THOMSON SURVEY LIMITED

SURVEYORS AND RESOURCE PLANNERS

Our Reference: 10849.1 (FNDC)

13 February 2026

Resource Consents Department
Far North District Council
JB Centre
KERIKERI

Dear Sir/Madam

RE: Proposed subdivision – Geoff Lodge - to create three additional lots at Taupo Bay Road

I am pleased to submit application on behalf of Geoff Lodge, for a proposed 4 lot subdivision (three additional) of land at Taupo Bay Road, zoned Rural Production. The subdivision is a discretionary activity.

The application fee of $3,044 has been paid separately via direct credit.

Regards

Lynley Newport
Senior Planner
THOMSON SURVEY LTD

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After Hours: Office Manager: Sam Lee 021 1370060

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)** _____

** 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?	

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: Geoff Lodge

Email: [redacted]

Phone number:

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

6. Address for Correspondence

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

Name/s: Lynley Newport

Email: [redacted]

Phone number:

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

** 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: as per item 5 above

Property Address/ Location:

Postcode

8. Application Site Details

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

Name/s: as per item 5

Site Address/ Location: Taupo Bay Road
(vacant site, no RAPID address)

Postcode

Legal Description: Lot 9 DP 457532 **Val Number:**

Certificate of title: 593337

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 agent prior to any site visit.

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.

Subdivision to create four lots (three additional) on land zoned Rural Production.

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) Geoff Lodge

Email: [redacted]

Phone number: [redacted]

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

Signature:
(signature of bill payer) [redacted] MANDATORY

Date 13/2/2026

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)

Signature:

Date 13/2/2026

A signature is not ... onic means

Checklist (please tick if information is provided)

- ☑ Payment (cheques payable to Far North District Council)
- ☑ 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
- ☑ Applicant / Agent / Property Owner / Bill Payer details provided
- ☑ Location of property and description of proposal
- ☑ Assessment of Environmental Effects
- ☐ Written Approvals / correspondence from consulted parties
- ☑ Reports from technical experts (if required)
- ☑ Copies of other relevant consents associated with this application
- ☐ Location and Site plans (land use) AND/OR
- ☑ 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.

G Lodge

PROPOSED SUBDIVISION PURSUANT TO FNDC OPERATIVE DISTRICT PLAN

Taupo Bay Road, Taupo Bay

PLANNER'S REPORT & ASSESSMENT OF ENVIRONMENTAL EFFECTS

Thomson Survey Ltd
Kerikeri

1.0 INTRODUCTION

1.1 The Proposal

The applicant proposes to subdivide property on Taupo Bay Road to create three additional lots of just over 4ha each, plus balance Lot 9 of 30.451ha. Access is via an existing appurtenant easement over Pt Section 4 Blk II Whangaroa SD. This easement is over existing formed access, with an existing crossing (intersection) to Taupo Bay Road - a sealed Council road. Refer to Scheme Plan in Appendix 1.

The application "site" is the balance Lot 9 of recently issued RC 2260190. A copy of that consent is attached in Appendix 4, with a copy of the draft Title Plan attached as Appendix 5.

The proposed lots will not have access to any Council 3 waters reticulated services and will be reliant on on-site water supply; wastewater treatment and disposal; and stormwater management. A Civil Site Suitability Report and Site Assessment Report support this application (Appendices 7 & 8).

1.2 Scope of this Report

This assessment and report accompanies the Resource Consent Application made by the applicant, and is provided in accordance with Section 88 and Schedule 4 of the Resource Management Act 1991. The application seeks consent to subdivide an existing site to create a total of four lots (three additional), as a discretionary activity.

The information provided in this assessment and report is considered commensurate with the scale and intensity of the activity for which consent is being sought. Applicant details are contained within the Application Form 9.

2.0 PROPERTY DETAILS

Location:	Taupo Bay Road, Taupo Bay. Location Map attached in Appendix 2.
Legal description & RT's:	Currently Lot 9 DP 457532; held in Record of Title 593337, copy attached in Appendix 3.

3.0 SITE DESCRIPTION

3.1 Site Characteristics

The site is situated on the north side of Taupo Bay Road, accessed via an existing metal surface right of way that also provides access to the Taupo Bay community fire station. The site is vacant of structures and is mostly in pasture with areas of bush. Tributary water courses traverse from the northeastern to southwestern boundary and east to west through the southern end of the block.

The proposed additional 4ha lots are on the western side of the block. They are set around a broad spur flank. The western portion of the lots are gently sloping with the eastern and southern portions more moderate to steeply sloping.

There is Top Energy network running through the site and the scheme plan reflects the alignment of the main line, with easement in gross in favour of Top Energy.

The Operative District Plan (ODP) zones the site Rural Production with no resource features. The same zoning is proposed under the Proposed District Plan (PDP).

There are two NZAA recorded sites within the application site, both within the large balance Lot 9.

The site contains no areas of Protected Natural Area (significant indigenous vegetation or habitat). It is within a "kiwi present" area.

The site is not mapped as containing any HAIL land or Selected Land Use Sites (Far North Maps and NRC online maps).

LUC maps show the site as containing LUC 4 and 6 soils *(Far North Maps, Soil layer)*.

The land is not mapped as being erosion prone.

3.2 Legal Interests

The title is subject to a right to convey water and power over part marked H on DP 457532. The property is subject to a Council imposed Consent Notice 11487862.2. This was imposed in the subdivision resulting in DP 457532. In granting RC 2260190-RMASUB, the Council also resolved the cancellation of the consent notice clause (vi) as it applies to the application site. RC 2260190-RMASUB requires a replacement clause to be registered. It is the replacement clause that will carry down to the new lots being applied for in this application:

"the site is identified as being within a kiwi present zone. Any cats and/or dogs kept on site must be kept inside and/or tied up at night to reduce the risk of predation of North Island brown kiwi by domestic cats and dogs".

The remainder of the Consent Notice clauses will automatically carry down onto every new title created, unless application is made to cancel or vary the consent notice.

Clause (i) relates to the requirement to obtain building consent and install a wastewater treatment and effluent disposal system as detailed in a report prepared by Haigh Workman in 2011. Whilst there might be an issue with the age of this report, the consent notice clause provides for an alternative report and design to be submitted for Council approval.

Clause (ii) advises lot owners that electricity supply was not a requirement of the subdivision and remains the responsibility of the lot owner, including for the operation of any on-site wastewater treatment or other device requiring electrical power to operate. This remains the case.

Clause (iii) advises of the Council's requirement for potable and fire fighting water supply and will carry down.

Clause (iv) requires the colour scheme for proposed buildings to be submitted at time of building consent, for Council's approval. Reflectance value is not to exceed 30%. This requirement will carry down onto all lots, albeit it seems odd to insist on this requirement where the lots are not zoned coastal and are not within an outstanding landscape.

Clause (v) requires a planting plan prepared by a suitably qualified and experienced landscape architect that identifies the means of mitigation of visual effects of built development located on or adjoining any ridgeline when viewed from Taupo Bay Road and earthworks associated with building works. This will carry over but is unlikely to be relevant for any proposed lot given they are all substantially below any ridgelines.

Clause (vii) relates to an existing bush covenant area but this is located on another lot created in the original subdivision and not relevant to the application site.

In addition RC 2260190 imposed an additional consent notice that will carry down to the new lots in regard to actions to take if there is an "accidental discovery" of archaeological material.

3.3 Consent History

There are no buildings on the property.

The resource consent history of the property includes the following:

RC 2120169-RMASUB, issued in January 2012, and RC 2170033-RMASUB, issued in 2016.

Only RC 2170033-RMASUB, issued in November 2016, was pursued. This created 10 lots in two stages whereby Lot 9 of RC 2170033 was to be further subdivided in a Stage 2 to create Lots

9 & 10, the latter being the last of the 2ha lots able to be created. This stage 2 lapsed, and RC 2260190-RMASUB was issued to re-approve that last Stage 2 lot. A copy of RC 2260190 is attached in Appendix 4.

4.0 SCHEDULE 4 – INFORMATION REQUIRED IN AN APPLICATION

Clauses 2 & 3: Information required in all applications

(1) An application for a resource consent for an activity must include the following:	
(a) a description of the activity: .	Refer Sections 1 and 5 of this Planning Report.
(b) an assessment of the actual or potential effect on the environment of the activity:	Refer to Section 6 of this Planning Report.
(b) a description of the site at which the activity is to occur:	Refer to Section 3 of this Planning Report.
(c) the full name and address of each owner or occupier of the site:	This information is contained in the Form 9 attached to the application.
(d) a description of any other activities that are part of the proposal to which the application relates:	No other activities are part of the proposal. The application is for subdivision pursuant to the FNDC's ODP.
(e) a description of any other resource consents required for the proposal to which the application relates:	None are required.
(f) an assessment of the activity against the matters set out in Part 2:	Refer to Section 7 of this Planning Report.
(g) an assessment of the activity against any relevant provisions of a document referred to in section 104(1)(b), including matters in Clause (2): (*a) any relevant objectives, policies, or rules in a document; and* *(b) any relevant requirements, conditions, or permissions in any rules in a document; and* *(c) any other relevant requirements in a document (for example, in a national environmental standard or other regulations).*	Refer to Sections 5 and 7 of this Planning Report.
(3) An application must also include any of the following that apply:	
(a) if any permitted activity is part of the	Refer to section 5.

proposal to which the application relates, a description of the permitted activity that demonstrates that it complies with the requirements, conditions, and permissions for the permitted activity (so that a resource consent is not required for that activity under section 87A(1)):	
(b) if the application is affected by section 124 or 165ZH(1)(c) (which relate to existing resource consents), an assessment of the value of the investment of the existing consent holder (for the purposes of section 104(2A)):	There is no existing resource consent. Not applicable.
(c) if the activity is to occur in an area within the scope of a planning document prepared by a customary marine title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011, an assessment of the activity against any resource management matters set out in that planning document (for the purposes of section 104(2B)).	The site is not within an area subject to a customary marine title group. Not applicable.
(4) An application for a subdivision consent must also include information that adequately defines the following:	
(a) the position of all new boundaries: *(b) the areas of all new allotments, unless the subdivision involves a cross lease, company lease, or unit plan:* *(c) the locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips:* *(d) the locations and areas of any existing esplanade reserves, esplanade strips, and access strips:* *(e) the locations and areas of any part of the bed of a river or lake to be vested in a territorial authority under section 237A:* *(f) the locations and areas of any land within the coastal marine area (which is to become part of the common marine and coastal area under section 237A):* *(g) the locations and areas of land to be set aside as new roads.*	Refer to Scheme Plans in Appendix 1.

Clause 6: Information required in assessment of environmental effects

(1) An assessment of the activity's effects on the environment must include the following information:	
(a) if it is likely that the activity will	Refer to Section 6 of this planning report. The activity will not

result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:	result in any significant adverse effect on the environment.
(b) an assessment of the actual or potential effect on the environment of the activity:	Refer to Section 6 of this planning report.
(c) if the activity includes the use of hazardous installations, an assessment of any risks to the environment that are likely to arise from such use:	Not applicable as the application does not involve hazardous installations.
(d) if the activity includes the discharge of any contaminant, a description of— *(i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and* *(ii) any possible alternative methods of discharge, including discharge into any other receiving environment:*	The subdivision does not involve any discharge of contaminant.
(e) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect:	Refer to Section 6 of this planning report.
(f) identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:	Refer to Section 8 of this planning report. No affected persons have been identified.
g) if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:	No monitoring is required as the scale and significance of the effects do not warrant it.
(h) if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).	No protected customary right is affected.

Clause 7: Matters that must be addressed by assessment of environmental effects (RMA)

(1) An assessment of the activity's effects on the environment must address the following matters:

(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:	Refer to Sections 6 and 8 of this planning report and also to the assessment of objectives and policies in Section 7.
(b) any physical effect on the locality, including any landscape and visual effects:	Refer to Section 6. The site has no high or outstanding landscape or natural character values.
(c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:	Refer to Section 6. The subdivision has no effect on ecosystems or habitat.
(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:	Refer to Section 6. The site has no aesthetic, recreational, scientific, historical, spiritual or cultural values that I am aware of, that will be adversely affected by the act of subdividing.
(e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:	The subdivision will not result in the discharge of contaminants, nor any unreasonable emission of noise.
(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations.	The subdivision site is not subject to hazard. The proposal does not involve hazardous installations.

5.0 ACTIVITY STATUS

5.1 Operative District Plan

The site is zoned Rural Production and has no resource features.

Table 13.7.2.1: Minimum Lot Sizes

(i) RURAL PRODUCTION ZONE

Controlled Activity Status (Refer also to 13.7.3)	**Restricted Discretionary Activity Status (Refer also to 13.8)**	**Discretionary Activity Status (Refer also to 13.9)**
The minimum lot size is 20ha.	1. The minimum lot size is 12ha; or 2. The minimum lot size is 12ha; or 3. A maximum of 3 lots in any subdivision, provided that the minimum lot size is 4,000m2 and there is at least 1 lot in the subdivision with a minimum lot size of 4ha, and provided further that the subdivision is of sites which existed at or prior to 28 April 2000, or which are amalgamated from titles existing at or prior to 28 April 2000; or	**1. The minimum lot size is 4ha**; or 2. A maximum of 3 lots in any subdivision, provided that the minimum lot size is 2,000m² and there is at least 1 lot in the subdivision with a minimum size of 4ha, and provided further that the subdivision is of sites which existed at or prior to 28 April 2000, or which are amalgamated from titles existing at or prior to 28 April 2000; or 3. A subdivision in terms of a management plan as per Rule 13.9.2 may be approved.

	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; Option 5. N/A as the proposal does not utilise remaining rights.	Option 4 N/A

The Title is younger than April 2000 and lots are 4ha in area or greater. The subdivision is therefore a **discretionary** subdivision activity.

Other Rules:

Zone Rules:

The proposal does not result in any breaches of Rural Production Zone rules. The land is vacant.

District Wide Rules:

Chapter 12.1 Landscapes and Natural Features does not apply as there is no landscape or natural feature overlay applying to the site.

Chapter 12.2 Indigenous Flora and Fauna does not apply as no clearance of indigenous vegetation is proposed.

Chapter 12.3 Soils and Minerals does not apply/ is complied with. Only minor subdivision earthworks will be required for access, highly unlikely to breach the zone's permitted activity thresholds.

Chapter 12.4 Natural Hazards does not apply as the site is not subject to any coastal hazard as currently mapped in the Operative District Plan (the only hazards with rules). There are no areas of bush from which a 20m buffer is required.

Rules in Chapters 12.5, 5A and 5B Heritage do not apply as the site contains no heritage values or sites, no notable trees, no Sites of Cultural Significance to Maori and no registered archaeological sites. The site is not within any Heritage Precinct.

Chapter 12.7 Waterbodies does not apply as the subdivision provides for building / development area well away from any water courses.

Chapter 12.8 Hazardous Substances does not apply as the activity being applied for is not a hazardous substances facility.

Chapter 12.9 does not apply as the activity does not involve renewable energy.

Chapter 14 Financial Contributions (esplanade reserve) is not relevant as there is no qualifying water body and no lot of less than 4ha in area.

Chapter 15.1 Traffic, Parking and Access

Rules in Chapter 15.1.6A are not considered relevant to the proposal. This is because the traffic intensity rules apply to land use activities, not subdivisions. Similarly rules in Chapter 15.1.6B (parking requirements) also relate to proposed land use activities, not subdivisions. Notwithstanding this, no breaches of either traffic intensity, or parking, rules have been identified.

Chapter 15.1.6C (access) is the only part of Chapter 15.1 relevant to a subdivision. I have not identified any breaches. Taupo Bay Road is sealed council road, to the appropriate standard. Conditions of RC 2260190 include a requirement to upgrade the intersection of easement and Taupo Bay Road (at s224c stage), so will be to standard. The easement providing frontage/access to Lots 4-6 has the appropriate legal width. This has good width past the fire station and to Lot 10 of RC 2260190, with no upgrading required in conditions of that consent. Lots 4-6 frontage will need to provide for passing bays. Entranceways into the Lots 4-6 can be formed to the appropriate standard. The balance Lot 9 is not intended to gain access off the right of way, but instead directly off Taupo Bay Road at a location as yet undetermined, with no immediate plans to identify and create a building platform.

In summary, I have not identified any land use breaches, and the subdivision remains a discretionary subdivision activity.

5.2 Proposed District Plan

The FNDC publicly notified its PDP on 27th July 2022. Whilst the majority of rules in the PDP will not have legal effect until such time as the FNDC publicly notifies its decisions on submissions, there are certain rules that have been identified in the PDP as having immediate legal effect and that may therefore need to be addressed in this application and may affect the category of activity under the Act. These include:

Rules HS-R2, R5, R6 and R9 in regard to hazardous substances on scheduled sites or areas of significance to Maori, significant natural areas or a scheduled heritage resource.

There are no scheduled sites or areas of significance to Maori, significant natural areas or any scheduled heritage resource on the site, therefore these rules are not relevant to the proposal.

Heritage Area Overlays – N/A as none apply to the application site.

Historic Heritage rules and Schedule 2 – N/A as the site does not have any identified (scheduled) historic heritage values.

Notable Trees – N/A – no notable trees on the site.

Sites and Areas of Significance to Maori – N/A – the site does not contain any site or area of significance to Maori.

Ecosystems and Indigenous Biodiversity – Rules IB-R1 to R5 inclusive.

No indigenous vegetation clearance is proposed.

Subdivision (specific parts) – only subdivision provisions relating to land containing Significant Natural Area or Heritage Resources have immediate legal effect. The site contains no scheduled or mapped Significant Natural Areas or Heritage Resources.

Activities on the surface of water – N/A as no such activities are proposed.

Earthworks – Only some rules and standards have legal effect. These are Rules EW-R12 and R13 and related standards EW-S3 and ES-S5 respectively. EW-R12 and associated EW-S3 relate to the requirement to abide by Accidental Discovery Protocol if carrying out earthworks and artefacts are discovered. EW-R13 and associated EW-S5 refer to operating under appropriate Erosion and Sediment Control measures. The only earthworks required to give effect to the subdivision is related to access. This can be carried out in compliance with the above referenced rules/standards.

Signs – N/A – signage does not form part of this application.

Orongo Bay Zone – N/A as the site is not in Oronga Bay Zone.

There are no zone rules in the PDP with immediate legal effect that affect the proposal's activity status.

6.0 ASSESSMENT OF ENVIRONMENTAL EFFECTS

6.1 Allotment Sizes and Dimensions

The proposed lots are large and can easily accommodate 30m x 30m square building envelopes. They are suitable for residential development associated with rural activities.

The Civil Site Suitability Report (CSSR) in Appendix 7 confirms that the proposed lots are all suitable for their intended use in regard to civil engineering matters.

6.2 Natural and Other Hazards

The proposed additional lots are not affected by any river flood hazard. The Site Assessment Report attached in Appendix 8 discusses geotechnical considerations and assesses qualitative slope stability and liquefaction susceptibility. The report concludes the building platforms/areas investigated within Lots 4-6 *"should be generally suitable for future residential*

construction in terms of NZS3604:2011, provided that site-specific Geotechnical investigations and assessments are undertaken during the building consent stage, once future development proposals have been formulated". The assessment did not identify any natural hazard on in the above mentioned area that would preclude future development.

The area of future development (Lots 4-6) is not subject to any hazard associated with erosion; landslip; rockfall; alluvion; avulsion; unconsolidated fill; soil contamination; subsidence; fire hazard or sea level rise.

6.3 Water Supply

There is no Council reticulated water supply available to the property. The existing consent notice requiring potable and fire fighting water supply will automatically carry down onto new lots, so no new consent notice is required. The sites are large enough to accommodate more than one tank.

6.4 Energy Supply & Telecommunications

Power and phone is not a requirement for rural subdivision. Clause (ii) of the existing consent notice advises lot owners that electricity supply was not a requirement of the subdivision and remains the responsibility of the lot owner, including for the operation of any on-site wastewater treatment or other device requiring electrical power to operate. This will carry down automatically onto new lots and does not need to be reimposed.

6.5 Stormwater Disposal

Refer to the CSSR in Appendix 7, specifically Section 7 of that report. This confirms that impermeable coverage on each lot will readily comply with the zone's permitted activity threshold. As such it is expected that a stormwater attenuation report will be required for any future residential development of the lots. The report makes recommendations in regard to future stormwater runoff management. An assessment against the assessment criteria in the ODP is contained in sub section 7.4 of the CSSR.

6.6 Sanitary Sewage Disposal

Refer to Section 6 of the CSSR in Appendix 7. For the purposes of feasibility the report considered a 6 persons occupancy scenario for each lot. The report verifies that onsite wastewater treatment to secondary aerated treatment level is possible on all lots in compliance with the Regional Plan's permitted standards – refer to 6.2 and 6.3 of the CSSR.

6.7 Easements for any purpose

The property has appurtenant right of way for its access. In addition there is an existing easement for a right to convey water and electricity, shown H on the scheme plan. As part of the previously issued RC 2260190, an Easement in Gross in favour of Top Energy has been incorporated in the scheme plan(s) for this current application, shown A, B & C.

This impacts on Lots 5, 6 & 9, where the easement instrument will carry down onto those new titles.

6.8 Property Access

Property access into the Lots 4-6 will be directly off existing appurtenant easement which in turn comes off Taupo Bay Road. RC 2260190 requires the intersection between right of way and Taupo Bay Road to be upgraded so "*that the surface is sealed (chip seal or asphalt) from the edge of the existing road carriageway seal (or edge of carriageway if unsealed) back a minimum of 5m into the right-of-way, including any necessary apron shaping and erosion protection, to the approval of Council's Resource Consents Engineer*". That condition could readily be repeated as a s224c condition in this current consent, if the works have not already been done at the time of issuing the consent.

The existing appurtenant easement will provide access to the three additional lots and farm property beyond. No upgrading or widening of this existing easement was required in RC 2260190 as the additional Lot 10 created in that subdivision could be accessed off a portion of the easement with good width and surface. We now propose three lots (4-6) to be accessed further up the existing easement. This will require passing bays at appropriate locations, potentially corresponding with entrance points to the lots.

6.9 Earthworks

The only earthworks associated with site works is the construction of entrances and passing bays within and off the existing appurtenant easement. These works will not breach any ODP rules and carried out with appropriate erosion and sediment control measures in place. No on site earthworks is required as part of any subdivision site works.

6.10 Building Locations

There are no restrictions in regard to natural hazard as to where dwellings/buildings can be located, with Site Assessment and Reporting showing indicative building platforms to show feasibility. The western end of each of Lots 4-6 is the most suitable area for future built development, based on contour and proximity to access, however, there are other parts of those lots that could also support built development. The eastern extremes of Lots 4-6 should be avoided because of the steepness of the slope – see contour information on the Site Assessment's "Site Plan". No building site is near a water course or any area of bush.

6.11 Preservation and enhancement of heritage resources (including cultural), vegetation, fauna and landscape, and land set aside for conservation purposes

Vegetation, fauna and landscape

The site has no resource feature overlays. It contains no features mapped in the Regional Policy Statement (or PDP) as having any high or outstanding landscape or natural values and there are no mapped biodiversity wetlands. The site contains isolated areas of indigenous vegetation, but none mapped as a Protected Natural Area. Notwithstanding this, an area of bush that also incorporates watercourses within gullies, is proposed for protection.

The property is mapped as 'kiwi present'. The consent notice imposed in RC 2260190 will carry down in regard to the keeping of dogs and cats. This reads: "*The site is identified as being within a kiwi present zone. Any coats and/or dogs kept onsite must be kept inside and/or tied up at night to reduce the risk of predation of North Island brown kiwi by domestic cats and dogs*".

Heritage/Cultural

The site does not contain any historic sites, nor any Sites of Cultural Significance to Maori (as scheduled or mapped in the ODP or PDP). It does, however, contain two NZAA recorded archaeological sites – P04/28 and P04/29. Site records attached in Appendix 6. There are no map details with the individual site records, but an excerpt from the NZAA map database is also contained within Appendix 6. They are in locations highly unlikely to ever be disturbed by soil disturbance of development.

Both sites are within the large balance Lot 9 and not in proposed Lots 4-6. P04/29, described as possible terraces running down the top of the spur, is located at the extreme upper north eastern end of the application's Lot 9, straddling the boundary with an adjacent property. The site is well away from any future development.

P04/28, also described as a shallow terrace, is located on a short steep spur running down between two streams towards a bush-filled gully. This equates to an area, also within Lot 9, between the proposed bush protection area and boundary of Lot 4. Again, well away from any area of development.

In summary, I do not believe the proposed area of development, at the western extreme of the application site, adjacent to an existing formed access road, presents any risk in regard to the presence of unknown archaeological sites. A consent notice was imposed on RC 2260190 in regard to outlining the steps to be followed in the event of any "accidental discovery". This will carry over onto all new titles in any event and is considered sufficient in the circumstances.

6.12 Soil

LUC maps show the site as containing LUC 4 and 6 soils *(Far North Maps, Soil layer)*. The creation of 3 x 4ha lots, leaving a large balance, does not in my opinion, adversely affect the life supporting capacity of soil.

6.13 Access to, and protection of, waterbodies

There is no qualifying water body along which, or around which, public access is required to be provided and no lot less than 4ha in area in any event. Built development within Lots 4-6 will be some distance from any waterbodies in the deep gully that features on the eastern extreme of Lots 4-6. Water quality will not be adversely impacted by the act of subdivision. On site wastewater treatment and disposal systems can be established in compliance with permitted activity standards in the Regional Plan.

6.14 Land use compatibility (reverse sensitivity)

The proposal is consistent with rural character where residential living is interspersed with larger holdings. I do not believe this subdivision unduly increases any risk of reverse sensitivity effects arising.

6.15 Proximity to Airports

The site is outside of any identified buffer area associated with any airport.

6.16 Natural Character of the Coastal Environment

The site is not within the coastal environment.

6.17 Energy Efficiency and renewable Energy Development/Use

The proposal has not considered energy efficiency. This is an option for future lot owners

6.18 National Grid Corridor

The National Grid does not run through the application site.

6.19 Effects on Rural Character and Amenity

The lots are rural in nature/character. The size of the lots means that rural amenity will be maintained. In my opinion, the proposal will have no adverse effects on rural character.

6.20 Cumulative and Precedent Effects

Cumulative Effect:

The proposal will create three additional lots easily able to internalise potential effects of any future built development. The proposal does not create an adverse cumulative effect.

Precedent Effect:

Precedent effects are a matter for consideration when a consent authority is considering whether or not to grant a consent. Determining whether there is an adverse precedent effect is, however, generally reserved for non complying activities, which this is not. In any event, the proposed subdivision does not set an adverse precedent effect and does not threaten the integrity of the ODP or those parts of the PDP with legal effect.

7.0 STATUTORY ASSESSMENT

7.1 Operative District Plan Objectives and Policies

Objectives and policies relevant to this proposal are considered to be primarily those listed in Chapter 8.6 (Rural Production Zone); and 13 (Subdivision), of the District Plan. These are listed and discussed below where relevant to this proposal.

Subdivision Objectives & Policies

Objectives

13.3.1 To provide for the subdivision of land in such a way as will be consistent with the purpose of the various zones in the Plan, and will promote the sustainable management of the natural and physical resources of the District, including airports and roads and the social, economic and cultural well being of people and communities

This is an enabling objective. The Rural Production Zone is predominantly, but not exclusively, a working productive rural zone. The site is 42ha in area and is utilised for grazing. It has not historically supported any horticulture crops, likely because of soil, topography and climate limitations. Grazing can continue on the new lots, as well as on the balance. The proposal is considered a sustainable use of the land.

13.3.2 To ensure that subdivision of land is appropriate and is carried out in a manner that does not compromise the life-supporting capacity of air, water, soil or ecosystems, and that any actual or potential adverse effects on the environment which result directly from subdivision, including reverse sensitivity effects and the creation or acceleration of natural hazards, are avoided, remedied or mitigated.

The Assessment of Environmental Effects and supporting report conclude that the proposed subdivision is appropriate for the site and that the subdivision can avoid, remedy or mitigate any potential adverse effects.

Objectives 13.3.3 and 13.3.4 refer to outstanding landscapes or natural features; and scheduled heritage resources; and to land in the coastal environment. The site exhibits none of these features.

13.3.5 To ensure that all new subdivisions provide a reticulated water supply and/or on-site water storage and include storm water management sufficient to meet the needs of the activities that will establish all year round.

Lots 4-6 will be required to be self sufficient in terms of on-site water storage and appropriate stormwater management. The supporting Civil Site Suitability Report confirms this is achievable.

13.3.6 To encourage innovative development and integrated management of effects between subdivision and land use which results in superior outcomes to more traditional forms of subdivision, use and development, for example the protection, enhancement and restoration of areas and features which have particular value or may have been compromised by past land management practices.

This objective is likely intended to encourage Management Plan applications, and does not have a lot of relevance to this proposal.

13.3.7 To ensure the relationship between Maori and their ancestral lands, water, sites, wahi tapu and other taonga is recognised and provided for.

And related Policy

13.4.11 That subdivision recognises and provides for the relationship of Maori and their culture and traditions, with their ancestral lands, water, sites, waahi tapu and other taonga and shall take into account the principles of the Treaty of Waitangi.

The site does not contain any mapped or scheduled sites of cultural significance to Maori, or wahi tapu. It does contain two recorded archaeological sites, both terraces. These sites are within the large balance lot and away from any area of development within Lots 4-6. The subdivision will have minimal, if any, impact on water quality. I do not believe that the proposal adversely impacts on the ability of Maori to maintain their relationship with ancestral lands, water, sites, wahi tapu and other taonga.

13.3.8 To ensure that all new subdivision provides an electricity supply sufficient to meet the needs of the activities that will establish on the new lots created.

The provision of power is not a requirement for rural allotments.

13.3.9 To ensure, to the greatest extent possible, that all new subdivision supports energy efficient design through appropriate site layout and orientation in order to maximise the ability to provide light, heating, ventilation and cooling through passive design strategies for any buildings developed on the site(s).

13.3.10 To ensure that the design of all new subdivision promotes efficient provision of infrastructure, including access to alternative transport options, communications and local services.

The subdivision has not considered energy efficiency, however, all lots can provide building sites with a northerly orientation and abundant access to sunlight. The subdivision has access off Council road.

Objective 13.3.11 is not discussed further as there is no National Grid on or near the subject site.

Policies

13.4.1 That the sizes, dimensions and distribution of allotments created through the subdivision process be determined with regard to the potential effects including cumulative effects, of the use of those allotments on:
(a) natural character, particularly of the coastal environment;
(b) ecological values;
(c) landscape values;
(d) amenity values;
(e) cultural values;
(f) heritage values; and
(g) existing land uses.

The values outlined above, where relevant to the proposal, have been discussed earlier in this report. I believe regard has been had to items (a) through (g) in the design of the subdivision.

13.4.2 That standards be imposed upon the subdivision of land to require safe and effective vehicular and pedestrian access to new properties. And

13.4.5 That access to, and servicing of, the new allotments be provided for in such a way as will avoid, remedy or mitigate any adverse effects on neighbouring property, public roads (including State Highways), and the natural and physical resources of the site caused by silt runoff, traffic, excavation and filling and removal of vegetation.

Access to all lots is off existing easement which in turn intersects with Taupo Bay Road. There will be minor works required to upgrade access and form entrances. This will not entail any removal of indigenous vegetation and works can be subject to sediment control measures. On site wastewater treatment and disposal and stormwater management is achievable.

13.4.3 That natural and other hazards be taken into account in the design and location of any subdivision.

The site is not identified as being subject to any hazard that impacts on location of future built development.

13.4.4 That in any subdivision where provision is made for connection to utility services, the potential adverse visual impacts of these services are avoided.

Power and telecommunications are not a requirement for rural allotments.

13.4.6 That any subdivision proposal provides for the protection, restoration and enhancement of heritage resources, areas of significant indigenous vegetation and significant habitats of indigenous fauna, threatened species, the natural character of the coastal environment and riparian margins, and outstanding landscapes and natural features where appropriate.

The site does not contain any mapped or scheduled heritage resources affected by the proposed subdivision. There are no areas of significant indigenous vegetation, if one uses the Department of Conservation's PNA maps as a guide. However, there is an area of bush, coinciding with water courses and gullies, that is proposed for ongoing protection, located

within Lot 9. The site is not in the coastal environment and contains no outstanding landscape or natural features.

Policy 13.4.7 is not relevant as there is no qualifying water body to which esplanade requirements apply and no lot less than 4ha in area.

13.4.8 That the provision of water storage be taken into account in the design of any subdivision.

This is discussed earlier. Each lot will require on-site water supply and storage.

Policies 13.4.9 and 13.4.10 are not discussed further. The former relates to bonus development donor and recipient areas, which are not contemplated in this proposal; whilst the latter only applies to subdivision in the Conservation Zone.

13.4.12 That more intensive, innovative development and subdivision which recognises specific site characteristics is provided for through the management plan rule where this will result in superior environmental outcomes.

The application is not lodged as a Management Plan application.

13.4.13 Subdivision, use and development shall preserve and where possible enhance, restore and rehabilitate the character of the applicable zone in regards to ***s6 matters****. In addition subdivision, use and development shall avoid adverse effects as far as practicable by using techniques including:*
(a) clustering or grouping development within areas where there is the least impact on natural character and its elements such as indigenous vegetation, landforms, rivers, streams and wetlands, and coherent natural patterns;
(b) minimising the visual impact of buildings, development, and associated vegetation clearance and earthworks, particularly as seen from public land and the coastal marine area;
(c) providing for, through siting of buildings and development and design of subdivisions, legal public right of access to and use of the foreshore and any esplanade areas;
(d) through siting of buildings and development, design of subdivisions, and provision of access that recognise and provide for the relationship of Maori with their culture, traditions and taonga including concepts of mauri, tapu, mana, wehi and karakia and the important contribution Maori culture makes to the character of the District (refer Chapter 2 and in particular Section 2.5 and Council's "Tangata Whenua Values and Perspectives" (2004);
(e) providing planting of indigenous vegetation in a way that links existing habitats of indigenous fauna and provides the opportunity for the extension, enhancement or creation of habitats for indigenous fauna, including mechanisms to exclude pests;
(f) protecting historic heritage through the siting of buildings and development and design of subdivisions.
(g) achieving hydraulic neutrality and ensuring that natural hazards will not be exacerbated or induced through the siting and design of buildings and development.

S6 matters (National Importance) are addressed later in this report.

In addition:

(a) The proposal creates rural lots of 4ha or larger, and provides for an appropriate type and scale of activity for the zone;
(b) The proposal is in an area not displaying high or outstanding natural values;

(c) The site contains no significant indigenous vegetation, however, does include a proposed bush covenant area for ongoing protection which will serve the dual purpose of habitat and water quality protection;
(d) The site is not within the coastal environment;
(e) The proposal enables the maintenance of amenity and rural character values;
(f) The proposal is not believed to negatively impact on the relationship of Maori with their culture;
(g) The site is not subject to any natural hazards that would limit future development.

I consider the proposal to be consistent with Policy 13.4.13.

13.4.14 That the objectives and policies of the applicable environment and zone and relevant parts of Part 3 of the Plan will be taken into account when considering the intensity, design and layout of any subdivision.

