

# Application for resource consent or fast-track resource consent

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

## 1. Pre-Lodgement Meeting

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

## 2. Type of Consent being applied for

*(more than one circle can be ticked):*

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

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

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

Yes  No

## 4. Consultation

Have you consulted with Iwi/Hapū?  Yes  No

If yes, which groups have you consulted with?

Who else have you consulted with?

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

## 5. Applicant Details

**Name/s:**

New Zealand Transport Agency Waka Kotahi (NZTA)

**Email:**

**Phone number:**

**Postal address:**

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

## 6. Address for Correspondence

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

**Name/s:**

Alex Erceg

**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:**

Christopher and Robyn Kimber

**Property Address/  
Location:**

520 Mangatoetoe Road

Kaitaia

**Postcode**

0482

## 8. Application Site Details

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

**Name/s:**

**Site Address/  
Location:**

**Postcode**

**Legal Description:**

**Val Number:**

**Certificate of title:**

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.

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

## 10. Would you like to request Public Notification?

Yes  No

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

(more than one circle can be ticked):

- Building Consent
- Regional Council Consent (ref # if known)
- National Environmental Standard consent
- Other (please specify)

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

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

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

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

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

## 13. Assessment of Environmental Effects:

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

Your AEE is attached to this application  Yes

## 13. Draft Conditions:

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

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

## 14. Billing Details:

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

**Name/s:** (please write in full)

New Zealand Transport Agency Waka Kotahi

**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)

Kim Harris Cottle

**Signature:**

(signature of bill payer)

**Date** 17-Feb-2025

**MANDATORY**

## 15. Important Information:

### Note to applicant

You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.

You may apply for 2 or more resource consents that are needed for the same activity on the same form. You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

### Fast-track application

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

### Privacy Information:

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

## 15. Important information continued...

### Declaration

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

**Name:** (please write in full)

**Signature:**

Date

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

### Checklist (please tick if information is provided)

---

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

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



# ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

## *Northern Fill Site – Peria Valley Road*

New Zealand Transport Agency Waka Kotahi  
Mangamuka Slip Response Project 2022

18 FEBRUARY 2025

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## QUALITY REVIEW AND APPROVAL RECORD

Item	Name	Date
<b>Prepared by:</b>	Alex Erceg Senior Planner, <b>Stellar Projects</b>	18 February 2025
<b>Reviewed by:</b>	Stuart Brooke Planning Manager, <b>Stellar Projects</b>	25 November 2024
<b>Reviewed by:</b>	Stephanie Kane Principal Planner, Environmental Planning (Auckland/Northland), <b>New Zealand Transport Agency Waka Kotahi</b>	15 January 2025
<b>Approved for lodgement by:</b>	Kim Cottle Principal Planner – Poutiaki Taiao / Environmental Planning Team, <b>New Zealand Transport Agency Waka Kotahi</b>	17 February 2025

## ACRONYMS, TERMS AND ABBREVIATIONS

Acronym/Term	Description
<b>AEE</b>	Assessment of Effects on the Environment
<b>EciA</b>	Ecological Impact Assessment
<b>EciA Guidelines</b>	EIANZ Guidelines for preparing an Ecological Impact Assessment 2018
<b>EIANZ</b>	Environmental Institute of Australia and New Zealand
<b>FNDC</b>	Te Kaunihera o Te Hiku o te Ika/Far North District Council
<b>FNDP</b>	Operative Far North District Plan 2009
<b>Gorge</b>	Mangamuka Gorge
<b>GRPA</b>	Government Roading Powers Act 1989
<b>HPL</b>	Highly Productive Land
<b>LTMA</b>	Land Transport Management Act 2003
<b>LUC</b>	Land Use Classification
<b>NES</b>	National Environmental Standard(s)
<b>NESCS</b>	Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011
<b>Northern Fill Site</b>	Cleanfill Site opposite 184 Peria Valley Road
<b>NPS</b>	National Policy Statement
<b>NPSFM</b>	National Policy Statement for Freshwater Management 2020
<b>NPSHPL</b>	National Policy Statement for Highly Productive Land 2022
<b>NRC</b>	Northland Regional Council
<b>NZCPS</b>	New Zealand Coastal Policy Statement 2010
<b>NZEM</b>	New Zealand Environmental Management Limited
<b>NZTA</b>	New Zealand Transport Agency Waka Kotahi
<b>pFNDP</b>	Proposed Far North District Plan 2024
<b>Project</b>	Establishment and operation of a cleanfill site
<b>pRPN</b>	Proposed Regional Plan for Northland 2024
<b>RMA</b>	Resource Management Act 1991
<b>RoT</b>	Record of Title
<b>RPS</b>	Regional Policy Statement for Northland
<b>SH1</b>	State Highway 1
<b>Site</b>	Lot 1 DP 35169 adjacent to 184 Peria Valley Road, Kaitaia
<b>Slip Response</b>	Mangamuka Slip Response Project 2022

## EXECUTIVE SUMMARY

On 19 August 2022, Te Tai Tokerau/ Northland was hit with a Severe Weather Event which resulted in a large number of landslides through the Mangamuka Gorge on State Highway 1 making it impassable. New Zealand Transport Agency Waka Kotahi established the “*Mangamuka Slip Response Project 2022*” to progress the remedial works required to reopen the road.

Zealand Transport Agency Waka Kotahi has undertaken slip remediation works over the length of State Highway 1 through the Mangamuka Gorge as part of the Mangamuka Slip Response 2022 project. Spoil from the northern side of the Gorge was initially disposed of at a Site at 6283 SH1, however, that fill site had reached capacity by mid-2023. A suitable site to accommodate further spoil material was required and this was identified adjacent to 184 Peria Valley Road, Kaitaia.

Due to constraints within the Gorge, such as topography and ecology the fill site was required to be outside of the Gorge. To address cultural concerns and mitigate the risk of spreading Kauri Dieback, spil from the norther half of the Gorge was required to be disposed of to the north of the Gorge.

The works were undertaken under the s330 Emergency Works Provisions of the RMA, whereby resource consent is required to be *sought retrospectively*, as it is considered that there are on-going adverse effects associated with the laying of additional aggregate.

The works involved the loss of indigenous vegetation and the permanent loss of a natural inland wetland with low ecological value. Resource consents are required under the Far North District Plan for:

- Fill activities exceeding 5000m<sup>3</sup> and 1.5m in height under Rule 12.3.6.2; and
- Land use within an indigenous wetland whereby water levels have been altered under Rule 12.7.6.2.

Overall, the activity is not considered to give rise to more than minor adverse effects on persons nor the environment and is not contrary to the relevant policies and objectives of the relevant statutory documents.

On-going consultation and engagement has been on-going throughout the Slip Response with relevant stakeholders, including Te Kaunihera o Te Hiku o te Ika/Far North District Council and man whenua.

The application can and should proceed non-notified and there are no reasons why resource consent cannot be granted for the activity.

# 1 BACKGROUND

On 19 August 2022, Te Tai Tokerau/ Northland was hit with a Severe Weather Event which resulted in a large number of landslides through the Mangamuka Gorge (the Gorge) on State Highway 1 (SH1) making it impassable. New Zealand Transport Agency Waka Kotahi (NZTA) established the “*Mangamuka Slip Response Project 2022*” (the Slip Response) in response.

Further detail is provided in the “*Summary of Applications*” document accompanying this report. The “*Summary of Applications*” should be read in conjunction with this report.

To aid in the Slip response, a cleanfill site was established adjacent to 184 Peria Valley Road (the Project), whereby soil from the northern half of the Gorge could be disposed.

## 2 INTRODUCTION

### 2.1 Report Purpose

NZTA is lodging applications for resource consent for land use consents under the provisions of the Resource Management Act 1991 (RMA).

This Assessment of Effects on the Environment (AEE) report has been prepared in support of the Application, in accordance with Section 88 of the RMA.

This application is accompanied and supported by the “*Summary of Applications*” report. The “*Summary of Applications*” report should be read in conjunction with this report as it provides the high-level overview of the Mangamuka Slip Response Project 2022.

The separate resource consent application form has been prepared in accordance with the requirements of Form 9 of the Resource Management (Forms, Fees, and Procedure) Regulations 2003 and the relevant Council application form requirements.

### 2.2 New Zealand Transport Agency Waka Kotahi

NZTA is a Crown entity with its functions, powers and responsibilities set out in the Land Transport Management Act 2003 (LTMA) and the Government Rounding Powers Act 1989 (GRPA). The primary objective of NZTA under Section 94 of the LTMA is to contribute to an effective, efficient, and safe land transport system in the public interest.

Its core functions can be summarised as:

- investing in land transport activities;
- managing the state highway network; and
- providing access to and regulation for land transport.

Section 96(1)(a) of the LTMA requires that NZTA exhibits a sense of social and environmental responsibility when undertaking its work. This statutory requirement is reflected in a raft of strategic and policy documents.

One of the core position statements is that NZTA will responsibly manage the land transport system's interaction with people, places, and the environment.

NZTA is also a network utility operator approved as a requiring authority under Section 167 of the RMA.

## 2.3 Project Overview

NZTA has undertaken slip remediation works over the 14km length of State Highway 1 through the Mangamuka Gorge as part of the Mangamuka Slip Response 2022 project. This involved the clearance of a large number of slips, and the associated spoil from those slips, as well as the spoil from drilling works associated with the remediation of the slips.

Spoil from the northern side of the Gorge was initially disposed of at a Site at 6283 State Highway 1, however that dump site had reached capacity by mid-2023. A suitable site to accommodate further spoil material was required and this was identified adjacent to 184 Peria Valley Road, Kaitaia (the Site).



**Figure 1:** Aerial Image of Site (with red polygon indicating extent of fill area prior to start of works) (Source: GoogleMaps)



**Figure 2:** Aerial Image of Site near completion of works (Image taken 29 October 2024)

This AEE relates to the establishment and operation of a cleanfill site at Peria Valley Road (the Northern Fill Site), which included the permanent loss, by way of draining and filling, of a “*natural inland wetland*” and an “*indigenous wetland*”.

The works were undertaken under the s330 Emergency Works Provisions of the RMA, whereby resource consent is required to be *sought retrospectively*, as it is considered that there are on-going adverse effects associated with the activity, namely the fill activities, being a land use within an “*indigenous wetland*”, that has altered the water levels of said wetland, through the permanent loss of wetland extent.

## 2.4 Resource Consents Sought

NZTA is submitting an application to Te Kaunihera o Te Hiku o te Ika/Far North District Council (FNDC) for the following resource consents being sought retrospectively:

- Consents under the Far North District Plan (FNDP) for:
  - Fill activities exceeding 5000m<sup>3</sup> and 1.5m in height under Rule 12.3.6.2; and
  - Land use within an indigenous wetland whereby water levels have been altered under Rule 12.7.6.2.

As will be identified in **Section 7.2.1.2**, resource consents are not required under the proposed Far North District Plan (pFNDP)

It is also noted here that Regional Resource Consents for the activities are required, and an application is being lodged with Northland Regional Council (NRC) concurrently.



## 3 DESCRIPTION OF THE EXISTING ENVIRONMENT

### 3.1 Location

The subject site is located adjacent to 184 Peria Valley Road, Kaitaia. The Site sits approximately 20km southeast of Kaitaia and approximately 2.6km northeast of the northern end of Mangamuka Gorge.

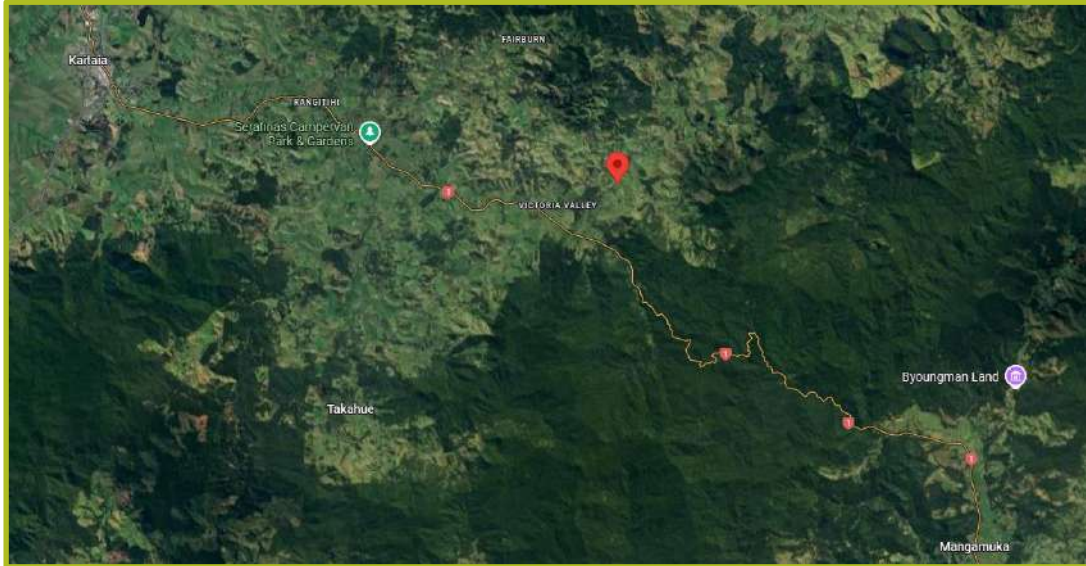


Figure 3: Site Location (indicated by red pin) (Source: GoogleMaps - accessed 12 November 2024)

### 3.2 Record of Title

The Site, sitting adjacent to 184 Peria Valley Road, owned by Christopher and Robyn Kimber, is held in Record of Title (RoT) NA1558/22 (Part-Cancelled) with the Legal Description Lot 1 DP 35169 (refer **Appendix A**).

There are no interests on the title that are relevant to the works that have been undertaken.

The allotment that the cleanfill site sits within is 85.8212 hectares (more or less).

### 3.3 Site Description

The cleanfill site sits within an operational farm, and within an area used for the grazing of stock. The area is sited in a road fronting paddock, with the access to the cleanfill area being via Peria Valley Road. The area is of rolling topography, stepping down from the road, creating a “*basin feature*”. The basin feature contains a “*hillslope seepage*” wetland area of approximately 1,400m<sup>2</sup> which is impounded by a raised farm track located along its lower edge. The Ecological Report (**Appendix B**) describes the ecological setting as “*comprise[ing] a small, shallow basin surrounded by gently rolling to steeply rolling hills dominated by pasture grasses*”. Further “*to the north [of the cleanfill site] is a farm track*”.



**Figure 4:** Aerial Photo showing location of cleanfill site taken prior to works being undertaken

Overall, the area was considered to be significantly modified, particularly by rural production activities, prior to the cleanfill activities being undertaken.

### **3.3.1 Natural Hazards**

The Site is not identified as being within any natural hazard areas (refer **Figure 5**). To the north of the cleanfill area, within the same property, there are some flood susceptible areas as evident on **Figure 5**. A Hazard Summary Report is attached as **Appendix C**.

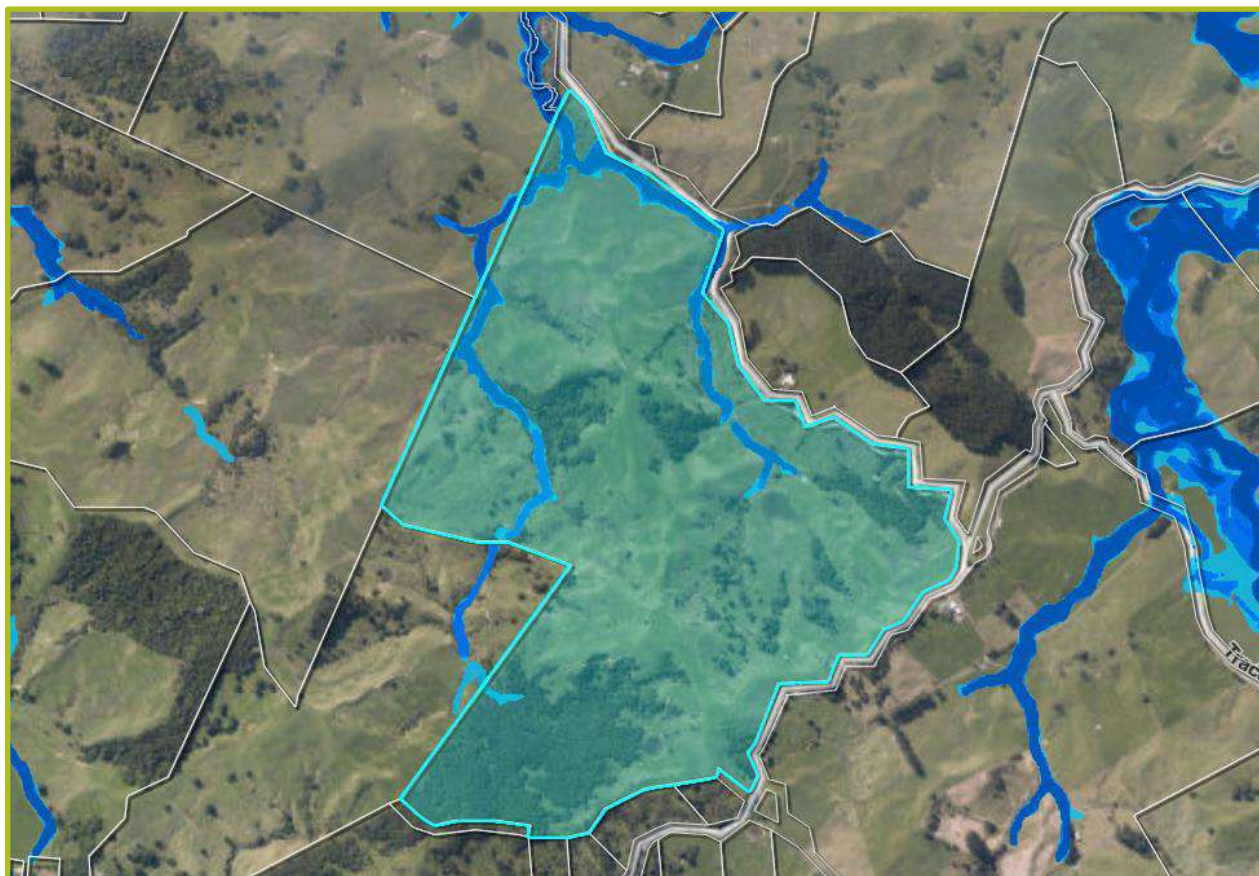
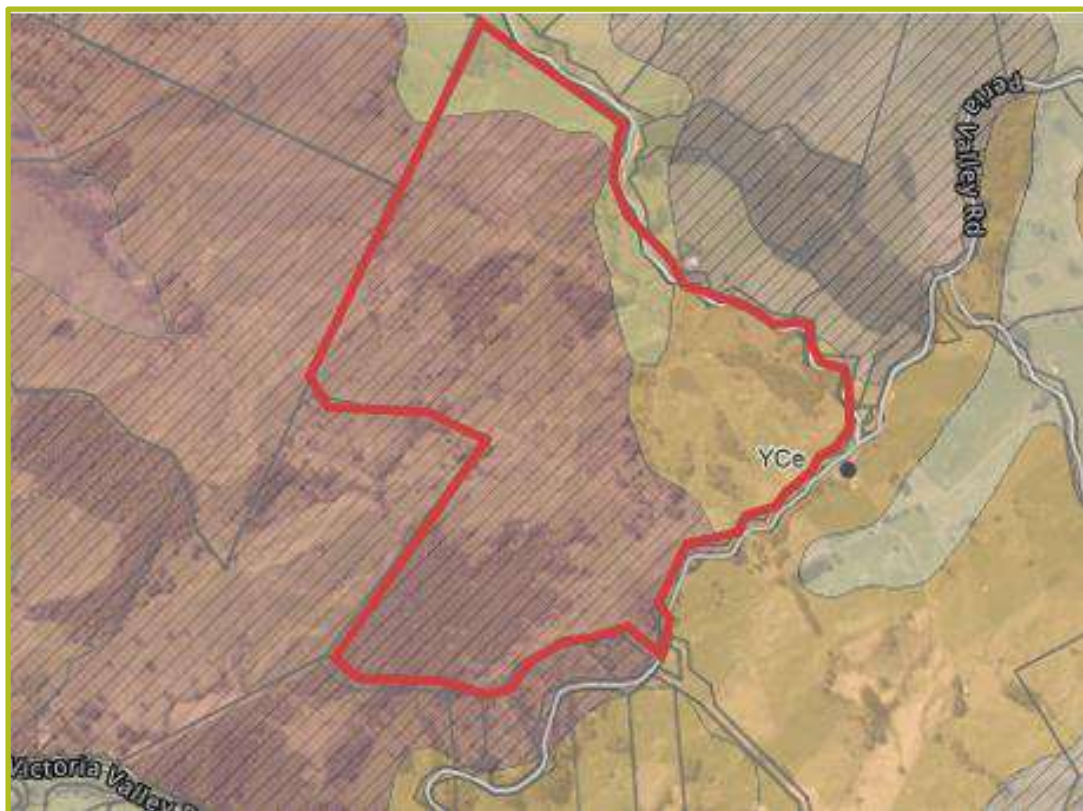


Figure 5: Flood Susceptible Areas (Source: NRC GIS Hazard Viewer – accessed 21 November 2024)

### 3.3.2 Soils

#### 3.3.2.1 Soil Types

Relevant to the location within the Site where the cleanfill is located, the soil types are identified as YCe and KNH, with the cleanfill site generally being located within the soil types identified as KNH (refer **Figure 6**).



**Figure 6:** Soil Types (red thatched = KNH; Orange = YCe) (Source: NRC Managing Northland Soils factsheet viewer - accessed 5 December 2024)

KNH is identified as being Konoti clay loam. The features of this can be found in the factsheet at **Appendix D**. YCe is identified as being Waitira clay. The features of this can be found in the factsheet at **Appendix D**.

### 3.3.2.2 Land Use Classification

The soils on the site have a land use classification (LUC) of LUC 4 and LUC 6 (refer **Figure 7**). To note, this is not considered to be highly productive land (HPL) under the National Policy Statement for Highly Productive Land (NPSHPL). A LUC report and map is attached as **Appendix E**.

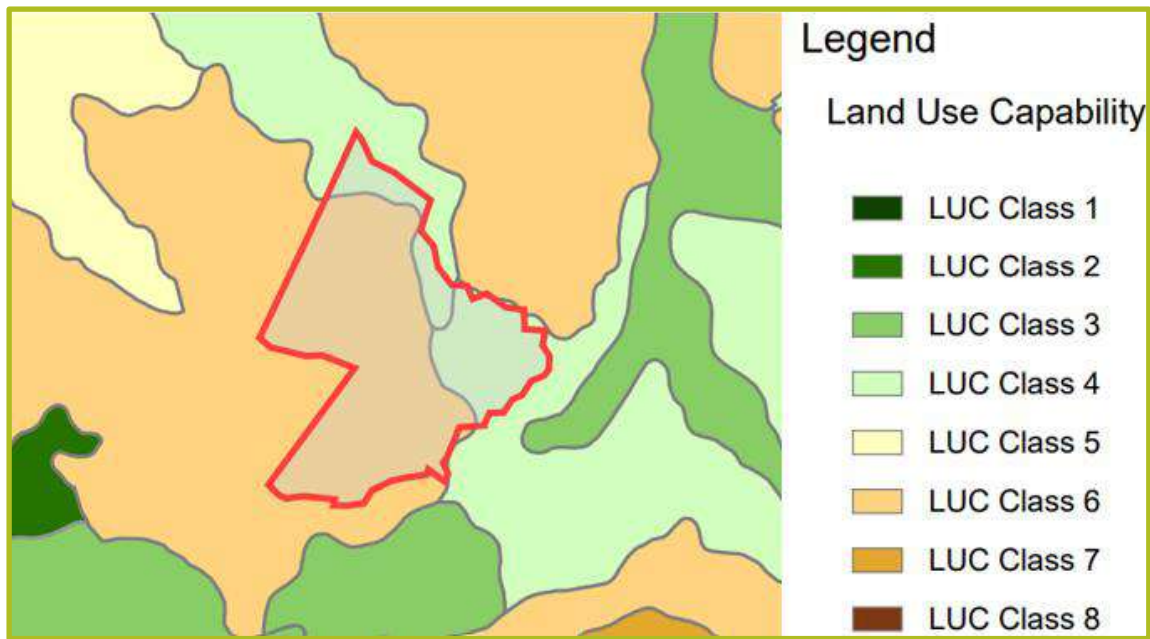


Figure 7: Land Use Classification (Source: OURENVIRONMENT Manaaki Whenua Landcare Research - accessed 21 November 2024)

### 3.3.3 Wetland Areas

As identified above, the basin feature forms a hillslope seepage, which meets the definition of a “wetland” under the RMA as it comprises “*permanently or intermittently wet areas... that support a natural ecosystem of plants and animals that are adapted to wet conditions*”. The hillslope seepage has been delineated into several wetland areas, with some of these areas being considered a “*natural inland wetland*” (refer **Figure 8**).

An Ecological Report (the Ecological Report) has been prepared by NZ Environmental Management (NZEM) which provides for the delineation and the identification of wetland areas (refer **Appendix B**).

The Ecological Report further states that the “*farm track along the northern edge of the proposed spoil site may be locally increasing soil moisture along the lower edge of the hillslope seepage wetland*”.

Furthermore, the Ecological Report makes the following conclusion:

“*Due to the abundance of wīwī and spike sedge, the cover of indigenous species is greater than 50%, and most of the wetland meets the definition of an indigenous wetland in the Far North District Plan*”



Figure 8: Wetland Areas (Source: NZEM)

### 3.3.3.1 Exotic Grassland on Hillslope

A large proportion of the area used for the cleanfill site consists of exotic grassland, dominated by pasture species typical of rural production land. This grassland is dominated by kikuyu (*Cenchrus clandestinus*), paspalum (*Paspalum urvillei*), parsley dropwort (*Oenanthe pimpinoides*), and buttercup (*Ranunculus repens*) with occasional gorse (*Ulex europaeus*).



Figure 9: Exotic grassland dominant in foreground of cleanfill area (Source: NZEM)

### 3.3.3.2 *Wīwī-Spike Sedge Ruhland on Hillslope Seepage*

An area of the hillslope seepage is dominated by two indigenous species, wīwī (*Juncus edgariae*) and spike sedge (*Eleocharis acute*). Mercer grass (*Paspalum distichum*), and soft rush (*Juncus effusus var. effusus*) are also present, and exotic grasses are abundant towards the drier top edge of the wetland area.

The Ecological Report concludes that the hydrophytic vegetation meets the definition of an “*indigenous wetland*”. The “*indigenous wetland*” was approximately 1,365m<sup>2</sup>.



Figure 10: Wīwī-Spike Sedge Rushland

### 3.3.3.3 Kahikatea-rimu Treeland in Hillslope Seepage

Near the northwest edge of the hillslope seepage wetland is a small area of kahikatea-rimu treeland. This treeland comprises seven kahikatea (*Dacrycarpus dacrydioides*) and two rimu (*Dacrydium cupressinum*).

The Ecological Report (**Appendix B**) concludes the treeland area also meets the definition of an “*indigenous wetland*”. The “*indigenous wetland*” area was approximately 35m<sup>2</sup>.



**Figure 11:** Kahikatea-Rimu Treeland (Source: NZEM)

The Ecological Report found that many of these trees exhibited late-stage symptoms of disease and/or overall stunted growth and ill-health.

### 3.3.4 Ecological Values of Wetland Areas

Aerial imagery suggests the wīwī and spike sedges within the wetland areas were less than 10 years old. As evident in **Figure 12** below, imagery from 2016 shows the sedges starting to establish, and factoring in the land use and grazing of stock, supports such a conclusion.





**Figure 12:** Aerial Imagery (Clockwise from top left 2016-2022) (Source: Google Earth - accessed 1 November 2024)

With respect to the ecological value of the above wetland areas and vegetation types, the Ecological Report concluded that:

*“The hillslope seepage wetland has been severely degraded by historic vegetation clearance, followed by a long history of grazing. This wetland, prior to human modification, was most likely swamp forest, dominated by kahikatea, with pukatea (*Laurelia novae-zelandiae*) and maire tawake (swamp maire; *Syzygium maire*) also potentially present as canopy trees. Currently, most of the wetland has a cover of wetland rushes and grasses. Two indigenous species, wīwī and spike sedge, remain dominant as these can persist in grazed habitats. The wetland retains a small stand of kahikatea and rimu, that likely regenerated at a time when the site reverted to scrub, before clearance reinstated grassland and rushland over most of the proposed spoil site. The wīwī-spike sedge rushland in hillslope seepage is of Low ecological value. The kahikatea-rimu treeland in the hillslope seepage is of Moderate ecological value.”*

### 3.4 Flora

As per the Ecological Report, the kahikatea in the kahikatea-rimu treeland provides habitat for an epiphytic lichen, *Teloschistes flavicans*, also known as the golden-hair lichen (refer **Figure 13**). This lichen is identified as having a conservation status of ‘At Risk-Declining’. The Ecological Report identified that the lower trunks of the trees supported at least 10 [visible] plants.



**Figure 13:** (Left) *Teloschistes flavicans* (gold coloured) on Kahikatea within Kahikatea-rime Treeland; (Right) *Teloschistes flavicans* (gold coloured) on Kahikatea in the surrounding area (Source: NZEM)

NZEM undertook a survey to determine the size of the local *Teloschistes flavicans* population on trees on the same property, which identified a further c. 90 individuals, spread across 16 other kahikatea within 250m of the cleanfill area (refer **Appendix B**).

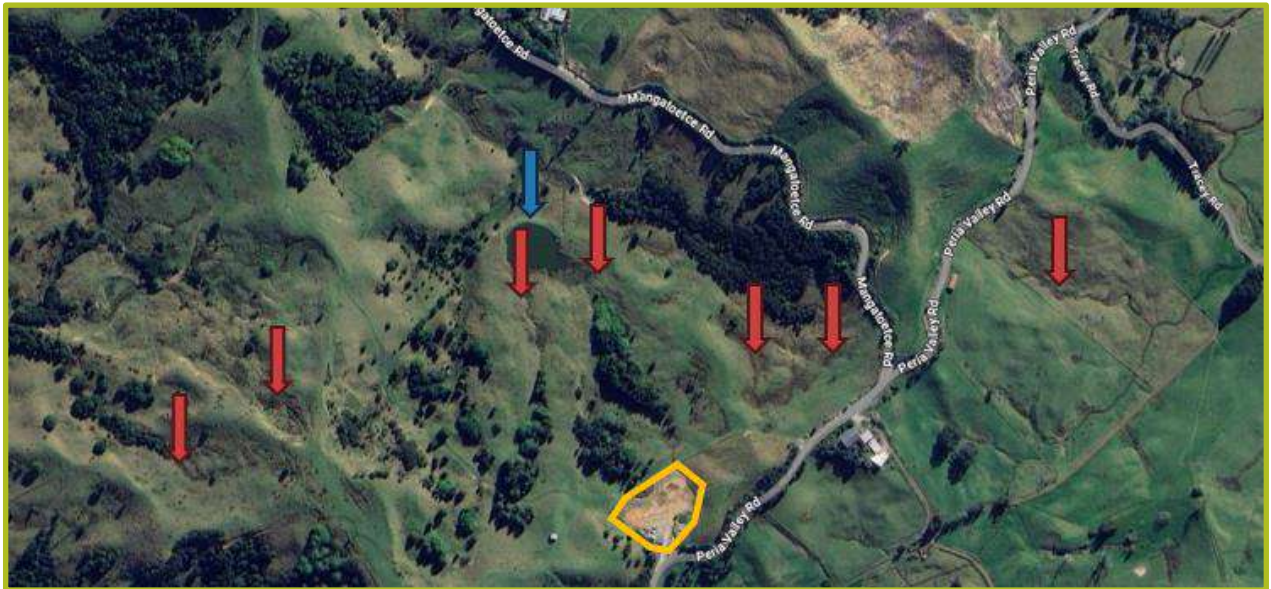
### 3.5 Surrounding Environment

The surrounding environment almost entirely consists of rural production and open space including Reserve Land. The Maungataniwha Ranges and Mangamuka Gorge sit to the south, with the nearest urban area being Kaitaia.

The site sits adjacent to a residential dwelling at 184 Peria Valley Road, with another (what appears to be) residential dwelling approximately 640m to the west of the Site.

Peria Valley Road is a typical unformed gravel rural road, with SH1 approximately 2.5km to the west of the Site.

Aerial imagery (refer **Figure 14**) indicates similar hillslope seepage type wetlands in the immediate environment, both contained within the same allotment and within other allotments in close vicinity to the cleanfill and further afield. Directly north of the cleanfill site there is a water feature sitting elevated above the cleanfill site (with noticeable hillslope seepage wetlands also visible in the aerial imagery). There are stands of vegetation throughout the surrounding environment.



**Figure 14:** Features in the surrounding environment (Cleanfill Site = Orange Polygon; Other Potential Similar Hillslope Seepage Wetlands - red arrows; Water feature - blue arrow) (Source: GoogleMaps - accessed 12 November 2024)

## 4 PLANNING CONTEXT

**Table 1** sets out the relevant planning provisions under the Far North District Plans and Regional Plans and matters, relating to the Site.

**Table 1:** Planning Context and Features

<b>FNDP Zone (Operative):</b>	Rural Production
<b>FNDP Zone (Proposed):</b>	Rural Production
<b>FNDP Resource area</b>	N/A
<b>FNDP Notations</b>	Top Energy High Voltage Power Lines

<b>Soil classification:</b>	LUC 4 – Arable. .
<b>Northland brown kiwi &amp; mudfish distribution:</b>	Kiwi Present
<b>Significant indigenous vegetation &amp; significant habitats of indigenous fauna:</b>	N/A
<b>Surface Water Protection zone:</b>	N/A
<b>NRC Natural Hazards:</b>	Tsunami Zone: Safe Area
<b>Designations:</b>	N/A
<b>Statutory Acknowledgement Area:</b>	Treaty Settlement Area of Interest: Te Rarawa
<b>HAIL:</b>	The site is not mapped as an identified HAIL site on Northland Regional Councils Selected Land use Register.
<b>Heritage &amp; Archaeology:</b>	No heritage or archaeological sites are mapped on, or in proximity to, the site on the New Zealand Archaeological Association online maps or FNDC GIS maps.
<b>Regional Plan notations and requirements:</b>	<ul style="list-style-type: none"> <li>• Hill Country and Lowland Areas: Hill Country Area</li> <li>• River Water Quantity Management Units: Small River</li> <li>• Groundwater Management Units: Groundwater Zone</li> </ul>
<b>Other relevant planning documents:</b>	N/A
<b>Reserves and protected areas and relevant management plans / strategies:</b>	N/A

## 5 DESCRIPTION OF PROJECT

### 5.1 Reason for the project

Spoil from the northern side of the Gorge was initially disposed of at 6283 State Highway 1, however that fill site had reached capacity by mid-2023. An alternative location was then required, and 184 Peria Valley Road was identified and selected (the northern cleanfill site). The northern cleanfill site was established to support the works associated the remediation of slips on the Northern side of the Mangamuka Gorge as part of the Mangamuka Slip Response Project 2022. These works have been described in detail in the accompanying “*Summary of Applications*” report and are not repeated here.

As noted in the “*Summary of Applications*”, the Mangamuka Gorge has high ecological and cultural significance and is steep, narrow and windy, and therefore a remote cleanfill site was required in order to safely and appropriately dispose of cleanfill, being spoil from the slips.

Furthermore, cleanfill sites needed to be located as close as possible to the Gorge in order to minimise and mitigate the risk of the spread of Kauri Dieback Disease (*Phytophthora agathidicida*). However, I do highlight that no Kauri were identified within the immediate area of where spoil was taken from, and where earthworks were undertaken.

## 5.2 Description of the Project

### 5.2.1 Cleanfill Areas

A total of 11,718m<sup>3</sup> of cleanfill was disposed of over the entirety of the cleanfill area. Cleanfill was disposed of over three stages (refer **Figure 15** and **Figure 16**) and to a depth of 4.5m. Cross sections are attached at **Appendix I**, which includes the running totals of cleanfill deposited.

- **Stage 1 (Southern Extent)**: an area of approximately 2,650m<sup>2</sup>. All fill was unloaded at the tip head and turn around area on the site. The material was then pushed into the fill site and was layered in no greater than 200mm layers, and track rolled for compaction. This area was filled during the dry summer period over 2023/2024.
- **Stage 2 (Northern Extent)**: An area of approximately 1,900m<sup>2</sup>. This area is located to the northwest of the Stage 1 area. The site was staged in a manner that enabled the fill to be moved, and track rolled into place at the base of the slope. The material was layered in no greater than 200mm layers and track rolled for compaction. Stage 2 was filled during the winter period in 2024.
- **Stage 3 (Western Extension)**: On 31 August 2024, it was identified that further area was required to dispose of spoil and therefore the cleanfill was expanded to the south-west of the wetland to accommodate this. The material was layered in no greater than 200mm layers and track rolled for compaction.

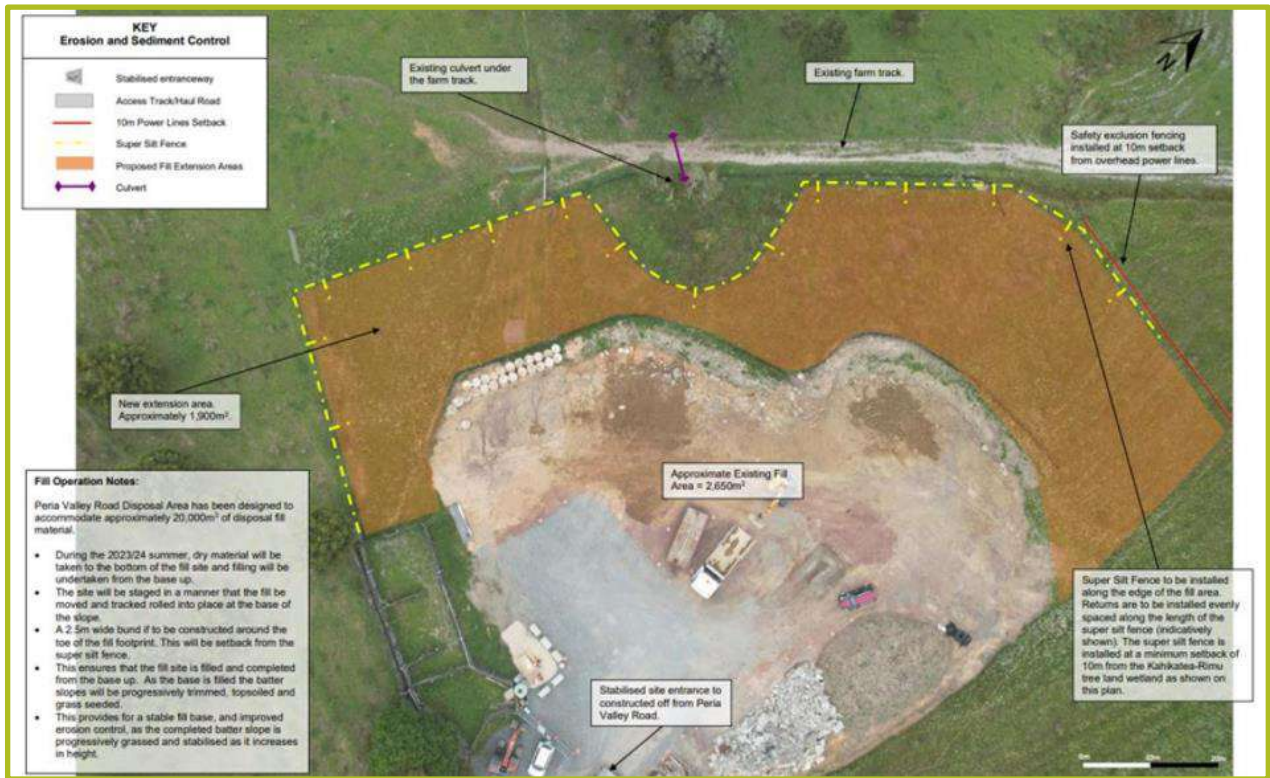


Figure 15: Snip from the Erosion and Sediment Control Plan Indicating Stage 1 and Stage 2 fill areas (Source: Erosion and Sediment and Control Plan)



Figure 16: Snip from Erosion and Sediment Control Plan Showing Extension Fill Area, being Stage 3 (Source: Erosion and Sediment and Control Plan)

## 5.2.2 Draining of Indigenous Wetland

As has been identified, the Site contained areas defined as an “*indigenous wetland*”. The area delineated as the wīwī-spike Rushland required draining and filling in order to operate the cleanfill site. This resulted in the complete and permanent loss of that area of natural inland wetland, being 1,365m<sup>2</sup> of wetland. A rough approximation to be used as a visual guide is in **Figure 17** below.



**Figure 17:** Rough approximation to indicate extent of indigenous wetland loss (orange outline)

As the area delineated as the kahikatea-rimu treeland had mature trees and the “*At-risk Declining*” *Teloschistes flavicans* lichen, it was concluded to have moderate ecological value, therefore the area was excluded and protected from the cleanfill activities.



**Figure 18:** Orange Polygon indicates protected Kahikatea-rimu Treeland Natural Inland Wetland (Image taken 29 October 2024)

### 5.3 Indicative construction methodology

Prior to beginning the fill activities on-site, Southern Skies prepared a Sediment and Erosion Control Plan (refer **Appendix F**). This was implemented on-site and included the installation of subsoil drainage and silt fencing around the perimeter of the cleanfill site.



**Figure 19:** (Left) Subsoil Drainage being Installed; (Right) Silt Fence around the perimeter



Subsoil drainage was installed that provided for the drainage of groundwater and fill material placed in the Stage 1 and 3 areas, feeding into an existing culvert beneath the farm track, adjacent to the Kahikatea/rimu wetland (refer **Figure 20**).

As there was an overhead electricity line running to the west of the cleanfill area, a 10m buffer was established and no works were undertaken within that buffer zone (refer **Figure 20**).



**Figure 20:** Snip from Erosion and Sediment Control Plan indicating buffer from electricity line, subsoil drainage and existing culvert

## 6 ALTERNATIVES

Prior to establishing the cleanfill site, consideration was given for practicable alternative locations for the activity (refer **Appendix G**). It is noted that due to cultural considerations and project requirements, the cleanfill site had to be north of the Mangamuka Gorge and therefore any site south of the Gorge was discounted from consideration as a practicable alternative.

**Table 2** below sets out the requirements and the rationale for those requirements when consideration was had for alternative sites.

*Table 2: Requirements for Alternative Locations*

Requirements	Rationale
Fill site needs to be as close as possible to the project site	<p><u>Project costs:</u> minimise transport costs and</p> <p><u>Project efficiency:</u> maximise efficient removal of spoil to avoid project delays.</p> <p><u>Hapu considerations:</u> spoil should remain in same ecological district.</p> <p><u>Other factors:</u> minimise CO<sub>2</sub> emissions, damage to local roads, disturbance to communities.</p>
Natural Hazards	Avoid sites with natural hazards including land instability and flood hazards.

Safe site access	Clear sight lines in both directions, existing formed access preferred. Room onsite for truck manoeuvring.
Minimum site size	Minimum 4,000m <sup>2</sup> area / capable of accommodating 5000m <sup>3</sup> + to be worth the cost of setup and landowner agreement etc
Site topography	Can laden trucks access the dumpsite.
Landowner agreement	NZTA do not own any suitable land on north side of Mangamuka Gorge, so all fill sites needed to be negotiated with private landowners.
Kauri Dieback	<ul style="list-style-type: none"> <li>• Fill site needs to be clear of any Kauri to avoid potential spread of Kauri Dieback.</li> <li>• Needs to be kept in the same location.</li> </ul>
Environmental effects	Avoid fill sites which require modification to: <ul style="list-style-type: none"> <li>• Natural wetlands</li> <li>• Streams</li> <li>• Ecologically Significant Indigenous vegetation</li> <li>• Outstanding Natural Landscapes</li> </ul>
Cultural effects	Avoid archaeological sites or other sites of cultural importance where the fill site will be.
Other Planning restrictions	Avoid sites with any other planning overlays or restrictions that would impact on establishing a fill site.

Overall, the assessment of alternatives (refer **Appendix G**) considered that:

*“[E]very other practicable alternative location for a fill site in the region to serve the northern section... would have equal or greater adverse effects on a natural inland wetland... Along the State Highway are basically flat areas with tributary streams feeding into the Victoria River, these flats are prone to flooding and a substantial amount on land on the flats are within the flood hazard zones. These flats are surrounded on both sides by hilly terrain. On the surrounding hills the majority of the land was either; inaccessible, too steep to fill or had areas where it plateaued but then of course held water and rushes etc would be present”.*

It was therefore concluded that there were no other viable alternative locations for the cleanfill operation.

# 7 STATUTORY CONTEXT

## 7.1 Overview

As has been detailed, particularly in the “*Summary of Application*” the works have been undertaken utilising the emergency works provisions pursuant to s330 of the RMA. Therefore, only the activities that have on-going adverse effects following the completion of the works require resource consent.

It is highlighted that all works associated with the cleanfill site at Peria Valley Road have been completed, and it has been determined there are on-going adverse effects associated with those works, namely in relation to the permanent loss of wetland extent. Consequently, resource consent is required, *retrospectively* where there has been an infringement of any District or Regional rules.

An assessment against the rules of the following statutory documents is therefore required:

- Operative Far North District Plan 2009 (FNDP)
- Proposed Far North District Plan 2024 (pFNDP)

A complete “*Planning Assessment*” has been undertaken, which provides an assessment against all the relevant rules and regulations of the above documents, determines any consent triggers, and details where and why resource consents are required retrospectively (or not) pursuant to s330 of the RMA. This is included at **Appendix H**.

## 7.2 Reasons for Consent

The assessment against the rules of the following statutory documents is set out in the sections below:

- Operative Far North District Plan 2009
- Proposed Far North District Plan 2024


For completeness, it is not considered the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NESCS) is relevant to this proposal as the site is not “*a piece of land*” as per the NESCS, and therefore consideration against the NESCS is not required.

### 7.2.1 Proposed Far North District Plan

A full assessment against the pFNDP is included in the Planning Assessment (**Appendix H**).

#### 7.2.1.1 Legal Standing of pFNDP

The pFNDP does not currently have full legal effect; however, certain provisions of the Plan do have legal effect, as indicated by the following statement shown in the pFNDP ePlan:

This chapter contains provisions that have legal effect. They are identified with a  to the right hand side of the provision.

With respect to this application, the following chapters have provisions that have legal effect:

- Ecosystems and Indigenous Biodiversity
- Earthworks

An assessment against the rules with legal effect in these chapters is included in **Section 7.2.1.2** below.

### 7.2.1.2 pFNDP Rules Assessment

It is **not considered** that the cleanfill activity infringed any rules under the pFNDP as set out in the Planning Assessment at **Appendix H**. Therefore, resource consents under the pFNDP are **not required**.

The Permitted Activities relied upon are indicated in **Table 3** below.

**Table 3:** pFNDP Rules Assessment

Rule	Activity	Activity Status
<i>Earthworks (EW) Chapter</i>		
<b>EW-R12</b>	<i>Earthworks and the discovery of suspected sensitive material that complies with the standard EW-S3</i>	<b>Permitted Activity</b>
<b>EW-R13</b>	<i>Earthworks and erosion and sediment control that complies with the standard EW-S5</i>	<b>Permitted Activity</b>
<i>Ecosystems and Indigenous Biodiversity (IB) Chapter</i>		
<b>IB- R1</b>	<i>Indigenous vegetation clearance from land which was previously cleared and the indigenous vegetation to be cleared is less than 10 years old</i>	<b>Permitted Activity</b>

#### 7.2.1.2.1 Rule IB-R4 Indigenous vegetation clearance and any associated land disturbance outside a Significant Natural Area

Rule IB-R4 provides for indigenous vegetation clearance and any associated land disturbance outside a Significant Natural Area as permitted activities, as follows:

**Where:**

**PER-1**

1. A report has been obtained from a suitably qualified and experienced ecologist confirming that the indigenous vegetation does not meet the criteria for a Significant Natural Area and it is submitted to Council 14 days in advance of the clearance being undertaken; and
2. It does not exceed the following amounts per site over a 5-year period:
  - i. Rural Production zone, Horticulture zone, Māori Purpose zone and Treaty Settlement Land Overlay – 5,000m<sup>2</sup> if not in a remnant forest, otherwise 500m<sup>2</sup> in a remnant forest; or
  - ii. All other zones – 500m<sup>2</sup>.

**PER-2**

1. A report has not been obtained from a suitably qualified and experienced ecologist confirming that the indigenous vegetation does not meet the criteria for a Significant Natural Area and a

*report has not been submitted to Council 14 days in advance of the clearance being undertaken;  
and*

*2. It does not exceed 100m<sup>2</sup> per site in any calendar year.*

The site is within the rural production zone and the area of wetland affected is 1,365m<sup>2</sup>, which consequently means indigenous vegetation clearance did not exceed 1,365m<sup>2</sup>, which is less than the 5000m<sup>2</sup> maximum under PER-1 of Rule IB-R4. Furthermore, the Ecological Report (refer **Appendix B**), concludes the vegetation does not meet the criteria for “*Significant Natural Area (SNA)*”<sup>1</sup>. Therefore, with the exception of providing that Report to Council 14 days in advance of the clearance being undertaken, the indigenous vegetation clearance would comply with PER-1 of Rule IB-R4 and therefore would be a **Permitted Activity**.

However, Rule IB-R4 has the following note regarding its applicability regarding legal effect:

*This rule only has immediate legal effect for indigenous vegetation clearance where compliance is not achieved with PER-2 (i.e. in circumstances where a report confirming that the indigenous vegetation is not a Significant Natural Area has not been obtained).*

It is considered that the above statement, means that Rule IB-R4 would only have immediate legal effect where the vegetation is or is likely to be considered an SNA.

The vegetation clearance was undertaken using emergency works provisions under s330 of the RMA therefore, there was no time to provide the report 14 days in advance of the vegetation clearance required by IB-R4. As PER-1 of Rule IB-R4 does not have immediate legal effect, it is not considered that there is any statutory requirement to provide that report within the timeframe specified. As the report has now been obtained and is attached as **Appendix B**, it is considered that had Rule IB-R4 had legal effect, the clearance of the vegetation pursuant to that rule would:

- Have been a permitted activity; or
- Could be deemed a permitted activity under s87BB of the RMA for a marginal or temporary non-compliance; or
- There would be no on-going residual adverse effects associated the vegetation clearance above that of the permitted baseline that would require retrospective resource consent as per the provisions of s330 of the RMA, as in this case the infringement would have related to notification which would result in no adverse effects on the environment in any case.

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<sup>1</sup> Which, as per the pFNDP, means an area:

- identified in Schedule 4 of the District Plan as an area of significant indigenous vegetation or significant habitat of indigenous fauna; or*
- assessed by a suitably qualified and experienced ecologist as meeting one of the criteria for ecological significance in Appendix 5 of the Regional Policy Statement for Northland 2016 or within any more recently gazetted National Policy Statement on indigenous biodiversity.*

Therefore, it is not considered that Rule IB-R4 has legal effect in his regard, and nevertheless resource consent would not be required.

## 7.2.2 Operative Far North District Plan

**Table 4** below sets out the reasons for resource consent and the resource consents that are required and hereby sought pursuant to the FNDP.

**Table 4:** FNDP

Rule	Activity	Activity Status
12.3.6.3	<i>For fill activities associated with the establishment and operation of a cleanfill exceeding 20,000m<sup>3</sup> and 1.5m in height in the Rural Production Zone</i>	<b>Discretionary Activity</b>
12.7.6.3	<i>Land use, being the establishment and operation of a cleanfill within an indigenous wetland greater than 200m<sup>2</sup> that has altered the water levels</i>	<b>Discretionary Activity</b>

## 7.3 Overall Application Status

The overall activity status of this application is **Discretionary**.

# 8 OTHER STATUTORY APPROVALS

The “*Summary of Applications*” sets out all other statutory approvals required for the Slip Response as a whole. For this activity in particular, no approvals, other than resource consent under the RMA are required.

An application for resource consent pursuant to Regulation 45B of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 is being lodged with NRC concurrently.

# 9 CONSULTATION AND ENGAGEMENT

The “*Summary of Applications*” sets out all consultation and engagement undertaken with respect to the overall Mangamuka Slip Response Project.

In addition, landowner approval was obtained and an agreement entered, to utilise their land for the cleanfill.

Throughout the project, as per the “*Summary of Applications*” on-going consultation has been had with FNDC. In particular, formal pre-application meetings have been held, via Microsoft Teams, on:

- 22 October 2024

# 10 ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

Pursuant to s330 of the RMA, resource consent is being sought retrospectively for activities associated with the establishment and operation of a cleanfill site, whereby that operation is now completed. Resource

consent is only required to address any on-going adverse effects; therefore, this assessment is limited to an assessment of the on-going effects on the environment. Where there are no on-going adverse effects, this will not be assessed, such as those related to noise or traffic.

## 10.1 Effects that “*may*” or “*must*” be disregarded

Section 95D of the RMA provides that:

*A consent authority that is deciding, for the purpose of section 95A(8)(b), whether an activity will have or is likely to have adverse effects on the environment that are more than minor—*

- (a) must disregard any effects on persons who own or occupy—
  - i. the land in, on, or over which the activity will occur; or*
  - ii. any land adjacent to that land; and**
- (b) may disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect; and*
- (c) in the case of a restricted discretionary activity, must disregard an adverse effect of the activity that does not relate to a matter for which a rule or national environmental standard restricts discretion; and*
- (d) must disregard trade competition and the effects of trade competition; and*
- (e) must disregard any effect on a person who has given written approval to the relevant application.*

### 10.1.1 Owners/Occupiers of the land in, on or over which the activity will occur and any land adjacent to that land.

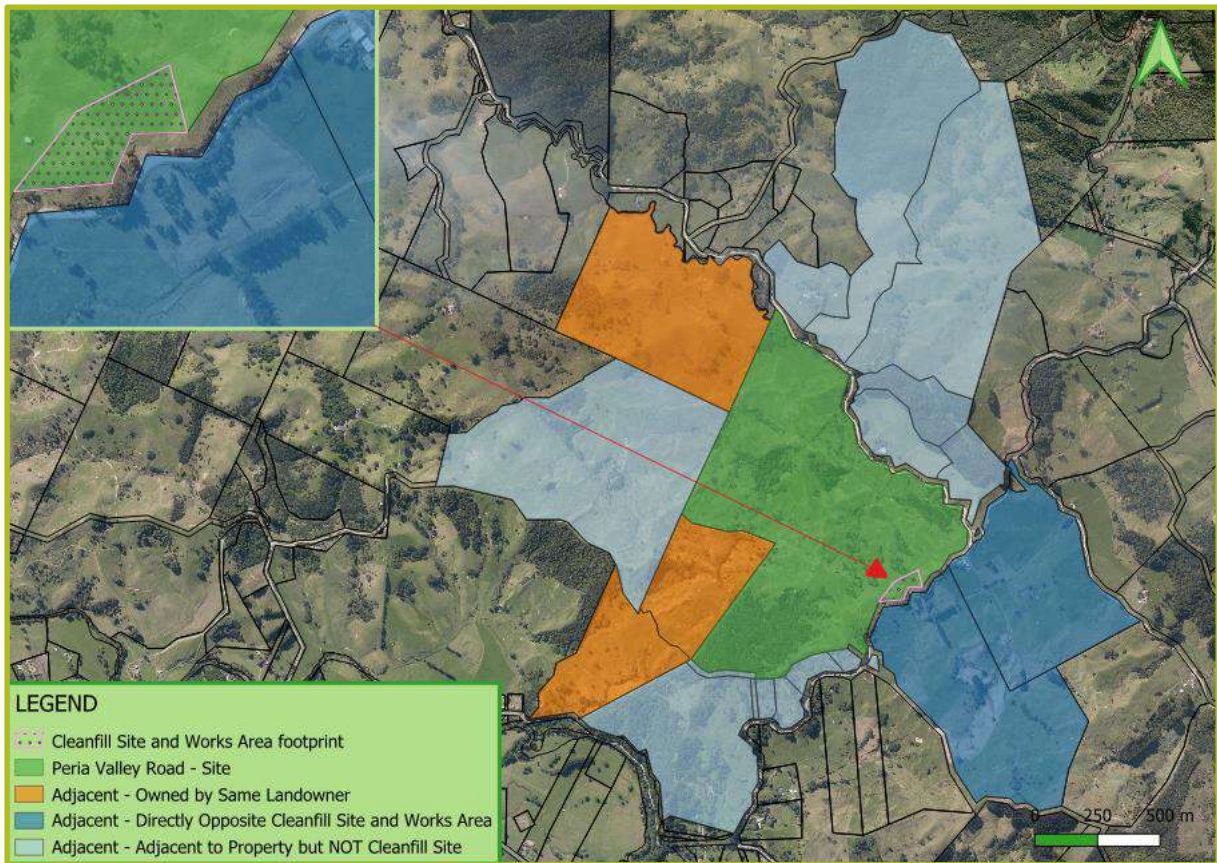
When assessing whether an activity will have or is likely to have adverse effects on the environment that are more than minor, Section 95D of the Act states that the consent authority must disregard effects on persons who own or occupy the land in, on or over which the activity will occur and any land adjacent to that land.

Therefore, effects on the landowner have been disregarded. With respect of “*any land adjacent to that land*”, the following land is considered adjacent (refer **Table 5** and **Figure 21**):

**Table 5: Legal Descriptions of Land Considered Adjacent**

Legal Description(s)	Registered Owners
Lot 1-2 Deposited Plan 15595 and Lot 9 Deposited Plan 15596	Anne Reta Stanton and David Hamilton Stanton
Section 1 Survey Office Plan 65598	Ian Taylor Bamber
Lot 1 Deposited Plan 396533	Steven Holt Pedersen and Veronica Margaret Holt Pedersen
Lot 3 Deposited Plan 396533	Gerard Reyneke and Ingrid Spitze
Lot 1 Deposited Plan 35760	Paul Allen Donaldson
Part Allotment 16 Parish of Maungataniwha and Part Western Part Allotment 17 Parish of Maungataniwha	Roger Allen Francis White and Suparat White
Allotment 229 Parish of Maungataniwha and Allotment 155 Parish of Kaiaka	Christopher Kenneth Kimber and Robyn Audrey Kimber
Lot 2 Deposited Plan 127106	Sinead Yvonne Fraser and Richard James Kimber
Part Allotment 84 and Part Allotment 86 Parish of Kaiaka and Lot 15 Deposited Plan 151158	Christopher Kenneth Kimber and Robyn Audrey Kimber
Lot 6 Deposited Plan 151158	Louise Anne Marshall
Lot 1 and Lot 11 Deposited Plan 151158	Leaf and Beef Limited
Lot 1 Deposited Plan 472985	Abdul Janif and Zakeeda Nisha Khan
Lot 1 Deposited Plan 173239	Young Property Consultants Limited
Lot 1 Deposited Plan 111937	Allison Eva Carter Minerva William Carter
Part Allotment 25 Parish of Maungataniwha, Lot 3 Deposited Plan 129553 and Lot 1 Deposited Plan 159138	Anne Reta Stanton and David Hamilton Stanton





**Figure 21: Land Considered Adjacent**

The effects on the owners and occupiers of the land in **Figure 21** have been disregarded. An assessment of effects on adjacent landowners is considered in **Section 11.2.3.1**, pursuant to s95E of the RMA.

### 10.1.2 Written Approvals

Council must disregard any effects on persons who has given written approval to the application.

No written approvals have been obtained.

As stated, landowner approval was obtained in order to use the land, however formal written approval, with respect of this application itself has not been obtained. Nevertheless, effects on owners of the land are not a relevant consideration and effects should be disregarded regardless.

### 10.1.3 Permitted Baseline

A council “*may disregard an adverse effect if a rule or national environmental standard permits an activity with that effect*”. This is known as the permitted activity baseline test.

In this case, the clearance of indigenous vegetation of indigenous vegetation less than 10 years old is a permitted activity and therefore vegetation clearance and the effects associated and/or arising from the clearance of said clearance form part of the permitted baseline.

## 10.2 Receiving Environment

Any resource consent application must provide an assessment of effects on the environment. The receiving environment is the environment upon which a proposed activity might have effects. It is permissible (and often desirable or necessary) to consider the future state of the environment upon which effects will occur.

The receiving environment consists of:

- The existing environment and associated effects from lawfully established activities;
- The future state of the environment as it might be modified by the utilisation of rights to carry out permitted activities; and
- The environment as it might be modified by implementing resource consents that have been granted at the time a particular application is considered, where it appears likely that those resource consents will be implemented.

This “*environment*” upon which effects should be assessed is therefore the existing and reasonably foreseeable future environment.

In this case, the existing environment comprises the rural production land and associated rural production activities as described in **Section 3** of this report.

There are no relevant implemented or unimplemented resource consents on the subject site or surrounding site that I am aware of.

## 10.3 Assessment of Effects

An application for resource consent requires an assessment of the “*actual or potential*” effects on the environment of the activity. In this case as the cleanfill operation is complete, the effects are known, and this assessment relates to the actual on-going effects on the environment.

The “*actual*” effects relate to the loss of indigenous vegetation and the Wīwī-Spike Sedge Rushland area of the identified natural inland wetland.

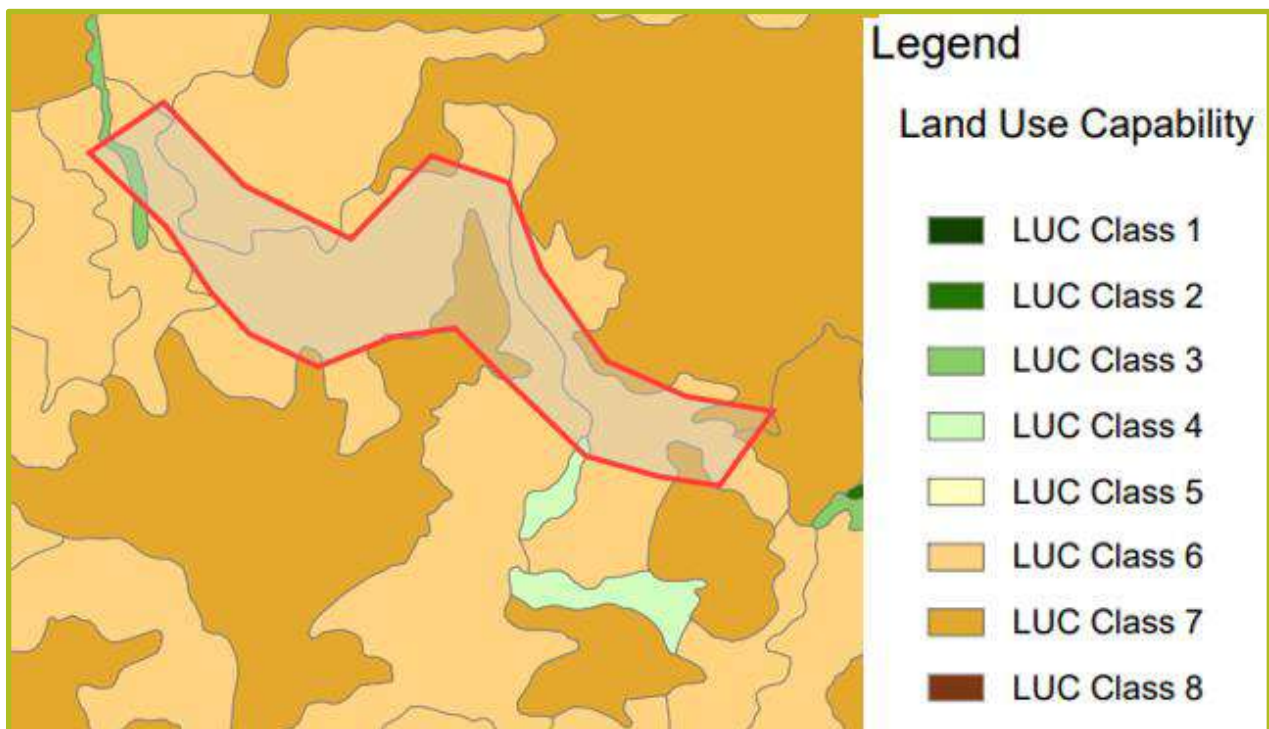
The following effects have been considered:

- Effects on Soils
- Effects on Character and Amenity
- Natural Hazard Effects
- Effects on Indigenous Vegetation
- Effects on Indigenous Fauna
- Effects on Wetlands
- Effects on Wetland Values (including potential values)
- Cumulative Effects
- Cultural and Archaeological Effects
- Positive Effects

### 10.3.1 Effects on Soils

The project involved the deposition of fill within the cleanfill site from the spoil collected within Mangamuka Gorge.

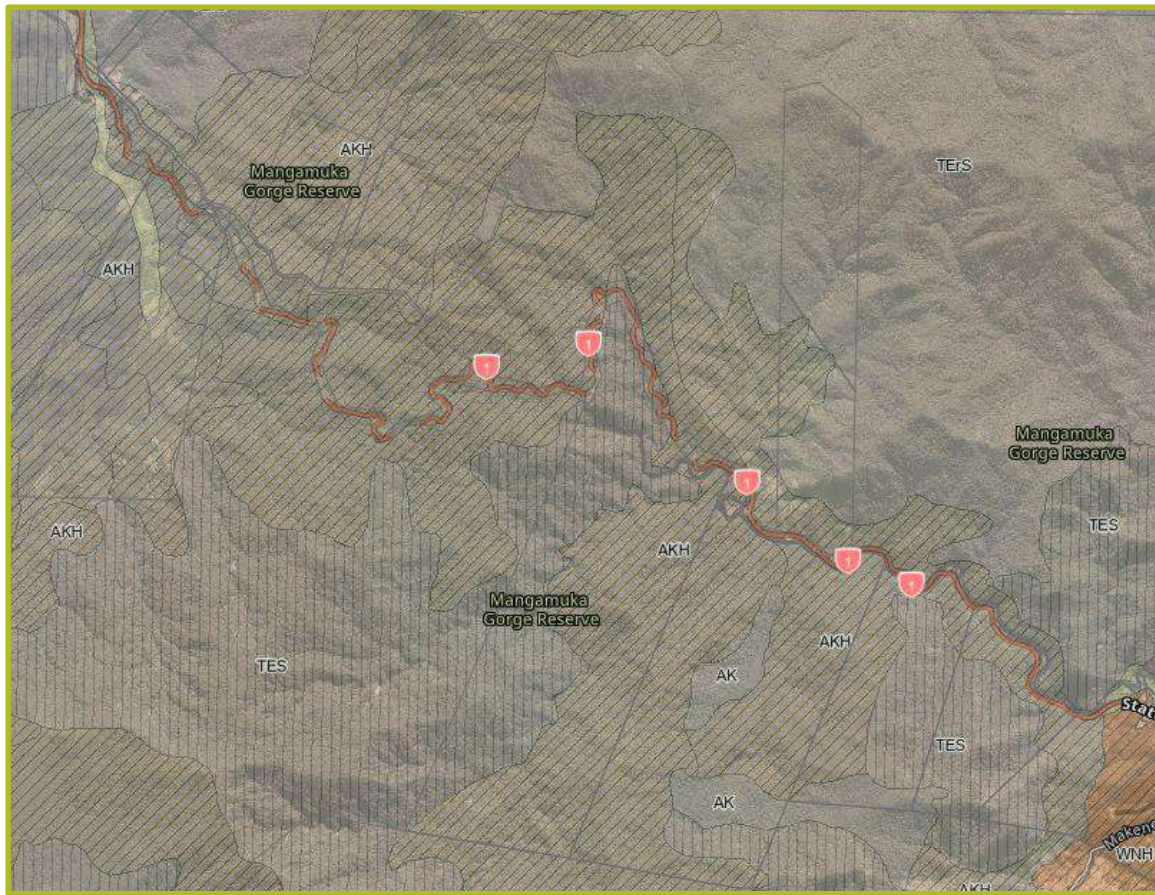
The LUC of soils at the Peria Valley Road site is identified as being LUC 4 and LUC 6, however a majority, if not all, of the area where the cleanfill site was established falls within the soils delineated and identified as LUC 6 (refer **Section 3.3.2.2**). The soils throughout the work footprint within the Mangamuka Gorge are identified as being LUC 6 and LUC 7 (and possibly some LUC 3 and 4) (refer **Figure 22** and **Appendix E**). The northern end of the Gorge is predominantly LUC 6 soils (as visible in **Figure 22**), therefore, the LUC of the soils deposited with the cleanfill are (at least for the most part) are LUC 6 soils as well.



**Figure 22:** LUC Capacity of Soils within Mangamuka Gorge (Source: OURENVIRONMENT Manaaki Whenua Landacre Research - accessed 5 December 2024)

Consequently, the deposition of soils is not considered to alter, particularly adversely, the productive capacity of the soils within the cleanfill area. This effectively ensures there are no adverse effects on the soils, particularly in regard to productive capacity or potential of the soils at the site.

As identified in **Section 3.3.2.1**, the soil types at Peria Valley Road are KNH and YCe, whereas the soil types on the northern end of Mangamuka Gorge are identified as TES and AKH and AK (refer **Figure 23**), which are Te Kie stony clay loam stepland soils and Awapuku clay loam respectively (refer **Appendix D** for factsheets). The soils at the cleanfill site are predominantly limestone soils, whilst the soils from the Gorge are young-semi volcanic soils. This means that as a result of the cleanfill activity, soil types that differ from those on-site have been deposited. The young semi-volcanic soils, as per the factsheet, can be productive soils and good for pastoral farming, therefore their deposition within a pastoral environment would not adversely impact on the productive capacity.



**Figure 23: Soil Types of Mangamuka Gorge** (Source: NRC Managing Northland Soils factsheet viewer - accessed 5 December 2024)

When considering the properties of the soils, the limestone soils are poorly drained, and prone to becoming waterlogged (particularly in winter) which would have assisted in maintaining wetland conditions. The young semi-volcanic soils are generally well drained, therefore this would indicate that the soil types present as a result of the cleanfill activity would be less likely to create the conditions for the area to return to wetland (of which the loss of the wetland is assessed in the following sections). The end result of this is it is now considered, that as a consequence of the cleanfill activity, the area of land would now be conducive to rural production activities, such as the pastoral grazing of stock, of which the site is currently and remains to be used for.

Overall, it is considered adverse effects on soils are less than minor.

### 10.3.2 Effects on Character and Amenity

The site sits within a rural environment and the wetland itself is considered to contribute very little to the character and amenity of the area. The vegetation types and distance from the road mean that the appearance of the wetland area would not have been dissimilar to that of a typical pasture paddock within an operational farm. The indigenous wetland itself was degraded and was contained within pasture used for the grazing of stock. The project effectively involved the filling of the indigenous wetland area and then covering it in pasture, whereby it retains its pastureland view and character. It is also not considered that

the Rushland provided any form of positive impact on character, recreational nor amenity values, such that its loss would create an adverse effect.

Whilst due to the volume and height of the fill, the topography will have been altered from that of the environment prior to the cleanfill activity (refer **Appendix I**). However, it is considered the finished levels follows the contours of the land prior to the works generally and would not stand out as an obviously modified landscape feature. It is not considered that this detracted from the character and amenity of the area, nor of that which would be associated with the rural zoning and wider rural area. As is evident, this area of land has been used as a farm paddock and for pastoral grazing, whereby the cleanfill activity has enabled more efficient use of this land for such an activity, which is consistent with the rural character and amenity of the area and the rural production zone.

Overall, it is not considered that the cleanfill activity, particularly upon its completion, resulted in minor or more adverse effects on the character and amenity of the area or the rural zone.

### 10.3.3 Natural Hazard Effects

As has been identified, the area of the cleanfill was located outside of any identified natural hazard area. It is not considered the completed fill activities would create new natural hazard risks, nor alter or effect any existing natural hazard risk in the area.

Subsurface drainage drains in the general direction of natural hydrological functions (i.e. downhill) and toward the retained wetland area and farm drainage and culvert that exist. Therefore, it is expected that natural ground water flow and movement would be similar to that that existed prior to the activity, but nonetheless, would not increase or exacerbate natural hazard risks, particularly onto neighbouring properties or the wider environment.

Overall, it is considered that the activity did not have any effect on natural hazards, nor the effects and risk associated with natural hazards.

### 10.3.4 Effects on Indigenous Vegetation

As identified in the Ecological Report (**Appendix B**) the indigenous vegetation within the hillslope seepage natural inland wetland, includes wīwī and spike sedge and kahikatea and rimu. None of these species are identified as threatened under the New Zealand Threat Classification System. As has been identified, the kahikatea provides habitat for the lichen *Teloschistes flavicans*, which is identified as being “*At risk – Declining*”. The natural inland wetland itself was degraded and was contained within pasture used for the grazing of stock.

The activity excluded the Kahikatea-rimu Treeland section of the natural inland wetland from the cleanfill site, thereby avoiding the loss of this area, and in particular the loss of the mature kahikatea, rimu as well as the *Teloschistes flavicans*. It has been identified the mature kahikatea and rimu were in poor condition, however it is not anticipated there will be any on-going effects of the activity on these trees, nor the *Teloschistes flavicans*. Furthermore, erosion and sediment controls were implemented to mitigate the sedimentation of this portion of the wetland (and higher value freshwater habitats, including wetlands, in the downstream receiving environment), and therefore, it is not considered that the activity has given rise to

minor or more than minor effects on the Kahikatea, rimu or *Teloschistes flavicans*., and there is not deemed to be any on-going effects arising on these trees.

The wīwī and spike sedge within the Wīwī-Spike Sedge Rushland on the Hillslope Seepage have been completely lost, and as the wetland area has been filled and subsoil drainage installed, their habitat has also been lost. Whilst it is accepted that the level of effect on the individual plants themselves is elevated due to their removal, the removal of these individual plants is a permitted activity. In addition, these plants are abundant and can be found throughout the catchment and wider region.

Overall, it is considered that the on-going effects on indigenous vegetation in the environment is no more than minor.

### 10.3.5 Effects on Indigenous Fauna

With respect to the on-going effects of the project on indigenous fauna, this is limited to any loss of habitat that resulted from the loss of the wīwī-spike sedge Rushland. The Ecological Report (**Appendix B**) identified the Australasian Swamp Harrier/ kāhu and a number of exotic bird species. It is also considered that such a wetland could provide habitat to the Pūkeko. Neither the kāhu or the Pūkeko is endangered or threatened and are highly mobile, whereby they are able to find other suitable habitat which exists within the wider area. The Ecological Assessment further identifies other wetland habitat in the vicinity, indicating that for such mobile fauna, new and appropriate habitat is not scarce. Whilst degraded by historic vegetation clearance and grazing, the loss of the wīwī-spike sedge Rushland will still result in localised habitat loss for common wetland species. However, the Ecological Report identified higher value wetland habitat nearby (e.g. kahikatea forest on seepages, raupo reedland), and “*these provide a greater extent of higher quality habitat for the wetland species present in this catchment*”.

No other indigenous fauna was identified/noted within the natural inland wetland itself.

Overall, any effects on indigenous fauna are considered to be negligible.

### 10.3.6 Effects on Wetlands

The Ecological Assessment has determined that the hillslope seepage is a “*natural inland wetland*” and has delineated this into two [hydrologically connected] types; the wīwī-spike sedge Rushland and the Kahikatea-rimu Treeland. The complete loss of wetland was avoided as much as possible, with the loss being minimised through the exclusion and protection of the Kahikatea-rimu Treeland section of the “*natural inland wetland*” and was limited to the complete loss of the wīwī-spike Rushland section.

When determining the extent of the cleanfill area it was identified that the Kahikatea-rimu Treeland had higher ecological values than that of the wīwī-spike sedge Rushland (in spite of the poor condition, particularly of the Kahikatea and rimu) and provided habitat for the “*At-risk declining*” *Teloschistes flavicans*. Due to its higher ecological significance, this area was avoided and excluded from the cleanfill site. Erosion and sediment control measures were implemented to ensure that sediment runoff into the Kahikatea-rimu Treeland was mitigated as far as reasonably practicable. As per the Ecological Report (**Appendix B**), without the implementation of best practice sediment control practices, disposal of spoil within the cleanfill site could have consequently increased sedimentation of aquatic and wetland habitats downstream of the

Site. Due to the sediment and erosion control measures implemented, it is not considered there are any on-going adverse effects on downstream wetlands (or aquatic habitats) in this regard.

The Ecological Report identified the “*level of unmitigated effects*” on the two wetland types (refer **Figure 24**), using the EIANZ guidelines for preparing an Ecological Impact Assessment (EclA) 2018 (EIANZ EclA guidelines).

Habitat type/species	Ecological Value	Magnitude of Effect	Level of Unmitigated Effect
Wīwī-spike sedge rushland in hillslope seepage wetland	Low	Moderate	Low
Kahikatea-rimu treeland in hillslope seepage wetland	Moderate	Low (due to revision of spoil site to exclude this area)	Low

**Figure 24:** Snip from Ecological Report showing ecological value, magnitude of loss, and level of effect (unmitigated) (Source: NZEM)

In both cases, the level of *unmitigated* effect was considered to be “*low*”. With respect to the Kahikatea-rimu Treeland, this was due to the avoidance of that area of the wetland. The implementation of appropriate mitigation measures such as no spoil within 3m of the mature trees and the sediment and erosion control ensure that that the level of *mitigated* effect was “*very low*”, and upon completion of the works no on-going adverse effects on the Treeland.

Overall, there are not any on-going adverse effects on downstream wetlands, including the Kahikatea-rimu Treeland, and therefore, consideration of effects is limited to those on the wīwī-spike sedge Rushland.

The cleanfill site has resulted in the complete loss of the wīwī-spike sedge Rushland. The Ecological Report (**Appendix B**) has concluded that the level of on-going residual adverse effects arising from that loss of wetland extent, on the environment is “*low*” (refer **Figure 25**), which accounted for the fact that there was no mitigation available to lower the level of effect.

Habitat type	Level of Unmitigated Effect	Mitigation	Residual Level of Effect
Wīwī-spike sedge rushland in hillslope seepage wetland	Low	Almost all of this wetland lost. No mitigation possible.	Low

**Figure 25:** Snip from Ecological Report indicating level of effect (unmitigated) for the project site, proposed mitigation, and level of residual effects (Source: NZEM)

When determining the level of effects, whilst accepting that the effects on the wīwī-spike sedge Rushland may be significant in that it is lost entirely, this must be considered in the context of what that effect is on the environment. It is also identified that the EclA guidelines makes the following guidance with respect to determining effects:

*“Assessing magnitude of effect at the spatial scale of the effect is not recommended, since it does not assist in developing impact management options. For many activities, this is a narrow perspective on the effect on*

*ecological value and provides no information about the impact of the effect in the context of the local ecosystems, or in the context of the site's value. For example, removal of 10m<sup>2</sup> kanuka at the edge of a 20m<sup>2</sup> stand for an access road may reduce the site's kanuka cover by 50%; but if the surrounding land supports extensive kanuka, and the species is common in the Ecological District, the wider context of that clearance needs to be considered".*

As has been identified in previous sections, on-going effects on indigenous flora and fauna are considered to not be more than minor. This is largely attributed to the fact that there are similar hillslope wetlands in the immediate environment, within the catchment and the ecological district, and throughout Te Tai Tokerau/Northland. The Ecological Report (**Appendix B**) concludes (my **emphasis** added) that "*whilst it is recognised that the project will result in the loss of a hillslope seepage wetland, the ecological value of this area, considering its local context, is **Low**, and the **residual effects of its loss are also Low**".*

Furthermore, it is not considered that hydrological function and water level range of the remainder of the natural inland wetland is affected by the landfill site. As per the Ecological Report (**Appendix B**), the wetland area is formed by high groundwater levels, which have not been altered in the remainder of the wetland area, including the Treeland area that was protected from the works.

Noting its location within rural production land and being subjected to the rural production activities, such as grazing of cattle, in addition to already being a severely degraded wetland with limited ecological value, it also has limited (if any) potential values, particularly due to it being sited within a pastoral grazing operation.

It is considered that the residual adverse effects on wetlands, in the context of determining effects on the environment, are not more than minor.

### 10.3.7 Effects on Wetland Values (including potential values)

Under the National Policy Statement for Freshwater Management 2020 (NPSFM) one of the considerations in relation to natural inland wetlands is the "*potential values*" of the wetland, and the loss of values, including potential.

The NPSFM defines "*loss of value*" as:

*In relation to a natural inland wetland or river, means the wetland or river is less able to provide for the following existing or potential values:*

- (a) any value identified for it under the NOF process*
- (b) any of the following values, whether or not they are identified under the NOF process:*
  - i. ecosystem health*
  - ii. indigenous biodiversity*
  - iii. hydrological functioning*
  - iv. Māori freshwater values*
  - v. amenity values*



As identified in the preceding Section, the natural inland wetland, in particular the Rushland, currently has limited ecological value, and it is considered it does not have high indigenous biodiversity, due to it only containing two indigenous species. I do not consider the Rushland had a high amenity value, and in fact I would argue its amenity value as it existed was not materially different in amenity value to pasture in a rural setting. In addition to being on private property, so not overtly visible in the surrounding environment, it was degraded with little biodiversity and no recreational values.

Noting its location within rural production land and being subjected to the rural production activities such as grazing of cattle, in addition to already being a severely degraded wetland with limited ecological value, the Rushland also had limited (if any) potential values. Potential unfettered and ongoing grazing by cattle would have likely contributed further to the degradation of the Rushland, stymying—if not reducing—its ecological potential.

Therefore, any loss of value as a result of the filling activity is considered likely to be less than minor, and definitely not more than minor.

### 10.3.8 Cumulative Effects

#### 10.3.8.1 Cumulative Effects on Wetlands

Wetland loss and degradation is an important issue in Aotearoa/New Zealand which requires consideration. It is well known that wetland loss is estimated to be at about 90% nationwide from pre-human distribution. It is accepted that the loss of the wīwī-spike sedge Rushland increases the cumulative loss of wetland extent within the catchment (as well as further afield). The Ecological Report (**Appendix B**) determined that the ecological value of the wīwī-spike sedge Rushland is “low” and already degraded through vegetation clearance and on-going grazing. The EclA Guidelines define ecological value “*the importance of ecological features or their components (such as species, habitats, processes, ecosystems, community composition) determined by their rarity, vulnerability and role in ecosystem functioning*”, indicating that the Rushland is of little value in regard to matters such as its ability to provide habitat or wetland functions or processes and does not have a high value of rarity or vulnerability.

Therefore, whilst resulting in a cumulative loss of wetland extent, it is not considered that the filling of the Rushland gives rise to a more than minor effect, particularly when considering its ecological value and lack of ecological features and components. The areas of the wetland with higher ecological values were protected and avoided to minimise the adverse effects of the filling activity.

As has been noted, several hillslope seepage wetlands are visible within the immediate catchment and the wider region and the extent of the seepage that has been lost did not contain any endangered or at-risk species (fauna or flora) and it is not considered that the loss of this extent of a hillslope seepage could be considered a more than minor effect, including cumulatively.

When taking into account the limited ecological value of the lost portion of the wetland and the fact that there are number of other similar wetlands within the immediate catchment (and further afield), it is considered that the loss of wetland extent with regards to cumulative effects results in a minor effect, but not more than minor.

### 10.3.8.2 Cumulative Effects on Highly Productive Soils, Productive Capacity and Rural Production

Overall, the end result of the cleanfill activity was an area of land recontoured and returned to pasture which will be suitable for rural and land-based primary production use. The soils are not considered highly productive, and the soils deposited within the cleanfill had the Same LUC as the existing soils.

It is not considered that there is any cumulative loss of HPL, productive capacity or rural production (including potential), and therefore any cumulative effects are negligible. In fact, it is considered the activity resulted in improved outcomes for rural production.

### 10.3.9 Cultural and Archaeological Effects

There are no known sites of cultural or archaeological importance within the area of the cleanfill operations. Hapū have been heavily involved with the project as set out in the “*Summary of Applications*” and hapū Kaitiaki have been on-site during the works.

On this basis, it is considered that any adverse effects on cultural and archaeological values were less than minor.

### 10.3.10 Positive Effects

The use of the site for cleanfill activity enabled NZTA to undertake critical emergency response works following the severe weather events on the Mangamuka Gorge and remediate SH1 in order to safely reopen it and restore a lifeline transport route for Northland.

It provided a disposal area in close proximity to the Gorge, reducing the distance heavy machinery and trucks had to travel to dispose of the spoil collected in the Gorge, thus reducing emissions and their effects on the environment. The site was free of Kauri and enabled the disposal of material in a manner that minimise and mitigated the risk of spreading Kauri Dieback Disease.

## 10.4 Conclusion on Effects

As set out above, it is considered that the residual adverse effects at the completion of the cleanfill activity are not more than minor.

# 11 NOTIFICATION

## 11.1 Public Notification Assessment

### 11.1.1 Step 1 – Mandatory public notification in certain circumstances

Mandatory public notification is **not required** as:

- the applicant has not requested that the application is publicly notified (s95A(3)(a)); and

- the application does not involve any exchange of recreation reserve land under s15AA of the Reserves Act 1977 (s95A(3(c))).

### 11.1.2 Step 2: If not required by step 1, public notification precluded in certain circumstances

The application is **not precluded** from public notification as:

- the activities are not subject to a rule or national environmental standard (NES) which precludes public notification (s95A(5)(a)), and
- the application for resource consent is for a Discretionary Activity and is not solely a controlled activity, or boundary activity and therefore not precluded from public notification (s95A(5)(b)).

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

The application is not required to be publicly notified as:

- the activities are not subject to a rule or national environmental standard (NES) which require public notification (s95A(8)(a)), and
- As concluded in **Section 10.4** above, the activity will not have adverse effects on the environment that are more than minor (s95A(8)(b)).

### 11.1.4 Step 4: Public notification in Special circumstances

Section 95(9) of the Act states that an application may be publicly notified if '*special circumstances*' exist, notwithstanding the satisfaction of the statutory tests that would allow for non-notification.

'Special circumstances' are not defined in the Act. Case law has identified '*special circumstances*' as something outside the common run of things which is exceptional, abnormal or unusual but less than extraordinary or unique. A '*special circumstance*' would be one which makes notification desirable despite the general provisions excluding the need for notification. The local authority should be satisfied that public notification may elicit additional information on the aspects of the proposal requiring resource consent.

It is not considered that this proposal is special or out of the ordinary in any way and as such public notification is **not required** under this step.

### 11.1.5 Public notification Conclusion

It is considered that public notification of the application under s95A, 95C-D is not required and should therefore proceed without public notification.

## 11.2 Limited Notification Assessment

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

There are no protected customary rights groups or customary marine title groups affected by the proposed activity and the proposed activity is not on or adjacent to, or likely to affect, a Statutory Acknowledgement Area.

Accordingly, limited notification is **not required** under s95B(2) or (3).

### 11.2.2 Step 2: Limited notification precluded in certain circumstances

The application is **not precluded** from limited notification as:

- the activities are not subject to a rule or national environmental standard which precludes public notification (s95B(6)(a));
- the proposal is not for a controlled activity (s95B(6)(b)).

### 11.2.3 Step 3: If not precluded by Step 2, certain other affected persons must be notified

Limited notification is not required pursuant to s95B(9) as:

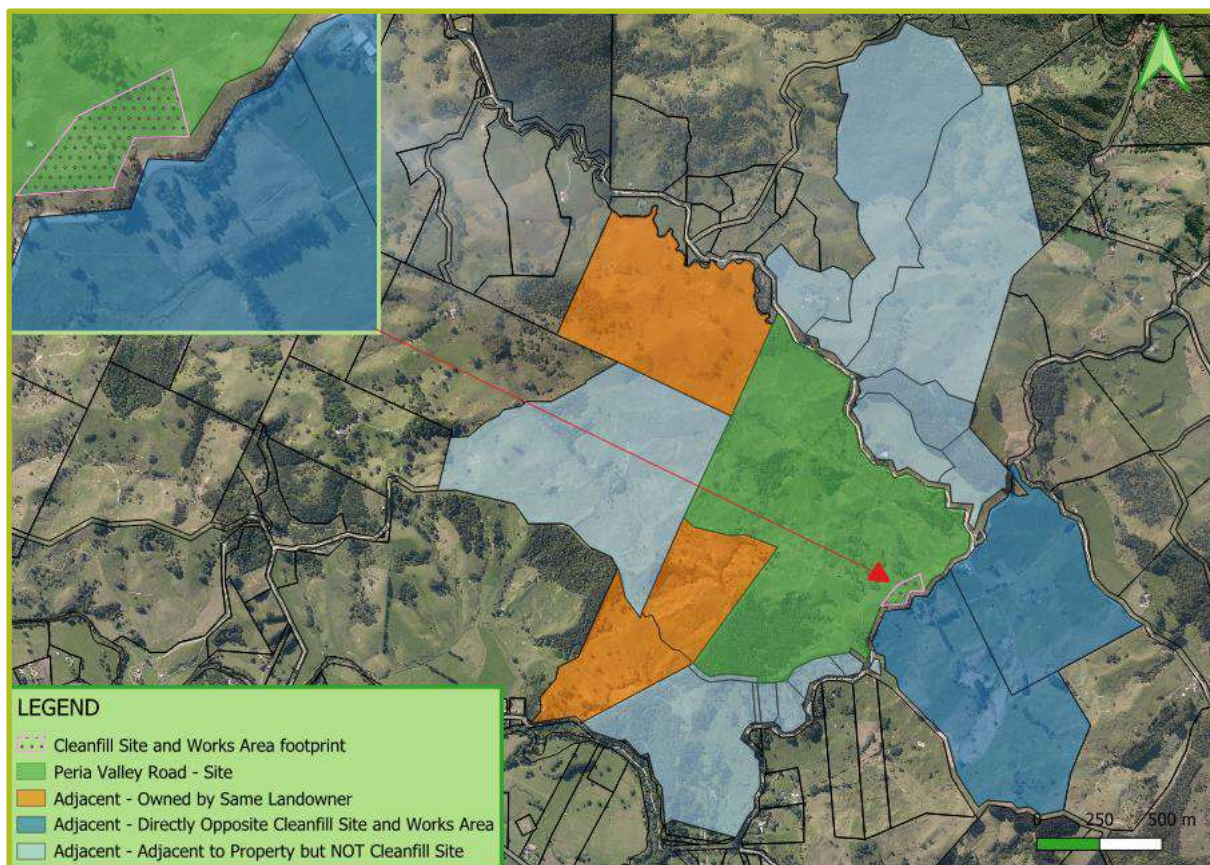
- The activity is not a boundary activity and therefore there are no persons in accordance with s95E that are considered affected by an infringed boundary (s95B(7));
- No other person is considered to be affected in accordance with s95E as set out in **Section 11.2.3.1** below

#### 11.2.3.1 Affected Persons Assessment pursuant to s95E of the RMA

Section 95E of the RMA provides that:

*For the purpose of giving limited notification of an application for a resource consent for an activity to a person under section 95B(4) and (9) (as applicable), a person is an affected person if the consent authority decides that the activity's adverse effects on the person are minor or more than minor (but are not less than minor).*

As identified in **Section 10.1.1**, the properties identified in **Figure 26** are considered to be adjacent, and an assessment in accordance with s95E is required to determine whether the owners and/or occupiers of the identified land are considered to be affected persons.



