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

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of 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 voume = _____ m³
Note; volumes >3m³ requires NRC Consent.

◯ **Subdivision**

◯ **Existing Use Certicicate (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?
Ngati Kuri Trust Board and Muriwhenua Incorporation

Who else have you consulted with?
Haukainga of Te Hapua

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: Te Hiku O Te Ika Marae Trust

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: Steven Sanson - Bay of Islands Planning

Email:

Phone number:

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

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

7. Details of property owner/s and occupier/s

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

Name/s: Refer 8 below

Property address/
location: Refer 8 below

8. Application site details

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

Name/s: Proprietors of Muriwhenua

Site address/ location: Waharua Road, Te Hapua

Postcode 0441

Legal description: Te Hapua 42 Block **Val Number:**

Certificate of title: 517692

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 new marae in Te Hapua

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**
◯ **Changing the use of a piece of land**
◯ **Disturbing, removing or sampling soil**
◯ **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**
◯ **Landslips**
◯ **Coastal Erosion**
◯ **Coastal Inundation**
◯ **Active Faults**
◯ **Liquefaction**
◯ **Tsunami**

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**

IIf 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) Te Hiku O Te Ika Marae

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) JOHN RATA WALSH

Signature:
(signature of bill payer)

Date 03-Nov-2026

MANDATORY

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)

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.

BAY OF ISLANDS PLANNING LIMITED

02 November 2026

Far North District Council
Private Bag 752
Kaikohe 0440

Application for resource consent — Establishment and operation of the new Te Hiku o Te Ika Marae, Waharua Road, Te Hāpua (Te Hāpua 42 Block)

Please find an application for resource consent on behalf of the Te Hiku o Te Ika Marae Trust to establish and operate a new marae on land legally described as the Te Hāpua 42 Block.

The proposal provides for the construction of a wharenui (meeting house), wharekai (dining hall) and wharepaku (ablutions block), linked by a covered walkway, together with associated earthworks, a new formed access road, parking, and on-site three-waters infrastructure.

A marae is a permitted activity in the Māori Purpose Zone – Rural under the Proposed Far North District Plan. Resource consent is nonetheless required because certain associated works and standards trigger the need for restricted discretionary consent under the Coastal Environment, Natural Character, Earthworks, Natural Hazards (wildfire) and Transport (access road gradient and surfacing) provisions. The indigenous vegetation clearance for the marae and its access also exceeds the 1,500 m^2 permitted under the Ecosystems and Indigenous Biodiversity chapter, which requires consent as a Discretionary Activity. Consent is also sought, out of caution, under the indigenous vegetation clearance rules of the Operative Far North District Plan. Overall the application is a Discretionary Activity.

The application is supported by the following information:

- **Appendix A –** Record of Title and supporting instruments (Te Hāpua 42 Block)
- **Appendix B –** Architectural drawings (Matakohe Architecture + Urbanism, Ref MA0146, Preliminary Draft Rev 03) and Outline Specification (Ref 260813)
- **Appendix C –** Topographical Survey Plan (Ref 260224)
- **Appendix D –** Geotechnical Investigation Report (RS Eng Ltd, Ref 19766, Revision 3, 15 October 2026)
- **Appendix E –** Three Waters Report (RS Eng Ltd, Ref 19766, Revision 3, 14 October 2026)
- **Appendix F –** Concept Civil Drawings for the access road (RS Eng Ltd, Ref 19766, Sheets C01 to C07, Revision B, 1 October 2026)
- **Appendix G –** Northland Regional Council resource consent application (available on request)

Based on the assessment of environmental effects set out in the enclosed report, it is concluded that any adverse effects on the environment can be appropriately avoided, remedied or mitigated, and that the application can be processed on a non-notified basis and granted subject to conditions.

Please do not hesitate to contact the undersigned should any further information be required.

Kind regards,

Steven Sanson
Consultant Planner
Bay of Islands Planning Limited

Applicant and Property Details

Applicant	Te Hiku o Te Ika Marae Trust
Address for Service	Bay of Islands Planning Limited, Kerikeri House, Suite 3, 88 Kerikeri Road, Kerikeri. C/O Steven Sanson | steve@bayplan.co.nz | 021 160 6035
Site Address	Waharua Road, Te Hāpua 0484
Legal Description	Te Hāpua 42 Block (part of the Te Hiku o Te Ika Māori Reservation)
Parent Title Area	Approximately 5,875 ha
Operative Plan Zone	Coastal Living Zone (development area)
Proposed Plan Zone	Māori Purpose Zone – Rural (development area)
Relevant Overlays / Notations	Coastal Environment Sites and Areas of Significance to Māori (mapped within the wider Reservation, outside the development area and access) Natural Character (heathland / wetland margins in the vicinity) Treaty Settlement Area of Interest (Ngāi Takoto, Ngāti Kuri, Te Aupōuri). Outstanding Natural Landscapes / Features and coastal flood hazard areas are mapped elsewhere on the wider landholding but not within the development area.

Summary of Proposal

Proposal	Construction and operation of a new marae (wharenui, wharekai and wharepaku linked by a covered walkway) at Waharua Road, Te Hāpua, together with earthworks to form a building platform, retaining walls, a new 5.0 m wide formed access road from Te Hāpua Road, parking, and on-site three-waters infrastructure (secondary wastewater treatment and subsurface drip irrigation, bore-fed potable supply with storage tanks, and stormwater dispersal). The marae caters for up to 200 day visitors and sleeps up to 150 people during peak events.
Reason for Consent	A marae is a permitted activity in the Māori Purpose Zone – Rural (MPZ-R7). Consent is required because the associated works trigger restricted discretionary activity status under the Coastal Environment (CE-R1, CE-R2), Natural Character (NATC-R1, NATC-R2), Earthworks (EW-R1), Natural Hazards – wildfire (NH-R5) and Transport (TRAN-R2) rules. The indigenous vegetation clearance also exceeds the 1,500 m^2 permitted for a marae under the Ecosystems and Indigenous Biodiversity chapter (IB-R2 and IB-R3), which is a Discretionary Activity. Consent is also sought out of caution under Operative Plan Rule 12.2.6.2.2 (Indigenous Flora and Fauna) as a Restricted Discretionary Activity. The application is bundled and assessed overall as a Discretionary Activity.
Appendices	Appendix A – Record of Title Appendix B – Architectural Drawings and Outline Specification Appendix C – Topographical Survey Plan Appendix D – Geotechnical Investigation Report Appendix E – Three Waters Report Appendix F – Concept Civil Drawings (access road) Appendix G – Northland Regional Council resource consent application (on request).

1. Introduction

The Te Hiku o Te Ika Marae Trust (the applicant) seek resource consent to establish and operate a new marae on land at Waharua Road, Te Hāpua, legally described as the Te Hāpua 42 Block.

The proposal responds to a long-held aspiration to provide a modern, purpose-built marae to serve the community of Te Hāpua and the wider Te Hiku o Te Ika rohe. The marae will provide for the cultural, social and spiritual wellbeing of tangata whenua, including the hosting of tangihanga, hui, wānanga and other customary and community activities.

The Record of Title and relevant instruments are provided in **Appendix A**. The proposal is shown on the architectural drawings prepared by Matakohe Architecture + Urbanism (Ref MA0146, Preliminary Draft Rev 03) and described in the accompanying Outline Specification (Ref 260813), both provided in **Appendix B**, and on the Topographical Survey Plan (Ref 260224) in **Appendix C**.

The application is supported by a Geotechnical Investigation Report and a Three Waters Report, both prepared by RS Eng Ltd (Appendices **D and E).** Concept Civil Drawings for the new access road, also prepared by RS Eng Ltd, are provided in Appendix F. Together these confirm the geotechnical suitability of the site, the ability to service the marae on site, and the design of the access.

Based on the assessment of environmental effects set out in this report, it is concluded that any potential adverse effects arising from the proposal can be appropriately avoided, remedied or mitigated through design and conditions of consent, and would be no more than minor.

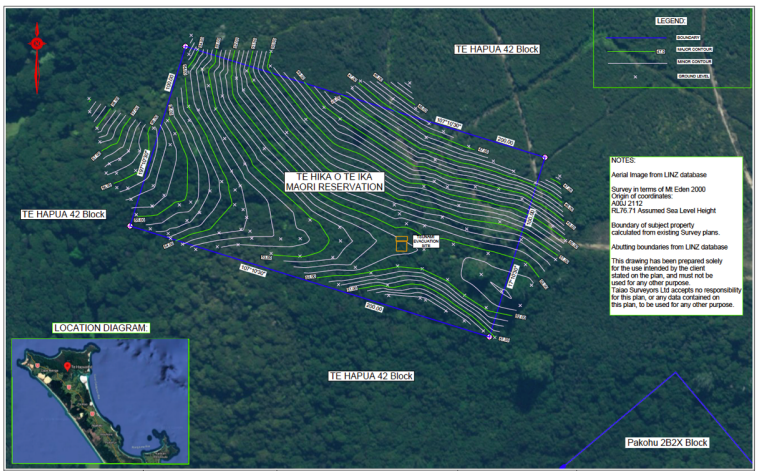


Figure 1: Topographic survey of the marae reservation area (Source: Cadastral / topographic survey, Ref 260224)

2. Description of the Site and Surrounds

The subject site is located on the western side of Waharua Road, Te Hāpua, and is currently accessed via an existing gravel driveway positioned approximately 230 m from the intersection of Te Hāpua Road and Waharua Road. The development area forms a discrete part of the much larger Te Hāpua 42 Block, which comprises approximately 5,875 ha of the Te Hiku o Te Ika Māori Reservation.

Topography and landform

The designated building area sits atop a broad, gently sloping ridgeline oriented west to east, with ground elevations across the central ridge spanning approximately 46 m to 55 m. From the central ridge the flanks fall away moderately to steeply to the south, and more gently to the north and northeast. Ground cover across the proposed building areas is currently a mix of patchy grass and dense scrub, while the surrounding flanks are covered in regenerating scrub and bush.

Geology, soils and geotechnical context

The underlying geology comprises the Parengarenga Group, characterised by muddy fine-grained sandstone. Subsoil investigations undertaken by RS Eng Ltd identified a ground profile of topsoil (0.05 m to 0.6 m thick), locally over a dense silty sand hardpan, underlain by firm to stiff residual silty clays, clayey silts and sandy silts, and completely weathered sandstone to the investigated depth of 5.0 m. The clay-rich soils are classified as highly expansive (Class H1 to AS 2870), and the site is assessed as Site Subsoil Class C (shallow soil site) under NZS 1170.5:2004.

The geotechnical assessment concludes that the risks of slope instability and liquefaction at the building area are low, provided a minimum 25 m setback is maintained from slopes steeper than 14°, and that foundations and retaining structures are specifically designed to account for the highly expansive soils.

The southern flanks display rounded landforms that RS Eng attribute to relic slope instability or erosion, with no sign of recent movement, and no signs of instability were observed at or adjacent to the building areas.

Hydrology and water supply

An existing mapped water supply bore is located on the property in the vicinity of the proposed marae. The bore log records a depth of 48 m with a static water level of 2.6 m and an installed flow rate of approximately 1.3 m^3/hour (with a recommended take of 1.0 m^3/hour), which is considered adequate to supply the marae when supplemented by on-site storage. Groundwater inflows were encountered in two hand augers at depths of 0.7 m and 3.5 m. The static groundwater table at the building area is likely deeper than 6 m, with the potential for temporary perched water above the hardpan and weathered sandstone during extreme rainfall.

Vegetation and ecological context

The building areas are in a mix of patchy grass and dense scrub. The surrounding flanks, the proposed effluent disposal area and much of the access road corridor are in regenerating scrub, characteristic of the manuka–kanuka heathland (gumland) that is widespread across the Te Hiku landscape. No mature indigenous forest is present within the development footprint. Vegetation clearance associated with the works has been kept to the minimum necessary to form the building platform, access and car park. The effluent disposal field will be laid within the existing scrub without clearance, with infill planting where the existing cover is sparse.

Surrounding environment

The site is located within a predominantly rural and coastal setting characteristic of the Te Hiku o Te Ika rohe, with the Parengarenga Harbour forming the broader landscape context. Surrounding land within the Reservation is largely undeveloped and in regenerating vegetation. A designated Tsunami Evacuation Site is located nearby within the Reservation boundaries.

Zoning, overlays and notations

Under the Operative Far North District Plan the development area is within the Coastal Living Zone. Under the Proposed Far North District Plan (PDP) the development area is within the Māori Purpose Zone – Rural. The broader landholding carries numerous zones and overlays reflecting its scale; the following are relevant to, or in the vicinity of, the development area and its access:

- **Coastal Environment** — the development area is within the mapped coastal environment overlay.
- **Sites and Areas of Significance to Māori — a number of scheduled sites are mapped elsewhere within the wider Reservation. None is located within the development footprint or along the route of the new access road.**
- **Natural Character** — the building platform and disposal area adjoin heathland / wetland margins to which the Natural Character provisions apply.
- **Treaty Settlement Area of Interest** — the land falls within the areas of interest of Ngāi Takoto, Ngāti Kurī and Te Aupōuri.

Outstanding Natural Landscapes, Outstanding Natural Features, areas of High and Outstanding Natural Character, and coastal and river flood hazard areas are mapped across other parts of the wider Reservation (for example the Parengarenga mouth) but are not located within the immediate development area.

The building platform, access and servicing areas have been sited to avoid these features.



Figure 2: PDP Zoning & Features (Source: FNDC PDP Maps)

3. Description of Proposal

The proposal provides for the construction and operation of a new marae to serve the Te Hiku o Te Ika community, as shown on the architectural drawings. The marae is designed to cater for up to 200 day visitors and to sleep up to 150 people during peak cultural events such as a tangihanga.

Buildings and layout

The marae complex comprises three primary structures interconnected by a covered walkway:

- **Wharenui (Meeting House)** — the main meeting area, together with a rūma tamariki (children's room), a minister's dressing room, a tomokanga (entryway), a mattress store and a chair / table store.
- **Wharekai (Dining Hall)** — a large open dining space supported by a kīhini (kitchen), pantry, chillers, table store and a kāuta (outdoor kaimoana preparation area).

- **Wharepaku (Ablutions Block)** — all sanitary amenities, including showers, separate wāhine and tāne toilets, accessible WCs, a baby-changing area, a laundry and a cleaning room.

The site plan also allocates future space for a kōhanga reo and two kuia / kaumātua duplexes. These future elements **do not** form part of this application and would be the subject of separate consideration at the appropriate time. The updated Three Waters Report has nonetheless sized the wastewater system to include flows from these future buildings, so that on-site servicing capacity is available should they proceed.

Design and materials

The buildings will be constructed using Glulam portal frames with Triboard infill panels and continuous exterior rockwool insulation wrapped around the building envelope. The exterior will be clad in Weathertex Weathergroove 150 Natural Vertical cladding finished in a natural, off-white tone ("Rubio Woodcream Creamy White"). The roofing will be Dimond DP955 marine-grade steel in a dark recessive colour ("Lignite"), installed as a vented warm-roof system. Floor systems vary by building. A concrete slab on grade (with XPS underslab and edge insulation) to the wharenui, wharepaku and kīhini, and a timber floor on timber piles to the wharekai dining area. All windows and glazed doors will be thermally broken, double-glazed aluminium joinery. The materials palette responds to the Very High / Extra High wind zone and Class D coastal corrosion environment and achieves a recessive, natural appearance appropriate to the coastal setting.

Earthworks and retaining

To create a level building platform at RL 52.775, earthworks are proposed comprising a cut area of approximately 2,320 m^2 and a fill area of approximately 1,775 m^2 (a combined disturbance footprint in the order of 4,095 m^2 and a cut / fill volume in the order of 1,463 m^3). The new access road shown on the Concept Civil Drawings (Appendix F) involves further earthworks over approximately 4,805 m^2 (4,030 m^2 for the main road and 775 m^2 for the side road), with 810 m^3 of cut and 1,085 m^3 of fill (1,895 m^3 in total).

Across the marae platform and access road, the earthworks therefore extend over approximately 8,900 m^2 with a combined volume in the order of 3,358 m^3.

Retaining walls will be required to support the cut and fill faces and will be specifically designed by a Chartered Professional Engineer to accommodate the highly expansive soils, in accordance with the geotechnical recommendations. Cuts and fills will be limited to a maximum of 2.0 m without further geotechnical assessment, and to 1.0 m (suitably retained) on slopes steeper than 16°. Unretained batters will be no steeper than 1V to 3H and will be revegetated to limit erosion, consistent with the Geotechnical Report. Site works will generally be completed in accordance with NZS 4431.

Indigenous vegetation clearance

Indigenous vegetation clearance is required to form the building platform, the access road and the car park. The clearance broadly follows the earthworks footprints described above, being approximately 4,095 m^2 for the marae platform and approximately 4,805 m^2 for the access road. Parts of these footprints are already in patchy grass or follow the existing track, so the area of indigenous vegetation actually cleared will be less than the combined earthworks footprint of 8,900 m^2. For the purposes of this application the clearance is conservatively assumed to be up to approximately 8,900 m^2. Consent is sought out of caution. The previous and historic clearance regime across the site is difficult to establish. The architectural plans describe the building area as cleared, while the RS Eng review of historical aerial imagery shows the building area in bush and scrub. It therefore cannot be confirmed with certainty how much of the footprint is previously cleared land, or how much cleared land already exists on the site.

The vegetation to be cleared is regenerating mānuka and kānuka scrub. No remnant or mature indigenous forest is affected. The effluent disposal field will be formed within the existing scrub without clearance, and areas lacking cover will be planted at one to two plants per square metre in accordance

with the Three Waters Report. Unretained batters will be revegetated, and restoration planting using eco-sourced indigenous species is proposed to offset the vegetation lost.

Access, parking and vehicle movements

Vehicle access will be provided by a new formed access road shown on the Concept Civil Drawings prepared by RS Eng Ltd (Appendix F). The main road extends approximately 443 m from a new Type C vehicle crossing on Te Hāpua Road, which has 9.0 m radius splays, is sealed to the boundary line and includes a culvert where necessary. At its eastern end the main road marries into the existing track. An 85 m side road branches from the main road to serve the car park. Both roads are designed as 5.0 m wide gravel carriageways with a 4% crossfall and 1V to 3H batters. Longitudinal gradients reach approximately 17.4% on the main road and approximately 23.7% on a short section of the side road. The concept design shows a gravel surface throughout, and sealing of sections steeper than 12.5% can be secured by condition consistent with TRAN-Table 11. A dedicated parking area is provided within the site as shown on the architectural plans, including four accessible car parks (exceeding the minimum requirement of two). Passing bays will be provided along the accessway where its surfaced width is less than 5.5 m, at spacings not exceeding 100 m consistent with TRAN-S3.

Three-waters servicing

The marae will be fully serviced on site, as detailed in the Three Waters Report (Appendix E):

- **Wastewater** — the design flow is 14,540 L/day. This comprises the marae (11,500 L/day) together with allowances for the future kōhanga reo (720 L/day) and kuia / kaumātua duplexes (2,320 L/day). Over a three-day peak event such as a tangihanga, flows are estimated at 43,620 L. A commercial-type secondary treatment plant with 25,000 L of buffer storage will reduce the discharge to a maximum of 5,500 L/day. Treated effluent will be discharged to a 2,750 m^2 planted subsurface drip-irrigation field located on the gentle slopes (less than 10°) to the north and northeast of the buildings, with a 33% reserve area available. A water meter is recommended to confirm the design flow allowances. A discharge permit from the Northland Regional Council is required for the discharge to land and is being obtained separately.
- **Water supply** — potable water will be drawn from the existing 48 m bore, supplemented by a minimum of four 25,000 L storage tanks to provide for peak events, power outages and firefighting reserves. Water will be treated in accordance with G12 of the Building Code and the Drinking Water Standards. The bore location will be confirmed before construction so that it is protected during the works and maintains at least 20 m separation from the disposal field.
- **Firefighting** — dedicated firefighting water storage will be provided in accordance with SNZ PAS 4509:2008, with the storage tanks sized to meet the FW3–FW4 classification, subject to confirmation with Fire and Emergency New Zealand.
- **Stormwater** — roof and hardstand runoff will be collected and piped to stable watercourses, drains or dispersal structures (such as riprap-lined aprons or spreader bars) discharging to the northern or eastern slopes, avoiding concentrated discharge and erosion. RS Eng consider stormwater attenuation is not warranted, given the 5,875 ha size of the property and that dispersed runoff will sheet flow to existing overland flow paths draining to downstream tidal environments.

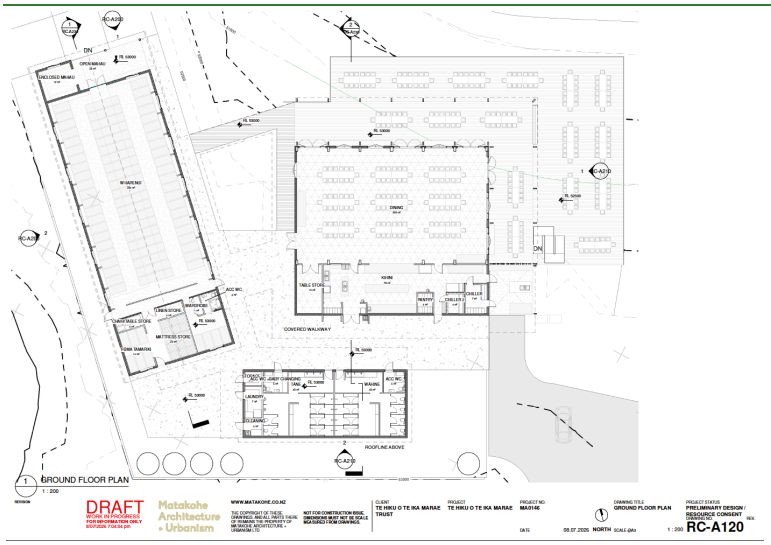


Figure 3: Proposed marae site plan (Source: Matakohe Architecture + Urbanism, Ref MA0146 Rev 03)

Based on the assessment of environmental effects set out below, it is concluded that any potential adverse effects arising from the proposal can be appropriately avoided, remedied or mitigated and would be no more than minor.

4. District Plan Assessment

This assessment is directed at the Proposed Far North District Plan (PDP), which is the plan of primary relevance. A marae is a permitted activity in the Māori Purpose Zone – Rural. Resource consent is required because certain associated works and infringed standards trigger restricted discretionary activity status across a number of district-wide chapters.

The indigenous vegetation clearance is also a Discretionary Activity under the Ecosystems and Indigenous Biodiversity chapter. Because the PDP indigenous vegetation clearance rules are under appeal, the Operative Plan rules in Chapter 12.2 (Indigenous Flora and Fauna) also continue to apply and are assessed in section 4.8. The relevant rules and standards are assessed in the tables below. The overall activity status of the bundled application is Discretionary.

4.1 Māori Purpose Zone – Rural

The development area is within the Māori Purpose Zone – Rural. A marae is expressly provided for as a permitted activity under MPZ-R7. The relevant standards are assessed below.

Table 1 – Māori Purpose Zone – Rural Rules and Standards

Rule / Std	Subject	Assessment
MPZ-R7	Marae	A marae is proposed. Permitted activity.
MPZ-R1	New buildings or structures (PER-1 to PER-3)	PER-1: the marae is a permitted activity under MPZ-R7, so buildings accommodating it satisfy PER-1. PER-2: the buildings are within the 12 m height limit; located centrally with respect to height in relation to boundary; appropriately set back from boundaries; and, given the size of the parent title, raise no concern in terms of building / structure coverage. The site can be serviced on site (Appendix E). PER-3: no airport protection surface applies. Compliance with the servicing standard MPZ-S5 is confirmed by the Three Waters Report. Complies.
MPZ-R2	Impermeable surfaces	On sites containing a marae the permitted impermeable coverage is 50%. Given the scale of the parent title this is not a constraint; the marae footprint and hardstand represent a negligible proportion of the site. Complies.
MPZ-S1	Maximum height (12 m – Rural)	The tallest elements of the marae are within the 12 m height limit for the Māori Purpose Zone – Rural. Complies.
MPZ-S2 / S3 / S4	Height in relation to boundary; setbacks; coverage	The buildings are centrally located on the ridgeline platform, well setback from all boundaries and well within the recession planes and coverage thresholds given the site scale. Complies.
MPZ-S5	Servicing	Wastewater treatment and disposal, potable water and stormwater are all contained on site as confirmed by the Three Waters Report (Appendix E). Complies.
MPZ-S6	Sensitive-activity setback from Mineral Extraction zone	There is no Mineral Extraction zone in the vicinity. Not applicable.

4.2 Coastal Environment

The development area is within the mapped coastal environment. The buildings and earthworks / vegetation clearance are assessed below. The development area is not within a High or Outstanding Natural Character area.

Table 2 – Coastal Environment Rules and Standards

Rule / Std	Subject	Assessment
CE-R1	New buildings or structures — coastal environment	The proposal is not located in the zones listed in PER-1. In terms of PER-2, the buildings are not for a residential activity, the gross floor area exceeds 110 m^2 and parts of the marae exceed 5.5 m in height. The buildings can comply with the colour and material requirements of CE-S2 and are well separated from MHWS (CE-S4). Compliance with PER-1 and PER-2 is therefore not achieved.
	Resulting status (CE-R1)	Restricted Discretionary Activity. The matters of discretion are CE-P9 and positive effects.
CE-R2	Earthworks or indigenous vegetation clearance — coastal environment	PER-1 is not relevant. In terms of PER-2, the earthworks and associated vegetation clearance exceed the CE-S3 thresholds (100 m^2 for earthworks and 400 m^2 for indigenous vegetation clearance outside high / outstanding natural character areas). Compliance is not achieved.
	Resulting status (CE-R2)	Restricted Discretionary Activity. The matters of discretion are CE-P9 and positive effects.
CE-S1	Maximum height (5.5 m)	Parts of the marae exceed 5.5 m. Addressed under CE-R1 PER-2 above.
CE-S2	Colours and materials	The Weathertex cladding in a natural off-white tone and the Dimond roofing in a dark recessive 'Lignite' colour achieve natural materials and a reflectance value no greater than 30%. Complies.
CE-S3	Earthworks / vegetation clearance thresholds	Exceeded — addressed under CE-R2 above.
CE-S4	Setback from MHWS	The building platform is well separated from and elevated above MHWS. Complies.
CE-R8 to R15	Coastal hazard area provisions	No buildings or works are proposed within a mapped Coastal Hazard Area. Not applicable.

4.3 Natural Character

The building platform and disposal area adjoin heathland / wetland margins to which the Natural Character provisions apply. The relevant rules are assessed below.

Table 3 – Natural Character Rules and Standards

Rule / Std	Subject	Assessment
NATC-R1	New buildings or structures — natural character	The marae is located on an area of heathland treated as wetland margin and is not for the purposes listed in PER-1.

Rule / Std	Subject	Assessment
		In terms of PER-2, the buildings exceed 300 m^2. In terms of PER-3, parts of the marae exceed the 5.5 m maximum height in NATC-S1. Compliance is not achieved.
	Resulting status (NATC-R1)	Restricted Discretionary Activity. The matters of discretion are effects on natural character, NATC-P6 matters, and positive effects.
NATC-R2	Earthworks or indigenous vegetation clearance — natural character	In terms of PER-1, the earthworks are not for the purposes listed. In terms of PER-2, the earthworks exceed 50 m^2 and the vegetation clearance exceeds 400 m^2, in breach of NATC-S2. Compliance is not achieved.
	Resulting status (NATC-R2)	Restricted Discretionary Activity. The matters of discretion are effects on natural character, NATC-P6 matters, and positive effects.
NATC-S1 / S2	Maximum height; earthworks / clearance thresholds	Exceeded — addressed under NATC-R1 and NATC-R2 above.

4.4 Earthworks

Earthworks are required to form the building platform, access and servicing areas. In the Māori Purpose Zone – Rural, EW-S1 permits earthworks up to a volume of 5,000 m^3 and an area of 2,500 m^2 per calendar year. The combined volume for the marae platform and access road (in the order of 3,358 m^3) is within the volume threshold, but the combined disturbance area (in the order of 8,900 m^2) exceeds the 2,500 m^2 area threshold.

Table 4 – Earthworks Rules and Standards

Rule / Std	Subject	Assessment
EW-R1	Earthworks — all zones	The proposal involves a combined cut / fill volume in the order of 3,358 m^3 across an area of approximately 8,900 m^2. This comprises the marae platform (1,463 m^3 over 4,095 m^2) and the access road (1,895 m^3 over 4,805 m^2). The volume is within the 5,000 m^3 Māori Purpose Zone – Rural threshold, but the area exceeds the 2,500 m^2 threshold in EW-S1. Maximum cut / fill depths are within 2.0 m (EW-S2). An Accidental Discovery Protocol (EW-S3) will apply. Site reinstatement (EW-S4) and erosion and sediment control (EW-S5) can be secured by an Erosion and Sediment Control Plan provided as a condition of consent. No works occur beyond the site boundaries (EW-S6).

Rule / Std	Subject	Assessment
		Land stability and fill quality (EW-S7, EW-S8) will accord with the Geotechnical Report (Appendix D) and consent conditions. EW-S9 (flood / coastal hazards) is not relevant.
	Resulting status (EW-R1)	Restricted Discretionary Activity, by reason of the EW-S1 area threshold being exceeded.
EW-R2 / R3 / R4	Earthworks near transmission lines / critical electricity lines / land drainage areas	Not relevant to the proposal.

4.5 Natural Hazards

The development area is not within a mapped flood, coastal inundation or land-instability hazard area. The marae is, however, a building used for a vulnerable activity, which engages the wildfire provisions given the surrounding regenerating scrub.

Table 5 – Natural Hazards Rules and Standards

Rule / Std	Subject	Assessment
NH-R5	Wildfire — buildings used for a vulnerable activity	In terms of PER-1, the marae is a vulnerable activity located on a site that does not have access to a fire hydrant, but firefighting water will be provided in accordance with SNZ PAS 4509:2008. In terms of PER-2, the buildings are within a 20 m setback of the surrounding regenerating scrub. Compliance with PER-2 is not achieved.
	Resulting status (NH-R5)	Restricted Discretionary Activity. The matters of discretion are availability of firefighting water, alternative locations, building materials, and vegetation management / low-flammability planting.
NH-R1 to R4, R7 to R11	River flood hazard provisions	The development area is not within a mapped river flood hazard area. Not relevant to the proposal.

4.6 Sites and Areas of Significance to Māori

No buildings, earthworks, vegetation clearance or access works are proposed within any scheduled Site or Area of Significance to Māori. The revised access road shown on the Concept Civil Drawings (Appendix F) is located outside the scheduled sites mapped within the wider Reservation. The rules of the Sites and Areas of Significance to Māori chapter are therefore not engaged, and no consent is required under this chapter. An Accidental Discovery Protocol will apply to all earthworks.

Commented [S2]: There is no longer any access proposed over the site of significance to Maori.

Commented [S2R2]: No consent required.

Commented [S3]: No longer any effects

4.7 Ecosystems and Indigenous Biodiversity

The Ecosystems and Indigenous Biodiversity chapter applies to indigenous vegetation clearance in all zones. Its clearance rules apply in addition to the clearance rules in the Coastal Environment and Natural Character chapters, which are assessed in sections 4.2 and 4.3. The chapter includes specific provisions for marae on Māori land and for customary activities, which have been checked for any exemption that applies to the proposal. As explained in section 3, consent is sought under this chapter out of caution because the previous and historic clearance regime across the site is difficult to establish.

The vegetation to be cleared is regenerating mānuka and kānuka scrub and does not include remnant forest. The total clearance for the marae platform and access road is conservatively assumed to be up to approximately 8,900 m^2, as described in section 3. The relevant rules are assessed below.

