

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 [Form 9](#)). 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*

☐ Change of Consent Notice (s.221(3))

☐ Certificate of Compliance (s.139)

☐ Extension of time (s.125)

☐ Discharge: Total volume = m³

Note: volumes >3m³ requires NRC Consent.

☒ Subdivision

☐ Existing Use Certificate (s.139A)

☐ Consent under National Environmental Standard
(e.g. Assessing and Managing Contaminants in Soil)

☐ 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?

Refer Appendix 11

Who else have you consulted with?

HPT

For any questions or information regarding iwi/hapū consultation, please contact:
The Resource Consents Planning Technicians, planning_technicians@fndc.govt.nz

5. Applicant details

Name/s:

Markus Wiese

Email:

Phone number:

Postal address:

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

Have you been the subject of abatement notices, enforcement orders, infringement notices and/or convictions under the Resource Management Act 1991? ☒ **Yes** ☐ **No**

If yes, please provide details.

6. Address for correspondence

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

Name/s:

Northland Planning & Development 2020 Ltd c/- Rochelle Jacobs

Email:

Phone number:

Postal address:

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

Postcode 0294

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:

Kurapari Holdings Limited and Markus Wiese

**Property address/
location:**

8. Application site details

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

Name/s:	Kurapari Holdings Limited & Markus Wiese		
Site address/ location:	88 Kurapari Road, Kerikeri		
	Postcode 0245		
Legal description:	Lot 3 DP 415575	Val Number:	00213-7700
Certificate of title:	460076		

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.

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.

Proposed subdivision to create 4 allotments, associated vegetation clearance and earthworks to construct a shared ROW serving proposed Lots 2 & 3, partial upgrade to existing ROW.

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.

The proposal has been prepared in accordance with the following version of the FNDC Engineering Standards:

☐ 2009 ☒ 2023

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

☒ Disturbing, removing or sampling soil

☐ Changing the use of a piece of land

☐ Removing or replacing a fuel storage system

13. Natural hazards (National Policy Statement for Natural Hazards 2025)

Is the site subject to known or potential natural hazards (for example, flooding, coastal inundation, erosion, or unstable land), as contemplated by the National Policy Statement for Natural Hazards 2025? ☐ Yes ☒ No

If yes, please identify the relevant natural hazard(s) by ticking the applicable box(es) below:

☐ Flooding

☐ Active Faults

☐ Landslips

☐ Liquefaction

☐ Coastal Erosion

☐ Tsunami

☐ Coastal Inundation

Please ensure all relevant technical reports are submitted with the application.

14. 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

15. Draft conditions:

Do you wish to see the draft conditions prior to the release of the resource consent decision? ☒ Yes ☐ No

If yes, please be advised that the timeframe will be suspended for 5 working days as per s107G of the RMA to enable consideration for the draft conditions.

16. 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)

Markus Wiese

Email:

Phone number:

Postal address:

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

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)

Markus Wiese

Signature:

(signature of bill payer)

Date

15/09/26

17. 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.

18. Declaration

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

Name (please write in full)

Rochelle Jacobs

Signature

Date

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

See overleaf for a checklist of your information...

Checklist of your information

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.*

Subdivision Resource Consent

M & E Wiese

88 Kurapari Road, Kerikeri

17 September 2026

Attention: Nick Williamson – Team Leader, Resource Consents

Please find attached:

- A completed application form for a subdivision resource consent to create four allotments from a parent lot site at 88 Kurapari Road, Kerikeri; and
- An Assessment of Environmental Effects.

MW Holdings Limited is seeking a subdivision and the necessary land use consents to create four allotments from a parent site located at 88 Kurapari Road, Kerikeri. The site is zoned **Rural Lifestyle** under the Proposed District Plan (PDP-AV). The proposed subdivision activity is **Discretionary Activity** under the PDP because of the coastal environment overlay and the wetland, lake and river margin provisions that apply to the site. A land use consent is required for earthworks and vegetation clearance required to construct the subdivision.

As the relevant subdivision provisions relating to the PDP RLZ zone have not been appealed the Operative District Plan, an assessment against the (ODP) subdivision provisions do not form part of this application.

If you require further information, please do not hesitate to contact me.

Regards,

Rochelle Jacobs
Director/Senior Planner
NORTHLAND PLANNING & DEVELOPMENT 2020 LIMITED

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Appendices

- 1. Far North District Council Application Form**
- 2. Certificate of Title – Lot 3 DP 415575**
- 3. Subdivision Plan – Thomson Survey Limited**
- 4. Ecological Report – Bay Ecological Consulting**
- 5. Archaeological Report & Letter – Horizon Archaeology**
- 6. Geotech Report – Wilton Joubert Limited**
- 7. Site Suitability Report – Wilton Joubert Limited**
- 8. Traffic Impact Assessment – Engineering Outcomes**
- 9. Electrical Servicing Plan – Top Energy**
- 10. Correspondence – HNZ**
- 11. Correspondence – Iwi**
- 12. Landuse Consent RC 2260119 – FNDC**
- 13. Relevant Objectives and Policies – Northland Planning and Development 2020 Ltd**

Assessment of Environment Effects Report

1. Description of the Proposed Activity

- 1.1. MW Holdings is seeking a subdivision and the necessary land use consents to create four new allotments from a parent site at 88 Kurapari Road, Kerikeri. The subdivision plan is illustrated in *Figure 1* below and is attached at **Appendix 3**.

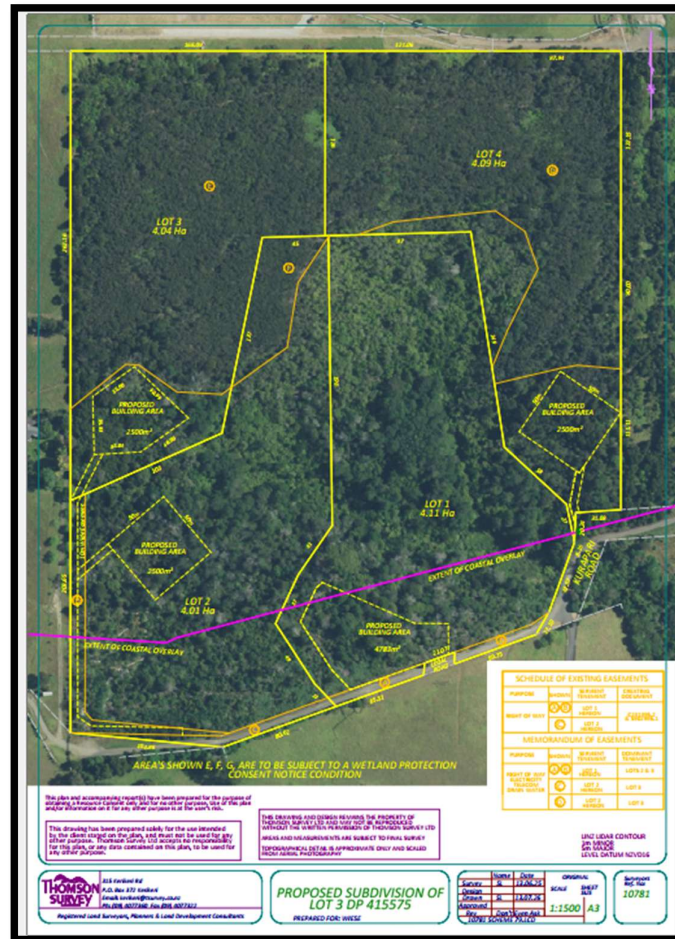


Figure 1 – Proposed Subdivision

Subdivision

- 1.2. Four new allotments are proposed including:
- Lot 1 – 4.11 hectares (contains the consented dwelling and accessory shed)
 - Lot 2 – 4.01 hectares
 - Lot 3 – 4.04 hectares
 - Lot 4 – 4.09 hectares

- 1.3. Building envelopes comprising a 2,500m² building area are illustrated on the subdivision plan. Other than the consented dwelling on proposed Lot 1, the designated building areas are outside of the mapped 'coastal environment'.
- 1.4. The designated building areas can accommodate the required allotment dimension and comply with the building setback from boundary requirements. Building areas (and associated vehicle access) are located away from sensitive natural wetland and indigenous vegetation features on the site. Protected wetland areas identified on the subdivision plan as 'E', 'F' and 'G' are to be permanently protected via a consent notice condition that the applicant is offering as part of this application. The illustrated covenant area is intended to denote the boundary (edge) of the identified wetland for the purpose of any potential resource consent required under the National Environmental Standard for Freshwater Management (NES-FM). As noted by Ms Lodge, future earthworks and building development within Lot 4 may be within 100m of the central wetland on the site could be subject to a resource consent requirement under Regulation 54 of the NES-FM, if there is a proven hydrological connection.
- 1.5. Wilton Joubert has assessed the site for its suitability for on-site wastewater treatment and disposal (that assumes secondary level treatment for a 4-bedroom dwelling / 6-person occupancy) and geotechnical stability. Wastewater disposal areas will be located outside of the identified wetland and gumland areas on the site. A copy of the Wilton Joubert 'Civil Site Suitability Report' dated 3 August 2026 is attached at **Appendix 7**.
- 1.6. Existing overland flowpaths will be maintained. The generous lots sizes are such that there is sufficient land area within each lot to accommodate buildings and paved areas within the permitted activity rule threshold for stormwater management and impermeable surfaces. For stormwater management, Wilton Joubert engineers recommend that future roof runoff be directed to potable water tanks and overflow to appropriate dispersal devices. Runoff from the Lot 2 and 3 ROW driveway and hardstand areas can shed to recommended drainage infrastructure within the site.
- 1.7. Vehicle access to the site(s) will be via the existing ROW that is within the application site, and which also provides legal vehicle access to five other sites at the western end (refer **Figure 8** below). As illustrated on the subdivision plan, Lots 1-3 will have access from this ROW. Lot 4 will have access from the end of Kurapari Road. Wilton Joubert engineers have recommended that all vehicle crossings are constructed in accordance with the FNDC Engineering Standards

(2023), Sheet 1A – Light Vehicles. Proposed vehicle crossing locations can meet the required sight distance requirements.

Land Use (s224 subdivision works)

- 1.8. An estimated 1000m³ of cut and fill earthworks and mixed indigenous and exotic vegetation clearance over an area of approximately 1,600m² is required to construct the vehicle crossing and ROW driveway that will provide access to proposed Lots 2 and 3. The ROW is contained within proposed Lot 2. The associated vegetation to be cleared is described in the ecology report prepared by Bay Ecological and has a low species value and moderate habitat value. To mitigate the potential adverse effect on the main site vegetation, a 5-metre buffer of ‘simple low flammability indigenous species, comprising flax, cabbage tree, five finger and mapou will be established along the eastern boundary of the access. This will remedy the introduced edge effects, provide net gain and additionality for indigenous cover, biodiversity and density and provide a lower flammability corridor for retreat in the event of fire.¹
- 1.9. Land disturbance earthworks will be undertaken in accordance with Auckland Technical Standard GD-05 and standard Accidental Discovery Protocol.
- 1.10. In terms of traffic safety, expert traffic engineer Dean Scanlan of Engineering Outcomes has assessed the existing ROW and the effects associated with additional users. To reduce traffic speeds and to enable two-way vehicle passing within the ROW, the existing section of Kurapari Road which is vested road midway along the existing ROW will be widened to accommodate a constructed chicane (refer *Figure 2* below). This aspect of the proposal has been discussed with the Council’s Roading Development Lead and will require some widening of the existing legal road as part of this proposal. Speed advisory signage is to be added to the roadway to warn drivers about potential oncoming traffic. A copy of the Engineering Outcomes report is attached at **Appendix 8**.

¹ Appendix 4 – Ecological Report [p7]

Proposed Mitigation

1.13. To manage potential adverse ecological effects to a less than minor extent and to enable post subdivision and development protection of the remaining indigenous vegetation on the site, Ms Lodge has recommended an effects management plan which includes:

- a) Permanent protection of remaining vegetation by way of a consent notice on all four titles;
- b) Prior to the removal of any vegetation (including for the ROW and for future building areas), the preparation and approval of a Wildlife Management Plan (WMP) to check for herpetofauna and North Island Brown Kiwi. All clearance is to occur in accordance with the approved WMP.
- c) Preparation and implementation of an approved Offset Management Plan (OMP) for each lot (excluding the ROW driveway to be cleared as part of the subdivision), which provides for a 'no net loss' of vegetation through weed and pest management, a 10m low flammability planted buffer around all future cleared residential building areas (and infill revegetation should the area of clearance exceed 1,000m²)³, and specified planting downstream of stormwater outlets.
- d) Provision of a 5m wide planted buffer along the eastern edge of the proposed ROW.

1.14. The Wildlife Management plan described in (b) for the ROW clearance would be provided as part of an RMA section 223 condition and approval. Future Wildlife Management plans would be required via consent notice condition for the post subdivision vegetation clearance required for residential buildings on Lots 2, 3 and 4. The OMP would be provided by way of a consent notice condition for vegetation clearance and earthworks associated with an approved building consent. This includes an updated OMP for Lot 1 (consented dwelling) to reflect the new site layout and subsequent reallocation of weed and pest control requirements.

1.15. The ecological recommendations include the continuation of an existing consent notice condition that restricts the keeping or introduction of carnivorous or omnivorous animals such as cats, dogs or ferrets that have the potential to be kiwi predators.

³ Vegetation clearance exceeding 1,000m² would require an additional resource consent and a consent notice variation.

2. Description of the Site and Surrounding Environment

- 2.1. The application site is located at 88 Kurapari Road, Kerikeri. The site is legally described as Lot 3 DP 415575. A copy of the Record of Title is attached at **Appendix 2**.
- 2.2. The site is a 16.249 coastal property located north-east of Kerikeri township. The southern part of the site is within the mapped Regional Policy Statement for Northland (RPSN) and the PDP 'Coastal Environment' (Refer **Figure 3** below). The site topography is moderately sloping south facing hill country that overlooks the Pickmere channel and the Kerikeri River Inlet. Coastal views of the Kerikeri Inlet are an attractive feature of the development.
- 2.3. Access to the site is via Kurapari Road, which terminates at the driveway entrance to 51A (Lot 1 DP 96467). Beyond the end of the road, the access is a ROW (referred to as Kurapari Road extension) that forms part of the Applicant's site. The extension has an unsealed carriageway that is between 2.8 and 3.8 metres wide and a legal width of 7.5m. There is a short section of public road located midway along the site frontage. This has resulted from an historic road stoppage application where the legal road traversed through the subject site down through the neighbouring property.



Figure 3 – Partial site location within mapped RPSN 'coastal environment'



Figure 4 - Partial site location within mapped RPSN 'coastal environment'

- 2.4. A land use consent for a dwelling and accessory shed on the site was granted on 16 October 2025 (RC 2260119-RMALUC). The consented dwelling and shed will be located within proposed Lot 1. Vegetation clearance and earthworks associated with this development has been completed under the supervision of expert ecologist Rebecca Lodge of Bay Ecological. A copy of the land use consent is attached at **Appendix 12**. It is understood that most of these conditions have now been satisfied.

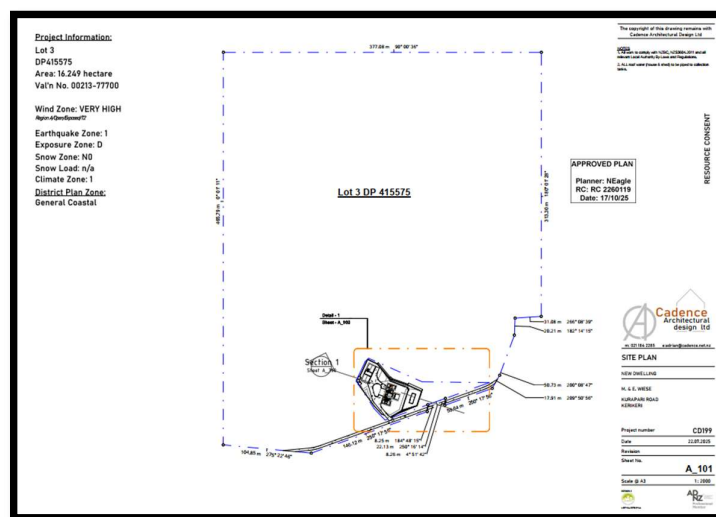


Figure 5 – approved land use consent RC2260119

- 2.5. The site is within the 2016 DoC mapped PNA# PO5/087 'Rangitane Shrublands' (refer *Figure 5* below). Historic clearance of rural lifestyle land to the west separates this vegetation from the escarpment along the eastern side of the Rangitane River.



Figure 6 – Site location within 'Rangitane Shrublands' PNA

- 2.6. Bay Ecological Consultancy Limited has prepared an ecological assessment of the site (refer **Appendix 4**). Other than the consented cleared area within the proposed Lot 1 boundary, the site remains covered in dense mixed native and exotic vegetation. Wetland, stream and gumland areas also feature throughout the site as illustrated on *Figure 3* of the Bay Ecological Report.
- 2.7. The site is within the *Kerikeri ED PNA # PO5/087 Rangitane Shrubland* and is designated '*High Density*' for Northland Brown Kiwi. Vegetation type varies throughout the site, which reflects the soil type. Kanuka shrubland and exotic Wattle and Hakea are prevalent. Weed species are prevalent. The northern part of the site contour contains a rare mix of wet and dry gumland that is assessed as having high habitat significance. The central part of the site comprises wet type natural inland wetlands as defined under the NES-FM and stream headwaters that converge in the lower part of the site (below Lot 4) and pass under Kurapari Road before discharging into the coastal marine area.

- 2.8. The site is not within any regional or district area of mapped high natural character or outstanding natural landscape. The wider remnant bush areas within the PNA are fragmented by farmland and mixed quality in terms of maturity and species.

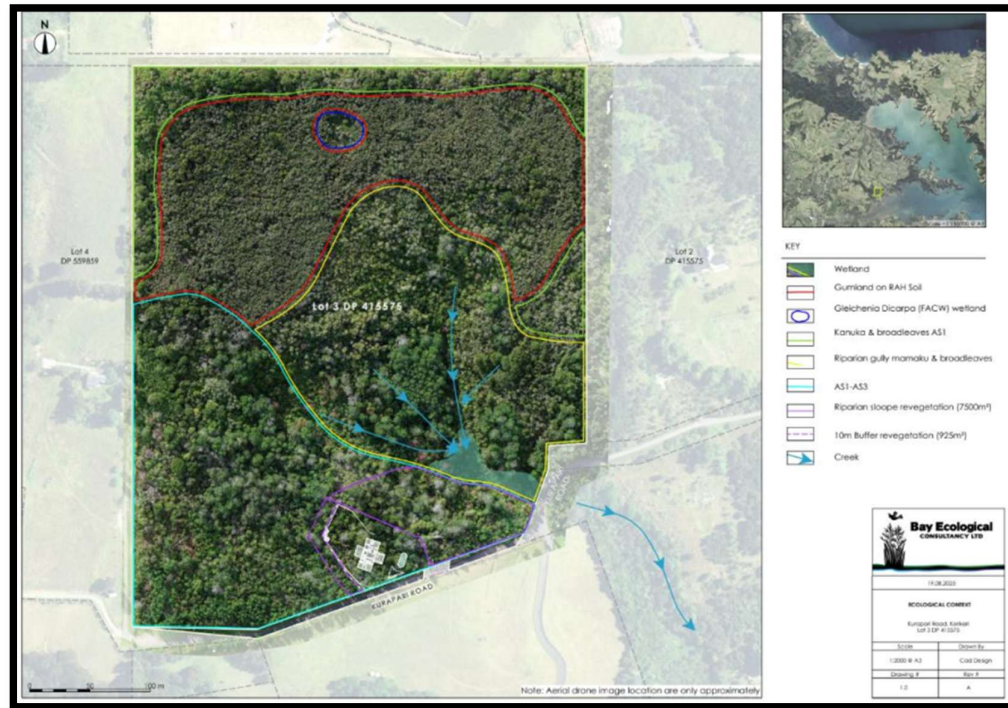


Figure 7 – On-site ecological features – Figure 3 – Bay Ecological Report

- 2.9. As described in the Bay Ecological report, the required vegetation clearance is in two stages, the first being the works required to construct the ROW access to Lot 2 & 3 and an assumed clearance area (up to 1,000m²) within the designated building areas. Avoidance of the significant vegetation, wetland, stream and habitat environment has been a primary design consideration.
- 2.10. The subdivision vegetation clearance area required for the ROW is approximately 1,600m². The location is a previously cleared part of the site and has poorer quality vegetated areas that are affected by the edges that are the neighbouring property and Kurapari Road.
- 2.11. The site falls within the PDP definition of 'significant natural area' because the definition clause (b) RPSN Appendix 5 criteria classification are met (refer **Appendix 4** - Bay Ecological Report - Table 13 [p54]). The highest ecological values are within the gumland (wetland) in the northern part of the site. There is no development proposed in this area nor within the wetland and stream network in the south-eastern part of the site.

2.12. The subdivision and building development clearance areas have ‘moderate’ habitat value (for potentially kiwi and potentially herptofauna) and low ‘flora’ value, which is reflected in its general lack of variety and density of planting. Overall, the Bay Ecological Report states that *“the clearance area has a **moderate** level of significance as per RPS (2018) Appendix 5 with regard to connectivity, size, habitat and representativeness, physical and functioning buffering to the creek / wetland aquatic environment as riparian vegetation e.g. erosion and hydrological control.”*

2.13. The site is within an area mapped as Kiwi ‘High Density’. The surrounding Opito Bay peninsula is well known as a populated kiwi environment that is valued by the local community. However, no Kiwis were encountered by the kiwi dog during the supervised clearance for the consented Lot 1 house site. A Kiwi burrow in the upper gumland was noted during site field inspections.

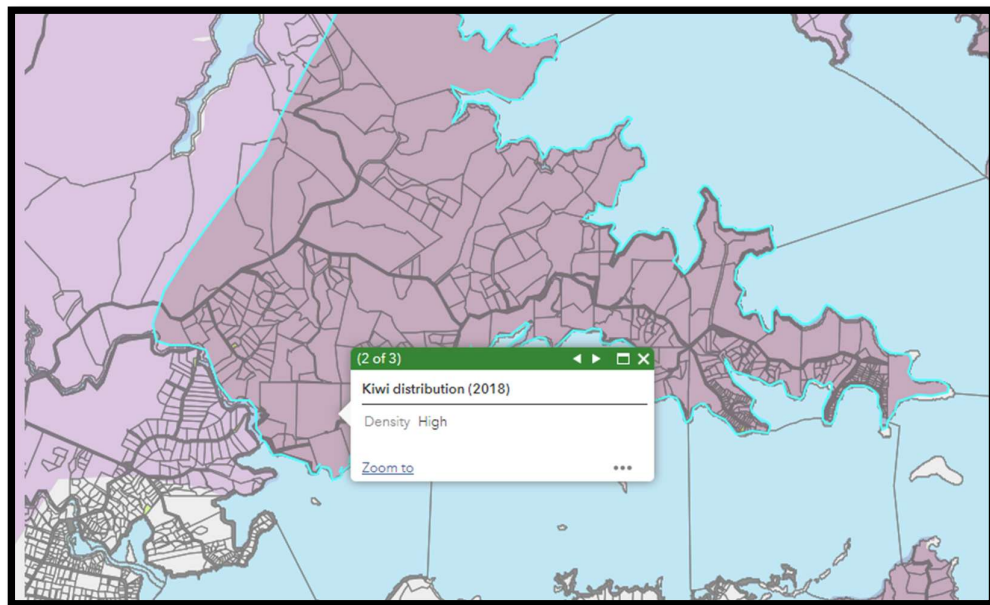


Figure 8 – Kiwi Habitat – High Density (Far North Maps)

2.14. The ‘At Risk’ North Island green gecko has been found on adjacent land as part of the earlier 2010 ‘Fernbrook’ subdivision. It is possible that similar species, including Fernbird and Kukupā (NZ pigeon) inhabit the wider site.

2.15. Horizon Archaeology has undertaken an archaeological survey of the site dated 20 May 2025. There are no recorded sites on the property, other than a small portion of P05/18 that is historically associated with an open terrace site on the Rangitane ridgeline, formerly thought

to be a Pa site. A ground survey of the site did not identify any archaeological features or deposits in the vicinity of the proposed lots. No earthworks or development is proposed in the vicinity of this recorded site. The adoption of an Accidental Discovery Protocol is recommended during site works. Heritage NZ has confirmed that it has no concerns with the subdivision or the proposed location of buildings. Refer **Appendix 10**.

- 2.16. The surrounding environment is a mix of coastal rural-residential properties with large residential homes that enjoy expansive views of the western Bay of Islands and the Kerikeri Inlet. The immediately adjoining neighbouring properties include:

TABLE 1 – ADJACENT NEIGHBOURS

Address	Legal Description	Landowner(s)
28 Kurapari Road	Lot 1 DP 415575	Yvette & Matthew Tatum
51A Kurapari Road	Lot 1 DP 96467	Marplow Nominees Limited
51B Kurapari Road	Lot 4 DP 559859	Peter McNeilly
0 Rangitane Road	Lot 10 DP 488662	Clearspan Property Assets
111 Magnolia Tree Way	Lot 12 DP 431913	Kerry & Shirley Ludbrook
118 Magnolia Tree Way	Lot 11 DP 379502	Alison & Darren Manning
228 Rangitane Road	Lot 2 DP 156003	Kerry & Shirley Ludbrook

- 2.17. As illustrated in **Figure 8**, there are five properties that have existing access from the current ROW including Lots 1-4 DP 559859 and Lot 1 DP 372922 and Lot 2 DP 157606, which are held together in one title. Following subdivision of the application site, eight lots will utilise the section of ROW that is the application site frontage⁴. The state of the existing ROW is described in Section 9 of the Wilton Joubert 'Civil Site Suitability' report and the Traffic Impact Assessment prepared by Engineering Outcomes. The ROW is generally a single lane, unsealed road that is privately owned and managed. The ROW carriageway width is between 2.8m and 3.2m wide.

⁴ Following the completion of the Wilton Joubert civil site suitability report it was determined that the number of existing ROW users is five. Following subdivision the total number of users will be 8.

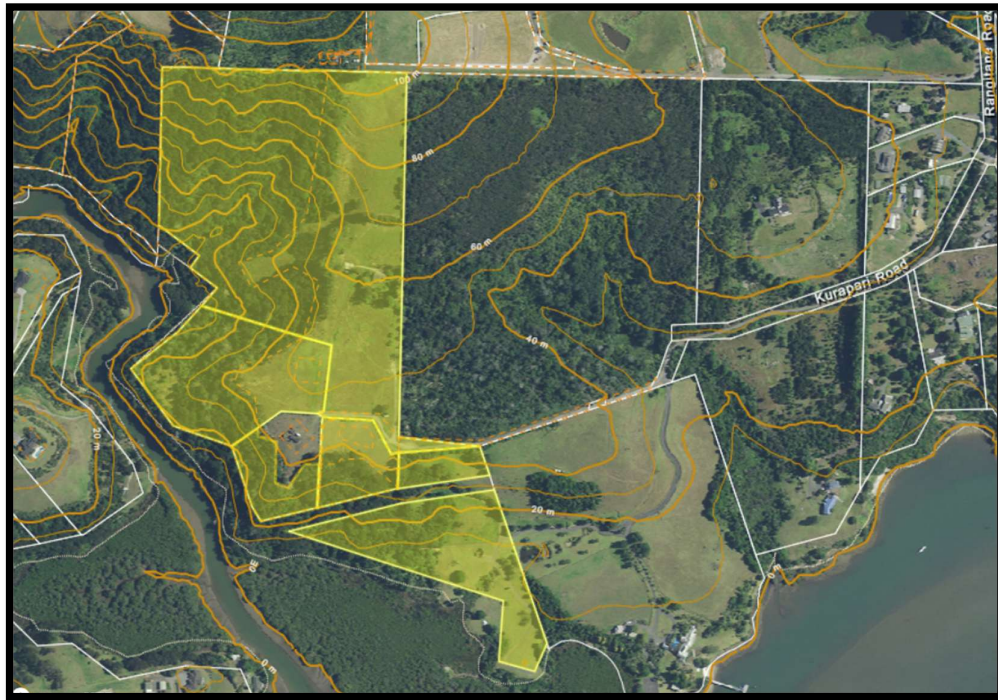


Figure 9 – Allotments that have existing ROW access

2.18. Stages 1 and 2 (and the recently consented Stages 3-6) of the Rangitane River Park development is to the west, separated by the Rangitane Hill and the vegetated River escarpment. Rangitane coastal settlement is to the east.



Figure 10 – Site and Surrounds

3. Reasons for Consent

Proposed District Plan

- 3.1. The Council notified its' PDP on 27 July 2022. The period for public submissions closed on the 21 October 2022. A summary of submissions was notified on the 4 August 2023. The further submission period closed on the 5 September 2023. District Plan hearings on submissions are concluded. A full council decision on the IHP recommendations was made on the 11th of June 2020. Public notification of decisions on submissions was advertised on 30 June 2026. A thirty working day appeal period closed on the 12th of August resulting in the PDP – Appeals Version.
- 3.2. There are no appeals that relate to the proposed RLZ zoning of the site (other than seeking the addition of new provisions) or the applicable minimum allotment size for subdivision. The telecommunications and power supply standard SUB-S6 relating to subdivision has been appealed. While this is the case, under the Operative Plan the site was zoned General Coastal which did not require a reticulated connection. Furthermore, these provisions do not apply to the Rural Lifestyle zone.
- 3.3. Regarding subdivision construction works, including earthworks and vegetation clearance, under the ODP these were included in the subdivision Rule 13.6.8 set out below. The rule gave an Applicant the choice about whether to include the proposed earthworks and vegetation clearance assessment within the subdivision consent application or to apply separately as a land use consent.

13.6.8 SUBDIVISION CONSENT BEFORE WORK COMMENCES

Except where prior consent has been obtained to excavate or fill land pursuant to rules under **Section 12.3**, or consent to vegetation clearance has been obtained pursuant to rules under **Sections 12.1 or 12.2**, and/or relevant consents have been obtained from the Regional Council, no work, other than investigatory work, involving the disturbance of the land or clearance of vegetation shall be undertaken until a subdivision consent has been obtained.

When the subdivision consent is granted, provided all the necessary calculations and assessment of effects is provided with the application, the subdivision consent application shall be deemed to include consent to excavate or fill land, and clear vegetation to the extent authorised by the consent and subject to any conditions in the consent. Alternatively, an applicant may apply to add a land use consent application to the subdivision consent application, for any excavation/filling work and/or vegetation clearance. This does not exempt a consent holder from also obtaining any relevant resource consent or approvals from the Regional Council or the Heritage New Zealand Pouhere Taonga for earthworks, vegetation clearance or disturbance of an archaeological site.

- 3.4. For this proposal, the detail and assessment pertaining to the subdivision earthworks and vegetation clearance required to construct the ROW is included with this application. Because

of appeals⁵ that relate to the PDP 'Ecosystems and Indigenous Biodiversity' permitted activity Rules IB-R1 and IB-R2, a separate land use consent for a nominal 1,000m² of vegetation clearance within Lots 2, 3 and 4 because of a potential breach to ODP Rule 12.2.6.1.3(a) is sought.

- 3.5. The PDP provisions separate subdivision from the associated physical works land use activities, including earthworks and vegetation clearance. Because there are appeals relating to the 'Ecosystems and Indigenous Biodiversity', the ODP provisions remain relevant to this aspect of the proposed subdivision proposal.
- 3.6. The Council's intention for the site is to enable further residential intensification via the application of a 'Rural Lifestyle' zone. The RLZ recognises that the existing environment is no longer comprised of large rural production sites but has a more rural-residential character. This same zoning has been applied to coastal land to the west, north-west and east (excluding Rangitane coastal settlement). Rural land immediately north of the site is to be zoned 'Rural Production'. For larger sites, the potential outcome of this rezoning will be additional houses in the existing coastal landscape. In addition, development land use rules applying to buildings in the coastal environment overlay will be more restrictive with respect to building area location, height, exterior colours, and associated vegetation clearance and earthworks.
- 3.7. There are no historical, natural environment or natural hazard overlays that apply to the site. The site is not within an area of outstanding natural landscape or high natural character. The lower part of the site is within the coastal environment overlay and is subject to SUB-R20. The site contains wetlands and river margins that would qualify in terms of the application of Discretionary Subdivision Rule SUB-R19. The site has been assessed to be 'significant' based on the ecological assessment and the classification criteria in Appendix 5 of the RPSN (refer PDP definition of SNA below – Clause (b)).

SIGNIFICANT INDIGENOUS VEGETATION OR SIGNIFICANT HABITAT OF INDIGENOUS FAUNA	means an area identified as significant indigenous vegetation or significant habitat of indigenous fauna in accordance with Appendix 5 of the Regional Policy Statement for Northland 2016.
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⁵ Top Energy Limited (ENV-2026-AKL-000141) and Vision Kerikeri, Our Kerikeri Community Trust, Kapiro Conservation Trust and Carbon Neutral NZ Trust (ENV-2026-AKL-000167)



Figure 11 - Proposed District Plan 'Rural Lifestyle' Zone and coastal environment overlay

3.8. The subdivision proposal is assessed against the applicable PDP rules set out in **Tables 1-6** below.

TABLE 1 - ASSESSMENT AGAINST THE APPLICABLE PDP RULES

Table 2 - Assessment against the PDP Subdivision ('Rural Lifestyle') Rules & Standards		
Plan Reference	Rule	Performance of Proposal
SUB-R1	Boundary Adjustment	Not applicable
SUB-R2	Subdivision of land solely to create an allotment that is for the purpose of public works, infrastructure, reserves or access	Not applicable
SUB-R3	Subdivision of land to create a new allotment	Controlled Activity CON-1 - Permitted 1. The subdivision complies with standards: SUB-S2 Requirements for building platforms for each allotment; (20m x 20m) - <i>complies</i> SUB-S3 Water supply (potable water tanks plus fire-fighting supply) - <i>can comply via a condition of consent notice;</i> SUB-S4 Stormwater management;

		<i>(designed in accordance with the standard and FNDC Engineering Standards 2023)</i> SUB-S5 Wastewater disposal <i>(designed in accordance with the standard and FNDC Engineering Standards 2023)</i> SUB-S6 Telecommunications and power supply; <i>Not applicable in the Rural Lifestyle Zone</i> and SUB-S7 Easements for any purpose. <i>Provided in respect of shared accessways.</i> CON-2 – Controlled Activity 1. The subdivision complies with standards: SUB-S1 Minimum allotment sizes (except subdivision under SUB-R3 CON-3 below); and SUB-S8 Esplanades. <i>Rural Lifestyle Zone minimum lot size is 2ha (Controlled Activity), 1 ha (Discretionary Activity)</i> CON-3 - not applicable <i>The site is not within the Rural Production Zone</i>
SUB – R4	Subdivision that creates a private accessway	Permitted CON-1 1. A private accessway serves a maximum of 8 allotments. <i>The existing ROW will serve 8 allotments which is the minimum permissible as a controlled activity.</i> CON-2 Where a subdivision serves 9 or more allotments, access shall be by a public road.

		<i>The proposed subdivision would create 4 allotments. 3 lots will have access from the existing ROW (and the proposed ROW serving Lots 2 & 3). The total number of allotments served by the existing ROW will be 8. Lot 4 will have access from the end of the public Kurapari Road.</i>
SUB-R5	Subdivision around an approved residential development	Not applicable
SUB-R6	Environmental benefit subdivision	Not applicable
SUB-R7	Management plan subdivision	Not applicable
SUB-R8	Subdivision of a site containing land susceptible to land instability	Not applicable <i>The geotechnical assessment prepared by Wilton Joubert has not identified the proposed building platform or access and services location as being within land that is susceptible to instability.</i>
SUB-R9	Subdivision of site within 32m of the centre line of a Critical Electricity Line Overlay	Not applicable
SUB-R10	Subdivision of a site within the National Grid Subdivision Corridor	
SUB-R11	Subdivision of a site within flood hazard areas	Not applicable <i>The site is not within a flood hazard area</i>
SUB-R12	Subdivision of a site within coastal hazard areas	Not applicable <i>The site is not within a coastal hazard area</i>
SUB-R13	Subdivision of a site within a heritage area overlay	Not applicable <i>The site is not within a heritage area overlay</i>
SUB-R14	Subdivision of a site that contains a scheduled heritage resource	Not applicable <i>The site does not contain a scheduled heritage resource</i>
SUB-R15	Subdivision of a site containing a scheduled site	Not applicable

	and area of significance to Māori	<i>The site does not contain a scheduled site and area of significance to Māori</i>
SUB-R16	Subdivision of land within a mapped Land Drainage Area of Benefit	Not applicable
SUB-R17	Subdivision of land within the mineral extraction zone	Not applicable
SUB-R18	Subdivision creating one or more additional allotments within an Outstanding Natural Landscape and Outstanding Natural Feature	Not applicable <i>The site is not within an Outstanding Natural Landscape or Outstanding Natural Feature</i>
SUB-R19	Subdivision creating one or more additional allotments of a site within wetland, lake and river margins	Discretionary <i>The subdivision will create new allotments that are potentially within a wetland or river margin.</i>
SUB-20	Subdivision creating one or more additional allotments within the Coastal Environment (excluding Outstanding Natural Character Areas)	Discretionary <i>The subdivision will create new allotments within the Coastal Environment (specifically the lower parts of Lots 1 and 2)</i>
SUB-R21	Subdivision of land within 100m of a Mineral Extraction Zone	Not applicable <i>The site is not within 100m of a Mineral Extraction Zone</i>
SUB-R22	Subdivision creating one or more additional allotments that contain highly productive land	Not applicable <i>The site does not contain highly productive land.</i>

Table 2 - Assessment against the Rural Lifestyle Zone Rule Standards

Plan Reference	Rule	Performance of Proposal
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RLZ-R1	New buildings or structures and relocated buildings or extensions or alterations to existing buildings or structures	Not applicable <i>No buildings are proposed.</i>
RLZ-R2	Impermeable surface coverage	PER-1 Permitted The impermeable surface coverage of any site is no more than 12.5% or 2,500m ² , whichever is lesser. <i>The consented area of impermeable surface within Lot 1 is 1,727m², which is 4.20% of the proposed site area.</i> <i>The subdivision works include the impermeable surface (gravel) formation of the shared ROW to Lots 2 and 3 for a sealed width of up to 3.5m over approximately 110m length, which 385m² or 0.09% of the proposed Lot 2 site area.</i>
RLZ-R3-R28		Not applicable.
Standards		
RLZ-S1	Maximum height	Not applicable <i>Consented dwelling on proposed Lot 1</i>
RLZ-S2	Height in relation to boundary	Not applicable <i>Consented dwelling on proposed Lot 1</i>
RLZ-S3	Setback (excluding from MHWS or wetland, lake and river margins)	Not applicable <i>Consented dwelling on proposed Lot 1. Dwelling location is setback the required distance</i>
RLZ-S4	Building or structure coverage	Not applicable <i>Consented dwelling on proposed Lot 1 comprising 0.014% site coverage.</i>

RLZ-S5-S8		Not applicable

Table 3 - Assessment against the Coastal Environment Rule Standards

Plan Reference	Rule	Performance of Proposal
CE-R1	New buildings or structures and relocated buildings and extensions or alterations to existing buildings or structures	PER1-PER4 Not applicable – no new buildings are proposed. The proposed dwelling on Lot 1 is consented.
CE-R2	Earthworks or indigenous vegetation clearance	PER-1 - Not applicable. PER-2 - Restricted Discretionary The earthworks or indigenous vegetation clearance is not provided for within CE-R3 PER - 1 but it complies with standard CE-S3 Earthworks or indigenous vegetation clearance. <i>The site is not within an outstanding natural character or high natural character area. The proposed earthworks area that is 1,600m² required to construct the ROW driveway would exceed the S3(1)(ii) earthworks standard for works outside an area of outstanding or high natural character.</i> <i>The vegetation clearance is 1,600m² plus a nominal 1,000m² per Lot 2, 3 & 4 which exceeds the CE-S3(2)(ii) standard</i>
CE-S3	Earthworks or indigenous vegetation clearance	Restricted Discretionary <i>Proposed earthworks and indigenous vegetation clearance will exceed the 400m² permitted standard for earthworks and vegetation clearance.</i>
CE-R3	Farming	Not applicable

CE-R4-R9		Not applicable.
Standards		
CE-S1	Maximum height	Not applicable
CE-S2	Colours and materials	Not applicable
CE-S3	Earthworks or indigenous vegetation clearance	Refer above
CE-S4	Setbacks from MHWS	Not applicable

- 3.9. The site is within an area that expert ecologist Rebecca Lodge of Bay Ecological has been identified as having significant indigenous vegetation and habitat of indigenous fauna. The following rules therefore apply.

Table 4 - Assessment against Indigenous Biodiversity Rule Standards		
Plan Reference	Rule	Performance of Proposal
IB-R1	Indigenous vegetation pruning, trimming and clearance and any associated land disturbance for specified activities	Not applicable
IB-R2	Indigenous vegetation clearance and any associated land disturbance for papakāinga	Not applicable
IB-R3	Indigenous vegetation clearance and any associated land disturbance (All Zones)	PER-1 Not applicable PER-2 Discretionary For areas outside of a remnant forest, it does not exceed the following amounts per site over a calendar year: i. Not applicable ii. Not applicable iii. Rural Lifestyle zone – 250m²;

		<i>The proposed clearance of indigenous vegetation required to construct the ROW driveway is 1,600m² which exceeds the rule standard. A nominal allocation of 1,000m² vegetation clearance per Lot 2, 3 & 4 is sought.</i>
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Table 5 - Assessment against Earthworks Rule Standards		
Plan Reference	Rule	Performance of Proposal
EW-R1	Earthworks	PER-1 Permitted <i>(For construction of the ROW)</i> The earthworks comply with standards: EW-S1 Maximum earthworks thresholds; <i>1,000m³ or 2,500m² in the Rural Lifestyle Zone is permitted. The proposed area and volume of earthworks required to construct the ROW will not exceed this standard.</i> EW-S2 Maximum depth and slope; <i>Cut or height of fill does not exceed 1.5m or total height of 3m. No retaining walls are proposed.</i> EW-S3 Accidental discovery protocol; <i>Will be complied with</i> EW-S4 Site reinstatement; <i>Will be complied with</i> EW-S5 Erosion and sediment control; <i>Proposes earthworks will comply with GD-05 as per a condition of resource consent.</i> EW-S6 Setbacks; <i>Complies</i> EW-S7 Land stability;

		<i>Complies</i> EW-S8 Nature of filling material; and <i>Complies</i> EW-S9 Flood and coastal hazards. <i>Complies</i>
EW-R3	Earthworks within 10m of critical electricity lines (excluding Top Energy 110Kv and 66Kv Transmission Lines)	Not applicable

Table 6 - Assessment against Transportation Rule Standards

Plan Reference	Rule	Performance of Proposal
TRAN-R1	Parking	Not applicable
TRAN-R2	New or altered vehicle crossings and access, including private accessways (excluding access from a State Highway or Limited Access Road)	PER-1 - Permitted <i>The existing private accessway (ROW) will serve 8 allotments.</i> PER-2 - Permitted <i>The existing accessway will not serve more than 9 allotments</i> PER-3 – Permitted <i>The vehicle crossing is not off a road classified arterial as shown on the Transport Network Hierarchy layer.</i> PER-4 – Not applicable PER-5 – Restricted Discretionary

		Private accessways shall be designed and constructed in accordance with TRAN-Table 10 - Requirements for private accessways. <i>The existing ROW accessway carriageway is less than the required 6.0m for accessways serving between 6-8 lots. The legal width is approximately 7.5m which is less than the required 10m.</i> PER-6 - Permitted Vehicle crossings and private accessways shall be designed and constructed in accordance with TRAN-Table 11 – Sealing requirements for vehicle crossings and private accessways. <i>Can be designed to comply in accordance with a condition of consent.</i> PER-7 – Restricted Discretionary The vehicle crossing, access, or private accessway complies with standard: TRAN-S2 Requirements for vehicle crossings; and The passing bay standard TRAN-S3 is not complied with: TRAN-S3 Requirements for passing bays. <i>The proposal includes a new chicane to enable vehicles travelling in both directions to pass safely and to accommodate larger vehicles.</i> <u>Note: Emergency responder access requirements are further controlled by the Building Code. Plan users should refer to the Building Code to ensure compliance can be achieved at building consent stage. Granting of a resource consent does not imply that waivers of Building Code requirements will be granted. Fire and Emergency New Zealand</u>
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		<u>publishes guidance in the context of Building Code requirements.</u>
TRAN-R3-R8		Not applicable
TRAN-R9	Trip Generation	PER-1 – Permitted <i>The use and development of the site is no greater than the thresholds in TRAN-Table 11 – Trip Generation</i> PER-2 – Permitted The subdivision does not create lots (including balance lots) that enable use or development greater than the thresholds in TRAN-Table 11 – Trip generation. <i>The subdivision will create lots that enable use and development for a single residential dwelling. 20 trips are permitted per residential unit.</i>
TRAN-R10-R13		Not applicable
Standards		
TRAN-S1	Requirements for parking	Not applicable
TRAN-S2	Requirements for vehicle crossings	Permitted <i>The site frontage exceeds 200m. Two new vehicle crossings are proposed to access the consented dwelling at Lot 1 and a shared crossing for Lots 2 and 3. A third crossing at the eastern end of the site will access Lot 4. The proposed ROW to Lots 2 & 3 can comply with private accessway standards in TRAN-Table 9.</i> <i>Vehicle access is from an unsealed rural road.</i>

TRAN-S3	Requirements for passing bays	<i>Passing bays are required every 100m for accessways in the Rural Lifestyle zone. They are to be a minimum of 15m long and a sealed width of no less than 5.5m.</i> <i>The proposal includes a chicane feature that will enable two-way vehicle passing.</i>
TRAN-S4-S5		Not applicable

Relevant ODP Provisions - Land use

- 3.10. For the reasons outlined above, the ODP land use rules as they apply to future, post subdivision vegetation clearance on Lots 2, 3 and 4 are relevant until such time as the PDP Ecosystems and Indigenous Biodiversity rules are operative. These are set out below in **Table 7**.

TABLE 7 - ASSESSMENT AGAINST THE RELEVANT ODP DISTRICT-WIDE RULES:		
Plan Reference	Rule	Performance of Proposal
12.1	LANDSCAPE AND NATURAL FEATURES	Not applicable The application site is not within any mapped outstanding natural or landscape feature.
12.2	INDIGENOUS FLORA AND FAUNA Rule 12.2.6.2.1	Discretionary Resource consent for up to 1,000m² of vegetation clearance within the proposed Lot 2, 3 and 4 boundaries is sought. Vegetation clearance required to create the subdivision is deemed to be included as part of the application under Subdivision Rule 13.6.8. Clearance of more than 1,000m² vegetation within Lots 2, 3 & 4 on a site comprising more than 50% indigenous vegetation required for future building platforms, access

		and on-site services is proposed in accordance with Rule 12.2.6.3.
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District Plan(s) Activity Status

Proposed District Plan

- 3.11. The proposed subdivision is a “**Discretionary**” activity under the PDP to create three new allotments within the coastal environment overlay and within the margins of a wetland and river (stream) within the site.
- 3.12. The physical works required to construct the subdivision is a ‘**Discretionary**’ land use activity for earthworks and clearance of indigenous vegetation to construct the ROW driveway servicing proposed Lots 2 and 3, and for the required passing bays and a ROW not meeting the required width and passing bay standards in Tran-Table 10.

Operative District Plan

- 3.13. The proposed vegetation clearance required post subdivision to construct building platforms and accessways within Lots 2 (other than the shared ROW), 3 and 4 is a Discretionary Activity under Rule 12.2.6.3.

National Environmental Standards

National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NESCS)

- 3.14. The site is not a HAIL site and has no history of HAIL activity.

National Environmental Standards for Freshwater Management 2020

- 3.15. The identified wetlands and streams on the site will not be affected by the subdivision or the future development of the site for residential purposes. A future resource consent under NES-FM Regulation 54 for building development associated with Lot 4 may be required.

- 3.16. The location and character of natural features are described in the Bay Ecological report (refer **Appendix 4**). There will be no earthworks, vegetation clearance (or future buildings) located within or adjacent to the identified wetland and gumland area(s).

4. Statutory Assessment

Section 104B of the Resource Management Act 1991 (RMA)

- 4.1. Section 104B governs the determination of applications for **Discretionary Activities**. A consent authority may grant or refuse an application for a discretionary resource consent and may impose conditions under section 108 of the RMA.

Section 104(1) of the RMA

- 4.2. Section 104(1) of the RMA states that when considering an application for resource consent –
- “the consent authority must, subject to Part II, have regard to –*
- (a) any actual and potential effects on the environment of allowing the activity; and*
 - (ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment that will or may result from allowing the activity; and*
 - (b) any relevant provisions of –*
 - i. a national environmental standard:*
 - ii. other regulations:*
 - iii. a national policy statement:*
 - iv. a New Zealand Coastal Policy Statement:*
 - v. a regional policy statement or proposed regional policy statement:*
 - vi. a plan or proposed plan; and*
 - (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.”*
- 4.3. Actual and potential effects arising from a development as described in 104(1)(a) can be both positive and adverse (as described in section 3 of the RMA). Positive effects arising from this proposal include the establishment of three additional rural-residential type lots that will

contribute to housing supply in and around Kerikeri. Indigenous wetland (gumland) features and associated vegetation in the context of the site wide ecological unit will be permanently protected via land covenants proposed in conjunction with this application. The location is suitable for the size of lots proposed in an established rural lifestyle environment. In the absence of natural environment overlays, the subdivision would be considered as a 'controlled activity'.

- 4.4. Section 104(1)(ab) requires that the consent authority consider 'any measure proposed or agreed to by the applicant for the purposes of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity'. Potential adverse effects are assessed to be no more than minor. There are no significant adverse effects that would require offsetting or compensation.
- 4.5. Section 104(1)(b) requires the consideration of any relevant provisions found in national policy statements or standards, regional policy statements or plans and operative or proposed district plans. Of relevance to this application are the Regional Policy Statement for Northland (RPSN) and the ODP and PDP.
- 4.6. Section 104(1)(c) states that consideration must be given to 'any other matters that the consent authority considers relevant and reasonably, necessary to determine the application'. There are no other matters relevant to this application.

RMA Section 106

- 4.7. Section 106 of the RMA is the basis on which a consent authority may refuse to grant a subdivision consent. This includes potential risk from natural hazards and satisfactory provision of legal and physical access to each allotment created by the subdivision. Section 1A requires an assessment of the risk from natural hazards, including the likelihood of occurrence, the type of material damage to land or structures and any subsequent use of land that may accelerate, worsen that damage.
- 4.8. The recently gazetted National Policy Statement for Natural Hazards (NPS-NH) provides the basis for an assessment of natural hazards affecting a site. Wilton Joubert has undertaken an assessment of the proposed subdivision under the NPS-NH and concluded that any potential natural hazard risk is low (refer **Appendix 6 & 7**). As recommended, the establishment of new buildings would be subject to a foundation design assessment provided as part of any building consent application. There are suitable developable areas within the building platforms indicated on the Wilton Joubert civil site plan. These are illustrated on the subdivision plan and will be included on the approved title plan and referenced by way of a consent notice condition.

Assessment of Effects on the Environment

- 4.9. Section 104(1)(a) requires the consent authority to consider any potential or actual adverse effects on the environment of allowing the activity. Potential effects on the environment to be assessed generally arise from the following rule infringements:
- *Subdivision – allotment sizes*
 - *Coastal environment and landscape effects*
 - *Earthworks & indigenous vegetation clearance*
 - *Natural Hazards*
 - *On-site services*
 - *Vehicle access and traffic safety*
- 4.10. The proposed activity is a four-lot subdivision that would include the previously consented residential dwelling within proposed Lot 1. Building envelopes on Lots 2, 3 and 4 have been positioned such that they are located away from environmentally sensitive features on the site

including wetlands, the northern gumland area, streams and significant indigenous vegetation. These areas are identified as 'E', 'F' and 'G' on the subdivision plan are to be permanently protected via a consent notice condition.

- 4.11. The PDP-AV has rezoned the site 'Rural Lifestyle' which potentially enables greater intensification of the site as compared to the ODP General Coastal Zone. This includes the associated vegetation clearance and earthworks. Subdivision of the site is subject to an assessment of potential adverse effects on the coastal environment which applies to the lower half of the site and existing natural wetland and stream features. The rezoning reflects the existing rural-residential character of the surrounding area.

Allotment Size and Dimensions

- 4.12. In respect of subdivision, the proposed number and size of allotments comply with the PDP-AV controlled activity status. The land use pattern below indicates the extent to which the immediate surrounds has developed away from traditional rural farming and is now a rural lifestyle environment. The application site is a remnant of large sites that have no economic rural production value due to the existing bush and gumlands on the site. The land north of the site has already been subdivided into smaller rural-residential lots. The application proposal is consistent with the type of development that has been enabled in this location and will not adversely affect the character of the coastal environment in this location.
- 4.13. The 'Rural Lifestyle' zoning under the PDP-AV enables lot sizes more in keeping with the existing environment, and which are subject to natural environment protection overlays including the coastal environment, and rule protection given to areas of existing indigenous vegetation and fauna habitat.



Figure 12 – Existing environment development pattern

- 4.14. The proposed allotment sizes would not be out of character with the existing environment and would be developed in such a way that the remaining vegetation and wetland / streams will be permanently protected and enhanced.

Landscape effects and the coastal environment

- 4.15. The lower part of the site is within the mapped RPSN and PDP coastal environment boundary. Landscape effects as they affect the natural character of the coastal environment is an RMA section 6 matter and is a primary consideration for land development within the mapped coastal environment.
- 4.16. The number and size of the proposed allotments align with the PDP-AV controlled activity minimum allotment sizes. Subdivision at the intensity proposed will be in keeping with the landscape character of development that has already occurred along this part of the district's coastline. As viewed from the coastal marine area, the predominant natural character of the site comprised of regenerating indigenous vegetation on south sloping land will remain. The proposed ROW running up the western boundary will appear adjacent to the neighbouring driveway. The appearance of future buildings will be managed in terms of what is appropriate for the site and where the coastal environment boundary is now defined. Closer land-based views will be obscured by topography and vegetation that will continue to surround each building platform. Vegetation clearance associated with the dwelling on proposed Lot 1 has

been consented. On-site vegetation that provides the visual backdrop to this dwelling will remain and is currently being enhanced via offset planting required by land use consent conditions.

- 4.17. Potential adverse landscape effects on the existing coastal environment are assessed to be no more than minor.

Earthworks and effects on indigenous vegetation

- 4.18. As illustrated on the Vegetation Clearance Plan A_910 contained within the ecological report (**Appendix 4**), 1,600m² of indigenous vegetation clearance is proposed to construct the driveway. Some additional (future) vegetation (up to 1,000m²) will be required within the building platforms. Enabling up to 1,000m² of vegetation clearance on Lots 2, 3 & 4 forms part of this application and is consistent with the permitted IB-R1(7) standard.
- 4.19. The balance area of the site will remain in bush and protected by way of a consent notice condition. The proposed vegetation clearance infringes the PDP Rule IB-R3 Indigenous vegetation clearance and any associated land disturbance. The wider site and clearance area has been assessed at varying significance based on the PDP definition and the ecological assessment conclusions made in respect of the RPSN Appendix 5 criteria (refer Table 15 of the Bay Ecology Report). Indigenous vegetation in the clearance area has moderate significance regarding connectivity; size; habitat and representative. The clearance area derives most of its value from the wider site where there are natural gumlands and wetland environments and from its location within the Rangitane Shrublands PNA.
- 4.20. The significance value of the vegetation within the clearance area is generally low value exotic trees and weed species interspersed with mixed natives that comprise approximately 40% of the vegetated area. The higher moderate ecological values are associated with the habitat opportunities the site provides for North Island Brown kiwi that are prevalent in this area, and potentially herpetofauna. The most significant effects consideration for fauna is the potential for injury, hence the mitigation recommendation for a site check prior to clearance and relocation of resident kiwi within the clearance area if necessary. This also applies to herpetofauna.

- 4.21. The type and maturity of vegetation on the site reflects general coastal land outside of identified outstanding natural landscapes. Such areas are still subject to assessment requirements to determine their significance under the RPSN Appendix 5 and the contribution they make to the overall biodiversity of the District.
- 4.22. Based on the assessed value of the vegetation and fauna habitat within the clearance area, Bay Ecology has recommended offset mitigation replanting within the adjacent bush areas to remove weed / flammable species and replanting of higher value indigenous species to compensate for the permanent loss of vegetation. The mitigation will improve the ecological value of the site by improving fauna access to fruiting species and contributing to the regeneration of a more appropriate WF9 podocarp forest pattern. Replanting will be supported by active weed and pest management. The overall offset gains to compensate for the loss of vegetation is set out in Table 20 of the Bay Ecology Report. The combination of effects management recommendations to be included in an Offset Management Plan (OMP) has been assessed as sufficient to reduce potential adverse ecological effects to less than minor. The preparation of an OMP that references the Bay Ecology report is expected to be a condition of consent.
- 4.23. Providing the mitigation proposal is complied with, potential adverse effects on the significance value of the existing vegetation and associated ecosystems would be no more than minor.

Natural and other hazards

- 4.24. Wilton Joubert has assessed the natural hazard risk at the site and concluded that this is low (refer Section 5.5 of the Wilton Joubert 'Site Assessment Report' (SAR) attached at **Appendix 6**). The site is elevated well above sea level and is not at risk from any coastal flood hazard, nor is it at risk from erosion. The identified building sites are within land identified as having 'low instability' risk and are positioned to avoid steep slopes. Wilton Joubert state that any future buildings are constructed in accordance with the recommendations in the SAR report and as part of any building consent application.
- 4.25. Other potential natural hazard effects which could impact the site relate to wildfire. Recommendations within the Bay Ecology report require fire buffer planting around clearance

areas to ensure highly flammable species are not located within close proximity to future dwellings.

- 4.26. Potential adverse natural hazard effects arising from subdivision and the nominated position of building platforms is assessed to be no more than minor.

On-site services

- 4.27. Wilton Joubert engineers have assessed the site's suitability for domestic on-site services including wastewater, potable (and firefighting) water supply and the management of stormwater. The designated building areas are assessed to be suitable for on-site wastewater with varying slope conditions that will need to be designed for as part of any future building consent. A secondary system is a likely requirement. Wilton Joubert has concluded that there is sufficient undeveloped natural ground within each designated building area to accommodate primary and reserve wastewater disposal areas.⁶ Future water supply will be on-site tanks including firefighting as per NZ standards to be determined by Council. Stormwater runoff from the site can be managed within the site boundaries and in accordance with the Wilton Joubert recommendations.

- 4.28. Potential adverse effects arising from the construction or use of on-site services are assessed to be less than minor.

Vehicle Access and traffic safety

- 4.29. Access to the proposed lots will be via the existing private accessway that runs parallel to the site from the end of Kurapari Road. Post subdivision, a total of eight users will have access from the ROW which complies with the PDP SUB-R4 standard. The existing legal width of the ROW is 7.5m and is less than the PDP-AV minimum legal width of 10m and the carriageway width of 6m (refer TRAN-Table 10). The development is also subject to passing bay requirements for the Rural Lifestyle zone as the ROW exceeds 100m metres.

- 4.30. A new ROW providing vehicle access to Lots 2 and 3 will be constructed from the end of the existing ROW and adjacent to the western site boundary. The width and construction standard

⁶ Wilton Joubert 'Civil Site Suitability Report [p9]

of this private accessway will comply with the PDP-AV permitted standards and FNDC Engineering Standards.

- 4.31. Expert traffic engineer Dean Scanlan has assessed the suitability of the existing ROW to accommodate the expected number of users and their associated safety risks. It is Mr Scanlan's view that general widening of the carriageway is not appropriate or necessary in this location. However, to address potential traffic safety risks that may arise in the central part of the accessway where there is limited visibility and passing opportunities, Mr Scanlan has recommended the installation of a 'chicane' within the short section of legal road to slow traffic and enable vehicles to deviate around away from one another. The addition of speed warning signs will also serve to slow traffic and make drivers aware of potential oncoming traffic. The PDP-AV TRAN-S3 includes matters over which the Council has reserved its discretion.
- 4.32. The Applicant has consulted with the FNDC roading development lead about the proposed mitigation and the widening of the existing road to vest. Ms Page has verbally advised that this mitigation is in principle a workable solution that will ensure the future safe use of the private accessway. Ms Page also queried whether the client would be open to a covenant setting aside the ROW and an additional 2.5m to top this up to 10m for future road to vest if a future road extension was necessary. MW Holdings is open to this arrangement. It is noted that the additional 2.5m strip would slightly encroach on some native vegetation however any impact involving the removal of this vegetation would be no more than minor.
- 4.33. Based on the proposed mitigation to utilise and the expand the existing section of legal road to include the chicane and the addition of traffic signs, potential adverse traffic safety effects are assessed to be no more than minor.

Assessment against any relevant policy documents

- 4.34. In accordance with Section 104(1)(b) of the Act, the following statutory documents have been assessed for relevance to the consideration of this proposal.

National Environmental Standards

- 4.35. The site is not a HAIL site and is not subject to the National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011.
- 4.36. There are no subdivision activities proposed in proximity to natural inland wetlands (or gumlands) on the site that would require resource consent under the National Environmental Standard for Freshwater Management. The proposed subdivision design seeks to avoid sensitive wetland and stream environments on the site and protect these areas by way of a consent notice condition that would apply to the relevant lot.
- 4.37. No other National Environmental Standards apply to this development.

National Policy Statement(s)

- 4.38. There are currently nine operative National Policy Statements. These are as follows:
- New Zealand Coastal Policy Statement
 - National Policy Statement on Urban Development
 - National Policy Statement for Freshwater Management
 - National Policy Statement for Renewable Electricity Generation
 - National Policy on Electricity Transmission
 - National Policy Statement for Highly Productive Land
 - National Policy Statement for Indigenous Biodiversity
 - National Policy Statement for Greenhouse Gas Emissions from Industrial Process Heat
 - National Policy Statement for Natural Hazards
- 4.39. Other than the NZCPS, the NPS-FW, and the NPS-NH, there are no other NPS that are relevant to the assessed of the proposed activities.
- 4.40. The NZCPS provides national policy direction for the management of subdivision and development in the coastal environment to ensure that its natural character is preserved. Objective 2 seeks to:

‘preserve the natural character of the coastal environment and protect natural features and landscape values through:

- *recognising the characteristics and qualities that contribute to natural character, natural features and landscape values and their location and distribution;*
- *identifying those areas where various forms of subdivision, use, and development would be inappropriate and protecting them from such activities; and*
- *encouraging restoration of the coastal environment.'*

4.41. The consented house site within proposed Lot 1 is within the mapped RPSN and PDP coastal environment. The appropriateness of the size and location of the building and the associated vegetation clearance and earthworks have already been assessed and deemed to be no more than minor. No other coastal environment mapped land is affected. The proposed building platforms on Lots 2, 3 and 4 are not within the mapped coastal environment. The upper, central parts of the site will remain vegetated and will continue to provide a natural coastal character backdrop to buildings on the site.

4.42. The NPS-FM applies to wetland and stream environments within the site. This includes the gumland area that comprises a large area within the upper part of the property. Subdivision of the site will avoid these areas, including the location of the accessway and the building platforms.

Regional Policy Statement for Northland

4.43. The purpose of the Regional Policy Statement for Northland (RPS) is to promote the sustainable management of Northland's natural and physical resources by providing an overview of the regions resource management issues and setting out policies and methods to achieve integrated management of Northlands natural and physical resources. The application site is not within any mapped outstanding landscape or area of high natural character. The lower part of the site is within the mapped RPS coastal environment boundary. The proposed subdivision will not adversely affect any identified regional values, including indigenous biodiversity that exist at the site, and it will not be contrary to any RPS objective or policy.

Proposed Far North District Plan

4.44. The Council has determined that the site is to be zoned 'Rural Lifestyle' with a 'Coastal Environment' overlay applying to the southern edge of the property. There are no other environment overlays that apply to the site. The proposed site zoning applies a more intensive

rural-residential type zoning to the site that reflects the existing development character of the location and its surrounds.

- 4.45. Applicable rules are set out in the tables above. The application is a controlled activity in terms of subdivision rules and a Discretionary Activity overall due to the sites' partial location within the coastal environment overlay, proximity to streams and wetlands for reasons relating to the number of allotments that will utilise the existing ROW.
- 4.46. The relevant zone, overlay and district-wide objectives and policies are set out in **Appendix 13**.

Subdivision

- 4.47. The proposal is for four new lots in the PDP RLZ. Subdivision where lot sizes are not less than 2 hectares is a 'controlled activity'. The proposed allotments exceed 4 hectares and are well within the anticipated lot size standard for the zone. Additional considerations include the extent to which the site is affected by the applicable natural environment overlays including the coastal environment, and the proximity to wetlands and streams. These features must be given a broader 'Discretionary' consideration when deciding this application.
- 4.48. Objectives SUB-O1 (and SUB-P3) seeks that subdivision results in the efficient use of land, including achieving the objectives of the relevant zone, overlays and district-wide provisions, planned local character and sense of plan, avoiding reverse sensitivity and land use patterns that oppose zone objectives, limiting the risk of natural hazards and managing adverse effects. The role of the RLZ is to provide a specific area for rural lifestyle living that is close to transport and urban services and which reduces ad-hoc sporadic rural lifestyle development throughout the Rural Production Zone⁷.
- 4.49. Objective RLZ-O1 states that the zone is for predominantly '*low density residential activities and small-scale farming activities*' (RLZ-O1). These are not intended to be at a rural-residential scale (2,000m² – 4,000m²), which are restricted in the zone, unless the development provides for superior environmental outcomes (SUB-P9). The RLZ is a transition zone between Rural-Residential and Rural Production⁸ and has been applied to land that is already fragmented with

⁷ Rural Lifestyle Zone - Overview

⁸ Rural Lifestyle Zone - Overview

residential activity, or on low value soils. The proposed allotments are not rural-residential in size and are consistent with the intent of the zone which is to provide for low density residential activity. The subdivision recognises and provides for the protection, restoration and enhancement of the existing areas of significant vegetation on the site, which is consistent with SUB-O2. Building platforms can be adequately accommodated within each allotment with suitable upgraded vehicle access utilising the existing ROW.