**Figure 26: Adjacent Land for s95E Assessment**

The properties identified in **orange** in **Figure 26** are under the same ownership as the land on which the cleanfill site is located. As landowner approval was obtained for the cleanfill site, it is considered that written approval is implied with respect to the adjacent land under the same ownership. Consequently, adverse effects have been disregarded.

With respect to all the properties identified as adjacent, the owners/occupiers may have been affected by the following activities:

- Transport-related effects, including increase in traffic and traffic associated noise;
- Construction/Operational noise;
- Loss of amenity during operation of the cleanfill, including through increased level of machinery and activity on the site.

However, as the activities are completed, these effects cease to exist. Further, pursuant to s330, resource consent is not required for any infringement (if any) relating to transport and noise, and the operation of the cleanfill is complete, whereby any effects of the activities set out above are no longer occurring. As resource consent is not required for the activities above, and any associated effects, no persons are considered affected in that regard.

With respect of the properties identified in **light blue**, being the “*Adjacent – Adjacent to Property but NOT Cleanfill Site*”, these properties are well removed from the actual site of the cleanfill, whereby the

owners/occupiers would not be affected by the on-going adverse effects. At most they may get a transitory view of the Site if they drove past, but this would not result in any adverse effects.

With respect of the properties in **dark blue**, being the “*Adjacent – Directly Opposite Cleanfill Site and Works Area*”, it is not considered the on-going adverse effects, which as per **Section 10.4** are no more than minor on the environment, would give rise to any adverse effects on the owners and occupiers of these properties. Whilst there may be changes to the landscape, it still retains its rural character and amenity. It is also not considered that the Rushland provided any form of positive impact or character and amenity values to the owners and occupiers of this land, that its loss would create an adverse effect.

Overall, it is not considered the on-going adverse effects associated with the cleanfill site give rise to any adverse effects on owners and/or occupiers of the adjacent properties.

With respect of any other potentially affected persons, I do not consider there would be any other person or group that would be considered affected. Iwi and hapū have been engaged and consulted with, and form part of the project team, with Kaitiaki on-site, therefore, it is not considered in accordance with s95E that any hapū or iwi would be considered an affected person.

#### 11.2.4 Step 4: Limited notification in special circumstances

It is considered that no special circumstances warranting limited notification of the application exist, therefore limited notification under Step 4 is **not required**.

#### 11.2.5 Limited Notification Conclusion

It is considered that limited notification of the application under s95B is **not required**, for the reasons set out above.

### 11.3 Notification Conclusion

Overall, this application satisfies the relevant statutory steps under S95A, 95B and 95E, so can lawfully be assessed **without** notification or the requirement for written approvals from any person, group, or organisation.

Consequently, the application can and should be processed on a **non-notified** basis.

## 12 STATUTORY ASSESSMENT

### 12.1 Statutory Considerations

The follow statutory documents require consideration:

- National Policy Statements (NPS):
  - National Policy Statement for Freshwater Management 2020 (NPSFM)
- Regional Policy Statement for Northland 2016 (RPS)

- Proposed Far North District Plan 2024 (pFNDP)
- Far North District Plan (FNDP)

## 12.2 National Policy Statements

As identified, there are two NPS that require consideration with respect of this application:

- National Policy Statement for Freshwater Management 2020
- National Policy Statement for Highly Productive Land 2022

### 12.2.1 National Policy Statement for Freshwater Management 2020

The NPSFM was introduced in 2020 to provide guidance and direction on how freshwater should be managed under the RMA.

#### 12.2.1.1 Resource Management (Freshwater and Other Matters) Amendment Bill and Te Mana o Te Wai

Under clause 1.3, the NPSFM introduced the fundamental concept Te Mana o te Wai:

*Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.*

The concept of Te Mana o te Wai created a hierarchy of obligations:

*There is a hierarchy of obligations in Te Mana o te Wai that prioritises:*

- (a) first, the health and well-being of water bodies and freshwater ecosystems*
- (b) second, the health needs of people (such as drinking water)*
- (c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.*

The Hierarchy of Obligations was then transferred into the Objective of the NPSFM under clause 2.1, of which then required that consent applications demonstrated how the proposal was consistent with this objective.

On 24 October 2024, the Resource Management (Freshwater and Other Matters) Amendment Act came into force which inserted the following into s104 of the RMA.

*(2F) When considering an application and any submissions received, a consent authority must not have regard to clause 1.3(5) or 2.1 of the NPSFM 2020 (which relates to the hierarchy of obligations in the NPSFM 2020).*

*(2G) Subsection (2F) applies despite subsection (1)(b)(iii) and any other provision of this Act.*

As a consequence, the Hierarchy of Obligations is no longer a relevant consideration for a consent application.

### 12.2.1.2 NPSFM Policy Assessment

**Table 6** provides an assessment against the relevant policies of the NPSFM.

**Table 6:** NPSFM Policy Assessment

Policy	Comment	Consistent (Y/N)
<p><b>Policy 1:</b> <i>Freshwater is managed in a way that gives effect to Te Mana o te Wai.</i></p>	<p>The project implemented and utilised erosion and sediment controls to ensure that freshwater bodies in the receiving environment were protected from loss sedimentation and runoff from the clean fill site, ensuring those waterbodies were protected.</p>	<p>Yes</p>
<p><b>Policy 2:</b> <i>Tangata whenua are actively involved in freshwater management (including decision making processes), and Māori freshwater values are identified and provided for.</i></p>	<p>Iwi and hapū have been involved with the project through its entirety. Consultation and engagement has been on-going. Representatives from local hapū are integrated within the project team and Kaitiaki have been on-site during works.</p>	<p>Yes</p>
<p><b>Policy 3:</b> <i>Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.</i></p>	<p>The project implemented and utilised erosion and sediment controls to ensure that freshwater bodies in the receiving environment were protected from sedimentation and runoff from the clean fill site, ensuring those waterbodies were protected.</p>	<p>Yes</p>
<p><b>Policy 5:</b> <i>Freshwater is managed (including through a National Objectives Framework) to ensure that the health and well-being of degraded water bodies and freshwater ecosystems is improved, and the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved.</i></p>	<p>The project implemented and utilised erosion and sediment controls to ensure that freshwater bodies in the receiving environment were protected from sedimentation and runoff from the clean fill site, ensuring those waterbodies were protected.</p>	<p>Yes</p>
<p><b>Policy 6:</b> <i>There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted</i></p>	<p>As has been identified, natural inland wetland was within the cleanfill site, and the project has resulted in the loss of extent of natural inland wetland.</p>	<p>No</p>



	<p>The natural inland wetland was delineated into the Treeland and Rushland areas. It was identified that the Treeland had higher ecological values and as such this area was protected and avoided. The Rushland was deemed to have low ecological values. As has also been identified, the extent of wetland lost had little values, ecological or otherwise and was not supporting habitat for species and the indigenous vegetation was not threatened or at-risk. the Ecological Report (<b>Appendix B</b>) It was concluded that the effects on the wetland were “low” as per and therefore was not more than minor, including cumulatively (refer <b>Section 10.3</b>).</p>	
<p><b>Policy 9:</b> <i>The habitats of indigenous freshwater species are protected.</i></p>	<p>No indigenous freshwater species were identified within the extent of wetland lost, and as per the Ecological Report (<b>Appendix B</b>), it was unlikely to support any such species. Erosion and Sediment control was implemented and utilised in order to prevent sediment runoff into the receiving environment, thus protecting these waterbodies and mitigating effects on the habitats of any indigenous freshwater species within any freshwater bodies in the receiving environment.</p>	<p>Yes</p>

### 12.2.1.3 Conclusion

Whilst it is accepted the project is contrary to Policy 6 of the NPSFM, it is consistent with the other relevant policies as set out in **Table 6** above. Therefore, overall and on balance the project is **not contrary** to the NPSFM. Freshwater is largely protected, in that, the effects beyond the loss of wetland extent are less than minor at most, with most effects on freshwater being confined to the Shrubland extent of the natural inland wetland, whereby effects are not considered to be more than minor.

### 12.2.2 National Policy Statement for Highly Productive Land 2022

The NPSHPL was introduced to provide policy guidance and direction to improve the way in which HPL is managed under the RMA. It seeks to do this by setting out requirements for councils to map and zone HPL and manage the subdivision, use and development of such land.

Pursuant to the NPSHPL, one of the criteria for land to be considered HPL it must be identified as having a LUC of 1, 2, or 3. The Site is identified as having a LUC of 4 and 6, therefore, the Site is not considered to be or contain HPL (refer **Appendix E**) and consequently the NPSHPL is not relevant to this application.

As is stated at **Section 10.3.1**, the cleanfill activity does not alter the LUC of the soil.

### 12.3 Proposed Far North District Plan 2024

Whilst, as set out in **Section 7.2.1.1**, some of the provision of the pFNDP have immediate legal effect, there are no relevant objectives or policies with immediate legal effect, therefore consideration is not had against the objectives and policies of the pFNDP.

### 12.4 Operative Far North District Plan 2009

Overall, and on balance, it is considered that the proposal is not contrary to the objectives and policies of the FNDP. An assessment against the relevant objectives and policies as set out in **Table 8**.

Table 7: Relevant objectives and policies of the FNDP

Policy/Objective	Comment	Consistent (Y/N)
<i>Chapter 8 – Rural Environment</i>		
<p><b>Objective 8.3.1</b> <i>To promote the sustainable management of natural and physical resources of the rural environment.</i></p>	<p>No practicable alternative locations for the cleanfill were determined. Overall, it is considered that adverse effects are not more than minor. With respect to natural and physical resources of the rural environment, these, namely soils and streams/rivers are not adversely impacted by the activity.</p>	Yes
<p><b>Objective 8.3.2</b> <i>To ensure that the life supporting capacity of soils is not compromised by inappropriate subdivision, use or development.</i></p>	<p>The works have not altered the viability of the land nor has the cleanfill compromised the life supporting capacity of the soils. The fill activity resulted in the introduction of soils which had similar LUC classifications. Adverse effects on soils are considered to be no more than minor as set out in <b>Section 10.3.1</b>.</p>	Yes
<p><b>Objective 8.3.3</b> <i>To avoid, remedy or mitigate the adverse and cumulative effects of activities on the rural environment.</i></p>	<p>Overall, it is considered that cumulative effects are less than minor, particularly in regard to effects on soils, productive capacity and rural production as set out in <b>Section 10.3</b>. Furthermore, whilst it is acknowledged the loss of wetland extent increases the cumulative loss in wetland extent, it is not considered the adverse effect of this is more than minor as set out in <b>Section 10.3.8.1</b>. Additionally, the cumulative loss was mitigated through the avoidance of the Treeland area of the wetland therefore reducing the total loss of wetland extent.</p>	Yes
<p><b>Objective 8.3.4</b> <i>To protect areas of significant indigenous vegetation and significant habitats of indigenous fauna.</i></p>	<p>No areas of significant indigenous vegetation or significant habitats of indigenous fauna have been identified. The area of the wetland with higher ecological value, being the Treeland, including the <i>Teloschistes flavicans</i> and its habitat (being the kahikatea), has been avoided.</p>	Yes
<p><b>Objective 8.3.6</b></p>	<p>It is not considered that the cleanfill activity, particularly upon completion results in any conflicts between land use activities in the rural environment. Firstly, is not considered a</p>	Yes

<p><i>To avoid actual and potential conflicts between land use activities in the rural environment</i></p>	<p>cleanfill activity itself would create a conflict. Secondly, as this activity is now completed, the area is returned back to pastoral land to be retained in primary production uses, such as grazing of stock.</p>	
<p><b>Objective 8.3.7</b> <i>To promote the maintenance and enhancement of amenity values of the rural environment to a level that is consistent with the productive intent of the zone.</i></p>	<p>The site is not identified as being in an outstanding natural landscape nor does it contain any outstanding natural features or known sites of historic or cultural heritage or significance. Due to the degraded nature of the wetland and its pastoral uses, it already had limited natural character, largely due to its significant modification and degradation. Overall, it is not considered the proposal detracts from any natural character associated with freshwater bodies. The Treeland wetland area was avoided and protected and retains what natural character it had.</p>	<p>Yes</p>
<p><b>Objective 8.3.9</b> <i>To enable rural production activities to be undertaken in the rural environment.</i></p>	<p>The activity has not resulted in any obstruction or hindrance to the ability of rural production activities to be undertaken. Additionally, it is not considered that the cleanfill activity, particularly upon completion results in any conflicts between land use activities in the rural environment. Firstly, it is not considered a cleanfill activity itself would create a conflict. Secondly, as this activity is now completed, the area is returned back to pastoral land to be retained in primary production uses, such as grazing of stock.</p>	<p>Yes</p>
<p><b>Objective 8.3.10</b> <i>To enable the activities compatible with the amenity values of rural areas and rural production activities to be established in the rural environment</i></p>	<p>Overall, I do not consider the cleanfill area would have had a high amenity value, and in fact I would argue its amenity value as it existed was not materially different in amenity value to pasture in a rural setting. It is considered that the cleanfill site, particularly upon completion retains the land for rural production and therefore is compatible with amenity values of the rural environment.</p>	<p>Yes</p>
<p><b>Policy 8.4.1</b></p>	<p>As set out there were no practicable alternative locations for the cleanfill to be located, Overall, it is considered that adverse effects are not more than minor. With respect of</p>	<p>Yes</p>

<p><i>That activities which will contribute to the sustainable management of the natural and physical resources of the rural environment are enabled to locate in that environment.</i></p>	<p>natural and physical resources of the rural environment, these, namely soils and streams/ivers are not adversely impacted by the activity.</p>	
	<p>It is not considered the project altered the viability of the land nor did it compromise the life supporting capacity of the soils. The fill activity resulted in the introduction of soils which had similar LUC classifications. Adverse effects on soils are considered to be less than minor as set out in <b>Section 10.3.1</b>.</p>	
<p><b>Policy 8.4.2</b></p> <p><i>That activities be allowed to establish within the rural environment to the extent that any adverse effects of these activities are able to be avoided, remedied or mitigated and as a result the life supporting capacity of soils and ecosystems is safeguarded, and rural productive activities are able to continue.</i></p>	<p>It is not considered the project altered the viability of the land nor did it compromise the life supporting capacity of the soils. The fill activity resulted in the introduction of soils which had similar LUC classifications. Adverse effects on soils are considered to be less than minor as set out in <b>Section 10.3.1</b>.</p> <p>The activity has not resulted in any obstruction or hindrance to the ability of rural production activities to be undertaken. Additionally, it is not considered that the cleanfill activity, particularly upon completion results in any conflicts between land use activities in the rural environment. Firstly, is not considered a cleanfill activity itself would create a conflict. Secondly, as this activity is now completed, the area is returned back to pastoral land to be retained in primary production uses, such as grazing of stock.</p>	<p>Yes</p>
<p><b>Policy 8.4.4</b></p> <p><i>That development which will maintain or enhance the amenity value of the rural environment and outstanding natural features and outstanding landscapes be enabled to locate in the rural environment.</i></p>	<p>Overall, I do not consider the cleanfill area would have had a high amenity value, and in fact I would argue its amenity value as it existed was not materially different in amenity value to pasture in a rural setting. It is considered that the cleanfill site, particularly upon completion retains the land for rural production and therefore is compatible with amenity values and maintains said values within the rural environment. There are no areas identified as Outstanding Natural Features or Landscapes.</p>	<p>Yes</p>

<p><b>Policy 8.4.5</b></p> <p><i>That plan provisions encourage the avoidance of adverse effects from incompatible land uses, particularly new developments adversely affecting existing land-uses (including by constraining the existing land-uses on account of sensitivity by the new use to adverse effects from the existing use – i.e. reverse sensitivity).</i></p>	<p>It is not considered the activity resulted in incompatible land uses, nor would reverse sensitivity effects arise or did arise that constrain or adversely impact existing land uses</p> <p>The activity has not resulted in any obstruction or hindrance to the ability of rural production activities to be undertaken. Additionally, it is not considered that the cleanfill activity, particularly upon completion results in any conflicts between land use activities in the rural environment. It is not considered a cleanfill activity itself would create a conflict and as this activity is now completed, the area is returned back to pastoral land to be retained in primary production uses.</p>	<p>Yes</p>
<p><b>Policy 8.4.6</b></p> <p><i>That areas of significant indigenous vegetation and significant habitats of indigenous fauna habitat be protected as an integral part of managing the use, development and protection of the natural and physical resources of the rural environment.</i></p>	<p>The area, being the Treeland, of the wetland with higher ecological value, including the <i>Teloschistes flavicans</i> and its habitat (being the kahikatea) have been avoided.</p> <p>The site is not identified as being in an outstanding natural landscape nor does it contain any outstanding natural features or known sites of historic or cultural heritage or significance. Due to the degraded nature of the wetland and its pastoral uses, it already had limited natural character, largely due to its significant modification and degradation.</p>	<p>Yes</p>
<p>Chapter 12 – Natural and Physical Resources</p>		
<p><b>Objective 12.7.3.2</b></p> <p><i>To protect the natural, cultural, heritage and landscape values and to promote the protection of the amenity and spiritual values associated with the margins of lakes, rivers and indigenous wetlands and the coastal environment, from the adverse effects of land use activities, through proactive restoration/rehabilitation/revegetation.</i></p>	<p>As set out in the Ecological Report and <b>Section 3.3.4</b> of this report, the wetland area had limited values. The area, being the Treeland, of the wetland with higher ecological value, including the <i>Teloschistes flavicans</i> and its habitat (being the kahikatea), were avoided and not impacted by the cleanfill activity. As noted in <b>Section 9</b>, hapū have been actively involved with the project, ensuring their cultural and spiritual values are considered and any effects in relation to such values are avoided where possible, but otherwise mitigated.</p> <p>The site is not identified as being in an outstanding natural landscape nor does it contain any outstanding natural features or known sites of historic or cultural heritage or significance. Due to the degraded nature of the wetland and its pastoral uses, it already</p>	<p>Yes</p>

	<p>had limited natural character, largely due to its significant modification and degradation. Overall, it is not considered the proposal detracts from any values associated with freshwater bodies.</p> <p>Iwi and hapū have been involved with the project through its entirety. Consultation and engagement has been on-going. Representatives from local hapū are integrated within the project team and Kaitiaki have been on-site during works.</p>	
<p><b>Objective 12.7.3.5</b></p> <p><i>To avoid the adverse effects from inappropriate use and development of the margins of lakes, rivers, indigenous wetlands and the coastline.</i></p>	<p>As set out there were no practicable alternative locations for the cleanfill to be located. As set out in the Ecological Report and <b>Section 3.3.4</b> of this report, the wetland area had limited values. Adverse effects on these areas are considered to be no more than minor. Due to the nature of the activity these adverse effects could not be avoided.</p> <p>The area, being the Treeland, of the wetland with higher ecological value, including the <i>Teloschistes flavicans</i> and its habitat (being the kahikatea) have been avoided.</p> <p>It is not considered the use of the pastoral land as a cleanfill site is considered inappropriate use or development. and no other location was identified as being suitable, the cleanfill provided for the rehabilitation of SH1 and the benefits it provides, thus ensuring that the use of the site was not an inappropriate use or development of the site.</p> <p>Overall, it is not considered the activity is contrary to this objective.</p>	No
<p><b>Policy 12.7.4.2</b></p> <p><i>That land use activities improve or enhance water quality, for example by separating land use activities from lakes, rivers, indigenous wetlands and the coastline, and retaining riparian vegetation as buffer strips.</i></p>	<p>The project implemented and utilised erosion and sediment controls to ensure that freshwater bodies in the receiving environment were protected from the effects of sedimentation and runoff from the clean fill site, ensuring those waterbodies were protected, whereby it is not considered the project had a negative effect on water quality.</p>	Yes

<p><b>Policy 12.7.4.3</b></p> <p><i>That adverse effects of land use activities on the natural character and functioning of riparian margins and indigenous wetlands be avoided</i></p>	<p>As per the Ecological Report (<b>Appendix B</b>), the Rushland provided limited ecological values. The Rushland lies upstream of a stream and is largely formed by groundwater rather than surface water, in a manner whereby it is unlikely to contribute in any meaningful way to stream flows.</p> <p>The Ecological Report identifies it does not provide habitat, and it is not considered the Rushland has any recreation, amenity or natural character values. I would argue its natural character value as it existed was not materially different in the value to pasture in a rural setting, particularly due to its degraded and modified state.</p> <p>The Treeland had higher ecological values and provided some form of habitat. This area was avoided and not lost and therefore any values and contributions it did make in terms of wetland functions has been maintained.</p> <p>Overall, it is not considered, largely considering the degraded nature of the wetland extent lost, and its low ecological value, that any important functions or values of wetlands have been lost. Furthermore, the wetland was a very small peripheral wetland feature in the context of the wider site, whereby, only a portion of the overall wetland feature was lost.</p> <p>As is identified in <b>Sections 10.3.3.</b> and <b>10.3.4</b> and the Ecological Report (<b>Appendix B</b>) the adverse effects on the wetland are not considered to be more than minor.</p> <p>Overall, whilst not wholly consistent with this Policy, it is not considered the activity is contrary to the Policy.</p>	<p>No</p>
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## 12.5 Regional Policy Statement for Northland

As set out in **Section 12.4** it is considered that the activity is consistent with the District Plan. As the project is considered to be consistent with the policies and objectives of the FNDP, it is therefore considered to be consistent with the policies and objectives of the RPS. For completeness, an assessment against the most relevant provisions of the RPS is included as **Appendix J**.

## 12.6 Statutory Assessment Items for Resource Consent

The following sections provide an assessment against the relevant Sections of the RMA.

### 12.6.1 Section 104 Assessment

#### *12.6.1.1 Actual and Potential Effects - Section 104(1)(a)*

When considering an application for resource consent, the consent authority must, subject to Part 2, have regard to any actual and potential effects on the environment of allowing the activity. In the Act, the term effect includes both adverse and positive effects.

As has been identified, as this resource consent is being sought retrospectively, consideration is only required of the actual effects, as these are known, and only relate to the on-going or residual effects associated with establishment and operation of the cleanfill site.

An assessment of the actual environmental effects on the environment arising from the proposal has been undertaken and is included in **Section 10** of this report. It provides an assessment of the actual effects relating to matters such as effects on wetlands and indigenous flora and fauna and on rural character and amenity as well as cumulative effects.

It is concluded that the adverse effects of the project are not more than minor. As discussed in **Section 10.3.10** the activity has had positive effects, in that it enabled NZTA to undertake important and necessary remediation to SH1 to restore this vital Te Hiku/ Far North transport link.

Overall, the actual of the proposal are considered to be no more than minor and therefore acceptable.

#### *12.6.1.2 Relevant Statutory Documents – Section 104(1)(b)*

When considering an application for resource consent, the consent authority must, subject to Part 2, have regard to any relevant provisions of a national environmental standard; other regulations; a national policy statement; a New Zealand coastal policy statement; a regional policy statement or proposed regional policy statement; and a plan or proposed plan.

#### **Section 104(1)(b)(i) – National Environmental Standards**

This section of the Act requires that regard is given to any relevant provisions of a NES.

In this case, the only relevant NES is the National Environmental Standard for Freshwater. This is a regional consenting matter and is being considered as part of the application for resource consent lodged concurrently with NRC.

### **Section 104(1)(b)(ii) – Other Regulations**

There are no “*other regulations*” considered relevant to this application.

### **Section 104(1)(b)(iii) – National Policy Statement**

This section of the Act requires that regard is given to any relevant provisions of any relevant NPS.

In this case, an assessment was provided at **Section 13.2** against the:

- National Policy Statement for Freshwater Management 2020
- National Policy Statement for Highly Productive Land 2022

As the site did not contain any land identified as HPL, the NPSHPL was not considered relevant (as identified in **Section 12.2.2**).

An assessment against the NPSFM was undertaken at **Section 12.2.1**, which concluded the project was not contrary to the objectives and policies of the NPSFM.

### **Section 104(1)(b)(iv) – New Zealand Coastal Policy Statement**

This section of the Act requires that regard is given to any relevant provisions of a New Zealand Coastal Policy Statement (NZCPS).

The Site is not within the coastal marine area, nor in its vicinity. Therefore, the NZCPS is not a relevant consideration for this application.

### **Section 104(1)(b)(v) – Regional Policy Statement**

Section 104(1)(b)(v) of the Act requires that regard is given to any relevant provisions of a regional policy statement or proposed regional policy statement.

An assessment against the RPS has also been undertaken at **Section 12.5** and it is considered the proposal is consistent with the policies and objectives of the RPS.

### **Section 104(1)(b)(vi) -Regional Plan**

Section 104(1)(b)(vi) of the Act requires that regard is given to any relevant provisions of a plan or proposed plan.

This is a regional consenting matter and is being considered as part of the application for resource consent lodged concurrently with NRC.

#### **12.6.1.3 Other Matters – Section 104(1)(c)**

Section 104(1)(c) provides for consideration of “*any other matter the consent authority considers relevant and reasonably necessary to determine the application*”.

It is not considered that there are any “*other matters*” that require consideration.

## **12.7 Consideration of Part 2 Matters**

Part 2 of the RMA provides a common set of principles to be applied to the management of all resources.

Section 5 in Part 2 identifies the purpose of the RMA as being:

*“To promote the sustainable management of natural and physical resources”.*

This means managing the use of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems; and avoiding, remedying or mitigating adverse effects on the environment.

Section 6 sets out a number of matters of national importance which need to be recognised and provided for. Of relevance to this application are the preservation of the natural character of wetlands, and the protection of these from inappropriate use and development, the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, the protection of historic heritage, and the management of significant risks from natural hazards.

Section 7 identifies a number of “*other matters*” to be given particular regard by the council in considering an application for resource consent. These include kaitiakitanga, the efficient use of natural and physical resources, the maintenance and enhancement of amenity values, intrinsic value of ecosystems and maintenance and enhancement of the quality of the environment.

Section 8 requires a council to take into account the principles of the Treaty of Waitangi.

The proposal is considered to be consistent with the FNDP, which in turn gives effect to Part 2 of the RMA. As such, it is not considered necessary to provide a direct assessment against Part 2 of the RMA.

However, for completeness, it is considered the proposal is consistent and in no way contrary to, the purpose and principles of the RMA as it promotes the sustainable management of natural and physical resources as adverse effects on the environment have been avoided, remedied or mitigated and are considered to be acceptable. The proposal enables the management of significant natural hazard risks, and did not affect any matters related to the provisions of the Treaty of Waitangi/ Te Tiriti o Waitangi. With respect of Section 7 of the RMA, the proposal did not adversely or significantly alter nor change the amenity values of the area and does not exacerbate any effects of climate change. The areas with higher ecological values and at-risk species were avoided.

Overall, this activity enabled the wider benefits of the Slip Response, namely the remediation and reopening of SH1 through the Mangamuka Gorge, providing for the people and communities, particularly of Te Tai Tokerau and Te Hiku-o-te Ika-a-Māui, providing for their social, economic and cultural well-being, including that of iwi and hapū.

The adverse effects of the cleanfill are no more than minor, and the activity is consistent with the relevant policies and objectives of the relevant statutory documents and is therefore considered to be consistent with Part 2 of the RMA.

## 13 DRAFT CONDITIONS

We welcome the opportunity to review and provide comments on draft conditions prior to a decision being made on the application.

## 14 CONCLUSION

NZTA is seeking resource consents as a **Discretionary Activity** retrospectively, in accordance with the emergency works provisions of the RMA, pursuant to FNDP rules relating to for a cleanfill and land use within an indigenous wetland.

This AEE concludes that any ongoing adverse effects on the environment and on people will be no more than minor and have been sufficiently mitigated or avoided, to the extent practicable. The proposal is considered not to be contrary with the relevant statutory provisions.

On this basis, pursuant to Section 95 of the Resource Management Act, this proposal can be processed without the requirement for public or limited notification and without the requirement for the written approval of any specific persons.

Furthermore, it is considered that the statutory requirements of Section 104 and 104B of the Resource Management Act 1991 are satisfied.

On this basis it is our opinion that the resource consent can be granted for the activity subject to any reasonable and necessary conditions required to mitigate ongoing adverse effects.

**APPENDIX A RECORD OF TITLE**



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD**

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



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** **NA1558/22** **Part-Cancelled**  
**Land Registration District** **North Auckland**  
**Date Issued** 28 May 1958

**Prior References**  
NA912/1

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**Estate** Fee Simple  
**Area** 85.8212 hectares more or less  
**Legal Description** Lot 1 Deposited Plan 35169  
**Registered Owners**  
Christopher Kenneth Kimber as to a 1/2 share  
Robyn Audrey Kimber as to a 1/2 share

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**Interests**

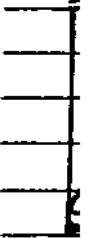
C276816.1 Gazette Notice (NZ Gazette 6.6.1991 No.83 p.1826) declaring (a) part (732m<sup>2</sup>) to be road which shall vest in the Far North District Council (c) part (450<sup>2</sup>) to be taken and shall vest in the Far North District Council - 21.6.1991 at 10.45 am  
5771562.3 Mortgage to (now) Westpac New Zealand Limited - 21.10.2003 at 9:00 am

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**APPENDIX B ECOLOGICAL REPORT PREPARED BY NZEM**



Prepared for  
WAKA KOTAHI NZ TRANSPORT AGENCY

# WETLAND ASSESSMENT

OF THE PROPOSED SOIL DISPOSAL  
SITE AT 184 PERIA VALLEY ROAD

FINAL REPORT 2024

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<b>Appendix I:</b>	<b>Far North District Plan: Definition of an Indigenous Wetland</b>
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## DOCUMENT CONTROL

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### NZEM Quality System:

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Report Revision	3
Report Status	Final
Prepared by	Joana Unteregger, Tim Martin
Reviewed by	Tim Martin
Approved by	Grace Henty
Date created	21 November 2024
Date Issued	21 November 2024

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## PERSONNEL

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### Joana Unteregger – Ecologist

Joana Unteregger is a plant ecologist, with a background in environmental science and biosecurity. She holds a BSc (in environmental science, ecology and biodiversity, 2018), and a MSc (Research) degree from the University of Waikato (Environmental Science, 2021). Her thesis investigated the flowering phenology of mānuka in Aotearoa, New Zealand. Joana conducts a variety of ecological and wetland assessments, and prepares Planting, Weed, and Pest Management Plans.

### Tim Martin – Principal Ecologist

Tim Martin is an ecologist with over 20 years experience in terrestrial and aquatic habitat and biodiversity surveys, environmental impact assessment (including large scale infrastructure projects), sustainable land use, and biodiversity management. Tim has worked on roading projects throughout North Island, including Waikato Expressway, Puhoi to Warkworth, Otaki to North Levin, Mount Messenger, and the Manawatu Gorge Bypass. He has a PhD in Environmental Science from the University of Auckland (2007). For his thesis he researched forest dynamics and disturbance in the mountains of central and southern North Island. Tim has extensive experience in New Zealand and the Asia-Pacific Region, including Indonesia, Solomon Islands, Vanuatu, Fiji, Samoa, and Cook Islands. Northland is home for Tim and he is recognized for his excellent local knowledge of Northland ecosystems, flora, and fauna. He has worked on many projects across Te Tai Tokerau, including wetland delineation, mapping, and ranking, mapping kauri forests for the entire region, and identification of gumland ecosystems.

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## 1. INTRODUCTION

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### 1.1 BACKGROUND

Waka Kotahi NZ Transport Agency is conducting emergency works in the Mangamuka Gorge, State Highway 1, repairing more than 25 slips. As part of the slip repairs of Nationally and Regionally Significant Infrastructure, soil is being removed from the affected slip areas into soil disposal sites. However, due to kauri dieback (caused by the pathogen *Phytophthora agathidicida*) the movement of soil from within and around potentially infected kauri forest creates a significant risk of infecting other forests and kauri populations. To avoid and mitigate the risk of moving the pathogen throughout the region, NZ Transport Agency propose to keep the soil disposal sites within the catchment that the soil originated from.

In addition to the above risks, topography of the land must be suitable for soil disposal to ensure that soil does not move and negatively impact other areas. Due to these constraints, NZ Environmental Management Limited ('**NZEM**') was retained by Stellar Projects on behalf of NZ Transport Agency to conduct an ecological assessment, with specific regard to any wetlands, of the area proposed for soil disposal/fill ('**the Site**') at 184 Peria Valley Road, Northland (legally described as Lot 1 DP 35169) (Figure 1-1).

Figure 1-1 shows the extent of the winter and summer works areas, highlighting the erosion and sediment controls which will be implemented for the life of the disposal site.

The Site will continue to be utilised as a grazing area post the completion of works.

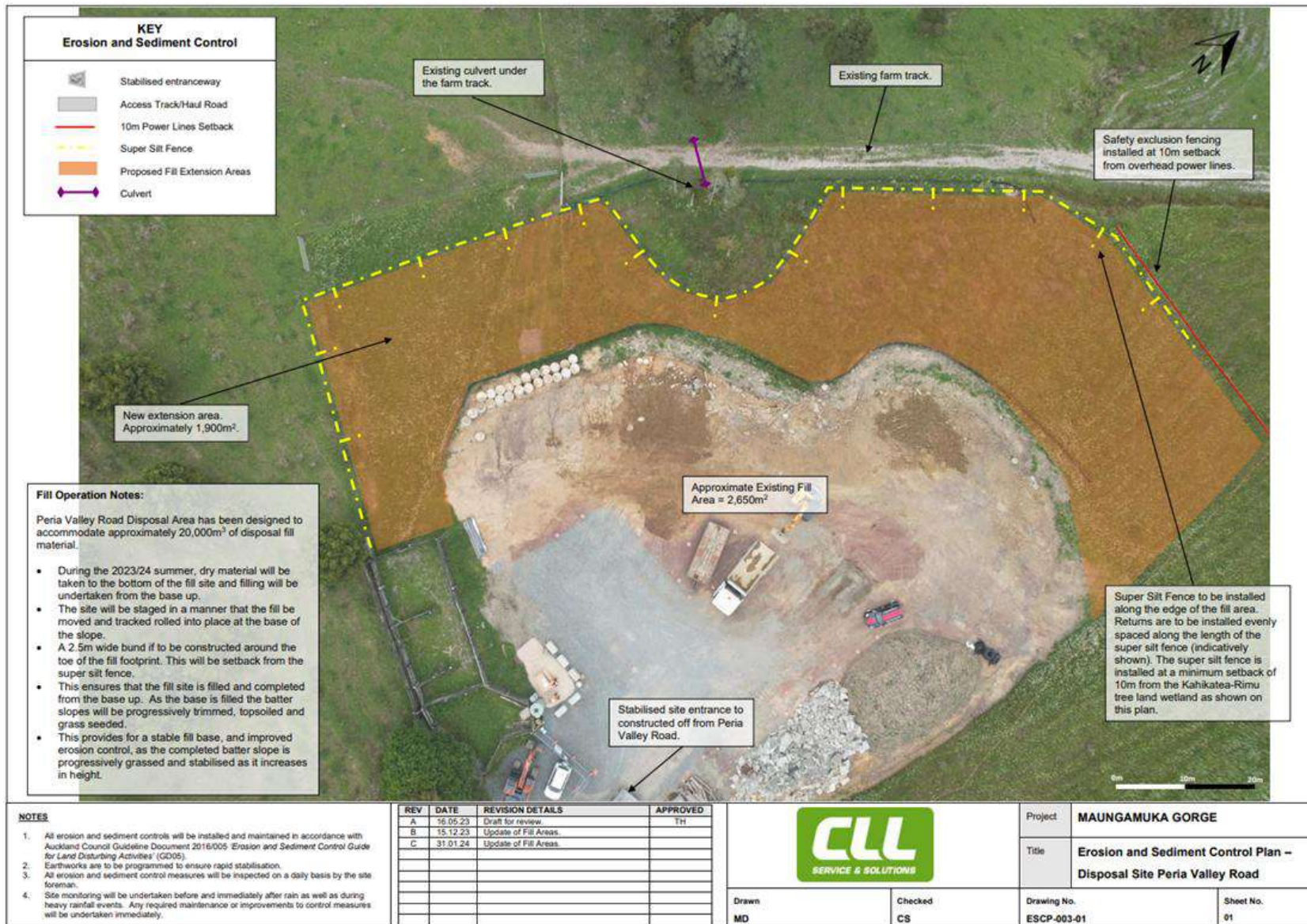


Figure 1-1: Map and scheme plan of the existing and proposed soil disposal site at 184 Peria Valley Road, Northland.

## 2. METHODS

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### 2.1 FIELD SURVEYS

Field surveys were undertaken on the 31 May 2023 by Joana Unteregger and Ashlee Deeming, and on 28 August 2023 by Tim Martin. The proposed soil disposal site was walked, all species seen were recorded and identified, and vegetation and habitats were described and mapped. Representative photographs were taken of habitats at the site. The vegetation and any putative wetlands were assessed against the relevant tests and definitions of the National Policy Statement for Freshwater Management 2020 ('**NPS-FM**'), National Environment Standards for Freshwater 2020 ('**NES-FW**'), and the Ministry for the Environment Pasture Exclusion Assessment Methodology (2022). The putative wetlands were also assessed against the 'Indigenous Wetland' definition in the Far North District Plan ('**FNDP**') (Appendix I).

### 2.2 ASSESSMENT

The EIANZ Ecological Impact Assessment ('**EclIA**') Guidelines (Roper-Lindsay et al., 2018) were used as a guide to assess value to species and habitats, determine ecological effects of the proposal, assess the magnitude of the effect of the proposal, and to determine the overall level of ecological effects, after any mitigation actions have been completed. Summaries of the EclIA criteria are listed in the Appendix II.

### 3. ECOLOGICAL CONTEXT

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#### 3.1 ECOLOGICAL DISTRICT

The Site is located in the Maungataniwha Ecological District ('ED') and Northland Ecological Region (McEwen 1987, Brook 1996). The Maungataniwha ED encompasses approximately 101,900 ha and is bordered by five other EDs: Whangaroa ED to the east, Puketi ED to the south, Hokianga ED to the southwest, Ahipara ED to the west, and Aupouri ED to the north.

Conning (2000) mapped and described areas of indigenous natural vegetation within the Maungataniwha ED, and also provided an analysis of the main vegetation types, threatened species, and other taxa of scientific interest present in the district, as part of the Protected Natural Areas Programme ('PNAP') in 1994 and 1995. Maungataniwha ED is distinctive for the high number of small, fragmented remnants of natural forests and shrubland, and is characterised by the extensive linkages between areas of indigenous vegetation. The natural areas identified comprise approximately one-third of the ED, of which 66% are forest, 31% shrubland, 2.5% estuarine and less than 1% are wetland (Conning, 2002).

The Site does not contain any Recommended Areas for Protection ('RAPs'). The closest RAPs are approximately 1 km away (Victoria Valley Road: PNA O04/063 in the west, and Tracey/Edwards Roads: PNA O04/114 to the east). The nearest areas of indigenous vegetation to the Site are stands of secondary kahikatea (*Dacrycarpus dacrydioides*) forest in gullies immediately to the north of the proposed spoil disposal area. These forest stands have severely limited and degraded understoreys due to stock grazing.

#### 3.2 ECOLOGICAL SETTING

The Site comprises a small, shallow basin surrounded by gently rolling to steeply rolling hills dominated by pasture grasses. To the south of the spoil site is Peria Valley Road, and to the north is a farm track. The existing and proposed spoil site comprises exotic grassland on hillslope, and a wetland in a hillslope seepage. The farm track along the northern edge of the proposed spoil site may be locally increasing soil moisture along the lower edge of the hillslope seepage wetland.

## 4. VEGETATION AND HABITATS

### 4.1 VEGETATION TYPES

#### 4.1.1 Exotic Grassland on Hillslope

Rapid visual assessment confirmed that most of the spoil disposal area is exotic grassland on hillslopes. This grassland is dominated by kikuyu (*Cenchrus clandestinus*), paspalum (*Paspalum urvillei*), parsley dropwort (*Oenanthe pimpellinoides*), and buttercup (*Ranunculus repens*) with occasional gorse (*Ulex europaeus*) (Plate 4-1).



Plate 4-1: Overview of the Site, showing exotic grassland on hillslope (foreground) and hillslope seepage (right of centre).

#### 4.1.2 Wīwī-Spike Sedge Rushland on Hillslope Seepage (1,365 m<sup>2</sup>)

The lower hillslope within the spoil disposal site is a hillslope seepage wetland (Plate 4-2). This area meets the definition of a wetland provided in the Resource Management Act 1991, as it comprises “permanently or intermittently wet areas... that support a natural ecosystem of plants and animals that are adapted to wet conditions”. This wetland type occurs on sloping ground where the groundwater levels are close to or at the ground surface, resulting in permanently wet soils (Wildland Consultants, 2012). The hydrophytic vegetation in this seepage (Figure 4-1) meets the tests and definitions of a natural inland wetland in the NPS-FM and NES-FW. Whilst the lower edge of the wetland may have higher water levels due to the construction of an adjacent farm race, the wetland is on a sloping surface, and most of the wetland lies at a higher elevation than this race and is not there due to this artificial impoundment. Additionally, the water source does not exclude this wetland as a natural inland wetland as the site has a permanently high water table that interacts with the ground surface (vs. the alternative of only being subject to temporary rain-derived water pooling). The wetland is dominated by two indigenous species, wīwī (*Juncus edgariae* – facultative wetland species) and spike sedge (*Eleocharis acuta* – obligate wetland species) (Plate 4-2). Mercer grass (*Paspalum distichum*), and soft rush (*Juncus effusus* var. *effusus*) are also present, and exotic grasses increase in abundance towards the drier top edge of the wetland.





**Plate 4-2: Hillslope seepage wetland within the spoil disposal area. The vegetation is dominated by wīwī (*Juncus edgariae*), and spike sedge (*Eleocharis acuta*) is common.**

Due to the abundance of wīwī and spike sedge, the cover of indigenous species is greater than 50%, and most of the wetland meets the definition of an indigenous wetland in the Far North District Plan (Appendix I).

Smaller areas along the top edge of the wetland are likely to have been more dominated by grasses, including exotic species, prior to spoil deposition. These areas are likely to have not met the definition of indigenous wetland under the Far North District Plan.

#### **4.1.3 Kahikatea-rimu Treeland in Hillslope Seepage (35 m<sup>2</sup>)**

Near the northwest edge of the hillslope seepage wetland is a small area of kahikatea-rimu treeland. This treeland comprises seven kahikatea and two rimu (*Dacrydium cupressinum*) (Summer Fill Area, Figure 1-1). Many of these trees exhibited late-stage symptoms of disease and/or overall stunted growth and ill-health (Plate 4-3). Whilst small, this treeland meets the definition of an indigenous wetland in the Far North District Plan (Appendix I).



**Plate 4-3: Kahikatea-rimu treeland on the northwest edge of the hillslope seepage wetland.**



Figure 4-1: Map of vegetation and habitats at the proposed soil disposal site at 184 Peria Valley Road, Northland.

#### 4.1.4 Wetland areas of the wider catchment area

A desktop map was produced of wetland areas in the wider catchment area, using Google Earth imagery.



**Figure 4 1: Desktop map of wetland habitats in the catchment of the spoil site. The wetland within the spoil site is shown in blue. Additional wetland areas are likely present but concealed from view by tree canopy.**

#### 4.2 FLORA

The Site is known to support one 'At Risk' species. The kahikatea in the kahikatea-rimu treeland is habitat for an epiphytic lichen, *Teloschistes flavicans*, which has a conservation status of 'At Risk-Declining' (Plate 4-4) (de Lange et al., 2018). The lower trunks of the trees supported at least 10 plants (Plate 4-5), and additional plants may be present in the upper canopy. A second survey was undertaken on 14 September 2023 to determine the size of the local *Teloschistes* population on trees on the same property. The survey found a further c. 90 individuals, spread across 16 other kahikatea within 250 m of the spoil disposal site. This is a conservative estimate of the size of the wider population, as the lichen favours canopy habitats and only trees on the edges of forest remnants could be observed.



Plate 4-4: *T. flavicans* (gold-coloured lichen) on kahikatea tree in hillslope seepage wetland within proposed spoil site.

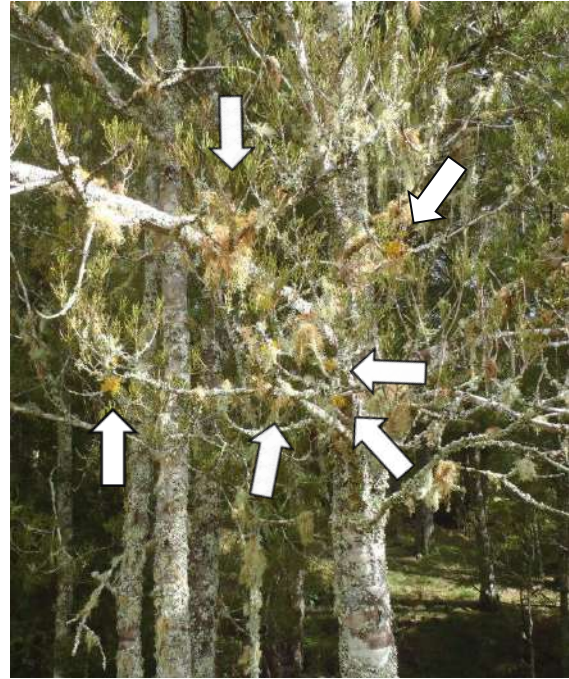


Plate 4-5: *T. flavicans* (gold-coloured lichen) on kahikatea trees in forest immediately

### 4.3 FAUNA

During the site visits, three bird species were observed, the introduced skylark (*Alauda arvensis*) and myna (*Acridotheres tristis*), and the native kāhu (swamp harrier, *Circus approximans*, Not Threatened) (Robertson et al., 2021). Lizards, and in particular indigenous skinks, are not likely to be present in the footprint of the proposed spoil site.

Aside from the small size of the wetland and its degradation by grazing, the wetland lacks the habitat components typically associated with Threatened or At Risk bird species that can utilise smaller wetlands within pasture areas. The wetland lacks pools of open water, the key feeding habitat for matuku-hūrepo (Australasian bittern, Threatened – Nationally Critical), the wetland lacks dense stands of taller reeds such as raupo, the typical habitat of pūweto (spotless crane, At Risk – Declining), and the wetland lacks a shrub tier, which is an important structural component of habitats where māātā (North Island fernbird, At Risk -Declining) are usually found. The long history of grazing, and the low structural and compositional diversity of the wetland, mean that the only common wetland birds such as pukeko and putangitangi (paradise shelduck) are likely to utilise the habitat provided by the wetland.

Long-tailed bats (Threatened – Nationally Critical) could be present in the catchment. Long-tailed bats can forage over farmland, including pasture, streams and wetland areas, and are known to roost in larger, older trees with cavities or flaking bark.

## 5. ASSESSMENT OF ECOLOGICAL VALUES, SIGNIFICANCE, AND EFFECTS

### 5.1 ECOLOGICAL VALUES

#### 5.1.1 Hillslope Seepage Wetland

The hillslope seepage wetland has been severely degraded by historic vegetation clearance, followed by a long history of grazing. This wetland, prior to human modification, was most likely swamp forest, dominated by kahikatea, with pukatea (*Laurelia novae-zelandiae*) and maire tawake (swamp maire; *Syzygium maire*) also potentially present as canopy trees. Currently, most of the wetland has a cover of wetland rushes and grasses. Two indigenous species, wīwī and spike sedge, remain dominant as these can persist in grazed habitats. The wetland retains a small stand of kahikatea and rimu, that likely regenerated at a time when the site reverted to scrub, before clearance reinstated grassland and rushland over most of the proposed spoil site. These trees are habitat for *Teloschistes flavicans*, a lichen species with a conservation status of 'At Risk-Declining'. The wīwī-spike sedge rushland in hillslope seepage is of Low ecological value. The kahikatea-rimu treeland in the hillslope seepage is of Moderate ecological value.

#### 5.1.2 Exotic Grassland on Hillslope

The grassland on the hillslope is almost solely comprised of exotic plant species. The grassland would provide some habitat value for highly mobile indigenous birds, such as pūkeko and kāhu, that favour modified open habitats. Exotic grassland is the most common habitat type in the local landscape and has Negligible ecological value.

### 5.2 ASSESSMENT OF SIGNIFICANCE

The two wetland vegetation types were assessed for significance (Table 5-1). using the criteria in Appendix 5 of the Regional Policy Statement for Northland (2016). Significance is met if the indigenous vegetation meets one or more of the four criteria. Some of the criteria provide sub criteria and the site is significant if any of the sub criteria are met (e.g. Representativeness 1 a or b) whereas the criteria for Rarity Distinctiveness includes four sub criteria all of which must be met (a, b, c, and d). Neither of the two wetland vegetation types were assessed as Significant.

**Table 5-1. Assessment of significance for wetland habitats at the project site.**

	Wīwī-spike sedge rushland in hillslope seepage wetland	Criteria met (yes/no)	Kahikatea-rimu treeland in hillslope seepage wetland	Criteria met (yes/no)
1. Representativeness (a) Indigenous vegetation and typical of what existed c. 1840, or representative of fauna expected for the habitat type, or (b) Large example or a good example of its type	1 (a) Degraded vegetation induced by grazing. (b) not a large or good example	No	1 (a) Degraded vegetation induced by grazing. (b) not a large or good example	No
2. Rarity/distinctiveness (a) Acutely or Chronically Threatened land environments or trigger Appendix 5 Criteria or exceed 0.05 ha (for seepage wetlands) (b) Supports rare, threatened or uncommon species	2 (a) Yes - a seepage wetland larger than 0.05 ha (b) No rare, threatened or uncommon species recorded (c) No Northland	No. Meets 2 (a) and (d) but not (b) and (c). Does not meet all components for Criteria 2.	2 (a) Yes - a seepage wetland larger than 0.05 ha (b) Yes – an At Risk lichen species is present (c) No Northland endemics or species at limits	No. Meets 2 (a), (b) and (d) but not (c). Does not meet all components for Criteria 2.

	Wīwī-spike sedge rushland in hillslope seepage wetland	Criteria met (yes/no)	Kahikatea-rimu treeland in hillslope seepage wetland	Criteria met (yes/no)
(c) Contains vegetation or taxa endemic to Northland or at distributional limits (d) Vegetation or taxa of restricted occurrence or originally rare ecosystem, or naturally rare or recognised by NZ Marine Protected Areas Policy	endemics or species at limits (d) Yes, seepages are a naturally rare ecosystem type		(d) Yes, seepages are a naturally rare ecosystem type	
3. Diversity and pattern (a) Vegetation or habitat with high diversity (b) Composition reflects diverse features or ecological gradients or (c) Ecological sequences	3 (a) low diversity due to grazing impacts, (b) limited compositional changes, (c) no ecological sequences	No	3 (a) low diversity due to grazing impacts, (b) limited compositional changes, (c) no ecological sequences	No
4. Ecological Context (a) Important linkage or network, important buffering, or (b) Important role for protecting the function of other sites, or (c) Important habitat for a critical life history stage for indigenous fauna.	4 (a) limited linkage value due to degraded habitats, small size, and catchment position (upper edge). (b) Limited role in protection of other sites due to small size and degraded nature. (c) not important habitat for a critical life stage	No	4 (a) limited linkage value due to degraded habitats, small size, and catchment position (upper edge). (b) Limited role in protection of other sites due to small size and degraded nature. (c) not important habitat for a critical life stage	No
Area is significant?		No		No

### 5.3 ASSESSMENT OF ECOLOGICAL EFFECTS

Following completion of a preliminary ecological assessment, the footprint of the proposed spoil site was revised to avoid the small stand of kahikatea and rimu in the hillslope seepage wetland, that was assessed as of Moderate ecological value. This revision, whilst small, avoids any significant impact on an indigenous lichen species that is “At Risk-Declining”.

The revised footprint of the proposed spoil site will fill the gully head, resulting in the loss of most of this hillslope seepage wetland, and a larger area of surrounding exotic grassland. Without avoidance and or mitigation, the potential adverse effects of revised spoil disposal at this site include:

- Loss of wetland habitats
- Sedimentation of downstream aquatic habitats.

This assessment of level of effects has been undertaken at the scale of the wetland system affected by the proposal, which extends through several gully heads to the north of the spoil site, before converging at a farm pond approximately 250 metres to the northwest.

Whilst degraded by vegetation clearance and grazing, loss of an upper reach of this wetland will still result in localised habitat loss for common wetland species (e.g. pukeko; *Porphyrio melanotus*, Not Threatened), and the lost opportunity to restore this portion of the wetland to

higher value wetland habitats. Higher value wetland habitats occur nearby (e.g. kahikatea forest on seepages, raupo reedland), and these provide a greater extent of higher quality habitat for the wetland species present in this catchment. The unmitigated level of effect on wetland habitat and wetland species within the wider catchment is assessed as Low for the wīwī-spike sedge rushland.

Without best practice sediment control practices, disposal of spoil of this site could increase sedimentation of aquatic and wetland habitats downstream of the Site. If the Site was subject to a catastrophic failure of the spoil site, this sedimentation could be at a scale that leads to the loss of downstream wetland habitat (through rapid infilling).

Using EclA guidelines, and without any avoidance and or mitigation measures, the level of effect will or has been Very Low to Moderate, depending on the habitat or species impacted (Roper-Lindsay et al., 2018). The potential adverse impacts of the project are summarised in Table 5-1.

**Table 5-2: Habitat type and species, ecological value, magnitude of loss, and level of effect (unmitigated) for habitats and species at the spoil site.**

Habitat type/species	Ecological Value	Magnitude of Effect	Level of Unmitigated Effect
Wīwī-spike sedge rushland in hillslope seepage wetland	Low	Moderate	Low
Kahikatea-rimu treeland in hillslope seepage wetland	Moderate	Low (due to revision of spoil site to exclude this area)	Low
Aquatic habitats and kahikatea wetlands downstream of spoil site	Moderate	Moderate	Moderate
Exotic grassland	Negligible	Low (under assumption that grassland is reestablished on the completed spoil site)	Very Low
<i>Teloschistes flavicans</i>	Moderate	Low (as this species is present on kahikatea to the south)	Low

#### 5.4 OPPORTUNITIES TO MANAGE ECOLOGICAL EFFECTS

To address the ecological effects of the spoil disposal area at 184 Peria Valley Road the following actions should be implemented:

- Sediment be controlled during the preparation and use of the soil disposal site by implementing the GD05 guidelines.
  - A silt fence should be erected to protect the small stand of kahikatea and rimu trees within the wetland, and the forest remnant and wetlands immediately to the north.
  - After, and where appropriate during, the life of the soil disposal site, the bare soil should be grassed to stabilise the soil, preventing erosion.
- The small stand of kahikatea-rimu in the wetland has been excluded from the finalised spoil disposal area. The spoil disposal area should come no closer than 3 metres from the trunks of the closest trees.
- For Low adverse effects that cannot be avoided, the EclA guidelines (p. 84) note that design and construction should minimise adverse effects; however, revision of the design to avoid the wetland area was not feasible.

- With the mitigation described in Table 5-2 below, the adverse ecological effects on habitats of the catchment will be Low or Very Low.
- The EclA guidance (p. 85) equates a very low level of effect with “not more than minor”.

**Table 5-1: Habitat type, level of effect (unmitigated) for the catchment, proposed mitigation, and level of residual effects.**

Habitat type	Level of Unmitigated Effect	Mitigation	Residual Level of Effect
Wīwī-spike sedge rushland in hillslope seepage wetland	Low	Almost all of this wetland lost. No mitigation possible.	Low
Kahikatea-rimu treeland in hillslope seepage wetland	Low	Retain trees	Very Low
Aquatic habitats	Moderate	Best practice sediment control	Low
Exotic grassland	Very low	N/A	Very Low
<i>Teloschistes flavicans</i>	Low (as trees retained)	Excluded from spoil site.	Very Low



## 6. CONCLUSIONS

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To avoid potentially spreading kauri dieback contaminated soil throughout the region, Waka Kotahi NZ Transport Agency constructed a soil disposal site within the catchment to accommodate the works and soil removal required for the Mangamuka Gorge slip repairs on State Highway 1 (Emergency work on Nationally Significant Infrastructure).

The Site at 184 Peria Valley Road contains areas of hydrophytic vegetation which meet the tests and definitions of a natural inland wetland in the NPS-FM and NES-FW. The wetland vegetation is a hillslope seepage and meets the definition of an Indigenous Wetland in the Far North District Plan but does not meet the criteria for Significant Indigenous Wetland.

Final design of the spoil site has excluded the small area of kahikatea-rimu treeland on the northwest edge of the spoil site. By revision of the footprint of the spoil site, indigenous wetland vegetation of Moderate ecological value will be avoided, and the effects of habitat removal on an At Risk-Declining lichen species will also be avoided. Under this scenario, the residual adverse effects of the proposed spoil site were assessed as Low or Very Low for terrestrial habitats, Very Low for an At Risk lichen species, and for Low or Very Low wetland vegetation. Whilst it is recognised that the project will result in the loss of a hillslope seepage wetland, the ecological value of this area, considering its local context, is Low, and the residual effects of its loss are also Low.

## 7. REFERENCES

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- Brook, F.J. 1996: Classification of the ecological districts of Northland. Unpublished report prepared for Northland Conservancy, Department of Conservation, Whangarei.
- Conning, L. 2002. Natural areas of Maungataniwha Ecological District. Reconnaissance Survey Report for the Protected Natural Areas Programme. New Zealand Protected Natural Areas Programme 42. Department of Conservation, Whangarei.
- de Lange, P., Blanchon, D., Knight, A., Elix, J., Lücking, R., Frogley, K., Harris, A., Cooper, J., Rolfe, J. 2018: Conservation status of New Zealand indigenous lichens and lichenicolous fungi, 2018. New Zealand Threat Classification Series 27. Department of Conservation, Wellington. 64 p.
- Maseyk, F., Ussher, G., Kessels, G., Christensen, M., Brown, M. 2018. Biodiversity Offsetting under the Resource Management Act. A guidance document. Prepared for the Biodiversity Working Group on behalf of Biomanagers Group Ltd.
- McEwen, W.M. 1987. Ecological Regions and Districts of New Zealand. Third Revised Edition in Four 1:500,000 Maps. New Zealand Biological Resources Centre, Department of Conservation, Wellington.
- Ministry for the Environment. 2023. National Policy Statement for Freshwater Management 2020. New Zealand Government, Wellington.
- Northland Regional Council. 2007. Regional Water and Soil Plan for Northland. Northland Regional Council, Whangarei.
- Resource Management (National Environmental Standards for Freshwater) Regulations 2020. 2023. New Zealand Government, Wellington.
- Robertson, H.A., Baird, K.A., Elliott, G.P., Hitchmough, R.A., McArthur, N.J., Makan, T.D., Miskelly, C.M., O'Donnell, C.F.J., Sagar, P.M., Scofield, R.P., Taylor, G.A., Michel, P. 2021. Conservation status of birds in Aotearoa New Zealand, 2021. New Zealand Threat Classification Series 36. Department of Conservation, Wellington.
- Roper-Lindsay, J., Fuller, S.A., Hooson, S., Sanders, M.D., Ussher, G.T. 2018. Ecological impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems. 2nd edition. Environment Institute of Australia and New Zealand, Wellington.
- Tonkin and Taylor 2023. Biodiversity Compensation Models. <https://www.tonkintaylor.co.nz/what-we-do/ecology/biodiversity-compensation-models/> Accessed 13-09-2023.
- Wildland Consultants. 2012. Report on Wetland Guidelines for the Northland Region. Contract Report No. 2952. Prepared for Northland Regional Council. Wildland Consultants, Rotorua.

**APPENDIX**

**Appendix I: Far North District Plan: Definition of an Indigenous Wetland**

An indigenous wetland is any naturally occurring wetland of 50m<sup>2</sup> or more (with a minimum width of 5m) which is permanently or seasonally wet (in that the water table is at or near the ground surface during high water table conditions) and which is dominated by indigenous wetland plant species including all or some of the following:

- a) raupo;
- b) flax;
- c) sedge associations;
- d) kahikatea;
- e) cabbage tree;
- f) manuka/kanuka on peatlands;
- g) mangrove and saltmarsh;
- h) kuta

For the purposes of this Plan, indigenous wetlands that have been created for conservation purposes, as a requirement of a resource consent, are included within the definition of "indigenous wetlands". The definition excludes wetlands created and subsequently maintained principally for or in connection with:

- a) effluent treatment and disposal systems; or
- b) stormwater management; or
- c) water storage; or
- d) other artificial wetlands, water courses or open drains.

The definition also excludes:

- a) trees with a pasture understorey; or
- b) exotic rush/pasture communities;
- c) or land which has been modified to the extent that it is no longer ecologically viable

**Appendix II: Assessment of Effects Methodology (Roper-Lindsay et al., 2018)**

The Ecological Impact Assessment (EclA) guidelines consider the factors set out in Table 1 when assigning value to species.

Once the overall level of ecological effects is determined the requirement and types of mitigation can be considered.

**Table 1:** Assigning value to species according to the EclA guidelines.

Determining Factors	Value Ascribed
Nationally threatened species found within the project's zone of influence, either permanently or seasonally	<b>Very high</b>
Species listed as threatened or at risk (declining) found within the project's zone of influence, either permanently or seasonally	<b>High</b>
Species listed as any other category of "at risk" found in the project's zone of influence either permanently or seasonally	<b>Moderate</b>
Locally uncommon (within the ecological district) or distinctive species present	<b>Moderate</b>
Nationally and locally common indigenous species present	<b>Low</b>
Exotic species, including pest species present, having recreational value	<b>Negligible</b>

**Table 2:** Descriptors for the magnitude of ecological effects according to EclA guidelines.

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

**Table 3:** EclA criteria for describing the overall level of ecological effects.

Ecological value	Very high	High	Moderate	Low	Negligible
Magnitude					
<b>Very High</b>	Very high	Very high	High	Moderate	Low
<b>High</b>	Very high	Very high	Moderate	Low	Very low
<b>Moderate</b>	High	High	Moderate	Low	Very low
<b>Low</b>	Moderate	Low	Low	Very low	Very low
<b>Negligible</b>	Low	Very low	Very low	Very low	Very low
<b>Positive</b>	Net gain	Net gain	Net gain	Net gain	Net gain

# APPENDIX C HAZARD SUMMARY REPORT



Overview

Hazard Property Viewer

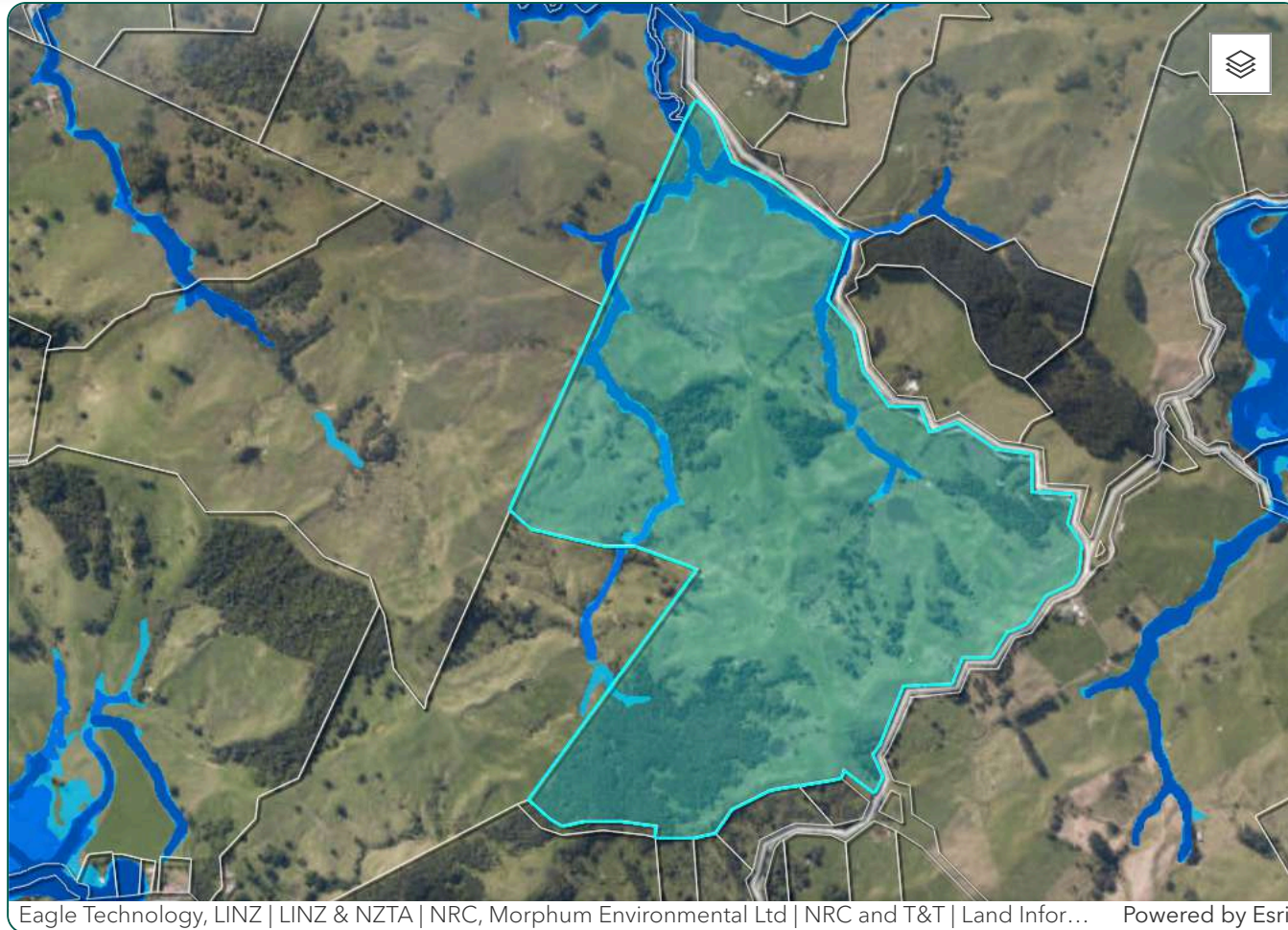
Disclaimer

[← Back](#)

# Title No. NA1558/22

[Print](#)

Fee Simple, 1/1, Lot 1 Deposited Plan 35169, 858,212 m2











*Note : Due to device screen size differences, you may need to adjust your map view for printing.*

### Far North District




Coastal Hazards



Sea Level Rise (SLR) Scenario	Coastal Flood Hazard Zone (CFHZ)	Intersecting Zone % (rounded to 1 decimal place)	Coastal Erosion Hazard Zone (CEHZ)	Intersecting (Y/N)*
Current	 CFHZ0	0%	 CEHZ0	No
2080 (0.55m SLR)	 CFHZ1	0%	 CEHZ1	No
2130 (1.2m SLR)	 CFHZ2	0%	 CEHZ2	No
2130 (1.5m Rapid SLR)	 CFHZ3	0%	 CEHZ3	No

\*Note that a property may still fall within a coastal erosion zone if it does not intersect with an erosion line. Further information here.



**River Flooding - Regionwide Models**

Scenario	River Flooding Hazard Zone (RFHZ)	Intersecting Zone % (rounded to 1 decimal place)
One-in-10-year flood extent	 RFHZ1	2.7%
One-in-50-year flood extent	 RFHZ2	3.5%
One-in-100-year flood extent (plus climate change)	 RFHZ3	4.4%

**River Flooding - Priority Rivers**

Scenario	River Flooding Hazard Zone (RFHZ)	Intersecting Zone % (rounded to 1 decimal place)
----------	-----------------------------------	--



One-in-10-year flood extent		RFHZ1	0.6%
One-in-50-year flood extent		RFHZ2	0.7%
One-in-100-year flood		-----	-----



# APPENDIX D SOIL TYPE FACTSHEETS

# Young semi-volcanic soils

## Soil types in this group

- Awapuku clay loam – AK, AKH\*
- Bream clay loam – BM, BMH\*
- Haunga complex – C5, C5H\*
- Huia stony clay and stony silt loam steep land soil - HAS
- Huia stony silt loam steep land soils – HAIS
- Hunoke stony clay loam – HU, HUH\*
- Katui clay loam – KT, KTH\*
- Takitu gravelly clay loam – TU, TUH\*
- Te Kie light brown stony clay loam steep land soils – TeuS
- Te Kie red clay loam steep land soil – TerS
- Te Kie stony clay loam steep land soils – TES
- Tokawhero stony clay – TWH\*

This fact sheet uses NZ Soil Bureau map series soil type names and abbreviations.

\*The H denotes the hill variant of this soil type, which occurs on slopes over 20° and has a shallower profile.



*Takitu gravelly clay loam (TU, TUH) soil profile*

## Features of young semi-volcanic soils

- These young semi-volcanic brown granular loams and clays are a complex group of soils formed on rock and ash from the now-extinct Tangihua volcanoes
- They are part of the Huia, Katui and Te Kie soil suites
- Tangihua volcanics are mixed with sedimentary rocks
- Young semi-volcanic soils on easier contour can be fertile, highly productive pastoral or forestry land
- However, while naturally fertile, the steep land soils are particularly prone to shallow or deep seated slipping. Therefore, much of this land is not suited to pastoral farming
- Because most young semi-volcanic soils are found in the upper catchments of Northland's major rivers and they easily discolour water, it is important that they are carefully managed

## Structure and drainage management

Issues	Management tips
While topsoils are friable, granular and prone to drying out, subsoils can be sticky clay	Consider subsurface drainage in poorly drained areas of pasture with sticky clay subsoil
Soil structures can be compromised on steeper slopes; Te Kie steepland variants are particularly skeletal  Bream clay loam topsoils are dry, shallow and hard to revegetate	Avoid overgrazing of pasture and maintain a dense pasture cover to help build soil organic matter, improve soil structure and retain moisture in the soil
Haunga (C5, C5H) soils are limited in their use for farming or forestry because of numerous rocks and seepage areas from plateaus above	Consider retiring very steep or marginal pastoral land from grazing if pastoral returns are poor and/or weed invasion is a problem

## Erosion control

Erosion risks	Soil type	Specific problems	Possible solutions
Sheet erosion	All young semi-volcanic soils	Extreme slopes with limited vegetation cover are vulnerable to sheet erosion	Maintain dense pasture cover to prevent sheet erosion
Slipping (severe)	All young semi-volcanic soils, especially on steepland soils	Deep Takitu hill soils are subject to deeper slips than those that occur on shallow Te Kie soils  Te Kie and Awapuku slip scars are slow to revegetate  Haunga complex (C5, C5H) and Hunoke soils suffer deep-seated flow movement on easier contour and large scale slipping on steeper land	Strategic planting of poplars can reduce but not eliminate risk of slipping on steepland slopes  Areas of deeper soils support productive pine forest (but remain slip-prone); slippage may be reduced with pine cover in some areas  Planting poplars where rubble has accumulated at the base of slopes can sometimes prevent further erosion
Gully erosion	All these soils; Takitu gravelly clay loam (hill variant) soils in particular	Rubbly areas are susceptible to deep seated slips and gullyng  Both gully and slip areas can be difficult to revegetate because of accumulated clay in subsoil or extremely dry, friable topsoils	Consider retiring very steep or marginal pastoral land from grazing if pastoral returns are poor and/or weed invasion is a problem  Avoid constructing drains or tracks in rubbly areas which are prone to deep-seated movement and gullyng

## Nutrient management

Soil type	Nutrient status	Management strategies
All young semi-volcanic soils	Iron and aluminium in the topsoil causes these soils to hold phosphate, making it less available to plants	Little and often applications of phosphorus are recommended to provide a more readily available and regular source of phosphate to plants
All these soils	Soils are of medium to high natural fertility, with good supplies of nutrients essential for plant growth. Soils are naturally high in magnesium and calcium but low in potassium	Differences in basement rock make detailed knowledge of soil types and nutrient status essential for good management; seek expert advice for soil testing and fertiliser recommendations

## Drainage classes

Soil symbol	Full name	Drainage class
<b>HUIA SUITE</b> Basement rock: Tangihua volcanics Rubbly material erupted from Whangaroa, Whangarei Heads, Tokatoka, Waitakere		
HAS	Huia stony clay and stony silt loam steepland soils	6⇒4 - Excessively to well drained
H AIS	Huia stony silt loam steepland soils	5⇒4 - Very well to well drained
HU, HUH	Hunoke stony clay loam	4⇒2 - Well to imperfectly drained
BM, BMH	Bream clay loam	4⇒2 - Well to imperfectly drained
<b>KATUI SUITE</b> Basement rock: Tangihua volcanics Andesite lava flows on inland slopes of volcanoes that once extended seaward from Mangonui Bluff		
KT, KTH	Katui clay loam	4⇒3 - Well to moderately drained
TU, TUH	Takitu gravelly clay loam	4⇒3 - Well to moderately drained
<b>TE KIE SUITE</b> Basement rock: Tangihua volcanics		
TES	Te Kie stony clay loam steepland soils	6⇒4 - Excessively to well drained
TErS	Te Kie red clay loam steepland soil	6⇒4 - Excessively to well drained
TEuS	Te Kie light brown stony clay loam steepland soils	6⇒4 - Excessively to well drained
AK, AKH	Awapuku clay loam	4⇒1 - Well to poorly drained
TWH	Tokawhero stony clay	3⇒1 - Moderately to poorly drained
C5, C5H	Haunga clay complex	3 - Moderately drained



*Tangihua volcanic hill country*

## Northland soil factsheet series

- Northland's climate, topography, historic vegetation and mixed geology have combined to form a complex pattern of soils across the region. There are over 320 soil types in Northland. Other regions in New Zealand average only 20 soil types per region.
- The information in this fact sheet is based on a 1:50,000 mapping scale. Therefore, it is not specific to individual farms or properties. However, it may help you to understand general features and management options for recent alluvial soils.
- Knowing your soils' capabilities and limitations is the key to sustainable production in Northland. Northland Regional Council (NRC) land management advisors are available to work with landowners to provide free soil conservation advice, plans and maps specific to your property.
- Regular soil tests are recommended. If you are concerned about your soil structure or health, the Visual Soil Assessment test could be useful. Contact the land management advisors at Northland Regional Council for more information.
- Further background information about the processes that have formed these soils can be found here:  
[www.nrc.govt.nz/soilfactsheets](http://www.nrc.govt.nz/soilfactsheets)

Contact a land management advisor on  
0800 002 004 or visit [www.nrc.govt.nz/land](http://www.nrc.govt.nz/land)

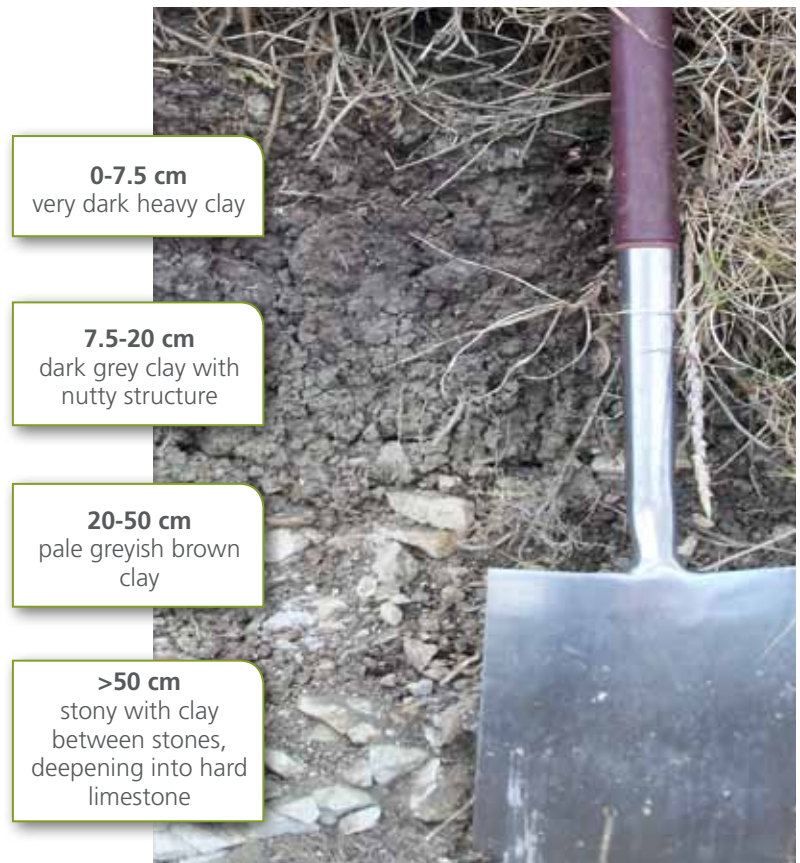
# Limestone soils

## Soil types in this group

- Arapohue clay - AU, AUH\*
- Arapohue deep clay - AUd
- Dairy Flat clay - DF
- Konoti clay - KNr, KNrH\*
- Konoti clay loam - KN, KNH\*
- Maungaturoto clay - MO
- Motatau clay - MT, MTH\*

This fact sheet uses NZ Soil Bureau map series soil type names and abbreviations.

The H\* denotes the hill variant of this soil type, which occurs on slopes over 20° and has a shallower profile.



*Arapohue clay soil profile*

## Features of limestone soils

- These soils were formed under broadleaf forest on different types of limestone
- They are part of the Arapohue, Konoti and Maungaturoto soil suites
- Limestone country in Northland is usually gently to strongly rolling
- These soils are relatively young, with a well-developed soil profile defined by limestone basement rock
- Limestone topsoils are weakly to strongly leached
- They are typically dark, with paler, flecked or mottled limestone clay beneath
- All these limestone soils are winter wet and prone to pugging and compaction

## Structure and drainage management

Issues	Management tips
Silica minerals in limestone weather to montmorillonite, a clay that expands when wet, closing off internal drainage; it then cracks when it dries in summer	Maintain a dense sward of grass at all times to prevent cracking and to protect from soil structure breakdown
Arapohue soils are 45%-55% montmorillonite clay, and the entire soil profile may be only 30 cm deep, making these soils particularly vulnerable to drought and cracking  Arapohue and Motatau soils are even shallower on steeper slopes	Rotational grazing systems will allow adequate pasture recovery between grazings and will help to protect soil structure necessary for future production
Winter waterlogging can occur in limestone soil types, even in good winters	Avoid overstocking to prevent soil compaction and pugging  Consider temporary fencing to exclude stock from gully heads, steeper slopes and erosion prone areas to preserve soil structure

## Erosion control

Erosion risks	Soil type	Specific problems	Possible solutions
Slip erosion, both shallow slipping and deep-seated earthflow	All limestone soils, especially cracked soils on steeper slopes and where montmorillonite clay forms a slip plane	Clay washed down through the soil profile creates a slip plane on basement rock  During high intensity rain storms following dry weather, water flows down through cracks, lubricating the slip plane and removing support from adjoining slopes, which then slip	Open planting of unstable slopes with poplars or quick growing native trees can reduce erosion risk  Plant willows in a zig-zag pattern along drainage channels to help prevent or control erosion  Fencing of eroded channels will allow planted and self-seeded vegetation cover to establish
Gully erosion	Deeper Maungaturoto and Dairy Flat clay soils	Concentrated water flow causes gullies to extend upslope and expand as the side walls collapse	Plant willow poles in a zig-zag pattern along the gully  Increase planting density of erosion control trees in gully heads
Sheet erosion	Konoti clay and clay loam soils	Pugging on older, more strongly leached Konoti suite soil types leads to loss of pasture and topsoil	Maintaining good pasture covers helps build soil organic matter and improve soil structure





Shallow Motatau clay soils on limestone, Mangamuka

## Nutrient management

Soil type	Nutrient status	Management strategies
All limestone soils	These soils are generally fertile, with dark humus-filled topsoils	Less fertiliser may be needed than for other soil types; however, soil tests are required to determine localised variation in nutrient status, especially where there has been no input for a long time
All limestone soils	Limestone soils are generally of a higher pH than most other soil types in Northland, however added lime may still be required	Seek advice from your fertiliser consultant for nutrient requirements

## Drainage classes

Soil symbol	Full name	Drainage class
<b>ARAPOHUE SUITE</b> Basement rock: argillaceous limestone Weakly to moderately leached		
AU, AUH	Arapohue clay	2⇒0 - Imperfectly drained to very poorly drained
AUd	Arapohue deep clay	2⇒0 - Imperfectly drained to very poorly drained
MT, MTH	Motatau clay	2⇒0 - Imperfectly drained to very poorly drained
<b>MAUNGATUROTO SUITE</b> Basement rock: limestone-mudstone complex Moderately to strongly leached		
MO	Maungaturoto clay	2⇒0 - Imperfectly drained to very poorly drained
DF	Dairy Flat clay	2⇒0 - Imperfectly drained to very poorly drained
<b>KONOTI SUITE</b> Basement rock: sandstone-mudstone limestone complex Moderately to strongly leached		
KN, KNH	Konoti clay loam	2⇒0 - Imperfectly drained to very poorly drained
KNr, KNrH	Konoti clay	2⇒0 - Imperfectly drained to very poorly drained

## Northland soil factsheet series

- Northland's climate, topography, historic vegetation and mixed geology have combined to form a complex pattern of soils across the region. There are over 320 soil types in Northland. Other regions in New Zealand average only 20 soil types per region.
- The information in this fact sheet is based on a 1:50,000 mapping scale. Therefore, it is not specific to individual farms or properties. However, it may help you to understand general features and management options for recent alluvial soils.
- Knowing your soils' capabilities and limitations is the key to sustainable production in Northland. Northland Regional Council (NRC) land management advisors are available to work with landowners to provide free soil conservation advice, plans and maps specific to your property.
- Regular soil tests are recommended. If you are concerned about your soil structure or health, the Visual Soil Assessment test could be useful. Contact the land management advisors at Northland Regional Council for more information.
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Contact a land management advisor on  
0800 002 004 or visit [www.nrc.govt.nz/land](http://www.nrc.govt.nz/land)

# APPENDIX E LAND USE CLASSIFICATION REPORT

# Lot 1 DP 35169 - Peria Valley Road Fill Site LUC

Report prepared by Our Environment, 12:44:08 pm 21/11/2024 Manaaki Whenua - Landcare Research

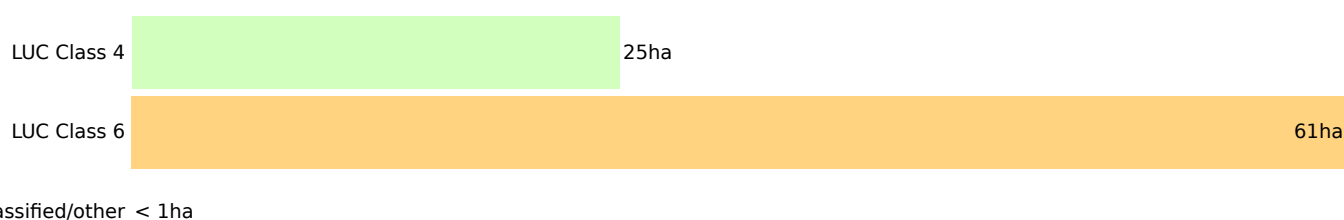
## Lot 1 DP 35169

Approximate area  
86ha



### Land Capability

## Land Use Capability



### Data source: Land Use Capability

The Land Use Capability system categorizes land into eight classes according to its long-term capability to sustain one or more productive uses based on physical limitations and site specific management needs. Productive capacity depends on physical qualities of the land, soil and environment. Differences between ideal and actual land qualities may be regarded as limitations which will affect productivity and land management options. Limitations considered in the LUC include: susceptibility to erosion, steepness of slope, climate, susceptibility to flooding, liability to wetness or drought, salinity, and depth, texture, structure and nutrient supply of the soil. Note that complex map units containing two LUC units may occur. In this case reports provided will describe the dominant LUC unit only.

## Data source & provenance

### Data source: Land Resource Inventory (LRI)

Pertains to: *Land Use Capability*

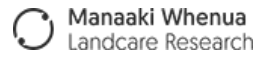
This is a single spatial (polygon) layer with national coverage that contains several physical resource themes: land use capability, lithology, soil, etc. In terms of geographical data accuracy the polygon boundaries were originally mapped at 1:63,360 scale, except where more recent mapping was carried out at 1:50,000 scale in Northland, Gisborne-East Coast, Wellington and Marlborough regions. This is regional scale mapping according to the Land Use Capability Survey Handbook (<https://digitallibrary.landcareresearch.co.nz/digital/collection/p20022coll14/id/74/>) (Edition 3). The minimum polygon size for the smallest area of interest in the LRI mapping was nominally 10 hectares, although some 2% of polygons fall below this threshold. Average polygon size for 1:63,360 scale mapping is 335 hectares, and for the more recent 1:50,000 scale mapping is 98 hectares, reflecting both increased mapping scale and improved standards of mapping.

The LRI is a regional-scale database and caution should be used when using these data at larger scales.

In addition to the geographical accuracy of the polygon boundaries, each resource theme is subject to uncertainties about the attributes (e.g., soil classification). Users should download and familiarise themselves with the relevant sections of the LRIS Spatial Data Layers Data Dictionary to ensure that the data are fit for their intended analysis. This is available for download from here (<https://iris.scinfo.org.nz/document/9162-Iris-data-dictionary-v3/>) in the LRIS Portal.