Table 6 – Ecosystems and Indigenous Biodiversity Rules

Rule / Std	Subject	Assessment
IB-R1	Indigenous vegetation clearance for specified activities (all zones)	PER-1 permits clearance that is the minimum necessary for a list of specified purposes. Several of these relate to marae or cultural matters. PER-1(5) permits the sustainable non-commercial harvest of plant material for rongoā Māori. This remains available to the Trust and is unaffected by the proposal. PER-1(6) permits clearance to create or maintain a 20 m setback between a building used for a vulnerable activity and the edge of indigenous vegetation. The marae is a vulnerable activity. Clearance or trimming around the buildings to manage wildfire risk is therefore permitted under this chapter where it is the minimum necessary. PER-1(10) permits clearance of previously cleared land where the vegetation is less than 10 years old. Parts of the building area are in patchy grass and the architectural plans describe it as cleared, but historical aerial imagery shows bush and scrub. Because the historic clearance regime cannot be confirmed, this exemption is not relied on and consent is sought out of caution. PER-1(14) permits the maintenance of lawfully established driveways and access. This covers maintenance of the existing track but not its widening and upgrade to form the new road. The clearance for the marae platform and the new access road is not provided for by PER-1 and is assessed under IB-R2 and IB-R3.
IB-R2	Indigenous vegetation clearance for papakāinga, including a marae (Māori Purpose zones)	PER-1(1) is the specific provision for marae. It permits up to 1,500 m^2 of indigenous vegetation clearance for a marae, including associated infrastructure and access. The clearance for the marae platform (approximately 4,095 m^2) and the access road (approximately 4,805 m^2) is in the order of 8,900 m^2 in total. Parts of these footprints are in grass or follow the existing track, but the indigenous vegetation clearance will still exceed 1,500 m^2. Compliance with PER-1 is not achieved.
	Resulting status (IB-R2)	Discretionary Activity.
IB-R3	Indigenous vegetation clearance (all zones)	For fullness, the clearance does not occur in remnant forest. PER-1(2)(a) permits up to 1,500 m^2 of clearance per site over a calendar year in the

Rule / Std	Subject	Assessment
		Māori Purpose zones. The clearance exceeds this threshold. Compliance with PER-1 is not achieved.
	Resulting status (IB-R3)	Discretionary Activity.
Notes 2 and 3	Relationship with other chapters	The clearance rules in the Coastal Environment and Natural Character chapters apply in addition to this chapter and are assessed in Tables 2 and 3. Earthworks that permanently alter the profile of the land are assessed under the Earthworks chapter in Table 4.

4.8 Operative District Plan – Indigenous Flora and Fauna

Under the Operative Far North District Plan the development area is within the Coastal Living Zone. The PDP indigenous vegetation clearance rules are subject to appeal, so the Operative Plan rules in Chapter 12.2 (Indigenous Flora and Fauna) continue to apply. The development area is not within an Outstanding Landscape or Outstanding Landscape Feature, so the vegetation clearance rules in Chapter 12.1 are not engaged.

The permitted standard for the Coastal Living Zone depends on the total area of cleared land on the site and on whether the land has been previously cleared. Consent is sought out of caution. The previous and historic clearance regime across the site is difficult to establish. The architectural plans describe the building area as cleared, while the RS Eng review of historical aerial imagery shows the building area in bush and scrub. It therefore cannot be confirmed with certainty how much of the footprint is previously cleared land, or how much cleared land already exists on the site. The relevant rules are assessed below.

Table 6A – Operative District Plan Indigenous Flora and Fauna Rules

Rule / Std	Subject	Assessment
12.2.6.1.1	Indigenous vegetation clearance permitted throughout the District	Clause (d) permits the maintenance of existing roads and private accessways. This covers maintenance of the existing track, but not its widening and upgrade to form the new road. Clause (f) permits the maintenance of existing open space within 20 m of an existing building. There are no existing buildings in the development area, so this does not apply. Clause (h) permits the sustainable harvest of plant material for rongoā Māori. This remains available to the Trust. Clause (m) permits the creation and maintenance of firebreaks where no more vegetation is cleared than necessary. This may apply to vegetation management around the marae for wildfire purposes. Clause (n) permits clearance of previously cleared land where the vegetation is less than 10 years old. This is not relied on because the historic clearance regime cannot be confirmed. The clearance for the marae platform and access road is not otherwise provided for by this rule.

Rule / Std	Subject	Assessment
12.2.6.1.4	Indigenous vegetation clearance in other zones (Coastal Living Zone)	The site is not an urban environment site. Clearance is permitted only where it does not increase the total area of cleared land on the site above 500 m^2. The extent of existing cleared land on the site cannot be readily established, and the proposed clearance alone is in the order of 8,900 m^2. Compliance is therefore not demonstrated, and consent is sought out of caution.
	Resulting status (12.2.6.2.2)	Restricted Discretionary Activity. Discretion is restricted to the significance of the area, the avoidance, remedying or mitigation of effects on significant vegetation and habitats, any protection and enhancement measures, visual and amenity effects, and the relationship of Māori with their ancestral lands and the exercise of kaitiakitanga.
12.2.6.3	Discretionary activities	Rule 12.2.6.3(a) refers to non-compliance with Rule 12.2.6.1.1. That rule lists permitted purposes rather than standards, and Rule 12.2.6.2.2 specifically makes clearance in other zones that does not comply with Rules 12.2.6.1.1 or 12.2.6.1.4 a restricted discretionary activity. The more specific rule is applied. In any event the application is assessed overall as a Discretionary Activity.
12.2.6.4.1	Pest species (prohibited)	No pest species will be introduced, kept or propagated. Not applicable.

4.9 Transport

Access is to be taken from a new vehicle crossing onto Te Hāpua Road via a new formed access road, as shown on the Concept Civil Drawings (Appendix F). The transport rules and standards are assessed below.

Table 7 – Transport Rules and Standards

Rule / Std	Subject	Assessment
TRAN-R1 / S1	Parking	Parking is provided in a dedicated area shown on the architectural plans. There is no formal requirement to provide bicycle parking for this activity. Two accessible car parks are required; the proposal provides four. Parking can be conditioned to be permanently marked and delineated. Complies (permitted).
TRAN-R2 / S2 / S3	Vehicle crossing and accessway	A new Type C vehicle crossing is proposed onto Te Hāpua Road, with 9.0 m radius splays, a seal to the boundary line and a culvert where necessary. The crossing is understood not to be off a road classified as arterial (PER-3). Compliance with the TRAN-S2 sight distance and intersection separation requirements will be confirmed at detailed design. The accessway is a 5.0 m wide gravel carriageway, which exceeds the TRAN-Table 10 minimum width. Its gradient reaches approximately 17.4% on the main road and approximately 23.7% on a short section of the side road. The side road therefore

Rule / Std	Subject	Assessment
		exceeds the 22.2% maximum gradient in TRAN-Table 10 (PER-5). TRAN-Table 11 (PER-6) requires sealing for the first 10 m where the adjacent road is sealed and wherever the gradient exceeds 12.5%. The concept design shows a gravel surface, and sealing of these sections can be secured by condition. Passing bays meeting TRAN-S3 will be provided where the accessway surfaced width is less than 5.5 m, at spacings not exceeding 100 m in the Māori Purpose Zone – Rural. As the side road gradient exceeds the TRAN-Table 10 maximum, compliance with PER-5 is not achieved.
	Resulting status (TRAN-R2)	Restricted Discretionary Activity. The matters of discretion relate to the use, location and design of the crossing and access, sight distances, separation from other crossings and intersections, and effects on the safe and efficient operation of the transport network.
TRAN-R9	Trip generation	A marae activity is not listed in TRAN-Table 12, so the default threshold of 200 ECM trips per day / 40 ECM trips per hour applies. Day-to-day movements are well below this threshold and peak movements are confined to occasional events such as tangihanga and hui. No subdivision is proposed. Complies (permitted).
TRAN-R13	Crossing from a State Highway / Limited Access Road	Access is from Te Hāpua Road, not a State Highway or Limited Access Road. Not applicable.

4.10 Overall activity status

Drawing the above together, a marae is a permitted activity in the Māori Purpose Zone – Rural. Resource consent is required because the following rules confer restricted discretionary or discretionary activity status:

- CE-R1 and CE-R2 (Coastal Environment) — building height / size and earthworks / vegetation clearance.
- NATC-R1 and NATC-R2 (Natural Character) — building height / size and earthworks / vegetation clearance on wetland margins.
- EW-R1 (Earthworks) — disturbance area exceeding the EW-S1 threshold.
- NH-R5 (Natural Hazards) — wildfire setback from surrounding vegetation.
- TRAN-R2 (Transport) — access road gradient and surfacing.
- IB-R2 and IB-R3 (Ecosystems and Indigenous Biodiversity) — indigenous vegetation clearance exceeding 1,500 m^2, a Discretionary Activity.
- Operative Plan Rule 12.2.6.2.2 (Indigenous Flora and Fauna) — indigenous vegetation clearance in the Coastal Living Zone not demonstrated to comply with Rule 12.2.6.1.4, a Restricted Discretionary Activity sought out of caution.

Applying the bundling principle across both plans, the application is assessed overall as a Discretionary Activity.

Please note that separate consents and authorisations are required from the Northland Regional Council and are being obtained under the rules applicable to that local authority.

5. Assessment of Effects on the Environment

As the application is a Discretionary Activity overall, the consent authority may consider all actual and potential effects of the proposal. The key matters are the effects on natural character and the coastal environment, the effects on indigenous biodiversity, the effects of earthworks, the management of wildfire risk, and the effects of the access on the safety and efficiency of the transport network. These are assessed below.

Positive effects

The proposal delivers significant positive social, cultural and spiritual effects. It provides the Te Hiku o Te Ika community with a modern, purpose-built marae capable of hosting tangihanga, hui, wānanga and other customary and community activities, and gives physical expression to the relationship of tangata whenua with their ancestral land.

The marae supports the occupation, use and development of Māori land consistent with the purpose of the Māori Purpose Zone, and provides for the cultural and social wellbeing of the hapū and the wider community.

These positive effects are directly relevant to the matters of discretion under CE-R1, CE-R2, NATC-R1 and NATC-R2 (which expressly include positive effects), and weigh in favour of the grant of consent.

Natural character and coastal environment effects

The buildings are consolidated on a single ridgeline platform, with a recessive materials palette (natural off-white cladding and dark 'Lignite' roofing achieving a reflectance value no greater than 30%) that integrates the development into the coastal landscape.

The development area is not within a High or Outstanding Natural Character area, nor within an Outstanding Natural Landscape or Feature.

Vegetation clearance is limited to regenerating manuka–kanuka scrub (gumland heathland) and has been kept to the minimum necessary, with no mature indigenous forest being affected. The access road requires further clearance of regenerating scrub, which is confined to the 5.0 m carriageway, its batters and drains. The RS Eng review of historical aerial photography (1942, 1980 and recent imagery) shows the building area in bush and scrub cover and identified no features of concern.

The development footprint sits within, or immediately adjacent to, heathland.The building platform and servicing have been located to minimise disturbance of the heathland so far as practicable, and exposed areas are protected from sediment by erosion and sediment controls, with disposal-field margins to be planted and enhanced.

The extent of any natural wetland affected, and the management of effects on it, are addressed in the companion regional application to the Northland Regional Council under the NES-F and NPS-FM (Appendix G).

Having regard to the ability of the environment to absorb change, the consolidated form, recessive appearance and limited clearance, the effects on natural character and the coastal environment are considered to be able to be managed to a no more than minor level.

Effects on indigenous biodiversity

The vegetation to be cleared is regenerating mānuka and kānuka scrub with areas of patchy grass, characteristic of the gumland heathland that is widespread across the Te Hiku landscape. No remnant or

mature indigenous forest is affected. The development area has not been identified as an area of significant indigenous vegetation or significant habitat of indigenous fauna under Appendix 5 of the RPS.

Mānuka and kānuka were given a precautionary threat classification in 2018 because of the risk posed by myrtle rust. That classification reflects the threat of disease rather than the loss of habitat, and both species remain common across the Te Hiku landscape and on the landholding itself. The clearance does not materially affect the extent or viability of these species in the district. These matters have been considered in relation to IB-P2 and Policy 11 of the NZCPS.

The effects management hierarchy has been applied in the design. The marae is consolidated on a single ridgeline platform, and the access road follows the existing track at its eastern end, which limits fragmentation. The effluent disposal field is laid within the existing scrub without clearance and is infill planted where cover is sparse. Clearance can be confined to the approved footprint by condition, with the clearance limits marked on site before works begin. Unretained batters will be revegetated. Restoration planting using eco-sourced indigenous species from within the ecological district can be secured by condition, together with pest plant and pest animal control, consistent with IB-P6, IB-P9 and IB-P10. If Council considers it necessary, a pet and pest management condition can also be imposed, consistent with IB-P11 and Operative Plan Policy 12.2.4.10.

The clearance is permanent but localised. It represents a very small proportion of the indigenous vegetation on the 5,875 ha landholding, most of which will remain in regenerating scrub and bush under the kaitiakitanga of the Trust. Linkages across the wider landscape are maintained, and downstream effects on waterbodies and the coastal marine area are managed through erosion and sediment controls. The clearance enables the use of Māori land for a marae, which IB-P5(d) expressly seeks to enable, and the Trust retains access to the surrounding vegetation for rongoā and other customary uses.

The assessment criteria in Section 12.2.7 of the Operative Plan have also been considered. The area has not been identified as significant, and the clearance is localised on a ridgeline and access corridor so the natural functioning of the wider ecosystem is maintained. Effects on cultural and spiritual values are positive, as the proposal is led by tangata whenua on their ancestral land. Visual and amenity effects are addressed in the natural character assessment above. The value of the vegetation in protecting soil and water quality is maintained through erosion and sediment controls, revegetation of batters and the retention of vegetation over the disposal field. Restoration planting and pest control can be secured by condition, and there are no reasonable alternatives that would avoid clearance while still providing for the marae on this ridgeline.

Having regard to the measures and conditions described above, the effects on indigenous biodiversity are considered to be no more than minor.

Earthworks effects

Earthworks are confined to the ridgeline platform, the access road and servicing areas, and the buildings are set back at least 25 m from slopes steeper than 14° in accordance with the Geotechnical Report. Cut and fill depths are limited to 2.0 m, and to 1.0 m (suitably retained) on slopes steeper than 16°. Unretained batters are no steeper than 1V to 3H, and retaining walls are specifically engineered for the highly expansive Class H1 soils. Cut and fill depths along the access road are generally less than about 1.1 m.

Erosion and sediment will be managed under an Erosion and Sediment Control Plan prepared to the Auckland Council GD2016/005 guideline and secured by condition, with exposed faces reinstated and revegetated within six months. Land stability at and beyond the boundary is maintained.

An Accidental Discovery Protocol will apply. With these measures, the effects of the earthworks on land stability, amenity, water quality and cultural values are no more than minor.

Natural hazards — wildfire, geotechnical and flooding

The site is not within a mapped flood or coastal hazard area, and the geotechnical assessment confirms low risks of slope instability and liquefaction. The marae is a vulnerable activity within a scrub setting, and while the 20 m wildfire setback in NH-R5 is not achieved, the risk is appropriately managed through the provision of dedicated firefighting water storage (a minimum of four 25,000 L tanks) in accordance with SNZ PAS 4509:2008, the use of non-combustible cladding and roofing (Weathertex and steel), and vegetation / low-flammability planting management around the buildings, which can be secured by condition and confirmed with Fire and Emergency New Zealand. The new 5.0 m wide formed access road also improves access for emergency vehicles. Residual wildfire risk is thereby reduced to no more than minor.

Servicing, water quality and public health effects

The Three Waters Report (Revision 3) confirms the marae can be fully serviced on site. Wastewater is treated to a secondary standard and buffered to 5,500 L/day before discharge to a 2,750 m^2 planted subsurface drip-irrigation field. The field is designed at a conservative loading rate of 2.0 mm/day for the Category 6 (medium to heavy clay) soils, with a 33% reserve area. All Northland Regional Council permitted-discharge separation distances are met or exceeded, and a minimum 0.6 m (achieved >1.2 m) groundwater separation is provided.

The report assesses the risk of groundwater and surface-water contamination as low and odour effects as no more than minor, subject to periodic monitoring by condition. A water meter is also recommended to verify the design flow allowances. Potable supply from the existing bore, supplemented by storage, is adequate and will be treated to the Drinking Water Standards. Stormwater is dispersed to stable outfalls to avoid erosion. Effects on water quality and public health are no more than minor. The discharge itself is authorised under a separate Northland Regional Council consent.

Transport and amenity effects

Access is via a new formed access road and Type C crossing onto Te Hāpua Road, with parking (including four accessible spaces) and passing bays provided on site. The 5.0 m wide carriageway allows two vehicles to pass and provides for emergency vehicle access. The steeper sections can be sealed by condition, and the section of the side road that exceeds the 22.2% maximum gradient is short and can be refined at detailed design. Day-to-day traffic is low and well below the permitted trip-generation threshold, with higher movements confined to occasional events. Given the rural setting, the separation from neighbouring dwellings, and the on-site parking provision, effects on the safety and efficiency of the transport network and on rural amenity are no more than minor.

Reverse sensitivity and cumulative effects

The surrounding land is within the wider Reservation and is largely undeveloped, and the marae is an anticipated activity in the Māori Purpose Zone – Rural. No reverse-sensitivity conflict with established primary production is created, and the consolidated, single-platform form of the development avoids cumulative sprawl. Cumulative effects are no more than minor.

Conclusion on effects

Taking the above matters together, and having particular regard to the significant positive cultural and social effects of the proposal, the actual and potential adverse effects on the environment can be appropriately avoided, remedied or mitigated through design and conditions of consent, and would be no more than minor.

6. Statutory Considerations

Section 104B of the RMA governs the determination of applications for discretionary activities. The consent authority may grant or refuse consent and, if it grants consent, may impose conditions under section 108. In considering the application the consent authority must have regard to the matters in section 104, which are addressed below.

Section 104(1)(a) – Actual and potential effects

The actual and potential effects on the environment are assessed in section 5 above and are concluded to be no more than minor, with significant positive cultural and social effects. Section 106 (natural hazards) is satisfied as the development area is not subject to material risk of erosion, falling debris, inundation or slippage, and the geotechnical and three-waters reports (Revision 3, October 2026) confirm the site can be safely developed and serviced.

Section 104(1)(ab) – Measures to offset or compensate

The proposal incorporates positive measures including restoration planting with eco-sourced indigenous species, disposal-field planting and enhancement, recessive building design, and the ongoing kaitiakitanga of the applicant over the land. Together these offset or compensate for the limited adverse effects of the works, including the loss of indigenous vegetation.

Section 104(1)(b) – National and regional instruments

The relevant higher-order instruments are addressed below:

- **NZ Coastal Policy Statement (NZCPS) 2010** — the development area is within the coastal environment. The proposal is consistent with the NZCPS as it consolidates development on a modified ridgeline outside High and Outstanding Natural Character areas, uses recessive materials, avoids Outstanding Natural Features and Landscapes, and gives effect to the relationship of tangata whenua with the coastal environment (Objective 3, Policies 13, 15 and the tangata whenua provisions). Adverse effects on natural character are avoided, remedied or mitigated. Policy 11 (indigenous biological diversity) is also relevant to the vegetation clearance. The vegetation to be cleared is regenerating scrub that is common in the district and has not been identified as significant. Significant adverse effects are avoided through the consolidated footprint and the avoidance of clearance in the disposal field, and other effects are remedied or mitigated through restoration planting. This is consistent with Policy 11(b).
- **National Policy Statement for Freshwater Management (NPS-FM) / NES-Freshwater** — the NRC Wetland Maps place the development within an heathland. The associated works are the subject of the companion regional application to the Northland Regional Council (Appendix G), which applies the NPS-FM effects-management hierarchy.
- National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB) — the NPS-IB is relevant to the clearance of indigenous vegetation. The land is part of a Māori reservation and is specified Māori land. The NPS-IB recognises the need to enable the use and development of specified Māori land, including for marae. Within the coastal environment the NZCPS prevails where there is any conflict. The proposal minimises clearance, applies the effects management hierarchy and provides for restoration, and is consistent with the NPS-IB.
- **Northland Regional Policy Statement (RPS)** — the proposal is consistent with the RPS, including its provisions recognising and providing for the relationship of tangata whenua with ancestral land and the use and development of Māori land, its coastal and natural-character provisions, and its provisions on indigenous ecosystems and biodiversity.

Section 104(1)(b)(vi) – Objectives and policies of the PDP and Operative Plan

The proposal is assessed against the relevant objectives and policies of the Māori Purpose Zone, Coastal Environment, Natural Character, Earthworks, Natural Hazards, Ecosystems and Indigenous Biodiversity, and Transport chapters of the PDP below. The indigenous flora and fauna objectives and policies of the Operative Plan are also assessed, as the Operative Plan clearance rules continue to apply.

Table 8 – Māori Purpose Zone Objectives and Policies

Ref	Objective / Policy	Assessment
Objectives		
MPZ-O1	Viability of the Māori Purpose zones ensured for future generations.	The marae secures the long-term use and occupation of the land for tangata whenua. Consistent.
MPZ-O2	Enable social, cultural and economic development supporting the ongoing relationship with ancestral land.	The marae is a core cultural facility that directly supports this relationship. Consistent.
MPZ-O3	Development reflects the sustainable servicing capacity of the land and environment.	On-site servicing is confirmed as adequate and sustainable by the Three Waters Report. Consistent.
Policies		
MPZ-P1 / P2	Provide for use and development of ancestral Māori land, including marae and customary and cultural activities.	A marae is expressly enabled and its adverse effects are avoided, remedied or mitigated. Consistent.
MPZ-P3	Provide for development that is compatible, does not compromise Māori land or adjacent land, maintains character and amenity, provides for wellbeing and health and safety, and can be serviced on site.	The proposal is compatible with the surrounding Reservation land, maintains rural character, provides for community wellbeing and safety (including firefighting water), and is serviced on site. Consistent.
MPZ-P4	Matters to consider — scale / design, positive cultural effects, interface, servicing, roading, hazards, cultural and natural values.	Each matter has been addressed in section 5. The positive cultural, social and economic effects are significant and adverse effects are no more than minor. Consistent.

Table 9 – Coastal Environment Objectives and Policies

Ref	Objective / Policy	Assessment
CE-O1 / O2	Natural character preserved; land use undertaken in an integrated manner, compatible with surroundings and recognising the relationship of tangata whenua with ancestral lands.	The consolidated marae recognises and provides for the relationship of tangata whenua with the coastal environment and preserves natural character outside high / outstanding areas. Consistent.
CE-P3	Avoid significant adverse effects and avoid, remedy or mitigate other effects on natural character (outside ONC / ONL / ONF).	Effects are avoided, remedied or mitigated through siting, recessive design and limited clearance. Consistent.
CE-P7	Enable use and development of Māori Purpose zoned land in the coastal environment, recognising some effects on natural character may be acceptable to support tangata whenua wellbeing.	This policy directly supports the proposal. The limited effects on natural character are acceptable to enable the cultural, social and economic wellbeing of tangata whenua. Consistent.
CE-P9	Matters to consider when managing effects on the coastal environment (a–p).	The relevant matters such as scale, design, integration, ability to absorb change, earthworks and clearance, cultural association, and positive

Ref	Objective / Policy	Assessment
		effects, are addressed in section 5 and support the grant of consent. Consistent.

Table 10 – Natural Character Objectives and Policies

Ref	Objective / Policy	Assessment
NATC-O1	Natural character of wetland, lake and river margins preserved and protected from inappropriate land use.	The development is not inappropriate. It is enabled by the zone. Consistent.
NATC-P1	Avoid significant adverse effects and avoid, remedy or mitigate other effects on natural character of margins.	Significant adverse effects are avoided and residual effects are remedied or mitigated through the design of the proposal. Consistent.
NATC-P6	Matters to consider — location / scale / design, integration, ability to absorb change, earthworks / clearance, cultural association, positive effects.	Addressed in section 5. The consolidated design, limited clearance and positive cultural effects support the proposal. Consistent.

Table 11 – Earthworks Objectives and Policies

Ref	Objective / Policy	Assessment
EW-O1 / O3	Earthworks enabled to facilitate development while managing effects; do not compromise land stability and public safety.	Earthworks are enabled to form the marae platform and are engineered for stability under the Geotechnical Report. Consistent.
EW-P1	Enable earthworks providing for cultural wellbeing and development.	The earthworks provide for the cultural wellbeing of the hapū. Consistent.
EW-P3 / P4 / P6	Locate and design earthworks to manage depth / area, drainage, sediment, stability and visual effects.	Depth and area are limited, batters revegetated, sediment controlled, and stability engineered. Consistent.
EW-P5 / P8	Manage effects on cultural and heritage values (accidental discovery) and the range of assessment matters.	An Accidental Discovery Protocol applies and all EW-P8 matters are addressed. Consistent.

Table 12 – Natural Hazards Objectives and Policies

Ref	Objective / Policy	Assessment
NH-O1 / O2	Risks from natural hazards managed; land use does not increase risk or risks are mitigated.	Geotechnical and flood risks are low. Wildfire risk is mitigated through firefighting water and vegetation management. Consistent.
NH-P9	Manage wildfire risk through setbacks, emergency-vehicle access and firefighting water supply.	While the vegetation setback is not met, emergency access and a compliant firefighting water supply are provided, and vegetation is managed. Consistent.

Table 13 – Ecosystems and Indigenous Biodiversity Objectives and Policies

Ref	Objective / Policy	Assessment
IB-O1	Areas of significant indigenous vegetation and significant habitats of indigenous fauna are protected.	The development area has not been identified as an area of significant indigenous vegetation or significant habitat. The vegetation is regenerating scrub that is common in the district, and the footprint is consolidated on the ridgeline and the existing track. Consistent.
IB-O2	Indigenous biodiversity is managed to maintain its extent and diversity while providing for social, economic and cultural wellbeing.	The clearance is a very small part of the indigenous vegetation on the 5,875 ha landholding, and restoration planting will offset

Ref	Objective / Policy	Assessment
		the loss. The marae provides for the cultural and social wellbeing of tangata whenua. Consistent.
IB-O3 / O4 / P1	The relationship of tangata whenua with indigenous biodiversity is recognised, and the role of tangata whenua as kaitiaki is provided for.	The proposal is led by the Trust, which will continue to exercise kaitiakitanga over the surrounding vegetation, including access to rongoā. Consistent.
IB-O5 / P6 / P10	Restoration and enhancement are promoted, with priority for Māori land where restoration is advanced by Māori landowners, using eco-sourced plants.	Restoration planting with eco-sourced species, revegetation of batters and planting of the disposal field are proposed and can be secured by condition. Consistent.
IB-P2	Within the coastal environment, avoid adverse effects on Threatened and At-Risk species and significant areas, and avoid significant adverse effects on areas of predominantly indigenous vegetation and vulnerable ecosystems.	This is the most directive policy. The clearance affects regenerating mānuka and kānuka scrub. These species carry a precautionary threat classification because of myrtle rust, but they remain common in the district and the clearance does not affect their extent or viability. No significant area has been identified. The footprint has been minimised and the disposal field avoids clearance, so significant adverse effects are avoided and other effects are mitigated through restoration planting. Consistent.
IB-P4	Where effects are not otherwise avoided, apply the effects management hierarchy and maintain indigenous biodiversity.	Effects are first avoided by siting, then minimised by limiting the footprint, then remedied by revegetation. Any residual loss is addressed by restoration planting. Consistent.
IB-P5	Manage land use in a way that enables Māori land to be used and developed to support the wellbeing of tangata whenua, including marae (clause d).	This policy directly supports the proposal. Consistent.
IB-P12	Matters to consider when assessing indigenous vegetation clearance (a to q).	The relevant matters are addressed in section 5. They include the permanent but localised nature of the clearance, fragmentation and linkages, pest threats, downstream effects, site design, the association of tangata whenua with the land, wellbeing and the benefits of the vegetation. Consistent.

Table 14 – Transport Objectives and Policies

Ref	Objective / Policy	Assessment
TRAN-O2 / O3 / O4	Integrated land use and transport; parking and access support the activity and safe, efficient operation.	Access via a new formed access road and crossing, with on-site parking and passing bays supports the activity safely and efficiently. Consistent.
TRAN-P3 / P7	Manage access design and assess transport effects.	The access road is designed as a 5.0 m wide formed carriageway, with sealing of steeper sections secured by condition. Transport effects are no more than minor. Consistent.

Table 14A – Operative District Plan Indigenous Flora and Fauna Objectives and Policies

Ref	Objective / Policy	Assessment
12.2.3.1	Maintain and enhance the life supporting capacity of ecosystems and the extent and representativeness of indigenous biodiversity.	The clearance is localised and is a very small part of the indigenous vegetation on the landholding.

Ref	Objective / Policy	Assessment
		Restoration planting will help maintain the extent of indigenous vegetation. Consistent.
12.2.3.2 / 12.2.4.1 / 12.2.4.3	Protect and actively manage areas of significant indigenous vegetation and habitats, and avoid, remedy or mitigate adverse effects on them.	The development area has not been identified as significant. The footprint is consolidated, edge effects and fragmentation are limited, and pest control can be secured by condition. Consistent.
12.2.3.3 / 12.2.3.4	Recognise landowner wellbeing and equity, and promote an ethic of stewardship.	The Trust is both landowner and kaitiaki and will continue to care for the wider landholding. Consistent.
12.2.4.4	Provide for the clearance of limited areas of indigenous vegetation.	The clearance is limited to what is needed for the marae, its access and the car park. Consistent.
12.2.4.8 / 12.2.4.12	Base restoration on locally occurring and locally sourced plants, and promote habitat restoration.	Restoration planting will use eco-sourced indigenous species. Consistent.
12.2.4.10	Avoid introducing pets and pests into areas with kiwi, dotterel and brown teal populations.	No pests will be introduced, and a pet and pest condition can be imposed if Council considers it necessary. Consistent.
12.2.4.14	Recognise and provide for Māori to sustainably manage their ancestral land when considering clearance.	The proposal enables the Trust to use its ancestral land for a marae. This policy directly supports the proposal. Consistent.

For the reasons above, the proposal is consistent with the relevant objectives and policies of the PDP and the Operative Plan.

Section 104(1)(b) – Weighting of the relevant PDP and Operative Plan provisions (appeal status)

The chapters relied on above are drawn from the Proposed Far North District Plan (Decisions / Appeals Version). Some of the provisions engaged by this application remain subject to appeal, and so attract reduced weight relative to settled, confirmed provisions.

Provisions that are neither under appeal nor "new provisions sought by appeal" are effectively operative and attract full weight. The table below records, chapter by chapter, the appeal status of the provisions relevant to this application and the weight they are afforded.

Table 15 – Appeal status and weighting of the relevant provisions, by chapter

Chapter	Relevant provisions relied on / engaged, and appeal status	Weighting
Māori Purpose Zone	Objectives MPZ-O1 to O3 and policies MPZ-P1 to P4, together with rule MPZ-R7 (marae – permitted) and standards MPZ-S1 to S6, are confirmed decisions-version provisions and are not under appeal.	Full weight. The provisions that most directly enable the marae carry full weight and the proposal is consistent with them.
Coastal Environment	The entire Coastal Environment chapter is under appeal (shown with an orange border in the ePlan across all of its objectives, policies and rules). This includes the objectives and policies engaged (CE-O1/O2, CE-P3, CE-P7, CE-P9) and the rules and standards that confer restricted discretionary status (CE-R1, CE-R2 and CE-S1 to CE-S4). None of the Coastal Environment provisions relied on is a settled, confirmed provision.	Reduced weight. As the whole chapter is under appeal, the Coastal Environment provisions carry reduced weight relative to settled provisions. This does not disadvantage the application as the proposal is consistent with the chapter in any event.

