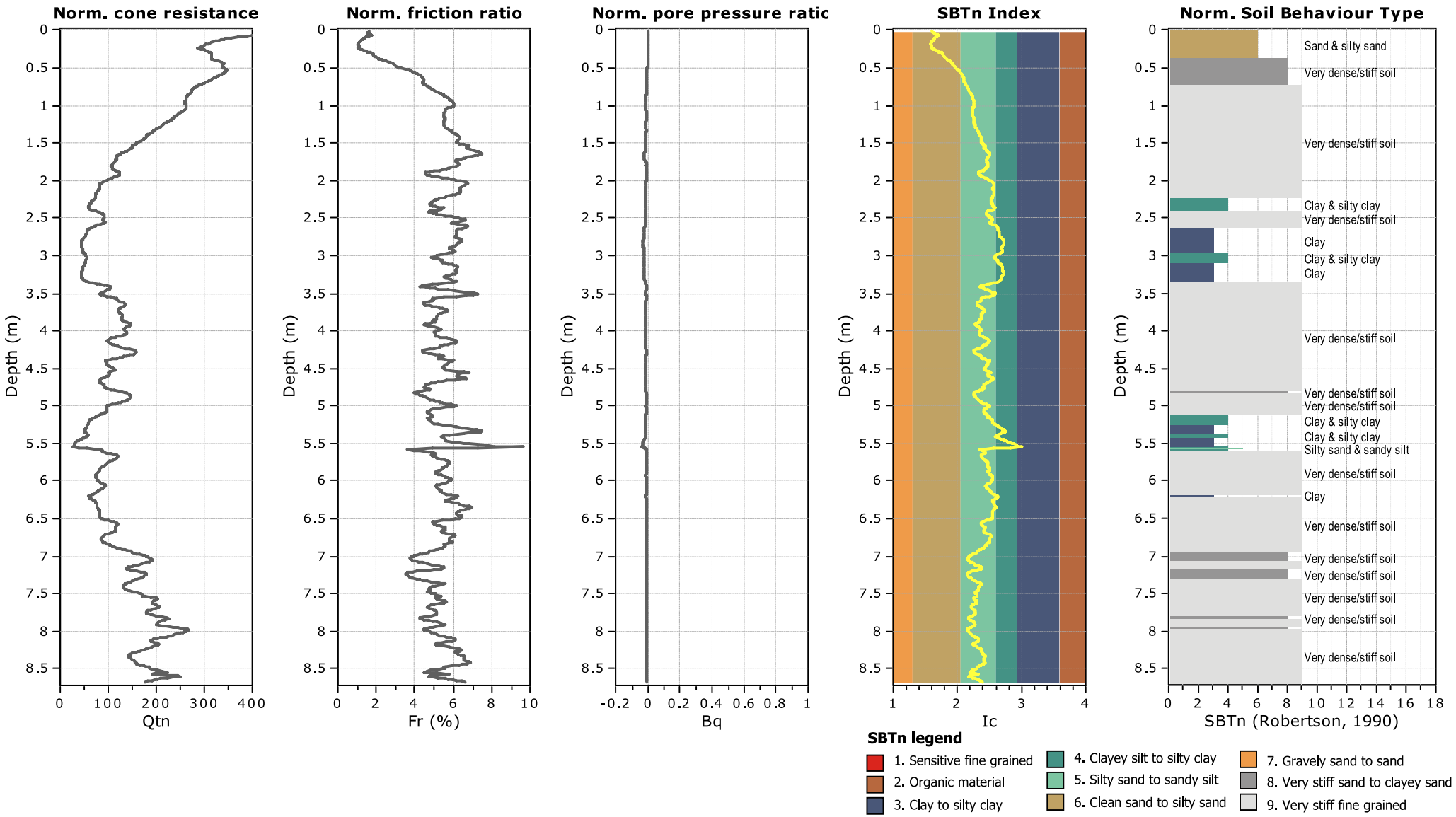
CPT: CPT02

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 8.68 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



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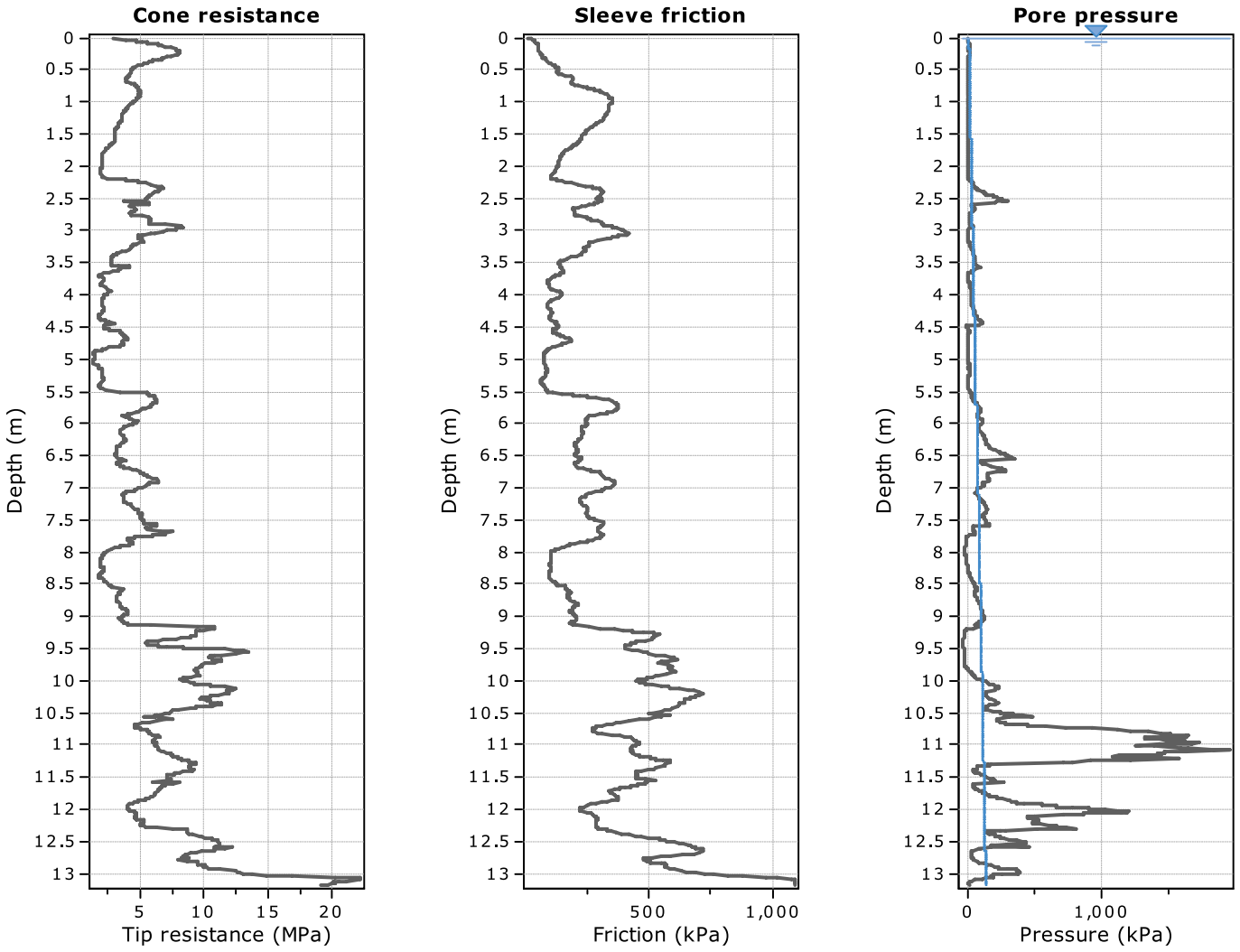
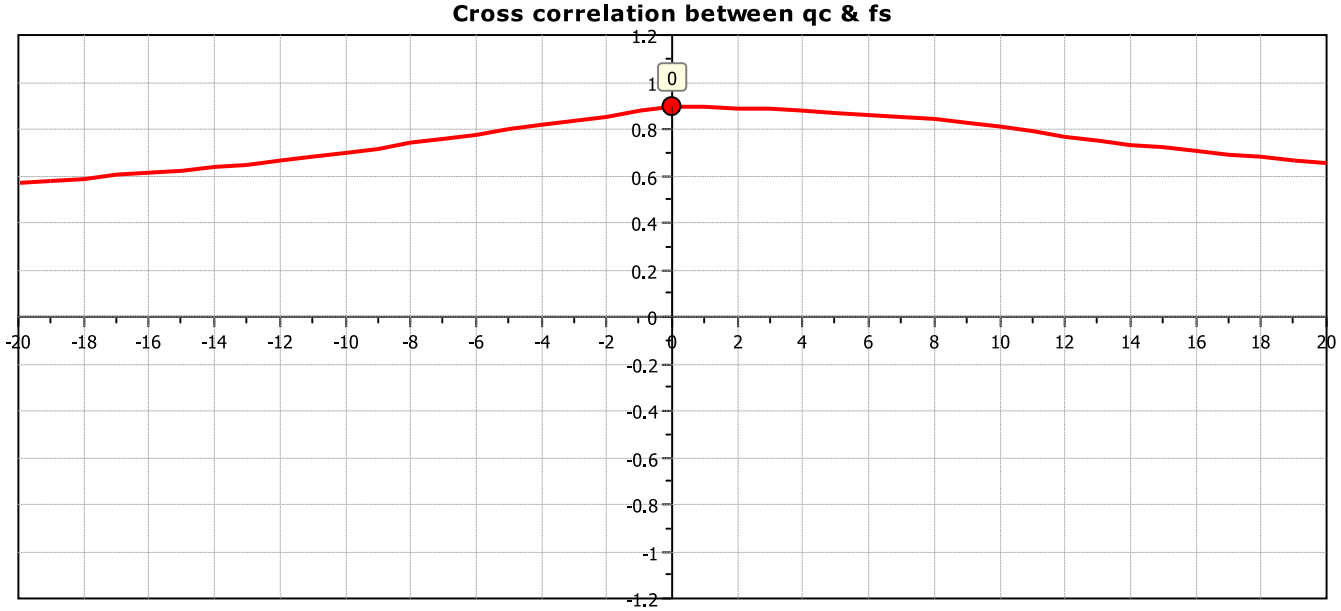
CPT: CPT03

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 13.18 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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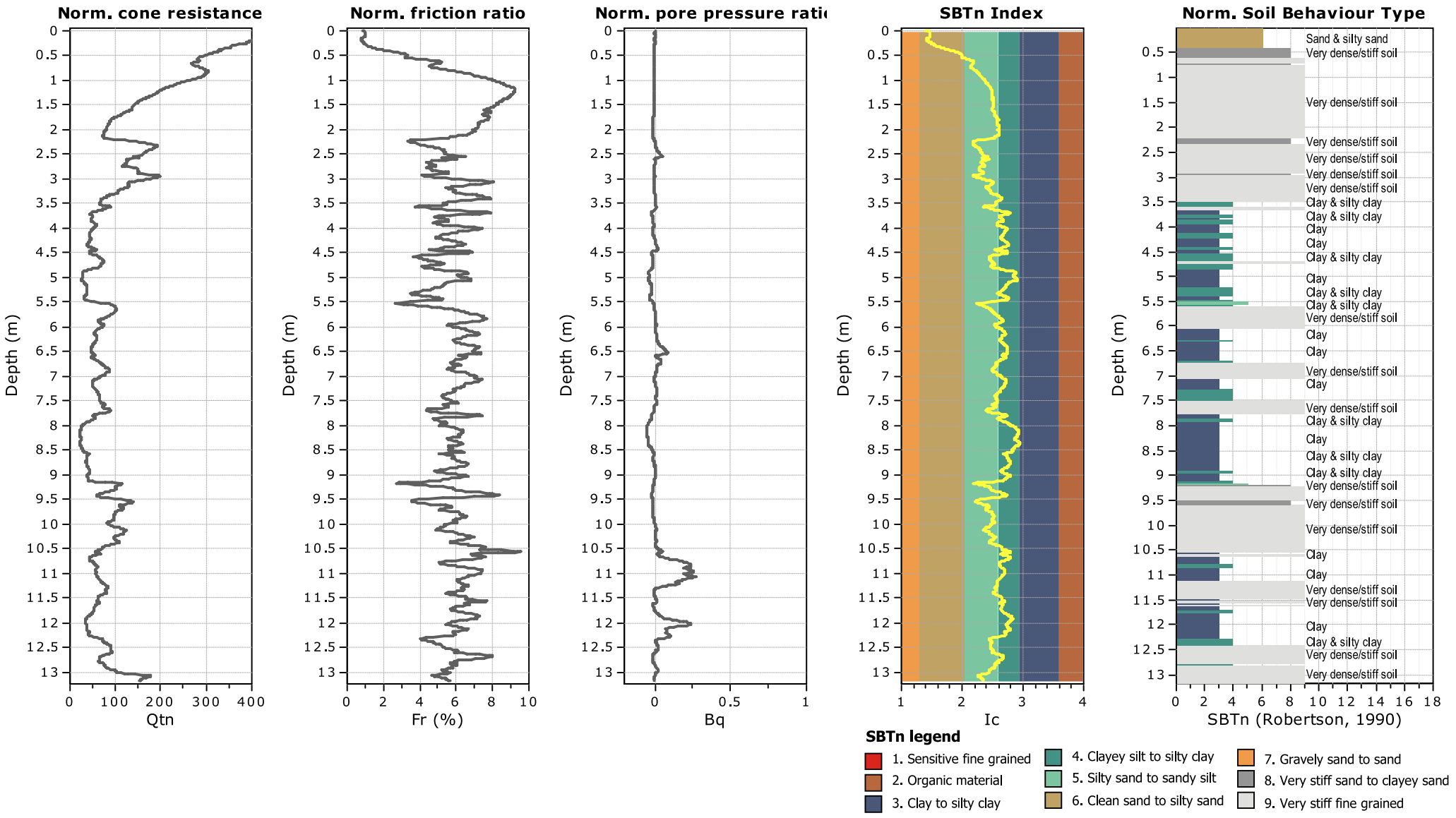
CPT: CPT03