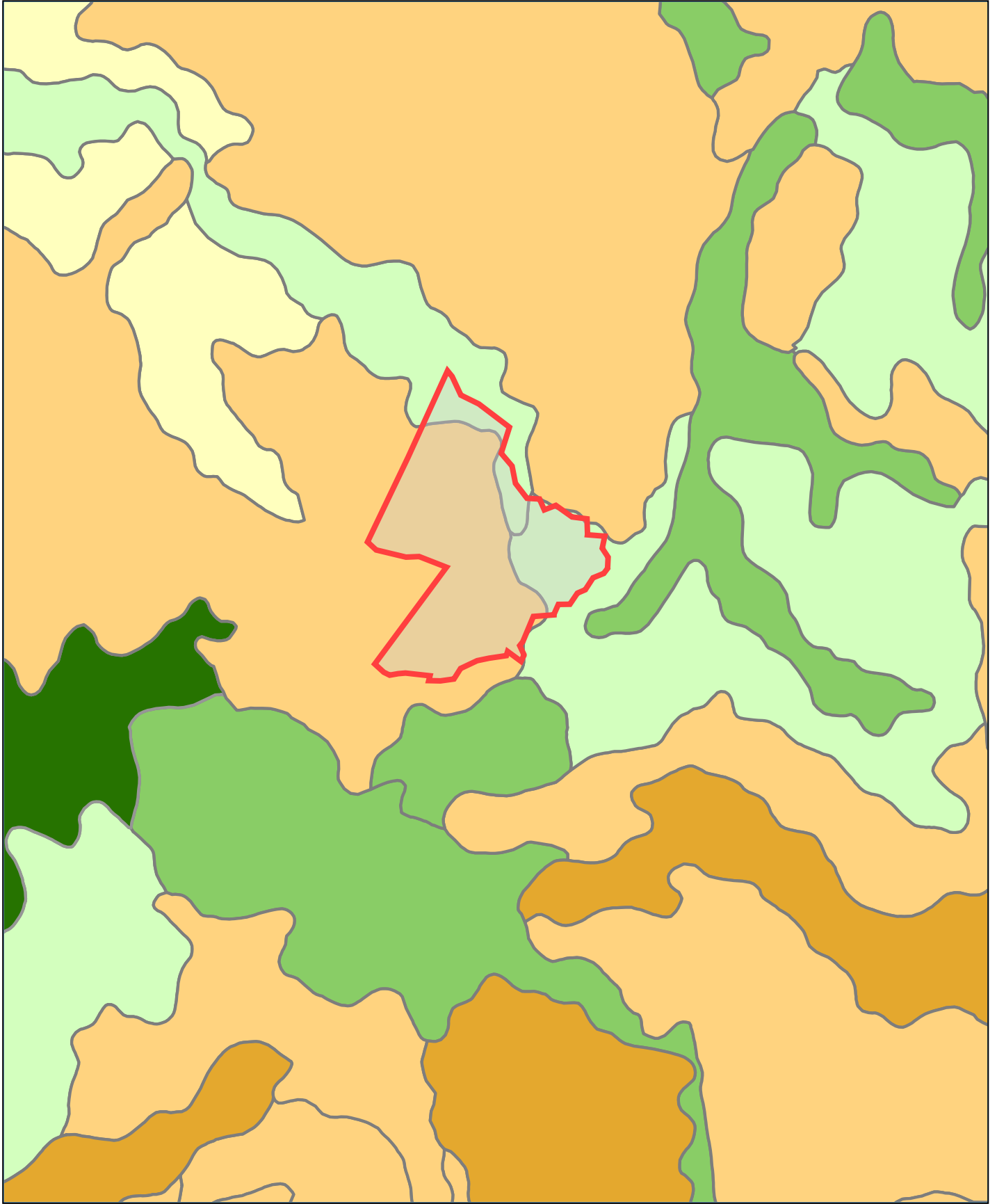
*Interpretations in Our Environment based on the LRI and therefore subject to its data accuracy are: Erosion Severity, Surface Geology and all five of the land suitability classifications.*

# OURENVIRONMENT



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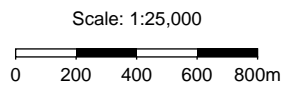


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




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# Legend

## Land Use Capability

-  LUC Class 1
-  LUC Class 2
-  LUC Class 3
-  LUC Class 4
-  LUC Class 5
-  LUC Class 6
-  LUC Class 7
-  LUC Class 8

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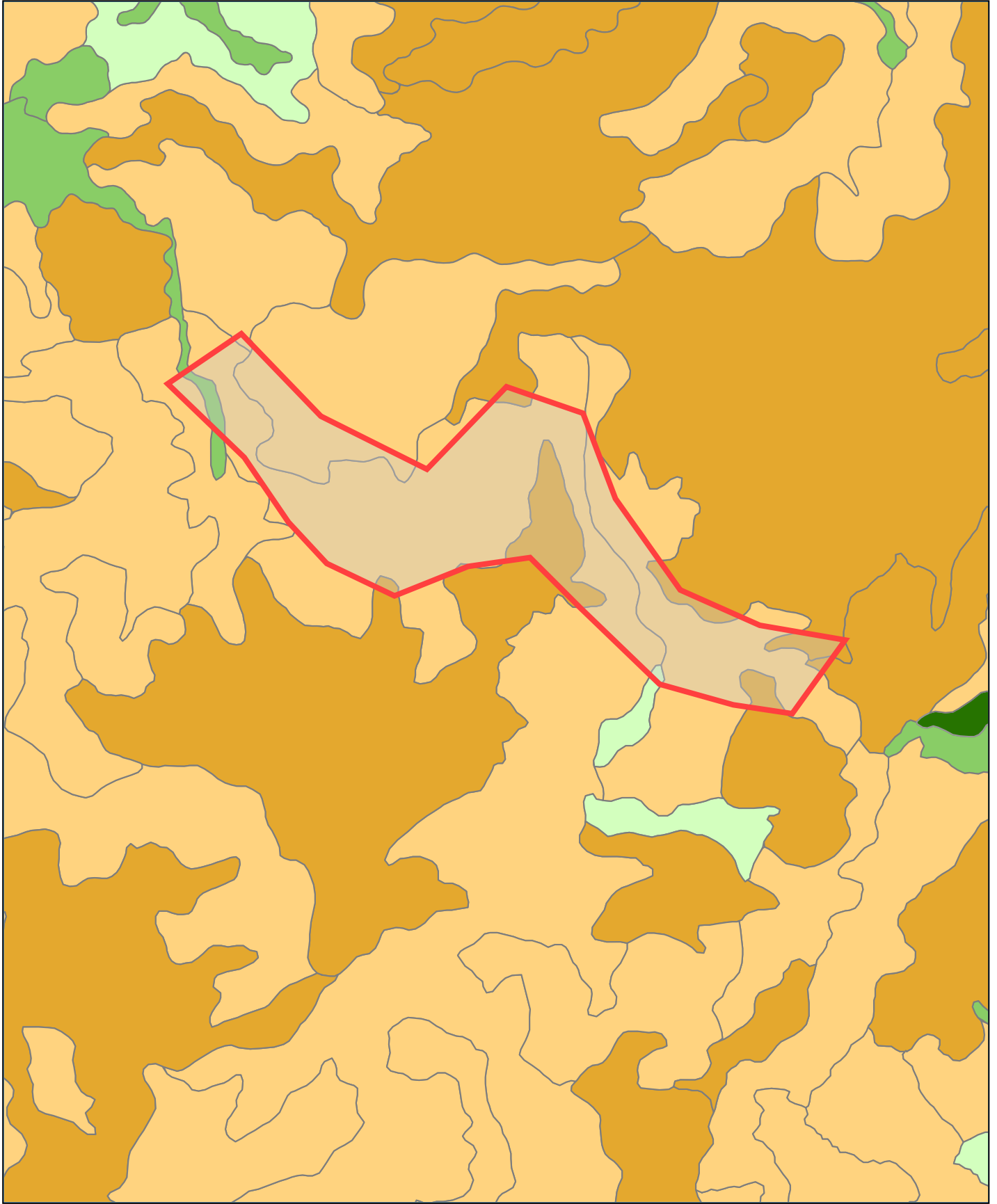
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# Mangamuka Gorge LUC



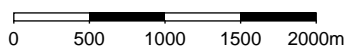
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Scale: 1:50,000



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




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Printed: 15:36:29 PM Thu, 5 Dec 2024



## Legend

### Land Use Capability

-  LUC Class 1
-  LUC Class 2
-  LUC Class 3
-  LUC Class 4
-  LUC Class 5
-  LUC Class 6
-  LUC Class 7
-  LUC Class 8

**OURENVIRONMENT**



Manaaki Whenua  
Landcare Research

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**APPENDIX F    EROSION AND SEDIMENT CONTROL PLAN**  
**PREPARED BY SOUTEHRN SKIES**



## Waka Kotahi

### EROSION & SEDIMENT CONTROL PLAN

#### ESC# 001 – SH1 Mangamuka Emergency Repairs

Project Name:	SH1 Mangamuka Emergency Repairs
Project No:	
Principal:	Waka Kotahi
Prepared by:	Southern Skies Environmental
Date:	08 November 2024

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## 1. Introduction

The Mangamuka Gorge on SH1 sustained severe damage during a storm event in August 2022. This section of SH1 is closed as part of the emergency repairs operations.

The proposed works involve a series of stabilisation works of five slip sites within the gorge. The stabilisation operations include the piling retaining wall structures and ground anchoring.

In order to achieve a high standard of environmental performance the following Erosion and Sediment Control Plan (ESCP) has been developed. The ESCP also includes spill management procedures.

## 2. Scope

The ESCP has been prepared to ensure that the works are undertaken in accordance with best practice to address the potential construction water effects associated with the works.

The overall ESCP will comprise several parts that deal with specific construction activities.

## 3. Reference Documents

- Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).

## 4. Site Description

The Mangamuka Gorge is located on SH1 approximately 5km north of Mangamuka and approximately 10km south of Kaitaia. The surrounding environment comprises of Mangamuka Scenic Reserve, steep vegetated native bush.

Access to the site is via SH1.

The works are within the road reserve of SH1 and the work will be undertaken while the section of SH1 is closed to public traffic.

The Mangamuka Gorge has sustained severe damage. The works area is unstable. Significant slips have occurred.

## 5. Description of Proposed Works

The area of the proposed works is five separate slip locations on SH1 within the Mangamuka Gorge. The emergency repair works will comprise the following activities:

- Installation of retaining concrete piles (1050mm diameter to varying depths) and associated capping beams;
- Installation of wire strand anchors
- Installation of new pipe drainage networks
- Relaying of roading surfaces

All works will occur with plant operations from SH1.

## 6. Erosion and Sediment Control

The erosion and sediment control (ESC) methodology has been designed in accordance with the best practice principles of GD05.

The layout and ESC measures and methodology are detailed in the ESC drawings attached in Appendix B. The works will commence in February 2023 and are expected to take approximately 12-18 months to complete.

Operations that involve the removal of material, such as the establishment of working benches and augured material, will be cut to waste (cut material to be removed from the works area to a designated disposal area).

Treatment tanks and silt fences will be installed at each site as practicable, as shown on the attached ESC drawings attached in Appendix B.

The general methodology at each site is as follows:

- Hot Mix Bund or similar (i.e. alternative concrete bund or timber dyna-bolted and sealed to road surface) will be installed along edge of seal to contain site runoff. The bunding will direct all work area water to a sump to then be piped to a series of treatment tanks for treatment. The treatment tanks will be located where practicable, as determined by the Site Engineer;
- Hot Mix Bunds or similar will also be installed to direct “clean” road water to water table drains to minimise the catchment of each works area. The water table drains will be protected from site runoff with Hot Mix Bunds or silt fences.
- On Site A9 “enabling” works will be undertaken to install water table drainage pipes to allow upper catchment water to be directed away from the slip area before the slip repairs works can commence.
- On most sites a bench will be excavated below the road to create a “level” area for the piling operations. The excavated material will be cut to waste (loaded onto trucks for removal away from the works area). All plant will operate from the road.
- On Site A12-13 a bench will not be cut due to the extensive slip below the road.
- A silt fence will then be installed on the bench as shown on the attached drawings. No silt fence will be installed on Site A12-13 due to the extensive slip below the road;
- Piling operations will commence with all plant operating from the road. All augured material to be cut to waste.
- Any pumping operations from the augured piles will be directed to the settlement tanks;
- During concrete pours, water will be collected from within the casings into ICB containers (or similar i.e. sucker truck). The water will be deemed contaminated and removed from site;
- During ground anchor operations, all wash material (drill fluids) will be collected by the drill rig and directed to settlement tanks.

### 6.1. Disposal Sites (Fill Sites)

Similarly to the works area, the ESC methodologies for each of the fill sites has been designed in accordance with the best practice principles of GD05.

The layout and ESC measures and methodologies for each of the disposal sites are detailed in the ESC drawings attached in Appendix B.

## 7. Spill Management

While best practice environmental systems will be implemented, to further reduce the possible consequence of spillage, refuelling points will be located well clear of the cleanwater road table drains. A trailer mounted diesel fuel tank will on occasions stay onsite overnight. The tank will be relocated a minimum 10m from any cleanwater table drain.

Spill kits will be provided onsite, located at the fuel tank onsite.

All site personnel will be trained to use spill kits (and spill booms) before commencing work, as part of the site induction. Preventative maintenance of plant (particularly hydraulic hoses) will also significantly reduce risk.

In the event of a spill, or another incident which results in an unauthorised discharge to ground, immediate action will be taken to contain the event. Spill response and recovery will be enacted in accordance with standard CLL environmental procedures, and the Client and the Northland Regional Council will be contacted. Once the situation has been controlled and rectified, an incident investigation will be completed, and a report prepared by the Project Manager.

Specific concrete management procedures will be separately developed as part of the Construction Work Method Statement.

### Spill Response:

The following actions will be implemented.

In the event of a spillage:

1. Stop the flow at its source – shut valves, switch off engines or machinery, block leaks if it is safe to do so.
2. Contain the spillage – catch in container or with bunding and cover with absorbent material/ sand/ fines.
3. Stop from spreading by surrounding with the absorbent sock, or if being carried in water, by placing the sock ahead of the flow.
4. Notify the Project Manager who will contact NRC (as per process below).
5. In the event that any hazardous substance or contaminant enters a watercourse NRC should be notified directly via the 24-hour number – 0800 504 639.

Cleaning up after a spillage:

1. Commence cleaning up of spillage immediately to limit any soakage into the ground, or escape to surface water, if it is safe to do so.
2. Use absorbent material for initial clean up.
3. Excavate contaminated soils and place in a secure location. In water, use the absorbent sock to skim/ absorb the spillage from the water surface.
4. Ensure that all spillage material (including the contained spillage, any contaminated soils and any rags, socks, or other equipment used during the clean-up process) are stored in a secure location and transported off site for disposal at a registered landfill.

In the event of a hazardous substance spill, the CLL Manager will be notified immediately (within 2 hours). The Project Manager will inform NRC as soon as practicable, and as a minimum within 6 hours of becoming aware of the spill. The following information shall be provided to NRC:

- Date, time, location, and estimated volume of the spill.
- Cause of the spill.
- Type of contaminant spilled.
- Clean up procedures taken.
- Steps undertaken to control and remediate the effects of the spill on the receiving environment.
- Assessment of potential effects of the spill.

- Measures to be undertaken to prevent a recurrence.
- All incidents are to be reported on a standard incident report form within 48 hours of the incident occurring to identify corrective actions to help prevent a reoccurrence.
- All sites storing chemicals are to have a Spill Checklist located on site.

## 8. Monitoring and Maintenance

All erosion and sediment control measures will be maintained in accordance with GD05 throughout the works until the site is stabilised against erosion.

All erosion and sediment control measures and methodologies will be monitored during the works. Monitoring will be undertaken at least weekly, and before and immediately after rain events as well as during heavy rainfall events by the CLL. Any required maintenance or improvements to control measures will be undertaken immediately.

In addition, Meridian will undertake monthly audits on the erosion and sediment control of the site to ensure compliance with GD05.

Sediment deposits and bulges against the silt fences will be removed when sediment accumulation reaches 20% of the fabric height.

The settlement tanks will be cleaned out before accumulated sediment volume reaches 20% of the total volume.

## 9. Kauri Dieback

A Kauri Dieback procedure has been prepared for the project works. Refer to Appendix C.

## 10. Rainfall Response and Contingency Measures

Best management practices will be used to minimise sediment yields and monitor any potential effects. In addition to the visual inspections and weekly self-auditing refer above, if a severe weather event is forecast, (a severe weather event is defined as greater than a 5% AEP across the project works area) the following actions will be implemented.

Pre-Weather Event Procedure:

- Visually check controls on site prior to weather event to ensure, as far as practicable, that they will function as intended;
- Depending on site specific circumstances and practices used on site, consider limiting or ceasing earthwork activities to limit land disturbance;
- As far as practicable, stabilise disturbed areas; and
- Photograph critical ESC measures prior to the weather event to document pre-weather event condition.

During a severe weather event that results in the discharge of treated discharges from the sediment retention devices water quality inspections will be undertaken where practical at discharge locations where treated discharge could leave the site. The discharges will be checked to document water quality.



## 11. Contact Details

<b>Name</b>	<b>Organisational Role</b>	<b>Contact Type</b>	<b>Responsibilities</b>	<b>Contact Number</b>
<i>Vaughan Robbins</i>	<i>CLL Project Director</i>	<i>Working Hours 0800-1700</i>	<i>Reporting of spills onsite, site issues to NZTA</i>	<i>027 492 3576</i>
<i>Tim Hunger</i>	<i>CLL Project Manager</i>	<i>Working hours 08:00-17:00 After Hours, 17:00-08:00</i>	<i>Site ESC and Construction plan responsibility</i>	<i>0275719111</i>
<i>Hendrik Postma</i>	<i>Waka Kotahi Project Manager</i>	<i>Working Hours 0800-1700</i>	<i>Client Rep</i>	<i>0272287329</i>
<i>Campbell Stewart</i>	<i>ESC and Environmental Specialist</i>	<i>Working hours, 07:00-18:00</i>	<i>ESC and Environmental audits and advice</i>	<i>021837824</i>
<i>Northland Regional Council</i>	<i>Pollution Response</i>	<i>24/7</i>	<i>Regulator agency</i>	<i>0800 504 639 (environmental hotline)</i>

## 12. Summary

This ESCP addresses the proposed erosion and sediment control methodology associated with the land disturbing activities required to complete the emergency repair works on SH1 in the Mangamuka Gorge and incorporates the spill management methodology.

All land disturbance works will be carried out in general accordance best practice and GD05. The methodology proposed will ensure that any adverse effects of the construction works are temporary and minor.

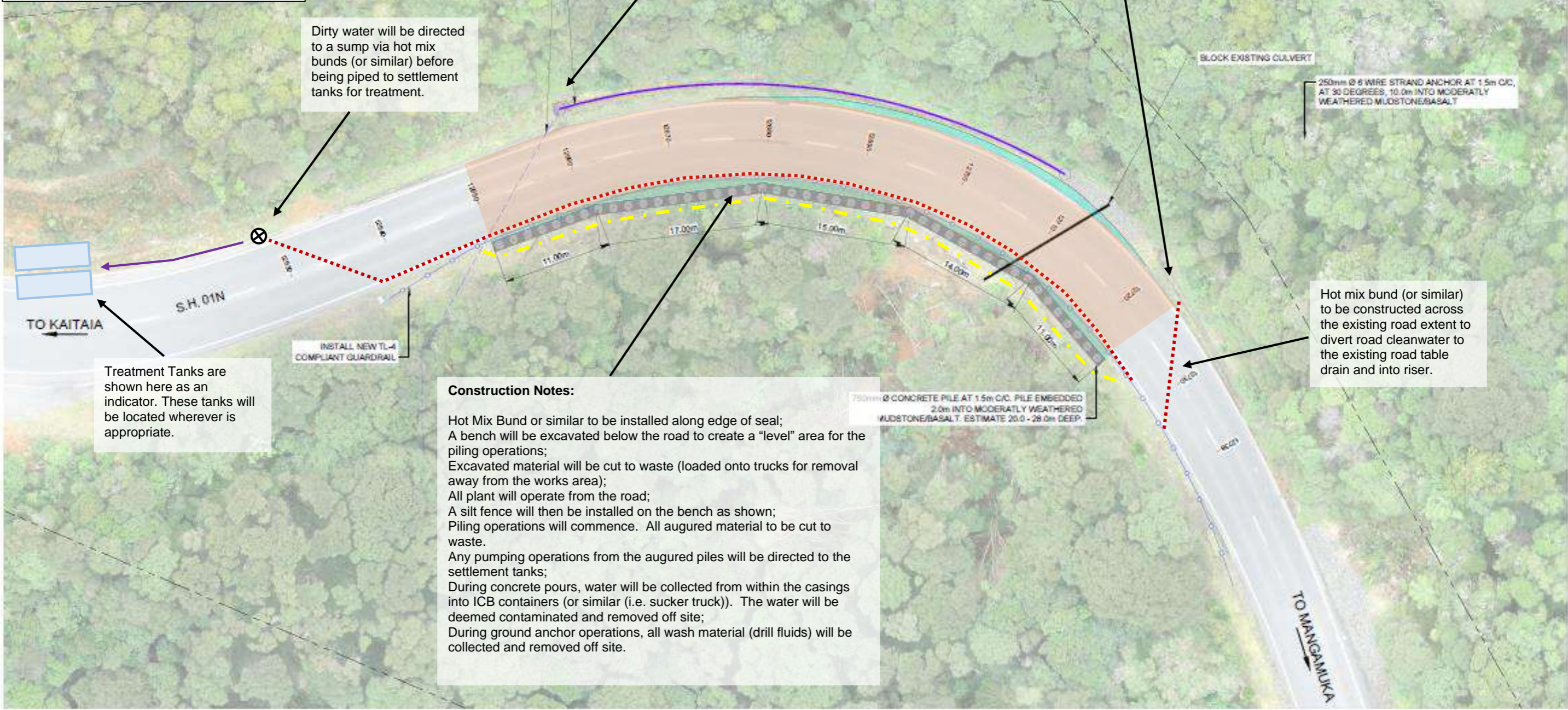


## Appendix B – ESC Drawings



**KEY**  
**Erosion and Sediment Control**

- Pipe
- ⊗ Sump
- Hot Mix Bund (or similar)
- Silt Fence
- Dirty Catchment Area
- Treatment Tanks



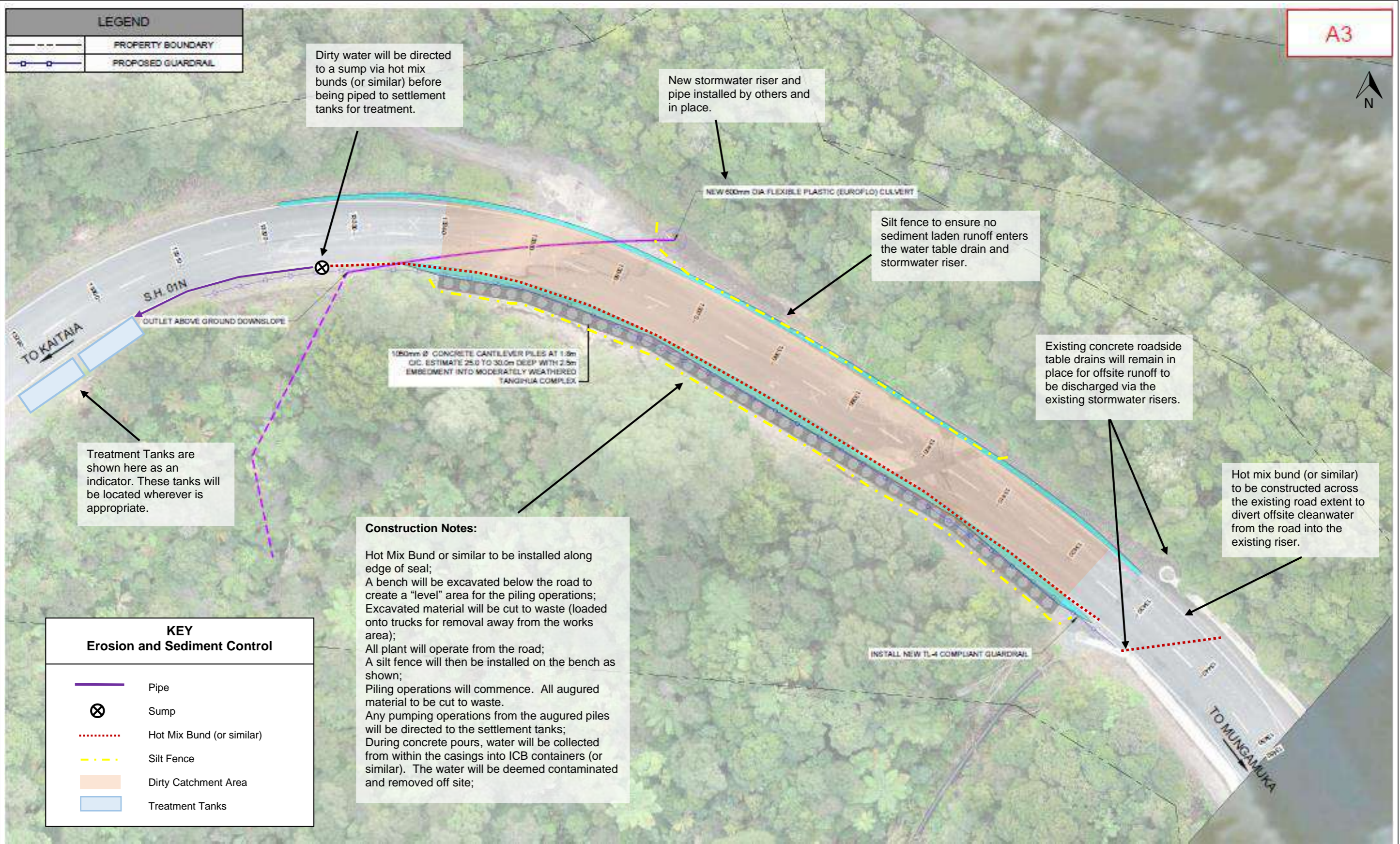
**Construction Notes:**

Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar (i.e. sucker truck)). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.

- NOTES**
1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  2. Earthworks are to be programmed to ensure rapid stabilisation.
  3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	TH

		Project	MAUNGAMUKA GORGE
		Title	Erosion and Sediment Control Plan – Stage A1 - 2
Drawn <b>MD</b>	Checked <b>CS</b>	Drawing No. <b>ESCP-001-01</b>	Sheet No. <b>01</b>



**NOTES**

- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	

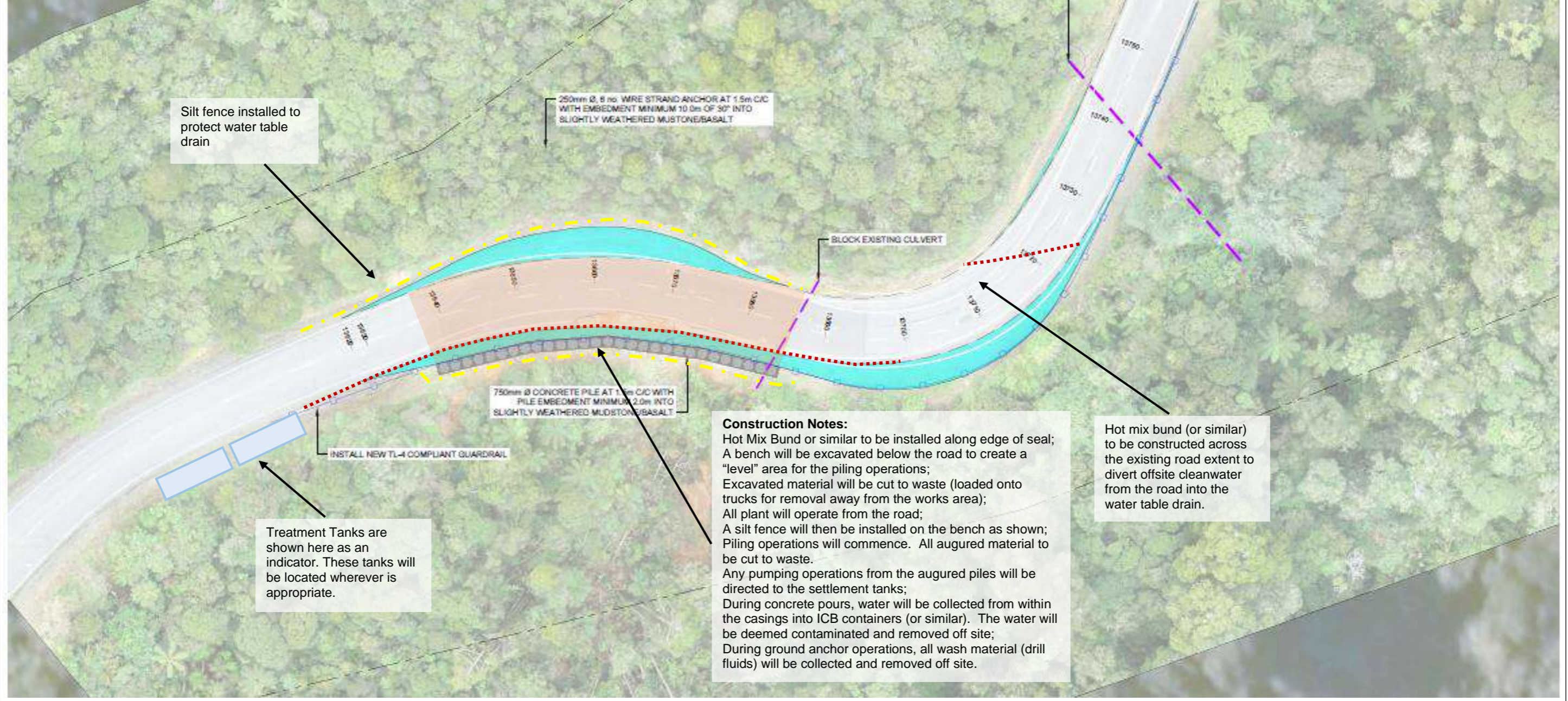
**CLL SERVICE & SOLUTIONS**

Drawn **MD**      Checked **CS**

Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Stage A3</b>
Drawing No.	<b>ESCP-001-01</b>
Sheet No.	<b>01</b>



KEY Erosion and Sediment Control	
	Pipe
	Sump
	Hot Mix Bund (or similar)
	Silt Fence
	Dirty Catchment Area
	Treatment Tanks



**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the water table drain.

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate.

**NOTES**

- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	TH

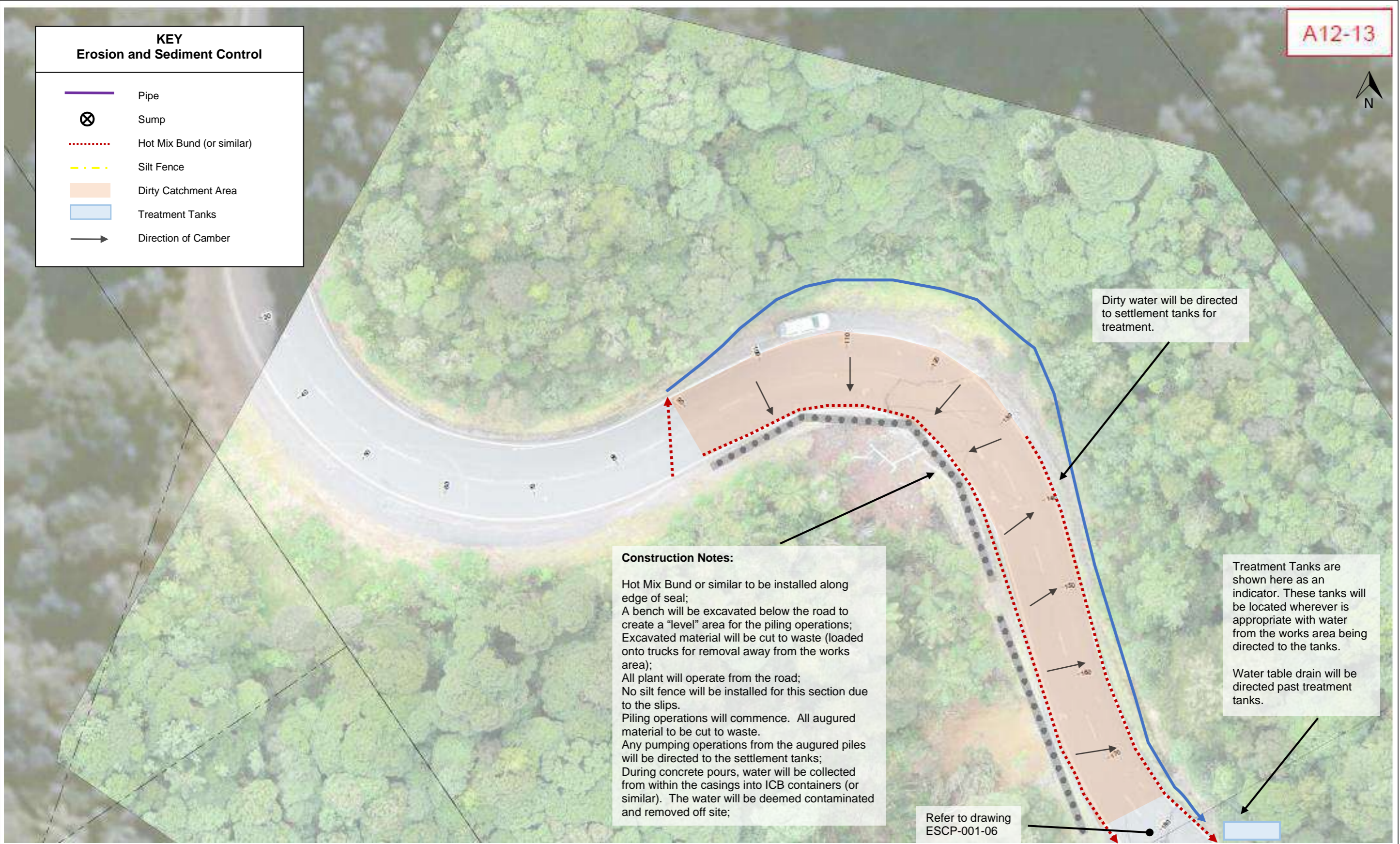


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Project <b>MAUNGAMUKA GORGE</b>	Sheet No. <b>03</b>
Title <b>Erosion and Sediment Control Plan – Stage A5</b>	Drawing No. <b>ESCP-001-03</b>



KEY Erosion and Sediment Control	
	Pipe
	Sump
	Hot Mix Bund (or similar)
	Silt Fence
	Dirty Catchment Area
	Treatment Tanks
	Direction of Camber



**Construction Notes:**

Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 No silt fence will be installed for this section due to the slips.  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;

Dirty water will be directed to settlement tanks for treatment.

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate with water from the works area being directed to the tanks.

Water table drain will be directed past treatment tanks.

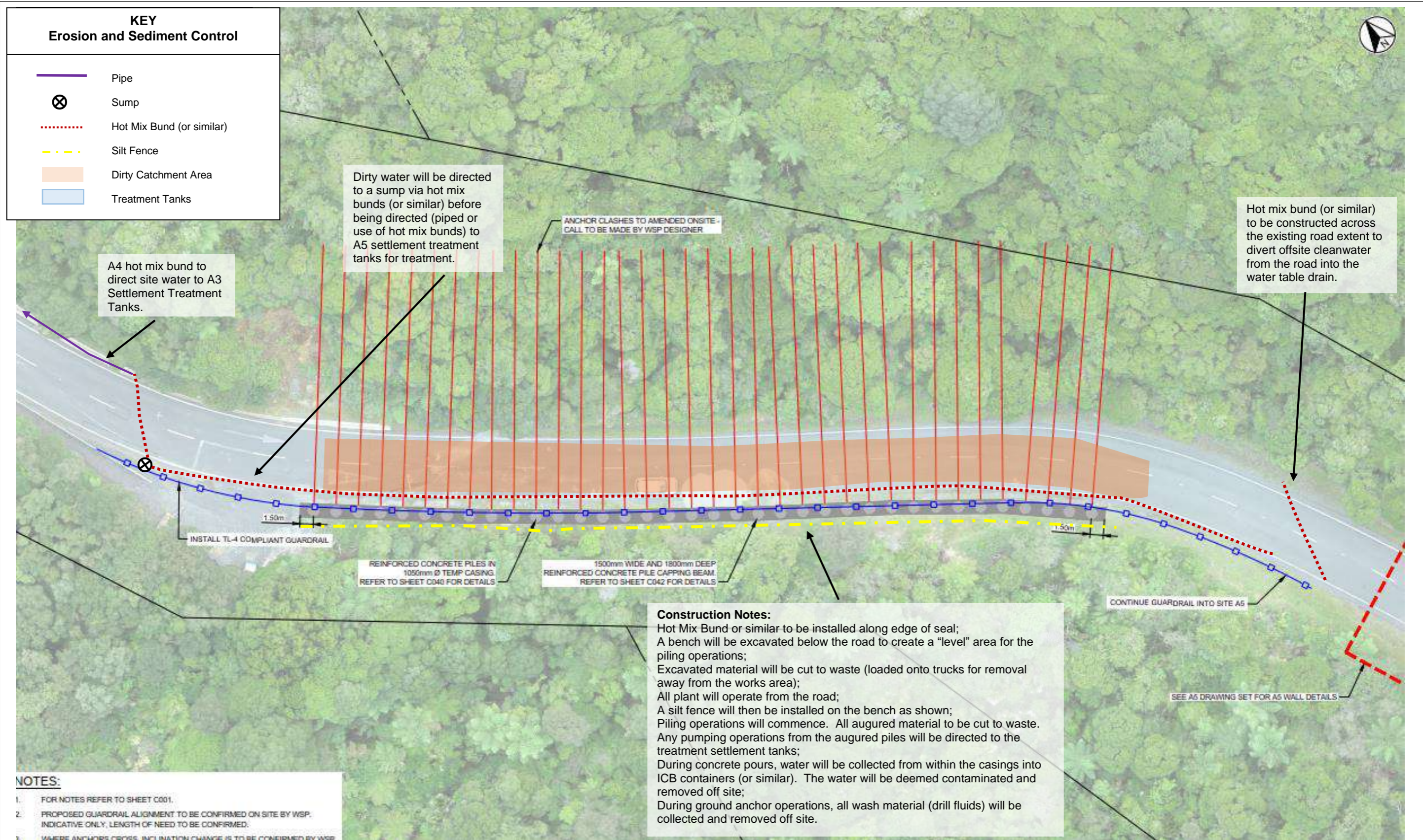
Refer to drawing ESCP-001-06

**NOTES**

- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	TH

		Project	<b>MANGAMUKA GORGE</b>
		Title	<b>Erosion and Sediment Control Plan – Stage A12-13 (Sheet 1 of 2)</b>
Drawn <b>MD</b>	Checked <b>CS</b>	Drawing No. <b>ESCP-001-05</b>	Sheet No. <b>05</b>



A4 hot mix bund to direct site water to A3 Settlement Treatment Tanks.

Dirty water will be directed to a sump via hot mix bunds (or similar) before being directed (piped or use of hot mix bunds) to A5 settlement treatment tanks for treatment.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the water table drain.

**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the treatment settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.

- NOTES:**
- FOR NOTES REFER TO SHEET C001.
  - PROPOSED GUARDRAIL ALIGNMENT TO BE CONFIRMED ON SITE BY WSP. INDICATIVE ONLY, LENGTH OF NEED TO BE CONFIRMED.
  - WHERE ANCHORS CROSS, INCLINATION CHANGE IS TO BE CONFIRMED BY WSP.

- NOTES**
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  - Earthworks are to be programmed to ensure rapid stabilisation.
  - All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  - Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

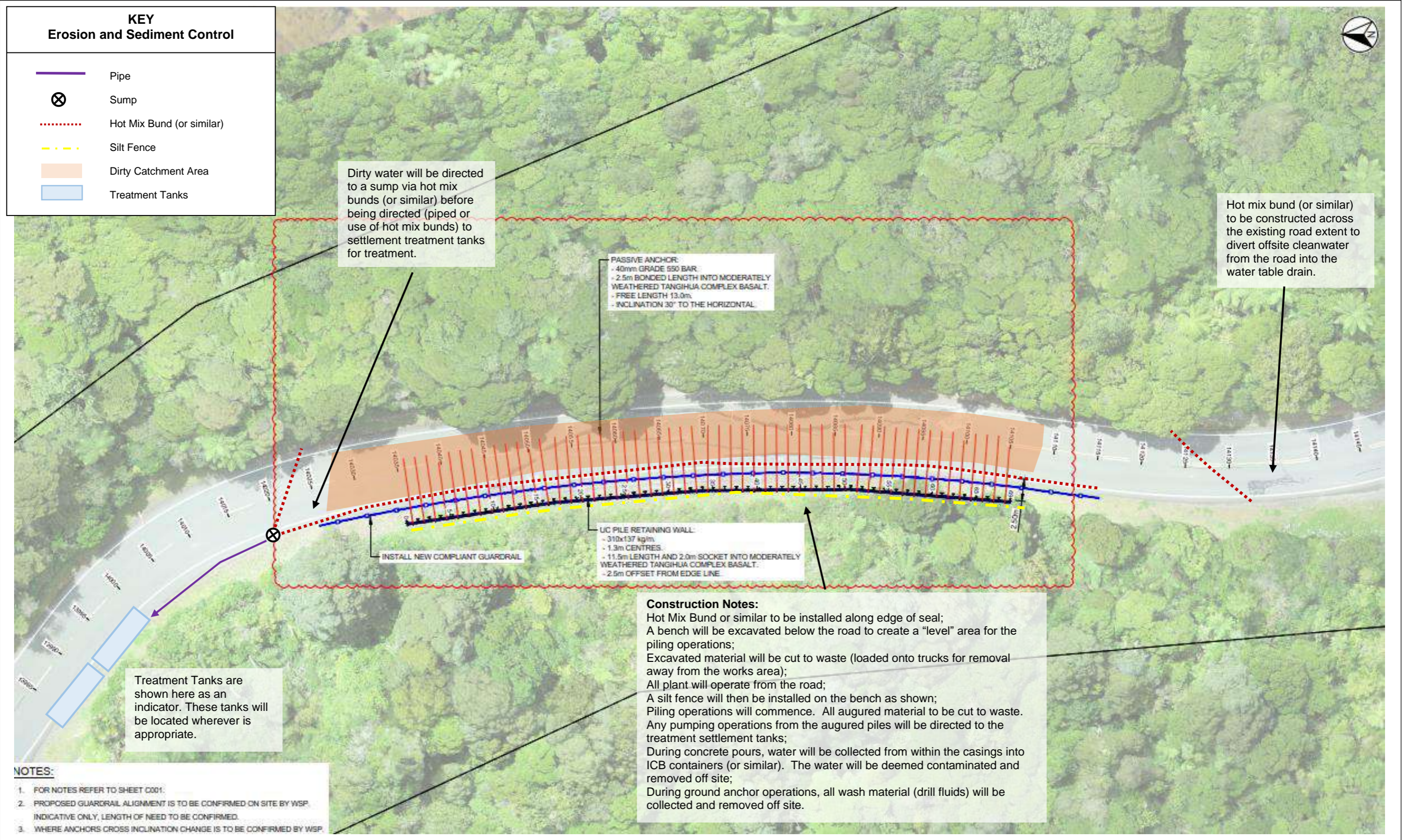
REV	DATE	REVISION DETAILS	APPROVED
A	08.11.24	Draft for review.	TH



Drawn <b>MD</b>	Checked <b>CS</b>
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Project <b>MAUNGAMUKA GORGE</b>	
Title <b>Erosion and Sediment Control Plan – Stage A4</b>	
Drawing No. <b>ESCP-001-09</b>	Sheet No. <b>09</b>





**NOTES**

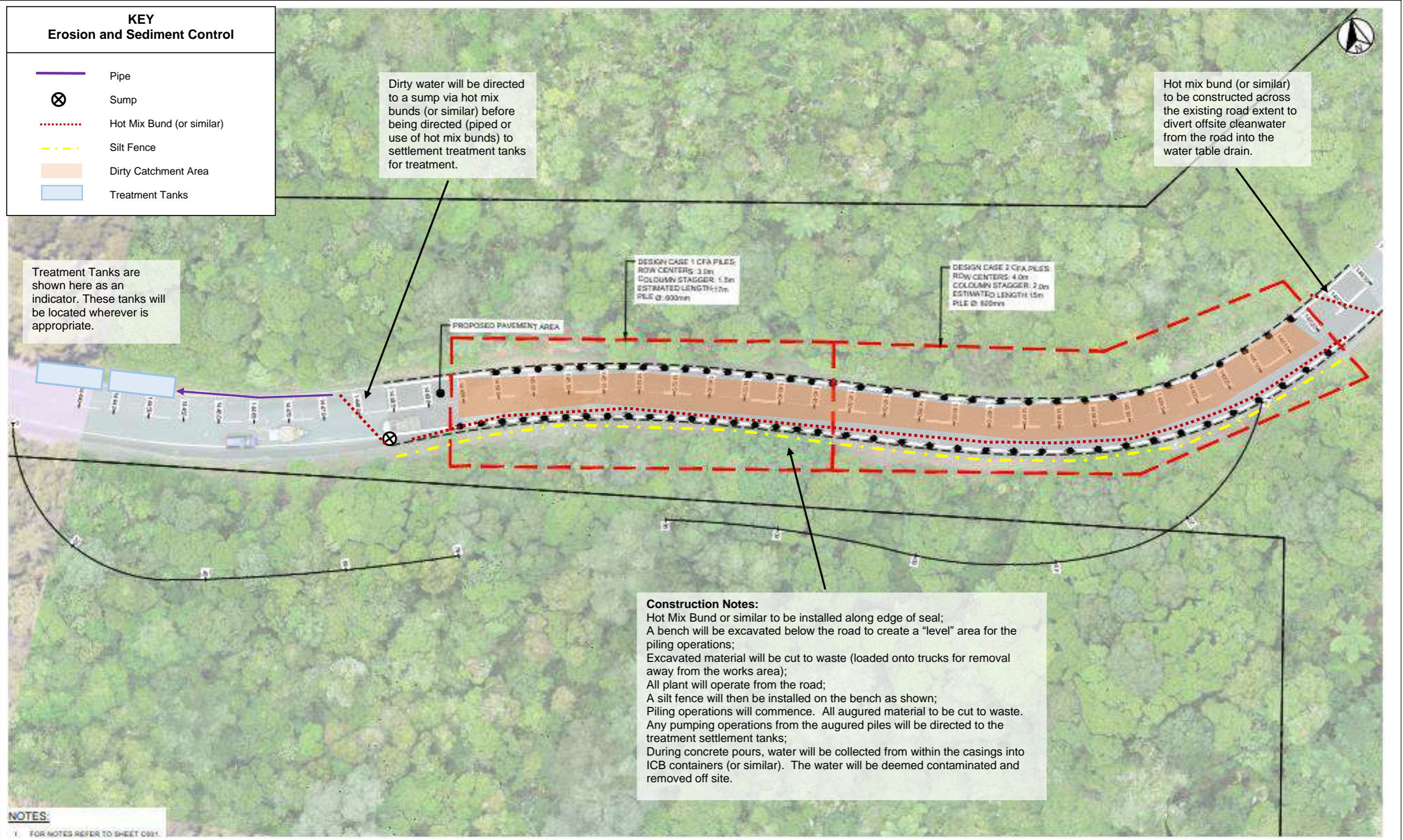
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	08.11.24	Draft for review.	TH



Drawn <b>MD</b>	Checked <b>CS</b>
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Project <b>MAUNGAMUKA GORGE</b>	Sheet No. <b>10</b>
Title <b>Erosion and Sediment Control Plan – Stage A7</b>	Drawing No. <b>ESCP-001-10</b>



Dirty water will be directed to a sump via hot mix bunds (or similar) before being directed (piped or use of hot mix bunds) to settlement treatment tanks for treatment.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the water table drain.

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate.

**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the treatment settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site.

**NOTES:**  
 1. FOR NOTES REFER TO SHEET 0011.

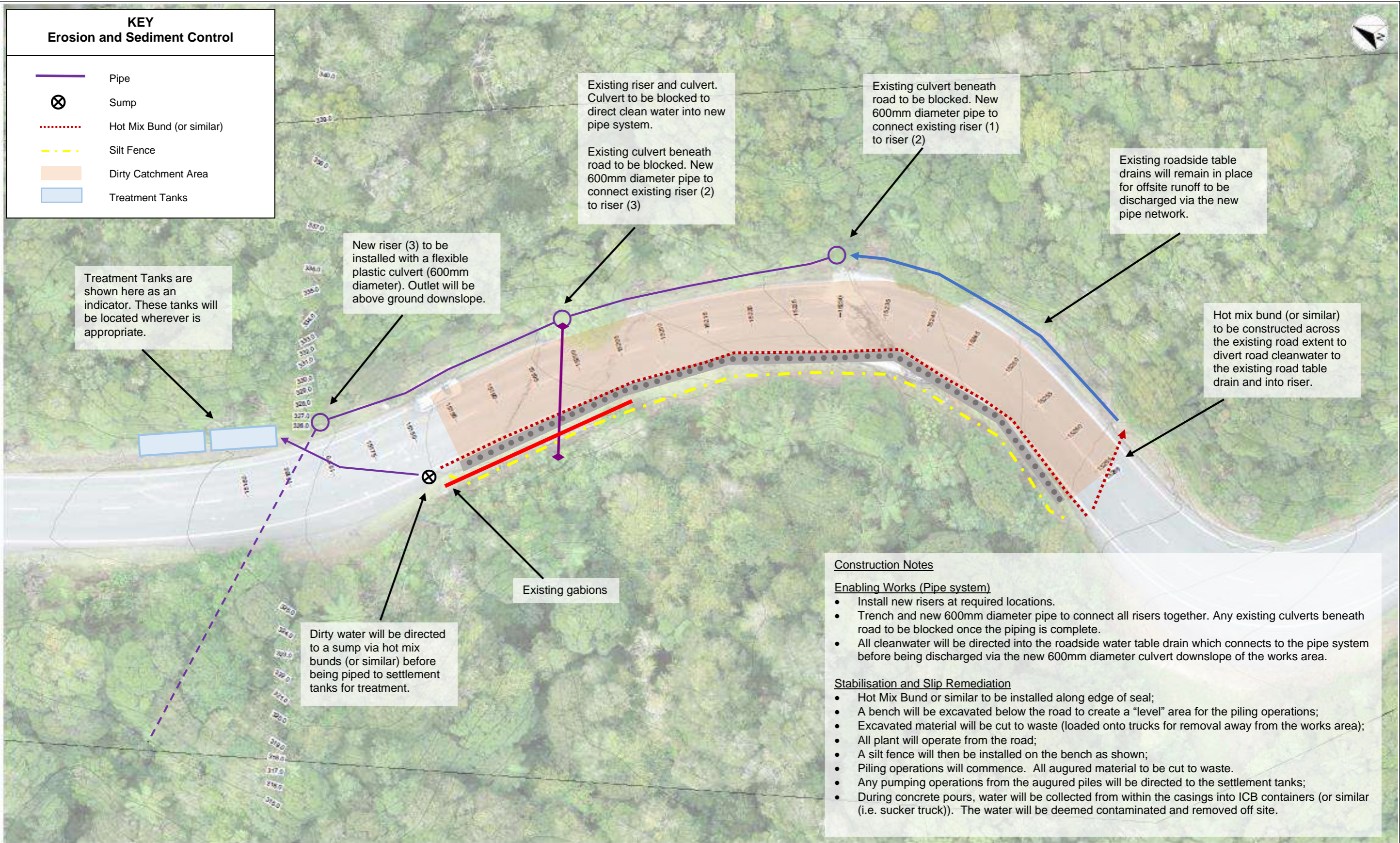
- NOTES**
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  - Earthworks are to be programmed to ensure rapid stabilisation.
  - All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  - Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	08.11.24	Draft for review.	TH



Drawn <b>MD</b>	Checked <b>CS</b>
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Project <b>MAUNGAMUKA GORGE</b>	Sheet No. <b>11</b>
Title <b>Erosion and Sediment Control Plan – Stage A8</b>	Drawing No. <b>ESCP-001-11</b>



Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate.

New riser (3) to be installed with a flexible plastic culvert (600mm diameter). Outlet will be above ground downslope.

Existing riser and culvert. Culvert to be blocked to direct clean water into new pipe system.

Existing culvert beneath road to be blocked. New 600mm diameter pipe to connect existing riser (2) to riser (3)

Existing culvert beneath road to be blocked. New 600mm diameter pipe to connect existing riser (1) to riser (2)

Existing roadside table drains will remain in place for offsite runoff to be discharged via the new pipe network.

Hot mix bund (or similar) to be constructed across the existing road extent to divert road cleanwater to the existing road table drain and into riser.

Existing gabions

Dirty water will be directed to a sump via hot mix bunds (or similar) before being piped to settlement tanks for treatment.

**Construction Notes**

Enabling Works (Pipe system)

- Install new risers at required locations.
- Trench and new 600mm diameter pipe to connect all risers together. Any existing culverts beneath road to be blocked once the piping is complete.
- All cleanwater will be directed into the roadside water table drain which connects to the pipe system before being discharged via the new 600mm diameter culvert downslope of the works area.


Stabilisation and Slip Remediation

- Hot Mix Bund or similar to be installed along edge of seal;
- A bench will be excavated below the road to create a "level" area for the piling operations;
- Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);
- All plant will operate from the road;
- A silt fence will then be installed on the bench as shown;
- Piling operations will commence. All augured material to be cut to waste.
- Any pumping operations from the augured piles will be directed to the settlement tanks;
- During concrete pours, water will be collected from within the casings into ICB containers (or similar (i.e. sucker truck)). The water will be deemed contaminated and removed off site.

**NOTES**







1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	TH

		Project	<b>MAUNGAMUKA GORGE</b>
		Title	<b>Erosion and Sediment Control Plan – Stage A9</b>
Drawn <b>MD</b>	Checked <b>CS</b>	Drawing No. <b>ESCP-001-04</b>	Sheet No. <b>04</b>



**KEY**  
**Erosion and Sediment Control**

-  Pipe
-  Sump
-  Hot Mix Bund (or similar)
-  Silt Fence
-  Dirty Catchment Area
-  Treatment Tanks

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate with water from the works area being directed to the tanks.

Water table drain will be directed past treatment tanks.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the existing water table drain.

**Construction Notes:**  
Hot Mix Bund or similar to be installed along edge of seal;  
All plant will operate from the road;  
No silt fence will be installed for this section due to the slips.  
Piling operations will commence. All augured material to be cut to waste.  
Any pumping operations from the augured piles will be directed to the settlement tanks;  
During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site.

Dirty water will be directed to a sump via hot mix bunds (or similar) before being piped to settlement tanks for treatment.

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate with water from the sump being pumped to the tanks.

Existing Water Table Drain (cleanwater)

- NOTES**
1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  2. Earthworks are to be programmed to ensure rapid stabilisation.
  3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	TH






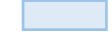


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Project	<b>MANGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Stage A12-13 (Sheet 2 of 2)</b>
Drawing No.	<b>ESCP-001-06</b>
Sheet No.	<b>06</b>

**KEY**  
**Erosion and Sediment Control**

-  Pipe
-  Sump
-  Hot Mix Bund (or similar)
-  Silt Fence
-  Dirty Catchment Area
-  Treatment Tanks



A5 hot mix bund to direct site water to A5 Settlement Treatment Tanks.

Dirty water will be directed to a sump via hot mix bunds (or similar) before being directed (piped or use of hot mix bunds) to A5 settlement treatment tanks for treatment.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the water table drain.

**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the treatment settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.







- NOTES**
1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  2. Earthworks are to be programmed to ensure rapid stabilisation.
  3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

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A	19.06.23	Draft for review.	TH



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Project <b>MAUNGAMUKA GORGE</b>	
Title <b>Erosion and Sediment Control Plan – Stage A6</b>	
Drawing No. <b>ESCP-001-07</b>	Sheet No. <b>07</b>

KEY Erosion and Sediment Control	
	Pipe
	Sump
	Hot Mix Bund (or similar)
	Silt Fence
	Dirty Catchment Area
	Treatment Tanks



**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the treatment settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.

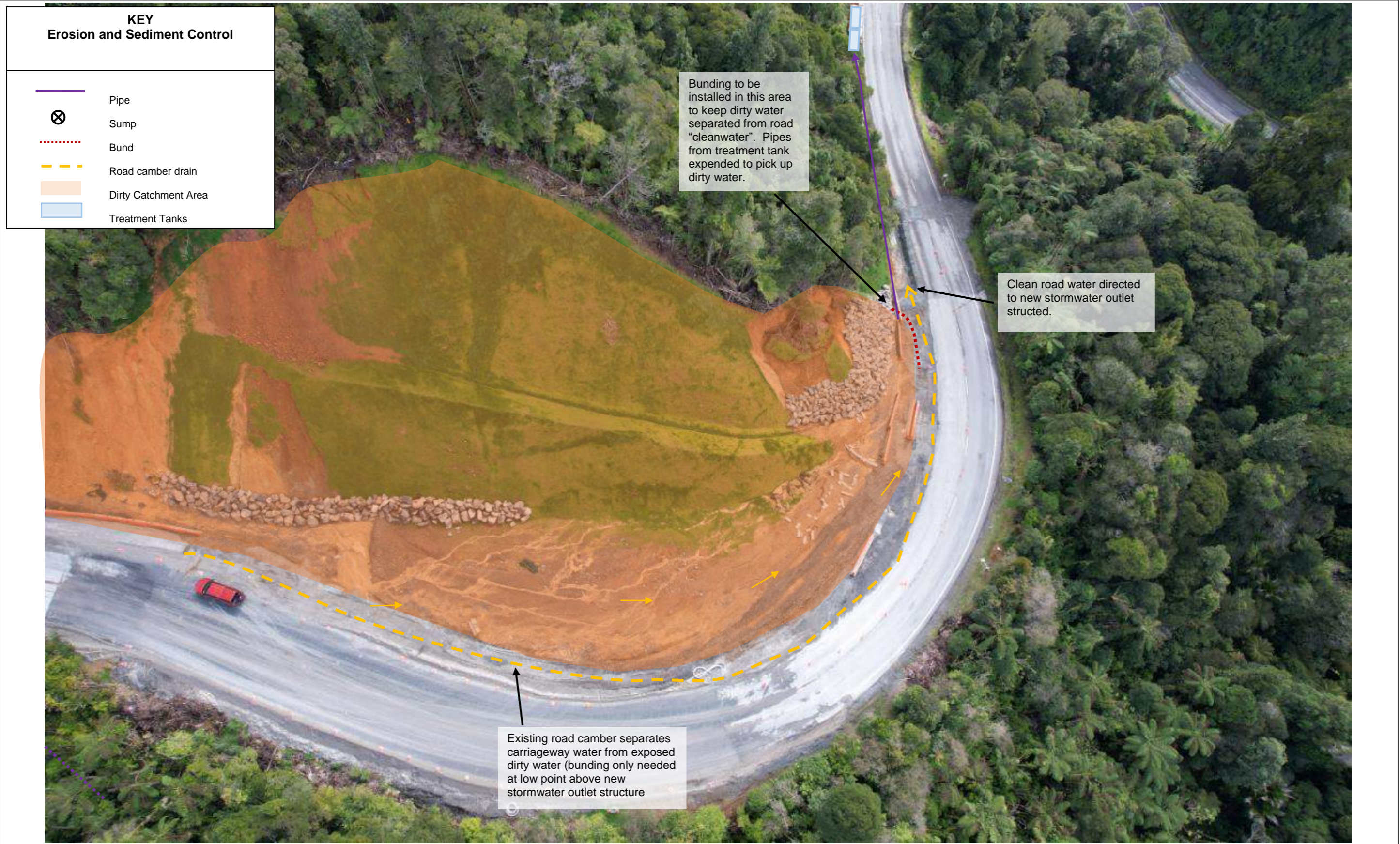
- NOTES**
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  - Earthworks are to be programmed to ensure rapid stabilisation.
  - All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  - Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	05.07.23	Draft for review.	TH



Drawn CS	Checked CTH
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Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Stage A26</b>
Drawing No.	<b>ESCP-001-08</b>
Sheet No.	<b>08</b>



KEY Erosion and Sediment Control	
	Pipe
	Sump
	Bund
	Road camber drain
	Dirty Catchment Area
	Treatment Tanks

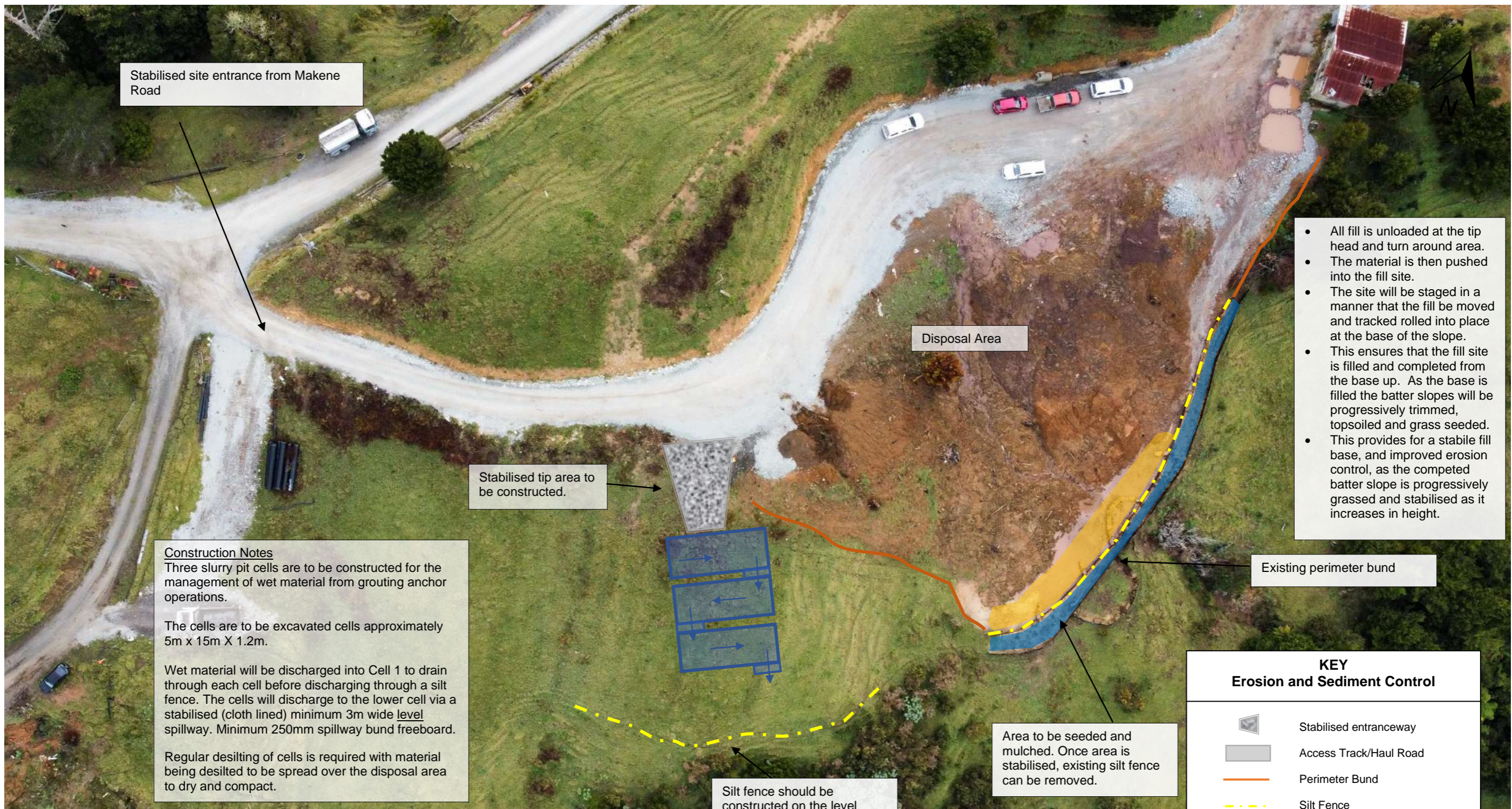
- NOTES**
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  - Earthworks are to be programmed to ensure rapid stabilisation.
  - All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  - Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	25.01.24	Draft for review.	TH
B	05.04.24	Updates due to methodology change	TH
C	31.08.24	Updates due to partial completion works	TH



Drawn <b>CS</b>	Checked <b>TH</b>
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Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Stage A11</b>
Drawing No.	<b>ESCP-001-09</b>
Sheet No.	<b>09</b>



Stabilised site entrance from Makene Road

Disposal Area

Stabilised tip area to be constructed.

**Construction Notes**  
 Three slurry pit cells are to be constructed for the management of wet material from grouting anchor operations.  
 The cells are to be excavated cells approximately 5m x 15m X 1.2m.  
 Wet material will be discharged into Cell 1 to drain through each cell before discharging through a silt fence. The cells will discharge to the lower cell via a stabilised (cloth lined) minimum 3m wide level spillway. Minimum 250mm spillway bund freeboard.  
 Regular desilting of cells is required with material being desilted to be spread over the disposal area to dry and compact.

- All fill is unloaded at the tip head and turn around area.
- The material is then pushed into the fill site.
- The site will be staged in a manner that the fill be moved and tracked rolled into place at the base of the slope.
- This ensures that the fill site is filled and completed from the base up. As the base is filled the batter slopes will be progressively trimmed, topsoiled and grass seeded.
- This provides for a stable fill base, and improved erosion control, as the completed batter slope is progressively grassed and stabilised as it increases in height.

Existing perimeter bund

Area to be seeded and mulched. Once area is stabilised, existing silt fence can be removed.

Silt fence should be constructed on the level contour along the edge of the flat area.

**KEY**  
**Erosion and Sediment Control**

- Stabilised entranceway
- Access Track/Haul Road
- Perimeter Bund
- Silt Fence
- Stabilised Area
- Area to fill and level

**NOTES**

- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.









REV	DATE	REVISION DETAILS	APPROVED
A	03.04.23	Draft for review.	TH
B	12.04.23	Updates	TH
C	19.06.23	Slurry Pit additions	TH

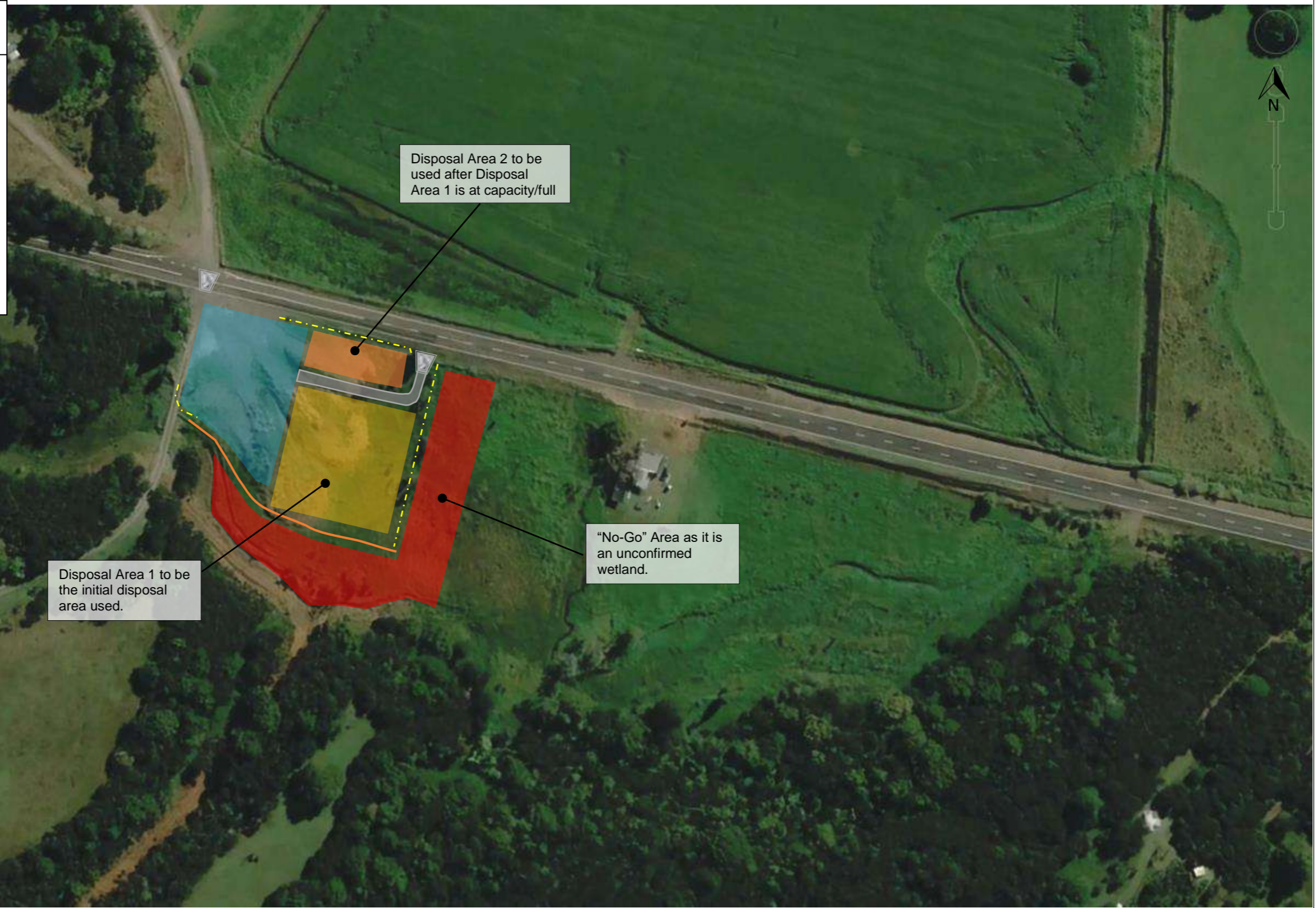
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 Checked: CS

Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Disposal Site Makene Road</b>
Drawing No.	ESCP-002-01
Sheet No.	01



**KEY**  
**Erosion and Sediment Control**

-  Stabilised entranceway
-  Access Track/Haul Road
-  Perimeter Bund
-  Silt Fence
-  Stabilised Area
-  Disposal Area 1
-  Disposal Area 2
-  Unconfirmed Wetland Area



Disposal Area 1 to be the initial disposal area used.

Disposal Area 2 to be used after Disposal Area 1 is at capacity/full

"No-Go" Area as it is an unconfirmed wetland.

**NOTES**

1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	









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**MD**

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**CS**

Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Disposal Site South</b>
Drawing No.	<b>ESCP-001-01</b>
Sheet No.	<b>01</b>

**KEY**  
**Erosion and Sediment Control**

	Stabilised entranceway
	Access Track/Haul Road
	Perimeter Bund
	Silt Fence
	Stabilised Area
	Disposal Area 1



**Construction Notes**  
Four cells are to be constructed for the management of wet material from grouting anchor operations.  
To be confirmed if the cells will be tanks or banded cells.

Wet material will be discharged into Cell 1 to drain through each cell before discharging through a silt fence.

Regular desilting of cells is required with material being desilted to be spready over the disposal area (Disposal Area 1) to dry and compacted.

Stabilised site entrance from SH1 to be constructed and maintained.

**NOTES**

- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	03.03.23	Draft for review.	TH
B	03.04.23	Update of Disposal Area	TH
C	15.05.23	Cell Construction	TH



Drawn  
**MD**

Checked  
**CS**


Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Disposal Site North</b>
Drawing No.	<b>ESCP-001-01</b>
Sheet No.	<b>01</b>



**NOTES**

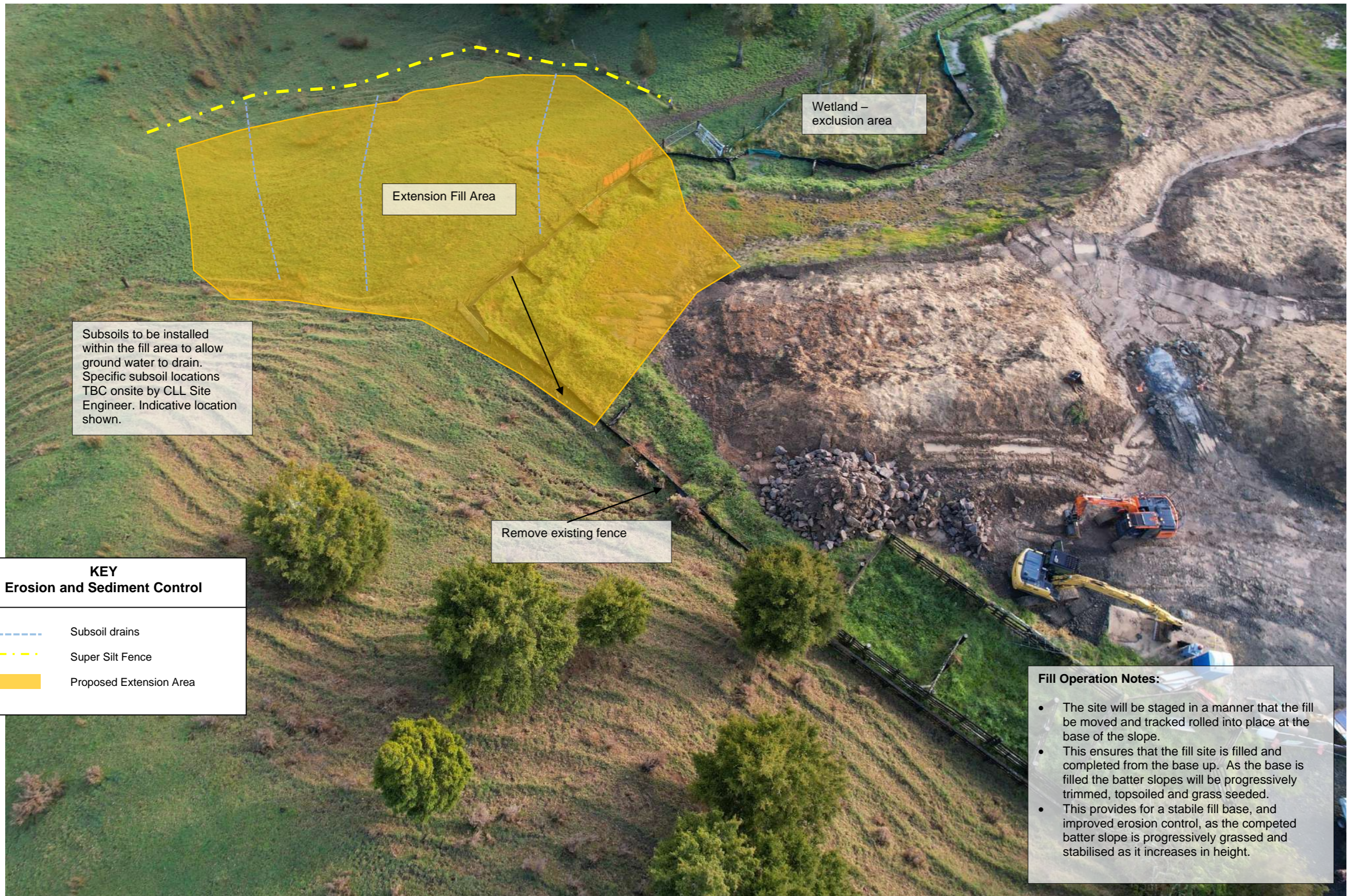
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- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	16.05.23	Draft for review.	TH



Drawn <b>MD</b>	Checked <b>CS</b>
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Project <b>MAUNGAMUKA GORGE</b>	Title <b>Erosion and Sediment Control Plan – Disposal Site Peria Valley Road</b>
Drawing No. <b>ESCP-003-01</b>	Sheet No. <b>01</b>



**KEY**  
**Erosion and Sediment Control**

- - - - - Subsoil drains  
- - - - - Super Silt Fence  
 Proposed Extension Area

**Fill Operation Notes:**

- The site will be staged in a manner that the fill be moved and tracked rolled into place at the base of the slope.
- This ensures that the fill site is filled and completed from the base up. As the base is filled the batter slopes will be progressively trimmed, topsoiled and grass seeded.
- This provides for a stable fill base, and improved erosion control, as the completed batter slope is progressively grassed and stabilised as it increases in height.

**NOTES**

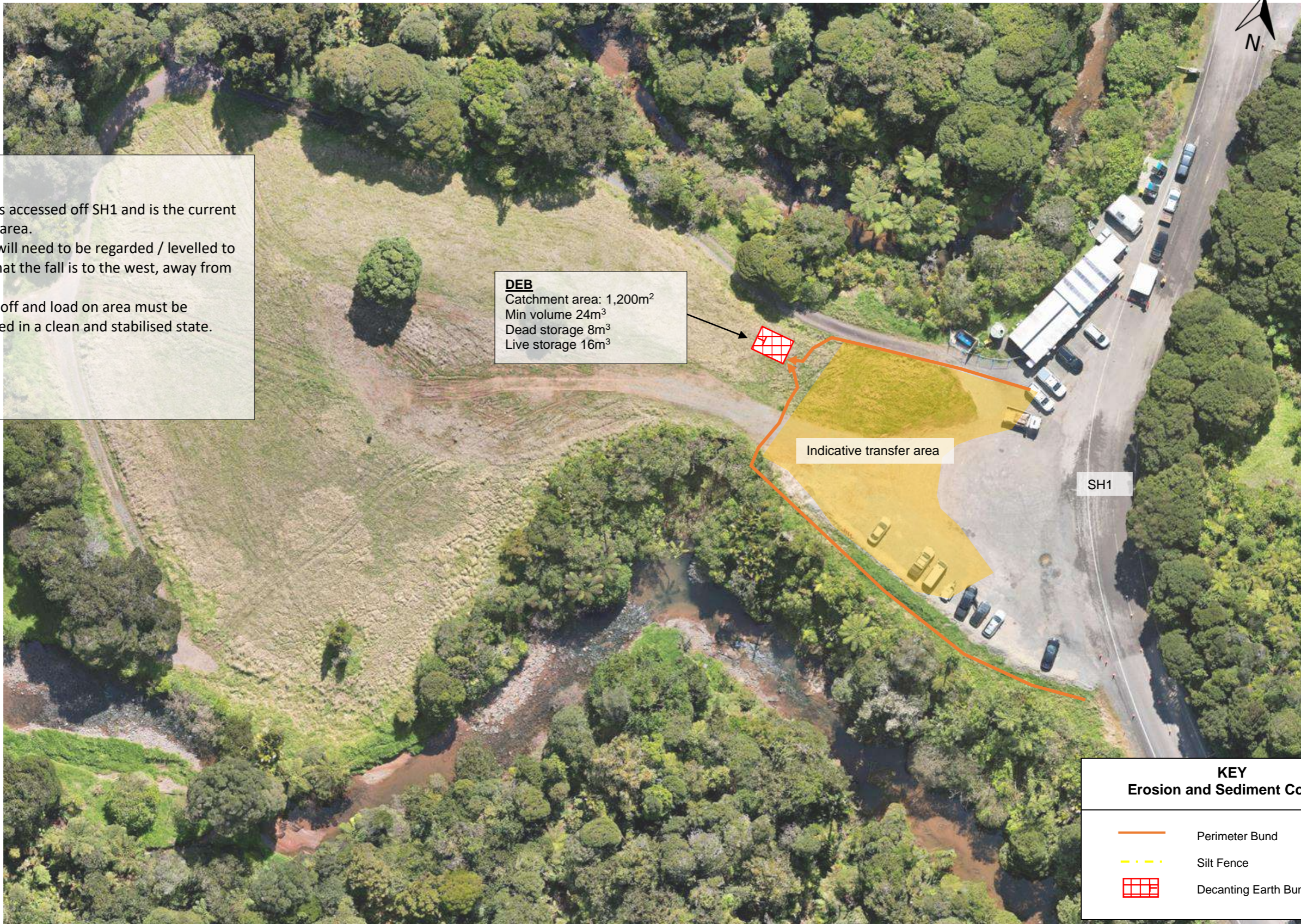
1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.08.24	Draft for review.	TH



<b>Drawn</b> MD	<b>Checked</b> CS
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<b>Project</b> MAUNGAMUKA GORGE	<b>Sheet No.</b> 01
<b>Title</b> Erosion and Sediment Control Plan – Disposal Site Peria Valley Road - Extension	<b>Drawing No.</b> ESCP-003-02






**Operation Notes:**

- ▶ The site is accessed off SH1 and is the current laydown area.
- ▶ The site will need to be regarded / levelled to ensure that the fall is to the west, away from SH1.
- ▶ The load off and load on area must be maintained in a clean and stabilised state.

**DEB**  
 Catchment area: 1,200m<sup>2</sup>  
 Min volume 24m<sup>3</sup>  
 Dead storage 8m<sup>3</sup>  
 Live storage 16m<sup>3</sup>

Indicative transfer area

SH1

KEY Erosion and Sediment Control	
	Perimeter Bund
	Silt Fence
	Decanting Earth Bund (DEB)

**NOTES**

1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.




REV	DATE	REVISION DETAILS	APPROVED
A	19.04.24	Draft for review.	TH



Drawn  
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Checked  
CS

Project	<b>MANGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Southern Gate Transfer Area – April 2024</b>
Drawing No.	ESCP-001-01
Sheet No.	01

KEY Erosion and Sediment Control	
	Silt Sock
	Silt Fence
	Fill Area



**Operation Notes:**

Temporary Spoil Area has been designed to accommodate approximately 1,500m³ of spoil material.

- Sediment Control will be via silt fences and silt socks
- A silt soc is to be installed across the entry point when rain is forecast or left over night.
- All spoil will be unloaded towards the back of the designated area first. The entry point into the spoil area will be maintained in a stabilised and clean state.
- Spoil will be grass seeded on a regular basis.



**NOTES**

1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	20.08.24	Draft for review.	TH
B	30.08.24	Final	TH



Drawn  
MD

Checked  
CS

Project

**MANGAMUKA GORGE**

Title

**Erosion and Sediment Control Plan –  
SH1 6770 Kaitaia Temporary Spoil Site**

Drawing No.

**ESCP-TSS-001-01**

Sheet No.

**01**

## Appendix C – Kauri Dieback Procedure



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

### 1 Application

This Plan forms a part of the Erosion and Sediment Control Plan (ESCP) for Mangamuka Gorge Road Rehabilitation works (the Project). The purpose of this Plan is to have the procedures in place to manage the risk of kauri dieback disease and to reduce the potential environmental impact the works may have on the spread of kauri dieback disease.

### 2 Scope of works

The construction activities of the Project include the following:

- Ground stability improvements (anchors);
- Retaining wall construction;
- Culvert works;
- Road reinstatement.

### 3 Potential Environmental Impacts of Activities.

Kauri (*Agathis australis*) are a cornerstone of the indigenous forests of the upper North Island and have had a large part to play not just in the landscape of Aotearoa but also in its culture and early history<sup>1</sup>. Kauri dieback is caused by a soil-borne pathogen. Minimising the movement of soil or plant material that is potentially contaminated with kauri dieback by people, animals, and limited natural spread (over small distances) is fundamental to the management of kauri dieback.

Kauri dieback spreads through the movement of contaminated soil and soil water and it is possible that it is also spread by streams and rivers particularly in times of flooding.

When working or conducting any activity within or around kauri or in native forests in Northland there is a risk of spreading kauri dieback. Kauri forests and stands can be less easily identifiable and have the potential to be in remnant forests across the region.

The key potential situations and the environmental impacts of these are:

Aspects	Impacts
Spread of kauri dieback disease around the local Native forests around the works area through the movement of soil via people, equipment/tools, heavy machinery, and vehicles.	Acute and chronic harm to local kauri by the spread of kauri dieback disease to healthy/uninfected kauri.

<sup>1</sup> Kauri Dieback Hygiene, Best Practice Guidelines; Northland Regional Council, March 2020





## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

## 4 Key Responsibilities

### Responsibilities.

The **Project Director** is responsible for:

- Ensuring controls to prevent kauri dieback spreading are in place; and
- Ensuring protocols and procedures to manage the risk of kauri dieback are in place.

The **Project Manager** is responsible for:

- Ensuring the implementation of this Plan;
- Communicating requirements to relevant site personnel; and
- Ensuring all personnel have received appropriate instruction and training in avoiding and following kauri dieback procedures.

The **Site Engineer** is responsible for:

- Ensuring adequate hygiene points and wash down stations are available for all soil disturbing activities where kauri may be present;
- Ensuring that all hygiene kits are in stock; and
- Ensuring all site personnel have received appropriate instruction and training in avoiding and following kauri dieback procedures.

All **Site Personnel** are responsible for:

- Following the requirements of this Procedure; and
- Reporting any concerns, incidents, or observations to the Earthworks Manager or Site/Contract Manager

## 5 Kauri Dieback Disease Prevention Procedures

### 5.1 Hygiene Procedures

- Ensure all gear (footwear, tools, equipment, and machinery) is clean before entering and after leaving if Kauri have been identified nearby the work site. It is recommended that all gear is cleaned at the beginning and end of each day if leaving the site. 'Clean' refers to completely soil-free. Soil and organic material cleaned from equipment (including vehicles and heavy machinery), where possible should be collected and disposed of appropriately at an approved landfill. Alternatively, the material can be left in situ at the source.
  - Wheeled or tracked machinery and vehicles pose a high risk and therefore must be cleaned thoroughly to remove all soil.
  - Where possible, machinery and vehicles should remain on sealed road for the duration of the project.
  - When moving from one area of Kauri to another (between work sites), all equipment should be cleaned prior to moving. A full wash-down of soil and debris should occur on site prior to movement as this contains any problems at the source.
  - Where the above recommendation cannot occur, vehicles and machinery may be taken off site and cleaned in a wash-down facility, but all loose soil and debris must be removed at the kauri site prior to moving and care should be taken to ensure that risk of spread during transport to that facility is minimised.
  - Operators are expected to carry out their own inspections and cleaning, however these may be checked by local Department of Conservation (DOC) or council staff.
- Vehicles and personnel should remain on roads and tracks where possible, particularly in wet conditions. If it is required that vehicles or personnel need to move onto/off tracks, portable



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

phytosanitary packs are required to be used to ensure that kauri dieback is not carried onto the track from surrounding kauri or between high-risk areas.

- Phytosanitary kits must be used when leaving an area showing symptoms of kauri dieback disease.
- Operations should be carried out under dry soil conditions where possible.
- Work sites should ideally be located downslope of kauri areas.
- When entering or exiting a stream system, you must use portable phytosanitary packs to ensure kauri dieback is not carried into the stream from surrounding kauri or between high-risk areas.
- Raw materials (soil/substrate/gravel) should not be sourced from kauri areas. Materials should be sourced from a 'clean' source not containing kauri.
- If any vegetation removal is required, methods that do not disturb the soil should be used.
  - If any diseased kauri and vegetation (including weeds and native vegetation in diseased zones) are trimmed or cleared they must be left in-situ, composted for use on site, or disposed of at an appropriate landfill site.
  - If any soil/plant material is to be removed from a "controlled area" this must be managed with biosecurity approval.

### 5.2 Additional General Considerations

- Avoid or restrict introduction of high-risk products (soil/substrate/gravel/vegetation) to the area. If any high-risk products are required, they must be from reputable/biosecurity accredited sources.
- Managing or limiting vehicle access where appropriate should be considered.
- Managers, visitors and users must be aware when undertaking high-risk activities in an infected area.
- Good hygiene practices by all users/visitors should be encouraged.
- If both infected/symptomatic and uninfected sites are identified within an area, hygiene measures must be taken to avoid soil transfer from infected to uninfected. Activity should be planned to move from uninfected to infected areas (not vice-versa where possible).

### 5.3 Phytosanitary information

Kauri dieback spores can be removed from footwear and equipment simply by scrubbing them with clean water to remove all soil then allowing gear to dry. However, while not essential, using Sterigene will increase the effectiveness of these hygiene measures. Sterigene should be used at a 2% mix.

It is recommended that Sterigene disinfectant is used on footwear, equipment, machinery and other items that have been in contact with soil. Sterigene is a broad-spectrum disinfectant which is non-toxic, non-corrosive, biodegradable and environmentally friendly compared to other products.

Alternatively, Virkon and Janola (Bleach) may be used, however its application is limited in a forest situation and any application should be in accordance with the product's label instructions and Material Safety Data Sheet. Options for mixes are outlined below:

- 70% Methylated Spirits, 30% water.
- 25% Bleach, 75% water.
- 2% Sterigene Mix

All gear should first be cleaned to remove soil. Sterigene should then be sprayed onto the clean surfaces (and left to dry). Sterigene will not kill kauri dieback spores that are embedded in soil hence it is important to remove soil before applying the disinfectant.

Water, soil, or slurry and Sterigene from cleaning dirty equipment needs to be disposed of carefully:

- Solution must be drained into waste water drains, not the stormwater system, or disposed of on a lawn or gravel pad.
- If necessary, expired Sterigene may be discarded on a lawn or gravel pad.



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

- Do not let Sterigene drain into septic systems.
- Sinks connected to waste water systems are ideal for cleaning equipment off site.

Wearing reusable non disposable overshoe booties is an option for each kauri area. Sourcing an overshoe bootie that is durable and can be washed and reused regularly is recommended. These need to be cleaned at the hygiene point (disinfectant location at the edge of the works or forest area) like footwear. Disposable ones are not recommended.

### 5.4 Hygiene Kit Requirements

Outlined below are the items needed in hygiene kits around the site and at hygiene and wash down points:

- Stiff bristle scrubbing brush or broom;
- 500ml spray bottle with disinfectant (disinfectant mixes are outlined in Section 5.3);
- Boot bags;
- 1 litre pump sprayer with water.

For vehicle and heavy machinery wash down points the volumes of disinfectant and water will be larger than those listed above. These volumes will be dictated by the frequency of cleaning and the amount of equipment that needs to be cleaned on site. The same mixes of disinfectant will be used as listed in Section 5.3.

## 6 Wash-Down Sites

Wash down of vehicles and/or heavy machinery that was used within a kauri root zone should occur within that area where possible. If the vehicles/machinery have been operating outside a root zone, the wash-down should occur prior to exiting a kauri forest.

When selecting a suitable wash-down site, the following should be considered:

- Hard stand area and well drained surface (e.g., road near the edge, firm grass or gravel).
- At least 30m away from a water course or water body. This includes drains that discharge to water courses such as stormwater drains and culverts.
- An area within the root zone, if use of equipment and vehicles has occurred in this area.
- Is of gentle slope to drain wastewater away from:
  - The wash-down area and into a kauri root zone.
  - Water catchment.
  - Areas outside the kauri root zone.
  - Vehicles and heavy machinery being washed to prevent potential re-contamination.
- Enable cleaned objects to exit without being re-contaminated.
- Undertaking a risk assessment of the site to inform a health and safety risk management plan e.g., working around powerlines.

Where runoff cannot be managed to an acceptable standard (e.g., large quantity of wastewater and/or an extensive runoff) construction of a bund and sump may be required to safely dispose of the wastewater. DO not drive through wash down wastewater as this may re-contaminate the vehicle/machinery.

If wash down cannot occur in the forest, then the vehicles and/or heavy machinery should be taken to a suitable facility off site for decontamination. All loose soil and vegetation should be physically removed (preferably when dry) where possible before the vehicle or heavy machinery is transported offsite. This can be removed using a hard brush or broom or by using compressed air. Pay attention to the underside, between dual wheels,



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

sump guards, mud flaps, hollow sections, foot wells, and bumper bars. The amount of water used should be minimised.

Footwear and equipment/tool hygiene points should be installed at the entrance and exit of a kauri forest site. If the same access point is used when moving from one area of kauri to another, a hygiene point should be set up between the two areas. Footwear should be cleaned following the procedures outlined in Section 5.3 and Section 5.4.

## 7 External Contacts

Kauri Dieback Helpline	0800 NZ KAURI
Kauri Dieback Team – Northland Regional Council	<a href="mailto:kauridieback@nrc.govt.nz">kauridieback@nrc.govt.nz</a>

### Project Team Contacts

Project Director: Vaughn Robbins	027 492 3576
Project Manager: Chris Tuxford	0272695275
ESC & Environmental: Campbell Stewart	021 837825
Site Engineer: Tim Hunger	0275719111

# APPENDIX G ASSESSMENT OF ALTERNATIVES

## Email from Jared Hoskin to Stuart Brooke, dated 04/07/2023

It is my opinion that every other practicable alternative location for a fill site in the region to serve the northern section of the Mangamuka Slip Response project would have equal or greater adverse effects on a natural inland wetland. I have driven the area multiple times to find dumpsites throughout the course of the project. Along the State Highway are basically flat areas with tributary streams feeding into the Victoria River, these flats are prone to flooding and a substantial amount on land on the flats are within the flood hazard zones. These flats are surrounded on both sides by hilly terrain. On the surrounding hills the majority of the land was either; inaccessible, too steep to fill or had areas where it plateaued but then of course held water and rushes etc would be present. Below is a summary of the requirements I look for in a dumpsite along with the rationale.