Natural Character	Objective NATC-O1, policies NATC-P1 and NATC-P6, and rules/standards NATC-R1, NATC-R2, NATC-S1 and NATC-S2 are confirmed and not under appeal.	Full weight. The proposal is assessed as consistent with these confirmed provisions.
Earthworks	Objectives EW-O1 to O3 and policies EW-P1 to P8, and rule EW-R1 with standards EW-S1 to S9, are confirmed and not under appeal. The EW-S1 area threshold that triggers consent is settled.	Full weight. The activity-status trigger and the assessment matters carry full weight.
Natural Hazards	The wildfire provisions engaged (objectives NH-O1/O2, policy NH-P9, rule NH-R5) are confirmed and not under appeal. No flood/coastal-hazard provisions are engaged.	Full weight. The wildfire framework relied on carries full weight.
Ecosystems and Indigenous Biodiversity	Objectives IB-O1 to O5 and policies IB-P1 to P12 are not under appeal. A new policy for existing lawfully established activities is sought by appeal and has no legal effect. Rules IB-R1 and IB-R3 are under appeal, and the IB-R2 heading is also marked as under appeal in the ePlan.	Full weight for the objectives and policies. Reduced weight for the clearance rules. Consent is nonetheless sought under IB-R2 and IB-R3 for fullness, and the proposal is consistent with the objectives and policies.
Transport	Objectives TRAN-O2 to O4 and policies TRAN-P3 and P7, and rules TRAN-R1, TRAN-R2 and TRAN-R9, are confirmed and not under appeal. Any "new provisions sought by appeal" relate to road-corridor infrastructure not engaged here.	Full weight. The access, parking and trip-generation provisions relied on carry full weight.

Provisions carrying full weight. The provisions that most directly determine this application, chiefly MPZ-R7 (which makes the marae a permitted activity), together with the Natural Character, Earthworks, Natural Hazards and Transport rules that confer restricted discretionary status, are confirmed and not under appeal, and carry full weight. The Ecosystems and Indigenous Biodiversity objectives and policies are also confirmed and carry full weight. The proposal is consistent with each of them, as set out in sections 4 to 6.

Provisions under appeal. The Coastal Environment chapter is under appeal in its entirety and so its objectives, policies and rules (CE-O1/O2, CE-P3, CE-P7, CE-P9, CE-R1, CE-R2 and CE-S1 to CE-S4) carry reduced weight. This does not disadvantage the application. The proposal is consistent with those provisions in any event. The restricted discretionary activity status set by CE-R1 and CE-R2 is accepted and assessed on its merits, and the reduced weight of the chapter neither alters that status nor weighs against the grant of consent. Rules IB-R1 and IB-R3 in the Ecosystems and Indigenous Biodiversity chapter are also under appeal. The Discretionary Activity status that results from the clearance exceeding 1,500 m^2 is accepted for fullness, and the clearance is assessed on its merits. No other provision relied on to grant or refuse this application is under appeal in a manner adverse to the proposal. To the extent any "new provisions sought by appeal" are advanced in the relevant chapters, they have no legal effect and attract no weight, and none is relied on here.

Overall weighting. The PDP is the instrument of primary relevance and has been given substantial weight. The provisions that decide the application are largely confirmed and carry full weight, and the proposal is consistent with them. Because the PDP indigenous vegetation clearance rules are under appeal, the Operative Plan indigenous flora and fauna provisions in Chapter 12.2 continue to apply. Consent is sought under those provisions out of caution, and the proposal is consistent with them. Weighted according to their status, the relevant provisions of both plans support the grant of consent.

Section 104(1)(c) – Other matters

The applicant's status as tangata whenua and the significant cultural aspiration underpinning the marae are relevant other matters that weigh in favour of the grant of consent. A separate Northland Regional

Council discharge consent is being obtained and is noted for completeness. No other matters are considered relevant to the determination of this application.

7. Notification (ss 95A–95D)

Section 95A sets out the steps for determining public notification:

- Public notification is not mandatory (Step 1);
- Public notification is not precluded (Step 2);
- Under Step 3, no rule or national environmental standard requires public notification, and this assessment concludes that the adverse effects of the proposal on the environment would be no more than minor;
- Under Step 4, there are no unusual or exceptional circumstances that would warrant public notification.

The application can therefore be processed without public notification.

Section 95B addresses limited notification:

- There are no affected protected customary rights or customary marine title groups, and no statutory acknowledgement area is affected in a way that engages Step 1;
- Limited notification is not precluded (Step 2);
- Under Step 3, no person is considered to be adversely affected. The works are contained within the applicant's 5,875 ha landholding and are well separated from neighbouring land. No scheduled Site or Area of Significance to Māori is affected. Fire and Emergency New Zealand's interest in firefighting water supply is addressed by design and is not an affected-person matter. No other person is considered to be affected in terms of s 95E;
- No special circumstances arise (Step 4).

The application can therefore proceed on a non-notified basis.

8. Part 2 of the RMA

Purpose (s 5). The proposal promotes the sustainable management of natural and physical resources. It enables the hapū to provide for their social, cultural and economic wellbeing through a marae, while safeguarding the life-supporting capacity of soils and water through engineered earthworks, on-site treatment and disposal, and sediment control. Adverse effects on the environment are avoided, remedied or mitigated.

Matters of national importance (s 6). The proposal preserves the natural character of the coastal environment and protects it from inappropriate development (s 6(a)). The development area is outside Outstanding Natural Features and Landscapes (s 6(b)), and it has not been identified as an area of significant indigenous vegetation or significant habitat of indigenous fauna (s 6(c)). Most significantly, it recognises and provides for the relationship of Māori with their ancestral land, water, sites, wāhi tapu and other taonga (s 6(e)).

Other matters and the Treaty (ss 7–8). The proposal maintains amenity values and the quality of the environment and reflects the exercise of kaitiakitanga by tangata whenua (s 7(a), s 7(c), s 7(f)). In accordance with s 8, the proposal gives practical effect to the principles of the Treaty of Waitangi by enabling tangata whenua to use and develop their ancestral land for a marae. The proposal is consistent with Part 2.

9. Overall Conclusion

This application seeks resource consent for the establishment and operation of the new Te Hiku o Te Ika Marae at Waharua Road, Te Hāpua (Te Hāpua 42 Block), together with associated earthworks, access, parking and on-site three-waters infrastructure.

A marae is a permitted activity in the Māori Purpose Zone – Rural. Consent is required because associated works engage the Coastal Environment, Natural Character, Earthworks, Natural Hazards (wildfire), Ecosystems and Indigenous Biodiversity, and Transport provisions of the Proposed Far North District Plan. Consent is also sought out of caution under the indigenous flora and fauna rules of the Operative Far North District Plan. The application is assessed overall as a Discretionary Activity.

Based on the assessment above, and having particular regard to the significant positive cultural, social and spiritual effects of the proposal, the actual and potential adverse effects on the environment would be no more than minor and can be appropriately managed through conditions of consent. The proposal is consistent with the relevant objectives and policies of the PDP, the NZCPS, the NPS-IB and the Northland RPS, and accords with Part 2 of the RMA.

It is therefore considered that the application can be processed on a non-notified basis and granted subject to appropriate conditions. A separate discharge consent for the treated-wastewater discharge to land is being obtained from the Northland Regional Council.

Please do not hesitate to contact the undersigned should any further information be required.

Kind regards,

Steven Sanson
Consultant Planner
Bay of Islands Planning Limited

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
QUALIFIED

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

R.W. Muir
Registrar-General
of Land

Identifier **517692**

Land Registration District **North Auckland**

Date Registered 29 March 2010 09:00 am

Prior References

NA46A/1113 NAPR27/158 NAPR27/160
NAPR27/162

Type	Amalgamation Order under Section 435 Maori Affairs Act 1953	**Instrument**	MFAO 8453728.1
Area	5875.3036 hectares more or less		
Legal Description	Te Hapua 42 Block		

Registered Owners

Proprietors of Muriwhenua

Interests

Subject to the provisions of the Maori Lands Administration Act 1900 (affects part formerly known as Pakohu No 1 Block)

The within order has been embodied in the register pursuant to Section 124(1) Te Ture Whenua Maori Act 1993. It will not be finally constituted a folium of the register until a plan has been deposited pursuant to Section 167(5) Land Transfer Act 1952

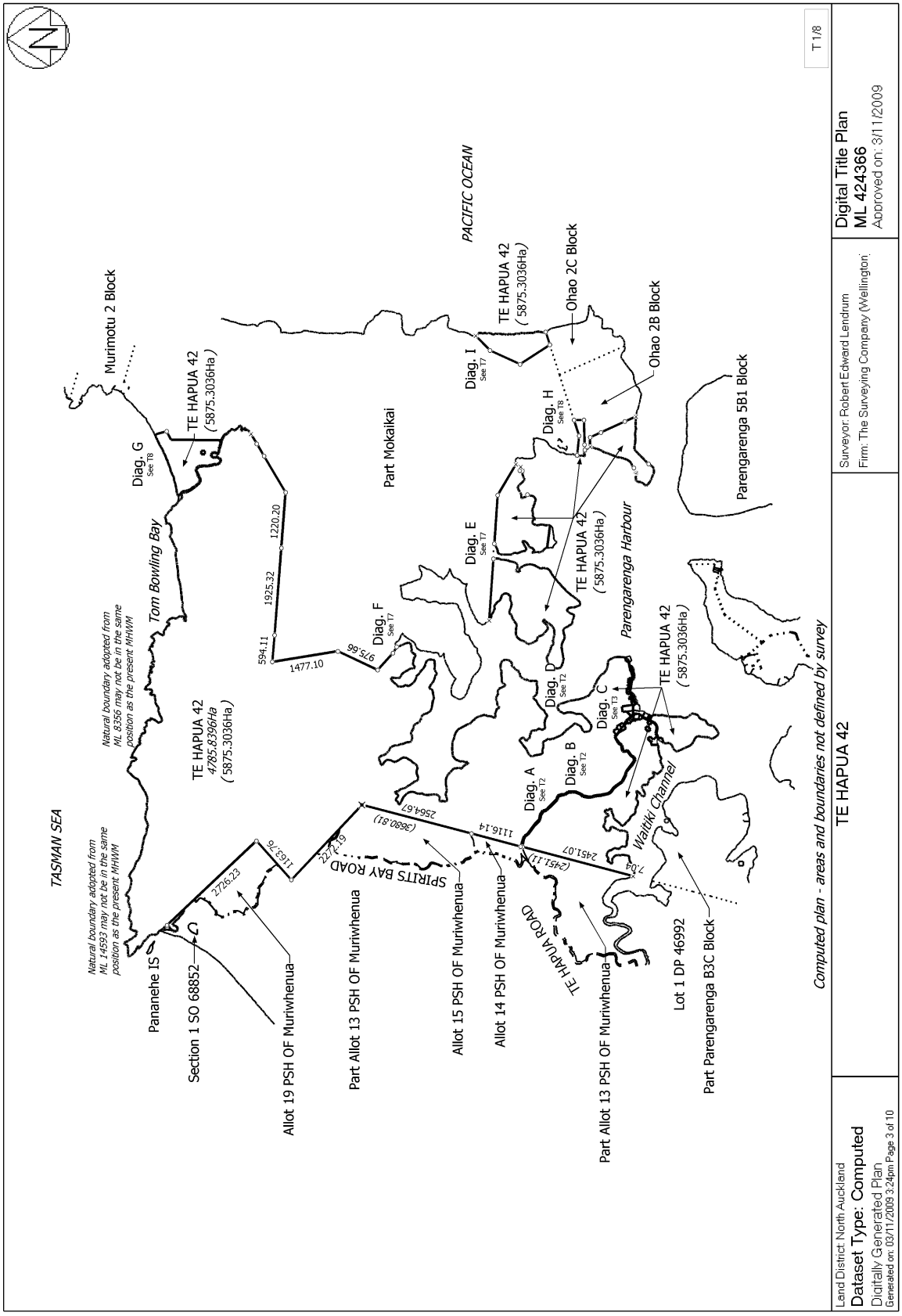
8453728.4 Roadway Order laying out a roadway over part (11.0250 ha) herein as shown on ML 15991 and ML 15992 - 29.3.2010 at 9:00 am

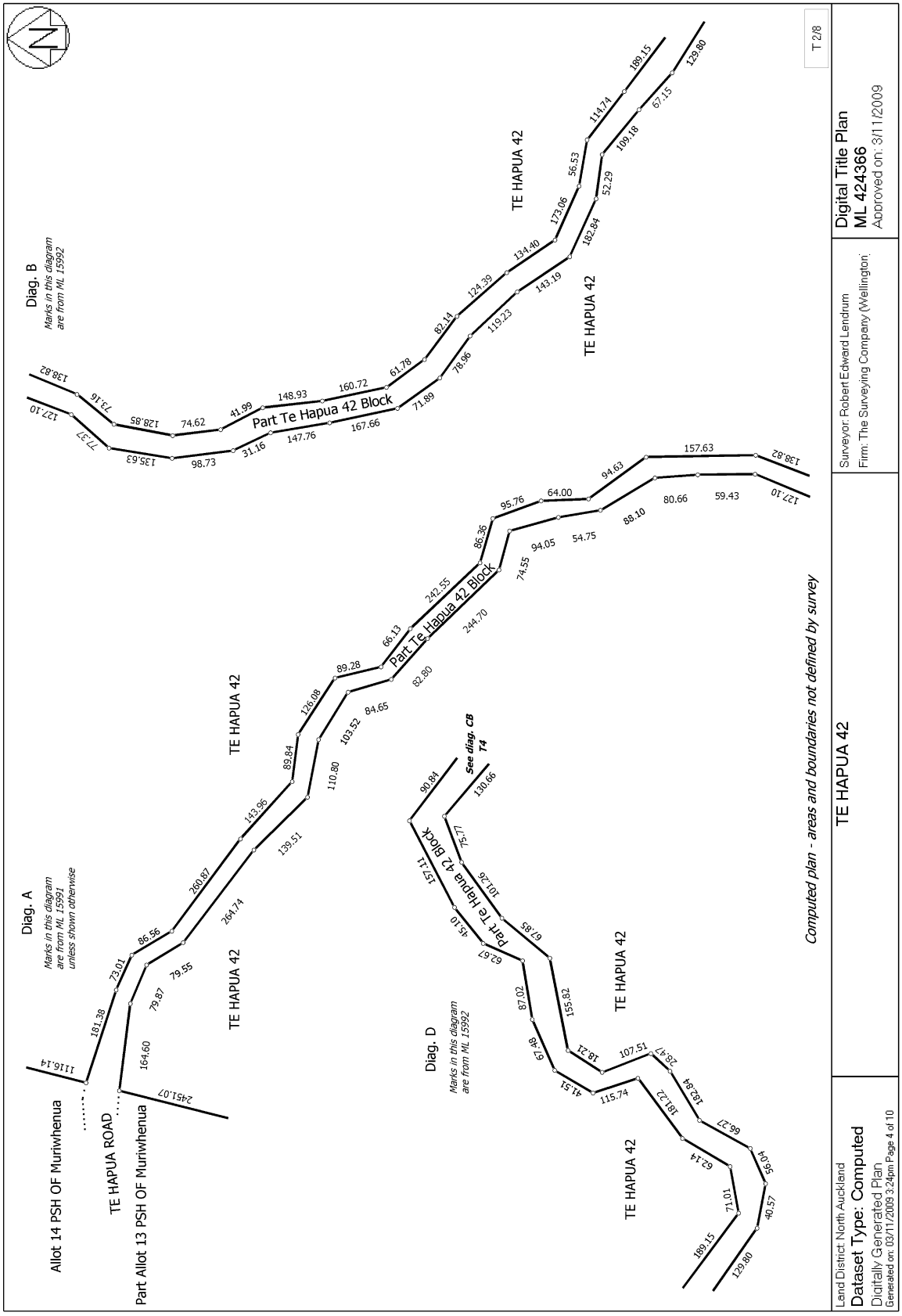
8453728.5 Roadway Order laying out a roadway over part (286m2) herein as shown on ML 16044 - 29.3.2010 at 9:00 am

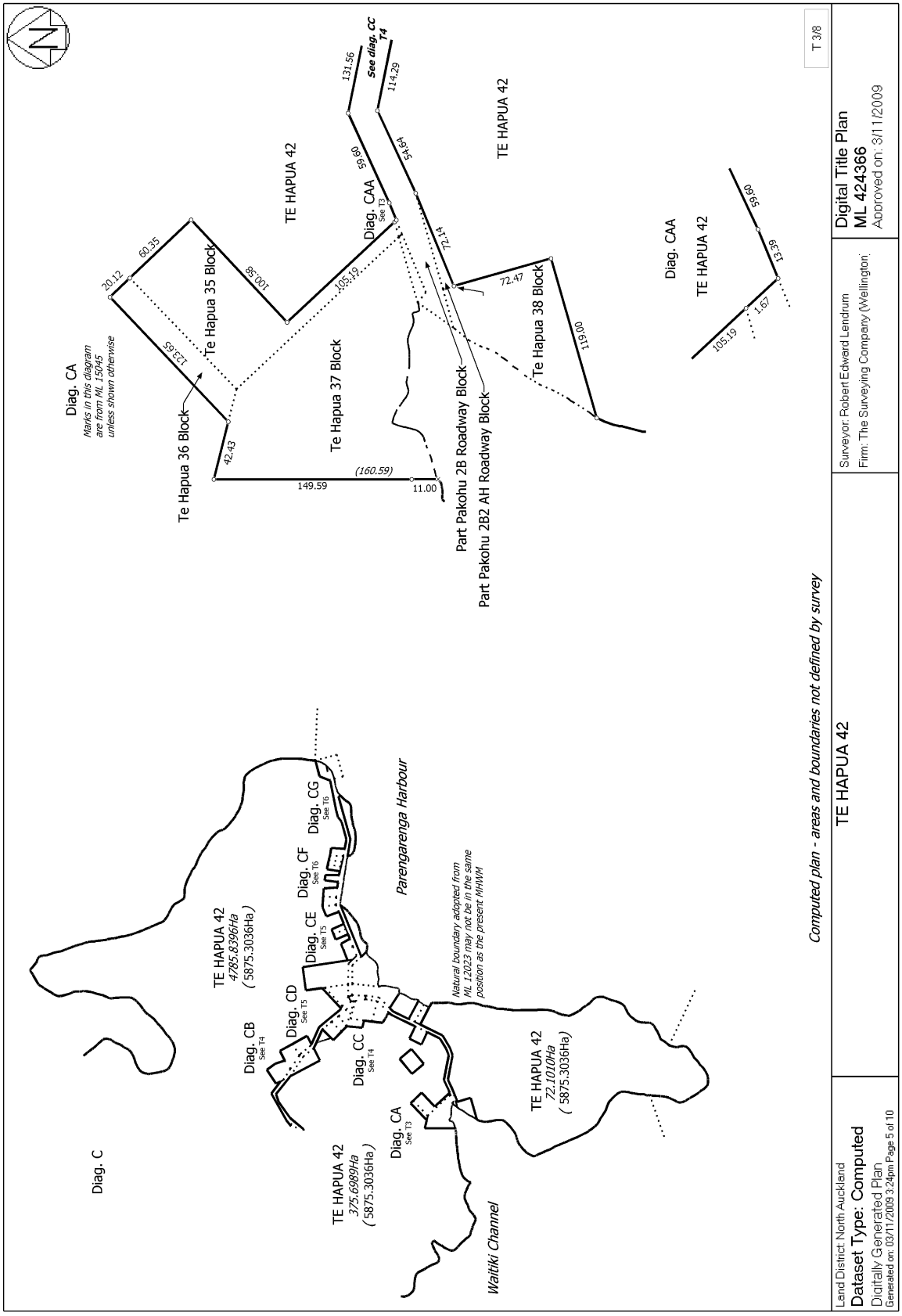
8453728.7 Status Order determining the status of the within land to be Maori Freehold Land - 29.3.2010 at 9:00 am

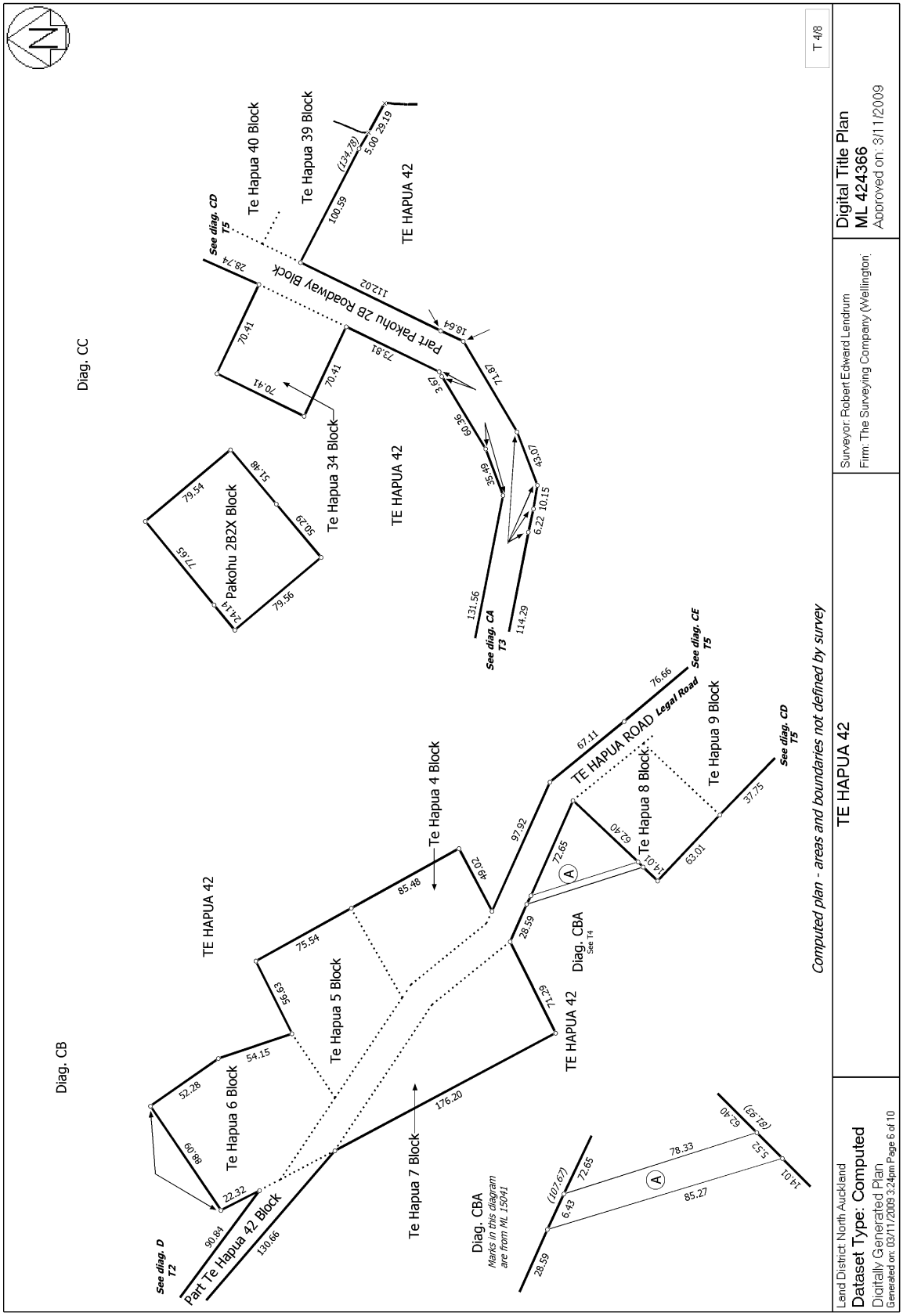
9110084.1 Notice pursuant to Section 195(2) Climate Change Response Act 2002 - 2.7.2012 at 11:59 am

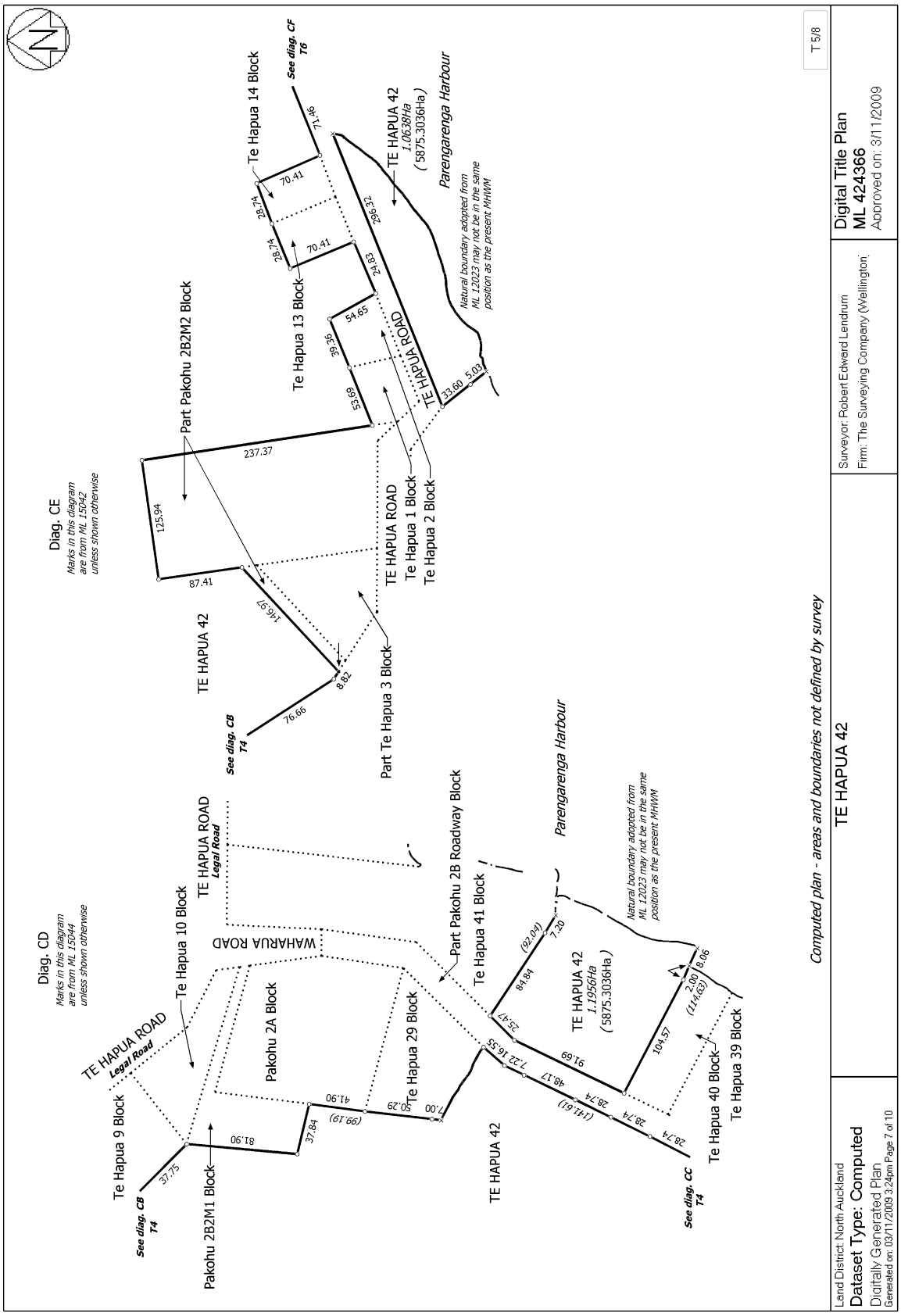
12818942.3 Forestry Right pursuant to the Forestry Rights Registration Act 1983 to Ngā Ngāhere o Muriwhenua Tika Limited - 25.10.2023 at 12:10 pm

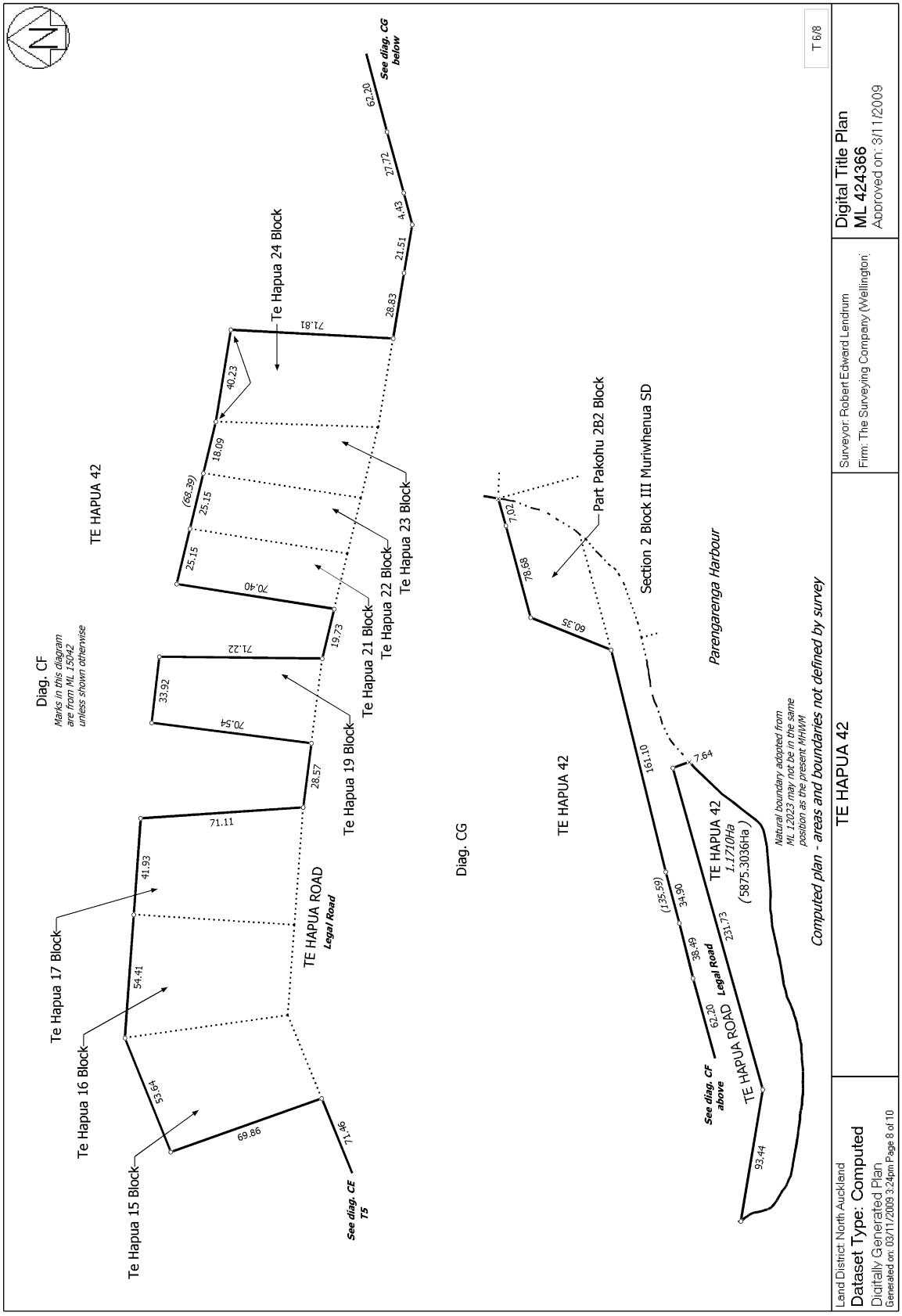

T 1/8
TASMAN SEA
PACIFIC OCEAN
Tom Bowling Bay
Parengarenga Harbour
Waitiki Channel
Murimotu 2 Block
TE HAPUA 42 (5875.3036Ha)
TE HAPUA 42 4785.8396Ha (5875.3036Ha)
Part Mokaikai
Ohao 2C Block
Ohao 2B Block
Parengarenga 5B1 Block
Diag. G See T8
Diag. I See T7
Diag. H See T8
Diag. E See T7
Diag. F See T7
Diag. D See T2
Diag. C See T3
Diag. A See T2
Diag. B See T2
Natural boundary adopted from ML 8356 may not be in the same position as the present MHWM
Natural boundary adopted from ML 14593 may not be in the same position as the present MHWM
1220.20
1925.32
594.11
1477.10
975.66
1163.76
2726.23
2274.19
(3680.81)
2564.67
1116.14
(2451.11)
2451.07
7.04
Pananehe 1S
Section 1 SO 68852
Allot 19 PSH OF Muriwhenua
Part Allot 13 PSH OF Muriwhenua
SPIRITS BAY ROAD
Allot 15 PSH OF Muriwhenua
Allot 14 PSH OF Muriwhenua
TE HAPUA ROAD
Part Allot 13 PSH OF Muriwhenua
Lot 1 DP 46992
Part Parengarenga B3C Block
Computed plan - areas and boundaries not defined by survey
TE HAPUA 42
Land District: North Auckland
Dataset Type: Computed
Digitally Generated Plan
Generated on: 03/11/2009 3:24pm Page 3 of 10
Surveyor: Robert Edward Lendrum
Firm: The Surveying Company (Wellington)
Digital Title Plan
ML 424366
Approved on: 3/11/2009