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 13.18 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



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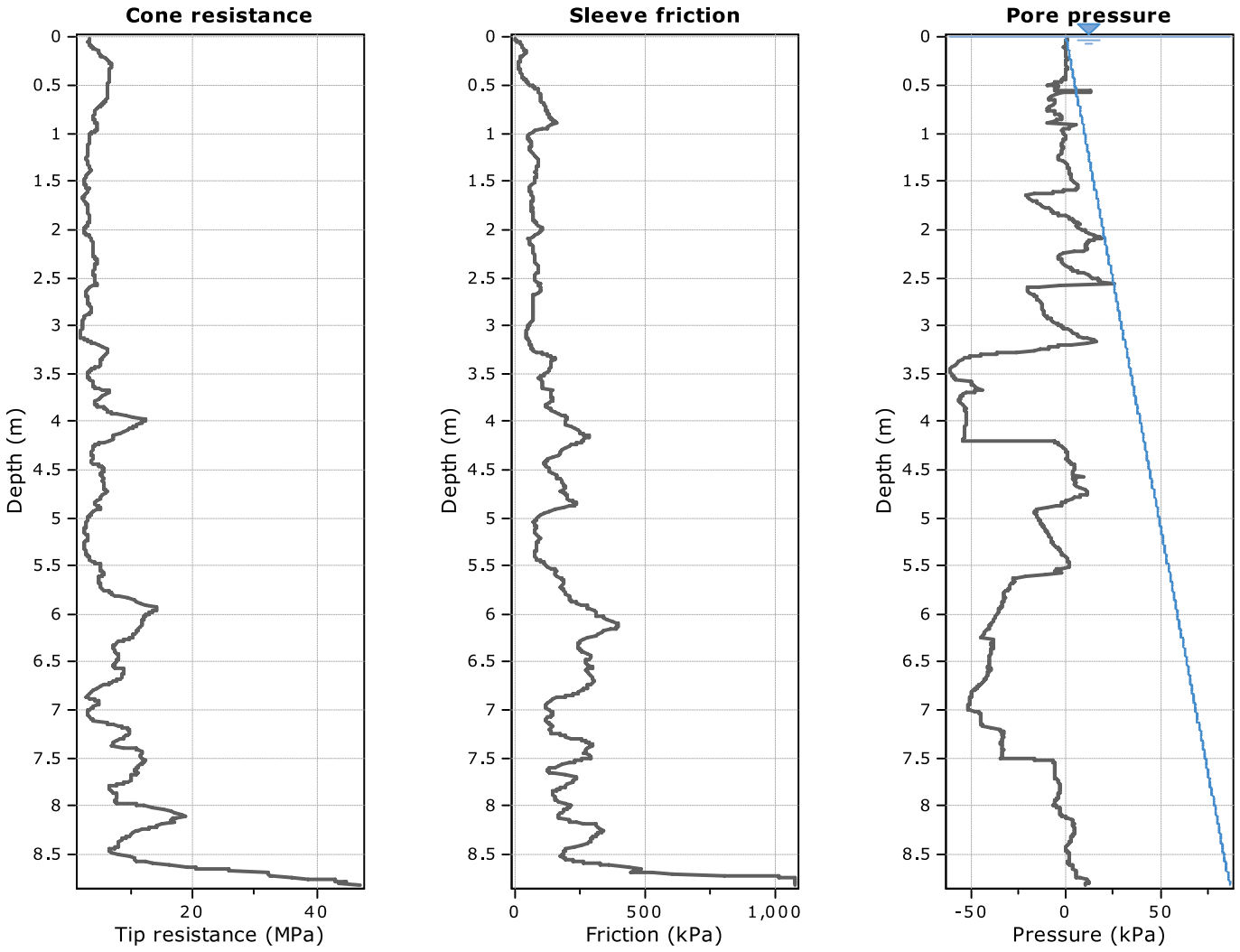
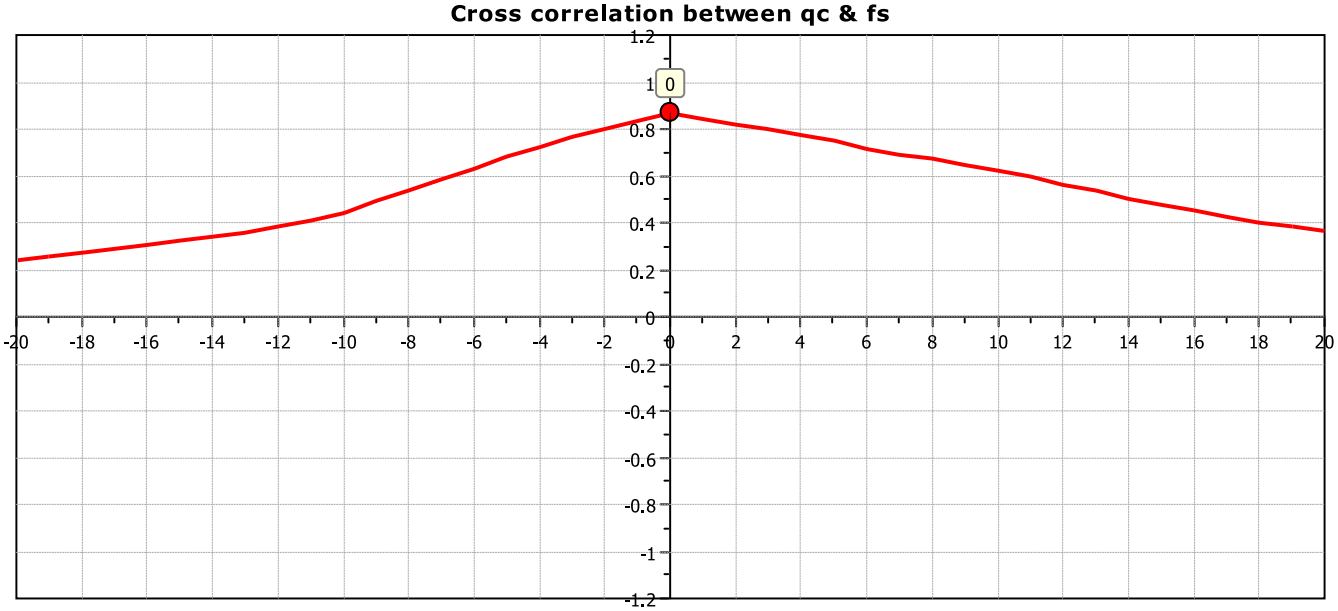
CPT: CPT04

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 8.82 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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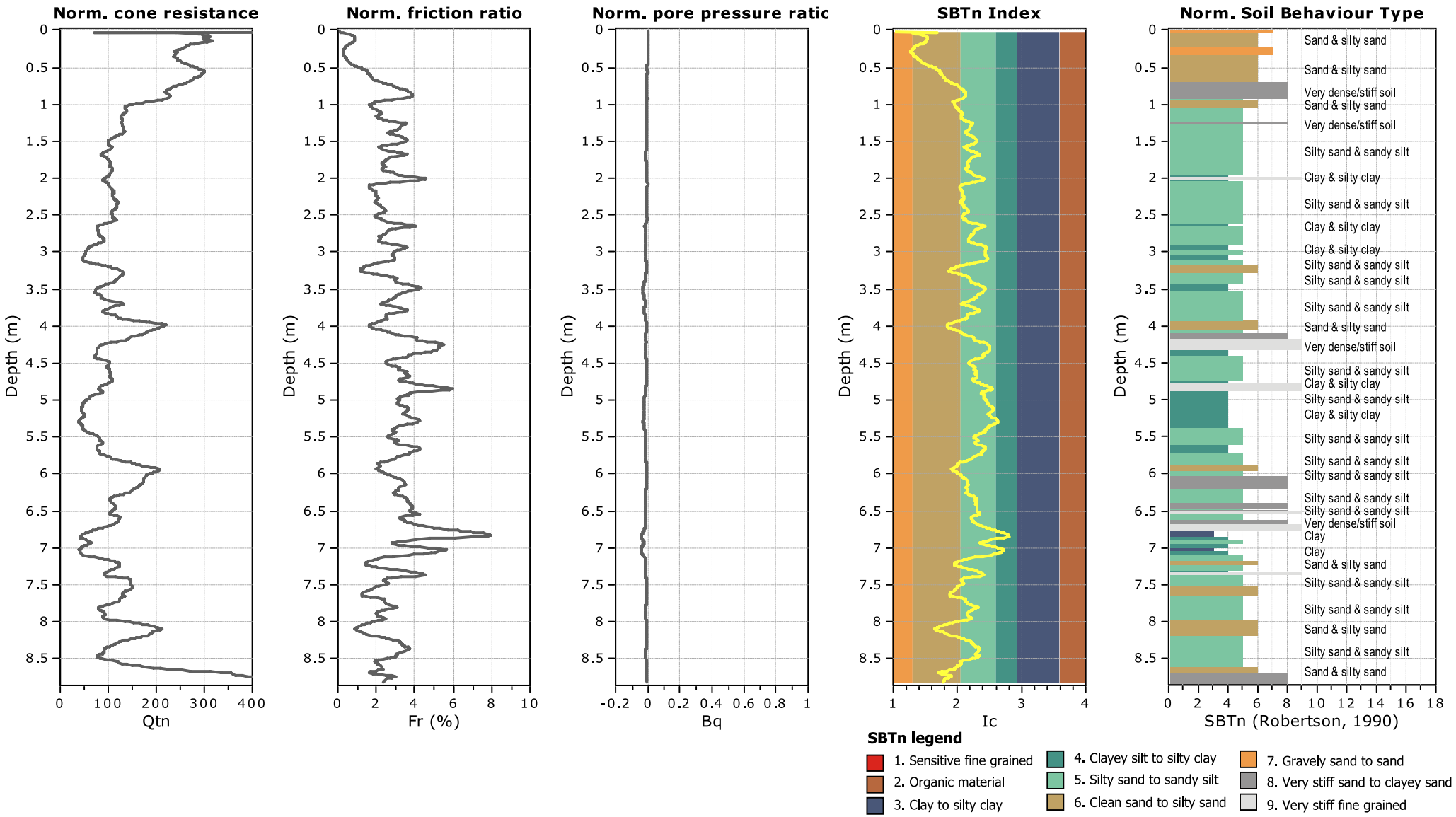
CPT: CPT04

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 8.82 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