<b>Requirements</b>	<b>Rationale</b>
Fill site needs to be as close as possible to the project site	<p><u>Project costs</u>: minimise transport costs and</p> <p><u>Project efficiency</u>: maximise efficient removal of spoil to avoid project delays.</p> <p><u>Hapu considerations</u>: spoil should remain in same ecological district .</p> <p><u>Other factors</u>: minimise CO2 emissions, damage to local roads, disturbance to communities.</p>
Natural Hazards	Avoid sites with natural hazards including land instability and flood hazards.
Safe site access	Clear site lines in both directions, existing formed access preferred. Room onsite for truck manoeuvring.
Minimum site size	Minimum 4,000m <sup>2</sup> area / capable of accommodating 5000m <sup>3</sup> + to be worth the cost of setup and landowner agreement etc
Site topography	Can laden trucks access the dumpsite.
Landowner agreement	NZTA Waka Kotahi do not own any suitable land on north side of Mangamuka Gorge so all fill sites need to be negotiated with private landowners.

Kauri Dieback	Fill site needs to be clear of any Kauri to avoid potential spread of PSA. And needs to be kept in the same location.
Environmental effects	Avoid fill sites which require modification to: <ul style="list-style-type: none"> <li>• Natural wetlands</li> <li>• Streams</li> <li>• Ecologically Significant Indigenous vegetation</li> <li>• Outstanding Natural Landscapes</li> </ul>
Cultural effects	Avoid archaeological sites or other sites of cultural importance where the fill site will be.
Other Planning restrictions	Avoid sites with any other planning overlays or restrictions that would impact on establishing a fill site.

I give particular weighting to the distance of the fill site from the main area of works. It's worth noting too that it takes quite a bit of time upfront to get agreements with landowners in place, with the Peria Valley Rd agreement taking over 3 weeks from being drafted to being signed up. Below is a map showing only the largest locations I have been too so far to find dumpsites (there are many other smaller ones within this area and outside this area that I have not included to save time as they were not suitable).



Kane Well's Farm – Most of the accessible places were in a flood hazard zone, but we managed to find a small area that wasn't. Blue colour on the above map.

Summit Forrest's – No access track, we would have to create a massive access track and the fill would essentially create hills as there were no holes to fill. Green colour on the above map.

Chris Kimber's Farm – Most of his land is inaccessible / would have to create massive access tracks. The best fill site so far is the one we are currently proposing (Peria Valley Rd). Red colour on the above map.

Jim Burrough's Farm – Rolling hills go directly onto flats, it's likely that the toe of any possible dumpsite would be within the flood hazard zone. Orange colour on the above map.

Steven Foster's Farm – Had to cross a stream to access the dumpsite, access is weather dependant. Not included on the above map.

Thanks,

Jared





Jared Olsen

Project Manager

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# APPENDIX H PLANNING ASSESSMENT

## MANGAMUKA 2022 SLIP RESPONSE

### Northern Fill Site

184 Peria Valley Road, Kaitaia



### PLANNING CHECKLIST:

[Far North Operative District Plan](#)  
[Far North Proposed District Plan](#)  
[Far North District Council Bylaws](#)  
[Northland Proposed Regional Plan](#)  
[National Environmental Standards](#)  
[National Policy Statements](#)

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consultancy excelling in project delivery.



## 1. DOCUMENT QUALITY CONTROL RECORD

<b>To</b>	Kim Cottle, Principal Planner, Waka Kotahi
<b>Copy</b>	Hendrik Postma, Senior Project Manager, NZTA Waka Kotahi
<b>Document Status</b>	Version 5: FINAL
<b>Date</b>	1 November 2024
<b>Prepared By</b>	Elisha Oldridge, Senior Planner, Stellar Projects; and Alex Erceg, Senior Planner, Stellar Projects
<b>Authorised for Issue</b>	Stuart Brooke, Planning Manager, Stellar Projects
<b>File/Ref</b>	J004190 – Mangamuka 2022 Slip Response
<b>Front cover image:</b>	Photo showing northern fill site at 184 Peria Valley Road

## 2. SUPPORTING DOCUMENTS

<b>Title</b>	<b>Author</b>	<b>Date &amp; Revision</b>
Erosion and Sediment Control Plan – Disposal Site Peria Valley Road	CLL	31 January 2024 (Rev C)
184 Peria Valley Rd – Wetland Assessment	NZ Environmental Management	30 October 2024 (Rev 5)

## 3. RELEVANT SITE DETAILS

<b>Site Address</b>	184 Peria Valley Road, Kaitaia
<b>Site Area</b>	85.8212 hectares
<b>Legal Description</b>	Lot 1 Deposited Plan 35169
<b>Relevant Title Instruments</b>	C276816.1 Gazette Notice (NZ Gazette 6.6.1991 No.83 p.1826) declaring (a) part (732m <sup>2</sup> ) to be road which shall vest in the Far North District Council (c) part (450m <sup>2</sup> ) to be taken and shall vest in the Far North District Council
<b>Owner/s</b>	Christopher Kenneth Kimber, Robyn Audrey Kimber
<b>Relevant Plans &amp; Regulations &amp; Policy Statements</b>	Operative Far North District Plan – 2009 Proposed Far North District Plan – 23 May 2023 (Rules with immediate legal effect) Proposed Northland Regional Plan – June 2023 Appeals Version National Environmental Standards: Freshwater 2020 (updated January 2023); Assessing and Managing Contaminants in Soil to Protect Human Health (2011) National Policy Statement for Highly Productive Land



## 4. BACKGROUND, PROPOSAL AND DESCRIPTION OF SITE

NZTA Waka Kotahi is carrying out slip remediation works over the length of State Highway 1 (**SH1**) through the Mangamuka Gorge (the **Gorge**) as part of the Mangamuka Slip Response 2022 project (the **Project**).

The works are being undertaken under the s330 Emergency Works Provisions of the Resource Management Act 1991 (the **Act**), whereby resource consent will be required to be sought retrospectively (discussed further at **Section 8.2**).

Spoil from the northern side of the gorge was initially disposed of at 6283 State Highway 1, however that dump site had reached capacity by mid-2023. A suitable site to accommodate further spoil material was identified at 184 Peria Valley Road, Kaitaia ("the site"). An initial planning assessment was undertaken in July 2023, and fill activity commenced shortly thereafter. **The purpose of this updated assessment is to review an expansion to the fill site ("Stage 2"), which has been somewhat modified from the original proposal.**

The proposed fill site is a 4,500m<sup>2</sup> area in a basin shaped feature on the north side of Peria Valley Road. The site is within an 85Ha farm located on the northern side of the Mangamuka ranges.

It is proposed to dispose a maximum of 20,000m<sup>3</sup> of fill within the site. The works will be carried out as illustrated in Figure 7 and described below:

- Stage 1 (works to date): an area of approximately 2,650m<sup>2</sup> has been filled. All fill is unloaded at the tip head and turn around area on the site. The material is then pushed into the fill site and will be layered in no greater than 200mm layers, and track rolled for compaction. Any non-structural loads are stockpiled and used for final landscaping.
- Stage 2: An area of approximately 1,900m<sup>2</sup> will be filled. This area is located to the northwest of the Stage 1 area. As with Stage 1 the site will be staged in a manner that the fill be moved and track rolled into place at the base of the slope. The material will be layered in no greater than 200mm layers. Any non-structural loads will be stockpiled and used for final landscaping.

Appropriate erosion and sediment control measures will be implemented for the duration of works, including a 2.5m wide bund and a 50m long super silt fence. Subsoils will be installed, and an existing farm culvert will be sealed off. The site will be accessed via a stabilised entranceway off Peria Valley Road.



**Figure 1:** Aerial photograph of the site (2014 – 2014, NRC) showing approximate location of the fill site.



**Figure 2:** Aerial photo showing location of fill disposal site at 184 Peria Valley Road



**Figure 3:** Photo of fill disposal site looking south west



**Figure 4:** Photo of fill disposal site looking north, taken prior to works commencing.



**Figure 5:** Photo of native trees and associated wetland area to be retained

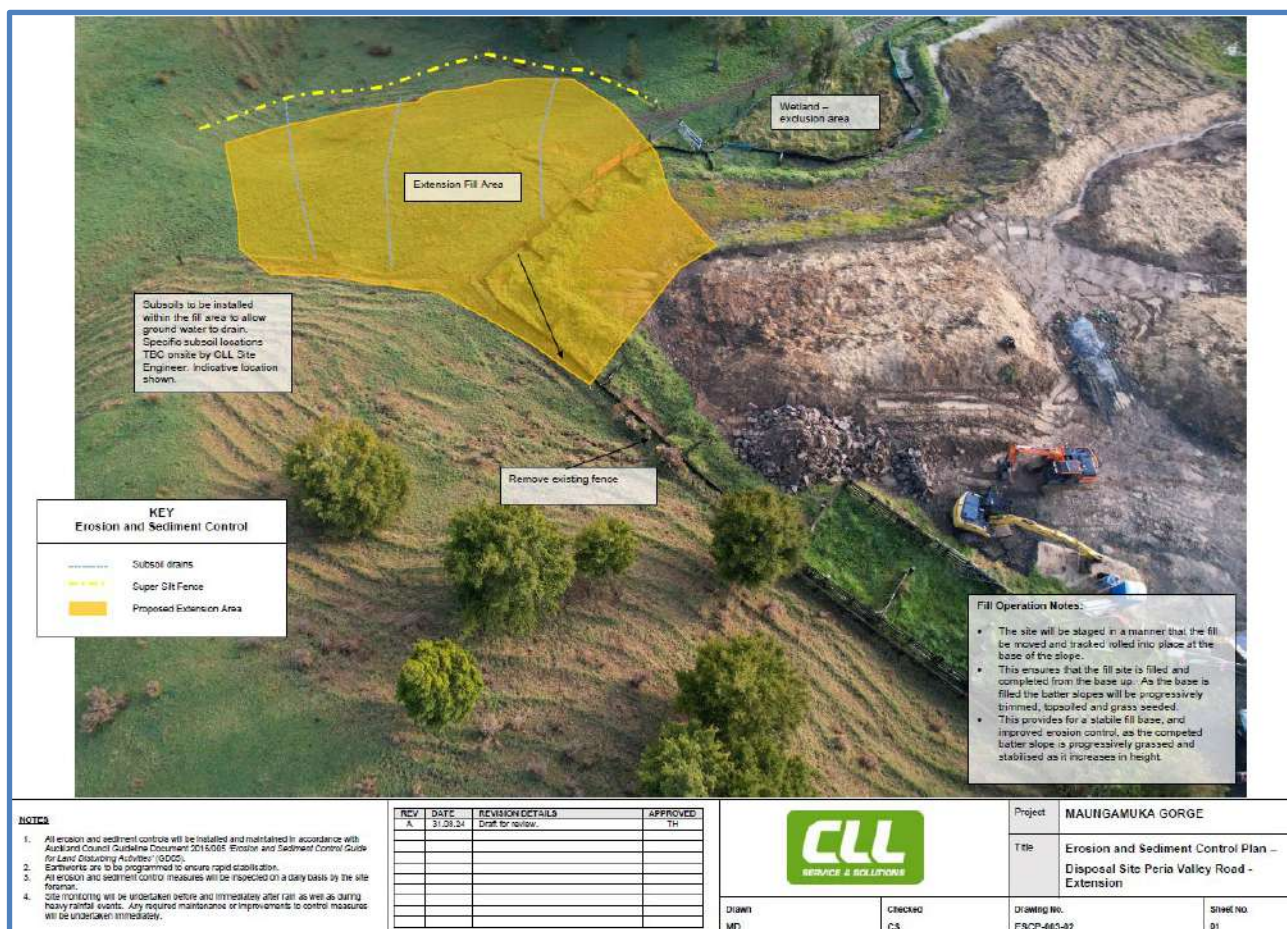


**Figure 6:** Erosion and sediment control plan, showing the existing Stage 1 fill operation and extent of the Stage 2 expansion.





On 31 August 2024, a further extension of the fill site was proposed (refer **Figure XX**).



**Figure 7:** Proposed Further Extension of Fill Area

## 5. WETLAND FEATURE & ECOLOGICAL VALUES

The site was previously used as grazing pasture, dominated by pasture grasses. The basin feature contains a hillslope seepage area of approximately c.1,400m<sup>2</sup> which is impounded by a raised farm track located along its lower edge. An assessment of this wetland has been carried out by NZ Environmental Management (refer **Appendix 2**). The wetland comprises of pasture and rush species and has been assessed as having low ecological value.

The wetland meets the definition of natural inland wetland under the National Policy Statement for Fresh Water Management (NPS-FM) and the definition of indigenous wetland in the Far North District Plan.

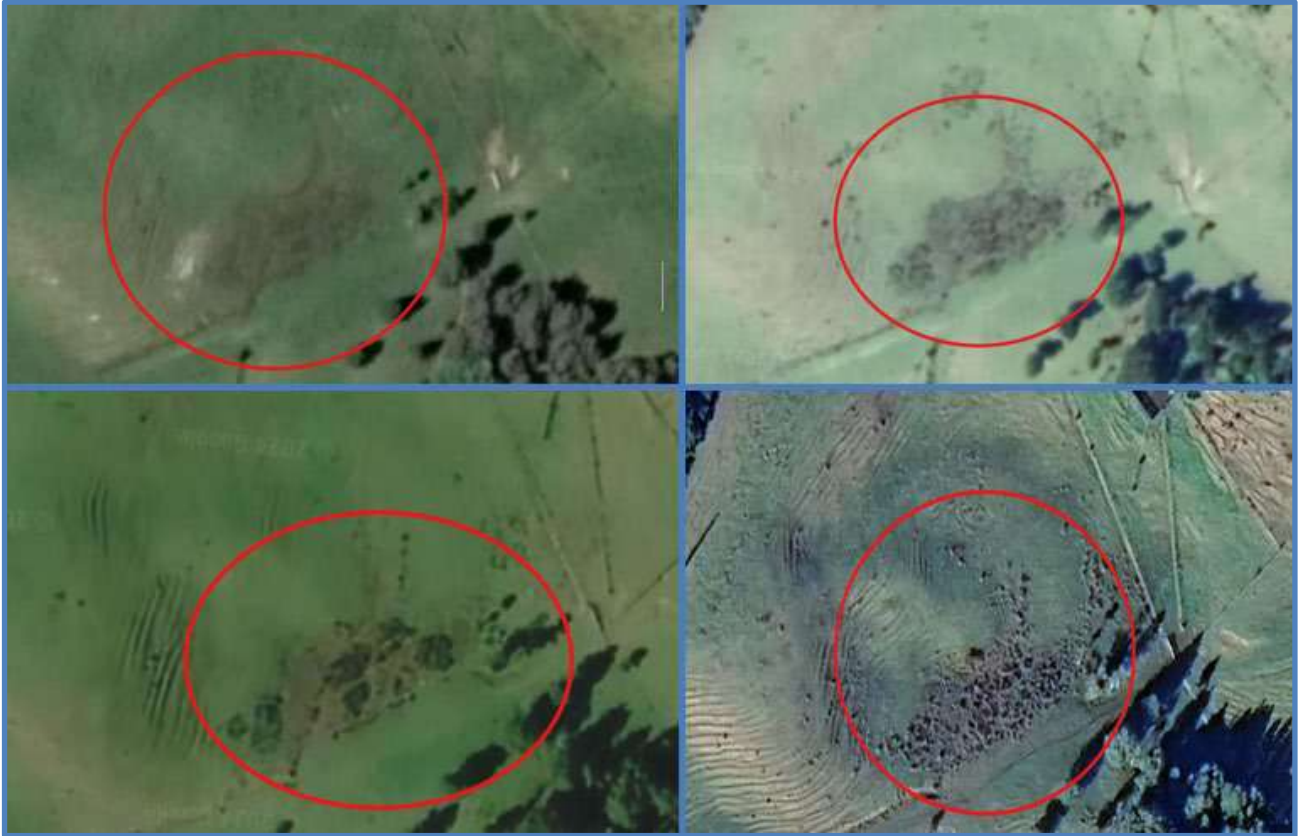
As noted above, it is proposed to drain and fill most of this wetland area as part of the fill activity (Stage 2).

Within the lower part of the wetland, there is a 35m<sup>2</sup> area containing a stand of seven kahikatea and two rimu trees. These trees have all been assessed as being in poor condition with stunted growth and ill- health, but nonetheless have higher ecological



value than other parts of the wetland and the design of the fill site has been redesigned to retain this area.


Aerial imagery suggests the vegetation within the wetland area is less than 10 years old. With imagery from 2016 showing the vegetation starting to establish.



**Figure 8:** Aerial Imagery (Clockwise from top left 2016-2022) (Source: Google Earth - accessed 1 November 2024)

## 6. PLANNING CONTEXT TABLE

**Table 1:** Planning Features

<b>FNDP Zone (Operative):</b>	Rural Production
<b>FNDP Zone (Proposed):</b>	Rural Production
<b>FNDP Resource area</b>	N/A
<b>FNDP Notations</b>	<p>Top Energy High Voltage Power Lines</p> 
<b>Soil classification:</b>	LUC 4 – Arable. NPS-HPL does not apply to this site.
<b>Northland brown kiwi &amp; mudfish distribution:</b>	Kiwi Present
<b>Significant indigenous vegetation &amp; significant habitats of indigenous fauna:</b>	N/A
<b>Surface Water Protection zone:</b>	N/A
<b>NRC Natural Hazards:</b>	Tsunami Zone: Safe Area
<b>Designations:</b>	N/A
<b>Statutory Acknowledgement Area:</b>	Treaty Settlement Area of Interest: Te Rarawa
<b>HAIL:</b>	The site is not showing as a recognized HAIL site on Northland Regional Councils Selected Landuse Register.
<b>Heritage &amp; Archeology:</b>	No heritage or archaeological sites are showing on, or in proximity to, the site on the New Zealand Archaeological Association online maps or FNDC GIS maps.
<b>Regional Plan notations and requirements:</b>	<ul style="list-style-type: none"> <li>• Hill Country and Lowland Areas: Hill Country Area</li> <li>• River Water Quantity Management Units: Small River</li> <li>• Groundwater Management Units: Groundwater Zone</li> </ul>
<b>Other relevant planning documents:</b>	N/A



<b>Reserves and protected areas and relevant management plans / strategies:</b>	N/A
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## 7. ASSUMPTIONS

We have undertaken our assessment based on the following assumptions:

- The activity will comply with the Far North District Plan Rule 12.7.6.1.6 *Noise*
- The activity will comply with the Far North District Plan Rule 15.1.6A *Maximum Daily one- way traffic movements* .

If the activity does not comply with the above rules, there will be no on-going effects upon completion of the activity relating to noise and traffic and therefore retrospective resource consent will not be required.

## 8. SUMMARY OF LIKELY CONSENTING REQUIREMENTS

The below table sets out the infringement of the relevant documents and outlines the approvals and/or resource consents required.

**Table 2:** Resource Management and Bylaw Infringements

<b>Statutory Document</b>	<b>Consent Triggered</b>	<b>Consents/Approvals Required/Comments</b>
<b>Proposed Regional Plan for Northland</b>	No	Resource Consents are <b>not</b> triggered under the rules within the proposed Regional Plan.
<b>Operative Far North District Plan</b>	Yes	Resource Consents will be required for infringements of: <ul style="list-style-type: none"> <li>• <b>Rule 12.3.6.2</b> – Fill exceeding 5000m<sup>3</sup> and exceeding 1.5m in height – <b>Discretionary Activity</b></li> <li>• <b>Rule 12.7.6.2</b> – Land use within an indigenous wetland that has altered the water levels – <b>Discretionary Activity</b></li> </ul>
<b>Proposed Far North District Plan</b>	No	Resource Consents are <b>not</b> triggered under the rules within the proposed plan that currently have legal effect.
<b>Far North District Control of Earthworks Bylaw</b>	Yes	An Earthworks Permit will be required for infringement of the Control of Earthworks Bylaw.
<b>National Environmental Standard: Freshwater</b>	Yes	Resource Consents will be required for infringements of: <ul style="list-style-type: none"> <li>• <b>Regulation 45B(1)</b> – Vegetation clearance within, or within a 10m setback of a natural inland wetland for the purpose constructing or operating a cleanfill area – <b>Discretionary Activity</b></li> </ul>



Statutory Document	Consent Triggered	Consents/Approvals Required/Comments
		<ul style="list-style-type: none"><li>• <b>Regulation 45B(2)</b> – Earthworks within, or within a 10m setback of a natural inland wetland for the purpose constructing or operating a cleanfill area – <b>Discretionary Activity</b></li><li>• <b>Regulation 45B(3)</b> – Earthworks outside a 10m, but within a 100m setback of a natural inland wetland for the purpose constructing or operating a cleanfill area – <b>Discretionary Activity</b></li><li>• <b>Regulation 45B(4)</b> – diversion of water within, or within a 100 m setback from, a natural inland wetland relating to the installation of sub-soil drainage to drain the wetland– <b>Discretionary Activity</b></li></ul>
<b>National Environmental Standard: Contamination</b>	No	The site is not known to have any soil contamination.

## 9. APPLICABILITY OF S330A OF THE ACT

Pursuant to s330A(2) of the Act, provides for where an activity is undertaken pursuant to the emergency works provisions of s330, contravenes any of s9, 12, 14 and 15, **and** the adverse effects of the activity continue, then the necessary resource consents required in respect of the activity must be sought.

It is considered that the activities associated with the construction and operation of the cleanfill will have on-going adverse effects, due to their location within, and within a 10m and 100m setback of the natural inland wetland, as well as the associated permanent drainage of the natural inland wetland.

Therefore, retrospective resource consent **will be required** to be sought for all associated activities (except for any traffic and noise related consents).

## 10. STATUTORY REQUIREMENTS FOR OFFSETTING AND COMPENSATION

The NES:FW requires an effects management hierarchy is applied to the management of effects on wetlands, as defined below:

***effects management hierarchy**, in relation to natural inland wetlands and rivers, means an approach to managing the adverse effects of an activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) that requires that:*



- (a) adverse effects are avoided where practicable; then*
- (b) where adverse effects cannot be avoided, they are minimised where practicable; then*
- (c) where adverse effects cannot be minimised, they are remedied where practicable; then*
- (d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible; then*
- (e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; then*
- (f) if aquatic compensation is not appropriate, the activity itself is avoided*

An Ecological Impact Assessment and an offsetting and compensation memorandum are being completed by NZEM, the project ecologists, which will identify whether there are residual effects that require offsetting or compensation (where they cannot be offset). In this case, we understand the loss of the hillslope seepage wetland can't feasibly be avoided, but has been minimised, through the avoidance of the more ecologically valuable areas and the residual adverse effects are considered to be low. It is considered that this correlates to no more than minor adverse effects and therefore no offsetting or compensation would be required.

## APPENDIX 1: PLANNING CHECKLIST: OPERATIVE FAR NORTH DISTRICT PLAN 2009

Relevant FNDC Definitions	Comments
Indigenous Vegetation	
Indigenous Wetland	<p>The wetland within the proposed fill site does not meet this definition as per the Ecological Assessment by NZEM.</p>
Impermeable surface	<p>The proposed stabilised vehicle entrance falls within the definition of impermeable surfaces</p>



	the total area of these impermeable surfaces are to be divided equally and considered as parts of the various sites served by the access lot for the purpose of determining compliance with the relevant stormwater management rules.	
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<b>CHAPTER 8: ZONE RULES – Rural Production Zone</b>					
Activity or standard checked	Not Applicable	Complies	Does not comply	Activity Status	Rule(s) infringed and the extent of the infringement
<b>Standards</b>					
8.6.5.1.1 Residential Intensity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A no buildings are proposed
8.6.5.1.2 Sunlight	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A no buildings are proposed
8.6.5.1.3 Stormwater Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		8.6.5.1.3 allows a maximum proportion of the gross site area covered by building and other impermeable surfaces shall be 15%. The proposed stabilised vehicle entrance falls within the definition of impermeable surfaces. Comment: Will comply - Given the 85ha site.
8.6.5.1.4 Setback from Boundaries	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A no buildings are proposed
8.6.5.1.5 Transportation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Refers to chapter 15 Rule 8.6.5.3 – Any activity that does not comply with 8.6.5.1.5 Transportation is a restricted discretionary activity.
8.6.5.1.6 Keeping of Animals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A no buildings are proposed
8.6.5.1.7 Noise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		8.6.5.1.6 Noise 8.6.5.1.6(a) – N/A 8.6.5.6(b) - Construction noise shall meet the limits recommended in, and shall be measured and assessed in accordance with, NZS 6803P:1984 "The Measurement and Assessment of Noise from Construction, Maintenance and Demolition Work".  <b>Comment – It is assumed that compliance will be achieved with this standard,.</b>
8.6.5.1.8 Building Height	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A no buildings are proposed
8.6.5.1.9 Helicopter Landing Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8.6.5.1.10 Building Coverage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A no buildings are proposed
8.6.5.1.11 Scale of Activities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		For activities ancillary to farming or plantation forestry activities, 8 persons per site or 2person per 1 hectare of net site area, whichever is the greater. For all other activities, 4 persons per site or 1 person per 1 hectare of net site area, whichever is the greater.  <b>Comment: As the site is 85ha, this allows for up to 85 people on the site.</b>
8.6.5.1.12 Temporary Events	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		





CHAPTER 12: Natural and physical resources					
Standard Checked	Not Applicable	Complies	Does not comply	Activity Status	Rule(s) infringed and the extent of the infringement.
<b>Natural Resources</b>					
<b>Outstanding Landscapes and Features</b>					
12.1.6.1.1 Protection of outstanding landscape features	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The site does not contain an outstanding natural feature or outstanding natural landscape area.
12.1.6.1.2 Indigenous vegetation clearance in outstanding landscapes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.1.6.1.3 Tree planting in outstanding landscapes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.1.6.1.4 Excavation and/or filling within an outstanding landscape	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.1.6.1.5 Buildings within outstanding landscapes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.1.6.1.6 Utility services in outstanding landscapes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.1.6.3.1 Development Bonus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.1.6.3.3 Development on an outstanding natural feature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>Indigenous Flora and Fauna</b>					
12.2.6.1.1 Indigenous vegetation clearance permitted throughout the district	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Permitted	<p>"Vegetation clearance of land which has been previously cleared and where the vegetation to be cleared is less than 10 years old".</p> <p>Aerial imagery from 2016-2022 appears to show the vegetation within the area growing and changing. And considering the land use and grazing that is likely to have occurred, I consider the vegetation to be less than 10 years old.</p>
12.2.6.1.2 Indigenous vegetation clearance in rural production	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Vegetation is not more than 10 years old, therefore this rule is not applicable.
<b>Soils and Minerals</b>					
12.3.6.1.1 Excavation and/or filling, excluding mining and quarrying	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Discretionary</b>	<p>The proposed involves 20,000m<sup>3</sup> of disposed fill within the rural production zone. Fill heights will also exceed 1.5m. This exceeds the Permitted activities of</p> <p>(a) 5,000m<sup>3</sup> in any 12-month period per site; and</p> <p>(b) a continuous cut or filled face not exceeding an average of 1.5m in height.</p> <p><b>Note: Refer rule 12.3.6.2 for activity status</b></p>
12.3.6.1.4 Nature of filling material in all zones	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<p>Filling in any zone shall meet the following standards:</p> <p>(a) the fill material shall not contain putrescible, pollutant, inflammable or hazardous components; and</p> <p>(b) the fill shall not consist of material other than soil, rock, stone, aggregate, gravel, sand, silt, or demolition material; and</p> <p>(c) the fill material shall not comprise more than 5% vegetation (by volume) of any load.</p> <p><b>Note: Assumed fill will comply with these standards</b></p>



CHAPTER 12: Natural and physical resources					
Standard Checked	Not Applicable	Complies	Does not comply	Activity Status	Rule(s) infringed and the extent of the infringement.
12.3.6.1.5 Excavation and/or filling, including mining and quarrying within the national grid yard in all zones	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		This rule excludes the rural production zone
12.3.6.2 discretionary activities	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Discretionary</b>	<p>An activity is a discretionary activity if:</p> <p>(a) it does not comply with one or more of the standards for permitted or restricted discretionary activities as set out under Rules 12.3.6.1 and 12.3.6.2 above; or</p> <p>(b) The excavation and/or filling is for the purposes of mining or quarrying, other than a quarry covered by definition of 'normal rural practices', and a Development Plan is part of the application as provided for in Rule 12.3.6.3.1 below; but</p> <p>(c) it complies with the relevant standards for permitted, controlled, restricted discretionary and discretionary activities in the zone in which it is located, set out in Part 2 of the Plan - Environment Provisions; and</p> <p>(d) it complies with the other relevant standards for permitted, controlled, restricted discretionary or discretionary activities set out in Part 3 of the Plan - District Wide Provisions.</p> <p><b>The proposed fill does not comply with Rule 12.3.6.1, and therefore is a discretionary activity. Note: the proposal will comply with the relevant standards and rules under Part 2 and Part 3 of the Plan.</b></p>
<b>Natural Hazards</b>					
12.4.6.1.1 Coastal Hazard 2 Areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The site is not identified as a coastal hazard zone. No buildings are proposed.
12.4.6.1.2 Fire Risk to residential units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.4.6.2.1 new buildings & additions to existing buildings in coastal hazard 2 areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.4.6.3.1 Coastal hazard 1 areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>Heritage</b>					
12.5.6.1.1 Notable trees	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		No heritage features are identified on the site
12.5.6.1.2 Alterations to/and maintenance of historic sites, buildings and objects	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.5.6.1.3 Registered Archaeological Sites	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.5.6.2.1 Heritage resources – permanent protection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.5.6.2.2 Activities which could affect sites of cultural significance to Maori	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.5.6.3.1 Development bonus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>Lakes, Rivers, Wetlands and the Coastline</b>					
12.7.6.1.1 Setback from Lakes, rivers and coastal marine area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		There are no lakes or rivers near the site. The site is not within the CMA
12.7.6.1.2 Setback from smaller lakes rivers and wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		There are no lakes or rivers near the site. The site is not within the CMA. There are no impermeable surfaces within 30m of any wetland that is 1ha or more in area.



CHAPTER 12: Natural and physical resources					
Standard Checked	Not Applicable	Complies	Does not comply	Activity Status	Rule(s) infringed and the extent of the infringement.
12.7.6.1.3 Preservation of indigenous wetlands	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Discretionary</b>	Any land use activity within an indigenous wetland of 200m <sup>2</sup> or more that does not change the natural range of water levels or the natural ecosystem or flora and fauna it supports is a permitted activity.  The fill is more than 200m <sup>2</sup> within an indigenous wetland, and has resulted in changes to the natural range or water levels.  The works cannot comply with the RDA rule as the earthworks are a Discretionary Activity and therefore does not comply "with the other relevant standards for permitted, controlled or restricted discretionary activities set out in Part 3 of the Plan – District Wide Provisions". Therefore, this will also be a <b>Discretionary Activity</b> under Rule 12.7.6.2.
12.7.6.1.4 Land use activities involving discharges of human sewage effluent	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.7.6.1.6 Noise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A – This rule is relevant to noise on lakes and streams
12.7.6.2.4 Development bonus					
Hazardous Substances					
12.8.6.1.1 Consent status indices for permitted activities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		No hazardous substances storage is proposed.
Renewable Energy					
12.9.6.1.1 Domestic scale of renewable energy devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The activity does not relate to renewable energy.
12.9.6.1.4 Installation, maintenance, operation and upgrade of free-standing renewable energy devices and associated structures excluding those associated with in-stream hydro or ocean investigation or electricity generation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12.9.6.1.5 Construction, operation, maintenance and upgrade of community scale renewable electricity generation device(s) and associated structures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Chapter 15: Transportation					
Activity or standard checked	Not Applicable	Complies	Consent Required	Activity Status	Rule(s) infringed and the extent of the infringement.
Rural Production zone					
15.1.6A Maximum Daily one- way traffic movements	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	p	Permitted: Rural Production maximum daily one-way movements: 60 one way movements. Restricted Discretionary: 61- 200 one-way movements. Discretionary: More than 200 one-way movements. Note: construction traffic is exempt but has to be associated with establishment of an activity. <b>Comment: Activity assumed to comply.</b>
15.1.6B.1.1 Car parking spaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		This rule relates to a change in activity or additional buildings on the site.
15.1.6C.1.1 Standards for private access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		No changes to access are proposed



## APPENDIX 2: PLANNING CHECKLIST: BYLAWS FOR FAR NORTH DISTRICT COUNCIL

	Not Applicable	Complies	Does not comply	Rule(s) infringed and the extent of the infringement.
<p>Control of Earthworks Bylaw 2019</p> <p>Filling does not include:</p> <p>(g) any works to public roads;</p> <p>(h) any quarry, public tip or similar use of land where fill is mined or stored pursuant to some other authorization consent;</p> <p>Permit it needed for</p> <p>(a) that is within 3 metres of any boundary or water body in all zones, except Minerals zone;</p> <p>(b) that is beyond 3 metres of any boundary or water body, in any zone, except Minerals zone and Rural Production zone, and:</p> <p>(i) exceeds 500mm in depth, over an area that exceeds 50m<sup>2</sup>; or</p> <p>(ii) exceeds 50m<sup>3</sup>;</p> <p><u>(c) that is in a Rural Production zone, and beyond 3 metres of any boundary or water body, and that exceeds 1.5 metres in depth;</u></p> <p>(d) in any area of natural or physical resource specified in Part 3 of the Far North District Plan</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The earthworks are in the Rural production Zone and exceeds the earthwork depth threshold.
Control of On-site Wastewater Disposal Systems Bylaw 2010	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Speed Limit Bylaw 2019	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



## APPENDIX 3: PLANNING CHECKLIST: FAR NORTH DISTRICT PLAN (PROPOSED) 2023

Relevant Definitions		Comments
Significant Natural Area	<p>means an area:</p> <p>identified in Schedule 4 of the District Plan as an area of significant indigenous vegetation or significant habitat of indigenous fauna; or</p> <p>assessed by a suitably qualified and experienced ecologist as meeting one of the criteria for ecological significance in Appendix 5 of the Regional Policy Statement for Northland 2016 or within any more recently gazetted National Policy Statement on indigenous biodiversity.</p>	The riparian margin for the site is 30m from the wetland.

Far North District Plan (Proposed)					
Rules with immediate Legal effect	Not Applicable	Complies	Does not comply	Activity Status	Rule(s) infringed and the extent of the infringement.
<b>Permitted</b>					
<p>EW-R13 Earthworks and sediment</p> <p>The earthworks comply with standard EW-S5 Erosion and sediment control and EW S3 Accidental discovery protocols</p> <p>EW5 – Erosion and sediment control</p> <p>i. must for their duration be controlled in accordance with the Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016 (Auckland Council Guideline Document GD2016/005);</p> <p>ii. shall be implemented to prevent silt or sediment from entering water bodies, coastal marine area, any stormwater system, overland flow paths, or roads.</p> <p>EW-S3 -Accidental discovery protocol</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Permitted	Comment: Erosion and sediment control will be implemented in accordance with this standard and Accidental discovery protocols will be implemented for the duration of works.
<p>IB-R4 - Indigenous vegetation clearance and any associated land disturbance outside a Significant Natural Area</p> <p>All zones</p> <p>Where: PER-1</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Comment: It is assumed the trees and wetland vegetation will not meet the criteria for significant natural area (SNA). As detailed in the ecological assessment the site does not contain any Recommended Areas for Protection ('RAPs') which form part of the Protected Natural Areas Programme ('PNAP'). FNDC consider PNAP's to meet the criteria of SNA's as there is currently no specific SNA mapping .



<b>Far North District Plan (Proposed)</b>					
<b>Rules with immediate Legal effect</b>	<b>Not Applicable</b>	<b>Complies</b>	<b>Does not comply</b>	<b>Activity Status</b>	<b>Rule(s) infringed and the extent of the infringement.</b>
<p>1. A report has been obtained from a suitably qualified and experienced ecologist confirming that the indigenous vegetation does not meet the criteria for a Significant Natural Area and it is submitted to Council 14 days in advance of the clearance being undertaken; and</p> <p>2. It does not exceed the following amounts per site over a 5-year period:</p> <ul style="list-style-type: none"><li>i. Rural Production zone, Horticulture zone, Māori Purpose zone and Treaty Settlement Land Overlay – 5,000m<sup>2</sup> if not in a remnant forest, otherwise 500m<sup>2</sup> in a remnant forest;</li><li>ii. All other zones – 500m<sup>2</sup>.</li></ul> <p>PER-2</p> <p>A report has not been obtained from a suitably qualified and experienced ecologist confirming that the indigenous vegetation does not meet the criteria for a Significant Natural Area and a report has not been submitted to Council 14 days in advance of the clearance being undertaken; and</p> <p>It does not exceed 100m<sup>2</sup> per site in any calendar year.</p>					



## APPENDIX 4 – CHECKLIST: PROPOSED REGIONAL PLAN FOR NORTHLAND (FEBRUARY 2024)

Relevant Definitions		Notes
Erosion control plan	Means a plan developed by a suitably qualified professional which specifically identifies areas of gully, landslide, and earthflow erosion and measures to mitigate sediment yield from these areas and meets the requirements of H.2 Erosion Control Plans. For the purposes of preparing Erosion Control Plans, "suitably qualified professional" means a person who: 1) has at least five years' experience in the management of pastoral, horticultural or arable farm systems, and 2) has completed advanced training or has tertiary qualifications in soil conservation, soil science or sediment management, or 3) is a Northland Regional Council Land Management Advisor.	Proposed sediment control plan meets this definition
Erosion Prone Land	Land defined as Land Use Capability (LUC) units 6e17, 6e19, 7e1 - 7e10, 8e1 - 8e3, and 8s1. The LUC units are generally depicted in the New Zealand Land Resource Inventory (NZLRI) and are also shown in I Maps   Ngā mahere matawhenua.	The fill site <u>does not meet this definition</u>
Induced wetlands	Wetlands that have formed naturally where wetlands did not previously exist, as a result of human activities, such as construction of roads and railways bunds. Does not include a constructed wetland nor any type of wet, damp or boggy ground that might incidentally occur as a result of land compaction, nor any ditch, drain, silt-trap, pit, bund, stockwater dam, or treatment pond associated with agricultural, pastoral or horticultural activities Notes: 1) Induced wetlands are a type of natural wetland. 2) The relationship between the various types of wetlands is shown in H.6 Wetland definitions relationships	The wetland within the fill site <u>meets this definition</u>
Natural wetland	Any wetland including an induced wetland and a reverted wetland, regardless of whether it is dominated by indigenous vegetation, but does not include: 1) a constructed wetland, or 2) wet pasture, damp gully heads, or 3) areas where water temporarily ponds after rain, or 4) pasture containing patches of rushes, or 5) artificial water storage facilities; detention dams; reservoirs for firefighting, irrigation, domestic or community water supply; engineered soil conservation structures including sediment traps; and roadside drainage channels. Notes: 1) The Regional Council's wetland mapping indicates the extents of known wetlands – these can be found on the Regional Council's website. 2) The relationship between the various types of wetlands is shown in Appendix H.6 Wetland definitions relationships	The wetland within the fill site <u>does not meet this definition, as it is "pasture containing patches of rushes" and is therefore excluded from the definition.</u>
Significant wetland	A natural wetland that meets the significance criteria in the Regional Policy Statement, Appendix 5 – "Areas of significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial, freshwater and marine environments". This includes natural wetlands comprising indigenous vegetation exceeding any of the following area thresholds: 1) saltmarsh greater than 0.5 hectare in area, or 2) lake margins and riverbeds with shallow water less than two metres deep and greater than 0.5 hectare in area, or 3) swamp greater than 0.4 hectare in area, or 4) bog greater than 0.2 hectare in area, or 5) wet heathland (including gumland and ironstone heathland) greater than 0.2 hectare in area, or 6) marsh, fen, ephemeral wetland or seepage greater than 0.05 hectares in area. Notes: 1) If there is any doubt over wetland extent use: Clarkson, B. R., 2013. A vegetation tool for wetland delineation in New Zealand. Prepared by Landcare Research for Meridian Energy Limited. 2) The Regional Council's wetland mapping indicates the extents of known wetlands – these can be found on the Regional Council's website. The purpose of this mapping is to help locate and identify different wetland types. The maps do not form part of this Plan. 3) The relationship between the various types of wetlands is shown in Appendix H.6 Wetland definitions relationships.	The wetland within the fill site <u>does not meet this definition</u>

<p>Vegetation clearance</p>	<p>The cutting, burning, crushing, removal or destruction of vegetation, but does not include clearing:</p> <ol style="list-style-type: none"> <li>1) hedges and amenity plants, or</li> <li>2) vegetation along fences and around dams and ponds, or</li> <li>3) vegetation around network utilities, or</li> <li>4) vegetation alongside roads and tracks, or</li> <li>5) vegetation that is infected by an unwanted organism as declared by the Ministry of Primary Industries Chief Technical Officer or an emergency declared by the Minister under the Biosecurity Act 1993, or</li> <li>6) pasture, or</li> <li>7) agricultural or horticultural crops, or</li> <li>8) weeds and pest plants.</li> </ol> <p>Note: The vegetation clearance definition only applies to vegetation clearance in the coastal riparian and foredune management area or within 10 metres of a natural wetland, or within 10 metres of the bed of a continually or intermittently flowing river or lake, as provided for by the rules in C.8.4 Vegetation clearance in riparian areas and foredune management area and related policies.</p>	<p>The proposed tree removal <u>meets this definition.</u></p>
<p>Wetland</p>	<p>Includes permanently or intermittently wet areas, shallow water and land water margins, that support a natural ecosystem of plants and animals that are adapted to wet conditions.</p> <p>Notes:</p> <ol style="list-style-type: none"> <li>1) See also: Constructed wetland, Induced wetland, Natural wetland, Reverted wetland, and Significant wetland.</li> <li>2) Wet heathlands (including gumland and ironstone heathlands) are wetlands because they are seasonally wet, consist of wetland vegetation, and are often found in mosaics with other low fertility habitat such as bogs and heathland.</li> <li>3) The relationship between the various types of wetlands is shown in Appendix H.6 Wetland definitions relationships</li> </ol> <p>Appendix H.6 Wetland definitions relationships H.6 Wetland definitions relationship</p> <div style="text-align: center;"> <h3 style="color: green;">Wetlands</h3> <p style="font-size: small; color: green;">Includes permanently or intermittently wet areas, shallow water, and land water margins, that support a natural ecosystem of plants and animals that are adapted to wet conditions.</p> <div style="display: flex; justify-content: space-around; font-size: small;"> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Natural Wetland</b></p> <p>Any wetland including an induced wetland and a reverted wetland, regardless of whether it is dominated by indigenous vegetation, but does not include: a constructed wetland, or wet pasture, damp gully heads, or areas where water temporarily ponds after rain, or pasture containing patches of rushes.</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Induced Wetland</b></p> <p>Wetlands that have formed naturally where wetlands did not previously exist, as a result of human activities such as construction of roads and railways bunds. Does not include a constructed wetland.</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Significant Wetland</b></p> <p>A natural wetland that triggers the significance criteria in the Regional Policy Statement, Appendix 5-“Areas of significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial, freshwater and marine environments”. This includes natural wetlands comprising indigenous vegetation exceeding any of the following area thresholds:</p> <ul style="list-style-type: none"> <li>» saltmarsh greater than 0.5 hectare in area, or</li> <li>» lake margins and river beds with shallow water beds less than two metres deep and greater than 0.5 hectare in area, or</li> <li>» swamp greater than 0.4 hectare in area, or</li> <li>» bog greater than 0.2 hectare in area, or</li> <li>» wet heathland (including gumland &amp; ironstone heathland) greater than 0.2 hectare in area, or</li> <li>» marsh, fen, ephemeral wetlands or seepage wetlands greater than 0.05 hectares in area.</li> </ul> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Reverted Wetland</b></p> <p>A wetland that has reverted back to its natural state over time. Does not include a constructed wetland. A reverted wetland has not been purposefully constructed by mechanical change to hydrological conditions.</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Constructed Wetland</b></p> <p>A wetland developed deliberately by artificial means or constructed on a site where:</p> <ul style="list-style-type: none"> <li>» a wetland has not occurred naturally previously; or</li> <li>» a wetland has been previously constructed legally.</li> </ul> <p>This does not include induced wetland, reverted wetland or wetland created for conservation purposes. Artificial water storage facilities; detention dams; reservoirs for firefighting, irrigation, domestic or community water supply; engineered soil conservation structures including sediment traps; and roadside drainage channels are not constructed wetlands or natural wetlands.</p> </div> </div> </div>	<p>The wetland within the fill site <u>meets this broad definition</u></p>





Proposed Regional Plan for Northland (PRP)																							
Relevant Chapter	Not Applicable	Complies	Does not comply	Activity Status	Rule(s) infringed and the extent of the infringement.																		
<b>EARTHWORKS</b>																							
<b>Permitted Activity Rules</b>																							
<p>C.8.3.1 Earthworks outside the bed of a river, lake, wetland and the coastal marine area, and any associated damming and diversion of stormwater and discharge of stormwater onto or into land where it may enter water: 1) The area and volume of earthworks at a particular location or associated with a project complies with the thresholds in table 15 below</p> <p><b>Table 15: Permitted activity earthworks thresholds</b></p> <table border="1"> <thead> <tr> <th>Location</th> <th>Earthworks thresholds</th> </tr> </thead> <tbody> <tr> <td>Within 10m of a natural wetland, the bed of a continually or intermittently flowing river or lake</td> <td>200 square metres of exposed earth at any time, and 50 cubic metres of moved or placed earth in any 12-month period.</td> </tr> <tr> <td>Within 10m of an inanga spawning site</td> <td>200 square metres of exposed earth at any time, and 50 cubic metres of moved or placed earth in any 12-month period.</td> </tr> <tr> <td>Catchment of an outstanding lake</td> <td>2500 square metres of exposed earth at any time.</td> </tr> <tr> <td>Erosion-prone land</td> <td>2500 square metres of exposed earth at any time.</td> </tr> <tr> <td>High-risk flood hazard area</td> <td>50 cubic metres of moved or placed earth in any 12-month period.</td> </tr> <tr> <td>Coastal riparian and foredune management area</td> <td>Excluding for coastal dune restoration, 200 square metres of exposed earth at any time.</td> </tr> <tr> <td>Flood hazard area</td> <td>100 cubic metres of moved or placed earth in any 12-month period.</td> </tr> <tr> <td>Other areas</td> <td>5000 square metres of exposed earth at any time.</td> </tr> </tbody> </table>	Location	Earthworks thresholds	Within 10m of a natural wetland, the bed of a continually or intermittently flowing river or lake	200 square metres of exposed earth at any time, and 50 cubic metres of moved or placed earth in any 12-month period.	Within 10m of an inanga spawning site	200 square metres of exposed earth at any time, and 50 cubic metres of moved or placed earth in any 12-month period.	Catchment of an outstanding lake	2500 square metres of exposed earth at any time.	Erosion-prone land	2500 square metres of exposed earth at any time.	High-risk flood hazard area	50 cubic metres of moved or placed earth in any 12-month period.	Coastal riparian and foredune management area	Excluding for coastal dune restoration, 200 square metres of exposed earth at any time.	Flood hazard area	100 cubic metres of moved or placed earth in any 12-month period.	Other areas	5000 square metres of exposed earth at any time.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Permitted</b>	<p>None of the restrictive locations in Table 15 apply to the site. In particular it is noted that the wetland on the site is not a natural wetland.</p> <p>The fill operation will comply with the permitted earthwork thresholds as the works will be subject to the "other areas" provision in Table 15 and the total area of exposed earth at any time will be less than 5,000m<sup>2</sup>.</p>
Location	Earthworks thresholds																						
Within 10m of a natural wetland, the bed of a continually or intermittently flowing river or lake	200 square metres of exposed earth at any time, and 50 cubic metres of moved or placed earth in any 12-month period.																						
Within 10m of an inanga spawning site	200 square metres of exposed earth at any time, and 50 cubic metres of moved or placed earth in any 12-month period.																						
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Other areas	5000 square metres of exposed earth at any time.																						
<b>Controlled Activity Rules (Operative)</b>																							
<p>C.8.3.2 Earthworks outside the bed of a river or lake, wetland and the coastal marine area that exceed 5,000m<sup>2</sup> of exposed earth at any time at a particular location or associated with a project area, and any associated damming and diversion of stormwater and discharge of stormwater onto or into land where it may enter water</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The earthworks will not occur over an area greater than 5000m <sup>2</sup> .																		
<p>C.8.3.3 Earthworks in a flood hazard area that involve more than 50 cubic metres, but not more than 1,000m<sup>3</sup>, of earth being moved or placed in any 12-month</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The site is not within a flood hazard area																		



Proposed Regional Plan for Northland (PRP)					
Relevant Chapter	Not Applicable	Complies	Does not comply	Activity Status	Rule(s) infringed and the extent of the infringement.
period, and any associated damming and diversion of stormwater and discharge of stormwater onto or into land where it may enter water.					
<b>Discretionary Activity Rules (Operative)</b>					
C.8.3.4 - Earthworks – discretionary activity					
Earthworks outside the bed of a river or lake, a wetland, or the coastal marine area, and any associated damming and diversion of stormwater and discharge of stormwater onto or into land where it may enter water, that are not a permitted or controlled activity under another rule in section C.8.3 of this Plan.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Earthworks are a permitted activity under Rule C.8.3.1
<b>C.8.4 Vegetation clearance in riparian areas and foredune management area</b>					
C.8.4.1 Coastal dune restoration within the coastal riparian and foredune management area – permitted activity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A
C.8.4.2 Vegetation clearance in riparian areas – permitted activity					
Vegetation clearance within 10 metres of a natural wetland or within 10 metres of the bed of a continually or intermittently flowing river or lake, and any associated damming and diversion of stormwater and discharge of stormwater onto or into land where it may enter water, are permitted activities, provided: 1) the area of cleared vegetation does not exceed 200 square metres in any 12-month period, and 2) vegetation is felled away from rivers, lakes, and natural wetlands, except where it is unsafe or impractical to do so, and 3) vegetation, slash, disturbed soil or debris is not deposited in a position where it could mobilise because of heavy rain or flood flows and: a) be deposited on other property, or b) divert or dam water, or c) cause bed or bank erosion, or d) damage receiving environments, downstream infrastructure, or property, and 4) any discharge of sediment originating from the cleared area does not give rise to any of the following effects in the receiving waters beyond a 20 metre radius of the point of discharge: a) any conspicuous change in colour or visual clarity, or b) the rendering of fresh water unsuitable for consumption by farm animals, or c) the rendering of surface water taken from a mapped priority drinking water abstraction point (refer I Maps   Ngā mahere matawhenua) unsuitable for human consumption after existing treatment.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Permitted</b>	The proposal involves the clearance of nine native trees within 10m of a wetland, however the wetland does not meet the definition of a <i>natural wetland</i> .
<b>C.2 Activities in the beds of lakes and rivers and in wetlands</b>					
<b>C.2.2 Activities affecting wetlands</b>					
C.2.2.1 Natural wetland maintenance and enhancement – permitted activity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A – no maintenance and enhancement of any wetlands is proposed.
C.2.2.2 Structures in wetlands – permitted activity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		N/A – no structures are proposed in a wetland



Proposed Regional Plan for Northland (PRP)					
Relevant Chapter	Not Applicable	Complies	Does not comply	Activity Status	Rule(s) infringed and the extent of the infringement.
C.2.2.3 Constructed wetland alteration – permitted activity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		N/A – the wetland is not a constructed wetland.
C.2.2.4 Activities in natural and constructed wetlands – discretionary activity  1) damage, destruction, disturbance, or removal of a plant in a wetland or deliberate introduction of a plant in a wetland for wetland maintenance or wetland enhancement, or 2) use, erection, reconstruction, placement, alteration, extension, removal, or demolition of any structure in a wetland, or 3) disturbance of the bed of a constructed wetland and construction or installation of a structure in a constructed wetland, that is not the subject of any other rule in this Plan are discretionary activities, provided the activities are not undertaken in a significant wetland.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		N/A – the wetland is not a natural or constructed wetland
C.2.2.5 National Grid Activities in significant wetlands – discretionary activities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		



## APPENDIX 5: NATIONAL ENVIRONMENTAL STANDARDS AND NATIONAL POLICY STATEMENTS

National Environmental Standards for Freshwater (updated January 2023)	
Regulation 3: Interpretation - Relevant Definitions	
cleanfill area	means an area used exclusively for the disposal of cleanfill material.
cleanfill material	means virgin excavated natural materials including clay, gravel, sand, soil and rock that are free of: <ul style="list-style-type: none"> <li>(a) combustible, putrescible, degradable or leachable components;</li> <li>(b) hazardous substances and materials;</li> <li>(c) products and materials derived from hazardous waste treatment, stabilisation or disposal practices;</li> <li>(d) medical and veterinary wastes, asbestos, and radioactive substances;</li> <li>(e) contaminated soil and other contaminated materials; and</li> <li>(f) liquid wastes.</li> </ul>
Natural Inland Wetland	natural inland wetland means a wetland (as defined in the Act) that is not: <ul style="list-style-type: none"> <li>(a) in the coastal marine area; or</li> <li>(b) a deliberately constructed wetland, other than a wetland constructed to offset impacts on, or to restore, an existing or former natural inland wetland; or</li> <li>(c) a wetland that has developed in or around a deliberately constructed water body, since the construction of the water body; or</li> <li>(d) a geothermal wetland; or</li> <li>(e) a wetland that: <ul style="list-style-type: none"> <li>(i) is within an area of pasture used for grazing; and</li> <li>(ii) has vegetation cover comprising more than 50% exotic pasture species (as identified in the National List of Exotic Pasture Species using the Pasture Exclusion Assessment Methodology (see clause 1.8)); unless</li> <li>(iii) the wetland is a location of a habitat of a threatened species identified under clause 3.8 of this National Policy Statement, in which case the exclusion in (e) does not apply</li> </ul> </li> </ul>
Specified infrastructure	Specified infrastructure means any of the following: <ul style="list-style-type: none"> <li>(a) infrastructure that delivers a service operated by a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002)</li> <li>(b) regionally significant infrastructure identified as such in a regional policy statement or regional plan</li> <li>(c) any water storage infrastructure</li> <li>(d) any public flood control, flood protection, or drainage works carried out: <ul style="list-style-type: none"> <li>(i) by or on behalf of a local authority, including works carried out for the purposes set out in section 133 of the Soil Conservation and Rivers Control Act 1941; or</li> <li>(ii) for the purpose of drainage by drainage districts under the Land Drainage Act 1908</li> </ul> </li> <li>(e) defence facilities operated by the New Zealand Defence Force to meet its obligations under the Defence Act 1990 National Policy Statement for Freshwater Management 2020</li> <li>(f) ski area infrastructure</li> </ul>
vegetation clearance	vegetation clearance— <ul style="list-style-type: none"> <li>(a) means the disturbance, damage, destruction, or removal of vegetation by any means (for example, by cutting, crushing, application of chemicals, or burning); and</li> <li>(b) includes activities that result in the disturbance, damage, destruction, or removal of vegetation (for example, over-planting, applying the seed of exotic pasture species, mob-stocking, or draining away water); but</li> <li>(c) does not include— <ul style="list-style-type: none"> <li>(i) the removal of sphagnum moss for the purpose of a harvest in accordance with regulation 48 or 49; or</li> <li>(ii) the crushing of other vegetation for the purpose of maintaining the dominance of sphagnum moss, if the crushing is carried out during a harvest of sphagnum moss or to rehabilitate the moss after it is harvested; or</li> </ul> </li> </ul>



	(iii) an activity described in paragraph (a) or (b) that is for the maintenance or construction of fencing for the purpose of excluding stock or marking property boundaries; or (iv) an activity described in paragraph (a) or (b) that is for the maintenance of shelter belts; or (v) grazing			
<b>Part 3 Standards for other activities that relate to freshwater.</b>				
<b>Subpart 1 – Natural Inland Wetlands</b>				
<b>Reg 45B: Landfills and Cleanfill Areas – Discretionary Activities</b>				
<b>Activity</b>	<b>Not applicable</b>	<b>Complies</b>	<b>Does not Comply</b>	<b>Comment</b>
45B(1) Vegetation clearance within, or within a 10 m setback from, a natural inland wetland is a discretionary activity if it is for the purpose of constructing or operating a landfill or a cleanfill area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Works will require the removal of nine trees and various wetland vegetation within the natural inland wetland. <b>Discretionary Activity</b>
45B(2) Earthworks or land disturbance within, or within a 10 m setback from, a natural inland wetland is a discretionary activity if it is for the purpose of constructing or operating a landfill or a cleanfill area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Earthworks will occur within, and within a 10m setback of the natural inland wetland for the purpose of constructing and operating a cleanfill. <b>Discretionary Activity</b>
45B(3) Earthworks or land disturbance outside a 10 m, but within a 100 m, setback from a natural inland wetland is a discretionary activity if it—  (a) is for the purpose of constructing or operating a landfill or a cleanfill area; and  (b) results, or is likely to result, in the complete or partial drainage of all or part of the wetland.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Earthworks will occur outside a 10 m, but within a 100 m, setback from a natural inland wetland for the purpose of constructing and operating a cleanfill, which will likely result in the complete or partial drainage of the wetland area being removed. <b>Discretionary Activity</b>
45B(4) The taking, use, damming, or diversion of water within, or within a 100 m setback from, a natural inland wetland is a discretionary activity if—  (a) the activity is for the purpose of constructing or operating a landfill or a cleanfill area; and  (b) there is a hydrological connection between the taking, use, damming, or diversion and the wetland; and  (c) the taking, use, damming, or diversion will change, or is likely to change, the water level range or hydrological function of the wetland.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Works will involve the installation of sub-soil drains to drain the wetland, to prepare the area for fill earthworks. <b>Discretionary Activity</b>
45B(5) The discharge of water into water within, or within a 100 m setback from, a natural inland wetland is a discretionary activity if—  (a) the discharge is for the purpose of constructing or operating a landfill or a cleanfill area; and	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Water discharged from exposed earthworks will occur within a 100 m setback from a natural inland wetland for the purpose of operating a cleanfill. Prior to the water entering the wetland it will pass through a silt fence. There is unlikely to be any material change to the water level range or hydrological function of the wetland as the earthworks will not change the volume of water discharged into the wetland, and most sediment will be removed via the silt fence prior to discharge into the wetland. <b>Permitted Activity.</b>



<p>(b) there is a hydrological connection between the discharge and the wetland; and</p> <p>(c) the discharge will enter the wetland; and</p> <p>(d) the discharge will change, or is likely to change, the water level range or hydrological function of the wetland.</p>				
<p>45B(6) A resource consent for a discretionary activity under this regulation must not be granted unless the consent authority has first—</p> <p>(a) satisfied itself that the landfill or cleanfill area—</p> <ul style="list-style-type: none"> <li>(i) will provide significant national or regional benefits; or</li> <li>(ii) is required to support the quarrying activities regulated under regulation 45A; or</li> <li>(iii) is required to support urban development regulated under regulation 45C; or</li> <li>(iv) is required to support the extraction of minerals regulated under regulation 45D; and</li> </ul> <p>(b) satisfied itself that—</p> <ul style="list-style-type: none"> <li>(i) there is no practicable alternative location for the landfill or cleanfill area in the region; or</li> <li>(ii) every other practicable alternative location in the region would have equal or greater adverse effects on a natural inland wetland; and</li> </ul> <p>(c) applied the effects management hierarchy.</p>				<p>Comment:</p> <p>Clause 45B(6)(a) can be demonstrated as the fill site is directly linked to the Mangamuka slip response, the re-opening of which will provide significant regional and potentially national benefit.</p> <p>Clause 45B(6)(b) sets a high bar by requiring an application to demonstrate that there is no practicable alternative location for a cleanfill area in the region, or that any other practicable location would have equal or greater impact on a natural inland wetland. A summary of alternatives sites is included in <b>Appendix 7</b>.</p> <p><u>Effects Management Hierarchy</u></p> <p><i>The effects management hierarchy, in relation to natural inland wetlands and rivers, means an approach to managing the adverse effects of an activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) that requires that:</i></p> <ul style="list-style-type: none"> <li>(a) adverse effects are avoided where practicable; then</li> <li>(b) where adverse effects cannot be avoided, they are minimised where practicable; then</li> <li>(c) where adverse effects cannot be minimised, they are remedied where practicable; then</li> <li>(d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible; then</li> <li>(e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; then</li> <li>(f) if aquatic compensation is not appropriate, the activity itself is avoided</li> </ul> <p><u>Comment</u></p> <p>Refer to Section 9 above for commentary on the effects management hierarchy, and the NZEM ecological assessment for recommendations to manage effects in appropriately.</p>

<b>National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (2011)</b>				
<b>Activity</b>	<b>Not applicable</b>	<b>Complies</b>	<b>Does not Comply</b>	<b>Comment</b>
Removing or replacing fuel storage system	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sampling soil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



Disturbing soil	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Although soil disturbance is proposed, the site is not showing as a HAIL site on Northland Regional Council Selected Landuse maps, and the fill site is not known to have contained any previous HAIL activities. <b>Therefore, the NES is not considered applicable</b>
Subdividing or changing use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**National Policy Statement for Highly Productive Land**

Part 3: Implementation – Landuse requirements

<b>Section</b>	<b>Not applicable</b>	<b>Complies</b>	<b>Does not Comply</b>	<b>Comment</b>
3.9 Protecting highly productive land from inappropriate use and development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The site is classed as LUC 4 – Arable and is therefore not considered Highly Productive Land as defined by the NPS. <b>Therefore, the NPS-HPL is not considered applicable.</b>

## APPENDIX 6: CONSIDERATION OF PRACTICABLE ALTERNATIVE LOCATIONS FOR A CLEANFILL ACTIVITY

### Email from Jared Hoskin to Stuart Brooke, dated 04/07/2023

It is my opinion that every other practicable alternative location for a fill site in the region to serve the northern section of the Mangamuka Slip Response project would have equal or greater adverse effects on a natural inland wetland. I have driven the area multiple times to find dumpsites throughout the course of the project. Along the State Highway are basically flat areas with tributary streams feeding into the Victoria River, these flats are prone to flooding and a substantial amount on land on the flats are within the flood hazard zones. These flats are surrounded on both sides by hilly terrain. On the surrounding hills the majority of the land was either; inaccessible, too steep to fill or had areas where it plateaued but then of course held water and rushes etc would be present. Below is a summary of the requirements I look for in a dumpsite along with the rationale.

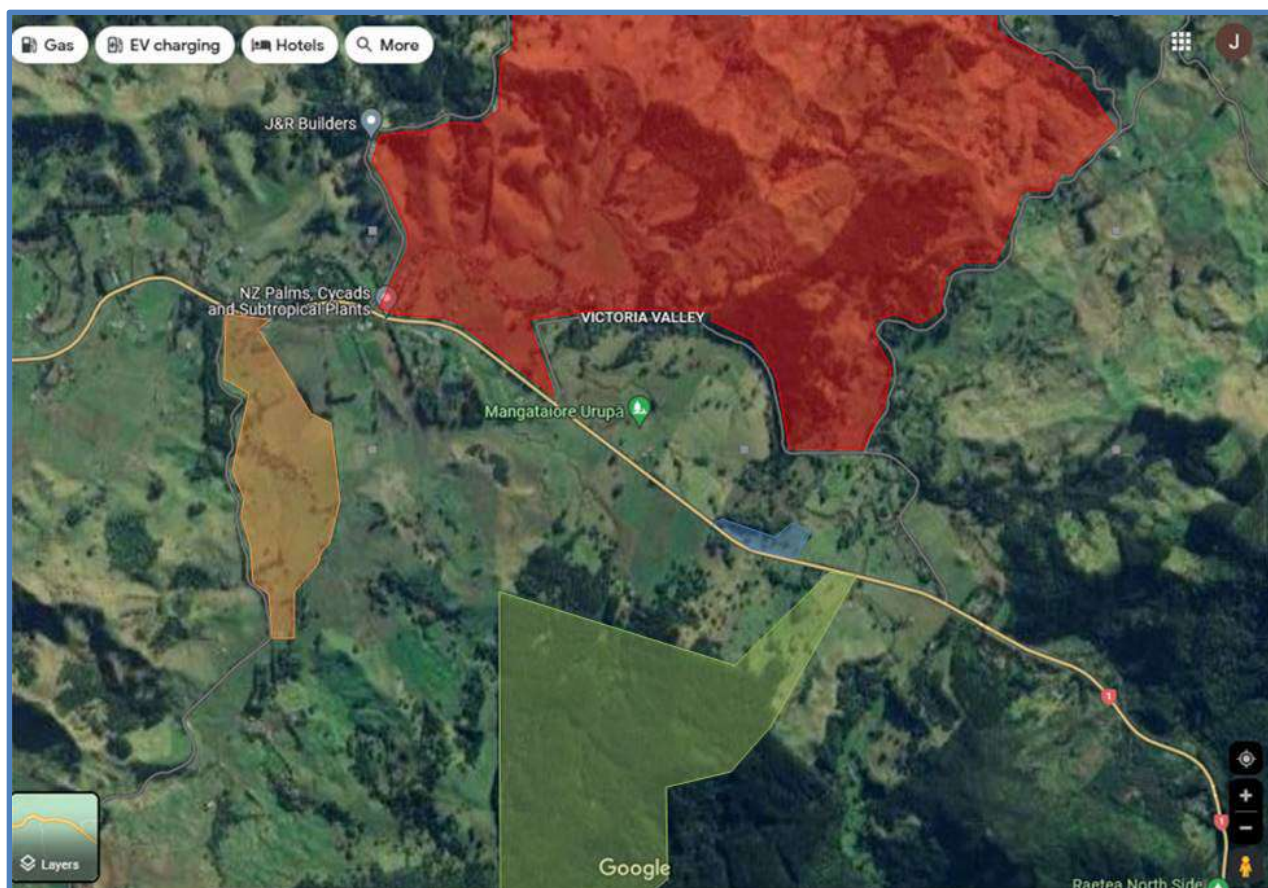
Requirements	Rationale
Fill site needs to be as close as possible to the project site	<p><u>Project costs</u>: minimise transport costs and</p> <p><u>Project efficiency</u>: maximise efficient removal of spoil to avoid project delays.</p> <p><u>Hapu considerations</u>: spoil should remain in same ecological district .</p> <p><u>Other factors</u>: minimise CO2 emissions, damage to local roads, disturbance to communities.</p>
Natural Hazards	Avoid sites with natural hazards including land instability and flood hazards.
Safe site access	Clear site lines in both directions, existing formed access preferred. Room onsite for truck manoeuvring.
Minimum site size	Minimum 4,000m <sup>2</sup> area / capable of accommodating 5000m <sup>3</sup> + to be worth the cost of setup and landowner agreement etc





Site topography	Can laden trucks access the dumpsite.
Landowner agreement	NZTA Waka Kotahi do not own any suitable land on north side of Mangamuka Gorge so all fill sites need to be negotiated with private landowners.
Kauri Dieback	Fill site needs to be clear of any Kauri to avoid potential spread of PSA. And needs to be kept in the same location.
Environmental effects	Avoid fill sites which require modification to: <ul style="list-style-type: none"><li>• Natural wetlands</li><li>• Streams</li><li>• Ecologically Significant Indigenous vegetation</li><li>• Outstanding Natural Landscapes</li></ul>
Cultural effects	Avoid archaeological sites or other sites of cultural importance where the fill site will be.
Other Planning restrictions	Avoid sites with any other planning overlays or restrictions that would impact on establishing a fill site.

I give particular weighting to the distance of the fill site from the main area of works. It's worth noting too that it takes quite a bit of time upfront to get agreements with landowners in place, with the Peria Valley Rd agreement taking over 3 weeks from being drafted to being signed up. Below is a map showing only the largest locations I have been too so far to find dumpsites (there are many other smaller ones within this area and outside this area that I have not included to save time as they were not suitable).



Kane Well's Farm – Most of the accessible places were in a flood hazard zone, but we managed to find a small area that wasn't. Blue colour on the above map.

Summit Forrest's – No access track, we would have to create a massive access track and the fill would essentially create hills as there were no holes to fill. Green colour on the above map.

Chris Kimber's Farm – Most of his land is inaccessible / would have to create massive access tracks. The best fill site so far is the one we are currently proposing (Peria Valley Rd). Red colour on the above map.

Jim Burrough's Farm – Rolling hills go directly onto flats, it's likely that the toe of any possible dumpsite would be within the flood hazard zone. Orange colour on the above map.

Steven Foster's Farm – Had to cross a stream to access the dumpsite, access is weather dependant. Not included on the above map.

Thanks,

Jared



Jared Olsen

Project Manager

027 706 7616 • [jared@hoskincivil.co.nz](mailto:jared@hoskincivil.co.nz)

**APPENDIX I    CLEANFILL CROSS SECTIONS AND RUNNING  
TOTALS OF CLEANFILL DEPOSITION**



REVISION HISTORY:			
#	DATE	DESCRIPTION	APPROVED
1			
2			
3			
4			

NOTES:

- Levels are in terms of NZVD2016
- Horizontal data is in MT EDEN2000
- 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 intervals.

Prepared By:		
	BY	DATE
SURVEY	Various	28/11/2024
DRAWN	AR	05/11/2024
CHECKED	LS	06/11/2024
REVIEWED		

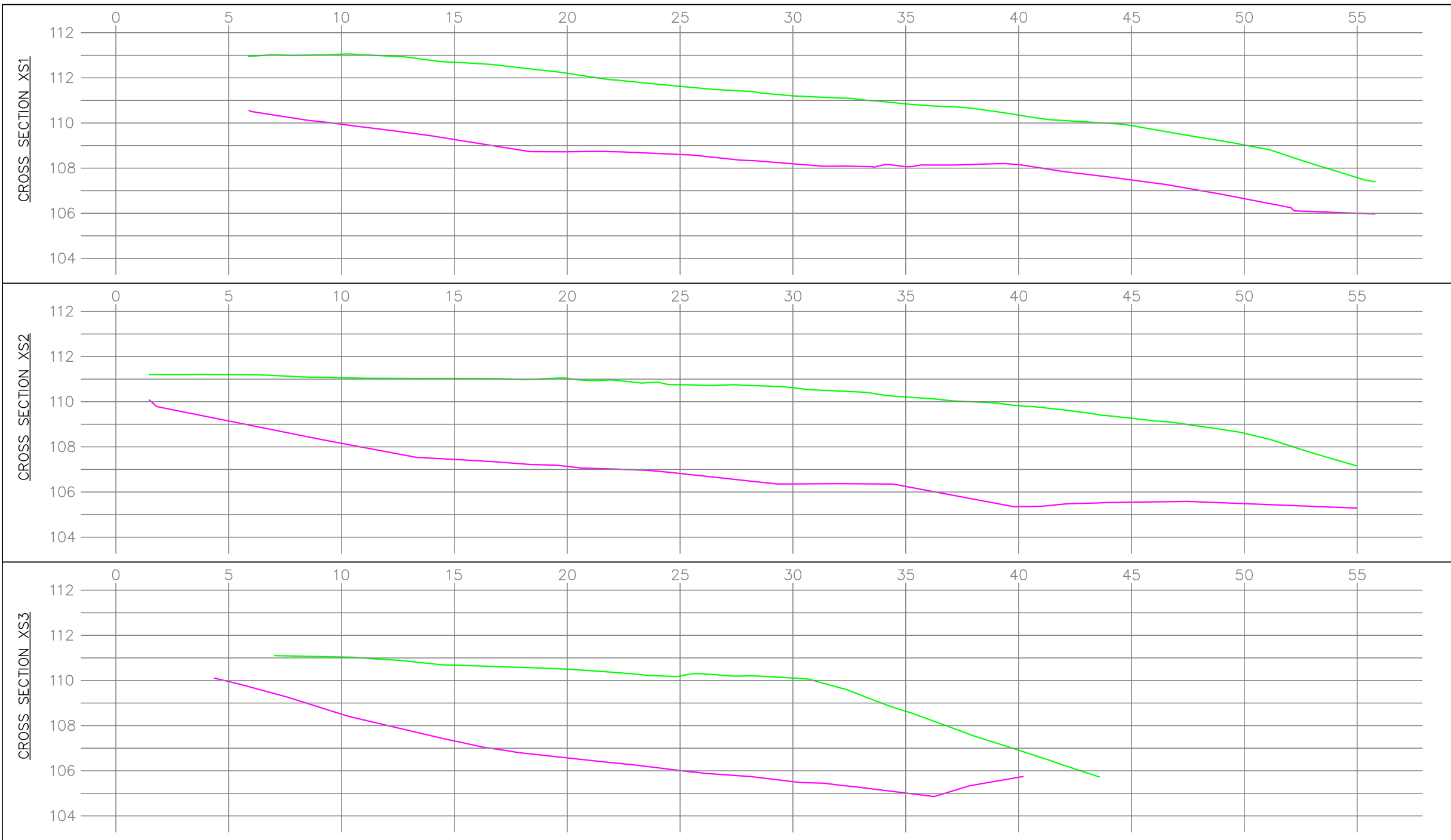
**TAIAO SURVEYORS**  
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Phone: 021 1124021  
Email: taiaosurveyors@gmail.com




Client:  
**WAKA KOTAHI**

Agent:  
**CLL**

TITLE:		
<b>Mangamuka Project - Cross Sections Location Plan for Dumpsite at Peria Valley Rd, Victoria Valley</b>		
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SCALE: 1:500 @ A3		SHEET 2
PROJECT FILE: Data old		REVISION



- LEGEND**
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  - 28/11/2024 SURFACE
  - 28/11/2024 SURFACE
  - 01/10/2024 SURFACE
  - 05/06/2024 SURFACE

REVISION HISTORY:			
#	DATE	DESCRIPTION	APPROVED
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-

**NOTES:**

- Levels are in terms of LINZ/DOSLI datum (One Tree Point 1964 Datum).
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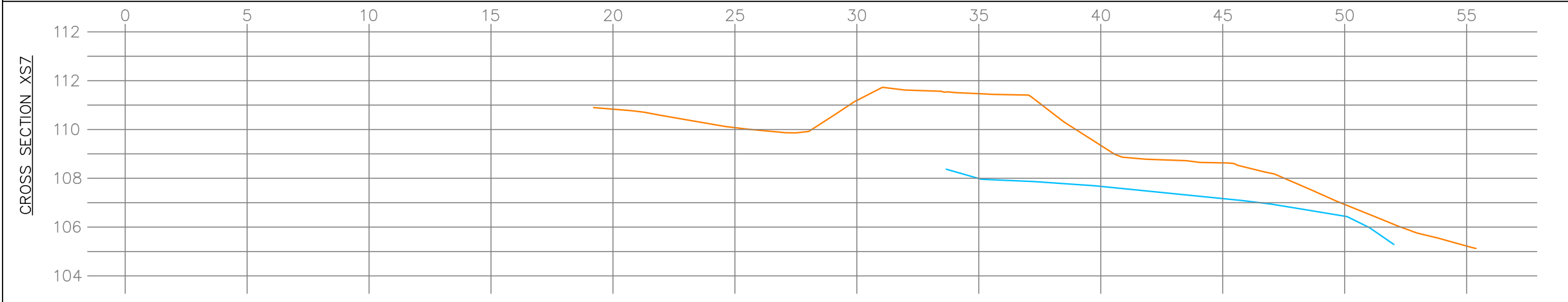
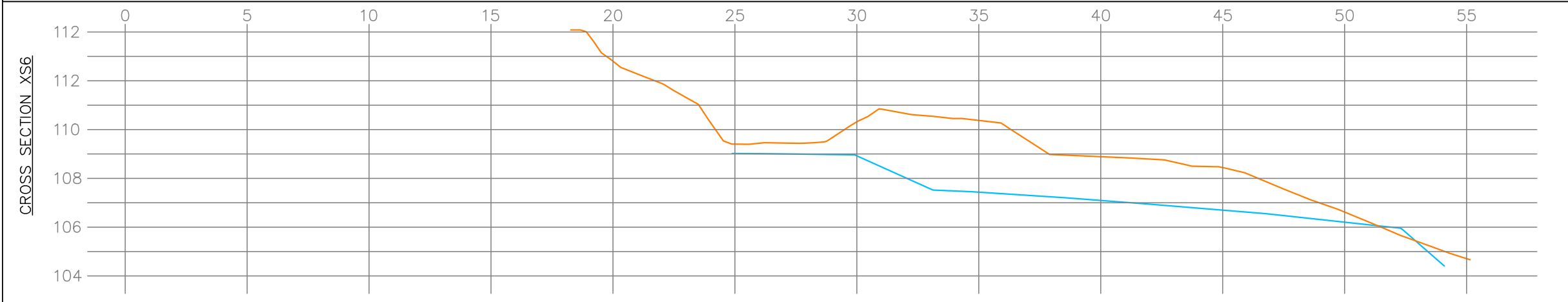
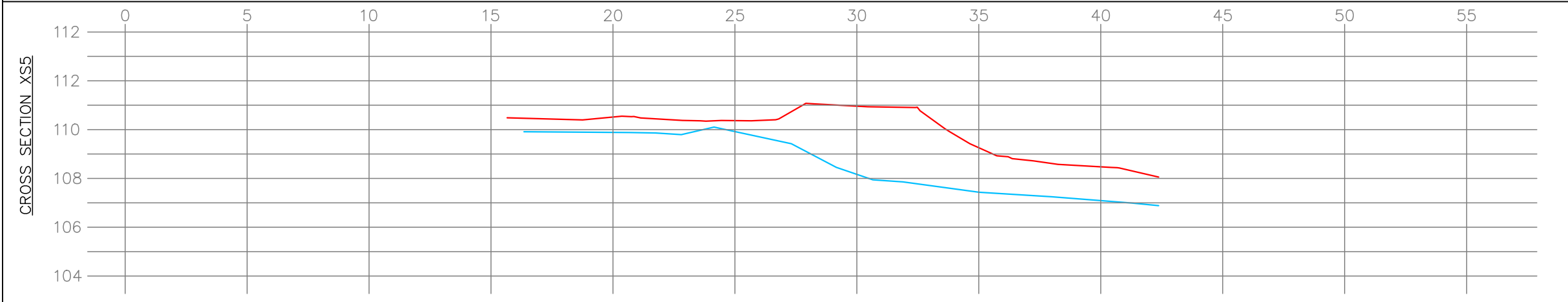
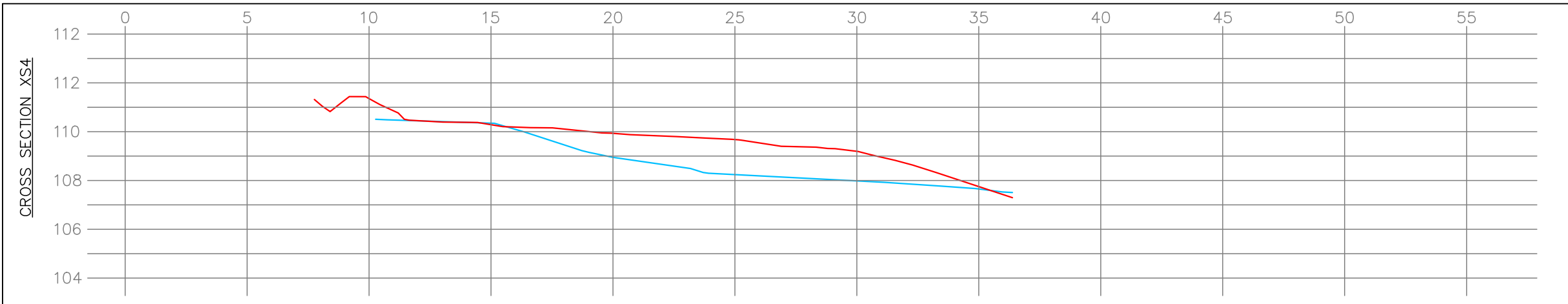
Prepared By:		
	BY	DATE
SURVEY	A RAMEKA	28/11/2024
DRAWN	L SANFT	04/12/2024
CHECKED	A RAMEKA	04/12/2024
REVIEWED	A RAMEKA	04/12/2024



Client:  
NZTA - WAKA KOTAHI

Agent:  
 14 WOOKEY LANE  
KUMEU 0810

TITLE:			
<b>NZ STATE HIGHWAY NO. 1 MAUNGAMUKA SLIP REPAIRS AND ROAD IMPROVEMENTS PERIA VALLEY ROAD FILL SITE CROSS SECTIONS</b>			
<b>PRE-CON SURFACES VS FINAL FILL SURFACE 28/11/2024</b>			
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SCALE: 1:200 @ A3	CAD FILE: 241204 PERIA VALLEY ROAD	REVISION 0	



- LEGEND**
- 28/11/2024 SURFACE
  - 28/11/2024 SURFACE
  - 28/11/2024 SURFACE
  - 01/10/2024 SURFACE
  - 05/06/2024 SURFACE

REVISION HISTORY:			
#	DATE	DESCRIPTION	APPROVED
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-

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Prepared By:		
	BY	DATE
SURVEY	A RAMEKA	28/11/2024
DRAWN	L SANFT	04/12/2024
CHECKED	A RAMEKA	04/12/2024
REVIEWED	A RAMEKA	04/12/2024

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**TITLE:** NZ STATE HIGHWAY NO. 1  
MAUNGAMUKA SLIP REPAIRS AND ROAD IMPROVEMENTS  
PERIA VALLEY ROAD FILL SITE CROSS SECTIONS  
PRE-CON SURFACES VS FINAL FILL SURFACE 28/11/2024

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SCALE: 1:200 @ A3

CAD FILE: 241204 PERIA VALLEY ROAD

JOB: #212702 SHEET 2 of 2

REVISION: 0

Peria Valley												
Month	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24
Volume m3		250	100	75	47	1300	428	2240	1130	820	2900	1300
Running Total m3	5328	5578	5678	5753	5800	7100	7528	9768	10898	11718	14618	15918



## APPENDIX J REGIONAL POLICY STATEMENT OBJECTIVES AND POLICIES ASSESSMENT

Policy/Objective	Comment	Consistent (Y/N)
<p><b>Objective 3.4 (indigenous ecosystems and biodiversity)</b></p> <p><i>Safeguard Northland’s ecological integrity by:</i></p> <ul style="list-style-type: none"> <li>(a) <i>Protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna;</i></li> <li>(b) <i>Maintaining the extent and diversity of indigenous ecosystems and habitats in the region; and</i></li> <li>(c) <i>Where practicable, enhancing indigenous ecosystems and habitats, particularly where this contributes to the reduction in the overall threat status of regionally and nationally threatened species.</i></li> </ul>	<p>The Rushland wetland was not identified as an area of significant indigenous vegetation (nor was it considered a significant wetland). It is not considered the wetland provided habitat, particularly not of any ecological value. The vegetation cleared within the Rushland is abundant within the surrounding area and is not threatened or at-risk. The avoidance of the Treeland wetland ensured the protection of higher value indigenous vegetation including the “<i>at-risk</i>” <i>Teloschistes flavicans</i>, as well as the habitat provided by the Kahikatea for the <i>Teloschistes flavicans</i>.</p>	Yes
<p><b>Objective 3.6 (Economic activities – reverse sensitivity and sterilisation)</b></p> <p><i>The viability of land and activities important for Northland’s economy is protected from the negative impacts of new subdivision, use and development, with particular emphasis on either:</i></p> <ul style="list-style-type: none"> <li>(a) <i>Reverse sensitivity for existing:</i> <ul style="list-style-type: none"> <li>i. <i>Primary production activities;</i></li> <li>ii. <i>Industrial and commercial activities;</i></li> <li>iii. <i>Mining*;</i> or</li> <li>iv. <i>Existing and planned regionally significant infrastructure;</i> or</li> </ul> </li> <li>(b) <i>Sterilisation of:</i></li> </ul>	<p>It is not considered the project altered the viability of the land for such activities identified and would not create reverse sensitivity or sterilisation issues. It also results land that is more conducive primary production, particularly pastoral grazing land due to the cleanfill activity, providing dryer and more level soil for pastoral grazing Furthermore, the activity did not alter the LUC of the soils.</p>	Yes

<p>i. Land with regionally significant mineral resources; or</p> <p>ii. Land which is likely to be used for regionally significant infrastructure.</p>		
<p><b>Objective 3.7 (Regionally Significant infrastructure)</b></p> <p><i>Recognise and promote the benefits of regionally significant infrastructure, (a physical resource), which through its use of natural and physical resources can significantly enhance Northland's economic, cultural, environmental and social wellbeing.</i></p>	<p>SH1 is regionally significant infrastructure. The cleanfill site was established in order to provide for the remediation of SH1 through the Mangamuka Gorge in order to facilitate its reopening.</p>	<p>Yes</p>
<p><b>Objective 3.12 (Tangata Whenua role in decision-making)</b></p> <p><i>Tangata whenua kaitiaki role is recognised and provided for in decision-making over natural and physical resources.</i></p>	<p>Iwi and hapū have been involved with the project through its entirety. Consultation and engagement has been on-going. Representatives from local hapū are integrated within the project team and Kaitiaki have been on-site during works.</p>	<p>Yes</p>
<p><b>Objective 3.13 (Natural hazard risk)</b></p> <p><i>The risks and impacts of natural hazard events (including the influence of climate change) on people, communities, property, natural systems, infrastructure and our regional economy are minimised by:</i></p> <p>(a) <i>Increasing our understanding of natural hazards, including the potential influence of climate change on natural hazard events;</i></p> <p>(b) <i>Becoming better prepared for the consequences of natural hazard events;</i></p> <p>(c) <i>Avoiding inappropriate new development in 10 and 100 year flood hazard areas and coastal hazard areas;</i></p> <p>(d) <i>Not compromising the effectiveness of existing defences (natural and man-made);</i></p>	<p>The cleanfill site was chosen due to it being outside any areas that pose natural hazard risks, such as flood susceptible or prone areas. The activity has not increased or exacerbated any risks associated with natural hazards. The cleanfill site was chosen due to its proximity to the Gorge to reduce the distance spoil needed to be transported whereby reducing emissions associated with the project.</p> <p>In addition, the cleanfill site allowed for the remediation of SH1 in a manner that has also increased its resilience to natural hazards.</p>	<p>Yes</p>

<p>(e) <i>Enabling appropriate hazard mitigation measures to be created to protect existing vulnerable development; and</i></p> <p>(f) <i>Promoting long-term strategies that reduce the risk of natural hazards impacting on people and communities.</i></p> <p>(g) <i>Recognising that in justified circumstances, critical infrastructure may have to be located in natural hazard-prone areas.</i></p>		
<p><b>Objective 3.14 (Natural character, outstanding natural features, outstanding natural landscapes and historic heritage)</b></p> <p><i>Identify and protect from inappropriate subdivision, use and development;</i></p> <p>(a) <i>The qualities and characteristics that make up the natural character of the coastal environment, and the natural character of freshwater bodies and their margins;</i></p> <p>(b) <i>The qualities and characteristics that make up outstanding natural features and outstanding natural landscapes;</i></p> <p>(c) <i>The integrity of historic heritage.</i></p>	<p>The site is not identified as being in an outstanding natural landscape nor does it contain any outstanding natural features or known sites of historic or cultural heritage or significance. Due to the degraded nature of the wetland and its pastoral uses, it already had limited natural character, largely due to its significant modification and degradation. Overall, it is not considered the proposal detracts from any natural character associated with freshwater bodies. The Treeland wetland area was avoided and protected and retains what natural character it had.</p>	<p>Yes</p>
<p><b>Policy 4.21 2.1 (Improving overall water quality)</b></p> <p><i>Improve the overall quality of Northland's water resources by:</i></p> <p>(b) <i>Reducing loads of sediment, nutrients, and faecal matter to water from the use and development of land and from poorly treated and untreated discharges of wastewater; and</i></p>	<p>The project implemented and utilised erosion and sediment controls to ensure that freshwater bodies in the receiving environment were protected from adverse effects of sedimentation and runoff from the cleanfill</p>	<p>Yes</p>

<p><b>Policy 4.4.1 (Maintaining and protecting significant ecological areas and habitats)</b></p> <p><i>(1) In the coastal environment, avoid adverse effects, and outside the coastal environment avoid, remedy or mitigate adverse effects of subdivision, use and development so they are no more than minor on:</i></p> <ul style="list-style-type: none"> <li><i>(a) Indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists.</i></li> <li><i>(b) Areas of indigenous vegetation and habitats of indigenous fauna, that are significant using the assessment criteria in Appendix 5;</i></li> <li><i>(c) Areas set aside for full or partial protection of indigenous biodiversity under other legislation.</i></li> </ul> <p><i>(2) In the coastal environment, avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of subdivision, use and development on:</i></p> <ul style="list-style-type: none"> <li><i>(a) Areas of predominantly indigenous vegetation;</i></li> <li><i>(b) Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;</i></li> <li><i>(c) Indigenous ecosystems and habitats that are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass, northern wet heathlands, coastal and headwater streams, floodplains, margins of the coastal marine area and freshwater bodies, spawning and nursery areas and saltmarsh.</i></li> </ul>	<p>The site is not in the coastal environment and is not considered to be an area of indigenous vegetation or habitat of igneous fauna that is considered to be significant.</p> <p>The lichen <i>Teloschistes flavicans</i> has been identified on the Kahikatea trees within the Treeland seepage, which is classified as being “<i>at-risk</i>”. This area of the wetland was avoided and protected within erosion and sediment controls mitigating the risk of over sedimentation of the Treeland Seepage.</p> <p>All vegetation within the Rushland Seepage that has been lost were not endangered or threatened.</p> <p>It was concluded that effects on the wetland were low and adverse effects are not more than minor.</p>	<p>Yes</p>
---	--	------------

<p>(3) <i>Outside the coastal environment and where clause (1) does not apply, avoid, remedy or mitigate adverse effects of subdivision, use and development so they are not significant on any of the following:</i></p> <ul style="list-style-type: none"> <li>(a) <i>Areas of predominantly indigenous vegetation;</i></li> <li>(b) <i>Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;</i></li> <li>(c) <i>Indigenous ecosystems and habitats that are particularly vulnerable to modification, including wetlands, dunelands, northern wet heathlands, headwater streams, floodplains and margins of freshwater bodies, spawning and nursery areas.</i></li> </ul>		
<p><b>Policy 4.6.1 (Managing effects on the characteristics and qualities natural character, natural features and landscapes)</b></p> <p>(2) <i>Outside the coastal environment avoid significant adverse effects and avoid, remedy or mitigate other adverse effects (including cumulative adverse effects) of subdivision, use and development on the characteristics and qualities of outstanding natural features and outstanding natural landscapes and the natural character of freshwater bodies...</i></p>	<p>Ecological effects on the wetland were “low” and adverse effects were considered to be no more than minor. Adverse effects on the Treeland Seepage were avoided through its exclusion from the operation of the cleanfill site. There were no alternatives to the use of the Rushland Seepage and adverse effects could not be avoided or mitigated nor remedied, however as stated these effects are not considered to be more than minor. The Rushland was considerably degraded and modified and used for pastoral purposes as such had limited natural character values as it existed. The protection of the Treeland ensured it maintained its natural character values.</p>	<p>Yes</p>



Image: Slips A12 and A13 – Taken on 16 August 2023

# MANGAMUKA SLIP RESPONSE PROJECT 2022

## *Summary of Applications*

New Zealand Transport Agency Waka Kotahi

18 FEBRUARY 2025

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## QUALITY REVIEW AND APPROVAL RECORD

Item	Name	Date
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Reviewed by:	Stuart Brooke Planning Manager, <b>Stellar Projects</b>	11 December 2024
Reviewed by:	Stephanie Kane Principal Planner, Environmental Planning (Auckland/Northland), <b>New Zealand Transport Agency Waka Kotahi</b>	17 January 2025
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## ACRONYMS, TERMS AND ABBREVIATIONS

Acronym/Term	Description
<b>ADP</b>	Accidental Discovery Protocol
<b>AEE</b>	Assessment of Effects on the Environment
<b>CFA</b>	Continuous Flight Auger
<b>DOC</b>	Department of Conservation
<b>District Plan</b>	Operative Far North District Plan 2009
<b>ED</b>	Ecological District
<b>eDNA</b>	Environmental DNA
<b>FFR</b>	Freshwater Fisheries Regulations 1983
<b>FNDC</b>	Te Kaunihera o Te Hiku o te Ika/Far North District Council
<b>FNDP</b>	Far North District Plan 2009
<b>Gorge</b>	Mangamuka Gorge
<b>GRPA</b>	Government Rooding Powers Act 1989
<b>HNZPT</b>	Heritage New Zealand Pouhere Taonga
<b>HNZPTA</b>	Heritage New Zealand Pouhere Taonga Act 2014
<b>LTMA</b>	Land Transport Management Act 2003
<b>National PMP</b>	National Pest Management Plan
<b>NESFW</b>	Resource Management (National Environmental Standards for Freshwater) Regulations 2020
<b>NESCS</b>	Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011
<b>NPSFM</b>	National Policy Statement for Freshwater Management 2020
<b>NPSHPL</b>	National Policy Statement for Highly Productive Land 2022
<b>NPSIB</b>	National Policy Statement for Indigenous Biodiversity 2023
<b>NRC</b>	Northland Regional Council
<b>NZTA</b>	NZ Transport Agency Waka Kotahi
<b>NOR</b>	Notice of Requirement
<b>ONL</b>	Outstanding Natural Landscape
<b>Outline Plan</b>	Outline Plan of Work
<b>OPW</b>	Outline Plan of Work
<b>PA</b>	<i>Phytophthora agathidicida</i> or Kauri Dieback Disease
<b>pFNDP</b>	Proposed Far North District Plan 2024
<b>Project</b>	Mangamuka Slip Response Project 2022
<b>pRPN</b>	Proposed Regional Plan for Northland 2024
<b>RMA</b>	Resource Management Act 1991
<b>RPS</b>	Regional Policy Statement for Northland
<b>SH1</b>	State Highway 1
<b>Slip Response</b>	Mangamuka Slip Response Project 2022

## EXECUTIVE SUMMARY

On 19 August 2022, Te Tai Tokerau/ Northland was hit with a Severe Weather Event, including strong wind gusts and significant rainfall, which caused widespread damage and flooding across the Region, and resulted in several landslides through the Mangamuka Gorge, making it impassable. This damage resulted in the complete closure of SH1 through the Gorge, severing a vital link for the Far North/ Te Hiku-o-te-Ika to the remainder of the country.