- 4.50. The site is within an area that over the past twenty years has become an established rural lifestyle living environment. Its productive value is limited by the large area of indigenous vegetation, poorer soils, and the existing stream and wetlands on the site. The size of the proposed lots is consistent with the development pattern that is anticipated for the zone and will continue to maintain the coastal rural lifestyle character of the area. The engineering assessment indicates that subdivision of the site as proposed will not exacerbate any natural hazard.
- 4.51. The natural environment overlays limit development at the site to the extent that they are to be protected, restored or enhanced. The ecological assessment has determined the significance of the indigenous vegetation, wetland and stream values on the site and recommended how potential adverse effects of the proposed clearance, land disturbance and introduction of residential activity can be mitigated. This will be achieved in the first instance by avoiding sensitive locations and through replacement planting to offset the loss of vegetation and habitat environment. Indigenous vegetation and wetland / stream environment within the balance of the site will be protected in perpetuity. This is consistent with SUB-O2 and SUB-P9.
- 4.52. On-site infrastructure, including vehicle access can be adequately provided. The existing ROW that currently accesses five properties will continue to function safely with the addition of three sites. The addition of new traffic safety measures, including the ability for two-way traffic to pass and safety signage will improve the existing road environment and to accommodate three new users. This is consistent with SUB-O4.
- 4.53. The site does not contain highly productive land that would be affected by the subdivision (SUB-O5).
- 4.54. The subdivision would not create the potential for reverse sensitivity. The site is surrounded by similar rural lifestyle activities on sites of various sizes. The site will not affect the

archaeological values in the northern boundary part of the site. There has been no response from local Iwi suggesting that the proposed subdivision would have an adverse effect on cultural or spiritual values. This is consistent with SUB-P11.

Coastal Environment

4.55. The subdivision will not affect the natural character of the coastal environment as mapped in this location. The coastal environment only affects the lower part of the site where development is limited to a consented dwelling and the construction of a new ROW driveway. This is consistent with CE-O1.

4.56. The site is not within an outstanding landscape area or feature that would be affected by the subdivision. Residential building development within proposed Lot 1 has already been consented. Building sites on Lot 2, 3 and 4 are outside of the mapped coastal environment.

Natural Environment values - Ecosystems and indigenous biodiversity

4.57. Other than the consented building area within Lot 1, the site is currently covered in mixed exotic and indigenous vegetation. Some clearance is required to form the ROW driveway to proposed Lots 2 and 3. The lower part of the site is within the coastal environment overlay and remains generally unaffected by this proposal.

4.58. The PDP seeks to ensure that areas of significant indigenous vegetation and habitats are identified and protected for current and future generations (IB-O1). The Bay Ecology report provides a comprehensive assessment of ecological values and documents the vegetation and fauna species that are present on the site. These range from low-moderate significance in terms of the RPSN Appendix 5 criteria.

4.59. The site is partially within the coastal environment, therefore IB-P2 is relevant. The site is deemed to be a significant natural area as per the PDP definition and the conclusions reached in the Bay Ecology report. Adverse effects on Threatened and At-Risk indigenous species and areas of significant indigenous vegetation and habitat are to be avoided. The proposal includes the removal of indigenous vegetation and fauna habitat that forms part of significant natural area. The Northland green gecko is an At-Risk indigenous species that is found locally and has

the potential to be within the site. The design approach to the subdivision has been to avoid higher value areas of indigenous vegetation and fauna habitat. Residential building sites, including wastewater disposal fields are limited to the western and eastern sides of the site to avoid the denser northern and central areas of bush and wetland. This is consistent with IB-P2.

- 4.60. A proposed Wildlife Management Plan will ensure that protected species are appropriately identified and relocated to other parts of the site. The proposal includes the application of an existing consent notice condition that restricts the keeping of predator species that may threaten kiwi on any of the new sites. This is consistent with IB-P11.
- 4.61. The proposal includes mitigation consent notice conditions that would require site wide pest management and a 10m offset replanting buffer around the perimeter of each cleared building site. Bay Ecological has confirmed that the replanting area is sufficient to offset up to 1,000m² of clearance within each lot. Indigenous fauna within the clearance area can be relocated if necessary. Active management of weed and species is proposed.
- 4.62. Policy IB-P12 includes a list of matters to be considered when assessing and managing the effects of indigenous vegetation clearance and associated land disturbance. These are commented on as follows:

(a) the temporary or permanent nature of any adverse effects;

Temporary or permanent adverse effects as detailed at length within the AEE can be mitigated through conditions of consent.

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

Cumulative effects will be mitigated through offset replanting to ensure that there is no net loss of habitats, species and ecosystems. Vegetation removal is limited to the development areas described above. Indigenous vegetation and fauna habitat within the balance areas of the site(s) will be permanently protected through consent notice conditions that apply to each lot.

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

Vegetation clearance and associated land disturbance will occur in the area of the proposed ROW and as part of future residential building development within the

proposed building area shown on the approved subdivision plan. The post subdivision area of clearance of up to 1,000m² for residential building and access purposes is consistent with the permitted IB-R1(7) standard.

(d) the effects of fragmentation;

The vegetated areas on the site will remain relatively intact and will avoid higher value indigenous vegetation and fauna habitat. Edge effects created by the ROW clearance will be mitigated by proposed replacement and enhancement planting. The clearance is assessed and mitigated having regard to the whole site and its ecological context.

(e) linkages between indigenous ecosystems and habitats of indigenous species;

The proposed subdivision design will retain linkages between ecosystems and habitat areas through the northern and central parts of the site.

(f) the potential for increased threats from pests;

The site is within a kiwi high density location. The proposal includes the continuation of a consent notice condition that restricts the keeping of predator species on each lot.

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

To the extent possible, proximity of development to wetlands and streams on the site can be avoided. The site is located some distance from the coastal marine area and will not affect this environment.

(h) where the area has been assessed as significant indigenous vegetation and significant habitat of indigenous fauna:

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

The proposed subdivision and development of the site for residential activity will have a no more than minor adverse effect on the ecological significance of the site and the function of the area, which includes its

connection to the surrounding PNA. Higher value areas on the site have been avoided. The loss of indigenous vegetation and habitat will be offset by proposed planting and the permanent protection of remaining areas on the site.

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

The ecological assessment has determined that biodiversity offset is appropriate at the site given the significance of the vegetation, particularly for fauna habitat. This is included in the proposal.

- (i) the location, scale and design of any proposed development;*

The location and design of the sites is illustrated on the proposed subdivision plan. These are positioned to avoid higher value vegetation, fauna habitat and wetland / gumland environments.

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

Indigenous vegetation cover on the site is extensive and has mixed values in terms of the quality of bush or its habitat value. The proposed clearance is deemed reasonable for the development and access to the proposed sites which are enabled in the RLZ. The extent of future clearance within the proposed lots for residential building purposes will be determined at the time of building consent and is proposed up to the permitted standard of 1,000m².

- (k) the functional or operational need of regionally significant infrastructure;*

Not applicable

- (l) any positive contribution any proposed biodiversity offsetting or biodiversity compensation will have on indigenous biodiversity;*

As previously described, the proposal includes a requirement for offset planting and in the context of the subdivision approval, will replace indigenous vegetation on the site to above the permitted IB-R1(7) standard.

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

The Applicant has consulted with local tangata whenua. There has been no response from any of the Iwi that were contacted. A copy of the Applicant's email sent on 22 July 2026 is attached at **Appendix 11**.

(n) the extent to which the proposed activity provides for the social, economic and cultural wellbeing of people and communities;

The proposed subdivision is being undertaken in accordance with the PDP rules for the RLZ. The development will contribute to the number of sites in the zone and assist in redirecting demand for rural lifestyle living in the Rural Production Zone that supports the Council's strategic direction stated at SD-RE-O1.

(o) adopting a precautionary approach where the effects on indigenous biodiversity are uncertain, unknown, or little understood and those effects could cause significant or irreversible damage to indigenous biodiversity;

The existing indigenous biodiversity environment at the site and as it connects to the surrounding areas is well understood and described in the ecological assessment prepared by Bay Ecological. High value bush and wetland /stream areas can be avoided, and the adverse effects of clearance can be offset.

(p) promoting the resilience of indigenous biodiversity to climate change and recognising the role of indigenous biodiversity in mitigating the effects of climate change; and

At the site level, this will include permanent protection of indigenous vegetation across the balance areas of the site.

(q) the benefits provided by the indigenous biodiversity, including ecosystem services.

The existing indigenous biodiversity is limited in its variety and adversely affected by weed species. The proposed subdivision and development of the site will introduce greater weed and pest control measures and offset planting that will enhance the variety of endemic species found at the site.

4.63. Providing the proposed mitigation measures are implemented, the potential adverse effects on indigenous vegetation, local biodiversity and fauna habitat are assessed to be no more than minor.

Transportation

- 4.64. Site access considerations are included in this assessment as the existing ROW is unable to achieve the carriageway width and passing bay arrangement required by the PDP-AV. All other aspects of the transportation standards can be met.
- 4.65. Linkages to the transport network includes private accessways and limitations are placed on the number of users and the standards at which these must be provided (TRAN-O3, TRAN-P2). A safe and efficient transport network includes well designed accessways that have an appropriate width, sightlines and safe passing opportunities. Expert traffic engineer Dean Scanlan has recommended upgrading within the existing section of legal road to slow traffic and improve passing opportunities within the ROW. While not a requirement this application includes future planning in the event road to vest is required across the site.

5. Plan Weighting

- 5.1. The nature and effect of appeals made in respect of the PDP provisions, including subdivision in the RLZ is such that they can now be treated as operative. No reference to the ODP subdivision provisions is included with this application.
- 5.2. With respect to land use activities, the exception is indigenous vegetation clearance for which the PDP rules are subject to appeals. Whilst the clearance of up to 1,000m² of indigenous vegetation for the purpose of building a residential unit and associated access and services is a permitted activity, it is the Applicant's preference to include this activity in the application proposal so that the development effects can be assessed comprehensively and the offset benefits secured through the consent notice conditions that would apply through the building consent approval process.

6. Proposed Mitigation Conditions

- 6.1. This proposal includes and relies on the inclusion of conditions of consent that will apply to the site for environmental enhancement and protection purposes. These are offered in draft form as follows:

Section 223

1. That prior to the commencement of any vegetation clearance, the consent holder shall submit for certification to the Resource Consents Team Leader or other duly delegated officer (planning_technicians@fndc.govt.nz) a wildlife management plan for the proposed clearance areas outlining methods to check for herpetofauna and North Island Brown Kiwi prior to clearance. This should be prepared by a suitably qualified and experienced ecologist or wildlife specialist, and include methods and timings of searches, and any required translocation within the site and licenses or permits required.
2. An area 10m wide along the length of ROWs A, B & C for the purpose of a future road to vest.

Section 224

3. The vegetation clearance on the site associated with the construction of the subdivision shall be undertaken in accordance with the certified Wildlife Management Plan.
4. Within six months of vegetation clearance within the proposed ROW Easement 'D', the consent holder shall plant the eastern edge of the accessway with a 5 metre wide low-flammability indigenous species planting buffer comprising flax, cabbage tree, five-finger and mapou.

Consent notice - All Lots

5. There shall be no clearance of vegetation or land disturbance within the area on the approved subdivision plan shown as easement areas 'E', 'F' and 'G'.
6. The landowners/occupiers of the land shall not keep or allow the introduction onto the site of carnivorous or omnivorous animals such as cats, dogs, or ferrets which have the potential to be kiwi predators. This prohibition includes the bringing of any such animals onto the site by visitors.

7. The area of indigenous vegetation clearance on the site for the purpose of any residential building, vehicle access or on-site infrastructure services shall not exceed 1,000m² and shall be limited to the building area envelope shown on the approved subdivision plan.
8. The area of indigenous vegetation clearance on the site shall be the minimum necessary for the purpose of constructing any residential building, vehicle access or on-site infrastructure services and shall be determined with reference to the Bay Ecological Consultancy Limited titled *'Ecological Impact Assessment (ECIA), Proposed Subdivision 88 Kurapari Road, Rangitane Lot 3 DP 415575 (RT 460076) MW Holdings Ltd*, dated 3 August 2026.
9. When a Building Consent is sought, the applicant must submit for approval a vegetation clearance plan that shows the extent of clearance and any associated earthworks required for the purpose of constructing any building(s), access or on-site infrastructure services.
10. Upon completion of the approved vegetation clearance and prior to any earthworks, the applicant must submit for certification of the Resource Consents Team Leader or other duly delegated representative (planning_technicians@fndc.govt.nz), an Offset Management Plan (OMP) for the site in general accordance with the *'Ecological Impact Assessment (ECIA), Proposed Subdivision 88 Kurapari Road, Rangitane Lot 3 DP 415575 (RT 460076) MW Holdings Ltd*, prepared by Bay Ecological Consultancy Ltd, dated 3 August 2026. The OMP must cover:
 - i. Site wide pest and weed management measures including ongoing maintenance;
 - ii. Appropriate signage;
 - iii. Details of the mechanism / arrangement to oversee the ongoing implementation of the plan in a coordinate manner;
 - iv. Revegetation and infill planting comprising a 10m buffer around the clearance area, including location, density, and the use of low flammability species within the areas recommended in the Bay Ecological Impact Assessment Report;
 - v. Timeframes for implementation of the Offset Management Plan

The Offset Management Plan shall be implemented in accordance with the timeframes set out within the Offset Management Plan, and pest and weed management shall be undertaken in perpetuity (unless otherwise approved in writing by the Team Leader Resource Consents of delegate).

11. That prior to the commencement of any vegetation clearance, the landowner shall submit for certification to the Resource Consents Team Leader or other duly delegated officer (planning_technicians@fndc.govt.nz) a wildlife management plan for the proposed clearance areas outlining methods to check for herpetofauna and North Island Brown Kiwi prior to clearance. This should be prepared by a suitably qualified and experienced ecologist or wildlife specialist, and include methods and timings of searches, and any required translocation within the site and licenses or permits required.
12. The vegetation clearance on the site associated with the construction of the subdivision shall be undertaken in accordance with the certified Wildlife Management Plan.

Consent notice – Lots 1 & 2

13. The areas marked A, B, C, ... & ... on DP Shall be reserved and vested for a future road if required by the relevant Local Authority. This consent notice does not bind Council to accept the vesting of future road, and any future roading matters will be considered separately at time of future development.

7. Notification Assessment – Sections 95A to 95G of the Act

Public Notification Assessment

- 7.1. Section 95A requires a council to follow specific steps to determine whether to publicly notify an application. The following is an assessment of the application against these steps:

Step 1 Mandatory public notification in certain circumstances

(2) Determine whether the application meets any of the criteria set out in subsection (3)

and,—

- (a) if the answer is yes, publicly notify the application; and*
- (b) if the answer is no, go to step 2.*

(3) The criteria for step 1 are as follows:

- (a) the applicant has requested that the application be publicly notified;*
- (b) public notification is required under section 95C;*
- (c) the application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.*

7.1.1. Notification of this application is not requested. Step 1 does not apply. Step 2 must be considered.

Step 2: Public Notification precluded in certain circumstances

(4) Determine whether the application meets either of the criteria set out in subsection (5) and,—

- (a) if the answer is yes, go to step 4 (step 3 does not apply); and*
- (b) if the answer is no, go to step 3.*

(5) The criteria for step 2 are as follows:

- (a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes public notification;*
- (b) the application is for a resource consent for 1 or more of the following, but no other, activities:*

- (i) a controlled activity;*
- (ii) [Repealed]*
- (iii) a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity.*
- (iv) [Repealed]*

(6) [Repealed]

7.1.2. The application is not subject to a rule or NES that precludes public notification. The application is not for a controlled activity. The proposal includes activities that are not boundary activities. Therefore Step 3 must be considered.

Step 3: If not precluded by Step 2, public notification required in certain circumstances

(7) Determine whether the application meets either of the criteria set out in subsection (8) and,—

(a) if the answer is yes, publicly notify the application; and

(b) if the answer is no, go to step 4.

(8) The criteria for step 3 are as follows:

(a) the application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification:

(b) the consent authority decides, in accordance with section 95D, that the activity will have or is likely to have adverse effects on the environment that are more than minor.

- 7.1.3. No applicable rules require public notification of the application. The proposal would not have a more than minor effect on the environment as detailed in the sections above.

Step 4: Public notification in special circumstances

(9) Determine whether special circumstances exist in relation to the application that warrant the application being publicly notified and,—

(a) if the answer is yes, publicly notify the application; and

(b) if the answer is no, do not publicly notify the application, but determine whether to give limited notification of the application under section 95B.

- 7.1.4. There are no special circumstances that would warrant public notification of the application.

Public Notification Summary

- 7.1.5. Based on the assessment above, the application does not require public notification, however an assessment of limited notification is still required.

Limited Notification Assessment

- 7.2. If the application is not publicly notified, a consent authority must follow the steps of section 95B to determine whether to give limited notification of an application.

Step 1: Certain affected groups and affected persons must be notified

(2) Determine whether there are any—

(a) affected protected customary rights groups; or

(b) affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity).

(3) Determine—

(a) whether the proposed activity is on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11; and

(b) whether the person to whom the statutory acknowledgement is made is an affected person under section 95E.

(4) Notify the application to each affected group identified under subsection (2) and each affected person identified under subsection (3).

- 7.2.1. There are no protected customary rights groups or customary marine title groups or statutory acknowledgement areas that are affected by this application.

Step 2: Limited notification precluded in certain circumstances

(5) Determine whether the application meets either of the criteria set out in subsection (6) and,—

(a) if the answer is yes, go to step 4 (step 3 does not apply); and

(b) if the answer is no, go to step 3.

(6) The criteria for step 2 are as follows:

(a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification:

(b) the application is for a controlled activity (but no other activities) that requires a resource consent under a district plan (other than a subdivision of land).

- 7.2.2. There is no rule in any relevant plan or national environmental standard that precludes notification. The application is not for a controlled activity. Therefore Step 2 does not apply, and Step 3 must be considered.

Step 3: Certain other affected persons must be notified

(7) In the case of a boundary activity, determine in accordance with section 95E whether an owner of an allotment with an infringed boundary is an affected person.

(8) In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.

(9) Notify each affected person identified under subsections (7) and (8) of the application.

The proposal is not for a boundary activity nor is it a prescribed activity.

7.2.3. The proposal does not involve a boundary activity.

7.2.4. In deciding who is an affected person under section 95E, a council under section 95E(2):

(2) The consent authority, in assessing an activity's adverse effects on a person for the purpose of this section,—

(a) may disregard an adverse effect of the activity on the person if a rule or a national environmental standard permits an activity with that effect; and

(b) must, if the activity is a controlled activity or a restricted discretionary activity, disregard an adverse effect of the activity on the person if the effect does not relate to a matter for which a rule or a national environmental standard reserves control or restricts discretion; and

(c) must have regard to every relevant statutory acknowledgement made in accordance with an Act specified in Schedule 11.

7.2.5. A Council must not consider that a person is affected if they have given their written approval, or it is unreasonable in the circumstances to seek that person's approval.

7.2.6. The immediately adjacent landowners and those who have legal access to the existing ROW are set out in Section 2 above.

7.2.7. The proposed physical works are internal to the site and future development will be setback from neighbouring boundaries. There are no external landowner parties that are directly affected by the subdivision. The potential adverse effects arising from the use of the existing ROW are assessed to be no more than minor as per the discussion within the Traffic Impact Assessment (**Appendix 8**). It is noted that the Chicane will be formed within legal road such that no updates to neighbouring titles are required.

7.2.8. With respect to section 95B(8) and section 95E, the assessment of environmental effects undertaken in Section 5 of this report concluded that the potential adverse effects on the environment will be no more than minor.

7.2.9. There are no persons who will be directly affected by the proposal to a minor or more than minor degree.

7.2.10. Overall, the adverse effects on any persons will be less than minor. Therefore Step 3 does not apply and Step 4 must be considered.

Step 4: Further notification in special circumstances

(10) whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited notification under this section (excluding persons assessed under section 95E as not being affected persons),

7.2.11. There are no other special circumstances that exist in relation to the application.

Limited Notification Assessment Summary

7.2.12. Overall, from the assessment undertaken Steps 1 to 4 do not apply and there are no directly affected persons that would be affected to a minor or more than minor degree.

Notification Assessment Conclusion

7.3. Pursuant to sections 95A to 95G the applicant requests that the application be processed on a non-notified basis.

8. Part 2 Assessment

8.1. The application must be considered in relation to the purpose and principles of the Resource Management Act 1991 which are contained in Section 5 to 8 of the Act inclusive.

8.2. The proposal will meet Section 5 of the RMA by promoting the sustainable management of natural and physical resources whilst meeting the foreseeable needs of future generations. It is considered that the proposal will safeguard the life supporting capacity of air, water, soil and ecosystems. In addition, ecosystems within the site will be enhanced and permanently protected.

8.3. Section 6 of the Act sets out matters of national importance. Other than the location of the site in the coastal environment and the significance of the vegetation and fauna habitat on the site, there are no other matters of national importance affected by this proposal.

- 8.4. Section 7 identifies “other matters” to be given particular regard by a Council when assessing an application for resource consent, including the maintenance and enhancement of amenity values. The proposal maintains amenity values in the area as the proposal is in keeping with the existing character of the surrounding environment.
- 8.5. Section 8 requires Council to ‘take into account’ the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). It is considered that the proposal would not be contrary to the principles of Te Tiriti.
- 8.6. Overall, the application is consistent with the relevant provisions of Part 2 of the RMA, as expressed through the objectives, policies and rules reviewed in earlier sections of this application. Given that consistency, it is concluded that the proposal achieves the purpose of sustainable management set out by Sections 5-8 of the Act.

9. Conclusion

- 9.1. MW Holdings are seeking resource consent to subdivide an existing lot at 88 Kurapari Road, Kerikeri. The subdivision would create four allotments of approximately 4 hectares in size from the parent lot site. Apart from the nominated building areas, the remaining existing vegetation, wetland and streams on the site will be protected by way of a land covenant and consent notice conditions on each lot. The existing section of legal road within the existing ROW that extends from the western end of Kurapari Road will be upgraded to improve traffic safety and passing opportunities.
- 9.2. The subdivision proposal is a Discretionary Activity under the PDP-AV and requires a Discretionary Activity land use consent for post-subdivision vegetation clearance under the ODP. An assessment of effects on the environment concludes that any potential adverse effects arising from the development will be no more than minor. Potential adverse effects on the existing indigenous vegetation and associated fauna habitat and can be mitigated through careful and expert supervised management of clearance and earthworks activities. The site will benefit from permanent protection of the remaining bush, wetland and stream environments within the site. A proposed suite of mitigation conditions, including consent notices that enable permanent protection of the remaining vegetation on the site is included with this application.

- 9.3. The proposed subdivision is consistent with the intent of the applicable RLZ and will not result in subdivision of a rural-residential scale. The effects of additional traffic generated by the development can be managed through appropriate upgrading of the existing ROW to improve safety and visibility. The proposed development would not be contrary to any PDP objective or policy.
- 9.4. The Applicant requests that this application is processed on a non-notified basis.

10. Limitations

- 10.1. This report has been commissioned solely for the benefit of our client, in relation to the project as described above, and to the limits of our engagement, with the exception that the Far North District Council or Northland Regional Council may rely on it to the extent of its appropriateness, conditions and limitations, when issuing their subject consent.
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**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD**

**Guaranteed Search Copy issued under Section 60 of the Land
Transfer Act 2017**




R.W. Muir
Registrar-General
of Land

Identifier **460076**
Land Registration District **North Auckland**
Date Issued 22 December 2011

Prior References
349700

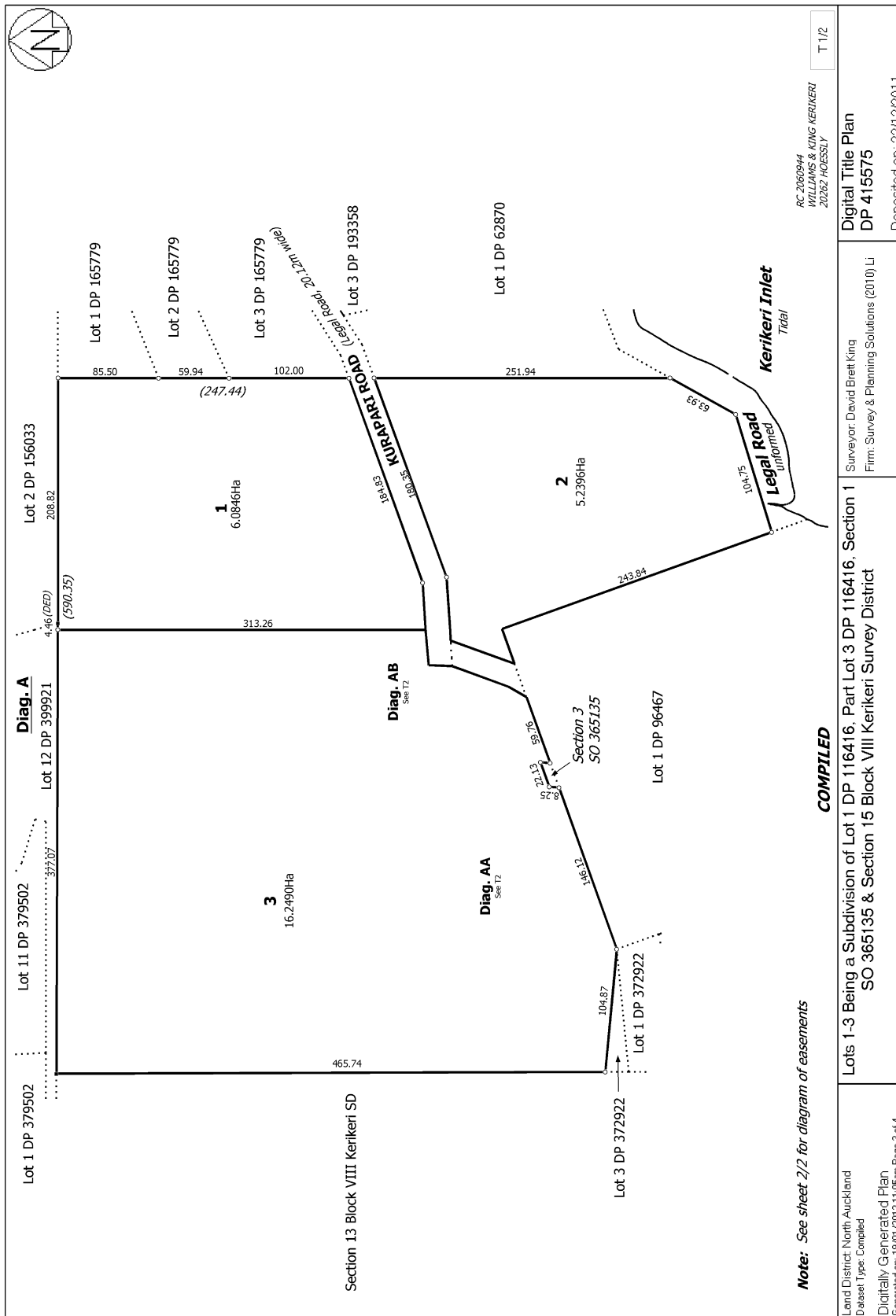
Estate Fee Simple
Area 16.2490 hectares more or less
Legal Description Lot 3 Deposited Plan 415575

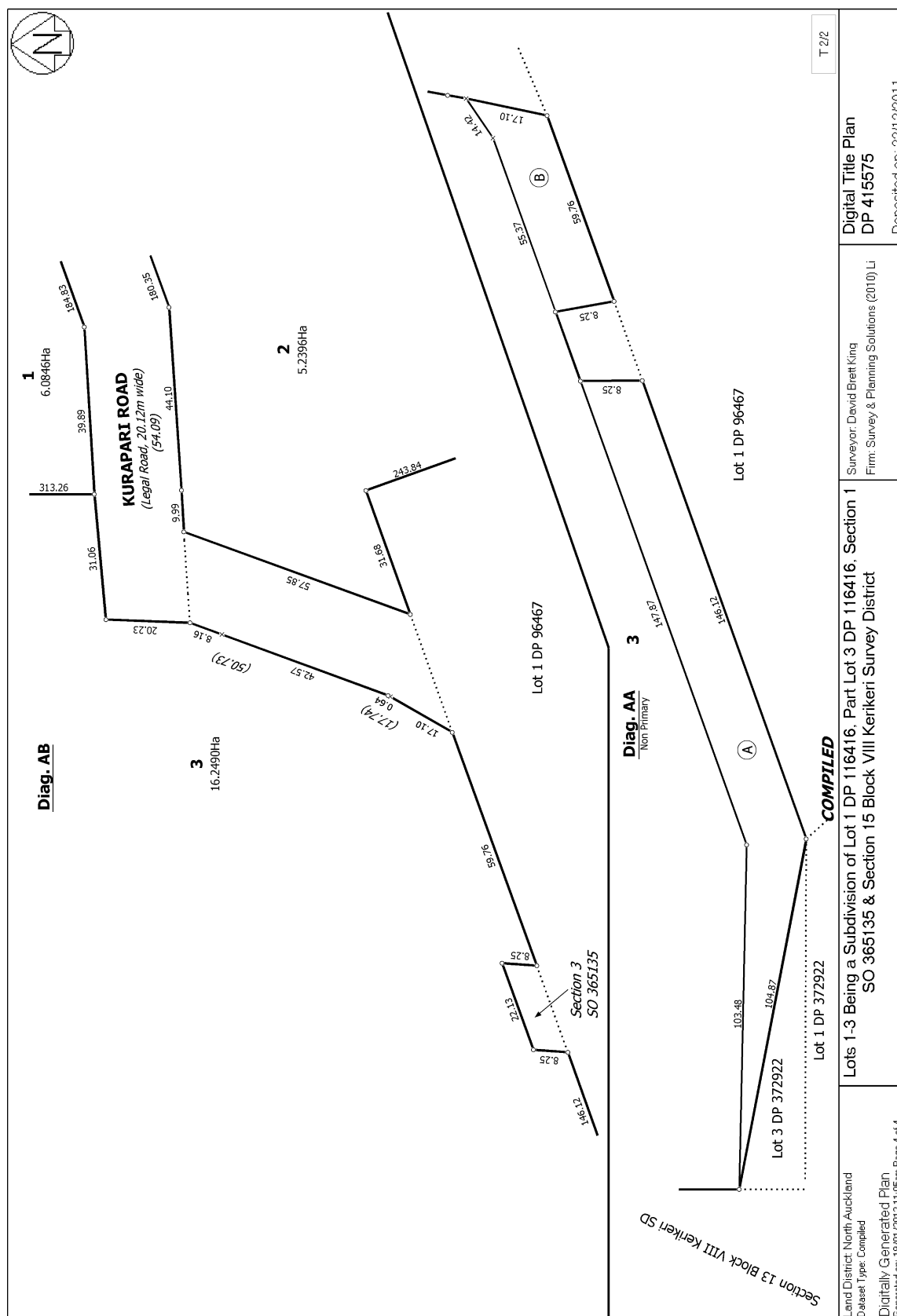
Registered Owners

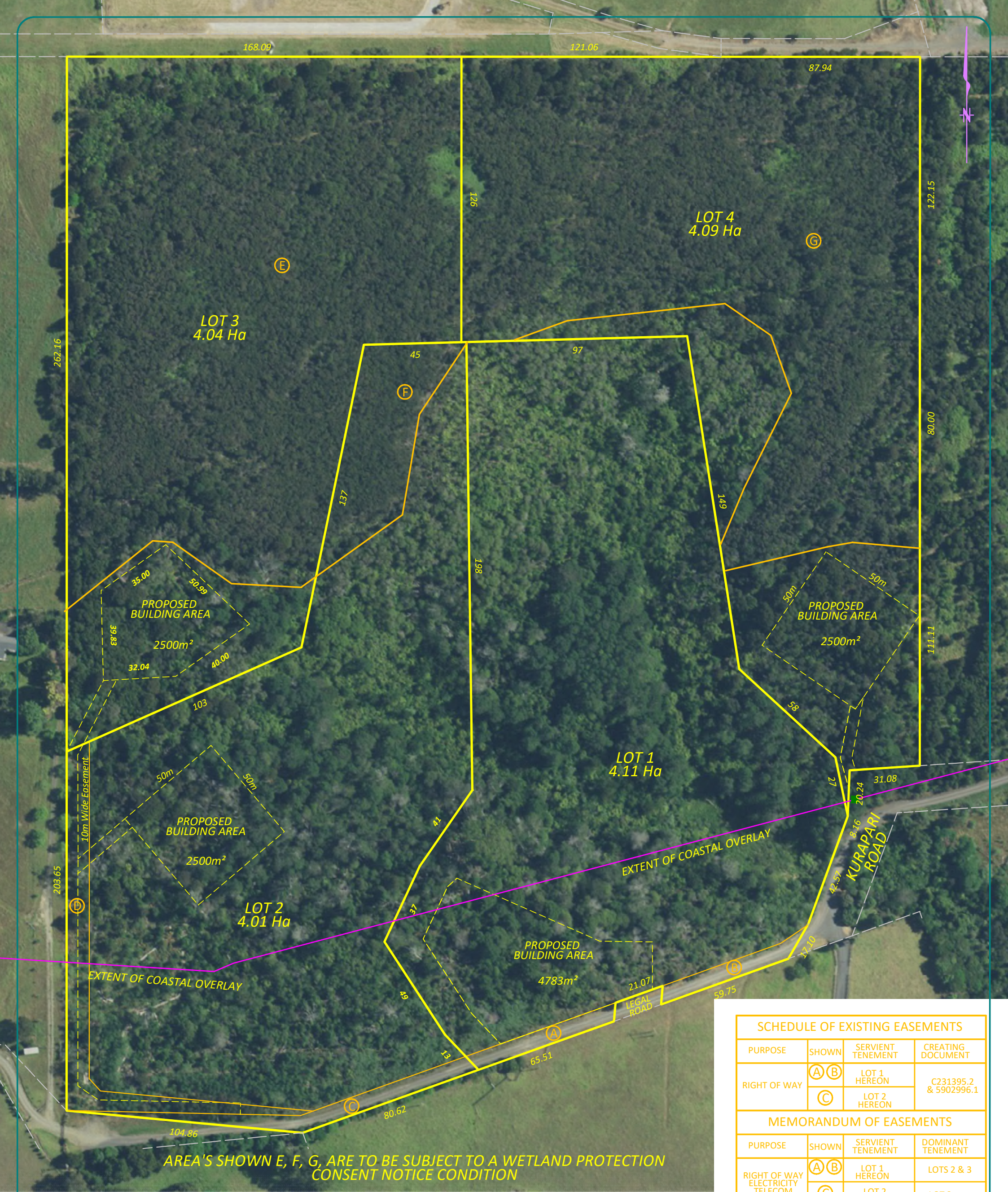
Kurapari Holdings Limited as to a 3/4 share
Markus Wiese as to a 1/4 share

Interests

Subject to a right of way over parts marked A & B on DP 415575 specified in Easement Certificate C231395.2
Subject to a right of way over parts marked A and B on DP 415575 created by Court Order 5902996.1 - 18.2.2004 at 9:00 am
8945742.1 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 22.12.2011 at 3:17 pm
13557294.1 Mortgage to ASB Bank Limited - 16.3.2026 at 9:47 am







AREA'S SHOWN E, F, G, ARE TO BE SUBJECT TO A WETLAND PROTECTION
CONSENT NOTICE CONDITION

SCHEDULE OF EXISTING EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	CREATING DOCUMENT
RIGHT OF WAY	(A) (B)	LOT 1 HEREON	C231395.2 & 5902996.1
	(C)	LOT 2 HEREON	
MEMORANDUM OF EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
RIGHT OF WAY ELECTRICITY TELECOM DRAIN WATER	(A) (B)	LOT 1 HEREON	LOTS 2 & 3
	(C)	LOT 2 HEREON	LOT 3
	(D)	LOT 2 HEREON	LOT 3

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AREAS AND MEASUREMENTS ARE SUBJECT TO FINAL SURVEY
TOPOGRAPHICAL DETAIL IS APPROXIMATE ONLY AND SCALED FROM AERIAL PHOTOGRAPHY

LINZ LIDAR CONTOUR
1m MINOR
5m MAJOR
LEVEL DATUM NZVD16



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Registered Land Surveyors, Planners & Land Development Consultants

PROPOSED SUBDIVISION OF LOT 3 DP 415575

PREPARED FOR: WIESE

	Name	Date
Survey	SL	13.06.25
Design		
Drawn	SL	13.07.26
Approved		
Rev		7.08.26
10781 SCHEME.LCD		

ORIGINAL
SCALE
1:1500
SHEET
SIZE
A3

Surveyors
Ref. No:
10781

ECOLOGICAL IMPACT ASSESSMENT (ECIA)



**PROPOSED SUBDIVISION
88 KURAPARI RD, RANGITANE
LOT 3 DP 415575 (RT 460076)
MW HOLDINGS LTD**



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This report may be cited as-

*EcIA LAND USE PROPOSED SUBDIVISION LOT 3 DP 415575 (RT 460076) 88 KURAPARI RD, RANGITANE
BAY ECOLOGICAL CONSULTANCY LTD (9/9/26)*

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ECOLOGICAL IMPACT ASSESSMENT (EcIA)

PROPOSED SUBDIVISION
88 KURAPARI RD, RANGITANE
LOT 3 DP 415575 (RT 460076)
MW HOLDINGS LTD
9/9/26



EXECUTIVE SUMMARY

Bay Ecological Consultancy Ltd has been engaged to provide an Ecological Impact Assessment (EcIA) of the MW Holdings Ltd proposal to subdivide the subject property Lot 3 DP 415575 (RT 460076) Kurapari Rd, Rangitane.

The activity will result in the creation of four Lots:

- Lot 1 – 4.11 hectares (includes the consented dwelling and newly built accessory shed 2260119-RMALUC 2025)
- Lot 2 – 4.01 hectares
- Lot 3 – 4.04 hectares
- Lot 4 – 4.09 hectares

The greater extent of the Lot is proposed as covenant, containing the more diverse central gully; gumland; headwaters & creek, and natural inland wetland. Subdivision works are limited to construction of the vehicle crossing and ROW to access proposed Lots 2 & 3, requiring earthworks and vegetation clearance.

This report also considers potential ecological impacts of development and residential occupation of the proposed Lots including:

- Vegetation clearance & earthworks in the development footprints
- Stormwater discharge from increased impermeable surface
- Residential occupation

Although the ecological effects of the subdivision itself are expected to be limited, the proposal will facilitate future residential development and occupancy, with associated potential effects that are not yet fully defined but are generally foreseeable. These effects can be appropriately managed through comprehensive consent notices registered on the new titles.

Reporting provides consideration of significance in regard to Northland Regional Policy Statement *Appendix 5* (2018). The core foundation principles for ecological assessment therein are also directly aligned with the *Appendix 1* criteria of the recently gazetted *National Policy Statement for Indigenous Biodiversity (2023)*¹.

This review followed structure and content requirements of the EIANZ EcIA Guideline (2018)² as the best practice standard for ecological impact assessment in NZ, specifically the core stages of

- Scoping - desktop & fieldwork evaluation of ecological context of the site and surrounds
- Description
- Evaluation of significance

¹ 4/8/2023 *Appendix 1 : Criteria for identifying areas that qualify as significant natural areas (SNAs)*

² Roper- Lindsay, J; Fuller, S.A; Hooson, S; Sanders, S.A; Usher, G. T. (2018) *Ecological Impact Assessment. EIANZ Guidelines for use in New Zealand: terrestrial and freshwater ecosystems. 2nd Ed.*

- Assessment of impacts/ effects and impact management, including any monitoring ongoing requirements

and with regard to non statutory NZ guideline documents

- *Guidelines for the application of ecological significance criteria for indigenous vegetation and habitats of indigenous fauna in the Northland Region (Wildlands 2019)*
- *Department of Conservation guidelines for assessing significant ecological values (Davis et al 2016)*

A desktop review of available ecological information was followed by targeted site visits on 24/7 & 5/8/2026 to ground-truth desktop findings and assess the proposal within its site context. The assessment was informed by prior site familiarity and ecological reporting undertaken in 2025 (2260119-RMALUC), with relevant findings from that reporting and the now-enacted land use consent considered where applicable.

SUMMARY ECOLOGICAL CONTEXT

- The site is captured in wider local mapping layers that be used as a surrogate for significance values
 - *Kerikeri ED PNA # P05/087 Rangitane Shrubland* mapping with potential shared values of shrubland and fauna with Threat status
 - *High Density Kiwi* designation (DoC 2018)
- Predicted ecosystem types ³ *WF9 Taraire, tawa forest on Waiotu Friable Clay (YO)* soil and *WF11 Kauri broadleaved podocarp* on Rangiora Clay (RAH) are absent.
- The northern upper site contour on the podzolised RAH soil (imperfectly to very poorly drained) exhibits a matrix of wet and dry gumland types – a rare ecosystem and considered to have HIGH significance including as habitat. It is relatively intact, with few exotics other than hakea and gorse able to tolerate the generally adverse conditions.
- The wet type is considered to be *natural inland wetland*- obligate (OBL) or facultative wetland (FACW) species under a sparse mānuka canopy, exhibiting an obvious wetland community. Mānuka onsite includes the pink flowered sub variety typical of gumland variants – (*Leptospermum scoparium* var. *incanum* At Risk - Declining), confined to upper Northland.
- The remaining vegetation on YO soils has been refined to a spectrum of *AS1 Kānuka shrubland with native shrubs* - inferior *AS3- Kānuka with exotic grass* type, common to the local peninsulas of the Bay of Islands. Indigenous species present have *LOW* individual significance.
- Aerial imagery illustrates the majority of the proposed development envelope of proposed Lot 3 was cleared as recently as 2014, persisting into 2019. Clearance also occurred in approx. 2022 along the entire Kurapari Rd frontage west from the unnamed creek and substantially further north into the site at the boundary with Lot 4 559859. Additional 2013 clearance occurred of the blackwood/ pine stand on Lot 1 DP 415575 directly and potentially into the site eastern boundary (under same ownership at the time). All have regenerated in heavy exotic weediness with edge effects further into the site vegetation.
- Wattle and hakea are frequently canopy dominant and cover is heavily impacted by weeds at all strata, largely species listed as environmental weeds (DoC 2024) and classified as Sustained Control species in the RPMS- the objective of which is to *reduce impacts on the biodiversity, cultural and economic values in Northland, and spread to other properties*. Landowners have a *requirement to act in regard to these species*. Without intervention vegetation is unlikely to re establish to a *WF9 type* representation within the foreseeable future.
- Site hydrology consists of headwaters readily visible in the 1950 aerial with low cover. They converge at lower contour and pass under Kurapari Rd as a creek mapped in the earliest top maps, travelling another 300m approx. to Kerikeri Inlet. Their lower extent is encompassed in *natural inland wetland* of swamp type adjacent Kurapari Rd.

³https://services2.arcgis.com/J8errK5dyxu7Xjf7/arcgis/rest/services/Northland_Biodiversity_Ranking/FeatureServer

- ✓ The lower contour *natural inland wetland* been diagnosed as per regulatory protocol⁴, according to definitions of the NPS FM (2020) and PNRP (2021) and subject to the *National Environmental Standards for Freshwater NES – F (2020)*.
- ✓ The Rapid Test, as the first strata of wetland delineation, was sufficient to determine wetland presence with dominance typified by obligate (OBL) and facultative wetland (FACW) species forming very obvious *natural inland wetland* community in depressed gully contour and saturated ground. Abrupt loss of wetland dominance occurs with slight elevation at the edges into terrestrial woody cover.
- ✓ Final stormwater management for each Lot is as yet undefined and must be confirmed at Building Consent stage once dwelling, driveway, tank overflow, and outlet locations are known. The Site Suitability Report recommends *roof/hardstand runoff is collected and discharged in a controlled manner to stable ground or an approved outlet & Discharges must not be concentrated onto neighbouring properties, steep or erosion-prone gully slopes, or wastewater disposal areas unless specifically assessed and designed*. Future design of sediment and stormwater control will be primary to avoidance of effects.
- ✓ All gullies discharge converges to the lower contour wetland and are the extant source of its hydrology. Adjacent ground level understory vegetation is generally open and sparse. Uncontrolled point source discharge of stormwater with potential scour and sediment transport to the headwaters directly hydrologically connected to the wetland should be avoided so not as to cause
 - ✓ PNRP Policy H.4.2 Minimum levels for lakes and natural wetlands : **change in seasonal or annual range in water levels**
 - ✓ NES-F (2024) 54(d) **change, or likely change, the water level range or hydrological function of the wetland**
- ✓ Initial subdivision works for the access to proposed Lots 2 & 3 has no hydrological connection.
- ✓ It is presumed from the proposed configuration that no future earthworks to enable residential occupation will interact within the wetland to cause drainage as per *NES-F (2020) 53 Prohibited Activities*.
- ✓ Lot 4 proposed designated envelope and proposed platform are within 100m of the central *natural inland wetland* swamp downslope, in addition to being adjacent to a short ephemeral waterway that is a direct hydrological connection & point source to the wetland. Final stormwater discharge will be subject at minimum to *NES- F (2020) REG 54 Non-complying activities (d) the discharge of water into water within, or within a 100 m setback from a natural inland wetland*
- **Avoidance** of adverse effects of vegetation clearance has been a primary consideration, as per FNDC operative & proposed policies; NRP Policy D.2.18 Managing Adverse Effects on Indigenous Biodiversity and the EMH cascade (NPSIB 2023).
- To minimise indigenous clearance to the extent practicable the access and potential envelopes have been shown largely within areas of the site heavily impacted by weeds and with open areas. They tend to AS3 type scrub⁵ and are estimated to be 0- 40% indigenous. Portions of the proposed Lots 2 & 3 subdivision access are entirely exotic. The canopy is dominant wattle, Taiwan cherry and hakea in some areas without a diversity of midstorey or ground cover other than exotic weeds – ginger; Aristea; tobacco weed; lantana, gorse. Indigenous species are seral and early successional with LOW species value, common in the ED & onsite. Indigenous contribution is kānuka and mapou, māhoe with a contribution of fecund *Coprosma*, mamaku; hangehange, scattered *Schoenus tendo*; and unpalatable ferns.
- While the overall parent Lot as an **ecological unit** has HIGH significance, the clearance areas rate *MODERATE* - as habitat although with a minimal and depauperate representation of the site vegetation values and characteristics, contributing to contiguous cover/ extent, rather than quality or composition. They are outside the more significant elements of the mamaku and broadleaved riparian gully cover and gumland.
- **Potential** fauna values largely contribute to its significance. There is high potential for kiwi to utilise clearance footprints, as part of the wider site territory, considered MODERATE value species as *Regionally Important; Conservation Dependant*. Herptofauna recorded from the

⁴ Ministry for the Environment. 2022. Wetland delineation protocols. Wellington: Ministry for the Environment.

⁵ **SCRUB**: seral communities, often dominated by or with a large component of exotic species such as gorse, Hakea, tobacco weed, etc. and/or commonly lacking a closed canopy and in which an understory is either absent or composed primarily of exotic species.

expansive *Rangitane Shrublands PNA* and locally are also potentially in the area are considered HIGH value. No individual or highly mobile species are likely dependent on the areas for any part of their lifecycle.

- There are no kauri, planted or otherwise considered in proximity to any proposed works to invoke the relevant Biosecurity (National PA Pest Management Plan) Order 2022.
- Kiwi are known to frequent the Lot and a burrow was previously noted within the upper gumland. Kiwi dog mediated clearance prior to the proposed Lot 1 construction activities located no burrows or individuals. Potential wildlife values will be managed to avoid injury or mortality through survey to determine occupation and relocation as per standard best practice if required. With recommended vegetation enhancement and pest control to increase habitat functionality the designated clearance areas are not considered to impact on connectivity across the Lot or as part of the wider landscape scale PNA. The clearance areas are not considered critical habitat or comprised of species or association that which may not be offset.
- We recommend no exterior white/ blue LED lighting of any covenant area to avoid potential effects on nocturnal species.
- There is no seagrass; saltmarsh or mangrove in the immediate CMA downstream which is encompassed in broad mapping layer
 - *Significant Bird Area: Bay of Islands & Northland Coastal Significant Marine Mammal & Seabird Management Area.*

No species listed in that documentation are considered to be at risk or displaced by the development.

SUMMARY EFFECTS & MANAGEMENT

The primary effect is clearance/ removal of vegetation with habitat and erosive protection function, of which the permitted level of clearance is 1000m² under the newly operative Plan. Additional potential, but avoidable effects of development are the concomitant introduction of edge effects; hydrological change; ongoing encroachment, weed and pest incursion. Despite emphasis on avoidance, removal of *MODERATE* significance vegetation beyond this cannot be mitigated completely at the point of impact as a portion is permanent. Potential *HIGH* effects on fauna must also be controlled. The vegetation clearance on site associated with the development shall be undertaken in accordance with a Wildlife Management Plan

SUBDIVISION WORKS

Clearance of the access to proposed Lots 2 & 3 is to be undertaken as part of the subdivision works for Sec 224. This will have adverse effect of advancing the eastern vegetation boundary into the remaining gross cover, increasing light and wind penetration and weed propagule ingress. A 5 m buffer of simple low-flammability indigenous species, comprising flax, cabbage tree, five-finger and mapou should be established along the access. This will:

- remedy the introduced edge effects
- provide net gain and additionality in regard to a positive increase in indigenous cover; biodiversity and density
- provide a lower-flammability corridor for retreat in the event of fire

RESIDENTIAL DEVELOPMENT

To provide erosive protection, habitat and amenity in the same close locales restoration and enhancement of values is proposed through provision of clearance offset of area >1000m² as per Appendix 3 NPSIB (2023) and RPS 4.4.2, providing no net loss, rather net gain and additionality through density and diversity. We recommend comprehensive consent notices to that end on the new titles to control potential future development & occupancy effects

We recommend once final building/ clearance areas and stormwater design has been finalized for the subdivision access and each Lot, site specific consent notices require:

FORMAL PROTECTION

Outside of the building envelopes & access the remainder of vegetation on the Lots is protected via covenant to retain habitat, higher biodiversity and ecological function values

- ✓ The central gully including tributary creeks and lower wetland – largely proposed Lots 1 & 2.
- ✓ Gumland matrix on RAH soils Lots 2; 3 & 4 - both wetland type as natural inland wetland and non wetland type as naturally rare ecosystem

WILDLIFE MANAGEMENT PLAN (WMP)

- ✓ Prior to the removal of any vegetation a wildlife management plan for the proposed clearance area outlining methods to check for herpetofauna and North Island Brown Kiwi prior to clearance. This should be prepared by a suitably qualified and experienced ecologist or wildlife specialist, and include methods and timings of searches, and any required translocation within the site and licenses or permits required.

OFFSET MANAGEMENT PLAN (OMP)

An Offset Management Plan (OMP) for each site in general accordance with this report and as per *Appendix 3 NPSIB (2023)* and *RPS 4.4.2*, providing no net loss, rather *net gain* and *additionality* through density and diversity. This includes an updated OMP for proposed Lot 1 (current house Lot) taking into account the new layout and subsequent reallocation of weed and pest control requirements. The OMPs must cover:

- ✓ **PEST & WEED MANAGEMENT**
 - ✓ Site wide pest and weed management measures including ongoing maintenance and consequent infill planting of remaining cover with canopy and late secondary species of predicted original forest *WF9 Taraire tawa*
 - ✓ Appropriate signage
- ✓ **PLANTING PLAN DETAILING**
 - ✓ low flammability diverse mix with broad temporal fruit supply; appropriate to predicted forest type and location *WF9* with coastal influence
 - ✓ 10m buffer surrounding all future residential envelope clearance areas 1.5m spacing
 - ✓ Infill revegetation enhancement of the remaining vegetation 1.5x any clearance area over permitted 1000m² baseline.
 - ✓ Stormwater outlets should be diffuse and include 2m buffering downslope of dense sedge vegetation as the current basal groundcover is sparse trunks with limited effectiveness to resist stormwater flows or retain sediment.
- ✓ Details of the mechanism / arrangement to oversee the ongoing implementation of the plan in a coordinated manner

Success of an offset relies on methodology to ensure goals are achieved as per as *NPSIB Appendix 3 (5)*. Therefore we also recommend

- ✓ Vegetation clearance shall not exceed the maximum areas shown in an approved Scheme Plan and positioned generally in accordance with such.
- ✓ Staged house Lot site preparation should commence with silt fencing to protect headwater gullies/ creeks and wetland during vegetation clearance. The subsequent earthworks undertaken post clearance may require establishment of any additional erosion and sediment control measures.
- ✓ Wastewater fields are not located within identified significant gumland wetland or dryland areas on the RAH soils.
- ✓ Best practice clearance methods to be used
 - ✓ machinery clean of soil and debris prior to site entry
 - ✓ vegetation, slash, disturbed soil or debris is not deposited in a position where it could mobilise into headwaters or wetland
 - ✓ preclearance fauna survey and Management Plan
- ✓ Due to confirmed kiwi presence and DoC Kiwi High Density designation a **no dogs/ cats** condition
- ✓ No lighting of covenants

In addition to best practice final stormwater detailed design it is considered that the concomitant offset of vegetation heightens the function of the remaining vegetation to retain and reduce sediment input, in regard to potential effects on the receiving headwaters, receiving lower contour creek; wetland and downstream CMA.

Landscape permeability value for low or ground dwelling fauna will be retained allowing natural dispersal across the wider extent of local cover and within potential meta populations.

Other positive effects will be:

- increase the ability of the site to accommodate the stormwater dispersal to ground protective of the wetland/creek
- visual definition of the protected areas beyond clearance envelopes to prevent ingress by future owners
- Increase site seed sources for natural regeneration
- Increased diversity & territorial economics for fauna over the current early successional state e.g. berries; nectar

Pest control conditioned for 2260119-RMALUC may be partitioned amongst the proposed Lots. Although already designated as indefinite, the separate ownership of the proposed Lots will allow reasonable amplification of weed control and replacement planting in a shorter time period.

The described primary effects management is protective of the wider site ecological unit and significance values, including hydrological features and wetland, habitat, and gumland. It is considered sufficient for progression of the proposal with a *less than minor* level of impact and aligned with aspirations of the objectives and policies of the FNDP and Coastal Policy Statement.

PROPOSAL SUMMARY

The MW Holdings Ltd is located on the northern side of Kurapari Rd, Rangitane, approx. 3km northeast of Kerikeri, at 88 Kurapari Road, Kerikeri (Lot 3 DP 415575 RT 460076; approx.16.2424ha).

Subdivision is proposed to create four allotments. The proposal is illustrated below in *Figs 1-4* and summarised in *Table 1*.

Potential development envelopes and building platforms have been allocated to accommodate residential development. **Avoidance** of the identified site significance values has been a primary consideration. The envelopes occupies lower value vegetation in comparison not only within the Lot but also the wider extent of the *Rangitane Shrublands PNA* (#P05/087), which encompasses much of the Kerikeri Peninsula coastline. The four proposed Lots are located outside areas of higher ecological value, riparian gully vegetation associated with three headwater catchments tributary to lower contour *natural inland wetland* adjacent Kurapari Rd, the gumland matrix of wetland (*natural inland wetland*) and dryland habitats on RAH soils (both naturally rare ecosystems).

The subdivision plan (Fig. 1) illustrates:

- Lot 1 – 4.11 hectares (includes the consented dwelling location; newly built accessory shed; recently completed revegetation as per the OMP 2260119-RMALUC)
- Lot 2 – 4.01 hectares
- Lot 3 – 4.04 hectares
- Lot 4 – 4.09 hectares

It is proposed that Lots 1-3 have primary access via the existing ROW that is within the site frontage and which also provides legal vehicle access to five other sites in separate ownership to the west. Lot 4 has access from the end of Kurapari Road.

Enabling subdivision works will consist of a combined vehicle crossing and ROW driveway access to proposed Lots 2 and 3, to minimize the required earthworks and vegetation clearance.

The connection should be formed with sufficient local widening and vegetation clearance to provide clear intervisibility between vehicles using the shared access and the existing ROW. Final access geometry, drainage and visibility should be confirmed during detailed design⁶.

The access activities have no site hydrological connection. No physical works are currently proposed for the balance of the Lot.

Standardised potential 2,500m² building envelopes are shown with ability to accommodate the required ODP and PDP allotment dimensions and comply with the required building setback from boundary. Building consent level detailed engineering design and site-specific investigations for individual platforms within the designated envelopes have not been undertaken. There is currently no detailed stormwater design. The Lot sizes are such that there is sufficient land area within each Lot to accommodate buildings and paved areas within the ODP and PDP controlled activity rule threshold for stormwater management and impermeable surfaces.

⁶ Wilson & Joubert (15/5/26) Site Assessment Report Lot 3 DP 415575 Kurapari Rd

Final stormwater management for each Lot should be confirmed at Building Consent stage once dwelling, driveway, tank overflow, and outlet locations are known.

The Site Suitability Report⁷ recommends

- *roof/hardstand runoff is collected and discharged in a controlled manner to stable ground or an approved outlet*
- *Discharges must not be concentrated onto neighbouring properties, steep or erosion-prone gully slopes, or wastewater disposal areas unless specifically assessed and designed.*

Each site has been assessed in terms of its suitability for on-site wastewater treatment and disposal (4-bedroom dwelling / 6 person capacity) and geotechnical stability.

Wastewater disposal fields have been deliberately located outside the identified gumland areas perched on Rangiora Clay (RAH imperfectly to very poorly drained) podzol soils in parts of the site, as wastewater inputs into these low-nutrient ecosystems, are inappropriate and may alter soil nutrient status, promoting invasion by a broader range of exotic plant species.

Although the ecological effects of the subdivision itself are expected to be limited to vegetation clearance, the proposal will facilitate future residential development and occupancy, with associated potential effects that are not yet fully defined but are generally foreseeable. These effects can be appropriately managed through comprehensive consent notices registered on the new titles.

The subdivision works clearance of proposed Lots 2 & 3 access along the western boundary requires wildlife management and revegetation of a 5m buffer into the remaining vegetation to prevent edge effects and maintain a low flammability retreat.

In terms of the residential development, response to the permanent loss of *MODERATE* significance cover will require wildlife management and vegetation offset to achieve no *net loss*, rather a *net gain* and *additionality* through density and diversity, in keeping with the aspiration of *Appendix 3 NPSIB (2023) and RPS 4.4.2*. Compliance with the NES- F (2020) will be required in regard to proposed Lot 4 development at minimum as the development area and access will likely be within 100m of wetland.

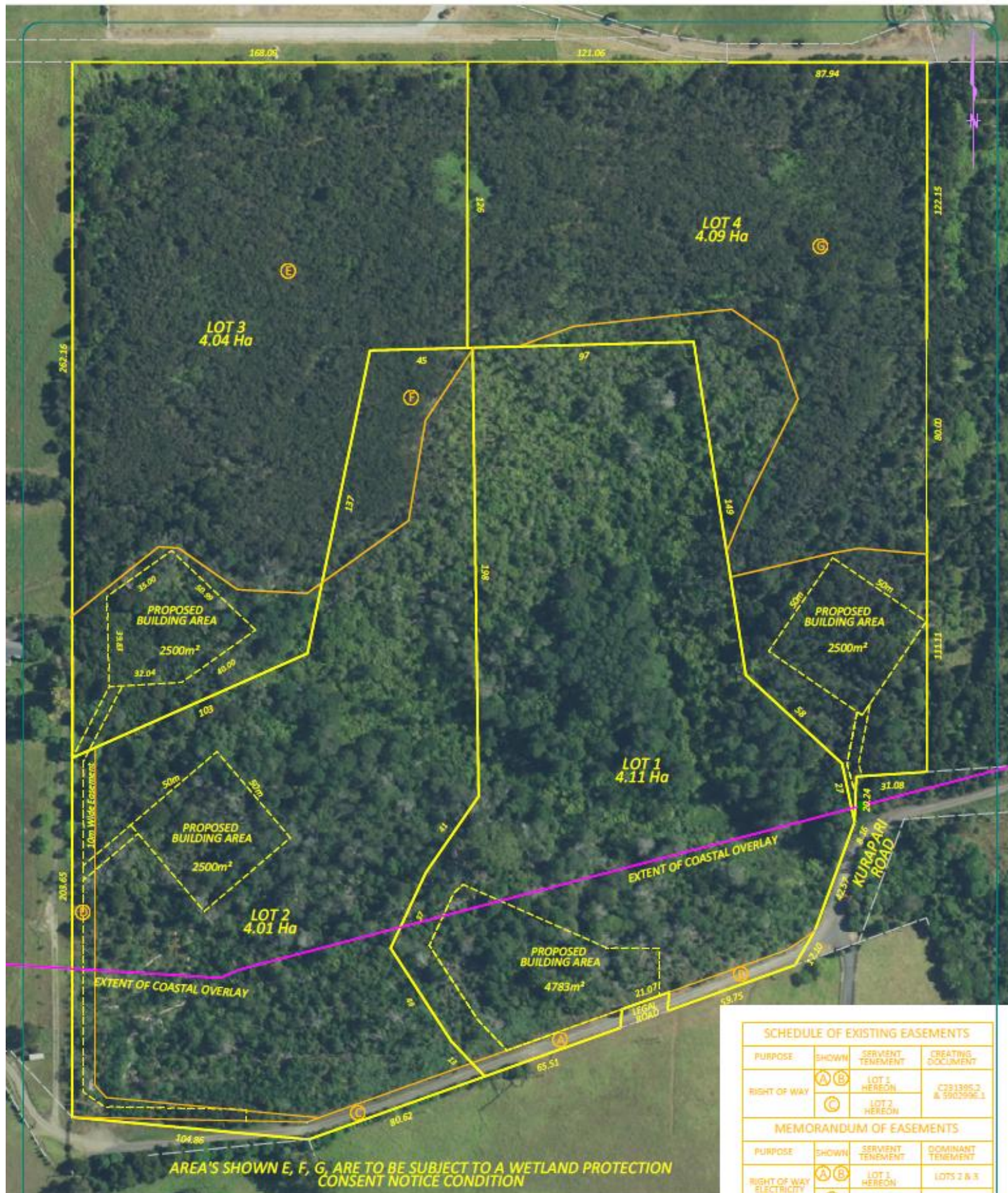
Fig 3 & 4 illustrate the implemented initial revegetation areas on proposed Lot 1 (2260119-RMALUC CONDITION 6). Standing pest control may be partitioned amongst the proposed Lots. Although already designated as indefinite, the separate ownership of the proposed Lots will allow reasonable amplification of weed control and replacement planting in a shorter time period.

⁷ Wilson Joubert (3/8/2026) Civil Site Suitability Report: STATUS/REVISION NO. 03– Resource / Subdivisional Consent for Markus Weise 88 Kurapari Road, Kerikeri Lot 3 DP 415575 Proposed 4-Lot Subdivision (Lots 2-4 for Assessment) REFERENCE NO. 146523

FIG 1: SITE LOCATION



FIG 2: PROPOSED SCHEME



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AREAS AND MEASUREMENTS ARE SUBJECT TO FINAL SURVEY
TOPOGRAPHICAL DETAIL IS APPROXIMATE ONLY AND SCALED FROM AERIAL PHOTOGRAPHY

SCHEDULE OF EXISTING EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	CREATING DOCUMENT
RIGHT OF WAY	(A) (B)	LOT 1 HEREON	C391395.2 & 5902596.1
	(C)	LOT 2 HEREON	
MEMORANDUM OF EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
RIGHT OF WAY ELECTRICITY TELECOM DRAIN WATER	(A) (B)	LOT 1 HEREON	LOTS 2 & 3
	(C)	LOT 2 HEREON	LOT 3
	(D)	LOT 3 HEREON	LOT 1

LINZ LIDAR CONTOUR
1m MINOR
5m MAJOR
LEVEL DATUM NZVD16



315 Kerikeri Rd
P.O. Box 372 Kerikeri
Email: kerikeri@tsurvey.co.nz
Ph: (09) 4077360 Fax (09) 4077322

Registered Land Surveyors, Planners & Land Development Consultants

PROPOSED SUBDIVISION OF LOT 3 DP 415575

PREPARED FOR: WIESE

	Name	Date
Survey	SL	13.06.25
Design	SL	13.07.26
Drawn	SL	13.07.26
Approved		
Rev		7.08.26
10781 SCHEME LCD		

ORIGINAL	SHEET
SCALE	SIZE
1:1500	A3

Surveyors
Ref. No:
10781

FIG 3: ECOLOGICAL CONTEXT



- KEY
- Wetland
 - Gumland on RAH Soil
 - Gleichenia Dicarpa (FACW) wetland
 - Kanuka & broadleaves AS1, Wattles
 - Riparian gully mamaku, broadleaves & exotics
 - AS1-AS3, large exotic component
 - Riparian slope revegetation (7500m²)
 - 10m Buffer revegetation (925m²)
 - Creek

 Bay Ecological CONSULTANCY LTD	
02.09.2025	
ECOLOGICAL CONTEXT	
Kurapari Road, Kerikeri Lot 3 DP 415575	
Scale	Drawn By
1:2000 @ A3	Cad Design
Drawing #	Rev #
1.0	A

FIG 4: IMPLEMENTED INITIAL REVEGETATION AREAS ON PROPOSED LOT 1 (2260119-RMALUC CONDITION 6)



SITE CONTEXT

Desktop review of the available ecological site context of the Lot was undertaken for house construction on now proposed Lot 1 2260119-RMALUC (2025). It remains informative and relevant in its entirety to the current proposal.

This standard EclA desktop scoping phase assists in determining priorities for field work, informed assessment of significance and targeted impact management. Although generally from broad scale mapping, requiring finer ground truthing, it provides insight into potential species occurrence and associations; underlying abiotic influences of soils and hydrology and extent and *values*⁸ of waterways.