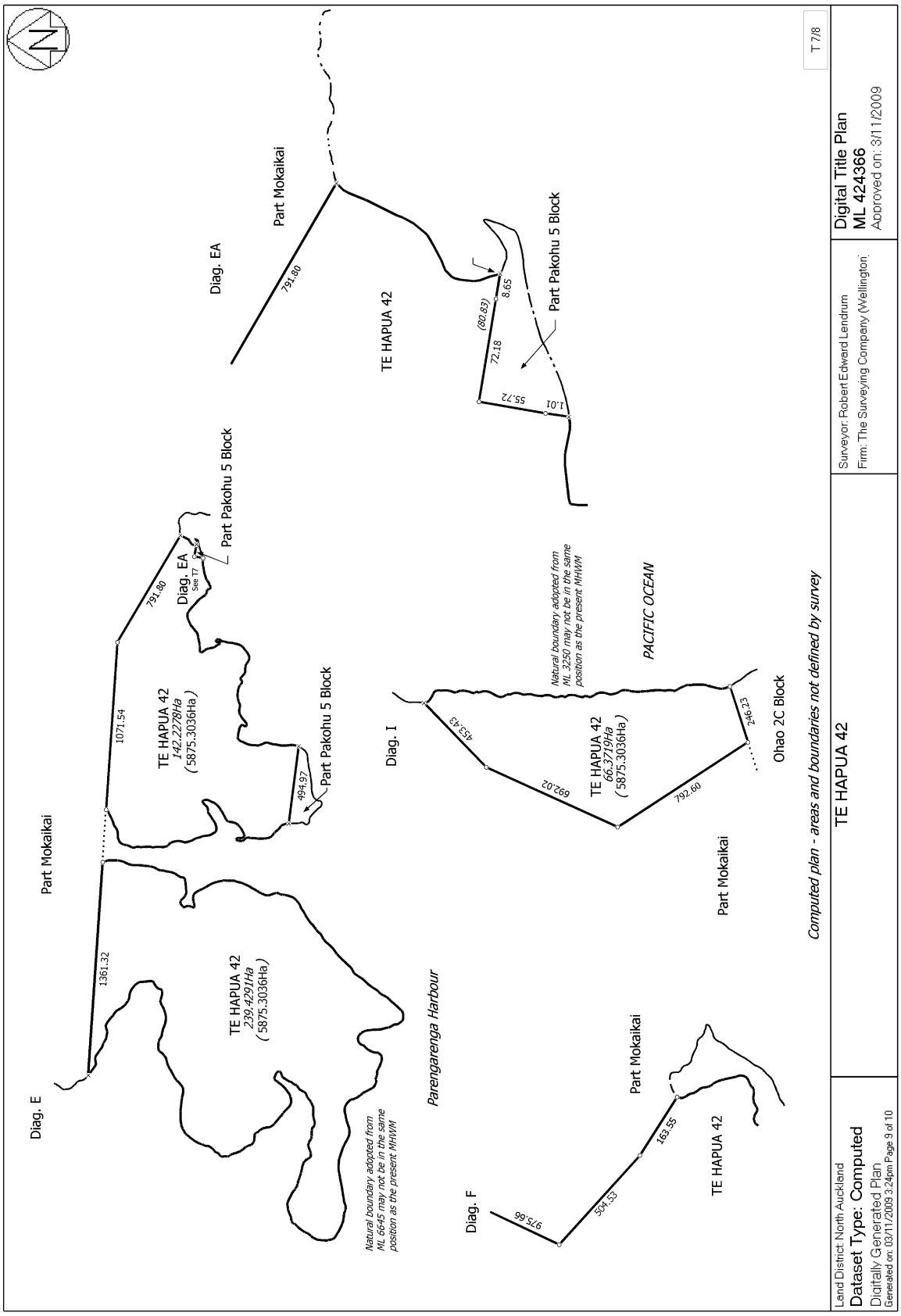

T 2/8
Digital Title Plan
ML 424366
Approved on: 3/11/2009
Surveyor: Robert Edward Lendrum
Firm: The Surveying Company (Wellington)
Computed plan - areas and boundaries not defined by survey
TE HAPUA 42
Land District: North Auckland
Dataset Type: Computed
Digitally Generated Plan
Generated on: 03/11/2009 3:24pm Page 4 of 10
Diag. A
Marks in this diagram are from ML 15991 unless shown otherwise
Allot 14 PSH OF Muriwhenua
TE HAPUA ROAD
Part Allot 13 PSH OF Muriwhenua
Diag. B
Marks in this diagram are from ML 15992
Part Te Hapua 42 Block
Diag. D
Marks in this diagram are from ML 15992
Part Te Hapua 42 Block
See diag. CB T4

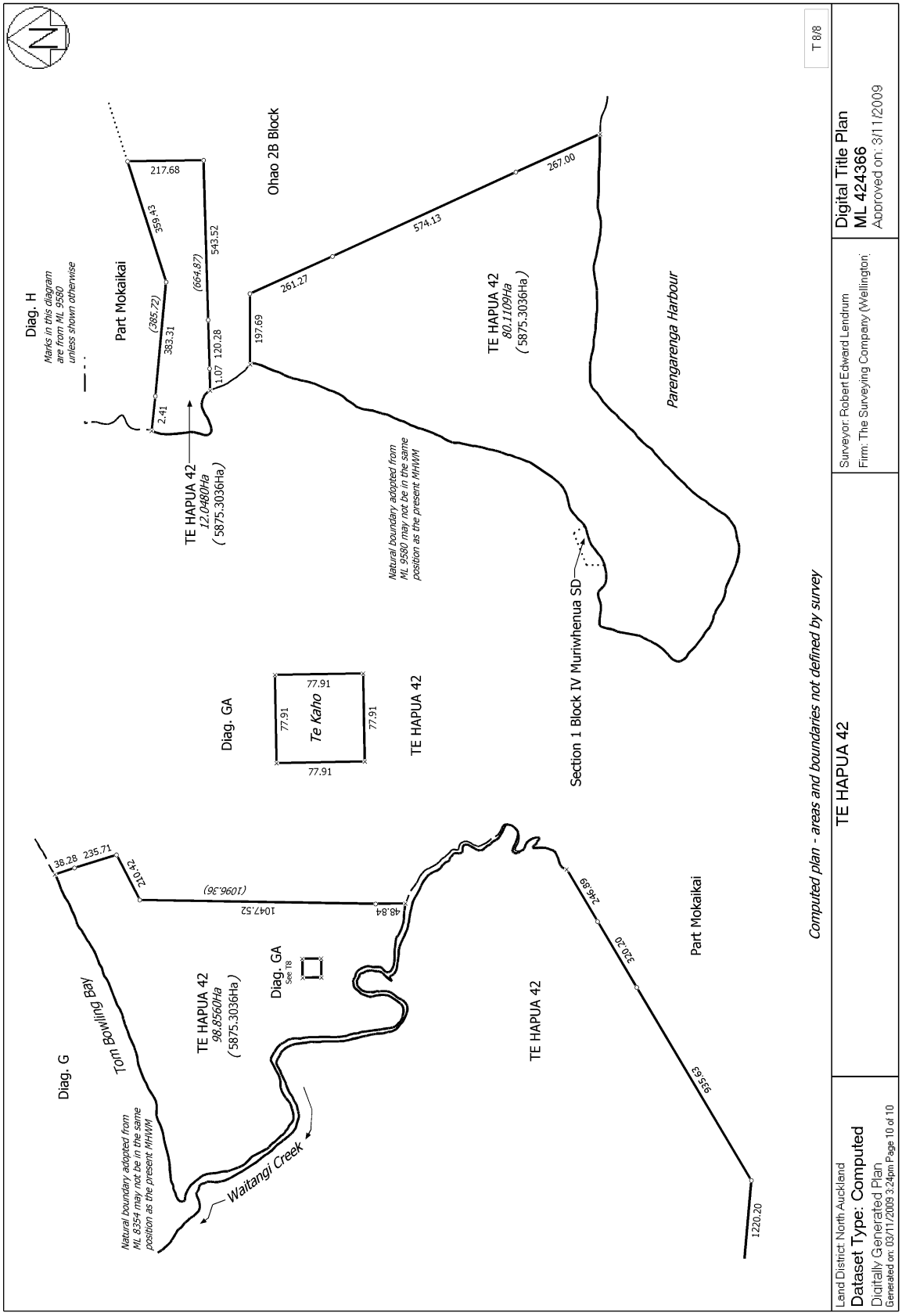

Diag. CA
Marks in this diagram are from ML 15045 unless shown otherwise
Te Hapua 36 Block
Te Hapua 35 Block
Te Hapua 37 Block
TE HAPUA 42
Diag. CAA See T3
See diag. CC T4
Part Pakohu 2B Roadway Block
Part Pakohu 2B2 AH Roadway Block
Te Hapua 38 Block
TE HAPUA 42
Diag. CAA
TE HAPUA 42
20.12
60.35
123.65
100.58
105.19
42.43
149.59
(160.59)
11.00
131.56
114.29
59.69
54.64
72.14
72.47
119.00
59.60
13.31
1.67
105.19
Diag. C
TE HAPUA 42
4785.8396Ha
(5875.3036Ha)
TE HAPUA 42
375.6989Ha
(5875.3036Ha)
TE HAPUA 42
72.1010Ha
(5875.3036Ha)
Diag. CA See T3
Diag. CB See T4
Diag. CC See T4
Diag. CD See T5
Diag. CE See T5
Diag. CF See T6
Diag. CG See T6
Parengarenga Harbour
Waitiki Channel
Natural boundary adopted from ML 12023 may not be in the same position as the present MHWM
Computed plan - areas and boundaries not defined by survey
T 3/8
TE HAPUA 42
Land District: North Auckland
Dataset Type: Computed
Digitally Generated Plan
Generated on: 03/11/2009 3:24pm Page 5 of 10
Surveyor: Robert Edward Lendrum
Firm: The Surveying Company (Wellington)
Digital Title Plan
ML 424366
Approved on: 3/11/2009


T 4/8
Digital Title Plan
ML 424366
Approved on: 3/11/2009
Surveyor: Robert Edward Lendrum
Firm: The Surveying Company (Wellington)
Computed plan - areas and boundaries not defined by survey
TE HAPUA 42
Land District: North Auckland
Dataset Type: Computed
Digitally Generated Plan
Generated on: 03/11/2009 3:24pm Page 6 of 10
Diag. CC
Diag. CB
Diag. CBA
Marks in this diagram are from ML 15041
Diag. CBA
See T4
Te Hapua 40 Block
Te Hapua 39 Block
Te Hapua 34 Block
Te Hapua 4 Block
Te Hapua 5 Block
Te Hapua 6 Block
Te Hapua 7 Block
Te Hapua 8 Block
Te Hapua 9 Block
Pakohu 2B2X Block
Part Pakohu 2B Roadway Block
Part Te Hapua 42 Block
TE HAPUA ROAD Legal Road
TE HAPUA 42
See diag. CD T5
See diag. CA T3
See diag. CE T5
See diag. D T2
(124.78)
5.00
29.19
100.59
112.02
28.74
70.41
70.44
73.81
18.64
71.87
3.67
60.26
35.49
43.07
10.15
6.22
131.56
114.29
79.54
51.48
50.29
79.56
74.14
77.65
76.66
67.11
97.92
49.02
85.48
75.54
56.95
54.15
52.28
60.88
22.32
90.84
130.66
176.20
71.29
28.59
72.65
62.40
10.01
63.01
37.75
(107.67)
6.43
78.33
85.27
5.52
14.01
(81.93)


Te Hapua 14 Block
See diag. CF T6
71.46
70.41
28.74
28.74
70.41
TE HAPUA 42
1.0638Ha
(5875.3036Ha)
298.32
24.83
Parengarenga Harbour
Natural boundary adopted from ML 12023 may not be in the same position as the present MHWM
Te Hapua 13 Block
54.65
39.36
53.69
TE HAPUA ROAD
33.60
5.03
Part Pakohu 2B2M2 Block
237.37
125.94
87.41
Diag. CE
Marks in this diagram are from ML 15042 unless shown otherwise
TE HAPUA 42
See diag. CB T4
146.97
8.82
76.66
TE HAPUA ROAD
Te Hapua 1 Block
Te Hapua 2 Block
Part Te Hapua 3 Block
Part Pakohu 2B Roadway Block
Te Hapua 41 Block
Parengarenga Harbour
Natural boundary adopted from ML 12023 may not be in the same position as the present MHWM
Diag. CD
Marks in this diagram are from ML 15044 unless shown otherwise
TE HAPUA ROAD
Legal Road
Te Hapua 10 Block
TE HAPUA ROAD
Legal Road
WHAHARUA ROAD
Pakohu 2A Block
Te Hapua 29 Block
(92.04)
7.20
84.84
25.47
TE HAPUA 42
1.1956Ha
(5875.3036Ha)
91.69
7.22
16.55
48.17
28.74
(141.61)
28.74
104.57
2.00
(114.69)
18.06
Te Hapua 9 Block
See diag. CB T4
37.75
81.90
Pakohu 2B2M1 Block
37.84
41.90
(99.19)
50.29
7.00
TE HAPUA 42
See diag. CC T4
Te Hapua 40 Block
Te Hapua 39 Block
Computed plan - areas and boundaries not defined by survey
T 5/8
TE HAPUA 42
Land District: North Auckland
Dataset Type: Computed
Digitally Generated Plan
Generated on: 03/11/2009 3:24pm Page 7 of 10
Surveyor: Robert Edward Lendrum
Firm: The Surveying Company (Wellington)
Digital Title Plan
ML 424366
Approved on: 3/11/2009


Te Hapua 17 Block
Te Hapua 16 Block
Te Hapua 15 Block
TE HAPUA ROAD
Legal Road
Te Hapua 19 Block
Te Hapua 21 Block
Te Hapua 22 Block
Te Hapua 23 Block
Te Hapua 24 Block
TE HAPUA 42
Diag. CF
Marks in this diagram are from ML 15042 unless shown otherwise
See diag. CE TS
See diag. CG below
Diag. CG
TE HAPUA 42
Part Pakohu 2B2 Block
Section 2 Block III Muriwhenua SD
Parengarenga Harbour
TE HAPUA 42
1.1710Ha
(5875.3036Ha)
TE HAPUA ROAD
Legal Road
See diag. CF above
Natural boundary adopted from ML 12023 may not be in the same position as the present MHWM
Computed plan - areas and boundaries not defined by survey
T 6/8
Land District North Auckland
Dataset Type: Computed
Digitally Generated Plan
Generated on: 03/11/2009 3:24pm Page 8 of 10
TE HAPUA 42
Surveyor: Robert Edward Lendrum
Firm: The Surveying Company (Wellington)
Digital Title Plan
ML 424366
Approved on: 3/11/2009


Part Mokaikai
Diag. E
1361.32
TE HAPUA 42
239.4291Ha
(5875.3036Ha)
Natural boundary adopted from ML 6645 may not be in the same position as the present MHWM
Parengarenga Harbour
Diag. F
975.66
504.53
163.55
Part Mokaikai
TE HAPUA 42
Part Mokaikai
Diag. I
453.43
692.02
TE HAPUA 42
66.3719Ha
(5875.3036Ha)
792.60
246.23
Ohao 2C Block
Natural boundary adopted from ML 3250 may not be in the same position as the present MHWM
PACIFIC OCEAN
Diag. EA
Part Mokaikai
791.80
TE HAPUA 42
(80.83)
8.65
72.18
55.72
1.01
Part Pakohu 5 Block
Diag. EA
See T7
Part Pakohu 5 Block
791.80
1071.54
TE HAPUA 42
142.2278Ha
(5875.3036Ha)
494.97
Part Pakohu 5 Block
Computed plan - areas and boundaries not defined by survey
T 7/8
TE HAPUA 42
Land District: North Auckland
Dataset Type: Computed
Digitally Generated Plan
Generated on: 03/11/2009 3:24pm Page 9 of 10
Surveyor: Robert Edward Lendrum
Firm: The Surveying Company (Wellington)
Digital Title Plan
ML 424366
Approved on: 3/11/2009


T 8/8
Diag. H
Marks in this diagram are from ML 9580 unless shown otherwise
Part Mokaikai
(385.72)
383.31
2.41
(664.87)
543.52
120.28
1.07
217.68
359.43
Ohao 2B Block
197.69
261.27
574.13
267.00
TE HAPUA 42
12.0480Ha
(5875.3036Ha)
TE HAPUA 42
80.1109Ha
(5875.3036Ha)
Parengarenga Harbour
Natural boundary adopted from ML 9580 may not be in the same position as the present MHWM
Section 1 Block IV Muriwhenua SD
Diag. GA
Te Kaho
77.91
77.91
77.91
77.91
TE HAPUA 42
Computed plan - areas and boundaries not defined by survey
TE HAPUA 42
Digital Title Plan
ML 424366
Approved on: 3/11/2009
Surveyor: Robert Edward Lendrum
Firm: The Surveying Company (Wellington)
Land District: North Auckland
Dataset Type: Computed
Digitally Generated Plan
Generated on: 03/11/2009 3:24pm Page 10 of 10
Diag. G
Tom Bowling Bay
Natural boundary adopted from ML 8354 may not be in the same position as the present MHWM
TE HAPUA 42
98.8560Ha
(5875.3036Ha)
Diag. GA
See T8
Waitangi Creek
TE HAPUA 42
Part Mokaikai
38.28
235.71
21.02
(1096.36)
1047.52
48.84
246.89
320.20
63.59
220.20

Report on Maori Land details for the following Record(s) of Title

Record(s) of Title

517692	Identified as potentially Maori Freehold Land

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



1 LOCATION PLAN

1 : 5000

SITE INFO

ADDRESS:	WAHARUA RD, TE HĀPUA 0484
LEGAL DESCRIPTION:	TE HAPUA 42 Block
WIND ZONE:	VERY HIGH/EXTRA HIGH
CORROSION ZONE:	D
EARTHQUAKE ZONE:	1
CLIMATE ZONE:	1

REVISION

DRAFT
WORK IN PROGRESS
FOR INFORMATION ONLY
21/09/2026 12:49:30 pm

Matakohe Architecture + Urbanism

WWW.MATAKOHE.CO.NZ

THE COPYRIGHT OF THESE DRAWINGS, AND ALL PARTS THERE OF REMAINS THE PROPERTY OF MATAKOHE ARCHITECTURE + URBANISM LTD

NOT FOR CONSTRUCTION ISSUE.
DIMENSIONS MUST NOT BE SCALE MEASURED FROM DRAWINGS.

CLIENT
TE HIKU O TE IKA MARAE TRUST

PROJECT
TE HIKU O TE IKA MARAE

PROJECT NO.
MA0146

DRAWING TITLE
LOCATION PLAN

PROJECT STATUS
PRELIMINARY DESIGN / RESOURCE CONSENT

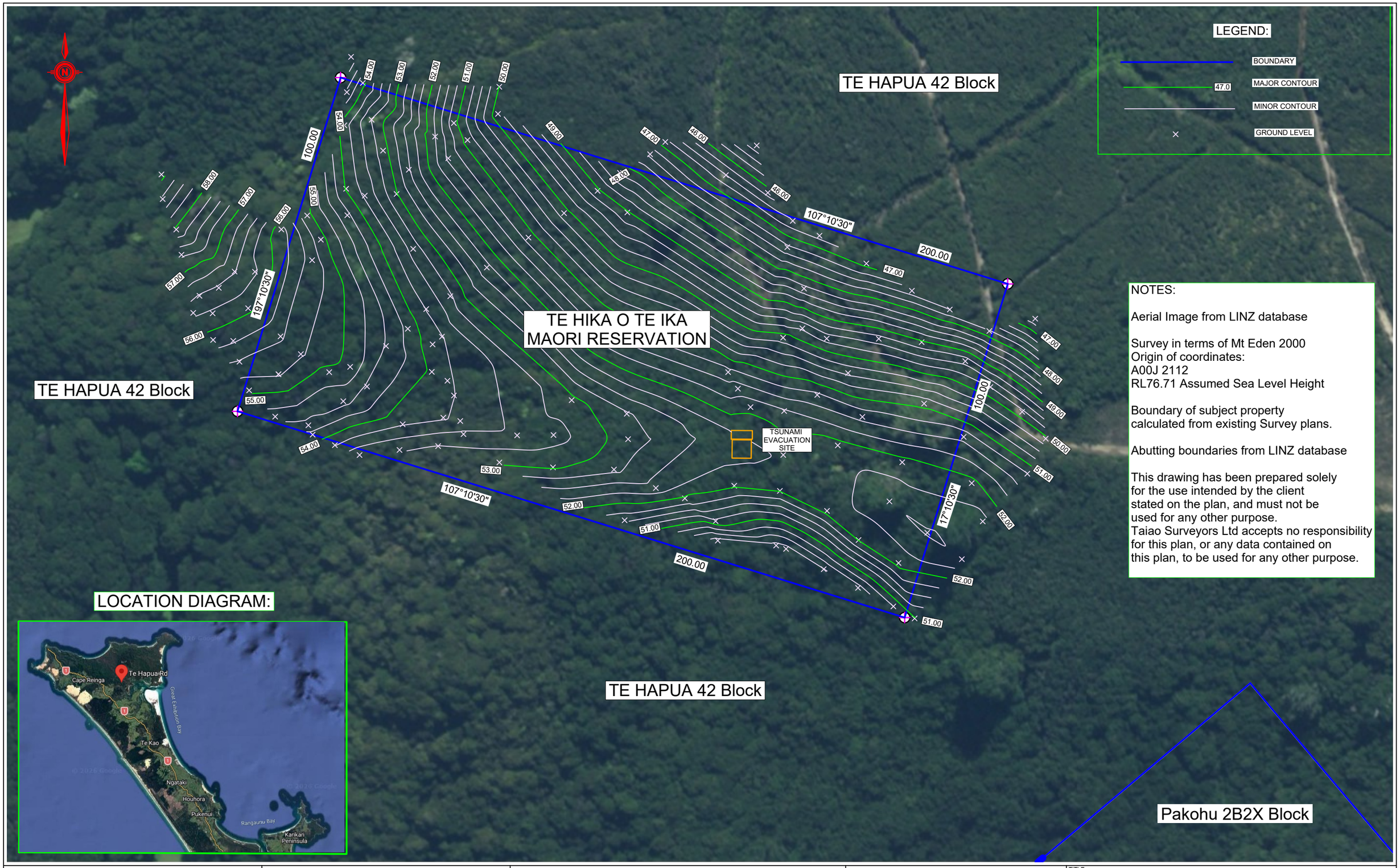
DATE
21.09.2026

NORTH

SCALE @A3
As indicated

DRAWING NO.
RC-A100

REV.



NOTES:

Aerial Image from LINZ database

Survey in terms of Mt Eden 2000
Origin of coordinates:
A00J 2112
RL76.71 Assumed Sea Level Height

Boundary of subject property
calculated from existing Survey plans.

Abutting boundaries from LINZ database

This drawing has been prepared solely
for the use intended by the client
stated on the plan, and must not be
used for any other purpose.
Taiao Surveyors Ltd accepts no responsibility
for this plan, or any data contained on
this plan, to be used for any other purpose.

LOCATION DIAGRAM:

REVISION HISTORY:

#	DATE	DESCRIPTION	APPROVED
1			
2			
3			
4			

NOTES:

- Levels are in terms of
- Horizontal data is in MT EDEN 2000
- All underground and above services may not be surveyed or shown on this plan.
- Please consult Service Providers before carrying out any excavation or construction.
- Taiao Surveyors accepts no responsibility for services omitted by this survey.
- Contours are at 0.25m Minor, 1.0m Major intervals.

Prepared By:	BY	DATE
SURVEY	AR	13/02/2026
DRAWN	AR	23/02/2026
CHECKED	LS	24/02/2026
REVIEWED		

TAIAO SURVEYORS
ENGINEERING SURVEYING
460 Kerikeri Rd, Kerikeri, Northland 0293
Phone: 021 1124021
Email: taiaosurveyors@gmail.com

Client:
Te Hiku O Te Ika Marae
Te Hapua

Agent:

TITLE:
Topographical Survey Plan of Te Hiku O te Ika Maori Reservation at
Te Hapua, Far North

This drawing shall not be reproduced or copied in whole or in part,or used for any purpose other than originally intended, without the permission of Taiao Surveyors.

JOB: 202645

SHEET: 1

SCALE: 1:1000 @ A3

PROJECT FILE: Data

REVISION

GEOTECHNICAL INVESTIGATION REPORT

Waharua Road

Te Hapua

(TE HAPUA 42 Block)

RS Eng Ltd • 2 Seaview Road, Whangarei 0110 • **09 438 3273** • **office@RSEng.co.nz**
Consulting Engineers

SUITABILITY REPORT

Waharua Road

Te Hapua

(TE HAPUA 42 Block)

Report prepared for:	Te Hiku o Te IKA Marae Trustees
Report reference:	19766
Date:	15 October 2026
Revision:	3

Document Control

Date	Revision	Description	Prepared by:	Reviewed by:	Authorised by:
14/11/2025	1	First Issue	C Hay	D Platt	M Jacobson
28/05/2026	2	Building Location Amendment	C Hay	M Jacobson	M Jacobson
15/10/2026	3	Site Plan Update	C Hay	M Jacobson	M Jacobson

Contents

1.0 Introduction 1

2.0 Site Description 1

3.0 Desk Study 2

3.1 Referenced/Reviewed Documents 2

3.2 Site Geology 2

3.3 Aerial Photography 3

4.0 Field Investigation 3

5.0 Subsoil Conditions 4

6.0 Geotechnical Assessment 4

6.1 Slope Stability 4

6.2 Liquefaction 5

6.3 Expansive Soils 5

7.0 Engineering Recommendations 5

7.1 Site Subsoil Class 5

7.2 Slope Setbacks 5

7.3 Earthworks 6

7.4 Foundations 6

7.3.1 Timber Piles 6

7.3.2 Concrete Floor 6

7.5 Timber Pole Retaining Walls 7

8.0 Drawing Review 7

9.0 Construction Monitoring and Producer Statements 8

10.0 Conclusions 8

11.0 Limitations 9

Appendices

A Drawings

B Subsurface Investigations

File: 19766
15 October 2026
Revision: 3

GEOTECHNICAL INVESTIGATION REPORT

Waharua Road, Te Hapua

(TE HAPUA 42 Block)

1.0 Introduction

RS Eng Ltd (RS Eng) has been engaged by Te Hiku o Te IKA Marae Trustees to investigate the suitability of the property (TE HAPUA 42 Block) for residential construction. The purpose of this report is to assess the geotechnical suitability of the building site making foundation and earthworks recommendations.

The client proposes to construct a marae consisting of Wharenui, Whareiti, Wharekai, and Kohanga Reo buildings, and Kuia Kaumatua duplexes.

2.0 Site Description

The property and building area are located on the western side of Waharua Road, currently accessed via a gravel driveway approximately 230m from the intersection between Te Hapua Road and Waharua Road. The building area is located atop of a broad gently sloping ridgeline, orientated west to east. The flanks of the ridgeline become moderately to steeply sloping to the south and gently sloping to the north/northeast. Ground coverage across the proposed building areas are currently patchy grass and dense scrub.

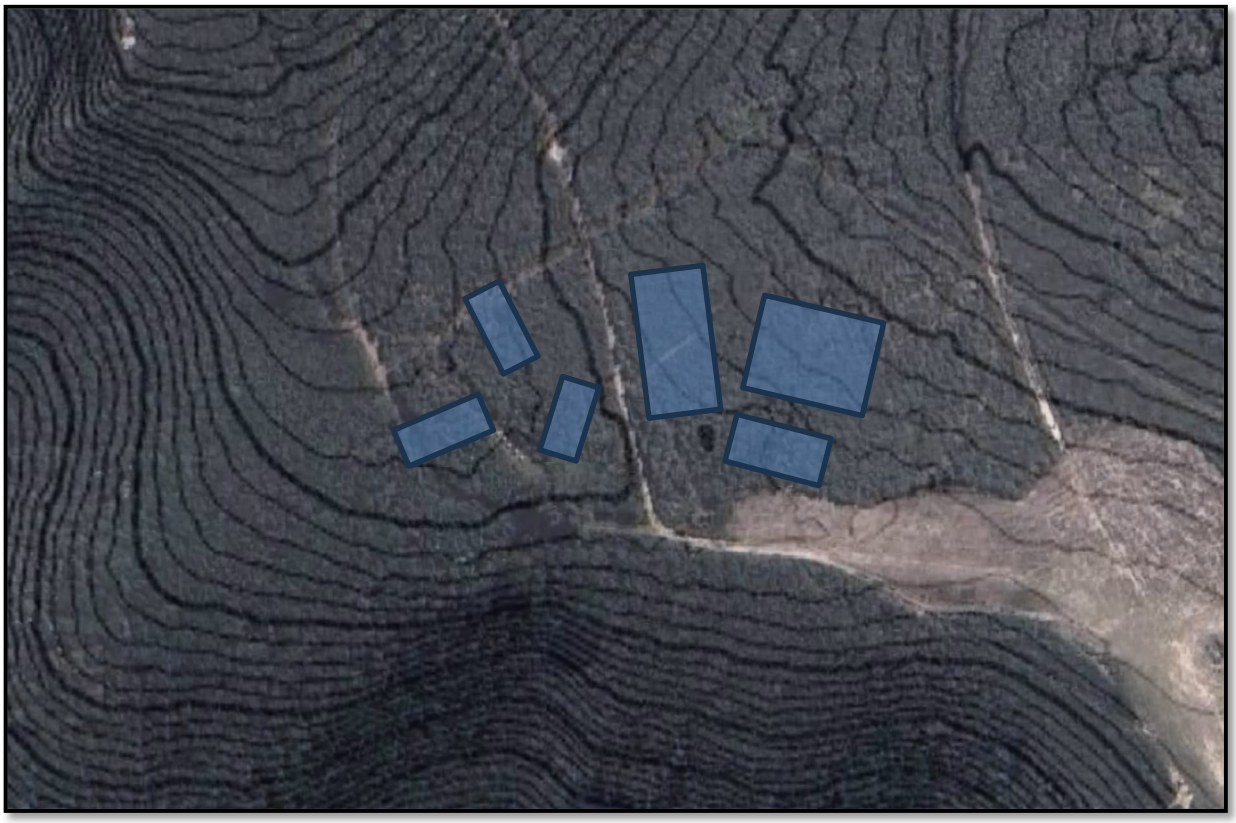


Figure 1: Aerial view of property and building area *(Source: QGIS, Google Earth, NRC LiDAR)*.

3.0 Desk Study

3.1 Referenced/Reviewed Documents

The following documents have been referenced in this report:

- GNS – Geology Of The Kaitaia Area – Isaac – 1996.

3.2 Site Geology

The GNS 1:250,000 scale New Zealand Geology Web Map indicates that the property is located within an area that is underlain by Parengarenga Group, which has been described as follows: *"Muddy fine-grained sandstone with pebble to boulder conglomerate, pebbly sandstone and pebbly mudstone."*

The investigation has confirmed the mapped geology.

3.3 Aerial Photography

RS Eng has undertaken a review of historical aerial photography, specifically images from 1942, 1980, and recent Google Earth Imagery. See Figure 2 below of the 1980 image. No notable features or concern were observed during this review, with the building area being in bush/scrub.