The subdivision has had regard to the underlying zone's objectives and policies – see below.

13.4.15 That conditions be imposed upon the design of subdivision of land to require that the layout and orientation of all new lots and building platforms created include, as appropriate, provisions for achieving the following: (a) development of energy efficient buildings and structures; (b) reduced travel distances and private car usage; (c) encouragement of pedestrian and cycle use; (d) access to alternative transport facilities; (e) domestic or community renewable electricity generation and renewable energy use

The subdivision layout has taken the above matters into account.

Policy 13.4.16 is not considered relevant as it only relates to the National Grid.

In summary, I believe the proposal to be more consistent than not with the above Objectives and Policies.

<u>Rural Production Zone Objectives and Policies</u>

Objectives:

8.6.3.1 To promote the sustainable management of natural and physical resources in the Rural Production Zone.

8.6.3.2 To enable the efficient use and development of the Rural Production Zone in a way that enables people and communities to provide for their social, economic, and cultural well being and for their health and safety.

8.6.3.3 To promote the maintenance and enhancement of the amenity values of the Rural Production Zone to a level that is consistent with the productive intent of the zone.

8.6.3.4 To promote the protection of significant natural values of the Rural Production Zone.

8.6.3.6 To avoid, remedy or mitigate the actual and potential conflicts between new land use activities and existing lawfully established activities (reverse sensitivity) within the Rural Production Zone and on land use activities in neighbouring zones.

8.6.3.7 To avoid remedy or mitigate the adverse effects of incompatible use or development on natural and physical resources.

8.6.3.8 To enable the efficient establishment and operation of activities and services that have a functional need to be located in rural environments.

8.6.3.9 To enable rural production activities to be undertaken in the zone.

And policies

8.6.4.1 That a wide range of activities be allowed in the Rural Production Zone, subject to the need to ensure that any adverse effects on the environment, including any reverse sensitivity effects, on the environment resulting from these activities are avoided, remedied or mitigated and are not to the detriment of rural productivity.

8.6.4.2 That standards be imposed to ensure that the off site effects of activities in the Rural Production Zone are avoided, remedied or mitigated.

8.6.4.3 That land management practices that avoid, remedy or mitigate adverse effects on natural and physical resources be encouraged.

8.6.4.4 That the type, scale and intensity of development allowed shall have regard to the maintenance and enhancement of the amenity values of the Rural Production Zone to a level that is consistent with the productive intent of the zone.

8.6.4.5 That the efficient use and development of physical and natural resources be taken into account in the implementation of the Plan.

8.6.4.7 That although a wide range of activities that promote rural productivity are appropriate in the Rural Production Zone, an underlying goal is to avoid the actual and potential adverse effects of conflicting land use activities.

8.6.4.8 That activities whose adverse effects, including reverse sensitivity effects cannot be avoided remedied or mitigated are given separation from other activities

8.6.4.9 That activities be discouraged from locating where they are sensitive to the effects of or may compromise the continued operation of lawfully established existing activities in the Rural production zone and in neighbouring zones.

Objective 8.6.3.5 and Policy 8.6.4.6 are not considered relevant as they are solely related to Kerikeri Road.

The proposed subdivision promotes an efficient use and development of the land (Objective 8.6.3.2). Amenity values can be maintained (8.6.3.3). Reverse sensitivity effects are not considered to be a significant risk (Objectives 8.6.3.6-8.6.3.9 inclusive and Policies 8.6.4.8 and 8.6.4.9).

Policy 8.6.4.7 anticipates a wide range of activities that promote rural productivity, and the underlying goal is to avoid any actual and potential adverse effects of conflicting land use activities. I believe in the case of this proposal, given the site's location, and the existing and proposed land uses around it, that additional adverse reverse sensitivity effects are unlikely. The site does not contain any highly versatile soils.

The proposal provides for sustainable management of natural and physical resources (8.2.4.1). Off site effects can be avoided, remedied or mitigated (8.6.4.2 and 8.6.4.3). Amenity values can be maintained and enhanced (8.6.4.4). The proposal enables the efficient use and development of natural and physical resources (8.6.4.5).

In summary, I believe the proposal to be consistent with the objectives and policies as cited above.

7.2 Proposed District Plan Objectives and Policies

An assessment against the relevant objectives and policies in the Subdivision section of the Proposed District Plan (PDP) follows:

SUB-O1
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.

SUB-O2
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.

SUB-O3 *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 give n to connections with the wider infrastructure network.

SUB-O4
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 water bodies

I consider the subdivision to achieve the objectives of the relevant zone, and district wide provisions. Local character is not adversely affected; significant additional reverse sensitivity issues will not result; risk from natural hazards will not be increased. Adverse effects on the environment are considered to be less than minor and not requiring mitigation (SUB-O1).

The site contains no 'highly productive land'. The site contains no ONF's or ONL's, nor any areas of high or outstanding natural character. There are no wetlands affected and no lakes or rivers, nor Sites and Areas of Significance to Maori and no Historic Heritage areas. There

are no areas of *significant* indigenous vegetation, albeit the proposal includes a proposal to protect an area of bush within the balance lot (SUB-O2).

The proposal is consistent with SUB-O3 and SUB-O4 does not apply.

SUB-P1
Enable boundary adjustments that:

Not relevant – application is not a boundary adjustment.

SUB-P2
Enable subdivision for the purpose of public works, infrastructure, reserves or access.

Not relevant – application does not involve public works, infrastructure, reserves or access lots.

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.

The subdivision results in lots that cannot comply with the minimum allotment size for the zone. However, the allotments remain consistent with the purpose, characteristics and qualities of the zone, noting the lack of highly productive land anywhere on the site and continued ability to graze excess land within the proposed 4ha lots. The lots can accommodate building platforms and have legal and physical access.

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

The subdivision has had regard to all the matters listed, where relevant.

SUB-P5
Manage subdivision design and layout in the General Residential, Mixed Use and Settlement zoneto provide for safe, connected and accessible environments by.....:

Not relevant. The site is not zoned any of the zones referred to.

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.

The subdivision is rural with no nearby Council administered or operated infrastructure except for the road.

SUB- P7
Require the vesting of esplanade reserves when subdividing land adjoining the coast or other qualifying water bodies.

No qualifying water body and no lot less than 4ha in area.

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.*

"Rural lifestyle" is not defined in the PDP and one can therefore only be guided by the PDP's proposed Rural Lifestyle zone, whereby a minimum lot size of 2ha is now proposed (following hearing of submissions). With the proposed lots all double that area, one can argue that the proposal does not create rural lifestyle lots.

The proposal will not protect a 'qualifying SNA' because there is no such thing. It does, however, protect an area of indigenous vegetation. The proposal will not result in the loss of versatile soils. The proposal is considered consistent with the above policy.

SUB-P9
Avoid subdivision [sic] rural lifestyle subdivision in the Rural Production zone and Rural residential subdivision inthe Rural Lifestyle zone unless the development achieves the environmental outcomes required in the management plan subdivision rule.

The proposal is not a management plan.

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.

Not relevant. No minor residential units exist.

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.

The subdivision does not require resource consent under the PDP. Notwithstanding that, the subdivision has considered the above matters, where relevant.

In summary I believe the proposed subdivision to be consistent with the PDP's objectives and policies in regard to subdivision.

The site is zoned Rural Production in the Proposed District Plan.

Objectives

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.

RPROZ-O2
The Rural Production zone is used for primary production activities, ancillary activities that support primary production and other compatible activities that have a functional need to be in a rural environment.

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.

RPROZ-O4
The rural character and amenity associated with a rural working environment is maintained.

The subdivision creates three additional rural allotments of 4ha in area, alongside four smaller allotments and a larger balance allotment. This mixture of lot sizes is consistent with that found in the general area. The balance lot remains capable of ongoing primary production activity, most likely grazing and 4ha is sufficient land to also continue grazing activity on. Existing consent notice clauses aimed at mitigating the visual impact of built development will assist in maintaining amenity. The application site contains no highly productive land. I do not believe the subdivision will create a scenario where existing primary production activities on adjacent sites will be constrained. Development can occur on the lots without exacerbating natural hazards. The lots are able to be serviced by on-site infrastructure.

Policies

RPROZP2
Ensure the Rural Production zone provides for activities that require a rural location by:
a. enabling primary production activities as the predominant land use;
b. enabling a range of compatible activities that support primary production activities, including ancillary activities, rural produce manufacturing, rural produce retail, visitor accommodation and home businesses.

The application is not for a primary production activity.

RPROZP3
Manage the establishment, design and location of new sensitive activities and other non-productive activities in the Rural Production Zone to avoid where possible, or otherwise mitigate, reverse sensitivity effects on primary production activities.

The proposal will not worsen / increase reverse sensitivity effects on existing primary production activities either on the site or on adjacent land, noting the existing consented lot configuration already existing in the area.

RPROZP4
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.

The proposal maintains rural character and amenity. The subdivision is low density and future built development can easily comply with the zone's impermeable and building coverage permitted thresholds. New dwellings are subject to requirements by way of existing consent notice in terms of their reflectivity values and the need for landscaping. Reverse sensitivity effects, or lack thereof, are discussed earlier.

RPROZP5
Avoid land use that:
.....

Application is not a land use. N/A.

RPROZP6
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.

The site does not contain any highly productive land. Lots of 4ha are capable of continuing to support farming activities, the definition of which includes grazing. As stated earlier, I do not believe 4ha lots to be rural lifestyle living given the recommended minimum lot size for the PDP's Rural Lifestyle Zone is now 2ha. In any event, the proposal does provide for some environmental benefit by way of a proposed bush protection area.

RPROZP7
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.

No consent is required under the PDP and the above policy is therefore of limited relevance.

7.3 Part 2 Matters

5 Purpose

(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and

(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

The proposal provides for peoples' social and economic well being, and for their health and safety, while sustaining the potential of natural and physical resources, safeguarding the life-supporting capacity of air, water, soil and the ecosystems; and avoiding, remedying or mitigating adverse effects on the environment.

6 Matters of national importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:
(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:
(d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:
(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:
(g) the protection of protected customary rights:
(h) the management of significant risks from natural hazards.

The site does not exhibit the features listed above. It does contain limited and isolated areas of bush, and a bush protection covenant is proposed. Whilst there are recorded archaeological sites on the large balance Lot 9, none exist within the area proposed for Lots 4-6.

7 Other matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

(a) kaitiakitanga:
(aa) the ethic of stewardship:
(b) the efficient use and development of natural and physical resources:
(ba) the efficiency of the end use of energy:
(c) the maintenance and enhancement of amenity values:
(d) intrinsic values of ecosystems:
(e) [Repealed]
(f) maintenance and enhancement of the quality of the environment:
(g) any finite characteristics of natural and physical resources:
(h) the protection of the habitat of trout and salmon:
(i) the effects of climate change:
(j) the benefits to be derived from the use and development of renewable energy.

Regard has been had to any relevant parts of Section 7 of the RMA, "Other Matters". These include 7(b), (c), (d), (f) and (g). Proposed layout and lot size, along with appropriate waste water and stormwater management, will ensure the maintenance of amenity values and the quality of the environment. The proposal has had regard to the values of ecosystems. The subdivision does not materially affect the productive capacity of any rural zoned land.

8 Treaty of Waitangi

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

The principles of the Treaty of Waitangi have been considered and it is believed that this proposed subdivision does not offend any of those principles.

In summary, it is considered that all matters under s5-8 inclusive have been adequately taken into account.

7.4 National Policy Statements

NPS Highly Productive Land

The National Policy Statement for Highly Productive Land is not relevant given that the site contains no "highly productive land".

NPS Freshwater

The site does not contain any 'natural inland wetlands', nor any waterbodies in the vicinity of any future works.

NPS Indigenous Biodiversity

The site contains indigenous vegetation, none of which is mapped as having any significance. Notwithstanding that, an area of bush protection is proposed. No clearance is required. I consider the proposal is consistent with the NPS IB.

7.5 National Environmental Standards

NES Assessing and Management Contaminants in Soil to Protect Human Health

To my knowledge the land has not historically supported any activity to which the NES CS applies.

NES Freshwater

See above comment under 7.4.

7.6 Regional Policy Statement

The Regional Policy Statement for Northland contains objectives and policies related to infrastructure and regional form and economic development. These are enabling in promoting sustainable management in a way that is attractive for business and investment. The proposal is consistent with these objectives and policies.

Objective 3.6 Economic activities – reverse sensitivity and sterilisation

The viability of land and activities important for Northland's economy is protected from the negative impacts of new subdivision, use and development, with particular emphasis on either:

(a) Reverse sensitivity for existing:

(i) Primary production activities; .....

The associated Policy to the above Objective is ***Policy 5.1.1 – Planned and coordinated development***.

Subdivision, use and development should be located, designed and built in a planned and co-ordinated manner which: ....

(c) Recognises and addresses potential cumulative effects of subdivision, use, and development, and is based on sufficient information to allow assessment of the potential long-term effects; ...

(e) Should not result in incompatible land uses in close proximity and avoids the potential for reverse sensitivity;

(f) Ensures that plan changes and subdivision to / in a primary production zone, do not materially reduce the potential for soil-based primary production on land with highly versatile soils, or if they do, the net public benefit exceeds the reduced potential for soil-based primary production activities; and ...

Policy 5.1.1 seeks to ensure that subdivision in a primary production zone does not "*materially reduce the potential for soil-based primary production on land with highly versatile soils, or if they do, the net public benefit exceeds the reduced potential for soil-based primary production activities*".

This has been discussed at length elsewhere in this planning report. The subdivision does not "*materially reduce the potential for soil-based primary production on land with highly versatile soils*". There are no highly versatile soils present on the site.

5.1.3 Policy – Avoiding the adverse effects of new use(s) and development

Avoid the adverse effects, including reverse sensitivity effects of new subdivision, use and development, particularly residential development on the following:

(a) Primary production activities in primary production zones (including within the coastal marine area);.....

In regard to this subdivision, it is considered that no additional adverse reverse sensitivity issues are likely to arise as a result.

8.0 s95A-E ASSESSMENT & CONSULTATION

8.1 S95A Public Notification Assessment

A consent authority must follow the steps set out in s95A to determine whether to publicly notify an application for a resource consent. Step 1 specifies when public notification is

mandatory in certain circumstances. No such circumstances exist. Step 2 of s95A specifies the circumstances that preclude public notification. No such circumstance exists and Step 3 of s95A must be considered. This specifies that public notification is required in certain circumstances. No such circumstance exists. In summary public notification is not required pursuant to Step 3 of s95A.

8.2 S95B Limited Notification Assessment

A consent authority must follow the steps set out in s95B to determine whether to give limited notification of an application for a resource consent, if the application is not publicly notified pursuant to s95A. Step 1 identifies certain affected groups and affected persons that must be notified. None exist in this instance. Step 2 of s95B specifies the circumstances that preclude limited notification. No such circumstance exists and Step 3 of s95B must be considered. This specifies that certain other affected persons must be notified. The application is not for a boundary activity and the s95E assessment below concludes that there are no affected persons to be notified. There is no requirement to limited notify the application pursuant to Step 3.

8.3 S95D Level of Adverse Effects

The AEE in this report assesses effects on the environment and concludes that these will be no more than minor.

8.4 S95E Affected Persons

A person is an 'affected person' if the consent authority decides that the activity's adverse effects on the person are minor or more than minor (but are not less than minor). A person is not an affected person if they have provided written approval for the proposed activity.

The activity is a discretionary activity and within the expected outcomes of subdivision and development of the Rural Production Zone. Built development can occur within the proposed new lots in compliance with all bulk and location rules applying to the zone. The proposal does not unduly increase reverse sensitivity effects. No dispensation is being sought in terms of access standards and supporting reports indicate that development can occur on the lots with no off-site adverse effects. I have reached the conclusion that the proposal will not have any minor or more than minor effects on adjacent properties.

The site contains two recorded archaeological sites, both relating to the presence of terraces. In both instance, however, these terraces are within the large balance Lot 9 and on relatively inaccessible parts of the site, unlikely to every be disturbed. Both are within areas currently grazed. This will likely remain the case – as noted in site records "long grass obscures surface". There are no DoC mapped Protected Natural Areas within the site. The site is not accessed off state highway. No pre lodgement consultation has been considered necessary with tangata whenua, Heritage NZ, Department of Conservation or Waka Kotahi.

9.0 CONCLUSION

The site is considered suitable for the proposed subdivision. Effects on the wider environment are no more than minor. The proposal is not considered contrary to the relevant objectives and policies of the Operative and Proposed District Plans, and is considered to be consistent with relevant objectives and policies of National and Regional Policy Statements. Part 2 of the Resource Management Act has been had regard to. There is no District Plan rule or national environmental standard that requires the proposal to be publicly notified. No affected persons have been identified.

It is requested that the Council give favourable consideration to this application and grant consent.

Signed Dated 13th February 2026
Lynley Newport,
Senior Planner
Thomson Survey Ltd

10.0 LIST OF APPENDICES

Appendix 1 Scheme Plan(s)

Appendix 2 Location Plan

Appendix 3 Records of Title & Relevant Instruments

Appendix 4 RC 2260190

Appendix 5 Draft LT Plan 624844

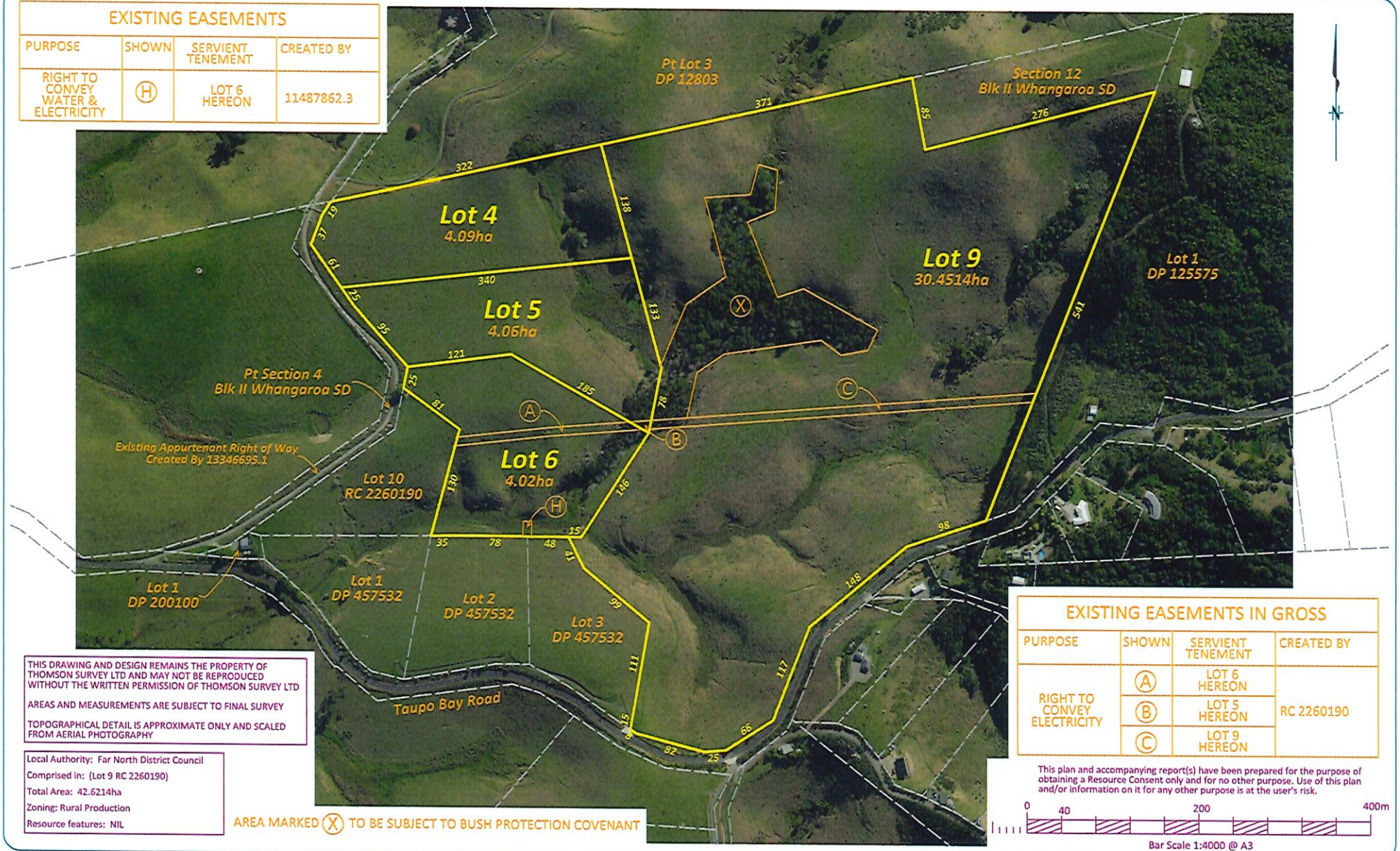
Appendix 6 NZAA Site Records and Map

Appendix 7 Civil Site Suitability Report

Appendix 8 Site Assessment Report

Appendix 1

Scheme Plan(s)



EXISTING EASEMENTS

PURPOSE	SHOWN	SERVIENT TENEMENT	CREATED BY
RIGHT TO CONVEY WATER & ELECTRICITY	(H)	LOT 6 HEREON	11487862.3

EXISTING EASEMENTS IN GROSS

PURPOSE	SHOWN	SERVIENT TENEMENT	CREATED BY
RIGHT TO CONVEY ELECTRICITY	(A)	LOT 6 HEREON	RC 2260190
	(B)	LOT 5 HEREON	
	(C)	LOT 9 HEREON	

AREAS AND MEASUREMENTS ARE SUBJECT TO FINAL SURVEY

TOPOGRAPHICAL DETAIL IS APPROXIMATE ONLY AND SCALED FROM AERIAL PHOTOGRAPHY

Local Authority: Far North District Council
Comprised in: (Lot 9 RC 2260190)
Total Area: 42.6214ha
Zoning: Rural Production
Resource features: NIL

AREA MARKED (X) TO BE SUBJECT TO BUSH PROTECTION COVENANT

This plan and 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.

0 40 200 400m

Bar Scale 1:4000 @ A3

THOMSON SURVEY LIMITED
315 Kerikeri Rd
P.O. Box 372 Kerikeri
Email: kerikeri@tsurvey.co.nz
Ph: (09) 4077360
www.tsurvey.co.nz
Registered Land Surveyors, Planners & Land Development Consultants

PROPOSED SUBDIVISION OF LOT 9 RC 2260190

TAUPO BAY ROAD, TAUPO BAY

PREPARED FOR: G. LODGE

	Name	Date
Survey		
Design		
Drawn	KY	30.10.25
Approved		
Rev	KY	03.02.26

81813 Scheme 20260203

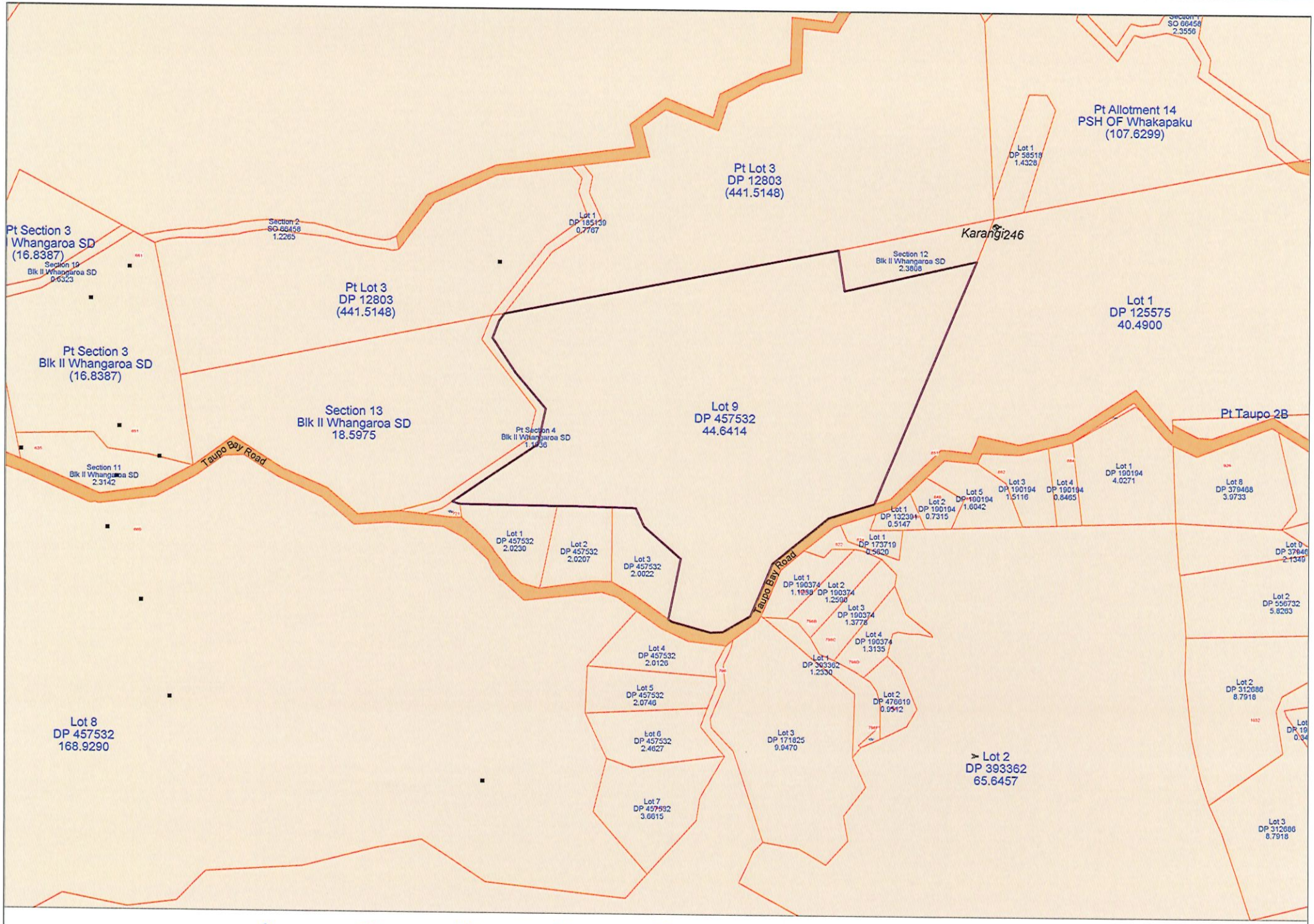
ORIGINAL
SCALE 1:4000
SHEET SIZE A3

Surveyors Ref. No: 10849

Sheet 1 of 1

Appendix 2

Location Plan



QuickMap
Custom Software Ltd

0 200 400 600 800 1000 1200m

Any person wishing to rely on the information shown on this map must independently verify the information

Scale 1:10000 Topographical and Cadastral map derived from LINZ data. Printed: 03-Feb-2026 03:54.

Appendix 3

Records of Title & Relevant Instruments

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**593337**
Land Registration District	**North Auckland**
Date Issued	05 December 2023

Prior References
610395

Estate	Fee Simple
Area	44.6414 hectares more or less
Legal Description	Lot 9 Deposited Plan 457532
Registered Owners	

Geoffrey Raymond Lodge and Andrea Sara Toft

Interests

Subject to Section 120(9) Public Works Act 1981

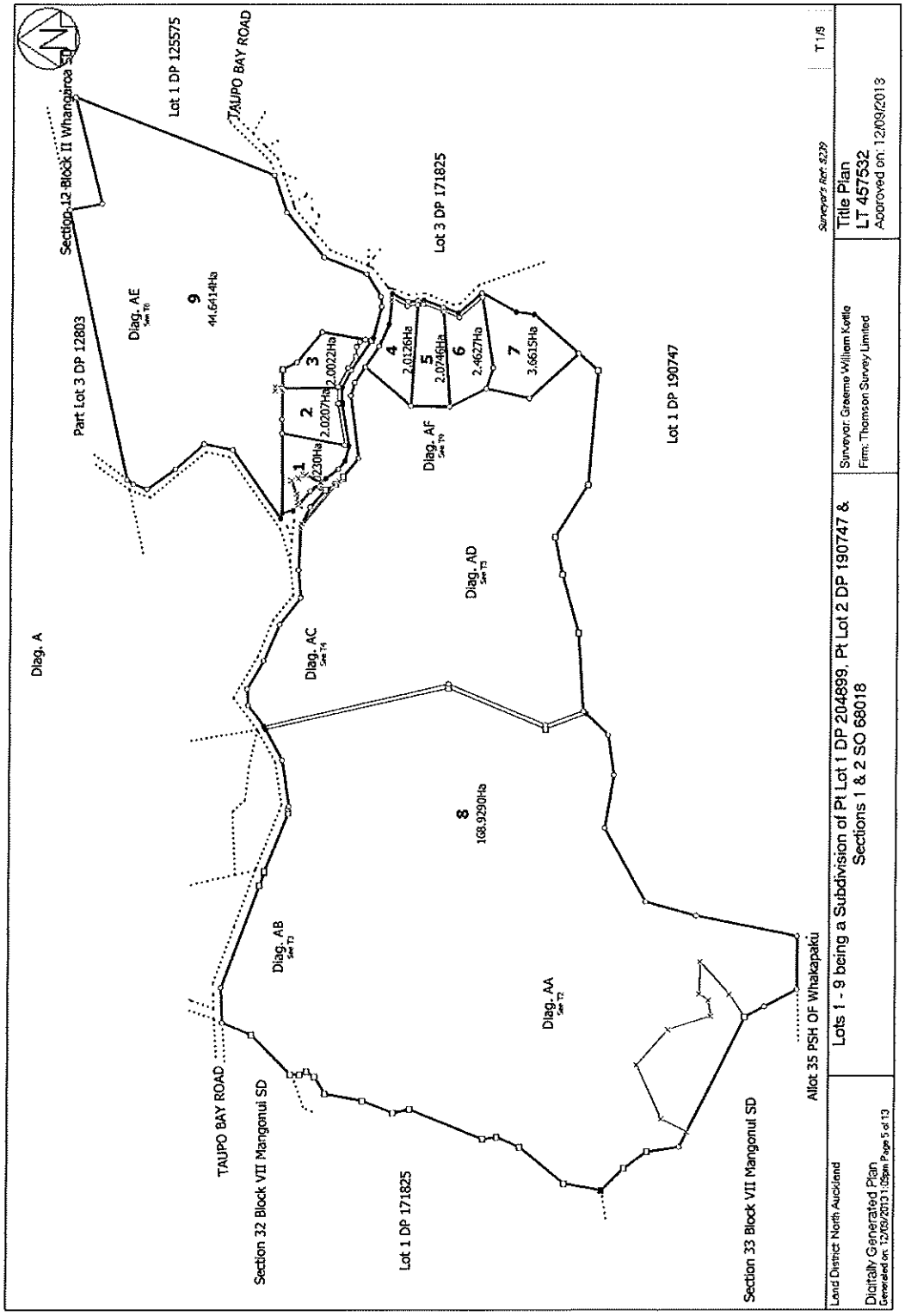
12435218.2 Mortgage to Heartland Bank Limited - 4.5.2022 at 1:32 pm

11487862.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 5.12.2023 at 3:33 pm

Subject to rights to convey water and electricity over part marked H on DP 457532 created by Easement Instrument 11487862.3 - 5.12.2023 at 3:33 pm

Land Covenant in Covenant Instrument 11487862.6 - 5.12.2023 at 3:33 pm

Appurtenant hereto is a right of way created by Deed of Easement 13346695.1 embodied in the register as 1248045 - 7.7.2025 at 7:00 am


Section 12 Block II Whangaroa SD
Lot 1 DP 125575
TAUPO BAY ROAD
Part Lot 3 DP 12803
Diag. AE
9
44.6414Ha
Lot 3 DP 171825
1
0.230Ha
2
2.0207Ha
3
2.0022Ha
4
2.0126Ha
5
2.0746Ha
6
2.4627Ha
7
3.6615Ha
Diag. AF
Diag. A
Diag. AC
Diag. AD
Lot 1 DP 190747
8
108.9290Ha
Diag. AB
Diag. AA
TAUPO BAY ROAD
Section 32 Block VII Mangonui SD
Lot 1 DP 171825
Section 33 Block VII Mangonui SD
Allot 35 PSH OF Whakapaku
Land District North Auckland
Digitally Generated Plan
Generated on: 12/09/2013 1:02pm Page 5 of 13
Lots 1 - 9 being a Subdivision of Pt Lot 1 DP 204899, Pt Lot 2 DP 190747 & Sections 1 & 2 SO 68018
Surveyor: Graeme William Kyelle
Firm: Thomson Survey Limited
Surveyor's Ref: 5239
T 1/3
Title Plan
LT 457532
Approved on: 12/09/2013

View Instrument Details

Instrument No.	11487862.2
Status	Registered
Date & Time Lodged	05 Dec 2023 15:33
Lodged By	Thompson, Emma Jane
Instrument Type	Consent Notice under s221(4)(a) Resource Management Act 1991

Affected Records of Title	Land District
593329	North Auckland
593330	North Auckland
593331	North Auckland
593332	North Auckland
593333	North Auckland
593334	North Auckland
593335	North Auckland
593336	North Auckland
593337	North Auckland

Annexure Schedule Contains 2 Pages.

Signature

Signed by Emma Jane Thompson as Territorial Authority Representative on 05/12/2023 03:28 PM

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

Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

THE RESOURCE MANAGEMENT ACT 1991

SECTION 221: CONSENT NOTICE

REGARDING **RC-2170033 – Stage 1**
Being the Subdivision of PT LOT 2 DP 190747, PT LOT 1 DP 204899 and SECS 1 & 2 SO 68018
North Auckland Registry

PURSUANT to Section 221 and for the purpose of Section 224 (c) (ii) of the Resource Management Act 1991, this Consent Notice is issued by the **FAR NORTH DISTRICT COUNCIL** to the effect that conditions described in the schedule below are to be complied with on a continuing basis by the subdividing owner and the subsequent owners after the deposit of the survey plan, and these are to be registered on the titles of the allotments specified below.

SCHEDULE

Stage 1 – Lots 1 - 9 DP 457532

(i) In conjunction with the construction of any building requiring a wastewater disposal system the lot owner shall obtain a Building Consent and install the wastewater treatment and effluent disposal system as detailed in the report prepared by Haigh Workman Civil and Structural Engineers dated November 2011 submitted with Resource Consent 2170033, and any additional report provided under Condition 3(e) above Resource Consent 2170033. The installation shall include an agreement with the system supplier or its authorised agent for the ongoing operation and maintenance of the wastewater treatment plant and the effluent disposal system.

The estimated cost of the installed system is $19,450.00 + GST. The costing is valid for a period of six months from the date of issue of the 224(c) certificate.

Following 12 months of operation of the wastewater treatment and effluent disposal system the lot owner shall provide certification to Council that the system is operating in accordance with its design criteria.

Where a wastewater treatment and effluent disposal system is proposed that differs from that detailed in the above-mentioned report, a new TP 58/Site and Soil Evaluation Report will be required to be submitted, and Council's approval of the new system must be obtained, prior to its installation.

(ii) Electricity supply is not a condition of this consent and power has not been reticulated to the boundary of the lots. The lot owner is responsible for the provision of a power supply to operate the on-site aerobic wastewater treatment plant and any other device which requires electrical power to operate.

Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki

NE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

(iii) In conjunction with the construction of any dwelling, and in addition to a potable water supply, a water collection system with sufficient supply for firefighting purposes is to be provided by way of tank or other approved means and to be positioned so that it is safely accessible for this purpose. These provisions will be in accordance with the New Zealand Fire Fighting Water Supply Code of Practice SNZ PAS 4509.

(iv) In conjunction with the lodgement of a building consent for any dwelling on Lots 1-9, the owner shall provide to the Council the colour scheme for the proposed building/s, such scheme to confirm that the proposed colours for the roof and external cladding, but excluding joinery, shall not exceed a reflectance value of 30%. The colours shall be subject to approval by the Councils duly authorised officer. On approval, the building is to be completed in the approved colours and maintained thereafter.

(v) In conjunction with the lodgement of a building consent on Lots 1-9, the owner shall prepare and lodge a planting plan prepared by a suitably qualified and experienced landscape architect that identifies the means of mitigation of visual effects of built development located on or adjoining any ridgeline when viewed from Taupo Bay Road and earthworks associated with building works. The plan shall be subject to approval by the Councils duly authorised officer. On approval, the works identified in the approved plan are to be carried out and completed within two years of the issuing date of the building consent, and all completed planting is to be maintained in perpetuity thereafter.

(vi) Lots 1-9 are identified as being within a kiwi habitat area. Dogs, cats and mustelids shall not be permitted on any of the lots, save for the following. Working dogs, being dogs used specifically for stock management purposes, may be kept on the lots where they are under control of the owner at all times, and housed in a kennel/run when not working. Where possible, any working dogs should have completed kiwi aversion training before being introduced onto the lot/s.

(vii) Covenant Area X is identified as an area of Outstanding Landscape. No earthworks, bush clearance or structures are to be located within this area. The only activities that may be provided for within this location are those that are defined as permitted activities within the relevant provisions of the Far North District Plan.

SIGNED: Mr Simeon Alistair McLean - Authorised Officer
By the FAR NORTH DISTRICT COUNCIL
Under delegated authority:
TEAM LEADER – RESOURCE CONSENTS

DATED at **KERIKERI** this 30th day of October 2023

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**1248045**
Land Registration District	**North Auckland**
Date Registered	07 July 2025 07:00 am

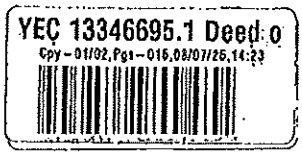
Type	Deed of easement under s60 Land Act 1948 **Instrument**	YEC 13346695.1
Area	1.1936 hectares more or less	
Legal Description	Part Section 4 Block II Whangaroa Survey District	
Purpose	Right of way over Part Section 4 SO 44176	

Registered Owners

His Majesty the King - Grantor

Interests

UNCLASSIFIED



Deed of Grant of Easement

(Pursuant to Section 60 of the Land Act 1948)

The Commissioner of Crown Lands

Geoffrey Raymond Lodge and Andrea Sara Toft

[Correct for the purposes of
the Land Transfer Act 2017

Solicitor for the Grantee]
[to be deleted if deed will be electronically registered]

2172339-3

UNCLASSIFIED

Deed of Grant of Easement

TABLE OF CONTENTS

2172339-3

GRL
ABT

UNCLASSIFIED

Date: 12 June 2025

PARTIES

The Commissioner of Crown Lands at Wellington (*Grantor*)

Geoffrey Raymond Lodge and Andrea Sara Toft (*Grantee*)

BACKGROUND

A The Grantee seeks an Easement for Right of Way over the Easement Land.

B The Grantor has agreed to grant to the Grantee an Easement over the Easement Land being part of the Grantor's Land and the Grantee agrees to accept the grant of the Easement on the terms and conditions set out in this Deed.

OPERATIVE PART

1 DEFINITIONS AND INTERPRETATION

1.1 In this Deed (including the Schedules):

Authority any governmental, local, territorial or statutory authority which has jurisdiction or authority in relation to the Grantor's Land or its use;

Commencement Date means the date of this Deed;

Deed means this Deed, the Background and the Schedules;

Default Interest Rate means 2% per annum above the Grantor's bank's unsecured commercial base overdraft rate at the date of default;

Dominant Land means Lot 9 Deposited Plan 457532 being all the land comprised in Record of Title 593337

Easement means the Right of Way;

Easement Land means the following area of the Grantor's Land being: that Part Section 4 on SO 44176 comprising 1.07Ha *and being unregistered Crown land vested in His Majesty the King shown outlined in green on the plan attached in Schedule 1 of this Deed* within which the Grantee may exercise the rights granted by this Deed;

Equipment includes equipment, tools, Machinery and all materials and items necessary for the purposes of exercising any of the rights granted by this Deed;

Grantor's Land means the unregistered Crown land described as Part Section 4 Block II Whangaroa Survey District;

GST means goods and services tax chargeable under the GST Act;

GST Act means the Goods and Services Tax Act 1985;

HSW Act means the Health and Safety at Work Act 2015;

UNCLASSIFIED

GRL
3 AST

Install means install, lay, suspend, extend, connect, inspect, use, replace, and remove;

Machinery includes cranes, drilling rigs, plant, pile drivers, excavators and other similar tools and machinery;

Maintain includes maintain, repair, renew, alter and inspect and *maintenance* has a similar meaning;

Right of Way means the right for the Grantee in common with the Grantor and other persons to whom the Grantor may grant similar rights, at all times, to go over and along the Easement Land at any time on foot or on or with bicycles, animals or non-motorised vehicles and Vehicles without interruption or impediment;

Structures includes buildings, towers, poles, repeaters, pipes, pumps, pump sheds, storage tanks, weirs, cables, bridges, roads, walls, frames, and fences of any kind;

Vegetation includes all vegetation both cultivated and natural and includes grass, crops, trees, and shrubs;

Vehicles includes trucks, tractors, cars, bicycles, boats, aircraft, motorcycles (2 and 4 wheeled) and trailers whether wheeled or tracked; and

Working Day means any day of the week excluding Saturday, Sunday, national statutory holidays, and the anniversary days commonly observed in Wellington, Auckland, and in the locality in which the Easement Land is situated.

1.2 In the interpretation of this Deed unless the context otherwise requires:

(a) references to a clause or a schedule is a reference to a clause or a schedule in this Deed;

(b) the headings and subheadings appear as a matter of convenience and do not affect the interpretation of this Deed;

(c) references to any statute, regulation or other statutory instrument or bylaw shall be deemed to be references to the statute, regulation, instrument or bylaw as from time to time amended and includes substitution provisions that substantially correspond to those referred to;

(d) derivations of a defined term have similar meanings to the defined term;

(e) references to the Grantee include their successors and assigns and, where not repugnant to the context, their employees, contractors, agents, lessees, licensees, and invitees;

(f) any provision to be performed by two or more persons binds those persons jointly and severally;

(g) a "person" includes any individual, company, corporation, firm, partnership, joint venture, association, organisation, trust, estate or Authority, whether or not having separate legal identity;

(h) a prohibition against doing any thing also includes a reference not to permit, suffer or cause that thing to be done; and

GRL.
AST

(i) the singular includes the plural and vice versa and words incorporating any gender shall include every gender.

2 **GRANT OF EASEMENT**

2.1 Pursuant to section 60 of the Land Act 1948 the Grantor grants to the Grantee as an easement appurtenant to the Dominant Landa Right to Way in perpetuity over the Easement Land together with the following incidental rights and powers:

(a) not used;

(b) the right to Maintain the the Easement Land; and

(c) the right from time to time and at all times to enter, exit, pass and remain on, under or over such part of the Grantor's Landas is reasonable for the exercise of the rights granted under this Deed from time to time and at all times for all purposes reasonably necessary for the exercise of the rights granted under this Deed with or without Vehicles or Equipment necessary for such purposes but subject to the limitations expressed in this Deed.

2.2 The rights granted under this Deed to the Grantee are non-exclusive and are exercisable in common with the Grantor and any other person having similar rights either now or in the future. The easement rights granted under this Deed to the Grantee are subject to the compliance by the Grantee with the obligations imposed on it under this Deed.

3 **PAYMENTS**

Consideration

3.1 In consideration of the grant of Easement in this Deed:

(a) the Grantee will pay the Grantor $22,000 plus GST; and

(b) the Grantee will observe the obligations imposed on it under this Deed.

3.2 The Grantee will pay the consideration to the Grantor by the 20th day of the month following the Commencement Date.

Payment of rates

3.3 The Grantor must pay all rates, taxes (including land or improvements tax), charges, assessments and other outgoings levied by an Authority in respect of the Easement Land.

3.4 The Grantee will reimburse the Grantor for all payments made under clause 3.3 by the 20th day of the month following receipt of a valid tax invoice from the Grantor.

Proportion of rates

3.5 Where any charge, rates or other payment under clause 3.3 or 3.4 is not separately assessed in respect of the Easement Land, the Grantee will pay a fair proportion as agreed by the parties or determined under clause 14.

Interest on overdue payments

GRL. JBT

3.6 If the consideration or other money payable by the Grantee under this deed remains unpaid for one month after its due date then the Grantee will pay to the Grantor, on demand, interest at the Default Interest Rate on the unpaid amount calculated from the due date to the date of payment.

GST

3.7 The Grantee will, at the time the consideration or any other amounts fall due for payment, pay to the Grantor all GST payable on the consideration and any other amounts payable by the Grantee under this deed (provided that the consideration and other amounts are calculated net of GST).

3.8 In respect of GST the parties agree as follows:

(a) unless the context otherwise requires, words and phrases used in this clause have the same meaning as in the GST Act;

(b) if the supply evidenced by this grant of easement is a taxable supply under the GST Act and the parties agree that it is to be zero-rated for GST purposes under section 11(1)(mb) of the GST Act, then:

(i) the Grantor and the Grantee warrant that they are each registered for GST purposes as at the Commencement Date and will be so at the time GST falls due for payment;

(ii) the Grantee warrants as at the Commencement Date and as at the time GST falls due for payment that it is acquiring the rights supplied with the intention of making taxable supplies; and

(iii) the Grantee warrants as at the Commencement Date and as at the time GST falls due for payment that the Grantee and any associated person in terms of section 2A(1)(c) of the GST Act do not intend to use the Easement Land as a principal place of residence.

4 REGISTRATION

This Deed may be registered pursuant to section 60 of the Land Act 1948 and both parties will do all things necessary to enable registration.

5 OBLIGATIONS OF THE GRANTEE

5.1 The Grantee will, when exercising its rights under this Deed:

(a) wherever possible remain on the formed roads and tracks and when on those roads or tracks comply with all traffic laws and regulations as are applicable to public roads and with the Grantor's directions;

(b) immediately after passing through any gates, close such of them as were closed and lock such of them as were locked immediately before such passing through;

(c) take all reasonable precautions for guarding against any danger (including but without limitation, fire, physical damage or transmission of disease or spread of contaminants), and in particular will (but without limiting the general obligation to take full and proper precautions pursuant to this clause 5.1(c)) comply with

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all reasonable conditions that may be imposed from time to time by the Grantor or any Authority;

(d) ensure that as little damage or disturbance is caused to the surface of the Easement Land and the Grantor's Land and that the surface is restored as nearly as possible to its former condition and any other damage done by reason of the activities permitted on the Easement Land by this Deed is similarly restored;

(e) repair to the reasonable satisfaction of the Grantor, any part of the Easement Land and the Grantor's Land, including the tracks, fences, gates, drains, buildings or other structures, which may be damaged directly or indirectly by the Grantee.

5.2 The Grantee covenants that when it exercises its rights under this Deed it will do so at all times in a manner so as not to obstruct or hamper the Grantor and any other person having similar rights either now or in future in their authorised use of the Easement Land.

5.3 The Grantee will not at any time carry out on the Easement Land any activity which is not provided for under clause 2 of this Deed, or do any other thing which would affect the ability of the Grantor to use the Easement Land.

5.4 The Grantee will comply at all times with all statutes and regulations, ordinances and by-laws, and codes of practice placing obligations on the Grantee and covenants to obtain all approvals, consents and authorisations as are necessary for the Grantee to lawfully conduct the activities permitted by this Deed.

5.5 The Grantee will at all times keep and Maintain the Easement Land in a good state of repair and will use its best endeavours to keep the Easement Land clear of noxious weeds, pests, disease and contaminants resulting from the Grantee's exercise or attempted exercise of its rights under this Deed.

5.6 The Grantee will at all times keep the Easement Land clear of Vegetation considered in the reasonable opinion of the Grantee to be a danger or hazard.

5.7 The Grantee will not install, construct or place any Structures on the Easement Land.

5.8 In accordance with section 34 of the HSW Act, the Grantee will, so far as is reasonably practicable, consult, cooperate with, and coordinate activities with:

(a) the Grantor; and

(b) other persons conducting a business or undertaking (as defined in section 17 of the HSW Act) who are accessing any part of the Easement Land,

in order to ensure that at all times, each of the parties referred to is complying with its duties under the HSW Act.

5.9 The Grantee will comply with its duties under the HSW Act and ensure its own health and safety and that of its workers and any person who enters on any part of the Grantor's Land and/or the Easement Land at the request or under the authority of the Grantee.

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5.10 The Grantee will comply with any reasonable instructions from the Grantor regarding the elimination or isolation of hazards and risks and/or the health and safety of persons on the Grantor's Land and/or the Easement Land.

6 OBLIGATIONS OF THE GRANTOR

6.1 Subject to any rights existing at the Commencement Date, the Grantor will not do anything on the Easement Land whereby the rights, powers and liberties granted to the Grantee by this Deed may be interfered with and in particular the Grantor may not without the consent in writing of the Grantee (which will not be unreasonably withheld):

(a) erect or permit the erection of any Structures on the Easement Land except as expressly permitted under clause 6.1(c);

(b) make any alterations or additions to any Structure on the Easement Land which affects the overall dimensions; and

(c) erect any fence of a height of more than three (3) metres on the Easement Land.

6.2 The Grantor may delegate all or any rights, benefits and obligations conferred by this Deed provided that the exercise of any such rights, benefits or obligations by that person must not limit the liability of the Grantor in the performance or observance of the provisions of this Deed.

7 NOT USED

7.1

8 COSTS

8.1 The Grantee is responsible for:

(a) all reasonable costs and expenses (including the Grantor's legal costs) in relation to the preparation, negotiation and enforcement of any provisions of this Deed;

(b) the registration (if any) of this Deed and any associated costs; and

(c) all the costs of the installation, construction, operation, repair and maintenance of the Structures, the carrying out of all works permitted by this Deed, and the exercise of all rights under this Deed.

9 NO GRANTOR WARRANTY

The Grantee acknowledges that it has entered into this Deed in reliance upon its own judgement and not in reliance upon any representations or warranties made by or on behalf of the Grantor as to the suitability of the Easement Land for any purpose or otherwise.

10 GRANTEE INDEMNITY

10.1 The Grantee hereby indemnifies the Grantor against any loss, claim, costs, damage, expense or liability or proceeding suffered or incurred at any time by the Grantor resulting from any breach of the Grantee's obligations under this Deed.

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10.2 The Grantee acknowledges that this Deed is granted on the basis that the Grantee's entry and/or use the Easement Land under this Deed, is strictly at its own risk and the Grantee indemnifies the Grantor from and against any action or claim made by any person the Grantee permits to enter into and upon the Easement Land.

11 GRANTOR'S LIABILITY EXCLUDED

11.1 Under no circumstances will the Grantee seek to claim against the Grantor in contract, tort, or otherwise for any expense, costs, loss, injury, or damage whether consequential or otherwise, arising directly or indirectly from this Deed or any activity undertaken by the Grantor on the Grantor's Land, whether the expense, cost, loss, injury or damage is the direct or indirect result of negligence or otherwise.

12 NOT USED

13 TERMINATION

13.1 The Grantor may terminate the rights created by this Deed if the Grantee breaches any of the terms of this Deed and the breach remains unrectified following written notice to the Grantee specifying the breach and seeking rectification within 20 Working Days or such other time agreed in writing by the parties.

13.2 If the breach remains unrectified (or is unable to be rectified) then the Grantor may terminate the rights granted by this Deed by written notice.

13.3 Upon termination (for whatever reason) of the grant of Easement evidenced by this Deed all rights of the Grantee will immediately cease (subject to clause 1.1 of this Deed) but the Grantee will not be released from any liability to pay consideration or other moneys up to the date of termination.

13.4 Upon termination the Grantee will formally surrender the rights under this Deed and surrender the grant of Easement.

14 DISPUTES

If any dispute arises between the Grantor and the Grantee concerning the rights and obligations created by this Deed the parties will enter into negotiations in good faith to resolve their dispute. If the dispute is not resolved within 20 Working Days of the date on which the dispute was notified, the parties will refer the dispute to mediation by a single mediator agreed by the parties (or, if they cannot agree, appointed by the Resolution Institute) on the terms of the Resolution Institute Mediation Rules and at a fee agreed by the parties (or, if they cannot agree, at a fee determined by the Resolution Institute). Each party shall pay its own costs of mediation. Notwithstanding any dispute, the parties shall continue to perform their obligations under this Licence as far as practical given the nature of the dispute provided that this clause is subject in all respects to the provisions of section 17 of the Land Act 1948.

15 NOTICES

15.1 Any notice to be given by one party to the other under this Deed must be in writing and will be forwarded by email, delivering or posting it to the appropriate address set out below or to such address notified by the addressee in writing to the other party:

The Grantor's Address:

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Land Information New Zealand
Crown Property Management
Radio New Zealand House
155 The Terrace, P O Box 5501
WELLINGTON

Email: crownproperty@linz.govt.nz

The Grantee's Address:

Mr GR Lodge & Ms AS Toft
244 Otaha Road, RD 2, Kerikeri 0295

Email: g.lodge@xtra.co.nz

15.2 All such notices shall be deemed to have been received:

(a) if posted, three Working Days following deposit in the mail with postage prepaid; or

(b) if hand delivered, at the time of actual delivery to the recipient's address; or

(c) if sent by email, on receiving a response to the notice from the addressee (not being an automatically-generated response such as an out of office notification or read receipt),

provided, however, that a notice sent or delivered on a day which is not a Working Day shall be deemed to be received at 9am on the next Working Day.

16 **SEVERABILITY**

If any part of this Deed is held by any court or administration body of competent jurisdiction to be illegal, void, or unenforceable, such determination shall not impair the enforceability of the remaining parts of this Deed which shall remain in full force.

17 **COVENANTS IMPLIED BY LAND TRANSFER REGULATIONS 2018 AND PROPERTY LAW ACT 2007**

The implied rights and powers set out in the Fifth Schedule to the Land Transfer Regulations 2018 and the Fifth Schedule of the Property Law Act 2007 are specifically excluded and replaced with those contained in this Deed.

18 **NO WAIVER**

18.1 A waiver of any provision of this Deed shall not be effective unless given in writing, and then it shall be effective only to the extent that it is expressly stated to be given.

18.2 A failure, delay or indulgence by one party in exercising any power or right shall not operate as a waiver of that power or right. A single exercise or partial exercise of any power or right shall not preclude further exercises of that power or right or the exercise of any other power or right.

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19 **GOVERNING LAW**

This Deed shall be governed by and construed in accordance with New Zealand Law.

20 **BINDING ON SUCCESSORS**

This Deed will be binding on and endure for the benefit of the executors, administrators, successors, and assigns of both parties.

21 **FURTHER ASSURANCES**

Each of the parties agrees to execute and deliver any documents and to do all acts and things as may reasonably be required by the other party to obtain the full benefit of this Deed according to its true intent.

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IN WITNESS WHEREOF this Deed has been duly executed on the date first written above.

Signed by
acting for and on behalf of the
Commissioner of Crown Lands pursuant to
a delegation under Schedule 6 Clause 2 of
the Public Service Act 2020 in the presence
of:

Authorised signatory

Megan McKinstry
Full name (please print)

Witness signature

James Terlesk
Full name (please print)

Customer Regulatory Specialist
Occupation (please print)

LINZ Wellington
Address (please print)

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Signed by GEOFFREY RAYMOND LODGE
in the presence of:

Signature of Grantee

Witness signature

EMMA JANE THOMPSON
Fellow, Legal Executives New Zealand
Law North, Kerikeri
Authorised to take Statutory Declarations

Full name (please print)

Occupation (please print)

Address (please print)]

Signed by ANDREA SARA TOFT
In the presence of:

Signature of Grantee

Witness signature

EMMA JANE THOMPSON
Fellow, Legal Executives New Zealand
Law North, Kerikeri
Authorised to take Statutory Declarations

Full name (please print)

Occupation (please print)

Address (please print)]

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SCHEDULE 1 – EASEMENT LAND

[Plan to be inserted if necessary and defined term "Easement Land" to be completed accordingly]

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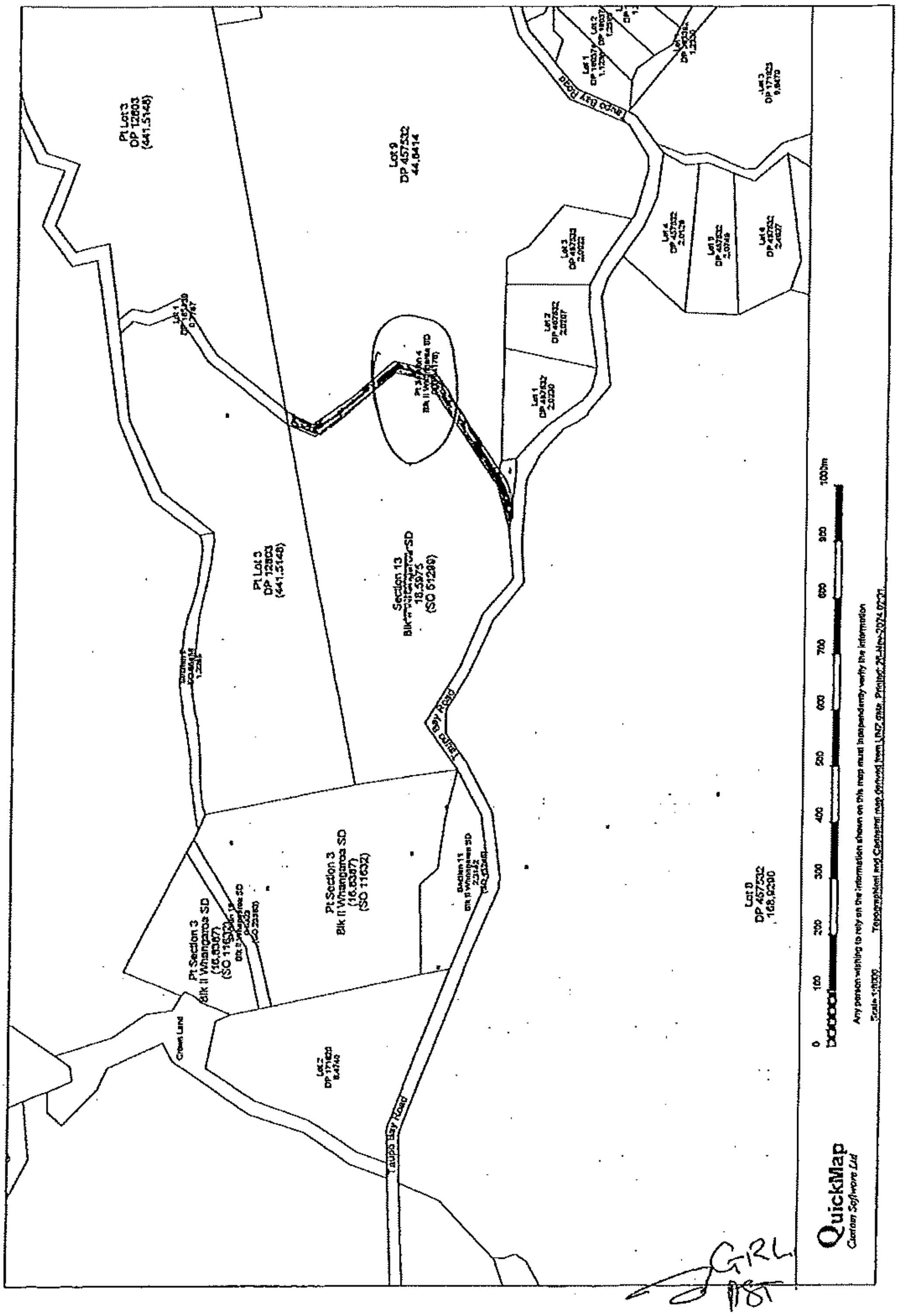
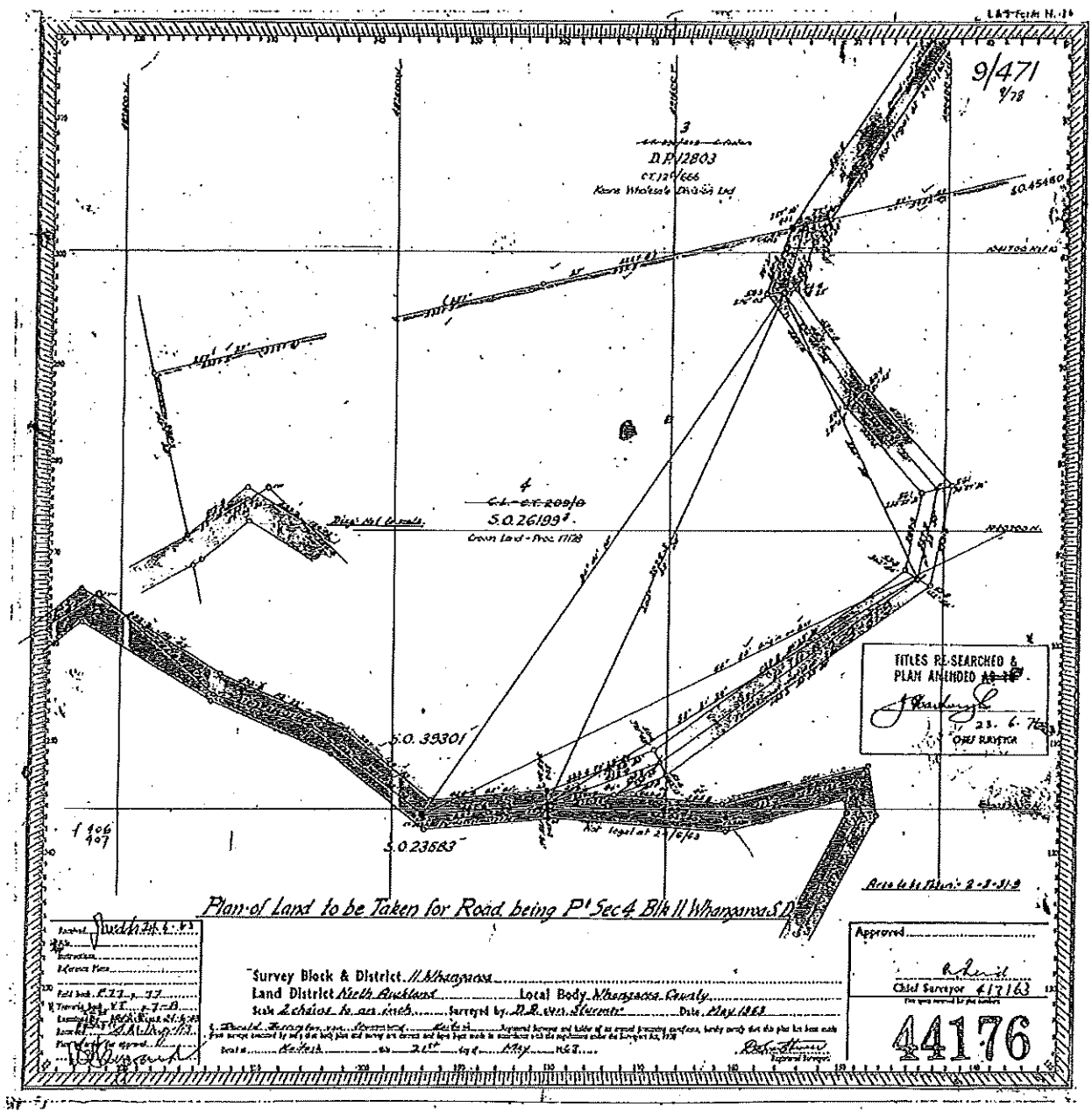

Pt Lot 3
DP 12803
(441.5148)
Lot 9
DP 457532
44.8414
Section 13
(SO 61298)
Pt Section 3
Blk II Whangaroa SD
(16.8367)
(SO 11632)
Crown Land
Lot 8
DP 457532
168.9290
Taupo Bay Road
QuickMap
Custom Software Ltd


9/471
9/78
D.P. 12803
S.O. 26199
S.O. 39301
S.O. 23583
FILES RE-SEARCHED & PLAN AMENDED AS
Plan of Land to be Taken for Road being Pt Sec 4 Blk II Whangaroa S.D.
Survey Block & District II Whangaroa
Land District North Auckland
Local Body Whangaroa County
Approved
Chief Surveyor 417163
44176

Appendix 4

RC 2260190

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

DECISION ON SUBDIVISION CONSENT APPLICATION UNDER THE RESOURCE MANAGEMENT ACT 1991

Pursuant to s133A of the Act on the 15TH December 2025

Decision

Pursuant to section 34A(1) and sections 104, 104B, 104D, 106 and Part 2 of the Resource Management Act 1991 (the Act), the Far North District Council **grants** subdivision resource consent for a Non-Complying activity, subject to the conditions listed below, to:

Applicant:	Geoffrey Raymond Lodge
Council Reference:	2260190-RMASUB
Property Address:	Lot 9, Taupo Bay Road, Mangonui
Legal Description:	Lot 9 DP 457532

The activity to which this consent relates is:

Activity A

2 lot subdivision in Rural Production Zone as non-complying activity.

Activity B

To cancel consent notice 11487862.2 clause (vi) insofar as it relates to Lot 9 DP 457532 pursuant to s221(3) of the RMA 1991 as Discretionary Activity in Rural Production Zone.

Conditions

Pursuant to sections 108 and 220 of the Act, this consent is granted subject to the following conditions:

1. The subdivision must be carried out in general accordance with the approved plan of subdivision prepared by Thomas Survey, referenced Proposed Subdivision of Lot 9 DP 457532, dated 13.08.25, and attached to this consent with the Council's "Approved Stamp" affixed to it.

Survey plan approval (s223) conditions

2. The survey plan, submitted for approval pursuant to Section 223 of the Act must show:

    a. All easements shown on the approved scheme plan to be duly granted or reserved in the memorandum of easements.

b. All easements for any Council infrastructure on the subject site that are not shown on the Scheme plan, and all these easements shall be included in the memorandum of easements on the survey plan.

c. An easement over the power corridor in accordance with requirements for access to utilities to the approval of Councils Resource Consents Engineer or their delegated representative.

d. The secondary overland flow path across Lot 10, showing its alignment and indicative width, and must demonstrate an available building area outside the shown flow path to the approval of Councils Resource Consents Engineer or their delegated representative.

Section 224(c) compliance conditions

3. Prior to the issuing of a certificate pursuant to section 224(c) of the Act, the consent holder shall:
   a. Provide a formed entrance to Lots 10 and 9 which complies with Section 3.3.17 and FNDC/S/6B of the Council's Engineering Standards 2009 (domestic crossing for rural unkerbed roads) to the approval of Councils Resource Consents Engineer or their delegated representative.

   b. Upgrade the vehicle crossing at the intersection with Taupō Bay Road so that the surface is sealed (chip seal or asphalt) from the edge of the existing road carriageway seal (or edge of carriageway if unsealed) back a minimum of 5 metres into the right-of-way, including any necessary apron shaping and erosion protection, to the approval of Council's Resource Consents Engineer.

4. Secure the conditions below by way of a Consent Notice issued under section 221 of the Act, to be registered against the titles of the affected allotment. The costs of preparing, checking and executing the Notice shall be met by the consent holder:

   a. All buildings, effluent disposal areas, driveways, and earthworks (including filling and re-contouring) must be located outside the flood-susceptible area for Lot 10. (Lot 10)

   b. The secondary overland flow path traversing Lot 10 must be kept free of obstruction at all times. No buildings, fences (including post-and-rail or netting), walls, bunds, landscaping mounds, tanks, or fill may be placed within the flow path unless specifically designed to maintain or improve flood conveyance by a Suitably Qualified and Experienced Professional (SQEP). (Lot 10)

   c. At the time of building consent for any habitable building on Lot 10, the consent holder must submit a Stormwater Management Plan (SMP) prepared by a SQEP that Identifies primary and secondary flow paths across the site and demonstrates that they are retained within the site, Confirms no increase in peak discharge or adverse redirection of overland flows to adjoining land for the 1% AEP (1-in-100 year) storm, and Integrates stormwater layout with the on-site wastewater disposal area to ensure separation and functionality of both systems. (Lot 10)

d. In conjunction with the construction of any dwellings on site, in the event of an "accidental discovery" of archaeological material, the following steps must be taken:

   i. All work on the site will cease immediately. The contractor/works supervisor will shut down all equipment and activity

   ii. The contractor/works supervisor/owner will take immediate steps to secure the site(tape it off) to ensure the archaeological remains are undisturbed and the site is safe in terms of health and safety requirements. Work may continue outside of the site area.

   iii. The contractor/works supervisor/owner will notify the Area Archaeologist of Heritage New Zealand – Pouhere Taonga (Northland Office), tangata whenua and any required statutory agencies (such as the NZ Police if human remains/koiwi tangata are found) if this has not already occurred.

   iv. Heritage New Zealand – Pouhere Taonga advise the use of a qualified archaeologist who will confirm the nature of the accidentally discovered material.

   v. If the material is confirmed as being archaeological, under the terms of the Heritage New Zealand Pouhere Taonga Act 2014, the landowner will ensure that an archaeological assessment is carried out by a qualified archaeologist, and if appropriate, an archaeological authority is obtained from Heritage New Zealand – Pouhere Taonga before work resumes.

   vi. If burials, human remains/koiwi tangata are uncovered, steps 4c (i) to (iii) above must be taken and the Area Archaeologist of Heritage New Zealand – Pouhere Taonga, the New Zealand Police and the Iwi representative for the area must be contacted immediately. The area must be treated with discretion and respect and the koiwi tangata/human remains dealt with according to law and tikanga.

   vii. Works at the site area must not recommence until an archaeological assessment has been made, all archaeological material has been dealt with appropriately, and statutory requirements met. All parties will work towards work recommencement in the shortest possible timeframe while ensuring that archaeological and cultural requirements are complied with.