TABLE 1: SITE SUMMARY

DESCRIPTION	LOT 3 DP 415575 (RT 460076)
OWNER	MW HOLDINGS LTD
FNOP ZONE	GENERAL COASTAL
FNPP ZONE	RURAL LIFESTYLE
RPS COASTAL	✓ Proposed Lot 1 & 2 lower contour
AREA	16.2424 ha approx.
ECOLOGICAL DISTRICT	KERIKERI
COVER	- designated for clearance & periphery - mixed vegetation AS1-3 <i>Kānuka</i> dominant; large area of senescing hakea; open grass areas - Dominant exotic component of gorse; tobacco weed; grass; gum; wattle hakea - Scattered <i>kānuka</i>; large broadleaves and podocarps predating 1950s secondary after initial historic clearance – none in building envelope
SOIL TYPE ⁹	- YO Waiotu Clay – well drained - RAH Rangiora Clay imperfectly to very poorly drained
POTENTIAL ECOSYSTEM ¹⁰	- WF9 TARAIRE TAWA FOREST - WF11 KAURI BROALEAVED PODOCARP FOREST
TEC CLASSIFICATION ¹¹	CLASS V
HYDROLOGY	NATURAL INLAND WETLAND SMALL HEADWATERS CONVERGE TO AN UNNAMED CREEK UPPER NZSEG#1006519
SITE RANKED AREAS	Site is encompassed within <i>Rangitane Shrublands PNA#P05/087</i> ¹²
ADJACENT RANKED AREAS	CMA - Significant Bird area Northland Coastal Significant Marine Mammal & Seabird Management Area Further extent of PNA#P05/087 ¹³ HNC#06/47 Kerikeri Inlet 250m southwest
NATURALLY RARE ECOSYSTEMS ¹⁴	GUMLAND NATURAL INLAND WETLAND
KIWI DENSITY DoC (2018)	HIGH

⁸ Values (NPS FM 2020 Amendment No.1 (2022) (i) ecosystem health; (ii) indigenous biodiversity; (iii) hydrological function; (iv) Maori freshwater values; (v) amenity values

⁹ <https://nrcgis.maps.arcgis.com/apps/webappviewer/index.html?id=fd6bac88893049e1beae97c3467408a9>

¹⁰ https://services2.arcgis.com/J8errK5dyxu7Xjf7/arcgis/rest/services/Northland_Biodiversity_Ranking/FeatureServer/0

¹¹ https://ourenvironment.scinfo.org.nz/maps-and-tools/app/Habitats/lenz_tec

¹² Conning & Miller (1999) Natural Areas of Kerikeri Ecological District. Reconnaissance Report for the Protected Natural Areas Programme. DoC, Whangarei.

¹³ Conning & Miller (1999) Natural Areas of Kerikeri Ecological District. Reconnaissance Report for the Protected Natural Areas Programme. DoC, Whangarei.

¹⁴ Williams et al (2007) New Zealand's historically rare terrestrial ecosystems set in a physical and physiognomic framework *New Zealand Journal of Ecology* 31(2): 119-128

HISTORIC AERIALS

Review of available historic photography and topographical maps illustrated historic change in cover.

The Kauri Gum Industry Act (1898) saw much of the Kerikeri Peninsula become part of the early Rangitane Gum Reserve, resulting in broad burning and shallow excavation. After the decline of the industry much of the land was used for rough pasture until the Land Act 1941 facilitated subdivision and sale of Crown Land. Redcliffs Road was cut in the 1950s and the land leased out initially by the Lands & Survey Dept. It was then dispersed once successfully developed with returned serviceman ballots and later civil ballots commencing as late as 1969.

The site and wider area is described on the 1942 topo map as in *light scrub*, having been part of the Rangitane Gum Reserve and still without developed roading. This local character persists in the earliest available Retrolens aerial (1950) in comparison to the more developed appearance to the west across Rangitane (Kapiro) Stream, likely due to the poor RAH land at upper contour and the steep slopes with central wet gully unsuitable comparatively for farming or horticulture.

By the late 1960s it conforms to the more typical production pattern of remnant areas on slopes and in gullies is visible in comparison to the grazed slopes and flatter plateaus. Cover shown was likely heavily exotic on the riparian slopes as current- the taller trees in the 1960s topo map and aerial are likely the emergent gums visible today.

At this time the Lot cover was likely canopy only, undergrazed as typical, demonstrated by the low diversity which has not recovered a spectrum of understorey, despite nearly 50 years of stock exclusion and more recent pest control. Cover may have been expected to evolve over the intervening decades with a contribution of natural regeneration supported by local seed source in the wider PNA, pest and weed control. However, current condition demonstrates this is not a guaranteed outcome.

Areas of the central gully dominated by mamaku cover today was well established in the 1981 aerial. This represents an alternative successional cover on high irradiance damp slopes where it out competes kānuka, mānuka and exotics to establish dominance.

FIG 5: RETROLENS¹⁵ AERIAL 1951 SITE COVER



¹⁵ All Retrolens photography released under Creative Commons Attribution 4.0 International license
<https://creativecommons.org/licenses/by/4.0/>

FIG 6: SUBJECT SITE 1942 NZMS1/N11

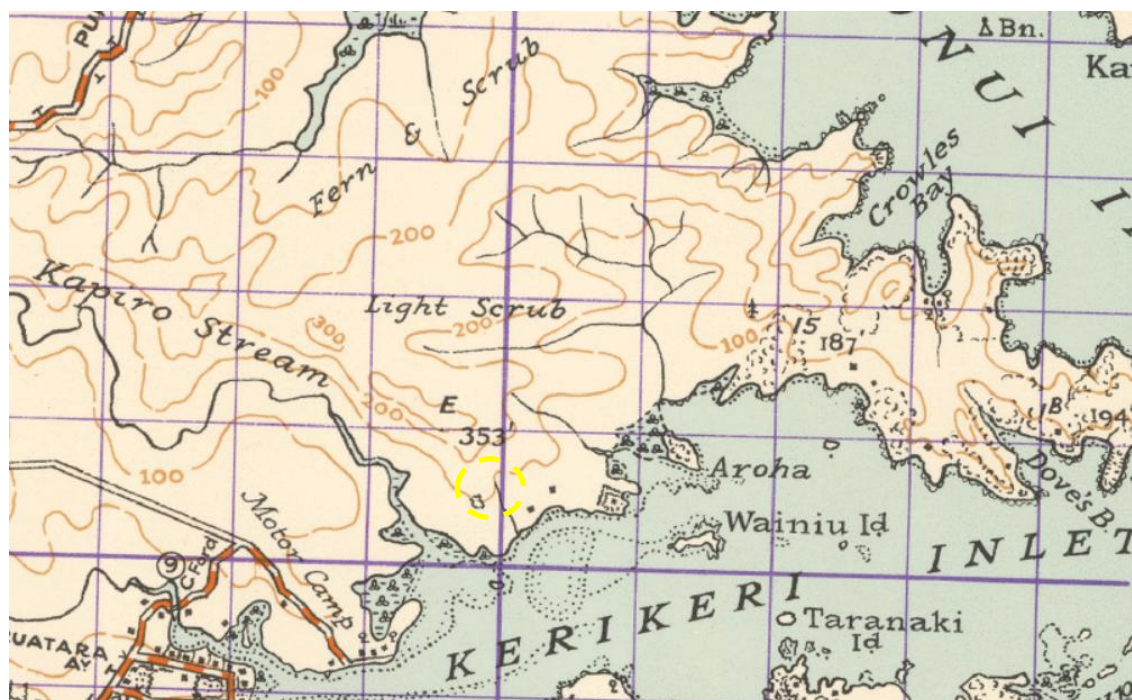
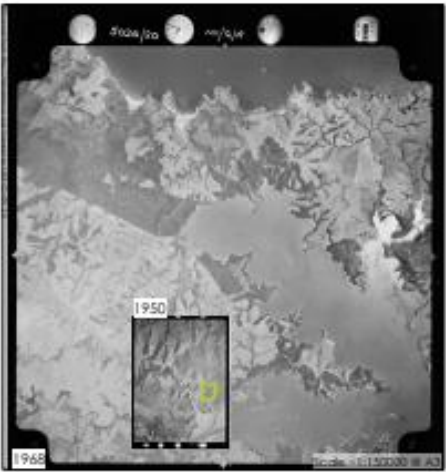


FIG 7: SUBJECT SITE 1969 NZMS1/N11



¹⁶ All Retrolens aerial photography - Sourced from <http://retrolens.nz> and licensed by LINZ CC-BY 3.0

FIG 8: SITE LOCATION 1968



 Bay Ecological CONSULTANCY LTD	
19.08.2025	
HISTORICAL IMAGE 1968	
Kurapari Road, Eritrea Lot 3 DP 415575	
Scale	Drawn By
1:2000 @ A3	Cad Design
Drawing #	Rev #
3.0	A

FIG 9: SITE LOCATION 1981



FIG 10: SITE LOCATION 2005



The 2014 aerial below shows an area of clearance to the western boundary with Lot 4 DP 559859. Since the previous aerial it also illustrates the pine /blackwood area to the east on present neighbouring Lot 1 DP 415575 and into the boundary has been cleared (at the time under the same ownership). Both actions provoked edge effects as currently present with high weed density, particularly in the western site.

FIG 11: LINZ 2014 & GOOGLE EARTH 2018 ILLUSTRATING CLEARED AREA TO WESTERN BOUNDARY CURRENT PROPOSED LOT 3



The 2022 Google Earth aerial below shows clearance occurred in approx. 2022 along the entire Kurapari Rd frontage from the bridge west and substantially further north into the site at the boundary with Lot 4 DP 559859. This has regenerated in heavy exotic weediness and edge effects further into the site vegetation. Similar regeneration to the east boundary from Lot 1 DP 415575 since 2014 is open and patchy.

FIG 12: GOOGLE EARTH 2022 SHOWING PERIPHERAL CLEARANCE KURAPARI RD FRONTAGE AND NORTH INTO THE SITE ON THE WESTERN BOUNDARY; 2026 CLEARANCE 2260119-RMALUC 2025



The consented clearance for the current house (2260119-RMALUC 2025) occurred in Dec 2025, largely removing exotic weed species.

SOILS

Site soils are mapped as *Rangiora Clay Hill Variant (RAH)* on the upper contour and *Waiotu Friable Clay (YO)* on lower contour toward Kurapari Road.

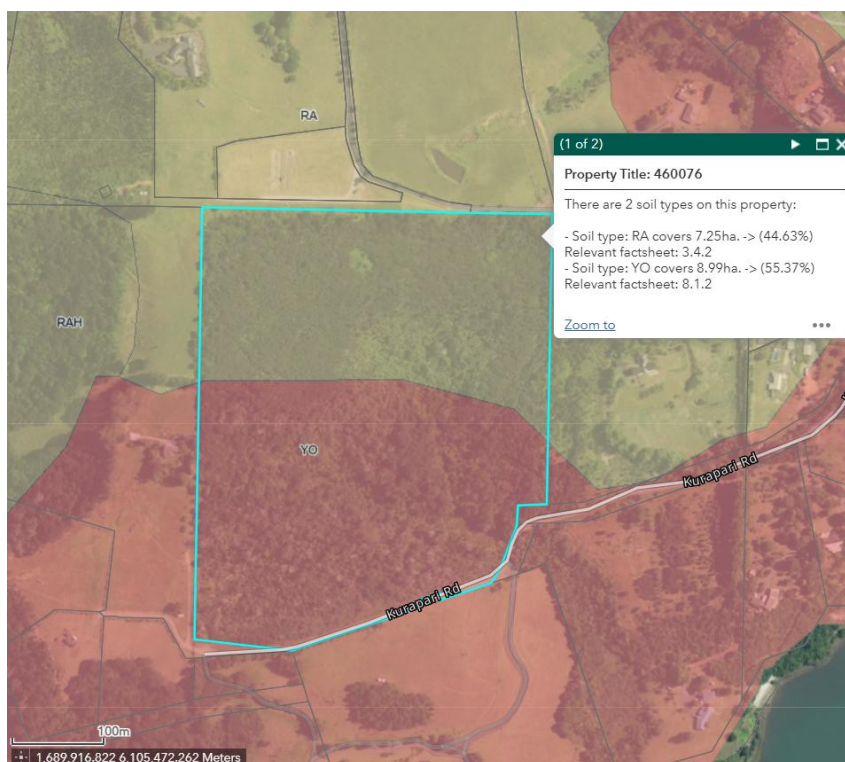
In conjunction with species associations, soil characteristics provide an indication of potential wetland presence, and are useful guide for any revegetation or amenity planting.

TABLE 2: MAPPED SOIL TYPE

SOIL TYPE NZRLI	SOIL TYPE FSL	DESCRIPTORS	PREDICTED FOREST TYPE
RANGIORA CLAY RAH 44.6%	ALBIC ULTIC UEM	MARUA SUITE- Mature greywacke soil - On strongly rolling to moderately steep slopes & deeply weathered greywacke - shallow E horizon with mottled redox layer beneath - Imperfectly to (very) poorly drained , seasonally wet and susceptible to pugging - Strongly leached to weakly podzolised - Dispersive surface horizons with low P retention in A & E horizons - may result in clay and P inputs to waterways when bare - Low Mg, K & P reserves. High aluminium & iron in B horizon may cause toxicity in some sensitive species.	WF11 <i>Kauri, podocarp, broadleaved</i>
WAIOTU FRIABLE CLAY YO 55.3%	TYPIC ORTHIC OXIDIC XOT	KIRIPAKI SUITE- Mature basalt soil - Well – moderately drained - Clayey soil materials derived from early to mid-Pleistocene basalts - Clay-enriched B horizons Limited shallow –medium root depth by high dry bulk density/penetration resistance, particularly in well drained soils. - Friable granular topsoil - Very low reserves of potassium, magnesium, calcium and phosphorus. - Exposed subsoils difficult to revegetate because of toxic levels of free iron, manganese and Al at low pH-hostile environment for plant roots	WF9 <i>Taraire tawa podocarp</i>

Site soils were inspected along tracks and cut faces during site visit and readily conformed to mapped description.

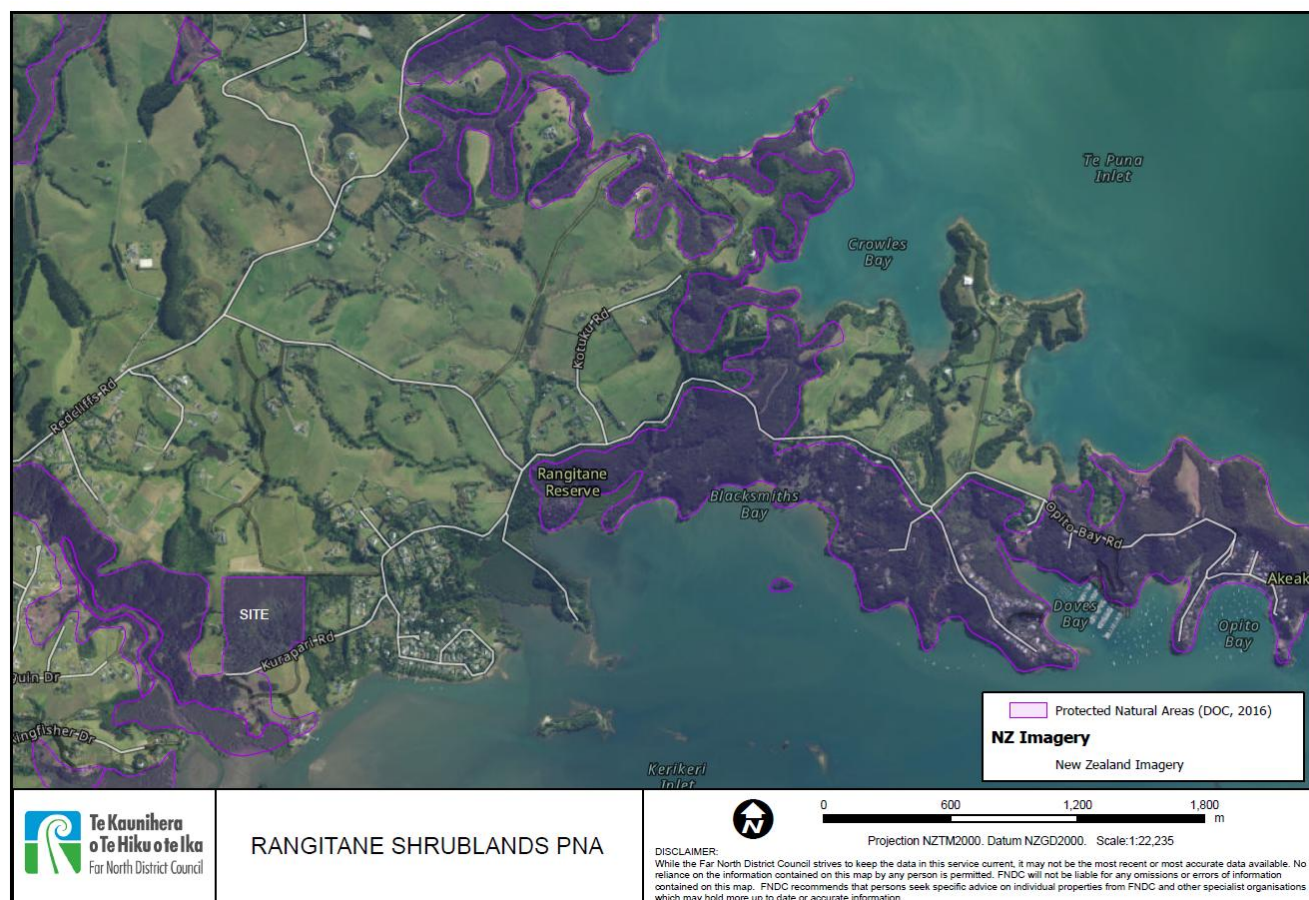
FIGURE 13: MAPPED SOIL TYPE (NRC)



KERIKERI ED PNA

Site cover was included in the 1995 DoC mapping of *Rangitane Shrublands PNA# P05/087* (330ha approx.) that encompasses a large tract of the coast of the Kerikeri Peninsula.

FIG 14: RANGITANE SHRUBLANDS PNA# P05/087



Although dated, the underlying assessment is a benchmark of that time and useful surrogate for potential significance and ecological of the current ecosystems. The site was likely surveyed from aerials, vantage points or the road. Documented values of the far larger unit are compared with those onsite as below *TABLE 4*.

PNA documentation states that shrubland¹⁷ (as compared to forest¹⁸) occurs at about half of the PNA sites in the Kerikeri Ecological District. Species scattered in the canopy are given as cabbage tree, mamaku; tānekaha; tōwai; rewarewa (*Knightia excelsa*); māhoe; pūriri and in coastal areas; pōhutukawa; kōwhai; and karaka. Common exotic component species include such as gorse; tobacco weed; Taiwan cheery; *Hakea*; *Acacia*; *Polygala*. Abundant exotic shrubland/ scrub¹⁹ types were included as components of broader PNA areas, due to their linking and buffering roles, making them integral components of predominantly native ecosystems and conferring significance.

¹⁷ **SHRUBLAND:** Successional vegetation dominated by seral species such as manuka, kanuka, māhoe etc or shrubs such as hangehange, bracken, kumerahou.

¹⁸ **FOREST:** A tall, predominantly closed canopy consisting mainly of tree species

¹⁹ **SCRUB:** seral communities, often dominated by or with a large component of exotic species such as gorse, *Hakea*, tobacco weed, etc. and/or commonly lacking a closed canopy and in which an understorey is either absent or composed primarily of exotic species.

TABLE 3: RANGITANE SHRUBLANDS PNA# P05/087 DOCUMENTED VALUES

RANGITANE SHRUBLANDS PNA# P05/087	SUBJECT SITE
<i>Representative forest and scrub types including unmodified</i> (a) kānuka shrubland/forest on coastal hillslope (b) Acacia treeland on coastal hillslope (c) Mamaku tree fernland on coastal hillslope (d) Hakea scrub on coastal hillslope (e) Pōhutukawa-kānuka forest on coastal hillslope (f) Tōwai-mamaku forest on coastal hillslope (g) mānuka shrubland on hillslope.	Gumland is aligned most closely with <i>Type (g)</i> of the documentation. <i>Type (c)</i> is present in the riparian gully in the centre of the Lot around the headwaters On lower slopes the canopy is kānuka dominant in some areas (a) but most emergent trees are exotic i.e type (b) <i>Acacia treeland</i> The site portion of the PNA is shrubland²⁰/ scrub²¹ as opposed to as forest²². The diverse broadleaved types given are not present
<i>Advanced shrubland, some dominated by exotics, and young secondary forest typify this coastal riparian site.</i> <i>Representative of volcanic broadleaf dominant forest in a location which is largely devoid of natural areas</i> <i>Type (a) - Taraire-pūriri forest with totara and occasional kahikatea, rimu, rewarewa and tōwai.</i> <i>This forest type is of particular importance as a food source for NZ pigeon, as well as being kiwi habitat.</i>	Not present. Low availability of fruiting component e.g. miro taraire absent pūriri scattered Kiwi habitat present
<i>Two exotic dominant (or shared dominant) vegetation types are included as they may be important NI brown kiwi population.</i> <i>Type (b) - Eucalyptus sp.-totara treeland with Acacia sp.</i> <i>Type (c) - Gorse scrub with mamaku tree fern and occasional tobacco weed and pine.</i>	Kiwi are likely utilising cover across the site regardless of origin
<i>Riparian in nature with sequential gradients from estuarine mangroves through to coastal hill forest.</i>	Cover protects headwater of short coastal creek and wetlands .CMA and coast 300m to the south offsite. Altitudinal pattern is suppressed onsite due to exotic weed homogeny . Pattern is disturbance and soil related e.g. gumland on RAH. Mamaku pioneer cover surrounding headwaters on damp high irradiance slope.
<i>One of the largest coastal shrubland/forest remnants remaining in the northern Bay of Islands.</i>	No – shrubland and scrub matrix – modified from extensive pastoral history. Low diversity seral pioneers with individual podocarps and larger stature broadleaves. Clearance area is heavily weed impacted Site is part of landscape linkage for highly mobile species
<i>Habitat for threatened flora and fauna</i> <i>Pittosporum pimeleoides subsp. pimeleoides (At Risk- Naturally Uncommon)</i> <i>Ranunculus urvilleanus (At Risk – Declining)</i> <i>Dwarf misletoe (Korthalsella salicornioides ; At Risk – Declining)</i> <i>reef heron</i> <i>Little blue penguin (At Risk Declining)</i> <i>Northland green gecko (At Risk- Declining)</i> <i>NI Brown Kiwi (Not Threatened – Conservation Dependant)</i>	Kiwi known from site Gecko recorded locally - potential to be onsite Flora spp given not found despite search Other species not likely reef heron prefer rocky shores and rarely inland Site is unlikely penguin habitat (nest) Fernbird (At Risk Declining) gully wetland and gumland upper plateau

The site shows some fidelity to the descriptors of the far larger PNA area.

²⁰ **SHRUBLAND:** Successional vegetation dominated by seral species such as manuka, kanuka, māhoe etc or shrubs such as hangehange, bracken, kumerahou.

²¹ **SCRUB:** seral communities, often dominated by or with a large component of exotic species such as gorse, Hakea, tobacco weed, etc. and/or commonly lacking a closed canopy and in which an understorey is either absent or composed primarily of exotic species.

²² **FOREST:** A tall, predominantly closed canopy consisting mainly of tree species

PRIOR 2010 ECOLOGICAL ASSESSMENT

The wider parent parcel²³ ‘Fernbrook’ was subject to brief ecological assessment²⁴ in 2010 as part of a subdivision proposal, in order to determine suitability for a formal Conservation Covenant (22ha) under the Sec 77 of the Reserves Act (1977) and gain rates relief. Covenant was reportedly proposed for 90% of the wider bundle which extended to Kerikeri Inlet at the time. Description notes that grazing ceased in 1971, and includes the current Lot and general comment, as below *TABLE 5*. Details of the 2010 reporting were considered during site visits for the current assessment. The Covenant was recently repealed, in order to sell subject site Lot 3, & Lot 1 DP 415575 to the east with the original family home.

The 2010 report concluded the parent parcel had a *HIGH* level of ecological ranking, based on criteria of landscape, habitat values; soil protection and connectivity - similar to those applied in the current assessment standard *RPS (2018) Appendix 5*, however without the specific detail of sub categories contained therein.

While we agree with the description of gumland, we note this coincides with the general area of the *RAH* soils rather than simply the overall historic burning that occurred to bring the former wider gumland on the Peninsula into production, bulldozing, ripping and fertilising. It includes areas of wet gumland type, which qualifies as *natural inland wetland*. Despite specific search, no *Schoenus carsei* was located, perhaps more frequent *Neostylis* as similar. The *HIGH* significance of the 2010 is reflected in some of the subject site elements - fernbird & kiwi; potential gecko; rarity on terms of gumland species and overall association; entire short coastal creek and wetland hydrology; hill catchment protection; connectivity across the landscape. However, the majority of cover on the lower slopes is highly weed infested and not of the condition, height or species associations described.

TABLE 4: FERNBROOK DOCUMENTED VALUES

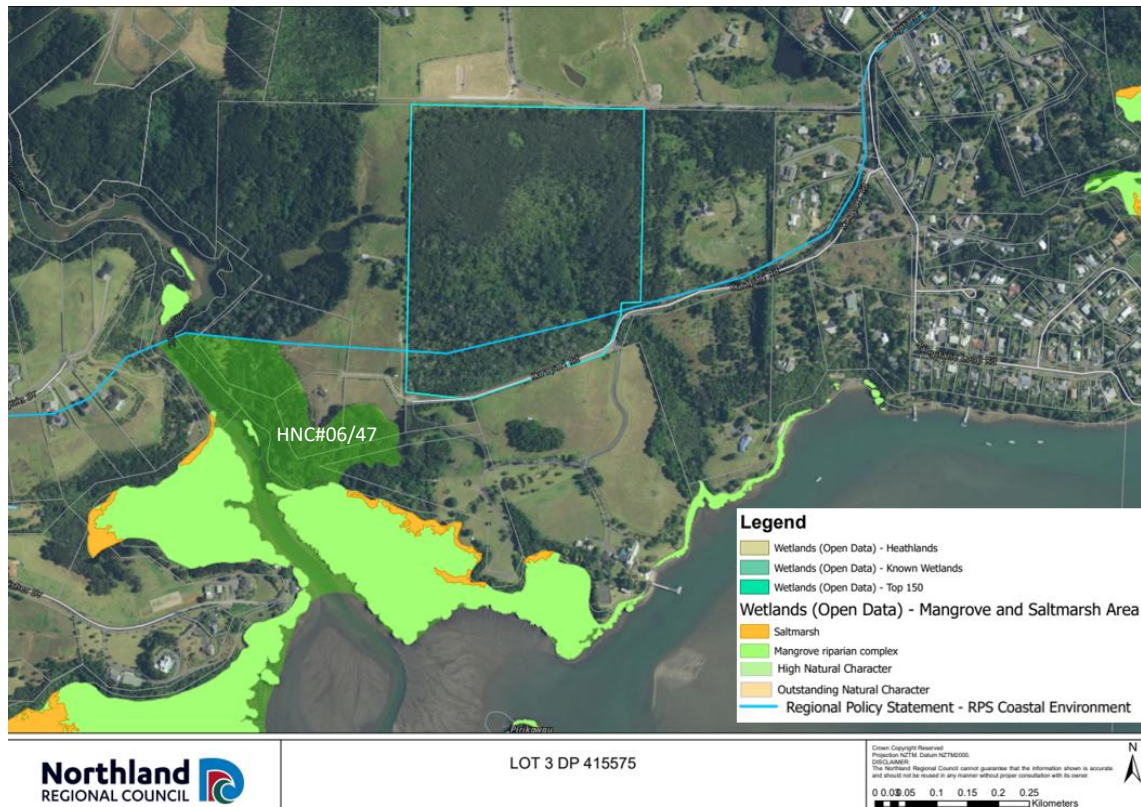
‘FERNBROOK’ 2010 NZE	SUBJECT SITE
VEGETATION TYPES <i>Coastal broadleaved kānuka forest – kānuka and rewarewa emergent with lemonwood; māhoe, mānuka and occasional totara</i> <i>Pūriri taraire pōhutukawa rewarewa totara forest</i> <i>Revegetation plantings (coastall block ex macadamia orchard)</i> <i>Wetland - Machaerina teretifolia</i> <i>Mānuka dominated shrubland/ gumland</i>	While these species are present it is not considered the kānuka forest type is not represented. It is shrubland at best with exotic dominance throughout and as emergent. Pūriri forest type is not represented The revegetation of the coastal block offsite that was indicated as being imminent in the next planting season was not completed and remains in grass since orchard removal. A large wetland is present on Lot 2 DP 415575 as contour flattens. It appears to have central raupo dominant area from annual dieback visible in aerials likely in deeper extent The subject site wetland is not detailed. Gumland is a site type on upper contour RAH soils
<i>High diversity of flora</i> <i>Good coastal riverine lacustrine terrestrial hydrology</i> <i>Ecosystems with rare assemblages within specific habitats such kānuka -pōhutukawa forest</i>	Site gumland is naturally not diverse however expected species <i>Dracophyllum</i> ; <i>Gleichenia microphylla</i> (FAC) & dicarpa (FACW) spp; raindeer moss, club moss; Schoenus apogon (FACW); Schoenus brevifolius (FACW); Schoenus tendo (FAC); Netrostylis capillaris (FACW) Dianella nigra (UPL) Lepidosperma neozelandicum (FACW) Machaerina teretifolia (FACW) kumaraho and Leptospermum incanum and kahikātoa both at Risk- Declining Lower cover on YO has a high diversity of weeds amongst common early successional species – not of expected diversity Headwater creek and wetland onsite is tributary to the downstream wetland creek and CMA that is noted in the report Site gumland on podzol / RAH soil is a rare association on specific substrate
<i>Over the entire property the canopy is in good condition</i> <i>Active weed & pest control has been undertaken over the 38 years of ownership</i> <i>Priority weeds:Monkey apple; pampas, ginger, moth plant, gorse, tuber fern; cotoneaster, Mexican devil;Taiwan ginger</i> <i>Weed control to focus on the coastal block</i>	The emergent canopy on lower YO soil is predominantly exotic wattle hakea and gum Mamaku canopy surrounding the headwater is dense as typic – unpalatable and early successional alternative to kānuka Weeds included at all tiers – also includes frequent hakea, privet; barberry , fan palm; taro; arum lily and lantana Gumland has hakea and gorse scattered throughout but more intact due to narrower substrate niche
<i>Moderately high diversity of taxa within a healthy regenerating forest ecosystem</i> <i>Natural regeneration has produced a closed canopy which is virtually weed free apart from persistent wattle and occasional Taiwan cherry</i> <i>Little browse evident and canopy is in a healthy condition</i>	Gumland and dense mamaku successional gully cover in good condition. Remainder is highly impacted by weeds and exotic canopy frequent Not weed free by any means Indigenous regeneration still largely early successional and unpalatable. Weed/ browser/ predator control may not be sufficient to allow regeneration of wider ssociations
<i>Serves as an ecological linkage to other areas and significant habitats of indigenous fauna including coastal seabirds on nearby islands and cliffs</i>	Site cover is contributory to wider landscape linkage for highly mobile species. No seabird burrowed soils or colony trees for pelargic species No likely to be used for mass roosting of gulls; terns; no heron colony tree
<i>Kiwi resident on the property</i> <i>Managed by NZ Kiwi Foundation</i>	Kiwi burrow noted in upper gumland Kiwi likely – call count by Kiwi Coast report highest local numbers in the area
<i>Northland Green gecko (Naultinus grayii) have been sighted on neighboring properties and likely to present here</i>	Recorded locally - potential to be onsite
BIRD SURVEY – 40 DIFFERENT SPECIES OF BIRDS <i>Fernbird</i> <i>Kiwi</i> <i>Kukupu</i> <i>Caspian tern; turnstone; Bar tailed godwit ;Black backed gull; reef heron; Australasian bittern</i>	Fern bird (At Risk -Declining) adjacent upper gully creek / gumland Kiwi (Not Threatened ;CD) likely Kukupu are frequent locally. Some large tree fruiting provision scattered pūriri; - no taraire or miro Seabirds unlikely From professional experience, the enclosed short stature wetland unlikely for bittern in favour of more open lower wetland on Lot 1
CURRENT LOT 3 DP415575 SPECIFIC DESCRIPTORS <i>The largest and most intact block</i> <i>Mānuka dominated shrubland has a vegetation composition typical of gumland fernland which succeeds on impoverished soils after burning</i> <i>Canopy 6 – 8m</i> <i>Understorey of Dracophyllum lessonianum; tangle fern; Schoenus brevifolius; Schoenus carsei; Schoenus tendo. Lycopodium spp; moss and lichens.</i> <i>Acaia treeland occurs within this block</i> <i>On the eastern edge there is a mature pine blackwood block of 3ha with frequent karaka and mapou (3ha) to be harvested and replanted in native species.</i>	The gumland is intact, however high weed density on lower contour Gumland is representative, canopy is <6m Native emergents 6-8m are limited to gully and eastern area – infrequent pūriri, totara; a rewarewa and several karaka. Majority of this stature are exotic. Gums are emergent The pine/ blackwood block felled was located east on Lot 2 DP 415575, visible in aerial photography Was replanted in largely kānuka / mānuka density

²³ Current Lots 1-3 DP 415575
²⁴ NZE (2010) Indigenous flora and fauna clearance and protection report. For Margaret Cooper & Robert Hoessly

COASTAL & LANDSCAPE MAPPING

The lower contour of proposed Lot 1 & 2 is within the RPS (2018) *Coastal Environment*. The Lot is not included in any RPS (2018) & District Plan *Natural Character* or *Landscape* mapping, nor is the development considered unlikely to impact negatively on the ecological or natural science aspects documented for local units HNC#06/47 to the southwest.

FIG 15: NRC COASTAL & LANDSCAPE LAYERS



The CMA is approx. 350m distant to the south with a degree of connectivity from the southeast of the site via the unnamed waterway and its vegetated corridor. It is included in the *PNRP Significant Bird Area Bay of Islands* and within the *Northland Coastal Significant Marine Mammal & Seabird Management Area*. These latter layers are broad and can capture the majority of the CMA, comprising the large and diverse harbour and estuarine habitat together with many small to moderate sized islands. This large area is given as having *Moderate-High* ecological significance and recorded species include pelagic; wetland and wading birds with threat status that utilise nearshore environment for roosting, nesting or resting. The likelihood of species listed in the documentation were considered during site visits.

Further presence of bird species was also considered during fieldwork from professional experience, local knowledge & ebird checklists from nearby Aroha Island²⁵ & Ake Ake Point Reserve within the Rangitane Shrubland PNA.

²⁵ <https://ebird.org/hotspot/L1014637>; <https://ebird.org/hotspot/L9976739>

Search was also made of available marine records²⁶ and mapping but the area adjacent the offsite creek mouth did not contain species indicative of vulnerable marine ecosystems²⁷ (VMEs); rhodolith beds or seagrass meadows – all highly sensitive to sediment. Coastal wetlands include saltmarsh and mangrove to the south west, outside a ZOI of the development.

There are no NRC or FNDC mapped *Natural Hazard* designations.

NATURALLY RARE ECOSYSTEMS

New Zealand's naturally rare or uncommon ecosystems²⁸ as those with an estimated maximum total area of <0.5% of New Zealand's land area before occupation (approx. AD 1280). A further subset of these have threat status due to vulnerability to further loss of area²⁹. They represent a distinct set of environmental conditions and structure, contrasting markedly to that of common ecosystems, in turn driving associations of rare and threatened endemic species. Their presence contributes to site significance assessment³⁰. In the coastal environment these may include ecosystems associated with seabird guano deposits; seabird burrowed soils; marine mammal haulouts; cliffs & caves. These are not relevant to the site.

Review of soil mapping and short mānuka cover visible in aerials suggested gumland for ground trothing prior to field work for 2260119-RMALUC 2025. In addition to being a *naturally rare* ecosystem, gumlands are also an critically endangered ecosystem²⁹ due to their lack of recognition resulting in a short term (50 years) decline of >80%.

Gumland is diagnostically a distinctive association of mānuka with a small, consistent suite of accompanying species, which vary with soil moisture as the abiotic driver. In the absence of forest, *RAH* soils i.e underlying the *WF11* type area (*FIG 3*) are a typic gumland soil with podzolisation, impeded drainage and low fertility. This promotes the gumland associated species tolerant of these specific conditions such as *Dracophyllum lessonianum*, *mingimingi* (*Leucopogon fasciculata*), *Gleichenia*, *Schoenus brevifolius* and *Lycopodium*³¹.

The **wetland** subset of gumland (WL1 '*gumland/ pakahi*' type of the NZ wetland classification system³²) is characterised by a consistent suite of obligate (*OBL*) or facultative wetland (*FACW*) sedge/rush spp. in the lower strata, exhibiting an obvious wetland community.

Mānuka is often the rarer pink flowered sub variety – (*Leptospermum hoipolloi* var. *incanum*³³), confined to upper Northland and *Regionally Declining* (ongoing or forecast decline of 50–70% next 10 years³⁴).

²⁶ Marine biological observation data from coastal and offshore surveys around New Zealand MBIS NZ. NIWA (2016); ala.org.au

²⁷ VME - ecosystem that are highly vulnerable to one or more kinds of fishing activity or other disturbance, and are identified by the vulnerability of their components (e.g. habitats, communities or species). NIWA (2016). Vulnerable marine ecosystems in the South Pacific Ocean region. National Institute of Water and Atmospheric Research (NIWA), Wellington, New Zealand. SPRFMO has defined ten benthic invertebrate taxa that are regarded as indicators of VMEs. They are: Porifera (sponges); Actiniaria (anemones); Alcyonacea (soft corals); Gorgonacea (sea fans); Pennatulacea (sea pens); Scleractinia (stony corals); Antipatharia (black corals); Stylasteridae (hydrocorals); Crinoidea (sea lilies); and Brisingida (armless stars).

²⁸ Williams et al (2007) New Zealand's historically rare terrestrial ecosystems set in a physical and physiognomic framework *New Zealand Journal of Ecology* 31(2): 119-128

²⁹ Holdaway et al (2012) Status assessment of NZs naturally uncommon ecosystems. *Conservation Biology*, Volume 26, No. 4, 619–629

³⁰ RPS APPENDIX 5: 2(D)i-iii

³¹ Clunie, N.M.U. (1984) Threatened plants on Crown Lease land adjoining the northwestern boundary of the Kaimaumu wetlands proposed reserve' Unpublished Vegetation Series Report No.490, Botany Division, DSIR

³² Johnson & Gerbeaux (2004) Wetland types in New Zealand. DoC, Wellington.

³³ <https://www.nzpcn.org.nz/flora/species/leptospermum-scoparium-var-incanum/>

³⁴ Ford, M., Cameron, E., Champion, P., de Lange, P., Townsend, A., & Forester, L. (2026). Conservation status of indigenous vascular plants in Taitokerau / Northland 2026. Northland Regional Council.

Successional mānuka shrubland (non gumland) differs in a much higher degree of species richness, including broadleaved trees/shrubs and greater invasion by weed species, usually hardy hakea and gorse. It may still contain a minor contribution areas of tangle fern (*Gleichenia microphylla* FAC), *Schoenus tendo* (FAC); *Morelotia affinis* (UPL). Northern gumlands have been further characterised by vegetation associations reflecting abiotic parameters -*Gleichenia* prevalence being at the wetter end of the spectrum with *Schoenus brevifolius* becoming more dominant to mossfield under extreme conditions on exposed soils dominated *Campylopus introflexus*³⁵. Grazing by pest animals is not usually an issue due to the nutrient poor and largely unpalatable schlerophyllus vegetation.

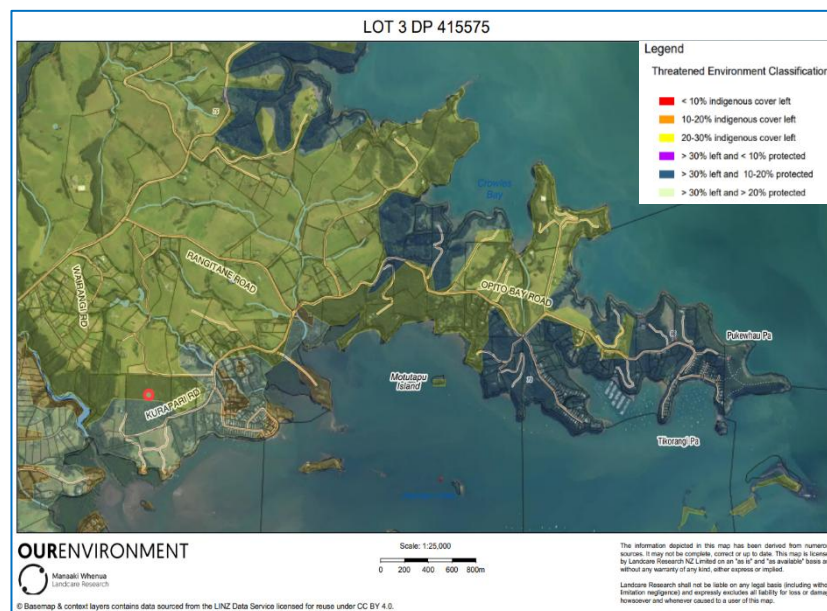
There are no NRC Biodiversity Terrestrial Ranking Top 30% or Top 30% +5 unit³⁶ units in a ZOI of the proposal, often associated with intact areas of rare/ reduced associations e.g. *WL1*; *WF9 Taraire tawa* or *WF4 Pōhutukawa pūriri broadleaved coastal forest*.

THREATENED ENVIRONMENT CLASSIFICATION (TEC)

The TEC is most appropriately applied to help identify priorities for formal protection against clearance and/or incompatible land-uses, and to restore lost linkages and buffers.

The first two classes of the national TEC mapping layer³⁷ have been incorporated into national and regional policy to address biodiversity protection on private land³⁸ and as a measure of significance of any site vegetation. Vegetation onsite is not included in these categories, rather the site and surrounding area is *CLASS III AT RISK (20-30% indigenous cover left)*. Indigenous vegetation and habitats in these environments is considered less reduced and fragmented than the first two categories, but lacking sufficient legal protection.

FIG 16: TEC CLASSIFICATION



³⁵ Clarkson et al (2011) Drainage, soil fertility and fire frequency determine composition and structure of gumland heaths in northern New Zealand. *New Zealand Journal of Ecology* 35(1): 96-113

³⁶ This layer identifies the top 5 % of additional High priority terrestrial sites that would potentially make the largest additional gains assuming management is applied to the top 30% of sites as identified in the ranking of terrestrial ecosystem areas derived from a ranking analysis of indigenous-dominated terrestrial ecosystems for the Northland Region.

³⁷ Threatened Environment Classification (2012) Landcare Research Manaaki Whenua. Based on Land Environments New Zealand (LENZ), classes of the 4th Land Cover Database (LCDB4, based on 2012 satellite imagery) and the protected areas network (version 2012, reflecting areas legally protected for the purpose of natural heritage protection).

³⁸ Northland Regional Policy Statement 2018 Appendix 5; Land Environments New Zealand Level VI; Land Cover Database 4 (2012); Protected Areas Network (2012) **Acutely Threatened** (<10% Indigenous Cover remains); **Chronically Threatened** (10-20% Indigenous Cover remains); **At Risk** (20-30% Indigenous Cover Remains); **Critically Underprotected** (>30% cover, <10% protected); **Underprotected** (>30% Indigenous cover remains, 10-20% protected); **Better Protected** (>30 indigenous cover, >20% protected)

CREEK

Site hydrology consists of headwaters and a creek indicated in *Fig 3*, mapped in the 1942 & 1968 NZMS topo maps and readily visible in the 1950 aerial *Fig 5*. Now encompassed by the mamaku dominant gully cover the headwaters converge at lower contour and pass under Kurapari Rd as a C4 type creek (NZSEG#1006519), travelling another approx. 300m to Kerikeri Inlet as

TABLE 5: CREEK CHARACTERISTICS

CHARACTERISTIC	CREEK
NZSEG	#1006519
ORDER	1st
RIVER ECOSYSTEM TYPE	<i>C4 small, moderate gradient rivers with gravelly beds occurring in coastal to moderately inland locations; this group occurs throughout Northland, generally on gentler terrain where streams of steeper uplands, transition into the lowlands</i>
MEAN FLOW (m ³ s ⁻¹)	low flow 1.17
C4 TYPE MEAN CONDITION SCORE	0.385
SITE CONDITION SCORE	0.250
RANKING TOP 30% OF TYPE	NO

The reach has a condition score³⁹ of **0.250**, which is lower than the **0.385** mean for the C4 Northland type. Values closest to 1 represent optimal condition. The primary contributor to the lower scores is likely the *high producing exotic grassland* descriptor of the surrounding landscape used to underpin the scoring (LCDB V5 2018).

Fish surveys were not undertaken for this assessment because no works affecting waterways are proposed. As all waterways will be retained and protected, adverse effects on fish habitat and associated species are not anticipated.

NIWA has combined REC V2 classification with monitoring data to extrapolate a wide range of instream water quality and fish habitat parameters for LINZ (2020) mapped NZ rivers⁴⁰. This resource gives *potential* fish species, with the proviso fish passage is not obstructed at any downstream point.⁴¹

TABLE 6: PREDICTED FISH SPECIES

SPECIES	COMMON NAME	NIWA PREDICTED	THREAT STATUS
<i>Anguilla australis</i>	SHORTFIN EEL	✓	NOT THREATENED
<i>Galaxias fasciatus</i>	BANDED KŌKOPU	✓	AT RISK NATURALLY UNCOMMON REGIONALLY SIGNIFICANT
<i>Gobiomorphus cotidianus</i>	COMMON BULLY	✓	NOT THREATENED
<i>Gobiomorphus huttoni</i>	REDFIN BULLY	✓	AT RISK -DECLINING

³⁹ NRC (2019) RANKINGS OF RIVERS AND STREAMS DERIVED FROM A RANKING ANALYSIS OF INDIGENOUS-DOMINATED TERRESTRIAL AND FRESHWATER ECOSYSTEMS FOR THE NORTHLAND REGION. Condition scores are based on the FENZ database (DoC 2010), incorporating parameters of: indigenous cover in the upstream catchment; estimates of instream nitrogen concentrations; alteration of river flows and fish passage by control structures; introduced fish, discharges from industry; and impervious surfaces from development.

⁴⁰ Shiny Rivers NIWA

⁴¹ Medium risk NIWA FISH PASSAGE ASSESSMENT TOOL AUGUST 2025

The creek is considered to provide reasonable habitat for NIWA predicted shortfin, common bully and banded kōkopu. However, from professional experience, red fin bully usually prefer riffle- pool habitat which the slow and vegetated character does not provide.

Visual wetland vegetation survey was undertaken in accordance with the MFE Wetland Protocols⁴²The Rapid Test, as the first strata of wetland delineation, was sufficient to confirm wetland presence encompassing the lower extent of the creek, with dominance typified by obligate (OBL) and facultative wetland (FACW) species forming a very obvious natural inland wetland community.

Persistent long term periodicity is evident from the 1950s aerial photography, despite land disturbance prior to this and in the ensuing decades. The proportion of creek to receiving wetland has likely varied dependent on the level of woody catchment cover, with accompanying changes in interception, transpiration and sediment input.

The wetland is best typified as a *swamp*⁴³ with flowing open channel in the high rainfall conditions, within depressed banks in the basal contour of the gully floor. The extant source is the headwater creeks at its head and there were no further tributary critical source areas (CSA) e.g. seepages or overland flow paths in the proposed clearance areas, including the indicated access to proposed Lots 2 & 3.

The species associations vary along the course, dependant on water depth. Raupo is dominant in part as per common association type *WL19: Raupō Reedland*.

Where hydrology cannot support raupō, a periphery of further *OBL & FACW* species tend towards expression of *WL11 Machaerina Sedgeland* type with *Machaerina* (OBL); *Schoenoplectus tabernaemontanii*; *Carex*; *Eleocharis acuta*, *Isolepis*; umbrella sedge (*Cyperus*); and purua grass (*Bolboschoenus*) sighted in various association. Wetland grass species occur *Paspalum distichum* (FACW); *Glyceria* (FACW) and native swamp millet *Isachne globosa* (OBL) as a rampant scrambler over other species. This creates a deceptively terrestrial appearance, revealed to be rafting over standing water if ventured into.

The presence of larger species *Machaerina*; *Bolboschoenus* and *Schoenoplectus* with raupō dominant area implies consistent periodicity and depth of watertable.

Wetland typology is based on the emphasis of observed vegetation and hydrology, however in reality the two wetland types *WL11 – WL19* intergrade and are dynamic systems with potential to change extent and composition over time due to natural factors e.g. drought; invasion; interspecific competition.

Formal topographical survey of the wetland has not been undertaken. We recommend this is demarcated for Sec223, along with the edge of gumland toward the clearance areas for residential development of the proposed Lots.

⁴² MfE(2022) Wetland Delineation Protocols

⁴³ Johnson & Gerbeaux (2004) Wetland types of NZ

TABLE 7: IDENTIFIED NATURAL INLAND WETLAND SWAMP

TYPE	SWAMP
CHARACTERISTIC	- standing water and/ or surface channels; leads with slow flow - mainly surface water with groundwater - water table usually above the surface - moderate to high fluctuation but permanent wetness at depth - poor drainage - combination of mineral and peat soils - wide spread - basins; valleys, gullies and plains
CLASSIFICATION	WL19: RAUPŌ REEDLAND - Palustrine/riverine/lacustrine wetlands; commonly found throughout Northland lowlands, margins of lakes and flooded valleys - Reedland of abundant raupō, locally with species of <i>Bolboschoenus</i>, <i>Schoenoplectus</i> and <i>Machaerina</i>, pūkio, harakeke, and swamp millet.
TYPIC SITE SPECIES	- raupō (OBL) DOMINANT <i>Isachne globosa</i> (OBL) swamp millet <i>Eleocharis acuta</i> (OBL) <i>Carex</i> (FACW) <i>Cyperus</i>* spp (FACW) <i>Epilobium</i> (OBL) <i>Isolepis</i> spp (OBL & FACW) <i>Juncus</i> spp (FACW) <i>Machaerina</i> (FACW) <i>Juncus</i> spp (FACW) <i>Paspalum distichum</i> (FACW) <i>Glyceria</i> (FACW) <i>Myosotis</i> (FACW) <i>Schoenoplectus tabernaemontanii</i>
LOCATION	In flatter contour in gully above Kurapari Rd

Downstream on Lot 2 DP 415575 further wetland is visible in aerial photography and noted in the 2010 ecological report. Areas dominated by *Machaerina* as noted and raupo as visible in aerials are likely associated with further species which together qualify as natural inland wetland.

Values⁴⁴ of the creek (river) were considered which translate to potential significance for consideration against RPS 2018 Appendix 5 criteria. Avoidance of extent and values loss in regard to rivers & wetland is core policy⁴⁵ of the NPS – FM (2020) and as such they must also be addressed in any effects management.

⁴⁴ Values (NPS FM 2020 Amendment No.1 (2022)) (i) ecosystem health; (ii) indigenous biodiversity; (iii) hydrological function; (iv) Māori freshwater values; (v) amenity values

⁴⁵ **Policy 3:** Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments. **Policy 6:** There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted. **Policy 7:** The loss of river extent and values is avoided to the extent practicable. **Policy 9:** The habitats of indigenous freshwater species are protected.

TABLE 8: WETLAND VALUES (NPS- FM)

VALUE NPS-FM (2020)	CENTRAL WETLAND & CREEK
ECOSYSTEM HEALTH	Riparian buffer (frequent exotics) is present for swamp with functionality of sediment retention and processing; diffuse stormwater interception Contribution of habitat diversity and species retention for insectivorous and wetland birds in wider site Lower swamp contributes to habitats and conditions necessary to support freshwater fish species and wetland birds in the landscape including those with threat status as appropriate fernbird Riparian margin and ecotone has heightened diversity, density and lesser exotic impact in comparison to remainder lower slope includes <i>Mamaku ecosystem type</i> cover
INDIGENOUS BIODIVERSITY	Entire site is KIWI HIGH DENSITY including margins - higher territorial economics moist ground & water source Predicted <i>At Risk Declining & Naturally Uncommon</i> Freshwater fish species High riparian exotic influence . Mistflower an issue Potential habitat for freshwater fish – obstruction unknown- rated <i>Medium Risk (NIWA)</i> Fernbird (At Risk – Declining)
HYDROLOGICAL FUNCTION	Sediment, stormwater retention and nutrient processing <i>Natural inland wetland</i> Hydrological connected as headwater source shortly to wetland and creek/ CMA downstream Buffer to CMA protective of groundwater and sediment control under rainfall when hydrological connections to ground and surface water pronounced Water source for terrestrial fauna
MAORI FRESHWATER VALUES	Outside the scope of reporting likely functional and intrinsic
AMENITY VALUE	Heightened amenity opportunity for residents Visible briefly from Kurapari Rd Amenity for residents and basic opportunity for recreational contact, not considered to provide food provision

Retention of buffer is considered key to avoid effects on riparian protection and internal habitat, including from light and disturbance. Fig 3 & 4 illustrate the implemented initial revegetation areas on proposed Lot 1 (2260119-RMALUC CONDITION 6). Pest control may be partitioned amongst the proposed Lots. Although already designated as indefinite, the separate ownership of the proposed Lots will allow reasonable amplification of weed control and replacement planting in a shorter time period.

PROPOSED LOT 1 LOOKING EAST OVER RAUPO AREA OF WETLAND SHORTLY ADJACENT KURAPARI RD; LOOKING WEST DENSE MACHAERINA (FACW) WATTLE CANOPY IN BACKGROUND





SITE VEGETATION

POTENTIAL ECOSYSTEM TYPE

Large scale abiotic variation of substrate; exposure (topography), and temperature are drivers of predicted terrestrial ecosystem classification⁴⁶ or forest pattern, mapped for the site as

- **WF9** *Taraire tawa podocarp forest*
- **WF11** *Kauri, podocarp, broadleaved forest*

These climax forest descriptions assume uniformity and discreet boundaries, however in reality they would grade into one another, expressed as a continuum of composition along inextricable environmental gradients. For management and revegetation purposes, these species descriptions are an appropriate selection to re-establish natural vegetation composition.

Where vegetation cover remains, expression of a predicted type is overlain by variables both natural and anthropogenic that have interplayed to produce a contemporary scenario. These influences may occur as discreet events e.g. clearance & fire or may be more pervasive e.g. species composition alters litter character overtime influencing soil & regeneration.

TABLE 9: MAPPED POTENTIAL ECOSYSTEM TYPE

ECOSYSTEM CLASSIFICATION	TYPE DISTRIBUTION	TYPE DESCRIPTION
WF9 <i>Taraire tawa podocarp forest</i> YO SOIL	<i>Predominantly in the warm climatic zone throughout Northland below 450 m altitude (predominantly eastern). Kauri is absent. Kohekohe can be locally abundant (e.g. Waipoua), while tawa is more common at higher altitudes.</i> NOT EXPRESSED ONSITE	Broadleaved, podocarp forest of abundant taraire, with occasional rimu, miro, northern rātā, tawa, kohekohe, hīnau and rewarewa, and with pukatea and kahikatea commonly in gullies. Locally includes tōtara, pūriri and tōwai.
WF11 <i>Kauri, podocarp, broadleaved forest</i> RAH OIL	<i>Warm to mild climatic zones north of Hamilton and Tauranga.</i> Site RA/ RAH soils display gumland matrix	Kauri, podocarp, broadleaved forest with occasional rimu, miro, kahikatea, kauri, taraire, tawa, tōwai, kohekohe, pūriri and rewarewa. Altitude variants occur, with taraire and kohekohe more abundant at lower altitudes, and tawa and tōwai more common at higher altitudes.

Due to the significant human history and forest clearance in Northland on lowland fertile areas, very little diverse **WF9** ecosystem remains, particularly on YO soils.

WF11- Kauri, podocarp, broadleaved type is the predicted forest type given on the RA/ RAH soils. This is the most widespread predicted ecosystem unit in Northland but sparse and relictual, having suffered the greatest percentage loss. Historically, composition was related to topography, fertility and water table with broadleaved species more abundant in gullies and podocarps widespread more common on ridges. As expressed onsite and elsewhere across the

⁴⁶ Singers, N.J.D.; Rogers, G.M. 2014: A classification of New Zealand's terrestrial ecosystems. *Science for Conservation* 325. Department of Conservation, Wellington. 87 p.

Kerikeri Peninsula, *WF11* type forest has widely been replaced in Northland by secondary mānuka/ kānuka dominated ecosystems, including gumland in some instances.

Site visits were made on the 24/7 & 5/8/2026 with specific regard to the proposed scheme, aerial photography and desktop review. Visual survey was undertaken to determine any small waterway presence and characterise the site associations and habitat for significance. Specific fauna methods were used to provide an indication of further requirements.

Exotics are prevalent at every strata and dominant in some areas with a canopy of wattle; hakea and gum frequent. Large open patches and logs occur throughout the site where exotics have been felled and beneath allopathic hakea canopy.

Exotics include species listed in both in the recent DoC (2024) List of Environmental Weeds in New Zealand and the RPMS largely as SUSTAINED CONTROL species -the objective of which is *to reduce impacts on the biodiversity, cultural and economic values in Northland, and spread to other properties*. Additionally, the principal measure in the RPMP is the **REQUIREMENT TO ACT**.

- People are required to undertake actions to help reduce the impacts and spread of the sustained control pests.

In addition to prevalent gorse and tobacco weed; sweet pea bush (*Polygala mytifolia*); ginger; pampas and *Aristea* throughout, wild ginger; arum lily, taro and mistflower are common along the stream. Notably there is no obvious *Tradescandia* infestations and moth plant was found limited to the road side.

TABLE 10: PROMINENT WEED SPECIES

SPECIES	COMMON NAME
<i>Acacia mearnsii</i>	wattle
<i>Argeratina spp.</i>	mistflower
<i>Ceanothus</i>	ceanothus
<i>Colocasia esculenta</i>	taro
<i>Cortaderia selloana</i>	pampas
<i>Crocosmia</i>	montbretia
<i>Hakea</i>	hakea
<i>Hedychium gardnerianum</i>	Wild ginger
<i>Lantana camara</i>	Lantana
<i>Ligustrum sinense</i>	privet
<i>Polygala mytifolia</i>	Sweet pea bush
<i>Prunus campanulata</i>	Taiwan cherry
<i>Solanum mauritianum</i>	woolly nightshade/ tobacco weed
<i>Trachycarpus fortunei</i>	Chinese fan palm
<i>Ulex europaeus</i>	gorse
<i>Zantedeschia spp</i>	arum lily

Site pest and weed management will wider benefit beyond site boundaries for the local PNA extent. Additionally, the closest unit *HNC#06/47 Kerikeri Inlet* 250m distant southwest is impacted by wattle - easily disbursed this distance from the site via prolific wind born seed. Pest & weed control conditioned for 2260119-RMALUC may be partitioned amongst the

proposed Lots as a result of the proposal. Although already designated as indefinite, the future separate ownership of the proposed Lots will allow reasonable amplification of weed control and replacement planting in a shorter time period.

Exotic habitats have low ecological value considered in terms of individual species value e.g. broad areas of weeds; pasture, vineyard. However, as was emphasised in the PNA documentation, their intimate connection with adjacent hydrology and higher value habitat is inextricable.

There are no representative predicted forest types *WF9* or *WF11*. *WF11* type has been replaced by shrubland/gumland due largely to irreversible alteration of site soils through kauri podzolisation, amplified by clearance/ burning, and is now unlikely to be supportable on the RAH soils.

Neither are the forest associations detailed in the 2010 reporting present. There is no distinct coastal ecosystem type - *WF4 Pōhutukawa, pūriri, broadleaved forest* or specific coastal species, other than infrequent karaka & pōhutukawa within the gully head and eastern edge, outside a ZOI of the current proposal.

Larger broadleaved and podocarp tree species are scattered as very sparse **individuals** amongst exotic canopy species and sparse kānuka on lower contour YO soils. They include rewarewa; tānekaha; tōtara and pūriri, but not at any density sufficient to denote type forest or a predominant association. They are as a group common in their ability to regenerate on soils depleted by original burn offs. Tānekaha typically fills the niche as the dominant podocarp where kauri seed source has been lost, as onsite, often associated with historic burning. Like unpalatable tōtara and rewarewa also present, they provide territorial space and nesting trees for a greater possum density, which may then browse the associated broadleaved component in gullies.

Although none have species threat status they are considered higher value with contribution of heightened ecosystem services e.g. soil retention through root diversity and depth; habitat height and structure heterogeneity; provisioning – food/nectar/foilage and litter contribution.

Refinement of site cover through field work recognises more contemporary modified associations as opposed to the *WF9* & *WF11* predicted types.

At best, mid to lower contour is a spectrum of *AS1 Kānuka shrubland with native shrubs* to *AS3- Kānuka with exotic grass*, common to the local peninsulas of the Bay of Islands. The site has a lower than expected diversity for *AS1* type and higher exotic content. The boundaries of the site are additionally constrained by edge effects adjacent the road, pasture to the north and west, and to a lesser degree the east. Although there is proximate seed source and local frugivore populations, regeneration and diversity remains commonly unpalatable species at the seedling and sapling layer, particularly *C. rhamnoides*; seral mapou, cabbage tree, and lemonwood; mingimingi (*Leucopogon fasciculatus*), *Carex*; tōtara; tānekaha; & silver fern (*Alsophila tricolor*). All are early successional. More palatable species are naturally abundant-highly fecund *C. robusta*; hangehange and infrequent māhoe & fivefinger.

Indigenous ground cover consistently comprises grasses *Oplismenus hirtellus subsp. imbecillis* & *Rytidosperma* spp are common, as typical for kānuka habitats, along with ubiquitous ground cover species *Uncinia uncinata*; *Carex dissita*; *Microlaena stipoides*; *Carex* spp; mosses; *Doodia australis* (rasp fern); rosy maidenhair (*Adiantum hispidulum*); bracken; *Sticherus*; *Hypolepsis*

ambigua; with hounds tongue as epiphyte in shady areas. Fecund mapou and *Coprosma* are the most common seedling/ sapling.

TABLE 11: CURRENT REFINED ECOSYSTEM TYPE

ECOSYSTEM CLASSIFICATION	TYPE DISTRIBUTION	TYPE DESCRIPTION
AS1-AS3 Kānuka shrubland with native shrubs	NORTHERN HALF OF THE N.I, SI NORTH OF WAITAKI RIVER Wide elevational range, from just above sea level to 1000 m Moderately low species richness average 27 species 14 % (5 species) exotic	AS1 Kānuka shrubland with native shrubs Shorter stature shrubland drier & less diverse sites than OF1 forest type - dominated by kānuka canopy - shrubs <i>Coprosma rhamnoides</i>, <i>Leptecophylla juniperina</i> and <i>Leucopogon fasciculatus</i> frequent. <i>Kunzea ericoides</i> is the only indicator species AS3 Kānuka shrubland most degraded form or early successional with grasses
Mamaku- silver fern ⁴⁷	SLIP FACES DISTURBED SOIL HIGH IRRADIANCE EDGES & CANOPY GAPS STEEPER DAMPER AREAS THAN OF1 or AS1	Monoculture of mamaku shade intolerant canopy Long lived (250yrs) high density silverfern subcanopy Associated with regeneration of dominated by shade-tolerant larger leaved broadleaved communities e.g. taraire pūriri kohekohe and shade tolerant miro
WL1 Mānuka, gumland grass tree, Machaerina scrub/sedgeland (gumland)	- Developed in association with historic kauri forest largely podzolised Wharekohe and Te Kopuru soils (strongly leached and acidic) - rainfed, poorly draining, seasonal waterlogging - low scrub of mānuka with gumland grass tree and tall mingimingi, - common <i>Machaerina</i>, <i>Schoenus</i>, <i>Gahnia</i>, <i>Tetraria</i>, <i>Lepidosperma</i> sedges - locally includes tangle fern (<i>Gleichenia</i>) - Fernbird commonly occurs in these ecosystems - geckos occur where mānuka cover and tangle fern are present	Palustrine wetlands in the Northland and Auckland regions, developed in association with historic kauri forest podzolised Wharekohe and Te Kopuru soils (Molloy 1998: 92–94). Poor-draining type occurs on Wharekohe soils, while seasonally dry type occurs on Te Kopuru soils. Vegetation type also occurs on fire-induced and highly leached, non-podzolised soils, and it is now difficult to determine which areas are natural or induced.

The mamaku type occupies smaller extent surrounding the hydrology in the gully as typical. Its tight, persistent canopy cover, in places reinforced by dense understorey of monoculture silver fern alters the soil conditions considerably with deep moist litter and promotes regeneration of shade tolerant species. However, its dominance is a recognised ecosystem that may persist for 150 years allowing very little other midstorey to develop.

Gumland on site is associated with the RAH soil layer (imperfectly to very poorly drained) and inferred in historic photography (FIG 5) illustrating this continuous landscape feature despite various levels of vegetation and clearance.

The dominant association was mānuka / kahikātoa (*Lepidospermum incanum* var *incanum*; *At Risk – Declining*) with *Gleichenia* dominant at the sedge layer with degrees of *Schoenus brevifolius*. Other predominant species include *Dracophyllum lessonianum*; *Dianella haematicum*; *Tetraria capillaris*; *Lepidosperma* spp. and *Machaerina teretifolia*. Density of kahikātoa varied and was often sparse in wetter areas (wetland gumland).

Kahikātoa is endemic to northern Northland particularly in coastal settings, gumfields and peat bog margins. It is easily distinguished by its compact upright habit, pink flushed or strongly coloured petals throughout the year; small hairy leaves and stems and large persistent capsule (8mm) that usually hardly opens except for death of plant or fire.⁴⁸ Kānuka also occurs

⁴⁷ Brock, J. et al (2018) Pioneer tree ferns influence community assembly in northern New Zealand forests NZJE 42(5)

⁴⁸ www.nzpcn.org.nz. accessed 4/5/2025

on the upper plateau, indicating dry and more fertile microsites. It was obvious in clusters along tracks often with a greater diversity of species – mingimingi; kumeraho and *Morelotia affinis* and gorse as well as *Schoenus tendo* - all FAC or FACU species. The main exotic species have broad ecosystem range across the Lot and are successful invaders e.g. hakea and ground cover *Aristea* are the primary exotics.

Within kahikātoa the upright yellow green *Lepidosperma* can be locally dominant rather than *Gleichenia dicarpa* (FACW). *Schoenus tendo* also creates local dominance due to the crowding of its extremely long drooping culms (<2m). Small hollows in the topography (flarks), possible historic kauri bowls, with near surface water resemble open bog vegetation with *Schoenus brevifolius*, *Netrostylis*, *Machaerina* spp. amongst *Gleichenia* and no mānuka, restricted to edges. *Machaerina teretifolia* was common in wetter areas. Bare soil is occupied by mossfields at the extreme or a diversity of lichens and bryophytes.