In total there are 24 critical slip sites across the entire Gorge, mostly comprising underslips. Remediation works were undertaken across all the slips, including replacement and upgrade of stormwater infrastructure such as culverts. Remote sites were also utilised for laydown and storage areas and cleanfill sites.

All remediation works were undertaken utilising either the existing road designation (identified in the District Plan as “SH”) and outline plan provisions or the s330 Emergency Works provisions under the RMA. For any works that were undertaken outside of the SH1 Designation, and any works that contravened a Regional Rule or Regulation in a National Environmental Standard (whether inside or outside of the Designation), consideration needed to be had, in accordance with s330 of the Resource Management Act 1991, to whether resource consent is required. All works that were undertaken within the Designation boundaries, whether or not they contravened a District Rule could be undertaken as per the conditions of the Designation.

Pursuant to s330A(2) of the Resource Management Act 1991, New Zealand Transport Agency Waka Kotahi is required to lodge applications for resource consent where the activity (but for s330) contravenes Sections 9, 12, 13, 14, or 15 **and the adverse effects of the activity continue beyond the completion of the emergency works**. For emergency works activities where the adverse effects were temporary in nature and/or have been fully remediated and are no longer on-going, resource consent is not required nor sought.

The applications for resource consent will be lodged as five separate and distinct resource consent packages, with separate applications required to be submitted to the relevant territorial authorities.

This overarching document, being the “*Summary of Applications*” is designed to support the Assessment of Effects on the Environment reports that have been prepared in support of each of the separate resource consent packages. This report will accompany each resource consent package.

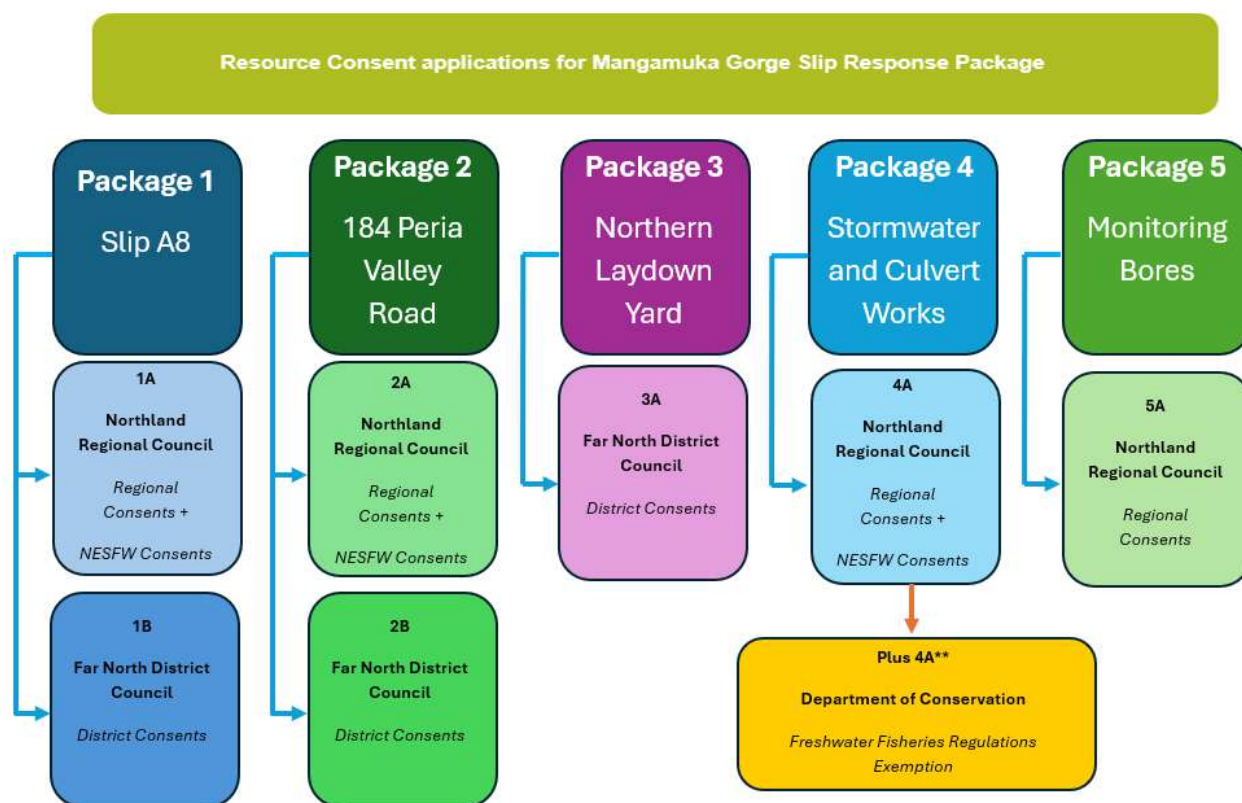
The purpose of this report is to provide the high-level and overarching information that is relevant across each individual resource consent package, avoiding duplication of the high-level information and common overarching project descriptions across each application.

*Emergency Works are still ongoing, and the information within this “Summary of Applications” is correct at the time of submitting this report but is however subject to change.*

# 1 INTRODUCTION

## 1.1 Report Purpose

New Zealand Transport Agency Waka Kotahi (NZTA) is lodging applications for resource consent under the provisions of the Resource Management Act 1991 (RMA). The applications for resource consent will be lodged as five separate and distinct resource consent packages (refer **Figure 1**), with separate applications submitted to the relevant territorial authorities, being Te Kaunihera o Te Hiku o te Ika/Far North District Council (FNDC) and Northland Regional Council (NRC), concurrently as part of each package. Whilst all being lodged individually, these application packages will be lodged in two tranches to align with the progressive completion of emergency works. Tranche 1 will involve resource consent packages 2 and 3, which address the remote sites. Tranche 2 will involve resource consent packages 1, 4 and 5, being for the work sites within the Mangamuka Gorge, which will remain ongoing following the official re-opening of SH1. The resource consents required for each package as shown on **Figure 1** are set out in **Table 1** in **Section 7.3.1** of this report.



**Figure 1:** Mangamuka Slip Response Consenting Packages

This overarching document, being the "Summary of Applications" is designed to support the Assessment of Effects on the Environment (AEE) reports that have been prepared in support of each of the separate resource consent packages. This report will accompany each resource consent package, and whilst each resource consent package should be considered separately, based on their own merits, this report should be read in conjunction with each of those applications.

The purpose of this report is to provide the high-level and overarching information that is relevant across each individual resource consent package, avoiding duplication of the high-level information and common overarching project descriptions across each application.

The AEE for **Resource Consent Package 2B** (as described in **Figure 1** above) is appended to this report as **Addendum 1**.

*Emergency Works are still ongoing, and the above information is correct at the time of submitting this report but is however subject to change.*

## 1.2 New Zealand Transport Agency Waka Kotahi

NZTA is a Crown entity with its functions, powers and responsibilities set out in the Land Transport Management Act 2003 (LTMA) and the Government Rounding Powers Act 1989 (GRPA). The primary objective of NZTA under Section 94 of the LTMA is to contribute to an effective, efficient, and safe land transport system in the public interest.

Its core functions can be summarised as:

- investing in land transport activities;
- managing the state highway network; and
- providing access to and regulation for land transport.

Section 96(1)(a) of the LTMA requires that NZTA exhibits a sense of social and environmental responsibility when undertaking its work. This statutory requirement is reflected in a raft of strategic and policy documents. One of the core position statements is that NZTA will responsibly manage the land transport system's interaction with people, places, and the environment.

The vision of NZTA is a “*land transport system connecting people, products and places for a thriving Aotearoa*”, including “*keeping towns, cities and regions connected to each other for freight and tourism purposes*”<sup>1</sup>.

With respect to this application, the works are located within and adjacent to State Highway 1 (SH1) through the Maungataniwha Range, more locally known as the Mangamuka Gorge (the Gorge), between Mangamuka and Kaitaia in Te Tai Tokerau/Northland. As per NZTA roles and responsibilities, they are responsible for the maintenance and operation of the SH1.

NZTA is a network utility operator pursuant to s166 of the RMA and is approved as a requiring authority under Section 167 of the RMA.

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<sup>1</sup> <https://www.nzta.govt.nz/about-us/about-nz-transport-agency-waka-kotahi/>

## 2 SEVERE WEATHER EVENTS 2022

The Maungataniwha Ranges are a volcanic mountain range over which SH1 is constructed. During 2022, particularly in between June and August, the Maungataniwha Ranges and SH1 through the Gorge were subjected to significant rainfall, which resulted in the soils within the Ranges becoming completely saturated. On 19 August 2022, Te Tai Tokerau/ Northland was hit with a Severe Weather Event, including strong wind gusts and significant rainfall, which caused widespread damage and flooding across the Region, and resulted in a large number of landslides through the Gorge, making it impassable. For contractors to access and assess the Gorge a temporary track had to be cut through a large slip at the southern end of the Gorge.



**Figure 2:** A large slip at the southern end of the Gorge in the immediate aftermath of 19 August 2022 Weather Event  
(Source: NZTA Media Release - 24 August 2022)

These slips resulted in the complete closure of SH1 through the Gorge, cutting a vital link for the Far North/ Te Hiku-o-te-Ika to the remainder of the country, and adding additional travel time due to the available detour routes.

## 3 DESCRIPTION OF THE SITE

### 3.1 Maungataniwha Ranges

Approximately 15km south-east of Kaitaia, SH1 crosses the Maungataniwha Ranges, through the Mangamuka Gorge due to the name of the settlement and river on its southern side. SH1 is bordered on both sides by the Mangamuka Gorge Scenic Reserve, which is administered by Department of Conservation (DOC), with several private properties also adjacent towards the northern end of the Gorge.

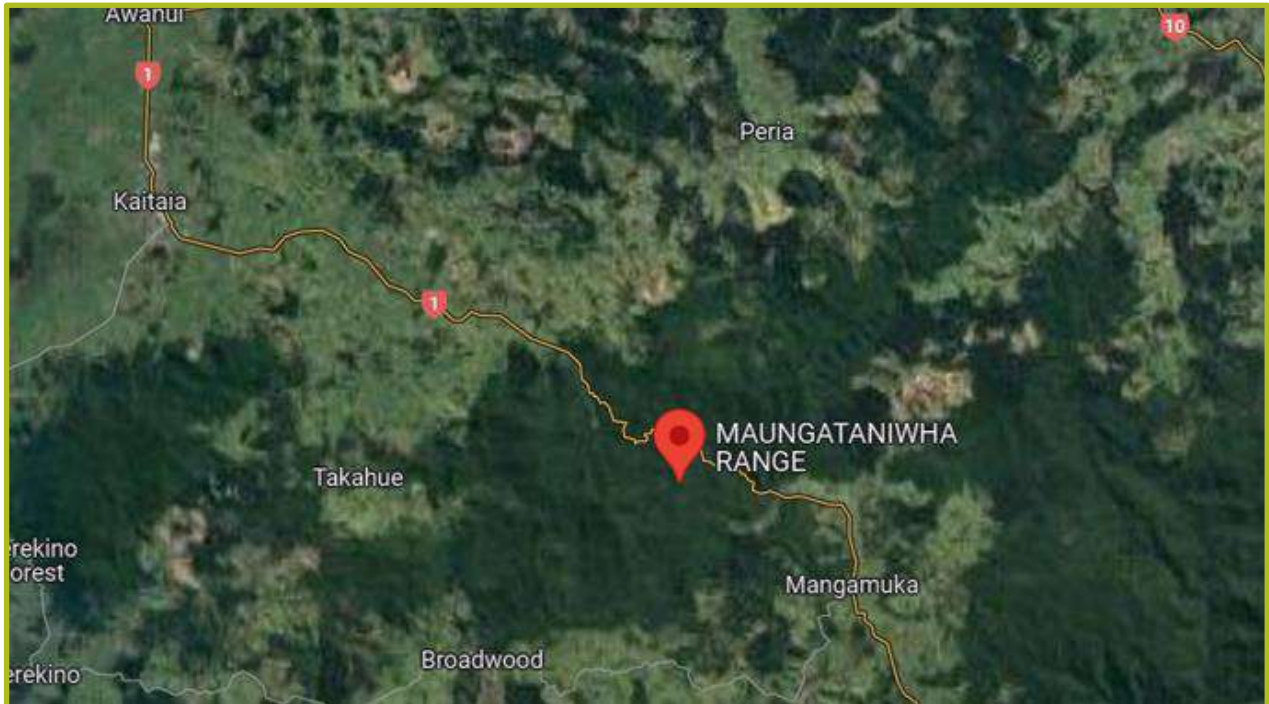


Figure 3:Maungataniwha Range (Source: GoogleMaps - accessed 21 October 2024)

#### 3.1.1 Landscape

The Maungataniwha Ranges including the SH1 corridor, are identified as an Outstanding Natural Landscape (ONL) in the operative Far North District Plan (“District Plan” or “FNDP”).

As per the Northland Regional Landscape Assessment Worksheet 2014, the Maungataniwha Ranges are described as a “*bold belt of bush-clad, elevation land that runs across central upper Northland, spanning from the upper Hokianga to immediately inland of Whangaroa Harbour*”.

The path of SH1 over the range via is “*some of the most spectacular on the main highway’s route through Northland – and indeed over its entire corridor nationwide*”. Furthermore, the “*combination of the adjacent Mangamuka River, the steep, imposing landform, substantial and diverse indigenous forest cover and the winding, intimate character of the highway itself are very distinctive and memorable*”.

The landscape is defined as having “*very strong indigenous character*”, and as containing large areas of substantial canopy that is “*of a scale that is not commonly found across large events*”.

### 3.1.2 Ecology/Biodiversity

The Site is located in the Maungataniwha Ecological District (ED) and Northland Ecological Region<sup>2</sup>. The Maungataniwha ED encompasses approximately 101,900 ha and is centred within five other EDs: Whangaroa ED to the east, Puketī ED to the south, Hokianga ED to the southwest, Ahipara ED to the west, and Aupouri ED to the north.

The forests within the Maungataniwha Range contain northern rātā (*Metrosideros robusta*), rimu (*Dacrydium cupressinum*) with the occasional tōtara (*Podocarpus totara*), kahikatea, and kauri (*Agathis australis*) in the emergent layer, and tōwai (*Pterophylla sylvicola*) (at higher altitudes) and taraire (at lower altitudes), with numerous tawa (*B. tawa*), rewarewa (*Knightia excelsa*), and pūriri in the canopy<sup>3</sup>. Many of the large contiguous areas comprise mainly secondary forests and regenerating shrubland, with small pockets of mature forest. At higher altitudes and wetter sites, regenerating areas are dominated by tōwai, while mānuka and kānuka are dominant in drier, lower altitude sites. The regenerating areas provide habitat for North Island brown kiwi (kiwi-nui, *Apteryx mantelli*) and the endemic Northland green gecko (*Naultinus grayii*). No kiwi have been noted during the Project works. Regenerating shrublands on gumland also provide habitat for a variety of native ground orchids<sup>4</sup>.

There are a number of streams running across the SH1 corridor, ranging from ephemeral streams through to intermittent and permanent streams. The streams are home to indigenous fish species, short-fin and long-fin eel/tuna, banded kōkopu and freshwater crayfish/ koura, all of which whose presence was identified through environmental DNA (eDNA) testing undertaken as part of the Project. It is noted that eDNA testing did not identify any short jaw kōkopu in the reaches of the streams in the vicinity of the SH, although they are accepted to be present in Te Tai Tokerau/Northland.

Long-tailed bats were confirmed/recorded on all acoustic recorders, at all monitoring sites. Based on the recent rediscovery of short-tailed bat populations in Ōmahuta and Puketī Forests and the contiguous forest landscape, it has been assumed that short-tailed bats are likely present and using habitat at the Site.

The Mangamuka Gorge is a known 'hot spot' for kauri snails/pūpūrangi and the Gorge also provides habitat for other invertebrates such as caved and tusked wētā and various slugs and flatworms.

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<sup>2</sup> McEwen 1997 and Brook 1996

<sup>3</sup> Conning 2002

<sup>4</sup> Conning 2002





**Figure 4:** (Left to Right) Kauri Snail/Pūpūrangi crosses the road in Mangamuka Gorge; Tusked Wētā discovered during vegetation clearance (Source: NZ Environmental Management)

### 3.2 State Highway 1

SH1 is the longest road in Aotearoa New Zealand's roading network and runs from Cape Reinga/Te Rerenga Wairua at the top of the North Island/Te Ika-a-Māui to Bluff/Motopōhue at the bottom of the South Island/Te Waipounamu. In the North Island, it is referenced as SH1N.

NZTA, as the requiring authority, has an existing designation which encompasses the entirety of the State Highway network, including SH1 referenced on the Far North District planning maps as "SH".

SH1 within the Gorge follows an approximately 14km long route through the ranges, reaching a summit of 383m above sea level. The carriageway is contained within a road reserve of variable width, which is designated for state highway purposes under the Far North District Plan (referenced as SH).

The designation provides for "NZTA, either itself or through its agents, to control, manage and improve the State Highway network including planning, design, research, construction and maintenance relating to all land within the designation. Such activities may also involve, but not necessarily be limited to, realigning the road, altering its physical configuration, culverts, bridges and associated protection works. The appropriate resource consents under the Act will be applied for where required."

The designation has been given effect to and does not have an expiry date stated in the District Plan. It therefore remains operative in the District Plan. There are no conditions on the existing designation.

Under the Regional Policy Statement for Northland (RPS), SH1 is defined as "regionally significant infrastructure" as identified in Appendix 3. Consequently, SH1 is similarly "specified infrastructure" for the purposes of the National Policy Statement for Freshwater Management (NPSFM) and the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NESFW).

## 4 DESCRIPTION OF PROJECT / PROPOSED WORK

This section will provide a high-level overview of all the works. Specific works associated with the resource consent packages will be detailed in their respective applications for resource consent.

Due to the constrained nature of the main Gorge site, the project area includes a number of remote sites including

- a) laydown areas for the storage of construction machinery and materials, and
- b) fill sites for the disposal of spoil from works within the Gorge. These sites are described below.

### 4.1 Location

Significant remediation works were required through the entire length of the Gorge. As discussed previously, remote sites were also required (locations described in **Sections 4.2.6** and **4.2.6**)

In total there are 24 “critical” slip sites, being slips posing an imminent risk of complete evacuation of the road, across the entire Gorge (refer **Figure 5**), mostly comprising underslips and several “minor” slips. Remediation works were undertaken across all the slips, including replacement and upgrade of stormwater infrastructure such as culverts.

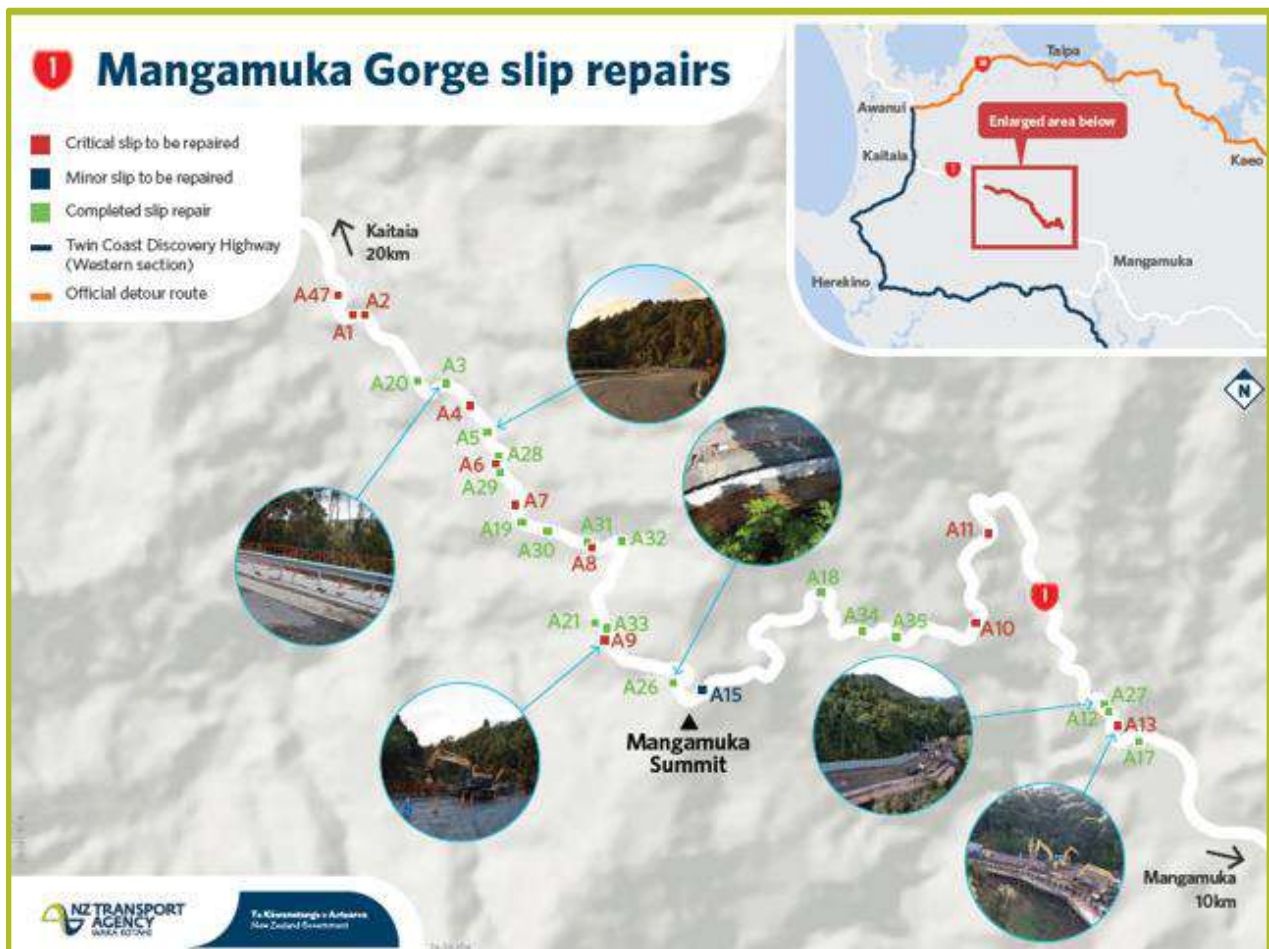


Figure 5: Critical Slip Sites - Mangamuka Gorge

## 4.2 Description of the project

### 4.2.1 Typical Slip Sites

The emergency works in relation to the remediation of the slip sites throughout the Gorge typically involved:

1. Initial slip clearance involving the removal of soil and vegetation on SH1 from overslips. All material was disposed offsite to an existing private fill site at 164 Makene Road
2. Initial slip mitigation works including:
  - a. installation of new/ upgrade stormwater culverts to divert stormwater away from slip faces
  - b. asphalt bunding on road surface to divert surface water to new culverts.
  - c. sealing road cracks to reduce ground soakage.
3. Following the initial slip mitigation works, the majority of slips have been stabilised with the construction of a concrete pile wall on the outer edge of the road. This was a 2-stage process, whereby '*temporary*' shallow piles needed to be installed first to support a larger drilling rig which constructed the larger, permanent piles.
4. In-ground soil anchors to support the palisade wall.
5. Installation of bored subsoil drains in the land above the slip sites to reduce groundwater pore pressure levels above the slips. These were installed via direct drilling and seepage will drain to culverts.
6. Replacement of several culverts to increase capacity and replace damaged/broken culverts
7. Spoil from drilling was exported to offsite locations.

All critical slip sites had sediment and erosion controls which had been established and operated in accordance with the sediment and erosion control plan prepared by Southern Skies Limited (refer **Appendix A**), which are being audited regularly by Southern Skies.

The remediation works had been designed to minimise earthworks and vegetation alteration within areas of indigenous vegetation and fauna habitat adjoining the carriageway.



**Figure 6:** Example of Typical Slip Site (Slip A5 Near Completion of Remediation Works (Image Taken: 6 August 2024))



**Figure 7:** Example of Typical Slip Site (Slip A3 Near Completion of Remediation Works (Image Taken: 14 August 2024))

## 4.2.2 Slip A11

Slip A11 is a historic slip first reported in 1988 during Cyclone Bola and is known as a “*Whole Road Slip*”. The slip was 50m wide and very deep-seated and extensive with a 20m depth failure surface under the downslope shoulder of the highway.

It was initially proposed to realign a 270m long section of road at Slip A11 for the purpose of retreating the road away from a significant slip feature and in the immediate vicinity of the site, replanting of native vegetation was proposed in the footprint of the section of road to be retired, comprising approximately 1,375m<sup>2</sup> in area.

However, with the bulk cut at Slip A11 completed in winter and a gully feature reforming along the above road slip face, there is not sufficient time available to “*clean up*” the gully feature and build the new road alignment in time to reopen the road safely by end of the year. Therefore, the road was remediated to rebuild the existing alignment.

In addition, the risk of the road subsiding and the under slip posing a critical threat has diminished significantly due to the removal of 30,000m<sup>3</sup> of material (60,000t of mass) off the slip prone feature.

NZTA have also installed a monitoring system to monitor any future movement where the road has been reinstated. The option to build the new alignment if required in the future is still retained.

The works further involved the unavoidable requirement to clear approximately 4,283m<sup>2</sup> of native vegetation, including a number of significant old growth trees.



Figure 8: Slip A11 (Images taken: August 2024)

### 4.2.3 Slip A8

The works to remediate Slip A8 involved the installation of CFA (continuous flight auger) (CFA) piles on both the northbound and southbound sides of the road. Bored drainage was then to be installed beneath the road.

An existing culvert (Culvert 78) was replaced effectively in the same location as it was, and then the culvert flume was extended to shift stormwater away from the active slip site and the road. Three culverts (Culverts 79, 80 and 80-1) were then blocked.

In order to install the required bored drainage, an access track has been constructed into the Reserve. To provide for ongoing maintenance and monitoring, a boardwalk is also required.

Monitoring bores are also to be installed to monitor the hydrology and groundwater levels associated with the lower and upper wetland.

*Works at this site are still ongoing, and the above description is correct at the time of submitting this report but is however subject to change.*

#### 4.2.4 Culvert and Stormwater Works

The severe weather events resulted in damage to a number of culverts and/or highlighted the inability of the culverts to cope with the volumes of stormwater generated in such events.

In addition to the culvert works undertaken at Slip A8 (as described in **Section 4.2.3**), the culvert and stormwater works as part of the Slip Response involved:

- The blocking of two culverts (Culverts 93 and 95) in intermittent or permanent streams.
- The replacement of three culverts (Culverts 52 and 92) in intermittent or permanent streams.
- The construction of five new culverts<sup>5</sup> (Culverts 88, 95-1, 51-1, 52-1 and 53-1) in intermittent or permanent streams.

No fish passage is to be provided within the above culverts, and in some cases, fish passage was blocked in the above culverts as a result of the works.

Further, the works under the recovery phase involved works relating to culverts on ephemeral streams. As “*ephemeral*” streams are not considered “*rivers*” under the relevant statutory documents, there are no relevant rules in relation to these works and therefore no consent requirements.

Fish passage structures were installed in several culverts based on a priority approach, which saw fish passage improved and/or restored to the four main permanent streams throughout the Gorge.

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<sup>5</sup> Note: Some of these culverts were constructed in the initial and immediate response to the Severe Weather Events, whilst some have only just been constructed. For the purposes of consenting, they are not differentiated between as all are considered “*new*” culverts under the rules.



**Figure 9:** Fish Ladder installed as part of the Fish Passage Betterment across the Gorge (Image taken 5 December 2024)

Many of the culverts required the installation of longer flumes on the outfall of the culverts to direct stormwater further away from the active slip zones and the roadway in order to protect the asset during future weather events and reduce the risk of slipping.

#### 4.2.5 Ancillary Works

In consultation with local hapū and kaitiaki, Pouwhenua (Pou) have been constructed and installed at both the Northern and Southern ends of the Gorge.

The Northern Pou (refer **Figure 10**) is carved from timber and is approximately 3.5m high with a 0.6m diameter.

The Southern Pou (refer **Figure 10**) is constructed out of steel is similarly approximately 3.5m high with a 0.6m diameter.





**Figure 10:** (Left) Northern Pouwhenua; (Right) Southern Pouwhenua

Landscaping has been completed at the Mangamuka Gorge Summit, including the construction of a “rest area” with seating and tables (refer **Figure 11**).



Figure 11: "Rest Area" constructed at the Mangamuka Gorge Summit

#### 4.2.6 Works Outside the Gorge

Due to the narrow, steep and windy nature of the road within the Gorge, laydown sites were needed outside of the Gorge for the storage of construction materials and equipment.

Due to matters such as the distance between each end of the Gorge, there were separate laydown areas for the northern and southern project areas.

Given the high ecological values and steep terrain within the Gorge, all spoil material from earthworks was exported from the Gorge to remote fill sites. Due to site constraints within the Gorge and in accordance with hapū feedback, all spoil from the southern section of the gorge was disposed of on the southern side of the gorge, and likewise all spoil from the northern section was disposed of on the northern side.

#### 4.2.7 Laydown and Cleanfill Sites

##### 4.2.7.1 Laydown Sites

The following laydown sites were established for the purpose of storage of materials, such as pipework and for the fabrication of mesh for the pile foundations:

- Southern Laydown Site at 4543 State Highway 1; and

- Northern Laydown Site at 6770 State Highway 1

### Southern Laydown Site at 4543 State Highway 1

This laydown yard at 4543 SH1 was established in February 2023 over an already existing laydown yard to support the remediation works on the southern section of the Gorge. The yard is maintained in an aggregate surface and occupies approximately 4,000m<sup>2</sup> of flat, low-lying land in a corner of the site bounded by SH1 to the north and a driveway to the west. A vehicle entrance is located at the north-east corner of the site.

The southern edge of the laydown yard is demarcated with a grassed bund which is set back approximately 5m from a stream, and the eastern edge has a silt fence beyond which is a natural inland wetland. A “no go” zone was established (refer **Figure 12**) that ensured the works and utilisation of the Southern laydown site did not encroach within the natural inland wetland area, and the utilisation of the site was confined to the areas that were already established as a laydown area, prior to its use as one for the Slip Response.

***The Site was purely used as a Laydown Yard; no fill activities were undertaken on the Site, and no cleanfill was deposited at the Site.***



**Figure 12:** Excerpt from CLL Erosion & Sediment Control Plan, which also indicates “no go” zone in and around a natural inland wetland. *Note that fill was not disposed on the site despite the notations on the plan.* (Source: CLL Contractors)

### Northern Laydown Site at 6770 State Highway 1

This laydown yard at 6770 SH1 was established in February 2023 to support the Phase 1 slip remediation works on the northern section of the Gorge. The laydown yard is maintained in an aggregate surface and occupies approximately 3,500m<sup>2</sup> of flat, low-lying land at the rear of an existing industrial yard operated by Brian Kitchen Contracting Ltd. It is understood that the only works undertaken to prepare the yard for this project was the laying of additional aggregate to stabilise the site for heavy equipment. FNDC considers this

to be an impermeable surface. The side property boundaries are defined by privacy fencing and mixed vegetation, and the rear boundary with a tall shelter belt vegetation. There are no wetlands or watercourses located near the site; however, the site is located in a flood plain.

#### **4.2.7.2 Cleanfill Sites**

The following fill sites were established:

- Southern Fill Sites at:
  - 4321 State Highway 1 (which has three fill sites at that location); and
  - 164 Makene Road
- Northern Fill Sites at:
  - 184 Peria Valley Road; and
  - 6283 State Highway 1

A temporary transfer station was also established within the Gorge at the southern end, to aid in the works associated with Slip A11 and the significant volume of spoil to be shifted.

In total 11,718m<sup>3</sup> of spoil was transported to the northern fill sites and 39,000<sup>3</sup> was transported to the southern fill sites.

#### **164 Makene Road Fill Site**

This is a 190ha site located on the southern side of the Mangamuka Gorge. The landowner holds a resource consent from NRC (ref: LUC.044750.01.01) to carry out up to 150,000m<sup>3</sup> of fill earthworks over a 2ha area. The fill site has erosion and sediment controls in place, in accordance with the resource consent. This site was utilised for the disposal of spoil from the southern portion of the project until mid-2023, at which point access to the site along Makene Road became dangerous due to slips.

#### **6283 State Highway 1 – Northern Fill Site**

This 8.83ha site is located on the northern side of the Mangamuka Gorge. An approximately 4,000m<sup>2</sup> flat paddock area was used as a permanent fill site for spoil from the northern section of the project between February and July 2023.

A total of 4500-5000m<sup>3</sup> of fill was placed on this site, to a uniform depth of approximately 1 metre.

#### **4321 State Highway 1**

This 70ha rural landholding, to the south of the Gorge, is primarily utilised for pastoral farming. Three separate fill areas were established within paddocks on elevated, gently sloping terrain.

In total, 39,000m<sup>3</sup> of fill was deposited across the three fill sites at this location.

#### **184 Peria Valley Road**

This 85ha site is located on the northern side of the Mangamuka Gorge and landowner approval was obtained for the utilisation of this Site. Part of the site is dissected by Top Energy High Voltage Power Lines to the east. A 10m separation buffer was created between the fill activities and this infrastructure. The lower portion of the site contains an *induced* natural inland wetland caused by the construction of a farm track which has impounded natural drainage flows. This wetland has been drained and filled during the fill activities. The fill operation on this site has recently been completed.

Overall, 11,718m<sup>3</sup> of fill was deposited on this site.

### **Temporary Transfer Station**

The site is at the southern entrance to the Gorge where the SH1 closure began, known under this project as the “*southern gate*”. At this point, the road corridor widens to encompass an aggregate hardstand area of approximately 3,000m<sup>2</sup>. It sits adjacent to a clearing within the scenic reserve and a stream. The site is within the road reserve and NZTA’s existing designation. During the excavation works for Slip A11, the southern gate road closure was relocated further to the south, and the areas used as a transfer station for the stockpiling of material excavated from A11 by Moxies, where it was loaded into trucks and taken to the fill site at 4321 SH1.

## **5 EMERGENCY WORKS PURSUANT TO S330 OF THE RMA**

Section 330 of the RMA provides for emergency works and power to undertake preventive or remedial action. It allows NZTA, as a network utility operator and requiring authority, to undertake certain activities (emergency work or measures) in emergency situations without the need to obtain a resource consent prior to the commencement of urgent works.

Emergency works can be undertaken by NZTA where, in their opinion, their assets are affected, or likely to be affected by:

- an adverse effect on the environment which requires immediate preventive or immediate remedial measures (s330(1)(d) and s330(1)(e)); or
- any sudden event causing or likely to cause loss of life, injury, or serious damage to property (s330(1)(f)).

Emergency works ‘*measures*’ can include any physical work or action specifically directed at removing the cause of, or mitigating, any actual or likely adverse effect of the emergency. Of relevance to this project, the measures may include, but are not limited to:

- Earthworks
- Clearance of fill
- Stabilisation work
- Roding repairs

- Clearing and disposing of slip debris from a roadway

The immediate measures undertaken must only extend to what is necessary and sufficient for dealing with the emergency. The provisions do not extend to any actions that would go beyond either removing the cause of, or mitigating, any actual or likely adverse effect of the emergency.

## 5.1 Overview of s330 Provisions

Section 330 of the RMA provides for emergency works and power to take preventive or remedial action as set out below (with my emphasis added):

(1) *Where—*

- (a) *any public work for which any person has financial responsibility; or*
- (b) *any natural and physical resource or area for which a local authority or consent authority has jurisdiction under this Act; or*
- (c) *any project or work or network utility operation for which any network utility operator is approved as a requiring authority under section 167; or*
- (ca) *any service or system that any lifeline utility operates or provides—*

1. *is, in the opinion of the person, authority, network utility operator, or lifeline utility, affected by or likely to be affected by—*

- (d) *an adverse effect on the environment which requires immediate preventive measures; or*
- (e) *an adverse effect on the environment which requires immediate remedial measures; or*
- (f) *any sudden event causing or likely to cause loss of life, injury, or serious damage to property—*

2. *the provisions of sections 9, 12, 13, 14, and 15 shall not apply to any activity undertaken by or on behalf of that person, authority, network utility operator, or lifeline utility to remove the cause of, or mitigate any actual or likely adverse effect of, the emergency*

As set out on **Section 1.2**, NZTA is a network utility operator approved as a requiring authority under s167 of the RMA.

It is important to note that subsection (1A) of s330 ensures that s330 applies irrespective of whether the adverse effect or sudden event was foreseeable.

Section 330 of the RMA requires that the opinion of NZTA (as the network utility operator approved as a requiring authority), formed in deciding whether or not to use the emergency powers, be one a reasonable person would form. This is an objective test, as to whether the situation is one in which any reasonable person or body would consider that it qualifies for emergency action.

In this case the severe weather event, being the “*sudden event*” caused serious damage to property, being SH1. Due to the ongoing slip movements, it was likely to cause further damage to property (SH1) and could have (in the absence of complete road closure) caused loss of life or injury. The slip movements, without remediation, did and could have resulted in further adverse effects on the environment, such as loss of indigenous flora and fauna and biodiversity, loss of habitat and sedimentation of waterways.

Therefore, it was determined that the provisions of s330 of the RMA applied, and NZTA could proceed with emergency remedial actions in accordance with those provisions. Therefore, sections 9, 12, 13, 14, and 15 of the RMA did not apply to any activity undertaken by or on behalf of NZTA as part of the Slip Response.

### 5.1.1 s330A Process

Section 330A of the RMA requires that:

- 1) *Where an activity is undertaken under section 330, the person (other than the occupier), authority, network utility operator, or lifeline utility who or which undertook the activity shall advise the appropriate consent authority, within 7 days, that the activity has been undertaken*
- 2) *Where such an activity, but for section 330, contravenes any of sections 9, 12, 13, 14, and 15 and the adverse effects of the activity continue, then the person (other than the occupier), authority, network utility operator, or lifeline utility who or which undertook the activity shall apply in writing to the appropriate consent authority for any necessary resource consents required in respect of the activity within 20 working days of the notification under subsection (1).*
- 3) *If the application is made within the time stated in subsection (2), the activity may continue until the application for a resource consent and any appeals have been finally determined.*

Section 330A(1) required NZTA to advise the appropriate consent authority, within 7 days, that the activity, being the emergency remediation works, had been undertaken. This notification was made to FNDC and NRC on 23 August 2022 (refer **Figure 13**).

#### **Mangamuka Range SH1 (Multiple locations)**

Fulton Hogan Northland based staff and enlisted subcontractors are to undertake clearance of numerous slips on State Highway 1 on behalf of NZTA after significant rain events on and around **19 August 2022** in accordance with environmental plans and best practice environmental controls. as the Mangamuka Reserve is identified as a sensitive area, an Outstanding Natural Landscape and high risk of Kauri Dieback disease north of the Mangamuka Summit.

**Figure 13:** Snip of notification made to NTRC and FNDC notifying of NZTA intention to undertaken emergency works

Engagement and consultation has been ongoing with NRC and FNDC throughout the emergency response (further detailed in **Section 8**).

Under s330A(2) resource consents will be required for any activity, where the activity (but for s330) contravenes Sections 9, 12, 13, 14, or 15 **and the adverse effects of the activity continue beyond the completion of the emergency works.**

If there are no ongoing adverse effects of the activities, the notification required by s330A(1) should also inform the Council that no resource consents are required.

As the notification required by s330A(1) is to be accompanied by notification as to whether resource consents are required (s330A(2)), it is considered the notification must be made after completion and not commencement in order to be able to fully comply with these provisions.

Notification must be made 7 [calendar] days from the completion of emergency works. This notification will be made to NRC and FNDC within the required timeframe following completion of the emergency works.

The road opened on 20 December 2024, however not all emergency works have been completed and are on-going. As such, these applications are being lodged well in advance of the statutory timeframe specified under the s330 provisions.

Where it has been determined that there are on-going effects at the completion of the emergency works, resource consent is required to be obtained for any activities that contravened Sections 9, 12, 13, 14, or 15 of the RMA. An application must be made to the appropriate consent authority for any necessary resource consents required within 20 working days of the notification under subsection s330A(1).

Where resource consents are required to be sought retrospectively is discussed further at **Section 7.3.1**.

### 5.1.2 Slip Response works covered by s330(1)

It is clear that the damage caused by August 2022 severe weather events to SH1 infrastructure within Mangamuka Gorge required immediate remedial measures to avoid the likely loss or life or injury, asnd further serious damage to property, as well as adverse environmental impacts. Therefore, NZTA were correct in proceeding with remedial measures under the s330(1) emergency works provisions.

The main issue for consideration was whether the full scope of the remediation works associated with the project could have reasonably been undertaken pursuant s330(1), and if not, what aspects of the project are not within these emergency provisions. I consider that two simple tests can be applied to determine this, as follows:

1. whether the works are required to safely re-open the Mangamuka Gorge section of SH1 to the public, and
2. whether these works are required to be carried out urgently to prevent further significant damage to critical infrastructure caused by further rainfall events.

#### **Works within the Gorge**

Using the criteria set out above, I consider that all works carried out as part of the Mangamuka Slip Response were required to safely re-open the Mangamuka Gorge section of SH1 to the public and were required to be carried out urgently to prevent further significant damage to critical infrastructure as a result of on-going slip movement, which could be exacerbated by future weather events. Further, it is considered had the remediation works not be undertaken in full, this would have posed a risk to life and safety of the users of SH1 and damage to property (being SH1).

The remediation works undertaken under the emergency works provisions are set out at **Section 4**.



## Remote Sites

Due to the narrow, steep and windy nature of the road within the Gorge, laydown sites are needed outside of the Gorge for the storage of construction materials and equipment. Likewise, given the high ecological values and steep terrain within the Gorge, all spoil material from earthworks must be exported from the Gorge to remote fill sites.

These laydown and fill sites are an intrinsic component of the emergency slip response works and in my opinion are sufficiently interlinked and a basic requirement of the ability to undertake the remediation works. Therefore, these works also fall within the scope of s330 RMA emergency work provisions.

## 6 UTILISATION OF S330 OF THE RMA V DESIGNATION

As set out in the above section, it is considered that all works undertaken in the immediate aftermath and throughout the period up until now, are, and could have been undertaken pursuant to the emergency works provisions as set out in s330 of the RMA. However, as has been identified, SH1 through the Gorge is sited within an existing designation, whereby a majority of the slips and the work required to remediate those slips could be undertaken within the designation boundaries (the road reserve).

Consideration was given to whether the extent of the required remedial works thin the existing SH1 designation boundaries could fall within the scope of the existing designation, and the benefits of utilising the Designation (s176) / Outline Plan (s176A) process for the remedial works within the SH1 designation were weighed against the emergency provisions process under s330 of the Act. A decision was made that, with a few exceptions, the works could be undertaken within the boundaries of the road reserve/Designation and were within the scope of the Designation, therefore the Designation (s176) / Outline Plan process (s176A) for these works was to be used. As per s176 of the Act, s9(3) of the Act does not apply to any public works undertaken by a requiring authority within the designation, thus meaning no District Land Use Consents are required for works within the designation.

However, in spite of the above, it was determined due to the significant level of works and alteration required to remediate Slip A11, an Outline Plan of Works (OPW) was required to be submitted to FNDC pursuant to s176A of the RMA.

On 5 February 2024 an Outline Plan was confirmed (2240268-RMAOUT) (refer **Appendix B**) for the works at Slip A11.

For the remainder of the works within the designation, a request for a waiver of the requirement for an Outline Plan of works was submitted to FNDC, as it was considered the works were consistent with the purpose of the designation. The waiver request sought to retrospectively cover all work completed at the time and all future works associated with the Slip Response Project.

On 15 May 2024, FNDC granted the request to waive the requirement for an Outline Plan pursuant to s176A(2)(c) of the RMA (2240428-RMAOUW) (refer **Appendix C**).

In accordance with s330A(2) of the Act, retrospective resource consent requirements for any works remaining that were undertaken outside of the SH1 Designation, contravened a Regional Rule or Regulation

in a National Environmental Standard (whether inside or outside of the Designation), and any works outside of the Designation that contravened a District rule (operative or proposed) needed to be determined based on whether the activities gave rise to any ongoing adverse effects.

## 7 STATUTORY CONSIDERATIONS

### 7.1 Overview

The location of work sites within and outside of the Gorge as well as the values and features in and around the Site mean that several different pieces of legislation are relevant to this Project. The relevant legislation includes higher order “Acts”, and lower order legislation such as “Order in Councils” and “Regulations”.

### 7.2 Relevant Legislation

The legislation that is relevant and has required consideration against for this Project are:

- Resource Management Act 1991 (RMA);
- Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA)
- Wildlife Act 1953
- Conservation Act 1987
- Reserves Act 1977
- Biosecurity Act 1993
- Fisheries Act 1983

### 7.3 Resource Management Act 1991 (RMA)

Under the RMA, the following statutory documents are considered to be relevant to this proposal.

- National Policy Statement for Freshwater Management 2020 (NPSFM)
- National Policy Statement for Indigenous Biodiversity 2023 (NPSIB)
- National Policy Statement for Highly Productive Land 2022 (NPSHPL)
- Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NESFW)
- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NESCS)
- Regional Policy Statement for Northland 2016 (RPS)
  - Proposed Regional Plan for Northland February 2024 (pRPN)
  - Operative Far North District Plan 2009 (FNDP)
  - Proposed Far North District Plan (pFNDP)

As was discussed in **Sections 5 and 6**, District land use activities for works within the road designation have been addressed through Outline Plans and Outline Plan Waivers. Works not requiring retrospective

resource consent pursuant to s330 will be notified to NRC and FNDC upon completion of the works as required.

### 7.3.1 Retrospective Resource Consents Required

The determination of whether the works will have ongoing adverse effects at the completion of each activity is crucial in assessing the need for seeking resource consent retrospectively pursuant to the s330 provisions (as outlined in **Section 5**). Technical experts have been consulted to provide their professional opinions on the matter.

**Table 1** below outlines all the retrospective resource consents that are considered be required for the entirety of the Slip Response Project, due to the identification of the presence of on-going adverse effects at the completion of the respective activity. These have been split into separate “*consenting packages*”.

The consent packages identified in **Table 1** below are for discrete work sites, and therefore applications are being lodged separately. The statutory documents that sit beneath the RMA will be considered as part of the respective application that is appended to this report.

*Emergency Works are still ongoing, and the above information is correct at the time of submitting this report but is however subject to change. It is anticipated, there may be additional resource consent triggers. Where these are identified, resource consent applications will be lodged with the relevant consenting authority.*

**Table 1: Retrospective Resource Consents Required**

	Legislation	Activity	Rule/ Regulation	Activity Status	Consenting Authority
Slip A8	NESFW	Vegetation Clearance to construct an access track within 10m of a natural inland wetland	47(1)	Restricted Discretionary	NRC
		Earthworks to construct an access track within 10m of a natural inland wetland	47(2)	Restricted Discretionary	
		Earthworks associated with the drilling of bored drainage within 10m of a natural inland wetland	47(2)	Restricted Discretionary	
		Diversion and discharge of water within a natural inland wetland	47(3A)	Restricted Discretionary	
	pRPN	Land Drainage within 50m of a natural wetland	C.4.1.7	Discretionary	FNDP
		Construction of two bores (one at the upper and one at the lower wetland)	C.8.5.3	Controlled	
Various (Gorge)	NESFW	The placement and use of a culvert (Culverts 52, 92, 88, 95-1, 51-1, 52-1 and 53-1) in, on, over or under the bed of a river where fish passage is not provided	71	Discretionary	NRC
	pRPN	To block (remove) culverts 93 and 95	C.2.1.7	Discretionary	

		To use, erect and place a culvert (Culverts 52, 92, 88, 95-1, 51-1, 52-1, 53-1) in, on, over or under the bed of a river	C.2.1.11	Discretionary	
		Construction and Operation of Various Bores	C.8.5.3	Controlled	
184 Peria Valley Road	NESFW	Vegetation clearance within, or within a 10m setback of a natural inland wetland for the purpose constructing or operating a cleanfill area	45B(1)	Discretionary	NRC
		Earthworks within, or within a 10m setback of a natural inland wetland for the purpose constructing or operating a cleanfill area	45B(2)	Discretionary	
		Earthworks outside a 10m, but within a 100m setback of a natural inland wetland for the purpose constructing or operating a cleanfill area	45B(3)	Discretionary	
		Diversion of water within, or within a 100 m setback from, a natural inland wetland relating to the installation of sub-soil drainage to drain the wetland	45B(3)	Discretionary	
	FNDP	Fill exceeding 5000m <sup>3</sup> and exceeding 1.5m in height	12.3.6.2	Discretionary	FNDC
Northern Laydown Yard	FNDP	For non-compliance with the stormwater management requirements due the deposition of aggregate surface resulting in impervious areas exceeding 20% of the site area.	8.6.5.4	Discretionary	FNDC

## 7.4 Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA)

Under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) no person may modify or destroy an archaeological site unless an authority is granted by Heritage New Zealand Pouhere Taonga (HNZPT), whether or not the site is a recorded archaeological site.

The Mangamuka area has a rich history of pre-European settlement and, according to HNZPT Senior Archaeologist James Robinson<sup>6</sup>, the area is likely to contain lots of archaeological sites (more so at either end of the gorge than within it) and wider heritage values.

There are no identified archaeological features within the works area in the Gorge and at the off-site spoil sites. Notwithstanding, NZTA engaged Geometria to prepare a comprehensive heritage values assessment, dated 25 October 2023 (refer **Appendix D**). The Geometria report confirmed that there are no known or likely heritage or archaeological features near the slip sites within the Gorge, or any of the remote sites. On this basis, both Geometria and HNZPT have confirmed that they are happy for all works to proceed operating under Accidental Discovery Protocols (ADP) with no archaeological authority in place. To date, no archaeological remains have been encountered.

## 7.5 Wildlife Act 1953

The Wildlife Act sets out protections of certain wildlife, particularly, and of most relevance, indigenous wildlife. Under this Act, a Wildlife Permit pursuant to s71 of the Wildlife Act is required for various activities associated with wildlife, including salvage, handling and destruction/killing of protecting wildlife. These permits are administered by DOC.

This project required significant areas of vegetation to be cleared, which could have required the salvage, handling and release/relocation of indigenous fauna such as Kauri Snails and Kiwi. Therefore, a Wildlife Permit (111521-FAU) was obtained on 18 March 2024 in relation to native invertebrates, lizards and birds, with a variation to that Permit obtained on 14 October 2024 (refer **Appendix E**). This permit allowed the ecology team to undertake fauna mitigation work associated with lizard, kauri snail and Northland tusked wētā salvage, kiwi relocation and egg uplift, and incidental mortality of all protected species identified in the Permit, associated with habitat clearance and earthworks. The Permit required various reporting to be undertaken, including a salvage report. These reports have been completed and provided as required.

Furthermore, a Certified Bat Expert, who holds their own Permit was engaged to advise and assist with works where bats may have been affected.

No further permits were required.

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<sup>6</sup> As discussed during a meeting with NZTA and HNZPT representatives on 13 April 2023



**Figure 14:** Kiwi Detection Dogs were used to detect Kiwi present within work areas. No Kiwi were detected. (Kiwi Detection Dog Pearl at Slip A11) (Source: NZ Environmental Management)

## 7.6 Conservation Act 1987

As identified, the Gorge is largely surrounded on both sides by the Mangamuka Scenic Reserve. Being a conservation area, any works required within the Scenic Reserve (i.e. outside of the road designation) required a concession from DOC under s170 of the Conservation Act.

Works within the Scenic Reserve were required at three locations across the Gorge as follows:

- At Slip A3 for a right to drain water (stormwater pipe);
- At Slip A4 for a right to drain water (stormwater pipe); and
- At Slip A8 for a right to convey water (bored drainage), right to drain water (stormwater pipe) and a right of way (Access Track).

A concession for these works was obtained. Concession Number 113662-OTH was obtained from the Department of Conservation on 3 May 2024, and is valid for a period of 60 years (refer **Appendix F**).

On 17 December 2024, an application was lodged to vary the concession, as the works at A3 and A4 were found to be on private property and are therefore not required to be included in the concession. No decision on this application has been made at the time of preparing this report.

The concession includes a number of conditions and obligations, including:

- Vegetation must not be cut down or damaged nor can any natural feature or historic resource be damaged without prior consent.

- The stormwater pipes must be suitably disguised as to blend in with the surroundings.
- An annual maintenance programme must be approved by DOC.
- An on-going weed control programme to the satisfaction of DoC must be implemented.
- All activities were to be undertaken in accordance with the Accidental Discovery Protocol in relation to archaeological finds and historic sites.

In addition, the concession also requires that, in *“the event the monitoring of water levels by a piezometer at the swamp forest at the A8 slip site located above the road identifies that water levels have reduced, then the amount of water removed by the bored drains shall be reduced so that the original swamp forest water level is maintained”*.

No further concessions were required.

## 7.7 Reserves Act 1977

The Mangamuka Scenic Reserve is protected through the Reserves Act. The Reserves Act sets out a number of protections including through the preservation of trees and bush, whereby trees and bush may not be cut or destroyed unless express consent in writing is obtained. It is considered the necessary approvals, being the Concession and Wildlife Permit provide the necessary consent for the works undertaken within the Scenic Reserve.

## 7.8 Biosecurity Act 1993

Of most relevance under the Biosecurity Act to this project is the Biosecurity (National PA Pest Management Plan) Order 2022.

### 7.8.1 Biosecurity (National PA Pest Management Plan) Order 2022.

A National Pest Management Plan (National PMP) relating to the control of the spread of *Phytophthora agathidicida* (PA), more commonly known as Kauri Dieback Disease, was introduced via and Order in Council made under the Biosecurity Act.

The site is located within an area of indigenous forest which contains a significant population of Kauri. The site is therefore located within a Kauri Protection Area, and the project must be undertaken in accordance with the National PMP, including the movement and disposal of any soil or vegetation matters.

A Kauri Survey was undertaken, and no Kauri Trees were identified within the work areas. A Kauri Dieback Procedure was prepared and was implemented (refer **Appendix G**).

The National PMP does not have any requirements for any type of approval that is to be obtained under any circumstance, but rather simply directs how activities must be undertaken in and around Kauri Trees. With respect to this project, these directions involve obligations to report any Kauri exhibiting any symptoms of PA, restrictions on works within a Kauri Hygiene Zone and obligations around cleaning items before entering and existing Kauri Forest.



## 7.9 Fisheries Act 1983

Of most relevance to this project under the Fisheries Act, are the Freshwater Fisheries Regulations 1983.

### 7.9.1 Freshwater Fisheries Regulations 1983

The Freshwater Fisheries Regulations (FFR) set out a number of regulations relating to both indigenous and exotic (namely “*sport*”) fish species, including, of most relevance, requirements for fish passage.

Part 6 of the FFR set out the regulations for fish passage and applies in any “*natural river, stream, or water*”. Regulation 42 requires that “*no person shall construct any culvert or ford in any natural river, stream, or water in such a way that the passage of fish would be impeded, without the written approval of the Director-General incorporating such conditions as the Director-General thinks appropriate*”.

As fish passage is being obstructed in several culverts as part of this project, an exemption will be required under the FFR and will be sought.

## 8 CONSULTATION AND ENGAGEMENT

Throughout the life of the project NZTA has engaged with several stakeholders through various means and channels, including:

- Quarterly hapū and iwi site visits
- Quarterly Kaitiāia market activations/pop-ups
- Regular update features on local radio stations with the NZTA Waka Kotahi Project Director
- Online and in person presentations and updates with community and regional stakeholder groups
- Regular hapū and iwi hui updates through the designated project hapū representatives
- Monthly detailed newsletter updates
- Weekly social media and online content updates
- Media visits for broader regional and national level updates.

NZTA has undertaken continuous consultation and engagement throughout the life of the Project with the following stakeholders:

- Department of Conservation
- Te Kaunihera o Te Hiku o te Ika/Far North District Council Northland Regional Council
- Hapū and iwi groups
  - Te Paatu
  - Te Paatu ki Kauhanga

- Te Paatu ki Pamapurua (Te Paatu marae, Pamapurua)
  - Nga Hapū o Mangamuka
  - Ngāti Taranga (Mangataiore marae, Victoria Valley)
  - Te Hiku Iwi Development Trust
  - Ngāi Takoto
  - Ngāi Takoto
  - Ngāti Kahu
  - Ngāti Kuru
  - Te Aupōuri
  - Te Rarawa
- NRC Regional Transport Committee
  - Te Whatu Ora
  - Civil Defence Emergency Management
  - Emergency Services: Police, St Johns, Fire and Emergency New Zealand (FENZ)
  - Landowners and adjacent landowners
  - Kaitāia Business Association
  - Community groups, Kaitāia Markets, Lions and Rotary clubs.

Key stakeholders of particular relevance to the statutory approvals process are DOC, FNDC, NRC and iwi/hapū groups. Consultation and engagement in this regard has consisted of regular meetings and informal pre-application type meetings. Key personnel within these organisations have also undertaken site visits. Hapū representatives and Kaitaiki are also on-site regularly and monitoring the works being undertaken.

## 8.1 Pre-Application Meetings

Pre application meetings have been had with Northland Regional Council on the following dates:

- 17 October 2025; and
- 12 December 2024

Pre application meetings have been had with Te Kaunihera o Te Hiku o te Ika/Far North District Council on the following dates:

- 22 October 2024

## 8.2 Iwi and Hapū

It is acknowledged that the Maungataniwha Ranges and the Mangamuka Gorge hold considerable cultural significance to iwi and hapū in the area. The Gorge is also home to a number of taonga species which hold significant cultural importance.

NZTA has continued to engage and consult with iwi and hapū groups since the beginning of the Project. A partnership has been developed with Nga hapū o Mangamuka and Te Paatu, who are an integral part of the Slip Response. Representatives of iwi and hapū have been ingrained in the Project and have formed part of the Project team. Kaitaiki from Nga hapū o Mangamuka and Te Paatu have been on-site at all times, monitoring and supervising works, including wildlife salvage and relocations. They have been on-site during site visits regarding the consenting requirements and attended bi-weekly meetings covering these matters.

When these applications are lodged, Nga hapū o Mangamuka and Te Paatu will receive copies of the application as they are lodged. They have been kept informed of the timings and the preparation of the resource consent applications as this has been undertaken.

**APPENDIX A Erosion and Sediment Control Plan**



## Waka Kotahi

### EROSION & SEDIMENT CONTROL PLAN

#### ESC# 001 – SH1 Mangamuka Emergency Repairs

Project Name:	SH1 Mangamuka Emergency Repairs
Project No:	
Principal:	Waka Kotahi
Prepared by:	Southern Skies Environmental
Date:	08 November 2024

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## 1. Introduction

The Mangamuka Gorge on SH1 sustained severe damage during a storm event in August 2022. This section of SH1 is closed as part of the emergency repairs operations.

The proposed works involve a series of stabilisation works of five slip sites within the gorge. The stabilisation operations include the piling retaining wall structures and ground anchoring.

In order to achieve a high standard of environmental performance the following Erosion and Sediment Control Plan (ESCP) has been developed. The ESCP also includes spill management procedures.

## 2. Scope

The ESCP has been prepared to ensure that the works are undertaken in accordance with best practice to address the potential construction water effects associated with the works.

The overall ESCP will comprise several parts that deal with specific construction activities.

## 3. Reference Documents

- Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).

## 4. Site Description

The Mangamuka Gorge is located on SH1 approximately 5km north of Mangamuka and approximately 10km south of Kaitaia. The surrounding environment comprises of Mangamuka Scenic Reserve, steep vegetated native bush.

Access to the site is via SH1.

The works are within the road reserve of SH1 and the work will be undertaken while the section of SH1 is closed to public traffic.

The Mangamuka Gorge has sustained severe damage. The works area is unstable. Significant slips have occurred.

## 5. Description of Proposed Works

The area of the proposed works is five separate slip locations on SH1 within the Mangamuka Gorge. The emergency repair works will comprise the following activities:

- Installation of retaining concrete piles (1050mm diameter to varying depths) and associated capping beams;
- Installation of wire strand anchors
- Installation of new pipe drainage networks
- Relaying of roading surfaces

All works will occur with plant operations from SH1.

## 6. Erosion and Sediment Control

The erosion and sediment control (ESC) methodology has been designed in accordance with the best practice principles of GD05.

The layout and ESC measures and methodology are detailed in the ESC drawings attached in Appendix B. The works will commence in February 2023 and are expected to take approximately 12-18 months to complete.

Operations that involve the removal of material, such as the establishment of working benches and augured material, will be cut to waste (cut material to be removed from the works area to a designated disposal area).

Treatment tanks and silt fences will be installed at each site as practicable, as shown on the attached ESC drawings attached in Appendix B.

The general methodology at each site is as follows:

- Hot Mix Bund or similar (i.e. alternative concrete bund or timber dyna-bolted and sealed to road surface) will be installed along edge of seal to contain site runoff. The bunding will direct all work area water to a sump to then be piped to a series of treatment tanks for treatment. The treatment tanks will be located where practicable, as determined by the Site Engineer;
- Hot Mix Bunds or similar will also be installed to direct “clean” road water to water table drains to minimise the catchment of each works area. The water table drains will be protected from site runoff with Hot Mix Bunds or silt fences.
- On Site A9 “enabling” works will be undertaken to install water table drainage pipes to allow upper catchment water to be directed away from the slip area before the slip repairs works can commence.
- On most sites a bench will be excavated below the road to create a “level” area for the piling operations. The excavated material will be cut to waste (loaded onto trucks for removal away from the works area). All plant will operate from the road.
- On Site A12-13 a bench will not be cut due to the extensive slip below the road.
- A silt fence will then be installed on the bench as shown on the attached drawings. No silt fence will be installed on Site A12-13 due to the extensive slip below the road;
- Piling operations will commence with all plant operating from the road. All augured material to be cut to waste.
- Any pumping operations from the augured piles will be directed to the settlement tanks;
- During concrete pours, water will be collected from within the casings into ICB containers (or similar i.e. sucker truck). The water will be deemed contaminated and removed from site;
- During ground anchor operations, all wash material (drill fluids) will be collected by the drill rig and directed to settlement tanks.

### 6.1. Disposal Sites (Fill Sites)

Similarly to the works area, the ESC methodologies for each of the fill sites has been designed in accordance with the best practice principles of GD05.

The layout and ESC measures and methodologies for each of the disposal sites are detailed in the ESC drawings attached in Appendix B.



## 7. Spill Management

While best practice environmental systems will be implemented, to further reduce the possible consequence of spillage, refuelling points will be located well clear of the cleanwater road table drains. A trailer mounted diesel fuel tank will on occasions stay onsite overnight. The tank will be relocated a minimum 10m from any cleanwater table drain.

Spill kits will be provided onsite, located at the fuel tank onsite.

All site personnel will be trained to use spill kits (and spill booms) before commencing work, as part of the site induction. Preventative maintenance of plant (particularly hydraulic hoses) will also significantly reduce risk.

In the event of a spill, or another incident which results in an unauthorised discharge to ground, immediate action will be taken to contain the event. Spill response and recovery will be enacted in accordance with standard CLL environmental procedures, and the Client and the Northland Regional Council will be contacted. Once the situation has been controlled and rectified, an incident investigation will be completed, and a report prepared by the Project Manager.

Specific concrete management procedures will be separately developed as part of the Construction Work Method Statement.

### Spill Response:

The following actions will be implemented.

In the event of a spillage:

1. Stop the flow at its source – shut valves, switch off engines or machinery, block leaks if it is safe to do so.
2. Contain the spillage – catch in container or with bunding and cover with absorbent material/ sand/ fines.
3. Stop from spreading by surrounding with the absorbent sock, or if being carried in water, by placing the sock ahead of the flow.
4. Notify the Project Manager who will contact NRC (as per process below).
5. In the event that any hazardous substance or contaminant enters a watercourse NRC should be notified directly via the 24-hour number – 0800 504 639.

Cleaning up after a spillage:

1. Commence cleaning up of spillage immediately to limit any soakage into the ground, or escape to surface water, if it is safe to do so.
2. Use absorbent material for initial clean up.
3. Excavate contaminated soils and place in a secure location. In water, use the absorbent sock to skim/ absorb the spillage from the water surface.
4. Ensure that all spillage material (including the contained spillage, any contaminated soils and any rags, socks, or other equipment used during the clean-up process) are stored in a secure location and transported off site for disposal at a registered landfill.

In the event of a hazardous substance spill, the CLL Manager will be notified immediately (within 2 hours). The Project Manager will inform NRC as soon as practicable, and as a minimum within 6 hours of becoming aware of the spill. The following information shall be provided to NRC:

- Date, time, location, and estimated volume of the spill.
- Cause of the spill.
- Type of contaminant spilled.
- Clean up procedures taken.
- Steps undertaken to control and remediate the effects of the spill on the receiving environment.
- Assessment of potential effects of the spill.

- Measures to be undertaken to prevent a recurrence.
- All incidents are to be reported on a standard incident report form within 48 hours of the incident occurring to identify corrective actions to help prevent a reoccurrence.
- All sites storing chemicals are to have a Spill Checklist located on site.

## 8. Monitoring and Maintenance

All erosion and sediment control measures will be maintained in accordance with GD05 throughout the works until the site is stabilised against erosion.

All erosion and sediment control measures and methodologies will be monitored during the works. Monitoring will be undertaken at least weekly, and before and immediately after rain events as well as during heavy rainfall events by the CLL. Any required maintenance or improvements to control measures will be undertaken immediately.

In addition, Meridian will undertake monthly audits on the erosion and sediment control of the site to ensure compliance with GD05.

Sediment deposits and bulges against the silt fences will be removed when sediment accumulation reaches 20% of the fabric height.

The settlement tanks will be cleaned out before accumulated sediment volume reaches 20% of the total volume.

## 9. Kauri Dieback

A Kauri Dieback procedure has been prepared for the project works. Refer to Appendix C.

## 10. Rainfall Response and Contingency Measures

Best management practices will be used to minimise sediment yields and monitor any potential effects. In addition to the visual inspections and weekly self-auditing refer above, if a severe weather event is forecast, (a severe weather event is defined as greater than a 5% AEP across the project works area) the following actions will be implemented.

Pre-Weather Event Procedure:

- Visually check controls on site prior to weather event to ensure, as far as practicable, that they will function as intended;
- Depending on site specific circumstances and practices used on site, consider limiting or ceasing earthwork activities to limit land disturbance;
- As far as practicable, stabilise disturbed areas; and
- Photograph critical ESC measures prior to the weather event to document pre-weather event condition.

During a severe weather event that results in the discharge of treated discharges from the sediment retention devices water quality inspections will be undertaken where practical at discharge locations where treated discharge could leave the site. The discharges will be checked to document water quality.

## 11. Contact Details

<b>Name</b>	<b>Organisational Role</b>	<b>Contact Type</b>	<b>Responsibilities</b>	<b>Contact Number</b>
<i>Vaughan Robbins</i>	<i>CLL Project Director</i>	<i>Working Hours 0800-1700</i>	<i>Reporting of spills onsite, site issues to NZTA</i>	<i>027 492 3576</i>
<i>Tim Hunger</i>	<i>CLL Project Manager</i>	<i>Working hours 08:00-17:00 After Hours, 17:00-08:00</i>	<i>Site ESC and Construction plan responsibility</i>	<i>0275719111</i>
<i>Hendrik Postma</i>	<i>Waka Kotahi Project Manager</i>	<i>Working Hours 0800-1700</i>	<i>Client Rep</i>	<i>0272287329</i>
<i>Campbell Stewart</i>	<i>ESC and Environmental Specialist</i>	<i>Working hours, 07:00-18:00</i>	<i>ESC and Environmental audits and advice</i>	<i>021837824</i>
<i>Northland Regional Council</i>	<i>Pollution Response</i>	<i>24/7</i>	<i>Regulator agency</i>	<i>0800 504 639 (environmental hotline)</i>

## 12. Summary

This ESCP addresses the proposed erosion and sediment control methodology associated with the land disturbing activities required to complete the emergency repair works on SH1 in the Mangamuka Gorge and incorporates the spill management methodology.

All land disturbance works will be carried out in general accordance best practice and GD05. The methodology proposed will ensure that any adverse effects of the construction works are temporary and minor.

## Appendix A – Hazardous Register

### Hazardous Substance Register / Inventory

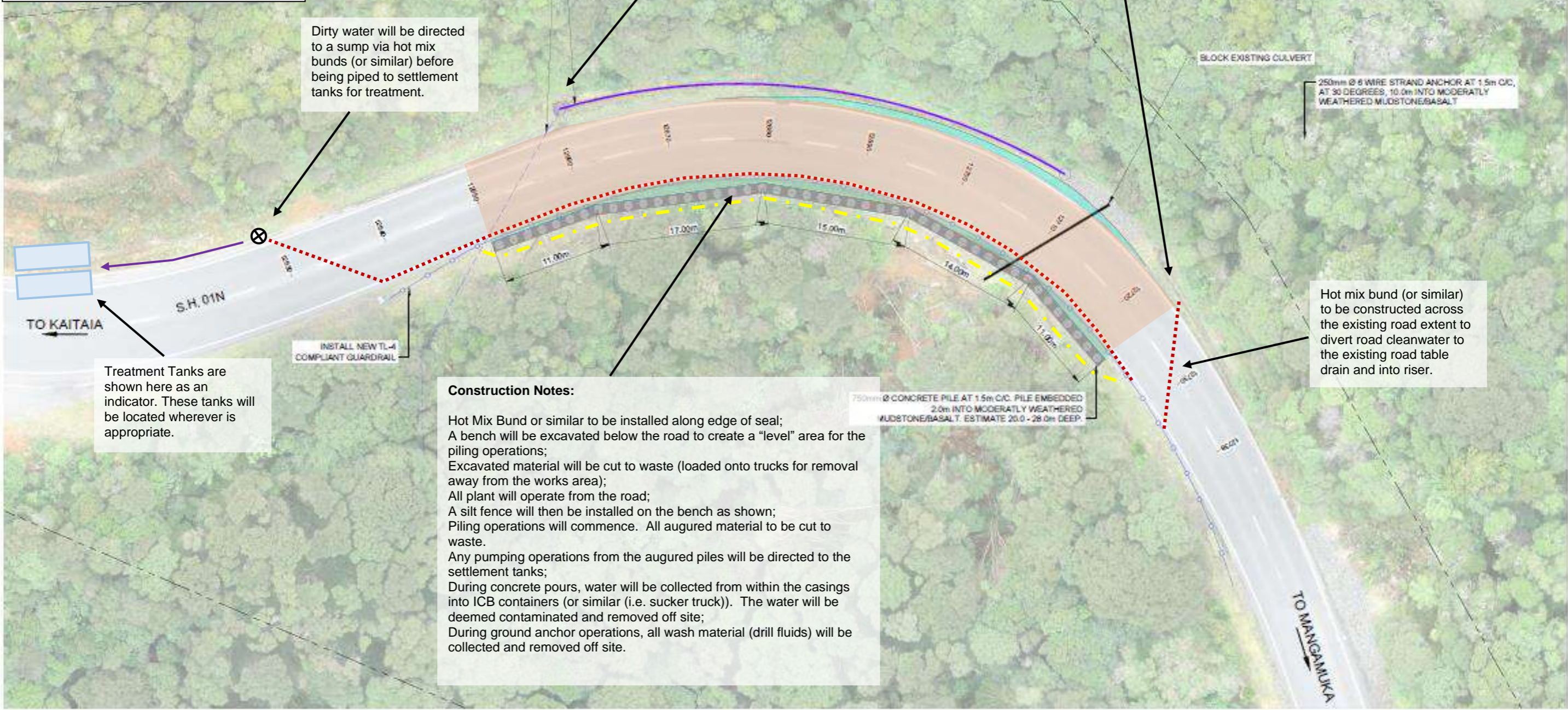
Name of Product	Total amount (Kg.L)	Solid, liquid or gas	Size of the container	Location	HSNO approval number and name of group standard UN class and packing group	HSNO classification (if available)	Special storage requirements

## Appendix B – ESC Drawings



**KEY**  
**Erosion and Sediment Control**

- Pipe
- ⊗ Sump
- Hot Mix Bund (or similar)
- Silt Fence
- Dirty Catchment Area
- Treatment Tanks



**Construction Notes:**

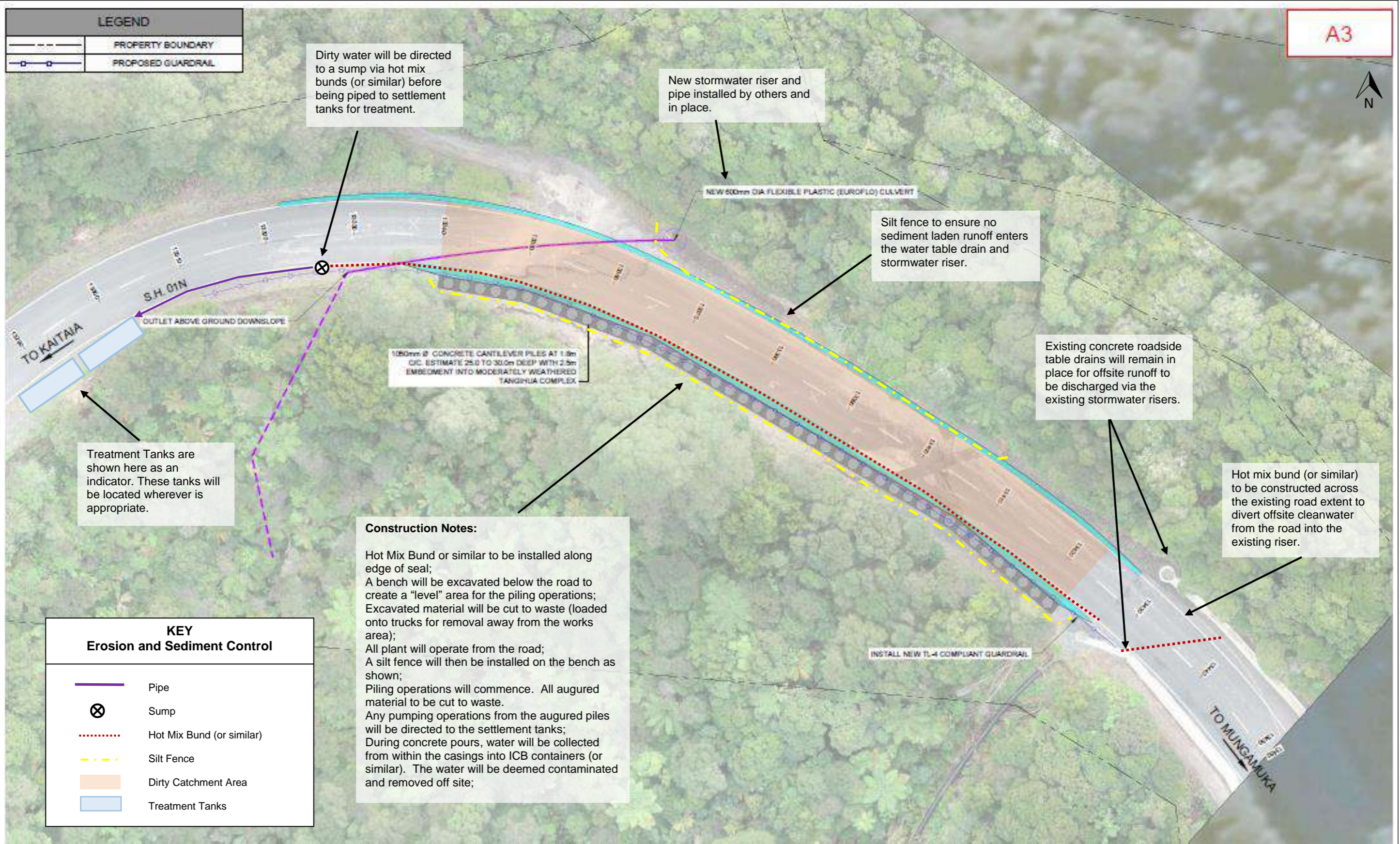
Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar (i.e. sucker truck)). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.

- NOTES**
1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  2. Earthworks are to be programmed to ensure rapid stabilisation.
  3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	TH

Drawn <b>MD</b>	Checked <b>CS</b>
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Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Stage A1 - 2</b>
Drawing No.	<b>ESCP-001-01</b>
Sheet No.	<b>01</b>



A3



LEGEND	
	PROPERTY BOUNDARY
	PROPOSED GUARDRAIL

Dirty water will be directed to a sump via hot mix bunds (or similar) before being piped to settlement tanks for treatment.

New stormwater riser and pipe installed by others and in place.

Silt fence to ensure no sediment laden runoff enters the water table drain and stormwater riser.

Existing concrete roadside table drains will remain in place for offsite runoff to be discharged via the existing stormwater risers.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the existing riser.

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate.

100mm Ø CONCRETE CANTILEVER PILES AT 1.5m O.C. ESTIMATE 25.0 TO 30.0m DEEP WITH 2.5m EMBEDMENT INTO MODERATELY WEATHERED TANGIHUA COMPLEX

**Construction Notes:**

Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;

KEY Erosion and Sediment Control	
	Pipe
	Sump
	Hot Mix Bund (or similar)
	Silt Fence
	Dirty Catchment Area
	Treatment Tanks

- NOTES**
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  - Earthworks are to be programmed to ensure rapid stabilisation.
  - All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  - Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	

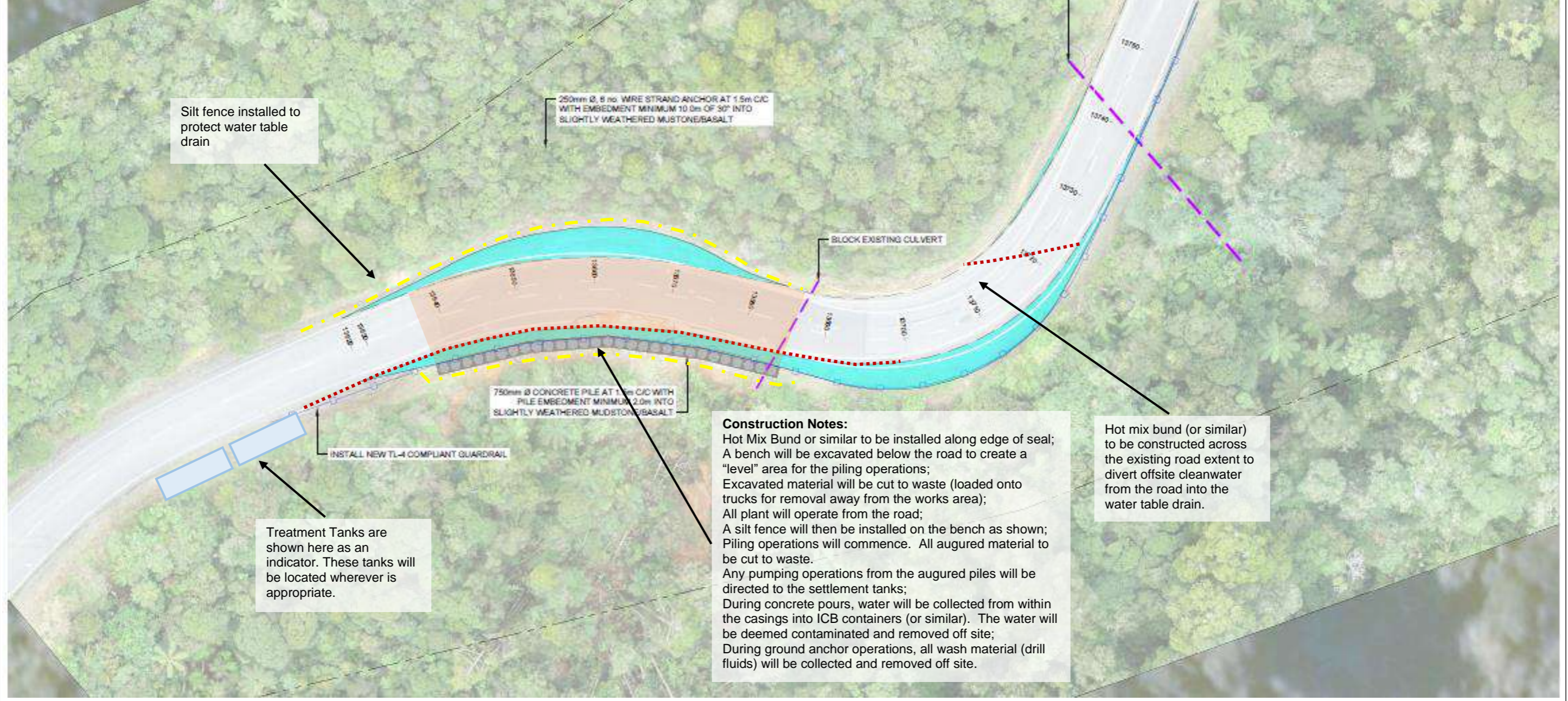


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Project <b>MAUNGAMUKA GORGE</b>	Sheet No. <b>01</b>
Title <b>Erosion and Sediment Control Plan – Stage A3</b>	Drawing No. <b>ESCP-001-01</b>



KEY Erosion and Sediment Control	
	Pipe
	Sump
	Hot Mix Bund (or similar)
	Silt Fence
	Dirty Catchment Area
	Treatment Tanks



**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the water table drain.

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate.

**NOTES**

- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	TH



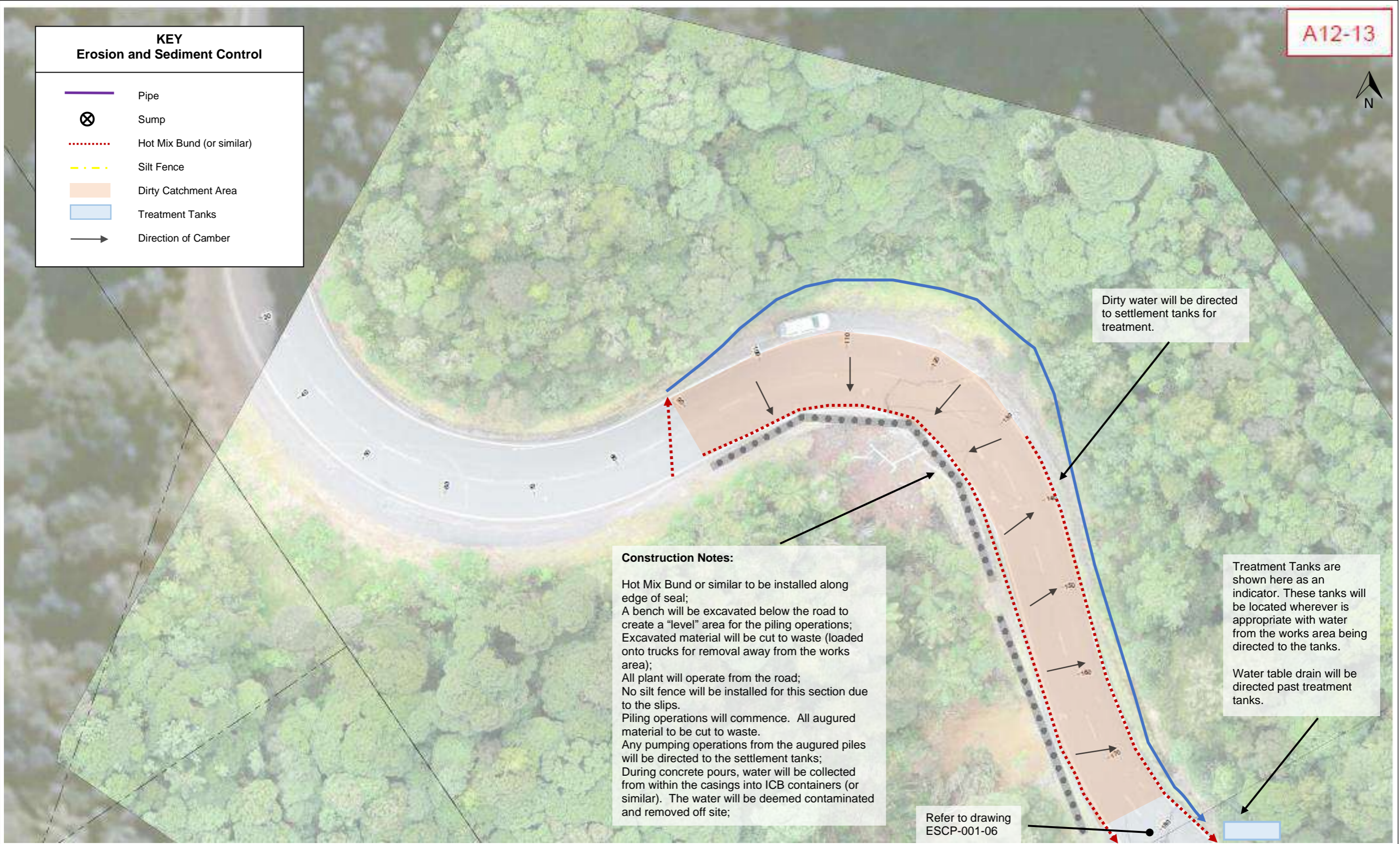
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Project <b>MAUNGAMUKA GORGE</b>	Sheet No. <b>03</b>
Title <b>Erosion and Sediment Control Plan – Stage A5</b>	Drawing No. <b>ESCP-001-03</b>





KEY Erosion and Sediment Control	
	Pipe
	Sump
	Hot Mix Bund (or similar)
	Silt Fence
	Dirty Catchment Area
	Treatment Tanks
	Direction of Camber



**Construction Notes:**

Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 No silt fence will be installed for this section due to the slips.  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;

Refer to drawing ESCP-001-06

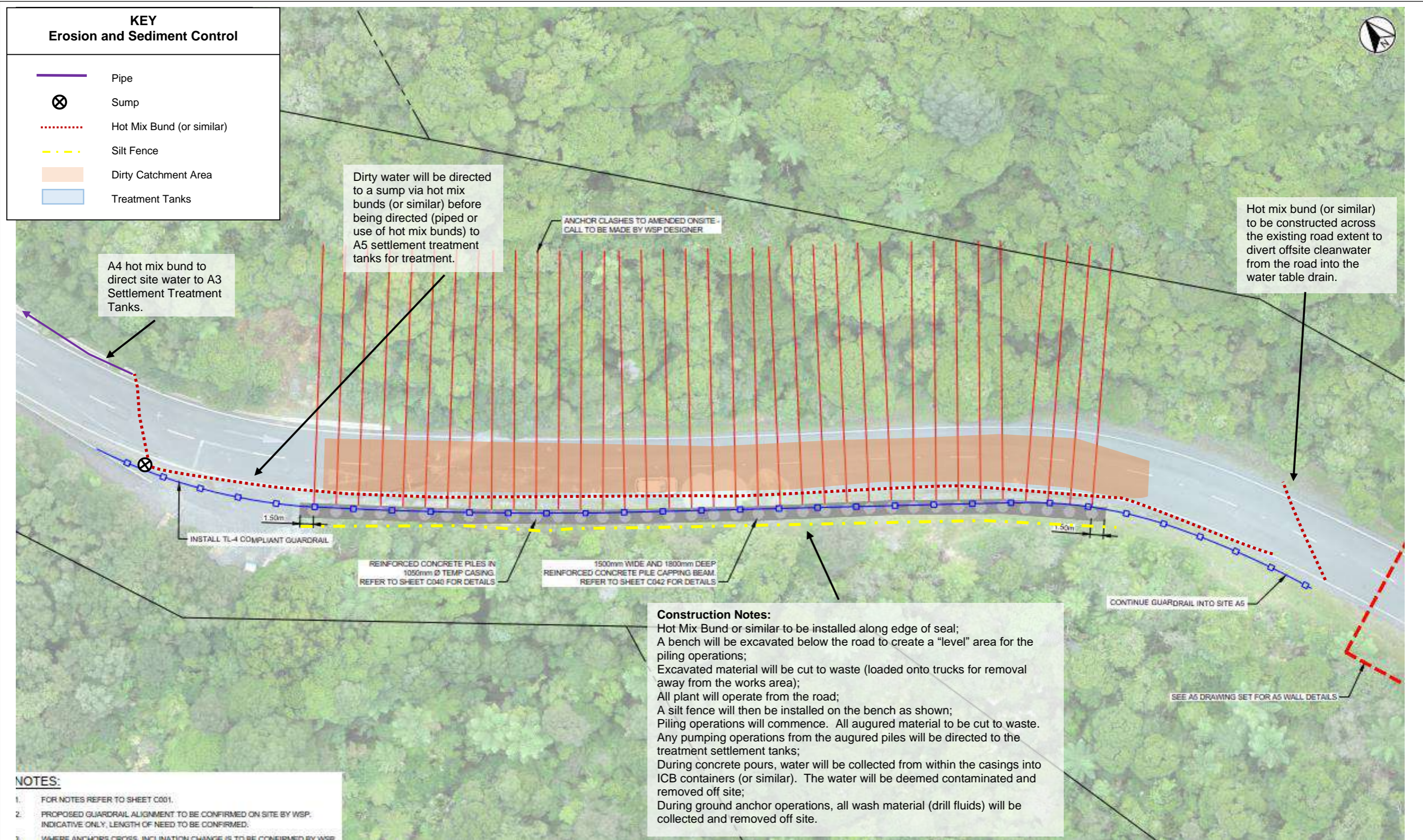
**NOTES**

- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
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Drawn <b>MD</b>	Checked <b>CS</b>
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Project <b>MANGAMUKA GORGE</b>	Sheet No. <b>05</b>
Title <b>Erosion and Sediment Control Plan – Stage A12-13 (Sheet 1 of 2)</b>	Drawing No. <b>ESCP-001-05</b>



**KEY**  
Erosion and Sediment Control

- Pipe
- ⊗ Sump
- ⋯ Hot Mix Bund (or similar)
- - - Silt Fence
- Dirty Catchment Area
- Treatment Tanks

A4 hot mix bund to direct site water to A3 Settlement Treatment Tanks.