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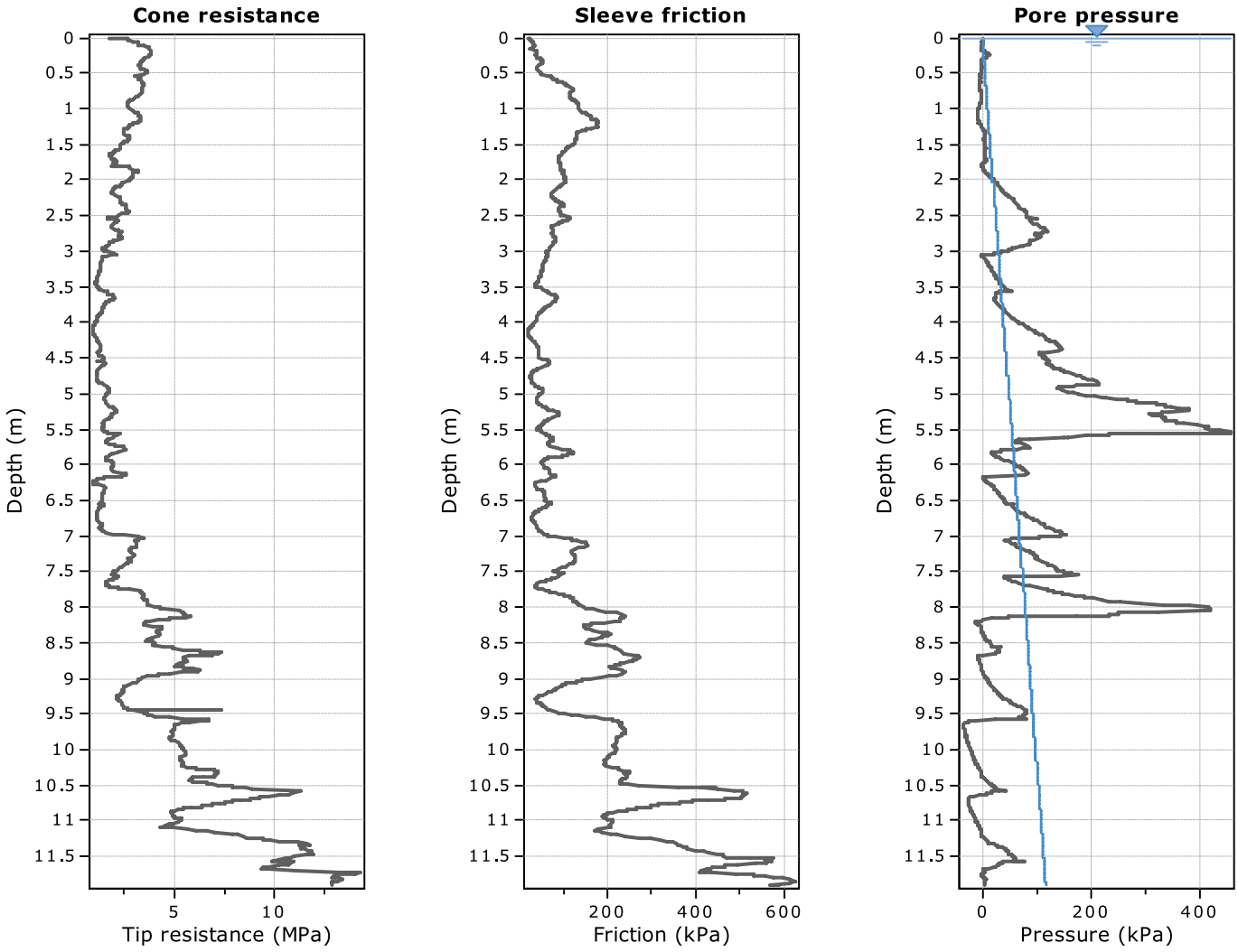
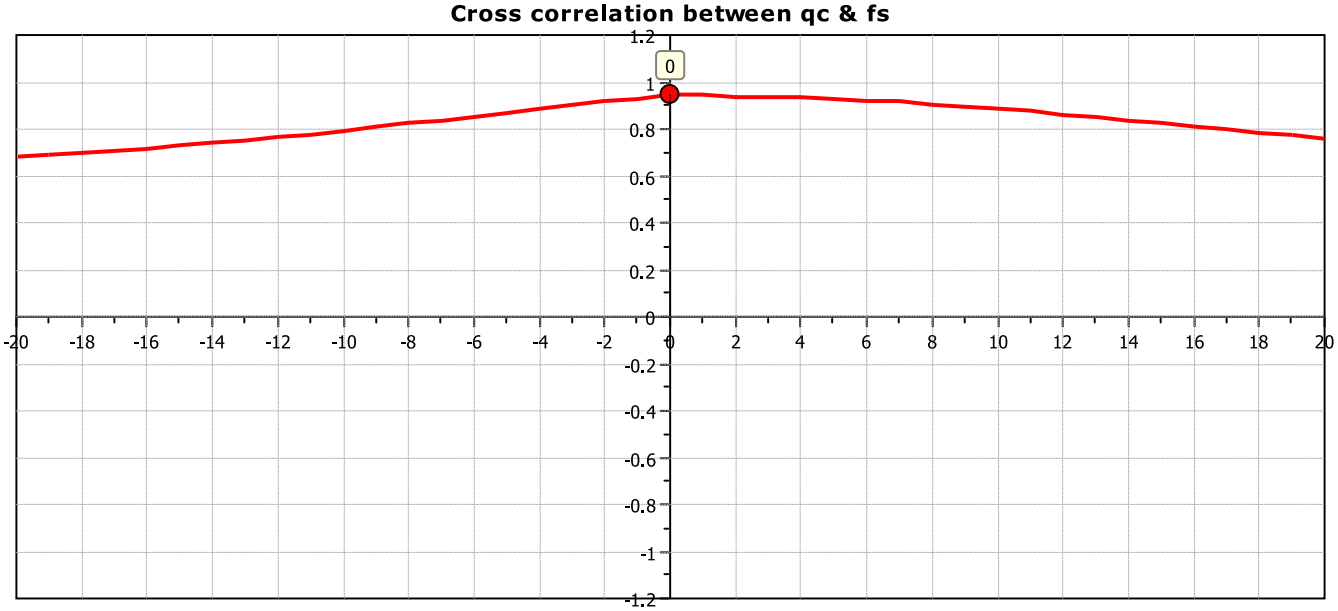
CPT: CPT05

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 11.90 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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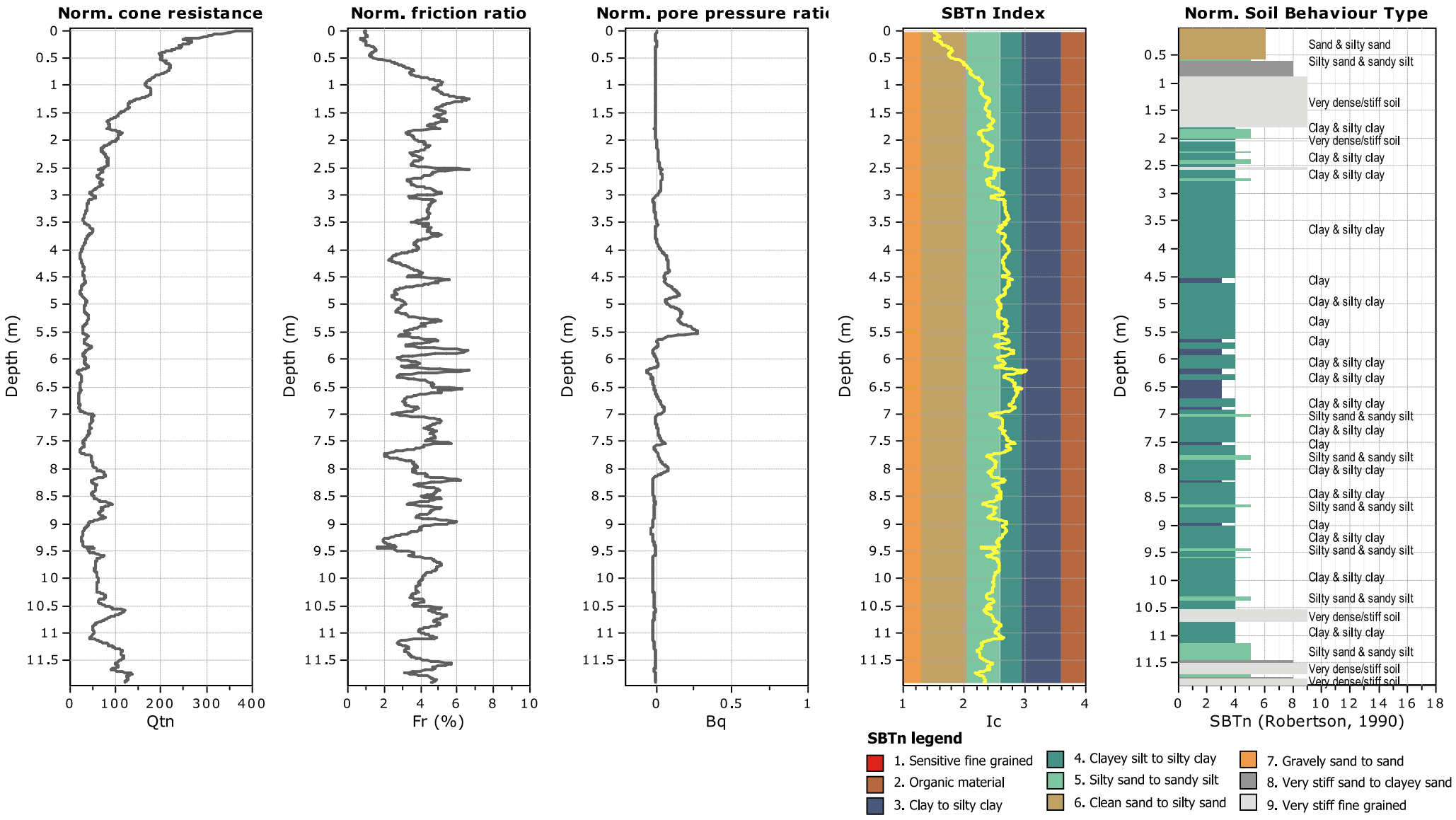
CPT: CPT05

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 11.90 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



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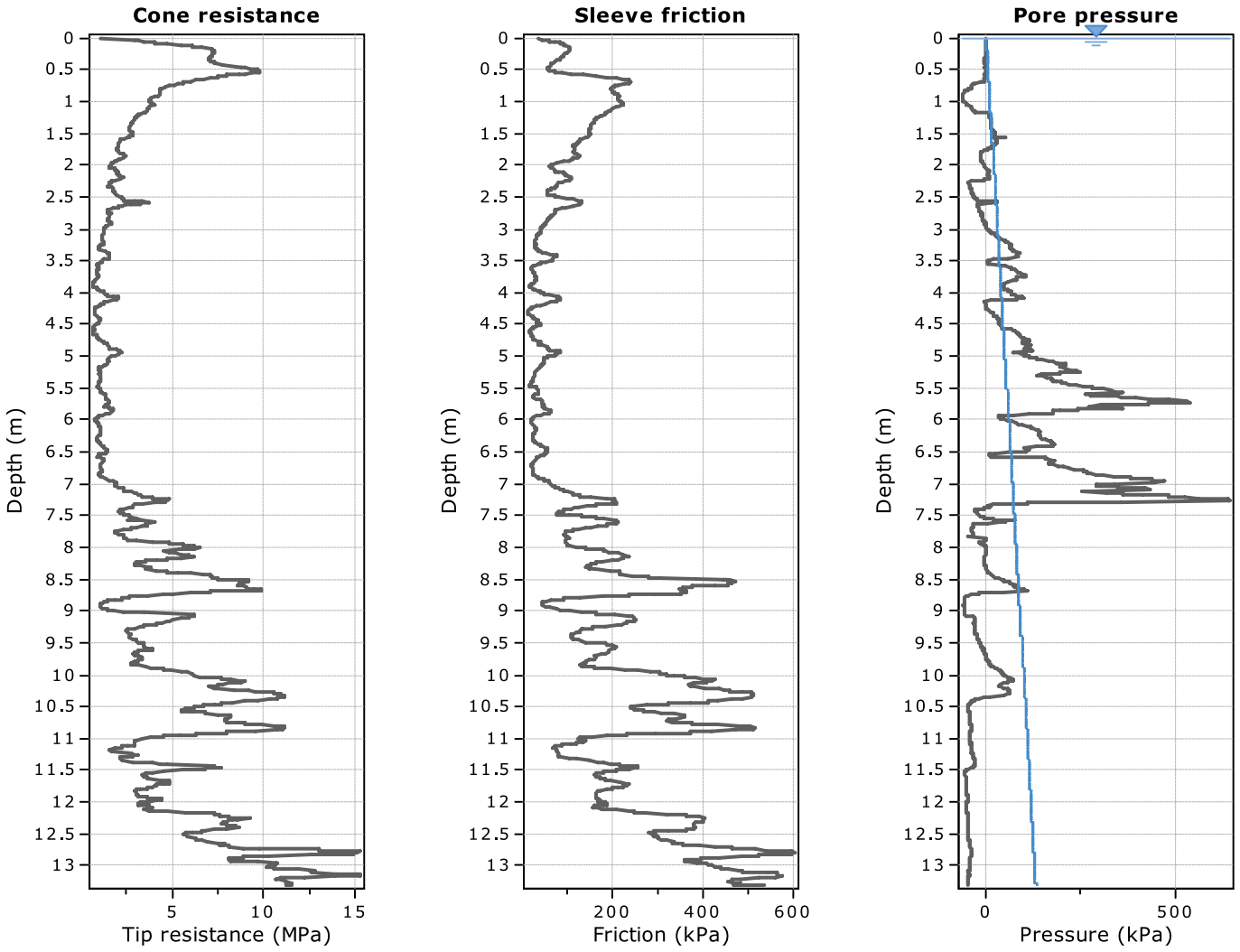
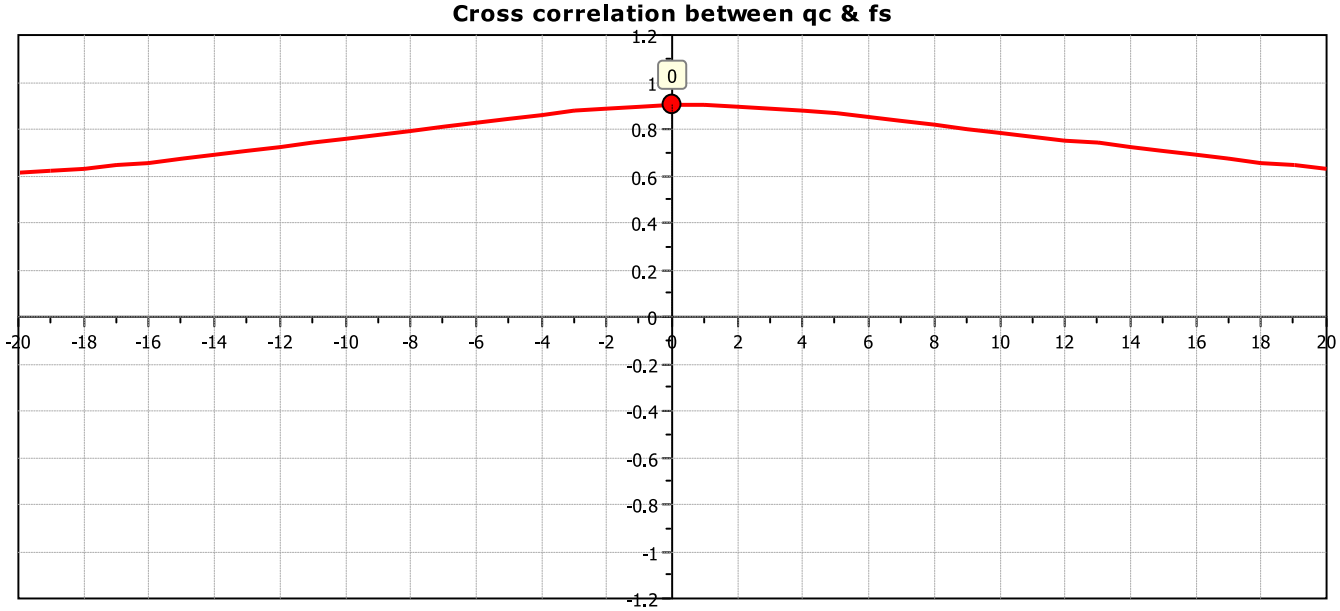
CPT: CPT06