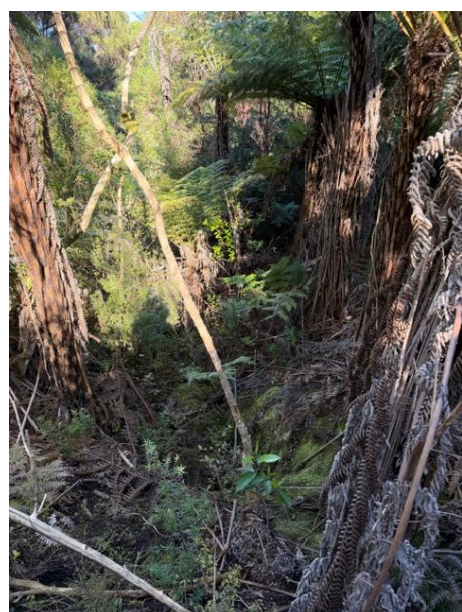
Gumland is key habitat for many species of common and threatened native orchids and observations have been recorded from the immediate area (PNA reports/ www.inaturalist.org/observations) however none were observed in the gumland despite search. Site visits were outside the typical peak flowering period when orchids are most obvious.

Gumland grades to AS1 vegetation (non gumland) towards the RAH soil boundaries. NRC 2026 indicative wetland mapping includes areas outside of the RAH soils toward Kurapari Rd on proposed Lot 4, allocated to visually darker canopy areas which are largely exotic with a smaller proportion of kanuka and manuka. This illustrates the inherent difficulty in confirming gumland identity from aerial imagery as per the mapping technique⁴⁹. Small areas of manuka and kanuka have a frequent shrub component including a diverse exotic component, reflecting successional habitat rather than type gumland, influenced by apparent edge effects. Areas of *Gleichenia microphylla* (FAC)⁵⁰, as opposed to *Gleichenia dicarpa* (FACW), with *Coprosma*, treefern, gorse, mapou, tobacco weed, *Schoenus tendo*, hangehange and exotic canopy wattle. Some areas are dense litter and open. Areas of tree fern dominance reflect the original regeneration post 1950s, typically a natural occurrence in steeper areas of high irradiation.

49

⁵⁰ Given as *Gleichenia dicarpa* (FACW) Eco- Logic 2024

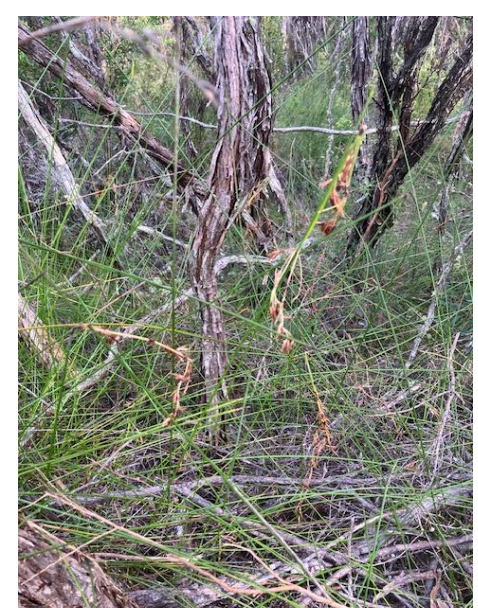
PROPOSED LOT 4 NON GUMLAND AREAS MAPPED AS INDICATIVE GUMLAND NRC 2026 CLOCKWISE FROM LEFT



LEPTOSPERMUM SCOPARIUM VAR *INCANUM* ON UPPER CONTOUR RAH SOILS EASILY DISTINGUISHED FROM OTHER MĀNUKA VARIANTS BY YOUNG BRANCHES, YOUNG LEAVES AND FLOWER BUDS CLAD IN LONG SILKY, GREY HAIRS © BAY ECOLOGICAL 2025



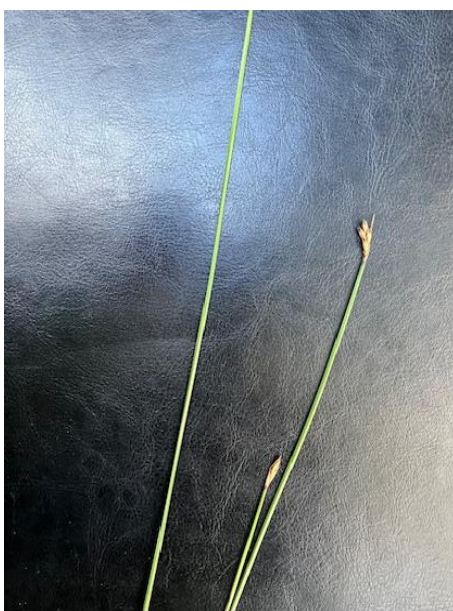
GUMLAND COVER ON UPPER CONTOUR RAH SOILS PROPOSED LOTS 2; 3 & 4 IS A MATRIX OF WET & DRY TYPES DEPENDANT ON MICROSITE MOISTURE VARIATION – CLUBMOSS FIELD (*PSEUDOLYCOPODIUM DENSUM*) UNDERNEATH MĀNUKA (W); *GLEICHENIA DICARPA* (FACW) IN OPEN SATURATED UNDERFOOT (W); MIXED SEDGES UNDER SPARSE MANAUKA (W); *SCHOENUS BREVIFOLIUS* (FACW) TYPICALLY ONLY FOUND IN GUMLAND; *DRACOPHYLLUM LESSONI* IN *GLEICHENIA MICROPHYLLA* (FAC) & DENSER MĀNUKA (D); KIWĪ BURROW IN RAINDEER MOSSFIELD WITH *DIANELLA*



WETLAND GUMLAND SPECIES *MACHAERINA TERETIFOLIA* (FACW); SILVER BACK *GLEICHENIA DICARPA* (FACW);
 KAHIKĀTOA/ *LEPIDOSPERMA SCOPARIUM* VAR *INCANUM* (FAC) TOP LEFT



DENSE FLOPPY *SCHOENUS TENDO* (FAC) SUPPRESSES OTHER GROWTH (D); *NETROSTYLIS* (FACW); OPPRESSED
 REPRODUCTIVE FRONDS OF CLUBMOSS



PROPOSAL CLEARANCE AREAS

The potential clearance areas have been chosen to avoid higher value elements in terms of both cover and habitat. Contribution is a minimal and depauperate representation of the wider sites values and characteristics, by virtue of presence rather than biodiversity/quality. They are highly compromised by exotics and long standing edge effects, with emergent dominants wattle, hakea and gum.

The combination of proposed Lots 2 & 3 access in the open and weed infested edge 0-40% indigenous avoids fragmentation of the site, and is not considered to restrict use of the broader site as a corridor for any highly mobile species or represent primary irreplaceable habitats. Cover ranges from 2 <6m tall. It does not include remnant forest and is not within 20m of any riparian margin.

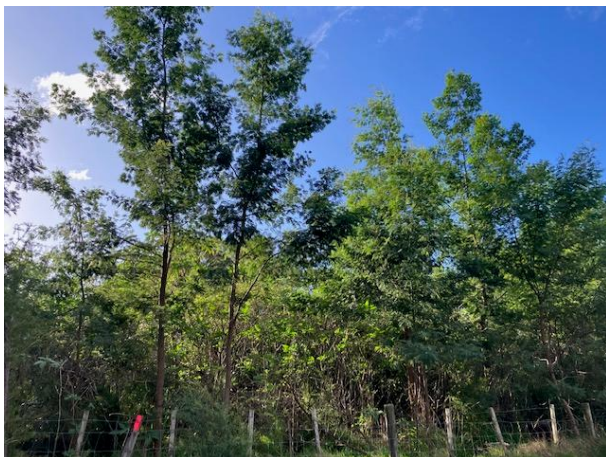
Specific search for *Threatened* and *At Risk* species identified from desktop review⁵¹ and professional expectation was made, unsuccessfully. There are no kauri considered in proximity to any proposed works to invoke the relevant Biosecurity Order 2022 (National PA Pest Management Plan).

TABLE 12: PROPOSED CLEARANCE AREAS

CLEARANCE AREAS	
COVER	- Selected in poorer quality frequent exotics at all tiers including dominant canopy wattle with seral kānuka shrubland/ scrub AS1-AS3 - Common shrubs <i>Coprosma</i>; <i>mapou</i>, <i>silverfern</i> and <i>Leucopogon fasciculatus</i>, <i>māhoe</i> and <i>hangehange</i> - Edge character above Kurapari Rd, portion recently cleared 2022 - Understorey sparse seral species common site wide - Open exotic herbaceous & grass areas includes ginger; gorse & tobacco weed
CONNECTIVITY	- The joint access proposed Lots 2 & 3 clearance area avoids fragmentation for access and utilities - Unlikely to prevent any movement across the site
SPECIES/ ASSOCIATIONS WITH THREAT STATUS	<i>Kiwi High Density no cats / dogs</i> <i>Herptofauna Survey and salvage prior to works with appropriate permits if salvage required</i> <i>Other species listed in PNA & 2010 reporting not present Leptospermum hoipolloi spp incanum</i> Not in clearance areas
RIPARIAN & SLOPE PROTECTION	- Retained in covenants and buffered/ infilled as offset - Does not occupy seepage or hydrologically active source area to creek/ wetland - Avoidance of effects on wetland vegetation and aquatic fauna through stormwater and sediment control e.g. sediment smothering/ infill to be determined at building consent

⁵¹ PNA documentation; ala.org.au; inaturalist; nzpcn.org.nz

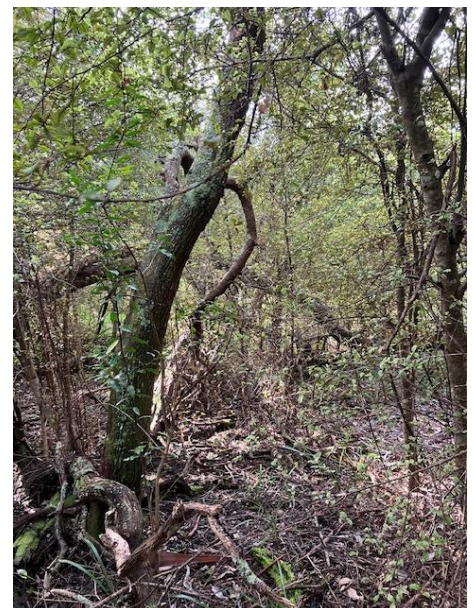
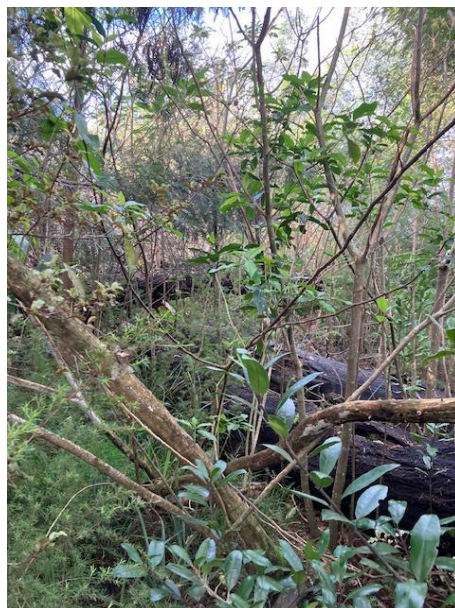
LARGER STATURE PŪRIRI ORIGINAL REVEGETATION ALONG NORTHER BOUNDARY INTO FARMLAND PROPOSED LOT 3;
 NORTHERN BOUNDARY OPEN KIKUYU BETWEEN LARGER REVEGETATION; UPPER NORTHEAST CONTOUR PROPOSED LOT 4 VIEW
 TO KERIKERI INLET GUMS TO THE RIGHT TREE FERN COVER FOREGROUND LARGER BROADLEAVES VISIBLE TO THE RIGHT
 AMONGST WATTLE; VIEW FROM AMONGST GUMS AS BEFORE TO THE EASTERN GULLY RIDGE KĀNUKA CANOPY; PROPOSED
 LOT 2 PREVIOUSLY CLEARED KURAPARI EDGE REVERTED TO WATTLE WITH OPEN EXOTIC GRASS GORSE TOBACCO WEED HANGE
 HANGE



**EASTERN UPPER CONTOUR PROPOSED LOT 1 WATTLE, HAKEA AND KĀNUKA , MONKEY APPLE, SILVER FERN;
CREEK UPPER CONTOUR >1m WIDE POOLS & RIFFLES SLOW FLOW; WITHIN TREE FERN CANOPY SILVER FERN
TYPICAL UNDERSTOREY DENSE LITTER CREATES A LONG SUCCESSIONAL TRAJECTORY TO SHADE TOLERANT
PODOCARPS ; RIMU SAPLING UPPER CONTOUR UNDER WATTLE CANOPY; FAN PALM IN RIPARIAN SHADEY NICHE
FAVOURED BY KIOKIO AND NIKAU; GINGER IS A PRIORITY WEED IN RIPARIAN GULLY PROPOSED LOT 1**



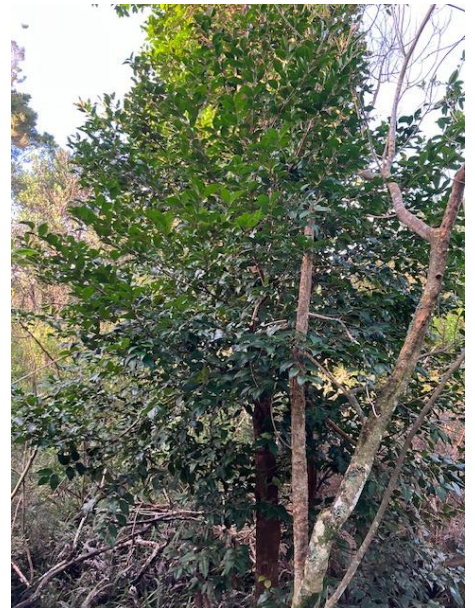
PROPOSED LOT 2 OPEN BENEATH HAKEA; WATTLE; MĀHOE, MAPOU, KĀNUKA ; DENSER WITH TREE FERN, MONKEY APPLE, WATTLE, HANGEHANGE ; HAKEA FORMS DENSE THICKETS SUPPRESSING OTHER GROWTH; HAKEA WITH MAPOU; HANGE HANGE MĀHOE; PREVIOUSLY FELLED EXOTICS LEAVE GAPS FILLED BY WATTLE GORSE HANGEHANGE AND MAPOU MONKEY APPLE; PROPOSED LOT 3 WATTLE STANDS IN GAPS & EDGES ARE COMMON WITH RANK GRASS MAPOU GORSE TOBACCO WEED; AGARICUS CANTHARELLUS FOUND IN DAMP GROUND UNDER KĀNUKA PROPOSED LOT 3



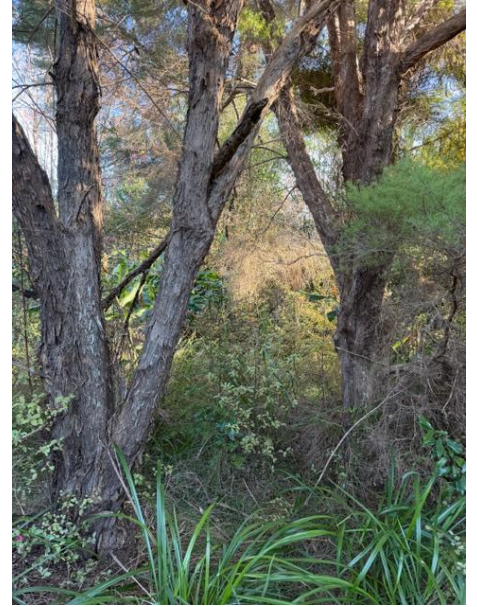
**TALL STATURE GUM EXAMPLE EMERGENTS IN RIPARIAN GULLY PROPOSED LOTS 1 & 2 ; OPEN EXOTIC COVER
PROPOSED LOT 2 ACCESS; LOW COVER PROPOSED LOT 2 ACCESS**



**COVER IN PROPOSED LOTS 2 & 3 IS TYPICALLY EXOTIC DOMINANT & OPEN WITH INDIGENOUS SPECIES OF
FECUND PIONEERS HANGE HANGE MAPOU COMPROSMA ROBUSTA KANUKA TYPICAL**



FROM CLOCKWISE PROPOSED LOT 2 WATTELE REGENERATION ACCESS IS IN PLACES ALMOST SOLEY EXOTIC; HIGHLY FECUND *COPROSMA ROBUSTA* AMONGST GINGER: WATTLE: TOBACCO WEED TAIWAN CHERRY & GORSE; INDIVIDUAL LARGER KANUKA SCATTERED IN PROPOSED LOT 2 & 3 WITH MAPOU GINGER DIANELLA 7& LANTANA; EDGE OF PROPOSED SUBDIVISION ACCESS IN GRASS AND EXOTICS; OPEN AREA OF EXOTIC GRASS AND WATTLE PROPOSED SUBDIVISION ACCESS; PROPOSED LOT 2 CLEARANCE AREA TAIWAN CHERRY GROVE



PROPOSED LOT 1 COMPLETED CLEARANCE AREAS(2260119-RMALUC 2025) TOBACCO WEED; WATTLE CANOPY; GORSE MAPOU; WATTLE CANOPY MAPOU BRACKEN; LANTANA CENTRE; LOW CANOPY AREASS OPEN WITH PAMPAS AND TOBACCO WEED, MAPOU & COPROSMA;HAKEA AS DOMINANT CANOPY IS ALLEOPATHIC PREVENTING INDERGROWTH; DENSE HAKEA LITTER; MONKEY APPLE, HANGE HANGE GORSE, MAPOU, TOBACCO WEED UNDER WATTLE A COMMON ASSOCIATION; LARGER TREES HAKEA; COMMON WITH WATTLE; FERN AND MAPOU



FAUNA

Primary observations were made in addition to consideration of vegetation, to complement characterisation of the site. Presence of bird species was also considered during fieldwork from professional experience, local knowledge & checklists⁵² from nearby.

AVIFAUNA

In addition to general observation throughout, 2 5 Minute Bird Counts (5MBC) were undertaken in each Lot across the elevation range on the morning of each site visit, in clear calm conditions.

Conspicuous birdlife consisted largely of frequent common exotic and native insectivorous generalists i.e. grey warbler; multiple fantail; kingfisher on margins of bush.

Conspicuous birdlife using the wetland included silveryeye, sparrows, greywarbler and fantails – exotic and native insectivorous generalists for which shrub vegetation provides ideal habitat. Tui were sighted crossing the site and are more likely to utilise the taller stature riparian vegetation or exotic gum and wattle than the broad gumland.

North Island Fernbird – (*Bowdleria p. vealeae*; *At Risk - Declining*) were encountered on 4 separate occasions within the gumland and mid site adjacent the creek during survey for 2260119-RMALUC 2025. For the current review a fernbird was heard but not seen in the upper gumland proposed Lot 3.

Kūkupa were not observed however these were unlikely to favour unable to satisfy their frugivorous and nectivorous dietary components in the proposed clearance areas and generally not of height or stature preferred for nesting. The small insectivores are more versatile in their habitat occupation however the proposal areas does not represent primary irreplaceable habitat.

No colony/roosting trees or ground burrows for pelagic birds listed in CMA mapping documentation were observed or likely within the works areas or ZOI, including species such as kororā (little blue penguin; *Eudyptula minor*; *At Risk- Declining*) or congregating shag species e.g. kāruhiruhi (pied shag; *Phalacrocorax varius*; *At Risk – Recovering*). Such areas are typically indicated by aggregation of multiple individuals, often audible at dawn and dusk, or extensive guano wash of trunks/ branches, neither present. Species that may rest or bask intermittently on the foreshore e.g. gulls; terns are not considered likely to use the site. However, blue spectrum or high white light LED external lighting should be avoided in any final landscape and architectural design, or any site works lighting, to avoid the risk to passing nocturnal flight birds, as well as kiwi. In particular, petrels and shearwater species common to the *Bay of Islands Significant Seabird Area* are vulnerable. Adverse effects include collisions; disorientation and grounding. Lighting of the covenant areas should be avoided.

The property is classed as *HIGH DENSITY KIWI (DoC 2018) and have been recorded on ARDs as such 2022-2024*. Kiwi are now considered *Not Threatened*, predicted to increase by > 10% over three generations due to the intensive in situ control of predators by many community groups and government agencies, ex situ management, and translocations to secure sites. However qualifiers to this status include *CD – Conservation Dependent, with RF- Recruitment Failure & PD – Partial Decline* from predation of chicks / decline of breeding individuals, both of which

⁵² EBIRD Aroha Island⁵² & Ake Ake Point Reserve within the Rangitane Shrubland PNA; Conning & Miller (1999) Kerikeri ED PNA report; ala.org.nz; inaturalist nz

mean an uncontrolled environment may likely lead to further loss. Creek with adjacent cover and softer wetland soils represents high territorial economics if supported by predator control. No kiwi were encountered, however this is not unexpected due to their habit. A burrow was located by chance in the upper gumland contour during site visit for 2260119- RMALUC 2025. No burrows were found directly within or nearby the proposal areas however dense cover made search difficult. Kiwi will also shelter in unexpected places –tangles of tall grass; at the base of tree ferns under fronds or amongst woody forest debris. No kiwi were encountered by kiwi dog during supervised clearance by kiwi dog handler for 2260119-RMALUC 2025. Regardless, a Wildlife Management Plan should be developed for all clearance for Lots and the subdivision access. Clearance should be undertaken outside breeding season for ease of process.

Pest control is pertinent to protect any resident bird or visiting fauna. Formalised, contracted pest control is now in place for the site as per the current Offset Management Plan. This may be portioned for the proposed Lots in an OMP for each Lot.

Cats and dogs are a primary threat fauna, particularly to ground dwelling/ nesting fauna to be excluded as standard in a *Kiwi High Density* zoning, including contractors dogs.

HERPTOFAUNA

Wider PNA vegetation presents habitat for a range of lizards frequently described in local surveys and reporting⁵³- most commonly Northland green gecko (*Naultinus grayii*; *At Risk-Declining*), and the Pacific gecko (*Dactylocnemis pacificus*; *At Risk-Relict*). No diurnal species have been encountered in the clearance areas despite repeat visual survey over the last 18 months. This has included disturbing longer groundcover, debris and scrutiny of taller vegetation; trunks and potential basking sites e.g. sunny trunks and open edges; banks & rocks. A nocturnal herptofauna survey was beyond the scope of this review. The site represents suitable habitat and we recommend prompt survey as appropriate during the impending wildlife season (Sept) with application for a permit for salvage and relocation as necessary.

⁵³ Kerikeri PNA documentation; Ala.org.au

SIGNIFICANCE

There are currently no FNDC *Significant Natural Areas* (SNAs) as per the *National Policy Statement for Indigenous Biodiversity (2023)*, subject to *Subpart 2 Clause 3.10*. However as per *Subpart 2 Clause 3.16*, significant adverse effects on indigenous biodiversity outside of such areas in regard to new subdivision, development or use must be managed by applying the effects management hierarchy.

Appendix 5 is the standard Northland criteria for assessing significance of an ecological site, and directly reflects those contained in *Appendix 1* of the recently mandated *National Policy Statement for Indigenous Biodiversity (2023)* including consideration of *Representativeness; Diversity & Pattern; Rarity and Distinctiveness & Ecological Context* . The *ecological site* includes the wider site with comment then given on the clearance area. In particular, this ecological condition/quality is important in assessment because it contributes to the way an activity may affect a feature and may be used to focus management of effects. It is apparent the gumland portion of the site has *HIGH* significance in all regards as per the desktop review, mapped values, and site observation. Although tabulated to demonstrate, there are no activities proposed for this area associated with RAH soils.

TABLE 13: ASSESSMENT OF SIGNIFICANT INDIGENOUS VEGETATION AND SIGNIFICANT HABITATS OF INDIGENOUS FAUNA IN TERRESTRIAL, FRESHWATER AND MARINE ENVIRONMENTS NORTHLAND REGIONAL POLICY STATEMENT (2018) APPENDIX 5

(1) REPRESENTATIVENESS	INDICATED CLEARANCE AREAS	GUMLAND
(A)Regardless of its size, the ecological site is largely indigenous vegetation or habitat that is representative , typical and characteristic of the natural diversity at the relevant and recognised ecological classification and scale to which the ecological site belongs (i) if the ecological site comprises largely indigenous vegetation types: and (ii) Is typical of what would have existed circa 1840 (iii)Is represented by the faunal assemblages in most of the guilds expected for the habitat type (B) The ecological site (i) Is a large example of indigenous vegetation or habitat of indigenous fauna (ii) Contains a combination of landform and indigenous vegetation and habitats of indigenous fauna that is considered to be a good example of its type at the relevant and recognised ecological classification and scale	<i>A.i The wider LOT has largely indigenous gumland and mamaku dominant gully vegetation types with larger stature canopy trees, particularly to the east of the gully. The remainder is a matrix of woody exotics and herbaceous weeds at all tiers and seral early successional natives. Hakea, wattle and gum as dominant in some areas and common gorse tobacco weed and Taiwan cherry. Clearance areas part of the latter type</i> <i>(ii) gumland & mamaku is a type that is likely present at 1840, the remainder is highly modified. Clearance areas is outside of gumland on RAH soil and gully vegetation</i> <i>(iii) habitat niches are available for insectivores present, some use by frugivorous and nectivorous including on exotics; herptofauna potentially; kiwi are present. Wetland birds represented by fernbird at minimum. Clearance areas outside of wetland and buffer. Other species potentially use clearance area as habitat</i> <i>B) The wider site is part of larger extent of broadly mapped landscape scale Rangitane Shrublands PNA P05/087 available for highly mobile species. The site vegetation types are not of a large size comparatively individually although gumland of the site size is significant due to its endangered status .</i> <i>Lower site vegetation is open and weedy constrained by edge effects -tends to areas of AS3 kānuka scrub (clear; open or edge with exotics) within AS1 (ii) secondary expression of former WF11 no distinct coastal association. Focus clearance areas not representative of wider site high values -depauperate expression edge effects has subdued pattern and representativeness due to weed infestation and edge effects. As part of the wider Lot represents potential habitat</i> <i>(ii)common insectivourous birds ; Kiwi ; potential herptofauna potentially use clearance area</i> CLEARANCE AREAS - MODERATE	A (i)& (ii) – YES typic gumland (ii) fernbird sighted a common associate of gumland. Other small insecti requirements available. Known kiwi habitat Potentially herptofauna B(i) Representative. Spectrum of gumland variants on podzolised substr Critically endangered ecosystem the size is sufficient MODERATE- HIGH
(2)RARITY/ DISTINCTIVENESS (A)The ecological site comprises indigenous ecosystems or indigenous vegetation types that: (i) Are acutely or chronically threatened land environments associated with LENZ Level 4 (ii) Excluding wetlands, are now less than 20% original extent (iii) excluding man made wetlands are examples of wetland classes that either otherwise trigger Appendix 5 criteria or exceed any of the following area (a) Saltmarsh 0.5ha (b) Shallow water lake margins and rivers 0.5ha (c) Swamp >0.4 (d) Bog >0.2 ha (e) Wet heathlands>0.2 ha (f) Marsh; fen; ephemeral wetland or seepage/flush >0.05ha (B) Indigenous vegetation or habitat of indigenous fauna that supports one or more indigenous taxa that are Threatened, At Risk, Data Deficient , or uncommon either nationally or within the relevant ecological scale (C) The ecological site contains indigenous vegetation or an indigenous taxon that is (i) endemic to the Northland/ Auckland region (ii) At its distribution limit in the Northland region (D) The ecological site contains indigenous vegetation or an association of indigenous taxa that (i)Is distinctive of a restricted occurrence (i)Is part of an ecological unit that occurs on a originally rare ecosystem (iii)Is an indigenous ecosystem and vegetation type that is naturally rare or has developed as a result of an unusual environmental factor(s) that occur or are likely to occur in Northland:	A(i) NO (ii) No. No WF9 <i>Taraire tawa</i> or WF4 <i>Pōhutukawa pūriri</i> coastal represented in the clearance area or on the Lot. Remnant larger stature trees in gully & riparian area –not in clearance except one totara <6m Kānuka habitat common in the ED and local Peninsula (ii) Gully Swamp; wet gumland – not in clearance area B) & C) As before herptofauna, kiwi , fernbird - Clearance area unlikely to provide critical or irreplaceable habitat . <i>Leptospermum scoparium var incunum</i> (At Risk Declining) Northland endemic in gumland. Not in clearance areas D) Gumland on RAH soil– not in clearance area CLEARANCE AREAS LOW -MODERATE	A(i) No (iii)YES WL1 reduced to 20% (2018) (iii) yes wet gumland (B) Fernbird (At Risk- Declining) <i>Leptospermum scoparium var incanum p</i> (c) <i>Leptospermum scoparium var incanum & potentially herptofauna Na</i> <i>Risk Declining</i>) (D) Gumland on RAH podzol <i>naturally rare ecosystem ;Lptospermum sco</i> HIGH
(3)DIVERSITY AND PATTERN (A) Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of: (i) Indigenous ecosystem or habitat types; or (ii) Indigenous taxa (B) Changes in taxon composition reflecting the existence of diverse natural features or ecological gradients; or (C) Intact ecological sequences	A(i) & (ii) Wider Lot has gumland; mamaku & broadleaved gully vegetation; wetland and Shrubland scrub exotic/ indigenous AS1-3. Clearance area is exotic dominant trees & diversity constrained as edge, habitat as cover not considered high. General fauna habitat for various niches as cover B) & C) Wider Lot changes in taxon and sequence -Gumland- Riparian gully and wetland creek – offsite creek & CMA Clearance areas outside these elements and vegetation pattern subdued by infrastructure, weeds and edge effects. LOW	A B) (c) Intergraded gumland types with distinct associations and sequ microsite soil and moisture Dominance changes; Machaerina & Gleich wet gumland to Gleichnia microphylla & Lepidosperma (FAC) in dry gum extreme habitat transition to kānuka and shrubs on edges higher fertility HIGH
(4) ECOLOGICAL CONTEXT (A) Indigenous vegetation or habitat of indigenous fauna is present that provides or contributes to an important ecological linkage or network, or provides an important buffering function: or (B) The ecological site plays an important hydrological, biological or ecological role in the natural functioning of a riverine, lacustrine, palustrine, estuarine, plutonic(including karst), geothermal or marine system (C) The ecological site is an important habitat for critical life history stages of indigenous fauna including breeding/ spawning, roosting, nesting, resting, feeding, moulting, refugia or migration staging point (as used seasonally, temporarily or permanently	A)B)Contributes to wider Rangitane Shrubland PNA vegetated linkage across the Peninsula; riparian protection in gully and habitat for avifauna. De minimus clearance footprint value on Lot or wider PNA scale adjacent the road, compromised by edge effects, exotics, low diversity. Unlikely to restrict movement of species. Riparian area to be retained to buffer creek – not in Clearance areas . Not in a CSA or source area for wetland C)As part of wider territory the clearance areas are unlikely to provide any critical habitat for or highly mobile species or resident insectivorous birds or kiwi/ herptofauna if present Fish protected by future stormwater and sediment design MODERATE	(A) & (B) YES buffers headwater creek and wetland source of control a of short coastal stream C) Fernbird and common native insectivores bird species.;Kiwi. Pote surveyed as part of this reporting HIGH

The significance ratings for each of the 4 criteria in RPS *Appendix 5* are combined to give an overall single value according to *EIANZ Table 6* below. This should not however suppress any impact consideration of a single value or component, particularly if effects may extend to a wider ZOI.

TABLE 14: SCORING FOR SITES COMBINING VALUES FOR SIGNIFICANCE CRITERIA (TABLE 6 EIANZ)

VALUE	EXPLANATION
VERY HIGH	Area Rates <i>VERY HIGH</i> for 4 or all of the matters in Appendix 5 RPS. Likely to be nationally important and recognised as such
HIGH	Area rates <i>HIGH</i> for 2 of the assessment matters. Moderate and <i>LOW</i> for the remainder
MODERATE	Area rates <i>HIGH</i> for one matter, MODERATE & <i>LOW</i> for the remainder Area rates MODERATE for 2 or more of the criteria. <i>LOW</i> or very <i>LOW</i> for the remainder. Likely to be significant in the ED
LOW	Area rates <i>LOW</i> or <i>VERY LOW</i> for all but one MODERATE. Limited ecological value other than as habitat for local tolerant species.
NEGLECTIBLE	Area rates <i>VERY LOW</i> for 3 matters and MODERATE- <i>LOW</i> or <i>LOW</i> for the remainder.

The clearance areas rates *MODERATE* as habitat although with a minimal and depauperate representation of the site vegetation values and characteristics, again contributing to contiguous cover/ extent, rather than quality or composition. Flora are *LOW* value species, common in the ED & onsite as per *Table 15 below*. It is outside the significant elements of the riparian cover with larger stature broadleaves, mamaku type representation and gumland on RAH soils.

Potential fauna values contribute to its significance, although no individual or highly mobile species⁵⁴ are likely dependant on the areas for any part of their lifecycle. There is ***potential*** for kiwi to be present in the footprint of clearance, as part of the wider site territory, considered *MODERATE* value species as *Regionally Important; Conservation Dependant*. Herptofauna recorded from the expansive *Rangitane Shrublands PNA* and locally are also potentially in the area considered *HIGH* value. Survey for lizards should be instigated early in the wildlife season (Commencing Sept/ October). In the event of occupancy a Lizard Management Plan (LMP) and application for appropriate permit under the Wildlife Act for their relocation to avoid injury is required.

⁵⁴ NPSIB (2023) Appendix 2: Specified highly mobile fauna

TABLE 15: FACTORS TO CONSIDER IN ASSESSING SPECIES VALUE (TABLE 5 EIANZ 2018)

VALUE	EXPLANATION	SPECIES PRESENT IN ZOI	STATUS
VERY HIGH	<i>Nationally Threatened</i> species (<i>Critical, Endangered or Vulnerable</i>) found in the Zone of Influence or likely to occur there, either permanently or occasionally		
HIGH	Nationally <i>At Risk</i> species (<i>Declining</i>) found in the ZOI or likely to occur there, either permanently or occasionally	Fernbird Potential heptofauna unconfirmed <i>Leptospermum scoparium incanum</i> <i>Redfin bully</i> potentially in creek	AT RISK DECLINING
MODERATE-HIGH	Species listed in any other category of <i>At Risk</i> category (<i>Recovering, Relict or Naturally Uncommon</i>) found in the Zone of Influence or likely to occur there, either permanently or occasionally.	Banded kokopu potentially	
MODERATE	Locally uncommon/rare species but not <i>Nationally Threatened</i> or <i>At Risk</i> .	Ni Brown Kiwi Kukupu	NOT THREATENED – CONSERVATION DEPENDANT ; REGIONALLY SIGNIFICANT NOT THREATENED- REGIONALLY SIGNIFICANT NOT THREATENED- REGIONALLY SIGNIFICANT
LOW	Species <i>Not Threatened</i> nationally and common locally.	Insectivores e.g. fantail; kingfisher; grey warbler	NOT THREATENED
NEGLECTIBLE	Exotic species, including pests Weed species	e.g. magpie; skylark	INTRODUCED - NATURALISED

There are currently 10 recognised species of kānuka, some of which have a restricted ecological niche and threat status elevated in part as a precautionary measure due to potential threat posed by myrtle rust. The clearance site species, *Kunzea robusta*, is *Not Threatened*, common and widespread in the Kerikeri Ecological District and therefore not considered significant under Appendix 5: *Criteria Rarity 2(B)* for species value alone, in accordance with regional guidance⁵⁵. We assign it a LOW value as per *EIANZ Table 5* criteria.

All *Myrtaceae* species are at risk of infection by myrtle rust (*Austropuccinia psidii*), however an area should not be classified as significant based purely on their presence without broader consideration. The remnant pōhutukawa onsite are outside the ZOI. They are recognized as valuable intrinsically as mature relict. Although they have no threat status the impact of myrtle rust remains undefined in the longer term for this iconic species. Plants imported to site should be checked prior for myrtle rust.

⁵⁵ Wildlands (2019) Guidelines for the application of ecological significance criteria for indigenous vegetation and habitats of indigenous fauna in the Northland Region. Contract Report 4899a;

EIANZ METHODOLOGY

Assessment of effects follows the systematic process of the EIANZ⁵⁶ Guidelines as best practice.

Standard criteria are utilised in a matrix framework to determine the impact of a proposal on a habitat, incorporating a three step process:

- **ECOLOGICAL VALUES** are ranked on a scale of *Negligible, Low, Moderate, High, or Very High*.
- **MAGNITUDE OF EFFECTS** on these values is ranked on a similar scale (EIANZ TABLE 8) Magnitude is determined by a combination of scale (temporal and spatial) of effect and degree of change that will be caused in or to the ecological component. It should initially be considered in a raw or unmitigated form.
- **OVERALL LEVEL OF EFFECT** is determined by a combination of value and the magnitude of the effect. (EIANZ TABLE 10)

The primary effect is clearance. Pre emptive avoidance of effects has been paramount in the ecological review and subdivision design. Despite emphasis on avoidance, removal of *MODERATE* significance vegetation cannot be mitigated completely at the point of impact as a portion is permanent. Potential *HIGH* effects on fauna must also be controlled.

Additional potential, but avoidable effects of development are hydrological change; ongoing encroachment, weed and pest incursion. At building consent geotech, stormwater and sediment control engineering must be refined to designate the best possible locations to avoid combined effects.

As before, the clearance vegetation has a **MODERATE** level of significance as per *RPS (2018) Appendix 5* with regard to connectivity; size; habitat and representativeness; physical and functional buffering to the creek/wetland aquatic environment as riparian vegetation e.g. erosion and hydrological control. As indicated currently the subdivision access to proposed Lots 2 & 3 has no hydrological connection to the central waterways/ wetland.

⁵⁶ Environmental Institute of Australia and New Zealand

MAGNITUDE OF EFFECTS

Consideration of a raw proposal form **without any mitigation** is best practice methodology.

TABLE 16: CRITERIA FOR DESCRIBING MAGNITUDE OF EFFECT (EIANZ 2018 TABLE 8)

MAGNITUDE	DESCRIPTION
VERY HIGH	Total loss of, or very major alteration to, key elements/features/ of the existing baseline conditions, such that the post-development character, composition and/or attributes will be fundamentally changed and may be lost from the site altogether; AND/OR Loss of a very high proportion of the known population or range of the element/feature
HIGH	Major loss or major alteration to key elements/features of the existing baseline conditions such that the post-development character, composition and/or attributes will be fundamentally changed; AND/OR Loss of a high proportion of the known population or range of the element/feature
MODERATE	Loss or alteration to one or more key elements/features of the existing baseline conditions, such that the post-development character, composition and/or attributes will be partially changed; AND/OR Loss of a moderate proportion of the known population or range of the element/feature
LOW	Minor shift away from existing baseline conditions. Change arising from the loss/alteration will be discernible, but underlying character, composition and/or attributes of the existing baseline condition will be similar to pre-development circumstances or patterns; AND/OR Having a minor effect on the known population or range of the element/feature
NEGLIGIBLE	Very slight change from the existing baseline condition. Change barely distinguishable, approximating to the 'no change' situation; AND/OR Having negligible effect on the known population or range of the element/feature

The interaction of magnitude of effect and ecological value (or significance) of species and habitat gives the **unmitigated level of effect** as per EIANZs Table 10 (below). This resultant level of effects is then a guide to the extent and nature of the ecological management required to render them acceptable in the statutory framework.

In this regard we consider **unmitigated** impacts as:

- **VEGETATION CLEARANCE** - MODERATE as an interaction between a MODERATE level of effects on MODERATE at best value elements terms of a change in absolute cover, incorporating the LOW flora species value and contribution to wider ecological unit and function
- **WILDLIFE** VERY HIGH effect on HIGH value species in terms of potential physical injury

TABLE 17: CRITERIA FOR DESCRIBING LEVEL OF EFFECTS (EIANZ TABLE 10)

		ECOLOGICAL &/OR CONSERVATION VALUE				
		VERY HIGH	HIGH	MODERATE	LOW	NEGLIGIBLE
MAGNITUDE	VERY HIGH	Very High	Very High	High	Moderate	Low
	HIGH	Very High	Very High	Moderate	Low	Very Low
	MODERATE	Very High	High	Moderate	Very Low	Very Low
	LOW	Moderate	Low	Low	Very low	Very Low
	NEGLIGIBLE	Low	Very Low	Very Low	Very Low	Very Low
	POSITIVE	Net Gain	Net Gain	Net Gain	Net Gain	Net Gain

EFFECTS MANAGEMENT

Value of the vegetation is seated in landscape and hydraulic connectivity as cover providing amenity; basic habitat and sediment/ erosion protection moderation of stormwater.

Avoidance of adverse effects has been a primary consideration, as per PNRP Policy **D.2.18 Managing Adverse Effects on Indigenous Biodiversity** and the EMH cascade (NPSIB 2023).

As per regulatory requirements, application of the EMH is tabulated as below:

TABLE 18 SEQUENTIAL APPLICATION OF THE EFFECTS MANAGEMENT HEIRARCHY TO PERMANENT LOSS

APPROACH	APPLICATION
(a) ADVERSE EFFECTS ARE AVOIDED WHERE PRACTICABLE	Ecological constraints of the site have been identified early in the design process. Avoidance of the HIGH significance gumland matrix on upper contour RAH soils is avoided and considered outside a ZOI. Designated clearance for proposed Lot 2 & 3 have been combined located at western adjacent existing edge influence of the neighbouring Lots & road to avoid fragmentation for access/ power. Areas have NEGLIGIBLE (exotic) – LOW indigenous flora species value (0-40%), requiring weed control of SUSTAINED CONTROL (RPMS) weed species regardless. Loss of MODERATE fauna habitat will avoid injury to individuals through standard management practices .
(b) WHERE ADVERSE EFFECTS CANNOT BE AVOIDED, THEY ARE MINIMISED WHERE PRACTICABLE	The absolute removal of portion of vegetation in the footprint cannot be minimised at the point of impact – it is permanent
(c) WHERE ADVERSE EFFECTS CANNOT BE MINIMISED, THEY ARE REMEDIED WHERE PRACTICABLE	The absolute removal of portion of vegetation in the footprint cannot be remedied at the point of impact – it is permanent
(d) WHERE MORE THAN MINOR RESIDUAL ADVERSE EFFECTS CANNOT BE AVOIDED, MINIMISED, OR REMEDIED, BIODIVERSITY OFFSETTING IS PROVIDED WHERE POSSIBLE	An offset is proposed in accordance with RPS 4.4.1, NPSIB Appendix 3; NPS-FM Appendix 6 & with reference to the best practice for offsetting in NZ ⁵⁷ It addresses identified values of the vegetation/habitat lost to provide net gain with additionality
(e) WHERE BIODIVERSITY OFFSETTING OF MORE THAN MINOR RESIDUAL ADVERSE EFFECTS IS NOT POSSIBLE, BIODIVERSITY (AQUATIC) COMPENSATION IS PROVIDED	N/A
(f) IF BIODIVERSITY (AQUATIC) COMPENSATION IS NOT APPROPRIATE, THE ACTIVITY ITSELF IS AVOIDED.	N/A

In the development footprints (point of impact) the vegetation loss will be permanent with residual adverse effect. Building envelope areas cleared over the permitted 1000m² are to be exceeded by replacement offset (m²) prescribed in individual OMPs prior to development.

In response, both restoration and enhancement of *values* to provide erosive protection, habitat and amenity in the same close locales is proposed through provision of **offset** as per Appendix 3 NPSIB (2023) and RPS 4.4.2 referencing best practice for offsetting in NZ⁵⁷ to provide no net loss, rather *net gain* and *additionality* through density and diversity.

The definition of offsetting⁵⁷ is given as

⁵⁷ New Zealand Government (2014). Guidance on Good Practice Biodiversity Offsetting in New Zealand. DoC, Wellington.

Measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground.

Offset can be inacted in conjunction with clearance to confer net ecological benefit of biodiversity and amenity value. In this manner, identified values will be amplified, allowing continuity of natural processes.

The proposed offsets represent *net gain*⁵⁸ and *additionality*⁵⁹ in cover and habitat, achieved through appropriate measurable currencies- increase in indigenous floral density & diversity, restoration of pattern and integrity directly adjacent to the point of impact. This primarily takes the form of active restoration to increase habitat quality supported by pest and weed control, while providing a light and disturbance buffer to internal habitat of the remaining vegetation and creek/ wetland.

Wildlife management is to include kiwi and herptofauna survey and relocation prior to clearance as necessary, avoiding mortality/ injury risk to kiwi/ lizards through appropriate and standardized wildlife management techniques. It is considered that the Kiwi can be relocated directly prior to clearance utilizing a certified handler/ kiwi dog. The loss of the designated exotic rich generalist habitat is not a significant adverse effect for wildlife as it remains extensive elsewhere onsite.

Future sediment and stormwater control design will be primary to avoidance of effects in the wetland & creek. Lighting of these areas is to be avoided in residential design. Stormwater outlets should be diffuse and include min. 2m buffering downslope of dense sedge vegetation as existing basal groundcover is sparse trunks with limited effectiveness to resist stormwater flows or retain sediment.

⁵⁸ net gain means that the measurable positive effects of actions exceed the point of no net loss.

⁵⁹ **ADDITIONALITY (NPSIB 2024):** A biodiversity offset achieves gains in indigenous biodiversity above and beyond gains that would have occurred in the absence of the offset, such as gains that are additional to any minimisation and remediation undertaken in relation to the adverse effects of the activity.

TABLE 19: APPLICATION OF NPSIB APPENDIX 3: PRINCIPALS FOR OFFSETTING

PRINCIPAL	APPLICATION
(1) Adherence to effects management hierarchy: A biodiversity offset is a commitment to redress more than minor residual adverse effects and should be contemplated only after steps to avoid, minimise, and remedy adverse effects are demonstrated to have been sequentially exhausted.	Offset is appropriate in the hierarchy, which has avoided effects through designation of the current weed dominant vegetation with habitat disturbance adjacent the road as the clearance footprint - preferable over other better quality vegetation and to minimise further fragmentation for infrastructure e.g. access; power. Loss of vegetation irreversible at point of impact
(2) When biodiversity offsetting is not appropriate: Biodiversity offsets are not appropriate in situations where indigenous biodiversity values cannot be offset to achieve a net gain. Examples of an offset not being appropriate include where: (a) residual adverse effects cannot be offset because of the irreplaceability or vulnerability of the indigenous biodiversity affected: (b) effects on indigenous biodiversity are uncertain, unknown, or little understood, but potential effects are significantly adverse or irreversible: (c) there are no technically feasible options by which to secure gains within an acceptable timeframe.	(a) the species to be cleared are largely locally common, senescing, recent; exotic; there are no rare ecosystems represented as per on upper contour RAH soils or wetland . Does not represent irreplaceable habitat with obligate adaption or co occurrence or parasitic relationship to any flora or fauna species present. General habitat tends to scrub ⁶⁰ with lower fruiting and nectar provision than a more mature diverse forest (b) Effect is known – loss of common flora local species, habitat and feeding patch -able to be bolstered/ reintroduced in offset.. (c) a Offset Management Plan will ensure the majority of species will establish quickly
(3) NET GAIN: This principle reflects a standard of acceptability for demonstrating, and then achieving, a net gain in indigenous biodiversity values. Net gain is demonstrated by a like-for-like quantitative loss/gain calculation of the following, and is achieved when the indigenous biodiversity values at the offset site are equivalent to or exceed those being lost at the impact site: (a) types of indigenous biodiversity, including when indigenous species depend on introduced species for their persistence; and (b) amount; and (c) condition (structure and quality).	A, B & C Achievable as given in Table 21
(4) ADDITIONALITY: A biodiversity offset achieves gains in indigenous biodiversity above and beyond gains that would have occurred in the absence of the offset, such as gains that are additional to any minimisation and remediation undertaken in relation to the adverse effects of the activity.	As per 1; 2 & 3 above
(5) LEAKAGE: Biodiversity offset design and implementation avoids displacing harm to other indigenous biodiversity in the same or any other location.	Weeds removed either be chipped or moved offsite, not disposed off into other site vegetation Revegetation within 10m of wetland will be undertaken in a method compliant with the NES-F 2020 as per REG 38 Restoration, wetland maintenance, and biosecurity of natural inland wetlands
(6) LONG-TERM OUTCOMES: A biodiversity offset is managed to secure outcomes of the activity that last at least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management and monitoring.	Offset Management Plan to ensure parameters include revegetation composition and success, timing, works envelopes, monitoring.
(7) LANDSCAPE CONTEXT: Biodiversity offsetting is undertaken where this will result in the best ecological outcome, preferably close to the impact site or within the same ecological district. The action considers the landscape context of both the impact site and the offset site, taking into account interactions between species, habitats and ecosystems, spatial connections, and ecosystem function.	Directly adjacent Expected ecosystem type at the offset location is the same and abiotic context factors are contiguous e.g. soil type, moisture, wind direction, topography is consistent Offset will be protective of the wetland/creek adjacent to bolster the riparian margin
(8) TIME LAGS: The delay between loss of, or effects on, indigenous biodiversity values at the impact site and the gain or maturity of indigenous biodiversity at the offset site is minimised so that the calculated gains are achieved within the consent period or, as appropriate, a longer period (but not more than 35 years).	Larger grades of the key coastal canopy species are to be integrated to minimise maturity lag Infill restoration allows for some larger stature indigenous individuals to be retained and provide vertical heterogeneity and as visual amenity mitigation Where possible larger exotics should be stumped and poisoned to enable continued tensile strength of roots to retain soil on slopes adjacent the creek and wetland
(9) SCIENCE AND MĀTAURANGA MĀORI: The design and implementation of a biodiversity offset is a documented process informed by science and mātauranga Māori.	Offset design is to be based on professional reporting of a SQEP, with reference to desktop review of accepted qualitative data and context, best practice industry documentation. NB The application of mātauranga Māori is outside the scope of this reporting
(10) TANGATA WHENUA AND STAKEHOLDER PARTICIPATION: Opportunity for the effective and early participation of tangata whenua and stakeholders is demonstrated when planning biodiversity offsets, including their evaluation, selection, design, implementation, and monitoring.	It is envisioned this report and recommendations herein will be reviewed by appropriate stakeholders and may be thereafter incorporate feedback from that exercise.
(11) TRANSPARENCY: The design and implementation of a biodiversity offset, and communication of its results is undertaken in a transparent and timely manner.	As required

⁶⁰ **SCRUB:** seral communities, often dominated by or with a large component of exotic species such as gorse, Hakea, tobacco weed, etc. and/or commonly lacking a closed canopy and in which an understorey is either absent or composed primarily of exotic species.

In order to ensure the required measurable biodiversity outcomes are achieved, and there is no residual change to *values* in the immediate ZOI of clearance areas, a quantifiable currency is required that can be monitored, as below

TABLE 20: GENERAL OFFSET GAINS AS PER NPSIB APPENDIX 3 (3) & (4)

MEASURABLE PARAMETER	REVEGETATION & ENHANCEMENT	MEASUREMENT
AREA	10m buffer surrounding all future residential envelope clearance areas 1.5m spacing - Envelope area cleared >1000m² to be exceeded by revegetation enhancement of the remaining vegetation 1.5x any clearance area over permitted 1000m² baseline.	m ²
DIVERSITY	A greater diversity of indigenous flora species is proposed WF9 appropriate low flammability diverse mix with broad temporal fruit supply These include higher value canopy species in comparison to kānuka/exotic dominance currently – taraire as predicted dominant WF9 kahikatea; kōwhai; kohekohe; rewarewa; karaka; pūriri	Numerical increase of appropriate species not currently present
DENSITY	Planting will be at an increased density to that as current which is impacted by edge effects and weed presence	Direct measurement of spacing
PATTERN	Planting of indigenous canopy species will restore WF9 pattern & coastal character	Number of WF9 coastal species used
INTEGRITY	Weed density & dominance will be removed as current	Indigenous vs exotic dominance with a standard of 90%
TIMING	Successful establishment of restoration planting within first planting season post earthworks measured by date of completion	Date completed
STORMWATER	The discharge does not result in cause any conspicuous change in colour or visual clarity of the receiving water; conspicuous oil or grease films, scums or foams, or floatable or suspended material; any emission of objectionable odour in the receiving water; more than 15 milligrams per litre of total petroleum hydrocarbons. Discharge is diffuse and there is no significant scour, erosion or loss of vegetation at discharge sites or source areas (CSA)-buildings sites min. 2m buffering downslope of dense sedge vegetation as existing basal groundcover is sparse trunks with limited effectiveness to resist stormwater flows or retain sediment.	As given

Success of an offset relies on methodology to ensure goals are achieved as per as *NPSIB Appendix 3 (5)* above, contained in individual Lot specific Offset Management Plans, provided for Sec223 condition as standard prior to site activities and in respect of any final engineering design e.g. site suitability; geotech; stormwater and sediment control. Covalent pest and weed effects management may be provided within the Offset Management Plans, to remedy existing issues and avoid effects of the development and residential occupation.

The revegetation is a positive effect of the proposal to provide joint functional purpose of aquatic function (attenuation; shade; sediment control; bank stabilization) and amenity with the rural landscape. In light of the exotic component and absent or early successional ground cover, additionality may be easily achieved by vegetating with a biodiverse secondary association to improve quality of vegetation as habitat, ensure resilience of remaining cover and 'short circuit' an otherwise prolonged successional process. Larger grades of the key canopy species including taraire as the predicted dominant are to be integrated to promote maturity of food source and vertical heterogeneity at the site. Natural succession is by no means a guaranteed outcome of simple pioneer species revegetation e.g. monoculture

mānuka. We recommended varieties are not used, plants are eco-sourced from east coast Northland and no kauri should be introduced.

Interaction is to be controlled by engineering best practice to avoid impacts from development and residential infrastructure in accordance with parameters of GD01, GD05 & TP 90. Sediment and stormwater control is to be assessed once individual Lot building design and clearance is finalized. Recognition of the significance of the headwater creeks and wetland as the receiving environment promotes the intent of NPS-FM (2020) policies and pre-emptive avoidance of effects through best practice stormwater design. It is well documented that increased turbidity and sediment loads have negative impacts on aquatic communities. Sedimentation or stockpiling of chipped or cleared vegetation can cause smothering of small waterways with low flow and wetland vegetation; eutrophication; infilling and alteration of invertebrate species composition. Together these effects adversely affect their use as habitat.

Final stormwater discharge should be diffuse and at a velocity sufficient to avoid adverse effects such as scouring or erosion and to maintain aquatic habitat condition. Stormwater outlets design should include 2m⁶¹ buffering downslope of dense sedge vegetation as the current basal groundcover is sparse trunks with limited effectiveness to resist erosive flows or retain sediment. In the absence of unmitigated point source discharge and revegetation of open source areas, the central waterway is unlikely subject to potential effects.

In addition to engineered design it is considered that the vegetation offset heightens the function of the remaining vegetation to retain and reduce sediment input, in regard to potential effects on the receiving headwaters, receiving lower contour creek; wetland and downstream CMA.

Compliance with the NES-F (2020) will be required in regard to proposed Lot 4 development at minimum as the proposed clearance envelope and access will likely be within 100m of wetland. Formal topographical survey of the lower contour wetland has not been undertaken. We recommend this is demarcated for Sec223, along with the edge of gumland toward the final clearance areas for residential development of the proposed Lots.

OFFSET SUMMARY

In order to control potential future development & occupancy effects we recommend once building/ clearance areas and stormwater design has been finalized for the subdivision access and each Lot, site specific consent notices require:

SUBDIVISION WORKS

Clearance of the access to proposed Lots 2 & 3 is to be undertaken as part of the subdivision works for Sec 224. A 5 m buffer of simple low-flammability indigenous species, comprising flax, cabbage tree, five-finger and mapou should be established along the eastern edge of the access toward the remaining vegetation.

FORMAL PROTECTION

Outside the building envelopes the remainder of vegetation on the Lots is protected via covenant including higher biodiversity and ecological function values

- ✓ The central gully including tributary creeks and lower wetland – largely proposed Lots 1 & 2.
- ✓ Gumland matrix on RAH soils Lots 2; 3 & 4 - both wetland type as natural inland wetland and non wetland type as naturally rare ecosystem

⁶¹ This 2m distance from a source represents that in which dense sedges trap the majority of sediment. NIWA (2000) Review of Information on riparian buffer widths necessary to support sustainable vegetation and meet aquatic functions TP350 Auckland Regional Council

WILDLIFE MANAGEMENT PLAN (WMP)

- ✓ Prior to the removal of any vegetation a wildlife management plan for the proposed clearance areas outlining methods to check for herpetofauna and North Island Brown Kiwi prior to clearance. This should be prepared by a suitably qualified and experienced ecologist or wildlife specialist, and include methods and timings of searches, and any required translocation within the site and licenses or permits required.
- ✓ The vegetation clearance on site associated with the development shall be undertaken in accordance with the certified Wildlife Management Plan.

OFFSET MANAGEMENT PLAN (OMP)

An Offset Management Plan (OMP) for each site in general accordance with this report and as per *Appendix 3 NPSIB (2023)* and *RPS 4.4.2*, providing no net loss, rather *net gain* and *additionality* through density and diversity. This includes an updated OMP for proposed Lot 1 (current house Lot). The OMP must cover:

- ✓ **PEST & WEED MANAGEMENT**
 - ✓ Site wide pest and weed management measures including ongoing maintenance and consequent infill planting of remaining cover with canopy and late secondary species of predicted original forest *WF9 Taraire tawa*
 - ✓ Appropriate signage
- ✓ **PLANTING PLAN DETAILING**
 - ✓ low flammability diverse mix with broad temporal fruit supply; appropriate to predicted forest type and location *WF9* with coastal influence
 - ✓ 10m buffer surrounding all future residential envelope clearance areas 1.5m spacing
 - ✓ Infill revegetation enhancement of the remaining vegetation 1.5x any clearance area over permitted 1000m² baseline.
 - ✓ Stormwater outlets should be diffuse and include 2m buffering downslope of dense sedge vegetation as the current basal groundcover is sparse trunks with limited effectiveness to resist stormwater flows or retain sediment.
- ✓ Details of the mechanism / arrangement to oversee the ongoing implementation of the plan in a coordinated manner

Success of an offset relies on methodology to ensure goals are achieved as per as *NPSIB Appendix 3 (5)*. Therefore we also recommend

- ✓ Vegetation clearance shall not exceed the maximum areas shown in an approved Scheme Plan and positioned generally in accordance with such.
- ✓ Staged house Lot site preparation should commence with silt fencing to protect headwater gullies/ creeks and wetland during vegetation clearance. The subsequent earthworks undertaken post clearance may require establishment of any additional erosion and sediment control measures.
- ✓ Wastewater fields are not located within identified significant gumland wetland or dryland areas on the RAH soils.
- ✓ Best practice clearance methods to be used
 - ✓ machinery clean of soil and debris prior to site entry
 - ✓ vegetation, slash, disturbed soil or debris is not deposited in a position where it could mobilise into headwaters or wetland
 - ✓ preclearance fauna survey and Management Plan / permits as necessary for salvage
- ✓ Due to confirmed kiwi presence and DoC Kiwi High Density designation a **no dogs/ cats** condition
- ✓ No lighting of covenants

This is considered sufficient for progression of the proposal with a *less than minor* level of impact.

CONCLUSION

Reporting included review of the proposal and ecological context, the latter from aerial photography, mapping and databases, prior reporting for 2260119- RMAUC 2025, complimented by fieldwork.

Subdivision works will consist of a combined vehicle crossing and ROW driveway access to proposed Lots 2 and 3, to minimize the required earthworks and vegetation clearance, as the only enabling subdivision works. These activities have no site hydrological connection as currently designed. No physical works are currently proposed for the balance of the Lot.

Although the ecological effects of the subdivision itself are expected to be limited, the proposal will facilitate future residential development and occupancy, with associated potential effects that are not yet fully defined but are generally foreseeable. Building consent level detailed engineering design and site-specific investigations for individual platforms within the proposed envelopes have not been undertaken. There is currently no detailed stormwater design. Once these are in place, prior to physical works, Lot specific effects can be appropriately managed through comprehensive consent notices registered on the new titles.

In terms of the *effects management hierarchy*, offset is considered the practicable primary form of effects management, as permanent loss of extent of vegetation extent at the point of impact cannot be avoided, minimised or remedied.

As a response to the permanent loss of *MODERATE* significance cover, development of the Lots will require wildlife management and vegetation offset to achieve no *net loss*, rather a *net gain* and *additionality* through density and diversity, in keeping with the aspiration of *Appendix 3 NPSIB (2023) and RPS 4.4.2*. Compliance with the NES- F (2020) will be required in regard to proposed Lot 4 development at minimum as the proposed clearance envelope and access will likely be within 100m of wetland.

The designated clearance areas are to be countervailed by a commensurate infill and buffer planting in terms of absolute cover in the immediate locale, resulting in *no net loss*. Gross *net gain* and *additionality* is achieved through appropriate measurable currencies- increase in indigenous floral diversity, restoration of pattern and integrity.

Potential threats to the success of the offsets include those common to any revegetation scheme -failure of plantings; weed and pest influence, to be managed as described in the Lot specific *Offset Management Plans* to achieve the long term functionality and resilience required, with parallel monitoring.

Pest control currently in place may be partitioned amongst the proposed Lots. Although already designated as indefinite, the separate ownership of the proposed Lots will allow reasonable amplification of weed control and ongoing replacement planting in a shorter time period.

Protection and restoration are underlying motifs of the proposal, undertaken with regard to the long term functionality and integrity of the wider environment, recognising the connectivity of the site waterways.

These integrated mechanisms will serve to commend persistent indigenous habitat and character within the proposal, with a level of effects that can be addressed through the EMH to obtain a *VERY LOW* impact (EIANZ 2018) or *less than minor* level of effects.