Dirty water will be directed to a sump via hot mix bunds (or similar) before being directed (piped or use of hot mix bunds) to A5 settlement treatment tanks for treatment.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the water table drain.

ANCHOR CLASHES TO AMENDED ONSITE - CALL TO BE MADE BY WSP DESIGNER

INSTALL TL-4 COMPLIANT GUARDRAIL

REINFORCED CONCRETE PILES IN 1050mm Ø TEMP CASING. REFER TO SHEET C040 FOR DETAILS

1500mm WIDE AND 1800mm DEEP REINFORCED CONCRETE PILE CAPPING BEAM. REFER TO SHEET C042 FOR DETAILS

CONTINUE GUARDRAIL INTO SITE A5

SEE A5 DRAWING SET FOR A5 WALL DETAILS

**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste. Any pumping operations from the augured piles will be directed to the treatment settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.

- NOTES:**
1. FOR NOTES REFER TO SHEET C001.
  2. PROPOSED GUARDRAIL ALIGNMENT TO BE CONFIRMED ON SITE BY WSP. INDICATIVE ONLY, LENGTH OF NEED TO BE CONFIRMED.
  3. WHERE ANCHORS CROSS, INCLINATION CHANGE IS TO BE CONFIRMED BY WSP.

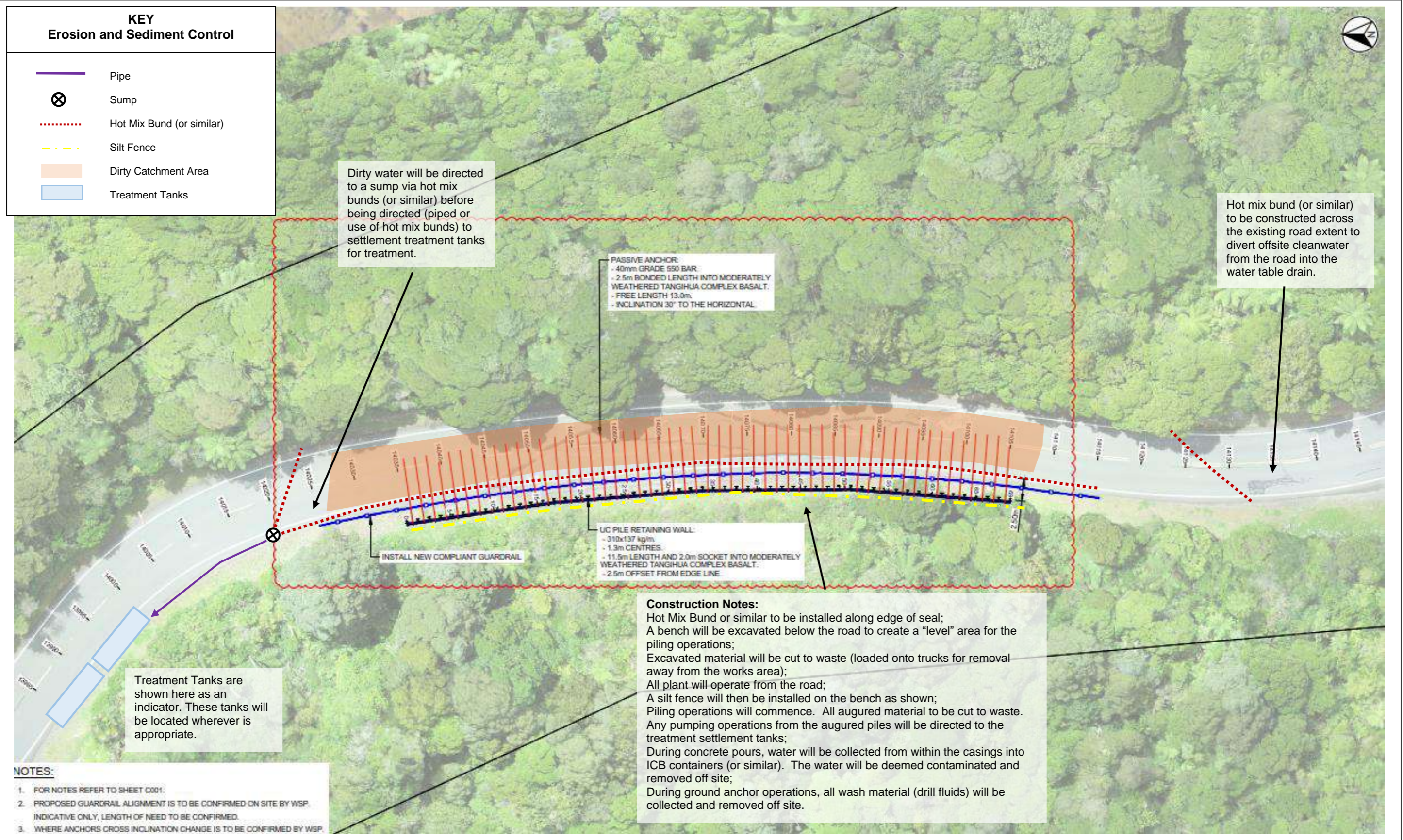
- NOTES**
1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  2. Earthworks are to be programmed to ensure rapid stabilisation.
  3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

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A	08.11.24	Draft for review.	TH



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Project <b>MAUNGAMUKA GORGE</b>	Sheet No. <b>09</b>
Title <b>Erosion and Sediment Control Plan – Stage A4</b>	Drawing No. <b>ESCP-001-09</b>



**NOTES**

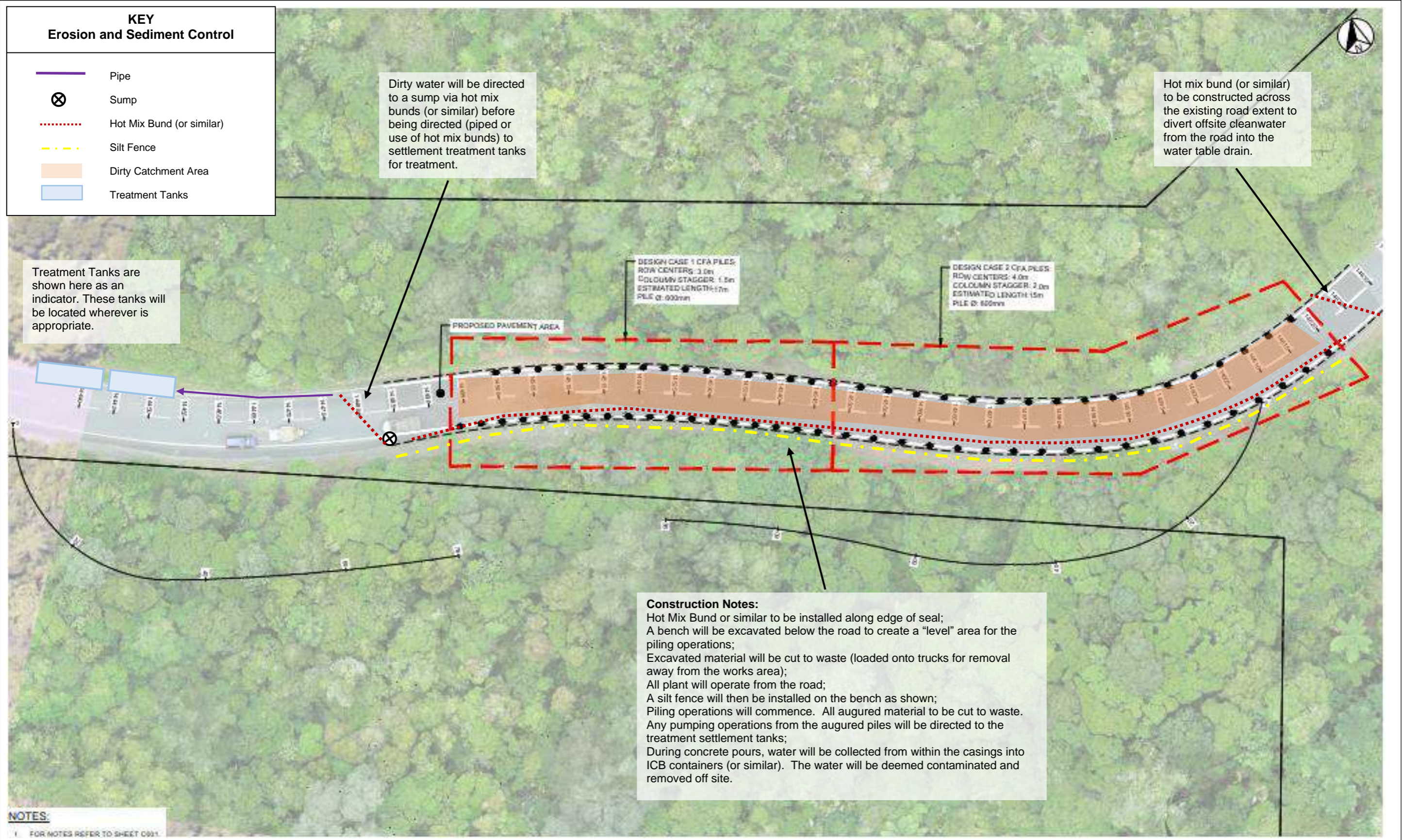
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

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Project <b>MAUNGAMUKA GORGE</b>	Sheet No. <b>10</b>
Title <b>Erosion and Sediment Control Plan – Stage A7</b>	Drawing No. <b>ESCP-001-10</b>



Dirty water will be directed to a sump via hot mix bunds (or similar) before being directed (piped or use of hot mix bunds) to settlement treatment tanks for treatment.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the water table drain.

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate.

**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the treatment settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site.

**NOTES:**  
 1. FOR NOTES REFER TO SHEET 0011.

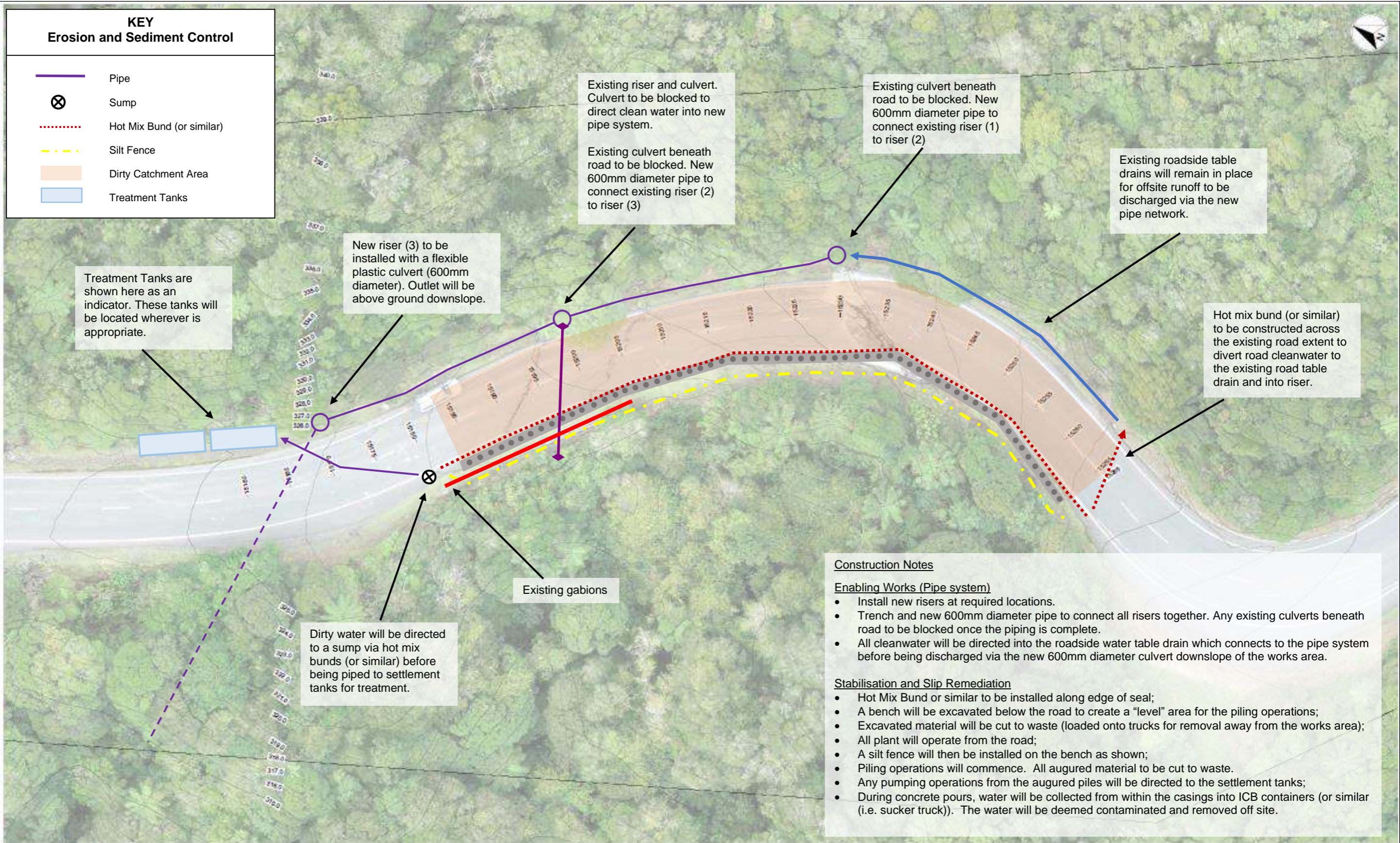
- NOTES**
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  - Earthworks are to be programmed to ensure rapid stabilisation.
  - All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  - Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	08.11.24	Draft for review.	TH



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Project <b>MAUNGAMUKA GORGE</b>	Sheet No. <b>11</b>
Title <b>Erosion and Sediment Control Plan – Stage A8</b>	Drawing No. <b>ESCP-001-11</b>



Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate.

New riser (3) to be installed with a flexible plastic culvert (600mm diameter). Outlet will be above ground downslope.

Existing riser and culvert. Culvert to be blocked to direct clean water into new pipe system.

Existing culvert beneath road to be blocked. New 600mm diameter pipe to connect existing riser (2) to riser (3)

Existing culvert beneath road to be blocked. New 600mm diameter pipe to connect existing riser (1) to riser (2)

Existing roadside table drains will remain in place for offsite runoff to be discharged via the new pipe network.

Hot mix bund (or similar) to be constructed across the existing road extent to divert road cleanwater to the existing road table drain and into riser.

Existing gabions

Dirty water will be directed to a sump via hot mix bunds (or similar) before being piped to settlement tanks for treatment.

**Construction Notes**

Enabling Works (Pipe system)

- Install new risers at required locations.
- Trench and new 600mm diameter pipe to connect all risers together. Any existing culverts beneath road to be blocked once the piping is complete.
- All cleanwater will be directed into the roadside water table drain which connects to the pipe system before being discharged via the new 600mm diameter culvert downslope of the works area.


Stabilisation and Slip Remediation

- Hot Mix Bund or similar to be installed along edge of seal;
- A bench will be excavated below the road to create a "level" area for the piling operations;
- Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);
- All plant will operate from the road;
- A silt fence will then be installed on the bench as shown;
- Piling operations will commence. All augured material to be cut to waste.
- Any pumping operations from the augured piles will be directed to the settlement tanks;
- During concrete pours, water will be collected from within the casings into ICB containers (or similar (i.e. sucker truck)). The water will be deemed contaminated and removed off site.

**NOTES**

1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	TH

		Project	<b>MAUNGAMUKA GORGE</b>
		Title	<b>Erosion and Sediment Control Plan – Stage A9</b>
Drawn <b>MD</b>	Checked <b>CS</b>	Drawing No. <b>ESCP-001-04</b>	Sheet No. <b>04</b>



KEY Erosion and Sediment Control	
	Pipe
	Sump
	Hot Mix Bund (or similar)
	Silt Fence
	Dirty Catchment Area
	Treatment Tanks

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate with water from the works area being directed to the tanks.

Water table drain will be directed past treatment tanks.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the existing water table drain.

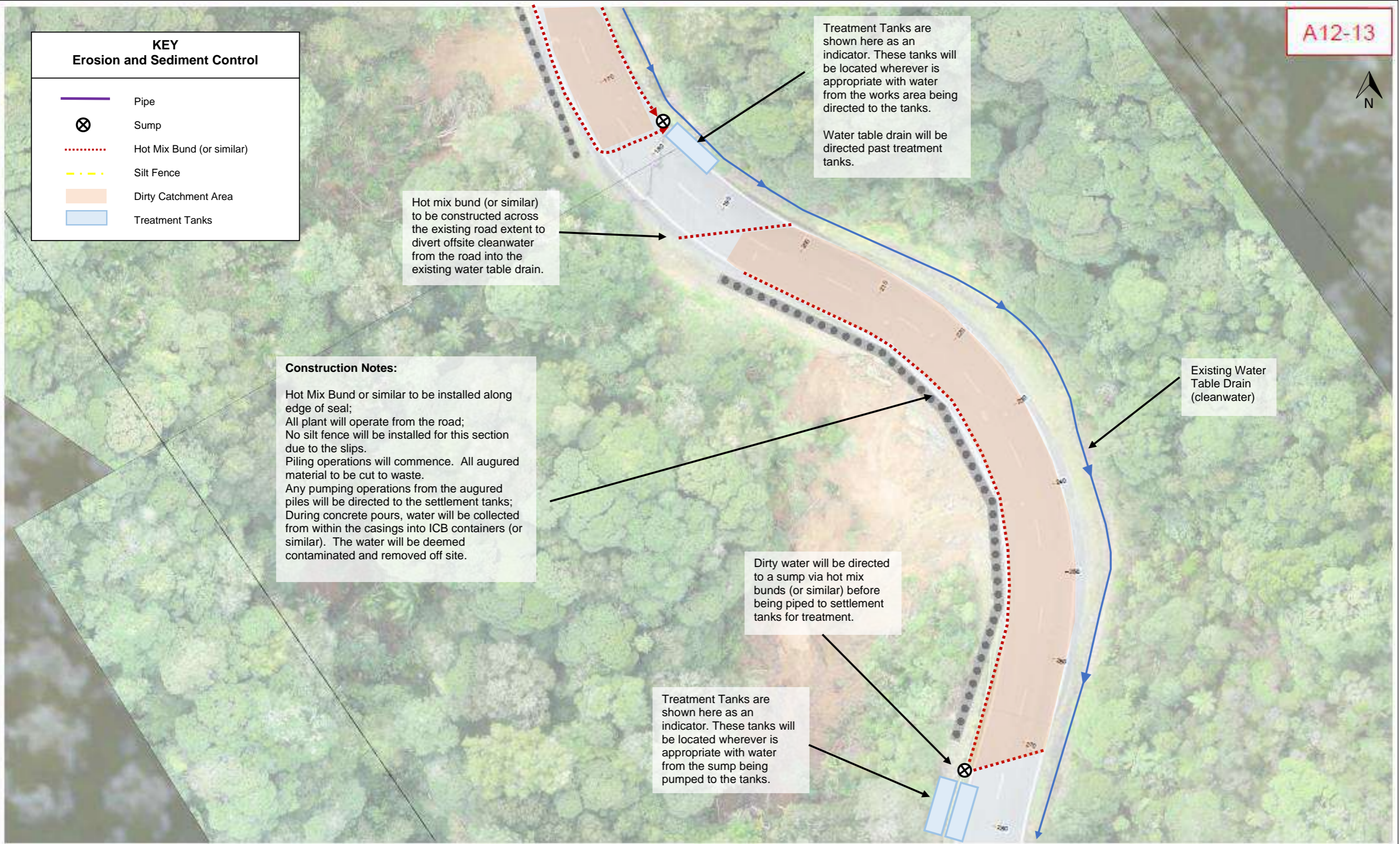
**Construction Notes:**

Hot Mix Bund or similar to be installed along edge of seal;  
 All plant will operate from the road;  
 No silt fence will be installed for this section due to the slips.  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site.

Dirty water will be directed to a sump via hot mix bunds (or similar) before being piped to settlement tanks for treatment.

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate with water from the sump being pumped to the tanks.

Existing Water Table Drain (cleanwater)



- NOTES**
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  - Earthworks are to be programmed to ensure rapid stabilisation.
  - All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  - Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.






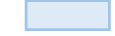
REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	TH



Drawn <b>MD</b>	Checked <b>CS</b>
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Project <b>MANGAMUKA GORGE</b>	Sheet No. <b>06</b>
Title <b>Erosion and Sediment Control Plan – Stage A12-13 (Sheet 2 of 2)</b>	Drawing No. <b>ESCP-001-06</b>

**KEY**  
**Erosion and Sediment Control**

-  Pipe
-  Sump
-  Hot Mix Bund (or similar)
-  Silt Fence
-  Dirty Catchment Area
-  Treatment Tanks



A5 hot mix bund to direct site water to A5 Settlement Treatment Tanks.

Dirty water will be directed to a sump via hot mix bunds (or similar) before being directed (piped or use of hot mix bunds) to A5 settlement treatment tanks for treatment.

Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the water table drain.

**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the treatment settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.







- NOTES**
1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  2. Earthworks are to be programmed to ensure rapid stabilisation.
  3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	19.06.23	Draft for review.	TH



<b>Drawn</b> MD	<b>Checked</b> CS
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Project	MAUNGAMUKA GORGE
Title	Erosion and Sediment Control Plan – Stage A6
Drawing No.	ESCP-001-07
Sheet No.	07

KEY Erosion and Sediment Control	
	Pipe
	Sump
	Hot Mix Bund (or similar)
	Silt Fence
	Dirty Catchment Area
	Treatment Tanks



Hot mix bund (or similar) to be constructed across the existing road extent to divert offsite cleanwater from the road into the water table drain.

Treatment Tanks are shown here as an indicator. These tanks will be located wherever is appropriate.

Dirty water will be directed to a sump via hot mix bunds (or similar) before being directed (piped or use of hot mix bunds) to settlement treatment tanks for treatment.

**Construction Notes:**  
 Hot Mix Bund or similar to be installed along edge of seal;  
 A bench will be excavated below the road to create a "level" area for the piling operations;  
 Excavated material will be cut to waste (loaded onto trucks for removal away from the works area);  
 All plant will operate from the road;  
 A silt fence will then be installed on the bench as shown;  
 Piling operations will commence. All augured material to be cut to waste.  
 Any pumping operations from the augured piles will be directed to the treatment settlement tanks;  
 During concrete pours, water will be collected from within the casings into ICB containers (or similar). The water will be deemed contaminated and removed off site;  
 During ground anchor operations, all wash material (drill fluids) will be collected and removed off site.

- NOTES**
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  - Earthworks are to be programmed to ensure rapid stabilisation.
  - All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  - Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

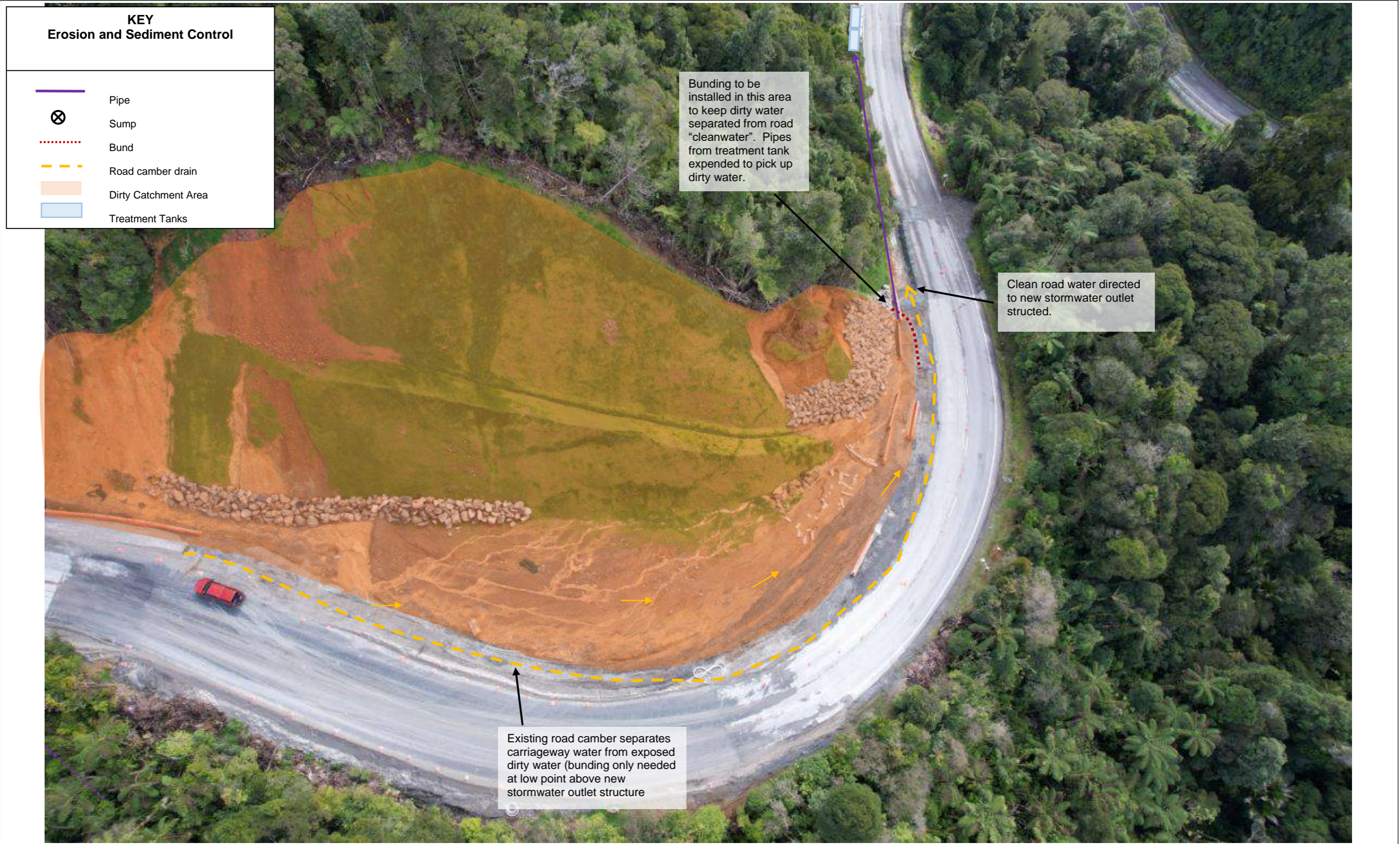
REV	DATE	REVISION DETAILS	APPROVED
A	05.07.23	Draft for review.	TH



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Project <b>MAUNGAMUKA GORGE</b>	Sheet No. 08
Title <b>Erosion and Sediment Control Plan – Stage A26</b>	Drawing No. ESCP-001-08





KEY Erosion and Sediment Control	
	Pipe
	Sump
	Bund
	Road camber drain
	Dirty Catchment Area
	Treatment Tanks

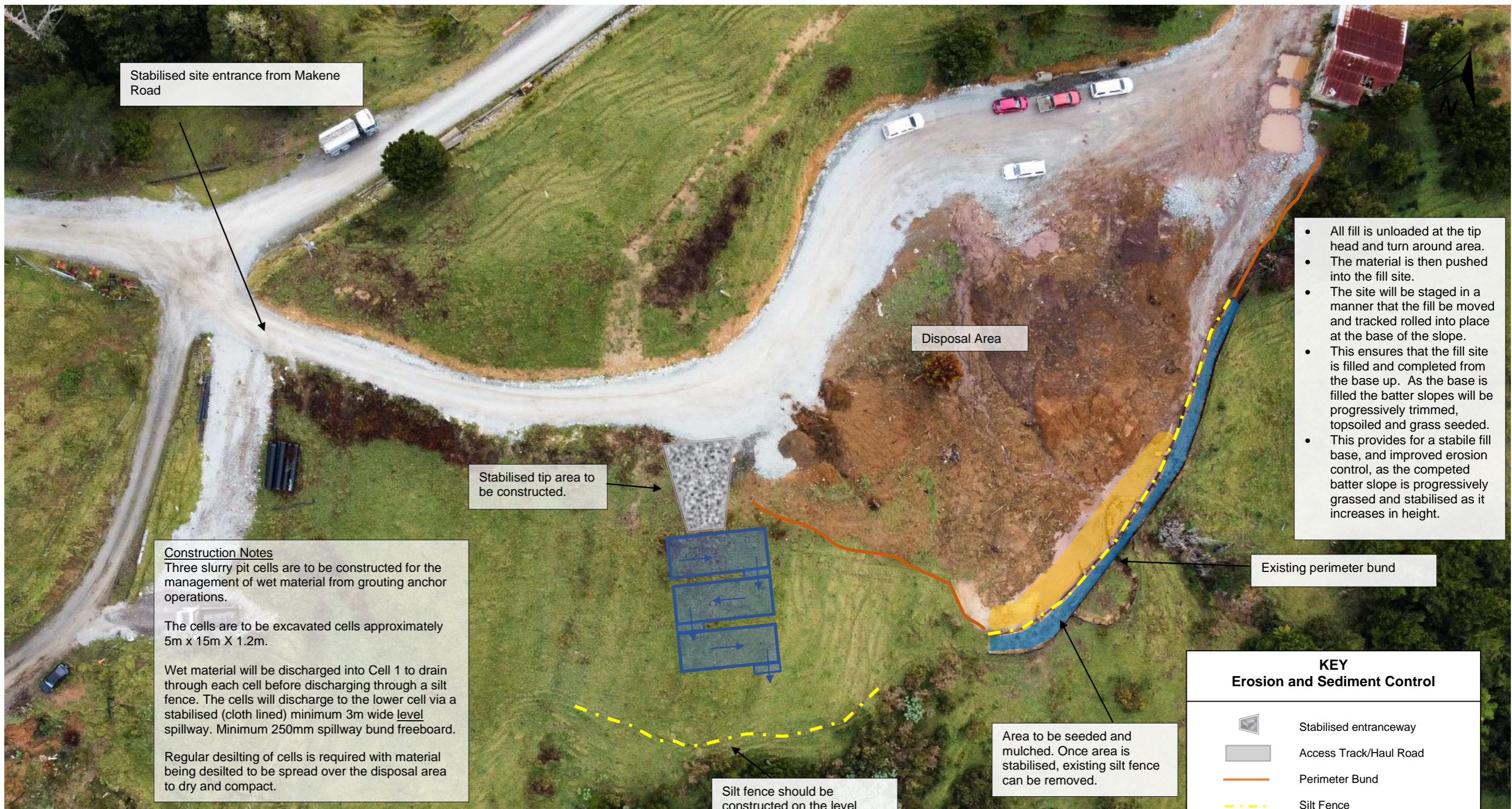
- NOTES**
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
  - Earthworks are to be programmed to ensure rapid stabilisation.
  - All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
  - Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	25.01.24	Draft for review.	TH
B	05.04.24	Updates due to methodology change	TH
C	31.08.24	Updates due to partial completion works	TH



Drawn <b>CS</b>	Checked <b>TH</b>
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Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Stage A11</b>
Drawing No.	<b>ESCP-001-09</b>
Sheet No.	<b>09</b>



Stabilised site entrance from Makene Road

Disposal Area

Stabilised tip area to be constructed.

**Construction Notes**  
 Three slurry pit cells are to be constructed for the management of wet material from grouting anchor operations.  
 The cells are to be excavated cells approximately 5m x 15m X 1.2m.  
 Wet material will be discharged into Cell 1 to drain through each cell before discharging through a silt fence. The cells will discharge to the lower cell via a stabilised (cloth lined) minimum 3m wide level spillway. Minimum 250mm spillway bund freeboard.  
 Regular desilting of cells is required with material being desilted to be spread over the disposal area to dry and compact.

- All fill is unloaded at the tip head and turn around area.
- The material is then pushed into the fill site.
- The site will be staged in a manner that the fill be moved and tracked rolled into place at the base of the slope.
- This ensures that the fill site is filled and completed from the base up. As the base is filled the batter slopes will be progressively trimmed, topsoiled and grass seeded.
- This provides for a stable fill base, and improved erosion control, as the completed batter slope is progressively grassed and stabilised as it increases in height.

Existing perimeter bund

Area to be seeded and mulched. Once area is stabilised, existing silt fence can be removed.

Silt fence should be constructed on the level contour along the edge of the flat area.

**KEY**  
**Erosion and Sediment Control**

- Stabilised entranceway
- Access Track/Haul Road
- Perimeter Bund
- Silt Fence
- Stabilised Area
- Area to fill and level

**NOTES**









- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

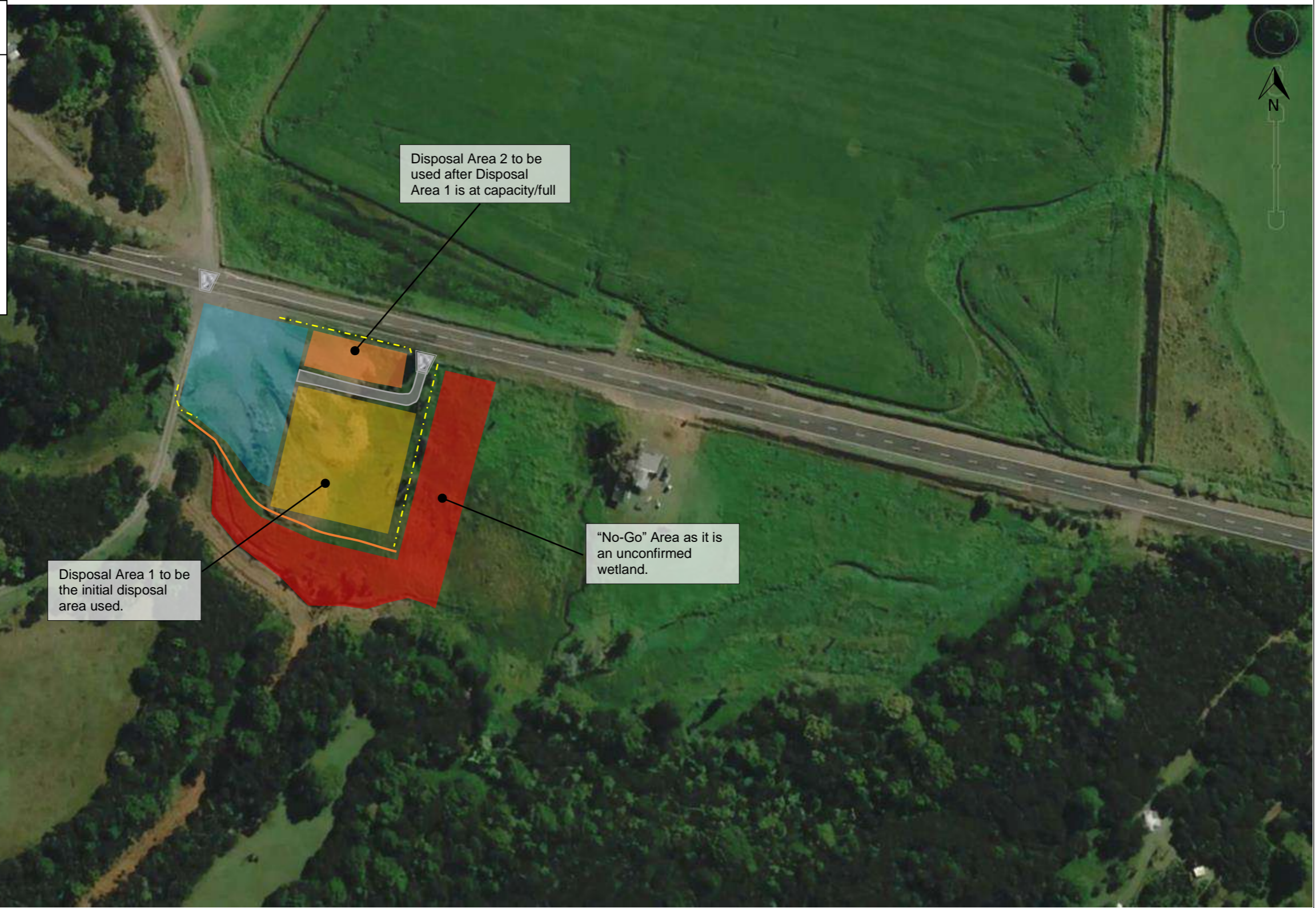
REV	DATE	REVISION DETAILS	APPROVED
A	03.04.23	Draft for review.	TH
B	12.04.23	Updates	TH
C	19.06.23	Slurry Pit additions	TH

Drawn: MD  
 Checked: CS

Project	MAUNGAMUKA GORGE
Title	Erosion and Sediment Control Plan – Disposal Site Makene Road
Drawing No.	ESCP-002-01
Sheet No.	01

**KEY**  
**Erosion and Sediment Control**

-  Stabilised entranceway
-  Access Track/Haul Road
-  Perimeter Bund
-  Silt Fence
-  Stabilised Area
-  Disposal Area 1
-  Disposal Area 2
-  Unconfirmed Wetland Area



Disposal Area 2 to be used after Disposal Area 1 is at capacity/full

Disposal Area 1 to be the initial disposal area used.

"No-Go" Area as it is an unconfirmed wetland.

**NOTES**

1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.01.23	Draft for review.	









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Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Disposal Site South</b>
Drawing No.	<b>ESCP-001-01</b>
Sheet No.	<b>01</b>

**KEY**  
**Erosion and Sediment Control**

	Stabilised entranceway
	Access Track/Haul Road
	Perimeter Bund
	Silt Fence
	Stabilised Area
	Disposal Area 1



**Construction Notes**  
 Four cells are to be constructed for the management of wet material from grouting anchor operations.  
 To be confirmed if the cells will be tanks or banded cells.

Wet material will be discharged into Cell 1 to drain through each cell before discharging through a silt fence.

Regular desilting of cells is required with material being desilted to be spready over the disposal area (Disposal Area 1) to dry and compacted.

Stabilised site entrance from SH1 to be constructed and maintained.

**NOTES**

- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	03.03.23	Draft for review.	TH
B	03.04.23	Update of Disposal Area	TH
C	15.05.23	Cell Construction	TH



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**MD**

Checked  
**CS**

Project	<b>MAUNGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Disposal Site North</b>
Drawing No.	<b>ESCP-001-01</b>
Sheet No.	<b>01</b>



**NOTES**

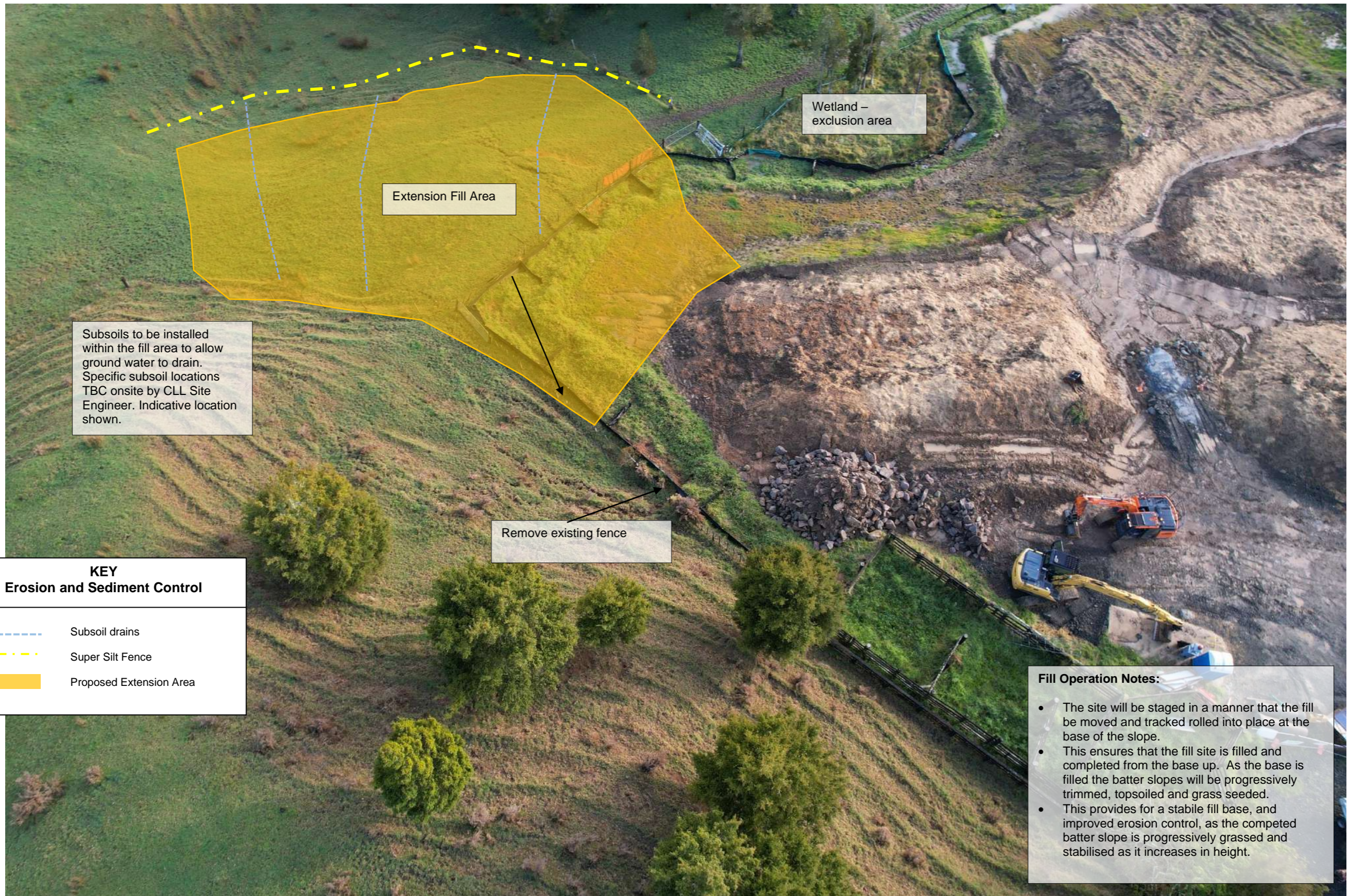
- All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
- Earthworks are to be programmed to ensure rapid stabilisation.
- All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
- Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	16.05.23	Draft for review.	TH



Drawn <b>MD</b>	Checked <b>CS</b>
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Project <b>MAUNGAMUKA GORGE</b>	Title <b>Erosion and Sediment Control Plan – Disposal Site Peria Valley Road</b>
Drawing No. <b>ESCP-003-01</b>	Sheet No. <b>01</b>



**KEY**  
**Erosion and Sediment Control**

- - - - - Subsoil drains  
- - - - - Super Silt Fence  
 Proposed Extension Area

**Fill Operation Notes:**

- The site will be staged in a manner that the fill be moved and tracked rolled into place at the base of the slope.
- This ensures that the fill site is filled and completed from the base up. As the base is filled the batter slopes will be progressively trimmed, topsoiled and grass seeded.
- This provides for a stable fill base, and improved erosion control, as the completed batter slope is progressively grassed and stabilised as it increases in height.

**NOTES**

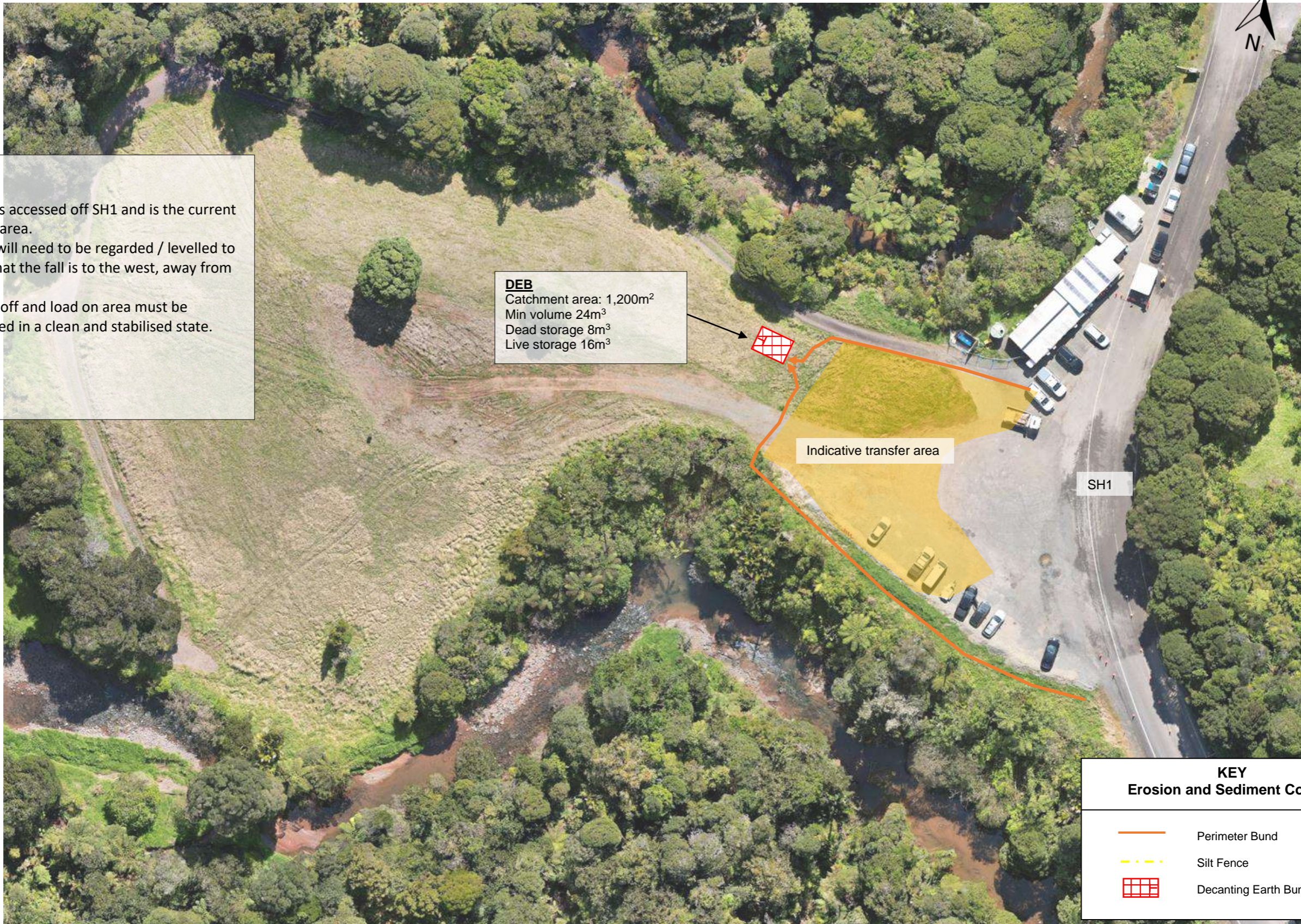
1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	31.08.24	Draft for review.	TH



<b>Drawn</b> MD	<b>Checked</b> CS
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<b>Project</b> MAUNGAMUKA GORGE	<b>Sheet No.</b> 01
<b>Title</b> Erosion and Sediment Control Plan – Disposal Site Peria Valley Road - Extension	<b>Drawing No.</b> ESCP-003-02






**Operation Notes:**

- ▶ The site is accessed off SH1 and is the current laydown area.
- ▶ The site will need to be regarded / levelled to ensure that the fall is to the west, away from SH1.
- ▶ The load off and load on area must be maintained in a clean and stabilised state.

**DEB**  
 Catchment area: 1,200m<sup>2</sup>  
 Min volume 24m<sup>3</sup>  
 Dead storage 8m<sup>3</sup>  
 Live storage 16m<sup>3</sup>

Indicative transfer area

SH1

KEY Erosion and Sediment Control	
	Perimeter Bund
	Silt Fence
	Decanting Earth Bund (DEB)

**NOTES**

1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.




REV	DATE	REVISION DETAILS	APPROVED
A	19.04.24	Draft for review.	TH



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CS

Project	<b>MANGAMUKA GORGE</b>
Title	<b>Erosion and Sediment Control Plan – Southern Gate Transfer Area – April 2024</b>
Drawing No.	ESCP-001-01
Sheet No.	01

KEY Erosion and Sediment Control	
	Silt Sock
	Silt Fence
	Fill Area



**Operation Notes:**

Temporary Spoil Area has been designed to accommodate approximately 1,500m³ of spoil material.

- Sediment Control will be via silt fences and silt socks
- A silt soc is to be installed across the entry point when rain is forecast or left over night.
- All spoil will be unloaded towards the back of the designated area first. The entry point into the spoil area will be maintained in a stabilised and clean state.
- Spoil will be grass seeded on a regular basis.

**NOTES**

1. All erosion and sediment controls will be installed and maintained in accordance with Auckland Council Guideline Document 2016/005 'Erosion and Sediment Control Guide for Land Disturbing Activities' (GD05).
2. Earthworks are to be programmed to ensure rapid stabilisation.
3. All erosion and sediment control measures will be inspected on a daily basis by the site foreman.
4. Site monitoring will be undertaken before and immediately after rain as well as during heavy rainfall events. Any required maintenance or improvements to control measures will be undertaken immediately.

REV	DATE	REVISION DETAILS	APPROVED
A	20.08.24	Draft for review.	TH
B	30.08.24	Final	TH



Drawn  
MD

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CS

Project

**MANGAMUKA GORGE**

Title

**Erosion and Sediment Control Plan –  
SH1 6770 Kaitaia Temporary Spoil Site**

Drawing No.

**ESCP-TSS-001-01**

Sheet No.

**01**



## Appendix C – Kauri Dieback Procedure



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

### 1 Application

This Plan forms a part of the Erosion and Sediment Control Plan (ESCP) for Mangamuka Gorge Road Rehabilitation works (the Project). The purpose of this Plan is to have the procedures in place to manage the risk of kauri dieback disease and to reduce the potential environmental impact the works may have on the spread of kauri dieback disease.

### 2 Scope of works

The construction activities of the Project include the following:

- Ground stability improvements (anchors);
- Retaining wall construction;
- Culvert works;
- Road reinstatement.

### 3 Potential Environmental Impacts of Activities.

Kauri (*Agathis australis*) are a cornerstone of the indigenous forests of the upper North Island and have had a large part to play not just in the landscape of Aotearoa but also in its culture and early history<sup>1</sup>. Kauri dieback is caused by a soil-borne pathogen. Minimising the movement of soil or plant material that is potentially contaminated with kauri dieback by people, animals, and limited natural spread (over small distances) is fundamental to the management of kauri dieback.

Kauri dieback spreads through the movement of contaminated soil and soil water and it is possible that it is also spread by streams and rivers particularly in times of flooding.

When working or conducting any activity within or around kauri or in native forests in Northland there is a risk of spreading kauri dieback. Kauri forests and stands can be less easily identifiable and have the potential to be in remnant forests across the region.

The key potential situations and the environmental impacts of these are:

Aspects	Impacts
Spread of kauri dieback disease around the local Native forests around the works area through the movement of soil via people, equipment/tools, heavy machinery, and vehicles.	Acute and chronic harm to local kauri by the spread of kauri dieback disease to healthy/uninfected kauri.

<sup>1</sup> Kauri Dieback Hygiene, Best Practice Guidelines; Northland Regional Council, March 2020



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

## 4 Key Responsibilities

### Responsibilities.

The **Project Director** is responsible for:

- Ensuring controls to prevent kauri dieback spreading are in place; and
- Ensuring protocols and procedures to manage the risk of kauri dieback are in place.

The **Project Manager** is responsible for:

- Ensuring the implementation of this Plan;
- Communicating requirements to relevant site personnel; and
- Ensuring all personnel have received appropriate instruction and training in avoiding and following kauri dieback procedures.

The **Site Engineer** is responsible for:

- Ensuring adequate hygiene points and wash down stations are available for all soil disturbing activities where kauri may be present;
- Ensuring that all hygiene kits are in stock; and
- Ensuring all site personnel have received appropriate instruction and training in avoiding and following kauri dieback procedures.

All **Site Personnel** are responsible for:

- Following the requirements of this Procedure; and
- Reporting any concerns, incidents, or observations to the Earthworks Manager or Site/Contract Manager

## 5 Kauri Dieback Disease Prevention Procedures

### 5.1 Hygiene Procedures

- Ensure all gear (footwear, tools, equipment, and machinery) is clean before entering and after leaving if Kauri have been identified nearby the work site. It is recommended that all gear is cleaned at the beginning and end of each day if leaving the site. 'Clean' refers to completely soil-free. Soil and organic material cleaned from equipment (including vehicles and heavy machinery), where possible should be collected and disposed of appropriately at an approved landfill. Alternatively, the material can be left in situ at the source.
  - Wheeled or tracked machinery and vehicles pose a high risk and therefore must be cleaned thoroughly to remove all soil.
  - Where possible, machinery and vehicles should remain on sealed road for the duration of the project.
  - When moving from one area of Kauri to another (between work sites), all equipment should be cleaned prior to moving. A full wash-down of soil and debris should occur on site prior to movement as this contains any problems at the source.
  - Where the above recommendation cannot occur, vehicles and machinery may be taken off site and cleaned in a wash-down facility, but all loose soil and debris must be removed at the kauri site prior to moving and care should be taken to ensure that risk of spread during transport to that facility is minimised.
  - Operators are expected to carry out their own inspections and cleaning, however these may be checked by local Department of Conservation (DOC) or council staff.
- Vehicles and personnel should remain on roads and tracks where possible, particularly in wet conditions. If it is required that vehicles or personnel need to move onto/off tracks, portable



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

phytosanitary packs are required to be used to ensure that kauri dieback is not carried onto the track from surrounding kauri or between high-risk areas.

- Phytosanitary kits must be used when leaving an area showing symptoms of kauri dieback disease.
- Operations should be carried out under dry soil conditions where possible.
- Work sites should ideally be located downslope of kauri areas.
- When entering or exiting a stream system, you must use portable phytosanitary packs to ensure kauri dieback is not carried into the stream from surrounding kauri or between high-risk areas.
- Raw materials (soil/substrate/gravel) should not be sourced from kauri areas. Materials should be sourced from a 'clean' source not containing kauri.
- If any vegetation removal is required, methods that do not disturb the soil should be used.
  - If any diseased kauri and vegetation (including weeds and native vegetation in diseased zones) are trimmed or cleared they must be left in-situ, composted for use on site, or disposed of at an appropriate landfill site.
  - If any soil/plant material is to be removed from a "controlled area" this must be managed with biosecurity approval.

### 5.2 Additional General Considerations

- Avoid or restrict introduction of high-risk products (soil/substrate/gravel/vegetation) to the area. If any high-risk products are required, they must be from reputable/biosecurity accredited sources.
- Managing or limiting vehicle access where appropriate should be considered.
- Managers, visitors and users must be aware when undertaking high-risk activities in an infected area.
- Good hygiene practices by all users/visitors should be encouraged.
- If both infected/symptomatic and uninfected sites are identified within an area, hygiene measures must be taken to avoid soil transfer from infected to uninfected. Activity should be planned to move from uninfected to infected areas (not vice-versa where possible).

### 5.3 Phytosanitary information

Kauri dieback spores can be removed from footwear and equipment simply by scrubbing them with clean water to remove all soil then allowing gear to dry. However, while not essential, using Sterigene will increase the effectiveness of these hygiene measures. Sterigene should be used at a 2% mix.

It is recommended that Sterigene disinfectant is used on footwear, equipment, machinery and other items that have been in contact with soil. Sterigene is a broad-spectrum disinfectant which is non-toxic, non-corrosive, biodegradable and environmentally friendly compared to other products.

Alternatively, Virkon and Janola (Bleach) may be used, however its application is limited in a forest situation and any application should be in accordance with the product's label instructions and Material Safety Data Sheet. Options for mixes are outlined below:

- 70% Methylated Spirits, 30% water.
- 25% Bleach, 75% water.
- 2% Sterigene Mix

All gear should first be cleaned to remove soil. Sterigene should then be sprayed onto the clean surfaces (and left to dry). Sterigene will not kill kauri dieback spores that are embedded in soil hence it is important to remove soil before applying the disinfectant.

Water, soil, or slurry and Sterigene from cleaning dirty equipment needs to be disposed of carefully:

- Solution must be drained into waste water drains, not the stormwater system, or disposed of on a lawn or gravel pad.
- If necessary, expired Sterigene may be discarded on a lawn or gravel pad.



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

- Do not let Sterigene drain into septic systems.
- Sinks connected to waste water systems are ideal for cleaning equipment off site.

Wearing reusable non disposable overshoe booties is an option for each kauri area. Sourcing an overshoe bootie that is durable and can be washed and reused regularly is recommended. These need to be cleaned at the hygiene point (disinfectant location at the edge of the works or forest area) like footwear. Disposable ones are not recommended.

### 5.4 Hygiene Kit Requirements

Outlined below are the items needed in hygiene kits around the site and at hygiene and wash down points:

- Stiff bristle scrubbing brush or broom;
- 500ml spray bottle with disinfectant (disinfectant mixes are outlined in Section 5.3);
- Boot bags;
- 1 litre pump sprayer with water.

For vehicle and heavy machinery wash down points the volumes of disinfectant and water will be larger than those listed above. These volumes will be dictated by the frequency of cleaning and the amount of equipment that needs to be cleaned on site. The same mixes of disinfectant will be used as listed in Section 5.3.

## 6 Wash-Down Sites

Wash down of vehicles and/or heavy machinery that was used within a kauri root zone should occur within that area where possible. If the vehicles/machinery have been operating outside a root zone, the wash-down should occur prior to exiting a kauri forest.

When selecting a suitable wash-down site, the following should be considered:

- Hard stand area and well drained surface (e.g., road near the edge, firm grass or gravel).
- At least 30m away from a water course or water body. This includes drains that discharge to water courses such as stormwater drains and culverts.
- An area within the root zone, if use of equipment and vehicles has occurred in this area.
- Is of gentle slope to drain wastewater away from:
  - The wash-down area and into a kauri root zone.
  - Water catchment.
  - Areas outside the kauri root zone.
  - Vehicles and heavy machinery being washed to prevent potential re-contamination.
- Enable cleaned objects to exit without being re-contaminated.
- Undertaking a risk assessment of the site to inform a health and safety risk management plan e.g., working around powerlines.

Where runoff cannot be managed to an acceptable standard (e.g., large quantity of wastewater and/or an extensive runoff) construction of a bund and sump may be required to safely dispose of the wastewater. DO not drive through wash down wastewater as this may re-contaminate the vehicle/machinery.

If wash down cannot occur in the forest, then the vehicles and/or heavy machinery should be taken to a suitable facility off site for decontamination. All loose soil and vegetation should be physically removed (preferably when dry) where possible before the vehicle or heavy machinery is transported offsite. This can be removed using a hard brush or broom or by using compressed air. Pay attention to the underside, between dual wheels,



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

sump guards, mud flaps, hollow sections, foot wells, and bumper bars. The amount of water used should be minimised.

Footwear and equipment/tool hygiene points should be installed at the entrance and exit of a kauri forest site. If the same access point is used when moving from one area of kauri to another, a hygiene point should be set up between the two areas. Footwear should be cleaned following the procedures outlined in Section 5.3 and Section 5.4.

## 7 External Contacts

Kauri Dieback Helpline	0800 NZ KAURI
Kauri Dieback Team – Northland Regional Council	<a href="mailto:kauridieback@nrc.govt.nz">kauridieback@nrc.govt.nz</a>

### Project Team Contacts

Project Director: Vaughn Robbins	027 492 3576
Project Manager: Chris Tuxford	0272695275
ESC & Environmental: Campbell Stewart	021 837825
Site Engineer: Tim Hunger	0275719111

**APPENDIX B - Outline Plan 2240268-RMAOUT**

## **FAR NORTH DISTRICT COUNCIL**

### **FAR NORTH OPERATIVE DISTRICT PLAN**

#### **IN THE MATTER OF**

The Resource Management Act 1991

#### **AND**

#### **IN THE MATTER OF**

an application for Outline Plan Assessment  
under the aforesaid Act by

**New Zealand Transport Agency**

FILE NUMBER: **2240268-RMAOUT**

#### **OUTLINE PLAN APPLICATION**

The proposal is to to realign a 270m long section of road at Slip A11 that involves approximately 25514m<sup>3</sup> of cut and 354m<sup>3</sup> of fill earthworks and approximately 4282m<sup>3</sup> of vegetation clearance.

The property in respect of which the application is made is situated State Highway 1, Mangamuka 0476.

The site is designated as under the Far North Operative District Plan (September 2009).

#### **OUTLINE PLAN DETERMINATION**

That pursuant to Section 176A of the Resource Management Act 1991, the Council has assessed the application by New Zealand Transport Agency to realign a 270m long section of road at Slip A11 that involves approximately 25514m<sup>3</sup> of cut and 354m<sup>3</sup> of fill earthworks and approximately 4282m<sup>3</sup> of vegetation clearance located State Highway 1, Mangamuka 0476 and has determined that the proposal may proceed without change to that which is shown on the approved plans prepared by WSP, referenced WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022, dated December 2023, and attached to this consent with the Council's "Approved Plan" stamp affixed to it and is subject to the following recommendations:

1. **It is recommended** that to ensure silt, sediment and dust control measures are maintained by an appropriately qualified and experienced person a site walk over shall be undertaken daily before leaving the site to identify any corrective maintenance required. A more thorough inspection shall be undertaken at the end of each week, before and after a major forecast storm event.



**DECISION PREPARED BY: Eden Nathan, Consents Planner**

**CONSENT GRANTED UNDER DELEGATED AUTHORITY:**

A handwritten signature in black ink, appearing to read 'Tianxu' or 'Brian', written in a cursive style.

**Tianxu (Brian) Huang**  
Team Leader – Resource Consents

**DATE: 5 February 2024**  
**2240268-RMAOUT**



Far North  
District Council

Private Bag 752, Memorial Ave

Kaikōhe 0440, New Zealand

Freephone: 0800 920 029

Phone: (09) 401 5200

Fax: (09) 401 2137

Email: [osk.us@fndc.govt.nz](mailto:osk.us@fndc.govt.nz)

Website: [www.fndc.govt.nz](http://www.fndc.govt.nz)

**Application No: 2240268-RMAOUT**

*Te Kaunihera o Tai Tokerau Ki Te Raki*

*The top place where talent  
wants to live, work and invest*

5 February 2024

New Zealand Transport Agency  
C/- Stellar Projects Ltd  
PO Box 33915  
Takapuna  
Auckland 0740

Tēnā koe New Zealand Transport Agency,

Re: **2240268-RMAOUT - Outline Plan – OUTLINE PLAN ASSESSMENT**

I am pleased to inform you that your application for outline plan consideration has been accepted. The decision and any recommendations are enclosed for your information. The application was considered and determined under authority delegated to the Resource Consents Manager, District Services, of the Far North District Council, pursuant to Section 34 (4) of the Resource Management Act 1991.

It is important that you advise the territorial authority as soon as practicable of your acceptance or otherwise of any changes requested to the Outline Plan. If you have any questions or concerns about any aspect of this assessment or its suggested changes, please contact the planner who prepared the decision.

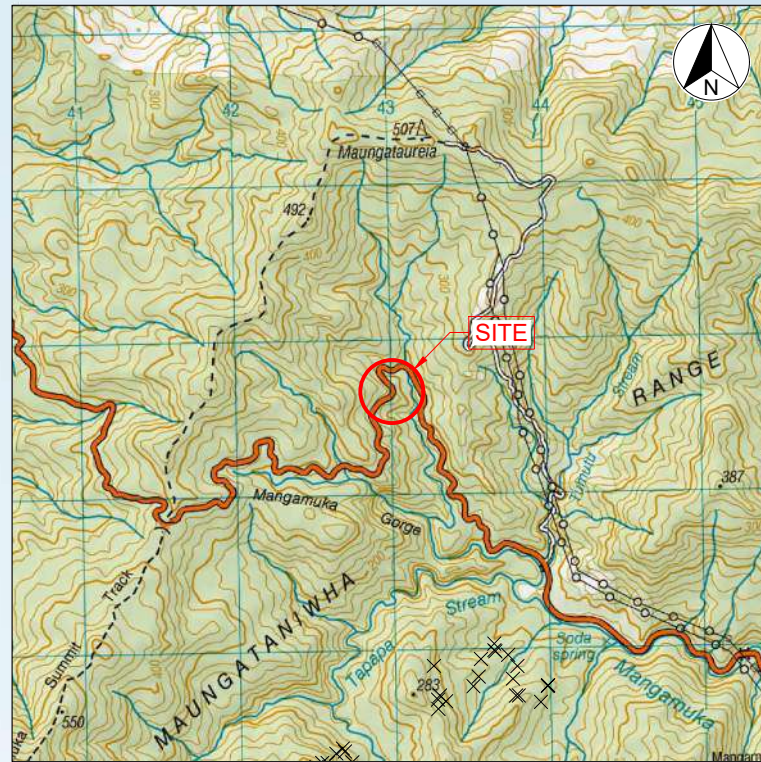
If you have any further queries regarding this matter, please contact the reporting planner on 09 401 5200 or 0800 920 029.

Ngā mihi,

A handwritten signature in black ink that reads "Edennathan".

Eden Nathan  
Consents Planner  
**Delivery and Operations**





---

**WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY**  
**S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND**  
**A11 NZTA EMERGENCY WORKS 2022**

---

**CIVIL**  
**DETAILED DESIGN**

Project No: 1-11241.13(A11)  
Date: DECEMBER 2023

**APPROVED PLAN**  
Planner: ENathan  
RC: 2240268-RMAOUT  
Date: 5/02/2024

DRAWING INDEX		
SHEET No.	SHEET TITLE	REV. No.
GENERAL OVERVIEW		
C000(A11)	COVER SHEET	A
C001(A11)	NOTES AND INDEX	A
C002(A11)	PLAN - EXISTING CONTOURS	A
C003(A11)	PLAN- PROPOSED OPTION	A
C004(A11)	PLAN- PROFILE	A
C004(A11)	PLAN-CUT FILL DRAWING	A
C010-C016(A11)	CROSS SECTIONS	A
C050	PLAN-CUT FILL PLAN	A
C051	ALIGNMENT - SETTING OUT	A

C060	REPLANTING AREA	A
GEOTECHNICAL INVESTIGATIONS		
CIVIL WORKS - PLANS		
CIVIL WORKS - TYPICAL SECTIONS AND DETAILS		
LONG SECTIONS - PAVEMENT AND WALL		
CIVIL WORKS - CROSS SECTIONS		

300 mm  
200  
100  
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**NOTES.**

- PLANS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS.
- PROPERTY BOUNDARIES ARE APPROXIMATE ONLY (LINZ). NO BOUNDARY SURVEY HAS BEEN COMPLETED.
- NO SERVICE IDENTIFICATION HAS BEEN UNDERTAKEN IN PREPARATION OF THESE PLANS. ANY SERVICES SHOWN ARE APPROXIMATE ONLY AND CLASHES MAY OCCUR.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MARK OUT THE LOCATION OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF PHYSICAL WORK ON SITE.
- ALL PLAN COORDINATES IN TERMS OF NZGD 2000 MOUNT EDEN CIRCUIT AND LEVEL DATUM IS NZVD 2016.
- CONTAINS DATA SOURCED FROM LAND INFORMATION NEW ZEALAND(LINZ). LINZ GIVES NO WARRANTY IN RELATION TO THE DATA (INCLUDING ACCURACY, RELIABILITY, COMPLETENESS OR SUITABILITY) AND ACCEPTS NO LIABILITY (INCLUDING, WITHOUT LIMITATION, LIABILITY IN NEGLIGENCE) FOR ANY LOSS, DAMAGE OR COSTS RELATING TO ANY USE OF THE DATA. CROWN COPYRIGHT RESERVED.
- PAVEMENT THICKNESS SHOWN IS INDICATIVE ONLY, NEEDS TO BE CONFIRMED AS PER DESIGN

**APPROVED PLAN**  
  
**Planner: ENathan**  
**RC: 2240268-RMAOUT**  
**Date: 5/02/2024**

**WORK IN PROGRESS**  
PRINTED 11/12/2023 3:38:45 pm

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR DETAILED DESIGN	-	-



**wsp**  
Whangarei Office  
+64 9 430 1700  
Private Bag 9017  
Whangarei 0148  
New Zealand

CIVIL

SCALES	ORIGINAL SIZE
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DRAWN	DESIGNED
K.DARSHAN	M.LEGGETT
DRAWING VERIFIED	DESIGN VERIFIED
-	-
APPROVED	APPROVED DATE
-	-

FOR INFORMATION

PROJECT	TITLE	WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022	NOTES AND INDEX	1-11241.13(A11)	C001(A11)	A

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---	ROAD RESERVE
☒	HIGH VALUE TREES

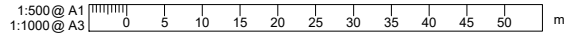


**APPROVED PLAN**  
**Planner: ENathan**  
**RC: 2240268-RMAOUT**  
**Date: 5/02/2024**

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**NOTES.**  
 1. FOR GENERAL NOTES REFER TO SHEET C001



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REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR DETAILED DESIGN		



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 New Zealand

CIVIL

SCALES	ORIGINAL SIZE	
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DRAWN	DESIGNED	APPROVED
K.DARSHAN	M.LEGGETT	APPROVER
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
VERIFIER	VERIFIER	YYYY-MM-DD

FOR INFORMATION

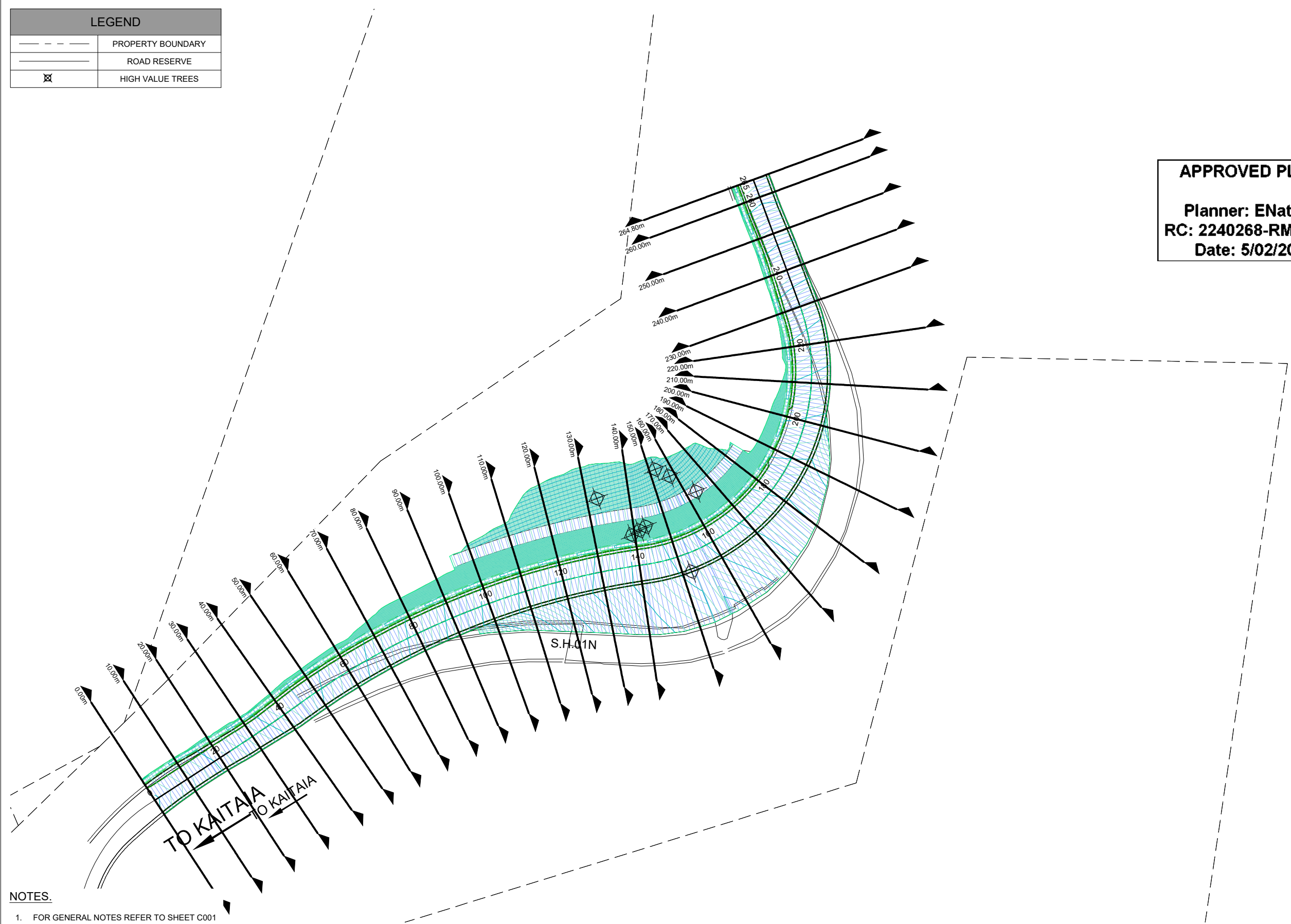
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WSP PROJECT NO. (SUB-PROJECT) 1-11241.13(A11)
SHEET NO. C002(A11)
REVISION A



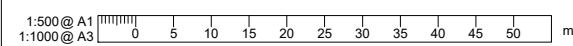
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---	PROPERTY BOUNDARY
---	ROAD RESERVE
☒	HIGH VALUE TREES

**APPROVED PLAN**  
**Planner: ENathan**  
**RC: 2240268-RMAOUT**  
**Date: 5/02/2024**

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**NOTES.**  
 1. FOR GENERAL NOTES REFER TO SHEET C001



**WORK IN PROGRESS**  
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REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION AND DISCUSSION		



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 Whangarei 0148  
 New Zealand

CIVIL

SCALES	ORIGINAL SIZE	
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K.DARSHAN	M.LEGGETT	APPROVER
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
VERIFIER	VERIFIER	YYYY-MM-DD

FOR INFORMATION

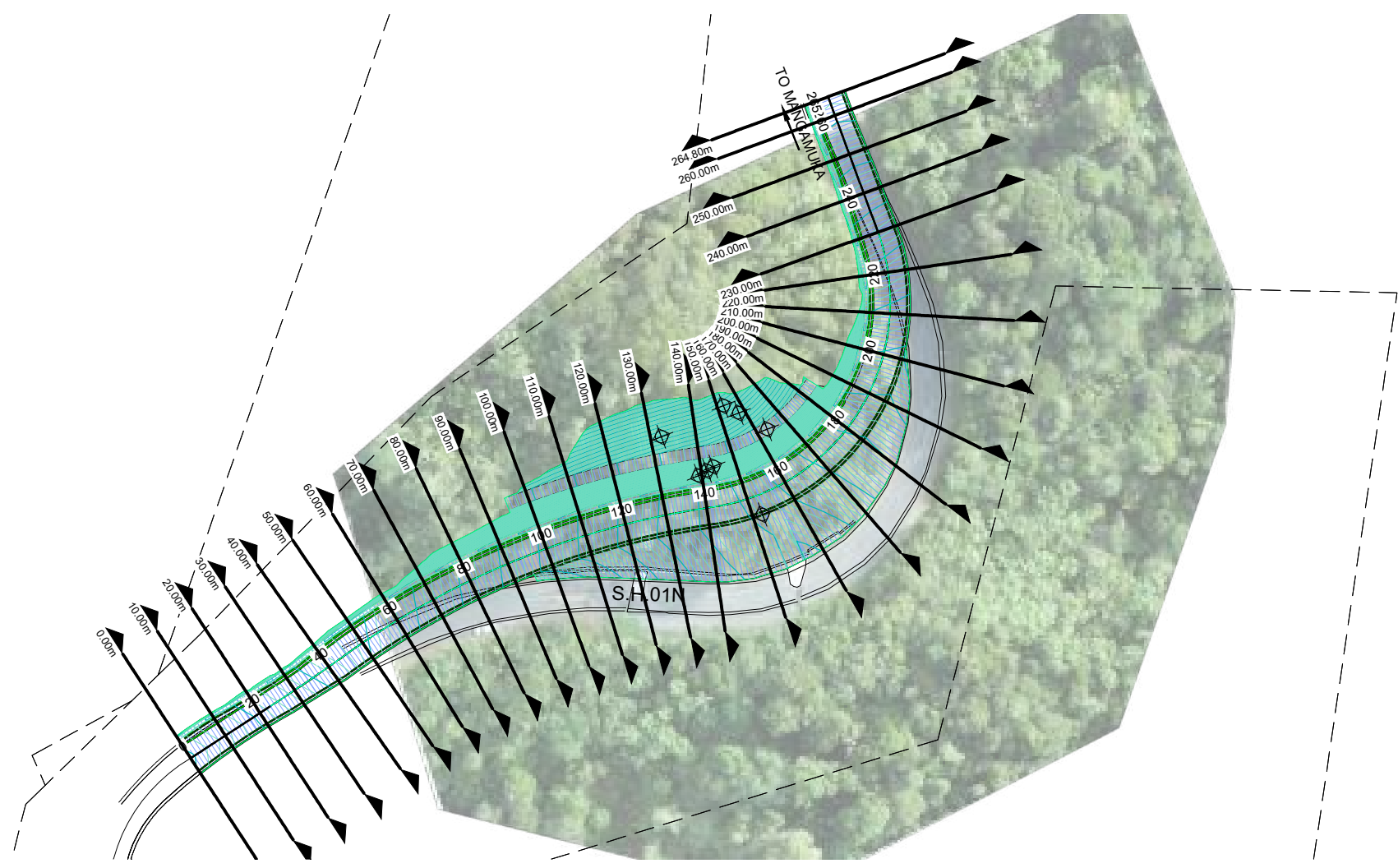
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TITLE
OVERALL PLAN PROPOSED REALIGNMENT PLAN
WSP PROJECT NO. (SUB-PROJECT) 1-11241.13(A11)
SHEET NO. C003(A11)
REVISION A

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	ROAD RESERVE



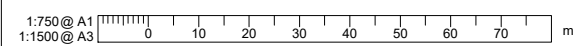
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**APPROVED PLAN**  
Planner: ENathan  
RC: 2240268-RMAOUT  
Date: 5/02/2024

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HORIZONTAL GEOMETRY	L=22.99m, L=22.20m (R=492.00m), L=96.17m (R=200.00m), L=89.15m (R=50.00m), L=34.30m
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**NOTES:**  
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REVISION	AMENDMENT	APPROVED	DATE
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Private Bag 9017  
Whangarei 0148  
New Zealand

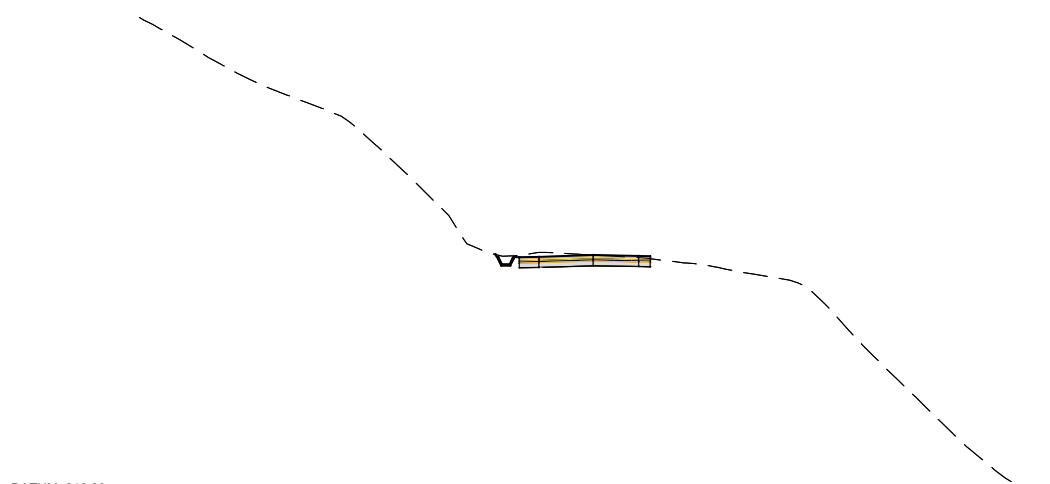
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FOR INFORMATION

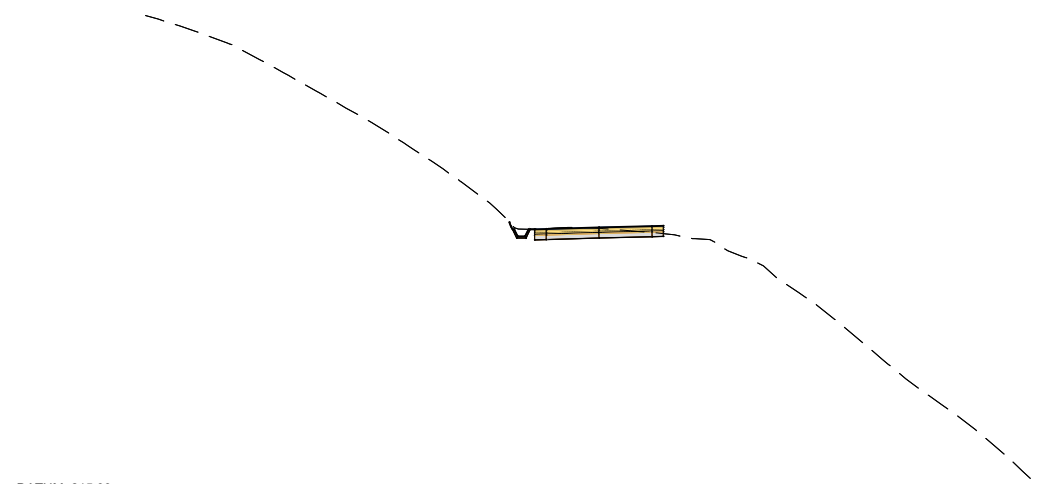
PROJECT	TITLE	SHEET NO.	REVISION
WAKA KOTAHİ NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022	OVERALL PLAN PROPOSED REALIGNMENT PLAN	C004(A11)	A
WSP PROJECT NO. (SUB-PROJECT)			
1-11241.13(A11)			

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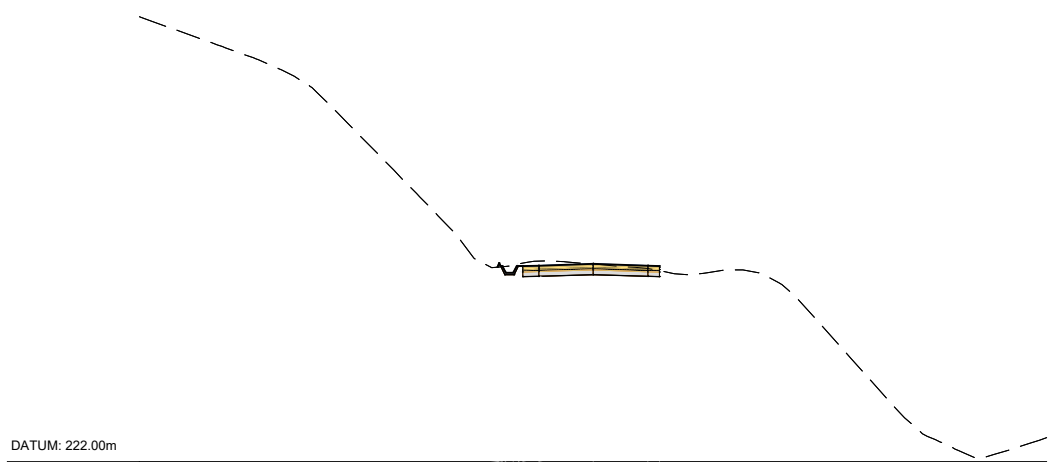
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241.68		241.68	
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229.88		229.88	
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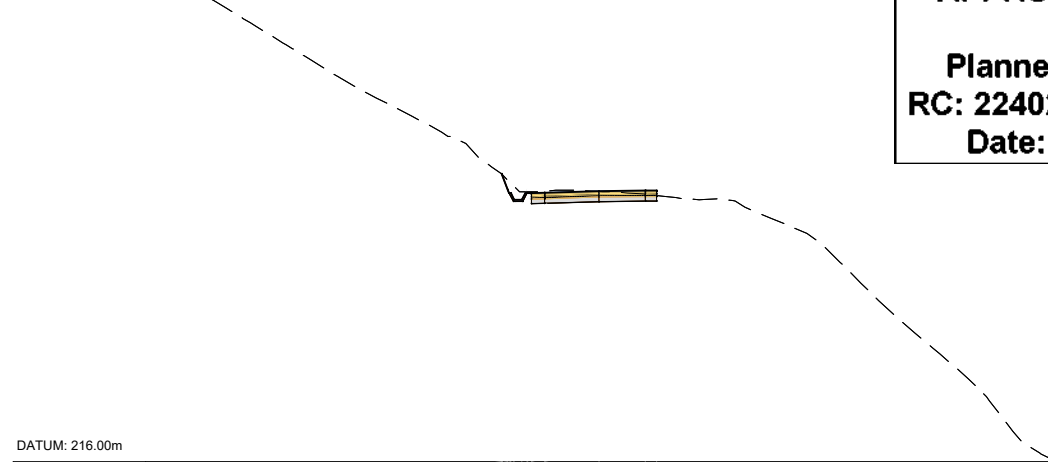
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236.34	-5.82	233.39	-0.16
234.53	-5.61	233.19	-0.12
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DGN. LEVEL	OFFSETS	E.G. LEVEL	CUT / FILL
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246.41		246.41	
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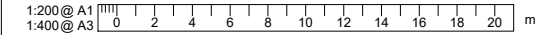
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CHAINAGE: 20.00m

**APPROVED PLAN**  
Planner: ENathan  
RC: 2240268-RMAOUT  
Date: 5/02/2024

**NOTES.**

- 1. FOR GENERAL NOTES REFER TO SHEET C001



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REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR DISCUSSION		