Figure 2: 1980 Aerial Image *(Source: www.retrolens.nz).*

4.0 Field Investigation

Technicians from this office visited the property on 30 July 2025 to undertake a walkover inspection, one Scala Penetrometer Test and eight hand augers. An additional site visit and eight hand auger investigations were completed on the 22 May 2026 at the new building locations. The walkover inspection did not observe any signs of concern at the building site in relation to the proposal.

The hand augers were dug to a maximum depth of 5.0m below ground level (BGL). Shear Vane readings were taken at regular intervals throughout the hand augers. Soil and rock descriptions are in general accordance with the New Zealand Geotechnical Society guideline.

5.0 Subsoil Conditions

Interpretation of the subsurface conditions is based on the investigations shown on the drawings in Appendix A. The conditions are summarised below.

- Topsoil was encountered to varying depths between 0.05m to 0.6m BGL.
- A dense silty sand hardpan layer was encountered underlying the topsoil in HA05 – HA13, and HA14, towards the centre of the ridgeline, northeastern flanks and effluent disposal area.
- Residual soils underlying the topsoil and hardpan layers consisted of firm to stiff silty clays, clayey silts, and sandy silts to depths of 0.8m to 3.2m BGL. In-Situ Undrained Shear Strengths recorded in this material were between 130kPa to greater than 218kPa.
- Completely weathered sandstone was encountered underlying the residual soils, consisting of stiff to very stiff clayey sandy silts, silty clays, and clayey silts to the investigated depth of 5.0m BGL. In-Situ Undrained Shear Strengths recorded in this material were between 121kPa to greater than 218kPa.
- Groundwater inflow was encountered in HA02 at a depth of 0.7m BGL and in HA09 at a depth of 3.5m BGL. RS Eng expect groundwater may perch temporarily above the completely weathered sandstone and hardpan layers during extreme rainfall events. The static groundwater table is likely at a depth greater than 6m BGL.

6.0 Geotechnical Assessment

6.1 Slope Stability

The proposed building area is situated on a broad gently sloping ridgeline, orientated west to east. The flanks to the south are generally moderately to steeply sloping, displaying contours which indicate evidence of relic slope instability or erosion likely due to downcutting at the toe of the slope from a watercourse. These features are rounded, indicating relic slope instability and lack of any recent slope instability. The flanks to the north and northeast are gently sloping, displaying even, uniform contours. No signs of existing slope instability were evident at or adjacent to the specific building areas. RS Eng recommend a 25m setback is maintained between the buildings and slopes considered steep.

Given the gentle slopes at the building area, setback 25m from slopes considered steep (>14°), and findings of our investigation, RS Eng consider the risk of slope instability affecting the proposed Marae to be low.

6.2 Liquefaction

The proposal is positioned on land underlain by the Parengarenga Group, consisting of soils that are cohesive in nature and therefore unlikely to liquefy when subjected to seismic shaking. RS Eng considers the risk of liquefaction to be low.

6.3 Expansive Soils

The clayey soils encountered on-site are likely to be subject to volumetric change with seasonal changes in moisture content (wet winters / dry summers); this is known as expansive or reactive soils. Apart from seasonal changes in moisture content other factors that can influence soil moisture content at the include:

- Influence of garden watering and site drainage.
- The presence of large trees close to buildings. Large trees can cause variation in the soil moisture content for a distance of up to 1.5 times their mature height.
- Initial soil moisture conditions during construction, especially during summer and more so during a drought. Building platforms that have dried out after initial excavation should be thoroughly wet prior to any floor slabs being poured.
- Plumbing leaks.

Based on a visual tactile assessment made during the subsoil investigation, and laboratory test results in this geology within similar terrain, RS Eng considers the soils as being Class H1 (highly expansive) as per AS 2870.

7.0 Engineering Recommendations

7.1 Site Subsoil Class

In accordance with NZS 1170.5:2004, Section 3.12.3 the site has been assessed for its Site Subsoil Class. Based on the observations listed above RS Eng considers the site soils lie within Site Class C *"Shallow Soil Site."*

7.2 Slope Setbacks

The proposed buildings should be setback a minimum of 25m from steep slopes. This setback has been indicated in Appendix A.

7.3 Earthworks

To form access to and create a building platform for the proposed Marae, earthworks are expected. To suitably develop the building area, RS Eng recommend as follows.

- The building site should be shaped to assist in stormwater run-off and avoid ponding of surface water.
- Cuts and fills should be limited to a maximum of 2.0m without further geotechnical assessment.
- Cuts and fills on steep slopes >16° shall be limited to 1.0m and be suitably retained, without further geotechnical assessment.
- Cut and fill batters should be sloped at angles less than 1V to 3H, unless suitably retained.
- Cut batters should be revegetated/topsoiled to limit erosion.
- Site works shall generally be completed in accordance with NZS 4431.

7.4 Foundations

The foundation system is currently unknown, however RS Eng have made foundation recommendations for multiple options, as follows.

7.4.1 Timber Piles

To suitably found the proposed construction on timber pile foundations, RS Eng make the following recommendations.

- All timber pile foundations are excavated a minimum of 1.0m below ground level, or 0.5m below any unsuitable material (such as fill), whichever depth is greatest.
- Pile shaft adhesion shall be ignored from the surface to a depth of 1.0m due to the presence of Class H soils as per AS 2870.

7.4.2 Concrete Floor

To suitably found the proposed construction on a concrete slab, RS Eng make the following recommendations.

- RibRaft slabs shall be specifically designed for Class H1 soil and be placed on a minimum of 150mm compacted granular hardfill extending 1.0m beyond the building envelope.
- Conventional concrete slab on grade foundations in accordance with NZS 3604 and NZS 4229 shall be designed to account for Class H1 soils.
- Isolated standard NZS 3604 type pile foundations supporting decks, verandas, or similar shall extend to a minimum depth of 1.0m below cleared ground level.

Notwithstanding the recommendations of this report, for the specific design of shallow foundations, RS Eng has assessed the following.

- 300kPa Ultimate Bearing Capacity (Geotechnical Ultimate).
- 150kPa Dependable Bearing Capacity (Ultimate Limit State).
- 100kPa Allowable Bearing Capacity (Serviceability Limit State).

7.5 Timber Pole Retaining Walls

Retaining walls shall be specifically designed by a suitably experienced Chartered Professional Engineer familiar with the contents of this report, using the assessed soil parameters presented in Table 1. Retaining walls shall be designed for at rest earth pressures.

Where retaining walls are incorporated in buildings or located adjacent to buildings and property boundaries, the effects of deformation should be considered.

Table 1: Assessed Retaining Wall Design Parameters.

Parameter	Residual Soil	Completely Weathered Sandstone
Soil Density (kN/m³)	19	19
Friction Angle (°)	28	30
Drained Cohesion, (kPa)	0	0
Undrained Shear Strength (kPa)	50	60

A strength reduction factor of 0.45 shall be adopted for limit state design of the lateral capacity of cantilever retaining wall pile foundations.

8.0 Drawing Review

It is recommended that RS Eng Ltd carry out a review of final development drawings prior to submittal for building consent and / or resource consent. The review is to confirm that the recommendations outlined in this report have been applied in full and correctly to the design.

9.0 Construction Monitoring and Producer Statements

RS Eng recommends a suitably experienced Chartered Professional Engineer monitor the construction of the following works to confirm if the geotechnical conditions are consistent with that outlined in this report.

- Stripped site once any cuts are completed and/or topsoil removed (if applicable).
- Fill compaction (if applicable).
- Foundation excavations to confirm depths and ground conditions.

Any works not inspected will be excluded from future producer statements (PS4) to be issued by RS Eng. In any event, where doubt exists regarding inspections, this office should be contacted for advice and provided with reasonable notice of inspections.

10.0 Conclusions

It is the conclusion of RS Eng Ltd that the building area is suitable for the proposal provided the recommendations and limitations stated within this report are adhered to.

RS Eng Ltd also concludes that subject to the recommendations of this report, in terms of Section 72 of the Building Act 2004;

(a) the building work to which an application for a building consent relates will not accelerate, worsen, or result in slippage or subsidence on the land on which the building work is to be carried out or any other property; and

(b) the land is neither subject to nor likely to be subject to slippage or subsidence.

11.0 Limitations

This report has been prepared solely for the benefit of our client. The purpose is to determine the engineering suitability of the proposed Marae, in relation to the material covered by the report. The reliance by other parties on the information, opinions or recommendations contained therein shall, without our prior review and agreement in writing, do so at their own risk.

Recommendations and opinions in this report are based on data obtained as previously detailed. The nature and continuity of subsoil conditions away from the test locations are inferred and it should be appreciated that actual conditions could vary from those assumed. If during the construction process, conditions are encountered that differ from the inferred conditions on which the report has been based, RS Eng should be contacted immediately.

Construction site safety is the responsibility of the builder/contractor. The recommendations included herein should not be construed as direction of the contractor's methods, construction sequencing or procedures. RS Eng can provide recommendations if specifically engaged to, upon request.

This report does not address matters relating to the National Environmental Standard for Contaminated Sites, and if applicable separate advice should be sought on this matter from a suitably qualified person.

Prepared by:

Codie Hay
Senior Technician
NZDE(Civil)

Reviewed by:

David Platt
Geotechnical Team Leader
NZDE(Civil), MEngNZ

Approved by:

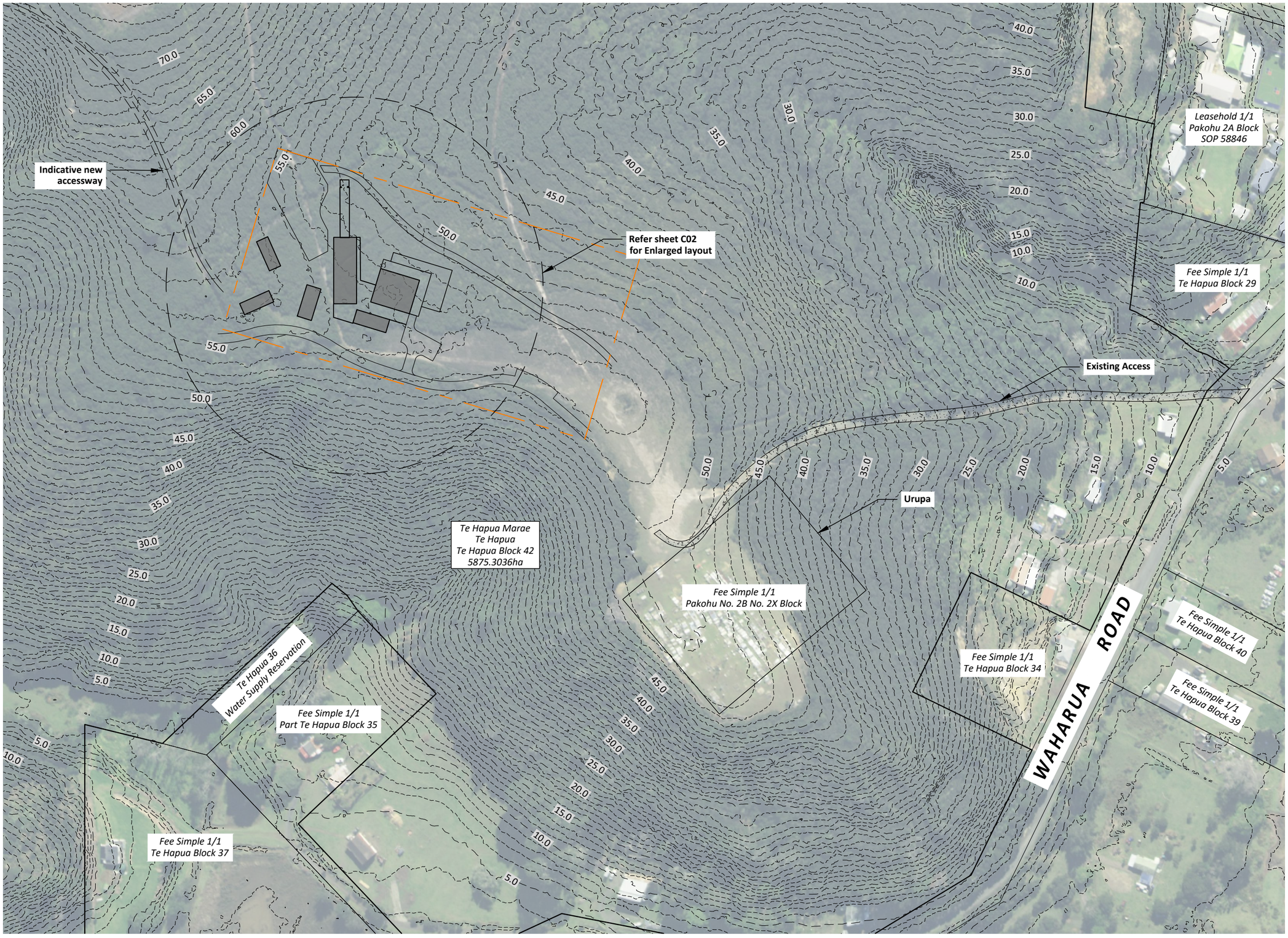


Matthew Jacobson
Director
NZDE(Civil), BE(Hons)(Civil), CPEng, CMEngNZ

RS Eng Ltd

Appendix A

Drawings



NOTES:

- If any part of these documents are unclear, please contact RSEng Ltd.
- This plan is copyright to RSEng Ltd and should not be reproduced without prior permission.

LEGEND

Proposed Wharekai, Wharenui, Whareiti, Kohanga Reo, & Kaumatua Duplex's

Te Hiku O Te Ika Maori Reservation

Contour Interval:	1.0m
Vertical Datum:	NZVD2016
Survey Data Source:	LiDAR (2018)

0 20 40
PLAN 1:2000

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.
If any part of these documents are unclear, please contact RS Eng Ltd.

TE HIKU O TE IKA MARAE
SITE PLAN
SITE INVESTIGATIONS

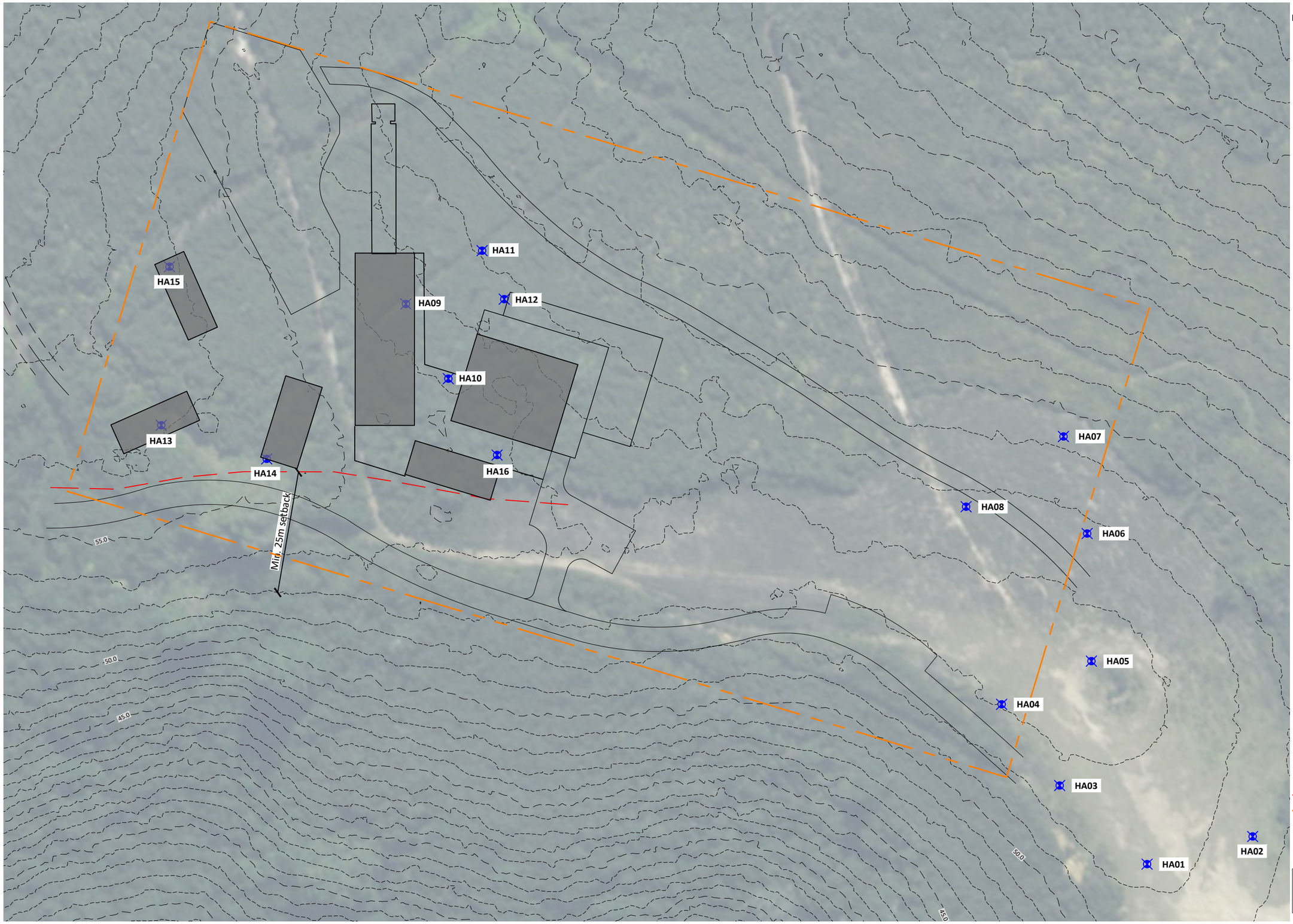
Client: TE PUTAHI PROJECTS

Location: TE HAPUA MARAE
TE HAPUA

Date	Rev	Notes
15/10/2026	C	Site Plan Update
28/05/2026	B	Revised Proposal
14/11/2025	A	Original Issue

Drawn by: LMC | Reviewed by: MJ | Approved by: MJ

Scale	1:2000
Rev No.	C
Original	A3
Sheet No.	C01
Job No.	19766



NOTES:

- If any part of these documents are unclear, please contact RSEng Ltd.
- This plan is copyright to RSEng Ltd and should not be reproduced without prior permission.

N

LEGEND

- Hand Auger Location
- Proposed Wharekai, Wharenui, Whareiti, Kohanga Reo, & Kaumatua Duplex's
- 25m Setback Restriction
- Te Hiku O Te Ika Maori Reservation

Contour Interval:	1.0m
Vertical Datum:	NZVD2016
Survey Data Source:	LiDAR (2018)

0 7.5 15
PLAN 1:750

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.
If any part of these documents are unclear, please contact RS Eng Ltd.

TE HIKU O TE IKA MARAE
SITE PLAN
SITE INVESTIGATIONS

Client: TE PUTAHI PROJECTS

Location: TE HAPUA MARAE, TE HAPUA

Date	Rev	Notes
15/10/2026	C	Site Plan Update
28/05/2026	B	Revised Proposal
14/11/2025	A	Original Issue

Drawn by: LMC | Reviewed by: MJ | Approved by: MJ

Scale	1:750
Rev No.	C
Original	A3
Sheet No.	C02
Job No.	19766

Appendix B

Subsurface Investigations

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA01

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591338mE, 6180300mN
ELEVATION: 52m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	Topsoil		0.0
Parengarenga Group	Sandy SILT, with minor clay; dark brownish grey. Stiff; moist; low plasticity.		0.4
	Completely weathered; SANDSTONE; extremely weak. - - Clayey sandy SILT; whitish grey/yellow mottling. Very stiff; moist; low plasticity.		1.0
	Silty CLAY, with minor sand; white/yellow. Very stiff; moist; low plasticity; sand, fine to medium.		1.4
	Light grey/orange mottling.		2.2
	Silty CLAY; purplish brown. Stiff; moist; low plasticity.		3.2
	Sandy SILT, with trace clay; white. Very stiff to hard; dry; non-plastic; sand, fine.		3.6
	End Of Hole: 3.90m		3.9

LEGEND

SCALA PENETROMETER (Blows / 0mm): 2, 4, 6, 8, 10, 12, 14, 16, 18

VANE SHEAR STRENGTH (kPa)
Vane: GEO1433
50, 100, 150, 200

Values
136
51
166
62
211+
-
211+
-
136
74
169
84
196
90

WATER: Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:09 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA02

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591360mE, 6180305mN
ELEVATION: 51.3m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO1433	WATER
TS	Topsoil						
Parengarenga Group	Clayey SILT; brown. Stiff; moist; low plasticity.		0.0 – 0.6			137 23	
	Clayey SILT, with some gravel; brown/yellow. Stiff; moist; low plasticity; gravel, fine, angular.		0.6 – 1.0			211+ -	
	Completely weathered; SANDSTONE; extremely weak. - - Clayey SILT, with some sand and gravel; light white/grey. Very stiff; dry; non-plastic; sand, fine to medium, gravel, fine.		1.0 – 2.4			211+ - 211+ - 211+ -	
	Yellow/orange.		2.4 – 4.6			181 75 166 48 211+ - 211+ -	
	Silty CLAY; yellow/orange. Stiff; moist; high plasticity.		4.6 – 5.0			121 63 158 116	
	End Of Hole: 5.00m		5.0				

Values

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:10 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA03

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591321mE, 6180316mN
ELEVATION: 52.6m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO1433	Values	WATER
TS	Topsoil		0.0	TS				
Parengarenga Group	Clayey SILT, with some sand, with trace rootlets; brownish grey. Firm; moist; low plasticity; sand, fine.		0.4				130	
	Silty CLAY, with minor sand; yellowish brown. Stiff; moist; low plasticity; sand, fine to medium.		0.6				48	
	Yellowish brown/white mottling.		1.0				211+ -	
	Completely weathered; SANDSTONE; extremely weak. - - Clayey sandy SILT, with trace gravel; yellowish brown/white. Very stiff; moist; low plasticity; sand, fine to medium; gravel, fine, subround.		1.4				211+ -	
	White/reddish brown mottling.		2.0				211+ -	
	Clayey SILT, with minor sand, with trace gravel; white with grey and reddish pink inclusions. Very stiff; moist; low plasticity; sand, fine; gravel, fine.		2.4				211+ -	
	With minor sand; green. Sand, fine to medium.		3.0				211+ -	
	End Of Hole: 4.00m		3.4				211+ -	
			4.0				211+ -	Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:12 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA04

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591309mE, 6180333mN
ELEVATION: 53m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO1433	WATER
TS	Topsoil		0.0	TS			
Parengarenga Group	Clayey SILT, with some gravel; brown. Stiff; moist; low plasticity; gravel, fine, subangular.		0.4			139 60	
	Completely weathered; SANDSTONE; extremely weak. Clayey SILT; yellow. Very stiff; moist; low plasticity.		1.0			211+ -	
			1.4			211+ -	
	Silty CLAY; yellow. Stiff; moist; high plasticity.		2.0			181 121	Groundwater Not Encountered
			2.4			211+ -	
	Clayey SILT, with some sand and gravel; light white/grey and orange. Stiff; moist; low plasticity; sand, coarse, gravel, fine, subangular.		2.8			211+ -	
	Silty CLAY; yellow. Stiff; moist; high plasticity.		3.2			211+ -	
	Clayey SILT; yellow. Very stiff; moist; low plasticity.		3.6			211+ -	
	Silty CLAY; yellow. Stiff; moist; high plasticity.		4.0			211+ -	
	End Of Hole: 4.20m		4.2				

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:13 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

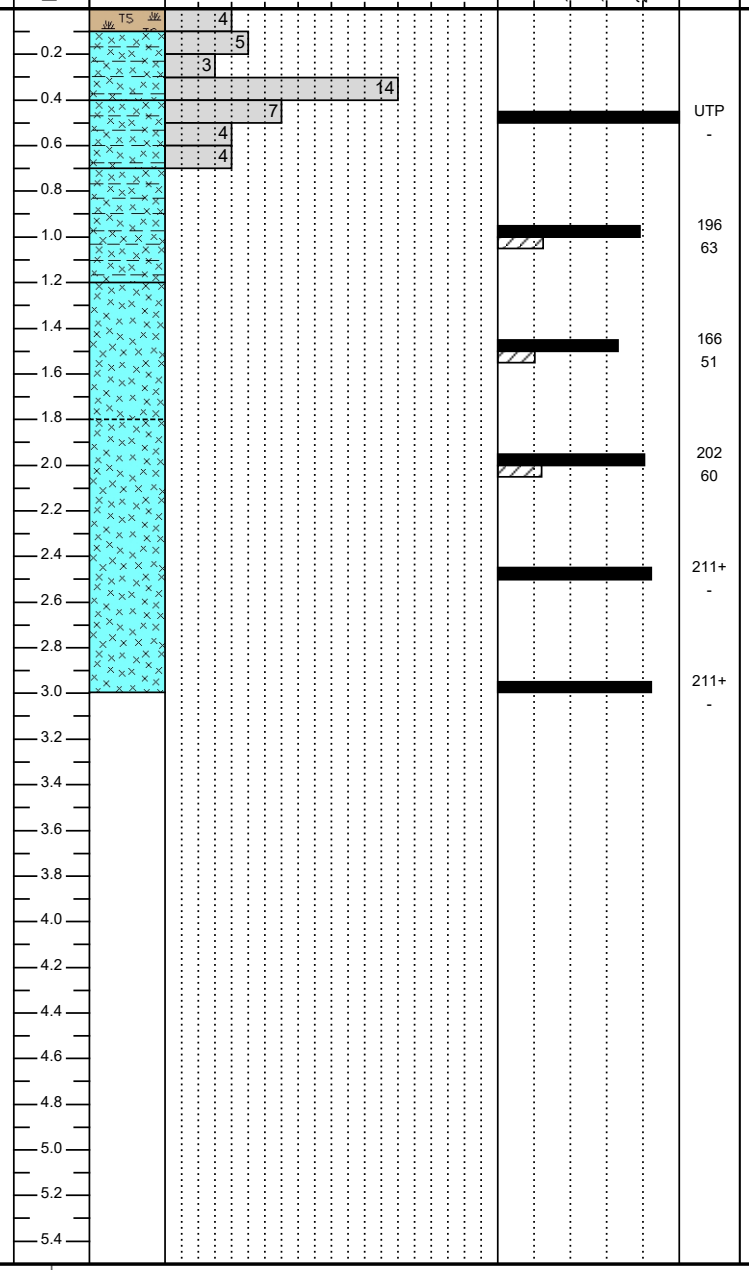
HAND AUGER LOG

HOLE NO.: HA05

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591328mE, 6180341mN
ELEVATION: 53.4m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	Topsoil		0.0
Parengarenga Group	SILT, with some clay, with minor sand; dark greyish brown. Firm to stiff; moist; low plasticity; sand, fine.		0.2
	Silty SAND; orangish brown. Dense; dry; non-plastic; sand, fine to coarse; hardpan.		0.4
	Sandy SILT, with minor clay; yellow/white. Very stiff; moist; low plasticity; sand, fine to medium.		0.6
	Completely weathered; SANDSTONE; extremely weak. - - Sandy SILT, with some clay, with minor gravel; yellowish/white. Very stiff; moist; low plasticity; sand, fine to medium; gravel, fine to medium, subround.		1.0
	Clayey sandy SILT, with trace gravel; white with grey/orange and green sand inclusions. Very stiff; moist; low plasticity; gravel, fine to medium, subround.		1.8
	End Of Hole: 3.00m		3.0



PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:14 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA06

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591327mE, 6180368mN
ELEVATION: 51.8m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND
TS	Topsoil		0.0 – 0.2	TS
Parengarenga Group	Silty SAND; yellow. Dense to very dense; dry; non-plastic; hardpan.		0.2 – 0.6	
Parengarenga Group	Silty CLAY; light yellow/grey. Stiff; moist; high plasticity.		0.6 – 1.2	
	End Of Hole: 1.20m		1.2 – 2.8	

SCALA PENETROMETER (Blows / 0mm): 2, 4, 6, 8, 10, 12, 14, 16, 18

VANE SHEAR STRENGTH (kPa) Vane: 50, 100, 150, 200 — Values

WATER: Groundwater Not Encountered

PHOTO(S)



REMARKS

Wastewater field location

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:15 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA07

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591323mE, 6180387mN
ELEVATION: 50.4m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND
TS	Topsoil		0.0	TS
arengarenga Grou	Organic SILT; brown. Firm; moist; low plasticity.		0.2	
	Silty SAND; yellow. Dense to very dense; dry; non-plastic; hardpan. End Of Hole: 0.45m		0.4	
			0.6	
			0.8	
			1.0	
			1.2	
			1.4	
			1.6	
			1.8	
			2.0	
			2.2	
			2.4	
			2.6	
			2.8	

SCALA PENETROMETER (Blows / 0mm): 2 4 6 8 10 12 14 16 18

VANE SHEAR STRENGTH (kPa) Vane: 50 100 150 200 Values

WATER: roundwater Not Encountere

PHOTO(S)



REMARKS

Wastewater field location

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:16 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA08

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591302mE, 6180373mN
ELEVATION: 51.9m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	Topsoil		0.0
Parengarenga Group	Organic SILT; brown. Firm; moist; non-plastic; hardpan.		0.2
	Silty gravelly SAND; yellow. Dense to very dense; dry; non-plastic; gravel, fine to medium, subangular; hardpan.		0.4
	Silty CLAY; light yellow/grey. Stiff; moist; high plasticity.		0.6
			0.8
			1.0
	End Of Hole: 1.20m		1.2
			1.4
			1.6
			1.8
			2.0
			2.2
			2.4
			2.6
			2.8

LEGEND

SCALA PENETROMETER (Blows / 0mm): 2 4 6 8 10 12 14 16 18

VANE SHEAR STRENGTH (kPa) Vane: 50 100 150 200 Values

WATER: Groundwater Not Encountered

PHOTO(S)



REMARKS

Wastewater field location

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:17 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA09

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591189mE, 6180417mN
ELEVATION: 51.88m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: MM

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063 Values	WATER
TS	Topsoil.		0.0	TS			
Parengarenga Group	White / black. Very stiff; dry; organic SILT non-plastic.		0.4			UTP -	
	SILT, with some sand, with minor clay; dark brown / orange. Very stiff to hard; dry; non-plastic; sand, fine; (hard-pan).		0.6				
	Silty CLAY; white / orange. Very stiff; moist; low plasticity.		1.0			203 93	
			1.4			174 93	
			1.8			218+ -	
	Grey / orange mottling.		2.2			218+ -	
			2.6			159 93	
	Completely weathered; SANDSTONE. - -. Silty CLAY, with minor sand and gravel; grey / orange mottling / white. Very stiff; moist; low plasticity; sand, fine, gravel, fine, subangular.		3.0			179 75	◁
	Moist to wet.		3.4				
			3.8			218+ -	
	End Of Hole: 4.20m		4.2				
			4.4				

PHOTO(S)



REMARKS

WATER

- ▼ Standing Water Level
- ▷ Out flow
- ◁ In flow

INVESTIGATION TYPE

- ☑ Hand Auger
- ☐ Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:19 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA10

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591197mE, 6180401mN
ELEVATION: 53.11m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	TOPSOIL.		0.0 – 0.4
Parengarenga Group	SILT, with some sand, with trace clay; brown. Hard; dry; non-plastic; (hard-pan).		0.4 – 1.0
Parengarenga Group	Silty CLAY, with trace sand; orange / white mottling. Very stiff; moist; low plasticity.		1.0 – 2.2
Parengarenga Group	Completely weathered; SANDSTONE. - - Clayey SILT, with trace sand and gravel; orange / yellow / white. Very stiff; moist; low plasticity; gravel, fine, subangular.		2.2 – 3.0
	End Of Hole: 3.00m		3.0

SCALA PENETROMETER (Blows / 0mm)

Depth (m)	Blows / 0mm
0.4	93
0.6	9
1.0	218+
1.2	-
1.6	187
1.8	84
2.0	199
2.2	62
2.6	218+
2.8	-
3.0	218+
3.2	-