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APPENDIX 1: STATUTORY CONSIDERATIONS

PROPOSED DISTRICT PLAN

OBJECTIVES		PROPOSAL
IB-01	<i>Areas of significant indigenous vegetation and significant habitats of indigenous fauna are protected for current and future generations.</i>	The proposal maintains the values and elements that contribute to the MODERATE significance of the clearance area by ensuring protection of the fauna through survey and salvage as required. The riparian buffer is enhanced and maintained in association with engineered stormwater and sediment control to avoid effects of development and occupation on waterways. Intersection with HIGH significance gumland, riparian vegetation wetland and headwater creeks is avoided in the proposal. Formal pest and weed control will remedy and protect the vegetation as functional habitat.
IB-02	<i>Indigenous biodiversity is managed to maintain its extent and diversity in a way that provides for the social, economic and cultural well-being of people and communities.</i>	The clearance area allows practicable and reasonable use of the site for residential occupation
IB-03	<i>The relationship between tangata whenua and indigenous biodiversity, including taonga species and habitats, is recognised and provided for.</i>	OUTSIDE SCOPE OF THIS REPORT
IB-04	<i>The role of tangata whenua as kaitiaki and landowners as stewards in protecting, <u>maintaining</u> and restoring <u>areas of significant indigenous vegetation and significant habitats</u>⁸ of indigenous <u>fauna</u> and indigenous biodiversity is provided for.</i>	OUTSIDE SCOPE OF THIS REPORT
IB-05	<i>Restoration and enhancement of indigenous biodiversity is promoted and enabled.</i>	The high intensity & formal pest control instigated for 2260119-RMALUC will be portioned between the proposed lots. Weed control is a gross positive outcome for the highly impacted site and neighbouring properties e.g. HNC#06/47 to the southwest. Revegetation will include density and additionality, measurable in variety of canopy species appropriate to WF9 predicted ecosystem type with coastal influence – currently absent

POLICIES	PROPOSAL
IB-P2 <i>Within the coastal environment:</i> <i>a. avoid adverse effects of land use and subdivision on:</i> <i>i. Threatened and At-Risk indigenous species;</i> <i>ii. areas of significant indigenous vegetation and significant habitat of indigenous fauna;</i> <i>iii. areas of indigenous biodiversity protected under other legislation.</i> <i>b. avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of land use and subdivision on:</i> <i>i areas of predominantly indigenous vegetation; and</i> <i>ii. indigenous species, habitats and ecosystems that are particularly vulnerable to modification.</i>	<i>Within the coastal environment subdivision access works for proposed Lots 2 & 3 will allow practicable and reasonable use of the site for residential occupation . Avoidance of high value vegetation has been primary in the recommendations of this report</i> <i>A(i). Fauna management will be instigated to ensure no adverse effect of physical harm in the clearance area Relocation within the wider Lot protected by pest management and enhanced with wider diversity species is not considered an adverse effect.</i> <i>(ii). The clearance area is not predominantly indigenous vegetation- positioned at most practicable furthest distance from HIGH value aspects – wetland; riparian area; gumland mapped on RAH soil; As part of a wider ecological unit the clearance areas have values including connectivity; size; habitat and representativeness; physical and functional buffering to the aquatic environment as riparian vegetation e.g. erosion and hydrological control as per RPS (2018) Appendix 5. An increase in density and diversity of remnant vegetation in conjunction with stormwater control allows these values to be maintained for the immediate area resulting in no residual adverse effect.</i> <i>ii. The Rangitane Shrublands PNA has been recognised onsite and HIGH values & elements avoided</i> <i>B(i) an offset is proposed to provide a net gain and additionality over the current status</i> <i>(ii) Stormwater control will ensure no significant habitat downstream in further offsite wetland or in the CMA is compromised for example will not be compromised</i> <i>These site elements are avoided i.e. gumland on RAH soil ; wetland; headwaters</i>
IB-P3 <i>Outside the coastal environment:</i> <i>avoid, remedy or mitigate adverse effects of land use and subdivision to ensure adverse effects are no more than minor on;</i> <i>Threatened and At-Risk indigenous species;</i> <i>areas of significant indigenous vegetation and significant habitat of indigenous fauna;</i> <i>areas of indigenous biodiversity protected under other legislation; and</i> <i>avoid, remedy, mitigate, offset or compensate adverse effects of land use and subdivision to ensure there are no significant adverse effects on:</i> <i>1. areas of predominantly indigenous vegetation; and</i> <i>indigenous species, habitats and ecosystems that are particularly vulnerable to modification.</i>	<i>Avoidance has been primary of high value site elements has been primary in the design</i> <i>A(i). Fauna management will be instigated to ensure no adverse effect of physical harm on potential individuals with Threat status . Relocation within the wider Lot protected by pest management and enhanced with wider diversity species is not considered an adverse effect. The sites are positioned at most practicable furthest distance from HIGH value aspects – wetland; riparian area; gumland mapped on RAH soil; Exterior lighting is not to include high blue or white spectrum LED for nocturnal fauna and pelagic birds .No further taxa with Threat status are considered to be compromised by the clearance or occupation. Enhanced density of offset planting will reduce diffuse runoff and complement the stormwater controls</i> <i>(ii). The clearance areas are not predominantly indigenous vegetation. As part of a wider ecological unit the clearance areas have values including connectivity; size; habitat and representativeness; physical and functional buffering to the aquatic environment as riparian vegetation e.g. erosion and hydrological control as per RPS (2018) Appendix 5. An increase in density and diversity of remnant vegetation in conjunction with stormwater control allows these values to be maintained for the immediate area resulting in no residual adverse effect.</i> <i>The Rangitane Shrublands PNA has been recognised onsite and HIGH values & elements avoided B(i) an offset is proposed to provide a net gain and additionality over the current status</i> <i>(ii) Stormwater control will ensure no significant habitat downstream in further offsite wetland or in the CMA is compromised for example will not be compromised</i> <i>These site elements are avoided i.e. gumland on RAH soil ; wetland; headwaters</i>

IB-P4	Where adverse effects are not otherwise avoided, remedied, mitigated, offset or compensated under IB-P2 and IB-P3 maintain indigenous biodiversity by: a. applying the effects management hierarchy to any significant adverse effects; and b. managing any other adverse effects on indigenous biodiversity to maintain indigenous biodiversity across the district	Adverse effects are avoided and offset The proposed offset area represents <i>NO NET LOSS</i>⁶² or “like for like” while further outcomes of <i>net gain</i>⁶³ and <i>additionality</i>⁶⁴ in cover and habitat is achieved through appropriate measurable currencies- increase in indigenous floral <i>diversity</i>, restoration of <i>pattern</i> and <i>integrity</i> directly adjacent to the point of impact that would not have occurred in the absence of the subdivision proposal. This primarily takes the form of active restoration to increase habitat and quality supported by pest and weed control, while providing a light and disturbance buffer to internal habitat of the remaining vegetation and creek/ wetland.
IB-P5	Ensure that the management of land use and subdivision to protect areas of significant indigenous vegetation and significant habitat of indigenous fauna and maintain indigenous biodiversity is done in a way that: a. does not unreasonably restrict existing primary production activities, particularly on highly productive land; b. recognises the operational need and functional need of regionally significant infrastructure to be located within areas of significant indigenous vegetation and significant habitat of indigenous fauna in some circumstances; c. allows for maintenance, use and operation of existing structures, including upgrading of regionally significant infrastructure; and d. enables Māori land to be used and developed to support the social, economic and cultural wellbeing of tangata whenua, including the provision of papakāinga, marae and associated residential units and infrastructure.	N/A
IB-P6	Promote the restoration of indigenous biodiversity, with priority given to: a. areas of significant indigenous vegetation and significant habitat of indigenous fauna whose ecological integrity is degraded; b. threatened and rare ecosystems representative of naturally occurring and formerly present ecosystems; c. areas that provide important connectivity or buffering functions; d. natural inland <i>wetlands</i> where ecological integrity is degraded or these no longer retain their indigenous vegetation or habitat for indigenous fauna; e. areas of indigenous biodiversity on specified <i>Māori land</i> where restoration is advanced by the Māori landowners; and f. any other priorities specified in regional biodiversity strategies or any national priorities for indigenous biodiversity restoration.	a. The property AS1-AS3 vegetation is heavily weed infested including with canopy species including hakea; wattle; privet and Taiwan cherry. The proposal includes formal pest and weed control and revegetation with diverse and dense WF9 species that are otherwise absent to restore pattern, representativeness and integrity. b. gumland onsite will benefit from the pest and weed control albeit outside of the zone of influence of potential effects of the clearance. The wetland will benefit from a more diverse and dense riparian buffer to protect internal from ingress and disturbance from residential occupation while providing joint functional purpose of aquatic function (attenuation; shade; sediment control; bank stabilization) and amenity within the landscape. c. as above(b) as buffer to a hydrological landscape corridor through the site and to the CMA d. as above (b) e. n/a f. naturally uncommon ecosystem gumland is subject to pest and weed control
IB-P7	Encourage the protection, <i>maintenance</i> and restoration of indigenous biodiversity through non-regulatory methods including consideration of: a. reducing or waiving resource consent application fees; b. providing, or assisting in obtaining funding from other agencies and trusts; c. sharing and helping to improve information on indigenous biodiversity; and d. working directly with <i>iwi</i> and <i>hapū</i>, landowners and community groups on ecological protection and enhancement projects	
IB-P8	<i>Subdivision</i> and associated land use is: a. enabled where this results in the restoration, enhancement and legal protection of indigenous biodiversity vegetation in accordance with SUB-R6 or SUB-R7; or b. considered where this will achieve positive, secure and long-term benefits for indigenous biodiversity through active and ongoing restoration and enhancement activities.	b. Pest and weed control in perpetuity

⁶² no net loss means that the measurable positive effects of actions match any loss of extent or values over space and time, taking into account the type and location of the wetland or river

⁶³ net gain means that the measurable positive effects of actions exceed the point of no net loss.

⁶⁴ **ADDITIONALITY (NPSIB 2024):** A biodiversity offset achieves gains in indigenous biodiversity above and beyond gains that would have occurred in the absence of the offset, such as gains that are additional to any minimisation and remediation undertaken in relation to the adverse effects of the activity.

IB-P9	Encourage and support active management control of pests and enable a timely and efficient response to biosecurity incursions of unwanted organisms.	Pest and weed control will allow any incursion to be noted/ reported
IB-P10	Assist with the protection of species that are endemic to Northland by promoting, supporting and using eco-sourced plants from within the ecological district.	Plants will be ecosourced as appropriate
IB-P11	Require landowners to manage pets and pests within their property through consent conditions, where necessary to avoid risks to Threatened and At-Risk indigenous fauna, and where appropriate, including avoiding the introduction of pets and pests into kiwi present or high-density kiwi areas where appropriate.	No cats and dogs as condition of consent
IB-P12	Consider the following matters where relevant when assessing and managing the effects of indigenous vegetation clearance and associated land disturbance: - the temporary or permanent nature of any adverse effects; - cumulative effects of activities that may result in loss or degradation of habitats, species populations and ecosystems; - the extent of any vegetation removal and associated land disturbance; - the effects of fragmentation; - linkages between indigenous ecosystems and habitats of indigenous species; - the potential for increased threats from pests; - any downstream adverse effects on waterbodies and the coastal marine area; - where the area has been assessed as significant indigenous vegetation and significant habitat of indigenous fauna: - the extent to which the proposal will adversely affect the ecological significance, values and function of that area; - whether it is appropriate or practicable to use biodiversity offsets or environmental biodiversity compensation to address more than minor residual adverse effects; - the location, scale and design of any proposed development; - the extent of indigenous vegetation cover on the site and whether it is practicable to avoid or reduce the extent of indigenous vegetation clearance; - the functional or operational need of regionally significant infrastructure; - any positive contribution any proposed biodiversity offsetting or biodiversity compensation will have on indigenous biodiversity; - any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6; - the extent to which the proposed activity provides for the social, economic and cultural wellbeing of people and communities; - adopting a precautionary approach where the effects on indigenous biodiversity are uncertain, unknown, or little understood and those effects could cause significant or irreversible damage to indigenous biodiversity; - promoting the resilience of indigenous biodiversity to climate change and recognising the role of indigenous biodiversity in mitigating the effects of climate change; and - the benefits provided by the indigenous biodiversity, including ecosystem services.	Site specific Offset Management Plans will ensure success of the revegetation in the short term <5yrs. Larger grades of the key coastal canopy species are to be used to minimise maturity lag. However the current vegetation is largely of lower stature. Infill restoration adjacent in the riparian area allows for some larger stature indigenous individuals to be retained and provide vertical heterogeneity and larger exotics can be stumped and poisoned to enable continued tensile strength of roots to retain soil adjacent the creek and wetland - None anticipated in respect of recommendations of this EclA. Positive effect from formal pest and weed control - The vegetation removal is to be offset to provide net gain and additionality as per Table 21 and 22. Location of earthworks is adjacent the road to minimise fragmentation and adverse effects to be avoided by engineered sediment & stormwater controls to the creek and wetland with retention of an enhanced vegetated buffer approx. 80m - located adjacent the road. Will not impact the use of the Lot as a corridor for highly mobile species and does not represent irreplaceable habitat. Does not intersect any critical source area or seepage to the creek/ wetland. Offset buffers will prevent edge effects adjacent vegetation - as per d. - formal pest and weed control is proposed - The development has been located away from high value gully and riparian area with a buffer to be retained on the slope to the creek and enhanced. There will be no adverse effect on the creek/ wetland that may be displaced to the lower offsite creek or CMA - The proposal has been located to avoid adverse effects high value elements including gumland riparian gully and headwaters. Fauna survey and salvage will ensure harm is avoided. Relocation within the Lot is not considered an adverse effect. Pest and weed control are a positive effect including to offsite environments. An offset is proposed for the absolute loss of the area of vegetation that has primary significance as potential habitat. - The proposal allows for reasonable use in the most practicable area to avoid effects on high value elements. - The entire site is vegetated in various associations. The proposal has been located to avoid the HIGH value elements including gumland and riparian cover. Clearance areas are 0-40% estimated indigenous and highly impacted by edge effects. - n/a - TABLES 19 & 20s. Additionality through diversity and density. A greater diversity of indigenous flora species is proposed to include higher value canopy species in comparison to kānuka/ exotic dominance currently – taraire as predicted dominant WF9 kahikatea; kōwhai; kohekohe; rewarewa; karaka pūriri. Planting will be at an increased density to that as current which is impacted by edge effects and weed presence. Planting of indigenous canopy species will restore WF9 pattern & coastal character. Weed density will be removed dominance as current. - outside the scope of this report - density of riparian cover and regeneration of species enables resilience to weather events. - Active restoration supported by pest and weed control will provide heightened biodiversity to restore pattern of WF9 & coastal elements formalised pest and weed requirement. Ecosystem services include provisioning; biodiversity; riparian/ water quality protection; nutrient cycling with a more diverse litter and root diversity/ density/ and heightening the amenity value and sense of place in the near coastal environment with recognisable appropriate canopy species - Landscape permeability value for low or ground dwelling fauna will be retained allowing natural dispersal across the wider extent of local cover

		and within potential meta populations. • increase the ability of the site to accommodate the stormwater dispersal to ground protective of the wetland/creek • visual definition of the protected areas to future owners to prevent future clearance. • Increase site seed sources for natural regeneration • Increased diversity & territorial economics for fauna over the current early successional state e.g. berries; nectar • removal of alleopathic hakea which prevents regeneration
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Comment on IB-R3

RULE IB-R3 INDIGENOUS VEGETATION CLEARANCE AND ANY ASSOCIATED LAND DISTURBANCE (ALL ZONES)	PROPOSAL
ACTIVITY STATUS:PERMITTED WHERE: PER -1 1. It does not occur in a remnant forest except that for within the Māori Purpose zones or Treaty Settlement Land Overlay – 1,500m² over a calendar year; and 2. For areas outside of remnant forest it does not exceed the following amounts per site over a calendar year; a. Māori Purpose zones and Treaty Settlement Land Overlay - 1,500m²; b. Rural Production zone - 500m²; c. Rural Lifestyle zone - 250m²; or d. All other zones - 100m²	They do comprise remnant forest, rather scrub including some recently regenerated from clearance (2103; 2022). The overall areas of clearance are estimated walk though as heavily weed infested comprising only approx. 0- 40% indigenous cover including by canopy exotic woody species gum; wattle and hakea They are located to avoid high value site vegetation including headwater creeks; natural inland wetland; broadleaved & mamaku dominance riparian cover and gumland on RAH soil.

SUBDIVISION

OBJECTIVES	PROPOSAL
SUB-O1 <i>Subdivision results in the efficient use of land, which:</i> <i>a. achieves the objectives of each relevant zone, precinct, development area, overlay and the district wide provisions;</i> <i>b. contributes to the existing or planned local character and sense of place;</i> <i>c. avoids reverse sensitivity issues that would prevent or adversely affect activities already established on land from continuing to operate;</i> <i>d. avoids land use patterns which would prevent land from achieving the objectives and policies of the zone in which it is located;</i> <i>e. does not increase risk from natural hazards or risks are mitigated and existing risks reduced; and</i> <i>f. manages adverse effects on the environment</i>	f. The proposal has been located to avoid adverse effects high value elements including gumland riparian gully and headwaters. Fauna survey and salvage will ensure harm is avoided. Relocation within the Lot is not considered an adverse effect. Pest and weed control are a positive effect including to offsite environments. Offset and wildlife management is proposed for the absolute loss of the area of vegetation that has primary significance as potential habitat.
SUB-O2 <i>Subdivision recognises and provides for the protection, restoration or enhancement of Outstanding Natural Features, Outstanding Natural Landscapes, Natural Character of the <u>Coastal Environment</u>, <u>wetland</u>, <u>lake and river margins</u>, areas of significant indigenous vegetation and significant habitats of indigenous fauna, Sites and Areas of Significance to Māori, and <u>Historic Heritage</u>.</i>	Protection and enhancement are primary motifs of the proposal through avoidance of high value elements in clearance positioning; infill and covenant of remaining vegetation and revegetation buffers of clearance areas.
POLICIES	PROPOSAL
SUB-P7 <i>Restrict rural residential <u>subdivision</u> in the Rural Lifestyle zone unless the development provides a management plan which results in superior environmental outcomes, including through, where relevant:</i> <i>a. The protection of natural character, landscape, amenity, heritage, or cultural values; and/or</i> <i>b. The restoration, enhancement and legal protection of indigenous biodiversity.</i>	b. Consent notices on title will require Offset management Plans specific to each proposed Lot be provided once final building development areas are finalised with stormwater and sediment control <i>Adverse effects are avoided and offset</i> The proposed offset areas represent <i>NO NET LOSS</i>⁶⁵ or “like for like” while further outcomes of <i>net gain</i>⁶⁶ and <i>additionality</i>⁶⁷ in cover and habitat is achieved through appropriate measurable currencies- increase in indigenous floral <u>diversity</u>, restoration of <u>pattern</u> and <u>integrity</u> directly adjacent to the point of impact that would not have occurred in the absence of the subdivision proposal. This primarily takes the form of active restoration to increase habitat and quality supported by pest and weed control, while providing a light and disturbance buffer to internal habitat of the remaining vegetation and creek/ wetland.
SUB-P11 <i>Consider the following matters where relevant when assessing and managing the <u>effects</u> of <u>subdivision</u>:</i> <i>a. the potential for reverse sensitivity effects that would prevent or adversely affect activities already established on <u>land</u> from continuing to operate;</i> <i>b. consistency with the scale, density, design and character of the <u>environment</u> and purpose of the zone;</i> <i>c. the location, scale and design of <u>buildings</u> and <u>structures</u>;</i> <i>d. the adequacy and capacity of available or programmed <u>development infrastructure</u> to accommodate the proposed activity; or the capacity of the <u>site</u> to cater for on-site <u>infrastructure</u> associated with the proposed activity;</i> <i>e. managing <u>natural hazards</u>;</i> <i>f. any adverse <u>effects</u> on areas with <u>historic heritage</u> and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and</i> <i>g. any historical, spiritual, or cultural association held by <u>tangata whenua</u>, with regard to the matters set out in Policy <u>TW-P6</u>.</i>	f. as per SUB – P7

⁶⁵ no net loss means that the measurable positive effects of actions match any loss of extent or values over space and time, taking into account the type and location of the wetland or river

⁶⁶ net gain means that the measurable positive effects of actions exceed the point of no net loss.

⁶⁷ **ADDITIONALITY (NPSIB 2024):** A biodiversity offset achieves gains in indigenous biodiversity above and beyond gains that would have occurred in the absence of the offset, such as gains that are additional to any minimisation and remediation undertaken in relation to the adverse effects of the activity.

NORTHLAND REGIONAL PLAN

Regard must be had to relevant objectives and policies in this Plan when considering an application for a resource consent.

The site has been considered in regard to Northland Regional Policy Statement Appendix 5 (2018) in order to evaluate potential impact of the proposal. Appendix 5 criteria encompass those in **District Plan Methods 12.2.5.6** for evaluating significance. Consideration has also been given to further Northland focused recommendations for significance evaluation⁶⁸.

Throughout the impact assessment process consideration is given to **D.2.18 Managing Adverse Effects on Indigenous biodiversity**

D.2.18 MANAGING ADVERSE EFFECTS ON INDIGENOUS BIODIVERSITY	
POLICY	PROPOSAL
Manage the adverse effects of activities on indigenous biodiversity by:	
1) in the coastal environment: A) avoiding adverse effects on: i. indigenous taxa that are listed as Threatened or At Risk in the New Zealand Threat Classification System lists, and ii. the values and characteristics of areas of indigenous vegetation and habitats of indigenous fauna that are assessed as significant using the assessment criteria in Appendix 5 of the Regional Policy Statement, and iii. areas set aside for full or partial protection of indigenous biodiversity under other legislation, and B) avoiding significant adverse effects and avoiding, remedying or mitigating other adverse effects on: i. areas of predominantly indigenous vegetation, and ii. habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes, and iii. indigenous ecosystems and habitats that are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, intertidal zones, rocky reef systems, eelgrass, northern wet heathlands, coastal and headwater streams, spawning and nursery areas and saltmarsh, and	The majority of clearance is outside of the coastal environment which encompasses lower proposed Lot 2 & 1 and small portion of lower Lot 4 adjacent Kurapari Rd. Clearance activities have already taken place on proposed Lot 1 for 2260119-RMALUC. 1) A(i). Fauna management will be instigated to ensure no adverse effect of physical harm on potential individuals with Threat status in the clearance area i.e. herpetofauna. Preclearance check with kiwidog/certified handler will also be made. Relocation within the wider Lot protected by pest management and enhanced with wider diversity species is not considered an adverse effect. Clearance is positioned at most practicable furthest distance from HIGH value aspects – wetland; riparian area; gumland; based on ecological; landscape and geotech parameters. Exterior lighting is not to include high blue or white spectrum LED for nocturnal fauna and pelagic birds. No further taxa with Threat status are considered to be compromised by the clearance or occupation. Enhanced density of offset planting will reduce diffuse runoff and compliment the stormwater controls for lower wetland creek that may accommodate fish with threat status e.g. banded kokopu (At Risk Naturally Uncommon) (ii). As part of a wider ecological unit the clearance areas have values including connectivity; size; habitat and representativeness; physical and functional buffering to the aquatic environment as riparian vegetation e.g. erosion and hydrological control as per RPS (2018) Appendix 5. An increase in density and diversity of remnant vegetation through infill and buffering in conjunction with pest, weed and stormwater control allows these values to be maintained for the immediate area resulting in no residual adverse effect. (iii) The Rangitane Shrublands PNA has been recognised onsite and HIGH values & elements avoided B(i) The clearance areas are not predominantly indigenous rather 0-40%. Offset is proposed to provide a net gain and additionality over the current status (ii) Stormwater control will ensure no significant habitat in the CMA is

⁶⁸ Wildlands (2019) Guidelines for the application of ecological significance criteria for indigenous vegetation and habitats of indigenous fauna in the Northland region.

	compromised for example will not be compromised (iii) These site elements are avoided i.e. gumland; wetland; headwaters
2) outside the coastal environment: A) avoiding, remedying or mitigating adverse effects so they are no more than minor on: i. indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists, and ii. areas of indigenous vegetation and habitats of indigenous fauna, that are significant using the assessment criteria in Appendix 5 of the Regional Policy Statement, and iii. areas set aside for full or partial protection of indigenous biodiversity under other legislation, and B) avoiding, remedying or mitigating adverse effects so they are not significant on: i. areas of predominantly indigenous vegetation, and ii. habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes, and iii. indigenous ecosystems and habitats that are particularly vulnerable to modification, including wetlands, wet heathlands, headwater streams, spawning and nursery areas, and	The majority of clearance is outside of the more sensitive coastal environment, however the same intensity of management is to be applied as before (1)A & B. Clearance areas have been designated to avoid high values outside of the coastal environment including fauna; gumland; mamaku and gully vegetation; headwaters.
3) recognising areas of significant indigenous vegetation and significant habitats of indigenous fauna include: a) Significant Ecological Areas, and b) Significant Bird Areas, and c) Significant Marine Mammal and Seabird Areas, and	Significant bird and mammal areas on the adjacent coast are not considered at risk from the proposal which is distanced from the shoreline. No colony trees or nests habitat are within the ZOI of any clearance. Protection of site hydrological avoids effects on CMA Lighting with exterior white or blue spectrum LEDs is to be avoided
4) recognising damage, disturbance or loss to the following as being potential adverse effects: a) connections between areas of indigenous biodiversity, and b) the life supporting capacity of the area of indigenous biodiversity, and c) flora and fauna that are supported by the area of indigenous biodiversity, and d) natural processes or systems that contribute to the area of indigenous biodiversity, and	a. Connections are not considered compromised in the site or across the wider landscape. Positioning the clearance areas to the periphery of the site as practicable and utilising a combined access to Lots 2 & 3 positioned road minimises fragmentation. Vegetation will be maintained and enhanced by the offset including infill of remaining vegetation, buffering of envelopes, pest and weed control. Pest control improves landscape permeability for any highly mobile species B; c; d. The life supporting capacity of the area will be improved in terms of diversity and density heightening ecosystem process such as nutrient cycling, regeneration, food provision and shelter. Fauna survey and salvage as standard if appropriate Maintenance of riparian buffer protective of hydrological contribution
5) assessing the potential adverse effects of the activity on identified values of indigenous biodiversity, including by: a) taking a system-wide approach to large areas of indigenous biodiversity such as whole estuaries or widespread bird and marine mammal habitats, recognising that the scale of the effect of an activity is proportional to the size and sensitivity of the area of indigenous biodiversity, and b) recognising that existing activities may be having existing acceptable effects, and c) recognising that minor or transitory effects may not be an adverse effect, and d) recognising that where effects may be irreversible, then they are likely to be more than minor, and e) recognising that there may be more than minor cumulative effects from minor or transitory effects, and	The proposal considered the site as part of the far wider Rangitane Shrubland PNA values. Offset grossly will provoke enhancement and formal management of the sites overall ecological functionality through weed and pest management. Recommendation of hooded and no outdoor blue/ bright white LED lighting is in respect to sea birds in the wider area Significant gumland on RAH soils and riparian elements have been avoided

6) recognising that appropriate methods of avoiding, remedying or mitigating adverse effects may include: a) careful design, scale and location proposed in relation to areas of indigenous biodiversity, and b) maintaining and enhancing connections within and between areas of indigenous biodiversity, and c) considering the minimisation of effects during sensitive times such as indigenous freshwater fish spawning and migration periods, and d) providing adequate setbacks, screening or buffers where there is the likelihood of damage and disturbance to areas of indigenous biodiversity from adjacent use and development, and e) maintaining the continuity of natural processes and systems contributing to the integrity of ecological areas, and f) the development of ecological management and restoration plans, and	a. The clearance areas are designated to poorer quality character adjacent the road with lesser significance, as habitat rather than vegetation values to avoid fragmentation. Light effects on seabird orientation in the adjacent CMA is addressed through suggested restrictions on utilisation of bright white/ blue light in outdoor lighting. Riparian buffer is to be retained b. Weed control, formal pest control, & planting will enhance site wide habitat and corridor function of remaining vegetation including reduction of open areas and canopy gaps c. n/a riparian buffer to be maintained; silt control d. Extensive planting as to bolster buffering is proposed and the focus area is set back from the wetland & creek. Gumland and riparian gully vegetation of higher value is outside ZOI e. e) Heightened biodiversity and density heighten ecosystem services e.g. nutrient cycling f. Formal pest and weed control will be instigated
7) recognising that significant residual adverse effects on biodiversity values can be offset or compensated: a) in accordance with the Regional Policy Statement for Northland Policy 4.4.1, and 43 b) after consideration of the methods in (6) above, and	Offsetting has been designed - NO NET LOSS, NET GAIN (ADDITIONALITY) on area; species composition; density and functionality i.e to protect water quality through bolstered buffer in turn heightening ecosystem function e.g. nutrient cycling; regeneration; food provision for resident species
8) recognising the benefits of activities on biodiversity values that: a) restore, protect or enhance ecosystems, habitats and processes, ecological corridors and indigenous biodiversity, and b) improve the public use, value or understanding of ecosystems, habitats and indigenous biodiversity.	The offset proposal encompasses aspects of restoration through planting area and species selection, enhancing corridor and bolstering ecosystem biodiversity and functionality Viewers from the road will benefit from increased density of recognisable iconic coastal canopy species overtime and the concomitant heightened ecosystem function/services (e.g. bird habitat) contributing to wellness and sense of place

NEW ZEALAND COASTAL POLICY STATEMENT (2010)

The proposal shows fidelity with primary objectives of the NZCPS to achieve sustainable management of the natural and physical resources of the coastal environment in regard to the development. Policies relating to the ecological context of the development have been considered throughout the scope of design

OBJECTIVES	
OUTCOME	PROPOSAL
OBJECTIVE 1: To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land, by: <i>maintaining or enhancing natural biological and physical processes in the coastal environment and recognising their dynamic, complex and interdependent nature;</i> <i>protecting representative or significant natural ecosystems and sites of biological importance and maintaining the diversity of New Zealand's indigenous coastal flora and fauna; and</i> <i>maintaining coastal water quality, and enhancing it where it has deteriorated from what would otherwise be its natural condition, with significant adverse effects on ecology and habitat, because of discharges associated with human activity.</i>	<i>The introduction of a more diverse, denser and WF9 emphasis will enhance the ecosystem services of the clearance area of proposed Lot 2 & 3 & 4 access area beyond the highly exotic current status - biological processes such as diffuse runoff interception; varied litter deposition and nutrient cycling; provide seed source and attract frugivores for natural regeneration of currently absent canopy species extending beyond site boundaries.</i> <i>Increased density of cover and 10m dense fire buffer around envelopes will compliment engineered stormwater controls that are tributary to the creek and wetlands with direct connection to the CMA</i>
OBJECTIVE 2: To preserve the natural character of the coastal environment and protect natural features and landscape values through: <i>recognising the characteristics and qualities that contribute to natural character, natural features and landscape values and their location and distribution;</i> <i>identifying those areas where various forms of subdivision, use, and development would be inappropriate and protecting them from such activities; and</i> <i>encouraging restoration of the coastal environment.</i>	<i>Although largely outside the coastal zone, the ecological strand of the design will enhance the natural character elements given for the local units through emphasis on coastal character of vegetation currently lacking and heavily impacted by weeds . Offset revegetation composition has been proposed to have a combined coastal influence e.g. pōhutukawa; karaka; pūriri enhancing resultant natural character across the wider site. Protection and restoration are underlying motifs of the proposal</i> <i>The proposed clearances avoid high value site elements to the extent practicable</i>

POLICIES	
POLICY	PROPOSAL
POLICY 1: EXTENT AND CHARACTERISTICS OF THE COASTAL ENVIRONMENT (1) Recognise that the extent and characteristics of the coastal environment vary from region to region and locality to locality; and the issues that arise may have different effects in different localities. (2) Recognise that the coastal environment includes: (a) the coastal marine area; (b) islands within the coastal marine area; (c) areas where coastal processes, influences or qualities are significant, including coastal lakes, lagoons, tidal estuaries, saltmarshes, coastal wetlands, and the margins of these; (d) areas at risk from coastal hazards; (e) coastal vegetation and the habitat of indigenous coastal species including migratory birds; (f) elements and features that contribute to the natural character, landscape, visual qualities or amenity values; (g) items of cultural and historic heritage in the coastal marine area or on the coast; (h) inter-related coastal marine and terrestrial systems, including the intertidal zone; and (i) physical resources and built facilities, including infrastructure, that have modified the coastal environment.	The immediate area in the coastal environment have a reduced expression of any coastal association, restrained by exotic modification to the riparian gully and repeated clearance of the ROW/ Kurapari frontage with resultant regeneration of large staure exotics including wattle previously planted as woodlot and remnant gums. The site is connected to the CMA by the creek, and avoidance of potential effects has been prioritised There are no colony roost trees/ seabird burrowed ecosystem on site . Planting higher diversity/ density into the slope will protect from legacy effects of soil erosion and diffuse stormwater, while development aspects will be controlled through stormwater and engineering design to ensure there is no smothering of wetland; creek or sediment to the CMA No high white/ blue spectrum LEDS are to be used in outdoor amenity lighting to avoid effects on pelagic and nocturnal birds that may intermittently utilise the foreshore or pass in flight.
POLICY 3: PRECAUTIONARY APPROACH (1) Adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse. (2) In particular, adopt a precautionary approach to use and management of coastal resources potentially vulnerable to effects from climate change, so that: (a) avoidable social and economic loss and harm to communities does not occur; (b) natural adjustments for coastal processes, natural defences, ecosystems, habitat and species are allowed to occur; and (c) the natural character, public access, amenity and other values of the coastal environment meet the needs of future generations.	(1) Fauna survey as precautionary prior to clearance. (2) Density of planting and diversity, provide functional coastal habitat and that is resilient to loss of any species or cohort of species e.g. aging uniform kākū cohort from pre 1950s impacted severely by weeds Management will heighten social ecosystem services for future residents and road users such a sense of place through more pronounced coastal canopy species selection (WF9 with coastal elements), protection of fauna and green infrastructure
POLICY 4: INTEGRATION Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment. This requires: (a) co-ordinated management or control of activities within the coastal environment, and which could cross administrative boundaries, particularly: (i) the local authority boundary between the coastal marine area and land; (ii) local authority boundaries within the coastal environment, both within the coastal marine area and on land; and (iii) where hapū or iwi boundaries or rohe cross local authority boundaries; (b) working collaboratively with other bodies and agencies with responsibilities and functions relevant to resource management, such as where land or waters are held or managed for conservation purposes; and (c) particular consideration of situations where: (i) subdivision, use, or development and its effects above or below the line of mean high water springs will require, or is likely to result in, associated use or development that crosses the line of mean high water springs; or (ii) public use and enjoyment of public space in the coastal environment is affected, or is likely to be affected; or (iii) development or land management practices may be affected by physical changes to the coastal environment or potential inundation from coastal hazards, including as a result of climate change; or (iv) land use activities affect, or are likely to affect, water quality in the coastal environment and marine ecosystems through increasing sedimentation; or (v) significant adverse cumulative effects are occurring, or can be anticipated.	The management including revegetation, pest and weed control is to be implemented as per an integrated Offset Management Plan c. i. no development in the CMA is required ii. the coastal character viewable from the road will be heightened by infill of remaining vegetation proposed lot 2 and buffer planting of the access 5m fire resistant species III. as before Policy 3 iv. to be controlled by stormwater and engineering design; retention and enhancement of buffer and avoidance through location setback v. Legacy effects on vegetation will be remedied by infill of diverse coastal species

POLICY 11: INDIGENOUS BIOLOGICAL DIVERSITY (BIODIVERSITY) To protect indigenous biological diversity in the coastal environment: (a) avoid adverse effects of activities on: (i) indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists; (ii) taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened; (iii) indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare; (iv) habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare; (v) areas containing nationally significant examples of indigenous community types; and (vi) areas set aside for full or partial protection of indigenous biological diversity under other legislation; and (b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on: (i) areas of predominantly indigenous vegetation in the coastal environment; (ii) habitats in the coastal environment that are important during the vulnerable life stages of indigenous species; (iii) indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh; (iv) habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes; (v) habitats, including areas and routes, important to migratory species; and (vi) ecological corridors, and areas important for linking or maintaining biological values identified under this policy.	Within the coastal environment of the Lot significant elements include the wetland and headwater creeks & fauna with threat status. These have been avoided in the design which locates the clearance and occupation outside of a buffer of the hydrology in poor quality impacted vegetation. Fauna survey will be undertaken prior to clearance with management as necessary. The clearance area does not represent irreplaceable habitat for any fauna species, including those with threat status. The clearance area is not considered to impact connectivity of the site or landscape scale Rangitane Shrubland PNA
POLICY 14 RESTORATION OF NATURAL CHARACTER Promote restoration or rehabilitation of the natural character of the coastal environment, including by: (a) identifying areas and opportunities for restoration or rehabilitation; (b) providing policies, rules and other methods directed at restoration or rehabilitation in regional policy statements, and plans; (c) where practicable, imposing or reviewing restoration or rehabilitation conditions on resource consents and designations, including for the continuation of activities; and recognising that where degraded areas of the coastal environment require restoration or rehabilitation, possible approaches include: (i) restoring indigenous habitats and ecosystems, using local genetic stock where practicable; or (ii) encouraging natural regeneration of indigenous species, recognising the need for effective weed and animal pest management; or (iii) creating or enhancing habitat for indigenous species; or (iv) rehabilitating dunes and other natural coastal features or processes, including saline wetlands and intertidal saltmarsh; or (v) restoring and protecting riparian and intertidal margins; or (vi) reducing or eliminating discharges of contaminants; or (vii) removing redundant structures and materials that have been assessed to have minimal heritage or amenity values and when the removal is authorised by required permits, including an archaeological authority under the Historic Places Act 1993; or (viii) restoring cultural landscape features; or (ix) redesign of structures that interfere with ecosystem processes; or (x) decommissioning or restoring historic landfill and other contaminated sites which are, or have the potential to, leach material into the coastal marine area.	Opportunity for gross improvement in coastal character and resilience identified throughout the EclA process and encompassed in the Offset design to ensure functionality of wider habitat and ecosystem processes. Approaches will include C(i) – (vi) as appropriate Reduction of weeds as seed source e.g. wattle will have benefit to offsite HNC#06/47
POLICY 21 :ENHANCEMENT OF WATER QUALITY Where the quality of water in the coastal environment has deteriorated so that it is having a significant adverse effect on ecosystems, natural habitats, or water based recreational activities, or is restricting existing uses, such as aquaculture, shellfish gathering, and cultural activities, give priority to improving that quality by: (a) identifying such areas of coastal water and water bodies and including them in plans; (b) including provisions in plans to address improving water quality in the areas identified above; (c) where practicable, restoring water quality to at least a state that can support such activities and ecosystems and natural habitats; (d) requiring that stock are excluded from the coastal marine area, adjoining intertidal areas and other water bodies and riparian margins in the coastal environment, within a prescribed time frame; and (e) engaging with tangata whenua to identify areas of coastal waters where they have particular interest, for example in cultural sites, wāhi tapu, other taonga, and values such as	Unmapped creek extent and natural inland have been identified. Retention and bolstering of buffer on all Lots outside the coastal area will also contributing to these lower contour will address development potential effects with stormwater and earthworks controls outside the scope of this report

<i>mauri, and remedying, or, where remediation is not practicable, mitigating adverse effects on these areas and values.</i>	
POLICY 22 SEDIMENTATION (1) Assess and monitor sedimentation levels and impacts on the coastal environment. (2) Require that subdivision, use, or development will not result in a significant increase in sedimentation in the coastal marine area, or other coastal water. (3) Control the impacts of vegetation removal on sedimentation including the impacts of harvesting plantation forestry. (4) Reduce sediment loadings in runoff and in stormwater systems through controls on land use activities.	Potential point source sedimentation & stormwater development will be addressed in stormwater design Retention of riparian buffer and Increased density / diversity vegetation with varied root structure will decrease risk from diffuse run off from slope
POLICY 26 NATURAL DEFENCES AGAINST COASTAL HAZARDS (1) Provide where appropriate for the protection, restoration or enhancement of natural defences that protect coastal land uses, or sites of significant biodiversity, cultural or historic heritage or geological value, from coastal hazards. (2) Recognise that such natural defences include beaches, estuaries, wetlands, intertidal areas, coastal vegetation, dunes and barrier islands.	Infill revegetation and protection of remaining vegetation both within and outside but contributing to the ecological site is a key theme of the proposal to enhance functionality to intercept and control precipitation and surface/ groundwater as natural defence .

**ARCHAEOLOGICAL
ASSESSMENT OF
27 KURIPARI ROAD,
KERIKERI, BAY OF
ISLANDS**



HORIZON
ARCHAEOLOGY

ARCHAEOLOGICAL ASSESSMENT OF 27 KURIPARI ROAD, KERIKERI, BAY OF ISLANDS

Date: 20 May 2025

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1. Introduction

Christoph Hoessly and family are in the process of selling their property at 27 Kurapari Road (Lot 3 DP 415575), Kerikeri, Far North District (Figure 1 and 2). The block has been retained a mixture of

native and exotic trees and shrubs and does not contain an existing dwelling, but as part of the sale process Mr Hoessly is investigating options to develop potential house sites on the property. The block is close to the coast and in a rich archaeological landscape. As such, Horizon Archaeology Ltd was commissioned to carry out a desk-based review and field survey of the property to identify any recorded and previously unrecorded archaeological sites for the purpose of informing the planning and development process.

This report is concerned with physical evidence of past human activity; advice about Māori cultural values should be sought from tangata whenua.



Figure 1 – Location of the project area on Kurapari Road, northeast of Kerikeri, Northland (Source: LINZ).



Figure 2 – The boundary of the Hoessly property (LINZ).

2. Statutory Requirements

Heritage New Zealand administers the *Heritage New Zealand Pouhere Taonga Act 2014*. The Act makes it unlawful for any person to modify or destroy, or cause to be modified or destroyed, the whole or any part of an archaeological site without the prior authority of Heritage New Zealand. Any work that may affect an archaeological site requires an authority from Heritage New Zealand before commencement.

This process applies regardless of whether the land on which the site is located is designated, or the activity is permitted under the District or Regional Plan or a resource or building consent has been granted. The Act provides for substantial penalties for unauthorised destruction or modification. An archaeological site is defined in the *Heritage New Zealand Pouhere Taonga Act 2014* as any place in New Zealand (including buildings, structures or shipwrecks) that was associated with pre-1900 human activity, where there is evidence relating to the history of New Zealand that can be investigated using archaeological methods. The archaeological authority process applies to all sites that fit the legal definition, regardless of whether:

- The site is recorded in the NZ Archaeological Association Site Recording Scheme or recorded on the New Zealand Heritage List
- The site is not recorded and only becomes obvious because of ground disturbance
- The activity is permitted under a district or regional plan, or a resource or building consent has been granted.

An archaeological authority is required for any work that may affect any sites identified within the project area. Authorities can be applied for under a general authority, in respect to a particular site or sites, or for all sites that may be present within a specific area.

The Resource Management Act 1991 requires City, District and Regional Councils to manage the use, development, and protection of natural and physical resources in a way that provides for the wellbeing of today's communities while safeguarding the options of future generations. The protection of historic heritage from inappropriate subdivision, use, and development is identified as a matter of national importance. Where resource consent is required for any activity, the assessment of effects is required to address historic heritage.

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

- Historic sites, structures, places, and areas
- Archaeological sites
- Sites of significance to Māori, including wāhi tapū
- Surroundings associated with the natural and physical resources (RMA section 2).

The primary means by which councils meet the requirements of the RMA is via Regional, District or City Plans. Plans may include inventories of heritage items, rules, and incentives for the protection of heritage.

The Burial and Cremation Act (1964) and Coroners Act (2006) govern the protocols associated with the discovery and exhumation of human remains.

The Protected Objects Act (1975) is administered by the Ministry for Culture and Heritage and regulates the sale, trade and ownership of taonga tūturu.

3. Methodology and Limitations

This archaeological review involved analysis of ArchSite (New Zealand Archaeological Association Archaeological Site Recording Scheme) to understand site distribution in the project area and the potential location of unrecorded sites. High-quality modern aerial photographs (LINZ) and historical aerials (Retrolens) together with historical maps (Quickmap) and LiDAR data were examined to identify the extent of known sites and to determine the risk of encountering unrecorded archaeological features during works. Relevant previous archaeological reports and other documentary sources were also consulted.

The results of the desk-based assessment were followed up by an archaeological survey conducted on the 20th of May 2025 by Dr Andy Brown (Horizon Archaeology Ltd). Full access to the property was granted, although the vegetation did obscure survey in some areas.

No detailed plans for houses, accessways or service trenches has been developed. This assessment is based on 3 indicative house site locations supplied to the author. To ensure these areas were appropriately assessed, a centroid GPS point for each area was loaded into a GPS and a 50m buffer around each point was surveyed intensively (Figure 3).



Figure 3 – Indicative house site locations with buffer zones indicating areas that were intensively surveyed (locations based on map supplied by C. Hoessly).

4. Archaeological and Historical Context

The project area is adjacent to the Kerikeri Inlet, which forms part of the northwestern Bay of Islands. The vast majority of sites in this area relate to pre-European Māori occupation, although a cluster of European sites are concentrated around Kerikeri (Figure 4).

The most common archaeological site type near the subject property are midden on the coastal margins. Pits and terraces are also present on areas of high ground, near where crops may have been grown. Several large pā are also present, particularly on prominent high-ground, such as Pakewhau and Tareha pā, east of the project area near the meeting of Kerikeri and Te Puna Inlets.

The nearest recorded archaeological site is located on the Rangitane ridgeline. P05/18 was originally recorded as ‘Rangitane pā’ on an early geological map of the area, the designation of the site as a pā was carried over to the earliest archaeological recording in 1979. Since that time the area to the northwest of the subject property has had a considerable amount of archaeological attention associated with cellular towers, residential development and forestry (e.g., Phillips 2005; Coster 2024, Callaghan and Johnson 2019). Various archaeological surveys have determined the site was an ‘open’ terrace site, rather than a defended pā. Phillips’ (2005) excavations identified highly disturbed Māori occupation dating to the late 17th century.

The subject property was originally part of the Waitete Block, which was purchased by James Shepherd in 1837 (Figure 5). Shepherd claimed a 400 acres for the block but was awarded 343 when the Aroha block was excluded from the award (Stirling and Towers 2007). The block was sold to Shepherd by Tirarau, but both Hikuwai Tango (who resided at Pakewhau) and Wiremu Hau

claimed unextinguished interests in the block. Both men sought hearings about these interests and their perception that Shepherd was claiming much more land than had been originally outlined. Shepherd's original survey of his claim took in around 400 acres, the boundaries were arrived at through discussion with local Māori. In 1860, at an Auckland sitting of the Court (i.e., away from local scrutiny) Shepherd presented a survey completed in the years prior (Figure 5), which observed the boundaries as he saw them. The result was a claim nearly three times the size of the original claim (1,187 acres; Stirling and Towers 2007). Shepherd's extended sense of his claim's boundaries drove conflict with the Crown over his perception that the nearby Hikuwai Crown purchase, which abutted Waitete to the north (see Figure 5), encroached on his land. Shepherd's claim was eventually acquired by the crown.

By the late nineteenth century and into the early twentieth century gum digging became a key economic activity in Northland. Following the passing of the Kauri Gum Industry Act (1898) gum digging reserves were formed including the Rangitane Kauri Gum Reserve immediately north of the subject property (Figure 7). The subject property was surveyed and sold into private ownership from around 1905 (Figure 8).

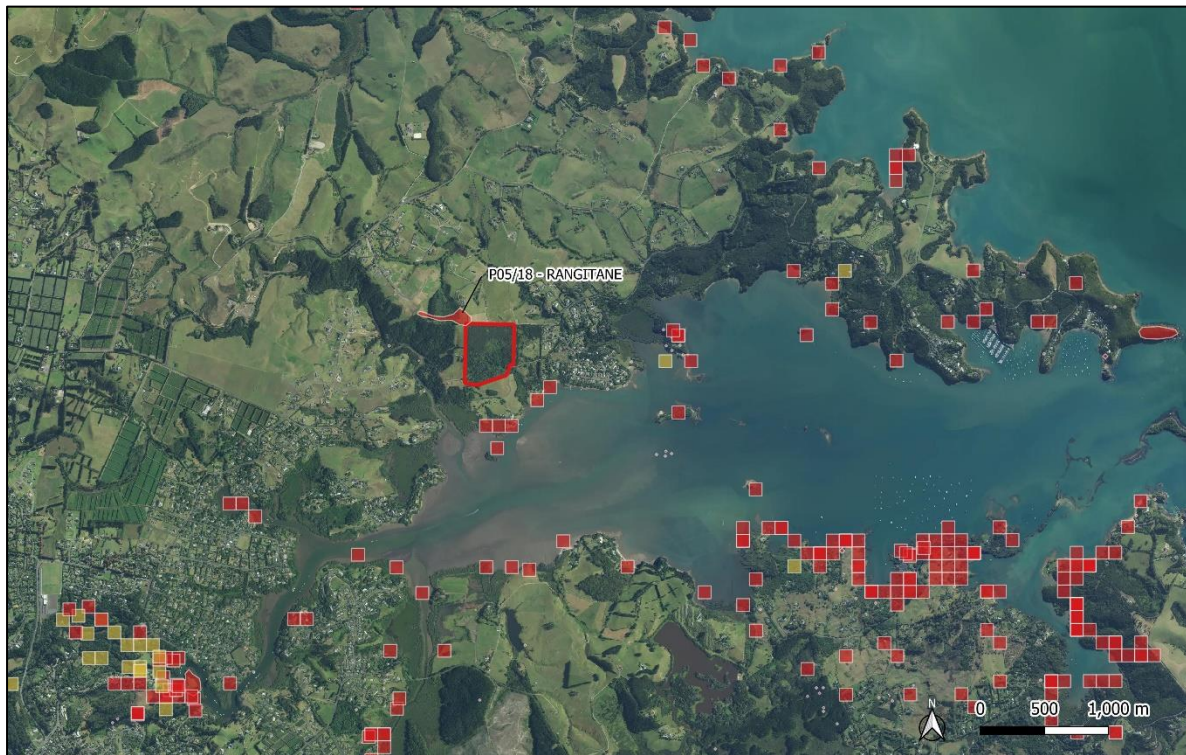


Figure 4 – Archaeological site distribution in the Kerikeri Inlet. Red filled polygons represent Māori sites, yellow polygons are European sites, red outline shows subject property (Source, ArchSite).

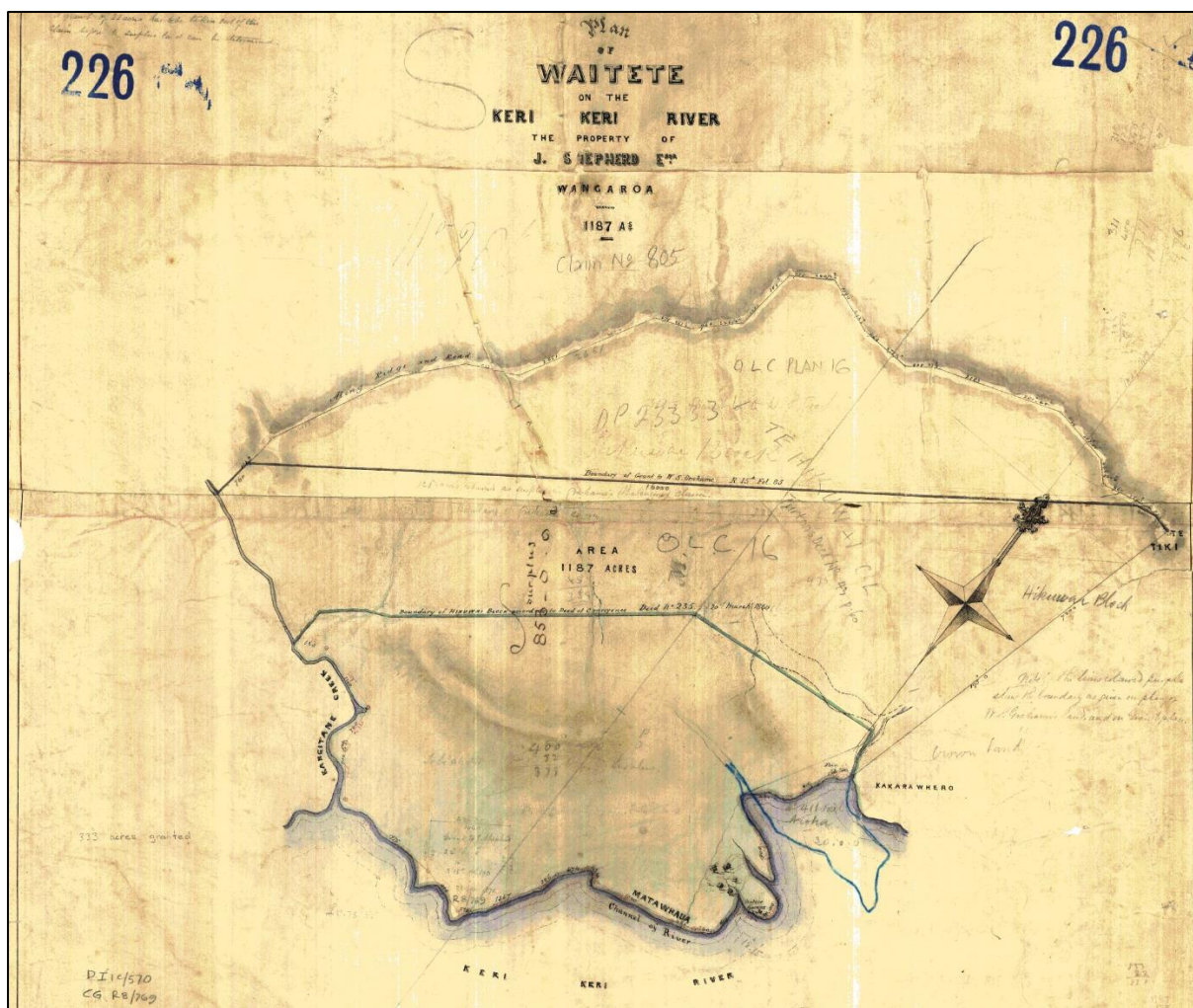


Figure 5 – Old Land Claim 226 (1858), showing the enlarged area of Waitete claimed by James Shepherd (Premise).

TRANSLATION.		1837. 21 April.
HEAR all men this book. Tirarau has made over to James Shepherd, Missionary his place called Waitete to be the property of James Shepherd, for him and his heirs for ever; the said place and all things growing on the said place.		WAITETE. James Shepherd.
The boundaries of the said place are these. On the West Rangitane, following the river to the road to Mangonui; on the North the Mangonui road; following the ridge till within sight of Mangonui following the road to the Tiki; on the East, proceeding from the Tiki, descending to Kakarawero and thence to the Kerikeri river: on the South Kakarawero, following the beach to Waitete, thence to Pirikawan, following the river to Rangitane. And the payment for the said place now made over by Tirarau to James Shepherd, Missionary, are these here written: 5 Blankets, 5 Hoes, 3 Iron pots, 5 Axes, 1 Adze, 5 Plane irons, 6 Combs, 1 piece of Print, 100 fish hooks, 6 scizzors, 10 Half crowns 200 figs Tobacco.		[400 acres.] Receipt.
And because the place now made over by Tirarau to James Shepherd is to be for him and his children for ever, therefore we write our names and our marks on the 21st day of April in the year of our Lord Jesus Christ 1837.		
[Witnesses.]	[Signatures.]	
We have received 2 Blankets 2 Spades 1 Hoe 1 Iron pot 2 axes 2 lbs. Tobacco of Mr. Shepherd Missionary at Kerikeri for the place made over by Tirarau to Mr. Shepherd, the names of which place are Rangitane, Waitete, Aroha, Kakarawero, the Tiki, following the road round to Rangitane.		Wakarua's receipt.
[Witnesses.]	[Signatures.]	
A True Transcript of Certified Copy of Original Deed and Translation.		No. 333c.
H. HANSON TURTON.		O.L.O.
Wellington, 23rd July, 1879.		

Figure 6 – Details of the initial purchase of the block (Turton 1886).

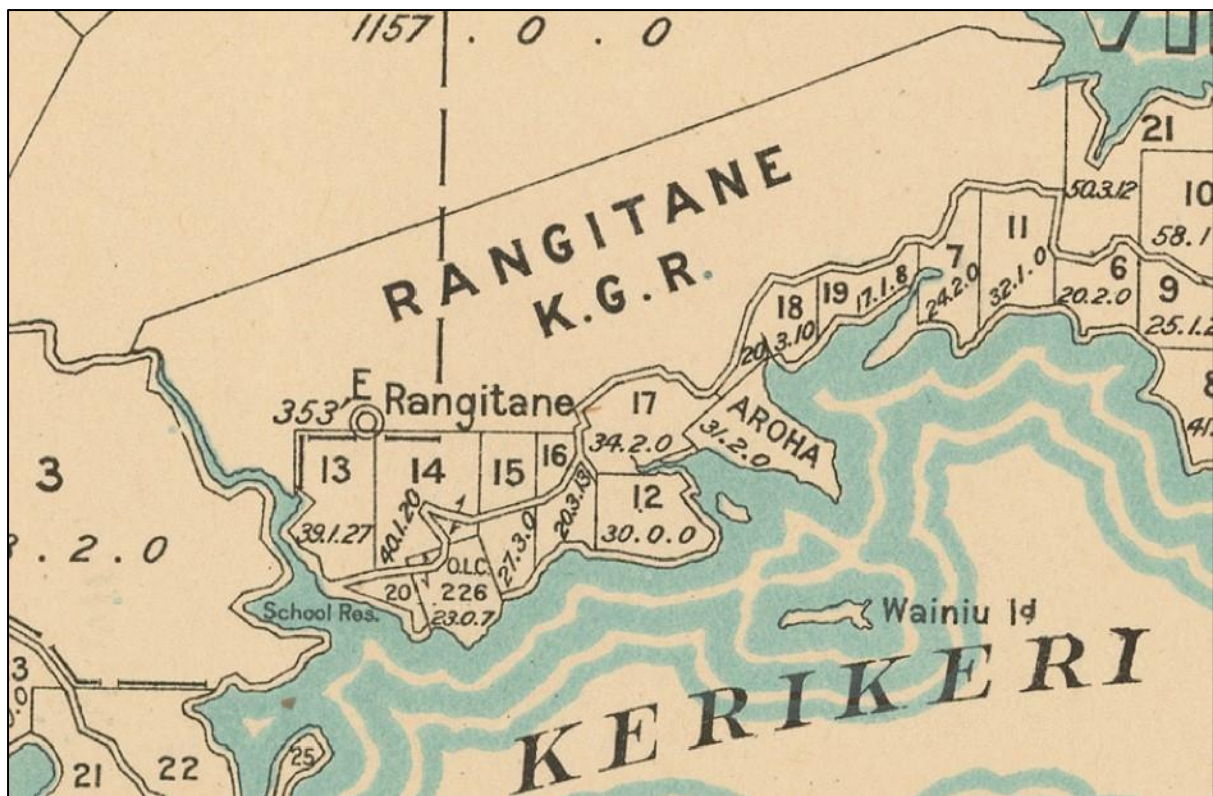


Figure 7 – A survey district map showing the subject property (Lot 14) immediately to the south of the Rangitane Kauri Gum Reserve.



Figure 8 – SO 13649 (1905) showing the subject property (Lot 14) and nearby blocks (Premise).

5. Results – Desk Based Review

Review of the New Zealand Archaeological Association site recording scheme (via the online platform ArchSite) identified a single site on the property (Figure 9). This site relates to Māori occupation of the Rangitane ridgeline, which overlaps at its eastern extent with the subject property. However, a review of various site plans (e.g., Figure 10) shows that no recorded features are currently recorded in the Hoessly property, and the recorded site extent is the result of previously inaccurate methods of recorded polygons in ArchSite.

The review of modern and historical aerial photographs showed no evidence of previously unrecorded sites. Historical aerials show that the property has been retained largely in scrub and vegetation from the 1950s with limited development.

LiDAR-derived models and historical survey plans did not show any evidence of archaeological features or deposits on the property.

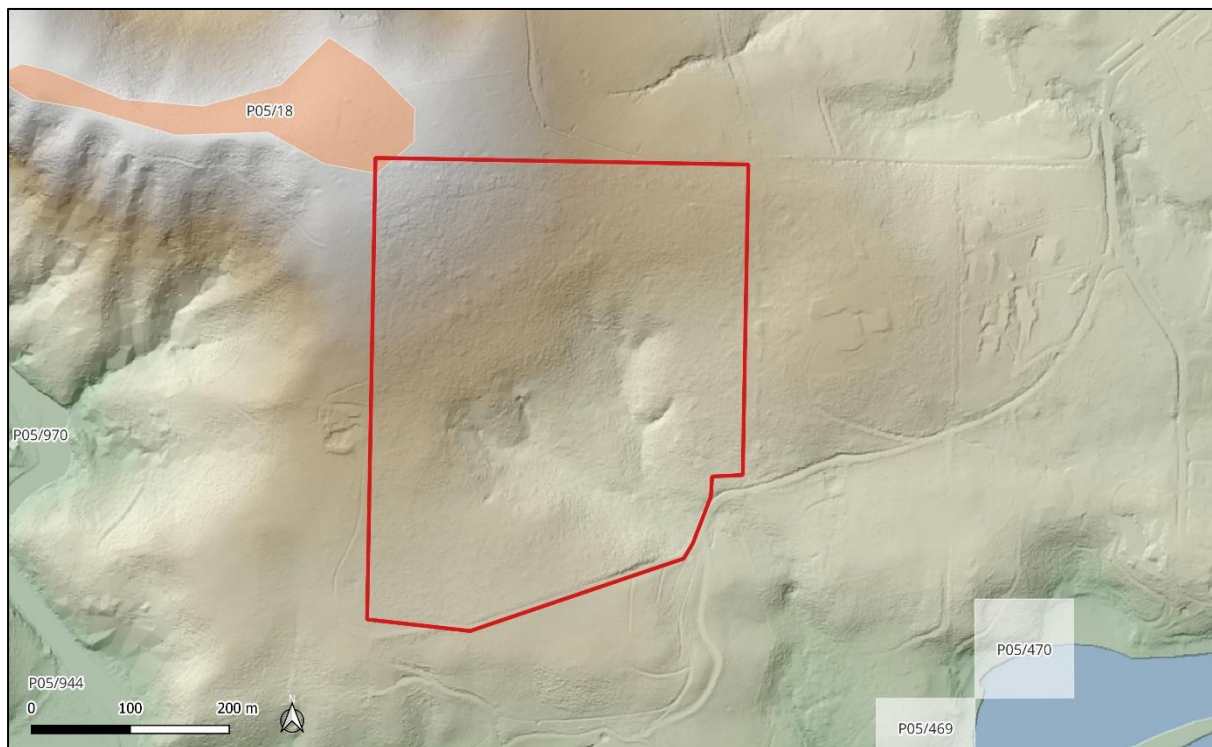


Figure 9 – Recorded archaeological sites near the subject property (red polygon). The extent of P05/18 overlaps very slightly with the property (ArchSite).

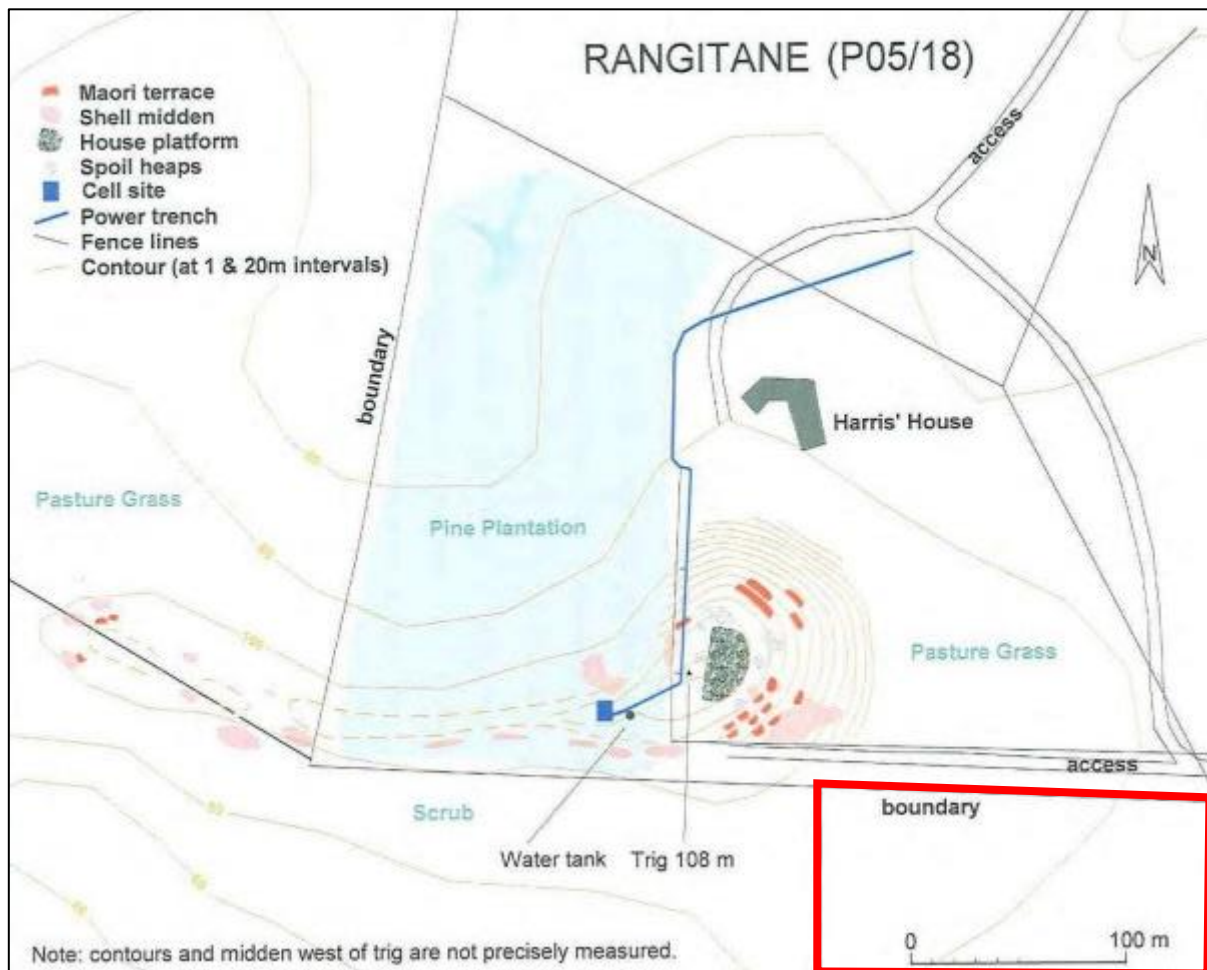


Figure 10 – Phillips' (2005) site plan showing the visible extent of features in relation to the subject property (red polygon).

6. Results – Field Survey

Archaeological survey was undertaken on the 20th of May 2025. The block is vegetated, and ground visibility was poor in some areas. The survey consisted of a walkover of the property, with targeted inspection of areas near P05/18 (NW corner of the property) and the proposed house sites. Probing was carried out across the property with more intensive focus on potential house sites.

Survey of the northwest corner of the property did not identify any features, such as terraces, associated with P05/18. The absence of features is probably due to this section of the property being on sloping ground well below the high ground of Rangitane, where features have previously been recorded.

Survey and probing across the potential house sites and the balance of the property did not identify any archaeological features or deposits.

7. Archaeological value & assessment of effects

7.1 Assessment of archaeological value

Archaeological values relate to the potential of a place to provide evidence of the history of New Zealand (Gumbley 1995). This potential is framed within the existing body of archaeological knowledge, and current research themes and questions relating to understanding New Zealand's past (Walton 2002).

This desktop exercise and field survey have revealed no evidence for archaeological sites within the project area.

7.2 Assessment of effects

Detailed plans are not currently available. However, based on the absence of archaeological sites on the property, the potential effects of any development on the property is regarded as low.

8. Summary and Recommendations

- i. Review of the NZAA site recording scheme indicated that a small portion of P05/18 was recorded in the northwest section of the property. Further desk-based research indicated that no previously recorded features were present in the property, the field survey also did not find any previously unrecorded features. The site extent of P05/18 has been amended; therefore, there are no previously recorded archaeological sites on the property.
- ii. Based on the desk-based assessment and field survey (including probing) it is considered that the risk of encountering unrecorded archaeological sites during works associated with the construction of dwellings is low and does not warrant the need for a prior archaeological authority from Heritage New Zealand.
- iii. However, given the proximity to other sites and poor visibility in parts of the property during survey, a residual risk remains. Therefore, an Archaeological Site Discovery Protocol should be used during all ground disturbances. All staff and contractors should be made aware of the requirements of the protocol, prior to the commencement of any ground disturbance, to ensure that appropriate action is taken in the unlikely event that buried archaeological deposits are encountered.
- iv. Although regarded as low, the greatest residual risk associated with earthworks is in the northwest of the property near P05/18. Earthworks in this area should be avoided if possible.
- v. Any archaeological features that may be encountered are subject to the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. If archaeological material is encountered during ground disturbance, all work in the area of the find must cease and further archaeological advice should be obtained.

9. References

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Stirling, B and Towers, R. 2007. Not With the Sword But With the Pen: The Taking of the Northland Old Land Claims. Part 1: Historical Overview. Waitangi Tribunal Research Report, WAI 1040, A009.

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Walton, T. 2002. Assessing archaeological value. *Archaeology in New Zealand* 45(3):220-236.