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 13.30 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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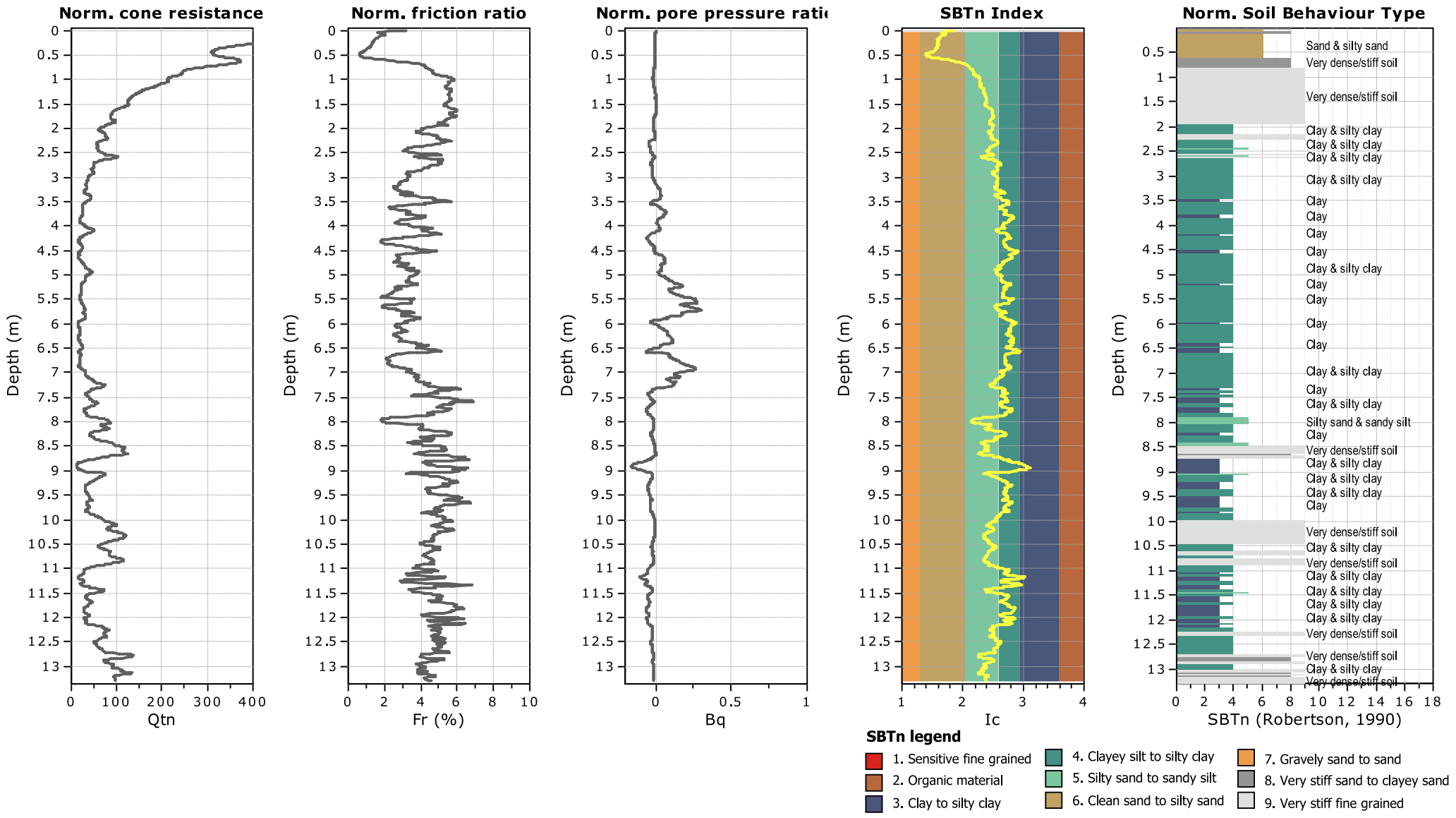
+64211473249

CPT: CPT06

Project: **Proposed subdivision**
Location: **Oromahoe Road**

Total depth: 13.30 m, Date: 15/03/2024
Cone Operator: Underground Investigations Ltd



Appendix D - Laboratory Test Results

Babbage Geotechnical Laboratory
Level 4
68 Beach Road
Auckland 1010
Telephone
E-mail

P O Box 2027
New Zealand
64-9-367 4954
wec@babbage.co.nz

Please reply to: W.E. Campton

Haigh Workman Ltd.
PO Box 89
Kerikeri 0245

Attention: **JOSH CURREEN**

Job Number: 63632#L
BGL Registration Number: 2828
Checked by: WEC

27th March 2024

ATTERBERG LIMITS & LINEAR SHRINKAGE TESTING

Dear Sir,

Re: 1202 OROMAHOE ROAD, OROMAHOE

Your Reference: 24 041
Report Number: 63632#L/AL 1202 Oromahoe Road

The following report presents the results of Atterberg Limits & Linear Shrinkage testing at BGL of a soil sample delivered to this laboratory on the 20th of March 2024. Test results are summarised below, with page 3 showing where the sample plots on the Unified Soil Classification System (Casagrande) Chart.

Test standards used were:

Water Content:	NZS4402:1986:Test 2.1
Liquid Limit:	NZS4402:1986:Test 2.2
Plastic Limit:	NZS4402:1986:Test 2.3
Plasticity Index:	NZS4402:1986:Test 2.4
Linear Shrinkage:	NZS4402:1986:Test 2.6

Borehole Number	Sample Number	Depth (m)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	Linear Shrinkage (%)*
BH06	**Sample 1**	**0.70 – 1.20**	**35.6**	**93**	**38**	**55**	**16**

**The amount of shrinkage of the sample as a percentage of the original sample length.*

The whole soil was used for the water content test (the soil was in a natural state), and for the liquid limit, plastic limit & linear shrinkage tests. The soil was wet up and dried where required for the liquid limit, plastic limit & linear shrinkage tests.

Babbage Geotechnical Laboratory

As per the reporting requirements of NZS4402: 1986: Test 2.1: water content is reported to two significant figures for values below 10%, and to three significant figures for values of 10% or greater. Test 2.2: liquid limit, test 2.3: plastic limit, and test 2.6: linear shrinkage are reported to the nearest whole number.

Please note that the test results relate only to the sample as-received, and relate only to the sample under test.

Thank you for the opportunity to carry out this testing. If you have any queries regarding the content of this report please contact the person authorising this report below at your convenience.

Yours faithfully,

Justin Franklin
Key Technical Person
Assistant Laboratory Manager
Babbage Geotechnical Laboratory

ACCREDITED
IANZ
TESTING LABORATORY
№ 126

BGL Babbage Geotechnical Laboratory	Job Number:	63632#L	Sheet 1 of 1	Page 3 of 3
	Reg. Number:	2828	Version No:	7
	Report No:	63632#L/AL 1202 Oromahoe Road	Version Date:	July 2022
	Project:	1202 OROMAHOE ROAD, OROMAHOE		

DETERMINATION OF THE LIQUID LIMIT, PLASTIC LIMIT & THE PLASTICITY INDEX

Test Methods: NZS4402: 1986: Test 2.2, Test 2.3 and Test 2.4

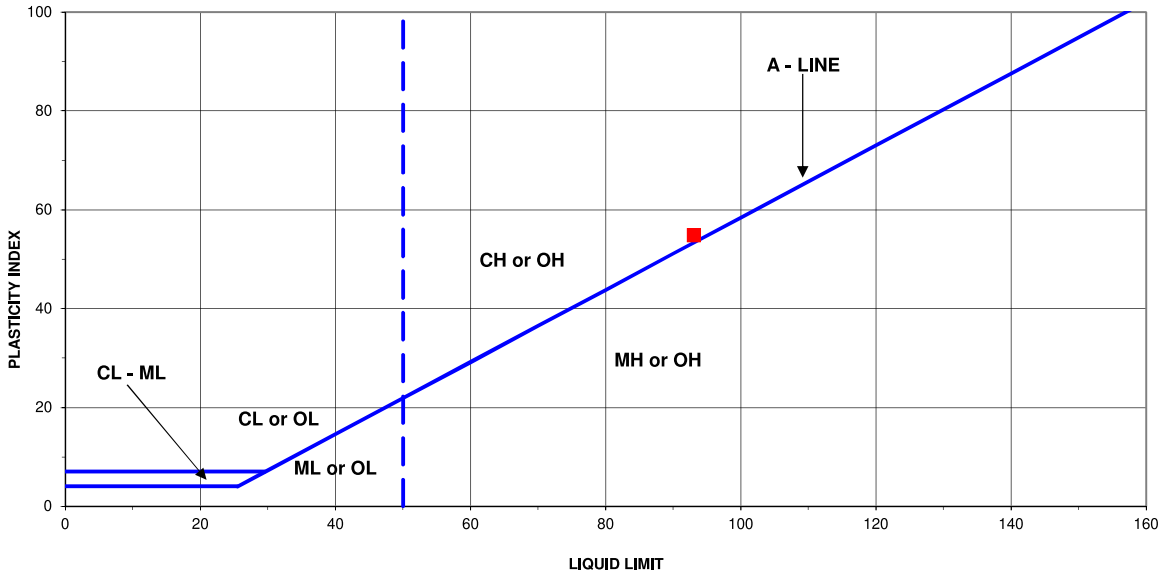
Tested By:	JL	March 2024
Compiled By:	JF	27/03/2024
Checked By:	JF	27/03/2024

SUMMARY OF TESTING

Borehole Number	Sample Number	Depth (m)	Liquid Limit	Plastic Limit	Plasticity Index	Soil Classification Based on USCS Chart Below
BH06	**Sample 1**	**0.70 - 1.20**	93	38	**55**	CH

The chart below & soil classification terminology is taken from ASTM D2487-17^{e1} "Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)", April 2020, & is based on the classification scheme developed by A. Casagrande in the 1940's (Casagrande, A., 1948: Classification and identification of soil. Transactions of the American Society of Civil Engineers, v. 113, p. 901-930). The chart below & the soil classification given in the table above are included for your information only, and are not included in the IANZ endorsement for this report.