VANE SHEAR STRENGTH (kPa) Vane: GEO4063

Depth (m)	Values
0.4	93
0.6	9
1.0	218+
1.2	-
1.6	187
1.8	84
2.0	199
2.2	62
2.6	218+
2.8	-
3.0	218+
3.2	-

WATER

Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:20 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA11

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591205mE, 6180427mN
ELEVATION: 51.29m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: MM

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063	WATER
TS	TOPSOIL.		0.0	TS			
Parengarenga Group	Organic SILT, with some clay; grey / brown. Firm to stiff; moist; low plasticity.		0.2			UTP -	
	SILT, with some clay; dark brown / orange. Very stiff; dry; non-plastic; (hard-pan).		0.6			218+ -	
	Silty CLAY; orange / white streaks. Stiff; moist; low plasticity.		1.0				
	Grey / orange mottling.		1.4			164 109	
	Completely weathered; SANDSTONE. - -. Silty CLAY; white / dark blue / orange. Very stiff; moist; low plasticity.		1.8			179 117	
	With minor gravel; orange / grey. Gravel, fine, subangular.		2.4			203 115	
	Clayey SILT, with minor gravel; orange / grey. Very stiff; moist; low plasticity; gravel, fine, subangular.		2.8			218+ -	
			3.4			218+ -	
	End Of Hole: 4.20m		4.0			218+ -	Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:21 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA12

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591209mE, 6180418mN
ELEVATION: 51.18m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	TOPSOIL.		0.0
Parengarenga Group	Sandy SILT; light grey. Very stiff; dry; non-plastic; (hard-pan).		0.6
	Orangish brown. Hard.		0.8
	Silty CLAY, with trace sand; orange / white. Very stiff; moist; low plasticity.		1.0
	Orange / brown / white mottling.		2.0
	End Of Hole: 3.20m		3.2

LEGEND

SCALA PENETROMETER (Blows / 0mm): 2, 4, 6, 8, 10, 12, 14, 16, 18

VANE SHEAR STRENGTH (kPa)
Vane: GEO4063
50, 100, 150, 200

Values
81
16
218+
-
171
47
218+
-
178
50
184
78

WATER: Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:22 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA13

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591138mE, 6180393mN
ELEVATION: 56.02m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: MM

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063	WATER
TS	TOPSOIL.		0.0	TS			
Parengarenga Group	SILT, with some clay; brownihs orange. Very stiff to hard; dry; non-plastic; (hard-pan).		0.4			UTP -	
	Clayey SILT, with trace gravel; orange / grey. Very stiff; moist; low plasticity; gravel, fine, subangular.		1.0			218+ -	
	Completely weathered; SANDSTONE. - -. Clayey SILT, with minor gravel; yellow / white / pink mottling. Very stiff; moist; low plasticity; gravel, fine, subangular.		1.4 2.0			218+ - 201 109	Groundwater Not Encountered
	With some gravel; yellow / grey. Gravel, fine to coarse, subangular.		2.6 3.0			218+ -	
	With minor gravel; grey / orange mottling. Gravel, fine, subangular.		3.4 4.0			218+ - 201 84	
	End Of Hole: 4.20m		4.2				

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:23 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA14

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591160mE, 6180386mN
ELEVATION: 55.27m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063	Values	WATER
TS	TOPSOIL.		0.0	TS				
Parengarenga Group	Silty CLAY; orangish brown. Very stiff; moist; low plasticity.		0.2			199	199 44	
			0.4					
			0.6					
			0.8					
	Yellow / white..		1.0			189	189 37	
			1.2					
			1.4					
	Completely weathered; SANDSTONE. - - Silty CLAY, with minor gravel, with trace sand; white / pink / yuellow. Very stiff; moist; low plasticity.		1.6			203	203 50	
			1.8					
	Pink / white.		2.0			215	215 56	
			2.2					
			2.4			218+	218+ -	
			2.6					
			2.8					
			3.0			218	218 -	
			3.2					
			3.4			218+	218+ -	
	Completely weathered; SANDSTONE. - -. Silty CLAY, with minor sand and gravel; yellow / white / glauconitic. Very stiff; moist; low plasticity.		3.6					
			3.8					
	End Of Hole: 4.00m		4.0			218+	218+ -	
			4.2					
			4.4					

Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:24 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA15

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591141mE, 6180425mN
ELEVATION: 56.73m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: MM

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 100mm)	VANE SHEAR STRENGTH (kPa)	WATER
TS	TOPSOIL.		0.0	TS	2 4 6 8 10 12 14 16 18	Vane: 50 100 150 200 Values	ndwater Not Encoun
ngarenga G	Beige. Organic SILT.		0.2				
	SILT, with some clay; white. Hard; dry; non-plastic; (hard-pan).		0.4				
	End of bore - unable to penetrate (hard-pan). End Of Hole: 0.50m		0.6		50 >>		
			0.8				
			1.0				
			1.2				
			1.4				
			1.6				
			1.8				
			2.0				
			2.2				
			2.4				
			2.6				
			2.8				
			3.0				
			3.2				
			3.4				
			3.6				
			3.8				
			4.0				
			4.2				
			4.4				

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:25 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA16

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591207mE, 6180386mN
ELEVATION: 54.4m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063	WATER
TS	TOPSOIL.		0.0	TS			
Parengarenga Group	Silty CLAY; brown. Stiff; moist; low plasticity.		0.4			140 44	
	Clayey SILT, with trace gravel; orange mottling / grey. Stiff; moist; low plasticity; gravel, fine.		0.8			215 72	
	Completely weathered; SANDSTONE. - - Clayey SILT, with minor sand; white / orange mottling / glauconitic. Very stiff; moist; low plasticity; sand, fine.		1.2			218+ -	Groundwater Not Encountered
			2.0			218+ -	
			2.4			218+ -	
			2.8			168 51	
	Completely weathered; SANDSTONE. - - Clayey SILT, with some sand and gravel; orange / grey / glauconitic. Very stiff; moist; low plasticity; sand, fine, gravel, fine, subangular.		3.4			218+ -	
	End Of Hole: 4.00m		4.0			201 69	
			4.4				

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:26 am

THREE WATERS REPORT

Waharua Road

Te Hapua

(TE HAPUA 42 BLOCK)

RS Eng Ltd • 2 Seaview Road, Whangarei 0110 • **09 438 3273** • **office@RSEng.co.nz**
Consulting Engineers

THREE WATERS REPORT

Waharua Road

Te Hapua

(TE HAPUA 42 BLOCK)

Report prepared for:	Te Hiku o Te IKA Marae Trustees
Report reference:	19766
Date:	14 October 2026
Revision:	3

Document Control

Date	Revision	Description	Prepared by:	Reviewed by:	Authorised by:
20/09/2025	1	First Issue	C Hay	D Platt	M Jacobson
29/05/2026	2	Proposal / Location Change	C Hay	M Jacobson	M Jacobson
14/10/2026	3	Site Plan Update	C Hay	M Jacobson	M Jacobson

Contents

1.0 Introduction 1

2.0 Site Description 1

3.0 Desk Study 2

3.1 Referenced/Reviewed Documents 2

4.0 Wastewater Disposal 3

4.1 Design Flows 3

4.1.1 Marae 3

4.1.2 Kohanga Reo 3

4.1.3 Kuia Kaumatua Duplex's 4

4.1.4 Total Flows 4

4.2 Site Evaluation 5

4.3 Design Irrigation Field Area 5

4.4 Regional Plan Compliance 5

4.5 Assessment of Environmental Effects 6

4.5.1 Irrigation Loading Rate 6

4.5.2 Treatment Plant 6

4.5.3 Treatment Through Soils 6

4.5.4 Heavy Metals 6

4.5.5 Effects on Groundwater Quality 7

4.5.6 Effects on Surface Water Quality 7

4.5.7 Effects on Air Quality 7

4.5.8 Effects on Public and Community 7

4.5.9 Summary 7

5.0 Stormwater Assessment 8

5.1 Stormwater Disposal 8

6.0 Firefighting Water Supply 8

7.0 Water Supply 9

8.0 Limitations 10

Appendices

A Drawings

B Subsurface Investigations

C On-site Wastewater Disposal Details

D Assessment of Environmental Effects (AEE)

File: 19766
14 October 2026
Revision: 3

THREE WATERS REPORT

Waharua Road, Te Hapua

(TE HAPUA 42 BLOCK)

1.0 Introduction

RS Eng Ltd (RS Eng) has been engaged by Te Hiku o Te IKA Marae Trustees to investigate the suitability of their property (TE HAPUA 42 BLOCK) for construction of a new Marae. The purpose of this report is to assess the preliminary water supply, firefighting water supply, stormwater attenuation and disposal, and provide an on-site wastewater disposal design to serve the proposed Marae.

The client proposes to construct a marae consisting of Wharenui, Whareiti, Wharekai, and Kohanga Reo buildings, and Kuia Kaumatua duplexes.

2.0 Site Description

The property and building area are located on the western side of Waharua Road, currently accessed via a gravel driveway approximately 230m from the intersection between Te Hapua Road and Waharua Road. The building area is located atop of a broad gently sloping ridgeline, orientated west to east. The flanks of the ridgeline become moderately to steeply sloping to the south and gently sloping to the north/northeast. Ground coverage across the proposed building areas are currently patchy grass and dense scrub.

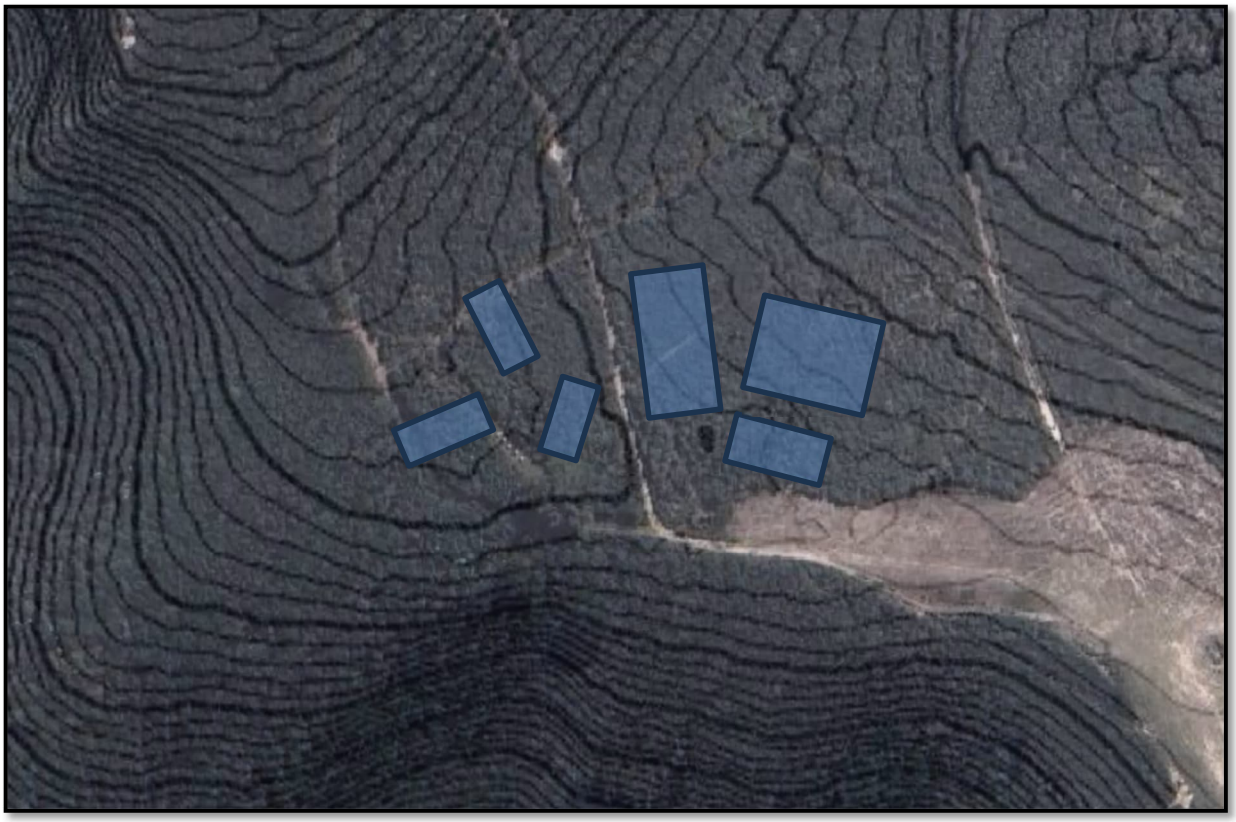


Figure 1: Aerial view of property and building area *(Source: QGIS, Google Earth, NRC LiDAR).*

3.0 Desk Study

3.1 Referenced/Reviewed Documents

The following documents have been referenced in this report:

- FNR Consulting – "*Te Hiku o Te Ika (Te Hapua) – New Marae Project, Architectural Design Brief*" dated 15 August 2018.

4.0 Wastewater Disposal

4.1 Design Flows

4.1.1 Marae

The development proposes a Wharenui, Wharekai and Whareiti as part of the Marae, which are to cater for a total of 200 people and to sleep 150 people.

In accordance with GD06, a design occupancy of 50 was applied for day only and 150 people for day and night. Usage values of 20L/person/day for day occupants and 70/person/day for day and overnight occupants has been adopted in the system design, assuming standard water fixtures. The total wastewater flows are presented in Table 1 below.

Table 1: Marae Flows

	Day only	Day & Night	
Design Occupancy	50	150	No.
Flow Allowance	20	70	L/person/Day
Flow	1000	10,500	L/Day
Total Flow	11,500		L/Day

4.1.2 Kohanga Reo

The development proposes a Kohanga Reo, which are to cater for a total of 20 children and 4 adults. In accordance with GD06, usage values of 30L/person/day have been adopted based on the higher value range of schools from GD06. The total wastewater flows are presented in Table 2 below.

Table 2: Kohanga Reo Flows

	Children	Adults	
Design Occupancy	20	4	No.
Flow Allowance	30	30	L/person/Day
Flow	600	120	L/Day
Total Flow	720		L/Day

4.1.3 Kuia Kaumatua Duplex's

The development proposes two Kuia Kaumatua Duplex's (four units) on the property which 2 bedrooms per unit have been accounted for, equating to a total occupancy of 8 people. Given the 8-person permanent occupancy and allowing for 145L/person/Day, assuming standard water reduction fixtures, the total wastewater flows for the permanent residents are presented in Table 3 below.

Table 3: Permanent Residents Flows

Bedrooms	2 + 2 + 2 + 2	No.
Occupancy	16	No.
Flow Allowance	145	L/person/Day
Total Flow	2320	L/Day

Full water-reduction fixtures include the combined use of reduced flush 6/3 litre water closets, shower-flow restrictors, aerator faucets, front-load washing machines and flow/pressure control valves on all water-use outlets (9 L/min maximum). Baths should also be discouraged.

4.1.4 Total Flows

The total flows for day and night visitors to the Marae, residents in the Kaumatua duplex's, Kohanga Reo equate to 14,540L/Day.

Over a three-day peak event such as a Tangi, flows are equivalent to 43,620L, based on the daily flows from the tables above. RS Eng expect daily average flows to be a lot less due to lower usage off peak events.

A system capable of providing secondary treatment shall be installed and specifically designed by the manufacturer.

The system shall also buffer the flows down to a maximum 5500L/day, allowing to buffer the flows over approximately 9 days. A buffer storage volume of 25,000L shall be allowed for in the system design.

A water meter should be installed to confirm and provide certainty to the accuracy of the design flow allowances.

4.2 Site Evaluation

The land available for effluent disposal is gently sloped (less than 10°). Ground coverage at the disposal field location is currently regenerative scrub.

Based on the subsoil investigations, RS Eng have assessed the soil at the disposal area as Category 6 as per GD06 and AS/NZS1547.

4.3 Design Irrigation Field Area

A total disposal area of 2750m² is required as detailed below based on the assessed total daily buffered flow and irrigation rate. Refer to Appendix A and C for the attached site plan, schematic, and specifications.

Table 4: Wastewater Disposal Calculations

Total Flow	14,540	L/day
Total Flow (buffered)	5,500	L/day
Irrigation Rate (DIR)	2.0	L/m²/day
Irrigation Area Required	2750	m²
Irrigation Line Spacing	1.0	m

4.4 Regional Plan Compliance

Table 5 below demonstrates compliance with the Northland Regional Council's Regional Plan.

Table 5: NRC Permitted Discharge Compliance

Feature	Permitted Activity Requirements	Proposed
Identified Stormwater Flow Path	5m	>5m
River, Lake, Pond, Stream, Dam or Wetland	15m	>15m
Existing Water Supply Bore	20m	>20m
Property Boundary	1.5m	>1.5m
Groundwater	0.6m	>1.2m
10m Buffer Zone	Slopes >10°	<10°
Floodplain Exclusion	5% AEP	Above the 5% AEP
Reserve area	30%	33%
Daily discharge	<2m³/day	6m³/day

If the disposal field is laid on ground slopes greater than 10°, a minimum 10m planted buffer zone is required.

The existing water supply bore on the property shall be located to confirm the effluent disposal field achieves minimum 20m separation.

4.5 Assessment of Environmental Effects

The NRC Regional Plan states that a proposed treated wastewater discharge to land that exceeds 2000L/day is a discretionary activity. The proposed discharge requires an NRC Resource Consent. The following sections have assessed the relevant matters of discretion.

4.5.1 Irrigation Loading Rate

The soil has been categorised as being Soil Category 6 as per GD06 and AS/NZS1547, described as "*Medium to heavy clays.*"

A low irrigation loading rate of 2.0mm/day has been considered as part of the design in accordance with the assessed soil category as per GD06 and AS/NZS1547.

Existing vegetation over the entirety of the disposal field is required where any existing vegetation is lacking (<1-2 plants per m^2) which will promote the uptake of Nitrogen and Phosphorous through the vegetation.

4.5.2 Treatment Plant

A secondary treatment system is recommended, which is capable of treating effluent to a high standard. This high level of treatment is the first mitigating factor in reducing the environmental effects of the proposed discharge, keeping Nitrogen and Biochemical Oxygen Demand (BOD) levels low. Such a system shall cater for the specific strength of the effluent.

4.5.3 Treatment Through Soils

Treated effluent from the wastewater treatment plant will be disposed of to a disposal field of which will provide treatment through the soils. The land treatment through the soils will allow to remove any BOD5, Total Suspended Solids (TSS), Nitrogen, Phosphorous, and pathogens remaining in the treated effluent.

4.5.4 Heavy Metals

The accumulation of heavy metals is typically found in large quantities within industrial or commercial zones / premises. Heavy metals within the soil profile for the proposed Marae is not of concern for the domestic strength wastewater.

4.5.5 Effects on Groundwater Quality

A minimum 0.6m groundwater separation between the proposed effluent disposal field is available, with the static groundwater table not encountered to a depth of 1.2m during our investigation at the effluent disposal field location.

Considering that the treated effluent quality is to a secondary level, percolation through the underlying subsoils, planting to assist in transpiration, and low irrigation loading rate, RS Eng assess the risk of groundwater contamination as a result of the discharge of treated effluent to the effluent disposal field is low.

4.5.6 Effects on Surface Water Quality

The effluent disposal field will be sufficiently set back from existing watercourses and stormwater flow paths as required by the Northland Regional Council Discharge to Land Compliance.

The existing vegetation and planting requirements of the effluent disposal field will aid in effluent retention and the uptake of effluent, reducing the risk of effluent break out.

4.5.7 Effects on Air Quality

It is expected that odours from the disposal field and treatment system will be no more than minor. The subsurface dripper lines are to be buried beneath the surface with planting to be undertaken which will aid in the uptake of effluent, reducing the effects of odour.

The treatment system manufacturer shall consider the risk of odour on the community and shall select a suitable treatment plant which will eliminate or reduce the risk of odour.

4.5.8 Effects on Public and Community

The effects to/on the wider community are considered to be minimal. The disposal field / drip irrigation lines are likely the most noticeable aspect of the disposal field, however of which will be formed within the existing regenerative scrub, with planting to be completed in any areas lacking existing plants. Irrigation dripper lines will be buried below the surface (subsurface) and hidden from sight.

4.5.9 Summary

Overall, RS Eng consider the risk of potential effects of the effluent discharge on ground and surface water quality to be no more than minor. An NRC AEE-7 Part B Form is enclosed in Appendix D to supplement the Resource Consent application.

RS Eng expects that the requirement for annual / periodic monitoring of the system to be undertaken as a condition of the consent, as would be typically applied to a consent for a treatment and disposal system of this nature.

It is recommended that a water meter be installed to confirm and provide certainty to the accuracy of the design flow allowances.

5.0 Stormwater Assessment

The Far North District Council (FNDC) District Plan shows the property within the Coastal Living Zone. A permitted activity under the District Plan states the following regarding stormwater management within this zone: "*The maximum proportion or amount of the gross site area which may be covered by buildings and other impermeable surfaces shall be 10% or 600m² whichever is the lesser.*"

The total allowable impermeable coverage is 600m². The proposed Marae and paved accessways are expected to exceed the allowable impermeable coverage, with existing development across the property expected to make up the total allowable impermeable coverage.

However, given the large scale of the property being 5875ha, and within the coastal environment where stormwater discharged via dispersal structures and/or riprap lined structures will sheet flow to existing overland flow paths which outlet to tidal environments downstream. RS Eng considers that stormwater attenuation is not warranted in this location, however at the discretion of the Far North District Council.

5.1 Stormwater Disposal

Uncontrolled and concentrated stormwater discharges can result in erosion and slope instability. RS Eng recommends that stormwater is collected where possible and piped to stable watercourses, drains, or dispersal structures such as riprap lined aprons or spreader bars disposing stormwater to the northern or eastern slopes.

6.0 Firefighting Water Supply

In accordance with the New Zealand Fire Service Firefighting Water Supplies Code of Practice (SNZ PAS 4509:2008), the Marae is expected to consist of three fire cells being the Wharekai, Wharenui, Whareiti, Kohanga Reo, and two Kaumatua duplex's, being classified as being FW3 to FW4, subject to review and assessment of the finalised building plans.

Consultation and approval with Fire Emergency NZ should be undertaken to confirm firefighting water supply storage requirements.

7.0 Water Supply

A water supply bore has been mapped on the property near to the proposed Marae. The bore log has been reviewed, being 48m in depth with a static water level of 2.6m. A flow rate at the time of the bore installation recorded 1.3m³/hour (0.36L/s) with a recommended take of 1.0m³/hr (0.27L/s). This is considered to have adequate water supply for the development, however should be supplemented to allow for water supply storage during power outages and peak events. RS Eng recommend a minimum of four 25,000L water supply tanks to supplement the water supply.

Potable water shall be treated in accordance with G12 of the NZ Building Code and New Zealand Drinking Water Standard.

The existing water bore location shall be confirmed in order to not damage or compromise the bore during construction. The layout of the drive/parking areas and buildings shall consider the location of the existing water bore and avoid potential short circuiting of surface water which would cause contamination.

8.0 Limitations

This report has been prepared solely for the benefit of our client. The purpose is to determine the engineering suitability of the proposed Marae, in relation to the material covered by the report. The reliance by other parties on the information, opinions or recommendations contained therein shall, without our prior review and agreement in writing, do so at their own risk.

Recommendations and opinions in this report are based on data obtained as previously detailed. The nature and continuity of subsoil conditions away from the test locations are inferred and it should be appreciated that actual conditions could vary from those assumed. If during the construction process, conditions are encountered that differ from the inferred conditions on which the report has been based, RS Eng should be contacted immediately.

Construction site safety is the responsibility of the builder/contractor. The recommendations included herein should not be construed as direction of the contractor's methods, construction sequencing or procedures. RS Eng can provide recommendations if specifically engaged to, upon request.

This report does not address matters relating to the National Environmental Standard for Contaminated Sites, and if applicable separate advice should be sought on this matter from a suitably qualified person.

Prepared by:

Codie Hay
Senior Technician
NZDE(Civil)

Reviewed by:

David Platt
Geotechnical Team Leader
NZDE(Civil), MEngNZ

Approved by:

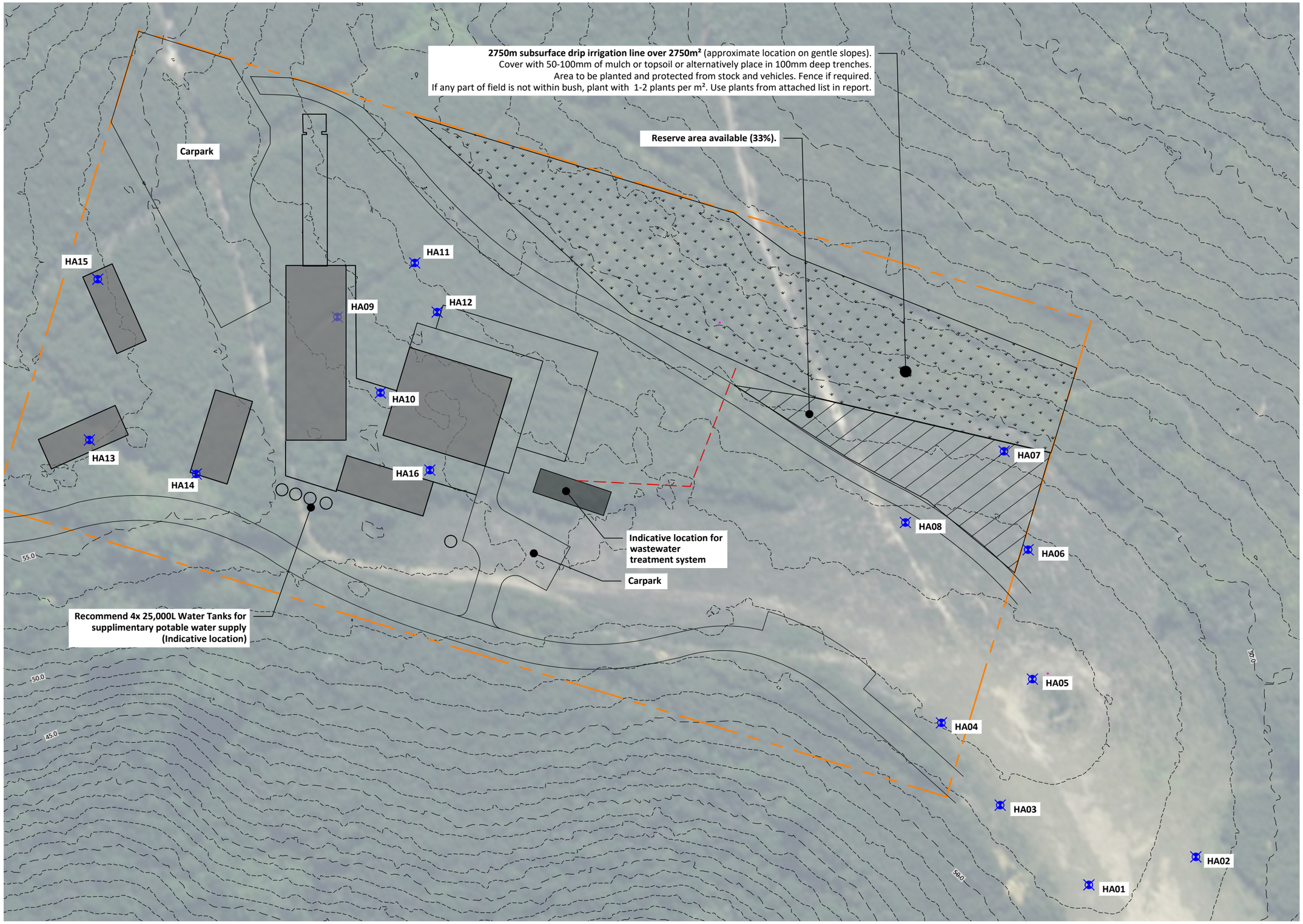


Matthew Jacobson
Director
NZDE(Civil), BE(Hons)(Civil), CPEng, CMEngNZ

RS Eng Ltd

Appendix A

Drawings



NOTES:

- If any part of these documents are unclear, please contact RSEng Ltd.
- This plan is copyright to RSEng Ltd and should not be reproduced without prior permission.

LEGEND

- Hand Auger Location
- Proposed Whare Kai, Whare Hui & Ablution Block
- Te Hiku O Te Ika Maori Reservation

Contour Interval:	1.0m
Vertical Datum:	NZVD2016
Survey Data Source:	LiDAR (2018)

0 7.5 15
PLAN 1:750

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.

If any part of these documents are unclear, please contact RS Eng Ltd.

TE HIKU O TE IKA MARAE
THREE WATERS REPORT
LAYOUT PLAN

Client: TE HIKU O TE IKA MARAE TRUSTEES

Location: TE HAPUA MARAE
TE HAPUA

Date	Rev	Notes
12/10/2026	C	Revised Layout
29/05/2026	B	Revised Issue
3/09/2025	A	Original Issue

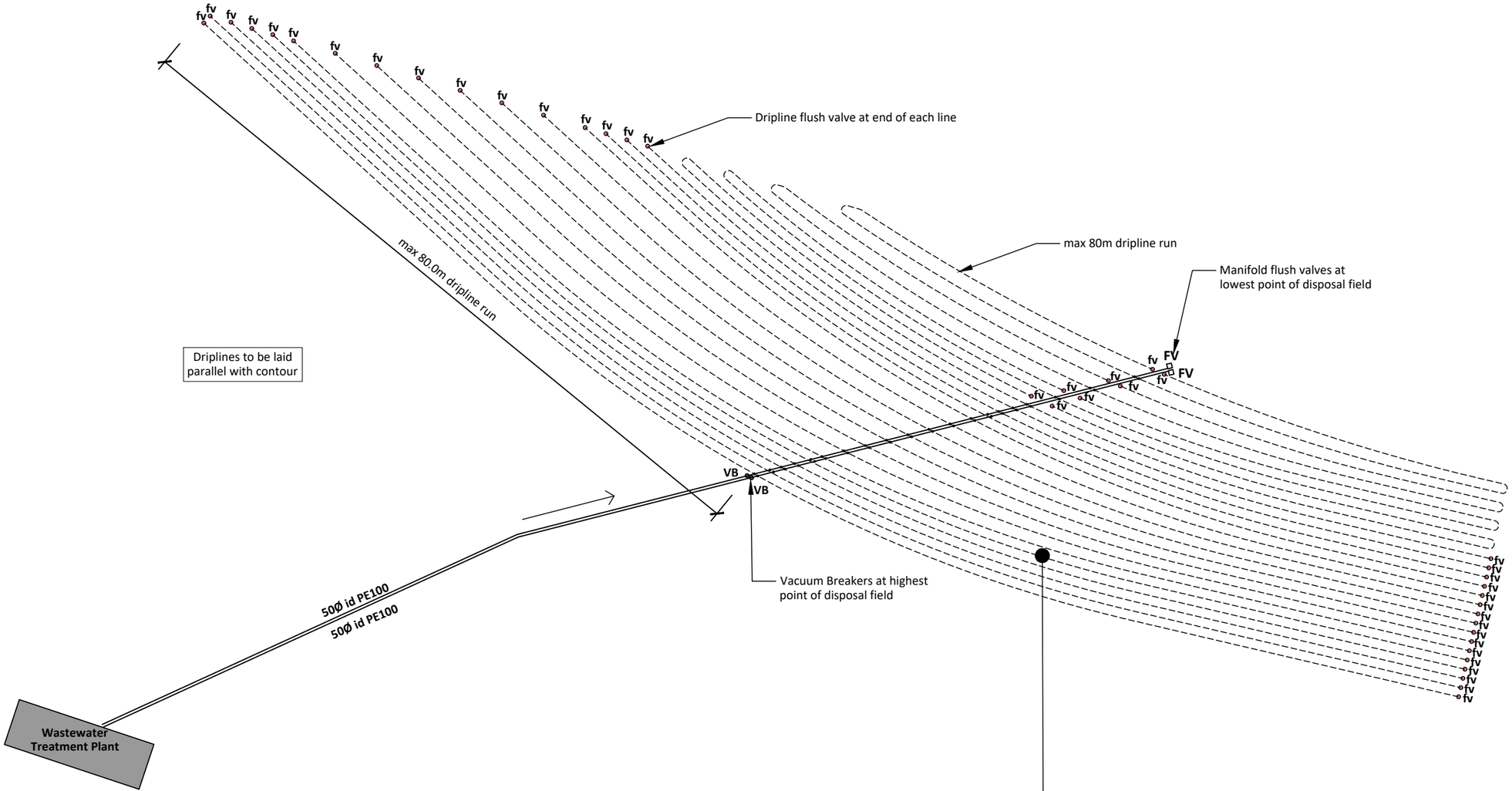
Drawn by: LMC | Reviewed by: MJ | Approved by: MJ

Scale: 1:750
Rev No.: C
Original: A3
Sheet No.: C01
Job No.: 19766

N:\02 Projects\Jobs 19000\19766 Te Hiku O Te Ika Marae (Te Putahi Projects) - Te Hapua\CAD\DWG\19766 Site Plan 2026-10-14 (three waters).dwg

NOTES:

- If any part of these documents are unclear, please contact RSEng Ltd.
- This plan is copyright to RSEng Ltd and should not be reproduced without prior permission.