   (All Lots)

e. The site is identified as being within a kiwi present zone. Any cats and/or dogs kept onsite must be kept inside and/or tied up at night to reduce the risk of predation of North Island brown kiwi by domestic cats and dogs. (All Lots)

Advice Notes

Lapsing of Consent

1. *Pursuant to section 125 of the Act, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;*
   a) *A survey plan is submitted to Council for approval under section 223 of the RMA before the lapse date, and that plan is deposited within three years of the date of approval of the survey plan in accordance with section 224(h) of the RMA; or*
   b) *An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Act.*

Right of Objection

2. *If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Act) to object to the decision. The objection must be in writing, stating reasons for the objection and must be received by Council within 15 working days of the receipt of this decision.*

Archaeological Sites

3. *Archaeological sites are protected pursuant to the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence, pursuant to the Act, to modify, damage or destroy an archaeological site without an archaeological authority issued pursuant to that Act. Should any site be inadvertently uncovered, the procedure is that work should cease, with the Trust and local iwi consulted immediately. The New Zealand Police should also be consulted if the discovery includes koiwi (human remains). A copy of Heritage New Zealand's Archaeological Discovery Protocol (ADP) is attached for your information. This should be made available to all person(s) working on site.*

Section 224 Certification

4. *A Section 224 Certificate will not be issued until all Council invoices, including engineering fees and any other costs associated with the Resource Consent have been paid in full.*

General Advice Notes

5. *This consent has been granted on the basis of all the documents and information provided by the consent holder, demonstrating that the new lot(s) can be appropriately serviced (infrastructure and access).*

6. *The site is in close proximity to an unsealed road. Unsealed roads have been shown to create a dust nuisance from vehicle usage. It is advised that the dwelling is either located as far as possible or at least 80m from the road, and/or boundary planting within the site is utilised to assist with this nuisance. Alternatively the applicant may consider sealing their road frontage to remove the issue.*

7. *Erosion and Sedimentation Control shall be designed and carried out in accordance with GD05 "Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region".*

8. *Building Consents may be required for retaining structures.*

9. *Before undertaking significant earthworks or drainage works on Lot 10, the consent holder is encouraged to engage with **Te Rūnanga o Whaingaroa** to discuss site-specific tikanga/kaitiaki considerations and practical measures to protect wai, taonga species, and cultural values.*

10. *The Consent Holder is advised that they are responsible for submitting a Traffic Management Plan (TMP) and/or a Corridor Access Request (CAR) for approval by Council's Corridor Access Engineer prior to construction of works on site, and the construction of any vehicle crossing or the undertaking of any remedial works within the road reserve and to the existing public road carriageway.*

Activity B: Cancellation of Consent Notice

1. Further Resolution: 1. Pursuant to Section 221 of the Resource Management Act, the Far North District Council hereby cancels existing consent notice 11487862.2 clause (vi) as it applies to Lot 9 DP 457532.

Advice Notes

Right of Objection

1. *If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Act) to object to the decision. The objection must be in writing, stating reasons for the objection and must be received by Council within 15 working days of the receipt of this decision.*

General Advice Notes

2. *The onus is upon the consent holder to apply to the Registrar General of Land to vary consent notice 11487862.2 clause (vi) as registered against Lot 9 DP 457532. Please contact your Lawyer to have the consent notice variation registered.*

Reasons for the Decision

1. By way of an earlier report that is contained within the electronic file of this consent, it was determined that pursuant to sections 95A and 95B of the Act the proposed activity will not have, and is not likely to have, adverse effects on the environment that are more than minor, there are also no affected persons and no special circumstances exist. Therefore, under delegated authority, it was determined that the application be processed without notification.

2. The application is for a Non-Complying activity resource consent as such under section 104 the Council can consider all relevant matters. In particular the matters listed in 13.7.2.1: Minimum Lot Sizes are of particular relevance.

3. In regard to section 104(1)(a) of the Act the actual and potential effects of the proposal will be acceptable as:

   a. There will be no reverse sensitivity effects as the activity is consistent with the current use of the existing activities in the wider environment.

   b. The lots will be self-sufficient in terms of on-site water storage and appropriate wastewater and stormwater management.

   c. It is considered that the proposed subdivision will not exacerbate any natural or other hazards on site as there are no identified HAIL sites located in the local area or surrounding properties.

   d. The proposal will also result in positive effects enabling the lots to be independently disposed for residential use.

4. In regard to section 104(1)(ab) of the Act there are no offsetting or environmental compensation measures proposed or agreed to by the applicant for the activity.

5. In regard to section 104(1)(b) of the Act the following statutory documents are considered to be relevant to the application:
   a. Operative Far North District Plan 2009,
   b. Proposed Far North District Plan 2022

   Operative Far North District Plan

   The Rural Production Zone applies over the majority of the rural part of the District and is predominantly a working productive rural zone. The zone contains environmental and amenity standards which will enable the continuation of the wide range of existing and future activities, compatible with normal farming and forestry activities, and with rural lifestyle and residential uses, while ensuring that the natural and physical resources of the rural area are managed sustainably.

   The subdivision will create 1 additional allotment within the Rural Production zone.

   The activity is consistent with the below objectives, policies and assessment criteria of Chapter 8 of the Operative District Plan:

   - The proposal will promote the sustainable management of natural and physical resources by providing a balance lot which can continue the existing activities which are currently undertaken on the site.

   - The proposal is of low density.

- All lots will have available space for on-site servicing and each lot can provide sufficient water supply for potable and firefighting purposes.
- The proposed new allotments will enable small scale farming and activities ancillary to rural production whilst maintaining and enhancing amenity values associated with the rural environment, and at minimising the likelihood and risk of incompatible land uses establishing in proximity to each other.

Overall, the proposal is consistent with the objectives and policies of the Operative District Plan.

Proposed Far North District Plan

The Rural Production zone is the largest zone in the district and accounts for approximately 65% of all land. The purpose of this zone is to provide for primary production activities including farming, plantation forestry, and horticulture The proposed subdivision is an efficient use of land which is compatible with adjoining land use activities and subdivision patterns, and generally in accordance with the Rural Production Zone objectives.

The subdivision is predominantly surrounded by a mixture of rural lifestyle and residential sized properties. The role, function and predominant character and amenity of the Rural Production zone is not compromised by incompatible activities.

- The subdivision maintains a pattern of rural-living lots already present in the vicinity and retains a large balance area.
- The application confirms there is no highly productive land on the site and no scheduled ONF/ONL, SASM, historic heritage, or mapped SNA on Lot 10 and the SNA is confined to the balance lot and is unaffected by the subdivision.
- The lots are self-serviced for three waters and access is via an existing right-of-way to a sealed council road and conditions require the Lot 10 entrance to meet Council standards and the ROW entrance sealed back 5 m at the road-reserve interface to reduce tracking and dust, consistent with the objective for integrated, efficient servicing in a rural setting.
- There is no qualifying waterbody and no demand for public access across the site.

Overall, while some PDP provisions may support or be neutral toward the proposal, it is considered contrary to key directive objectives and policies which seek to avoid rural lifestyle subdivision in the Rural Production Zone.

However, it is acknowledged the PDP was notified in July 2022 and hearings have commenced. There is substantial scope for provisions to evolve through the submission and appeal process. Therefore, at this early stage of the PDP process, limited weighting has been placed on these PDP provisions relative to the Operative Plan. The Operative Plan remains the primary planning instrument for determining this application.

6. In regard to section 104(1)(c) of the Act the following other matters are relevant and reasonably necessary to determine the application:

Te Runanga o Whaingaroa Environmental Management Plan. Also named as Te Ūkaipo Iwi Resource Management – 2011

Te Ūkaipō articulates the whāinga and policy direction of mana whenua for the Whaingaroa rohe, with a strong emphasis on kaitiakitanga, the protection of wai, indigenous biodiversity and taonga species, safeguarding wāhi tapu and cultural values, and avoiding cumulative adverse effects from subdivision and land use. It also promotes good practice for earthworks and stormwater so that natural hydrological processes are maintained and receiving environments are protected.

In considering Te Ūkaipō as an "other matter" under s104(1)(c), the proposal has been designed and conditioned so that it aligns with these outcomes. The site lies within a wider Statutory Acknowledgement/Treaty Settlement Area of Interest.

The decision secures an Accidental Discovery Protocol and encourages engagement at the time of detailed design and construction. This approach respects kaitiakitanga and provides a practical process for tikanga to be applied should cultural material be encountered.

With respect to wai protection, Council's mapping identifies a flood-susceptible area and a secondary overland flow path within proposed Lot 10. The decision requires, by Consent Notice, that all buildings, effluent disposal areas and earthworks are located outside the flood-susceptible area and that the secondary overland flow path is retained. A building-stage stormwater management plan prepared by a suitably qualified person must demonstrate how primary and secondary conveyance will be maintained within the site and how stormwater will be appropriately managed and, where necessary, attenuated before leaving the property.

The plan's emphasis on taonga species and biodiversity is addressed by confirming that the mapped Proposed Significant Natural Area is on the balance Lot 9 and not on proposed Lot 10. No clearance or works are authorised within the SNA, and the decision retains kiwi-protection advice. On that basis, the subdivision avoids adverse effects on identified indigenous habitats and taonga, which is consistent with Te Ūkaipō's outcomes.

Lastly, the proposal addresses climate and natural hazard resilience by directing development away from the flood-susceptible area and by retaining overland flow paths.

Overall, having particular regard to Te Ūkaipō as an "other matter", the decision, subject to the imposed conditions—aligns with and is not contrary to the plan's outcomes for

kaitiakitanga, wai protection, biodiversity and taonga, cultural heritage, and cumulative effects management.

Precedence

The applicant's AEE notes that the process to create the fire station lot commenced before April 2000 and that the re-issue of the residual title occurred because of that public-benefit outcome, not because of conventional subdivision for additional lifestyle yield. This is a material point of distinction from applications that are non-complying due to straightforward non-conformity with minimum lot size provisions.

The current proposal seeks to create one additional rural-living lot of approximately 2.02 ha within an area already characterised by similar rural-living parcels, while maintaining a large balance lot. Access is via an existing, formed right-of-way that also serves the fire station, with acceptable sight distances and low incremental traffic generation from one additional dwelling. Conditions require the Lot 10 entrance to comply with Council's standards and the interface with Taupō Bay Road to be sealed to control safety, dust and tracking. These features and conditions distinguish the proposal on its facts and ensure effects remain contained and typical of rural-living in this locality.

In terms of environmental context, the mapped flood-susceptible area and the secondary overland flow path are avoided through a consent notice requiring buildings, effluent fields and earthworks to be sited outside the hazard area and hydrological conveyance to be retained on-site. Biodiversity values are protected because the Proposed Significant Natural Area lies on the balance Lot 9, not on proposed Lot 10; no works are authorised within the SNA.

Precedent concerns most commonly arise where granting consent signals that similar proposals with similar planning mischief and effects would also be granted, undermining plan integrity. For this application, he combination of factors is narrow and atypical: the historic creation of a community fire station lot driving the title re-issue and activity status; the modest scale of one additional lot; existing formed legal access; and conditions that avoid natural hazard and stormwater effects and protect on-site hydrology. On this evidence, approval will not create an expectation that materially different proposals without these distinguishing characteristics must also be granted, and it will not undermine the objectives and policies for rural subdivision or the minimum lot size framework.

7. In regard to section 104D of the Act the activity meets one tests as any adverse effects arising from this proposed activity will not be more than minor, and the activity will not be contrary to the objectives and policies of the Operative District Plan. Therefore, consent can be granted for this non-complying activity.

8. In terms of s106 of the RMA the proposal is not considered to give rise to a significant risk from natural hazards, and sufficient provision has been made for legal and physical access to the proposed allotments. While Council mapping identifies a flood-susceptible area at the south-western corner of proposed Lot 10, there is ample developable area outside the overlay. Accordingly, council is able to grant this subdivision consent subject to the conditions above.

9. Based on the assessment above the activity will be consistent with Part 2 of the Act.

   The activity will avoid, remedy or mitigate any potential adverse effects on the environment while providing for the sustainable management of natural and physical resources and is therefore in keeping with the Purpose and Principles of the Act. There are no matters under section 6 that are relevant to the application. The proposal is an efficient use and development of the site that will maintain existing amenity values without compromising the quality of the environment. The activity is not considered to raise any issues in regard to Te Tiriti o Waitangi.

10. Overall, for the reasons above it is appropriate for consent to be granted subject to the imposed conditions.

Approval

This resource consent has been prepared by Swetha Maharaj, Senior Planner. I have reviewed this and the associated information (including the application and electronic file material) and for the reasons and subject to the conditions above, and under delegated authority, grant this resource consent.

P.J. Killalea

Name: Pat Killalea Date: 24th November 2025

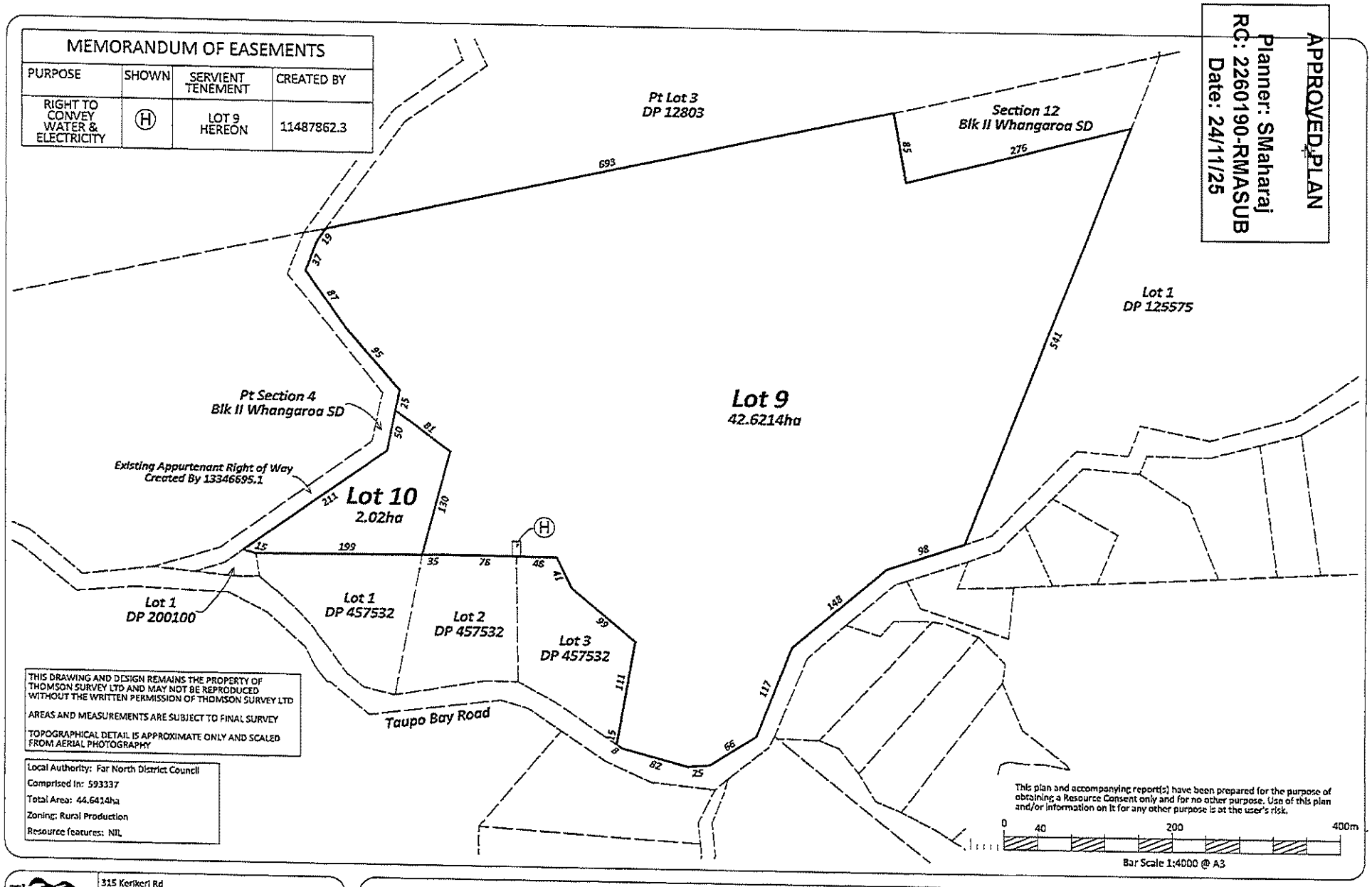
Title: Independent Commissioner

Approval

This Decision has been amended pursuant to s133A of the Resource Management Act on 15th December 2025. Details of the changes can be found in the resource consent file.

Whitney Peat
Senior Planner

Date 15th December 2025



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PROPOSED SUBDIVISION OF LOT 9 DP 457532

TAUPO BAY ROAD, TAUPO BAY

PREPARED FOR: G. LODGE

	Name	Date
Survey		
Design		
Drawn	KY	13.08.25
Approved		
Rev		

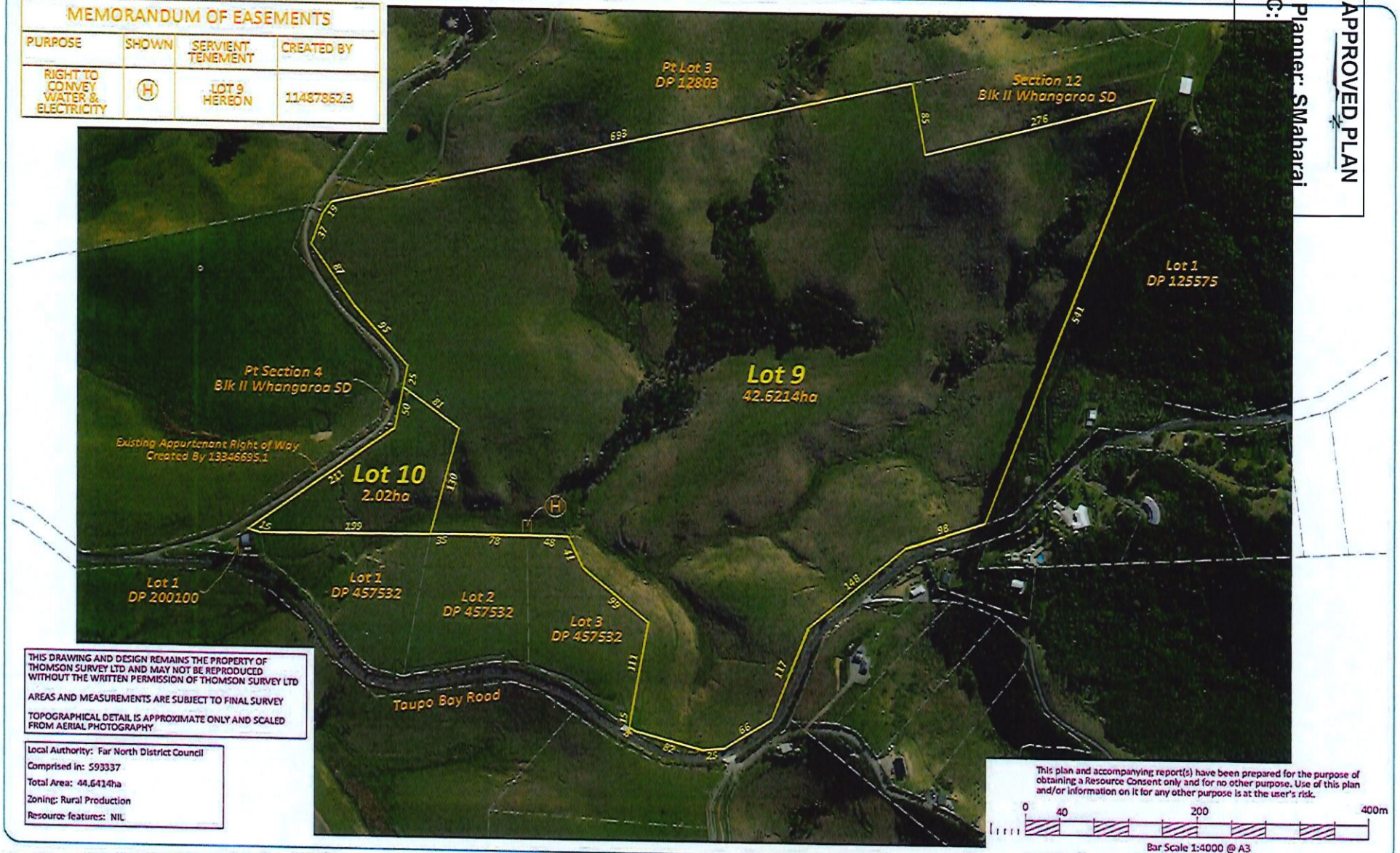
ORIGINAL
SCALE 1:4000
SHEET SIZE A3
51813 Scheme 20250813

Surveyors Ref. No: 8183
Sheet 1 of 1

APPROVED PLAN

RC: Planner: SMaharai

MEMORANDUM OF EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	CREATED BY
RIGHT TO CONVEY WATER & ELECTRICITY	(H)	LOT 9 HEREON	11487862.3



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TOPOGRAPHICAL DETAIL IS APPROXIMATE ONLY AND SCALED FROM AERIAL PHOTOGRAPHY

Local Authority: Far North District Council
Comprised in: 593337
Total Area: 44.6414ha
Zoning: Rural Production
Resource features: NIL

This plan and 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.

0 40 200 400m

Bar Scale 1:4000 @ A3

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Registered Land Surveyors, Planners & Land Development Consultants

PROPOSED SUBDIVISION OF LOT 9 DP 457532

TAUPO BAY ROAD, TAUPO BAY

PREPARED FOR: G. LODGE

	Name	Date
Survey		
Design		
Drawn	KY	13.08.25
Approved		
Rev		

81813 Scheme 20250813

ORIGINAL
SCALE 1:4000
SHEET SIZE A3

Surveyors Ref. No: 8183

Sheet 1 of 1

Appendix 5

Draft LT Plan 624844

Title Plan - LT 624844

Survey Number	LT 624844
Surveyor Reference	8183 Lodge
Surveyor	Denis McGregor Thomson
Survey Firm	Thomson Survey Limited
Surveyor Declaration	

Survey Details

Dataset Description	Lots 9 and 10 Being a Subdivision of Lot 9 DP 457532 and Easement over Lot 1 DP 457532.		
Status	Initiated		
Land District	North Auckland	**Survey Class**	Class B
Submitted Date		**Survey Approval Date**	
		Deposit Date	

Territorial Authorities

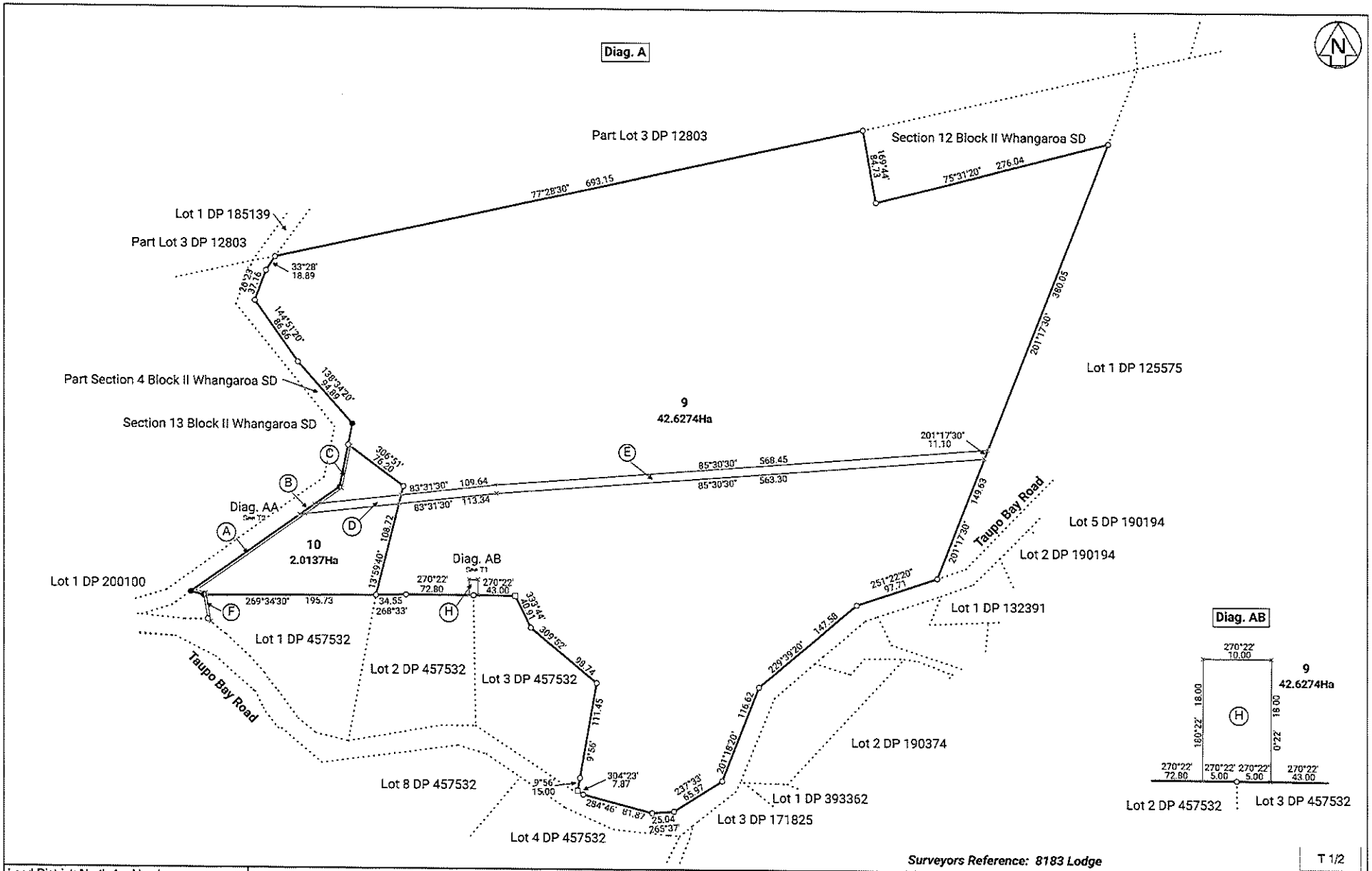
Far North District

Comprised In

RT 593337

Created Parcels

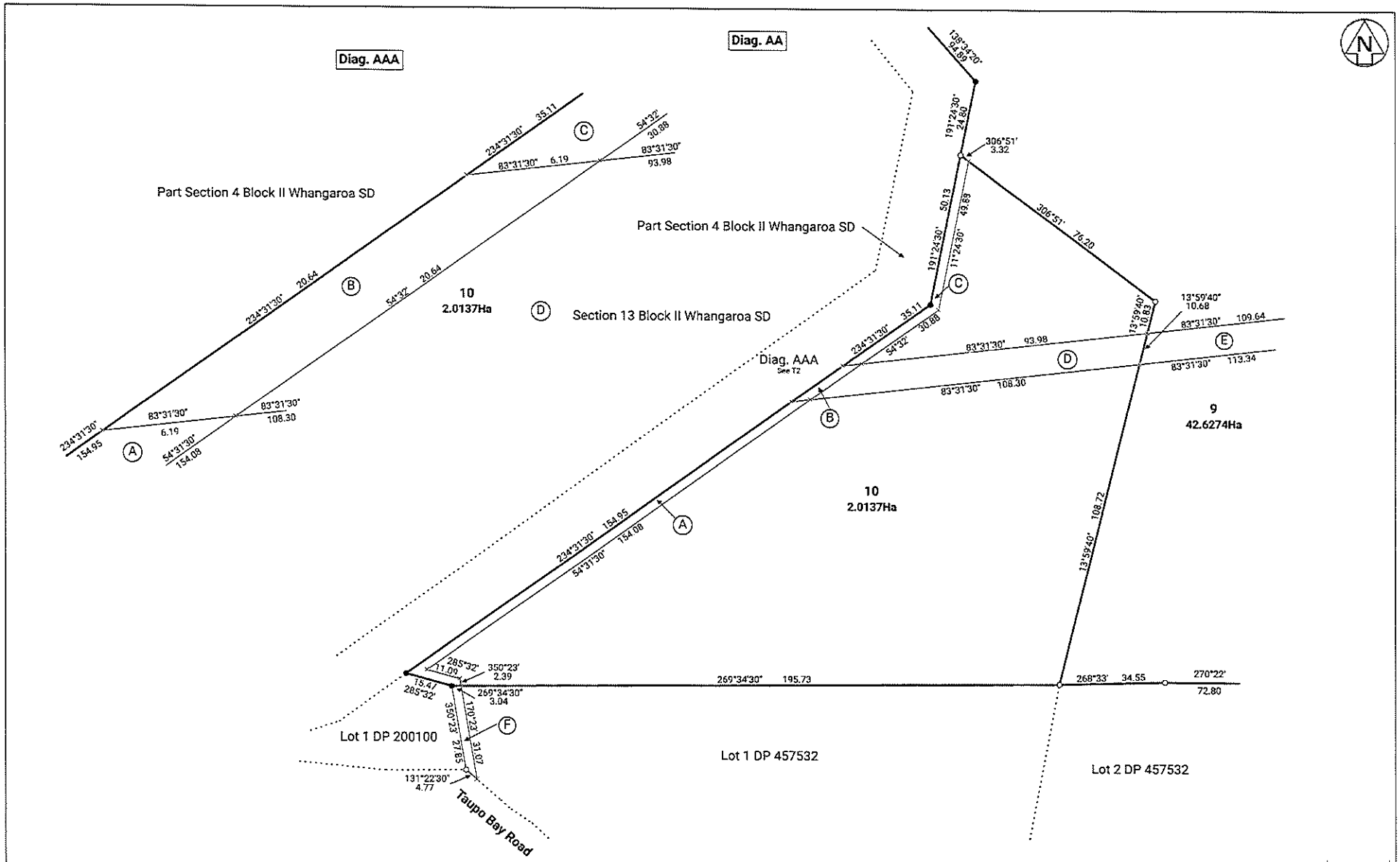
Parcels	Parcel Intent	Area	RT Reference
Area H Deposited Plan 624844	Easement		
Lot 9 Deposited Plan 624844	Fee Simple Title	42.6274 Ha	1269566
Area B Deposited Plan 624844	Easement		
Area C Deposited Plan 624844	Easement		
Area D Deposited Plan 624844	Easement		
Area E Deposited Plan 624844	Easement		
Lot 10 Deposited Plan 624844	Fee Simple Title	2.0137 Ha	1269567
Area F Deposited Plan 624844	Easement		
Area A Deposited Plan 624844	Easement		
Total Area		44.6411 Ha	



Surveyors Reference: 8183 Lodge

T 1/2

Land District: North Auckland Digitally Generated Plan Generated on: 15/12/2025 2:57pm Page 3 of 4	Lots 9 and 10 Being a Subdivision of Lot 9 DP 457532 and Easement over Lot 1 DP 457532.	Surveyor: Denis McGregor Thomson Firm: Thomson Survey Limited	Title Plan LT 624844 DRAFT



Surveyors Reference: 8183 Lodge

T 2/2

Land District: North Auckland Digitally Generated Plan Generated on: 15/12/2025 2:57pm Page 4 of 4	Lots 9 and 10 Being a Subdivision of Lot 9 DP 457532 and Easement over Lot 1 DP 457532.	Surveyor: Denis McGregor Thomson Firm: Thomson Survey Limited	Title Plan LT 624844 DRAFT

LT 624844 Schedule/Memorandum

Land registration district	Territorial authority
North Auckland	Far North District

Schedule of Easements in Gross

Parcels shown with a prefix of *HL-* include height-limited boundaries

PURPOSE	SHOWN	BURDENED LAND	GRANTEE
Right to convey electricity	B, D	Lot 10	Top Energy Ltd
" "	E	Lot 9	Top Energy Ltd

Schedule of Easements

PURPOSE	SHOWN	BURDENED LAND	BENEFITED LAND
Right to convey electricity	F	Lot 1 DP 457532	Lot 9, Lot 10
" "	B, C, A	Lot 10	Lot 9

Schedule of Existing Easements

PURPOSE	SHOWN	BURDENED LAND	CREATING DOCUMENT
Right to convey electricity	H	Lot 9	11487862.3

Appendix 6

NZAA Site Records and Map

APAWARDAAAJC

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

SITE RECORD FORM

SITE NUMBER N7/135 P04/28

SITE NAME: MAORI –
OTHER –

Map number NZMS 1, N7
Map name Doubtless Bay
Map edition 3rd, 1972
Grid Reference 189855

SITE TYPE Terrace (Doubtful Site)

1. Aids to relocation of site E118900 N885500 Paddock 1, Stony Creek Farm Settlement, Block Plan 28B, 1975.

A short steep spur running down between two streams towards a bush-filled gully.

2. State of site; possibility of damage or destruction

Long grass obscures surface.

3. Description of site *(NOTE: This section is to be completed ONLY if no separate Site Description Form is to be be prepared.)*

Just above the tip of the spur is a shallow terrace (6 x 3m).

Patches of kikuyu grass and vague indications of terraces and depressions run up the spur to the fenceline.

4. Owner Dept. of Lands & Survey; ~~Tenant~~/Manager K.Phillips,
Address Whangarei/Kaitaia Address Stony Creek Block
R.D.2,
Mangonui

Attitude Co-operative Attitude

5. Methods and equipment used One person examined site, measurements by pacing.

Photographs taken: ~~Yes~~/No (Describe on Photograph Record Form)
Date recorded 26.2.76

6. Aerial photograph or mosaic No. 1860/23 Site shows: ~~Clearly/badly~~/not at all

7. Reported by J.Coster, G.Johnstom Filekeeper
Address c/o Thorn Rd.,
R.D.1, Tauranga
Date 26.8.76. Date Jul 76

APAWARDAAJC ©

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

SITE RECORD FORM

Map number NZMS 1, N7
Map name Doubtless Bay
Map edition 3rd, 1972
Grid Reference 193856

SITE NUMBER N7/136 P04/29

SITE NAME: MAORI = OTHER

SITE TYPE Terrace(Doubtful Site)

1. Aids to relocation of site E1193000 N885600 Paddock 1, Stony Creek Farm Settlement, Block Plan 28B, 1975.

The next spur (a short, steep broad spur) to the east of N7/135.

2. State of site; possibility of damage or destruction

Long grass obscures site.

3. Description of site *(NOTE: This section is to be completed ONLY if no separate Site Description Form is to be be prepared.)*

There are at least 3 possible terraces running down the top of the spur, the most clearly defined of which measures approx. 6 x 2m.