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) PLASTICITY (CASAGRANDE) CHART

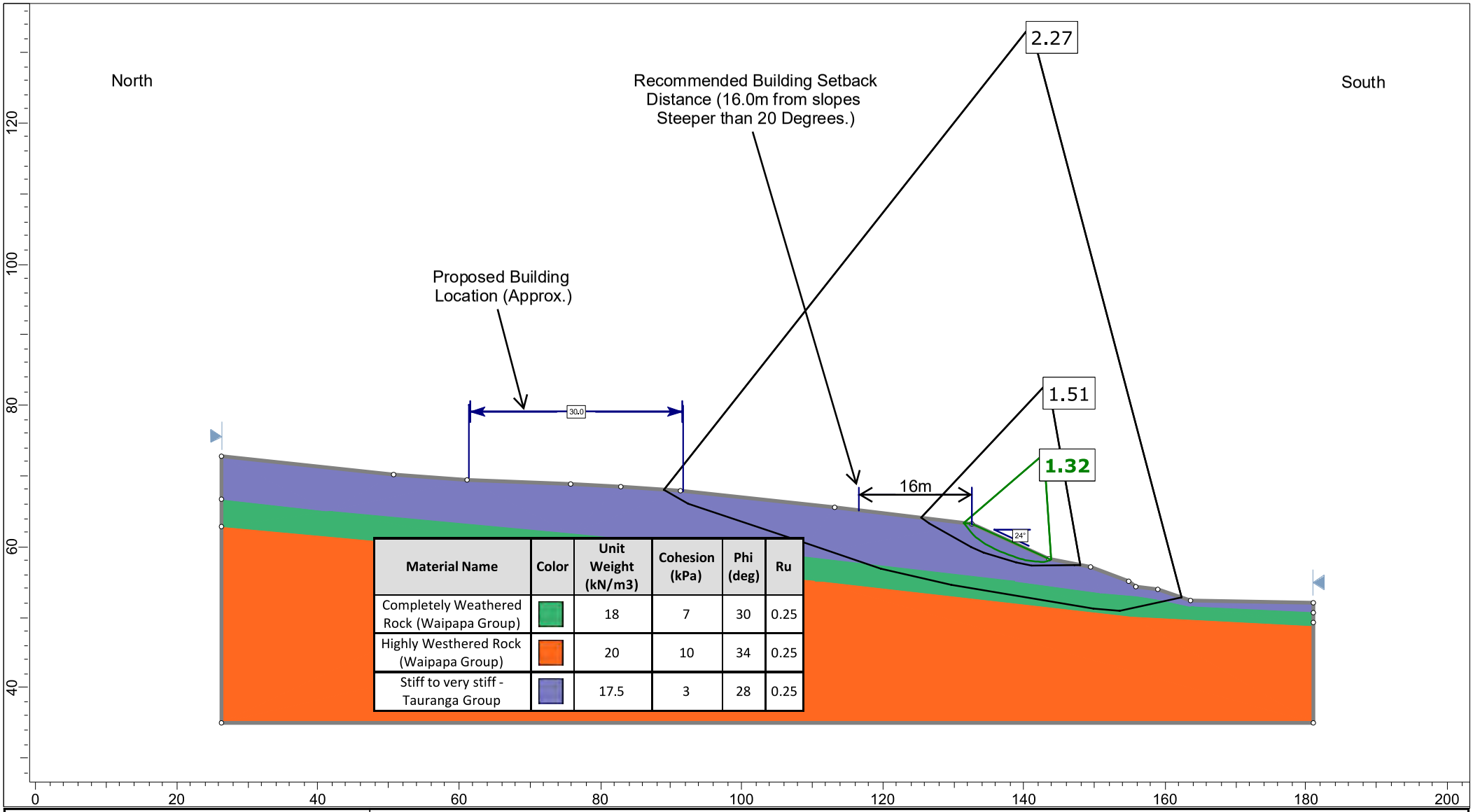


■ BH06 / Sample 1 / 0.70 - 1.20m

CHART LEGEND

CL = CLAY, low plasticity ('lean' clay)
OL = ORGANIC CLAY or ORGANIC SILT, low liquid limit
ML = SILT, low liquid limit
CL - ML = SILTY CLAY
CH = CLAY, high plasticity ('fat' clay)
OH = ORGANIC CLAY or ORGANIC SILT, high liquid limit
MH = SILT, high liquid limit ('elastic silt')

Appendix E – Slope Stability Outputs

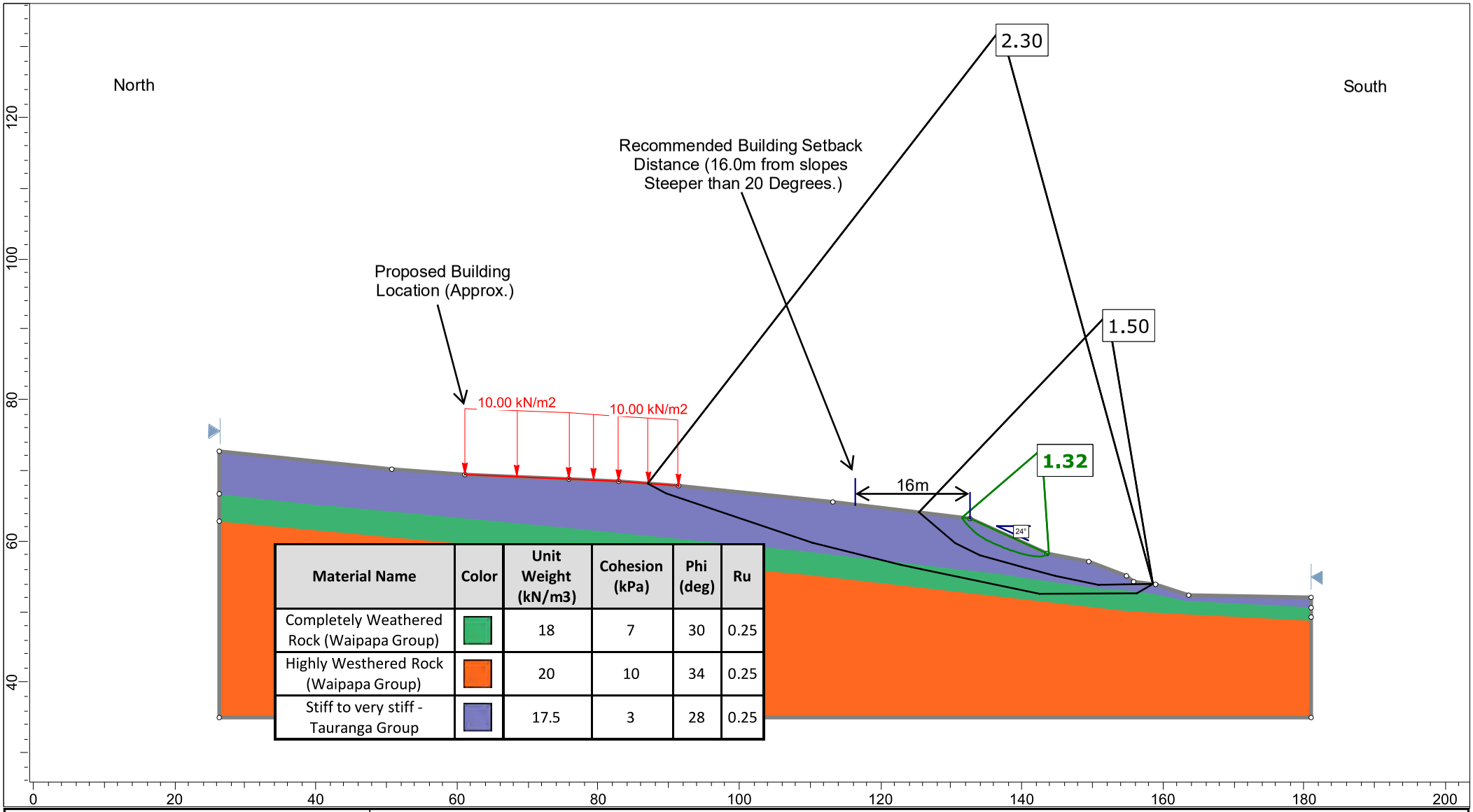


Material Name	Color	Unit Weight (kN/m3)	Cohesion (kPa)	Phi (deg)	Ru
Completely Weathered Rock (Waipapa Group)		18	7	30	0.25
Highly Westhered Rock (Waipapa Group)		20	10	34	0.25
Stiff to very stiff - Tauranga Group		17.5	3	28	0.25

rocscience

SLIDEINTERPRET 9.019

Project	Oromahoe Road Proposed Lot 5		
Group	Group 1	*Scenario*	Master Scenario
Drawn By	J. Power	*Company*	Haigh Workman Ltd
Date	19/04/2024, 2:36:25 pm	*File Name*	01 - noncirc - static.slmd

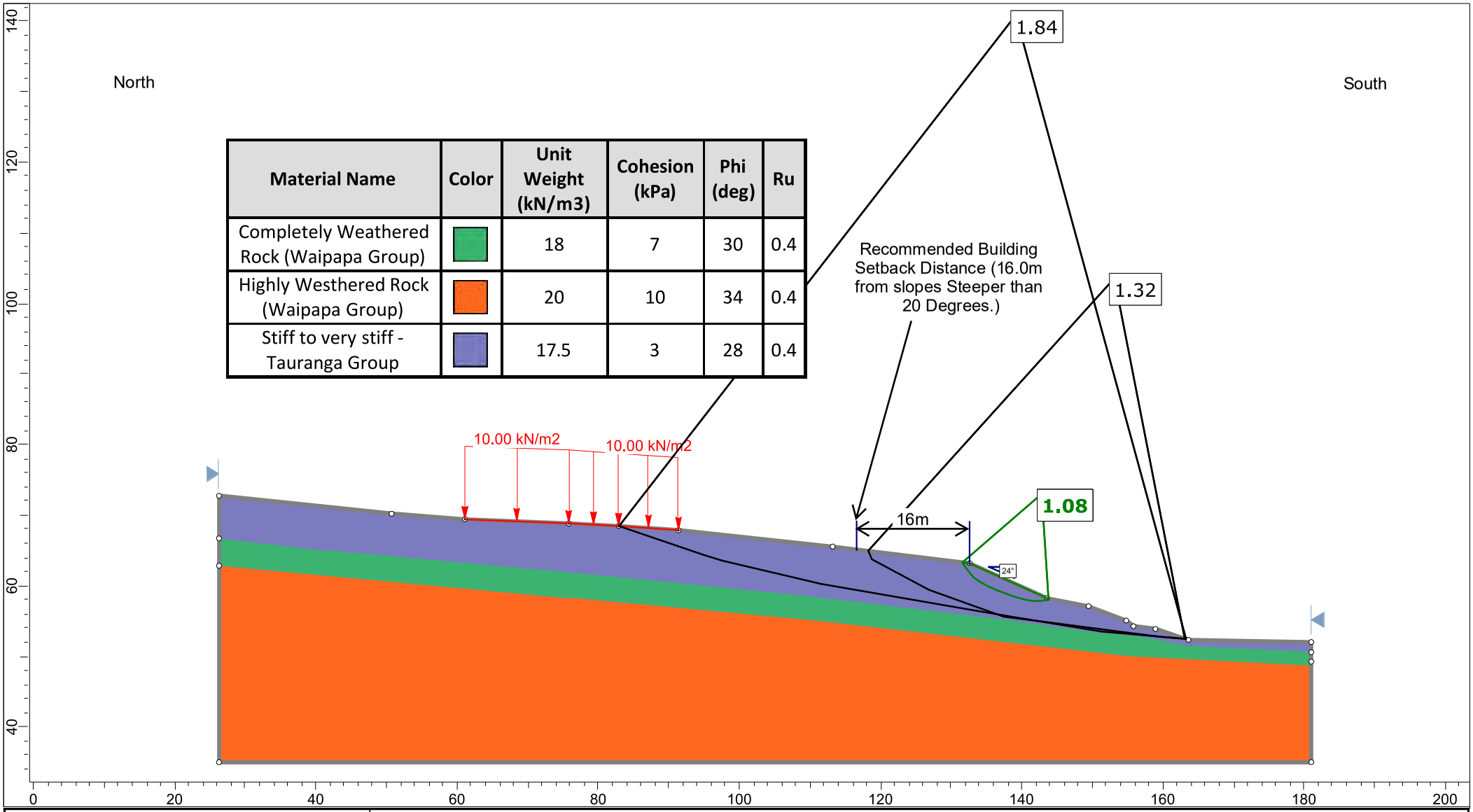


Material Name	Color	Unit Weight (kN/m3)	Cohesion (kPa)	Phi (deg)	Ru
Completely Weathered Rock (Waipapa Group)		18	7	30	0.25
Highly Westhered Rock (Waipapa Group)		20	10	34	0.25
Stiff to very stiff - Tauranga Group		17.5	3	28	0.25

rocscience

SLIDEINTERPRET 9.019

Project	Oromahoe Road Proposed Lot 5		
Group	Group 1	*Scenario*	Master Scenario
Drawn By	J. Power	*Company*	Haigh Workman Ltd
Date	19/04/2024, 2:36:25 pm	*File Name*	02 - noncirc - Proposed.slmd