SITE	88 Kurapari Road, Kerikeri
LEGAL DESCRIPTION	Lot 3 DP 415575
PROJECT	Proposed 4-Lot Subdivision (Lots 2-4 for Assessment)
CLIENT	Markus Weise
REFERENCE NO.	146522 (Rev D)
DOCUMENT	Site Assessment Report
STATUS/REVISION NO.	Revision D – Amendments to Subdivision Scheme Plan and Site Plan
DATE OF ISSUE	4 August 2026

Report Prepared For	Email
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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:	Proposed 4-Lot Subdivision (Lots 2 - 4 for Assessment).
Development Proposals Supplied:	Yes – Subdivision Scheme Plan (1 sheet).
NZS3604 Type Structure(s):	Future structures are assumed to be.
Geology Encountered:	Lots 2 & 3: Kerikeri Volcanic Group. Lot 4: Kerikeri Volcanic Group across the eastern end of the designated building platform (DBP) and Waipapa Group across the western end.
Topsoil Encountered:	Surficial layers of topsoil were encountered to depths ranging between 0.10m and 0.25m below present ground level (bpgl).
Overall Site Gradient in Proximity to Development:	Lot 2: The DBP is positioned on broad, near level to gently sloping crest land that averages less than 5°. Approximately 37m beyond the eastern corner of the DBP, a long gully side flank falls approximately 15m, at gradients ranging between 17° and 21°, down to the gully floor. Lot 3: The DBP is positioned on a southeast facing, gently sloping flank that averages less than 8°. Approximately 10m beyond the western corner of the DBP, a long gully side flank falls approximately 35m, at gradients ranging between 10° and 22°, down to the gully floor. Lot 4: The DBP is positioned on a southwest facing, gently sloping flank that averages less than 9°. Approximately 17m beyond the western corner of the DBP, a short gully side flank falls approximately 8m, at gradients ranging between 11° and 28°, down to the gully floor.
Site Stability Risk:	Our computer-based stability analysis indicates a Low Risk of Global Land Instability across all three DBPs, provided that our recommendations within this report are adhered to.
Liquefaction Risk:	Negligible risk of liquefaction susceptibility.
Suitable Foundation Type(s):	Shallow foundations will be suitable to support future residential developments within the Lot 2-4 DBPs provided: Lots 2 and 3 foundations are designed to accommodate vertical movement of soil associated with Soil Reactivity Class M – Moderately Reactive, and

- Lot 4 foundations are designed to accommodate vertical movement of soil associated with Soil Reactivity **Class H – Highly Reactive**.
- Leading-Edge Piles are required where ground surface inclination is steeper than 1V:4H (14°) within 5.0m of any future, permanent structure to provide resistance to shallow soil movement.

Shallow Soil Bearing Capacity:	Yes – Natural Soils and Engineered Hardfill only. Geotechnical Ultimate Bearing Capacity = 300kPa.
Minimum Footing Embedment Depth:	0.60m (Class M) or 0.9m (Class H) below finished engineered ground levels and 0.30m into competent natural ground, whichever is deeper.
NZS1170.5:2004 Site Subsoil Classification:	Class C – Shallow Soil stratigraphy.
Earthworks:	At this preliminary stage, we are not aware of any future earthwork proposals. We generally envisage that only minor engineered cut-fill earthwork operations will be required to create level building platforms for any future concrete floor slab proposal within the DBPs. <u>We recommend no earthworks are undertaken across both DBPs until site-specific proposals have been Geotechnically reviewed during the Building Consent stage. Such assessments will need to provide appropriate cut-fill parameters and limits.</u>
Consent Application Report Suitable for:	Resource Consent. Finalised future development proposals require Geotechnical review during the Building Consent stage.
National Policy Statement:	Refer to Section 8.6 for Risk Matrix Assessment Table.

The surface area of the subject site is approximately 16ha and is accessed approximately along the middle of the southern boundary. No driveway formation is currently present; however, a concrete formation is proposed. Aside from the cleared existing development area on proposed Lot 1 near the middle of the southern boundary, the site is covered in a mix of exotic and native scrub and shrubland, regenerated from approximately the 1960's.

Topographically speaking, the northern portion of the site is located on a southeast to east facing, gentle to moderately inclined flank, falling towards a large gully feature that essentially covers much of the southern portion of the site. The gully side flanks are long and moderately to steeply sloping in nature, descending at gradients ranging between 14° and 28°. Above the gully, near level to gently sloping crest land straddles the western, southwestern and eastern boundaries.

The Far North District Council (FNDC) online GIS Water Services Map indicates that public underground service connections are not available to the property.

4. DEVELOPMENT PROPOSALS

Based on our review of the Subdivision Scheme Plan supplied, we understand that it is proposed to subdivide the existing property into four individual allotments encompassing approximately 4ha each, as depicted in Figure 2 below.

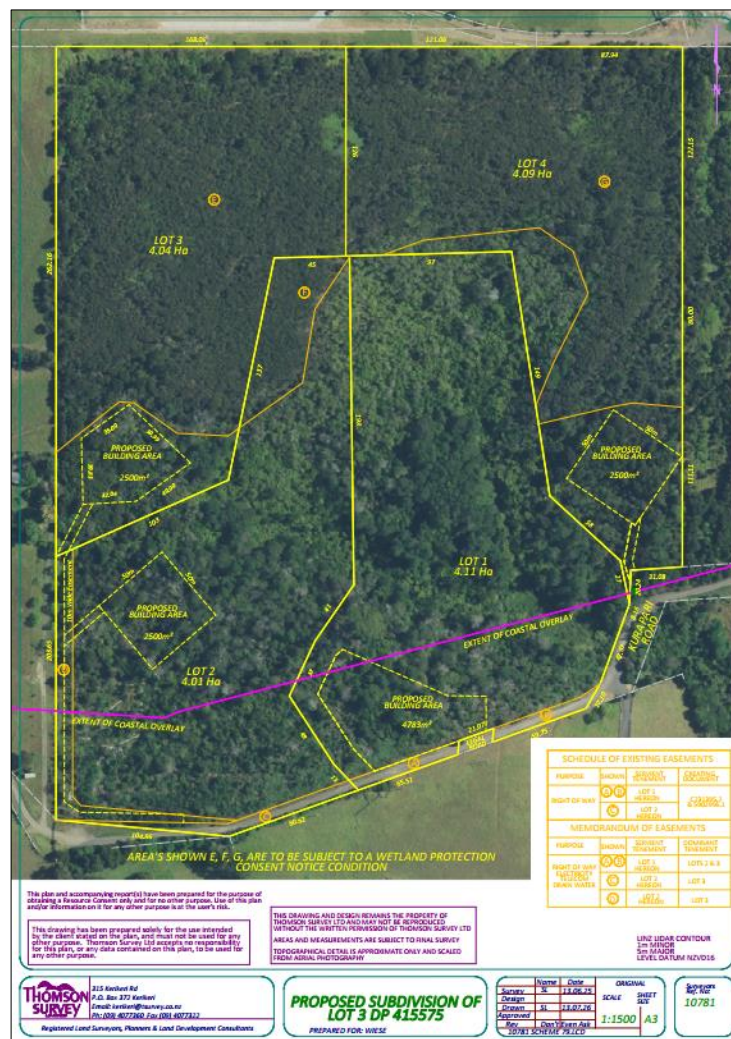


Figure 2: Subdivision Scheme Plan depicting the proposed development (from Thomson Survey).

WJL were previously engaged to provide a geotechnical assessment and structural design pertaining to a Building Consent approved residential development at proposed Lot 1, which is currently being constructed under the supervision of WJL. Findings from our geotechnical assessment are summarised in Section 5.3 below. As such, proposed Lot 1 is excluded from our assessments of this report.

We have since been engaged to provide geotechnical assessments along with preliminary design recommendations pertaining to future residential development within 900m² (30m x 30m) designated building platforms (DBP) at proposed Lots 2-3 and a 600m² (20m x 20m) DBP at proposed Lot 4, as depicted on our appended Site Plan. For the purposes of this report, we have assumed any future development will comprise of lightweight buildings, designed and constructed to apply loads generally in keeping with the requirements of NZS3604:2011.

At this preliminary stage, we are not aware of any future earthwork proposals. We generally envisage that only minor engineered cut-fill earthwork operations will be required to create level building platforms for any future concrete floor slab proposal within the DBPs.

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

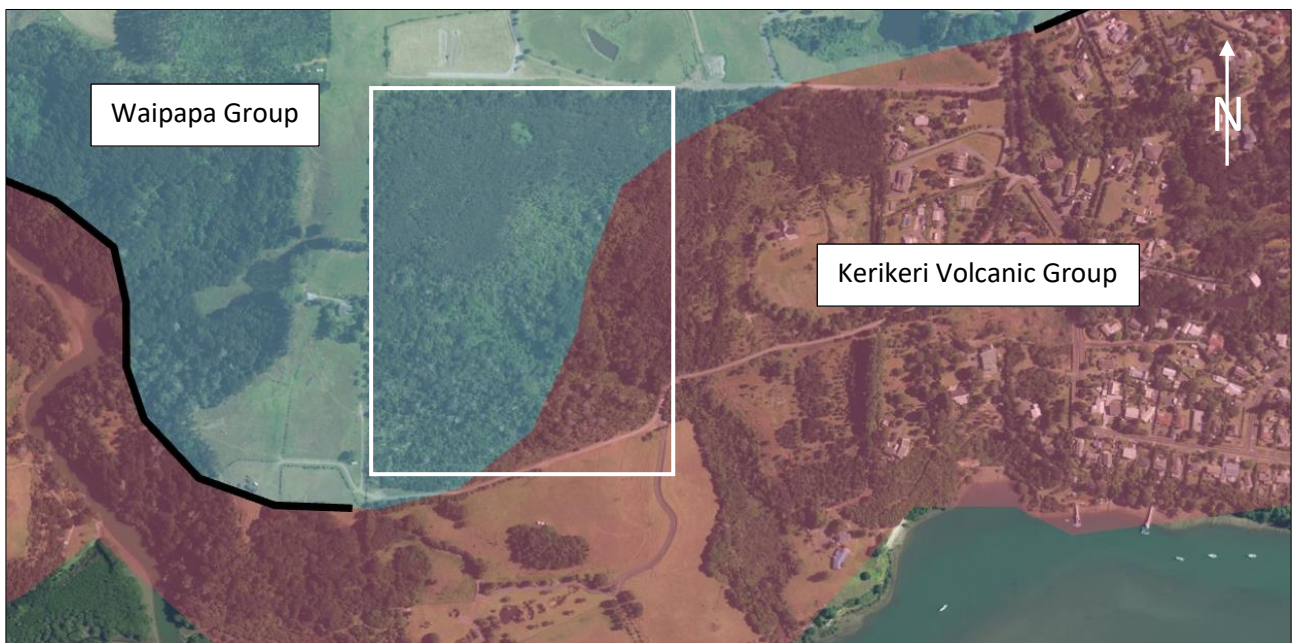
5. DESKTOP STUDY

5.1. GEOLOGY

Reference to the New Zealand Geology Web Map hosted by GNS Science indicates that the southeastern portion of the subject block, including the proposed development location, is underlain by deposits of the **Kerikeri Volcanic Group Late Miocene Basalt of Kaikohe – Bay of Islands Volcanic Field**. These deposits are approximately 9.7 to 1.8 million years in age and described as; *“Basalt lava, volcanic plugs and minor tuff”*.

The remaining northeastern area of the block is underlain by deposits of the **Waipapa Group Sandstone and Siltstone (Waipapa Terrane)**. These deposits are approximately 270 to 154 million years in age and described as; *“Massive to thin bedded, lithic volcanoclastic metasandstone and argillite, with tectonically enclosed basalt, chert and siliceous argillite.”*

Based on geological age, we generally assume that Waipapa Group deposits will be the basement rock underlying the entire site at depth.



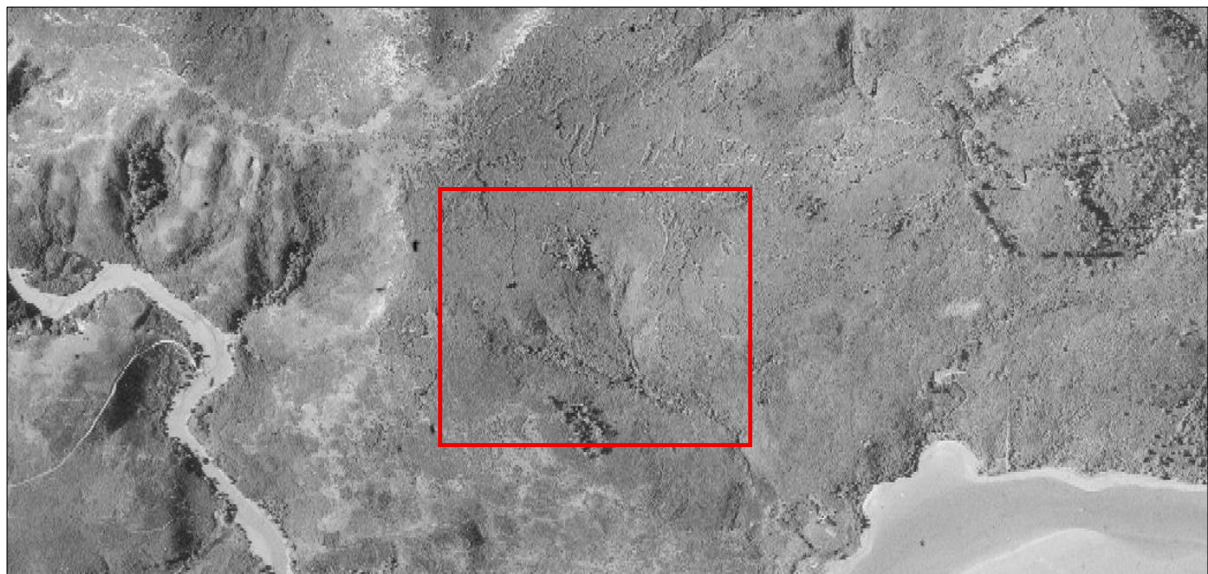
*Figure 3: Screenshot from New Zealand Geology Web Map hosted by GNS Science.
White rectangle approximately depicts site location.*

5.2. HISTORICAL AERIAL PHOTOGRAPHY REVIEW

A historical aerial photography review was undertaken to evaluate any slope instability features or changes in landform at the property. Aerial images from 1950 have been reviewed and compared to the present-day conditions.

There were no visible significant geomorphological changes in the landscape or feature consistent with major ground instability, indicating a period of stable ground conditions between 1950 and 2026.

In 1950, the site largely appeared to be covered in scrub (see Figure 4 below). By 1968, the site had been planted in a mix of exotic and native scrub and shrubland which has continued to regenerate until the present-day (see Figure 5 below).



*Figure 4: Historical aerial photo from 1950 (Source: <https://retrolens.co.nz>).
Red rectangle approximately depicts site location.*



*Figure 5: Aerial photo from December 2025 (Source: Google Earth).
Red rectangle approximately depicts property location.*

5.3. NATURAL HAZARDS

Reference has been made to the FNDC online GIS Hazard Maps and Engineering Standards (Version 0.6, dated: May 2023) for the following hazards on the site:

- Stability Hazard Zone, and
- Liquefaction.

The site is not identified by the FNDC or Northland Regional Council online GIS Hazard Maps as being susceptible to flooding or erosion.

5.3.1. STABILITY HAZARD ZONE

In accordance with Section 2.3.3 of the FNDC Engineering Standards, all three DBPs and immediate bounding land are assessed as being within Low Stability Hazard Zones. The downslope steeper gully side flanks are within Moderate to High Stability Hazard Zones depending on ground inclination.

Please refer to Sections 8.1 to 8.3 further below for further detailed assessment of slope stability.

5.3.2. LIQUEFACTION

The FNDC online GIS Hazards Map indicates the site is within an 'Unlikely' Liquefaction Vulnerability Zone.

Please refer to Section 8.4 below for further detailed assessment of liquefaction.

5.4. HISTORICAL GEOTECHNICAL REPORTS

We have reviewed our previous Site-Specific Report (SSR) pertaining to the residential development that is currently being constructed on proposed Lot 1, dated 27 February 2026 (Ref: 144264 (Revision B)).

In reviewing the SSR, we note the following summarised conclusions and recommendations were given:

- Our computer-based slope stability analysis indicates a Low Risk of Global Land Instability at the proposed development provided that our recommendations are adhered to,
- Negligible risk of liquefaction susceptibility,
- A shallow soil geotechnical ultimate bearing capacity of 300kPa was available,
- An expansive soil classification of Class M – Moderately Reactive,
- A minimum footing embedment depth of 0.60m below finished ground levels, and
- A NZS1170.5 site subsoil classification of Class C – Shallow Soil stratigraphy.

6. GEOTECHNICAL INVESTIGATION

Our fieldwork, as shown on our appended Site Plan, was undertaken on 7 May 2026 and involved drilling 6 (no.) 50mm diameter hand auger boreholes (HA01 to HA06 inclusive) to depths ranging between 2.0m and 4.4m below present ground level (bpgl).

Additionally, we have drawn 3 (no.) Cross-sections A-A' to C-C' (Drawing Nos. 146522-G610 to 146552-G612), using 1.0m LiDAR contours sourced from the Land Information New Zealand (LINZ) database to represent of the topography of each DBP 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), dated December 2005.

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

7.1. TOPSOIL

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

7.2. NATURAL GROUND

Aside from the western end of the Lot 4 DBP, the underlying natural deposits encountered were consistent with our expectations of Kerikeri Volcanic Group soils, comprising very stiff to hard, gravelly SILT and SILT with trace of to some clay, until termination at depth. At the western end of the Lot 4 DBP, HA06 encountered deposits consistent with our expectations of Waipapa Group soils, comprising of very stiff clayey SILT until termination on harder deposits at a depth of 2.1m bpgl.

Measured in-situ BS1377 adjusted peak Vane Shear Strengths within the boreholes ranged between 108kPa 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 could not penetrate the soil (UTP).

The ratio of peak to remoulded vane shear strength values measured within the boreholes ranged between 1.3 and 3.3, indicating the underlying subsoils are ‘Insensitive to Moderately Sensitive’ subgrade.

Sensitive soil subgrades require protection from rain, wind, etc., and to avoid (or minimize) heavy construction traffic and vibrating plants.

7.3. GROUNDWATER

Groundwater was not encountered within any of the boreholes on the day of our investigation.

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)	Groundwater Depth (m)
HA01	3.0	0.25	120 - 195+ / UTP	NE
HA02	4.4 ⁽¹⁾	0.20	110 – 197+ / UTP	NE
HA03	3.6 ⁽¹⁾	0.20	108 - 195+ / UTP	NE
HA04	2.0 ⁽¹⁾	0.20	UTP	NE
HA05	3.0	0.25	147 - 197+ / UTP	NE
HA06	2.1 ⁽¹⁾	0.10	197+ / UTP	NE

Table Note: (1) Too hard to auger, NE = Not encountered.

7.5. EXPANSIVE SOILS

Naturally occurring, seasonal moisture variations are a strong characteristic of most Upper North Island soils, which typically results 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 can be a significant risk to buildings.

In this instance, without any laboratory testing, but instead adopting the visual-tactile method as per AS2870, we recommend the following classifications for proposed Lots 2-4:

Lots 2 & 3

Considering the no to low plasticity of the underlying volcanic gravelly silt and silt deposits encountered across both DBPs, which included only trace of to some clay, we have adopted the following conservative primary classification estimate of the site subsoils as follows:

- NZBC B1 Expansive Soil Class M
- Upper Limit of Characteristic surface movement (y_s) 44mm

Lot 4

Considering the geological difference encountered across the DBP, consisting of volcanic gravelly silt and silt deposits across the eastern end and Waipapa Group clayey silt deposits across the western end, we have adopted the following conservative primary classification estimate of the site subsoils as follows:

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

Depending on the final placement of a future residential development at Lot 4, the classification given above might possibly be able to be lessened to Class M; however, this will need to be determined via a site-specific assessment during the Building Consent stage once future development proposals have been finalised.

Effects of expansive soils for the future construction will require mitigation by way of a specific engineering design (SED). Preliminary foundation design recommendations are given in the appropriate Conclusion and Recommendation sections below.

8. GEOTECHNICAL ASSESSMENT

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

- Qualitative (Lots 2 and 4) and quantitative (Lot 3) slope stability, and
- Liquefaction susceptibility assessments (Lots 2-4).

8.1. QUALITATIVE SLOPE STABILITY (LOTS 2 & 4)

The Lot 2 DBP is positioned on broad, near level to gently sloping crest land that averages less than 5°. Approximately 37m beyond the eastern corner of the DBP, a long gully side flank falls approximately 15m, at gradients ranging between 17° and 21°, down to the gully floor.

The Lot 4 DBP is positioned on a southwest facing, gently sloping flank that averages less than 9°. Approximately 17m beyond the western corner of the DBP, a short gully side flank falls approximately 8m, at gradients ranging between 11° and 28°, down to the gully floor.

Our assessment also considered the following:

- Very stiff to hard soils of the Kerikeri Volcanic Group and Waipapa Group encountered during our investigations,
- Groundwater was not present within any of the boreholes on the day of our investigation,
- There are no known active faults traversing through or close to the DBPs,
- No visual signs of ground instability were observed at the time of our investigation. A review of historical aerial photography confirms the absence of any obvious slope instability,
- Both DBPs and surrounding influential land are covered in very dense regenerating bush,
- Both DBPs are located on near level to gently sloping crest land, offset no less than 17m from moderately inclined gully flanks,
- A long-term 1V:4H (14°) regression line rising from the toe of the eastern gully flank up to the Lot 2 DBP daylight approximately 18m beyond the DBP, which we deem to be a suitable stability margin (see appended Cross-section A-A'), and
- A long-term 1V:4H (14°) regression line rising from the toe of the southwestern gully flank up to the Lot 4 DBP daylight approximately 6m beyond the DBP, which we deem to be a suitable stability margin (see appended Cross-section C-C').

8.2. QUANTITATIVE SLOPE STABILITY (LOT 3)

The Lot 3 DBP is positioned on a southeast facing, gently sloping flank that averages less than 8°. Approximately 10m beyond the western corner of the DBP, a long gully side flank falls approximately 35m, at average gradients ranging between 10° and 22°, down to the gully floor. A long-term 1V:4H (14°) regression line rising from the toe of the gully flank up to the DBP daylight in the middle of the DBP, triggering the need for slope stability analysis modelling.

Slope stability analyses were undertaken on Cross-section B-B' using computer program Slide 2 by Rocscience Limited. Theoretical non-circular (composite) surfaces were assessed using the Spencer and GLE / Morgenstern-Price methods.

An assumed Uniformly Distributed Load (UDL) of 10kPa was applied to represent the surcharge load of a future residential development.

The stability analyses have been undertaken for existing conditions (moderate groundwater), worst-case ground conditions (elevated groundwater) and extreme scenarios (seismic loading).

A Peak Ground Acceleration (PGA) value of 0.19g (ULS) was used for the 500-year seismic event, along with an effective earthquake magnitude of 6.5 as recommended by the NZGS (Earthquake Geotechnical Engineering Practice Module 1, dated November 2021).

Effective shear stress (shear strength) parameters were used for our assessment based on experience of the geology and using lower-bound soil parameters under normal and extreme groundwater conditions. Undrained soil strength parameters (no friction angle) were used to model the extreme conditions of a seismic event.

The soil strength parameters used in the stability assessment are shown in Table 2 below:

Table 2: Effective Shear Stress (Shear Strength) Parameters

Soil Parameters	Kerikeri Volcanic Group Soils	Inferred Basalt Rock Stratum
Unit Weight, γ (kN/m ³)	18	20
Effective Cohesion c' (kPa)	5	6
Friction Angle, ϕ' (°)	30	32
Undrained (no ϕ') S_u	85	225

We have adopted the following scenarios:

- Moderate Groundwater Level.** Long-term stability when modelling the existing ground conditions and assuming a groundwater level at a depth of approximately 4.0m below the DBP.
Factor of Safety (FoS) required >1.5
- Elevated Groundwater Level.** Transient (medium-term) stability when modelling the worst-case scenario and assuming a raised groundwater level at a depth of approximately 1.0m below the DBP.
FoS required >1.3.

It is important to consider that the computer model conservatively does not assess the further beneficial effects of very dense vegetation cover across the DBP and wider surrounding land, such as root binding and negative pore water pressure generated by the vegetation.

Also, construction of future developments and sealed surfaces is expected to intercept and redirect stormwater in a controlled fashion, such that ponding of rainwater and infiltration into the ground that would otherwise create extremely elevated groundwater conditions is highly unlikely. Furthermore, the development area is situated on elevated volcanic crest, with good water-shedding characteristics. Groundwater was also not encountered in any of the boreholes on the day of our investigation.

As a result, it is anticipated that groundwater levels are likely to remain deeper than modelled, hence the elevated groundwater scenario represents a 'sensitivity' check.

3. **Seismic Loading.** Short-term stability when modelling extreme ground conditions under a 500-year seismic event and assuming a moderate groundwater level at a depth of approximately 4.0m below the DBP.

FoS required >1.1.

A summary of the calculated minimum FoS against failure across the proposed shed building site for each of the above scenarios is shown in Table 3 below:

Table 3: Stability Analysis Results – Post-Development (Proposed)

Section	Design Conditions	FoS within DBP		Compliance
		Required	Calculated	
A-A'	Moderate Groundwater, plus Surcharge Load	≥1.5	1.66	Yes
	Elevated Groundwater, plus Surcharge Load	≥1.3	1.31	Yes
	Moderate Groundwater, plus Surcharge Load, plus Seismic Load	≥1.1	1.15	Yes

8.3. SLOPE STABILITY CONCLUSIONS

Based on our qualitative and quantitative assessments above, land instability is not considered to be a constraint or risk to the Lot 2-4 DBPs, provided future design and construction is undertaken in strict accordance with our recommendations provided in Section 9 below.

Our slope stability assessment outputs (3 sheets) for the Lot 3 DBP are appended to this report.

8.4. 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 Hazards Map categorises the DBPs as '*Unlikely*' Liquefaction Vulnerability areas,
- Very stiff to hard soils of the Kerikeri Volcanic Group and Waipapa Group encountered during our investigations,
- Groundwater was not present within any of the boreholes on the day of our investigation,
- The DBPs are situated on near level to gently sloping land, set no less than approximately RL50m New Zealand Vertical Datum (NZVD), with good water-shedding characteristics,
- There are no known active faults traversing through or close to the site, and
- Soils and rock of the Kerikeri Volcanic Group and Waipapa Group underlie the site (minimum geological age +1.8My).

8.5. 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.

8.6. NATIONAL POLICY STATEMENT CONCLUSION

In accordance with Appendix 1 of the National Policy Statement (NPS) for Natural Hazards 2025 (December 2025), we have undertaken a natural hazard risk assessment for the proposed Lots 2-4 DBPs using the risk matrix presented in Figure 1 of the NPS. The adopted risk matrix is shown in Figure 6 below.

Figure 1: Risk matrix

		Likelihood Level						
		Almost Certain	Very Likely	Likely	Possible	Unlikely	Rare	Very Rare
ARI (years)		up to 10	10-20	20-50	50-100	100-500	500-5000	> 5000
AEP		10% or more	10% to 5%	5% to 2%	2% to 1%	1% to 0.2%	0.2% to 0.02%	< 0.02%
Consequence Level	Catastrophic	Very High	Very High	Very High	High	Medium	Medium	Medium
	Major	Very High	Very High	High	High	Medium	Medium	Medium
	Moderate	High	High	High	Medium	Medium	Low	Low
	Minor	Medium	Medium	Medium	Medium	Low	Low	Low
	Negligible	Low	Low	Low	Low	Low	Low	Low

Note: The top end of the likelihood range includes the top end year, that is: Likely = over 20 years and up to and including 50 years.

Figure 6: Appendix 1 Risk Matrix from the NPS for Natural Hazards 2025.

A summary of our assessment findings for the design-life of future structures within the DBPs is presented in Table 4 below:

Table 4: Risk Matrix Assessment Table

Natural Hazard	Likelihood Level	Consequence Level	Natural Hazard Risk	Explanation
Flooding	Very Rare	Negligible	Low	DBPs are elevated and not within a Flood Hazard Zone
Landslips	Rare	Minor	Low	Refer Sections 8.1 to 8.4 above
Coastal Erosion	Very Rare	Negligible	Low	DBPs are inland and not within a Coastal Erosion Hazard Zone
Coastal Inundation	Very Rare	Negligible	Low	DBPs are inland, elevated and not within a Coastal Flood Hazard Zone
Active Faults	Very Rare	Negligible	Low	As per the GNS Science Active Fault Web Map, the northernmost active fault is near Clevedon, Auckland
Liquefaction	Very Rare	Negligible	Low	Refer Sections 8.4 and 8.5 above
Tsunami	Very Rare	Negligible	Low	DBPs are inland, elevated and within a Safe Area Zone

Based on the above, 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:

- 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
- 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 consider that the proposed Lot 2-4 DBPs should generally be suitable for future residential construction in terms of NZS3604:2011, provided:

- The recommendations of this report are adhered to,
- A Geotechnical development review of future finalised development proposals at both proposed Lots is undertaken prior to submission for a Building Consent application. Depending on the future development proposals, the review could range from desktop assessment to further Geotechnical investigation and reporting, and
- Any proposed construction beyond the assessed DBPs must be subject to site-specific investigations and assessments.

9. CONCLUSIONS AND RECOMMENDATIONS

On the basis of our assessments as described herein, we confirm that we have considered both foundation and ground stability risks, and are of the Professional Opinion that the subject development as described above should not be exposed to unsatisfactory Geotechnical Risk, subject to the following requirements:

9.1. PRELIMINARY FOUNDATION DESIGN RECOMMENDATIONS

Shallow foundations will be suitable to support future residential developments within the Lot 2 - 4 DBPs, provided:

- Lots 2 and 3 foundations are designed to accommodate vertical movement of soil associated with Soil Reactivity **Class M – Moderately Reactive**,
- Lot 4 foundations are designed to accommodate vertical movement of soil associated with Soil Reactivity **Class H – Highly Reactive**, and
- Leading-Edge Piles are required where ground surface inclination is steeper than 1V:4H (14°) within 5.0m of any future, permanent structure to provide resistance to shallow soil movement.

As noted in Section 7.5 above, depending on the final placement of a future residential development at Lot 4, the classification given above might possibly be able to be lessened to Class M; however, this will need to be determined via a site-specific assessment during the Building Consent stage once future development proposals have been finalised.

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 the proposed foundations.

All bored, strip and pad footings should be embedded a minimum of 0.60m (Class M) or 0.90m (Class H) below finished engineered ground levels and 0.30m into competent natural ground, whichever is deeper.

The following bearing capacity values are considered to be appropriate for the design of shallow foundations, subject to founding directly on or within competent natural ground and/or engineered fill, for which careful future Geo-Professional inspections of the subgrade should be undertaken to check that underlying ground conditions are in keeping with our expectations:

Table 5: Bearing Capacity Values

Parameters	Kerikeri Volcanic Group & Waipapa Group Soils
Geotechnical Ultimate Bearing Capacity	300 kPa
ULS Dependable Bearing Capacity ($\Phi=0.5$)	150 kPa

9.2. NZS1170.5:2004 SITE SUBSOIL CLASSIFICATION

We consider the Lot 2-4 DBPs to be underlain with a Class C – Shallow Soil stratigraphy.

9.3. SITE EARTHWORKS

At this preliminary stage, we are not aware of any future earthwork proposals. We generally envisage that only minor engineered cut-fill earthwork operations will be required to create level building platforms for any future concrete floor slab proposal within the DBPs.

We recommend no earthworks are undertaken across both DBPs until site-specific proposals have been Geotechnically reviewed during the Building Consent stage. Such assessments will need to provide appropriate cut-fill parameters and limits.

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).

9.4. GENERAL SITE WORKS

We stress that any and all works 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,
- **Crests above moderate to steeply sloping ground should be isolated, and heavy plant should be kept away from these areas,**
- 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.

9.5. 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
- Foundation construction too soon after their removal can result in soil swelling and raising foundations as the soils rehydrate.

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.

10. STORMWATER & SURFACE WATER CONTROL

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

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 both platforms from both saturation and erosion. Water collected in interceptor drains should be diverted away from the future building sites to appropriate disposal points. All stormwater runoff from future 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, especially directly to the moderate to steeply inclined gully side flanks below the DBPs.

11. ON-SITE WASTEWATER DISPOSAL

No reticulated sanitary sewer is available for the site; therefore, an on-site wastewater treatment and disposal system 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.

12. UNDERGROUND SERVICES

The FNDC online GIS Water Services Map indicates that public underground service connections are not available to the property. 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.

13. DRAWING REVIEW OR FUTURE GEOTECHNICAL ASSESSMENT

Once architectural and foundation design drawings for future development proposals at Lots 2-4 have been finalised, the drawings should be referred to us for review to verify that the recommendations contained in this report have been incorporated into the design.

Depending on the future development proposals, the review could range from desktop assessment to further Geotechnical investigation and reporting.

Recommended Geotechnical site inspections and testing will be given during the development review phase.

14. LIMITATIONS

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

This report has been commissioned solely for the benefit of our Client, **Markus Weise**, 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

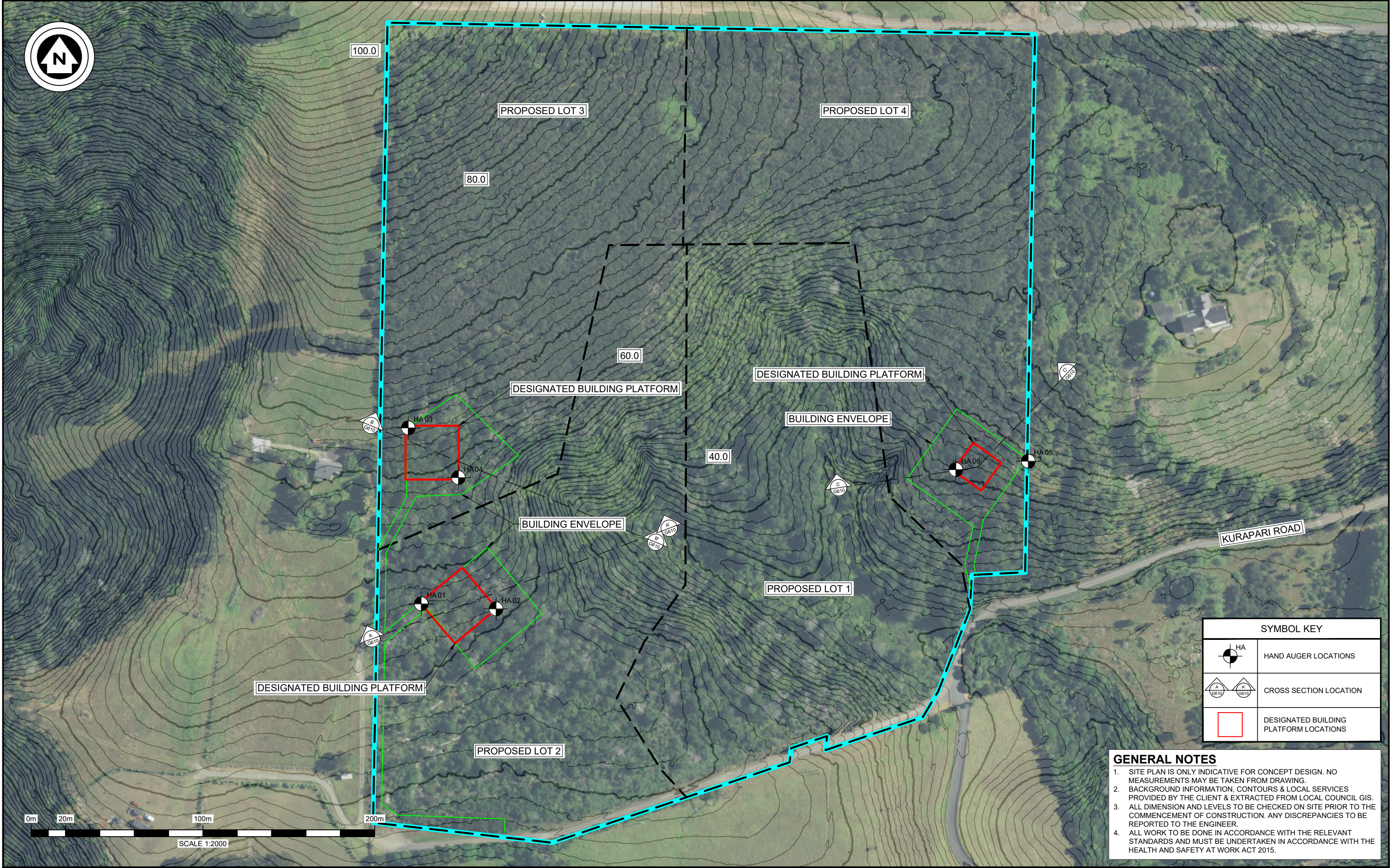
Appendices:

Site Plan and Cross-sections (4 sheets)

Hand Auger Borehole Records (6 sheets)

Slope Stability Assessment Outputs (3 sheets)

'Foundation Maintenance and Footing Performance' homeowner's guide, published by CSIRO (4 sheets)



SYMBOL KEY	
	HA HAND AUGER LOCATIONS
	CROSS SECTION LOCATION
	DESIGNATED BUILDING PLATFORM LOCATIONS

- GENERAL NOTES**
1. SITE PLAN 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.

WILTON JOUBERT
Consulting Engineers
Northland: 09 945 4188 Auckland: 09 527 0196
Christchurch: 021 824 063 Wanaka: 03 443 6209
www.wiltonjoubert.co.nz

ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
A	MAY 2026	A.B	ISSUED WITH GEOTECHNICAL REPORT
B	JULY 2026	S.J.P	UPDATED LOT 4 DESIGNATED BUILDING PLATFORM

DESIGNED BY:

DRAWN BY:
A.B

CHECKED BY:

SURVEYED BY:

SERVICES NOTE
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GEOTECHNICAL
DESIGN / DRAWING SUBJECT TO ENGINEERS APPROVAL

DRAWING TITLE:

SITE PLAN

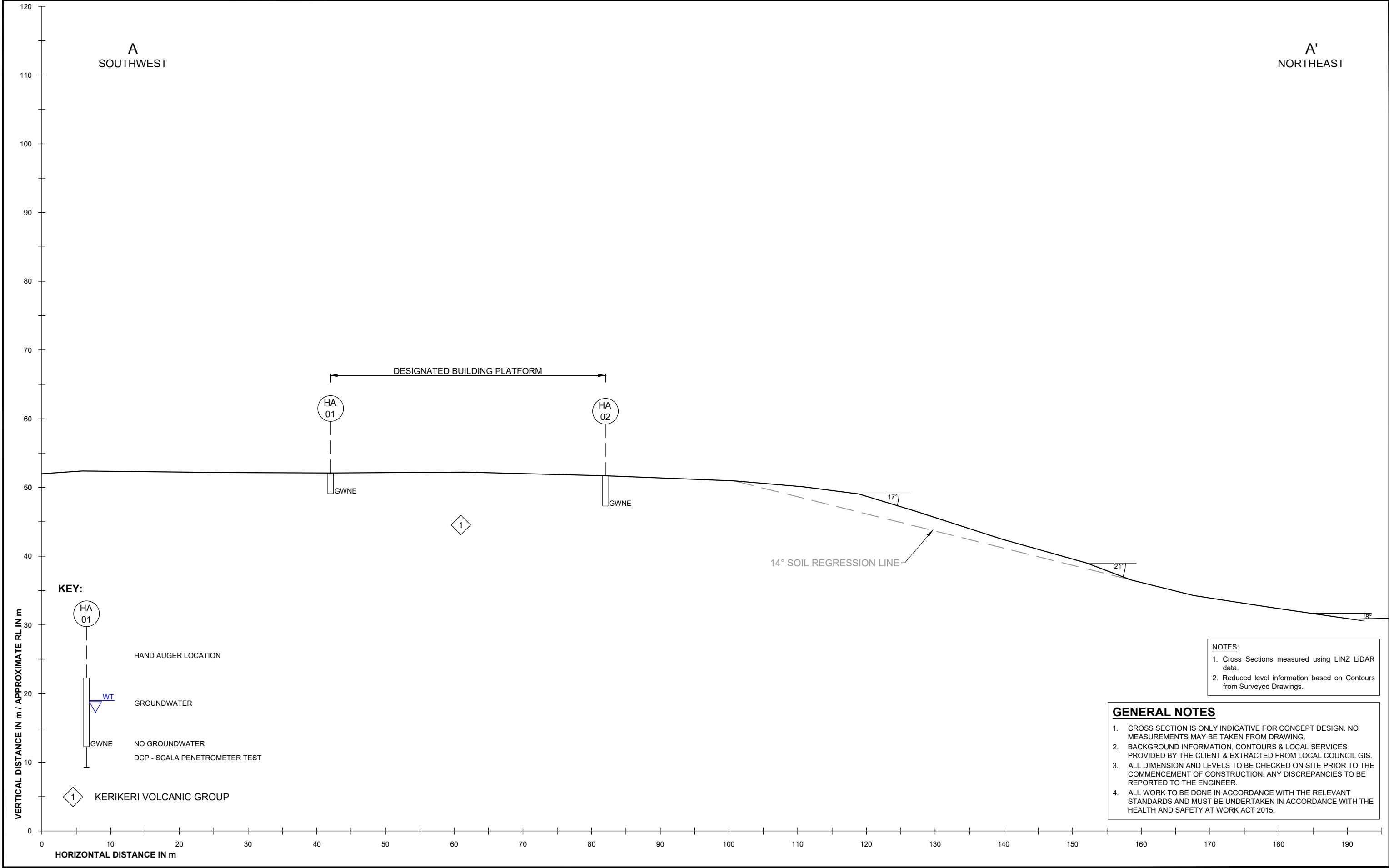
PROJECT DESCRIPTION:

4-LOT SUBDIVISION (LOTS 2-4 ASSESSMENT)

PROJECT TITLE:

**LOT 3 DP 415575
KURAPARI ROAD
KERIKERI
NORTHLAND**

ORIGINAL DRAWING SIZE: A3	OFFICE: WHANGAREI
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No.	DATE	BY	DESCRIPTION
A	MAY 2026	A.B	ISSUED WITH GEOTECHNICAL REPORT

DESIGNED BY:

DRAWN BY:
A.B

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SURVEYED BY:

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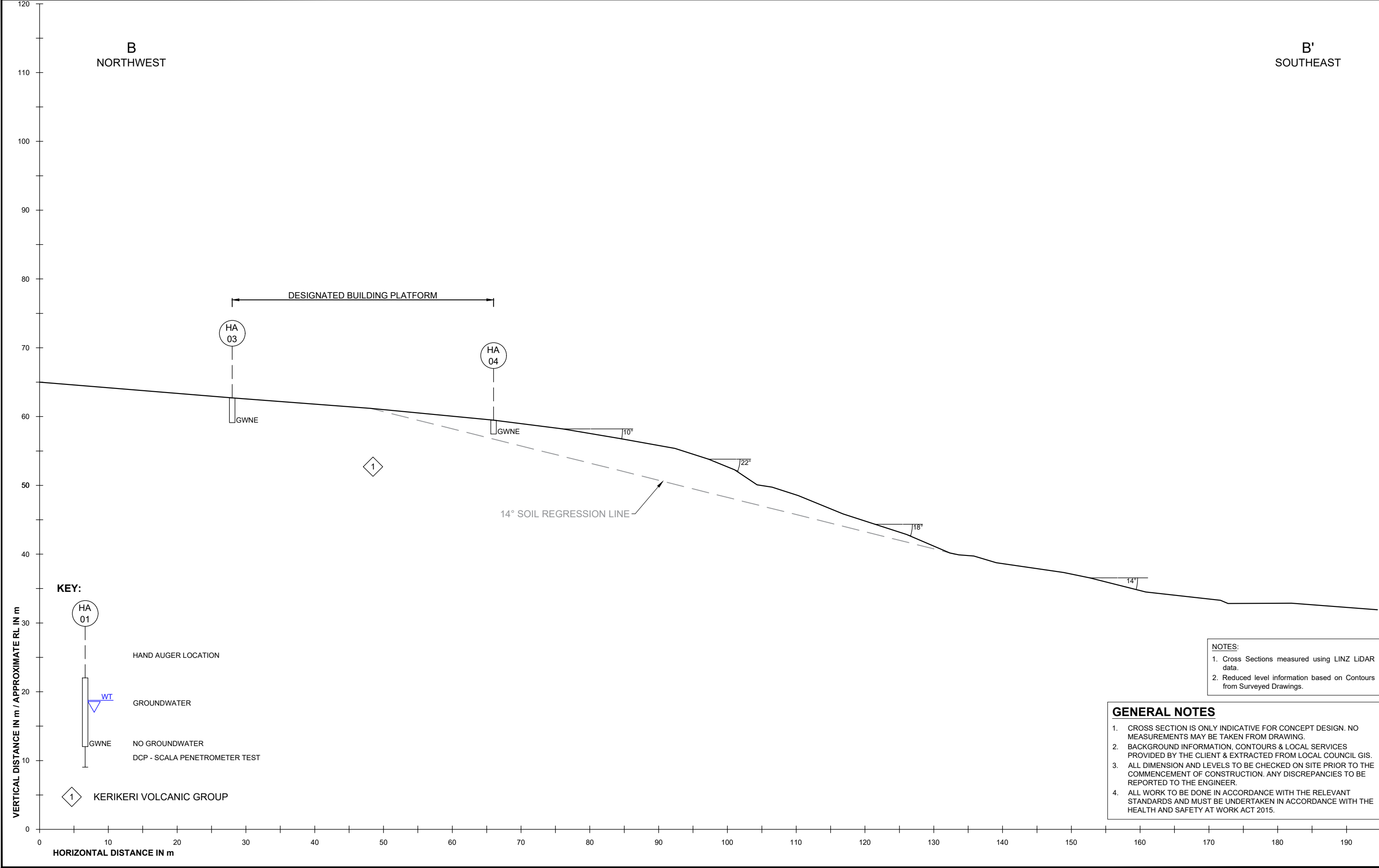
PROJECT DESCRIPTION:

4-LOT SUBDIVISION (LOTS 2-4 ASSESSMENT)

PROJECT TITLE:

**LOT 3 DP 415575
KURAPARI ROAD
KERIKERI
NORTHLAND**

ORIGINAL DRAWING SIZE: A3	OFFICE: WHANGAREI
DRAWING SCALE: 1:500	CO-ORDINATE SYSTEM: NOT COORDINATED
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DRAWING TITLE:

CROSS SECTION

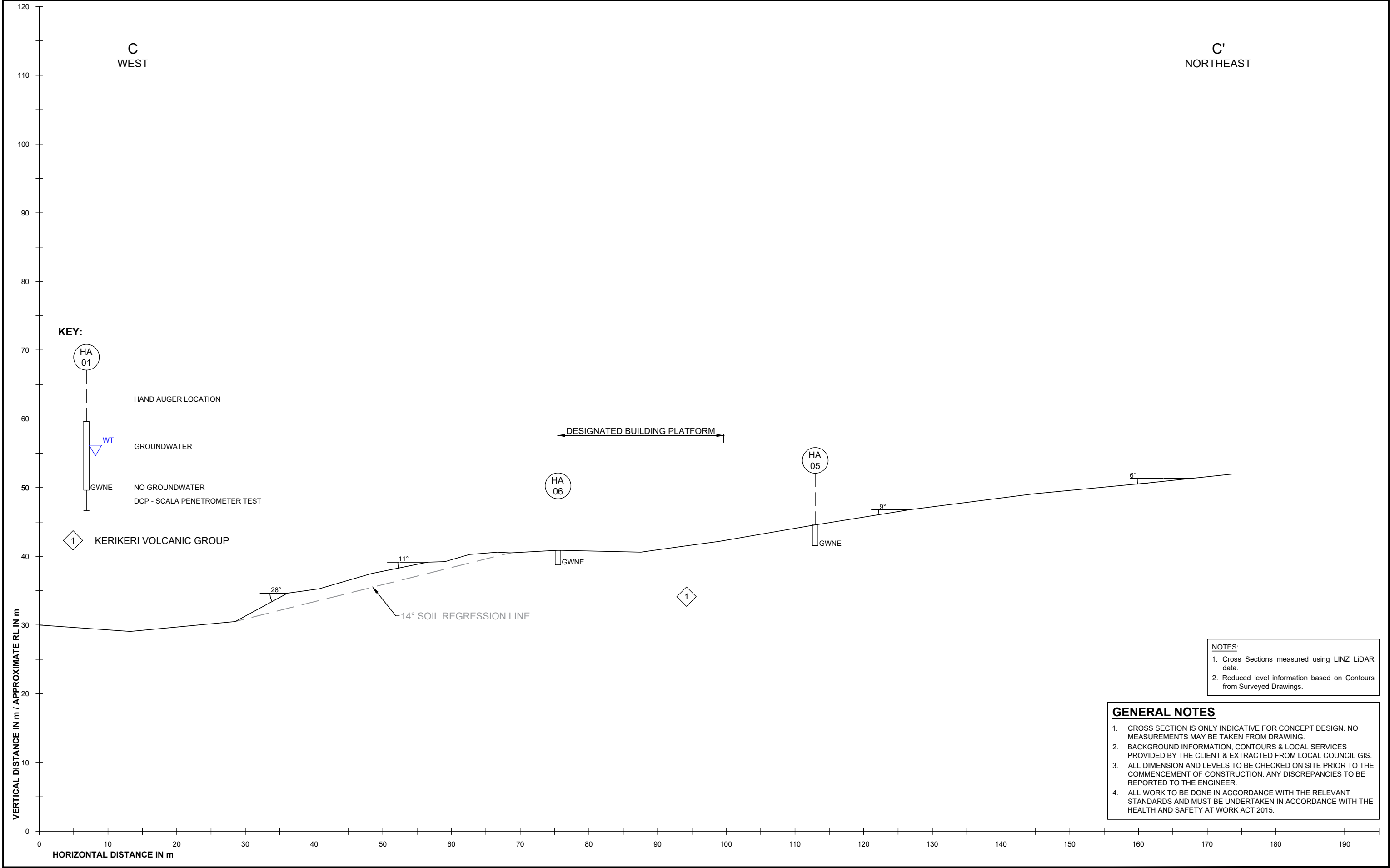
PROJECT DESCRIPTION:

4-LOT SUBDIVISION (LOTS 2-4 ASSESSMENT)

PROJECT TITLE:

**LOT 3 DP 415575
KURAPARI ROAD
KERIKERI
NORTHLAND**

ORIGINAL DRAWING SIZE: A3	OFFICE: WHANGAREI
DRAWING SCALE: 1:500	CO-ORDINATE SYSTEM: NOT COORDINATED
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ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
A	MAY 2026	A.B	ISSUED WITH GEOTECHNICAL REPORT
B	JULY 2026	S.J.P	UPDATED LOT 4 DESIGNATED BUILDING PLATFORM

DESIGNED BY:

DRAWN BY:

A.B

CHECKED BY:

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GEOTECHNICAL

DESIGN / DRAWING SUBJECT TO ENGINEERS APPROVAL

DRAWING TITLE:

CROSS SECTION

PROJECT DESCRIPTION:

4-LOT SUBDIVISION (LOTS 2-4 ASSESSMENT)

PROJECT TITLE:

**LOT 3 DP 415575
KURAPARI ROAD
KERIKERI
NORTHLAND**

ORIGINAL DRAWING SIZE:	OFFICE:
A3	WHANGAREI
DRAWING SCALE:	CO-ORDINATE SYSTEM:
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HAND AUGER : HA01		JOB NO.: 146522		SHEET: 1 OF 1						
CLIENT: Markus Wiese		START DATE: 07/05/2026		NORTHING: GRID:						
PROJECT: 4-Lot Subdivision		DIAMETER: 50mm		EASTING:						
SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri		SV DIAL: DR4802		ELEVATION: Ground						
		FACTOR: 1.39		DATUM:						
STRATIGRAPHY	SOIL DESCRIPTION		LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
						PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
Topsoil	TOPSOIL, dark brown, moist.			0.0	Groundwater Not Encountered					
				0.2						
				0.4		UTP	-	-		
				0.6						
				0.8		UTP	-	-		
				1.0						
				1.2		UTP	-	-		
				1.4						
				1.6		UTP	-	-		
				1.8						
Kerikeri Volcanic Group	NATURAL: Gravelly SILT, trace to minor clay, brown with orange mottles, very stiff, dry to moist, no plasticity.			0.0	Groundwater Not Encountered					
				0.2						
				0.4						
				0.6						
				0.8						
				1.0						
				1.2						
				1.4						
				1.6						
				1.8						
	SILT, minor to some clay, frequent gravel and clast inclusions, brown with orange and red mottles, very stiff, dry to moist, low plasticity.			0.0	Groundwater Not Encountered					
				0.2						
				0.4						
				0.6						
				0.8						
				1.0						
				1.2						
				1.4						
				1.6						
				1.8						
	SILT, minor clay, brown with orange, yellow, red and white mottles, very stiff, dry to moist, no to low plasticity.			0.0	Groundwater Not Encountered					
				0.2						
				0.4						
				0.6						
				0.8						
				1.0						
				1.2						
				1.4						
				1.6						
				1.8						
	SILT, some clay, dark reddish brown with occasional red mottles and white specks, very stiff, moist, low plasticity.			0.0	Groundwater Not Encountered					
				0.2						
				0.4						
				0.6						
				0.8						
				1.0						
				1.2						
				1.4						
				1.6						
				1.8						
	SILT, minor clay, dark reddish brown with occasional red mottles and white specks, very stiff, moist, no to low plasticity.			0.0	Groundwater Not Encountered					
				0.2						
				0.4						
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				1.4						
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				1.8						
	EOH: 3.00m - Target Depth			0.0	Groundwater Not Encountered					
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				1.8						
		2.0								
		2.2								
		2.4								
		2.6	139	83	1.7					
		2.8								
		3.0	120	75	1.6					
		3.2								
		3.4								
		3.6								
		3.8								
		4.0								
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		44.6								
		44.8								
		45.0								
		45.2								

HAND AUGER : HA02

JOB NO.: 146522

SHEET: 1 OF 1

START DATE: 07/05/2026

NORTHING:

GRID:

DIAMETER: 50mm

EASTING:

SV DIAL: 1994

ELEVATION: Ground

FACTOR: 1.41

DATUM:

CLIENT: Markus Wiese
PROJECT: 4-Lot Subdivision

SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
					PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
	TOPSOIL, dark brown, moist.		0.0						
Kerikeri Volcanic Group	NATURAL: SILT, minor clay, frequent gravels and clasts, brown, very stiff, moist, low plasticity.		0.2						
	Gravelly SILT, trace clay, orangey brown with brown mottles very stiff, moist, no plasticity.		0.4		UTP	-	-		
			0.6						
			0.8		UTP	-	-		
			1.0						
			1.2		UTP	-	-		
	SILT, minor clay, occasional gravels, orangey brown with white specks, very stiff, moist, no to low plasticity.		1.4						
			1.6		197+	-	-		
	1.7m: Moist to wet.		1.8						
			2.0		197+	-	-		
			2.2						
	SILT, some clay, brown, very stiff, moist to wet, low plasticity.		2.4		197+	-	-		
	2.4m: Orangey brown.		2.6						
			2.8		197+	-	-		
	2.7m: Occasional clasts.		3.0						
			3.2		141	54	2.6		
			3.4						
			3.6		110	59	1.9		
			3.8						
			4.0		197+	-	-		
		4.2							
		4.4		UTP	-	-			
	EOH: 4.40m - Too Hard To Auger		4.6						
			4.8						

REMARKS

End of borehole @ 4.40m (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

▼ Standing groundwater level

CHECKED BY: CSH

▽ GW while drilling



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Website: www.wiltonjoubert.co.nz

HAND AUGER : HA03

JOB NO.: 146522

SHEET: 1 OF 1

START DATE: 07/05/2026

NORTHING:

GRID:

DIAMETER: 50mm

EASTING:

SV DIAL: DR4802

ELEVATION: Ground

FACTOR: 1.39

DATUM:

CLIENT: Markus Wiese

PROJECT: 4-Lot Subdivision

SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCLALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
					PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
Topsoil	TOPSOIL, dark brown, moist.		0.0						
Kerikeri Volcanic Group	NATURAL: SILT, minor clay, frequent gravels and clasts, brown with orange mottles, very stiff, moist, no to low plasticity.		0.2						
			0.4		195+	-	-		
	SILT, trace clay, frequent clasts, orangey brown, very stiff to hard, dry to moist, no plasticity.		0.6						
	0.7m: Trace to minor clay.		0.8		UTP	-	-		
			1.0						
	SILT, some clay, orangey brown to brown, very stiff, moist, low plasticity.		1.2		UTP	-	-		
			1.4						
			1.6		195+	-	-		
	1.8m: Orangey brown with light brown mottles.		1.8						
			2.0		195+	-	-		
			2.2						
			2.4		128	100	1.3		
	2.6m: Dark reddish brown with light brown mottles.		2.6						
	2.8m: Orangey brown with light brown mottles.		2.8		108	83	1.3		
			3.0						
			3.2		195+	-	-		
			3.4						
			3.6		UTP	-	-		
	EOH: 3.60m - Too Hard To Auger		3.8						
			4.0						
			4.2						
			4.4						
			4.6						
			4.8						

REMARKS

End of borehole @ 3.60m (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: SJP

▼ Standing groundwater level

CHECKED BY: CSH

▽ GW while drilling



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HAND AUGER : HA04		JOB NO.: 146522		SHEET: 1 OF 1						
CLIENT: Markus Wiese		START DATE: 07/05/2026		NORTHING: GRID:						
PROJECT: 4-Lot Subdivision		DIAMETER: 50mm		EASTING:						
SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri		SV DIAL: 1994		ELEVATION: Ground						
		FACTOR: 1.41		DATUM:						
STRATIGRAPHY	SOIL DESCRIPTION		LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
						PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
Kerikeri Volcanic Group	TOPSOIL, dark brown, moist.			0.2	Groundwater Not Encountered					
	NATURAL: Gravelly SILT, brown with orangey brown mottles, very stiff, dry to moist, no plasticity.									
	SILT, minor clay, frequent gravels, orangey brown with orange mottles, very stiff, moist, no to low plasticity.			UTP		-	-			
				UTP		-	-			
	Gravelly SILT, trace clay, orangey brown with orange, black and yellow mottles, very stiff, moist, no plasticity.			1.2	Groundwater Not Encountered	UTP	-	-		
				UTP		-	-			
	EOH: 2.00m - Too Hard To Auger			2.0	Groundwater Not Encountered	UTP	-	-		
REMARKS		 185 Waipapa Road, Kerikeri 0295 Phone: 09-945 4188 Email: jobs@wjl.co.nz Website: www.wiltonjoubert.co.nz Consulting Engineers								
End of borehole @ 2.00m (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		▼ Standing groundwater level								
CHECKED BY: CSH		▽ GW while drilling								

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HAND AUGER : HA05		JOB NO.: 146522		SHEET: 1 OF 1							
CLIENT: Markus Wiese		START DATE: 07/05/2026		NORTHING: GRID:							
PROJECT: 4-Lot Subdivision		DIAMETER: 50mm		EASTING:							
SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri		SV DIAL: 1994		ELEVATION: Ground							
		FACTOR: 1.41		DATUM:							
STRATIGRAPHY	SOIL DESCRIPTION		LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS	
						PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY			
Kerikeri Volcanic Group	TOPSOIL, dark brown, moist.			0.0	Groundwater Not Encountered						
				0.2							
	NATURAL: Gravelly SILT, some clay, brown, very stiff, moist, low plasticity.			0.4		UTP	-	-			
				0.6							
	SILT, some clay, orangey brown, very stiff, dry to moist, low plasticity.			0.8							
				1.0		197+	-	-			
				1.2							
				1.4		197+	-	-			
				1.6							
				1.8		197+	-	-			
	1.8m: Occasional clasts.			2.0		155	51	3.0			
				2.2							
				2.4		186	56	3.3			
				2.6							
	2.7m: Orangey brown with brown mottles and frequent multicoloured specks.			2.8		147	51	2.9			
				3.0							
	EOH: 3.00m - Target Depth			3.2							
				3.4							
		3.6									
		3.8									
		4.0									
		4.2									
		4.4									
		4.6									
		4.8									
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: JEM					▼ Standing groundwater level						
CHECKED BY: CSH					▽ GW while drilling						
								185 Waipapa Road, Kerikeri 0295 Phone: 09-945 4188 Email: jobs@wjl.co.nz Website: www.wiltonjoubert.co.nz			
					Consulting Engineers						

HAND AUGER : HA06

JOB NO.: 146522

SHEET: 1 OF 1

START DATE: 07/05/2026

NORTHING:

GRID:

DIAMETER: 50mm

EASTING:

SV DIAL: 1994

ELEVATION: Ground

FACTOR: 1.41

DATUM:

CLIENT: Markus Wiese
PROJECT: 4-Lot Subdivision

SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
					PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
Top soil	TOPSOIL, dark brown, moist.	 	0.0	Groundwater Not Encountered					
Waipapa Group	NATURAL: Clayey SILT, yellowish brown, very stiff, dry to moist, low plasticity.		0.2						
			0.4						
			0.6		UTP	-	-		
			0.8						
			1.0		197+	-	-		
			1.2						
	1.2m: Yellowish brown with red mottles.		1.4						
			1.6						
	1.5m: No to low plasticity.		1.8		UTP	-	-		
			2.0						
			2.2		UTP	-	-		
			2.4						
			2.6						
			2.8						
			3.0						
			3.2						
			3.4						
			3.6						
			3.8						
	4.0								
	4.2								
	4.4								
	4.6								
	4.8								
	EOH: 2.10m - Too Hard To Auger		5.0						

REMARKS

End of borehole @ 2.10m (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

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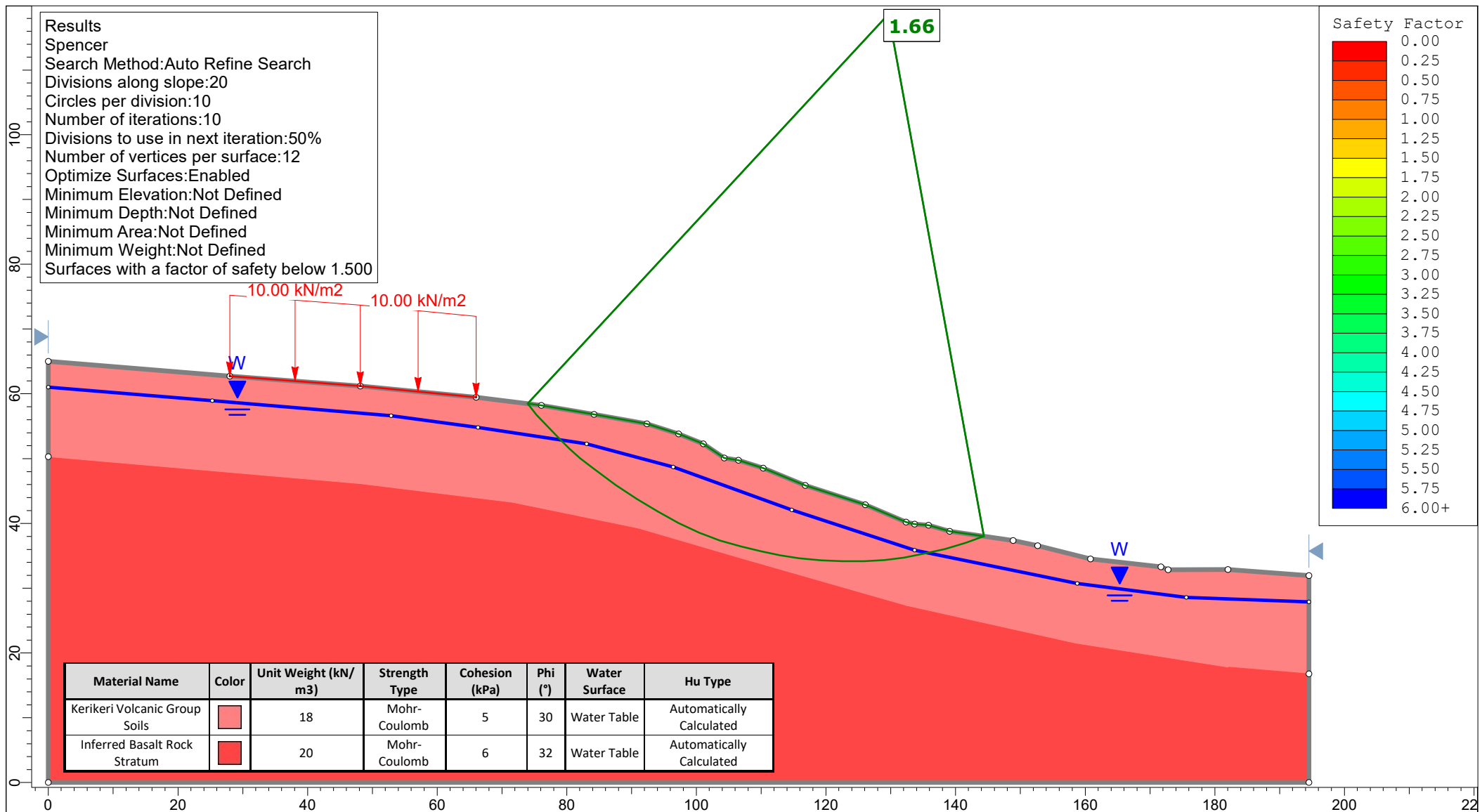
▼ Standing groundwater level

CHECKED BY: CSH

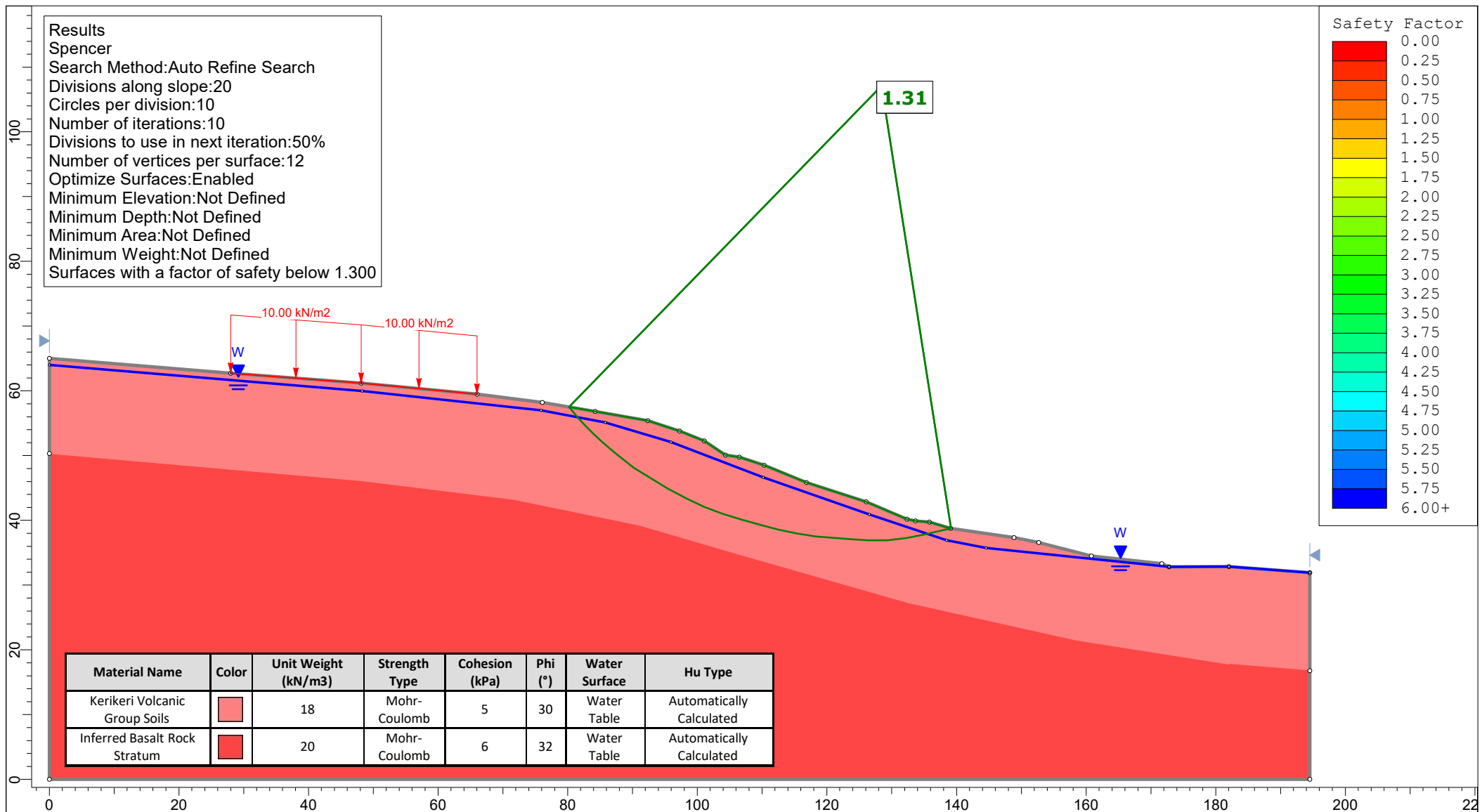
▽ GW while drilling



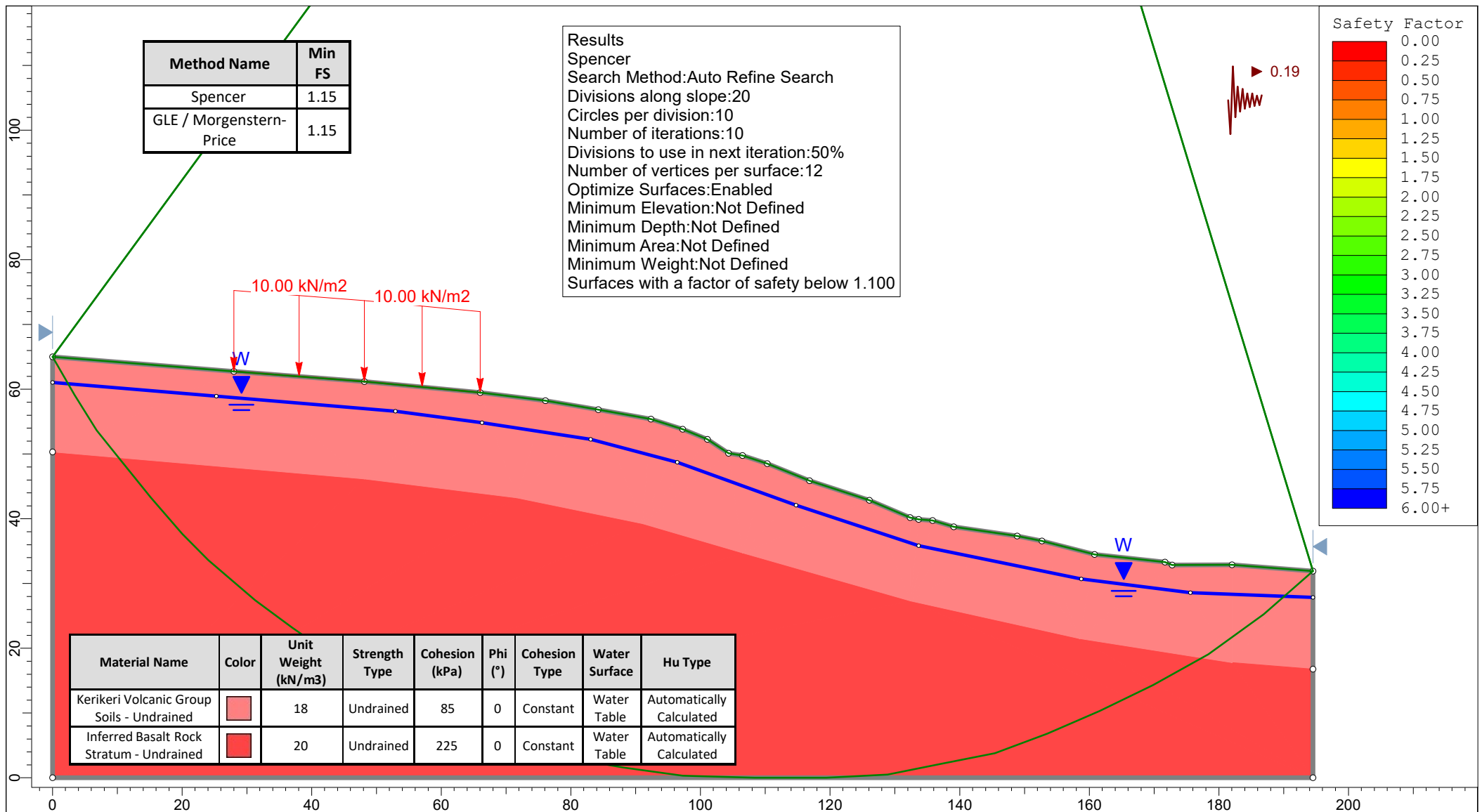
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 WILTON JOUBERT Consulting Engineers	Project		146522 - Kurapari Road, Kerikeri	
	Group		Cross Section B-B' - Post Development	Scenario
	Drawn By		A.B	Company
	Date		12/05/2026	File Name
				Measured Groundwater Level
				Wilton Joubert Limited
				146522 BB - Proposed.slmd



 WILTON JOUBERT Consulting Engineers	Project		146522 - Kurapari Road, Kerikeri	
	Group		Cross Section B-B' - Post Development	Scenario
	Drawn By		A.B	Company
	Date		12/05/2026	File Name
				Elevated Groundwater Level
				Wilton Joubert Limited
				146522 BB - Proposed.slmd



 WILTON JOUBERT Consulting Engineers	Project		146522 - Kurapari Road, Kerikeri	
	Group		Cross Section B-B' - Post Development	Scenario
	Drawn By		A.B	Company
	Date		12/05/2026	File Name
			Measured Groundwater Level - Seismic	
			Wilton Joubert Limited	
			146522 BB - Proposed.slmd	



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

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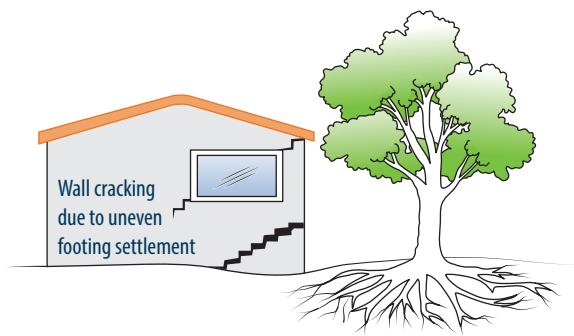


FIGURE 1 Trees can cause shrinkage and damage.