4. Owner Dept.of Lands & Survey, Address Whangarei/Kaitaia
Attitude Co-operative

Tenant/Manager K.Phillips
Address Stony Creek Block R.D.2, Mangonui
Attitude

5. Methods and equipment used Two people examined site, measurements estimated.

Photographs taken: ~~Yes~~/No (Describe on Photograph Record Form)
Date recorded 26.2.76

6. Aerial photograph or mosaic No. 1860/23

Site shows: Clearly/badly/not at all

7. Reported by J.Coster,G.Johnston
Address c/o Thorn Rd., R.D.1, Tauranga
Date 26.8.76

Filekeeper
Date 7/4/77

Layer List | Print | Add Lay

Sites

Sites

Approved

Pending - Edit

NZAA File District

Map Grids

NZ Territorial Authorities

NZ Regional Councils

LINZ NZ Property Titles

Islands

NZ Mainland Contours Topo 50k

How to use this site

P04/28

1662882.87 6128730.69 Meters

Selected features: 1

Eagle Technology, LINZ | Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth, © OpenStreetMap contributors. | New Zealand Archaeo... Powered by Esri

Site Details | History | Documents

NZAA Site Number - P04/28

Update Date: 1 January 1976

Status: Approved

Summary: ?TERRACE

Source of Spatial Data: CINZAS

NZTM Easting	1662645
NZTM Northing	6128457
Site Type	Pit/Terrace
Finder Aid	
Site Features	Terrace, Terrace
Description	Updated 11/12/2025 by ArchSite. Grid reference changed from (E1662595 / N6128407) to centroid of site polygon (E1662645 / N6128457).
Site Name	
Other Name	
Ethnicity	Maori
Site Periods	
Associated Sites	
Condition Value	No Recent Info
Condition Notes	
Land Use	

Appendix 7

Civil Site Suitability Report

Wilton Joubert Limited
09 527 0196
196 Centreway Road,
Orewa, Auckland, 0931

SITE	**Taupo Bay Road, Taupo Bay**
LEGAL DESCRIPTION	**Lot 9 RC 2120373**
PROJECT	**Proposed 4-Lot Subdivision (Proposed Lots 4-6 for Assessment)**
CLIENT	**Geoffrey Lodge**
REFERENCE NO.	**144123**
DOCUMENT	**Civil Site Suitability Report**
STATUS/REVISION NO.	**01– Resource Consent**
DATE OF ISSUE	**14 January 2026**

Report Prepared For	Attention	Email
Geoffrey Lodge	Lynley Newport	g.lodge@xtra.co.nz lynley@tsurvey.co.nz

Authored by	**G.M. Brant** *(Be (Hons) Civil)*	Civil Engineer	gustavo@wjl.co.nz	
Reviewed & Approved by	**B. Steenkamp** *(CPEng, BEng Civil, CMEngNZ, BSc (Geology))*	Senior Civil Engineer	bens@wjl.co.nz	

1 EXECUTIVE SUMMARY

The following table is intended to be a concise summary which must be read in conjunction with the relevant report sections as referenced herein.

Legal Description:	Lot 9 RC 2120373
Lot Sizes:	Proposed Lot 4 – 4.09ha Proposed Lot 5 – 4.06ha Proposed Lot 6 – 4.02ha Proposed Lot 9 – 30.4514ha (balance lot not included in assessment)
Scope:	Civil Site Suitability Investigation: - Potable Water - Wastewater Assessment - Stormwater Assessment
Development Proposals Supplied:	Subdivision Scheme Plan supplied by Thomson Survey (Ref No: 10849, dated: 30.10.2025)
District Plan Zone:	Rural Production Zone
Wastewater:	Recommendations for wastewater are provided in Section 6.
Stormwater Management – District Plan Rules:	Permitted Activity: 8.6.5.1.3 STORMWATER MANAGEMENT – The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 15%. Controlled Activity: 8.6.5.2.1 STORMWATER MANAGEMENT – The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 20%.
Stormwater Management:	To comply with the parameters of the Permitted Activity Rule (8.6.5.1.3), Lots 4, 5 & 6 must not exceed an impermeable area of 6,135m², 6,090m² and 6,030m² respectively. Given the above, it is expected that any residential future development of the Lots would comply with Permitted Activity Rule (8.6.5.1.3). Accordingly, stormwater attenuation is not expected to be required for future residential development of the Lots; however, stormwater management will still be required. Stormwater mitigation recommendations are provided in Section 7.

2 SCOPE OF WORK

Wilton Joubert Ltd (WJL) was engaged by the client to undertake a civil site suitability assessment (potable water, wastewater and stormwater) to support a four-lot subdivision of Lot 9 RC 2120373 as per the supplied Scheme Plan prepared by Thomson Survey (Ref No: 10849, dated: 30.10.2025). The primary purpose of this report is to provide civil assessments along with preliminary design recommendations pertaining to future residential development of Lots 4 – 6. Proposed Lot 9 is a balance Lot of approximately 30ha and is excluded from our assessment.

A Geotechnical Site Suitability Report (WJL Ref. 144122) has been prepared by WJL for the subject site which should be read in conjunction with this report.

Any revision of the supplied drawings and/or development proposals with potable water, wastewater and/or stormwater implications should be referred back to us for review. This report is not intended to support Building Consent applications for the future proposed lots, and any revision of supplied drawings and/or development proposals including those for Building Consent, which might rely on potable water, wastewater and/or stormwater assessments herein, should be referred to us for review.

3 SITE DESCRIPTION

The proposed development will be created across the following (the site), which is located off the northern side of Taupo Bay Road and is bound by a right-of-way (ROW), titled Waimahana Road, along the western boundary:

- Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay.

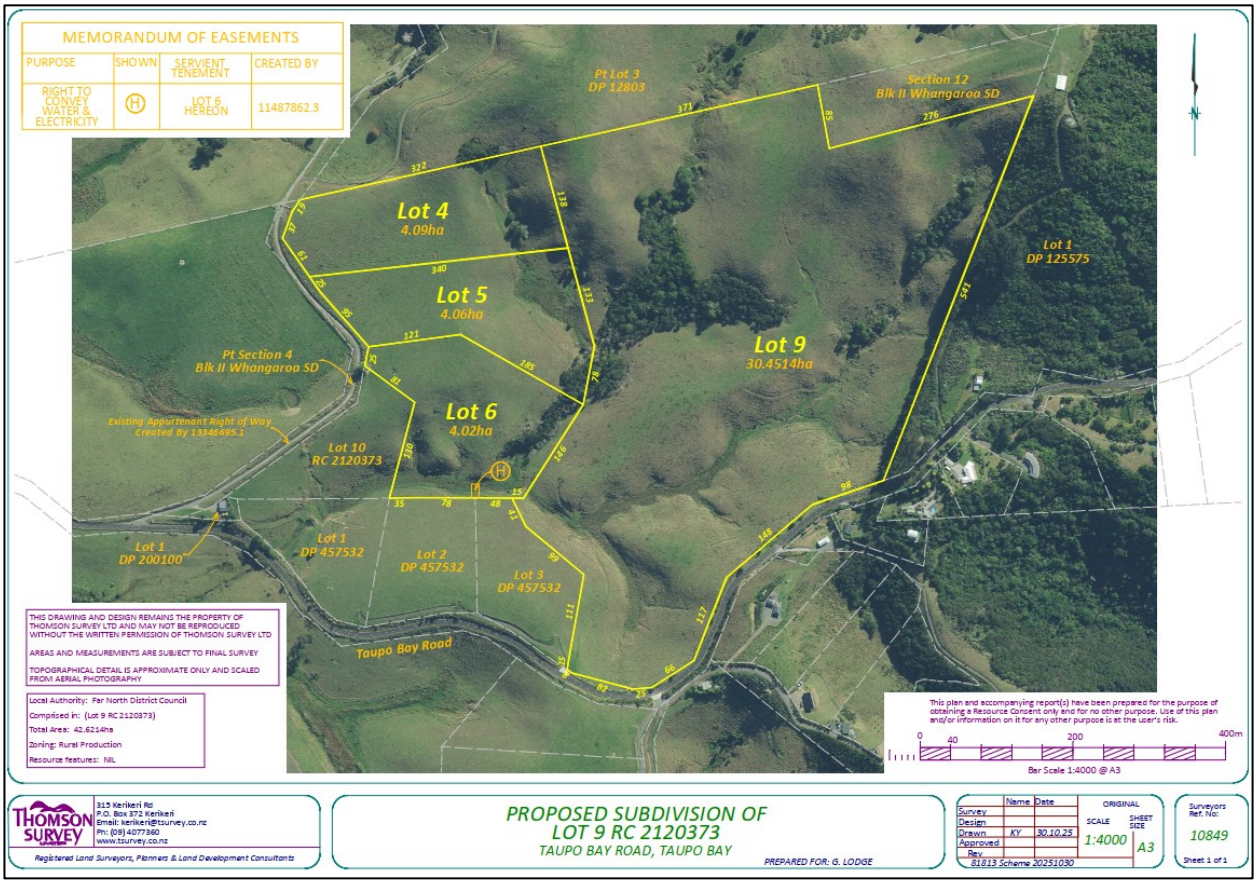


Figure 1: Snip of scheme plan prepared by Thomson Survey (Ref No: 10849, dated: 30.10.2025)

The surface area of the subject block is 45.621ha and is accessed at the northwestern boundary corner via a farm gate from Waimahana Road. The Taupo Bay Fire Station is located adjacent to the Taupo Bay Road and Waimahana Road intersection.

The site is vacant of structures and is largely covered in pasture. Tributary watercourses traverse from the northeastern to southwestern boundary and east to west through the southern end of the block. The northernmost watercourse is generally lined in dense bush. The watercourses connect near the southwestern boundary, ultimately discharging into the Waipukakakau Stream towards the northwest.

Proposed Lots 4-6 are to be created across the western portion of the block. Topographically speaking, the proposed Lots are set around a broad spur flank and local ridge crest feature that straddle north to south through the central area of the Lots. The western portion of the Lots are gently sloping, falling at inclinations averaging less than 8° down to Waimahana Road. The eastern and southern portions are essentially covered by moderate to steeply inclined side flanks and gullies that descend to the above-mentioned watercourses.

The Far North District Council (FNDC) on-line GIS Water Services Map indicates that public underground services connections are not available to the property. It should be noted that overhead powerlines trend through proposed Lots 4-6 and as such, it is recommended that Top Energy is contacted to determine any applicable building offsets.

4 PUBLISHED GEOLOGY

Local geology at the subject site is noted on the GNS Science New Zealand Geology Web Map, Scale 1:250,000 as; Tupou Complex in Northland Allochthon, described as; "*Strongly indurated, poorly stratified conglomerate, sandstone and argillite*". Refer to GNS Science Website.

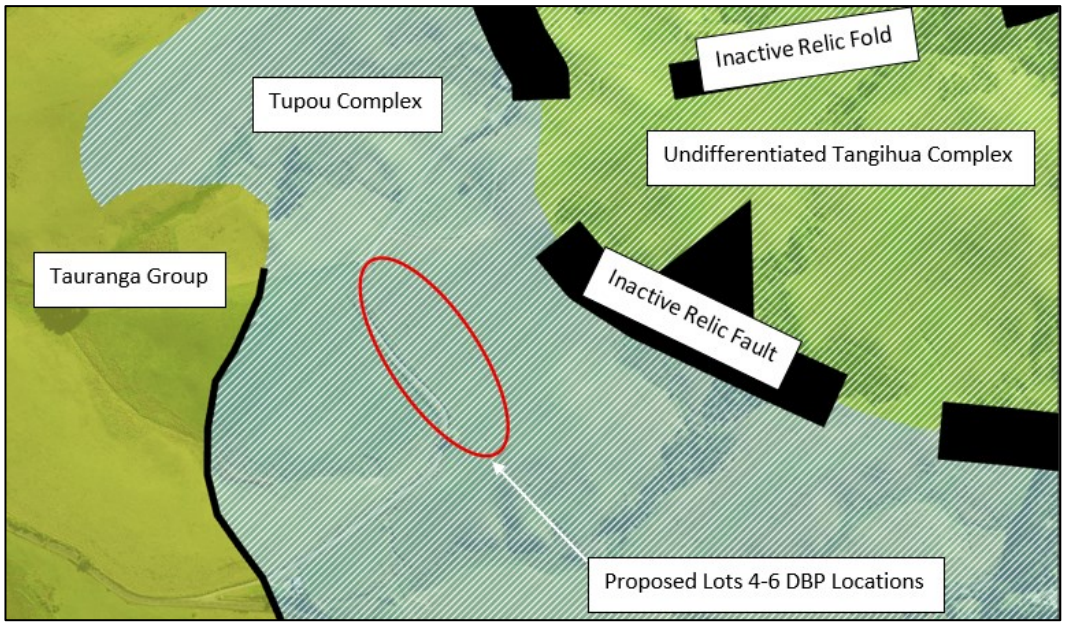


Figure 2: Screenshot aerial view from the New Zealand Geology Web Map.

In addition to the above, hand auger testing was conducted by WJL within Lots 4 – 6.

The subsoils encountered during WJL's fieldwork consisted predominantly of Clayey SILT and Silty CLAY. Approximately 100mm-250mm of TOPSOIL was overlying the investigated area. Groundwater was observed at 2.4m below ground level at one of the six tested locations. Refer to the appended 'BH Logs'.

Given the above, the site's subsoils have been classified as Category 6 in accordance with the TP58 design manual.

5 POTABLE WATER SUPPLY

It is recommended that potable water for Lots 4 - 6 be provided for by rainwater tanks in accordance with the Countryside Living Toolbox requirements. It is recommended to provide at least 2 x 25,000L tanks for potable water usage per new dwelling. The type of tank and volume is for the client / owner to confirm.

6 WASTEWATER

No existing wastewater management system is present within the proposed Lots. As such, a new site-specific design in accordance with the ASNZS: 1547 / TP58 design manual will be required by FNDC for any future development within the proposed Lots.

6.1 DESIGN PARAMETERS

The following table is intended to be a concise summary of the design parameters, which must be read in conjunction with the relevant report sections as referenced herein.

The below wastewater design has been completed to show feasibility of on-site wastewater management within the proposed Lots. As no development proposals are available at this stage for the eventual residential development within the Lots, our recommendations have been based on a moderate size dwelling containing 4 bedrooms.

Given the subsoils encountered during WJL's fieldwork investigation, we recommend secondary level treatment or higher for any new wastewater system within the Lots.

Although dripper irrigation is recommended and shown below, alternative trench or bed setup with secondary level treatment may also be acceptable subject to specific design.

6.1.1 Summary of Preliminary Design Parameters for a PCDI Secondary Treatment System

Development Type:	Residential Dwellings
Effluent Treatment Level:	Secondary (<BOD5 20 mg/L, TSS 30 mg/L)
Fill Encountered in Disposal Areas:	Not encountered
Water Source:	Rainwater Collection Tanks
Site Soil Category (TP58):	Category 6 – Silty CLAY – Moderate / Poor Drainage
Estimate House Occupancy:	6 Persons
Loading Rate:	PCDI System – 3mm/day
Estimated Total Daily Wastewater Production:	1,080L/day
Typical Wastewater Design Flow Per Person:	Rainwater Supply: 180L/pp/day (Estimated –water conservation devices may enable lower design flows)
Application Method:	Surface Laid PCDI Lines
Loading Method:	Dosed
Minimum Tank size:	>1,080L
Emergency Storage:	24 hours
Estimated Min. Disposal Area Requirement:	360m²
Required Min. Reserve Area:	30%
Buffer Zone:	Not anticipated to be required
Cut-off Drain:	May be required – refer to Site Plan (144123-C001)

6.2 REQUIRED SETBACK DISTANCES

The disposal and reserve areas must be situated outside the relevant exclusion areas and setbacks described within Table 9 of the PRPN: Exclusion areas and setback distances for on-site domestic wastewater systems:

Table 9 of the PRPN (Proposed Regional Plan for Northland)			
Feature	Primary treated domestic wastewater	Secondary treated domestic wastewater	Greywater
Exclusion areas			
Floodplain	5% AEP	5% AEP	5% AEP
Horizontal setback distances			
Identified stormwater flow paths (downslope of disposal area)	5 meters	5 meters	5 meters
River, lake, stream, pond, dam or wetland	20 meters	15 meters	15 meters
Coastal marine area	20 meters	15 meters	15 meters
Existing water supply bore	20 meters	20 meters	20 meters
Property boundary	1.5 meters	1.5 meters	1.5 meters
Vertical setback distances			
Winter groundwater table	1.2 meters	0.6 meters	0.6 meters

6.3 NORTHLAND REGIONAL PLAN ASSESSMENT

Any future wastewater disposal system should meet the compliance points below, stipulated within Section C.6.1.3 of the Proposed Regional Plan for Northland:

C.6.1.3 Other on-site treated domestic wastewater discharge– permitted activity	
The discharge of domestic type wastewater into or onto land from an on-site system and the associated discharge of odour into air from the on-site system are permitted activities, provided:	
#	Rule
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
3	The discharge is not via a spray irrigation system or deep soakage system, and
4	The slope of the disposal area is not greater than 25 degrees, and
5	The wastewater has received secondary or tertiary treatment and is discharged via a trench or bed in soil categories 3 to 5 that is designed in accordance with Appendix L of Australian/New Zealand

	Standard. On-site Domestic Wastewater Management (AS/NZS 1547:2012); or is via an irrigation line system that is:
	a) dose loaded, and
	b) covered by a minimum of 50 millimetres of topsoil, mulch, or bark, and
6	For the discharge of wastewater onto the surface of slopes greater than 10 degrees:
	a) the wastewater, excluding greywater, has received at least secondary treatment, and
	b) the irrigation lines are firmly attached to the disposal area, and
	c) where there is an up-slope catchment that generates stormwater runoff, a diversion system is installed and maintained to divert surface water runoff from the up-slope catchment away from the disposal area, and
	d) a minimum 10 metre buffer area down-slope of the lowest irrigation line is included as part of the disposal area, and
	e) the disposal area is located within existing established vegetation that has at least 80 percent canopy cover, or
	f) the irrigation lines are covered by a minimum of 100 millimetres of topsoil, mulch, or bark, and
7	the disposal area and reserve disposal area are situated outside the relevant exclusion areas and setbacks in Table 9: Exclusion areas and setback distances for on-site domestic wastewater systems, and
8	for septic tank treatment systems, a filter that retains solids greater than 3.5 millimetres in size is fitted on the outlet, and
9	the following reserve disposal areas are available at all times:
	a) 100 percent of the existing effluent disposal area where the wastewater has received primary treatment or is only comprised of greywater, or
	b) 30 percent of the existing effluent disposal area where the wastewater has received secondary treatment or tertiary treatment, and
10	the on-site system is maintained so that it operates effectively at all times and maintenance is undertaken in accordance with the manufacturer's specifications, and
11	the discharge does not contaminate any groundwater water supply or surface water, and
12	there is no surface runoff or ponding of wastewater, and
13	there is no offensive or objectionable odour beyond the property boundary.

We envision that the Lots will have no issue meeting the Permitted Activity Status requirements outlined above.

Based on current observations and topography, each lot contains sufficient undeveloped natural ground to accommodate both the primary and reserve wastewater disposal areas in accordance with AS/NZS1547 and TP58. Final sizing and positioning will be confirmed at Building Consent stage.

7 STORMWATER MANAGEMENT

7.1 ASSESSMENT CRITERIA

The stormwater assessment has been completed in accordance with the recommendations and requirements contained within the Far North District Engineering Standards and the Far North District Council District Plan.

As below, the site resides in a Rural Production Zone.

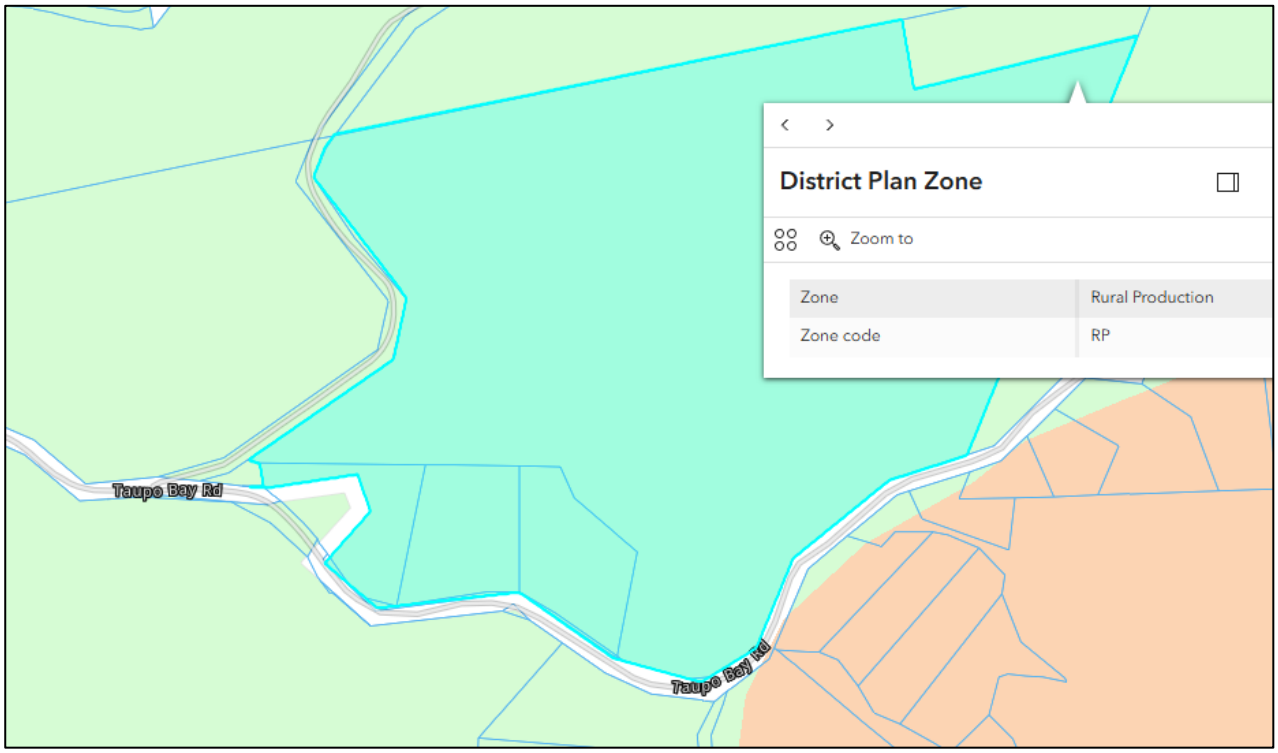


Figure 3: Snip of FNDC Maps showing site in Rural Production Zone.

The following Stormwater Management Rules Apply:

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

Controlled Activity: 8.6.5.2.1 STORMWATER MANAGEMENT – The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 20%.

To comply with the parameters of the Permitted Activity Rule (8.6.5.1.3), Lots 4, 5 & 6 must not exceed an impermeable area of 6,135m², 6,090m² and 6,030m² respectively.

Given the above, it is expected that any residential future development of the Lots would comply with Permitted Activity Rule (8.6.5.1.3). As such, it is not expected that a stormwater attenuation report will be required for any future residential development of the Lots.

To appropriately mitigate stormwater runoff from the future proposed impermeable areas, and in recognition of the highly expansive soils identified in the accompanying Geotechnical Report, it is recommended that stormwater management be designed to control runoff and avoid localised saturation and erosion in the vicinity of future structures and building platforms. Low Impact Design methods are recommended as the primary means of stormwater management. Design guidance should be taken from The Countryside Living Toolbox design document and, where necessary, Technical Publication 10 – Stormwater Management Devices: Design Guidelines Manual (Auckland Regional Council, 2003).

Stormwater management recommendations are provided below.

7.2 PRIMARY STORMWATER

7.2.1 Stormwater Runoff from Roof Areas

Stormwater runoff from the roof of any future buildings must be captured by a gutter system and conveyed to potable water tanks on the corresponding lot.

Discharge and overflow from the rainwater tanks should be directed to a discharge point as specified below via sealed pipes.

7.2.2 Stormwater Runoff from Hardstand Areas

Where driveways are formed perpendicular to the slope of the topography, the driveway may shed runoff to lower-lying grassed areas via even sheet flow, well clear of any structures. Runoff passed through grassed areas will be naturally filtered of entrained pollutants and will act to mitigate runoff by way of ground recharge and evapotranspiration.

Where even sheet flow is not practicable, concentrated flows must be managed with swales to prevent erosion/scouring. These should be sized to manage and provide capacity for secondary flows and mitigate flow velocity where appropriate. Swales are to direct runoff to silt traps with suitably sized grate / scruffy dome inlets, from which runoff may be piped to the discharge point.

Alternatively, if sealed, driveways may be formed to shed runoff to catchpits installed per E1 of the NZ Building Code. Runoff collected via catchpits is to be directed to an outlet as specified below via sealed pipes.

Due to water quality concerns, runoff resulting from hardstand areas should not be allowed to drain to any potable water tanks.

7.2.3 Stormwater Runoff Discharge Point

Discharge and overflow from future potable water tanks / detention tank(s) and any hardstand catchpits / silt traps should be directed an appropriately sized dispersal device within each lot, unless discharge is directed to an open channel, where an appropriate riprap outlet is required for erosion protection. The dispersal device or discharge point should be positioned on/in stable ground downslope of any buildings and wastewater disposal, with setbacks as per the relevant standards.

7.3 SECONDARY STORMWATER

Where required, overland flows and any concentrated runoff from higher ground should be intercepted by means of shallow surface drains or small bunds near structures to protect these from both saturation and erosion.

Based on the local topography of Proposed Lots 4–6 and the limited extent of contributing upslope catchments, future development is not anticipated to be subject to flood risk. Localised surface runoff may occur during heavy rainfall events; however, this can be readily managed through minor swales or shallow bunds where required to intercept and divert flows away from building platforms and to avoid nuisance effects.

7.4 DISTRICT PLAN ASSESSMENT

This section has been prepared to demonstrate the likely effects of the activity on stormwater runoff and the means of mitigating runoff.

In assessing an application under this provision, the Council will exercise discretion to review the following matters below, (a) through (r). In respect of matters (a) through (r), we provide the following comments:

13.10.4 – Stormwater Disposal

(a) Whether the application complies with any regional rules relating to any water or discharge permits required under the Act, and with any resource consent issued to the District Council in relation to any urban drainage area stormwater management plan or similar plan.	No discharge permits are required. No resource consent issued documents stipulating specific requirements are known for the subject site or are anticipated to exist.
(b) Whether the application complies with the provisions of the Council's "Engineering Standards and Guidelines" (2004) - Revised March 2009 (to be used in conjunction with NZS 4404:2004).	The application is deemed compliant with the provisions of the Council's "Engineering Standards and Guidelines" (2004) - Revised March 2009
(c) Whether the application complies with the Far North District Council Strategic Plan - Drainage.	The application is deemed compliant with the Far North District Council Strategic Plan - Drainage
(d) The degree to which Low Impact Design principles have been used to reduce site impermeability and to retain natural permeable areas.	Stormwater management should be provided for the subject lot by utilising Low Impact Design Methods. Guidance for design should be taken from 'The Countryside Living Toolbox' design document, and where necessary, *"Technical Publication 10, Stormwater Management Devices – Design Guidelines Manual" Auckland Regional Council (2003).* All roof runoff will be collected by rainwater tanks for conveyance to a safe outlet point. Hardstand areas should be shaped to shed to swales/catchpits for runoff conveyance to a safe outlet location.
(e) The adequacy of the proposed means of disposing of collected stormwater from the roof of all potential or existing buildings and from all impervious surfaces.	As above. Runoff from new roof areas will be collected, directed to rainwater tanks and discharged in a controlled manner to a designated outlet, reducing scour and erosion. Hardstand areas should be shaped to shed runoff to lower-lying lawn areas as passive mitigation, or to swales/catchpits for runoff conveyance to a safe outlet location.
(f) The adequacy of any proposed means for screening out litter, the capture of chemical spillages, the containment of contamination from roads and paved areas, and of siltation.	Runoff from roof areas is free of litter, chemical spillages, or contaminants from roads. Hardstand areas should be shaped to shed runoff to lower-lying lawn areas as passive mitigation, or to swales/catchpits for runoff conveyance to a safe outlet location. Large downslope pasture areas and swales act as bio-filter strips to filer out entrained pollutants and catchpits/silt traps allow for the settlement of sediment.
(g) The practicality of retaining open natural waterway systems for stormwater disposal in preference to piped or canal systems and adverse effects on existing waterways.	No alteration to waterways is proposed.

(h) Whether there is sufficient capacity available in the Council's outfall stormwater system to cater for increased run-off from the proposed allotments.	Not applicable.
(i) Where an existing outfall is not capable of accepting increased run-off, the adequacy of proposals and solutions for disposing of run-off.	Not applicable.
(j) The necessity to provide on-site retention basins to contain surface run-off where the capacity of the outfall is incapable of accepting flows, and where the outfall has limited capacity, any need to restrict the rate of discharge from the subdivision to the same rate of discharge that existed on the land before the subdivision takes place.	Not applicable.
(k) Any adverse effects of the proposed subdivision on drainage to, or from, adjoining properties and mitigation measures proposed to control any adverse effects.	Outlet locations are to be determined during detailed design and are to be located such that there are no adverse effects on adjacent properties.
(l) In accordance with sustainable management practices, the importance of disposing of stormwater by way of gravity pipe lines. However, where topography dictates that this is not possible, the adequacy of proposed pumping stations put forward as a satisfactory alternative.	Not applicable.
(m) The extent to which it is proposed to fill contrary to the natural fall of the country to obtain gravity outfall; the practicality of obtaining easements through adjoining owners' land to other outfall systems; and whether filling or pumping may constitute a satisfactory alternative.	Not applicable.
(n) For stormwater pipes and open waterway systems, the provision of appropriate easements in favour of either the registered user or in the case of the Council, easements in gross, to be shown on the survey plan for the subdivision, including private connections passing over other land protected by easements in favour of the user.	Not applicable.
(o) Where an easement is defined as a line, being the centre line of a pipe already laid, the effect of any alteration of its size and the need to create a new easement.	Not applicable.
(p) For any stormwater outfall pipeline through a reserve, the prior consent of the Council, and the need for an appropriate easement.	Not applicable.
(q) The need for and extent of any financial contributions to achieve the above matters.	Not applicable.
(r) The need for a local purpose reserve to be set aside and vested in the Council as a site for any public utility required to be provided.	Not applicable.

8 LIMITATIONS

We anticipate that this report is to be submitted to Council in support of a Resource/Subdivision Consent application.

This report has been commissioned solely for the benefit of our client, in relation to the project as described herein, and to the limits of our engagement, with the exception that the local Territorial Authority may rely on it to the extent of its appropriateness, conditions, and limitations, when issuing the subject consent. This report does not include a flood assessment or freeboard recommendations.

Any variations from the development proposals as described herein as forming the basis of our appraisal should be referred back to us for further evaluation. Copyright of Intellectual Property remains with Wilton Joubert Limited, and this report may NOT be used by any other entity, or for any other proposals, without our written consent. Therefore, no liability is accepted by this firm or any of its directors, servants, or agents, in respect of any other civil aspects of this site, nor for its use by any other person or entity, and any other person or entity who relies upon any information contained herein does so entirely at their own risk. Where other parties may wish to rely on it, whether for the same or different proposals, this permission may be extended, subject to our satisfactory review of their interpretation of the report.

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

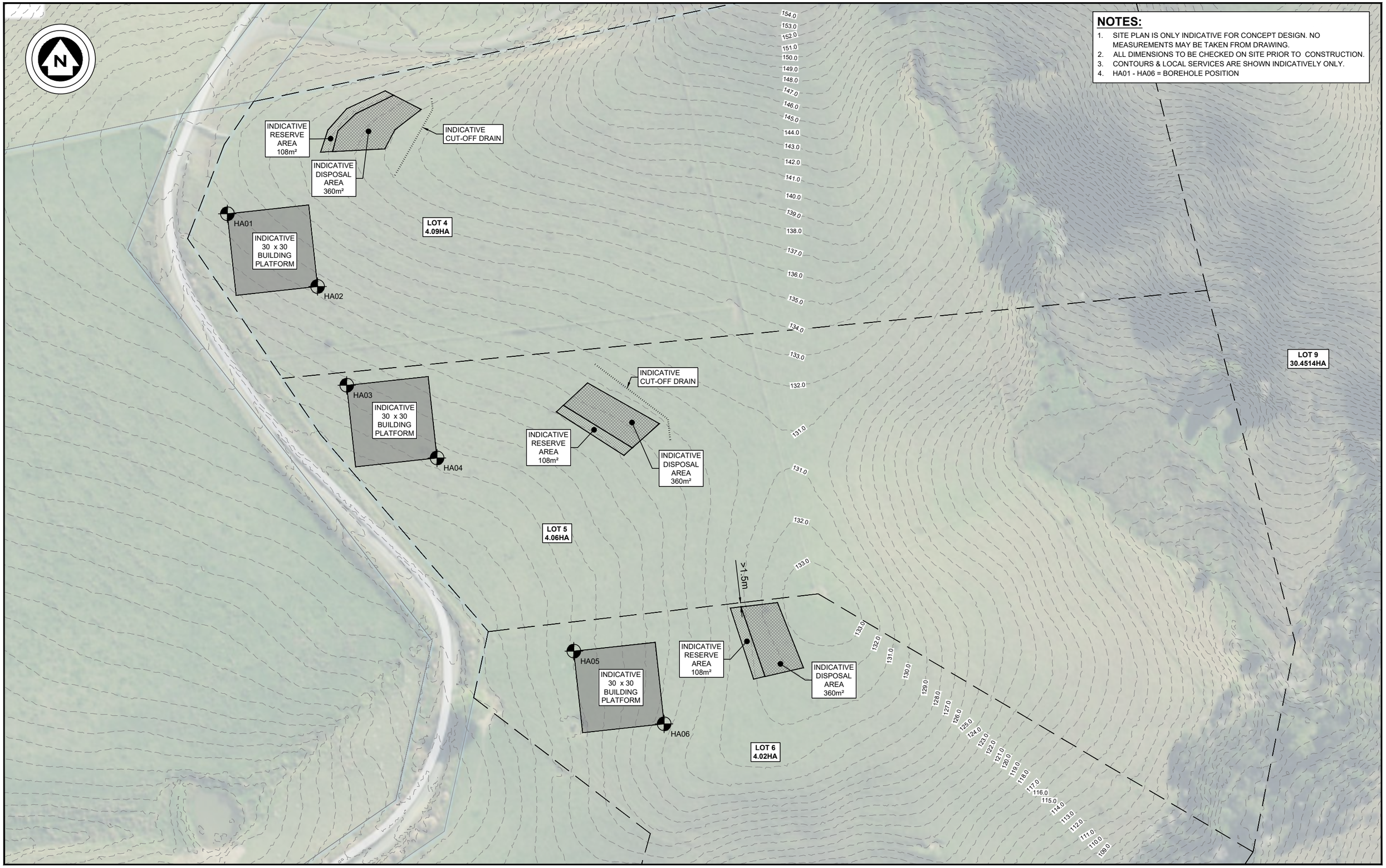
Thank you for the opportunity to provide our service on this project, and if we can be of further assistance, please do not hesitate to contact us.

Yours faithfully,

WILTON JOUBERT LIMITED

Enclosures:

- Site Plan – C001 (1 sheet)
- Hand Auger Borehole Records (6 sheets)



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ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
01	JAN '26	GMB	CIVIL SITE SUITABILITY REPORT

DESIGNED BY: GMB
DRAWN BY: GMB
CHECKED BY: BGS
SURVEYED BY: N/A

SERVICES NOTE
WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. WILTON JOUBERT LTD DOES NOT WARRANT THAT ALL, OR INDEED ANY SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.