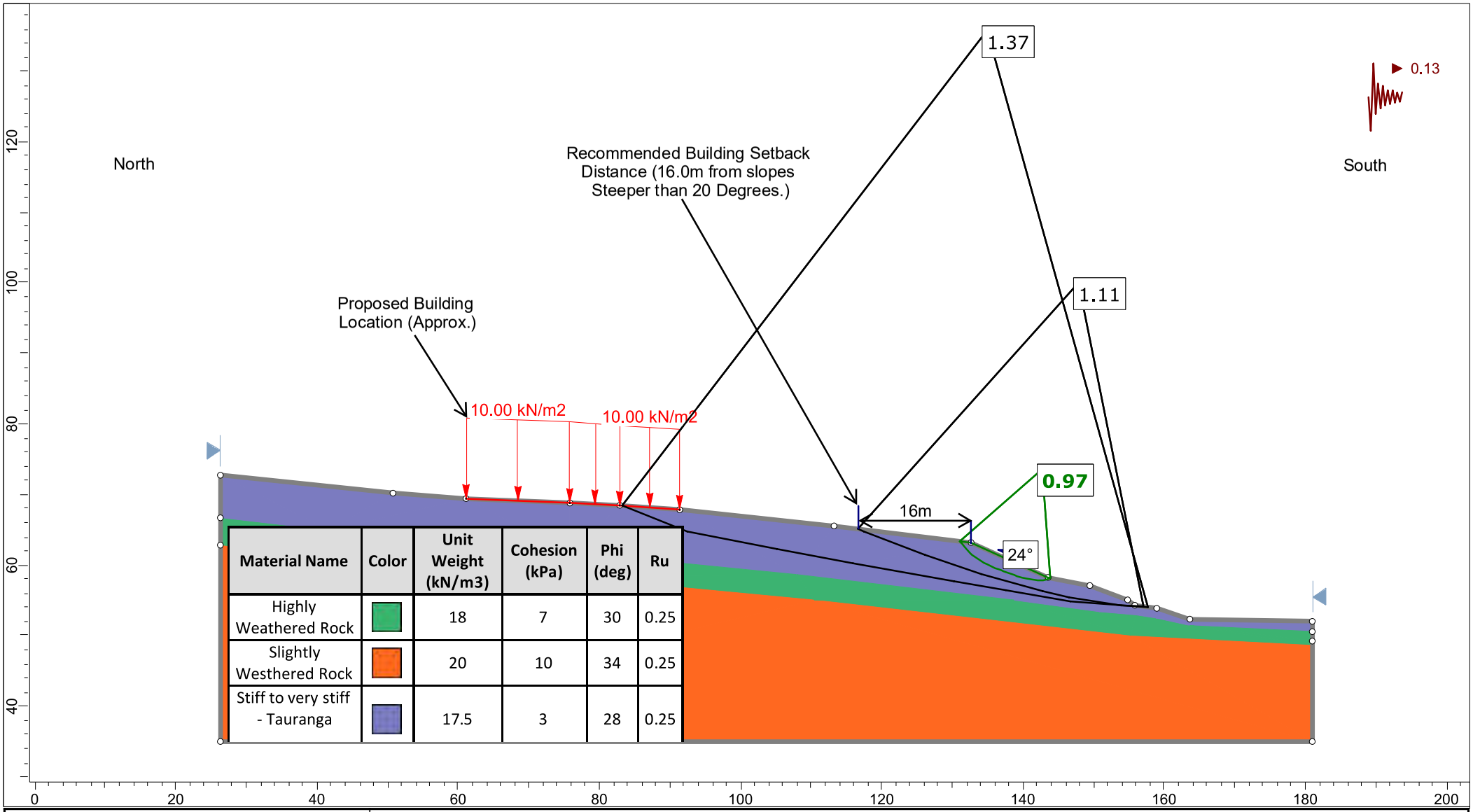


Material Name	Color	Unit Weight (kN/m3)	Cohesion (kPa)	Phi (deg)	Ru
Completely Weathered Rock (Waipapa Group)		18	7	30	0.4
Highly Westhered Rock (Waipapa Group)		20	10	34	0.4
Stiff to very stiff - Tauranga Group		17.5	3	28	0.4

rocscience

SLIDEINTERPRET 9.019

Project	Oromahoe Road Proposed Lot 5		
Group	Group 1	*Scenario*	Master Scenario
Drawn By	J. Power	*Company*	Haigh Workman Ltd
Date	19/04/2024, 2:36:25 pm	*File Name*	03 - noncirc - Elevated.slmd



rocscience

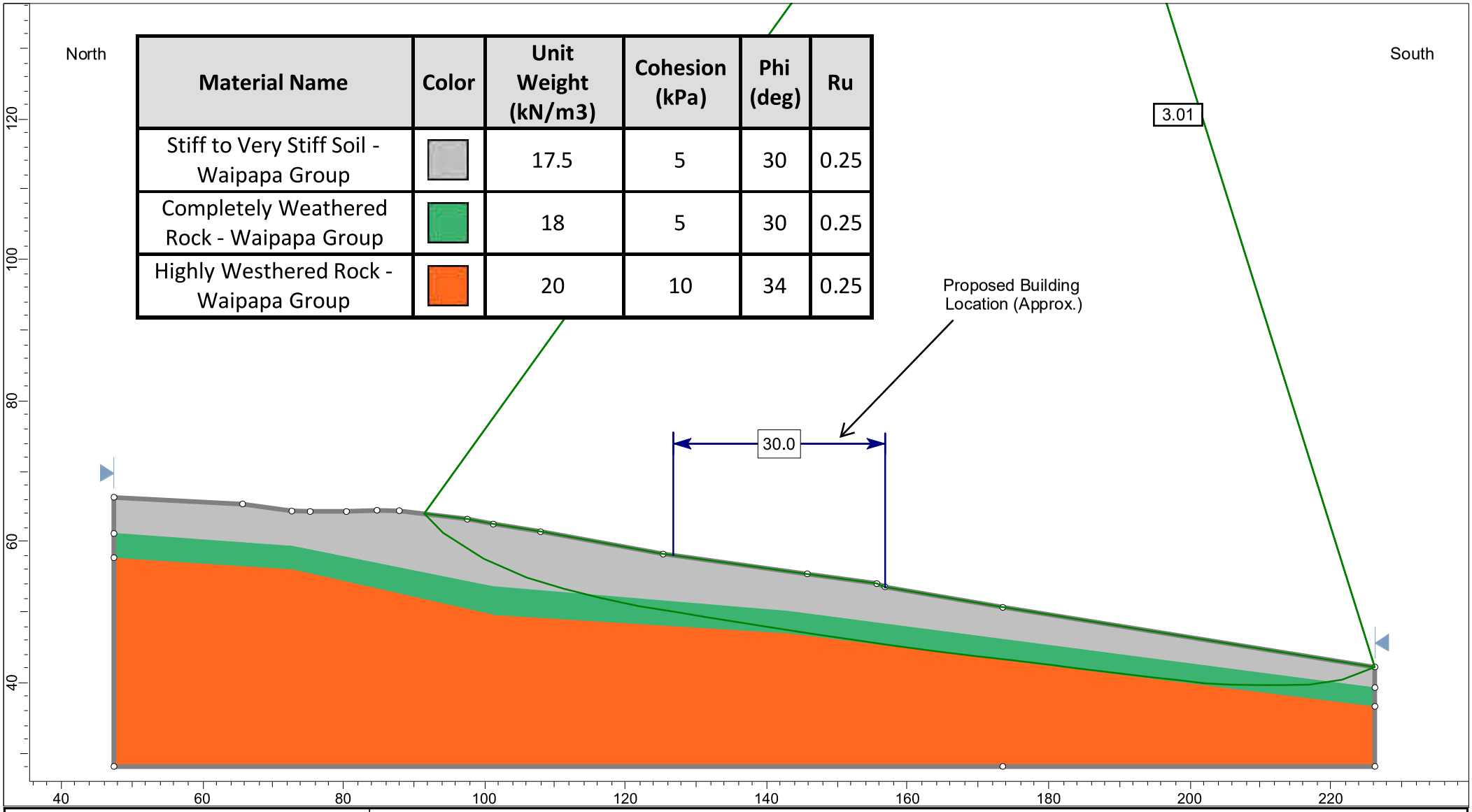
SLIDEINTERPRET 9.019

Project	Oromahoe Road Proposed Lot 5		
Group	Group 1	Scenario	Master Scenario
Drawn By	J. Power	Company	Haigh Workman Ltd
Date	19/04/2024, 2:36:25 pm	File Name	04- noncirc - Seismic.slmd

North

South

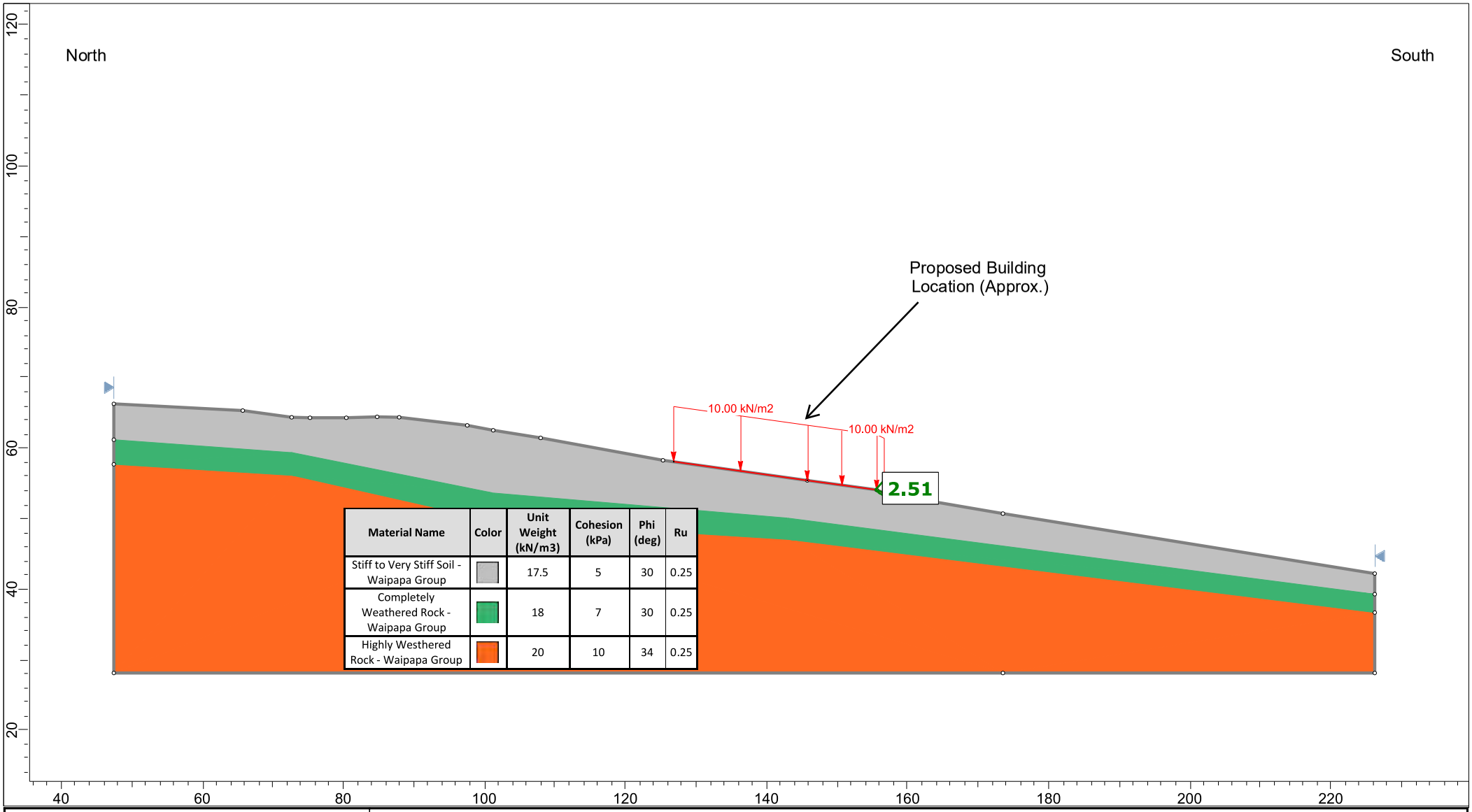
Material Name	Color	Unit Weight (kN/m3)	Cohesion (kPa)	Phi (deg)	Ru
Stiff to Very Stiff Soil - Waipapa Group		17.5	5	30	0.25
Completely Weathered Rock - Waipapa Group		18	5	30	0.25
Highly Westhered Rock - Waipapa Group		20	10	34	0.25