- ▶ 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 perpend).

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.

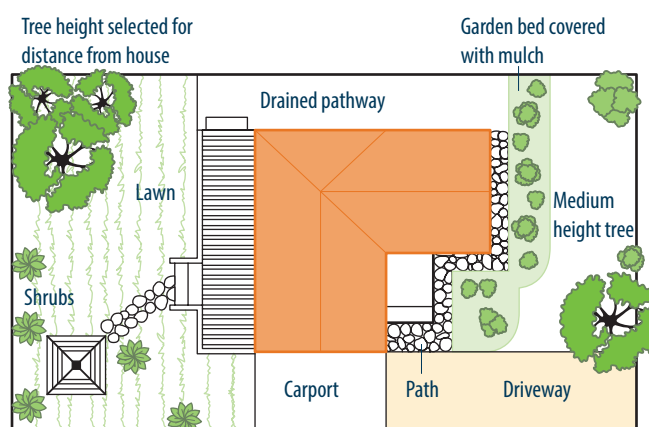


FIGURE 2 Gardens for a reactive site.

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.

SITE	88 Kurapari Road, Kerikeri
LEGAL DESCRIPTION	Lot 3 DP 415575
PROJECT	Proposed 4-Lot Subdivision (Lots 2-4 for Assessment)
CLIENT	Markus Weise
REFERENCE NO.	146523
DOCUMENT	Civil Site Suitability Report
STATUS/REVISION NO.	03– Resource / Subdivisional Consent
DATE OF ISSUE	3 August 2026

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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.

Legal Description:	Lot 3 DP 415575
Lot Sizes:	Proposed Lot 1 – 4.11ha (not assessed) Proposed Lot 2 – 4.01ha Proposed Lot 3 – 4.04ha Proposed Lot 4 – 4.09ha
Scope:	Civil Site Suitability Investigation: - Potable Water Recommendations - Wastewater Assessment - Stormwater Assessment - Access Assessment
Development Proposals Supplied:	Subdivision Scheme Plan supplied by Thomson Survey Ltd (Ref No: 10781, dated: 13.07.26)
District Plan Zone:	General Coastal Zone
Wastewater:	The following is an indicative PCDI wastewater design for a 4-bedroom dwelling – given the dense vegetation encountered we recommend Secondary Level Treatment or higher: Daily Wastewater Production: 1,080L/day Daily Application Rate: 4mm/day (Lots 2 and 4) *3.2mm/day (Lot 3) Disposal Area: 270m² (Lots 2 and 4) 338m² (Lot 3) Reserve Area: (30%) Recommendations for wastewater are provided in Section 7. <i>*20% Reduction Applied for field located in steeper areas (10-20% grade) as per AS/NZS:1547 Table M2</i>
Stormwater Management – District Plan Rules:	Permitted Activity: 10.6.5.1.6 STORMWATER MANAGEMENT – The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 10%. Controlled Activity: 10.6.5.2.3 STORMWATER MANAGEMENT – The maximum proportion or amount of the gross site area covered by buildings and other impermeable surfaces shall be 15% or 4,000m², whichever is the lesser.
Stormwater Management:	Under Rule 10.6.5.1.6, the permitted impermeable coverage allowance is 4,010m ² for Lot 2, 4,040m ² for Lot 3, and 4,090m ² for Lot 4. However, as the controlled activity threshold under Rule 10.6.5.2.3 is capped at 4,000m ² ,

future impermeable coverage should be limited to a maximum of 4,000m² per lot.

Provided future impermeable coverage on Lots 2–4 remains below 4,000m² per lot, and runoff is discharged in a controlled manner to avoid erosion or instability, significant increases in stormwater runoff are not anticipated as part of the subdivision. Specific stormwater attenuation measures are not considered necessary at this stage. Stormwater management recommendations are provided in Section 8.

Access:

Lots 1–3 will obtain vehicle access via the existing private ROW located within the application site, while Lot 4 will obtain access from the end of Kurapari Road. The ROW also provides legal access to six existing properties to the west and will therefore serve nine legal users following subdivision. Specific FNDC approval is required to retain the ROW as private access for nine users. New vehicle crossings are to be constructed in accordance with the FNDC Engineering Standards (2023), Sheet 21, Type 1A – Light Vehicles. Further assessment is provided in Section 9.

2 SCOPE OF WORK

Wilton Joubert Ltd (WJL) was engaged by the client to undertake a civil site suitability assessment (water, wastewater, stormwater and access) to support a 4-lot subdivision of the subject site as depicted in the supplied Scheme Plan Set prepared by Thomson Survey Ltd (Ref No: 10781, dated: 15.04.26).

3 SITE DESCRIPTION

The proposed subdivision will be established within the following property, which is located off the northern side of Kurapari Road, accessed 650m southwest of the Rangitane Road intersection:

- 88 Kurapari Road, Kerikeri, legally described as Lot 3 DP 415575

The ~16ha subject site is currently accessed from the approximate midpoint of the southern boundary. No driveway formation is currently present; however, a concrete formation is proposed. Aside from the cleared existing development area on proposed Lot 1 near the middle of the southern boundary, the site is covered in very dense regenerating bush.

Topographically speaking, the northern portion of the site is located on a southeast to east facing, gentle to moderately inclined flank, falling towards a large gully feature that essentially covers much of the southern portion of the site. The gully side flanks are long and moderately to steeply sloping in nature, descending at gradients ranging between 14° and 28°. Above the gully, near level to gently sloping crest land straddles the western, southwestern and eastern boundaries.

The Far North District Council (FNDC) online GIS Water Services Map indicates that public underground service connections are not available to the property.



Figure 1: Aerial view with the subject property highlighted in cyan (from Far North District Council's online GIS database).

4 DEVELOPMENT PROPOSALS

Based on our review of the Subdivision Scheme Plan supplied, it is our understanding that the client intends to subdivide the existing property into four individual allotments encompassing approximately 4ha each.

A Geotechnical Assessment Report (WJL Ref. 146522) has been completed for the proposed subdivision which should be read in conjunction with this report.

WJL were previously engaged to provide Geotechnical, Civil and Structural designs pertaining to a Building Consent approved residential development at proposed Lot 1, which is currently being constructed under the supervision of WJL. All civil designs we completed to comply with the future subdivision assessed in this report. As such, proposed Lot 1 is excluded from this report.

This report is intended only to support the Resource/Subdivision Consent application and does not replace the requirement for detailed engineering design and site-specific investigations at the Building Consent stage.

5 PUBLISHED GEOLOGY

Reference to the New Zealand Geology Web Map hosted by GNS Science indicates that the southeastern portion of the subject block, including the proposed development location, is underlain by deposits of the **Kerikeri Volcanic Group Late Miocene Basalt of Kaikohe – Bay of Islands Volcanic Field**. These deposits are approximately 9.7 to 1.8 million years in age and described as; *“Basalt lava, volcanic plugs and minor tuff”*.

The remaining northeastern area of the block is underlain by deposits of the **Waipapa Group Sandstone and Siltstone (Waipapa Terrane)**. These deposits are approximately 270 to 154 million years in age and described as; *“Massive to thin bedded, lithic volcanoclastic metasandstone and argillite, with tectonically enclosed basalt, chert and siliceous argillite.”*

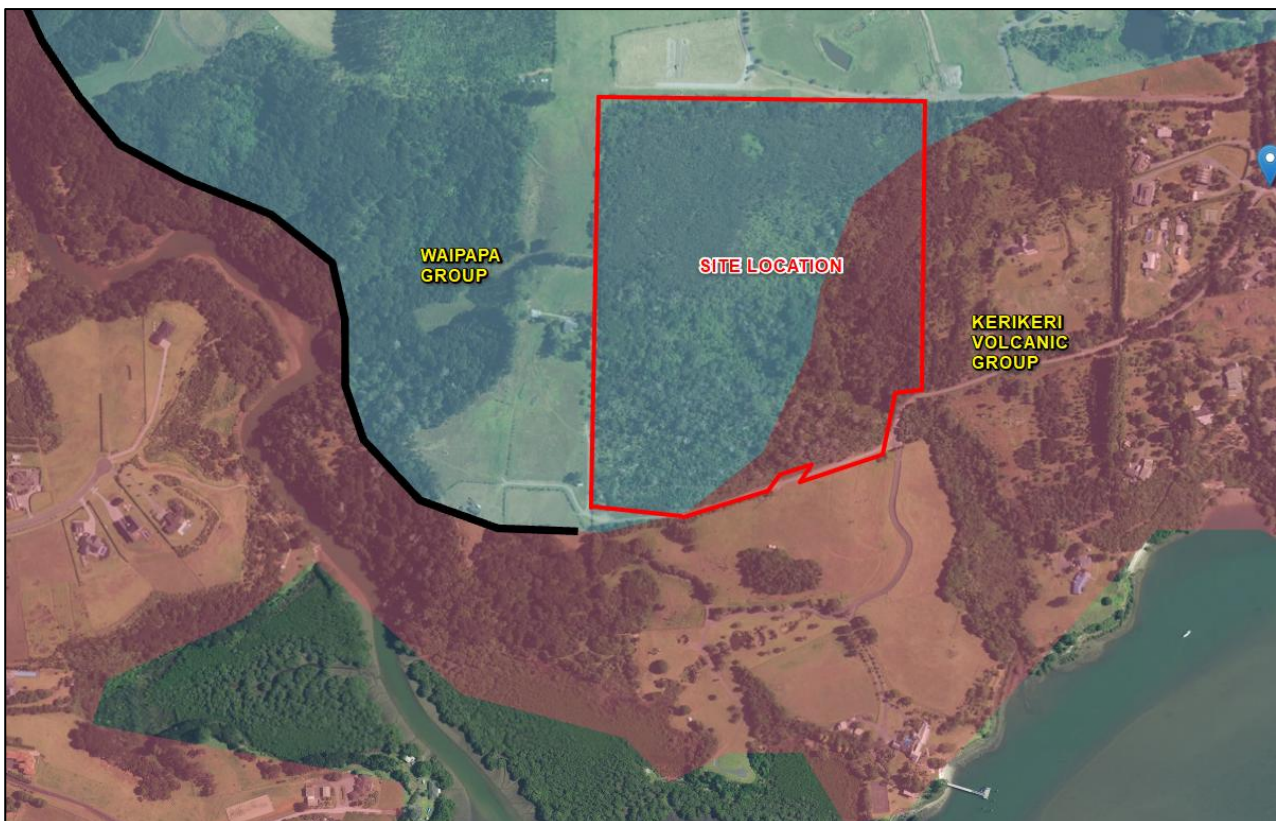


Figure 2: Screenshot from New Zealand Geology Web Map hosted by GNS Science.

In addition to the above, hand auger testing was conducted by WJL within the subject site (Lots 2-4).

The subsoils encountered during WJL's fieldwork consisted predominantly of gravelly SILT and SILT. Approximately 100mm-250mm of TOPSOIL was overlying the investigated area. Groundwater was not observed to a tested depth of up to 4.4m below natural ground level. Refer to the appended 'BH Logs'.

Based on the soils encountered, the subsoils within the assessed areas are considered to generally correspond to AS/NZS 1547:2012 Soil **Category 3** for on-site wastewater disposal design purposes.

6 POTABLE WATER SUPPLY

Potable water is expected to be provided by roof-collected rainwater storage. It is recommended that each future dwelling be provided with a minimum of 2 x 25,000L rainwater tanks, or an alternative storage volume confirmed by the owner/building designer at Building Consent stage. Final tank sizing should consider anticipated occupancy, available roof catchment area, potable water demand and any applicable firefighting storage requirements.

7 WASTEWATER

No existing wastewater management system is present within proposed Lots 2 - 4. A new site-specific design in accordance with the AS/NZS 1547:2012 will be required for any future residential development within these proposed lots.

7.1 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 preliminary wastewater assessment below has been completed to demonstrate the feasibility of on-site wastewater management for Lots 2-4. As no dwelling designs are available at this stage, the assessment is based on a typical 4-bedroom residential dwelling with an assumed occupancy of 6 persons.

Given the dense vegetation present across the assessed areas, secondary treatment or higher is recommended, with land application via pressure compensating drip irrigation (PCDI). Alternative trench or bed disposal systems may also be feasible, subject to future site-specific design, vegetation clearance constraints, and confirmation of suitable disposal areas.

7.1.1 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 (AS/NZS 1547:2012):	Category 3 – Gravelly SILT / SILT – Moderate Drainage
Estimate House AS/NZS 1547:2012 Occupancy:	6 Persons

Estimated Slope Reduction (AS/NZS 1547:2012 Table M2):	Lots 2 and 4: 0% reduction (Area available with <10% Grade) Lot 3: 20% reduction (Area available with 10-20% Grade) <i>Correct reduction factor to be applied at detailed design in accordance with AS/NZS:1547 Table M2</i>
Design Irrigation Rate (DIR):	Lots 2 and 4: 4mm/day Lot 3: 3.2mm/day
Typical Wastewater Design Flow Per Person:	Rainwater Supply: 180L/pp/day (Estimated –water conservation devices may enable lower design flows)
Estimated Total Daily Wastewater Production:	1,080L/day
Application Method:	Dose-loaded PCDI lines installed within existing vegetated areas, covered with topsoil, mulch or bark in accordance with PRPN C.6.1.3.
Emergency Storage Required:	24 hours
Estimated Min. Disposal Area Requirement:	Lots 2 and 4: 270m² Lot 3: 338m²
Required Min. Reserve Area:	30%
Downslope Buffer:	Required where the disposal field is located on slopes greater than 10 degrees.
Cut-off Drain:	May be required depending on final location – topsoil bund recommended without damaging / removing existing vegetation

7.2 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

7.3 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
	the following reserve disposal areas are available at all times:
9	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.

Based on the current observations, site topography, and subsoil conditions encountered during the investigation, proposed Lots 2–4 appear to contain sufficient undeveloped natural ground to accommodate primary and reserve wastewater disposal areas in accordance with AS/NZS 1547:2012 and the permitted activity requirements of PRPN Rule C.6.1.3.

Final system sizing, configuration, treatment level, and disposal field positioning must be confirmed through site-specific wastewater design and localised soil assessment at Building Consent stage.

Primary treatment systems with trench or bed disposal may also be feasible; however, their suitability will depend on the availability of suitable unvegetated land application areas, soil conditions, setbacks, slope constraints, and compliance with the relevant regional plan requirements.

8 STORMWATER MANAGEMENT

8.1 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 General Coastal Zone.

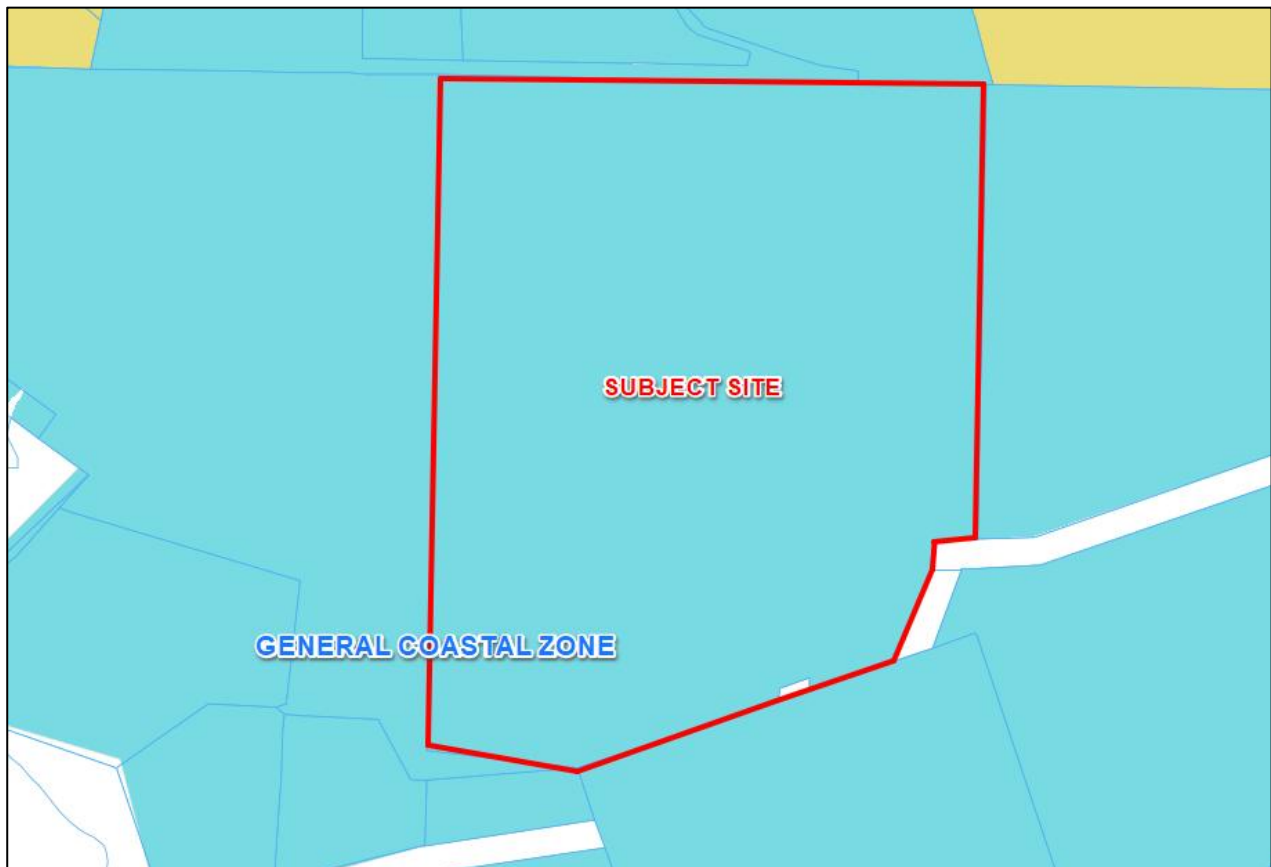


Figure 3: Snip of FNDC Maps showing site in General Coastal Zone

The following Stormwater Management Rules Apply:

Permitted Activity: 10.6.5.1.6 STORMWATER MANAGEMENT – The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 10%.

Controlled Activity: 10.6.5.2.3 STORMWATER MANAGEMENT – The maximum proportion or amount of the gross site area covered by buildings and other impermeable surfaces shall be 15% or 4,000m², whichever is the lesser.

Under Rule 10.6.5.1.6, the permitted impermeable coverage allowance is 4,010m² for Lot 2, 4,040m² for Lot 3, and 4,090m² for Lot 4. However, as the controlled activity threshold under Rule 10.6.5.2.3 is capped at 4,000m², future impermeable coverage should be limited to a maximum of 4,000m² per lot.

Provided future impermeable coverage on Lots 2–4 remains below 4,000m² per lot, and roof/hardstand runoff is collected and discharged in a controlled manner to stable ground or an approved outlet, specific stormwater attenuation measures are not considered necessary at subdivision stage. Final stormwater management for each lot should be confirmed at Building Consent stage once dwelling, driveway, tank overflow, and outlet locations are known.

To appropriately mitigate stormwater runoff from the existing and future proposed impermeable areas, we recommend utilising Low Impact Design Methods as a 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.

8.2 PRIMARY STORMWATER

8.2.1 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 tank(s) on the corresponding lot.

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

8.2.2 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 vegetated 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 safely convey anticipated runoff 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.

8.2.3 Stormwater Runoff Discharge Point

Discharge and overflow from future potable water tanks and any hardstand catchpits / silt traps should be directed to an appropriately sized dispersal device within the respective lot, unless discharge is directed to an open channel / gully feature, where an appropriate riprap outlet or equivalent erosion protection will be required. The dispersal device or discharge point should be positioned on stable ground downslope of any buildings and wastewater disposal areas, but clear of steep or erosion-prone gully slopes unless specifically designed. Relevant setbacks must be confirmed at Building Consent stage.

8.3 SECONDARY STORMWATER

Where required, overland flows and concentrated runoff from higher ground should be intercepted by shallow surface drains, contour drains, or small bunds near future structures to protect building platforms, accessways, and wastewater disposal areas from saturation and erosion.

Intercepted flows should be directed to stable ground or a defined drainage path in a controlled manner. Discharges must not be concentrated onto neighbouring properties, steep or erosion-prone gully slopes, or wastewater disposal areas unless specifically assessed and designed.

8.4 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

<i>(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.</i>	No regional discharge consent requirements have been identified as part of this preliminary civil assessment. Final regional consenting requirements should be confirmed by the project planner.
<i>(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).</i>	The proposed subdivision is considered capable of complying with the relevant provisions of the Far North District Council Engineering Standards 2023, being the current FNDC engineering standards at the time of this assessment. Final stormwater details, including any outlet protection, swales, catchpits, and dispersal devices, should be confirmed at Building Consent / detailed design stage.
<i>(c) Whether the application complies with the Far North District Council Strategic Plan - Drainage.</i>	The application is deemed compliant with the Far North District Council Strategic Plan - Drainage
<i>(d) The degree to which Low Impact Design principles have been used to reduce site impermeability and to retain natural permeable areas.</i>	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 an approved/stable discharge point. Hardstand areas should be shaped to shed to swales/catchpits for runoff conveyance to an approved/stable discharge point.
<i>(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.</i>	As above. Runoff from 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 vegetated areas as passive mitigation, or to swales/catchpits for runoff conveyance to an approved/stable discharge point.
<i>(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.</i>	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 vegetated areas as passive mitigation, or to swales/catchpits for runoff conveyance to a safe outlet location. Large downslope vegetated areas act as bio-filter strips to filter out entrained pollutants and catchpits/silt traps allow for the settlement of sediment.

<i>(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.</i>	No alteration to waterways is proposed.
<i>(h) Whether there is sufficient capacity available in the Council's outfall stormwater system to cater for increased run-off from the proposed allotments.</i>	Not applicable.
<i>(i) Where an existing outfall is not capable of accepting increased run-off, the adequacy of proposals and solutions for disposing of run-off.</i>	Not applicable.
<i>(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.</i>	Not applicable.
<i>(k) Any adverse effects of the proposed subdivision on drainage to, or from, adjoining properties and mitigation measures proposed to control any adverse effects.</i>	Outlet locations are to be determined during detailed design and are to be located such that there are no adverse effects on adjacent properties.
<i>(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.</i>	Not applicable.
<i>(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.</i>	Not applicable.
<i>(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.</i>	Not applicable.
<i>(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.</i>	Not applicable.
<i>(p) For any stormwater outfall pipeline through a reserve, the prior consent of the Council, and the need for an appropriate easement.</i>	Not applicable.
<i>(q) The need for and extent of any financial contributions to achieve the above matters.</i>	Not applicable.

<i>(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.</i>	Not applicable.
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9 ACCESS

9.1 GENERAL

The parent lot is located on the northern side of Kurapari Road, which is a rural, metalled-surfaced road. The local formation is narrow, with intermittent widening areas available for two-way vehicle passing.

From the site's south-eastern section, the current single-lane metal road services 6 Household Equivalents (HEs). Following subdivision, proposed Lots 1–3 will obtain access from the existing ROW, while proposed Lot 4 will obtain access independently from the end of Kurapari Road. The existing ROW will therefore serve nine legal users following subdivision.

The existing cul-de-sac/turning area near the southwestern boundary is located on neighbouring land and the applicant does not currently hold ROW rights over it. The proposed access connections are therefore located within the application site, as shown on the updated scheme plan, with proposed easements C and D providing the necessary legal access.

The vehicle crossings and accessways are assessed under the Far North District Council Engineering Standards (2023). Refer to the appended Site Plan (146523-C001) for access point locations.

9.2 VEHICLE CROSSING

It is recommended that all vehicle crossings are constructed in accordance with the Far North District Council Engineering Standards (2023), Sheet 21 Type 1A – Light Vehicles.

The crossing shall not obstruct any drainage facilities within the berm. Where the drain is shallow and only carries low rain flow, the crossing must pass through the drain. Where the drain is an unstable shape or carries significant rain flow the drain shall be piped under the crossing. Pipes and end treatments shall be sized appropriately for the catchment intercepted but shall be a minimum 300mmØ.

9.3 SIGHT DISTANCES

Kurapari Road has a default speed limit of 100km/hr under the NZTA National Speed Limits Register. On this basis, and as an Access Road under the Far North District Council Engineering Standards 2023 Sheet 4, the applicable minimum sight distance would be 195m.

Based on the existing road environment, a 195m sight distance is not practically achievable along this section of Kurapari Road due to the narrow metalled formation, road curvature, topography and roadside vegetation. Given this, the practical operating speed in the vicinity of the proposed vehicle crossings is expected to be substantially lower than the posted/default speed limit. A formal speed survey or traffic engineering assessment has not been undertaken.

As a comparative assessment only, FNDC Engineering Standards 2023, Sheet 4, identifies a minimum sight distance of 60m for a 50km/hr operating speed. The available sight distances at the proposed crossing locations have therefore been compared against this lower-speed environment as an indication of practical suitability, subject to FNDC review and acceptance.

9.3.1 Lot 4 - Vehicle Crossing Sight Distance

Lot 4's proposed vehicle crossing is expected to provide approximately 70m sight distance to the west and 85m sight distance to the east, based on GIS / LiDAR review. These sight distances exceed the 60m comparative sight distance associated with a 50km/hr operating speed under FNDC Engineering Standards 2023, Sheet 4.

On this basis, the proposed Lot 4 access is considered reasonable in principle for the existing low-speed, low-volume rural metalled road environment. This remains subject to confirmation during detailed design that vegetation, road curvature and vertical alignment do not further restrict visibility, and subject to FNDC acceptance.



Figure 4: Annotated image from Google Streetview showing available sight distance to the west



Figure 5: Annotated image from Google Streetview showing available sight distance to the east

9.3.2 Lots 2 and 3 – Connection to Existing ROW

Lots 2 and 3 will share an internal access connection to the existing private ROW at the location shown on the updated scheme plan. As this connection is located within private land and does not form a vehicle crossing onto the public road, the FNDC public-road vehicle-crossing sight-distance requirements are not applicable.

The connection should be formed with sufficient local widening and vegetation clearance to provide clear intervisibility between vehicles using the shared access and the existing ROW. Final access geometry, drainage and visibility should be confirmed during detailed design.

9.4 VEHICLE ACCESS & PASSING BAYS

Internal vehicle access requirements for proposed Lots 2 and 3 have been reviewed against the relevant accessway provisions of the Operative District Plan (ODP), Proposed District Plan (PDP), and FNDC Engineering Standards 2023.

APPENDIX 3B-1: STANDARDS FOR PRIVATE ACCESS

(Reference: *Part 3 District Wide Provisions, Section 15.1 Traffic, Parking and Access and Zone Maps*)

Zone	No. of H.E.s	Legal Width	Carriageway Width	Maximum Gradient		Kerb	Foot-path	Storm-water Drain ¹
				Unsealed	Sealed			
Residential	1	-	3.0	1:6	1:4	-	-	Yes
Coastal Residential	2	5.0	3.0	-	1:4	-	-	Yes
Russell Township	3 - 4	7.5	3.0 with passing bays	-	1:4	-	-	Yes
Point Veronica	5 - 8	7.5	5.0	-	1:4	Yes	-	Yes
Commercial	1	-	3.0	1:8	1:5	-	-	Yes
Industrial	2 - 4	8.0	6.0	-	1:5	-	-	Yes
Orongo Bay Special Purpose	>5	8.0	6.0	-	1:5	-	-	Yes
Rural Production	1	-	3.0	1:5	1:4	-	-	Yes
Rural Living								
Waimate North Horticultural Processing	2	5	3.0	1:5	1:4	-	-	Yes
Carrington Estate								
General Coastal Coastal Living	3 - 4	7.5	3.0 with passing bays	1:5	1:4	-	-	Yes
South Kerikeri Inlet								
Recreational Activities	5 - 8	7.5	5.0	1:5	1:4	-	-	Yes

¹ All private access must have stormwater drainage measures such that adverse effects are not created on adjoining properties or the public road, in accordance with Council's "Engineering Standards and Guidelines" (June 2004 – Revised 2009)

Note 1: H.E. = Household Equivalent represented by 10 vehicle movements

Note 2: Refer to *Rules 15.1.6B.1.1(c) and (d)*.

Note 3: Access for more than 8 Household Equivalents shall be by public road and constructed to a standard identified in *Appendix 3B-2*.

Note 4: Access carriageways in urban zones that serve two or more users shall be sealed or concreted, refer *Rule 15.1.6B.1.2(c)*.

Figure 6: FNDC Operative DP (ODP) Table 3B-1: Standards for Private Accessways

TRAN-Table 9 - Requirements for private accessways								
Number of residential units	Maximum length (m)	Minimum legal width (m)	Minimum carriageway width (m)			Footpath width (m)	Maximum gradient	Crossfall
			Unsealed shoulder	Surfacing width	Total			
Urban								
2-4	50	4.0	-	1 x 3.0	3.0	-	12.5% from the first 5m from the road boundary and 22% for the remainder restricted to straight sections	3%
5-8	100	6.0		1 x 4.5	4.5	1 x 0.95		
Rural								
2	-	4.0	2 x 0.25	1 x 3.0	3.5	-	12.5% for the first 5m from the road boundary and 22.2% for the remainder	3% where sealed; 6% where unsealed
3 - 5		6.0	2 x 0.25	1 x 3.0	4.5			
6 - 8		10.0	2 x 0.25	1 x 3.0	6.0			

Figure 7: Snip of FNDC Proposed District Plan (PDP) TRAN-Table 9

On accessways more than 200 m long and less than 4.5 m carriageway width, passing bays shall be provided at points of intervisibility (at approximate 100 m intervals). For such passing bays the carriageway width should be increased to 5.5 m over a 15 m length including 5 m tapers at each end.

Figure 8: Snip from FNDC Engineering Standards (2023) Section 3.2.28.3

The shared access length from the proposed crossing to the point where the accessways separate is approximately 110m. Given the short shared length and the expected use by two household equivalents only, passing bays are not anticipated to be required within the proposed lots. Final accessway formation and passing requirements should be confirmed at detailed design stage.

The Lot 2 panhandle accessway proposed legal width is shown to be ~10m wide per the supplied Scheme Plan. Each Proposed Lot is assumed to serve 1 household equivalent.

The applicable requirements are summarised below:

No. of H.E.s	Minimum Legal Width	Minimum Carriageway Width	Passing Bay(s) Required
1	ODP: - PDP: 4.0m	ODP: 3.0m PDP: 3.5m	Every 100m for total accessway length >200m
2	ODP: 5.0m PDP: 4.0m	ODP: 3.0m PDP: 3.5m	

10 LIMITATIONS

This report has been prepared for the benefit of the Client for the purpose of supporting a Resource/Subdivision Consent application for the project described herein and within the agreed scope of engagement. The report may be submitted to the relevant Territorial Authority for that purpose.

The Territorial Authority may rely on this report for the purposes of assessing the Resource Consent application, subject to the scope, assumptions, and limitations described herein. Any material changes to the development proposal, site conditions, or design assumptions from those described in this report should be referred to Wilton Joubert Limited for review.

This report remains the intellectual property of Wilton Joubert Limited. No responsibility or liability is accepted for the use of this report by any third party, or for any purpose other than that for which it was prepared, unless expressly agreed in writing. Any party choosing to rely on this report does so at their own risk.

While this report may be used in support of regulatory approvals, it does not remove the requirement for detailed, site-specific investigations, assessments, or inspections that may be required at subsequent design or Building Consent stages, in accordance with standard engineering practice.

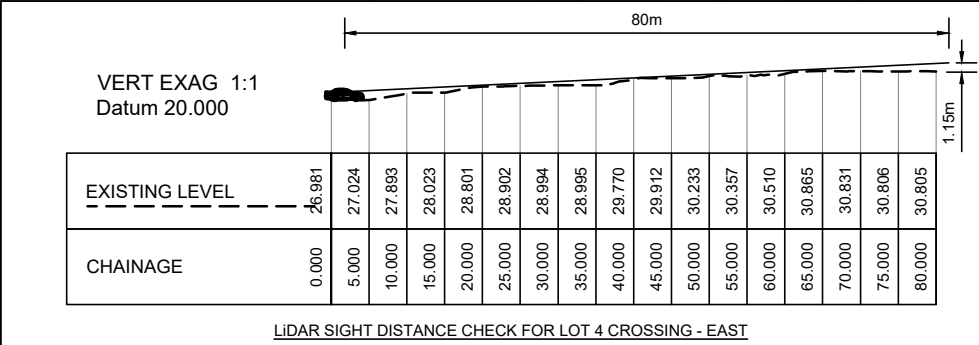
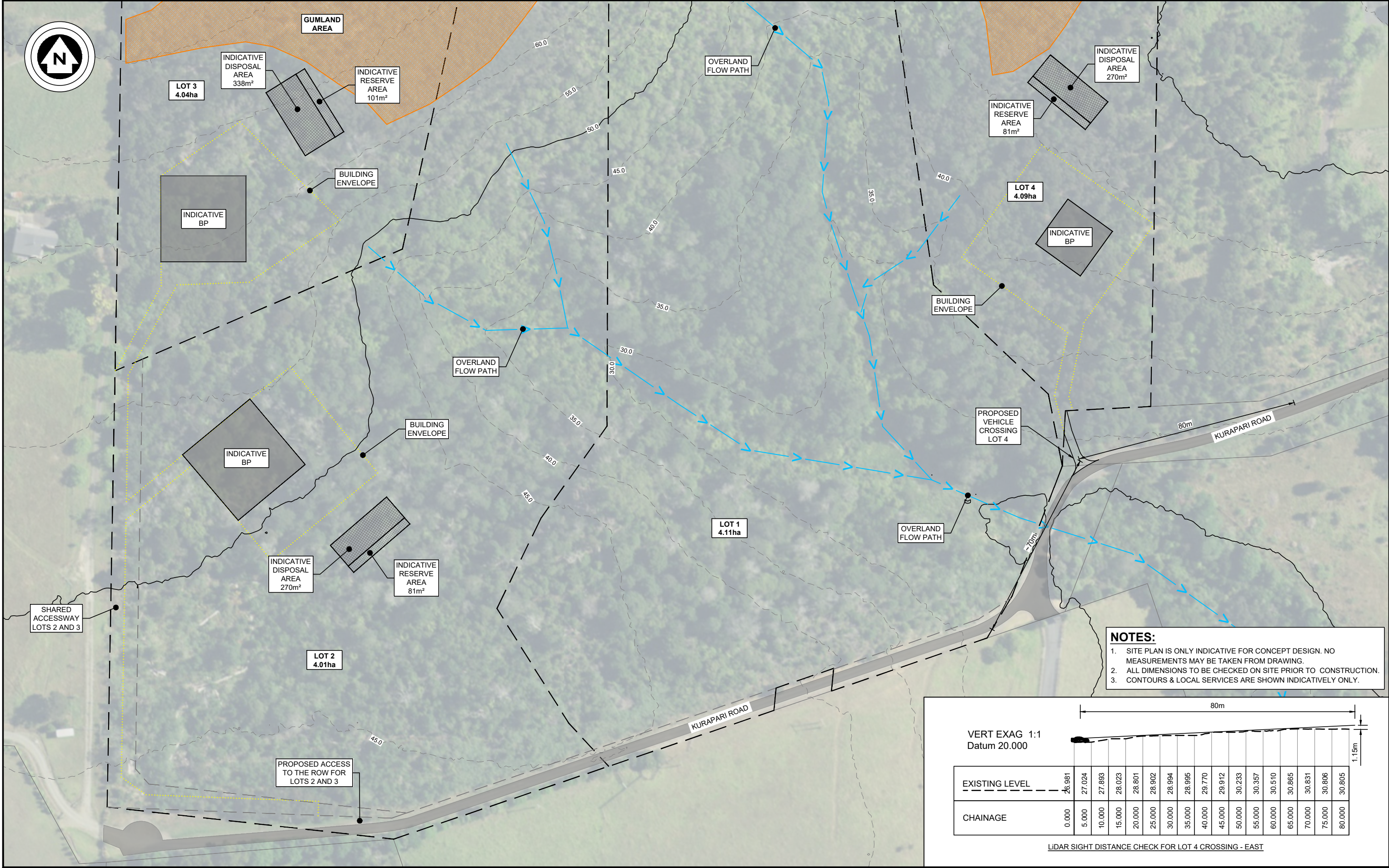
The conclusions and recommendations in this report are based on information available at the time of preparation and are dependent on appropriate implementation during construction. Variations in site conditions or construction practices may affect performance and should be reviewed by a suitably qualified and experienced engineer if encountered.

Yours faithfully,

WILTON JOUBERT LIMITED

Enclosures:

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





WILTON JOUBERT
Consulting Engineers

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Wanaka: 03 443 6209

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ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
01	MAY '26	BGS	FOR RC / SUB APPROVAL
02	JUN '26	BGS	REVISED WASTEWATER FIELD LAYOUT
03	AUG '26	BGS	REVISED ACCESS FOR LOTS 2 & 3

DESIGNED BY:
BGS

DRAWN BY:
BGS

CHECKED BY:
PM

SURVEYED BY:
OTHER

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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 ENGINEERS APPROVAL

DRAWING TITLE:

CIVIL SITE PLAN

PROJECT DESCRIPTION:

CIVIL SUITABILITY REPORT

PROJECT TITLE:

LOT 3 DP 415575
88 KURAPARI ROAD
KERIKERI

ORIGINAL DRAWING SIZE: A3

OFFICE: OREWA

DRAWING SCALE: 1:1250

CO-ORDINATE SYSTEM: NOT COORDINATED

DRAWING NUMBER: 146523-C001

ISSUE: 03

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HAND AUGER : HA01		JOB NO.: 146522		SHEET: 1 OF 1						
CLIENT: Markus Wiese		START DATE: 07/05/2026		NORTHING: GRID:						
PROJECT: 4-Lot Subdivision		DIAMETER: 50mm		EASTING:						
SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri		SV DIAL: DR4802		ELEVATION: Ground						
		FACTOR: 1.39		DATUM:						
STRATIGRAPHY	SOIL DESCRIPTION		LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
						PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
Topsoil	TOPSOIL, dark brown, moist.			0.0	Groundwater Not Encountered					
				0.2						
				0.4		UTP	-	-		
				0.6						
				0.8		UTP	-	-		
				1.0						
				1.2		UTP	-	-		
				1.4						
				1.6		UTP	-	-		
				1.8						
Kerikeri Volcanic Group	NATURAL: Gravelly SILT, trace to minor clay, brown with orange mottles, very stiff, dry to moist, no plasticity.			0.2	Groundwater Not Encountered					
				0.4						
				0.6						
				0.8		UTP	-	-		
				1.0						
				1.2		UTP	-	-		
				1.4						
				1.6		UTP	-	-		
				1.8						
				2.0		UTP	-	-		
	SILT, minor to some clay, frequent gravel and clast inclusions, brown with orange and red mottles, very stiff, dry to moist, low plasticity.			0.8	Groundwater Not Encountered					
				1.0						
				1.2		UTP	-	-		
				1.4						
				1.6		UTP	-	-		
				1.8						
				2.0		UTP	-	-		
				2.2						
				2.4						
				2.6		139	83	1.7		
	SILT, minor clay, brown with orange, yellow, red and white mottles, very stiff, dry to moist, no to low plasticity.			1.2	Groundwater Not Encountered					
				1.4						
				1.6		UTP	-	-		
				1.8						
				2.0		UTP	-	-		
				2.2						
				2.4						
				2.6		139	83	1.7		
				2.8						
				3.0		120	75	1.6		
	SILT, some clay, dark reddish brown with occasional red mottles and white specks, very stiff, moist, low plasticity.			1.6	Groundwater Not Encountered					
				1.8						
				2.0		UTP	-	-		
				2.2						
				2.4						
				2.6		139	83	1.7		
				2.8						
				3.0		120	75	1.6		
				3.2						
				3.4						
	SILT, minor clay, dark reddish brown with occasional red mottles and white specks, very stiff, moist, no to low plasticity.			1.6	Groundwater Not Encountered					
				1.8						
				2.0		UTP	-	-		
				2.2						
				2.4						
				2.6		139	83	1.7		
				2.8						
				3.0		120	75	1.6		
				3.2						
				3.4						
	EOH: 3.00m - Target Depth			3.0	Groundwater Not Encountered					
				3.2						
				3.4						
				3.6						
				3.8						
				4.0						
				4.2						
				4.4						
				4.6						
				4.8						
REMARKS		 185 Waipapa Road, Kerikeri 0295 Phone: 09-945 4188 Email: jobs@wjl.co.nz Website: www.wiltonjoubert.co.nz Consulting Engineers								
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		▼ Standing groundwater level								
CHECKED BY: CSH		▽ GW while drilling								

HAND AUGER : HA02

JOB NO.: 146522

SHEET: 1 OF 1

START DATE: 07/05/2026

NORTHING:

GRID:

DIAMETER: 50mm

EASTING:

SV DIAL: 1994

ELEVATION: Ground

FACTOR: 1.41

DATUM:

CLIENT: Markus Wiese
PROJECT: 4-Lot Subdivision

SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
					PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
Kerikeri Volcanic Group	TOPSOIL, dark brown, moist.	 TOPSOIL  CLAY  SAND  PEAT	0.0						
	NATURAL: SILT, minor clay, frequent gravels and clasts, brown, very stiff, moist, low plasticity.	 SILT  GRAVEL  ROCK	0.2						
	Gravelly SILT, trace clay, orangey brown with brown mottles very stiff, moist, no plasticity.		0.4	UTP	-	-			
			0.6						
			0.8	UTP	-	-			
			1.0						
			1.2	UTP	-	-			
			1.4						
	SILT, minor clay, occasional gravels, orangey brown with white specks, very stiff, moist, no to low plasticity.		1.6	197+	-	-			
	1.7m: Moist to wet.		1.8						
			2.0	197+	-	-			
			2.2						
	SILT, some clay, brown, very stiff, moist to wet, low plasticity.		2.4	197+	-	-			
	2.4m: Orangey brown.		2.6						
	2.7m: Occasional clasts.		2.8	197+	-	-			
			3.0						
			3.2	141	54	2.6			
			3.4						
			3.6	110	59	1.9			
			3.8						
		4.0	197+	-	-				
		4.2							
		4.4	UTP	-	-				
	EOH: 4.40m - Too Hard To Auger		4.6						
			4.8						

REMARKS

End of borehole @ 4.40m (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

▼ Standing groundwater level

CHECKED BY: CSH

▽ GW while drilling



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HAND AUGER : HA03					JOB NO.: 146522		SHEET: 1 OF 1					
CLIENT: Markus Wiese					START DATE: 07/05/2026		NORTHING:		GRID:			
PROJECT: 4-Lot Subdivision					DIAMETER: 50mm		EASTING:		ELEVATION: Ground			
SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri					SV DIAL: DR4802		ELEVATION: Ground		DATUM:			
STRATIGRAPHY	SOIL DESCRIPTION				LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
	TOPSOIL	CLAY	SAND	PEAT				PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
Topsoil	TOPSOIL, dark brown, moist.					0.0	Groundwater Not Encountered					
	NATURAL: SILT, minor clay, frequent gravels and clasts, brown with orange mottles, very stiff, moist, no to low plasticity.					0.2						
						0.4		195+	-	-		
	SILT, trace clay, frequent clasts, orangey brown, very stiff to hard, dry to moist, no plasticity.					0.6						
						0.8		UTP	-	-		
	0.7m: Trace to minor clay.					1.0						
						1.2		UTP	-	-		
	SILT, some clay, orangey brown to brown, very stiff, moist, low plasticity.					1.4						
						1.6						
						1.8		195+	-	-		
	1.8m: Orangey brown with light brown mottles.					2.0						
						2.2		195+	-	-		
						2.4		128	100	1.3		
	2.6m: Dark reddish brown with light brown mottles.					2.6						
	2.8m: Orangey brown with light brown mottles.					2.8		108	83	1.3		
	Kerikeri Volcanic Group					3.0						
				3.2	195+	-	-					
				3.4								
				3.6	UTP	-	-					
EOH: 3.60m - Too Hard To Auger				3.8								
				4.0								
				4.2								
				4.4								
				4.6								
				4.8								
REMARKS					WILTON JOUBERT Consulting Engineers 185 Waipapa Road, Kerikeri 0295 Phone: 09-945 4188 Email: jobs@wjl.co.nz Website: www.wiltonjoubert.co.nz							
End of borehole @ 3.60m (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: SJP												
CHECKED BY: CSH												
					▼ Standing groundwater level							
					▽ GW while drilling							

HAND AUGER : HA04

JOB NO.: 146522

SHEET: 1 OF 1

START DATE: 07/05/2026

NORTHING:

GRID:

DIAMETER: 50mm

EASTING:

SV DIAL: 1994

ELEVATION: Ground

FACTOR: 1.41

DATUM:

CLIENT: Markus Wiese
PROJECT: 4-Lot Subdivision

SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
					PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
Kerikeri Volcanic Group	TOPSOIL, dark brown, moist.	 TOPSOIL  CLAY  SAND  PEAT  FILL  SILT  GRAVEL  ROCK	0.0	Groundwater Not Encountered					
	NATURAL: Gravelly SILT, brown with orangey brown mottles, very stiff, dry to moist, no plasticity.		0.2						
	SILT, minor clay, frequent gravels, orangey brown with orange mottles, very stiff, moist, no to low plasticity.		0.4		UTP	-	-		
			0.6						
			0.8		UTP	-	-		
			1.0						
			1.2		UTP	-	-		
			1.4						
			1.6		UTP	-	-		
			1.8						
			2.0		UTP	-	-		
			2.2						
	EOH: 2.00m - Too Hard To Auger		2.4						
			2.6						
			2.8						
			3.0						
			3.2						
			3.4						
			3.6						
			3.8						
4.0									
4.2									
4.4									
4.6									
4.8									

REMARKS

End of borehole @ 2.00m (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

▼ Standing groundwater level

CHECKED BY: CSH

▽ GW while drilling



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HAND AUGER : HA05			JOB NO.: 146522		SHEET: 1 OF 1				
CLIENT: Markus Wiese			START DATE: 07/05/2026		NORTHING: GRID:				
PROJECT: 4-Lot Subdivision			DIAMETER: 50mm		EASTING:				
SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri			SV DIAL: 1994		ELEVATION: Ground				
			FACTOR: 1.41		DATUM:				
STRATIGRAPHY	SOIL DESCRIPTION		LEGEND	DEPTH (m)	WATER	SHEAR VANE			COMMENTS, SAMPLES, OTHER TESTS
						PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY	
	TOPSOIL, dark brown, moist.			0.2					
Kerikeri Volcanic Group	NATURAL: Gravelly SILT, some clay, brown, very stiff, moist, low plasticity.			0.4		UTP	-	-	
	SILT, some clay, orangey brown, very stiff, dry to moist, low plasticity.			0.6					
				0.8					
				1.0		197+	-	-	
				1.2					
				1.4		197+	-	-	
				1.6					
				1.8		197+	-	-	
	1.8m: Occasional clasts.			2.0		155	51	3.0	
				2.2					
				2.4		186	56	3.3	
				2.6					
	2.7m: Orangey brown with brown mottles and frequent multicoloured specks.			2.8		147	51	2.9	
	EOH: 3.00m - Target Depth			3.0					
				3.2					
				3.4					
				3.6					
				3.8					
				4.0					
				4.2					
				4.4					
				4.6					
				4.8					
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: JEM			▼ Standing groundwater level						
CHECKED BY: CSH			▽ GW while drilling						
			 WILTON JOUBERT Consulting Engineers 185 Waipapa Road, Kerikeri 0295 Phone: 09-945 4188 Email: jobs@wjl.co.nz Website: www.wiltonjoubert.co.nz						

HAND AUGER : HA06

JOB NO.: 146522

SHEET: 1 OF 1

START DATE: 07/05/2026

NORTHING:

GRID:

DIAMETER: 50mm

EASTING:

SV DIAL: 1994

ELEVATION: Ground

FACTOR: 1.41

DATUM:

CLIENT: Markus Wiese
PROJECT: 4-Lot Subdivision

SITE LOCATION: Lot 3 DP 415575, Kurapari Rd, Kerikeri

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE			DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
					PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY		
Top soil	TOPSOIL, dark brown, moist.		0.0	Groundwater Not Encountered					
Waipapa Group	NATURAL: Clayey SILT, yellowish brown, very stiff, dry to moist, low plasticity.		0.2						
			0.4		UTP	-	-		
			0.6						
			0.8		197+	-	-		
			1.0						
	1.2m: Yellowish brown with red mottles.		1.2		197+	-	-		
			1.4						
	1.5m: No to low plasticity.		1.6		UTP	-	-		
			1.8						
			2.0		UTP	-	-		
			2.2		UTP	-	-		
			2.4						
			2.6						
			2.8						
			3.0						
			3.2						
			3.4						
			3.6						
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REMARKS

End of borehole @ 2.10m (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

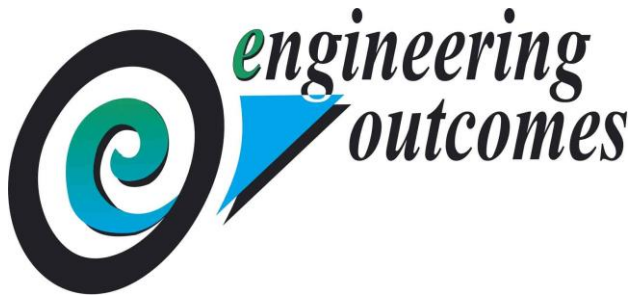
▼ Standing groundwater level

CHECKED BY: CSH

▽ GW while drilling



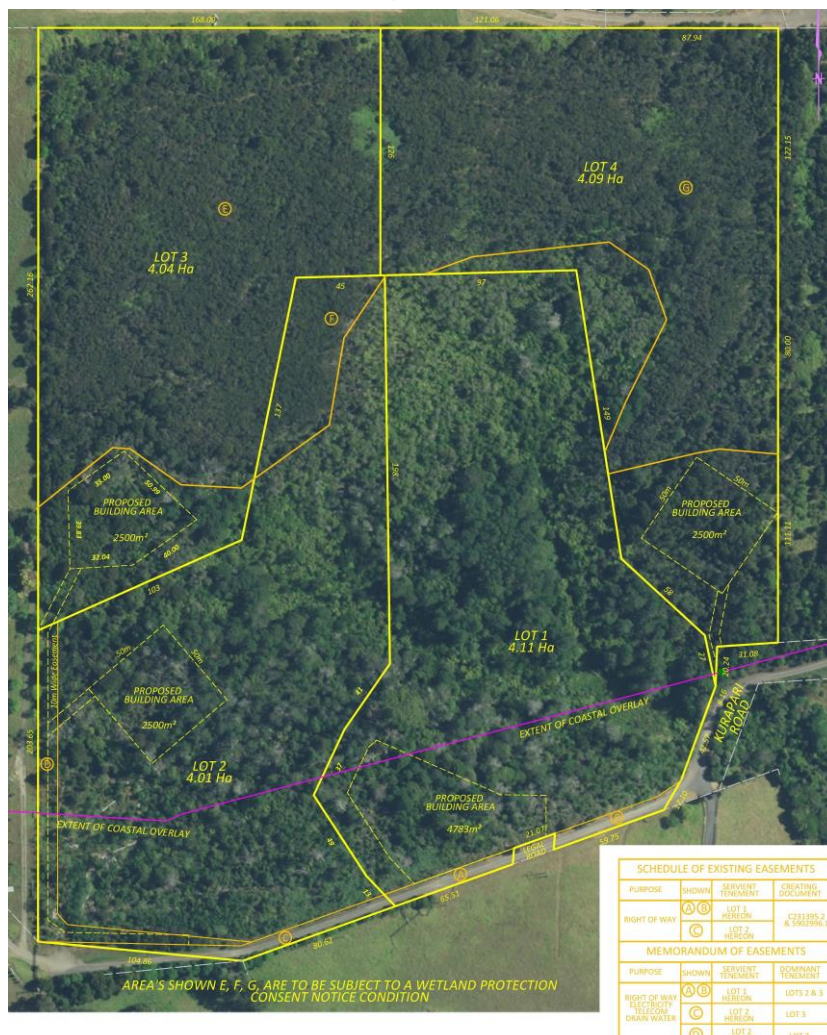
185 Waipapa Road, Kerikeri 0295
Phone: 09-945 4188
Email: jobs@wjl.co.nz
Website: www.wiltonjoubert.co.nz



Engineering Outcomes, Limited
132 Beach Road
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New Zealand
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E-mail info@e-outcomes.co.nz

SUBDIVISION

88 KURAPARI ROAD, RANGITANE, NORTHLAND



ASSESSMENT OF TRAFFIC EFFECTS

Prepared by Dean Scanlen
Engineering Outcomes Ltd
16 September 2026

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1. THE PROPOSAL

This is a traffic report in relation to a proposed subdivision of Lot 3 DP 415575, on Kurapari Road Rangitane, into four rural-residential titles. The subdivision is described in concept plans by Thomson Survey which are appended. Traffic safety mitigation is described in Figures 1 and 2.

All lots lead to Kurapari Road between 500 and 900 metres from Rangitane Road. Lot 4 of the subdivision is intended to lead to Kurapari Road at 490 metres (on the outside of a bend where the visibility in both directions is at least adequate). Lot 1 has a large potential building area with a frontage to Kurapari Road extension between 630 and 700 metres. Lots 2 and 3 lead to a proposed easement (D) that connects to Kurapari Road extension at 900 metres.

The subdivision will increase the usage of Kurapari Road extension to eight titles¹.

A crest between 630 and 710 metres affords forward visibility of only 70 metres. A chicane is proposed between 615 and 655 metres, as detailed in Figure 2, to ensure that vehicles travel at speeds from which the combined safe-stopping distance is less than the available forward visibility through the crest².

Warning and speed advisory signage is proposed, all as shown in Figure 1. There are two driveways that connect to Kurapari Road at an acute angle and with restricted visibility towards the west. Warning signs are proposed on the eastbound approach to both.

2. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Overall, with the mitigation measures proposed and summarised in Figures 1 and 2, it is concluded that the traffic effects of the proposal will be well managed such that the associated risks are well within acceptable limits and the traffic effects will be less than minor. The measures include a speed control chicane and signage.

With those measures in place, Kurapari Road extension, while narrower than the width specifications of the *Far North district plan*, will still be fit-for purpose even with the additional traffic generated by the proposal, which is estimated at 20 to 24 movements on an average day at full development.

Additional general widening of Kurapari Road extension, even in conjunction with sealing, is likely to be counter-productive. Recent peer-reviewed research into the influence of road width on harm found that the widening of unsealed roads increases the rate of harm on them, even with roadways such as this that provide only a single effective lane.

The risks associated with the steep section of Kurapari Road extension, between 550 and 640 metres have been found to be less than minor.

Even with the subdivision, the extension of Kurapari Road extension will also not carry an unusual level of traffic for an unsealed roadway of this width. In fact, with the work proposed, it will generally be superior to average roadways in this width range considered in the cited study.

¹ Although another title - NA52C/32 (Lot 1 DP 96467) has rights over some of the roadway, its access currently connects to Kurapari Road at the end of the legal road and likely council maintenance.

² The widest section of the chicane coincides with the short section of legal road, so only necessitates an extension of that, ie no change to the easements along the extension roadway



Project
Subdivision
Kurapari Road
Rangitane

Surveyed by
Williams & King
LINZ
NRC

Council ref.

Scale 1:2500 at A3
Date 16-Sep-2026 10:21:57

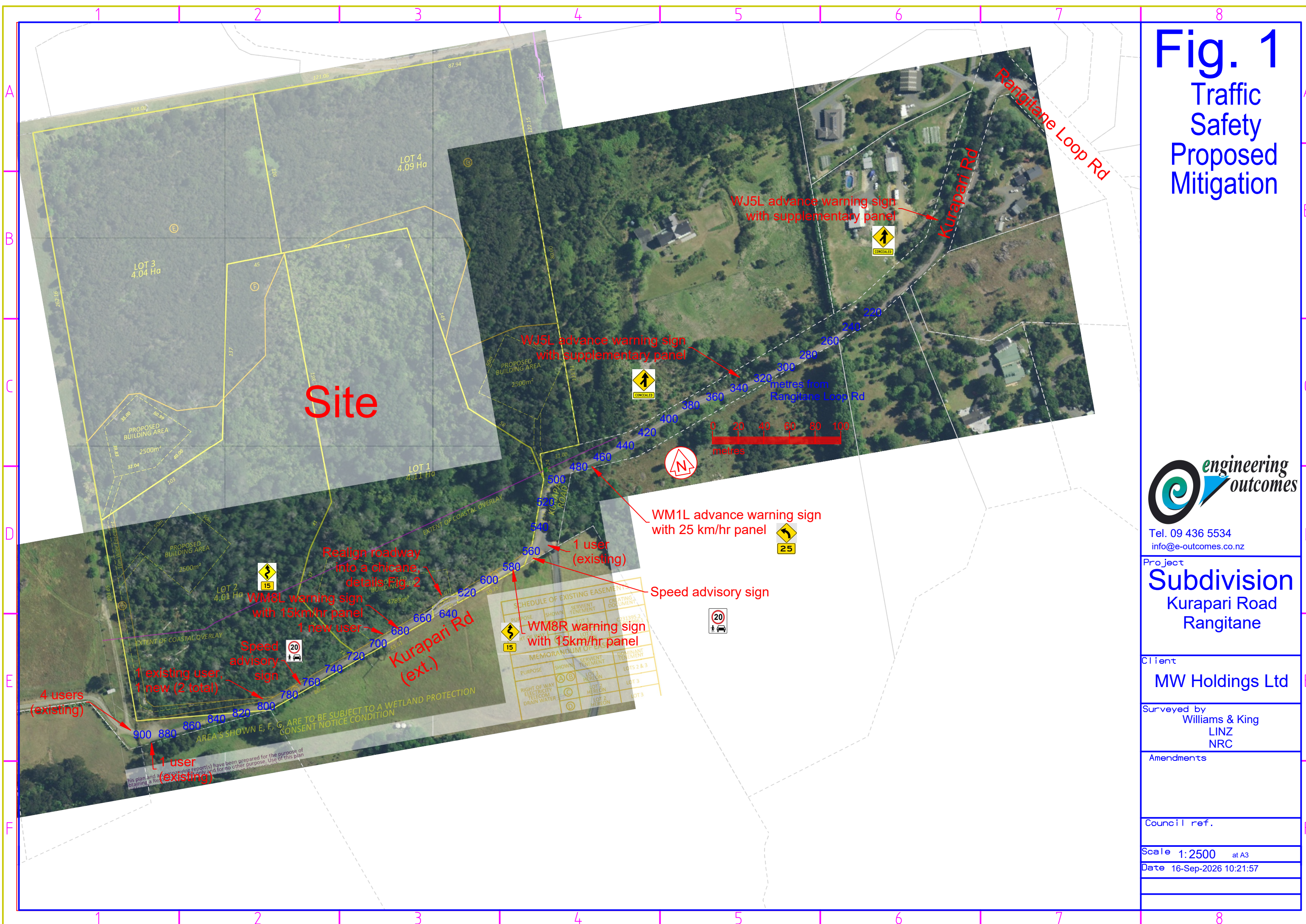


Fig. 2
Proposed
chicane



Tel. 09 436 5534
info@e-outcomes.co.nz

Project
Subdivision
Kurapari Road
Rangitane

Client
MW Holdings Ltd

Surveyed by
Williams & King
LINZ
NRC

Amendments

Council ref.