RESOURCE CONSENT
DESIGN / DRAWING SUBJECT TO ENGINEER'S APPROVAL

DRAWING TITLE: **SITE PLAN**

PROJECT DESCRIPTION: **CIVIL SITE SUITABILITY REPORT**

PROJECT TITLE: **LOT 9 RC 2120373 TAUPO BAY ROAD TAUPO BAY NORTHLAND**

ORIGINAL DRAWING SIZE: A3
OFFICE: **OREWA**
DRAWING SCALE: **1:1250**
CO-ORDINATE SYSTEM: NOT COORDINATED
DRAWING NUMBER: **144123-C001**
ISSUE: **01**

HAND AUGER : HA01

CLIENT: Geoffrey Lodge
PROJECT: 4-Lot Subdivision (3 Lots for Assessment)
SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay

JOB NO.: 144122 **SHEET:** 1 OF 1
START DATE: 12/12/2025 **NORTHING:** **GRID:**
DIAMETER: 50mm **EASTING:**
SV DIAL: DR4802 **ELEVATION:** Ground
FACTOR: 1.39 **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE PEAK STRENGTH (kPa)	SHEAR VANE REMOULD STRENGTH (kPa)	SHEAR VANE SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
Topsoil	TOPSOIL, dark brown, dry.	TS	0.2	Groundwater Not Encountered					
Tupou Complex in Northland Allochthon	NATURAL: Clayey SILT, light brown with occasional orange and red clast specks, very stiff, dry, low plasticity.		0.4		158	8	20		
	Silty CLAY, light brown, very stiff, dry to moist, moderate plasticity.		0.6						
			0.8		136	47	2.9		
	1.0m: Brown, moist.		1.0						
	Clayey SILT, purplish brown with red, orange, white and brown mottles, very stiff, moist, low to moderate plasticity.		1.2		100	56	1.8		
			1.4						
			1.6		195+	-	-		
			1.8						
			2.0		195+	-	-		
			2.2						
			2.4						
			2.6		111	39	2.8		
			2.8						
	EOH: 3.00m - Target Depth		3.0		81	33	2.5		
			3.2						
			3.4						
			3.6						
			3.8						
			4.0						
			4.2						
			4.4						
			4.6						
			4.8						
			5.0						
			5.2						
			5.4						

REMARKS
End of borehole @ 3.00m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: SJP
CHECKED BY: CSH

▼ Standing groundwater level
▽ GW while drilling

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HAND AUGER : HA02

JOB NO.: 144122 **SHEET:** 1 OF 1

START DATE: 12/12/2025 **NORTHING:** **GRID:**

CLIENT: Geoffrey Lodge **DIAMETER:** 50mm **EASTING:**

PROJECT: 4-Lot Subdivision (3 Lots for Assessment) **SV DIAL:** 1994 **ELEVATION:** Ground

SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay **FACTOR:** 1.41 **DATUM:**

TOPSOIL CLAY SAND PEAT FILL SILT GRAVEL ROCK

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE: PEAK STRENGTH (kPa)	SHEAR VANE: REMOULD STRENGTH (kPa)	SHEAR VANE: SENSITIVITY	DCP - SCALA (Blows / 100mm)	COMMENTS, SAMPLES, OTHER TESTS
ps nil	TOPSOIL, dark brown, dry.	TS	0.0						
Tupou Complex in Northland Allochthon	NATURAL: Silty CLAY, light brown, very stiff, dry to moist, low to moderate plasticity.		0.2						
			0.4		141	31	4.5		
	0.6m: Moist, moderate plasticity.		0.6						
			0.8		133	51	2.6		
	1.0m: Occasional clasts, purplish brown.		1.0						
			1.2		127	48	2.6		
	1.3m: Red with light brown, purple and white mottles.		1.4						
	1.6m: Purplish brown with brown mottles and white specks, stiff.		1.6	Groundwater Not Encountered	87	28	3.1		
			1.8						
	2.0m: Very stiff.		2.0		135	68	2.0		
			2.2						
	2.4m: Moist to wet.		2.4		130	45	2.9		
			2.6						
			2.8		104	42	2.5		
			3.0						
	3.2m: Brown with white streaks.		3.2		104	48	2.2		
			3.4						
			3.6		113	54	2.1		
			3.8						
			4.0		141	51	2.8	8	
	EOH: 4.00m - Poor Recovery Due To Borehole Squeezing		4.2					10	
			4.4					10	
			4.6					10	
			4.8					8	
			5.0					8	
			5.2					10	
			5.4					10	
								10	

REMARKS

End of borehole @ 4.00m (Target Depth: 5.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: JEM

CHECKED BY: CSH

▼ Standing groundwater level

▽ GW while drilling

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HAND AUGER : HA03

JOB NO.: 144122 **SHEET:** 1 OF 1

START DATE: 12/12/2025 **NORTHING:** **GRID:**

CLIENT: Geoffrey Lodge **DIAMETER:** 50mm **EASTING:**

PROJECT: 4-Lot Subdivision (3 Lots for Assessment) **SV DIAL:** DR4802 **ELEVATION:** Ground

SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay **FACTOR:** 1.39 **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE PEAK STRENGTH (kPa)	SHEAR VANE REMOULD STRENGTH (kPa)	SHEAR VANE SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
Topsoil	TOPSOIL, dark brown, dry.	TS	0.2	Groundwater Not Encountered					
Tupou Complex in Northland Allochthon	NATURAL: Clayey SILT, light brown with occasional orange and red clast specks, very stiff, dry, low plasticity.		0.4		195+	-	-		
	Silty CLAY, light brown with occasional orange mottles, very stiff, dry to moist, moderate plasticity.		0.6						
			0.8		114	50	2.3		
	1.1m: Brown with yellowish brown and white mottles, moist.		1.0						
			1.2		106	50	2.1		
	1.4m: Yellowish brown and reddish brown with white mottles.		1.4						
	1.6m: Stiff.		1.6		97	44	2.2		
			1.8						
			2.0		86	42	2.0		
	Clayey SILT, purplish brown and reddish brown with white, yellow and brown mottles, stiff, moist, low to moderate plasticity.		2.2						
			2.4						
			2.6		100	56	1.8		
			2.8						
			3.0						
	EOH: 3.00m - Target Depth		3.0		83	31	2.7		
			3.2						
			3.4						
			3.6						
			3.8						
			4.0						
			4.2						
			4.4						
			4.6						
			4.8						
			5.0						
			5.2						
			5.4						

REMARKS

End of borehole @ 3.00m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: SJP

CHECKED BY: CSH

▼ Standing groundwater level

▽ GW while drilling

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HAND AUGER : HA04

CLIENT: Geoffrey Lodge
PROJECT: 4-Lot Subdivision (3 Lots for Assessment)
SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay

JOB NO.: 144122 **SHEET:** 1 OF 1
START DATE: 12/12/2025 **NORTHING:** **GRID:**
DIAMETER: 50mm **EASTING:**
SV DIAL: 1994 **ELEVATION:** Ground
FACTOR: 1.41 **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE: PEAK STRENGTH (kPa)	SHEAR VANE: REMOULD STRENGTH (kPa)	SHEAR VANE: SENSITIVITY	DCP - SCALA (Blows / 100mm)	COMMENTS, SAMPLES, OTHER TESTS
TS ps nil	TOPSOIL, dark brown, dry.	TS	0.0						
Tupou Complex in Northland Allochthon	NATURAL: Clayey SILT, light brown, very stiff, dry to moist, low to moderate plasticity.		0.2						
			0.4		130	28	4.6		
			0.6						
	Silty CLAY, orangey brown, very stiff, moist, moderate plasticity.		0.8		121	45	2.7		
			1.0						
			1.2		104	54	1.9		
	1.6m: Stiff, moist to wet.		1.6		90	25	3.6		
	Clayey SILT, orangey brown with white mottles, stiff, moist to wet, low plasticity.		1.8						
			2.0		90	31	2.9		
			2.2						
	2.4m: Orangey brown with light brown mottles, very stiff, wet.		2.4	▼ 12/12/2025	127	51	2.5		
	2.6m: Occasional red streaks.		2.6						
			2.8		102	39	2.6		
			3.0	▽					
			3.2		135	42	3.2		
			3.4						
	EOH: 3.50m - Poor Recovery Due To Borehole Squeezing		3.6					3	
			3.8					4	
			4.0					4	
			4.2					7	
			4.4					7	
			4.6					10	
			4.8					10	
			5.0					10	
			5.2					10	
			5.4					10	
								11	
								12	
								12	
								13	

SOIL DESCRIPTION
TOPSOIL, CLAY, SAND, PEAT, FILL, SILT, GRAVEL, ROCK

REMARKS
End of borehole @ 3.50m (Target Depth: 5.00m)
Groundwater encountered @ 3.00m during drilling. Standing groundwater @ 2.40m.

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: JEM
CHECKED BY: CSH

▼ Standing groundwater level
▽ GW while drilling

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HAND AUGER : HA05

JOB NO.: 144122 **SHEET:** 1 OF 1

START DATE: 12/12/2025 **NORTHING:** **GRID:**

CLIENT: Geoffrey Lodge **DIAMETER:** 50mm **EASTING:**

PROJECT: 4-Lot Subdivision (3 Lots for Assessment) **SV DIAL:** DR4802 **ELEVATION:** Ground

SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay **FACTOR:** 1.39 **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE: PEAK STRENGTH (kPa)	SHEAR VANE: REMOULD STRENGTH (kPa)	SHEAR VANE: SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
Topsoil	TOPSOIL, dark brown, dry.	TS	0.2	Groundwater Not Encountered					
Tupou Complex in Northland Allochthon	NATURAL: Clayey SILT, yellowish brown with white mottles, very stiff, dry to moist, low to moderate plasticity.		0.4		145	25	5.8		
	Silty CLAY, Yellowish brown with white mottles, stiff, moist, moderate plasticity.		0.6						
	0.8m: Yellow with white and orange motttles.		0.8		92	31	3.0		
			1.0						
			1.2		97	39	2.5		
	1.6m: 100mm lense of orangey with white mottles, firm.		1.6		50	14	3.6		
			1.8						
	2.0m: 200mm lense of orange with white mottles.		2.0		33	14	2.4		
	2.2m: Orange and yellow with white mottles, stiff.		2.2						
			2.4						
			2.6		86	25	3.4		
	Clayey SILT, white with yellow and orange mottles, stiff, moist, low to moderate plasticity.		2.8						
	EOH: 3.00m - Target Depth		3.0		70	14	5.0		
			3.2						
			3.4						
			3.6						
			3.8						
			4.0						
			4.2						
			4.4						
			4.6						
			4.8						
			5.0						
			5.2						
			5.4						

TOPSOIL CLAY SAND PEAT FILL SILT GRAVEL ROCK

REMARKS

End of borehole @ 3.00m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: SJP

CHECKED BY: CSH

▼ Standing groundwater level

▽ GW while drilling

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HAND AUGER : HA06

JOB NO.: 144122 **SHEET:** 1 OF 1

START DATE: 12/12/2025 **NORTHING:** **GRID:**

CLIENT: Geoffrey Lodge **DIAMETER:** 50mm **EASTING:**

PROJECT: 4-Lot Subdivision (3 Lots for Assessment) **SV DIAL:** 1994 **ELEVATION:** Ground

SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay **FACTOR:** 1.41 **DATUM:**

TOPSOIL CLAY SAND PEAT FILL SILT GRAVEL ROCK

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE: PEAK STRENGTH (kPa)	SHEAR VANE: REMOULD STRENGTH (kPa)	SHEAR VANE: SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
ps	TOPSOIL, brown and grey, dry.	TS	0.0						
	NATURAL: SILT, grey, hard, dry, no plasticity.								
	SILT, minor clay, grey and brown, very stiff, dry, no plasticity.		0.2						
			0.4		197+	-	-		
	Clayey SILT, light brown and greyish brown, very stiff, dry to moist, low plasticity.		0.6						
			0.8		147	39	3.8		
	0.9m: Occasional brown organic inclusions.								
	1.0m: Moist.		1.0						
			1.2		147	37	4.0		
			1.4						
	1.6m: Yellowish brown with grey mottles.		1.6		197+	-	-		
			1.8						
			2.0		144	37	3.9		
			2.2						
			2.4		116	42	2.8		
	2.5m: Grey and brown.		2.6						
	2.8m: Greyish brown with yellowish brown mottles.		2.8		113	39	2.9		
			3.0						
			3.2		169	51	3.3		
	3.3m: Greyish brown.		3.4						
			3.6		197+	-	-		
			3.8						
			4.0		197+	-	-		
			4.2						
			4.4						
	EOH: 4.50m - Too Hard To Auger		4.6		UTP	-	-		
			4.8						
			5.0						
			5.2						
			5.4						

Tupou Complex in Northland Allochthon

Groundwater Not Encountered

REMARKS

End of borehole @ 4.50m (Target Depth: 5.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: JEM

CHECKED BY: CSH

▼ Standing groundwater level

▽ GW while drilling

WILTON JOUBERT Consulting Engineers

185 Waipapa Road, Kerikeri 0295
Phone: 09-945 4188
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Appendix 8

Site Assessment Report

Wilton Joubert Limited
09 945 4188
185 Waipapa Road,
Kerikeri

SITE	**Taupo Bay Road, Taupo Bay**
LEGAL DESCRIPTION	**Lot 9 RC 2120373**
PROJECT	**Proposed 4-Lot Subdivision (Proposed Lots 4-6 for Assessment)**
CLIENT	**Geoffrey Lodge**
REFERENCE NO.	**144122**
DOCUMENT	**Site Assessment Report**
STATUS/REVISION NO.	**FINAL – Issued for Resource Consent**
DATE OF ISSUE	**19 December 2025**

Report Prepared For	Attention	Email
Geoffrey Lodge	Lynley Newport	g.lodge@xtra.co.nz lynley@tsurvey.co.nz

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1. EXECUTIVE SUMMARY

The following table is intended to be a concise summary which must be read in conjunction with the relevant report sections as referenced herein.

Development Type:	4-Lot subdivision (Proposed Lots 4-6 for assessment).
Development Proposals Supplied:	Yes – Subdivision Scheme Plan.
NZS3604 Type Structure(s):	Future structures are assumed to be.
Earthworks Proposed:	Due to variablle soils encountered across the nominated Designated Building Platforms DBPs, we recommend no earthworks are undertaken until site-specific proposals have been Geotechnically assessed during the Building Consent stage. Such assessments will need to provide appropriate cut-fill parameters and limits that are Geotechnically appropriate for the subsoils encountered across future development locations.
Geology Encountered:	Tupou Complex in Northland Allocothon.
Topsoil Encountered:	Yes – Surficial layers were encountered to depths ranging between 0.10m to 0.25m below present ground level.
Overall Site Gradient in Proximity to Designated Building Platforms:	Gently inclined (averages less than 8°).
Site Stability Risk:	Low risk of instability at the site.
Liquefaction Risk:	Negligible risk of liquefaction susceptibility.
Suitable Foundation Type(s):	Shallow foundations, such as a reinforced, stiffened raft slab foundation system, slab-on-grade with deepened perimeter strip footings, or timber subfloor suspended on bored timber piles/poles, will likely be suitable to support future dwellings within the DBPs at proposed Lots 4-6, provided they are designed to accommodate vertical movement of soil associated with Soil Reactivity **Class H – Highly Reactive**.
Soil Bearing Capacity:	The available Geotechnical Ultimate Bearing Capacity for future foundation design purposes at proposed Lots 4-6 should be confirmed via site-specific Geotechnical assessments undertaken during the Building Consent stage. For preliminary soil bearing capacity refer to Section 9.3 of this report.
NZBC B1 Expansive Soil Classification:	Class H – Highly Expansive (ys = 78mm).
NZS1170.5:2004 Site Subsoil Classification:	Class C – Shallow soil stratigraphy.

Consent Application Report Suitable for:	**Resource (Subdivision) Consent** – No geotechnical hazards were identified as listed in the Resource Management Act (RMA) Section 106 that are considered a constraint to the proposed subdivision and cannot be addressed by typical engineering design/construction.

2. INTRODUCTION

2.1. SCOPE OF WORK

Wilton Joubert Limited (WJL) was engaged by **Geoffrey Lodge** (the Client) to undertake a geotechnical assessment of the ground conditions at the subject site, where we understand, it is proposed to subdivide the existing property into four individual allotments.

The primary purpose of this report is to provide Geotechnical assessments along with preliminary design recommendations pertaining to future residential development within vacant proposed Lots 4-6.

Proposed Lot 9 is a balance Lot of approximately 30ha and is excluded from our assessments.

It is our understanding that this report will be submitted to support a Resource Consent application for the proposed subdivision development.

2.2. SUPPLIED INFORMATION

At the time of preparing this report, we were supplied with a Subdivision Scheme Plan, dated 30th October 2025 (Ref: 10849), prepared by Thomson Survey Limited.

Any revision of the Subdivision Scheme Plan with Geotechnical implications should be referred to us for review.

3. SITE DESCRIPTION

The proposed development will be created across the following (the site), which is located off the northern side of Taupo Bay Road and is bound by a right-of-way (ROW), titled Waimahana Road, along the western boundary:

- Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay.

The surface area of the subject block is 45.621ha and is accessed at the northwestern boundary corner via a farm gate from Waimahana Road. The Taupo Bay Fire Station is located adjacent to the Taupo Bay Road and Waimahana Road intersection.

The site is vacant of structures and is largely covered in pasture. Tributary watercourses traverse from the northeastern to southwestern boundary and east to west through the southern end of the block. The northernmost watercourse is generally lined in dense bush. The watercourses connect near the southwestern boundary, ultimately discharging into the Waipukakakau Stream towards the northwest.

Proposed Lots 4-6 are to be created across the western portion of the block. Topographically speaking, the proposed Lots are set around a broad spur flank and local ridge crest feature that straddle north to south through the central area of the Lots. The western portion of the Lots are gently sloping, falling at inclinations averaging less than 8° down to Waimahana Road. The eastern and southern portions are essentially covered by moderate to steeply inclined side flanks and gullies that descend to the above-mentioned watercourses. A stormwater overland flow path traverses west in between the common boundary of proposed Lot 5 and 6.

The Far North District Council (FNDC) on-line GIS Water Services Map indicates that public underground services connections are not available to the property. It should be noted that overhead powerlines trend through proposed Lots 4-6 and as such, it is recommended that Top Energy is contacted to determine any applicable building offsets.

The site is shown on our appended Site Plan (Drawing No. 144122-G600) and in Figure 1 below.

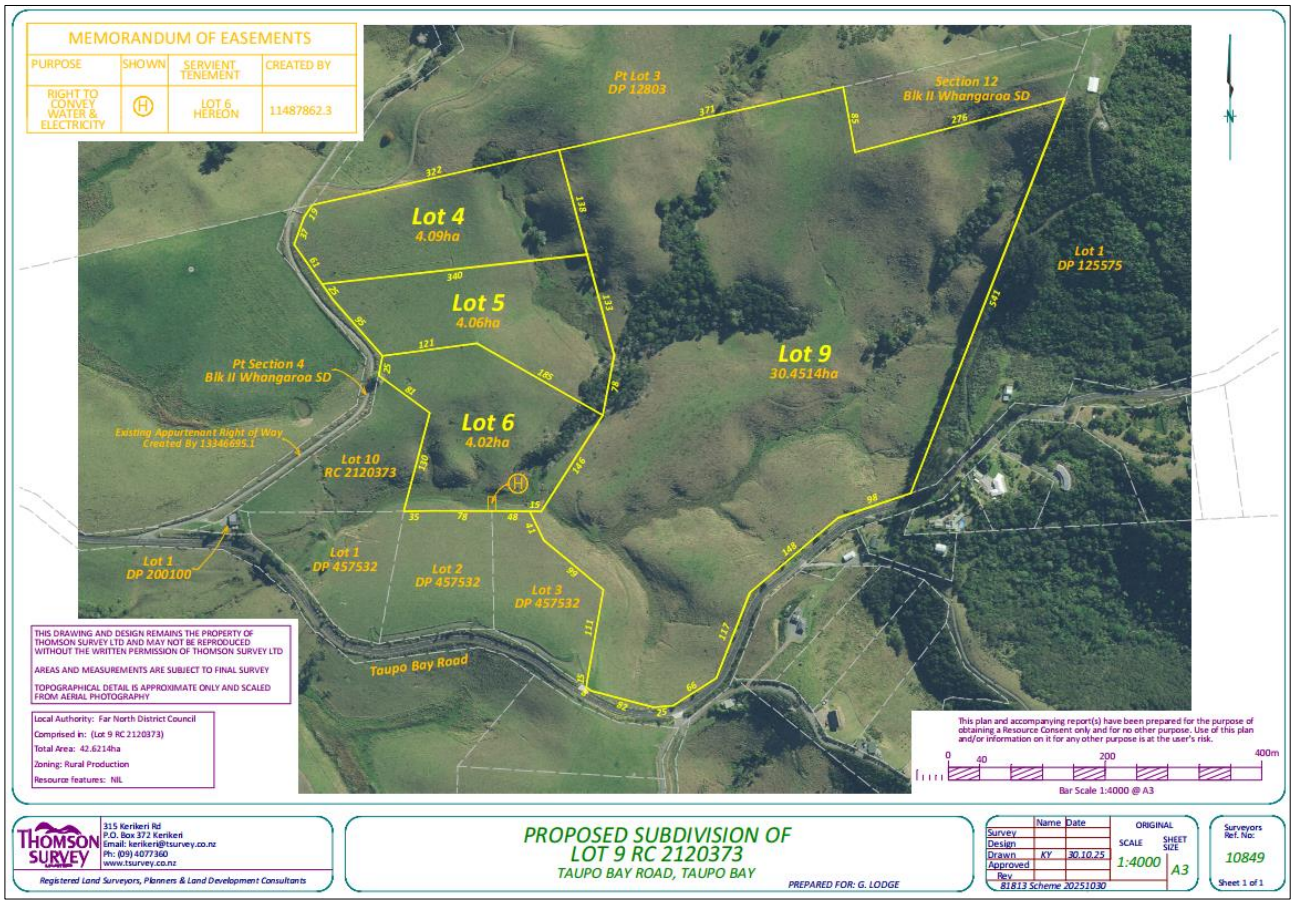


Figure 1: Subdivision Scheme Plan (from Thomson Survey Limited).

4. DEVELOPMENT PROPOSALS

Based on our review of the supplied Subdivision Scheme Plan that is depicted in Figure 1 above, we understand that it is proposed to subdivide the subject block into four individual allotments.

We have been engaged to provide Geotechnical assessments along with preliminary design recommendations pertaining to future residential development within 30m x 30m (900m²) designated building platforms (DBP) that are located near the common western boundary of proposed Lots 4-6, as depicted on our appended Site Plan.

For the purposes of this report, we have assumed any future development will comprise of a lightweight building, designed and constructed generally in keeping with the requirements of NZS3604:2011.

At this preliminary stage, we are not aware of any future earthwork proposals. Engineered cut-fill earthwork operations will be required to create level building platforms for any proposed concrete floor slab foundation.

As a result, the principal objectives were to investigate and assess the suitability of foundation options for the site subsoils, not only primarily in terms of bearing capacity, but also for differential foundation movement.

5. DESKTOP STUDY

5.1. PUBLISHED GEOLOGY

Local geology across the proposed Lots 4-6 DBPs and wider surrounding influential land is noted on the GNS Science New Zealand Geology Web Map, Scale 1:250,000, as; Tupou Complex in Northland Allochthon.

These deposits are approximately 108 to 100 million years in age and described as; "*Strongly indurated, poorly stratified conglomerate, sandstone and argillite*" (Ref: GNS Science Website).

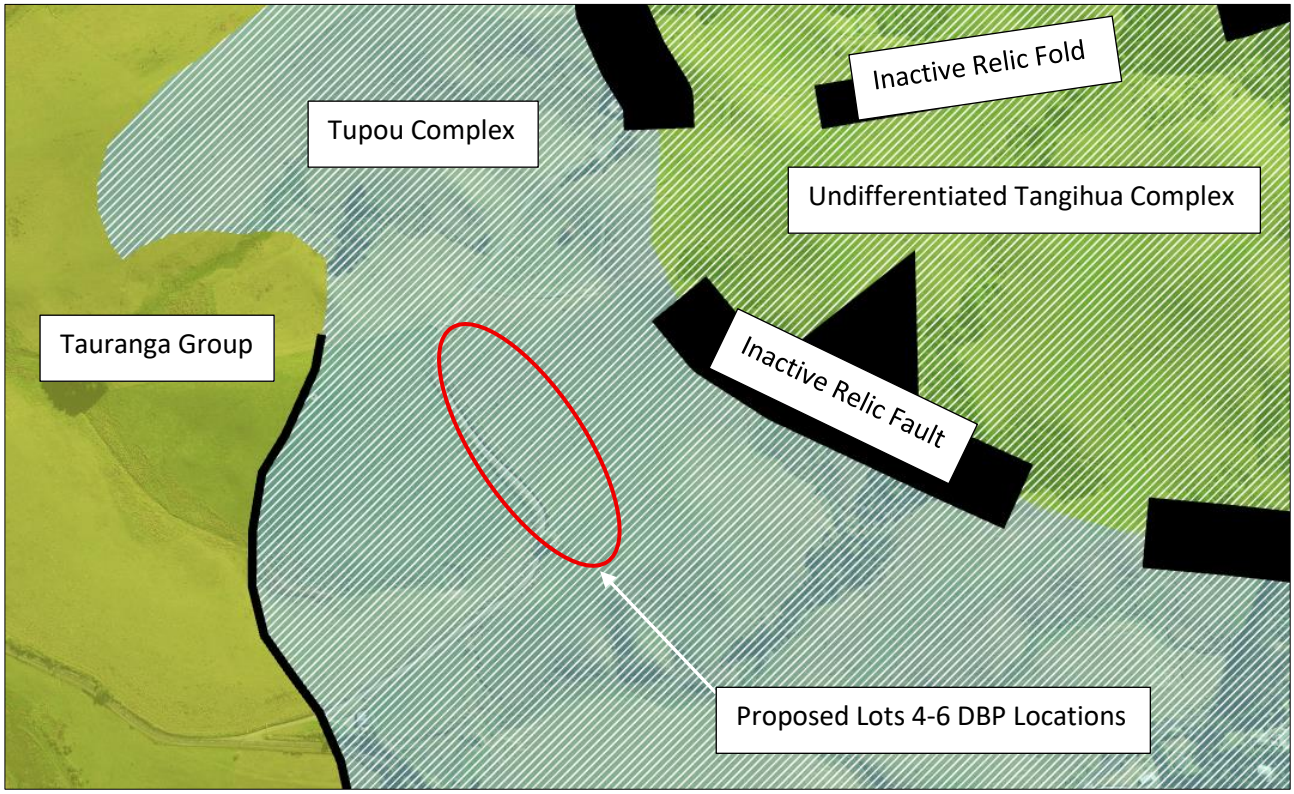


Figure 2: Screenshot from the New Zealand Geology Web Map hosted by GNS Science.

5.2. HISTROICAL AERIAL PHOTOGRAPHY REVIEW

A historical aerial photography review was undertaken to evaluate any slope instability features or changes in landform across the proposed Lots 4-6.

Aerial images from 1948 have been reviewed and compared to the present-day conditions of 2025.

There were no visible significant geomorphological changes in the landscape or obvious features consistent with major ground instability, indicating a period of stable ground conditions between 1948 and 2025 as shown in Figure 3 and 4 below.

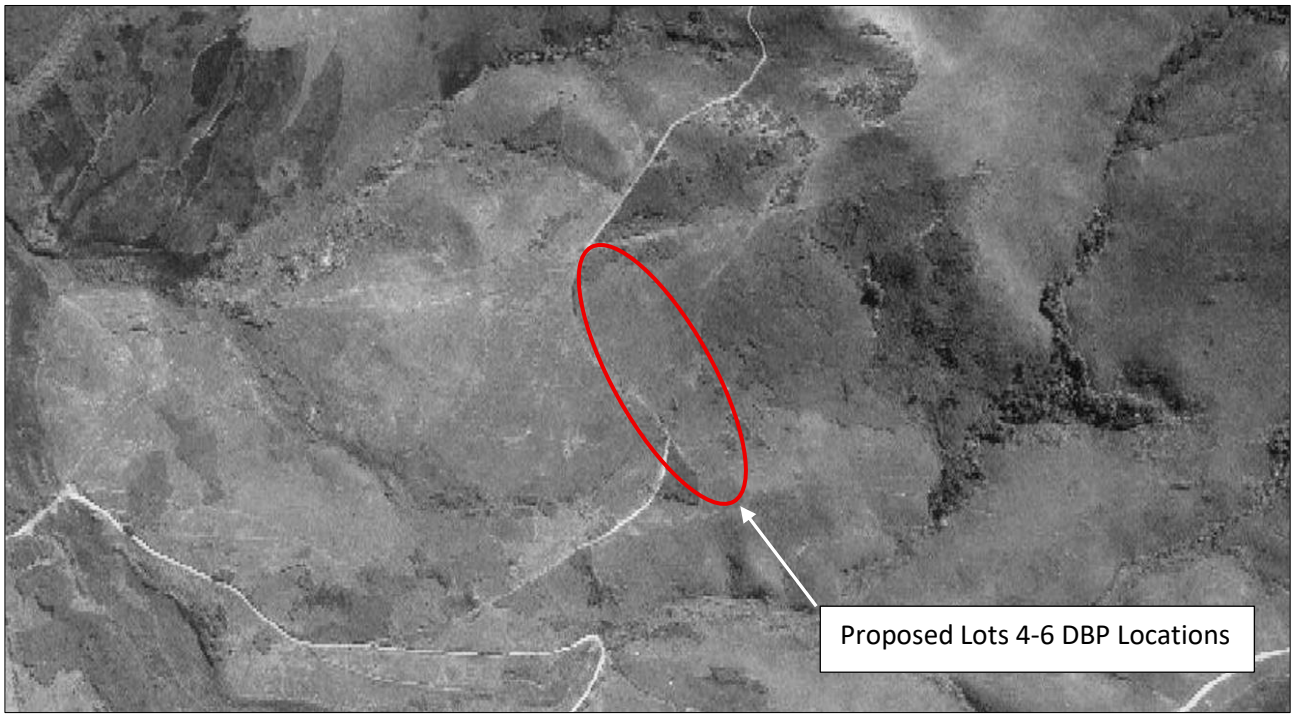


Figure 3: Historical aerial photo from 1948 (Source: https://retrolens.co.nz).

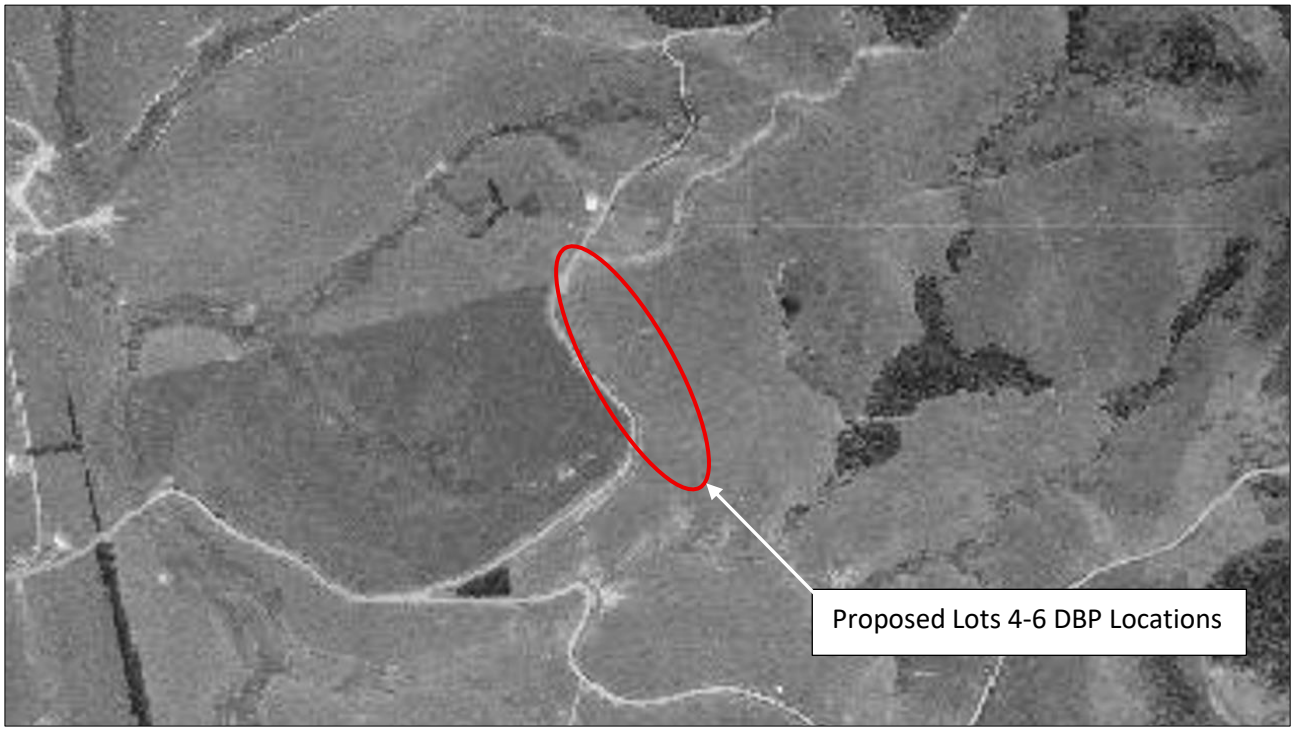


Figure 4: Historical aerial photo from 1981 (Source: https://retrolens.co.nz).

6. GEOTECHNICAL INVESTIGATION

Our fieldwork, as depicted on our appended Site Plan, was undertaken on 12 December 2025 and involved:

- Drilling 6 (no.) 50mm diameter hand auger boreholes (HA01 to HA06 inclusive) to depths ranging between 3.0m and 4.5m below present ground level (bpgl), and
- Dynamic Cone Penetrometer (DCP-Scala) tests were undertaken from the base of HA02 and HA04 both to a depth of 4.9m bpgl.

Additionally, we have drawn 4 (no.) appended Cross-sections, being A-A', B-B', C-C' and D-D' (Drawing Nos. 144122-G610, 144122-G611, 144122-G612 and 144122-G6130), using LiDAR data sourced from the Land Information New Zealand (LINZ) database to represent the topography of the proposed Lot 4-6 DBP's and surrounding influential land.

7. GEOTECHNICAL FINDINGS

The soil sample arisings from the boreholes were logged generally in accordance with the *"Field Description of Soil and Rock",* New Zealand Geotechnical Society (NZGS), December 2005.

The following is a summary of the ground conditions encountered in our investigations. Please refer to the appended logs for greater detail.

7.1. TOPSOIL

Surficial topsoil was encountered in all six boreholes to depths ranging between 0.10m to 0.25m bpgl.

7.2. NATURAL GROUND

The underlying natural deposits encountered were consistent with our expectations of Tupou Complex in Northland Allochthon deposits, generally comprising stiff to very stiff clayey SILT and silty CLAY.

In HA05, a softer, firm layer of silty clay was encountered between 1.6m to 2.2m bpgl. Additionally, in HA06, a 0.10m thick layer of hard, SILT was initially underlying the surficial topsoil.

Measured in-situ BS1377 adjusted peak Vane Shear Strengths ranged between 33kPa and greater than 195kPa and/or 197kPa, the latter two being where soil strength was in excess of the shear vane capacity, or the vane was unable to penetrate the soil (UTP).

DCP-Scala testing below the base of HA02 and HA04 return blow counts ranging between 3 and 13 blows per 100mm penetration, indicating medium dense to dense stratum at depth.

The ratio of peak to remoulded vane shear strength values measured within the boreholes generally ranged between 1.8 and 5.8, indicating the underlying subsoils are 'Moderately Sensitive to Sensitive' subgrade. In HA01, an isolated high of 20 was measured at a depth of 0.4m bpgl, likely influenced by the current dry summer conditions.