2750m subsurface drip irrigation line over 2750m².
Cover with 50-100mm of mulch or topsoil or alternatively place in 100mm deep trenches.
Area to be planted and protected from stock and vehicles. Fence if required.
If any part of field is not within bush, plant with 1-2 plants per m².
Use plants from attached list in report.

LEGEND

- 50Ø Manifold from Treatment Plant
- FV — Manifold Flush Valve (50Ø)
- Dripline
- fv — Dripline Flush Valve (20Ø)
- Indicative Slope Direction
- VB — Vacuum Break

0 3 6
PLAN 1:300

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.
If any part of these documents are unclear, please contact RS Eng Ltd.

TE HIKU O TE IKA MARAE
THREE WATERS REPORT
WWM SCHEMATIC PLAN

Client: TE HIKU O TE IKA MARAE TRUSTEES
Location: TE HAPUA MARAE, TE HAPUA

Date	Rev	Notes
12/10/2026	C	Revised Layout
29/05/2026	B	Revised Issue
16/09/2025	A	Original Issue

Drawn by: NW | Reviewed by: CH | Approved by: MJ

Scale: 1:300 | Rev No.: C
Original: A3 | Sheet No.: C02
Job No.: 19766

N:\02 Projects\Jobs 19000\19766 Te Hiku O Te Ika Marae (Te Putahi Projects) - Te Hapua\CAD\DWG\19766 Site Plan 2026-10-14 (three waters).dwg

Appendix B

Subsurface Investigations

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA01

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591338mE, 6180300mN
ELEVATION: 52m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	Topsoil		0.0
Parengarenga Group	Sandy SILT, with minor clay; dark brownish grey. Stiff; moist; low plasticity.		0.4
	Completely weathered; SANDSTONE; extremely weak. - - Clayey sandy SILT; whitish grey/yellow mottling. Very stiff; moist; low plasticity.		1.0
	Silty CLAY, with minor sand; white/yellow. Very stiff; moist; low plasticity; sand, fine to medium.		1.4
	Light grey/orange mottling.		2.2
	Silty CLAY; purplish brown. Stiff; moist; low plasticity.		3.2
	Sandy SILT, with trace clay; white. Very stiff to hard; dry; non-plastic; sand, fine.		3.6
	End Of Hole: 3.90m		3.9

LEGEND

SCALA PENETROMETER (Blows / 0mm): 2, 4, 6, 8, 10, 12, 14, 16, 18

VANE SHEAR STRENGTH (kPa)
Vane: GEO1433
50, 100, 150, 200

Values
136
51
166
62
211+
-
211+
-
136
74
169
84
196
90

WATER: Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:09 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA02

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591360mE, 6180305mN
ELEVATION: 51.3m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO1433	WATER
TS	Topsoil						
Parengarenga Group	Clayey SILT; brown. Stiff; moist; low plasticity.		0.0 – 0.6			137 23	
	Clayey SILT, with some gravel; brown/yellow. Stiff; moist; low plasticity; gravel, fine, angular.		0.6 – 1.0			211+ -	
	Completely weathered; SANDSTONE; extremely weak. - - Clayey SILT, with some sand and gravel; light white/grey. Very stiff; dry; non-plastic; sand, fine to medium, gravel, fine.		1.0 – 2.4			211+ - 211+ - 211+ -	
	Yellow/orange.		2.4 – 4.6			181 75 166 48 211+ - 211+ -	
	Silty CLAY; yellow/orange. Stiff; moist; high plasticity.		4.6 – 5.0			121 63 158 116	
	End Of Hole: 5.00m		5.0				

Values

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:10 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA03

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591321mE, 6180316mN
ELEVATION: 52.6m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO1433	Values	WATER
TS	Topsoil		0.0	TS				
Parengarenga Group	Clayey SILT, with some sand, with trace rootlets; brownish grey. Firm; moist; low plasticity; sand, fine.		0.4				130	
	Silty CLAY, with minor sand; yellowish brown. Stiff; moist; low plasticity; sand, fine to medium.		0.6				48	
	Yellowish brown/white mottling.		1.0				211+ -	
	Completely weathered; SANDSTONE; extremely weak. - - Clayey sandy SILT, with trace gravel; yellowish brown/white. Very stiff; moist; low plasticity; sand, fine to medium; gravel, fine, subround.		1.4				211+ -	
	White/reddish brown mottling.		2.0				211+ -	
	Clayey SILT, with minor sand, with trace gravel; white with grey and reddish pink inclusions. Very stiff; moist; low plasticity; sand, fine; gravel, fine.		2.4				211+ -	
	With minor sand; green. Sand, fine to medium.		3.0				211+ -	
	End Of Hole: 4.00m		3.4				211+ -	
			4.0				211+ -	Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:12 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA04

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591309mE, 6180333mN
ELEVATION: 53m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO1433	WATER
TS	Topsoil		0.0	TS			
Parengarenga Group	Clayey SILT, with some gravel; brown. Stiff; moist; low plasticity; gravel, fine, subangular.		0.4			139 60	
	Completely weathered; SANDSTONE; extremely weak. Clayey SILT; yellow. Very stiff; moist; low plasticity.		1.0			211+ -	
			1.4			211+ -	
	Silty CLAY; yellow. Stiff; moist; high plasticity.		2.0			181 121	Groundwater Not Encountered
			2.4			211+ -	
	Clayey SILT, with some sand and gravel; light white/grey and orange. Stiff; moist; low plasticity; sand, coarse, gravel, fine, subangular.		2.8			211+ -	
	Silty CLAY; yellow. Stiff; moist; high plasticity.		3.2			211+ -	
	Clayey SILT; yellow. Very stiff; moist; low plasticity.		3.6			211+ -	
	Silty CLAY; yellow. Stiff; moist; high plasticity.		4.0			211+ -	
	End Of Hole: 4.20m		4.2				

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:13 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

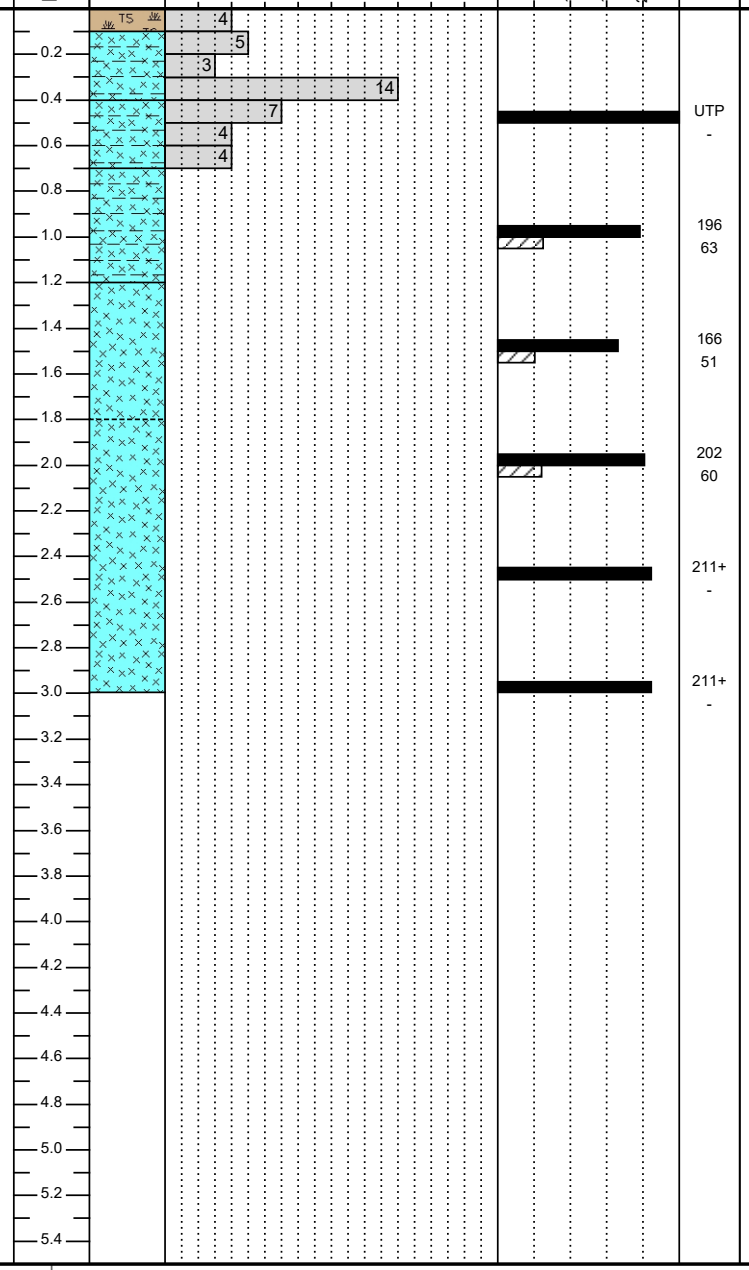
HAND AUGER LOG

HOLE NO.: HA05

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591328mE, 6180341mN
ELEVATION: 53.4m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	Topsoil		0.0
Parengarenga Group	SILT, with some clay, with minor sand; dark greyish brown. Firm to stiff; moist; low plasticity; sand, fine.		0.2
	Silty SAND; orangish brown. Dense; dry; non-plastic; sand, fine to coarse; hardpan.		0.4
	Sandy SILT, with minor clay; yellow/white. Very stiff; moist; low plasticity; sand, fine to medium.		0.6
	Completely weathered; SANDSTONE; extremely weak. - - Sandy SILT, with some clay, with minor gravel; yellowish/white. Very stiff; moist; low plasticity; sand, fine to medium; gravel, fine to medium, subround.		1.0
	Clayey sandy SILT, with trace gravel; white with grey/orange and green sand inclusions. Very stiff; moist; low plasticity; gravel, fine to medium, subround.		1.8
	End Of Hole: 3.00m		3.0



PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:14 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA06

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591327mE, 6180368mN
ELEVATION: 51.8m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND
TS	Topsoil		0.0 – 0.2	TS
Parengarenga Group	Silty SAND; yellow. Dense to very dense; dry; non-plastic; hardpan.		0.2 – 0.6	
Parengarenga Group	Silty CLAY; light yellow/grey. Stiff; moist; high plasticity.		0.6 – 1.2	
	End Of Hole: 1.20m		1.2 – 2.8	

SCALA PENETROMETER (Blows / 0mm): 2, 4, 6, 8, 10, 12, 14, 16, 18

VANE SHEAR STRENGTH (kPa) Vane: 50, 100, 150, 200 — Values

WATER: Groundwater Not Encountered

PHOTO(S)



REMARKS

Wastewater field location

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:15 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA07

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591323mE, 6180387mN
ELEVATION: 50.4m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND
TS	Topsoil		0.0	TS
arengarenga Grou	Organic SILT; brown. Firm; moist; low plasticity.		0.2	
	Silty SAND; yellow. Dense to very dense; dry; non-plastic; hardpan. End Of Hole: 0.45m		0.4	
			0.6	
			0.8	
			1.0	
			1.2	
			1.4	
			1.6	
			1.8	
			2.0	
			2.2	
			2.4	
			2.6	
			2.8	

SCALA PENETROMETER (Blows / 0mm): 2 4 6 8 10 12 14 16 18

VANE SHEAR STRENGTH (kPa) Vane: 50 100 150 200 Values

WATER: roundwater Not Encountere

PHOTO(S)



REMARKS

Wastewater field location

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:16 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA08

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591302mE, 6180373mN
ELEVATION: 51.9m
START DATE: 30/07/2025
END DATE: 30/07/2025
LOGGED BY: DP

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	Topsoil		0.0
Parengarenga Group	Organic SILT; brown. Firm; moist; non-plastic; hardpan.		0.2
	Silty gravelly SAND; yellow. Dense to very dense; dry; non-plastic; gravel, fine to medium, subangular; hardpan.		0.4
	Silty CLAY; light yellow/grey. Stiff; moist; high plasticity.		0.6
			0.8
			1.0
	End Of Hole: 1.20m		1.2
			1.4
			1.6
			1.8
			2.0
			2.2
			2.4
			2.6
			2.8

LEGEND

SCALA PENETROMETER (Blows / 0mm): 2 4 6 8 10 12 14 16 18

VANE SHEAR STRENGTH (kPa) Vane: 50 100 150 200 Values

WATER: Groundwater Not Encountered

PHOTO(S)



REMARKS

Wastewater field location

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:17 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA09

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591189mE, 6180417mN
ELEVATION: 51.88m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: MM

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063 Values	WATER
TS	Topsoil.		0.0	TS			
Parengarenga Group	White / black. Very stiff; dry; organic SILT non-plastic.		0.4			UTP -	
	SILT, with some sand, with minor clay; dark brown / orange. Very stiff to hard; dry; non-plastic; sand, fine; (hard-pan).		0.6				
	Silty CLAY; white / orange. Very stiff; moist; low plasticity.		1.0			203 93	
			1.4			174 93	
			1.8			218+ -	
	Grey / orange mottling.		2.2			218+ -	
			2.6			159 93	
	Completely weathered; SANDSTONE. - -. Silty CLAY, with minor sand and gravel; grey / orange mottling / white. Very stiff; moist; low plasticity; sand, fine, gravel, fine, subangular.		3.0			179 75	◁
	Moist to wet.		3.4				
			3.8			218+ -	
	End Of Hole: 4.20m		4.2				
			4.4				

PHOTO(S)



REMARKS

WATER

- ▼ Standing Water Level
- ▷ Out flow
- ◁ In flow

INVESTIGATION TYPE

- ☑ Hand Auger
- ☐ Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:19 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA10

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591197mE, 6180401mN
ELEVATION: 53.11m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	TOPSOIL.		0.0 – 0.4
Parengarenga Group	SILT, with some sand, with trace clay; brown. Hard; dry; non-plastic; (hard-pan).		0.4 – 1.0
Parengarenga Group	Silty CLAY, with trace sand; orange / white mottling. Very stiff; moist; low plasticity.		1.0 – 2.2
Parengarenga Group	Completely weathered; SANDSTONE. - - Clayey SILT, with trace sand and gravel; orange / yellow / white. Very stiff; moist; low plasticity; gravel, fine, subangular.		2.2 – 3.0
	End Of Hole: 3.00m		3.0

SCALA PENETROMETER (Blows / 0mm)

Depth (m)	Blows / 0mm
0.4	93
0.6	9
1.0	218+
1.2	-
1.6	187
1.8	84
2.0	199
2.2	62
2.6	218+
2.8	-
3.0	218+
3.2	-

VANE SHEAR STRENGTH (kPa) Vane: GEO4063

Depth (m)	Values
0.4	93
0.6	9
1.0	218+
1.2	-
1.6	187
1.8	84
2.0	199
2.2	62
2.6	218+
2.8	-
3.0	218+
3.2	-

WATER

Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:20 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA11

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591205mE, 6180427mN
ELEVATION: 51.29m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: MM

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063	WATER
TS	TOPSOIL.		0.0	TS			
Parengarenga Group	Organic SILT, with some clay; grey / brown. Firm to stiff; moist; low plasticity.		0.2			UTP -	
	SILT, with some clay; dark brown / orange. Very stiff; dry; non-plastic; (hard-pan).		0.6			218+ -	
	Silty CLAY; orange / white streaks. Stiff; moist; low plasticity.		1.0				
	Grey / orange mottling.		1.4			164 109	
	Completely weathered; SANDSTONE. - -. Silty CLAY; white / dark blue / orange. Very stiff; moist; low plasticity.		1.8			179 117	
	With minor gravel; orange / grey. Gravel, fine, subangular.		2.4			203 115	
	Clayey SILT, with minor gravel; orange / grey. Very stiff; moist; low plasticity; gravel, fine, subangular.		2.8			218+ -	
			3.4			218+ -	
	End Of Hole: 4.20m		4.0			218+ -	Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:21 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA12

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591209mE, 6180418mN
ELEVATION: 51.18m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
TS	TOPSOIL.		0.0
Parengarenga Group	Sandy SILT; light grey. Very stiff; dry; non-plastic; (hard-pan).		0.6
	Orangish brown. Hard.		0.8
	Silty CLAY, with trace sand; orange / white. Very stiff; moist; low plasticity.		1.0
	Orange / brown / white mottling.		2.0
	End Of Hole: 3.20m		3.2

LEGEND

SCALA PENETROMETER (Blows / 0mm): 2, 4, 6, 8, 10, 12, 14, 16, 18

VANE SHEAR STRENGTH (kPa)
Vane: GEO4063
50, 100, 150, 200

Values
81
16
218+
-
171
47
218+
-
178
50
184
78

WATER: Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:22 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA13

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591138mE, 6180393mN
ELEVATION: 56.02m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: MM

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063	WATER
TS	TOPSOIL.		0.0	TS			
Parengarenga Group	SILT, with some clay; brownihs orange. Very stiff to hard; dry; non-plastic; (hard-pan).		0.4			UTP -	
	Clayey SILT, with trace gravel; orange / grey. Very stiff; moist; low plasticity; gravel, fine, subangular.		1.0			218+ -	
	Completely weathered; SANDSTONE. - -. Clayey SILT, with minor gravel; yellow / white / pink mottling. Very stiff; moist; low plasticity; gravel, fine, subangular.		1.4 2.0			218+ - 201 109	Groundwater Not Encountered
	With some gravel; yellow / grey. Gravel, fine to coarse, subangular.		2.6 3.0			218+ -	
	With minor gravel; grey / orange mottling. Gravel, fine, subangular.		3.4 4.0			218+ - 201 84	
	End Of Hole: 4.20m		4.2				

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:23 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA14

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591160mE, 6180386mN
ELEVATION: 55.27m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063	Values	WATER
TS	TOPSOIL.		0.0	TS				
Parengarenga Group	Silty CLAY; orangish brown. Very stiff; moist; low plasticity.		0.2			199	199 44	
			0.4					
			0.6					
			0.8					
	Yellow / white..		1.0			189	189 37	
			1.2					
			1.4					
	Completely weathered; SANDSTONE. - - Silty CLAY, with minor gravel, with trace sand; white / pink / yuellow. Very stiff; moist; low plasticity.		1.6			203	203 50	
			1.8					
	Pink / white.		2.0			215	215 56	
			2.2					
			2.4			218+	218+ -	
			2.6					
			2.8					
			3.0			218	218 -	
			3.2					
			3.4			218+	218+ -	
	Completely weathered; SANDSTONE. - -. Silty CLAY, with minor sand and gravel; yellow / white / glauconitic. Very stiff; moist; low plasticity.		3.6					
			3.8					
	End Of Hole: 4.00m		4.0			218+	218+ -	
			4.2					
			4.4					

Groundwater Not Encountered

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:24 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA15

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591141mE, 6180425mN
ELEVATION: 56.73m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: MM

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 100mm)	VANE SHEAR STRENGTH (kPa)	WATER
TS	TOPSOIL.		0.0	TS	2 4 6 8 10 12 14 16 18	Vane: 50 100 150 200 Values	ndwater Not Encoun
ngarenga G	Beige. Organic SILT.		0.2				
	SILT, with some clay; white. Hard; dry; non-plastic; (hard-pan).		0.4				
	End of bore - unable to penetrate (hard-pan). End Of Hole: 0.50m		0.6		50 >>		
			0.8				
			1.0				
			1.2				
			1.4				
			1.6				
			1.8				
			2.0				
			2.2				
			2.4				
			2.6				
			2.8				
			3.0				
			3.2				
			3.4				
			3.6				
			3.8				
			4.0				
			4.2				
			4.4				

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:25 am

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

HAND AUGER LOG

HOLE NO.: HA16

CLIENT: Te Hiku o Te IKA Marae Trustees
PROJECT: Geotechnical Investigations
JOB NO.: 19766

SITE LOCATION: Waharua Road, Te Hapua
CO-ORDINATES: 1591207mE, 6180386mN
ELEVATION: 54.4m
START DATE: 22/05/2026
END DATE: 22/05/2026
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO4063	WATER
TS	TOPSOIL.		0.0	TS			
Parengarenga Group	Silty CLAY; brown. Stiff; moist; low plasticity.		0.4			140 44	
	Clayey SILT, with trace gravel; orange mottling / grey. Stiff; moist; low plasticity; gravel, fine.		0.8			215 72	
	Completely weathered; SANDSTONE. - - Clayey SILT, with minor sand; white / orange mottling / glauconitic. Very stiff; moist; low plasticity; sand, fine.		1.2			218+ -	Groundwater Not Encountered
			2.0			218+ -	
			2.4			218+ -	
			2.8			168 51	
	Completely weathered; SANDSTONE. - - Clayey SILT, with some sand and gravel; orange / grey / glauconitic. Very stiff; moist; low plasticity; sand, fine, gravel, fine, subangular.		3.4			218+ -	
	End Of Hole: 4.00m		4.0			201 69	
			4.4				

PHOTO(S)



REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Generated with CORE-GS by Geroc - 1 - Hand Auger - RS Standard scala & vane bars - 28/05/2026 9:39:26 am

Appendix C

On-site Wastewater Disposal Details

Irrigation Field Installation Details

- Use a system producing secondary treated effluent.
- Use 2750m (minimum) of Sub Surface Pressure Compensating Drip irrigation line, with Arkal filters, flushing and air release valves fitted.
- Irrigation line is to be laid in a 50-100mm (minimum) trench (sub surface) or covered in mulch surface).
- Irrigation line is to be laid parallel with the contour.
- Disposal Field to be Planted.
- System to be installed and maintained as per manufacturer's recommendations including regular de-sludging of the primary treatment tank.
- Disposal area to be protected from stock and vehicles.
- Refer to "How to look after your septic tank" (published by the Northland Regional Council) when protecting the disposal area.
- The system will benefit from the use of water reduction fixtures, i.e. dual flush 6/3 litre water closets, shower-flow restrictors, aerator tap fittings and water conserving automatic washing machines.

Irrigation Line Specification

- Distribution is to be via drip irrigation line with self-compensating pressure drip emitters.
- Install an Arkal disc filter at the outlet of the treatment system. Install pressure checkpoints on either side of the filter to allow for gauges to check for blockages. Install pressure checkpoints at the end of each lateral.
- Install either manual or automatic flushing valves at the end of each lateral. Install air release valves in the high points of the irrigation field.
- Allow 5m head loss from semi-blocked filter and ensure 12m of end pressure for the lowest emitter in the field.
- Ensure there is laminar flow through all lines in the field. Ensure flushing velocity is greater than 0.5m/s.
- Use drip irrigation line with 1.6L/Hr, 1.0m dripper spacing and 1.0m spacing between laterals.

Suitable Plant Species for Evapo – Transpiration Systems

(Source: NRC *"Looking after your household Sewerage System")*

Native Shrubs and Trees

- Coprosma
- Hebe
- Manuka
- Weeping Mapou
- Flax (Fast)
- Pokaka (slow)
- Cabbage Tree (fast)
- Rangiora (fast)
- Lacebark (fast)
- Ribbonwood (fast)
- Poataniwha
- Heketara
- Poataniweta
- Kohuhu (fast)

Grasses

- Jointed Twig Sedge
- Longwood Tussock
- Pukio
- Toetoe (native species)
- Umbrella Sedge
- Oioi
- Hooksedge

Introduced Species

- Canna Lilies
- Taro
- Aralia
- Fuschia
- Philodendrons
- Begonias

Appendix D

Assessment of Environmental Effects (AEE)

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

Part B: Assessment of Environmental Effects

Discharge Treated Sewage Effluent to Land

This application is made under Section 88/Section 127 of the Resource Management Act 1991

To: Consents Department
Northland Regional Council
Private Bag 9021
Te Mai
Whangārei 0143

Whangārei office: 09 470 1200
0800 002 004
Email: info@nrc.govt.nz
Website: www.nrc.govt.nz

PART B – ASSESSMENT OF ENVIRONMENTAL EFFECTS

Your application must include an Assessment of Effects on the Environment. This form is a guide to help you prepare one.

An assessment of effects is required so that you and others can understand what happens to the environment when you discharge domestic wastewater ("treated sewage effluent") to land. This will help you to propose ways to minimise those effects to the council's satisfaction.

The degree of detail required is in proportion to the scale of the environmental effects of your proposal. If you are required to apply for a consent to discharge sewage effluent into or onto land, then you will most probably need a qualified engineer (or similar) to design your on-site system. The information requested below is the minimum detail that your engineer must supply.

Please note that the word *"environment"* includes the surrounding waterways and groundwater, surrounding coastal water, adjoining land, any surrounding resource users, and local iwi.

It is advised that you make an appointment with an appropriate council officer to discuss your application prior to lodging it. This will help you to supply all the required information at the onset and ensure the efficient processing of your application.

A. Description of the Proposed Activity

A.1 What is the intended water supply?

- ☑ Rainwater collection
- ☑ Community or bore water supply
- ☐ Other *(please specify)* : _____

A.2 What is the source of the wastewater? *(please tick the appropriate box and answer those questions)*

☑ **Domestic House**

How many bedrooms are there in the house? 2 x 2 duplex's

Will the house be permanently occupied? ☑ Yes ☐ No

☑ **Small Motel/Campground/Hostel/Marae/Sports Club**

What is the maximum number of occupants that your facility can accommodate? 200

How frequently does this maximum occupancy occur and for what length of time? Expected during events such as Tangi's over 3 day

What is the typical number of occupants during the other periods of the year? Unknown, expected <50 over a week

☐ **Shared On-site Systems/Subdivisions**

How many individual lots are/will the treatment and disposal system be servicing? _____

What will be the average number of bedrooms per house? _____

What is the area of the lot on which the discharge will occur? _____

☑ **Other**

Provide details of the source of effluent, the number of persons contributing to the wastewater and the source of water supply for the facility.

Kohanga Reo - allowance for 20 children and 4 adults.

A.3 What is the likely maximum daily volume of wastewater to be discharged? 5500 (buffered) litres

The Wastewater Treatment System

A.4 What is your Proposed Wastewater Treatment System?
(please tick appropriate box and answer the associated questions)

☐ **Septic Tank**

What is the capacity of the tank? _____ litres

Will an effluent filter be fitted on the outlet? ☐ Yes ☐ No

☐ **Aerated Wastewater Treatment System (AWTS)**

What brand is the AWTS? _____

Will a programmed maintenance contract be entered into with the treatment systems manufacturer or agent? ☐ Yes ☐ No

☑ **Other,** what level of treatment do you consider the wastewater receives through your *"other"* treatment system?

☐ Primary

☐ Secondary

Describe the proposed *"other"* treatment system

Comercial type seconday treatment system - to be designed by manufacturer

The Wastewater Disposal System

A.5 What is your proposed disposal system?

(please tick the appropriate box and answer the associated questions)

☐ **Soakage Trench/Bed System**

What are the dimensions of the proposed soakage trenches/beds?

Width _____ m

Depth _____ m

What is the total length of all the soakage trenches/beds? _____ m

How will the soakage trench/bed system be loaded?

☐ Trickle

☐ Pump

☐ Dose loaded via a syphon

Has a 100% reserve area of undeveloped land been allowed for in the disposal system design?

☐ Yes

☐ No, what percentage has been allowed for and why?

What is the proposed loading rate to the trenches/beds? _____ mm/day

☑ **Irrigation Lines**

What area will the irrigation lines cover? 2750 m²

What is the distance between adjacent irrigation lines? 1.0 m

What is the distance between adjacent drip emitters along the irrigation line? 1.0 m

What brand is the irrigation line? Netafim or similar

What is the proposed aerial loading rate to the disposal area? 2.0 mm/day

Has a 30% reserve area of undeveloped land been allowed for in the disposal system design?

☑ Yes

☐ No, what percentage has been allowed for and why?

_____

_____

_____

☐ **Other** *(please describe)*

_____

_____

_____

A.6 **What is the intended ground cover within the disposal area after the disposal system is operational?** *(i.e. what plant species do you intend to plant, if any)*

Topsoiled or mulched with 1-2 plants per 1m² where not within existing scrub. Refer to attached three waters report for plant list.

_____

_____

B. Site Details

B.1 You **must** attach a map that shows the following:

- The location of your lot in relation to the nearest town.
- The legal property boundaries of your lot and the distance of your disposal system (including reserve area) from those boundaries.
- The layout of your disposal system (including reserve area) within your lot boundaries.
- The location of any groundwater bores within 20 metres of your disposal system (including reserve area).
- The location of any surface water (i.e. streams, roadside drains, lakes and rivers) within 20 metres of your disposal system (including reserve area).

B.2 **What is the map reference of the proposed disposal system?** *(if known)*

NZMS 260 Series map number:

Easting _____ (seven digit number)

Northing _____ (seven digit number)

B.3 **Which District Council is the property administered under?**

☐ Kaipara ☑ Far North ☐ Whangārei

B.4 **What is the slope of the proposed disposal area?**

☐ Flat

☑ Slightly sloping (5°–15°)

☐ Steep (>15°)

B.5 Are any drainage controls required?

☑ Yes, describe

Cut off surface water drain should be installed upslope of disposal field.

☐ No, state why not

B.6 Was a soakage test (percolation test) performed at the location of the proposed disposal system? *(please tick the appropriate box and answer those questions)*

☐ Yes

What was the date of the test? _____

What were the weather conditions prior to the soakage test? _____

What is the average soakage rate of the disposal area? _____ mm/hr
(please ensure the individual soakage test results are included with this application)

Are the locations of the soakage tests marked on the map that shows the layout of the disposal system?

☐ Yes

☐ No, state why not

_____

_____

☑ No, what are the reasons for not performing a soakage test?

Visual and soil charateristics as oulined in NZS1547.

_____

_____

B.7 Was any groundwater encountered during the site investigation?

☑ No ☐ Yes, at what depth? (not at disposal field location) _____ metres

B.8 What is the estimated winter groundwater level for the disposal area? 0.8-1.0m _____ metres

How was this winter groundwater level determined?

Based on subsoil investigations, geology, and geomorphology or the properties and surrounding area.

_____

B.9 Has a detailed soil profile been included with this application form?

☑ Yes

☐ No, state why not _____

B.10 What is the estimated soil category of the disposal area?

☐ 1: Gravel and sands, Rapidly draining

☐ 2: Sandy loams, Well drained

☐ 3: Loams, Moderately well drained

☐ 4: Clay loams, Imperfectly drained

☐ 5: Light clays, Poorly drained

☑ 6: Medium to heavy clays, Very poorly drained

Please state the criteria used for selecting the above soil category.
Subsoil investigations and observations at the effluent disposal field locations.

C. Assessment of Effects on the Environment

An assessment of effects should be proportional to the scale and significance of the proposed activity. Where your discharge could have an adverse effect on the environment, a detailed environmental assessment is required.

C.1 Affected Parties

Note: If you are proposing to dispose of your wastewater using a deep soakage system the determination of affected parties can be more complex, especially with relation to groundwater users. It is recommended that you contact the council to help determine who the affected parties from your proposal may be.

Are there any groundwater bores within 20 metres of any part of the disposal system (including reserve area) that are not owned by the applicant?