rocscience

SLIDEINTERPRET 9.019

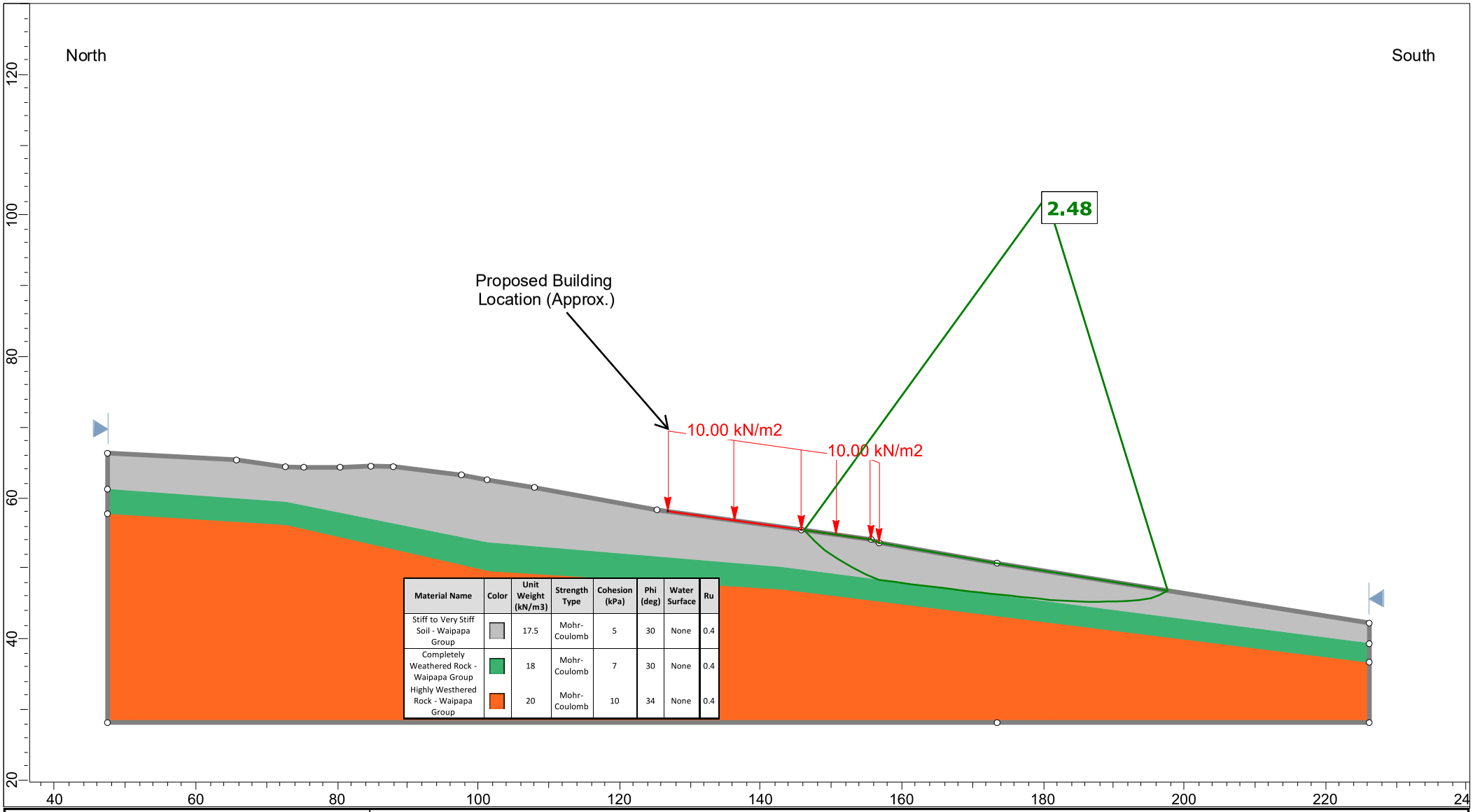
Project	Oromahoe Road Proposed Lot 6		
Group	Group 1	Scenario	Master Scenario
Drawn By	J. Power	Company	Haigh Workman Ltd
Date	19/04/2024, 2:36:25 pm	File Name	01 - noncirc - static.slmd



rocscience

SLIDEINTERPRET 9.019

Project	Oromahoe Road Proposed Lot 6		
Group	Group 1	*Scenario*	Master Scenario
Drawn By	J. Power	*Company*	Haigh Workman Ltd
Date	19/04/2024, 2:36:25 pm	*File Name*	02 - noncirc - Proposed.slmd

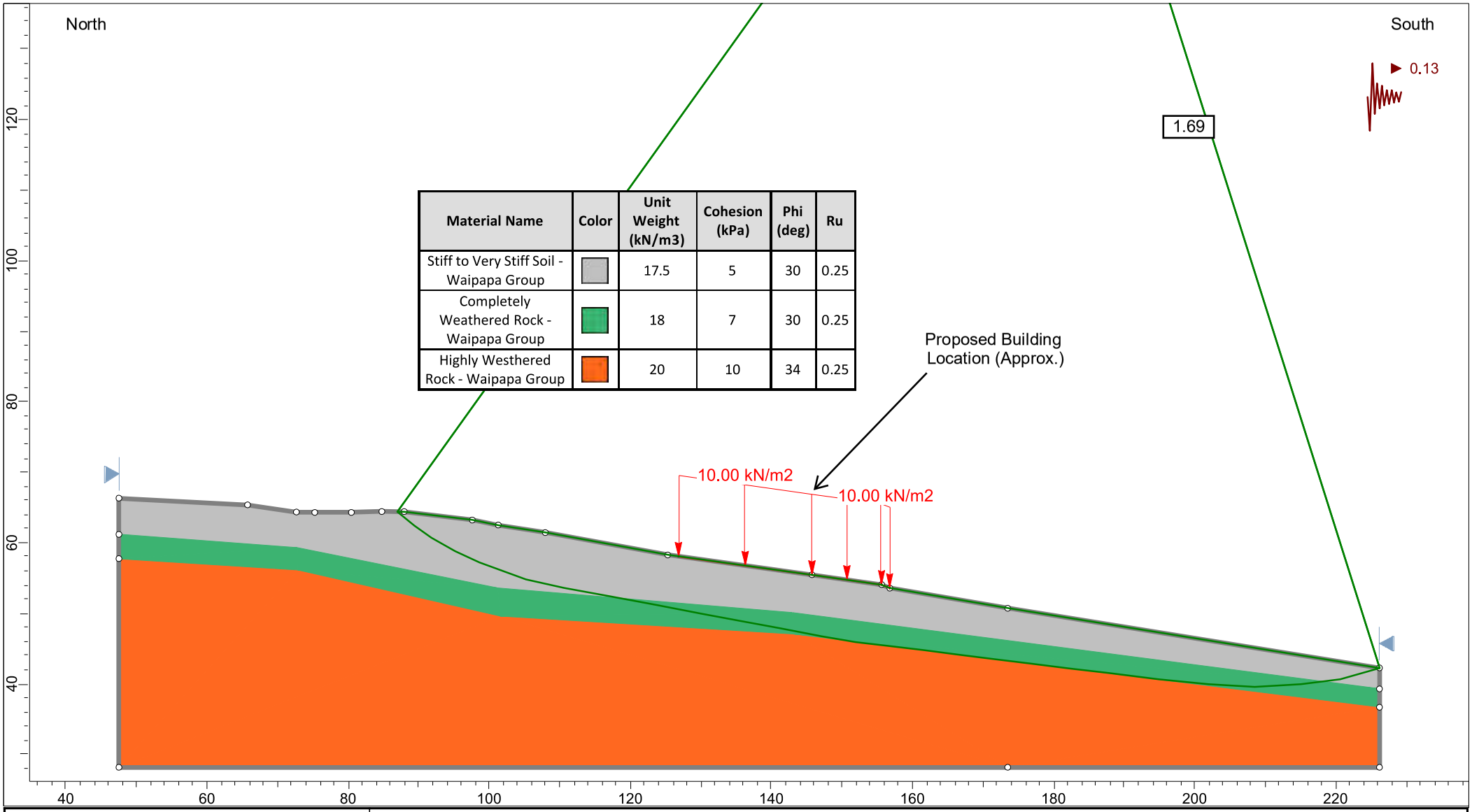


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Ru
Stiff to Very Stiff Soil - Waipapa Group		17.5	Mohr-Coulomb	5	30	None	0.4
Completely Weathered Rock - Waipapa Group		18	Mohr-Coulomb	7	30	None	0.4
Highly Westhered Rock - Waipapa Group		20	Mohr-Coulomb	10	34	None	0.4

rocscience

SLIDEINTERPRET 9.019

Project	Oromahoe Road Proposed Lot 6		
Group	Group 1	*Scenario*	Master Scenario
Drawn By	J. Power	*Company*	Haigh Workman Ltd
Date	19/04/2024, 2:36:25 pm	*File Name*	03 - noncirc - Elevated.slmd



rocscience

SLIDEINTERPRET 9.019

Project	Oromahoe Road Proposed Lot 6		
Group	Group 1	*Scenario*	Master Scenario
Drawn By	J. Power	*Company*	Haigh Workman Ltd
Date	19/04/2024, 2:36:25 pm	*File Name*	04 - noncirc - Seismic.slmd

Appendix 7

Maori Reservation Information

Te Kooti Whenua Māori
Māori Land Court

Application ID: AP-20250000002539

Tēnā koe Marion,

Subject: General Form of Application

We are glad to inform you that your application AP-20250000002539 has been registered and has been referred to the Taitokerau office of the court for a decision.

A staff member of that office will be assigned to your application to carry out any necessary research and confirm the information you have provided with the Māori Land Court record.

The findings of that research will be produced in a summary of facts (known as the submission) and you will be sent a copy of that before a Registrar or Judge makes a decision.

If your application is simple and there are no objections, you will be notified of the decision.

There are lengthy delays in the Court right now and it can take a long time for this to take place. Our staff will contact you if we require any further information otherwise, we thank you for the patience and apologise for delays.

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

Nāku noa nā,

Media Prime
Pae Whakapā
Māori Land Court
mlctewaharoa@justice.govt.nz |
https://www.māorilandcourt.govt.nz/ |

MĀORI RESERVATIONS

Te Kooti Whenua Māori – Māori Land Court

For more information, go to maorilandcourt.govt.nz

Te Kooti Whenua Māori – Māori Land Court (MLC) is the New Zealand Court that hears matters relating to Māori land. The unique relationship between Māori and whenua is recognised by the MLC, and the records held by the Court form an invaluable part of the whakapapa of all Māori people. The MLC operates under the provisions of Te Ture Whenua Māori Act 1993 ('the Act').

The regulations referred to in this factsheet are contained in the Māori Reservations Regulations 1994 ('the Regulations'). Every trustee[1] of a Māori reservation[2] should obtain a copy of, and become familiar with, the Regulations. Copies are available from the MLC.

Māori reservations are different to Māori reserves. Māori reserves are lands administered by the Māori Trustee under the Māori Reserved Land Act 1955. The information in this factsheet does not apply to Māori reserves.

Māori reservation land

Any Māori freehold land or any general land[3] may be set aside as a Māori reservation. Crown land[4] with historical, spiritual or emotional significance to Māori can also be set aside. Land that is perpetually leased (that is, land that is leased with an unlimited number of renewals), with the lessee's consent, can also be set aside. It is possible to establish a Māori reservation over one part of a block.

Purposes of a reservation

A reservation can be established for the following purposes:

- a village site
- a place of cultural, historical or scenic interest
- a sports ground
- a bathing place
- a church site
- a spring
- an urupā/burial ground
- a timber reserve
- papa kāinga
- kōhanga reo
- reserve contributions
- for any other specified purpose
- a marae
- a catchment area or other source of water supply
- pā site
- a building site
- a landing place
- a fishing ground
- a well
- wāhi tapu
- kaumātua flats
- a recreational ground
- a meeting place
- a conservation purpose (in conjunction with whenua rāhui)

A Māori reservation can be established and used for any combination of these purposes. For example, part of the reservation can be set aside as a sports ground and the rest for marae purposes (some marae have an area set aside as urupā).

People who benefit from a reservation

People who benefit from the reservation are usually named as members of a hapū[5] or several hapū, or any group of Māori. In some circumstances, Māori reservations can also be set aside for wider groups of people that can include the residents of a local community or even the people of Aotearoa New Zealand.

Establishing a Māori reservation

APPLYING TO THE MĀORI LAND COURT

An application must be made to the MLC to establish a Māori reservation. The process to do this is different from other MLC application processes.

Landowners and other interested parties, if appropriate, should hold a meeting to decide to set aside land as a Māori reservation. The people who will benefit from the reservation should be identified at the same time. Accurate minutes of the meeting should be taken.

The meeting must be properly advertised in a main newspaper circulating in the district where the land is located. The ad should identify the land and state the purpose of the meeting. The completed application, with the meeting's minutes and the application fee, should be sent to the MLC.

COURT ORDER

The MLC will conduct a hearing about the application. A judge can then make a court order to set the land aside as a Māori reservation. A court order will also be made to appoint trustees to administer the reservation.

If a mortgage, or any other charge, exists over the land, the land cannot be set aside for a reservation until the mortgage or charge has been cleared

TRUSTEES

The MLC may appoint trustees to administer a reservation.