Sensitive soil sites require to protect the subgrade from rain, wind, etc., and to avoid (or minimise) construction traffic and vibrating plants.

7.3. GROUNDWATER

Groundwater was only encountered in HA04 at a depth of 3.0m bpgl on the day of our investigation, ultimately stabilising at a standing level of 2.4m bpgl.

7.4. SUMMARY TABLE

The following table summarises our inferred stratigraphic profiling:

Table 1: Stratigraphic Summary Table

Investigation Hole ID	Termination Depth (m)	Depth to Base of Surficial Topsoil (m)	Vane Shear Strength Range within Natural Ground (kPa)	DCP-Scala Blow Count Range Per 100mm Penetration Below Borehole Base	DCP-Scala Termination Depth Below Borehole Base (m)	Standing Groundwater Depth (m)
HA01	3.0	0.20	81 – 195+	NT	NT	NE
HA02	4.0 (1)	0.10	87 - 141	8 - 10	4.9	NE
HA03	3.0	0.20	83 – 195+	NT	NT	NE
HA04	3.5 (1)	0.10	90 - 135	3 - 13	4.9	2.4
HA05	3.0	0.25	33 - 145	NT	NT	NE
HA06	4.5 (2)	0.10	113 – 197+ / UTP	NT	NT	NE

Table Note: (1) Poor recovery due to borehole squeezing, (2) Too hard to hand auger, NE=Not encountered, NT=Not tested.

7.5. EXPANSIVE SOILS

Naturally occurring, seasonal moisture variations are a strong characteristic of most Upper North Island soils, typically resulting in plastic soil masses swelling during winter months and then shrinking during summer months. Such volumetric changes in foundation soils (broadly termed 'Expansive Soils') vary according to clay mineralogy and geology and are a significant risk to buildings.

In this instance, in the absence of laboratory testing, but instead adopting the visual-tactile method as per AS2870, considering the high clay content present at likely foundation levels, we have adopted a conservative primary classification estimate of the soils underlying the site as follows:

- NZBC B1 Expansive Soil Class H
- Upper Limit of Characteristic surface movement (y_s) 78mm

Effects of expansive soils for all future foundations will require mitigation by way of specific engineering design (SED) deepened strip, pad and bored footings, or a reinforced, stiffened raft slab foundation system. Foundation design recommendations are given in the appropriate Conclusion and Recommendation sections below.

We recommend a lot-by-lot expansivity testing for future housing development (Building Consent Stage) to confirm or modify the recommended soil class above.

8. GEOTECHNICAL ASSESSMENTS

As appropriate to the site conditions, we have carried out the following geotechnical analyses:

- Qualitative slope stability, and
- Liquefaction susceptibility.

8.1. QUALITATIVE SLOPE STABILITY

The ground surface across the proposed Lots 4-6 DBPs and surrounding influential land is gently sloping for a considerable distance, falling at inclinations averaging less than 8° towards Waimahana Road.

Our assessment also considered the following:

- Firm to very stiff soils of the Tupou Complex in Northland Allochthon encountered during our investigations,
- DCP-Scala testing below the base of HA02 and HA04 indicating medium dense to dense stratum at depth,
- Groundwater was only encountered in HA04 at a depth of 3.0m bpgl on the day of our investigation, ultimately stabilising at a standing level of 2.4m bpgl,
- The DBPs are situated in an elevated topographical location, set no less than approximately RL120m New Zealand Vertical Datum (NZVD), with good water-shedding characteristics down to Waimahana Road,
- There are no known active faults traversing through or close to the site,
- No visual signs of ground instability were observed near the DBPs at the time of our investigation. A review of historical aerial photography confirms the absence of any obvious slope instability, and
- The DBPs located on gently sloping ground, setback no less than 36m from moderately inclined slopes, as depicted on our appended Cross-section D-D'.

8.2. SLOPE STABILITY ASSESSMENT CONCLUSION

Based on our qualitative assessment, land instability is not considered to be a constraint or risk to the DBPs at proposed Lots 4-6.

8.3. LIQUEFACTION SUSCEPTIBILITY

Liquefaction is the loss of effective strength of a cohesionless soil (typically sand) due to pore-water pressures generated during a seismic event (earthquake). The partial or complete loss of effective strength of loose, saturated soils can result in vertical settlement and/or horizontal movement (lateral spreading) of the ground.

A commonly accepted definition is: "Areas susceptible to liquefaction generally correspond with geologically young deposits (less than 10,000 years) located in relatively flat areas close to active or abandoned waterways, in coastal or estuarine areas, and/or areas of uncompacted or poorly compacted fill." None of these characteristics apply to this site.

We have carried out liquefaction susceptibility assessments in order to identify the risk of ground damage during a seismic event, based on the following items:

- The FNDC online GIS Hazard Map categorises the site as an 'Undetermined' Liquefaction Vulnerability area,
- Firm to very stiff soils of the Tupou Complex in Northland Allochthon encountered during our investigations,
- DCP-Scala testing below the base of HA02 and HA04 indicating medium dense to dense stratum (at depth,

- Groundwater was only encountered in HA04 at a depth of 3.0m bpgl on the day of our investigation, ultimately stabilising at a standing level of 2.4m bpgl,
- The DBP's are situated in an elevated topographical location, set no less than approximately RL120m New Zealand Vertical Datum (NZVD), with good water-shedding characteristics down to Waimahana Road,
- There are no known active faults traversing through or close to the site, and
- Soils and rock of the Northland Allochthon underlie the site (Early Cretaceous).

8.4. LIQUEFACTION ASSESSMENT CONCLUSION

Based on our susceptibility assessment, we conclude that the soils at the site have a negligible risk of liquefaction susceptibility, and therefore liquefaction induced ground damage is consequently unlikely.

9. CONCLUSIONS AND RECOMMENDATIONS

Based on our observations, site survey, record research, borehole investigation and in-situ testing as described herein, we consider on reasonable grounds that this report can be submitted to the Territorial Authority in support of a Resource Consent application for subdividing the subject site, substantiating that in terms of section 106 of the Resource Management Act and its current amendments, either

a) No land in respect of which the consent is sought, nor any structure on that land, is, nor is likely to be subject to material damage by erosion, falling debris, subsidence, or slippage from any source, or

b) No subsequent use that is likely to be made of the land is likely to accelerate, worsen, or result in material damage to that land, other land, or structure, by erosion, falling debris, subsidence, or slippage from any source.

Therefore, we are satisfied that the DBPs on proposed Lots 4-6 should be generally suitable for future residential construction in terms of NZS3604:2011, provided that site-specific Geotechnical investigations and assessments are undertaken during the Building Consent stage, once future development proposals have been formulated.

9.1 FOUNDATION DESIGN

Shallow foundations, such as a reinforced, stiffened raft slab foundation system, slab-on-grade with deepened perimeter strip footings, or timber subfloor suspended on bored timber piles/poles, will likely be suitable to support future dwellings within the DBPs at proposed Lots 4-6, provided they are designed to accommodate vertical movement of soil associated with Soil Reactivity **Class H – Highly Reactive**.

9.1.1. PRELIMINARY SHALLOW FOUNDATION BEARING CAPACITY

We generally envisage that a Geotechnical Ultimate Bearing Capacity of 300kPa will be available for shallow foundation design purposes within the DBPs at Lots 4 and 5.

Due to the firm subsoil layer encountered in HA05 between depths of 1.6m and 2.2m bpgl, we generally envisage that the Geotechnical Ultimate Bearing Capacity available at the Lot 6 DBP could range between 150kPa and 200kPa.,. We generally assume that placement of the dwelling further upslope to the east may result in shallow bearing capacity of 300kPa being available for design.

The available Geotechnical Ultimate Bearing Capacity for future foundation design purposes at proposed Lots 4-6 should be confirmed via site-specific Geotechnical investigations and assessments undertaken during the Building Consent stage.

When finalising the development proposals, it should be checked that all foundations lie outside 45° envelopes rising from 0.50m below the invert of service trenches, unless such foundation details are found by SED to be satisfactory. Deeper foundation embedment or piles may be required for any surcharging foundations.

9.1.2. SHALLOW FOUNDATIONS ON EXPANSIVE SOILS

As described earlier in this report, we have estimated the classification of the site subsoils as follows:

- NZBC B1 Expansive Soil Class H
- Upper Limit of Characteristic surface movement (y_s) 78mm

Given that the soils are not considered to lie within the definition of "Good Ground" in accordance with NZS3604:2011, the design of shallow foundations is no longer covered by NZS3604:2011. Care must be taken to mitigate against the potential seasonal shrinkage and swelling effects of expansive foundation soils on both superstructures and floors. We therefore recommend SED should be undertaken by a qualified engineer for the design of all proposed foundations.

Soil Reactivity class should be confirmed or modified lot-by-lot as part of the Building Consent preparations.

10. NZS1170.5:2004 SITE SUBSOIL CLASSIFICATION

We consider the DBPs at proposed Lots 4-6 to be underlain with a Class C – Shallow Soil stratigraphy.

11. SITE EARTHWORKS

At this preliminary stage, we are not aware of any future earthwork proposals. Engineered cut-fill earthwork operations will be required to create level building platforms for any proposed concrete floor slab foundation.

Due to the variable soils encountered across the DBPs, we recommend no earthworks are undertaken until site-specific proposals have been Geotechnically assessed during the Building Consent stage. Such assessments will need to provide appropriate cut-fill parameters and limits that are Geotechnically appropriate for the subsoils encountered across future development locations.

All future earthworks should be undertaken in accordance with the following standards:

- NZS4431:2022 "Code of Practice for Earth Fill Residential Development",
- Section 2 "Earthworks & Geotechnical Requirements" of NZS4404:2010 "Land Development and Subdivision Infrastructure", and
- The FNDC Engineering Standards (Version 0.6, dated May 2023).

12. GENERAL SITE WORKS

We stress that all work should be undertaken in a careful and safe manner so that Health and Safety is not compromised, and that suitable Erosion and Sediment control measures should be put in place. Any stockpiles placed should be done so in an appropriate manner so that land stability and/or adjacent structures are not compromised.

Furthermore:

- All works must be undertaken in accordance with the Health and Safety at Work Act 2015,

- Any open excavations should be fenced off or covered, and/or access restricted as appropriate,
- The location of all services should be verified at the site prior to the commencement of construction,
- The Contractor is responsible at all times for ensuring that all necessary precautions are taken to protect all aspects of the works, as well as adjacent properties, buildings and services, and
- Should the contractor require any site-specific assistance with safe construction methodologies, please contact WJL for further assistance.

13. LONG-TERM FOUNDATION CARE & MAINTENANCE

The recommendations given above to mitigate the risk of expansive soils do not necessarily remove the risk of external influences affecting the moisture in the subgrade supporting the foundations.

All owners should also be aware of the detrimental effects that significant trees can have on building foundation soils, viz:

- Their presence can induce differential consolidation settlements beneath foundations through localised soil water deprivation, or conversely, and
- Foundation construction too soon after their removal can result in soil swelling and raising foundations as the soil rehydrates.

To this end, care should be taken to avoid:

- Having significant trees positioned where their roots could migrate beneath the house foundations, and
- Constructing foundations on soils that have been differentially excessively desiccated by nearby trees, whether still existing, or recently removed.

We recommend that homeowners make themselves familiar with the appended Homeowners' Guide published by CSIRO, with particular emphasis on maintenance of drains, water pipes, gutters, and downpipes.

14. STORMWATER & SURFACE WATER CONTROL

Uncontrolled stormwater flows from new development areas must not be allowed to run onto or over site slopes, or to saturate the ground, so as to adversely affect foundation conditions and slope stability.

Overland flows and similar runoff such as from any higher ground should be intercepted by means of shallow surface drains and/or small bunds and be directed away from future building footprints to protect building platforms from both saturation and erosion. Water collected in interceptor drains should be diverted away from the building sites to an appropriate disposal point. All stormwater runoff from new roof and paved areas, should be collected in sealed pipes and be discharged to a Council approved stormwater system.

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

15. ON-SITE WASTEWATER DISPOSAL

No reticulated sanitary sewer is available for the site; therefore, an on-site wastewater treatment and disposal systems will be required to service future developments.

We recommend that all designs for future on-site wastewater systems should be carried out by an Engineer experienced in on-site wastewater disposal.

16. OVERHEAD & UNDERGROUND SERVICES

The FNDC on-line GIS Water Services Map indicates that public underground services connections are not available to the property. It should be noted that overhead powerlines trend through proposed Lots 4-6 and as such, it is recommended that Top Energy is contacted to determine any applicable building offsets

Other underground services, public or private, mapped, or unmapped, of any type could be also present.

A thorough service-search should be carried out prior to commencement of any excavations to locate the exact locations of the underground services.

17. LIMITATIONS

We anticipate that this report is to be submitted to Council in support of a Resource Consent application.

This report has been commissioned solely for the benefit of our Client, **Geoffrey Lodge,** in relation to the project as described herein, and to the limits of our engagement, with the exception that the local Territorial Authority may rely on it to the extent of its appropriateness, conditions and limitations, when issuing the subject consent. Any variations from the development proposals as described herein as forming the basis of our appraisal should be referred to us for further evaluation. Copyright of Intellectual Property remains with WJL, and this report may NOT be used by any other entity, or for any other proposals, without our written consent. Therefore, no liability is accepted by this firm or any of its directors, servants, or agents, in respect of any other geotechnical aspects of this site, nor for its use by any other person or entity, and any other person or entity who relies upon any information contained herein does so entirely at their own risk. Where other parties may wish to rely on it, whether for the same or different proposals, this permission may be extended, subject to our satisfactory review of their interpretation of the report.

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

Thank you for the opportunity to provide our service on this project, and if we can be of further assistance, please do not hesitate to contact us.

Yours faithfully,

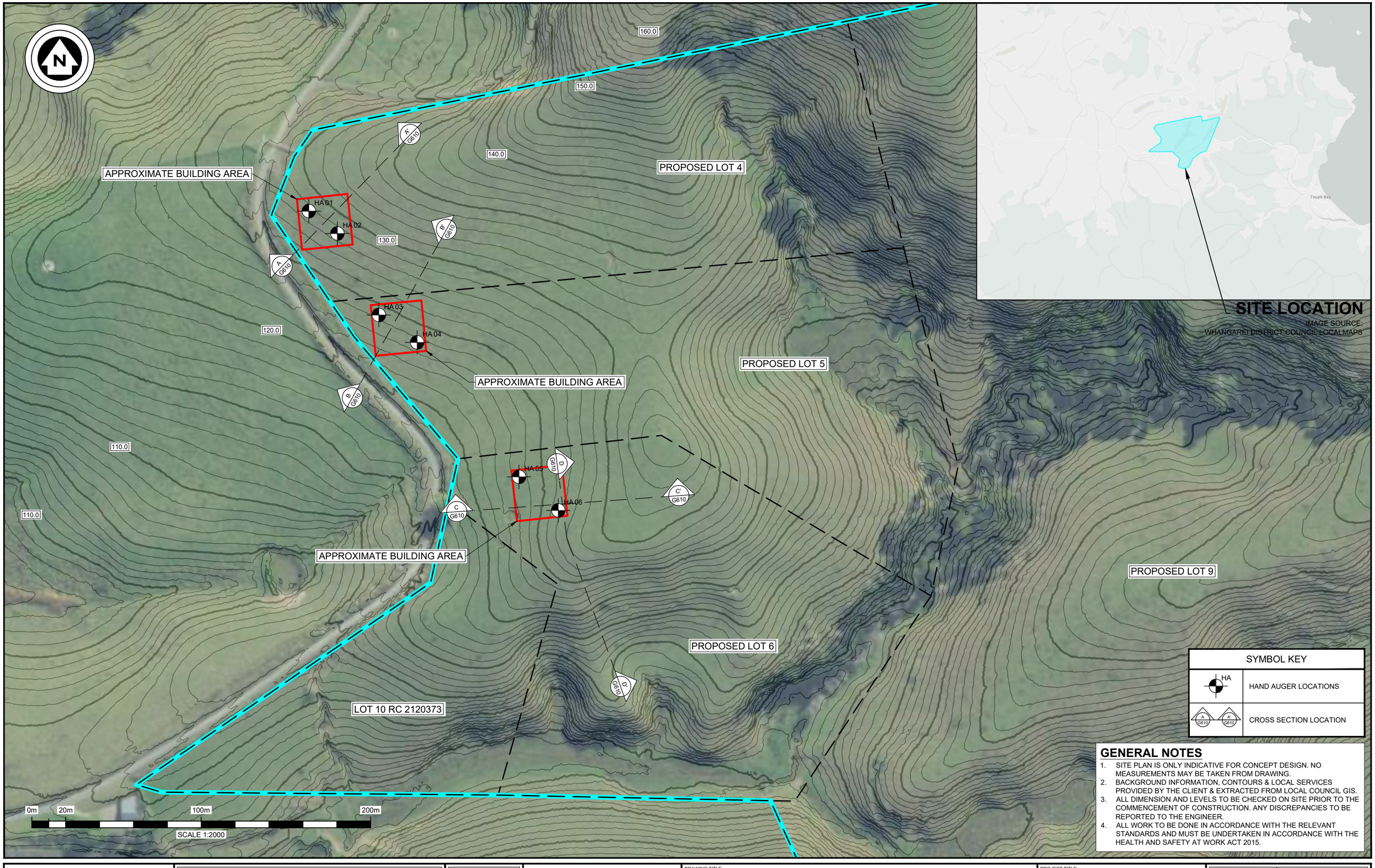
WILTON JOUBERT LIMITED

Appendices:

WJL Site Plan & Cross-section A-A', B-B', C-C' and D-D' (5 sheets)

Hand Auger Borehole Records (6 sheets)

'Foundation Maintenance & Footing Performance' sheet BTF18: A Homeowner's Guide, published by CSIRO (4 sheets)



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ISSUE / REVISION

No.	DATE	BY	DESCRIPTION
A	DEC 2025	A.B	ISSUED WITH GEOTECHNICAL REPORT

DESIGNED BY:
DRAWN BY: A.B
CHECKED BY:
SURVEYED BY:

SERVICES NOTE
WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. WILTON JOUBERT LTD DOES NOT WARRANT THAT ALL, OR INDEED ANY SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.

GEOTECHNICAL
DESIGN / DRAWING SUBJECT TO ENGINEER'S APPROVAL

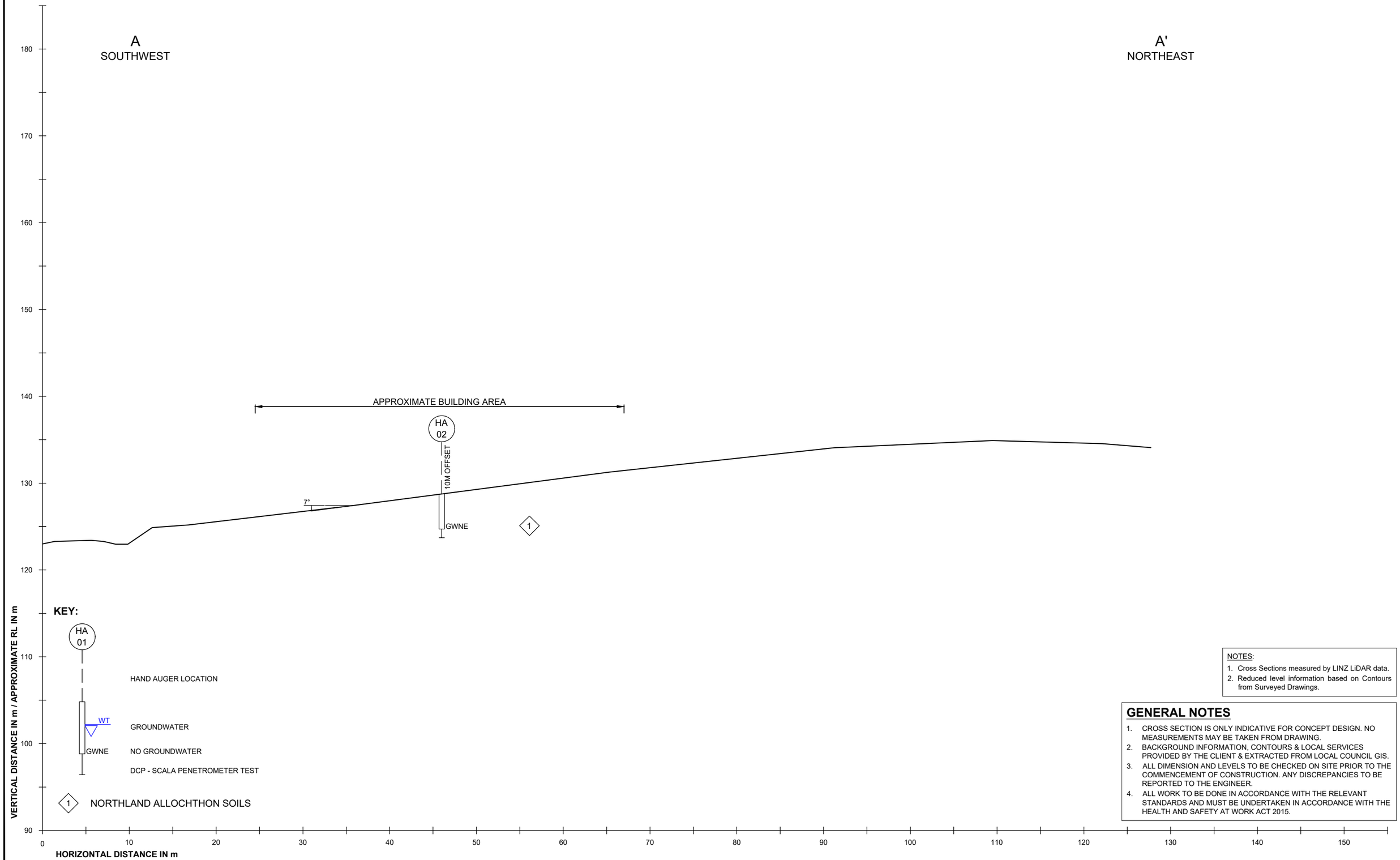
DRAWING TITLE: **SITE PLAN**

PROJECT DESCRIPTION: **PROPOSED SUBDIVISION**

PROJECT TITLE: **LOT 9 DP 457532 WAIMAHANA ROAD TAUPO BAY NORTHLAND**

ORIGINAL DRAWING SIZE:	OFFICE:
A3	WHANGAREI
DRAWING SCALE:	CO-ORDINATE SYSTEM:
1:2000	NOT COORDINATED

DRAWING NUMBER: **144122-G600**
ISSUE: **A**



NOTES:
1. Cross Sections measured by LINZ LiDAR data.
2. Reduced level information based on Contours from Surveyed Drawings.

GENERAL NOTES

1. CROSS SECTION IS ONLY INDICATIVE FOR CONCEPT DESIGN. NO MEASUREMENTS MAY BE TAKEN FROM DRAWING.
2. BACKGROUND INFORMATION, CONTOURS & LOCAL SERVICES PROVIDED BY THE CLIENT & EXTRACTED FROM LOCAL COUNCIL GIS.
3. ALL DIMENSION AND LEVELS TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER.
4. ALL WORK TO BE DONE IN ACCORDANCE WITH THE RELEVANT STANDARDS AND MUST BE UNDERTAKEN IN ACCORDANCE WITH THE HEALTH AND SAFETY AT WORK ACT 2015.

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Wanaka: 03 443 6209
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ISSUE / REVISION

No.	DATE	BY	DESCRIPTION
A	DEC 2025	A.B	ISSUED WITH GEOTECHNICAL REPORT

DESIGNED BY:
DRAWN BY: A.B
CHECKED BY:
SURVEYED BY:

SERVICES NOTE
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GEOTECHNICAL
DESIGN / DRAWING SUBJECT TO ENGINEER'S APPROVAL

DRAWING TITLE: **CROSS SECTION A - A'**

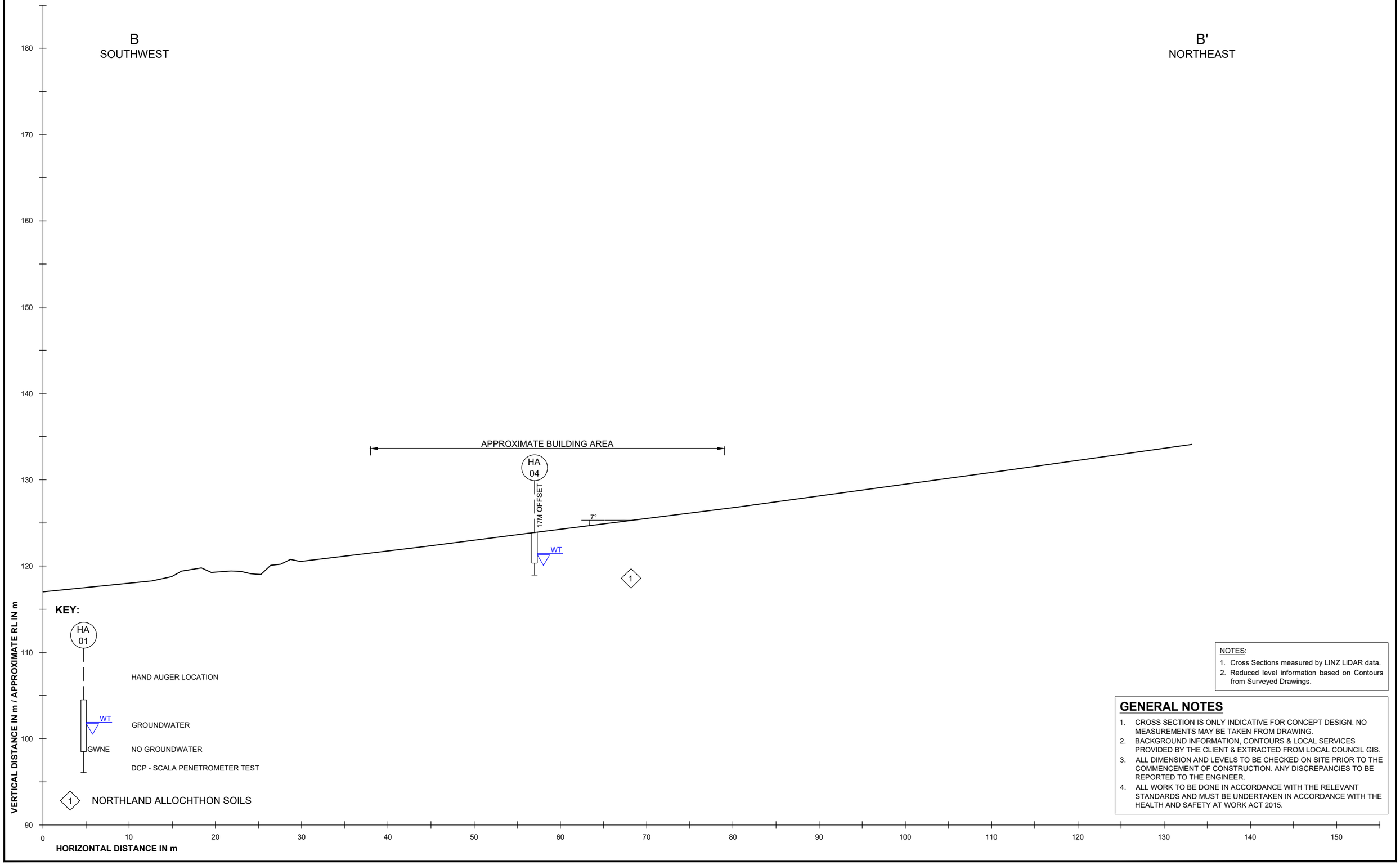
PROJECT DESCRIPTION: **PROPOSED SUBDIVISION**

PROJECT TITLE: **LOT 9 DP 457532 WAIMAHANA ROAD TAUPO BAY NORTHLAND**

ORIGINAL DRAWING SIZE:	OFFICE:
A3	WHANGAREI
DRAWING SCALE:	CO-ORDINATE SYSTEM:
1:400	NOT COORDINATED
DRAWING NUMBER:	ISSUE:
144122-G610	A

B
SOUTHWEST

B'
NORTHEAST



KEY:

HA 01 — HAND AUGER LOCATION

WT — GROUNDWATER

GWNE — NO GROUNDWATER

DCP - SCALA PENETROMETER TEST

1 — NORTHLAND ALLOCHTHON SOILS

NOTES:
1. Cross Sections measured by LINZ LiDAR data.
2. Reduced level information based on Contours from Surveyed Drawings.

GENERAL NOTES

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ISSUE / REVISION

No.	DATE	BY	DESCRIPTION
A	DEC 2025	A.B	ISSUED WITH GEOTECHNICAL REPORT

DESIGNED BY:
DRAWN BY: A.B
CHECKED BY:
SURVEYED BY:

SERVICES NOTE

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GEOTECHNICAL

DESIGN / DRAWING SUBJECT TO ENGINEER'S APPROVAL

DRAWING TITLE:
CROSS SECTION B - B'

PROJECT DESCRIPTION:
PROPOSED SUBDIVISION

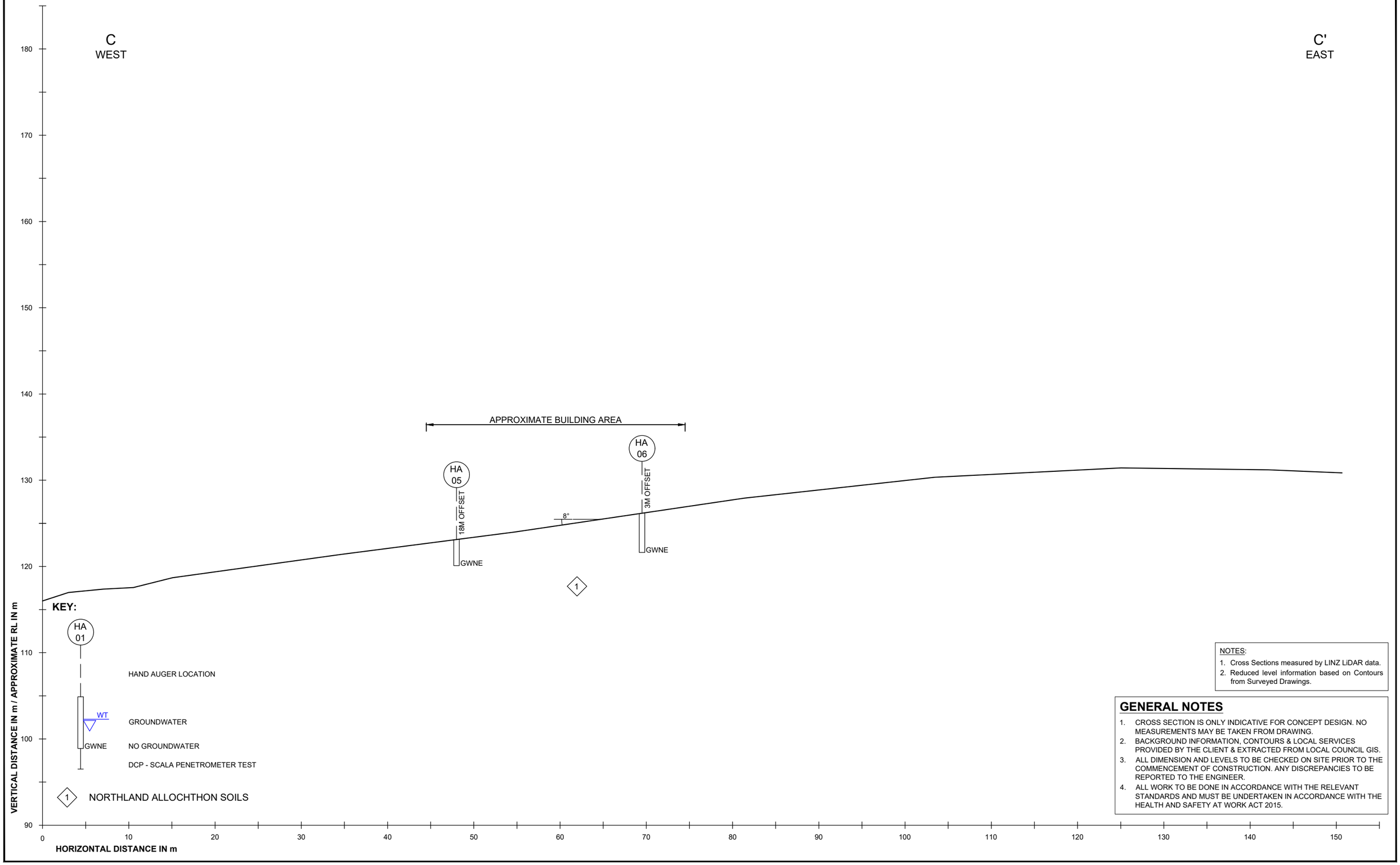
PROJECT TITLE:
LOT 9 DP 457532
WAIMAHANA ROAD
TAUPO BAY
NORTHLAND

ORIGINAL DRAWING SIZE:	OFFICE:
A3	WHANGAREI
DRAWING SCALE:	CO-ORDINATE SYSTEM:
1:400	NOT COORDINATED

DRAWING NUMBER: 144122-G611
ISSUE: A

C
WEST

C'
EAST



NOTES:
1. Cross Sections measured by LINZ LiDAR data.
2. Reduced level information based on Contours from Surveyed Drawings.