CIVIL

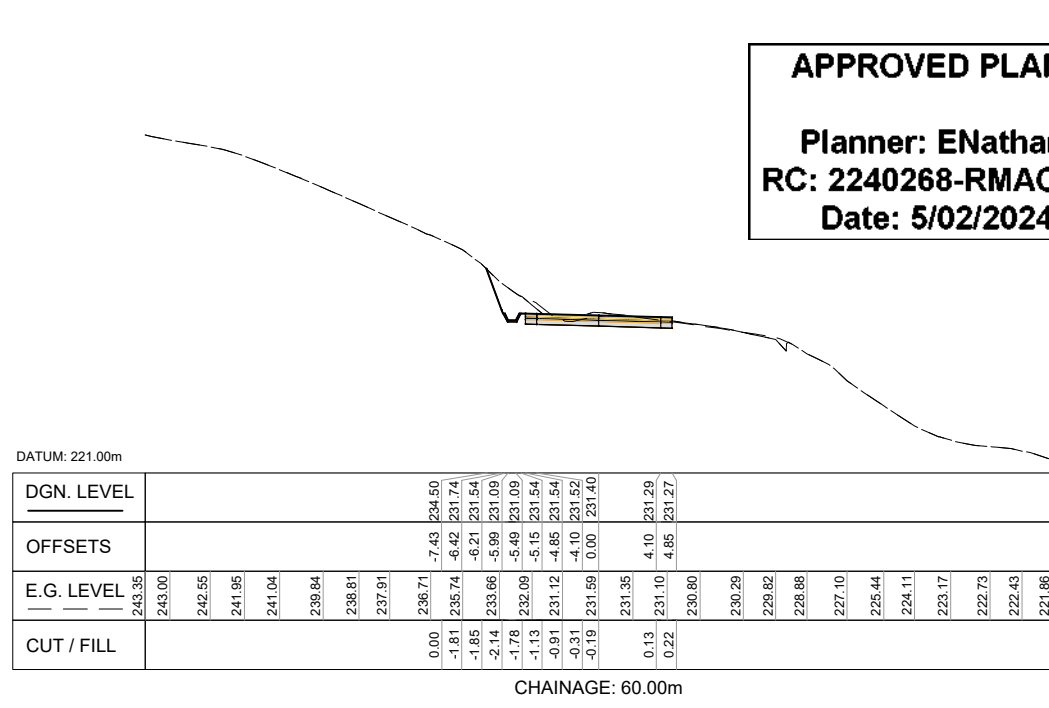
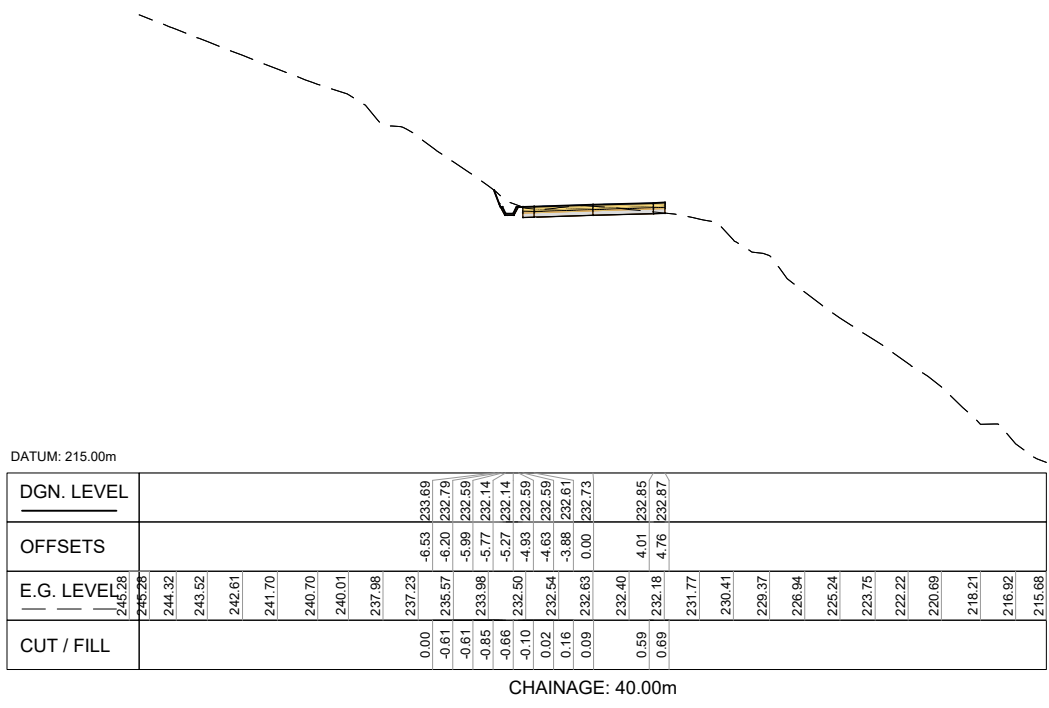
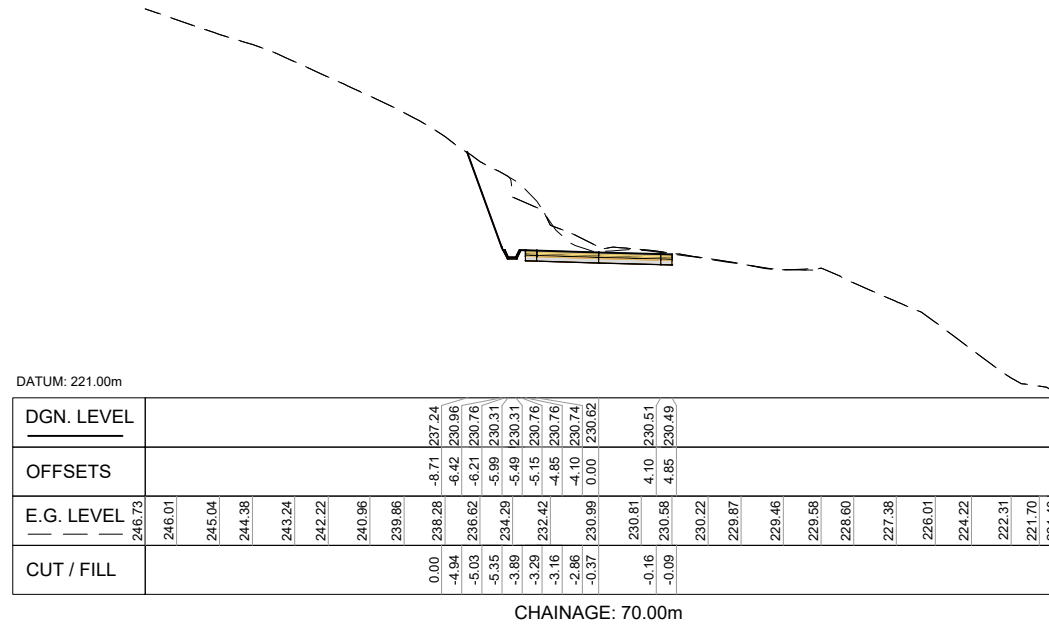
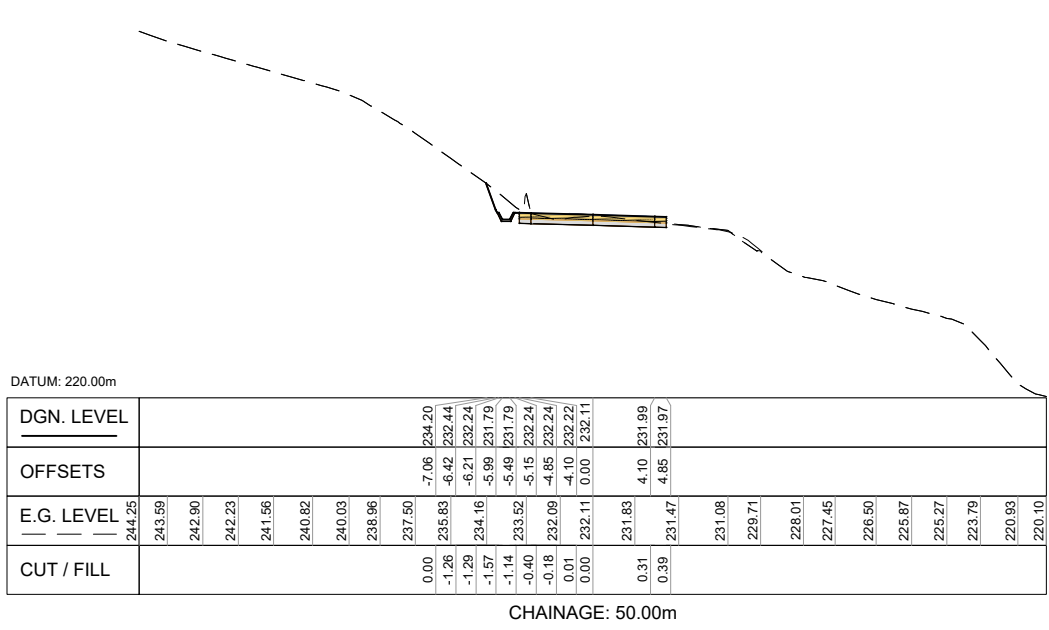
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DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE	
VERIFIER	VERIFIER	YYYY-MM-DD	

FOR INFORMATION

PROJECT	TITLE	SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022	CROSSSECTION A11 MANGAMUKHA	C010(A11)	A
WSP PROJECT NO. (SUB-PROJECT)			
1-11241.13(A11)			



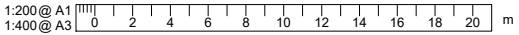
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0 10 mm



**APPROVED PLAN**  
Planner: ENathan  
RC: 2240268-RMAOUT  
Date: 5/02/2024

**NOTES.**

- 1. FOR GENERAL NOTES REFER TO SHEET C001



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REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR DISCUSSION		



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New Zealand

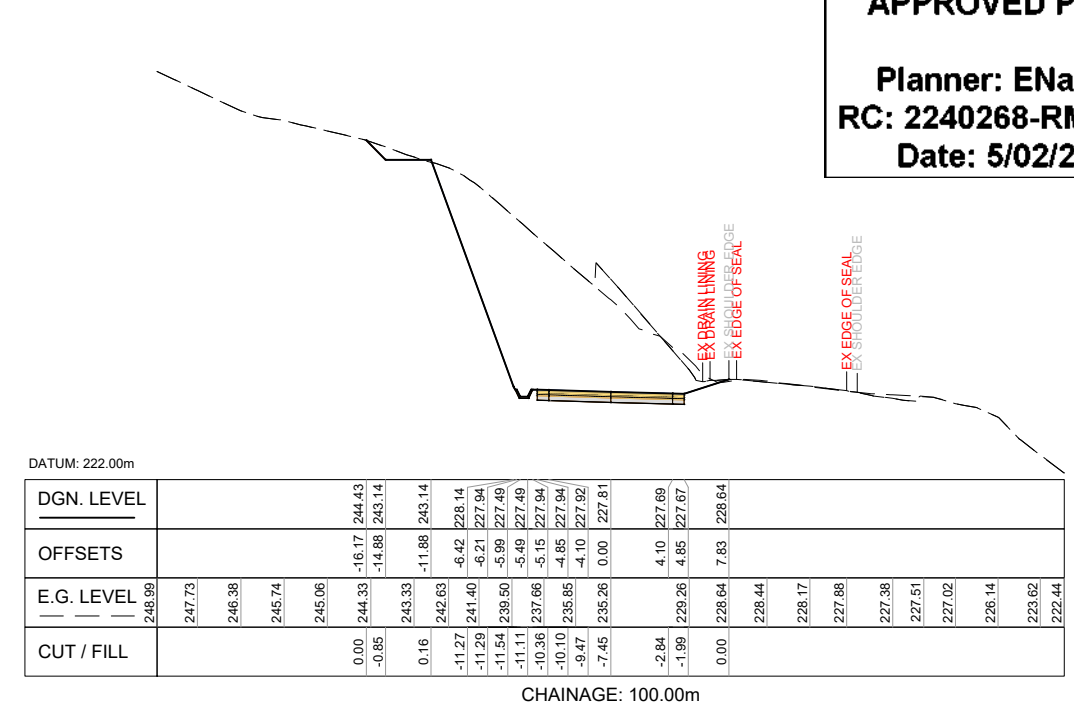
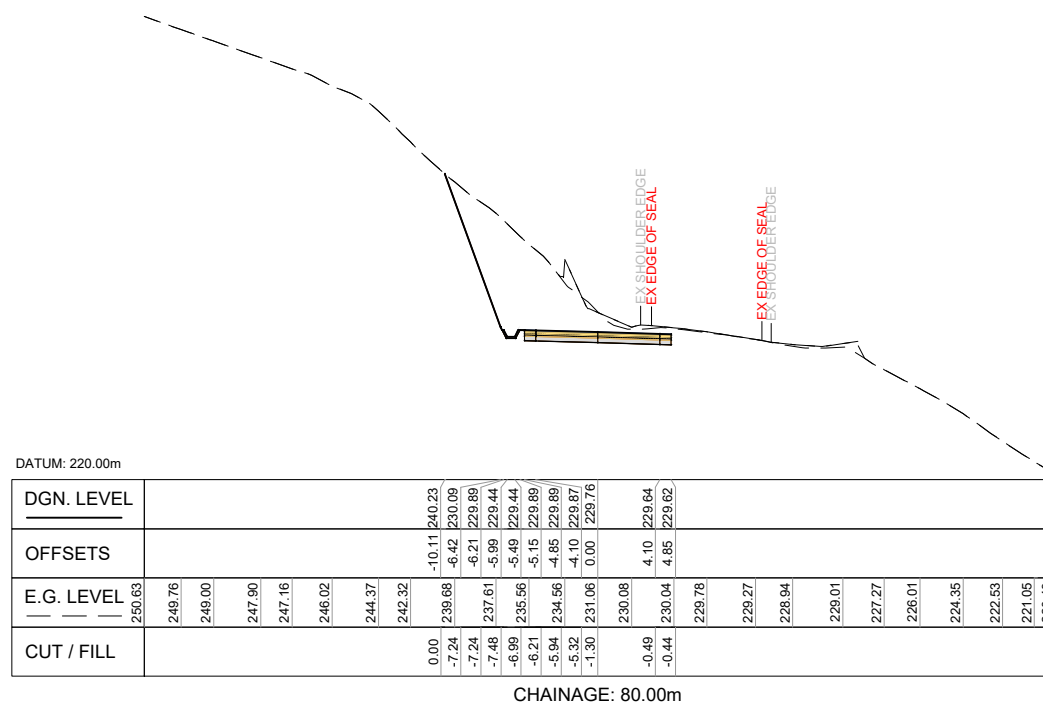
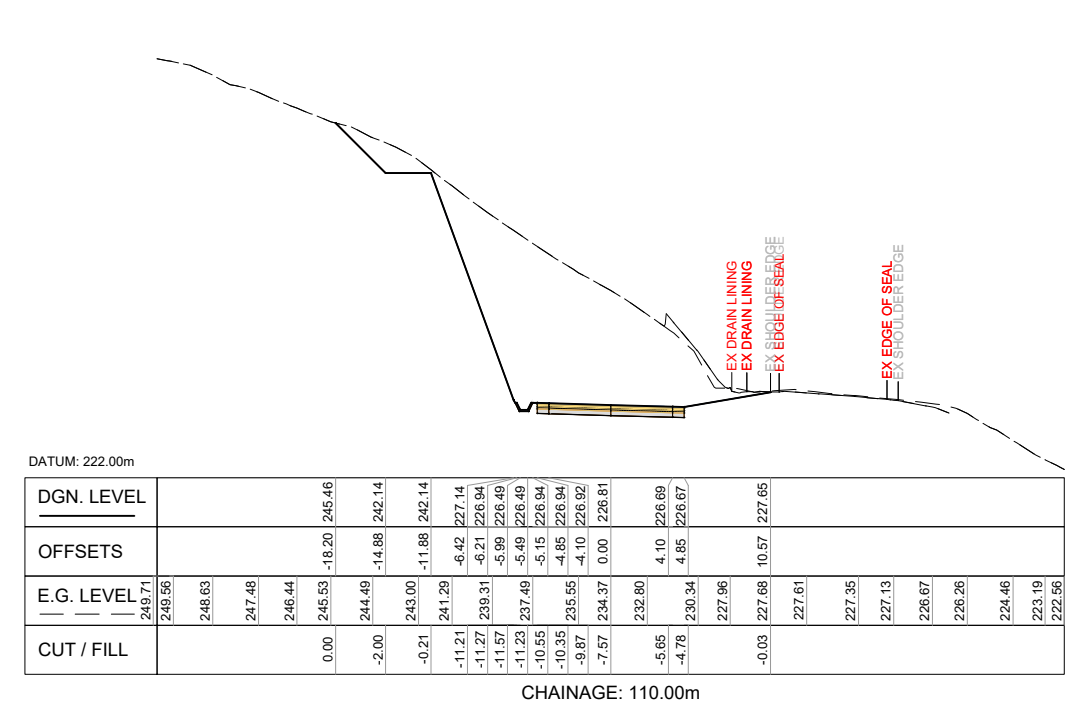
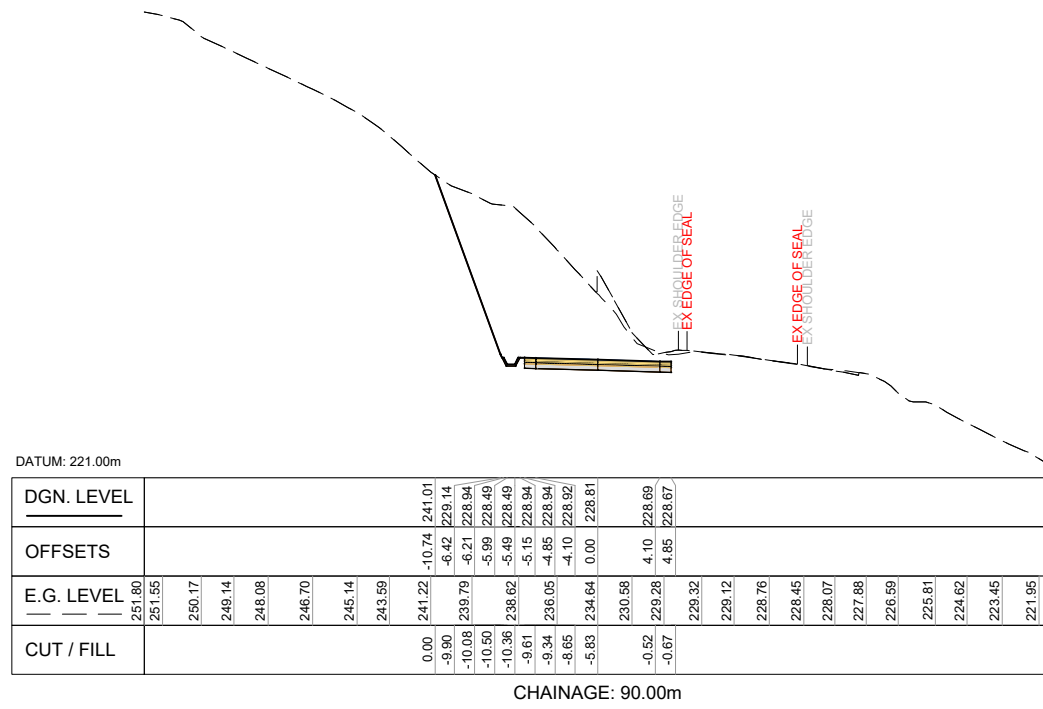
CIVIL

SCALES		ORIGINAL SIZE
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DRAWN	DESIGNED	APPROVED
K.DARSHAN	M.LEGGETT	APPROVER
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
VERIFIER	VERIFIER	YYYY-MM-DD

FOR INFORMATION

PROJECT		
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY		
S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND		
A11 NZTA EMERGENCY WORKS 2022		
TITLE		
CROSSSECTION		
A11 MANGAMUKHA		
WSP PROJECT NO. (SUB-PROJECT)		SHEET NO.
1-11241.13(A11)		C011(A11)
REVISION		A

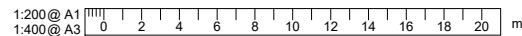
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**APPROVED PLAN**  
Planner: ENathan  
RC: 2240268-RMAOUT  
Date: 5/02/2024

**NOTES.**

- FOR GENERAL NOTES REFER TO SHEET C001



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REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR DISCUSSION		



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New Zealand

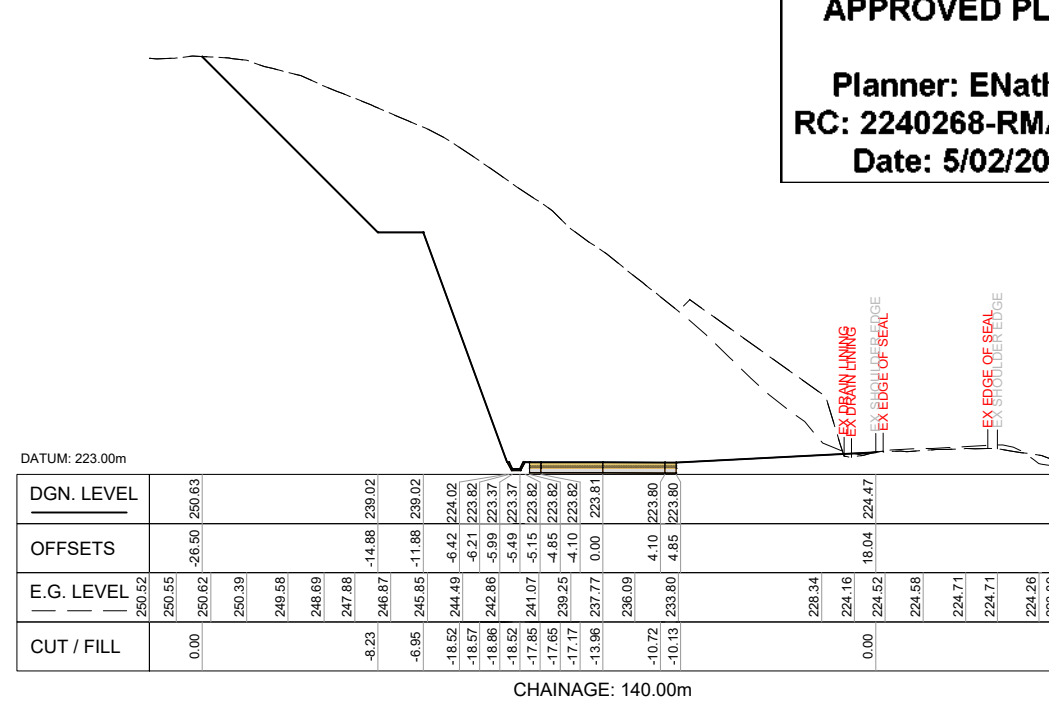
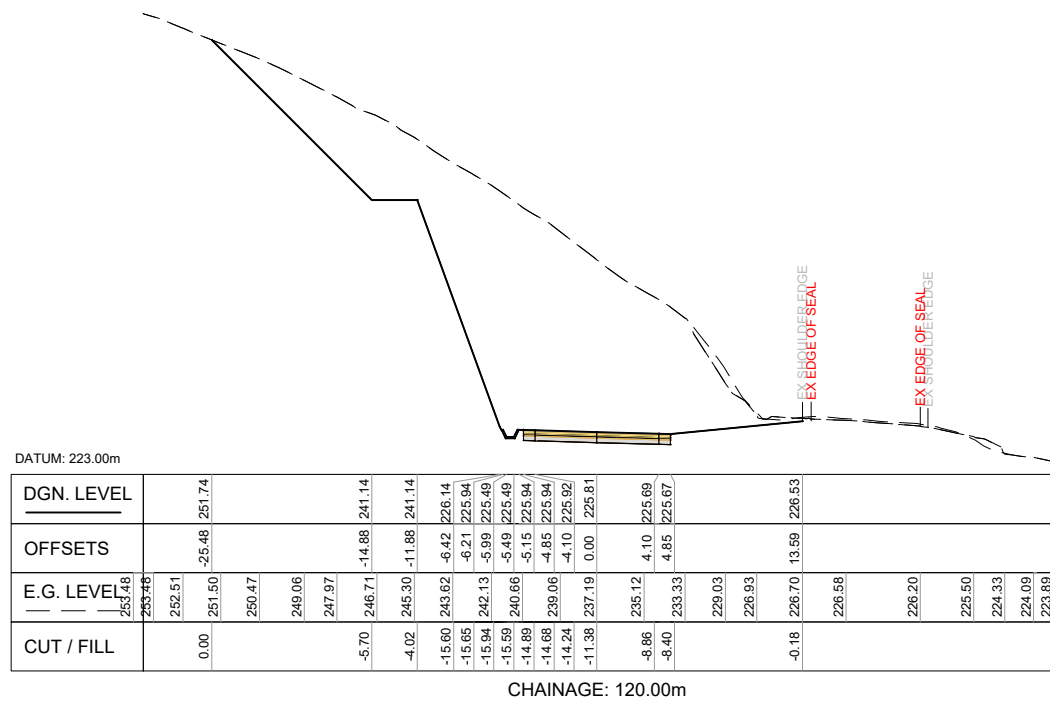
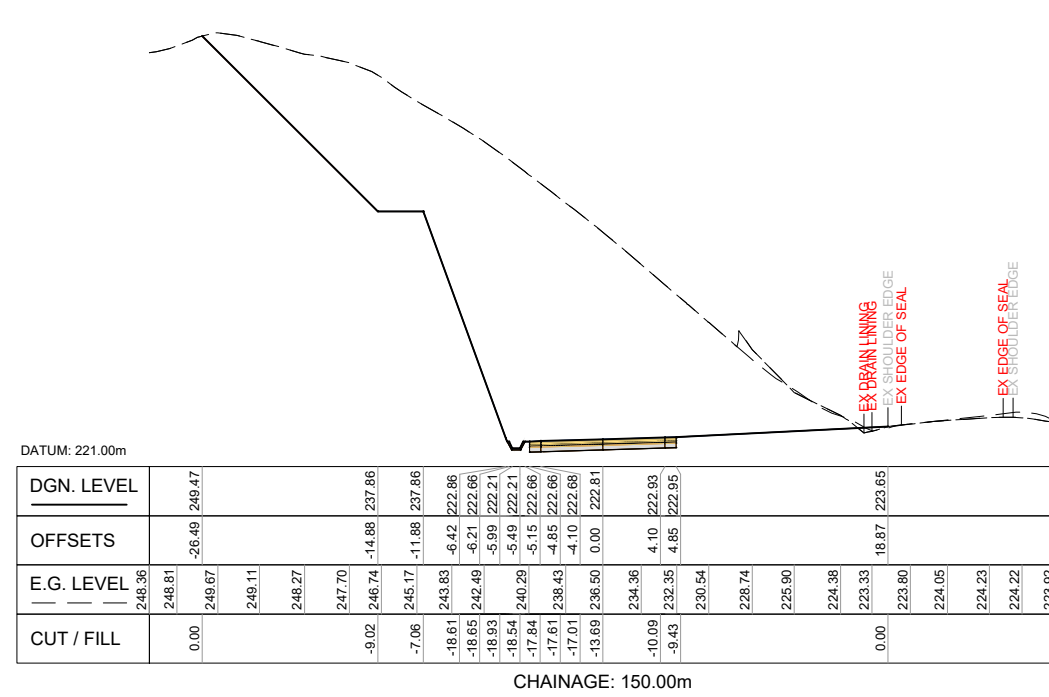
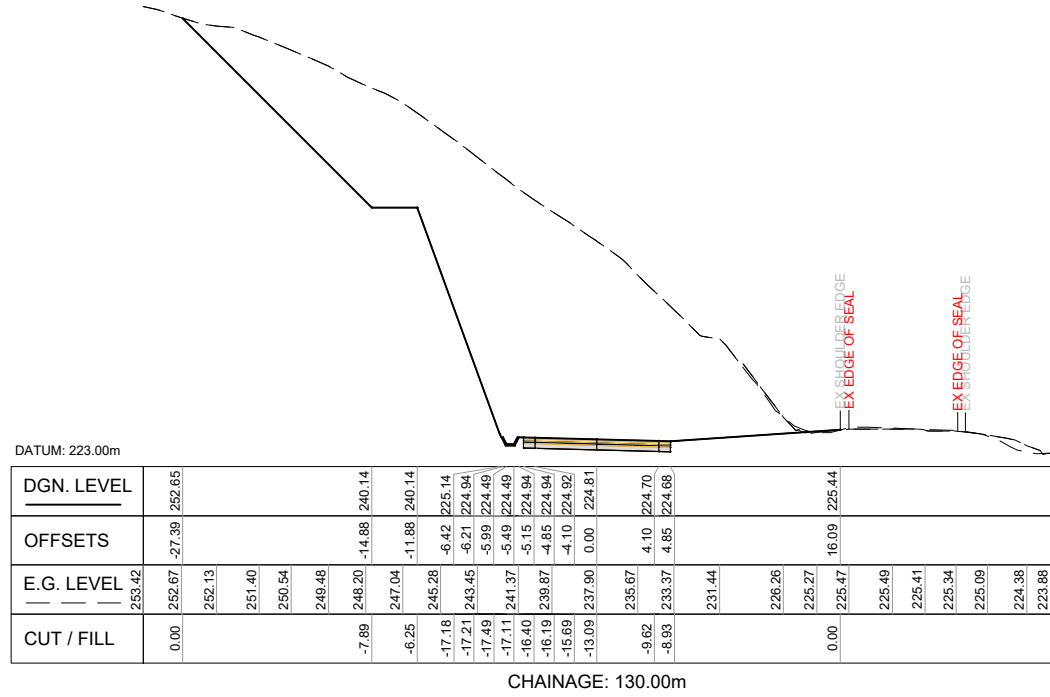
CIVIL

SCALES	DESIGNED	APPROVED	ORIGINAL SIZE
1:200 AT A1	M.LEGGETT	APPROVER	A1
DRAWN	DESIGN VERIFIED	APPROVED DATE	
K.DARSHAN	VERIFIER	YYYY-MM-DD	

FOR INFORMATION

PROJECT	TITLE	WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022	CROSSSECTION A11 MANGAMUKHA	1-11241.13(A11)	C012(A11)	A

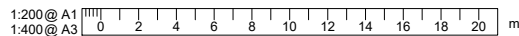
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**APPROVED PLAN**  
Planner: ENathan  
RC: 2240268-RMAOUT  
Date: 5/02/2024

**NOTES.**

- FOR GENERAL NOTES REFER TO SHEET C001



**WORK IN PROGRESS**

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REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR DISCUSSION		



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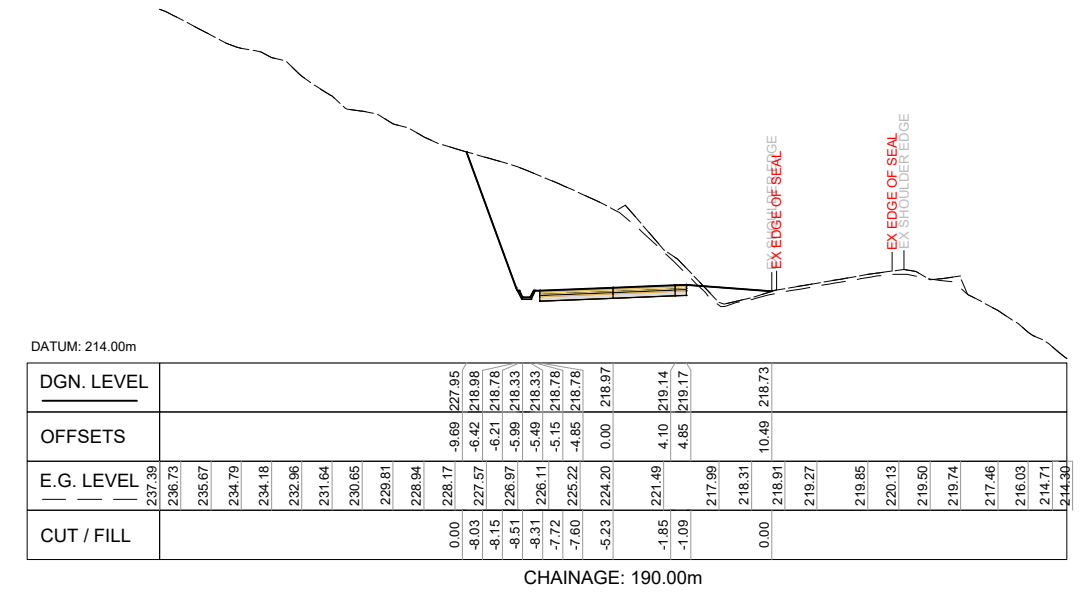
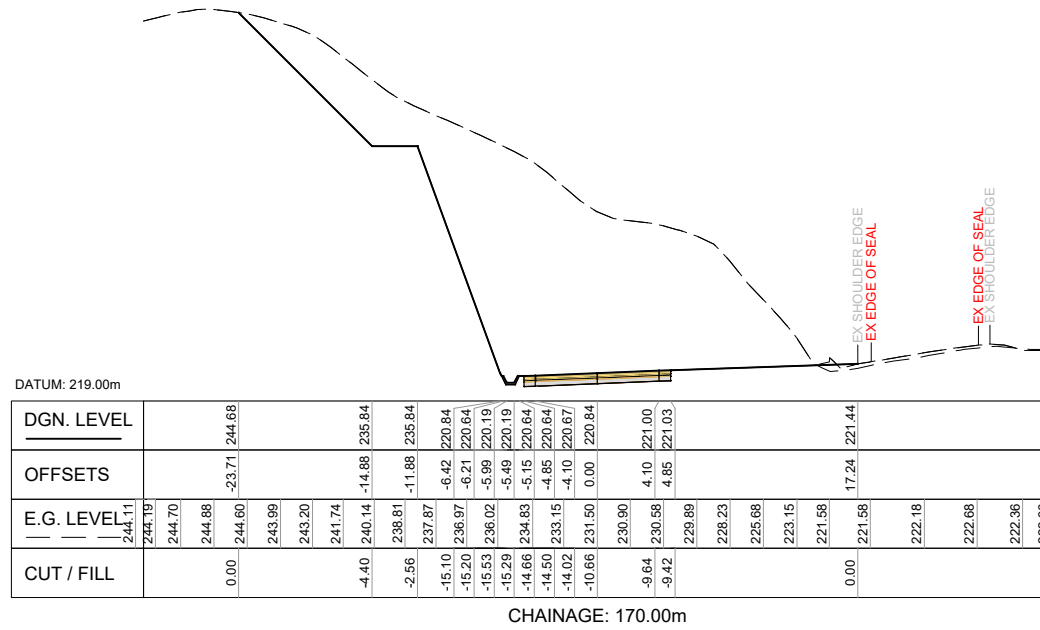
CIVIL

SCALES	DESIGNED	APPROVED	ORIGINAL SIZE
1:200 AT A1	M.LEGGETT	APPROVER	A1
DRAWN	K.DARSHAN	VERIFIER	
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE	
VERIFIER	VERIFIER	YYYY-MM-DD	

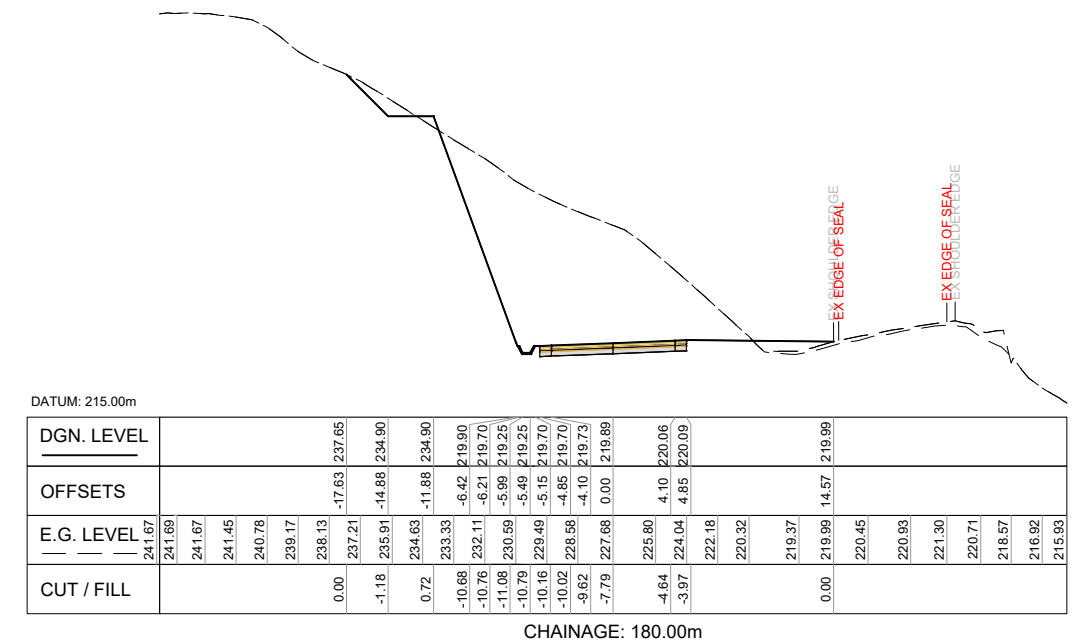
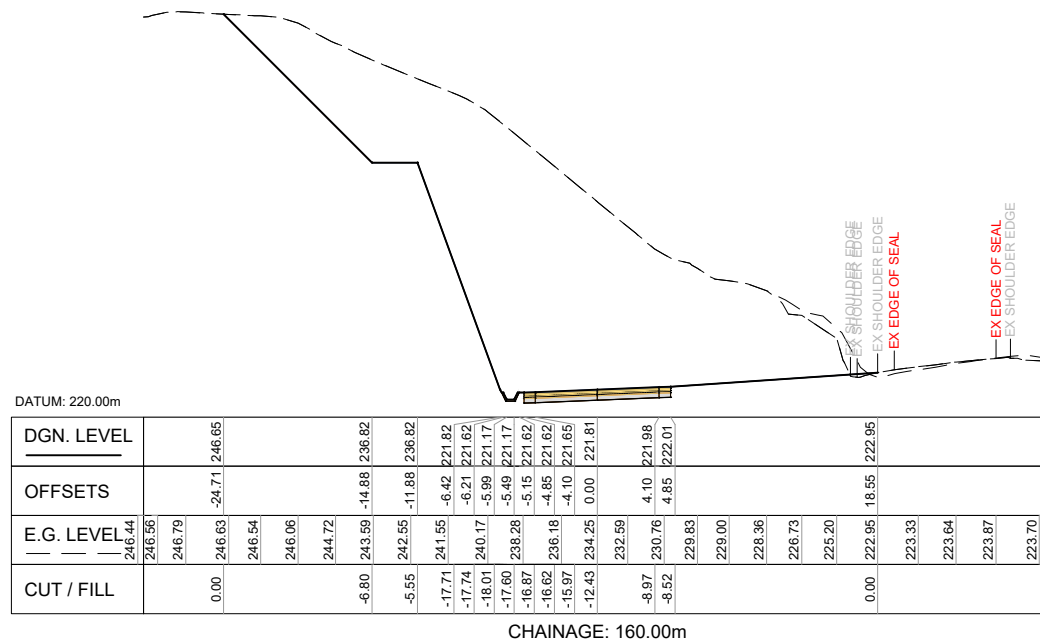
FOR INFORMATION

PROJECT	TITLE	WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022	CROSSSECTION A11 MANGAMUKHA	1-11241.13(A11)	C013(A11)	A

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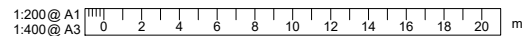


**APPROVED PLAN**  
Planner: ENathan  
RC: 2240268-RMAOUT  
Date: 5/02/2024



**NOTES.**

- FOR GENERAL NOTES REFER TO SHEET C001



**WORK IN PROGRESS**  
PRINTED 11/12/2023 2:17:35 pm

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR DISCUSSION		



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New Zealand

CIVIL

SCALES		ORIGINAL SIZE
1:200 AT A1		A1
DRAWN	DESIGNED	APPROVED
K.DARSHAN	M.LEGGETT	APPROVER
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
VERIFIER	VERIFIER	YYYY-MM-DD

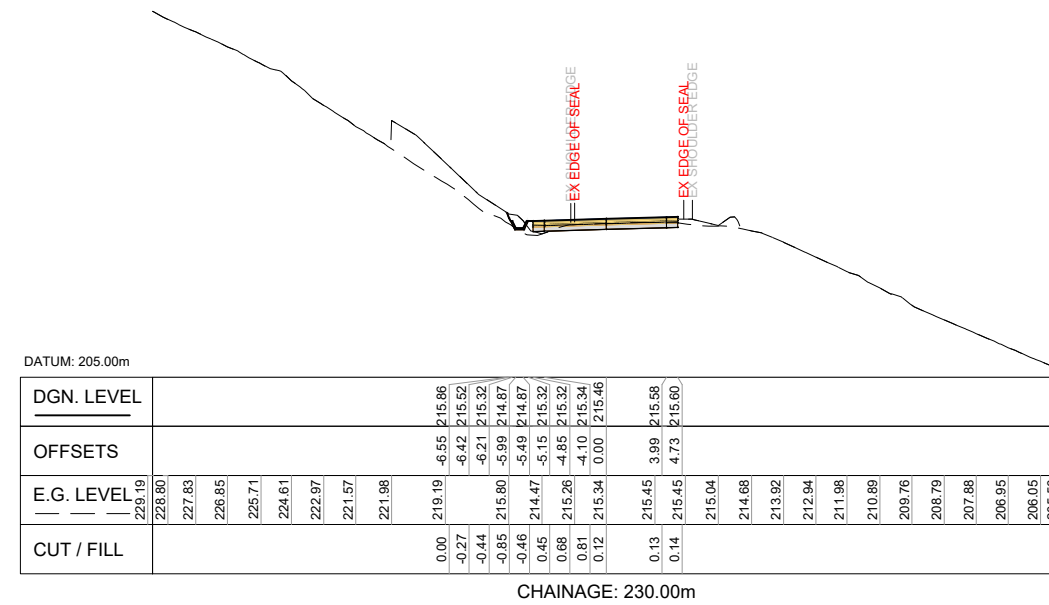
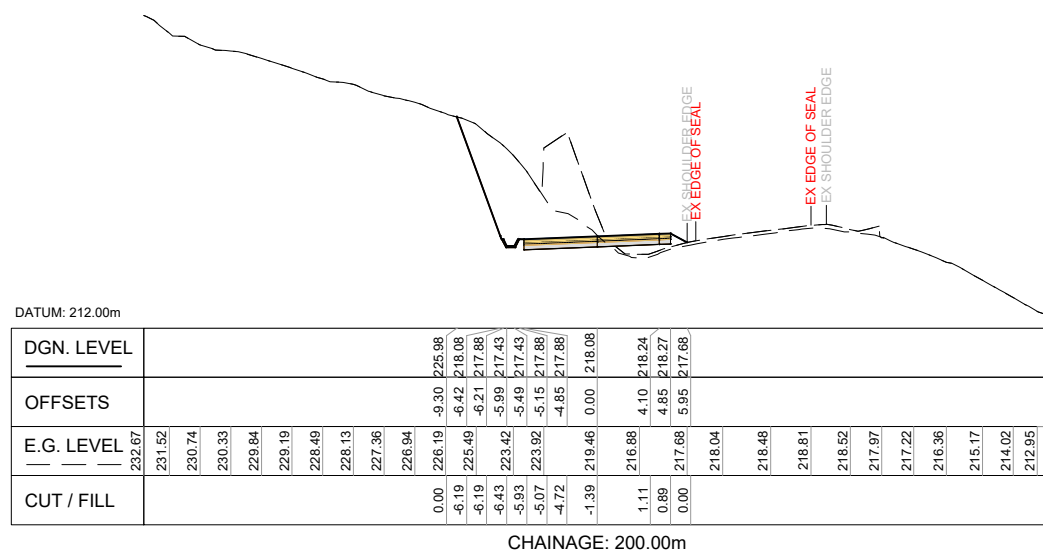
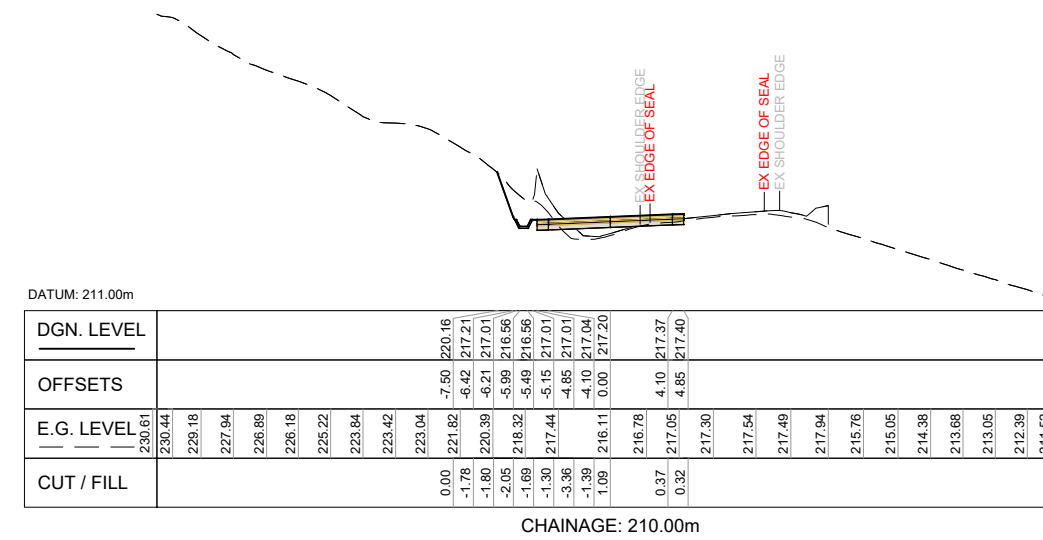
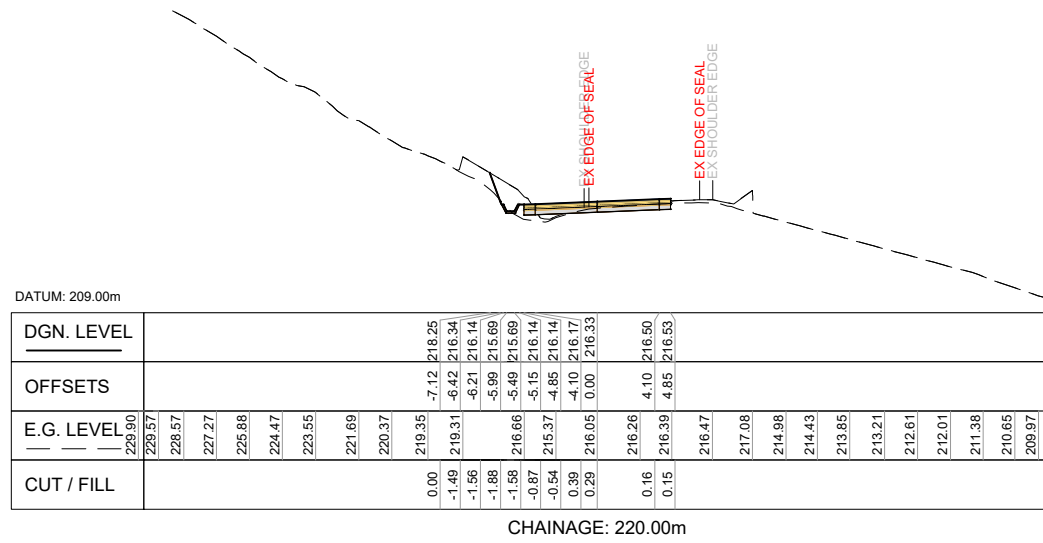
FOR INFORMATION

PROJECT		SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022		C014(A11)	A
TITLE			
CROSSSECTION A11 MANGAMUKHA			
WSP PROJECT NO. (SUB-PROJECT)			
1-11241.13(A11)			

**LEGEND**

	EXISTING GROUND
	DESIGN SURFACE

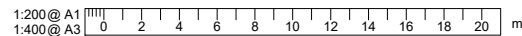
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**APPROVED PLAN**  
Planner: ENathan  
RC: 2240268-RMAOUT  
Date: 5/02/2024

**NOTES.**

- 1. FOR GENERAL NOTES REFER TO SHEET C001



REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR DISCUSSION		



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New Zealand

CIVIL

SCALES	DESIGNED	APPROVED	ORIGINAL SIZE
1:200 AT A1	M.LEGGETT	APPROVER	A1
DRAWN	K.DARSHAN	APPROVER	
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE	
VERIFIER	VERIFIER	YYYY-MM-DD	

FOR INFORMATION

PROJECT	TITLE	WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022	CROSSSECTION A11 MANGAMUKHA	1-11241.13(A11)	C015(A11)	A

**WORK IN PROGRESS**  
PRINTED 11/12/2023 2:20:44 pm



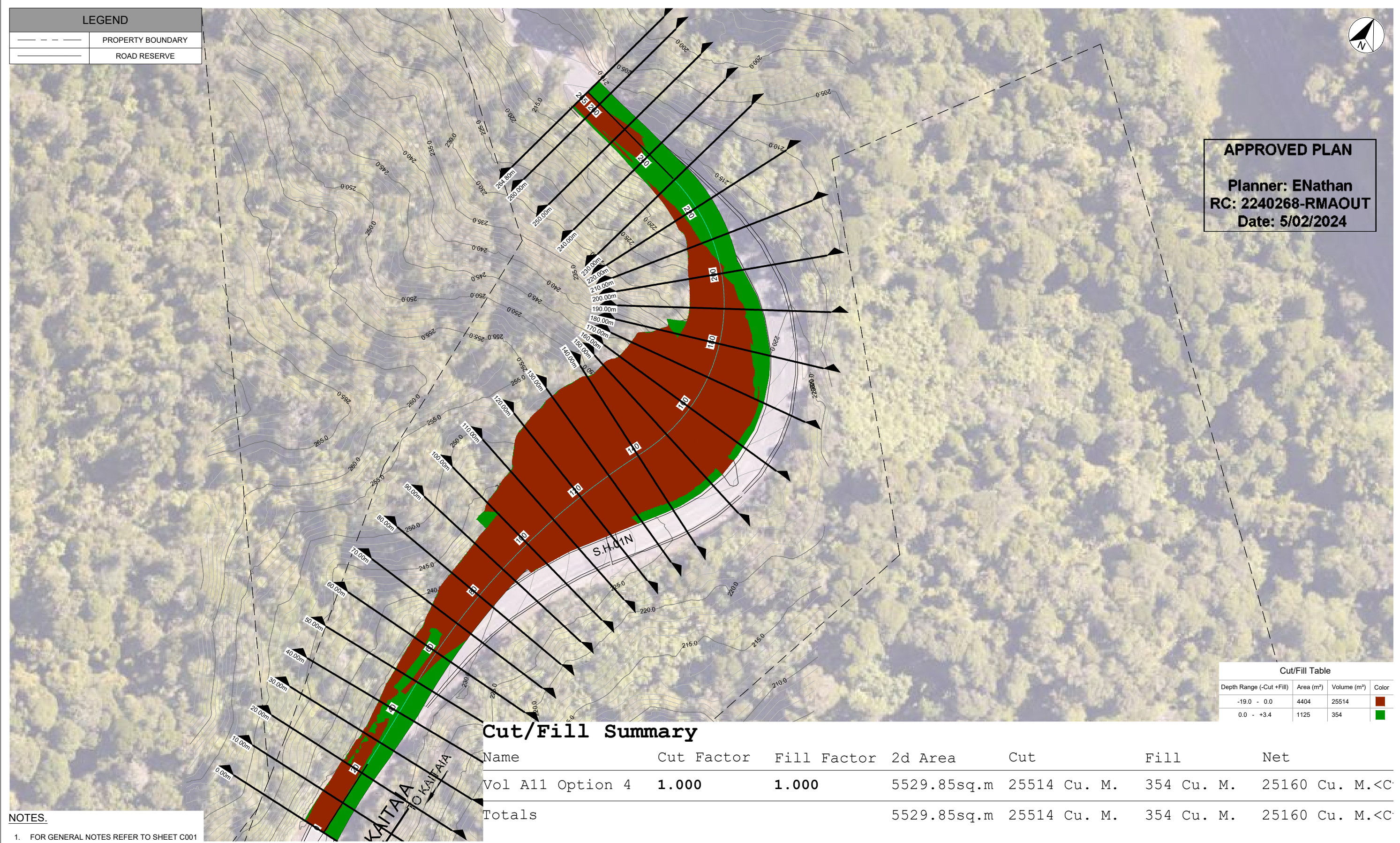
**LEGEND**

	PROPERTY BOUNDARY
	ROAD RESERVE



**APPROVED PLAN**  
 Planner: ENathan  
 RC: 2240268-RMAOUT  
 Date: 5/02/2024

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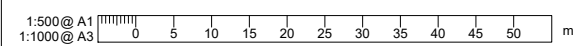


Depth Range (-Cut +Fill)	Area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Color
-19.0 - 0.0	4404	25514	
0.0 - +3.4	1125	354	

**Cut/Fill Summary**

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Vol A11 Option 4	<b>1.000</b>	<b>1.000</b>	5529.85sq.m	25514 Cu. M.	354 Cu. M.	25160 Cu. M.<C
<b>Totals</b>			5529.85sq.m	25514 Cu. M.	354 Cu. M.	25160 Cu. M.<C

**NOTES:**  
 1. FOR GENERAL NOTES REFER TO SHEET C001



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A	ISSUED FOR INFORMATION AND DISCUSSION		



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 New Zealand

CIVIL

SCALES	DESIGNED	APPROVED	ORIGINAL SIZE
1:500 AT A1	M.LEGGETT	APPROVER	A1
DRAWN	DESIGN VERIFIED	APPROVED DATE	
K.DARSHAN	VERIFIER	YYYY-MM-DD	

FOR INFORMATION

PROJECT	TITLE	SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022	CUT FILL PLAN A11	C050(A11)	A
WSP PROJECT NO. (SUB-PROJECT) 1-11241.13(A11)			

LEGEND

PROPERTY BOUNDARY



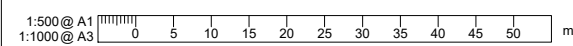
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0 10 mm

**APPROVED PLAN**  
**Planner: ENathan**  
**RC: 2240268-RMAOUT**  
**Date: 5/02/2024**

A11- SETTING OUT				
Number	Radius	Length	Line/Chord Direction	A Value
L1		22.99	32° 35' 40.58"	
C1	492.00	22.20	31° 18' 07.80"	
C2	200.00	96.17	43° 47' 05.14"	
C3	50.00	89.15	6° 28' 45.12"	
L2		34.30	315° 23' 54.98"	

NOTES

- 1. FOR GENERAL NOTES REFER TO SHEET C001



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PRINTED 11/12/2023 3:27:05 pm

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION AND DISCUSSION		



CIVIL

SCALES		ORIGINAL SIZE
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DRAWN	DESIGNED	APPROVED
K.DARSHAN	M.LEGGETT	APPROVER
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
VERIFIER	VERIFIER	YYYY-MM-DD

FOR INFORMATION

PROJECT		
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY		
S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND		
A11 NZTA EMERGENCY WORKS 2022		
TITLE		
ALIGNMENT SETTING OUT		
A11		
WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.	REVISION
1-11241.13(A11)	C051(A11)	A





LEGEND	
	PROPERTY BOUNDARY
	REPLANTING AREA
	CLEAR VEGETATION

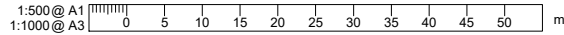
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0 10 mm

CLEAR VEGETATION, STRIP TOP SOIL AND UNSUITABLES TO COMPETENT MATERIAL WITHIN FOOT PRINT , 4283Sqm

REMOVING EXISTING PAVEMENT AND ALLOW FOR RE PLANTATION TO NATURE , 1375 Sqm APPROXIMATELY

**APPROVED PLAN**  
  
Planner: ENathan  
RC: 2240268-RMAOUT  
Date: 5/02/2024

**NOTES.**  
1. FOR GENERAL NOTES REFER TO SHEET C001



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New Zealand

CIVIL

SCALES	ORIGINAL SIZE	
1:500 AT A1	A1	
DRAWN	DESIGNED	APPROVED
K.DARSHAN	M.LEGGETT	APPROVER
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
VERIFIER	VERIFIER	YYYY-MM-DD

FOR INFORMATION

PROJECT	WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 134 R.P. 2.748 - 2.835, MANGAMUKA, NORTHLAND A11 NZTA EMERGENCY WORKS 2022
TITLE	REPLANTING AREA A11
WSP PROJECT NO. (SUB-PROJECT)	1-11241.13(A11)
SHEET NO.	C060(A11)
REVISION	A

**APPENDIX C -Outline Plan 2240428 – RMAOUW**

15 May 2024

*Te Kaunihera o Tai Tokerau Ki Te Raki*

Waka Kotahi - NZ Transport Agency  
PRIVATE BAG 106602  
29 Customs Street West  
Auckland Central  
Auckland 1143

*The top place where talent  
wants to live, work and invest*

Tēnā koe New Zealand Transport Agency – Waka Kotahi,

**Re: 2240428-RMAOUW - Outline Plan Waiver for Transit New Zealand (now known as NZTA) – Designation SH.**

I am pleased to advise that your application to waive the requirement to submit an outline plan waiver is duly granted pursuant to s.176A (2)(c) of the Resource Management Act 1991.

The property in respect of which the application is made is situated along State Highway 1, Mangamuka 0476.

The site is designated as:

Desig #	Site Notation/Purpose	Requirin g Authority	Site Location	Area	Map	Underlying Zone
SH (As shown on Plannin g Maps)	All of NZTA's State Highway network, including State Highways 1F, 1N, 10, 11 & 12	Transit New Zealand (now known as NZTA)			ALL	Refer definition of Road (Ch3)

The outline plan waiver is to undertake remediation and repair works on roading slips A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A12, A13, A26, and A27 along a section of State Highway 1 within the Mangamuka Gorge. The proposal is as detailed in the information submitted with the application for 2240428-RMAOUW and which is shown on the plans prepared by WSP, project titled WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 119 R.P. 13.613 - 13.722, MANGAMUKA, NORTHLAND A5 NZTA EMERGENCY WORKS 2022, Project Number: 1-11241.13, and referenced and dated as listed below:

Title	Sheet No.	Date
Plan Pavement Extents	C021(A1-A2) – Rev. 2	12-07-2023
Plan Pavement Reconstruction	C021 – Rev. 2	12-07-2023
Plan Pavement Reconstruction	C021(A4) – Rev. 1	02-11-2023
Plan Pavement Extents	C021(A5) – Rev. 2	12-07-2023
Plan Pavement Extents	C021(A6) – Rev. 1	19-10-2023
Plan Pavement Extents	C021(A7) – Rev. 2	15-01-2024
Plan Existing Contours	C002(A8) – Rev. 1	27-11-2023
Plan - Pavement Extents Sheet 1 of 2	C021(A9) – Rev. 2	12-07-2023
Plan Pavement Extents	C021(A10) – Rev. A	No Date
Plan - Pavement Extents Sheet 1 of 2	C022(A12-A13)	12-07-2023



Plan - Pavement Extents Sheet 2 of 2	C023(A12-A13) – Rev. 3	12-12-2023
Plan Pavement Extents	C021(A26) – Rev. 1	29-09-2023
Plan Design Overview	C020(A27) – Rev. 1	06-10-2023

In exercising Council’s delegated authority, consideration has been given to the purpose of the Transit New Zealand (now known as NZTA) designation, and the intent and scale of the proposed works. It is concluded that the works are within the purpose of the Designation.

If you have any queries regarding this information, please do not hesitate to contact the undersigned.

Ngā mihi,

**Tianxu (Brian) Huang**  
**Team Leader – Resource Consents**

Date: 15 May 2024





**APPROVED PLAN**  
 Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024

LEGEND	
	ROAD RESERVE
	PROPERTY BOUNDARY
	PROPOSED ROAD MARKINGS
	PROPOSED EDGE OF SEAL
	PROPOSED GUARDRAIL

300 mm  
200  
100  
50  
0 10 mm



**NOTES:**  
 1. FOR NOTES REFER TO SHEET C001.

1:200 @ A1  
 1:400 @ A3

REVISION	AMENDMENT	APPROVED	DATE
1	ISSUED FOR CONSTRUCTION	CJP	06-03-2023
2	ISSUED FOR CONSTRUCTION	SHG	12-07-2023



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 Private Bag 9017  
 Whangarei 0148  
 New Zealand

CIVIL

SCALES		ORIGINAL SIZE
1:200 @ A1		A1
DRAWN	DESIGNED	APPROVED
D. MOORE	M. LEGGET	C. PARKER
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
K. MEIN	S. GRIEVE	06-03-2023

FOR CONSTRUCTION

PROJECT  
 WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY  
 S.H. 01N R.S. 119 R.P. 12.597 - 12.750, MANGAMUKA, NORTHLAND  
 A1/2 NZTA EMERGENCY WORKS AUGUST 2022  
 TITLE  
 PLAN  
 PAVEMENT EXTENTS  
 WSP PROJECT NO. (SUB-PROJECT)  
 1-11241.13

SHEET NO. C021(A1-A2) REVISION 2

LEGEND	
	ROAD RESERVE
	PROPERTY BOUNDARY
	PROPOSED ROAD MARKINGS
	PROPOSED EDGE OF SEAL
	PROPOSED GUARDRAIL



**APPROVED PLAN**  
 Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024

300 mm  
200  
100  
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0 10 mm



**NOTES:**  
 1. FOR NOTES REFER TO SHEET C001.

1:200 @ A1  
 1:400 @ A3

REVISION	AMENDMENT	APPROVED	DATE
1	ISSUED FOR CONSTRUCTION	CJP	06-03-2023
2	ISSUED FOR CONSTRUCTION	SHG	12-07-2023



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 New Zealand

CIVIL

SCALES		ORIGINAL SIZE
1:200 @ A1		A1
DRAWN	DESIGNED	APPROVED
D. MOORE	M. LEGGET	C. PARKER
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
K. MEIN	S. GRIEVE	06-03-2023

FOR CONSTRUCTION

PROJECT	
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 119 R.P. 13.317 - 13.422.0, MANGAMUKA, NORTHLAND A3 NZTA EMERGENCY WORKS AUGUST 2022	
TITLE	
PAVEMENT RECONSTRUCTION	
WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.
1-11241.13	C021
	REVISION
	2



LEGEND	
	ROAD RESERVE
	PROPERTY BOUNDARY
	PROPOSED ROAD MARKINGS
	PROPOSED EDGE OF SEAL
	PROPOSED GUARDRAIL

**APPROVED PLAN**  
 Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024

300 mm  
200  
100  
50  
0 10 mm



**NOTES:**  
 1. FOR NOTES REFER TO SHEET C001.

1:200 @ A1  
 1:400 @ A3

REVISION	AMENDMENT	APPROVED	DATE
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SCALES	ORIGINAL SIZE	
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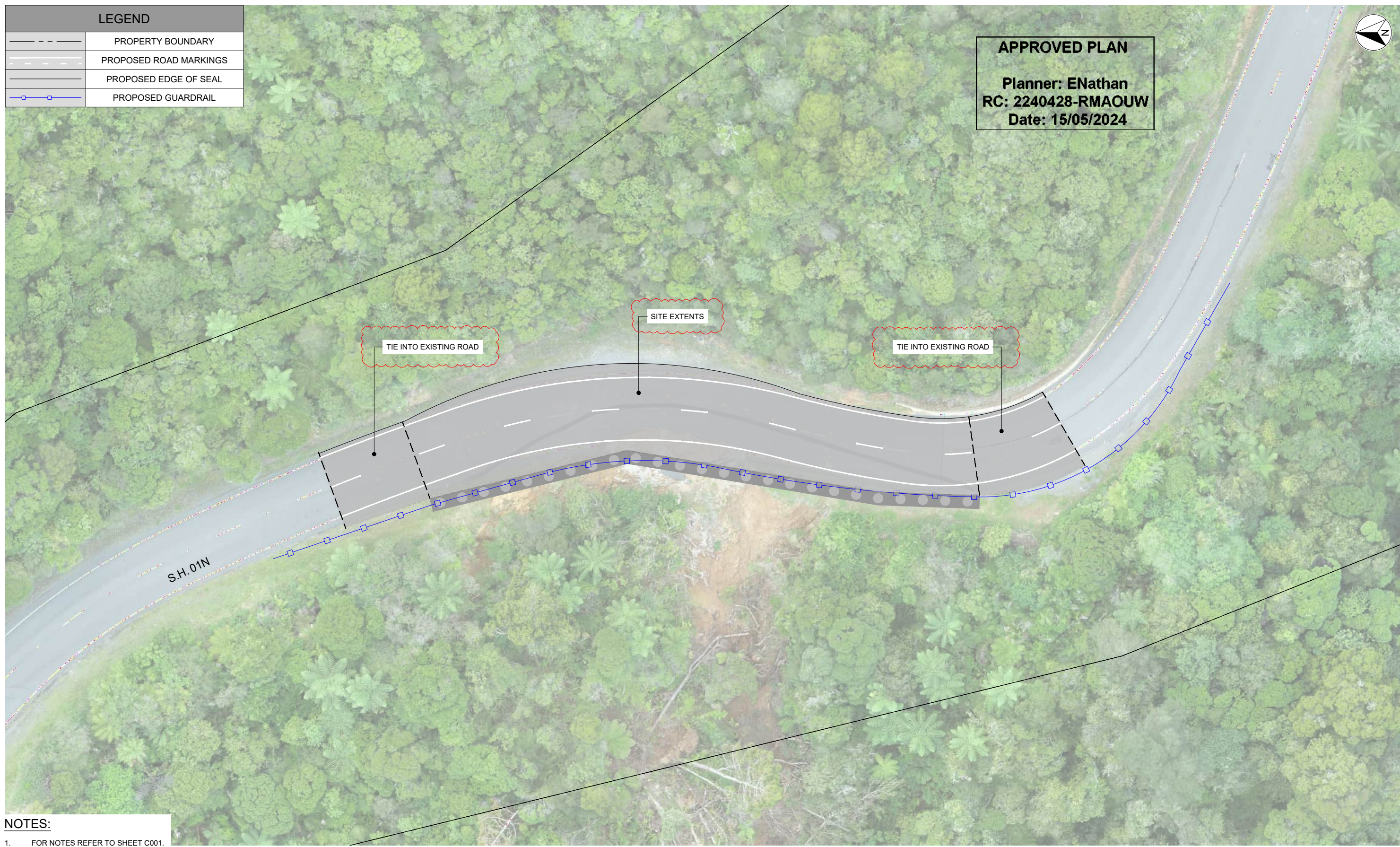
PROJECT
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TITLE
PAVEMENT RECONSTRUCTION
WSP PROJECT NO. (SUB-PROJECT) 1-11241.13
SHEET NO. C021(A4)
REVISION 1

LEGEND	
	PROPERTY BOUNDARY
	PROPOSED ROAD MARKINGS
	PROPOSED EDGE OF SEAL
	PROPOSED GUARDRAIL

**APPROVED PLAN**  
 Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024



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**NOTES:**  
 1. FOR NOTES REFER TO SHEET C001.

1:200 @ A1  
 1:400 @ A3

REVISION	AMENDMENT	APPROVED	DATE
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2	ISSUED FOR CONSTRUCTION	SHG	12-07-2023



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SCALES	DESIGNED	APPROVED	ORIGINAL SIZE
1:200 AT A1	M. LEGGETT	C. PARKER	A1
DRAWN	DESIGNED	APPROVED	
D. MOORE	M. LEGGETT	C. PARKER	
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 A5 NZTA EMERGENCY WORKS 2022  
 TITLE  
 PLAN  
 PAVEMENT EXTENTS  
 WSP PROJECT NO. (SUB-PROJECT)  
 1-11241.13

SHEET NO. C021(A5) REVISION 2





**LEGEND**

	ROAD BOUNDARY
	PROPERTY BOUNDARY
	PROPOSED GUARDRAIL
	ROAD MARKINGS
	ROAD EDGE OF SEAL

**APPROVED PLAN**

Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024

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**NOTES:**

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1:200 @ A1  
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1	ISSUED AS FOR CONSTRUCTION	S.H.G.	19-10-2023



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SCALES		ORIGINAL SIZE
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DRAWN	DESIGNED	APPROVED
D. MOORE	D. CLAASSEN	S. GRIEVE
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
V. GILES	S. GRIEVE	19-10-2023

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PROJECT	TITLE	SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 119 R.P. 13.750 - 13.860, MANGAMUKA, NORTHLAND A6 NZTA EMERGENCY WORKS 2022	PLAN PAVEMENT EXTENTS	C021(A6)	1
WSP PROJECT NO. (SUB-PROJECT) 1-11241.13			



**APPROVED PLAN**  
 Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024

LEGEND	
	ROAD BOUNDARY
	PROPERTY BOUNDARY
	PROPOSED GUARDRAIL
	ROAD MARKINGS
	ROAD EDGE OF SEAL

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**NOTES:**  
 1. FOR NOTES REFER TO SHEET C001.

1:200 @ A1  
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REVISION	AMENDMENT	APPROVED	DATE
1	ISSUED AS FOR CONSTRUCTION	S.H.G.	17-11-2023
2	ISSUED FOR CONSTRUCTION - WALL ALIGNMENT CHANGE	S.H.G.	15-01-2024



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SCALES	DESIGNED	APPROVED	ORIGINAL SIZE
1:200 AT A1	D. CLAASSEN	S. GRIEVE	A1
DRAWN	DESIGNED	APPROVED	
D. MOORE	D. CLAASSEN	S. GRIEVE	
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE	
J. MOOLMAN	S. GRIEVE	17-11-2023	

FOR CONSTRUCTION

PROJECT	TITLE	SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 119 R.P. 14.030 - 14.110, MANGAMUKA, NORTHLAND A7 NZTA EMERGENCY WORKS 2022	PLAN PAVEMENT EXTENTS	C021(A7)	2
WSP PROJECT NO. (SUB-PROJECT) 1-11241.13			



**NOTES.**  
 1. FOR NOTES REFER TO SHEET C001.

1:250 @ A1  
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REVISION	AMENDMENT	APPROVED	DATE
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SCALES	DESIGNED	APPROVED	ORIGINAL SIZE
1:250 AT A1	M. LEGGET	S. GRIEVE	A1
DRAWN	DESIGNED	APPROVED	
D. MOORE	M. LEGGET	S. GRIEVE	
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE	
V. GILES	S. GRIEVE	27-11-2023	

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PROJECT	TITLE	SHEET NO.	REVISION
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY S.H. 01N R.S. 119 R.P. 14.480 - 14.630, MANGAMUKA, NORTHLAND A8 NZTA EMERGENCY WORKS 2022	PLAN EXISTING CONTOURS	C002(A8)	1
WSP PROJECT NO. (SUB-PROJECT)			
1-11241.13			



**APPROVED PLAN**  
 Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024

LEGEND	
	ROAD RESERVE
	PROPERTY BOUNDARY
	PROPOSED ROAD MARKINGS
	PROPOSED EDGE OF SEAL
	PROPOSED GUARDRAIL

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**NOTES:**  
 1. FOR NOTES REFER TO SHEET C001.

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SCALES		ORIGINAL SIZE
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DRAWN	DESIGNED	APPROVED
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WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY	
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A9 NZTA EMERGENCY WORKS 2022	
TITLE	
PLAN - PAVEMENT EXTENTS	
SHEET 1 OF 2	
WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.
1-11241.13	C021(A9)
	REVISION
	2



LEGEND	
	ROAD BOUNDARY
	PROPERTY BOUNDARY
	PROPOSED GUARDRAIL
	ROAD MARKINGS
	ROAD EDGE OF SEAL

**APPROVED PLAN**  
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 RC: 2240428-RMAOUW  
 Date: 15/05/2024

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**NOTES.**  
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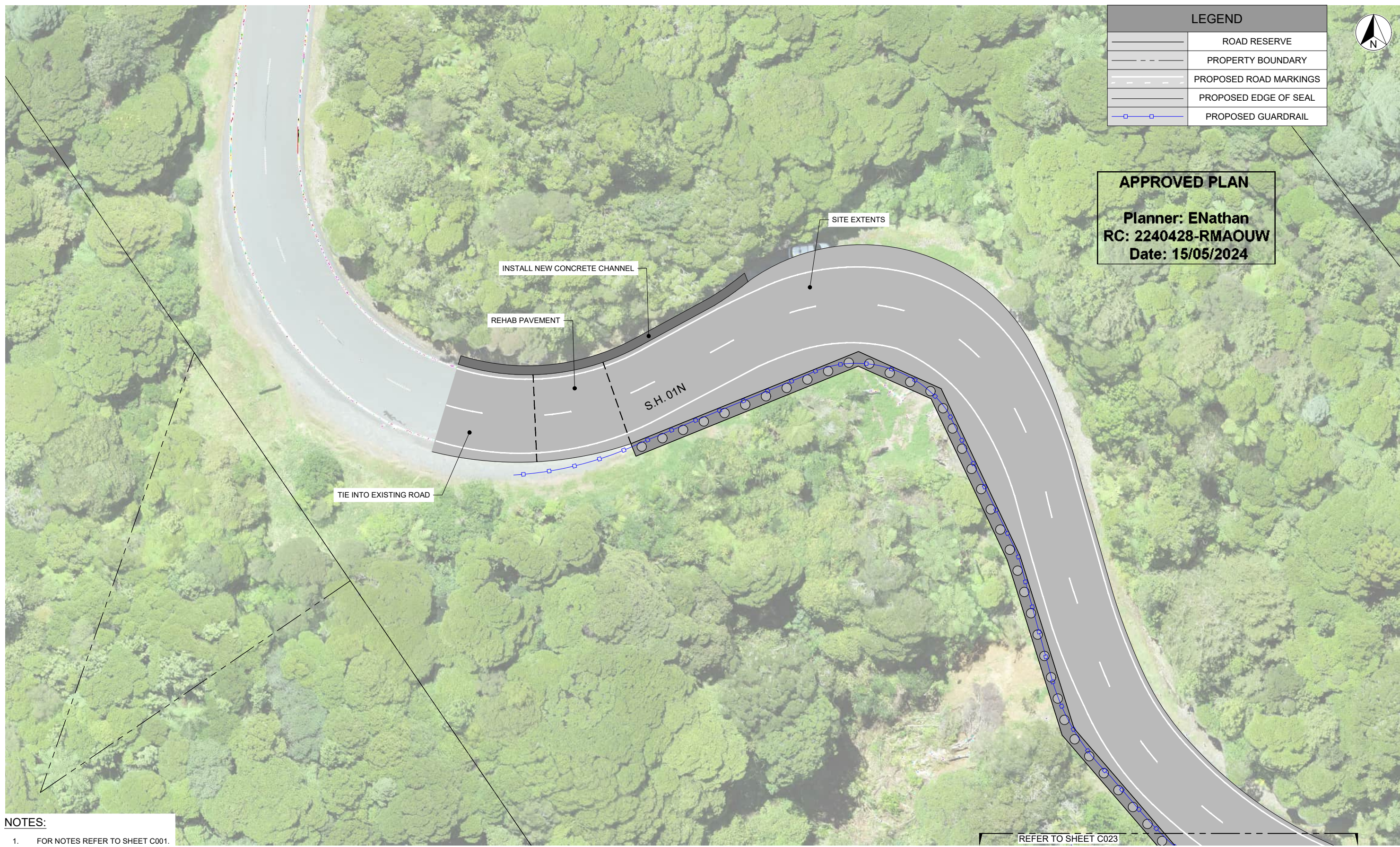
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PROJECT  
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 S.H. 01N R.S. 134 R.P. 2.213 - 2.385, MANGAMUKA, NORTHLAND  
 A10 NZTA EMERGENCY WORKS 2022

TITLE  
 PLAN  
 PAVEMENT EXTENTS

WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.	REVISION
1-11241.13(A10)	C021(A10)	A



LEGEND	
	ROAD RESERVE
	PROPERTY BOUNDARY
	PROPOSED ROAD MARKINGS
	PROPOSED EDGE OF SEAL
	PROPOSED GUARDRAIL

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 Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024

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**NOTES:**  
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SCALES	ORIGINAL SIZE	
1:200 @ A1	A1	
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 A12/13 NZTA EMERGENCY WORKS 2022

TITLE  
 PLAN - PAVEMENT EXTENTS  
 SHEET 1 OF 2

WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.	REVISION
1-11241.13	C022(A12-A13)	2

LEGEND	
	ROAD RESERVE
	PROPERTY BOUNDARY
	PROPOSED ROAD MARKINGS
	PROPOSED EDGE OF SEAL
	PROPOSED GUARDRAIL

REFER TO SHEET C022



**APPROVED PLAN**  
 Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024

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REVISION	AMENDMENT	APPROVED	DATE
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SCALES		ORIGINAL SIZE
1:200 @ A1		A1
DRAWN	DESIGNED	APPROVED
D. MOORE	D. CLAASSEN	C. PARKER
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
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PROJECT  
 WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY  
 S.H. 01N R.S. 134 R.P. 4.360 - 4.625, MANGAMUKA, NORTHLAND  
 A12/13 NZTA EMERGENCY WORKS 2022  
 TITLE  
 PLAN - PAVEMENT EXTENTS  
 SHEET 2 OF 2  
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 1-11241.13

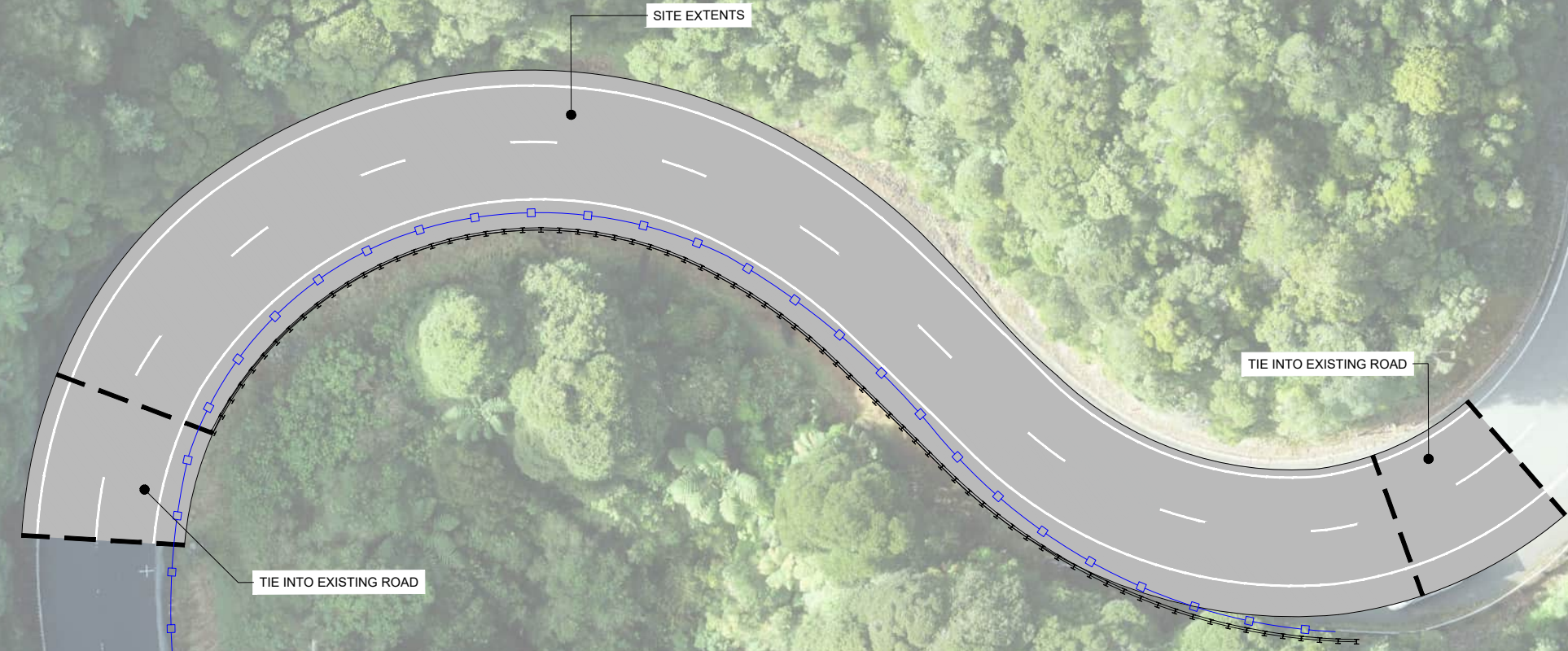
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LEGEND	
	ROAD RESERVE
	PROPERTY BOUNDARY
	PROPOSED ROAD MARKINGS
	PROPOSED EDGE OF SEAL
	PROPOSED GUARDRAIL

**APPROVED PLAN**  
 Planner: ENathan  
 RC: 2240428-RMAOUW  
 Date: 15/05/2024

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**NOTES:**  
 1. FOR NOTES REFER TO SHEET C001.

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SCALES		ORIGINAL SIZE
1:200 @ A1		A1
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TITLE
PLAN PAVEMENT EXTENTS
WSP PROJECT NO. (SUB-PROJECT) 1-11241.13
SHEET NO. C021(A26)
REVISION 1



**LEGEND**

	ROAD RESERVE
	PROPERTY BOUNDARY
	PROPOSED ROAD MARKINGS
	PROPOSED EDGE OF SEAL
	PROPOSED GUARDRAIL

**APPROVED PLAN**

**Planner: ENathan**  
**RC: 2240428-RMAOUW**  
**Date: 15/05/2024**

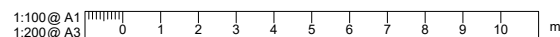


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SCALES		ORIGINAL SIZE
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PROJECT	
WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY	
S.H. 01N R.S 134 R.P 4.470 - 4530, MANGAMUKA, NORTHLAND	
A27 NZTA EMERGENCY WORKS 2022	
TITLE	
PLAN	
DESIGN OVERVIEW	
WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.
1-11241.13	C020(A27)
REVISION	1

# APPENDIX D Heritage Values Assessment

Archaeological and Historic Heritage Assessment

State Highway 1 Slip Repairs

Mangamuka-Victoria Valley

25 October 2023

Prepared for:

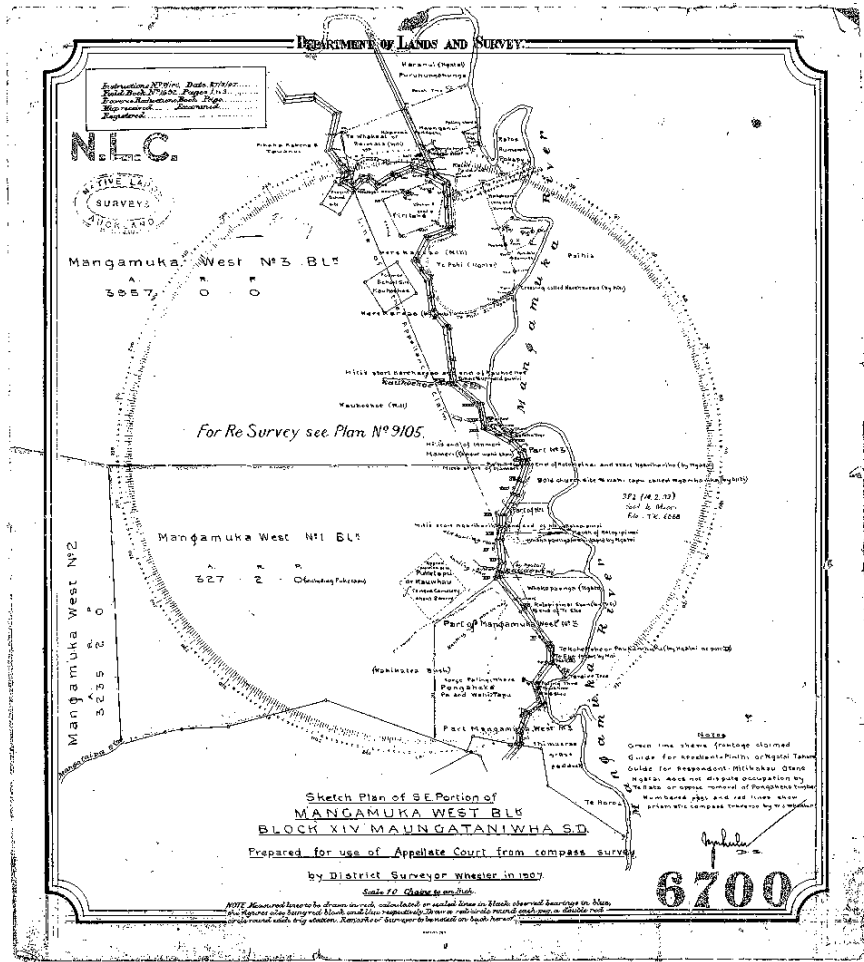
Waka Kotahi

Prepared by:

Geometria Limited

PO Box 1972

Whangarei 0140



Geometria

## 0.1 Executive Summary

This report provides an assessment of archaeological and heritage values along the State Highway 1 corridor from Mangamuka to Victoria Valley in order to assist with undertaking slip repairs through the Mangamuka gorge and over the Mangamuka range. It extends outside the area of slips in order to encompass areas which may be required as spoil dump sites and for other purposes associated the slip repairs, and any future works. There are no existing such assessments for the area and due to a prior lack of development, few recorded archaeological sites. A review of historic plans and other sources has identified more than 400 heritage features in the area and many of these may have an extant physical component and potentially meet the statutory definition of an archaeological site under the Heritage New Zealand Pouhere Taonga Act. Numerous names and historic topographic and vegetation descriptions have also been identified.

No archaeological sites are likely to be affected by the slip repairs themselves and these may occur under an Accidental Discovery Protocol. However several areas where spoil dump sites have been, or are in use are in areas of potential archaeological, historical and cultural significance and require assessment. New spoil dump sites and other works outside the slip areas will also need to be assessed early in the planning stages in order to avoid harm. Additional assessments will be added as appendices.

## 0.2 Quality Information

Document: Archaeological and Historic Heritage Assessment. State Highway Slip Repairs. Mangamuka-Victoria Valley

Ref: 2023-101

Date: 25 October 2023

Prepared by: Jonathan Carpenter

## 0.3 Revision History

Revision	Revision Date	Details	Authorized Name
Client draft v0.1	10 June 2023		J. Carpenter
Client Final v1.0	18 August 2023		J. Carpenter
Client Final v2.0	25 October 2023		J. Carpenter

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## Glossary

Classic	The later period of New Zealand settlement
Fire scoop	Fireplace used for various reasons (cooking, warming, etc.)
Hangi	An earth oven for cooking food
Midden	The remains of food refuse usually consisting of shells, and bone, but can also contain artefacts
Pa	A site fortified with earthworks and palisade defences
Pit	Rectangular excavated pit used to store crops by Maori
Radiocarbon	Method of absolute dating using known rates of decay of a carbon isotope
Terrace	A platform cut into the hill slope used for habitation
Wahi tapu	Sites of spiritual significance to Maori

## 1.0 Introduction

Geometria Ltd was commissioned by Waka Kotahi to undertake an archaeological assessment of slip repair work on State Highway 1 through the Mangamuka gorge, between Mangamuka and Victoria Valley in the Far North. The work was requested by K. O'Reilly, Waka Kotahi Principal Project Manager, Infrastructure Delivery (Northland and Auckland). No particular Zone of Influence has been indicated and so this assessment takes a geographically broad approach, extending from the Mangamuka Bridge in the south east to the State Highway 1/Takahue Road intersection in the north west in order to account for existing and potential spoil dump sites at some distance from the slips/works themselves.

Under the Heritage New Zealand Pouhere Taonga Act 2014 all archaeological sites are protected from any modification, damage or destruction except by the authority of the Heritage New Zealand Pouhere Taonga.

This assessment uses archaeological techniques to assess archaeological values and does not seek to locate or identify wahi tapu or other places of cultural or spiritual significance to Maori. Such assessments may only be made by Tangata Whenua, who may be approached independently of this report for advice.

Likewise, such an assessment by Tangata Whenua does not constitute an archaeological assessment and permission to undertake ground disturbing activity on and around archaeological sites and features may only be provided by Heritage New Zealand Pouhere Taonga, and may only be monitored or investigated by a qualified archaeologist approved through the archaeological authority process.

### 1.1 The Resource Management Act 1991.

Archaeological sites and other historic heritage may also be considered under the Resource Management Act 1991 (RMA). The RMA establishes (under Part 2) in the Act's purpose (Section 5) the matters of national importance (Section 6), and other matters (Section 7) and all decisions by a Council are subject to these provisions. Sections 6e and 6f identify historic heritage (which includes archaeological sites) and Maori heritage as matters of national importance.

Councils have a responsibility to recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, wahi tapu, and other taonga (Section 6e). Councils also have the statutory responsibility to recognise and provide for the protection of historic heritage from inappropriate subdivision, use and development within the context of sustainable management (Section 6f). Responsibilities for managing adverse effects on heritage arise as part of policy and plan preparation and the resource consent processes.

### 1.2 The Heritage New Zealand Pouhere Taonga Act 2014

Under the Heritage New Zealand Pouhere<sup>2</sup> Taonga Act 2014 (HNZPTA; previously the Historic Places Act 1993) all archaeological sites are protected from any modification, damage or destruction except by the authority of the Historic Places Trust. Section 6 of the HNZPTA defines an archaeological site as:

*" any place in New Zealand, including any building or structure (or part of a building or structure), that—*

*(i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and*

*(ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and*

*(b) includes a site for which a declaration is made under section 43(1)”*

To be protected under the HNZPTA an archaeological site must have physical remains that pre-date 1900 and that can be investigated by scientific archaeological techniques. Sites from 1900 or post-1900 can be declared archaeological under section 43(1) of the Act.

If a development is likely to impact on an archaeological site, an authority to modify or destroy this site can be sought from the local Heritage New Zealand Pouhere Taonga office under section 44 of the Act. Where damage or destruction of archaeological sites is to occur Heritage New Zealand usually requires mitigation. Penalties for modifying a site without an authority include fines of up to \$300,000 for destruction of a site.

Most archaeological evidence consists of sub-surface remains which are often not visible or obvious and indications of an archaeological site are often very subtle and hard to distinguish on the ground surface. Sub-surface excavations on a suspected archaeological site can only take place with an authority issued under Section 56 of the HNZPTA issued by the Heritage New Zealand.