NOMINATIONS

Anyone can be nominated as a trustee. The minimum number of trustees for a reservation is two people (unless the trustee is a body corporate[6], such as a Māori trust board or a Māori incorporation).

1. A person bound to deal with property on behalf of the owners or beneficiaries. The trustee becomes the legal owner when the order appointing them as trustee for the land is registered against the title. The beneficiaries are called the beneficial owners.
2. Before 6 February 2021, Māori reservations were established by notice in the New Zealand Gazette. Since, the Court has had authority to create, modify and cancel Māori reservations by court order.
3. In broad terms, land that is not Māori land and is not Crown land (see next item).
4. The Crown refers to the Sovereign, who is the head of state of New Zealand. Crown-owned land is, in effect, state-owned land.
5. A subtribe or kin group that is linked by a common ancestor.
6. A legal entity such as a company, incorporation or Māori trust board.

A trustee does not have to be an owner in the land. The MLC, though, needs to be satisfied that the trustee is a "worthy appointee." It is unlikely to appoint someone who is:

- bankrupt
- imprisoned
- convicted of a crime involving dishonesty
- under mental disability[7]
- a minor[8]
- known to the Court to have been guilty of misconduct in the administration of a trust
- involved with a corporation that is in liquidation or no longer in business.

Trustees must consent to their nomination and have the support of the beneficiaries[9]. They cannot be finally appointed until a gazette notice has been issued formally establishing the Māori reservation.

TERM OF OFFICE

A trustee remains in office unless they are removed by order of the MLC. A trustee may resign sooner if they wish, or may be removed by the MLC if it considers this to be necessary after hearing relevant evidence. Usually, an application for a trustee's removal is filed by the trustees or the beneficiaries. In terms of Regulation 3(h), any trustee removed by the MLC should not later be reappointed as a trustee for the same reservation (removal by the Court is a disciplinary matter).

POWERS OF THE TRUSTEES

Trustees are responsible for the administration of the Māori reservation and complying with the Regulations. Trustees of a reservation may:

- authorise and/or issue permits of lawful activities on the reservation
- apply to the MLC for directions about the administration of the reservation and the powers and obligations of the trustees
- call meetings of interested persons about the administration of the reservation
- appoint and employ, on behalf of the trustees, any advisers that may enable the better administration of the reservation
- sign documents that comply with the Act.

DELEGATING RESPONSIBILITIES

Trustees of a Māori reservation are totally prohibited from delegating any of their responsibilities. A trustee may not appoint a proxy[10] or a Power of Attorney to act for them.

QUORUM

The total number of trustees is the number appointed by the MLC. Note, though, that this total includes absent trustees, deceased trustees and resigning trustees who have not been replaced, or where the number of trustees has not been reduced by the MLC. Where there are more than three trustees, a quorum[11] is at least half of this total. Where there are only two trustees, both are required for the purpose of establishing a quorum.

SIGNING DOCUMENTS

Trustees may sign documents by a majority (more than half of all the trustees currently appointed by the MLC) if the trustees have passed a resolution authorising the document. However, if the document needs to be registered against Toitū Te Whenua – Land Information New Zealand (LINZ) title[12] to the land, then every trustee must sign it. There are limitations imposed on the trustees in section 338 of the Act. Trustees:

- may not mortgage or sell the land
- may grant a lease or occupation licence
- must seek the MLC's consent to any lease or occupation licence.

MARAE AND MĀORI COMMITTEES

The relationships between marae and Māori committees with the trustees of a reservation vary within each area. The trustees are the legal entity responsible for administering the reservation. They can choose to work with committees, and the relationship between the trustees and the committees should be written into the marae charter[13]. Everyone involved needs to understand the relationship and the protocols set down in terms of the kawa of the marae concerned.

CHARTERS

A charter is needed only if the reservation is a marae. The reservation trustees, in agreement with the beneficiaries, are required to draw up a charter for the reservation (if the beneficiaries are the people of Aotearoa, then the beneficial owners[14] of the land and the trustees will decide on the charter). The charter may include the following:

- the name of the marae
- a general description of the marae reservation
- a list of iwi[15], hapū or whānau who are the beneficiaries of the marae reservation
- the process for nominating and selecting marae trustees
- how trustees are accountable to the beneficiaries
- the process to resolve any conflict between trustees and beneficiaries
- a recognition of the committees associated with the marae
- the appointment of one or more committees by the trustees to carry out administrative functions for the marae
- the procedure for altering, keeping and inspecting the charter
- anything else the beneficiaries require (subject to the Act and Regulations).

If in agreement, the trustees and the beneficiaries may exclude any of, or add to, these items in their charters if they wish.

7. In its legal use, this means physical or mental disablement that, in the opinion of the Court, results in a person lacking, wholly or partly, the competence to manage their affairs in relation to their property.
8. A person who has not yet reached the age of 20.
9. Owner(s) of shares of land held within a trust. Beneficiaries are also called the beneficial owners.
10. The authority given by an owner of an interest in land to another person to vote on their behalf.
11. The minimum number of members who must be present at a meeting to make proceedings valid.
12. The legal ownership of property and the legal evidence of a person's ownership rights.
13. A set of principles that form the constitution of an organisation.
14. The owner of a beneficial interest in land. Where land is vested in trustees, the trustees own the land as legal owners on behalf of the beneficiaries. The beneficiaries hold their individual shares in the land as beneficial owners.
15. The traditional Māori tribal hierarchy and social order made up of hapū (kin groups) and whānau (family groups), having a founding ancestor and territorial (tribal) boundaries.

Using a reservation for an activity

ACTIVITIES REQUIRING TRUSTEES' WRITTEN AUTHORITY

Before the following activities can take place, prior written authority of the trustees is required:

- the use of any building on the reservation
- the promotion or holding of a hui, meeting or other large gathering of people
- the promotion or holding of a sports event, competition or concert
- other activities or events as decided by the trustees.

The trustees' prior written consent is not needed for tangihanga.

APPLYING TO THE TRUSTEES

Anyone who wants to promote or run an activity on a reservation must write to the trustees stating:

- the full name and address of the applicant
- the activity
- the area of land and the buildings that are to be used for the activity
- the proposed date, time and duration of the activity
- the number of people who are likely to attend the activity
- the arrangements that the applicant proposes for admission to and control of the activity.

CONSIDERATION OF AN APPLICATION

On receiving an application, the trustees can request further information. The trustees cannot adequately consider the application until they have received all the information they need. The trustees will need to meet to consider the application as soon as practicable. The trustees may:

- adjourn[16] their consideration of the application (as long as it is dealt with before the activity takes place)
- approve the application
- approve the application, subject to any conditions that the trustees think fit
- decline the application.

The trustees are not required to give reasons for their decision on an application unless they have been required to do so by an order of the MLC.

Annual general meetings

The trustees are required to hold an annual general meeting (AGM). However, if AGMs will not be practical or possible (for example, for a small family urupā), the MLC can be asked to approve less frequent meetings, such as one meeting every two, three or five years.

ATTENDEES

Any beneficiary or other person for whose benefit the reservation has been created may attend the meeting. The meeting will be chaired by a trustee or a person nominated by the trustees.

NOTICE

The meeting must be properly advertised in a newspaper circulating in the district where the reservation is located. The advertisement should identify the land, the beneficiary group(s) and the agenda items along with the meeting details.

At least 21 days' notice must be given for an AGM and 14 days for any other meeting.

PURPOSES OF THE MEETING

The main purposes of the meeting are to inform the beneficiaries of the trustees' administration of the reservation, to keep the trustees accountable and to ensure that communication flows between the trustees and beneficiaries. At an AGM, the trustees will:

- outline their administration of the reservation, including any matters undertaken by the trustees in the past 12 months, and present the financial accounts
- report their proposal for the administration of the reservation during the next 12-month period
- give the persons attending the meeting an opportunity to express their views about the administration of the reservation
- discuss any other relevant matters and distribute reports or other material.

Administration of reservations

RECORDS AND ACCOUNTS

The trustees are required to:

- keep and maintain accurate and up-to-date records and accounts of the reservation
- maintain a bank account for the reservation and ensure that the bank account is operated by at least two signatories
- at any time, give the MLC all records, accounts books and vouchers in possession or control of the trustees for examination by the Court
- keep a minute book of trustees' meetings and resolutions.

RESERVATION NOTICE

The trustees may, but are not bound to, display a permanent notice on the reservation that includes:

- the name of the reservation
- the name and address of each trustee
- a statement that the trustees are responsible for the administration of the reservation
- a statement that any public gathering on the reservation cannot take place without the authorisation of the trustees
- particulars of any activities or events that require the authority of the trustees
- a statement about application requirements to use the reservation, including the address of where to send the application.

16. To postpone a court sitting, or any meeting, to another date and/or location.

Limitations on trustees

The Act has some specific limitations on the trustees in administering Māori reservations. These are:

- The land cannot be sold, gifted, exchanged or mortgaged.
- The trustees can only grant a lease or occupation licence of the land for a term of up to 14 years (including renewals), unless the lease or occupation licence is for education, health or papakāinga housing, in which case there is no time limit.
- Any lease or occupation licence on a Māori reservation needs MLC's consent.
- Any revenue from the lease or licence must be used as directed by the MLC.

Section 150A of the Act (as amended by section 24 of Te Ture Whenua Māori Amendment Act 2002) requires any lease for longer than 52 years to have the consent of at least half the beneficial owners of the land and the approval of the MLC.

CHANGES TO A RESERVATION

After a Māori reservation has been established, it can:

- be cancelled, in full or part
- have its purpose varied
- have additional land included
- have the beneficiaries varied.

To make these changes, an application must be made to the MLC and a further court order will be made.

PAYMENT OF RATES

Any Māori reservation set aside for the purpose of marae, meeting place, or urupā/burial ground or any reservation set aside for the common use and benefit of the people of Aotearoa qualifies for exemption from payment of rates (this exemption is granted by the Local Government (Rating) Act 2002). The exemption does not apply to marae land that is used primarily for commercial or agricultural activity or for residential accommodation. Māori reservations may be subject to a targeted rate set by the local body for the provision of water supply, sewage disposal or refuse collection services.

Local bodies have discretionary power to reduce rates. If the trustees want a reduction in rates, they should talk with the local body.

INVESTIGATING THE ADMINISTRATION OF A RESERVATION

A beneficiary can apply to the MLC to conduct an inquiry into the administration of the reservation.

The MLC encourages parties to make every attempt to resolve their concerns on the marae or among themselves first. The MLC should be asked to intervene only when negotiations among the parties fail. The application must contain the details of why the inquiry by the MLC is sought. The MLC may determine who pays any costs associated with the inquiry. The applicant must also give a copy of the application to each trustee. The applicant must file evidence to support their allegations.

More information

To find out more about Māori reservations, **go online to** maorilandcourt.govt.nz

Or you can visit your local MLC office or attend an offsite clinic. We have nine offices across Aotearoa New Zealand which are open between 10am and 4pm on normal weekdays. You don't need to make an appointment. Contact details follow or **go online to** maorilandcourt.govt.nz/contact-us

Contact the Māori Land Court

The DX number is the postal address.

Taitokerau District	Level 3, Manaia House Rathbone Street, Whangārei 0110 DX Box AX10086, Whangārei Phone 09 983 9940 Email mlctaitokerau@justice.govt.nz
Auckland Information Office	Ground floor, Building B 65B Main Highway, Ellerslie Auckland 1051 DX Box EX10912, Auckland Phone 09 279 5850 Email mlctamakimakaurau@justice.govt.nz
Waikato-Maniapoto District	Level 2, BNZ Centre 354 Victoria Street, Hamilton 3204 DX Box GX10101, Hamilton Phone 07 957 7880 Email mlcwaikato@justice.govt.nz
Waiariki District	Hauora House 1143 Haupapa Street, Rotorua 3204 DX Box JX10529, Rotorua Phone 07 921 7402 Email mlcwaiariki@justice.govt.nz
Aotea District	Ingestre House 74 Ingestre Street, Whanganui 4500 DX Box PX10207, Whanganui Phone 06 349 0770 Email mlcaotea@justice.govt.nz
Tākitimu District	Hastings District Court, 106 Eastbourne Street West, Hastings 4122 DX Box MX10024, Hastings Phone 06 974 7630 Email mlctakitimu@justice.govt.nz
Tairāwhiti District	Ngā Wai e Rua Building Cnr Reads Quay and Lowe Street Gisborne 4010 DX Box PX10106, Gisborne Phone 06 869 0370 Email mlctairawhiti@justice.govt.nz
Te Waipounamu District	Level 1, CJESP 20 Lichfield Street, Christchurch 8011 DX Box WX11124, Christchurch Phone 03 962 4900 Email mlctewaipounamu@justice.govt.nz
Office of the Chief Registrar/ Specialist Applications Team	Level 7, Fujitsu Tower 141 The Terrace, Wellington 6011 DX Box SX11203, Wellington Phone 04 914 3102 Email mlc.chief-registrars.office@justice.govt.nz