☐ Yes ☑ No

If you have answered **Yes**, then you will need to gain the written approvals of all the owners of neighbouring groundwater bores identified by the above question.

If written approvals cannot be obtained from all affected parties, describe what effect your discharge may have on the neighbouring groundwater bore and the steps you propose to take to minimise (i.e. mitigate) these effects *(attach a separate sheet if necessary)*

Exisiting groundwater bore on the property is to be located and location confirmed in order to achieve 20m seperation.

C.2 Given the estimated winter groundwater level (see Question B8) and your proposed treatment and disposal system, what is the risk of groundwater contamination occurring and why?

No more than minor, refer to the attached RS Eng three waters report.

C.3 What is the smallest horizontal separation distance between the disposal system (including reserve area) and any nearby watercourse, including roadside water table drains?

>15m metres

C.4 Given the smallest horizontal separation distance to the nearest surface watercourse and your proposed treatment and disposal system (including reserve area), what is the risk of surface water contamination occurring and why?

No more than minor due to achieving the minimum NRC permitted discharge setbacks and proposed secondary treatment with low irregation rate applied over a large area. Refer to assessment of environmental effects in the RS Eng three waters report.

C.5 Consultation

Have you consulted with any of the following potentially affected parties?

	Yes	No
Neighbours	☐	☑
Department of Conservation *(if relevant)*	☐	☑
Fish and Game Council *(if relevant)*	☐	☑
District Council *(if relevant)*	☐	☑
Local iwi *(specify)*:	☐	☑
Other *(specify)*:	☐	☑

Please ensure all of the relevant questions on this form have been answered fully.

If you have any queries relating to information requirements or wish to meet with a council consents officer, please contact a Duty Planner at the Northland Regional Council.

Northland Regional Council offices:			
Whangārei Office 36 Water Street Whangārei 0110 **P** 0800 002 004 **E** info@nrc.govt.nz www.nrc.govt.nz	**Dargaville Office** Ground Floor 32 Hokianga Road Dargaville 0310 **P** 09 439 3300	**Kaitāia Office** 192 Commerce Street Kaitāia 0410 **P** 09 408 6600	**Waipapa Office** Shop 9 12 Klinac Lane Waipapa 0295 **P** 0800 002 004



NOTES:

- If any part of these drawings are unclear, please contact RS Eng.
- These plans are indicative only and shall not be used for construction set-out or scaled off.
- All services shall be identified on-site prior to construction.
- It is the responsibility of the lead designer/project manager to complete the design coordination and clash detection.
- This plan is copyright to RS Eng Ltd and should not be reproduced without prior permission.

Contour Interval:	1.0m
Vertical Datum:	NZVD2016
Survey Data Source:	LiDAR (2024)

0 10 20
PLAN 1:1000

FOR CONSENT

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.
If any part of these documents are unclear, please contact RS Eng Ltd.

PROPOSED MARAE - ACCESS ROAD
CONCEPT CIVIL DRAWINGS
LAYOUT PLAN

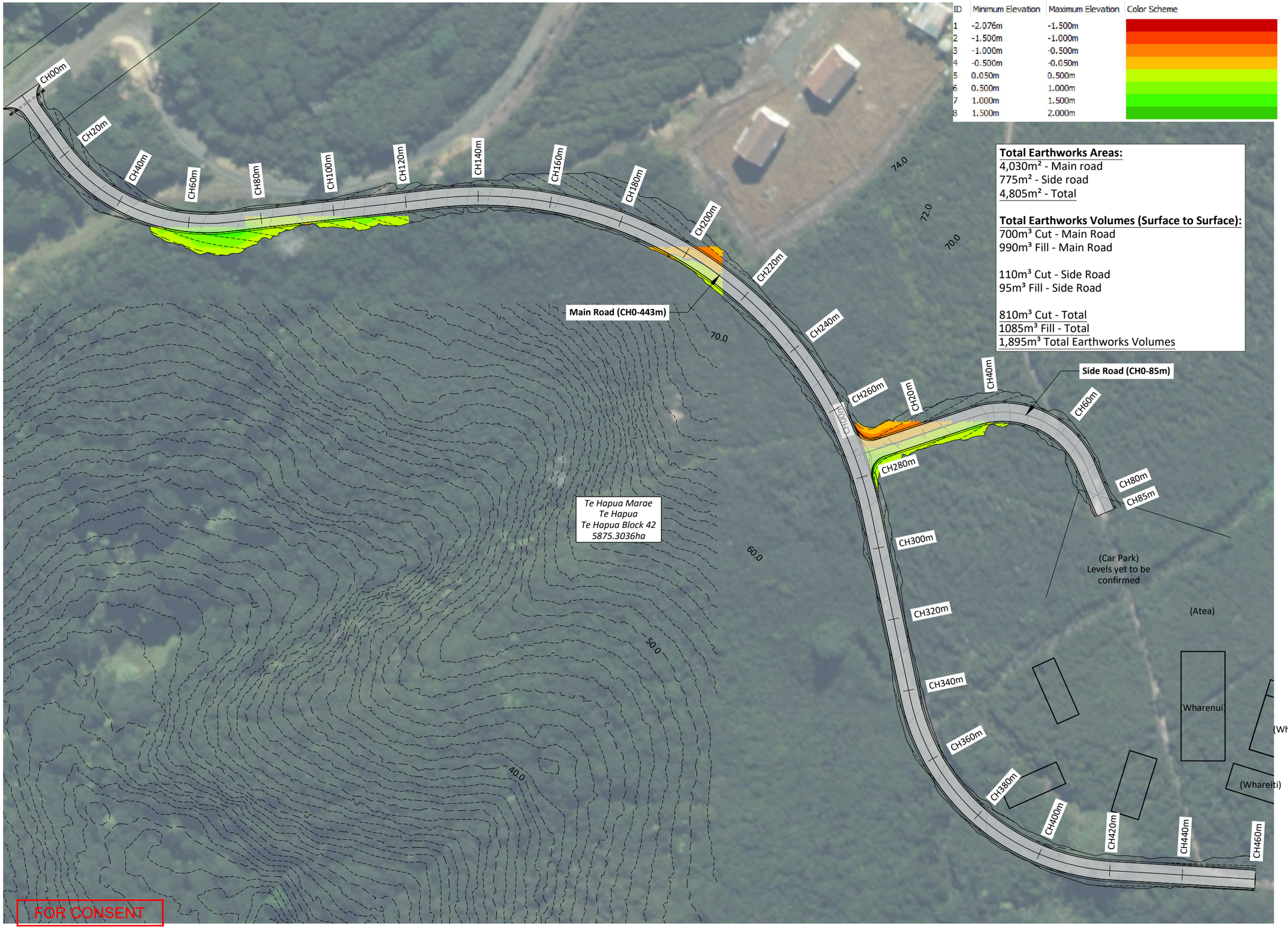
Client: TE HIKU O TE IKA MARAE

Location: TE HAPUA ROAD, TE HAPUA

Date	Rev	Notes
01/10/2026	B	Alignment Amendment
27/05/2026	A	Original Issue

Drawn by: NW | Reviewed by: MJ | Approved by: MJ

Scale	1:1,000
Rev No.	B
Original	A3
Sheet No.	C01
Job No.	19766



ID	Minimum Elevation	Maximum Elevation	Color Scheme
1	-2.076m	-1.500m	
2	-1.500m	-1.000m	
3	-1.000m	-0.500m	
4	-0.500m	-0.050m	
5	0.050m	0.500m	
6	0.500m	1.000m	
7	1.000m	1.500m	
8	1.500m	2.000m	

Total Earthworks Areas:
4,030m² - Main road
775m² - Side road
4,805m² - Total

Total Earthworks Volumes (Surface to Surface):
700m³ Cut - Main Road
990m³ Fill - Main Road

110m³ Cut - Side Road
95m³ Fill - Side Road

810m³ Cut - Total
1085m³ Fill - Total
1,895m³ Total Earthworks Volumes

NOTES:

- If any part of these drawings are unclear, please contact RS Eng.
- These plans are indicative only and shall not be used for construction set-out or scaled off.
- All services shall be identified on-site prior to construction.
- It is the responsibility of the lead designer/project manager to complete the design coordination and clash detection.
- This plan is copyright to RS Eng Ltd and should not be reproduced without prior permission.

N

Contour Interval: 1.0m
Vertical Datum: NZVD2016
Survey Data Source: LiDAR (2024)

0 10 20
PLAN 1:1000

FOR CONSENT

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.
If any part of these documents are unclear, please contact RS Eng Ltd.

PROPOSED MARAE - ACCESS ROAD
CONCEPT CIVIL DRAWINGS
CUT/FILL PLAN

Client: TE HIKU O TE IKA MARAE
Location: TE HAPUA ROAD, TE HAPUA

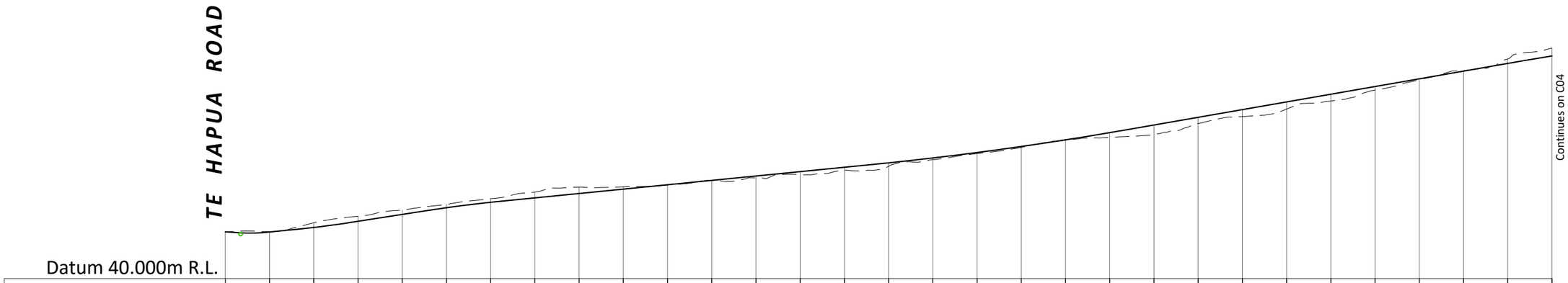
Date	Rev	Notes
01/10/2026	B	Alignment Amendment
27/05/2026	A	Original Issue

Drawn by: NW | Reviewed by: MJ | Approved by: MJ

Scale: 1:1,000
Original: A3
Job No.: 19766
Rev No.: B
Sheet No.: C02

NOTES:

- If any part of these drawings are unclear, please contact RS Eng.
- These plans are indicative only and shall not be used for construction set-out or scaled off.
- All services shall be identified on-site prior to construction.
- It is the responsibility of the lead designer/project manager to complete the design coordination and clash detection.
- This plan is copyright to RS Eng Ltd and should not be reproduced without prior permission.



DESIGN LEVELS	45.264	45.780	46.476	47.251	48.011	48.632	49.133	49.628	50.122	50.617	51.112	51.607	52.101	52.596	53.096	53.648	54.266	54.948	55.696	56.510	57.377	58.249	59.120	59.992	60.863	61.735	62.606	63.477	64.348	65.191
DEPTH	-0.040	-0.536	-0.570	-0.487	-0.377	-0.404	-0.660	-0.716	-0.259	0.041	-0.006	0.206	0.352	0.360	0.385	0.185	0.116	0.104	0.043	0.540	1.041	0.708	0.796	0.814	0.786	0.401	0.091	-0.058	-0.497	-0.887
EXISTING LEVELS	45.304	46.316	47.047	47.738	48.388	49.037	49.793	50.344	50.382	50.577	51.118	51.400	51.750	52.236	52.711	53.463	54.150	54.844	55.654	55.970	56.337	57.541	58.324	59.178	60.077	61.334	62.515	63.536	64.845	66.078
VERT. GEOMETRY	-6.39%	10.07%	R18.81m	R104.08m	15.51%	R152.70m	9.89%	R392.99m	17.43%	R564.31m																				
HORIZ. GEOMETRY	17.58m Lth.	R53.20m	57.14m Lth.	R162.53m																										
CHAINAGE	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000	75.000	80.000	85.000	90.000	95.000	100.000	105.000	110.000	115.000	120.000	125.000	130.000	135.000	140.000	145.000	150.000

MAIN ROAD - LONGITUDINAL SECTION - CH0-150m

1:500

FOR CONSENT

SECTION 0 5 10 1:500

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.
If any part of these documents are unclear, please contact RS Eng Ltd.

PROPOSED MARAE - ACCESS ROAD
CONCEPT CIVIL DRAWINGS
MAIN ROAD LONGITUDINAL SECTION

Client: TE HIKU O TE IKA MARAE
Location: TE HAPUA ROAD, TE HAPUA

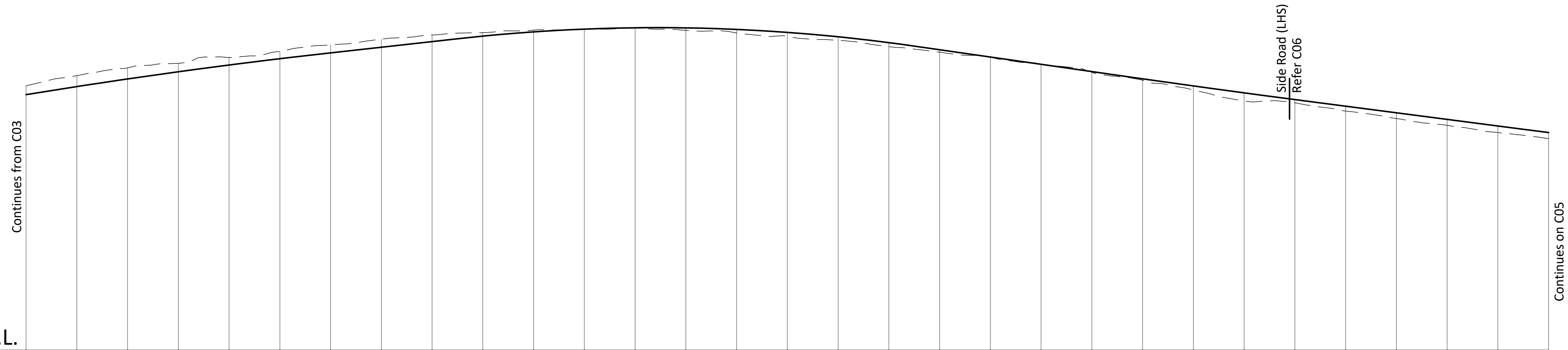
Date	Rev	Notes
01/10/2026	B	Alignment Amendment
27/05/2026	A	Original Issue

Drawn by: NW | Reviewed by: MJ | Approved by: MJ

Scale: 1:500 | Rev No.: B
Original: A3 | Sheet No.: C03
Job No.: 19766

NOTES:

- If any part of these drawings are unclear, please contact RS Eng.
- These plans are indicative only and shall not be used for construction set-out or scaled off.
- All services shall be identified on-site prior to construction.
- It is the responsibility of the lead designer/project manager to complete the design coordination and clash detection.
- This plan is copyright to RS Eng Ltd and should not be reproduced without prior permission.



Datum 40.000m R.L.

CHAINAGE	150.000	155.000	160.000	165.000	170.000	175.000	180.000	185.000	190.000	195.000	200.000	205.000	210.000	215.000	220.000	225.000
DESIGN LEVELS	65.191	65.990	66.744	67.454	68.119	68.740	69.317	69.874	70.431	70.970	71.386	71.660	71.792	71.783	71.632	71.339
DEPTH	-0.887	-1.082	-1.098	-0.832	-0.743	-0.724	-0.795	-0.798	-0.646	-0.344	-0.172	0.015	0.037	0.234	0.359	0.390
EXISTING LEVELS	66.078	67.071	67.842	68.286	68.862	69.465	70.112	70.672	71.077	71.314	71.558	71.645	71.756	71.549	71.273	70.949

CHAINAGE	230.000	235.000	240.000	245.000	250.000	255.000	260.000	265.000	270.000	275.000	280.000	285.000	290.000	295.000	300.000
DESIGN LEVELS	70.904	70.328	69.627	68.908	68.189	67.471	66.756	66.057	65.375	64.710	64.058	63.407	62.755	62.104	61.462
DEPTH	0.348	0.396	0.243	0.013	-0.024	0.068	0.141	0.399	0.808	0.321	0.477	0.570	0.587	0.649	0.593
EXISTING LEVELS	70.556	69.932	69.384	68.896	68.213	67.403	66.614	65.658	64.567	64.388	63.580	62.837	62.168	61.455	60.869

VERT. GEOMETRY: R564.31m | 11.13% | R176.40m | -14.38% | R1477.70m | -13.02% | R344.64m

HORIZ. GEOMETRY: R162.53m | 51.61m Lth.

MAIN ROAD - LONGITUDINAL SECTION - CH150-300m

1:500

FOR CONSENT

0 5 10
SECTION 1:500

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.

If any part of these documents are unclear, please contact RS Eng Ltd.

PROPOSED MARAE - ACCESS ROAD
CONCEPT CIVIL DRAWINGS
MAIN ROAD LONGITUDINAL SECTION

Client: TE HIKU O TE IKA MARAE

Location: TE HAPUA ROAD, TE HAPUA

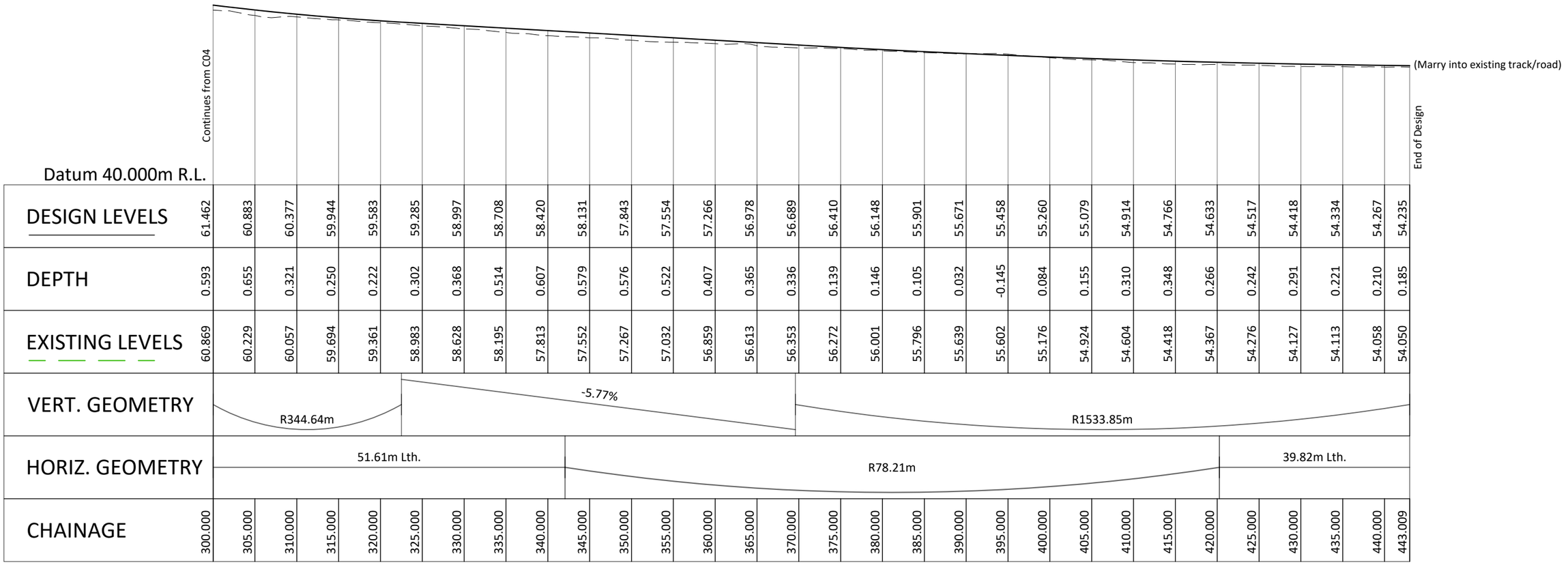
Date	Rev	Notes
01/10/2026	B	Alignment Amendment
27/05/2026	A	Original Issue

Drawn by: NW | Reviewed by: MJ | Approved by: MJ

Scale: 1:500 | Original: A3 | Job No.: 19766 | Rev No.: B | Sheet No.: C04

NOTES:

- If any part of these drawings are unclear, please contact RS Eng.
- These plans are indicative only and shall not be used for construction set-out or scaled off.
- All services shall be identified on-site prior to construction.
- It is the responsibility of the lead designer/project manager to complete the design coordination and clash detection.
- This plan is copyright to RS Eng Ltd and should not be reproduced without prior permission.



MAIN ROAD - LONGITUDINAL SECTION - CH300-443m

1:500

FOR CONSENT

0 5 10
SECTION 1:500

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.
If any part of these documents are unclear, please contact RS Eng Ltd.

PROPOSED MARAE - ACCESS ROAD
CONCEPT CIVIL DRAWINGS
MAIN ROAD LONGITUDINAL SECTION

Client: TE HIKU O TE IKA MARAE
Location: TE HAPUA ROAD, TE HAPUA

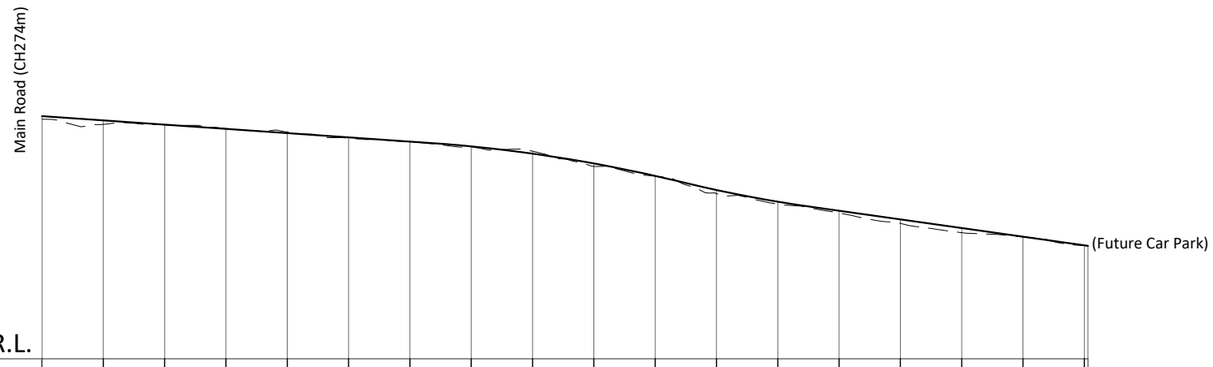
Date	Rev	Notes
01/10/2026	B	Alignment Amendment
27/05/2026	A	Original Issue

Drawn by: NW | Reviewed by: MJ | Approved by: MJ

Scale: 1:500 | Rev No.: B
Original: A3 | Sheet No.: C05
Job No.: 19766

NOTES:

- If any part of these drawings are unclear, please contact RS Eng.
- These plans are indicative only and shall not be used for construction set-out or scaled off.
- All services shall be identified on-site prior to construction.
- It is the responsibility of the lead designer/project manager to complete the design coordination and clash detection.
- This plan is copyright to RS Eng Ltd and should not be reproduced without prior permission.



Datum 45.000m R.L.

DESIGN LEVELS	64.434	64.088	63.743	63.397	63.051	62.705	62.312	61.721	60.919	59.908	58.759	57.805	57.065	56.360	55.656	54.951	54.246
DEPTH	0.327	0.026	-0.023	-0.098	0.078	0.071	0.035	-0.202	0.241	0.031	0.302	0.196	0.177	0.327	0.376	0.028	0.021
EXISTING LEVELS	64.107	64.062	63.766	63.495	62.973	62.634	62.277	61.923	60.679	59.877	58.457	57.609	56.888	56.033	55.280	54.922	54.225
VERT. GEOMETRY	-6.92%		R119.06m		-23.71%	R103.96m		-14.10%									
HORIZ. GEOMETRY	34.61m Lth.				R37.36m										13.32m Lth.		
CHAINAGE	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000	75.000	80.000	85.000

SIDE ROAD - LONGITUDINAL SECTION - CH0-85m

1:500

FOR CONSENT

0 5 10
SECTION 1:500

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.
If any part of these documents are unclear, please contact RS Eng Ltd.

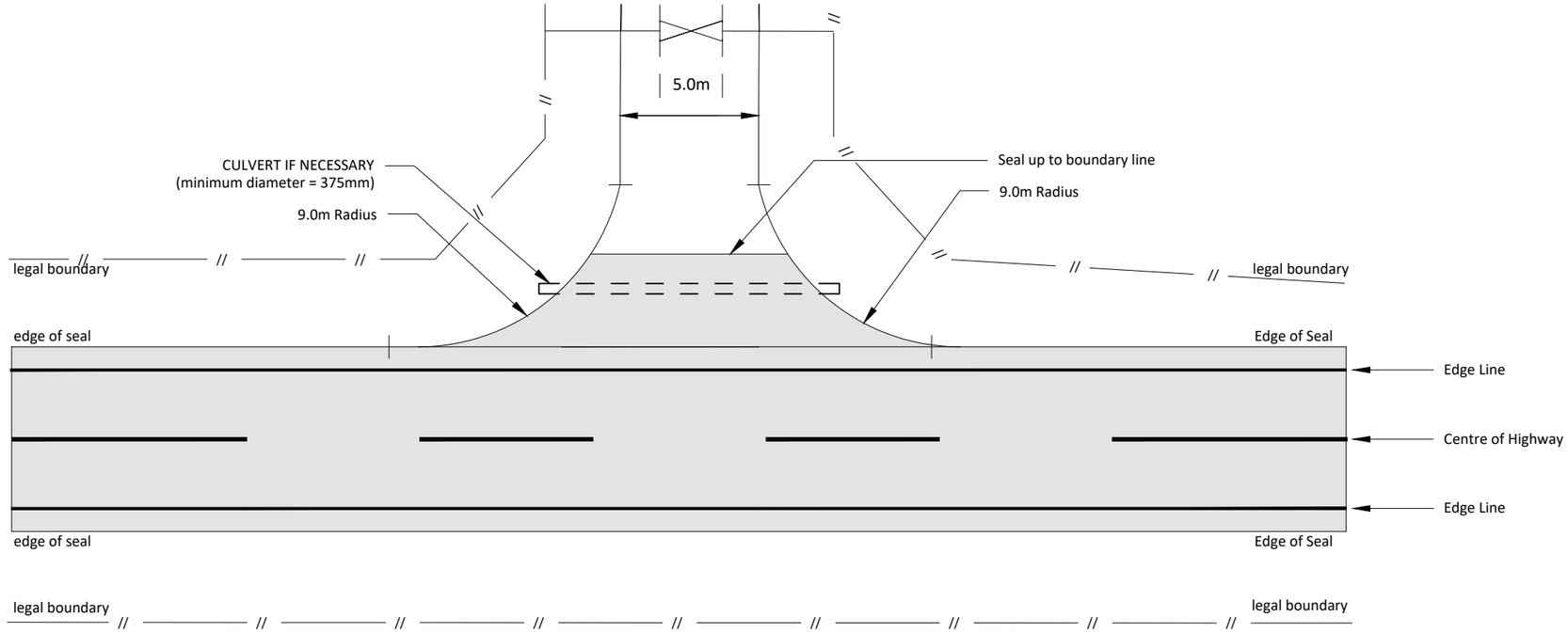
PROPOSED MARAE - ACCESS ROAD
CONCEPT CIVIL DRAWINGS
SIDE ROAD LONGITUDINAL SECTION

Client: TE HIKU O TE IKA MARAE
Location: TE HAPUA ROAD, TE HAPUA

Date	Rev	Notes
01/10/2026	B	Alignment Amendment
27/05/2026	A	Original Issue

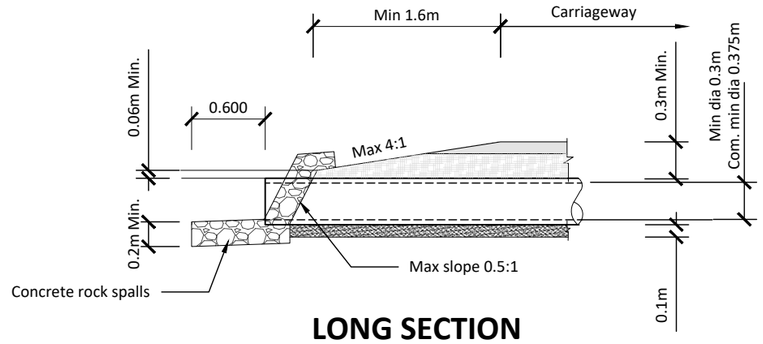
Drawn by: NW | Reviewed by: MJ | Approved by: MJ

Scale: 1:500
Original: A3
Job No.: 19766
Rev No.: B
Sheet No.: C06

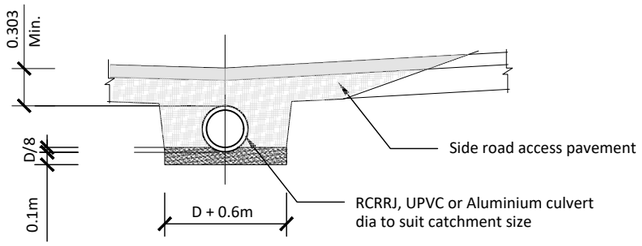


TYPICAL TYPE C - CROSSING DETAIL

1:250



LONG SECTION

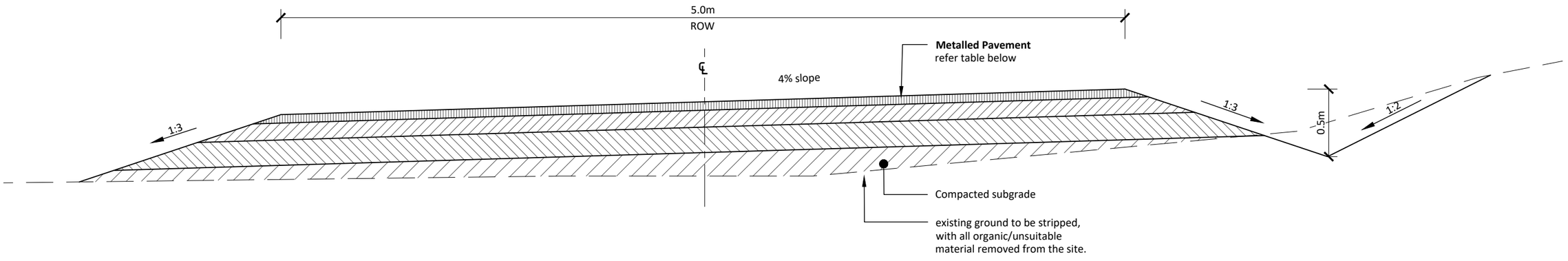


CROSS SECTION

VEHICLE CROSSING - CULVERT DETAILS

1:50

Gravel Surface	
SURFACE	50mm GAP20 running course
BASECOURSE	100mm GAP40
SUBBASE	150mm GAP65



PROPOSED ROW GRAVEL SURFACE - TYPICAL CROSS SECTION

1:25

FOR CONSENT

0 0.25 0.5 SECTION 1:25 | 0 2.5 5 PLAN 1:250

RS Eng Ltd
09 438 3273
office@RSEng.co.nz
2 Seaview Road,
Whangarei 0110

These drawings are copyright to RS Eng Ltd and should not be reproduced without prior permission.
If any part of these documents are unclear, please contact RS Eng Ltd.

PROPOSED MARAE - ACCESS ROAD
CONCEPT CIVIL DRAWINGS
TYPICAL DETAILS

Client: TE HIKU O TE IKA MARAE
Location: TE HAPUA ROAD, TE HAPUA

Date	Rev	Notes
01/10/2026	B	Alignment Amendment
27/05/2026	A	Original Issue

Drawn by: NW | Reviewed by: MJ | Approved by: MJ

Scale: As Shown
Original: A3
Job No.: 19766
Rev No.: B
Sheet No.: C07