Scale 1:150 at A3

Date 11-Sep-2026 14:43:19



3. KURAPARI ROAD AND EXTENSION

All distances in this report are metres from Rangitane Road.

The first 550 metres of Kurapari Road are maintained by the Far North district council³.

Kurapari Road extension is unsealed and privately owned and managed. It has an unsealed carriageway ranging from 2.8 to 3.2 metres wide and a legal corridor 7.5 metres wide. Its physical carriageway is a continuation of that of Kurapari Road. There is also a short section of legal road between 628 and 651 metres, also 7.5 metres wide

The section between 550 and 640 metres, which is immediately beyond the end of the legal road, is on a gradient as steep as 17%. Beyond the crest, there is full forward visibility and gradients no steeper than 3%.

The speed limit on Kurapari Road is 100 km/hr.

Photo 1. Kurapari Road extension from 645 metres and the location of the proposed chicane, looking west. The forward visibility over the crest is at least 70 metres.



Photo 2. Looking east along Kurapari Road extension from 730 metres.



³ Although there is no “council maintenance ends” sign, most of the legal road ends at 550 metres and the roadway continues for another 350 metres on right-of way easements. The section beyond the end of council maintenance is referred to as “Kurapari Road extension”.

Photo 3. Looking west along Kurapari Road extension from 780 metres. The shared access for Lots 2 & 3 connects at right.



4. COUNCIL STANDARDS

Kurapari Road extension currently leads to only three dwellings and five titles. The subdivision will increase its use to eight titles.

The council's width standards for rural public roads are given in Tran-Table 10 of its proposed district plan (which has legal effect). For rural roads leading to 8 household equivalents, those specify a sealed carriageway 6.0 metres carriageway and a legal corridor width of 10 metres. Neither footpaths nor lighting are specified for rural roadways.

5. TRAFFIC

All vehicle movements are one-way movements whether an entry or exit or a movement in one direction along public roads.

5.1 Traffic generation and on public roads

Based on analysis of other localities this distance from urban centres, the traffic generation is estimated to be in the range 15 to 18 movements on an average day.

5.2 Crashes

The *CAS* database of crashes reported to the Police has been searched on all of Kurapari Road and its extension since the start of 2016. Not one crash has been reported in that period.

6. ASSESSMENT OF TRAFFIC EFFECTS AND PROPOSED MITIGATION MEASURES

The focus of this section is the carriageway width of Kurapari Road extension.

Recent peer-reviewed research⁴ into the influence of road width on harm found that the widening of unsealed roads increases the rate of harm on them, ie is counter-productive. The research did not investigate the reasons for this effect, but it is very likely a result of the higher vehicle speeds that wider roads both enable and encourage.

The width of Kurapari Road extension – both its carriageway and legal corridor, is strictly already well below those specified in the *Far North district plan*. Despite this, the cited research shows that the risks associated with the proposed carriageway width are no higher than those for wider roads, in fact very likely lower.

Despite this, the presence of the crest between 620 and 720 metres is a risk factor that warrants mitigation. Provided vehicles travel at no more than 30 km/hr, the combined safe-stopping sight distance of two vehicles is no more than the forward sight distance available over the crest. However, given the easy to straight alignment of Kurapari Road extension, there is potential for some vehicles to travel at speeds higher than 30 km/hr in this locality.

To address this, the chicane detailed in Figure 2 is proposed. The proposed chicane forces all vehicles, travelling in both directions, to deviate sufficiently⁵ while enabling the passage of larger vehicles. A design speed no greater than 20 km/hr is necessary to achieve this here and this will be reinforced by the proposed advisory speed of 15 km/hr.

The chicane enables the passage of 8 metre rigid trucks, Types 1 to 3 fire appliances⁶ and typical furniture trucks. Vehicles larger than this are not expected⁷.

The risks associated with the steep section of Kurapari Road extension, between 550 and 640 metres, has been evaluated through a district-wide search of crashes resulting in more than minor injuries (“DSI crashes”) and involving a loss of control and/or head-on collision. The search covered all unsealed roads in the Far North district⁸ over the most recent 5 calendar years.

Four such crashes have been reported. One involved a vehicle doing “snakies” and another was a suspected suicide of an intoxicated driver. The other two occurred on sections of road that provide two effective lanes (widths of at least 5 metres) and easy to near-flat gradients.

There are numerous sections of unsealed road in the Far North district with gradients and widths similar to that on the steep section of Kurapari Road extension. The crash history does not point to a concerning safety record on such roads.

The warning signs on the approaches to both existing crossings on acute angles (on Kurapari Road at 100 and 290 metres) and advisory signage will reduce the, already very low, risks even further again.

⁴ Dean Scanlen (June 2024): How is Road Width Related to Harm? Presented to the ENZ Transportation Group conference in June 2024. With unsealed roads, the rate of harm increases steadily and significantly with increasing width.

⁵ Although it is not feasible here to force eastbound motorbikes to deviate. This is desirable because low-speed curves are a risk for motorbikes on unsealed surfaces and very few motorbikes are expected in any event.

⁶ One of which will almost certainly be used in this locality.

⁷ In particular, there are neither dairy farms nor planted forestry beyond the chicane.

⁸ Of which there are close to 2,000 kilometres.

7. FAR NORTH DISTRICT PLAN – ASSESSMENT CRITERIA

The assessment criteria in the plan relevant to traffic management and access are in section TRAN-P7.

Criterion (a): The type and level of traffic anticipated.

More than 98% of traffic generated by subdivisions such as this will be light vehicles. The chicane enables the passage of 8 metre rigid trucks, Types 1 to 3 fire appliances and typical furniture trucks as shown in Figure 2.

Criterion (b): The location of high traffic generating activities and their relationship to existing roads, the classification of those roads (as shown on the Transport Network Hierarchy layer) and adjacent properties access.

This subdivision does not include a land-use component and, as such, no high traffic generating activities are proposed.

Criterion (d): Safety requirements and improvements.

These are described in Figures 1 & 2 and a commentary and assessment is given in section 6.

Criterion (g): Any cumulative effects arising from lawfully established activities in the surrounding environment.

No lawfully established activities in the catchment of Kurapari Road will generate more traffic than typical rural activity including residential, grazing and/or horticulture.

Criterion (h) Current and future connectivity including pathways and parking, and open space networks

There is no public access to the coast, other roads or any other attractions, from Kurapari Road, so it is not necessary to consider connectivity or pathways. The lots are more than large enough to cater for all parking demand.

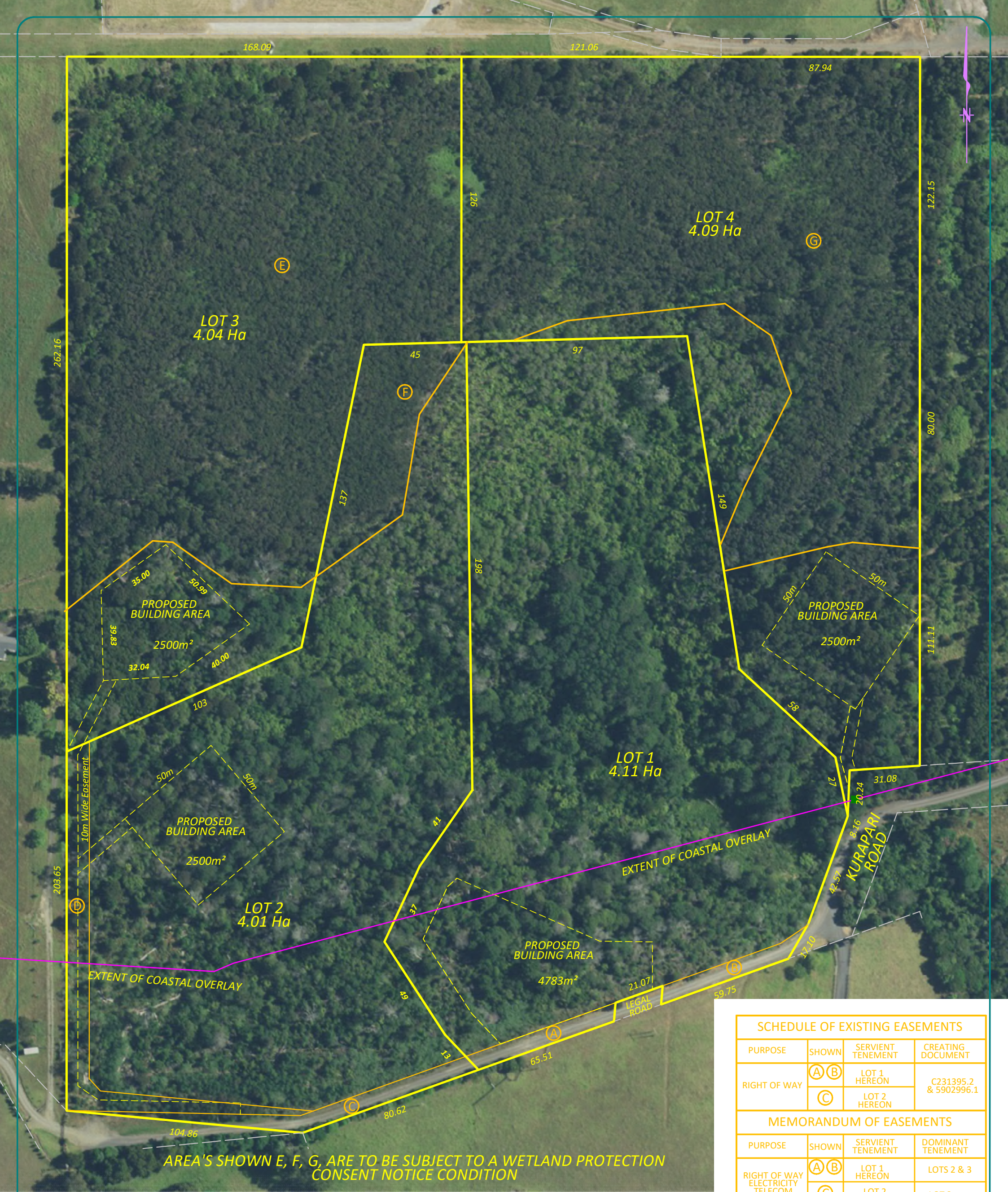
Criterion (i) any traffic assessment prepared by a suitably qualified and experienced transport professional;

This report is such an assessment.



Dean R Scanlen
BE(Hons)(Civil), CPEng, IntPE(NZ)

Engineering Outcomes Limited



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.

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AREAS AND MEASUREMENTS ARE SUBJECT TO FINAL SURVEY
TOPOGRAPHICAL DETAIL IS APPROXIMATE ONLY AND SCALED FROM AERIAL PHOTOGRAPHY

SCHEDULE OF EXISTING EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	CREATING DOCUMENT
RIGHT OF WAY	(A) (B)	LOT 1 HEREON	C231395.2 & 5902996.1
	(C)	LOT 2 HEREON	
MEMORANDUM OF EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
RIGHT OF WAY ELECTRICITY TELECOM DRAIN WATER	(A) (B)	LOT 1 HEREON	LOTS 2 & 3
	(C)	LOT 2 HEREON	LOT 3
	(D)	LOT 2 HEREON	LOT 3

LINZ LIDAR CONTOUR
1m MINOR
5m MAJOR
LEVEL DATUM NZVD16



315 Kerikeri Rd
P.O. Box 372 Kerikeri
Email: kerikeri@tsurvey.co.nz
Ph: (09) 4077360 Fax (09) 4077322

Registered Land Surveyors, Planners & Land Development Consultants

**PROPOSED SUBDIVISION OF
LOT 3 DP 415575**

PREPARED FOR: WIESE

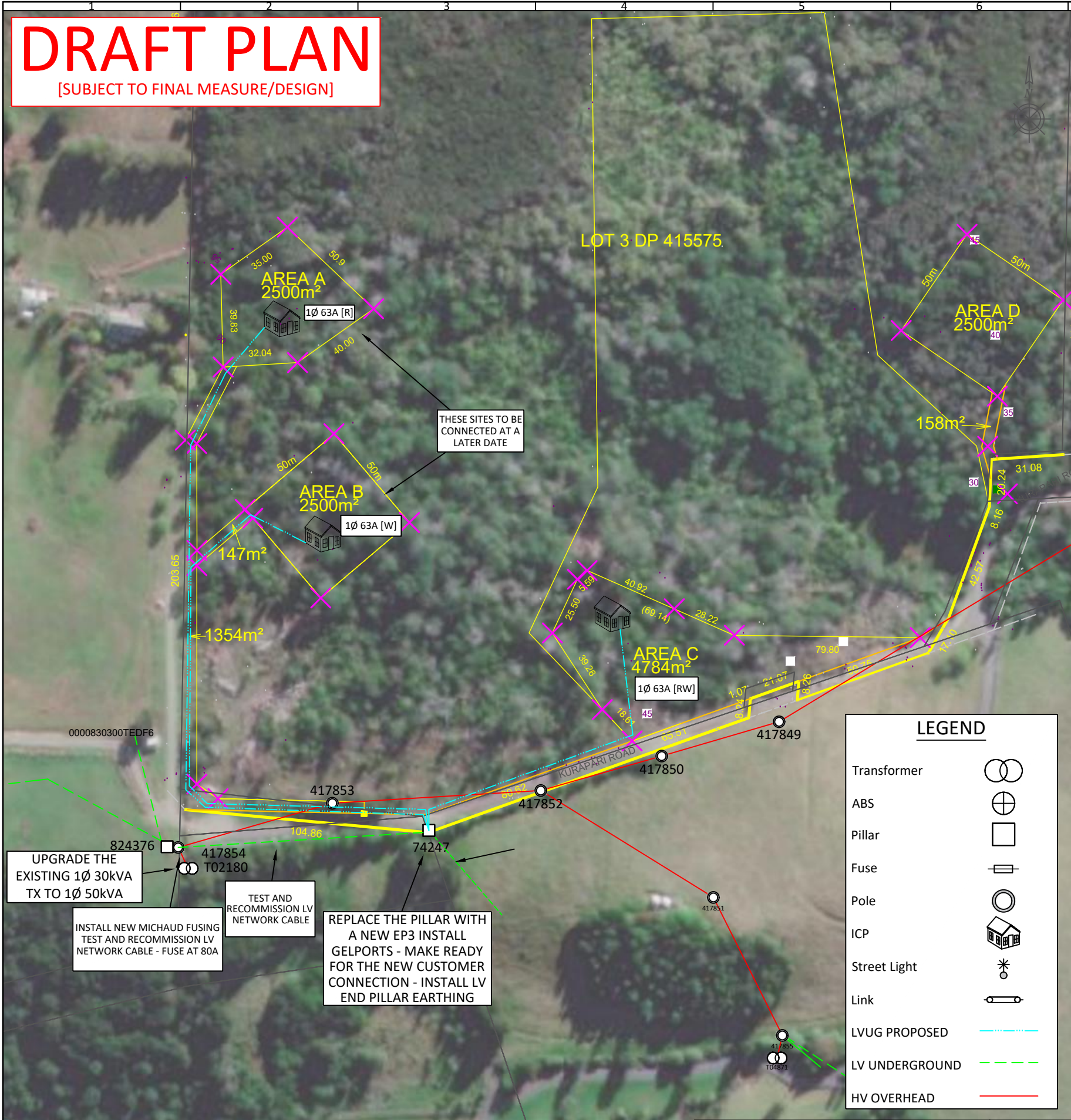
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Survey	SL	13.06.25
Design		
Drawn	SL	13.07.26
Approved		
Rev	Don't Even Ask	
10781 SCHEME 79.LCD		

ORIGINAL
SCALE
1:1500
SHEET
SIZE
A3

Surveyors
Ref. No:
10781

DRAFT PLAN

[SUBJECT TO FINAL MEASURE/DESIGN]



CONSTRUCTION DETAILS

NETWORK UPGRADE

A NOTIFIED HV SHUTDOWN OF T02180 IS REQUIRED TO:
AT T02180

- UPGRADE THE EXISTING 1Ø 30kVA TX TO A 1Ø 50kVA
- INSTALL NEW LV TAILS AND CONNECTIONS TO TX
- INSTALL NEW MASTER MICHAUD FUSE BASES TO THE LV FUSE ARM - X2

AT T02180/74247 - RECOMMISSION EXISTING LV CABLE TO PILLAR 74247

- DISCONNECT THE CABLES AT PILLAR 74247
- TEST THE LV NETWORK CABLES FROM T02180 - 74247
- IDENTIFY AND LABEL THE CABLES AT TX AND PILLAR
- RECORD TEST RESULTS
- RECONNECT THE NETWORK LV TO THE FUSE BASE X2
- RELIVEN THE CIRCUIT TO THE NEW PILLAR
- FUSE LV AT 80A
- COMPLETE AS BUILD FOR THE UG NETWORK CABLE

PILLAR 74247 - NO LABEL ON THE PILLAR

- INSTALL A NEW EP3 PILLAR
- DISCONNECT LABEL AND CAP THE REDUNDANT OUTGOING SERVICE CABLES AND MAKE SAFE - 2Ø AND NEUTRAL
- INSTALL GELPORT CONNECTIONS
- MAKE PILLAR READY FOR THE NEW CUSTOMER CONNECTIONS
- INSTALL LV END PILLAR EARTHING
- COMPLETE AS BUILD FOR THE NEW PILLAR

SERVICE CONNECTION POINT FOR LOT 3 KURAPARI RD - AREA C

- PROVIDE A 2Ø 63A FUSED SERVICE CONNECTION AT THE NEW EP 3 PILLAR
- CONNECT SERVICE MAIN CABLE SUPPLIED AND INSTALLED BY ELECTRICIAN/OTHERS
- INSPECT, TEST AND LIVEN THE PERMANENT SUPPLY

CUSTOMER RESPONSIBILITY

SERVICE MAIN INSTALLATION AREA C - KURAPARI RD

- CUSTOMER TO SUPPLY/INSTALL DUCTS ACROSS DRIVEWAY TO PILLAR TO SUPPLY AREAS, A, B AND C
- CUSTOMER TO ARRANGE THEIR PREFERRED ELECTRICAL CONTRACTOR TO SUPPLY/INSTALL THE SERVICE MAINS FROM THE NEW PILLAR TO THE CUSTOMERS METER STATION FOR AREA C
- AREAS A AND B NEW CONNECTIONS TO BE COMPLETED AT A LATER DATE

NOTES

POSSIBLE LAND BASE INACCURACIES. PROPERTY BOUNDARIES AND TOP ENERGY ASSET LOCATIONS SHOWN ON THE PLAN ARE AN INDICATION ONLY AND ARE SUBJECT TO ONSITE VERIFICATION.

REFERENCE DRAWINGS

10T1-S423-1 - TRANSFORMER, 1 PHASE UP TO 50kVA
10G1-N952-1 - EARTH BANK SINGLE & 3 PHASE POLE TRANSFORMER
10U0-0500-1 - DUCT TRENCH PROFILE

(FIF) 40108774 (CF) 40108775 (CC/LVUG) 40108776 (N/TX) 40108777

LEGEND

- Transformer
- ABS
- Pillar
- Fuse
- Pole
- ICP
- Street Light
- Link
- LVUG PROPOSED
- LV UNDERGROUND
- HV OVERHEAD

A							
REV	DESCRIPTION	DRAWN	DRAWN DATE	CHECKED	CHECKED DATE	APPROVED	APPROVED DATE

TOP ENERGY
TePuna Hihiko

Level 2, John Butler Centre
60 Kerikeri Rd, Kerikeri
PO Box 43, Kerikeri 0245

Ph: 09 401 5440
Fax: 09 401 5605
www.topenergy.co.nz

DRAWN: KM	DRAWN DATE: 01/09/2025
DESIGNED: KM	DESIGNED DATE: 01/09/2025
DWG CHECKED: -	CHECKED DATE: -
APPROVED: -	APPROVED DATE: -
SHEET 1 OF 2	

PROJECT: NETWORK UPGRADE - NEW CONNECTION	
SUBSTATION: WAIPAPA	FEEDER: 041632
DRAWING TITLE: MARKUS WIESE 27A KURAPARI RD, KERIKERI	

DRAWING NUMBER	REV
CIW-104556-1	A
SERVICE FUSING	

Rochelle

From: Stuart Bracey <SBracey@heritage.org.nz>
Sent: Tuesday, 28 July 2026 1:45 pm
To: Rochelle
Cc: Bill Edwards; James Robinson; Lisa Ahn; Tharron Bloomfield
Subject: RE: 88 Kurapari Road Kerikeri - proposed subdivision

Kia ora Rochelle,

I confirm HNZPT reviewed this application today and has no heritage issues based on the information provided. The ADP should be noted in any resource consent decision. Thanks for the opportunity to review this application early in the RMA process.

Cheers,
Stuart

Stuart Bracey | Kaiwhakamāhere | Heritage Planner | Northern Region | Heritage New Zealand Pouhere Taonga | L10 SAP
Tower 151 Queen Street Auckland CBD | Private Box 105 291 Auckland City 1143 | mobile 027 684 0833 | visit
www.heritage.org.nz and learn more about NZ's heritage places.

Tairangahia a tua whakarere; Tatakihia nga reanga o amuri ake nei – Honouring the past; Inspiring the future

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From: Stuart Bracey
Sent: Thursday, 23 July 2026 8:35 am
To: Rochelle <rochelle@northplanner.co.nz>
Subject: RE: 88 Kurapari Road Kerikeri - proposed subdivision

Hi Rochelle,

I more concerned that a new owner of the vacant lots decides they want to change the location of the building platform – not uncommon – so wanted a warning that undiscovered archaeology may be found within the site – so be careful doing earthworks in different locations,

Cheers,
Stuart

Stuart Bracey | Kaiwhakamāhere | Heritage Planner | Northern Region | Heritage New Zealand Pouhere Taonga | L10 SAP
Tower 151 Queen Street Auckland CBD | Private Box 105 291 Auckland City 1143 | mobile 027 684 0833 | visit
www.heritage.org.nz and learn more about NZ's heritage places.

Tairangahia a tua whakarere; Tatakihia nga reanga o amuri ake nei – Honouring the past; Inspiring the future

This communication may be a privileged communication. If you are not the intended recipient, then you are not authorised to retain, copy or distribute it. Please notify the sender and delete the message in its entirety.

From: Rochelle <rochelle@northplanner.co.nz>
Sent: Wednesday, 22 July 2026 4:33 pm
To: Stuart Bracey <SBracey@heritage.org.nz>
Subject: RE: 88 Kurapari Road Kerikeri - proposed subdivision

Hi Stu,

The wetland protection consent notice will be quite stringent such that the notice may not be necessary.

Are you concerned someone may establish a track which could unearth archaeology?

There are a couple of tracks that already exist in these areas, such that I don't anticipate they would need to construct any others.

I can have a chat with Markus and see what he might be open to if you like.

Regards,



Rochelle Jacobs

Director / Senior Planner

Offices in Kaitaia & Kerikeri

☎ 09 408 1866 | 📠 027 449 8813

Northland Planning & Development 2020 Limited

From: Stuart Bracey <SBracey@heritage.org.nz>
Sent: Wednesday, July 22, 2026 4:00 PM
To: Deanne Rogers <Deanne@northplanner.co.nz>
Cc: Rochelle <rochelle@northplanner.co.nz>
Subject: RE: 88 Kurapari Road Kerikeri - proposed subdivision

Just a quick initial thought – would it be possible to include in the wetland protection consent notices (E,F,G) a warning about possible archaeology that may be unearthed in these areas ?

Stuart Bracey | Kaiwhakamāhere | Heritage Planner | Northern Region | Heritage New Zealand Pouhere Taonga | L10 SAP
Tower 151 Queen Street Auckland CBD | Private Box 105 291 Auckland City 1143 | mobile 027 684 0833 | visit
www.heritage.org.nz and learn more about NZ's heritage places.

Tairangahia a tua whakarere; Tatakihia nga reanga o amuri ake nei – Honouring the past; Inspiring the future

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From: Deanne Rogers <Deanne@northplanner.co.nz>
Sent: Wednesday, 22 July 2026 3:27 pm

To: Stuart Bracey <SBracey@heritage.org.nz>
Cc: Rochelle <rochelle@northplanner.co.nz>
Subject: 88 Kurapari Road Kerikeri - proposed subdivision

Good afternoon Stuart

You may recall a land use proposal we sent you last year for a house proposal (now consented) in Kurapari Road Kerikeri. I have attached your previous correspondence with Rochelle and a copy of the Horizon Archaeology report. Our client is now seeking to subdivide the property into four lots (of which Lot 1 includes the consented house). Associated development works includes some bush clearance and earthworks to construct the ROW driveway up the western boundary. Works required to form the building platforms noted on the subdivision would be deferred to building consent stage.

In respect of the subdivision, are you able to review the proposal and provide comment back on behalf of HPT (including any recommendations for consent notice conditions. As previously requested, there are no works proposed in the north-west of the site in proximity to PO5/18. In any case this part of the site is within an identified wetland / gumland where for ecological reasons, development will be avoided.

Kind Regards,



Deanne Rogers

Consultant Planner

Offices in Kaitia & Kerikeri

☎ 09 408 1866 | 📠 027 449 8813

Northland Planning & Development 2020 Limited
(office days: Mon & Wed)

Deanne Rogers

From: Deanne Rogers
Sent: Wednesday, 22 July 2026 3:41 pm
To: 'taiao@ngatirehia.co.nz'; 'mihakahone@gmail.com'; 'joanne.civil.nz@gmail.com'; 'riogreening@hotmail.com'; 'wayne@kiatupato.co.nz'; 'ricky.ashby@niss.org.nz'; 'TeRau.Allen@northable.org.nz'; 'edith.tahere@ngapuhi.org'; 'veza@xtra.co.nz'; 'leadett@gmail.com'; 'Arama.reihana72@gmail.com'; 'ngatikutahapu@gmail.com'; 'leadett@gmail.com'; 'honetiatoa@hotmail.com'; 'tekauri1@xtra.co.nz'; 'marisestuart@protonmail.com'; 'arnoldm86@windowslive.com'; 'arnoldm86@windowslive.com'; 'arnoldm86@windowslive.com'; 'moana.tuwhare@ngapuhi.org'; 'b.p.king@xtra.co.nz'; 'riharidaniellelucille@gmail.com'; 'olemac@xtra.co.nz'
Cc: Rochelle
Subject: Proposed subdivision - 88 Kurapari Road, Kerikeri
Attachments: 10781 Subdivision Plan - 88 Kurapari Road Kerikeri.pdf

Tena koutou

Our client is proposing to subdivide an existing property at 88 Kurapari Road, Kerikeri, Lot 3 DP 415575. I have attached a copy of the proposed subdivision plan for your information.

The subdivision would create four rural-residential allotments with vehicle access from a ROW off Kurapari Road. Some vegetation clearance and earthworks are required to form the proposed ROW up the western boundary. No other development works are proposed. Any vegetation clearance, earthworks or building within the platforms shown on the subdivision plan would be deferred until building consent stage. No works are proposed within or in proximity to the existing wetlands / gumlands on the site that are to be protected by a 'wetland protection' consent notice condition.

Far North District Council has advised us that the Iwi / hapu parties listed in the table below may have an interest in this area and development within it. If you are interested and wish to comment on the proposal, please reply to this email.

Group name	Group type	Contact name
Te Runanga o Ngāti Rehia	Hapu	Admin
Nga Hapu o Taiamai Waimate Kerikeri	Hapu	Hone Mihaka
Ngāti Hineira	Hapu	Joanne Civil
Ngāti Korohue	Hapu	Rio Greening and Arnold Mu
Te Ngare Hauata	Hapu	Wayne Stokes
Te Uri Taniwha	Hapu	Ricky and Ziandra Ashby
Te Whiu	Hapu	Te Rau Allen
Te Runanga a Iwi o Ngāpuhi	Iwi	Edith Tahere
Manukau Marae	Marae	Waimaria Veza
Pā te Aroha Marae	Marae	Tiwai Rāwiri
Private individual	Private individual	Arama Reihana
Ngāti Kuta Resource Management Unit	Resource management unit	Ngāti Kuta Admin
Ngāti Torehina ki Mataka Resource Management Unit	Resource management unit	Tiwai Rāwiri
Taiamai ki te Takutai Moana Resource Management Unit	Resource management unit	John Tiatoa
Kaire Edmonds Whanau Trust	Trust	Ian Mitchell
Lake Omapere Trust	Trust	Marise Stuart

Nga mihi,



Deanne Rogers

Consultant Planner

Offices in Kaitia & Kerikeri

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Northland Planning & Development 2020 Limited

(office days: Mon & Wed)

DECISION ON LAND USE CONSENT APPLICATION UNDER THE RESOURCE MANAGEMENT ACT 1991

Decision

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

Applicant: Markus Wiese
Council Reference: 2260119-RMALUC
Property Address: 27 Kurapari Road, Kerikeri 0294
Legal Description: Lot 3 DP 415575

The activities to which this decision relates are listed below:

The proposal is for a dwelling and garage which is a Discretionary Activity under the ODP for visual amenity, earthworks, vegetation clearance and fire risk and a Discretionary Activity under the PDP for vegetation clearance.

Conditions

Pursuant to sections 108 of the Act, this consent is granted subject to the following [conditions](#):

1. The activity shall be carried out in general accordance with the approved plans and documents prepared by:
 - Cadence Architectural Design Ltd, project number CD199, referenced A_001, A_101, A_102, A_103, A_104, A_201, A300, A102, A201, dated 22.07.2025,
 - Thomson Survey, project number 10781, Sheet & Sheet 2, dated 7.7.25.
 - PK Engineering, Environmental Silt Controls- Site Locality Plan, Overall Site Plan, Silt Control Details, dated Aug 2025.

and attached to this consent with the Council's "Approved Stamp".

2. This consent must be carried out in general accordance with the Application Form and Assessment of Environmental Effects prepared by Northland Planning & Development, dated 11 September 2025 and all documents and all supporting additional information submitted with the application as listed below.

Report title	Author	Date
Ecological Impact Assessment	Bay Ecological Consultancy Ltd	3/8/2025

Archaeological Assessment	Horizon Archaeology	20/5/2025
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Wildlife Management Plan (WMP)

3. Prior to the removal of any vegetation associated with the development, the consent holder shall submit for certification to the Resource Consents Team Leader or other duly delegated officer (planning_technicians@fndc.govt.nz) a wildlife management plan for the proposed clearance areas outlining methods to check for herpetofauna and North Island Brown Kiwi prior to clearance. This should be prepared by a suitably qualified and experienced ecologist or wildlife specialist, and include methods and timings of searches, and any required translocation within the site and licenses or permits required.
4. The vegetation clearance on site associated with the development shall be undertaken in accordance with the certified Wildlife Management Plan.

Offset Management Plan (OMP)

5. Upon completion of the vegetation clearance and prior to bulk earthworks, provide for the certification of the Resource Consents Team Leader or other duly delegated representative (planning_technicians@fndc.govt.nz), an Offset Management Plan (OMP) for the site in general accordance with the Ecological Impact Assessment prepared by Bay Ecological Consultancy Ltd, dated 3 August 2025. The OMP must cover:
 - i. Site wide pest and weed management measures including ongoing maintenance;
 - ii. Appropriate signage;
 - iii. Details of the mechanism / arrangement to oversee the ongoing implementation of the plan in a coordinate manner;
 - iv. Revegetation and infill planting, including location, density, and the use of low flammability species within the areas specified on the Bay Ecological Impact Assessment Report Figure 3: Ecological Context Drawing #1.0, Rev A [p10] ;
 - v. Timeframes for implementation of the Offset Management Plan
6. The Offset Management Plan shall be implemented in accordance with the timeframes set out within the Offset Management Plan, and pest and weed management maintenance shall be undertaken in perpetuity (unless otherwise approved in writing by the Team Leader Resource Consents or delegate).

Prior to Commencing any works

7. Prior to the commencement of any earthworks following vegetation clearance at the site, the consent holder shall submit an Earthworks Management Plan (EMP) to the Council's Resource Consents Engineer or delegate for certification (planning_technicians@fndc.govt.nz).
The EMP must contain information about and site management procedures for:
 - (i) The erosion and sediment control.
 - (ii) The timing of earthworks, including hours of work, and the key project and site management personnel.
 - (iii) The transportation of fill and construction materials from and to the site and associated controls on vehicles through sign-posted site entrances/exits and the loading and unloading of materials.
 - (iv) the extent of excavation works, including retaining structures prepared by a suitably qualified geotechnical engineer where necessary.

(vi) control of dust and noise on-site and necessary avoidance or remedial measures

(v) prevention of soil or other material being deposited on surrounding roads from vehicles working within the site and the proposed remedial actions should it occur.

(vii) proposed publicity and safety measures, including signage, to inform adjacent landowners and occupiers, pedestrians, and other users of the right of way.

The EMP must also include information as to:

(vii) the identity and contact details of the successful contractor

(viii) the planned commencement date and duration of the contract

(ix) the identity and contact details of the supervising engineer; and

(x) a copy of the corridor access request (if required)

All physical works on site must be undertaken in accordance with the approved EMP.

8. Prior to bulk vegetation, clearance erosion and sediment controls must be installed in accordance with the PK Engineering Environmental Silt Control Plans for Stage 1 Site Vegetation Clearance dated August 2025, Job No. 25-038.
9. Prior to bulk earthworks commencing, the consent holder shall provide evidence from a suitably qualified and experienced person to Councils Resource Consents Engineer or their delegated representative, to certify that the erosion and sediment controls have been constructed in accordance with the Earthworks Management Plan. Evidence can be sent to planning_technicians@fndc.govt.nz.
10. Prior to vegetation clearance or earthworks commencing, a stabilised entrance must be constructed at the development entry and exit in accordance with the requirements of GD05.

During Construction

11. During earthworks, all necessary measures must be taken to minimise dust generation. Adequate water supply must be available on site and used as required to dampen exposed soil. Alternatively, other effective dust suppression methods must be readily available and implemented to control dust emissions.
12. The consent holder must ensure that spoil from the site is not tracked out onto Council Road formations or must be removed if this occurred to the satisfaction of the Resource Consent Engineer or delegated representative.

On Completion

13. Within three months of the completion of earthworks any exposed areas created by the earthworks shall be stabilised or re-vegetated to prevent ongoing erosion.

Monitoring

14. The consent holder must pay the Council's compliance monitoring charges to cover the actual and reasonable costs incurred in monitoring compliance with the conditions of this consent, in accordance with section 36(1)(c) of the Resource Management Act.

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) The consent is given effect to; 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.

General Advice Notes

4. During the assessment of your application it was noted that there is a consent notice on your title as follows:

"The landowners/occupiers of the land shall not keep or allow the introduction onto the site of carnivorous or omnivorous animals such as cats, dogs or ferrets which have the potential to be kiwi predators. This prohibition includes the bringing of any such animals onto the site by visitors".
5. All earthworks are required to comply with the Proposed Regional Plan for Northland noting Erosion & sediment control and dust suppression requirements.
6. The consent holder is responsible for arranging for buried services to be located and marked prior to commencing earthworks and is also responsible for the repair and reinstatement of any underground services damaged as a result of the earthworks.
7. All storage of materials and loading and unloading of equipment and plant associated with earthworks activities shall take place within the site boundaries unless otherwise approved by Council.

8. *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"*
9. *Compliance monitoring charges cover the costs associated with site inspections (where required), and the review of plans, reports, and other documentation to ensure compliance with the resource consent. These charges will be calculated based on the applicable hourly rate at the time and included in a final invoice once monitoring is complete. A letter confirming compliance will be issued by the Council, upon request, only after all consent conditions have been met.*

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 Discretionary activity resource consent as such under section 104 the Council can consider all relevant matters. In particular the matters listed in the General Coastal Zone 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. Bush vegetation surrounding the site will continue to frame the developed curtilage area and will ensure that the appearance of the buildings remain subservient to the existing natural character with the property being a large 16-hectare bush-clad section. It is also well set back from neighbouring dwellings whereby visual effects are considered less than minor on all persons.
 - b. Vegetation clearance is supported by the Bay Ecology Report, this recommends an Offset Management Plan (OMP) which has been assessed as sufficient to reduce potential adverse ecological effects to be less than minor. As such effects on Indigenous vegetation and fauna habitat are considered less than minor.
 - c. It is considered with the mitigation measures are in place, any potential adverse earthworks effects are expected to be less than minor on all persons. Adverse visual effects associated with the earthworks will be temporary and less than minor in the context of the site surrounds that is a mixed rural and rural-residential environment.
 - d. The application has been reviewed by Heritage NZ who supports the finding of the Archaeological Assessment, which includes an Archaeological Site Discovery Protocol being in place. As such effects on all persons is considered less than minor.
 - e. The Applicant has provided a copy of the proposal to FENZ, including the proposed mitigation. FENZ has approved the location of the building on that basis.

Providing the proposed mitigation is implemented, it is expected that any potential adverse fire risk effects will be less than minor on all persons.

4. In regard to section 104(1)(ab) of the Act there are offsetting proposed through the Offset Management Plan including infill planting which is conditioned as above 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. National Environmental Standards,
 - b. New Zealand Coastal Policy Statement 2011,
 - c. Northland Regional Policy Statement 2016,
 - d. Operative Far North District Plan 2009,
 - e. Proposed Far North District Plan 2022

The activity is consistent with these documents for the reasons set out in the Assessment of Environmental Effects submitted with the application. In particular

Northland Regional Policy Statement 2016

The role of the Regional Policy Statement is to promote the sustainable management of Northland's natural and physical resources by providing an overview of the region's resource management issues and setting out policies and methods to achieve the integrated management of Northland's natural and physical resources. The proposal is considered to create less than minor effects on the coastal character of the locality. The proposal will enable a dwelling and garage in an acceptable manner, while not compromising the sustainable management of natural and physical resources of the locality. Given the nature of the proposal, it will have negligible effects on the life supporting capacity of air, water, soil and ecosystems. As such, it is considered the proposal is compatible with the intent of the RPS.

Operative Far North District Plan

The relevant objectives and policies are those related to the General Coastal Zone. The proposal would create less than minor adverse effects on the coastal environment. It is considered to be consistent with the character of the area and effects on the Protected Natural Area were determined to be less than minor. As such it is considered to have negligible effects on the amenity value of the area. The proposal is then considered to be consistent with the objectives and policies of the Operative District Plan.

Proposed Far North District Plan

The activity is consistent with the relevant objectives, policies and assessment criteria of the Proposed District Plan because for this resource consent application, the relevant provisions of both an operative and any proposed plan must be considered. Weighting is relevant if different outcomes arise from assessments of objectives and policies under both the operative and proposed plans. As the outcomes sought are the same under the operative and the proposed plan frameworks, no weighting is required.

6. In regard to section 104(1)(c) of the Act there are no other matters relevant and reasonably necessary to determine the application. The approval of the proposal will

not undermine the integrity of the District Plan as the activity will produce only localised and less than minor effects and will not set an undesirable precedent.

7. 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.

8. 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 Nick Eagle, 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.



Nicola Cowley

Date: 16/10/2025

Principal Planner

Relevant PDP Objectives and Policies

Part 2 – District-Wide Matters - Subdivision	
Objectives	
SUB-O1	<u>Subdivision</u> results in the efficient use of <u>land</u>, which: a. achieves the objectives of each relevant zone, precinct, development area, overlay and the district wide provisions; b. contributes to the existing or planned local character and sense of place; c. avoids reverse sensitivity issues that would prevent or adversely affect activities already established on <u>land</u> from continuing to operate; d. avoids land use patterns which would prevent <u>land</u> from achieving the objectives and policies of the zone in which it is located; e. does not increase risk from <u>natural hazards</u> or risks are mitigated and existing risks reduced; and f. manages adverse <u>effects</u> on the <u>environment</u>.
SUB-O2	Subdivision recognises and provides for the protection, restoration or enhancement of Outstanding Natural Features, Outstanding Natural Landscapes, Natural Character of the Coastal Environment, wetland, lake and river margins, areas of significant indigenous vegetation and significant habitats of indigenous fauna, 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 is provided in an integrated, efficient, coordinated and future-proofed manner at the time of subdivision; and b. where no existing connection is available infrastructure is planned and connections made with the wider infrastructure network.
SUB-O4	<u>Subdivision</u> is accessible, connected, and integrated with the surrounding <u>environment</u> including by providing for: a. safe transport connections including active modes of public transport where practicable; b. new, and connection to existing public open spaces; c. esplanade where <u>land</u> adjoins the coastal marine area; and d. esplanade where <u>land</u> adjoins other qualifying <u>waterbodies</u>.

SUB-O5	<i>Subdivision protects the long-term availability and productive capacity of <u>highly productive land</u> by avoiding inappropriate <u>subdivision</u> that would compromise its use for <u>farming and forestry activities</u>.</i>
SUB-O6	<i>Subdivision occurs in a sequenced and coherent manner in locations and at a rate that enables growth and development to be supported by <u>additional infrastructure</u>.</i>
Policies	
SUB-P1	<i>Enable boundary adjustments that:</i> <i>a. do not alter:</i> <i>i. the degree of non-compliance with District Plan rules and standards;</i> <i>ii. the number and location of any access; and</i> <i>iii. the number of certificates of title.</i>
SUB-P2	<i>Enable <u>subdivision</u> for the purpose of public works, <u>infrastructure</u>, reserves or access.</i>
SUB-P3	<i>Provide for <u>subdivision</u> where it results in <u>allotments</u> that:</i> <i>a. are consistent with the planned <u>environment</u> of the zone or precinct;</i> <i>b. comply with the minimum <u>allotment</u> sizes for each zone or precinct;</i> <i>c. have an adequate size and appropriate shape to contain a <u>building platform</u>; and</i> <i>d. have legal and physical access.</i>
SUB-P4	<i>Manage subdivision design and layout in the General Residential, Mixed Use, Medium Density Residential, Town Centre and Settlement zone to provide for safe, connected and accessible environments by:</i> <i>a. minimising vehicle crossings that could affect the safety and efficiency of the current and future transport network;</i> <i>b. avoid cul-de-sac development unless the site or the topography prevents future public access and connections;</i> <i>c. providing for development that encourages social interaction, neighbourhood cohesion, a sense of place and is well connected to public spaces;</i> <i>d. contributing to a well connected transport network that safeguards future roading connections;</i> <i>e. maximising accessibility, (including for emergency response) and connectivity by creating walkways, cycleways and an interconnected transport network; and</i>

	<i>f. providing additional infrastructure where required.</i>
SUB-P5	<i>Require <u>infrastructure</u> to be provided in an integrated and comprehensive manner by:</i> <i>a. demonstrating that the <u>subdivision</u> will be appropriately serviced (including telecommunications) and integrated with existing and planned <u>infrastructure</u> if available; and</i> <i>b. ensuring that the <u>infrastructure</u> is provided in accordance with the planned <u>environment</u> of the zone.</i>
SUB-P6	<i>Require the vesting of <u>esplanade reserves</u> or <u>esplanade strips</u> when subdividing to specific <u>allotment</u> sizes <u>land</u> adjoining the coast or other qualifying <u>waterbodies</u>.</i>
SUB-P7	<i>Avoid rural lifestyle <u>subdivision</u> in the Rural Production zone unless the <u>subdivision</u>:</i> <i>a. will protect areas of significant indigenous vegetation, significant habitats of indigenous fauna or natural inland <u>wetlands</u> in perpetuity;</i> <i>b. Provides a management plan which results in superior environmental outcomes, including through, where relevant: <i>i. the protection of natural character, landscape, amenity, heritage or cultural values; and/or</i> <i>ii. the restoration, enhancement and legal protection of indigenous biodiversity; or</i> </i> <i>c. is around an existing <u>residential unit</u>.</i>
SUB-P8	<i>Avoid <u>subdivision</u> that:</i> <i>a. within the Horticulture Precinct, is not provided for in <u>PREC2-P5</u>:</i> <i>b. in all other parts of the Rural Production zone: <i>i. results in any potential cumulative loss of the availability or productive capacity of highly productive <u>land</u> for use by <u>farming</u> or <u>forestry activities</u>;</i> <i>ii. cannot demonstrate that the proposed lots will retain the overall productive capacity of highly productive <u>land</u> over the long term;</i> <i>iii. fragments <u>land</u> into parcel sizes that are no longer able to support <u>farming</u> or <u>forestry activities</u> in accordance with <u>RPROZ-P6(c)</u>;</i> <i>iv. Results in rural lifestyle <u>subdivision</u> unless provided for in <u>SUB-P7</u>.</i> </i>

SUB-P9	Restrict rural residential <u>subdivision</u> in the Rural Lifestyle zone unless the development provides a management plan which results in superior environmental outcomes, including through, where relevant: a. The protection of natural character, landscape, amenity, heritage, or cultural values; and/or b. The restoration, enhancement and legal protection of indigenous biodiversity.
SUB-P10	To protect amenity and character by avoiding the <u>subdivision of minor residential units</u> from principal <u>residential units</u> where resultant <u>allotments</u> do not comply with minimum <u>allotment</u> size and residential density.
SUB-P11	Consider the following matters where relevant when assessing and managing the <u>effects of subdivision</u>: a. the potential for reverse sensitivity <u>effects</u> that would prevent or adversely affect activities already established on <u>land</u> from continuing to operate; b. consistency with the scale, density, design and character of the <u>environment</u> and purpose of the zone; c. the location, scale and design of <u>buildings</u> and <u>structures</u>; d. the adequacy and capacity of available or programmed <u>development infrastructure</u> to accommodate the proposed activity; or the capacity of the <u>site</u> to cater for on-site <u>infrastructure</u> associated with the proposed activity; e. managing <u>natural hazards</u>; f. any adverse <u>effects</u> on areas with <u>historic heritage</u> and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and g. any historical, spiritual, or cultural association held by <u>tangata whenua</u>, with regard to the matters set out in Policy <u>TW-P6</u>.

Part 2 – District-Wide Matters Coastal Environment	
Objectives	
CE-O1	<i>The natural character of the coastal environment is preserved and protected from inappropriate land use and subdivision.</i>
CE-O2	Land use and <u>subdivision</u> in the <u>coastal environment</u>: a. is undertaken in an integrated and coordinated manner; b. is compatible with the surrounding land use; c. does not result in urban sprawl occurring outside of existing urban areas;

	d. promotes restoration and enhancement of the natural character of the <u>coastal environment</u>; and e. recognises and provides for the relationship of <u>tangata whenua</u> with their ancestral lands in the <u>coastal environment</u>.
CE-O3	Land use and <u>subdivision</u> in the <u>coastal environment</u> within urban areas is consolidated and provides for the social, economic and cultural wellbeing of people and communities without compromising other <u>coastal environment</u> values.
Policies	
CE-P1	Identify the extent of the coastal environment as well as areas of high and outstanding natural character using the assessment criteria in APP1- Mapping methods and criteria.
CE-P2	Avoid adverse <u>effects</u> of land use and <u>subdivision</u> on the characteristics, qualities and values that make an area an outstanding natural character area in the <u>coastal environment</u> .
CE-P3	Avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of land use and subdivision on the characteristics, qualities and values of natural character areas and natural features and landscapes in the coastal environment not identified as an: a. outstanding natural character area; b. ONL; or c. ONF.
CE-P4	Preserve the visual qualities, character and integrity of the coastal environment by: a. consolidating land use and subdivision around existing urban centres and rural settlements; and b. avoiding sprawl or sporadic patterns of development in the rural environment.
CE-P5	Enable land use and <u>subdivision</u> in urban areas within the <u>coastal environment</u> by recognising that a change in character may be acceptable in some existing urban areas to provide for the social, economic and cultural wellbeing of people and communities.
CE-P6	Provide for farming activities within the coastal environment by: a. recognising that existing farming activities form part of the coastal environment and allowing for these activities to continue without undue restriction; and b. only allowing new farming activities outside outstanding and high natural character areas where appropriate.

CE-P7	<i>Enable the use and development of Māori Purpose zoned <u>land</u> and <u>Treaty Settlement land</u> in the <u>coastal environment</u> by recognising that adverse <u>effects</u> on natural character may be acceptable to support the social, economic and cultural wellbeing of <u>tangata whenua</u>.</i>
CE-P8	<i>Encourage the restoration and enhancement of the natural character of the <u>coastal environment</u>.</i>
CE-P9	<i>Consider the following matters where relevant when assessing and managing the <u>effects</u> of land use and <u>subdivision</u> on the <u>coastal environment</u>:</i> <i>a. the presence or absence of <u>buildings</u>, <u>structures</u> or <u>infrastructure</u>;</i> <i>b. the temporary or permanent nature of any adverse <u>effects</u>, including any cumulative <u>effects</u>;</i> <i>c. the location, scale and design of any proposed development;</i> <i>d. any means of integrating the <u>building</u>, <u>structure</u> or activity into the wider landscape;</i> <i>e. the ability of the <u>environment</u> to absorb change;</i> <i>f. the need for and location of <u>earthworks</u> or indigenous vegetation clearance and proposed mitigation measures;</i> <i>g. the operational or <u>functional need</u> of any <u>infrastructure</u> to be sited in the particular location;</i> <i>h. any viable alternative locations or methods for the activity or development where significant adverse <u>effects</u> may arise;</i> <i>i. any historical, spiritual or cultural association held by <u>tangata whenua</u>, with regard to the matters set out in <u>Policy TW-P6</u>;</i> <i>j. the likelihood of the activity exacerbating <u>natural hazards</u>;</i> <i>k. the opportunity to enhance public access and recreation;</i> <i>l. potential <u>effects</u> of land use and <u>subdivision</u> on the coastal marine area and the overall quality of <u>coastal waters</u>;</i> <i>m. any positive contribution the development has on the characteristics and qualities, including restoration and enhancement;</i> <i>n. the <u>effects</u> on the characteristics, qualities and values of the <u>coastal environment</u>, including natural character and natural landscape values and the quality and extent of indigenous biodiversity;</i> <i>o. the extent to which the land use and <u>subdivision</u> complements activities in the coastal marine area; and</i> <i>p. whether the activity is on a previously approved <u>building</u> platform</i>

Part 2 – District -Wide Matters - Ecosystems & Indigenous Biodiversity	
Objectives	
IB-O1	<i>Areas of significant indigenous vegetation and significant habitats of indigenous fauna are protected for current and future generations.</i>
IB-O2	<i>Indigenous biodiversity is managed to maintain its extent and diversity in a way that provides for the social, economic and cultural wellbeing of people and communities.</i>
IB-O3	<i>The relationship between <u>tangata whenua</u> and indigenous biodiversity, including <u>taonga</u> species and habitats, is recognised and provided for.</i>
IB-O4	<i>The role of <u>tangata whenua</u> as kaitiaki and landowners as stewards in protecting, maintaining and restoring areas of significant indigenous vegetation and significant habitats of indigenous fauna and indigenous biodiversity is provided for.</i>
IB-O5	<i>Restoration and enhancement of indigenous biodiversity is promoted and enabled.</i>
Policies	
IB-P1	<i>Ensure that the protection, <u>maintenance</u> and restoration of indigenous biodiversity is done in a way that:</i> <i>a. recognises and values the mana of <u>tangata whenua</u> as kaitiaki; and</i> <i>b. provides specific opportunities for <u>tangata whenua</u> to exercise kaitiakitanga in accordance with <u>tikanga</u> Māori.</i>
IB-P2	<i>Within the coastal environment:</i> <i>a. avoid adverse effects of land use and subdivision on: <i>i. Threatened and At-Risk indigenous species;</i> <i>ii. areas of significant indigenous vegetation and significant habitat of indigenous fauna;</i> <i>iii. areas of indigenous biodiversity protected under other legislation.</i> </i> <i>b. avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of land use and subdivision on: <i>i. areas of predominantly indigenous vegetation; and</i> <i>ii. indigenous species, habitats and ecosystems that are particularly vulnerable to modification.</i> </i>
IB-P3	<i>Outside the <u>coastal environment</u>:</i> <i>a. avoid, remedy or mitigate adverse <u>effects</u> of land use and <u>subdivision</u> to ensure adverse <u>effects</u> are no more than minor on: <i>i. Threatened and At-Risk indigenous species;</i> </i>

	ii. areas of significant indigenous vegetation and significant habitat of indigenous fauna; iii. areas of indigenous biodiversity protected under other legislation; and b. avoid, remedy, mitigate, offset or compensate adverse <u>effects</u> of land use and <u>subdivision</u> to ensure there are no significant adverse <u>effects</u> on: i. areas of predominantly indigenous vegetation; and ii. indigenous species, habitats and ecosystems that are particularly vulnerable to modification.
IB-P4	Where adverse effects are not otherwise avoided, remedied, mitigated, offset or compensated under IB-P2 and IB-P3 maintain indigenous biodiversity by: g. applying the effects management hierarchy to any significant adverse effects; and h. managing any other adverse effects on indigenous biodiversity to maintain indigenous biodiversity across the district.
IB-P5	Ensure that the management of land use and <u>subdivision</u> to protect areas of significant indigenous vegetation and significant habitat of indigenous fauna and maintain indigenous biodiversity is done in a way that: a. does not unreasonably restrict existing <u>primary production</u> activities, particularly on highly productive <u>land</u>; b. recognises the <u>operational need</u> and <u>functional need</u> of <u>regionally significant infrastructure</u> to be located within areas of significant indigenous vegetation and significant habitat of indigenous fauna in some circumstances; c. allows for <u>maintenance</u>, use and operation of existing <u>structures</u>, including <u>upgrading</u> of <u>regionally significant infrastructure</u>; and d. enables <u>Māori land</u> to be used and developed to support the social, economic and cultural wellbeing of <u>tangata whenua</u>, including the provision of <u>papakāinga</u>, <u>marae</u> and associated <u>residential units</u> and <u>infrastructure</u>.
IB-P6	Promote the restoration of indigenous biodiversity, with priority given to: a. areas of significant indigenous vegetation and significant habitat of indigenous fauna whose ecological integrity is degraded; b. threatened and rare ecosystems representative of naturally occurring and formerly present ecosystems; c. areas that provide important connectivity or buffering functions; d. natural inland wetlands where ecological integrity is degraded or these no longer retain their indigenous vegetation or habitat for indigenous fauna; e. areas of indigenous biodiversity on specified Māori land where restoration is advanced by the Māori landowners; and

	<i>f. any other priorities specified in regional biodiversity strategies or any national priorities for indigenous biodiversity restoration.</i>
IB-P7	<i>Encourage the protection, <u>maintenance</u> and restoration of indigenous biodiversity through non-regulatory methods including consideration of:</i> <i>a. reducing or waiving resource consent application fees;</i> <i>b. providing, or assisting in obtaining funding from other agencies and trusts;</i> <i>c. sharing and helping to improve information on indigenous biodiversity; and</i> <i>d. working directly with <u>iwi</u> and <u>hapū</u>, landowners and community groups on ecological protection and enhancement projects.</i>
IB-P8	<i>Subdivision and associated land use is:</i> <i>a. enabled where this results in the restoration, enhancement and legal protection of indigenous biodiversity vegetation in accordance with SUB-R6 or SUB-R7; or</i> <i>b. considered where this will achieve positive, secure and long-term benefits for indigenous biodiversity through active and ongoing restoration and enhancement activities.</i>
IB-P9	<i>Encourage and support active management control of pests and enable a timely and efficient response to biosecurity incursions of unwanted organisms.</i>
IB-P10	<i>Assist with the protection of species that are endemic to Northland by promoting, supporting and using eco-sourced plants from within the ecological district.</i>
IB-P11	<i>Require landowners to manage pets and <u>pests</u> within their property through consent conditions, where necessary to avoid risks to Threatened and At-Risk indigenous fauna, and where appropriate, including avoiding the introduction of pets and <u>pests</u> into kiwi present or high-density kiwi areas where appropriate.</i>
IB-P12	<i>Consider the following matters where relevant when assessing and managing the <u>effects</u> of indigenous vegetation clearance and associated <u>land disturbance</u>:</i> <i>a. the temporary or permanent nature of any adverse <u>effects</u>;</i> <i>b. cumulative <u>effects</u> of activities that may result in loss or degradation of habitats, species populations and ecosystems;</i> <i>c. the extent of any vegetation removal and associated <u>land disturbance</u>;</i> <i>d. the <u>effects</u> of fragmentation;</i> <i>e. linkages between indigenous ecosystems and habitats of indigenous species;</i>

	f. the potential for increased threats from <u>pests</u>; g. any downstream adverse <u>effects</u> on <u>waterbodies</u> and the coastal marine area; h. where the area has been assessed as significant indigenous vegetation and significant habitat of indigenous fauna: - the extent to which the proposal will adversely affect the ecological significance, values and function of that area; - whether it is appropriate or practicable to use <u>biodiversity offsets</u> or environmental <u>biodiversity compensation</u> to address more than minor residual adverse <u>effects</u>; i. the location, scale and design of any proposed development; j. the extent of indigenous vegetation cover on the <u>site</u> and whether it is practicable to avoid or reduce the extent of indigenous vegetation clearance; k. the functional or <u>operational need</u> of <u>regionally significant infrastructure</u>; l. any positive contribution any proposed biodiversity offsetting or <u>biodiversity compensation</u> will have on indigenous biodiversity; m. any historical, spiritual or cultural association held by <u>tangata whenua</u>, with regard to the matters set out in <u>Policy TW-P6</u>; n. the extent to which the proposed activity provides for the social, economic and cultural wellbeing of people and communities; o. adopting a precautionary approach where the <u>effects</u> on indigenous biodiversity are uncertain, unknown, or little understood and those <u>effects</u> could cause significant or irreversible damage to indigenous biodiversity; p. promoting the resilience of indigenous biodiversity to climate change and recognising the role of indigenous biodiversity in mitigating the <u>effects</u> of climate change; and q. the benefits provided by the indigenous biodiversity, including ecosystem services.
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Part 2 – District-Wide Matters - Transport	
Objectives	
TRAN-O1	The transport network, including State Highways and cycleways of strategic significance, is recognised and managed as regionally significant infrastructure to support the economic, cultural, environmental and social wellbeing of current and future generations.
TRAN-O2	Land use and transport planning are integrated to achieve an efficient pattern of land use and a transport network that is safe, efficient and well-connected.
TRAN-O3	Parking, loading and access provisions support the needs of land use and <u>subdivision</u> activities, and ensure safe and efficient operation for users.

TRAN-O4	<i>The transport network provides for the safe and efficient movement of vehicular, cycle and pedestrian traffic and also meets the needs of persons with a disability or limited mobility.</i>
TRAN-O5	<i>The transport network is resilient to the likely current and future <u>effects</u> of climate change, and supports urban environments to reduce <u>greenhouse</u> gas emissions by encouraging the provision of active modes of transport and public transport networks.</i>
Policies	
TRAN-P1	<i>Recognise the transport network as <u>regionally significant infrastructure</u> by having particular regard to the significant social, economic, and cultural benefits of transport projects when determining resource consent applications or making recommendations on notices of requirement.</i>
TRAN-P2	<i>Establish and maintain a transport network that:</i> <i>a. provides safe and efficient linkages and connections;</i> <i>b. recognises the different functions and design requirements for each road classification, as shown on the Transport Network Hierarchy layer;</i> <i>c. supports reductions of greenhouse gases from vehicle movements and encourages the provision of active modes of transport and public transport networks;</i> <i>d. considers the likely current and future impacts of climate change when new sections of the network are proposed or existing sections upgraded; and</i> <i>e. provides for existing and future pedestrian and cycling pathways that are well connected, including the Pou Herenga Tai Twin Coast Cycle Trail</i>
TRAN-P3	<i>Ensure the safe, efficient and well connected operation of the transport network through the management of:</i> <i>a. the <u>subdivision</u> layout, and location of <u>buildings</u>, <u>structures</u> and other potential visual obstructions that may impact on sightlines and the integrity of the <u>road</u> carriageway and the railway corridor;</i> <i>b. well connected <u>roads</u>, including discouraging the design and construction of cul-de-sacs;</i> <i>c. the design of access (including emergency response access) and parking;</i> <i>d. vehicular access to and from <u>sites</u>;</i> <i>e. the volume of traffic from land use activities;</i> <i>f. vehicular, pedestrian, and cyclist needs, including persons with a disability or limited mobility;</i> <i>g. the adverse cumulative <u>effects</u> of land use and <u>subdivision</u> on the transport network; and</i> <i>h. reverse sensitivity <u>effects</u> that may impact <u>regionally significant infrastructure</u></i>

TRAN-P4	<i>Manage the design and location of all parking and the supply of bicycle parking and loading bays to:</i> <i>i. achieve the safe, efficient and effective operation of the transport network;</i> <i>j. ensure parking facilities for all transport modes are safe and secure;</i> <i>k. support the operational and functional requirements of activities;</i> <i>l. appropriately manage character and amenity effects on the local environment, including on the streetscape;</i> <i>m. minimise the impact of large parking areas on the stormwater network by encouraging water sensitive design;</i> <i>n. provide sufficient parking for persons with a disability or limited mobility; and</i> <i>o. comply with any relevant Parking Management Plans.</i>
TRAN-P5	<i>Encourage land uses to support an integrated and diverse transport network by:</i> <i>a. promoting alternative transport modes;</i> <i>b. the provision of safe and secure parking facilities for bicycles and associated end-of-trip facilities;</i> <i>c. allocation of parking facilities for motorcycles, car share vehicles, pick/up/drop off areas for ride share services and charging stations for electric vehicles; and</i> <i>d. supporting the establishment and operation of accommodation and tourism related activities in close proximity to the Pou Herenga Tai Twin Coast Cycle Trail, provided reverse sensitivity <u>effects</u> can be avoided.</i>
TRAN-P6	<i>Only allow high traffic generating activities exceeding the thresholds in TRAN-Table 12 - Trip generation where these activities support the safe, efficient and effective use of transport infrastructure, as demonstrated through an integrated transport assessment (ITA). All ITAs should be completed by a suitably qualified and experienced transport professional.</i>
TRAN-P7	<i>Consider the following matters where relevant when assessing and managing the <u>effects</u> on the transport network and adjacent <u>land</u>:</i> <i>a. the type and level of traffic anticipated;</i> <i>b. the location of high traffic generating activities and their relationship to existing <u>roads</u>, the classification of those <u>roads</u> (as shown on the Transport Network Hierarchy layer) and adjacent properties;</i> <i>c. <u>water</u> sensitive design methods, including green spaces;</i> <i>d. safety requirements and improvements;</i> <i>e. the management of <u>stormwater</u>;</i> <i>f. any <u>natural hazards</u>;</i>

	g. any cumulative <u>effects</u> arising from lawfully established activities in the surrounding <u>environment</u>; h. current and future connectivity including pathways and parking, and open space networks; i. any traffic assessment prepared by a suitably qualified and experienced transport professional; j. impacts on any State Highway or <u>Limited Access Road</u>; and k. any historical, spiritual or cultural association held by tangata <u>whenua</u>, with regard to the matters set out in <u>Policy TW-P6</u>.
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Part 3 – Area Specific Matters - Rural Lifestyle Zone	
Objectives	
RKZ-O1	<i>The Rural Lifestyle zone is used predominantly for low density <u>residential activities</u> and small scale <u>farming</u> activities that are compatible with the rural character and <u>amenity values</u> of the zone.</i>
RLZ-O2	<i>The predominant character and <u>amenity values</u> of the Rural Lifestyle zone are characterised by:</i> a. low density <u>residential activities</u>; b. small scale <u>farming</u> activities with limited <u>buildings</u> and <u>structures</u>; c. smaller <u>lot</u> sizes than anticipated in the Rural Production zone; d. a general absence of urban <u>infrastructure</u>; e. rural <u>roads</u> with low traffic volumes; f. areas of vegetation, natural features and open space.
RLZ-O3	<i>The role, function and predominant character and <u>amenity values</u> of the Rural Lifestyle zone are not compromised by incompatible activities.</i>
RLZ-O4	<i>Land use and <u>subdivision</u> in the Rural Lifestyle zone does not compromise the effective and efficient operation of <u>primary production</u> activities in the adjacent Rural Production zones.</i>
Policies	
RLZ-P1	<i>Enable activities that will not compromise the role, function and predominant character and <u>amenity values</u> of the Rural Lifestyle zone, while ensuring their design, scale and intensity is appropriate to manage adverse <u>effects</u> in the zone, including:</i> a. low density <u>residential activities</u>; b. small scale <u>farming</u> activities;

	c. <u>home business</u> activities; d. <u>visitor accommodation</u>; and e. small scale education facilities.
RLZ-P2	Avoid activities that are incompatible with the role, function and predominant character and <u>amenity values</u> of the Rural Lifestyle zone because they are: a. contrary to the density anticipated for the Rural Lifestyle zone; b. predominantly of an urban form or character; c. <u>primary production</u> activities, such as <u>intensive indoor primary production</u>, that generate adverse amenity <u>effects</u> that are incompatible with rural lifestyle living; or d. commercial, <u>rural industry</u> or <u>industrial activities</u> that are more appropriately located in a Settlement zone or an urban zone.
RLZ-P3	Avoid where possible, or otherwise mitigate, reverse sensitivity <u>effects</u> from sensitive and other non-productive activities on <u>primary production</u> activities in the adjacent Rural Production zone.
RLZ-P4	Consider the following matters where relevant when assessing and managing the <u>effects</u> of land use and <u>subdivision</u> in the Rural Lifestyle zone: a. consistency with the scale and character of the rural lifestyle <u>environment</u>; b. location, scale and design of <u>buildings</u> or <u>structures</u>; c. at zone interfaces and the rail designation <u>boundary</u>: i. any <u>setbacks</u>, fencing, screening or <u>landscaping</u> required to address potential conflicts; ii. the extent to which adverse <u>effects</u> on adjoining or surrounding <u>sites</u> are mitigated and internalised within the <u>site</u> as far as practicable; d. the capacity of the <u>site</u> to cater for on-site <u>infrastructure</u> associated with the proposed activity; e. the adequacy of roading <u>infrastructure</u> to service the proposed activity; f. managing <u>natural hazards</u>; g. any adverse <u>effects</u> on <u>historic heritage</u> and cultural values, natural features and landscapes or indigenous biodiversity; and h. any historical, spiritual, or cultural association held by <u>tangata whenua</u>, with regard to the matters set out in <u>Policy TW-P6</u>.