GENERAL NOTES

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SERVICES NOTE
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GEOTECHNICAL
DESIGN / DRAWING SUBJECT TO ENGINEER'S APPROVAL

DRAWING TITLE:
CROSS SECTION C - C'

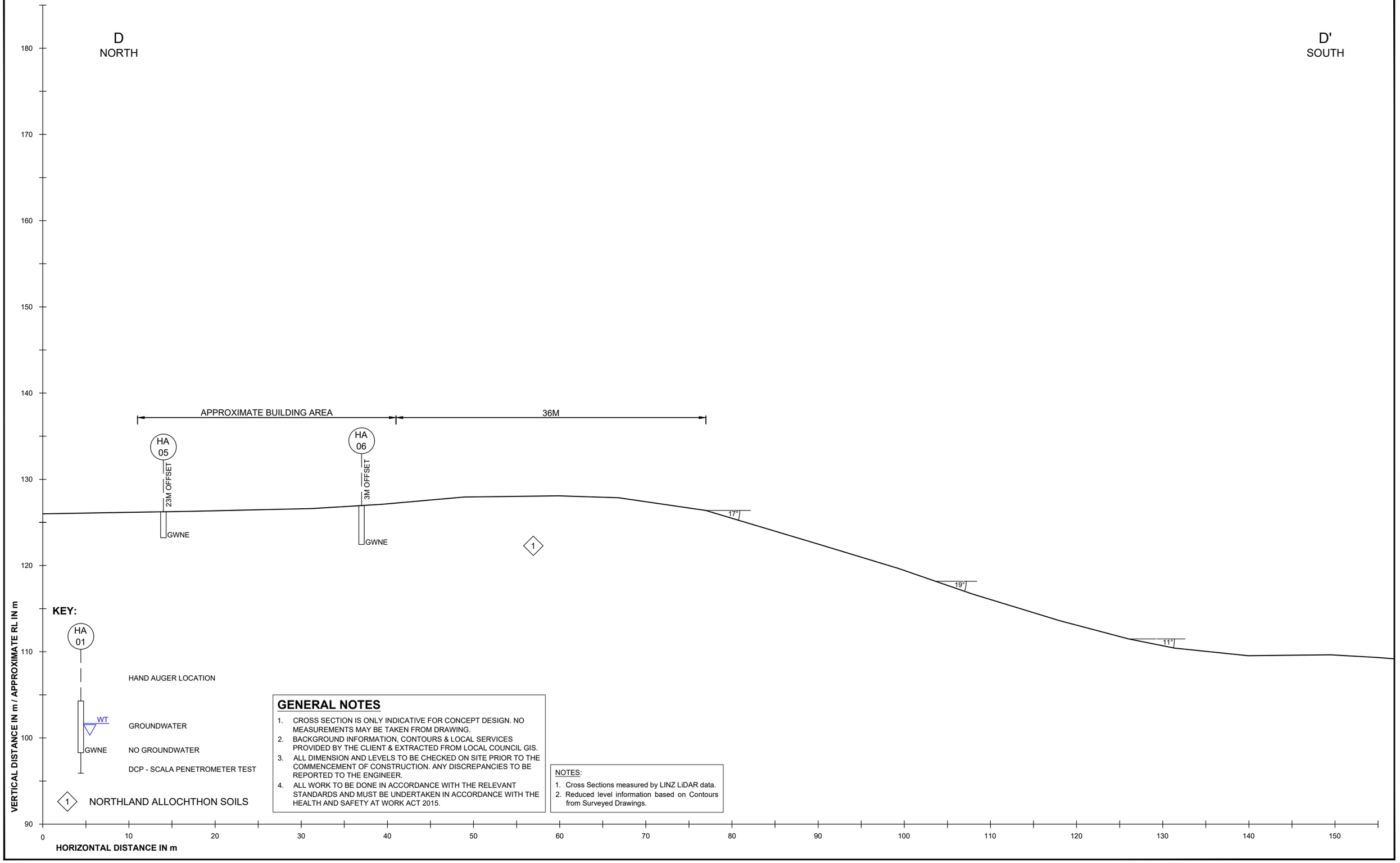
PROJECT DESCRIPTION:
PROPOSED SUBDIVISION

PROJECT TITLE:
LOT 9 DP 457532
WAIMAHANA ROAD
TAUPO BAY
NORTHLAND

ORIGINAL DRAWING SIZE:	OFFICE:
A3	WHANGAREI
DRAWING SCALE:	CO-ORDINATE SYSTEM:
1:400	NOT COORDINATED
DRAWING NUMBER:	ISSUE:
144122-G612	A

D
NORTH

D'
SOUTH



KEY:

HA 01 — HAND AUGER LOCATION

WT — GROUNDWATER

GWNE — NO GROUNDWATER

DCP - SCALA PENETROMETER TEST

1 — NORTHLAND ALLOCHTHON SOILS

GENERAL NOTES

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NOTES:

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SERVICES NOTE

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GEOTECHNICAL

DESIGN / DRAWING SUBJECT TO ENGINEER'S APPROVAL

DRAWING TITLE: **CROSS SECTION D - D'**

PROJECT DESCRIPTION: **PROPOSED SUBDIVISION**

PROJECT TITLE: **LOT 9 DP 457532 WAIMAHANA ROAD TAUPO BAY NORTHLAND**

ORIGINAL DRAWING SIZE:	OFFICE:
A3	WHANGAREI
DRAWING SCALE:	CO-ORDINATE SYSTEM:
1:400	NOT COORDINATED
DRAWING NUMBER:	ISSUE:
144122-G613	A

HAND AUGER : HA01

CLIENT: Geoffrey Lodge
PROJECT: 4-Lot Subdivision (3 Lots for Assessment)
SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay

JOB NO.: 144122 **SHEET:** 1 OF 1
START DATE: 12/12/2025 **NORTHING:** **GRID:**
DIAMETER: 50mm **EASTING:**
SV DIAL: DR4802 **ELEVATION:** Ground
FACTOR: 1.39 **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE PEAK STRENGTH (kPa)	SHEAR VANE REMOULD STRENGTH (kPa)	SHEAR VANE SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
Topsoil	TOPSOIL, dark brown, dry.	TS	0.2	Groundwater Not Encountered					
Tupou Complex in Northland Allochthon	NATURAL: Clayey SILT, light brown with occasional orange and red clast specks, very stiff, dry, low plasticity.		0.4		158	8	20		
	Silty CLAY, light brown, very stiff, dry to moist, moderate plasticity.		0.6						
			0.8		136	47	2.9		
	1.0m: Brown, moist.		1.0						
	Clayey SILT, purplish brown with red, orange, white and brown mottles, very stiff, moist, low to moderate plasticity.		1.2		100	56	1.8		
			1.4						
			1.6		195+	-	-		
			1.8						
			2.0		195+	-	-		
			2.2						
			2.4						
			2.6		111	39	2.8		
			2.8						
	EOH: 3.00m - Target Depth		3.0		81	33	2.5		
			3.2						
			3.4						
			3.6						
			3.8						
			4.0						
			4.2						
			4.4						
			4.6						
			4.8						
			5.0						
			5.2						
			5.4						

REMARKS
End of borehole @ 3.00m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: SJP
CHECKED BY: CSH

▼ Standing groundwater level
▽ GW while drilling

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HAND AUGER : HA02

JOB NO.: 144122 **SHEET:** 1 OF 1

START DATE: 12/12/2025 **NORTHING:** **GRID:**

CLIENT: Geoffrey Lodge **DIAMETER:** 50mm **EASTING:**

PROJECT: 4-Lot Subdivision (3 Lots for Assessment) **SV DIAL:** 1994 **ELEVATION:** Ground

SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay **FACTOR:** 1.41 **DATUM:**

TOPSOIL CLAY SAND PEAT FILL SILT GRAVEL ROCK

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE: PEAK STRENGTH (kPa)	SHEAR VANE: REMOULD STRENGTH (kPa)	SHEAR VANE: SENSITIVITY	DCP - SCALA (Blows / 100mm)	COMMENTS, SAMPLES, OTHER TESTS
ps nil	TOPSOIL, dark brown, dry.	TS	0.0						
Tupou Complex in Northland Allochthon	NATURAL: Silty CLAY, light brown, very stiff, dry to moist, low to moderate plasticity.		0.2						
			0.4		141	31	4.5		
	0.6m: Moist, moderate plasticity.		0.6						
			0.8		133	51	2.6		
	1.0m: Occasional clasts, purplish brown.		1.0						
			1.2		127	48	2.6		
	1.3m: Red with light brown, purple and white mottles.		1.4						
	1.6m: Purplish brown with brown mottles and white specks, stiff.		1.6	Groundwater Not Encountered	87	28	3.1		
			1.8						
	2.0m: Very stiff.		2.0		135	68	2.0		
			2.2						
	2.4m: Moist to wet.		2.4		130	45	2.9		
			2.6						
			2.8		104	42	2.5		
			3.0						
	3.2m: Brown with white streaks.		3.2		104	48	2.2		
			3.4						
			3.6		113	54	2.1		
			3.8						
			4.0		141	51	2.8	8	
	EOH: 4.00m - Poor Recovery Due To Borehole Squeezing		4.2					10	
			4.4					10	
			4.6					10	
			4.8					8	
			5.0					8	
			5.2					10	
			5.4					10	
								10	

REMARKS

End of borehole @ 4.00m (Target Depth: 5.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: JEM

CHECKED BY: CSH

▼ Standing groundwater level

▽ GW while drilling

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HAND AUGER : HA03

JOB NO.: 144122 **SHEET:** 1 OF 1

START DATE: 12/12/2025 **NORTHING:** **GRID:**

CLIENT: Geoffrey Lodge **DIAMETER:** 50mm **EASTING:**

PROJECT: 4-Lot Subdivision (3 Lots for Assessment) **SV DIAL:** DR4802 **ELEVATION:** Ground

SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay **FACTOR:** 1.39 **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE PEAK STRENGTH (kPa)	SHEAR VANE REMOULD STRENGTH (kPa)	SHEAR VANE SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
Topsoil	TOPSOIL, dark brown, dry.	TS	0.2	Groundwater Not Encountered					
Tupou Complex in Northland Allochthon	NATURAL: Clayey SILT, light brown with occasional orange and red clast specks, very stiff, dry, low plasticity.		0.4		195+	-	-		
	Silty CLAY, light brown with occasional orange mottles, very stiff, dry to moist, moderate plasticity.		0.6						
			0.8		114	50	2.3		
	1.1m: Brown with yellowish brown and white mottles, moist.		1.0						
			1.2		106	50	2.1		
	1.4m: Yellowish brown and reddish brown with white mottles.		1.4						
	1.6m: Stiff.		1.6		97	44	2.2		
			1.8						
			2.0		86	42	2.0		
	Clayey SILT, purplish brown and reddish brown with white, yellow and brown mottles, stiff, moist, low to moderate plasticity.		2.2						
			2.4						
			2.6		100	56	1.8		
			2.8						
			3.0						
	EOH: 3.00m - Target Depth		3.0		83	31	2.7		
			3.2						
			3.4						
			3.6						
			3.8						
			4.0						
			4.2						
			4.4						
			4.6						
			4.8						
			5.0						
			5.2						
			5.4						

REMARKS

End of borehole @ 3.00m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: SJP

CHECKED BY: CSH

▼ Standing groundwater level

▽ GW while drilling

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HAND AUGER : HA04

CLIENT: Geoffrey Lodge
PROJECT: 4-Lot Subdivision (3 Lots for Assessment)
SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay

JOB NO.: 144122 **SHEET:** 1 OF 1
START DATE: 12/12/2025 **NORTHING:** **GRID:**
DIAMETER: 50mm **EASTING:**
SV DIAL: 1994 **ELEVATION:** Ground
FACTOR: 1.41 **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE: PEAK STRENGTH (kPa)	SHEAR VANE: REMOULD STRENGTH (kPa)	SHEAR VANE: SENSITIVITY	DCP - SCALA (Blows / 100mm)	COMMENTS, SAMPLES, OTHER TESTS
TS ps nil	TOPSOIL, dark brown, dry.	TS	0.0						
Tupou Complex in Northland Allochthon	NATURAL: Clayey SILT, light brown, very stiff, dry to moist, low to moderate plasticity.		0.2						
			0.4		130	28	4.6		
			0.6						
	Silty CLAY, orangey brown, very stiff, moist, moderate plasticity.		0.8		121	45	2.7		
			1.0						
			1.2		104	54	1.9		
	1.6m: Stiff, moist to wet.		1.6		90	25	3.6		
	Clayey SILT, orangey brown with white mottles, stiff, moist to wet, low plasticity.		1.8						
			2.0		90	31	2.9		
			2.2						
	2.4m: Orangey brown with light brown mottles, very stiff, wet.		2.4	▼ 12/12/2025	127	51	2.5		
	2.6m: Occasional red streaks.		2.6						
			2.8		102	39	2.6		
			3.0	▽					
			3.2		135	42	3.2		
			3.4						
	EOH: 3.50m - Poor Recovery Due To Borehole Squeezing		3.6					3	
			3.8					4	
			4.0					4	
			4.2					7	
			4.4					7	
			4.6					10	
			4.8					10	
			5.0					10	
			5.2					10	
			5.4					10	
								11	
								12	
								12	
								13	

SOIL DESCRIPTION
TOPSOIL, CLAY, SAND, PEAT, FILL, SILT, GRAVEL, ROCK

REMARKS
End of borehole @ 3.50m (Target Depth: 5.00m)
Groundwater encountered @ 3.00m during drilling. Standing groundwater @ 2.40m.

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: JEM
CHECKED BY: CSH

▼ Standing groundwater level
▽ GW while drilling

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HAND AUGER : HA05

JOB NO.: 144122 **SHEET:** 1 OF 1

START DATE: 12/12/2025 **NORTHING:** **GRID:**

CLIENT: Geoffrey Lodge **DIAMETER:** 50mm **EASTING:**

PROJECT: 4-Lot Subdivision (3 Lots for Assessment) **SV DIAL:** DR4802 **ELEVATION:** Ground

SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay **FACTOR:** 1.39 **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE: PEAK STRENGTH (kPa)	SHEAR VANE: REMOULD STRENGTH (kPa)	SHEAR VANE: SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
Topsoil	TOPSOIL, dark brown, dry.	TS	0.2	Groundwater Not Encountered					
Tupou Complex in Northland Allochthon	NATURAL: Clayey SILT, yellowish brown with white mottles, very stiff, dry to moist, low to moderate plasticity.		0.4		145	25	5.8		
	Silty CLAY, Yellowish brown with white mottles, stiff, moist, moderate plasticity.		0.6						
	0.8m: Yellow with white and orange motttles.		0.8		92	31	3.0		
			1.0						
			1.2		97	39	2.5		
	1.6m: 100mm lense of orangey with white mottles, firm.		1.6		50	14	3.6		
			1.8						
	2.0m: 200mm lense of orange with white mottles.		2.0		33	14	2.4		
	2.2m: Orange and yellow with white mottles, stiff.		2.2						
			2.4						
			2.6		86	25	3.4		
	Clayey SILT, white with yellow and orange mottles, stiff, moist, low to moderate plasticity.		2.8						
	EOH: 3.00m - Target Depth		3.0		70	14	5.0		
			3.2						
			3.4						
			3.6						
			3.8						
			4.0						
			4.2						
			4.4						
			4.6						
			4.8						
			5.0						
			5.2						
			5.4						

TOPSOIL CLAY SAND PEAT FILL SILT GRAVEL ROCK

REMARKS

End of borehole @ 3.00m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: SJP

CHECKED BY: CSH

▼ Standing groundwater level

▽ GW while drilling

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HAND AUGER : HA06

JOB NO.: 144122 **SHEET:** 1 OF 1

START DATE: 12/12/2025 **NORTHING:** **GRID:**

CLIENT: Geoffrey Lodge **DIAMETER:** 50mm **EASTING:**

PROJECT: 4-Lot Subdivision (3 Lots for Assessment) **SV DIAL:** 1994 **ELEVATION:** Ground

SITE LOCATION: Lot 9 RC 2120373, Taupo Bay Road, Taupo Bay **FACTOR:** 1.41 **DATUM:**

TOPSOIL CLAY SAND PEAT FILL SILT GRAVEL ROCK

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE: PEAK STRENGTH (kPa)	SHEAR VANE: REMOULD STRENGTH (kPa)	SHEAR VANE: SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
ps	TOPSOIL, brown and grey, dry.	TS	0.0						
	NATURAL: SILT, grey, hard, dry, no plasticity.								
	SILT, minor clay, grey and brown, very stiff, dry, no plasticity.		0.2						
			0.4		197+	-	-		
	Clayey SILT, light brown and greyish brown, very stiff, dry to moist, low plasticity.		0.6						
			0.8		147	39	3.8		
	0.9m: Occasional brown organic inclusions.								
	1.0m: Moist.		1.0						
			1.2		147	37	4.0		
			1.4						
	1.6m: Yellowish brown with grey mottles.		1.6		197+	-	-		
			1.8						
			2.0		144	37	3.9		
			2.2						
			2.4		116	42	2.8		
	2.5m: Grey and brown.		2.6						
	2.8m: Greyish brown with yellowish brown mottles.		2.8		113	39	2.9		
			3.0						
			3.2		169	51	3.3		
	3.3m: Greyish brown.		3.4						
			3.6		197+	-	-		
			3.8						
			4.0		197+	-	-		
			4.2						
			4.4						
	EOH: 4.50m - Too Hard To Auger		4.6		UTP	-	-		
			4.8						
			5.0						
			5.2						
			5.4						

Tupou Complex in Northland Allochthon

Groundwater Not Encountered

REMARKS

End of borehole @ 4.50m (Target Depth: 5.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: JEM

CHECKED BY: CSH

▼ Standing groundwater level

▽ GW while drilling

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FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE

Preventing soil-related building movement

This Building Technology Resource is designed as a homeowner's guide on the causes of soil-related building movement, and suggested methods to prevent resultant cracking.

Buildings can and often do move. This movement can be up, down, lateral or rotational. The fundamental cause of movement in buildings can usually be related to one or more problems in the foundation soil. It is important for the home owner to identify the soil type in order to ascertain the measures that should be put in place in order to ensure that problems in the foundation soil can be prevented, thus protecting against building movement. Generally soil classification is provided by a geotechnical report.

SOIL TYPES

The types of soils usually present under the topsoil in land zoned for residential buildings can be split into two approximate groups – granular and clay. Quite often, foundation soil is a mixture of both types. The general problems associated with soils having granular content are usually caused by erosion. Clay soils are subject to saturation and swell/shrink problems.

As most buildings suffering movement problems are founded on clay soils, there is an emphasis on classification of soils according to the amount of swell and shrinkage they experience with variations of water content. Table 1 below is a reproduction of Table 2.1 from Australian Standard AS 2870-2011, Residential slabs and footings.

CAUSES OF MOVEMENT

SETTLEMENT DUE TO CONSTRUCTION

There are two types of settlement that occur as a result of construction:

- Immediate settlement occurs when a building is first placed on its foundation soil, as a result of compaction of the soil under the weight of the structure. The cohesive quality of clay soil mitigates against this, but granular (particularly sandy) soil is susceptible.
- Consolidation settlement is a feature of clay soil and may take place because of the expulsion of moisture from the soil or because of the soil's lack of resistance to local compressive or shear stresses. This will usually take place during the first few months after construction but has been known to take many years in exceptional cases.

These problems may be the province of the builder and should be taken into consideration as part of the preparation of the site for construction.

EROSION

All soils are prone to erosion, but sandy soil is particularly susceptible to being washed away. Even clay with a sand component of say 10% or more can suffer from erosion.

SATURATION

This is particularly a problem in clay soils. Saturation creates a bog-like suspension of the soil that causes it to lose virtually all of its bearing capacity. To a lesser degree, sand is affected by saturation because saturated sand may undergo a reduction in volume, particularly imported sand fill for bedding and blinding layers. However, this usually occurs as immediate settlement and should normally be the province of the builder.

SEASONAL SWELLING AND SHRINKAGE OF SOIL

All clays react to the presence of water by slowly absorbing it, making the soil increase in volume (see table below, from AS 2870). The degree of increase varies considerably between different clays, as does the degree of decrease during the subsequent drying out caused by fair weather periods. Because of the low absorption and expulsion rate, this phenomenon will not usually be noticeable unless there are prolonged rainy or dry periods, usually of weeks or months, depending on the land and soil characteristics.

The swelling of soil creates an upward force on the footings of the building, and shrinkage creates subsidence that takes away the support needed by the footing to retain equilibrium.

SHEAR FAILURE

This phenomenon occurs when the foundation soil does not have sufficient strength to support the weight of the footing. There are two major post-construction causes:

- Significant load increase.
- Reduction of lateral support of the soil under the footing due to erosion or excavation.

In clay soil, shear failure can be caused by saturation of the soil adjacent to or under the footing.

TREE ROOT GROWTH

Trees and shrubs that are allowed to grow in the vicinity of footings can cause foundation soil movement in two ways:

- Roots that grow under footings may increase in cross-sectional size, exerting upward pressure on footings.

TABLE 1. GENERAL DEFINITIONS OF SITE CLASSES.

Class	Foundation
A	Most sand and rock sites with little or no ground movement from moisture changes
S	Slightly reactive clay sites, which may experience only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes
H1	Highly reactive clay sites, which may experience high ground movement from moisture changes
H2	Highly reactive clay sites, which may experience very high ground movement from moisture changes
E	Extremely reactive sites, which may experience extreme ground movement from moisture changes

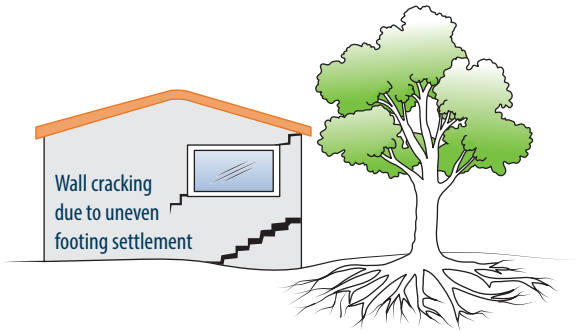

FIGURE 1 Trees can cause shrinkage and damage.

- Roots in the vicinity of footings will absorb much of the moisture in the foundation soil, causing shrinkage or subsidence.

UNEVENNESS OF MOVEMENT

The types of ground movement described above usually occur unevenly throughout the building's foundation soil. Settlement due to construction tends to be uneven because of:

- Differing compaction of foundation soil prior to construction.
- Differing moisture content of foundation soil prior to construction.

Movement due to non-construction causes is usually more uneven still. Erosion can undermine a footing that traverses the flow or can create the conditions for shear failure by eroding soil adjacent to a footing that runs in the same direction as the flow.

Saturation of clay foundation soil may occur where subfloor walls create a dam that makes water pond. It can also occur wherever there is a source of water near footings in clay soil. This leads to a severe reduction in the strength of the soil which may create local shear failure.

Seasonal swelling and shrinkage of clay soil affects the perimeter of the building first, then gradually spreads to the interior through absorption. The swelling process will usually begin at the uphill extreme of the building, or on the weather side where the land is flat. Shrinkage usually begins on the side of the building where the sun's heat is greatest.

EFFECTS OF UNEVEN SOIL MOVEMENT ON STRUCTURES

EROSION AND SATURATION

Erosion removes the support from under footings, tending to create subsidence of the part of the structure under which it occurs. Brickwork walls will resist the stress created by this removal of support by bridging the gap or cantilevering until the bricks or the mortar bedding fail. Older masonry has little resistance. Evidence of failure varies according to circumstances and symptoms may include:

- Step cracking in the mortar beds in the body of the wall or above/below openings such as doors or windows.
- Vertical cracking in the bricks (usually but not necessarily in line with the vertical beds or perpends).

Isolated piers affected by erosion or saturation of foundations will eventually lose contact with the bearers they support and may tilt or fall over. The floors that have lost this support will become bouncy, sometimes rattling ornaments etc.

SEASONAL SWELLING/SHRINKAGE IN CLAY

Swelling foundation soil due to rainy periods first lifts the most exposed extremities of the footing system, then the remainder of the perimeter footings while gradually permeating inside the building footprint to lift internal footings. This swelling first tends to create a dish effect, because the external footings are pushed higher than the internal ones.

The first noticeable symptom may be that the floor appears slightly dished. This is often accompanied by some doors binding on the floor or the door head, together with some cracking of cornice mitres. In buildings with timber flooring supported by bearers and joists, the floor can be bouncy. Externally there may be visible dishing of the hip or ridge lines.

As the moisture absorption process completes its journey to the innermost areas of the building, the internal footings will rise. If the spread of moisture is roughly even, it may be that the symptoms will temporarily disappear, but it is more likely that swelling will be uneven, creating a difference rather than a disappearance in symptoms. In buildings with timber flooring supported by bearers and joists, the isolated piers will rise more easily than the strip footings or piers under walls, creating noticeable doming of flooring.

As the weather pattern changes and the soil begins to dry out, the external footings will be first affected, beginning with the locations where the sun's effect is strongest. This has the effect of lowering the external footings. The doming is accentuated, and cracking reduces or disappears where it occurred because of dishing, but other cracks open up. The roof lines may become convex.

Doming and dishing are also affected by weather in other ways. In areas where warm, wet summers and cooler dry winters prevail, water migration tends to be toward the interior and doming will be accentuated, whereas where summers are dry, and winters are cold and wet, migration tends to be toward the exterior and the underlying propensity is toward dishing.

MOVEMENT CAUSED BY TREE ROOTS

In general, growing roots will exert an upward pressure on footings, whereas soil subject to drying because of tree or shrub roots will tend to remove support from under footings by inducing shrinkage.

COMPLICATIONS CAUSED BY THE STRUCTURE ITSELF

Most forces that the soil causes to be exerted on structures are vertical – i.e. either up or down. However, because these forces are seldom spread evenly around the footings, and because the building resists uneven movement because of its rigidity, forces are exerted from one part of the building to another. The net result of all these forces is usually rotational. This resultant force often complicates the diagnosis because the visible symptoms do not simply reflect the original cause. A common symptom is binding of doors on the vertical member of the frame.

EFFECTS ON FULL MASONRY STRUCTURES

Brickwork will resist cracking where it can. It will attempt to span areas that lose support because of subsided foundations or raised points. It is therefore usual to see cracking at weak points, such as openings for windows or doors.

In the event of construction settlement, cracking will usually remain unchanged after the process of settlement has ceased.

With local shear or erosion, cracking will usually continue to develop until the original cause has been remedied, or until the subsidence has completely neutralised the affected portion of footing and the structure has stabilised on other footings that remain effective.

In the case of swell/shrink effects, the brickwork will in some cases return to its original position after completion of a cycle, however it is more likely that the rotational effect will not be exactly reversed, and it is also usual that brickwork will settle in its new position and will resist the forces trying to return it to its original position. This means that in a case where swelling takes place after construction and cracking occurs, the cracking is likely to at least partly remain after the shrink segment of the cycle is complete. Thus, each time the cycle is repeated, the likelihood is that the cracking will become wider until the sections of brickwork become virtually independent.

With repeated cycles, once the cracking is established, if there is no other complication, it is normal for the incidence of cracking to stabilise, as the building has the articulation it needs to cope with the problem. This is by no means always the case, however, and monitoring of cracks in walls and floors should always be treated seriously.

Upheaval caused by growth of tree roots under footings is not a simple vertical shear stress. There is a tendency for the root to also

exert lateral forces that attempt to separate sections of brickwork after initial cracking has occurred.

The normal structural arrangement is that the inner leaf of brickwork in the external walls and at least some of the internal walls (depending on the roof type) comprise the load-bearing structure on which any upper floors, ceilings and the roof are supported. In these cases, it is internally visible cracking that should be the main focus of attention, however there are a few examples of dwellings whose external leaf of masonry plays some supporting role, so this should be checked if there is any doubt. In any case, externally visible cracking is important as a guide to stresses on the structure generally, and it should also be remembered that the external walls must be capable of supporting themselves.

EFFECTS ON FRAMED STRUCTURES

Timber or steel framed buildings are less likely to exhibit cracking due to swell/shrink than masonry buildings because of their flexibility. Also, the doming/dishing effects tend to be lower because of the lighter weight of walls. The main risks to framed buildings are encountered because of the isolated pier footings used under walls. Where erosion or saturation causes a footing to fall away, this can double the span which a wall must bridge. This additional stress can create cracking in wall linings, particularly where there is a weak point in the structure caused by a door or window opening. It is, however, unlikely that framed structures will be so stressed as to suffer serious damage without first exhibiting some or all of the above symptoms for a considerable period. The same warning period should apply in the case of upheaval. It should be noted, however, that where framed buildings are supported by strip footings there is only one leaf of brickwork and therefore the externally visible walls are the supporting structure for the building. In this case, the subfloor masonry walls can be expected to behave as full brickwork walls.

EFFECTS ON BRICK VENEER STRUCTURES

Because the load-bearing structure of a brick veneer building is the frame that makes up the interior leaf of the external walls plus perhaps the internal walls, depending on the type of roof, the building can be expected to behave as a framed structure, except that the external masonry will behave in a similar way to the external leaf of a full masonry structure.

WATER SERVICE AND DRAINAGE

Where a water service pipe, a sewer or stormwater drainage pipe is in the vicinity of a building, a water leak can cause erosion, swelling or saturation of susceptible soil. Even a minuscule leak can be enough to saturate a clay foundation. A leaking tap near a building can have the same effect. In addition, trenches containing pipes can become watercourses even though backfilled, particularly where broken rubble is used as fill. Water that runs along these trenches can be responsible for serious erosion, interstrata seepage into subfloor areas and saturation.

Pipe leakage and trench water flows also encourage tree and shrub roots to the source of water, complicating and exacerbating the problem. Poor roof plumbing can result in large volumes of rainwater being concentrated in a small area of soil:

- Incorrect falls in roof guttering may result in overflows, as may gutters blocked with leaves etc.
- Corroded guttering or downpipes can spill water to ground.
- Downpipes not positively connected to a proper stormwater collection system will direct a concentration of water to soil that is directly adjacent to footings, sometimes causing large-scale problems such as erosion, saturation and migration of water under the building.

SERIOUSNESS OF CRACKING

In general, most cracking found in masonry walls is a cosmetic nuisance only and can be kept in repair or even ignored. Table 2 below is a reproduction of Table C1 of AS 2870-2011.

AS 2870-2011 also publishes figures relating to cracking in concrete floors, however because wall cracking will usually reach the critical point significantly earlier than cracking in slabs, this table is not reproduced here.

PREVENTION AND CURE

PLUMBING

Where building movement is caused by water service, roof plumbing, sewer or stormwater failure, the remedy is to repair the problem. It is prudent, however, to consider also rerouting pipes away from the building where possible and relocating taps to positions where any leakage will not direct water to the building vicinity. Even where gully traps are present, there is sometimes sufficient spill to create erosion or saturation, particularly in modern installations using smaller diameter PVC fixtures. Indeed, some gully traps are not situated directly under the taps that are installed to charge them, with the result that water from the tap may enter the backfilled trench that houses the sewer piping. If the trench has been poorly backfilled, the water will either pond or flow along the bottom of the trench. As these trenches usually run alongside the footings and can be at a similar depth, it is not hard to see how any water that is thus directed into a trench can easily affect the foundation's ability to support footings or even gain entry to the subfloor area.

GROUND DRAINAGE

In all soils there is the capacity for water to travel on the surface and below it. Surface water flows can be established by inspection during and after heavy or prolonged rain. If necessary, a grated drain system connected to the stormwater collection system is usually an easy solution.

It is, however, sometimes necessary when attempting to prevent water migration that testing be carried out to establish watertable height and subsoil water flows. This subject may be regarded as an area for an expert consultant.

PROTECTION OF THE BUILDING PERIMETER

It is essential to remember that the soil that affects footings extends well beyond the actual building line. Watering of garden plants, shrubs and trees causes some of the most serious water problems.

For this reason, particularly where problems exist or are likely to occur, it is recommended that an apron of paving be installed around as much of the building perimeter as necessary. This paving should extend outwards a minimum of 900 mm (more in highly reactive soil) and should have a minimum fall away from the building of 1:60. The finished paving should be no less than 100 mm below brick vent bases.

It is prudent to relocate drainage pipes away from this paving, if possible, to avoid complications from future leakage. If this is not practical, earthenware pipes should be replaced by PVC and backfilling should be of the same soil type as the surrounding soil and compacted to the same density.

Except in areas where freezing of water is an issue, it is wise to remove taps in the building area and relocate them well away from the building – preferably not uphill.

It may be desirable to install a grated drain at the outside edge of the paving on the uphill side of the building. If subsoil drainage is needed this can be installed under the surface drain.

CONDENSATION

In buildings with a subfloor void, such as where bearers and joists support flooring, insufficient ventilation creates ideal conditions for condensation, particularly where there is little clearance between the floor and the ground. Condensation adds to the moisture already present in the subfloor and significantly slows the process of drying out. Installation of an adequate subfloor ventilation system, either natural or mechanical, is desirable.

TABLE 2. CLASSIFICATION OF DAMAGE WITH REFERENCE TO WALLS.

Description of typical damage and required repair	Approximate crack width limit	Damage category
Hairline cracks	<0.1 mm	0 – Negligible
Fine cracks which do not need repair	<1 mm	1 – Very Slight
Cracks noticeable but easily filled. Doors and windows stick slightly.	<5 mm	2 – Slight
Cracks can be repaired and possibly a small amount of wall will need to be replaced. Doors and windows stick. Service pipes can fracture. Weathertightness often impaired.	5–15 mm (or a number of cracks 3 mm or more in one group)	3 – Moderate
Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows. Window and door frames distort. Walls lean or bulge noticeably, some loss of bearing in beams. Service pipes disrupted.	15–25 mm but also depends on number of cracks	4 – Severe

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Warning: Although this Building Technology Resource deals with cracking in buildings, it should be said that subfloor moisture can result in the development of other problems, notably:

- Water that is transmitted into masonry, metal or timber building elements causes damage and/or decay to those elements.
- High subfloor humidity and moisture content create an ideal environment for various pests, including termites and spiders, and mould.
- Where high moisture levels are transmitted to the flooring and walls, an increase in the dust mite count can ensue within the living areas. Dust mites, as well as dampness in general, can be a health hazard to inhabitants, particularly those who are abnormally susceptible to respiratory ailments.

THE GARDEN

The ideal vegetation layout is to have lawn or plants that require only light watering immediately adjacent to the drainage or paving edge, then more demanding plants, shrubs and trees spread out in that order.

Overwatering due to misuse of automatic watering systems is a common cause of saturation and water migration under footings. If it is necessary to use these systems, it is important to remove garden beds to a completely safe distance from buildings.

EXISTING TREES

Existing trees may cause problems with the upheaval of footings by their roots, or shrinkage from soil drying. If the offending roots are subsidiary and their removal will not significantly damage the tree, they should be severed and a concrete or metal barrier placed vertically in the soil to prevent future root growth in the direction of the building. Soil drying is a more complex issue and professional advice may be required before considering the removal or relocation of the tree.

INFORMATION ON TREES, PLANTS AND SHRUBS

State departments overseeing agriculture can give information regarding root patterns, volume of water needed and safe distance from buildings of most species. Botanic gardens are also sources of information.

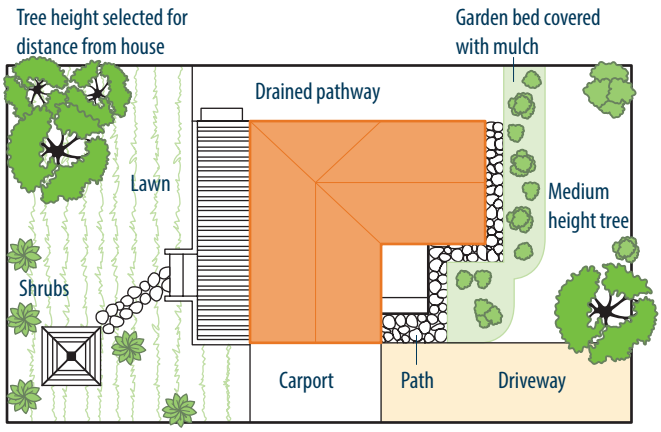

FIGURE 2 Gardens for a reactive site.

EXCAVATION

Excavation around footings must be properly engineered. Soil supporting footings can only be safely excavated at an angle that allows the soil under the footing to remain stable. This angle is called the angle of repose (or friction) and varies significantly between soil types and conditions. Removal of soil within the angle of repose will cause subsidence.

REMEDIATION

Where erosion has occurred that has washed away soil adjacent to footings, soil of the same classification should be introduced and compacted to the same density. Where footings have been undermined, augmentation or other specialist work may be required. Remediation of footings and foundations is generally the realm of a specialist consultant.

Where isolated footings rise and fall because of swell/shrink effect, the home owner may be tempted to alleviate floor bounce by filling the gap that has appeared between the bearer and the pier with blocking. The danger here is that when the next swell segment of the cycle occurs, the extra blocking will push the floor up into an accentuated dome and may also cause local shear failure in the soil. If it is necessary to use blocking, it should be by a pair of fine wedges and monitoring should be carried out fortnightly.