## **2.0 Location**

The project area is the State Highway 1 corridor between Mangamuka and Victoria Valley, and several adjacent spoil dump sites (Figure 1). The slips are located between the Taupapa Stream outfall to the Mangamuka River on the southeast side of the gorge, to the Raetea Valley DOC campground on the northwest side.

Current and closed spoil dump sites are located at Mangamuka State Highway 1 at Church Road, Makene Road, Victoria Valley Road, Mangatoetoe Road, and the north side of SH1 midway between Victoria Valley and Kitchen Road. New spoil dumps are being established at Peria Valley Road and the Mangamuka Valley as of August 2023.

## **2.1 Topography, Geology, Climate and Vegetation**

The project area lies within the Maungataniwha ecological district, with Maungataniwha itself approximately one kilometre east of the highway with the summit at an elevation of 744m above sea level. The Maungataniwha range, extending northeast towards Whangaroa and Manganui, and southwest towards the Hokianga and Whangape either side of the high point comprises heavily forest, steep and dissected hill country 300-400m high. There are marine-cut ancient beach terraces up to 160m above sea level, and deep alluvial deposits on the floors of the larger valley systems.

Across the range, the underlying geology comprises basalt and dolerite with some breccia, weathering to soft brown clay up to 30m thick. Through the gorge, the weathering geology has produced Awapuku clay loam, with an area of Manganui clay in the Raetea Valley. On the steep country above, the rock has weathered to Te Kie stoney clay loam and red loam steepland soils. The Te Kie suite soils are semi-volcanic brown granular loams and clays, derived from Tangihua volcanic deposits mixed with sedimentary rock. While they can be highly fertile on the flat land, on the steep country they are prone to severe shallow or deep-seated slipping as the Te Kie soils are described as skeletal, comprising 35% or more rock fragments, and slip scars are difficult to revegetate.

On the valley floors, alluvium comprises varying amounts of mud, sand and gravels forming riverbed, flood plain and terrace deposits of unconsolidated and un-weathered to slightly weathered to clay

deposits up to 2m thick. Marine terraces underlie the slightly higher rolling country 30-150m above sea level west of the highway in the central part of the Mangamuka valley. To the west and east/north east of the Mangamuka valley towards Mangataipa and Fern Flat respectively, and north of the Victoria Valley towards Peria are blue-grey thin to medium bedded mudstones interbedded with fine sandstones, weathering to soft silty clay up to 10m deep.

The valley floors have weathered to Mangakahia clay loam and silt loam with the rolling hill country either side Kohumaru clay, beyond which the patchwork of soil types becomes more complex. The flood plain soils are relatively fertile and free-draining, with periodic flooding adding nutrients and depositing coarse sediment in the upper valleys and near the stream banks (silt loams) and finer material in the lower valleys and further away from the banks (clay loams). These are highly productive arable and pastoral soils. The clay soils are found on the higher terraces, are no longer being replenished by flood-borne sediment and are far more variable in terms of fertility and drainage.

The area has a mild, wet climate with the predominant winds from the south west, and annual rainfall ranging from 140mm on the low country to 2150mm across the ranges. The annual mean temperature is 15.9 with seasonal averages ranging from 12 degrees in June to 20 degrees in February.

The vegetation in the area was originally dominated by broadleaf podocarp-kauri forest, with intensive logging from European arrival of podocarps and to a lesser extent puriri and kauri (there appears to have been less kauri here than in many parts of Taitokerau). The larger river valleys contained extensive wetlands and kahikatea-dominated swamp forests. By the time of European arrival much of the low land areas had been cleared of primary forest by Maori, leaving a patchwork of primary forest in cooler, wetter gullies, and bracken fernlands and manuka-kanuka dominated shrublands, with areas of intensive Maori horticulture on the fertile and well-watered valley floors.

In summary, the soils and climate in the project area have produced a highly productive horticultural and pastoral landscape on the valley floors on either side of the Maungataniwha Range, with very steep, high and slip-prone country in between.

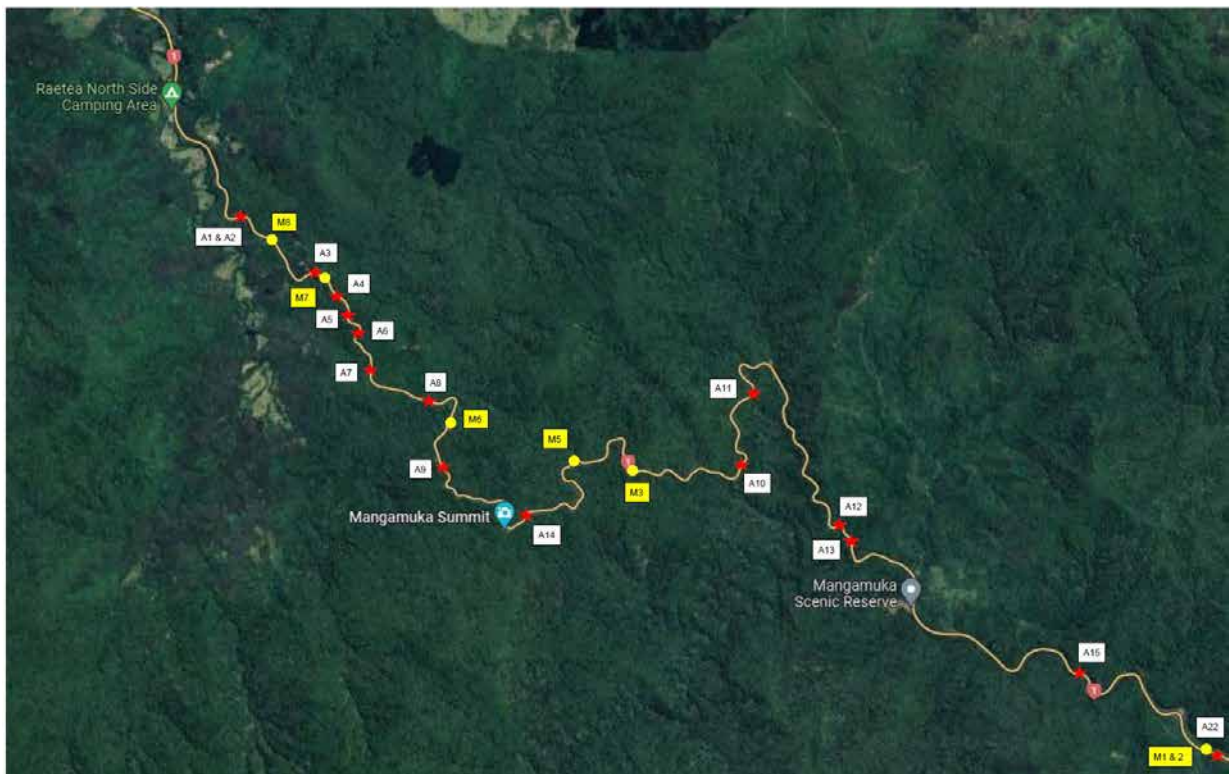


Figure 1: Slips on State Highway 1, Mangamuka

### **3.0 Proposed Works**

Slip repairs in the project area take a more or less common form across the project area. Slips are to be retained with drilled concrete piles with a concrete pile cap beam. The cap beam is anchored back into the hillside with wire strand anchors.

Arrays of bored subsurface drains will take water from the upslope side of the slips to central manholes and then dispose of it via the existing stormwater system. Concrete channels and minor road widening will also be undertaken. Plans for works at slip A3 near the Raetea campground are provided below as an example of the typical treatment (Figure 2- Figure 5), along with typical cross sections for concrete piles and drains (Figure 6-Figure 7), and similar plans for all the slips have been provided and considered, along with associated/enabling works.

The locations of a number of closed, open and potential future spoil dump sites in the wider Victoria Valley and Mangamuka Valley area have also been provided for assessment, with separate site-based assessments contained in the Appendices of this report.

### **4.0 Methodology**

The methods used to assess the presence and state of archaeological remains in the project area included both a desktop review and preliminary field assessment.

The initial desktop assessment involved an investigation of written records relating to the history of the project area and surrounds. These included regional historical and archaeological publications and unpublished reports, and New Zealand Archaeological Association Site Record Files (NZAA SRF) downloaded via the ArchSite website. Deeds indexes and other resources held by Archives New Zealand and land plans held at Land Information New Zealand were consulted, along with other historic maps and plans, historic and modern aerial and terrestrial imagery, and primary historic sources (Google Earth/Retrolens/Whangarei Public Library/Auckland Public Library/Alexander Turnbull Library/University of Auckland/Victoria University of Wellington/Paperspast/Appendices to the Journal of the House of Representatives). The Far North District Plan and Heritage New Zealand List were also consulted.

Subsequently, site visits were undertaken to view the slip repairs, and assess closed, operational and proposed soil dump sites and other areas of interest.



Figure 2: Slip A3.



Figure 3: Slip A3, plan of concrete cap and pile retaining and new channelling.



Figure 4: Slip A3, plan of pavement reconstruction.



Figure 5: Slip A3, plan of bored drains.

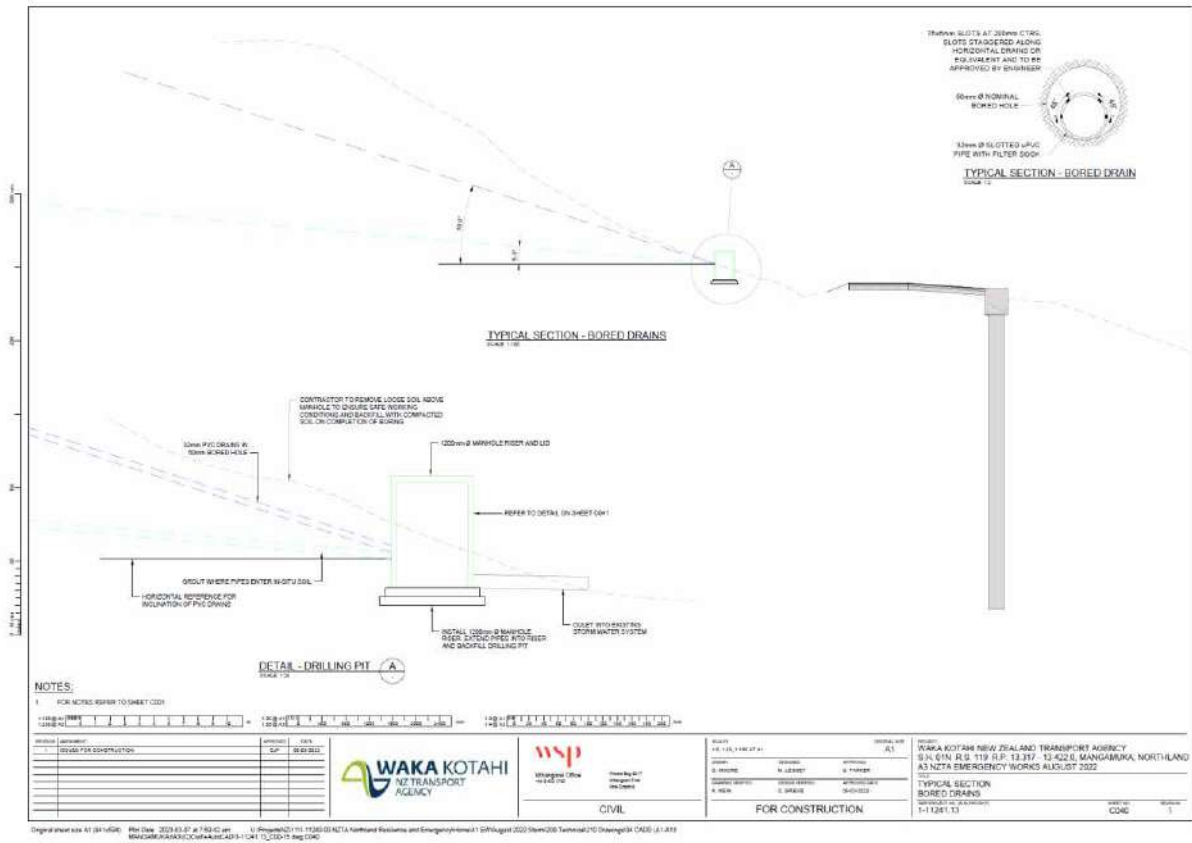


Figure 6: Typical cross section, bored drains.



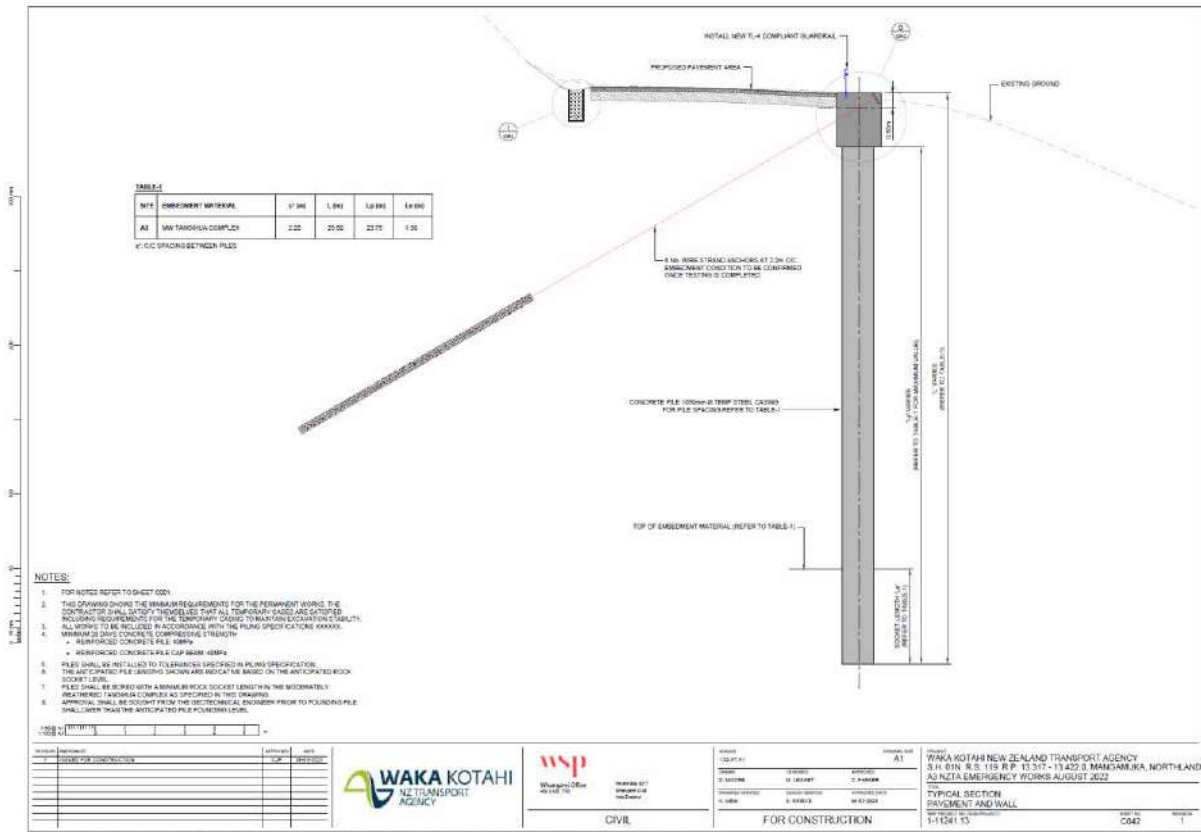


Figure 7: Typical cross section, concrete cap and pile retaining, channelling and pavement.

## 5.0 Background

### 5.1 Archaeological sites in the Project Area

There are no recorded archaeological sites in the project area through the Mangamuka gorge and over the range, but a number of sites are recorded in the central Mangamuka valley to the southeast of the gorge, and to the north west at Victoria Valley. A review of reports held by Heritage New Zealand and the New Zealand Archaeological Association suggests no archaeological surveys have been undertaken in the vicinity (Note: archaeological assessments which did not result in an archaeological Authority being sought may not be included in these repositories), and the sites have largely been recorded in an ad hoc fashion.

The nearest known prior formal archaeological assessments are to the west at Takahue (Gibb 2017, 2019), and in the Oruru valley/Peria to the north (Hensley 2003; Johnson, L., 1986, 1996, 2016. Large numbers of Maori archaeological sites including pa, pit and terrace complex, midden and horticultural sites are present in the Oruru Valley including more than 40 pa sites (Robinson pers. comm.), but most have yet to be formally recorded. A large number of similar sites are also present in the Takahue Valley, with a smaller cluster north of the Victoria River between Takahue Road and Te Rore Road, but far more are likely to be present given the importance of the valley to Maori for horticultural activities.

The nearest sites to the project area are 1-3km east of the mouth of the Mangamuka gorge, around the modern settlement of Mangamuka. O05/209 is taro, recorded by P. Matthews in 1985 as part of his survey of extant wild and cultivated taro in Northland (Matthews 1985). He records the variety at RR, actively grown by Mrs Harris on the north side of the highway, between the road and river. RR is an acronym for red petioles, rounded blades, and the varietal is one of the likely pre-European introductions of taro, and the most common type found in the survey, at 75%. This variety is the most

important food crop, the most well-dispersed, and found in a range of contexts including in the wild, associated with archaeological sites, and being cultivated at the time of survey, as opposed to e.g. later taro introductions as pig feed in the historic period (Matthews 1985: 268-269).

O05/208 is also taro, recorded by P. Matthews. This taro was of the GR variety in a derelict garden, and was gardened by Violet Harris's mother on the flats below the Harris house, on the south side of the highway. GR is green petioles and rounded blades, made up 13% of Matthews samples, and was most common north of Auckland in non-derelict, non-cultivated gardens. O05/211 is another Matthews Taro site, of the RR variety and growing wild in an old apple orchard near the Abraham Road bridge. O05/210 is another Matthews Taro site, of the RR variety and growing wild in a 20m long clump in the valley below the road, 400m east of the Abraham-Iwitaua Road intersection.

The next nearest site is well to the south, where burials are recorded on the Mangamuka-Broadwood Road, between Mangataipa and Tutekehua. To the east, a number of timber industry sites are recorded in the Omahuta Forest. But the overall impression is one of few sites and/or little site recording having occurred in the area.

At Victoria Valley, three pa sites and four pit/terrace complexes are recorded approximately four kilometres west of where the State Highway leaves the Mangamuka ranges at Mangataiore and passes over the river flats. All the sites were recorded by R. Pollock in 1982 and haven't been re-visited by an archaeologist since that time. R. Pollock appears to have been employed by the Forest Service in this period, undertaking archaeological surveys in State Forests. There is no record of a report associated with this episode of site recording in the Heritage New Zealand digital catalogue or the New Zealand Archaeological Association Northland Site Record File report library. The Pollock sites may have been recorded as part of an ad-hoc survey of a proposed afforestation project or similar at the request of the local Forest Service office. The sites comprise five small to medium sized pit and terrace complexes on the spurs running south towards the river (O04/567, 568, 596, 571, 572) from the main Panther Hill and subsidiary ridges; one large pa site named Pahoro (O04/570), immediately adjacent to the river on the west bank; and a small pa on Panther Hill itself, O04/573 (Carpenter 2019).

As the highway travels west the sites increase in density with large numbers of pa, pits and terraces recorded either side of the highway and the Victoria and Takahue Rivers, and the upper Awanui.

The lack of recorded archaeological sites in the Mangamuka-Victoria Valley area is likely due to a number of factors. A lack of large scale subdivision and development activity in the area since the 2004 RMA amendments has meant that archaeological and historic heritage assessment have not been undertaken in the area, and the lack of previously recorded sites/ad-hoc recording e.g. of prominent sites visible from public areas has meant that what small scale subdivision and development has occurred has not triggered heritage assessments as there are no sites which might act as red flags in the course of consenting.

The lack of sites is belied by the descriptions of the dense 19<sup>th</sup> century Maori occupation of the valleys by observers, as discussed in Section 5.3 below, and a pre-European contact traditional history stretching back to the time of Kupe.

## 5.2 Other Heritage Sites and Features

There several scheduled Historic Heritage Items or Areas, or Sites or Areas of Significance to Maori in the project area and its immediate vicinity, in the Far North District Plan. At Mangamuka, the Ratana Church is scheduled Historic Site, Building or Object #178 and is 200m from the highway. There are also several scheduled Sites of Cultural Significance to Maori including MS08-34 the Kupe memorial, and MS08-29 a wahi tapu, both of which are immediately adjacent to the highway.

In the Mangamuka Gorge immediately adjacent to the highway is MS08-27 the Tapapa wahi tapu. This reserve is adjacent to the meeting place of the Tapapa and Patuturi Rivers. Tapapa refers to a story about a man hiding by lying face down on a rock by the river here. Near here is the place known as Hoanga, after the meeting of two friends (the rivers) Te hono o te awa o Patuturi kia Tapapa (Mangamuka School Centenary Committee, 1983: 45-46).

At Mangataiore on the northwest side of the range there are Scheduled three wahi tapu, MS05-60 Taunoke, MS05-59 Mangataiore, and MS05-28 Kotipu Marae. The latter two are immediately adjacent to the highway, the first is 300 from the road.

There is a scheduled Notable Tree in the Far North District Plan, Tree #4 a puriri at the Victoria Valley school site. There is one Listed Historic Places, Historic Areas or Wahi Tapu or Wahi Tapu Areas on the Heritage New Zealand Pouhere Taonga List in the vicinity. The Ratana Church at Mangamuka is Listed Historic Place #3884.

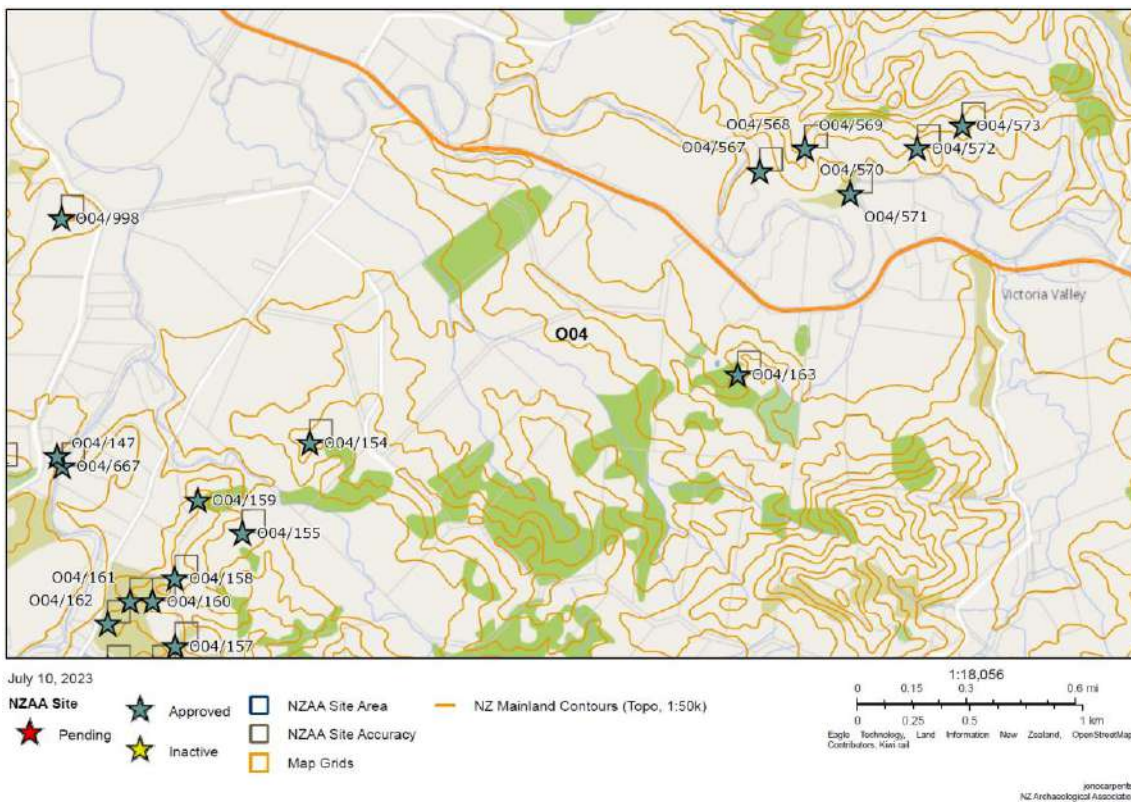


Figure 8: Archaeological sites in the vicinity of the project area, Takahue to Mangamuka (ArchSite; project area in blue, 1 of 6).

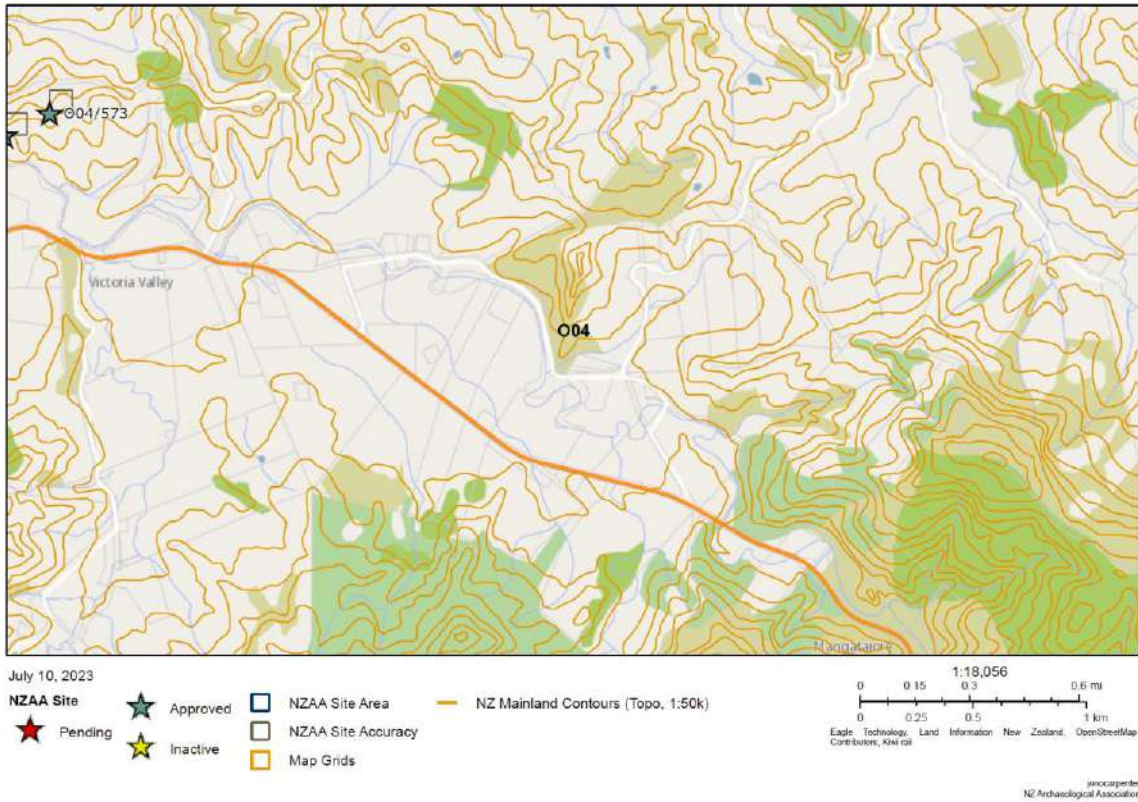


Figure 9: Archaeological sites in the vicinity of the project area, Takahue to Mangamuka (ArchSite; project area in blue, 2 of 6).

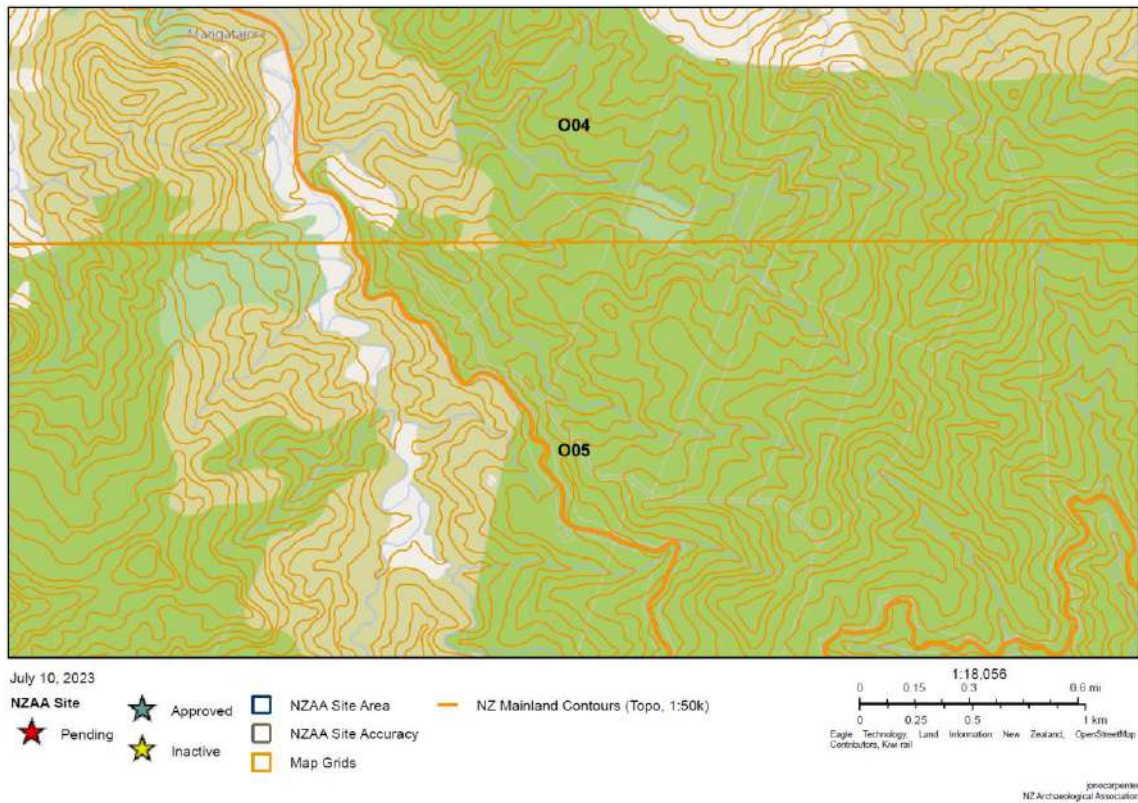


Figure 10: Archaeological sites in the vicinity of the project area, Takahue to Mangamuka (ArchSite; project area in blue, 3 of 6).

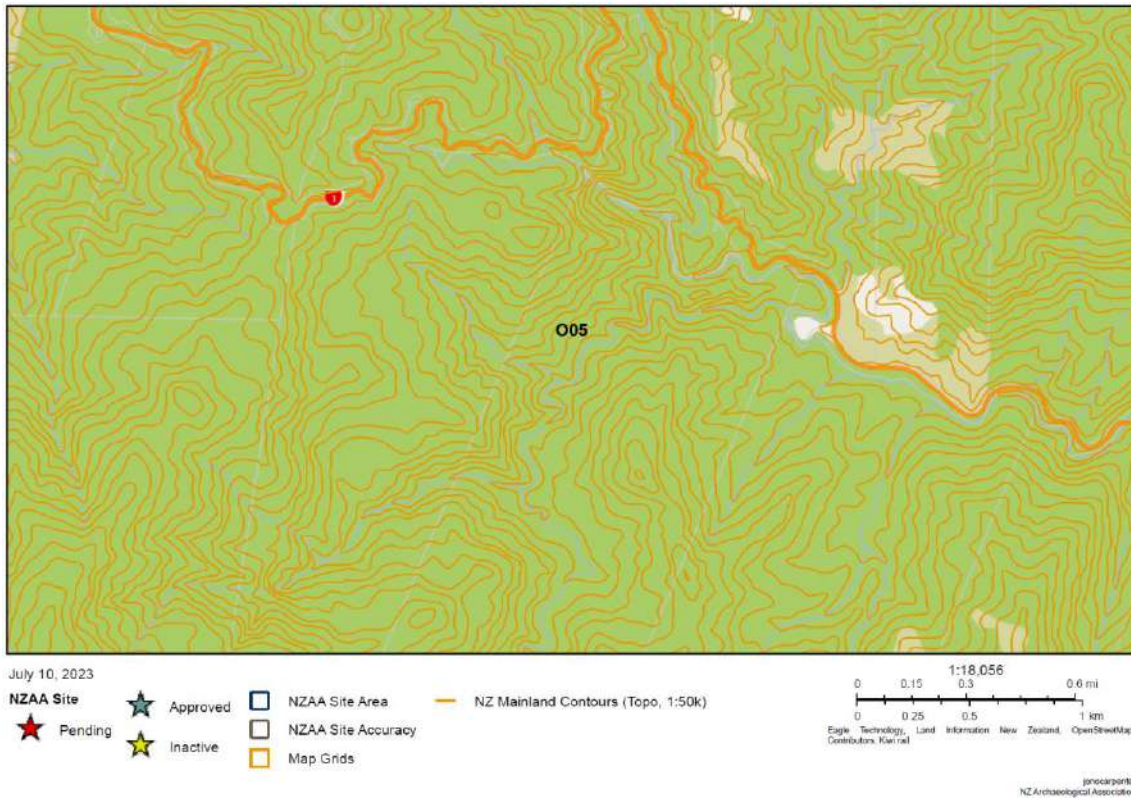


Figure 11: Archaeological sites in the vicinity of the project area, Takahue to Mangamuka (ArchSite; project area in blue, 4 of 6).

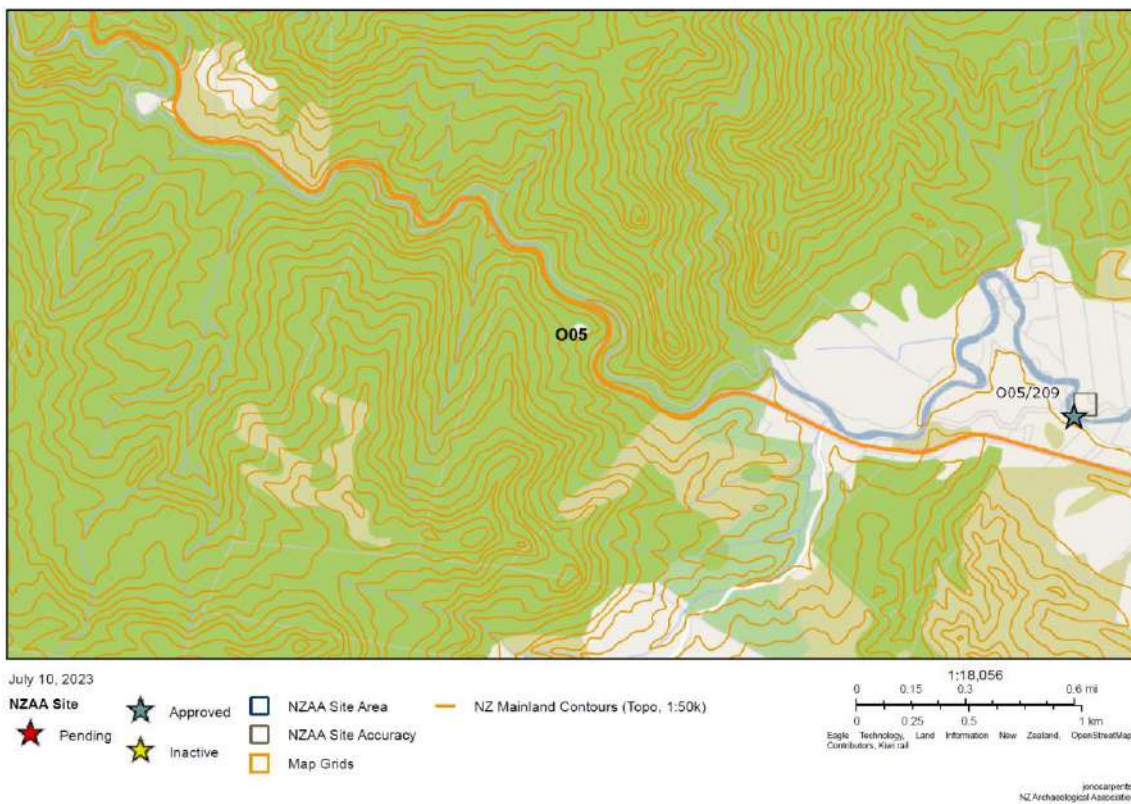


Figure 12: Archaeological sites in the vicinity of the project area, Takahue to Mangamuka (ArchSite; project area in blue, 5 of 6).

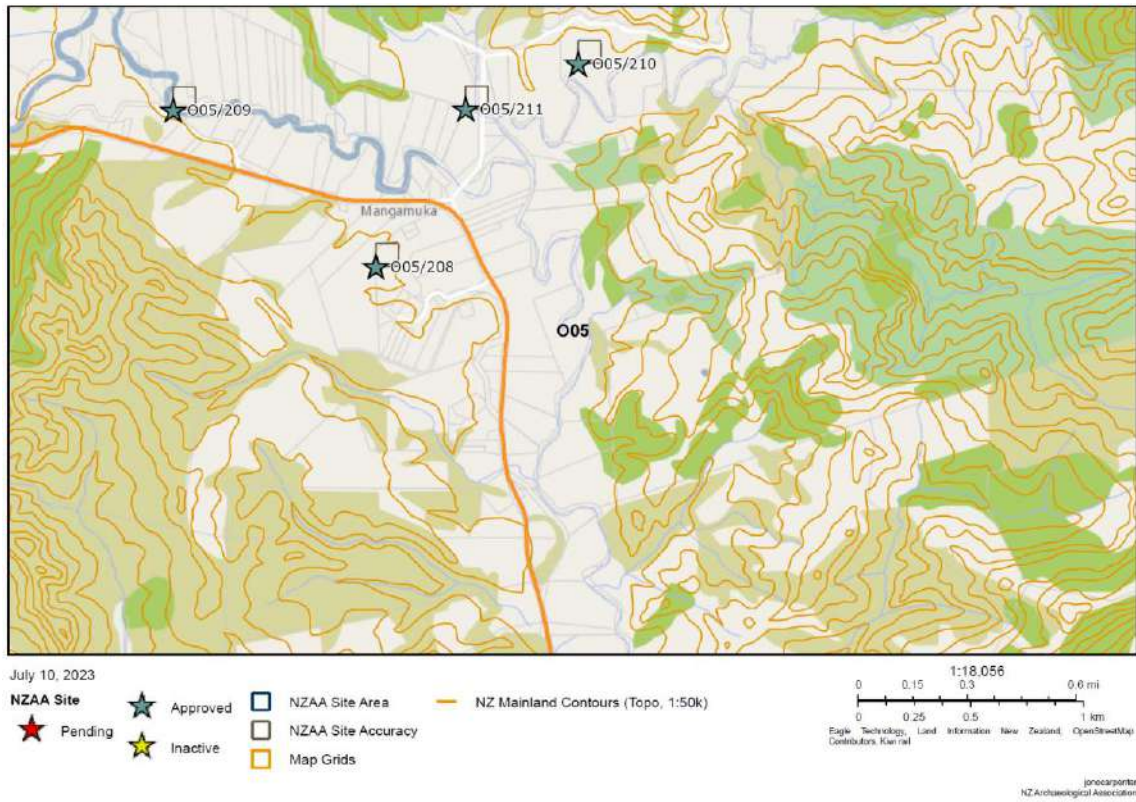


Figure 13: Archaeological sites in the vicinity of the project area, Takahue to Mangamuka (ArchSite; project area in blue, 6 of 6).

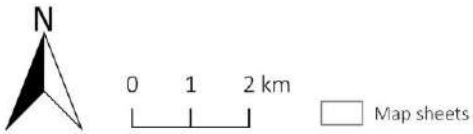
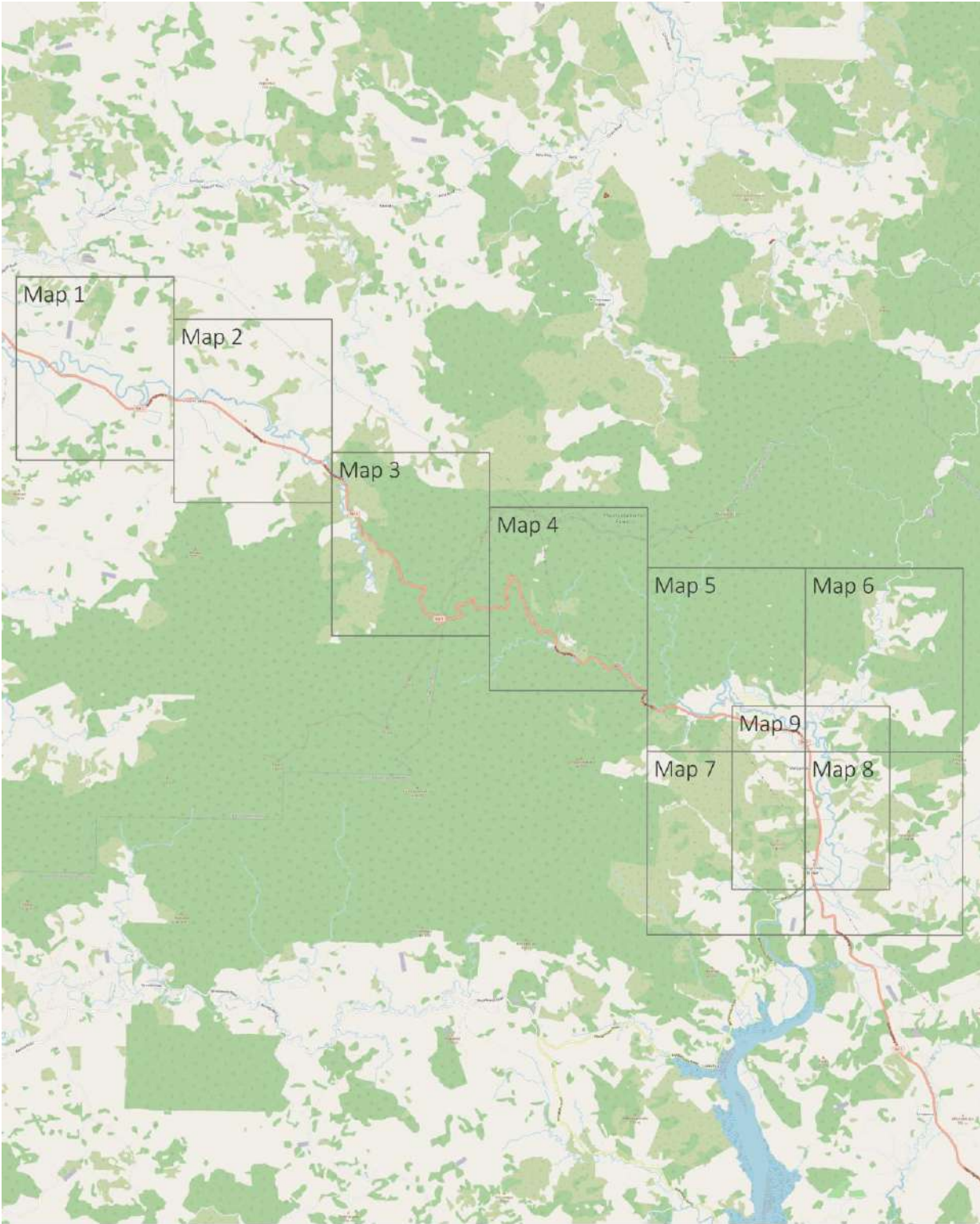


Figure 14: Map sheet key.

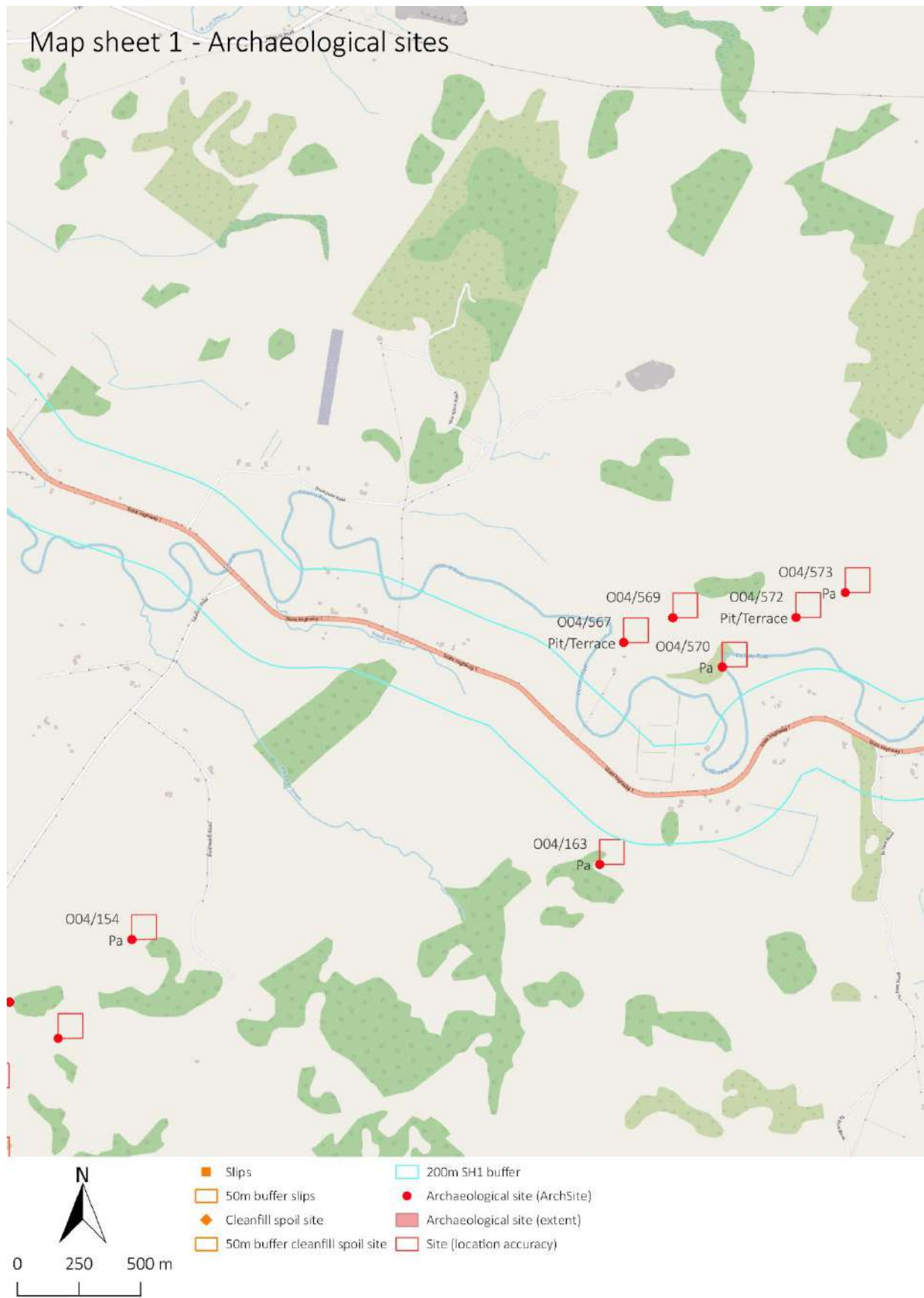


Figure 15: Map sheet 1 – archaeological sites.





Figure 16: Map sheet 2 – archaeological sites.



Figure 17: Map sheet 3 – archaeological sites.

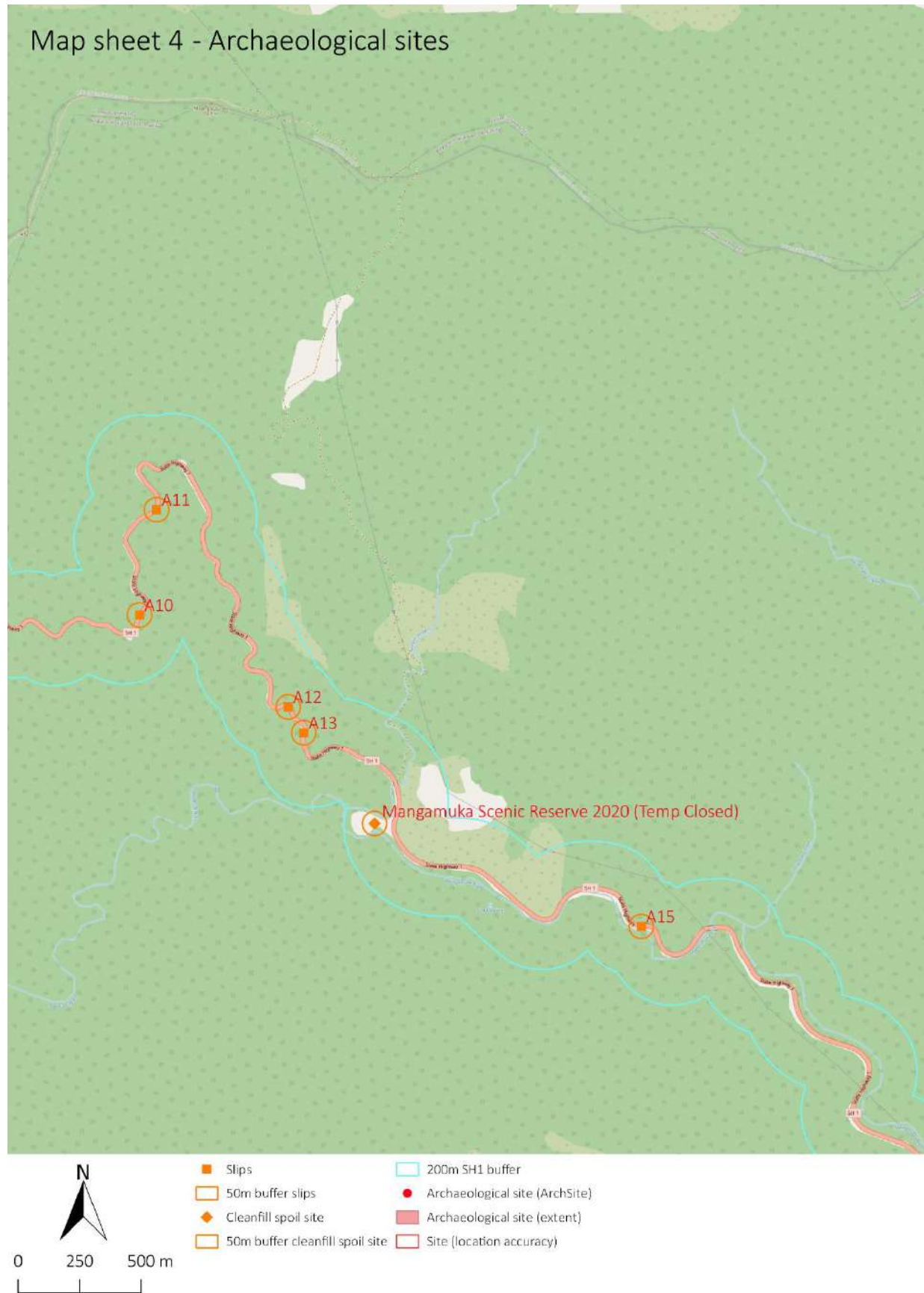


Figure 18: Map sheet 4 – archaeological sites.



Figure 19: Map sheet 5 – archaeological sites.

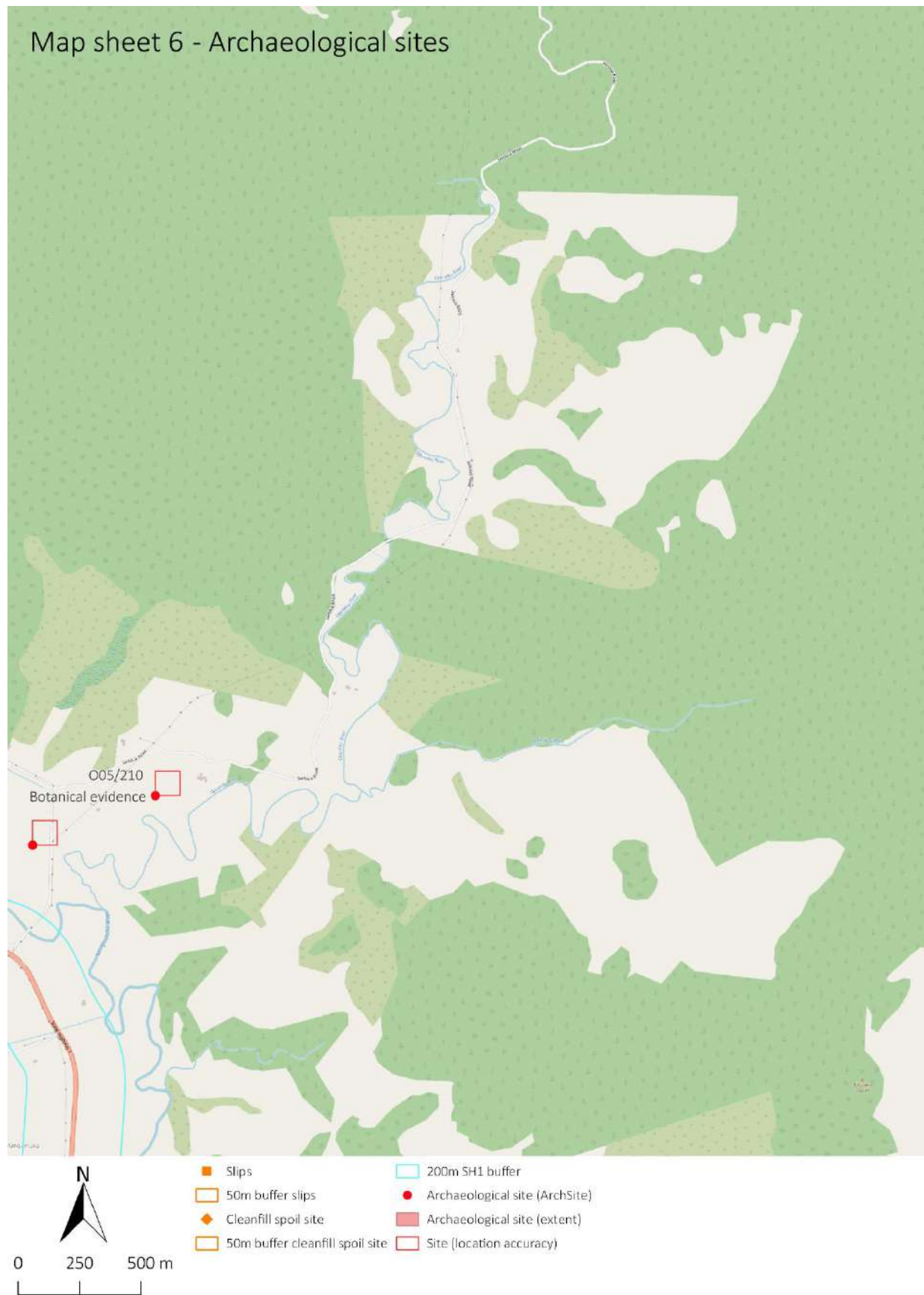


Figure 20: Map sheet 6 – archaeological sites.



Figure 21: Map sheet 7 – archaeological sites.



Figure 22: Map sheet 8 – archaeological sites.



Figure 23: Map sheet 9 – archaeological sites.



### 5.3 Historic Background

#### Maori Traditional History

The Mangamuka valley is named for the muka flax, which once grew abundantly along the river banks there. The navigator Kupe visited the area, naming it Hokianga-nui-a-Kupe. His grandson Nukutawhiti, and Nukutawhiti's brother in law Ruanui returned to Hokianga and settled there with those who remained when Kupe returned to Hawaiiki. A number of subsequent waka arrived in the area, along with movements of people through the Hokianga from elsewhere in the motu. Most consequential for Te Rarawa was the arrival of the Tinana waka captained by Tūmoana, at Tauroa west of Ahipara. His descendants included Houpure the ancestor of Te Rarawa, and his brother Houmeaiti who would settle at Hokianga. They would come into conflict with Ngāti Miru and Ngāti Awa to the north, ultimately dividing the area amongst themselves.

By the 18<sup>th</sup> century, Te Rarawa would hold the land from Ahipara up to Hukatere and over to Kaitaia through to Takahue, Maungataniwha and Mangamuka to the Hokianga and the west coast and the smaller harbours between Hokianga and Ahipara. To the north were Ngati Kuri and Te Aupouri, Ngai Takoto to the northeast and Ngati Kahu and Ngati Kahi ki Whangaroa to the east, and Ngati Pou to the southeast and Nga Puhi beyond.

At the end of the 18<sup>th</sup> century and into the early 19<sup>th</sup> century, the iwi and hapu of Hokianga, Muriwhenua, Whangaroa, Ipiripi and were in regular conflict with the interrelated tribes of Ngati Whatua, Te Roroa and Te Uri O Hau. Hongi Hika was shot and wounded at Mangamuka during a skirmish with Ngati-Pou and Te Roroa elements on the south bank of the Operehu River in early 1827, at a battle known as Hunuhunua, after driving Ngati-Pou from Whangaroa. Many dead from the battle lay on the other side of the Tapapa River for a time.

#### European accounts of Mangamuka in the mid-19th century

European accounts from the 1830s and 1840s, made by explorers and missionaries give the impression of a thriving Maori community of multiple undefended kainga on the Mangamuka River flats, with large and abundant plantations of traditional and introduced cultigens, separated by pockets of remnant forest on the lowlands. The occasional threat of violence still necessitated the establishment from time to time of ad hoc defences, but there are no descriptions of major pa being occupied or defended by this time. A large number of Europeans, mostly involved in the kauri spar trade lived along the river banks on the lower reaches, while the kainga were on the productive river flats of the Mangamuka valley. There were two major named kainga at the time, Mangataipa where the river turned to the east to enter the mouth of the Mangamuka valley and became shallow and winding, and Rotopipiwai just north of the modern Mangamuka bridge. Other smaller kainga were located further up the valley.

Transport was via the main river up to where it became shallow and winding, and thereafter by a mix of shallow-bottomed waka towai or river canoes and forest tracks. At the north end of the valley, foot tracks provided access over the Maungataniwha-Mangamuka ranges to the Oruru Valley, and the Victoria Valley and CMS Mission in Kaitaia. The area was well-travelled by both European and Maori in the earlier decades, with Missionaries from the Wesleyan Mission at Mangungu on the Hokianga preaching in Mangamuka every fortnight. Working with the tides and an early start allowed a visit from Mangungu to Mangamuka to be accomplished in a day, but Maori families travelling to Sunday service at Mangunu would often make the trip a three-day affair.

A map of the Hokianga, published by the British Parliament's Select Committee on the Present State of the Islands of New Zealand (British Parliamentary Papers 1838: 234) shows three chapels established on

the upper Mangamuka River by the Wesleyan Mission, according to the accompanying key at Mangataipa, Rotopiwai and Hunuahunua.

Select Committee on the present State of the Islands of New Zealand. p. 234.

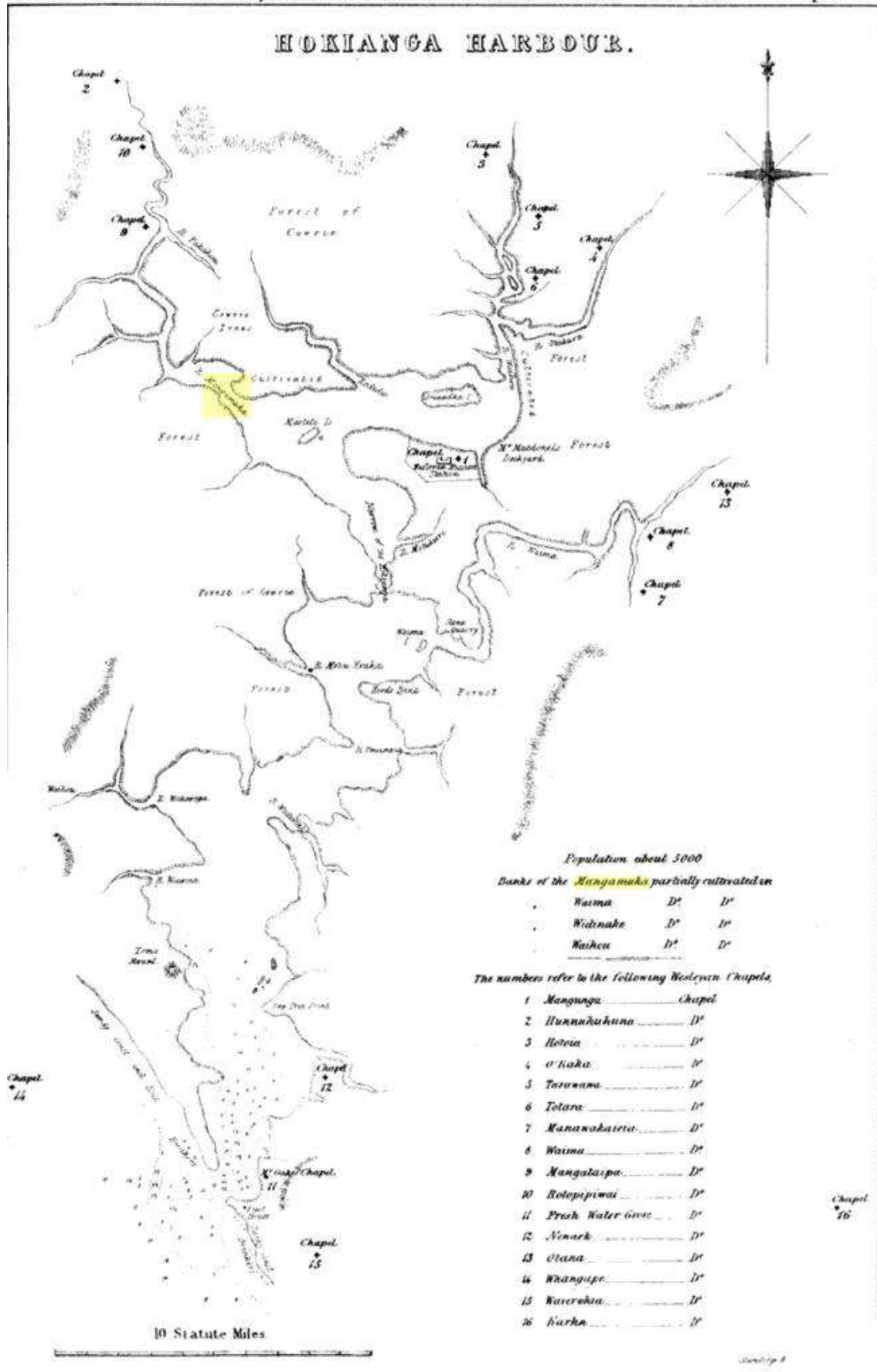


Figure 24: Map of Hokianga, with chapels at Mangataipa, Rotopiwai and Hunuhunua on the Mangamuka River.

In February 1834, a European settler named Oakes visited Mangamuka with William White (Wakefield 1937: 260-261), the Wesleyan Missioner at Mangungu from 1830 to 1836. He talks about “the village of Mangamuka”, possibly Rotopiwai being three miles walk above the navigable part of the river and the valley itself containing the finest cultivation he had seen in New Zealand, in patches cleared from the “thickest forest imaginable”. At the time, White was erecting one of the three chapels noted above, and his congregation had prayer books and bibles in Maori to learn and sing from and most could read and write well. Unfortunately couched in the unaffectedly racist language of the day, Oakes noted the Maori of Mangamuka were the most industrious and hospitable tribe he had met, which he put down to White’s fine character.

Writing in March 1834, Edward Markham reported 11 sawyers, and 20 Europeans overall, living on the Mangamuka River. He reports that Maori settlement grew denser the further he travelled up the river and by that time were all professing Christians. The sawyer’s houses are described as being of weatherboard and lined (presumably as opposed to whare of nikau or similar), some of them very nice, and with their saw pits roofed.

Near the head of the river, as far as boats could go, he stayed in kainga, and the next day travelled seven miles to go to a tangi, all the way travelling through cultivations and crossing a stream multiple times. Cultivations included maize, potatoes, kumara and taro but it appeared that the land had only been recently cleared, as large freshly burned stumps were present throughout the cultivated areas. Peaches were also in abundance, with peach trees around the kainga which was in a large, flat valley with the shallow gravel-bottomed stream winding through it. Potatoes were stored in 60lb kete on whata, raised platforms 20-30 feet high. He saw one whata 80 feet high, situated in a tree with all the branches removed but it is not clear if this was in Mangamuka or somewhere else.

The Rev. James Buller, serving at the Mangungu mission station had cause to travel to Mangamuka in 1837, after two Maori missionaries were murdered and the event risked spiralling into a wider utu-driven confrontation. Four young Christian chiefs had gone to a small village several miles from Rotopiwai to evangelise at the settlement of a Chief, Kaitoke, who was an adherent of Papahurihia/Te Atua Wera, a notable Maori prophet of the period. Having been told by Kaitoke that any attempt to proselytize again would be met with violence, the four young men Wiremu Patene, Matiu, Rihimona, and Hohepa Otane were fired upon as they approached Kaitoke’s holding; Matiu lived long enough to wish that no further violence would be done in his name, and Rihimona, shot in the gut, survived for several days. Patene stayed with the casualties while Otane raised the alarm.

Buller, Turner and Whitely went up the river by boat as far as Mangataipa, then took a canoe onwards to Rotopiwai. Hone Wetere had retrieved Matiu and Rihimona and they were in a whare on the other side of a potato field from where the Missionary party landed. They arrived in the dark, and were eating a meal of potatoes at 11pm when a party of Ihutai, related to the deceased, arrived at the kainga. The Missionaries counselled the aggrieved party to send for the British Resident Busby who could arrange a conference between the parties.

The next morning, the Missionary party arose at 5am and travelled some way up “...this beautiful valley, rich in crops of maize, potatoes, kumaras, etc., and the little huts nestled snugly under the spreading branches of the peach trees, or the karaka groves”. At 10am, a ruckus ensued as the great Hokianga chiefs (Tamati Waka) Nene, Mohi (Tawhai) and Taonui (Makoare) arrived and a mock battle was fought. Argument ensued as to what steps to take, Rihimona was commended to God by Turner, and as relative peace returned, pigs and potatoes were put in the ovens. But at that point, some of the younger men stole away up the forest track in the direction of Kaitoke’s kainga.

A general rush ensued as the party of approximately 500 warriors, followed by the Missionaries, charged down on Kaitoke's kainga, where a new entrenchment had been quickly thrown up. The defenders fired first, killing another Christian chief, Himeona, and wounding another. Then, everyone began firing. In the ensuing rush, ten were killed, the rest captured including Kaitoke who was wounded; he was removed to Otararau where he was tended to by the Missionaries. For some time, the whole area was unsettled, war canoes travelled the water ways, new pa were built and no one was sure whether the violence would turn into a full scale conflict, and settlers were raided

In 1839 the Rev John Bumby visited Mangamuka. The first leg of the trip involved a hard row of four hours from Mangunun to the end of the navigable portion, followed by a walk through beautiful plantations of potatoes and kumara to the Christian kainga of Rotopipiwai. Leaving the kainga the next day he reports having to cross the same river 20 times, while it was in flood, and climb immense mountains and that the day's journey was disagreeable. In the afternoon they arrived at the next kainga and stayed in a six foot long whare four feet high, with a central fire. He notes the richness of the valley, but also a number of abandoned kainga and ruined pa nearby, noting that the population must have once been more numerous. He goes on to note that about noon his party arrived at the chapel, a commodious and substantial Maori building, in the midst of the valley. While he makes no mention of the events to years previous, it seems likely the abandoned kainga were the result of the unsettled period after the events on 1837.

William Wade, writing in 1842 recorded travelling up the Mangamuka with Mrs Woon. They left at 9am in a large boat and he noted the thickly wooded banks and cottages of European settlers, mostly sawyers, living on the river banks. They visited one of the settlers, and then came to a 'retired' pa, Mangataipa on the bend of the river. At that point, the stream became narrow and more winding, through a forest growing down to the waters edge. Higher up the stream became impassable for European boats, but local shallow draughted waka tiwai could manage to travel further around the fallen trees and shallow stream bottom. Eventually they landed on the west bank and after a short walk through the forest arrived at Rotopipiwai, described as being 15 miles up the river and "delightfully situated in a fertile valley". There was no pa, the village consisting of scattered whare surrounded by fences, with a large Maori chapel. Wade records that Mr Woon had said that there were different villages further up the valley, some considerably further up than Rotopipiwai, and that villagers often travelled down on Saturdays for Sunday services at Mangununu, then back up on Monday.

By the late 1860s, the Mangamuka River and Valley had fallen on hard times. A combination of the remove of the capital to Auckland in 1840, the Northern War of 1845-1846, and the winding down of the Hokianga spar trade saw the European sawyers depart. As that part of the Hokianga emptied of Europeans, so did the market for the cash crop horticulture in the Mangamuka valley by the Maori inhabitants, many of whom appear to have moved elsewhere.

### Mangamuka in the Late 19<sup>th</sup> Century

The Rev. James Buller returned to the Hokianga where he had once worked at the Mission at Mangunu. At six in the morning he travelled up the Mangamuka with the tide. By 1869 the sawyers houses on the river were gone, only marked by a wilding plot of grass or European trees. A few Maori were still living at Mangataipa where they were squaring logs. They left their boat there where the stream became shallow and borrowed some horses to proceed up the valley. They went to Rotopipiwai where the old chapel was in ruins but a number of cows grazed behind a post and rail fence. The old Christian chief Te Otane still dwelt at the foot of Maungataniwha. Buller was back at Mangungu by five in the afternoon.

The death of chief Te Otene Pura/Otane would go on to be reported in the 1874 Report from Officers in the Native Districts (AJHR 1874, Session 1 G-02: 2). Von Sturmer reported that the old chief, who had

fought for the Crown in the Northern War against Kawiti and Heke had received a government pension in return for his services, and died at about 90 years old.

Wiremu Patene, Otene's old friend had died a dozen years earlier. The Maori Messenger/Te Karere Maori reported his death in its edition of 16 December 1862. Te Otene said of his friend that he was esteemed by both Ngapuhi and Te Rarawa because he was good and would do no evil. He had taken ill in 1860 but had managed to return to the north in June 1862 and attend the Mangonui Rununga in July. He had visited his relatives in Oruru and then returned to Mangamuka where he passed several months later.

Reports to the House of Representatives in the 1870s concerning the Maori population, education matters, as well as general reports by government officers provide snapshots of life in the area. In the 1872 Papers Relating to Native Schools (AJHR 1872, Session 1 F-05: 14), Maori in Mangamuka were asking the government for a native school for the valley but were going to wait to see how the new school at Waitapu near the Hokianga Heads progressed before they made a final decision.

In the 1874 census of Maori population, Hokianga Resident Magistrate Von Sturmer reported that 235 Maori were living at Mangamuka and identifying as Te Ihutai, 126 males and 109 females. There were 165 people identifying as Te Urekopura, 102 males and 63 females, and three Ngati Toa (AJHR 1874, Session 1 G-07). These numbers would make the Mangamuka area the most highly populated Maori community in the Hokianga, with Waima coming second.

In 1878 Von Sturmer reported 140 Maori living at Mangamuka, 79 males and 61 females. He also recorded that they identified as Te Urimahoe. He noted that while 30 people had returned to the locality from the east coast that year, all over the Hokianga a large number of young Maori families had left to work in the kauri industry at Whangaroa and Kaipara because of the money they could make. He also reported two epidemics, measles and whooping cough, had greatly affected the local Maori population and caused numerous deaths in infants and "delicate youth". Overall there had been an 8% drop in the Maori population in the Hokianga since 1874 (AJHR 1874, Session 1 G-07: 12).

The 1879 Report from Officers (AJHR 1879, Session 1 G-01A: 2, 12-17) noted that at Mangamuka, Maori were successfully growing tobacco in large patches and that their crop was supplanting imported tobacco. The 1882 Education: Native Schools report (AJHR 1883, Session 1 E-02: 3) stated that a new school had been opened at Mangamuka in March and that "...it will certainly be a good one. The master did good work at Rakau Para for many years under disadvantageous circumstances; with a neat and comfortable schoolhouse and residence, and a large and regular attendance, he will probably do even better."

The Master was J. Harrison, the Sewing Mistress was his wife, and in the course of the first year 60 children enrolled with 45 still attending at the end of the year. Of the 45 children at the end of the year, 23 were boys and 22 were girls, 33 were Maori, five European and the balance of mixed race. The school cost £602 to build, with staff salaries totalling £161 and expenses of £20.

The 1884 Education reports notes 38 children in attendance during the inspection and the roll consisted largely of experienced students from Rakau Para and new students from Mangamuka, with few students of middle years. Overall the performance was satisfactory (AJHR 1884, Session 1 E-02: 5). The Officers report of the same year noted that grape growing had taken off in the valley since some German winemakers had arrived, and one Maori resident had sold a ton of grapes for two pennies a pound.

In 1892 three notable men lived in Mangamuka, Tamiora, the former Member of the House of Representatives Hori Karaka, and the Wesleyan Missionary Piripipi Rakena who had served in the South

Island. They were living in a settlement known as Otene, below Maungataniwha (New Zealand Herald, 12 March 1892).

In the 1893, the chiefs of Mangamuka gathered together and promoted a temperance policy in opposition to the formal granting of a liquor licence to the Mangamuka Hotel. Karaka Tawiti, Mitikakau Otene, To Tawio Pou, To Rakena Pou, Moka Kaio, Tipeno Apatari, Puhi Otene, Karena Kiwa, Hone Pororua, Pakia Tika, Eru Mate, and Makoro Kere joined to promote a policy of fining anyone caught walking tipsily on the road, or caught drinking or smelling of liquor £1 for the offence. The ban on alcohol sale and consumption was to last a year and a petition signed by 62 locals was sent to Parliament in aid of obtaining support, and Piripipi Rakena stated that all the local Maori were supportive, and bemoaned their European friends in the Hokianga supporting the sale of alcohol (New Zealand Herald and Daily Southern Cross, 29 August 1893).

Wiremu Patene was a leading chief of Hokianga. In him the Northern tribes have lost a wise counsellor, and the Europeans a warm-hearted friend. He was a faithful ally of the New Zealand Government, and a zealous promoter of Christian truth, acting in conjunction with the Ministers of religion.

“He was a man,” says Te Otene Pura, of Mangamuka, “esteemed by both peoples, the Ngapuhi and the Harawa; for he was a good man, and would not do evil. He practically exhibited love to his Maker and to man.”

We are informed that the late chief had a serious attack of illness in May, 1860; but he so far recovered his strength, as to be able to undertake a journey to the North in June, 1862, and was present at the Mangonui District Runanga held in July last. After bidding his relatives at Oruru and its vicinity an affectionate farewell, he returned

to his settlement at Mangamuka, on the Hokianga river.

"On his arrival," says the writer quoted above, "his people greeted him with gladness, as he looked well in health, for they supposed that his days on earth would be many." On the 10th of September, he was again seized with severe illness, and soon after became conscious that his end was at hand. His people assembled on the 20th, in accordance with his request, that they might hear his dying words. When informed that his friends had arrived, he said, "Let me be taken into the open air, that I may bid adieu to my people, and to the mountains of my native land." When placed on his couch, near his house, "he greeted his people, weeping, as he bid them farewell, and he lifted up his eyes to the mountains of his country and said, 'Farewell, O mountains of my country,' calling each by its name;" and turning his eyes towards the assembled throng, he said, "Farewell, farewell, O my people! My children, after I have gone, deal kindly with one another. The greatest boon you can have is Christianity with a contented mind. My second word to you all is this, love God and love man."

After the utterance of this speech, he was removed into the house, where he slept for a long time, and on awaking, chanted a song, a few lines of which we insert:—

Buried within my bosom is this love,  
And I am vainly striving to conceal it.  
O my friends, what a dread melody is this,—  
This burning passion, &c., &c.

Our departed friend continued to linger till the 8th of October, when at the dawn of day he breathed his last. When it became known that Wiremu Patene was no more, two hundred of the people gathered round his remains to weep; and when they had bid farewell to the dead, Hohepa Otene Purā, his father, commenced the following Lament, which was chanted by all the people:—

I see him not, —  
I see the foggy cloud above the mountain's  
But vainly do I look for him, [height,  
Oh where is he?  
Haste Tiki with your guns,  
Throw open wide your stores of powder,  
And pay the homage due to such a chief.  
We may scan with gaze intent, my son,  
But who can see the mystic ball  
Which strikes its victim?

Much more might be said in praise of our departed friend, but we will conclude with the hope that his last injunctions will be held sacred by the tribes he represented.

Figure 25: Obituary of Wiremu Patene.





moved over from the Hokianga about 25 years previous, taking the area from Te Aupouri and Ngati Kuri, and noting the number of pa on the hills, suggested the former population was very numerous.

He notes that “for a very small payment”, local Maori have cut a bridle road 32 miles long from the CMS Mission at Kaitaia, to the Mission at Waimate. Fifty Maori cut the road in six weeks and were paid in blankets, and Dieffenbach includes a waiata sung by those about the poor working conditions.

“Ka ngaro te purapura,

Te pata kai:

Etiki ka mate: ko Taewa ka mate:

Ko te Paki ka mate:

Ko te Matiu ka mate:

Ka ka po nei te manawa:

Ka tahuri au ki te reinga:

He poro kaki ka mate.

The tobacco is gone: we have no food cooked in a pot: Etiki is hungry: Taewa is sick: Te Matiu is sick: Te Paki is hungry: all our good cheer is exhausted: we turn back towards the Reinga: we are sick for some food.”

Dieffenbach records the bridle track ascending nearly to the summit of Maungataniwha, then proceeds in a different direction. From the top of Maungatanwha, the bridle track turns westwards and drops steeply into the Mangamuka valley. He says the upper part of the valley is flat and fertile alluvial land five or six miles broad and eight miles long, with the river flowing 20 miles to the Hokianga. The valley was then bounded by wooden hills and the river ran over a bed of whinstone pebbles and appears to flood frequently. He notes the hills on the lower river are covered with kauri trees but the best of them near the waters edge had already been felled.

Through the 1850s, the Crown and settler interests became increasingly enamoured with the Victoria Valley and its agricultural potential, and references to the area start to increase in various publications. Henry Tacey Kemp recorded that Panakareao would not sell the land, figuring it would be needed by Maori once all the surplus land they saw no need for had been sold to Europeans.

Kemp described the Victoria Valley in 1858, in the course of Crown attempts to purchase it from Panakareao. He noted that Maori referred to the area as Takahue, situated on the northern side of the “Rua Taniwah range”. He described the valley as well-watered and covered in excellent timber, with rich alluvial soil, and suggested it was about 20,000 acres in size. He noted a large proportion of the valley had been under cultivation but at the present there were only a few scattered plantations. Panakareao was described as the principal owner and when Kemp asked to visit, told him it had never been offered for sale and would probably need to be retained by Moari. Kemp suggested he then inferred a large price would be asked if the Crown persisted with its purchase.

Surveyor Charles Heaphy noted that “The Victoria Valley contains some fine land well wooded: it is at present in the possession of the natives, but they evince a disposition to sell, if such sale shall secure to them the immediate residence of Europeans, or the location of a settlement in their vicinity (Heaphy 1860: 76).

“The immigrants from Prince Edward's Island are also about to locate themselves at Mongonui. There is already a large extent of land in that neighbourhood at the disposal of the Government. The Natives--- who anxiously desire to have settlers near them--have promised to sell the celebrated "Victoria Valley;" and thus, if a good harbour, good land, capital, labour, and a ready market, can make a settlement prosperous, the future of Mongonui is secure.” (Ridgeway and Sons, 1860: 42).

#### Crown Purchases and Native Reserves

As noted above, local Maori, and in particular Te Patu hapu of Te Rarawa rangatire Nopera Panakareao were loathe to sell the Takahue/Victoria Valley lands to Europeans. The Muriwhenua Report (Waitangi Tribunal 1997: 199-200, 303-306) provides a detailed description of attempts to purchase the valley while Panakareao was still alive, and which did not succeed until after his death in 1856. Even then, it required the disinterment of his remains which he had placed in the centre of the valley to tapu the area.

The current highway runs through or adjacent to several Crown purchases and Native Reserves at the eastern end of the Victoria Valley.

South of the Victoria River and eastwards to the centre of the range were the Maungataniwha Blocks. Maungataniwha West No. 2 was sold in 1863 for £560, with two Native Reserves carved out; the 79 acre Ta Keke and 381 acre Mangataiore Reserve. Takeke was on-sold in 1877 for £70, and 191 acres of Mangataiore was subsequently sold. The Maungataniwha Block No. 1 extended northwards from the centre of the range, to Peria (ANZ Record No. R12153644).

The original Deed for Maungataniwha No. 2 West is provided in Appendix C but the text and signatories are as follows (Turton 1877: 18-19):

“This Deed written on this 14th day of January in the Year of our Lord 1863 is a full and final sale of conveyance and surrender by us the Chiefs and People of the Tribe "Te Rarawa" whose names are hereunto subscribed And Witnesseth that on behalf of ourselves our relatives and descendants we have by signing this Deed under the shining sun of this day parted with and for ever transferred unto Victoria Queen of England Her Heirs the Kings and Queens who may succeed Her and Her and Their Assigns for ever in consideration of the Sum of Five hundred and sixty pounds two shillings Pounds to us paid by Henry Tacy Kemp on behalf of the Queen Victoria (and we hereby acknowledge the receipt of the said monies) all that piece of our Land situated at Mangonui and named Maungataniwha—(West) the boundaries whereof are set forth at the foot of this Deed and a, plan of which Land is annexed thereto with its trees minerals waters rivers lakes streams and all appertaining to the said Land or beneath the surface of the said Land and all our right title claim and interest whatsoever thereon To Hold to Queen Victoria Her Heirs and Assigns as a lasting possession absolutely for ever and ever. And in testimony of our consent to all the conditions of this Deed we have hereunto subscribed our names and marks. And in testimony of the consent of the Queen of England on her part to all the conditions of this Deed the name of Henry T. Kemp, District Commissioner is hereunto subscribed. These are the boundaries of the Land commencing at a Hill named Puketoetoe, along the survey lines to Te Huinga, thence along the survey lines to a point known as Tapuketukituki, thence along, the survey lines to a point called Opou on the Kaitaia Stream, thence along the survey lines, returning towards the Kaitaia River, thence along the Kaitaia River to the Native Reserve known as Mangataeore, thence along the survey line of the Native Reserve to a Peg on the Kaitaia river, named Kowhatupotaka-taka, thence along the survey line to the starting point at Puketoetoe.

Receipt for £560. 2. 0. Received this 14th day of January in the Year of Our Lord One thousand eight hundred and the Sum of Five hundred and sixty 2s. Pounds sterling being the consideration money expressed in the above-written Deed to be paid by Henry T. Kemp on behalf of Her Majesty the Queen to us.

(Signed) Wiremu Pikahu.

Na Wharerau x.

Rei: Kiriwi.

Ko Te Huhu.

Rapata Take.

Na Te Kepa Taiaroa.

Rutene te Wa.

Na Wiremu Kingi.

Witnesses—

Henry Grover, R. M. Clerk, Mangonui.

Henry S. F. Richardson, Surveyor

W. B. White, Residt. Magte.”

H. T. Kemp.

The survey of Ta Keke is on plan ML 109, and the block is located immediate east of the Takahue Road intersection. Archives New Zealand contains a certificate of title issued in 1865 with the owners named as Tohuora Parahiku, Wharerau Te Rata, Ngapipi Mumu, Hore Ngakoti, Hemi Pau, Pita Tohia, Rupene Hopewai, Rapiana Tohe, Rata Te Ahi and Nopera Kirione (ANZ Record No. 1029).

The title investigation for Ta Keke is contain in Native Land Court Northern Minute Book 1: 7, with the hearing held on 30 December 1865 immediately after the investigation into the Wai Mamaku Block discussed below. Tohuora Parahiku stated that the 79 acre block of that name surveyed by Campbell, reserved out of the Maungataniwha Block, and named those who claimed the land as in the preceding paragraph. His claim was supported by Wharerau te Kanohi and title was issued in January 1866.

The Manga Tai Ore reserve is shown on ML 389, also from 1866, and extends either side of the highway from Victoria Valley Road to Kitchen Road. Archives New Zealand has a Certificate of Title issued in 1867 to Hemi Te Pau, Maihi Te Huhu, Karipa Ehakai, Nopera Kiriona, Ngatawa Pana Kareau, Hakitara Paea, Nopera Puru, Watene Pipi, Henare Waha and Tipene Te Taha (ANZ Record No. 1043).

Maori Land Court Northern Minute Book 2: 33 contains the record of the title investigation, attended by Hemi Te Pau, Nopera Kiriona and Kapira Ehakai on 15 March 1867. Hemi Te Pau states the block is reserved out of the Maungataniwha Block for their own use based on the ancestor Te Ure (or Ku?) Paraoa; the Maori Land Court database refers to Te Ku Paraoa while the survey plan has an annotation Te Ure Praoa (sic) within a clearing on the block. Nopera Kiriona agreed with Hemi Te Pau’s statement, noting that there was no person to interfere with the claim and they did not wish it to be sold. Kapira

Ehakai also agreed, noting he lived on the land and cultivated it. Surveyor Samuel Campbel also attested the claimants were living and cultivating on the block.

In the early to mid-1890s, Huirama Ngatawa of Mangonui made several claims to a share of Mangataiore. In 1896 he wrote to the government asking under whose authority the share of the deceased Ngatawa P. Kareau had been assigned to someone else and was still inquiring into the Ngatawa Pana Kareau succession in 1915 (ANZ Record No. 1891, 183 and 850; 1895/1207; 1915/2285).

In 1915, Wairama Maihi who was the son of Maihi Te Huhu wrote to the Native Affairs Parliamentary Select Committee, asking that his father's share of Mangataeore (sic) be transferred to him, his brother and his sister as the current successors (Hariata Pene and Paurini Wahanui) were not children of Maihi Te Huhu (ANZ Record No. 1915/2568). On investigation, it became apparent that Pene and Wahanui who were cousins of Maihi had been added as successors by Wairama Maihi himself in 1896, upon the death of his father.

The claim and definition of relatives interests went through the Maori Land Court in 1915 (Northern Minute Book N0.37: 72, 74, 88-91, 110-111).

The land was obviously much contested as in 1916, Herepete Karipa and seven others wrote asking that the land be re-vested as disputes had arisen about individual holdings ANZ Record No. 1916/4001).

The Kaiaka Block was the last Crown purchase before the Native Land Court was established in 1865. It comprised 7367 acres of broken country north of the Maungataniwha Block and Victoria River, purchased for £1114 or 3s an acre, the second highest per acre rate of all Crown purchases. In February 1865 Civil Commissioner W. B. White wrote to District Commissioner Kemp stating that despite it being superior land that local Maori had long declined to sell he had argued the price down from 5s per acre to 3s per acre for 8000 acres, and that the Kaiaka Block had been surveyed but not mapped (White to Kemp, 24 February 1865 in Turton 1883: 17).

The original Kaiaka Block deed is contained in Appendix C but the text and signatories are as follows (Turton 1877: 26-27):

"This Deed written on this thirtieth day of May in the year of Our Lord 1865 is a full and final sale conveyance and surrender by us the Chiefs and People of the Tribe Te Patu (Rarawa) whose names are hereunto subscribed And Witnesseth that on behalf of ourselves our relatives and descendants we have by signing this Deed under the shining sun of this day parted with and for ever transferred unto Victoria Queen of England Her Heirs the Kings and Queens who may succeed Her and Her and Their Assigns for ever in consideration of the Sum of one thousand one hundred and fourteen 1/- Pounds to us paid by W. B. White Esqre. Civil Commissioner on behalf of the Queen Victoria (and we hereby acknowledge the receipt of the said monies) all that piece of our Land situated at Mongonui and named Kaiaka the boundaries whereof are set forth at the foot of this Deed and a plan of which Land is annexed thereto with its trees minerals waters rivers lakes streams and all appertaining to the said Land or beneath the surface of the said Land and all our right title claim and interest whatsoever thereon To Hold to Queen Victoria Her Heirs and Assigns as a lasting possession absolutely for ever and ever. And in testimony of our consent to all the conditions of this Deed we have hereunto subscribed our names and marks. And in testimony of the consent of the Queen of England on her part to all the conditions of this Deed the name of William Bertram White Civil Commissioner is hereunto subscribed. These are the boundaries of the Land commencing at the North from Boundaries. Taumerekauri, Mangatete to the Toatoa block to Tutaihika. On the East by a surveyed line, Native Reserve, in the Maungataniwha West

No. 1 block, to Waitotira Creek, along the Creek to Hokotuku, to Te Puihi, along the surveyed line to Mahititawa to Te Kati to Tetaporoahi, Opake, on to Te Pahi. On the South by Maungataniwha West No. 2 to Kotengenioru, then by the Victoria river to Parakokopu. On the West from Parakokopu by land belonging to Natives by a surveyed line to Tearawhati on to the Puihi Creek, along the Creek to the Kaiherehere to the Kaiherehere Creek, up to the Taumerekauri.

Witnesses to the payment and signatures—

Reihana Kiriuri.  
Karaka Waruora.  
Timoti Papata.  
Hone te Karu.  
Puru.  
Rupene Hopewai.  
Ko Wi te Hau.  
Neho Wetekia.  
Pane te Pae.  
Tipene Taha.  
Rakena.

Received this thirtieth day of May in the Year of Our Lord One thousand eight hundred and sixty five the Sum of one thousand one hundred and fourteen 1/- Pounds sterling being the full consideration money expressed in the above-written Deed to be paid by W. B. White Civil Commissioner on behalf of Her Majesty the Queen to us.

Witnesses—

Rutene.  
Hare Reweti.  
Karaka.  
Reihana Matiu.  
Raphana Tohe.  
Tohuora.  
te Wiremu Pi Ka Hu.”

The 154 acre Waimamaku Reserve was carved out of the block next to the Victoria River, along with three others. The Muriwhenua Report (Waitangi Tribunal 1997: 236) states that none of the reserves were identified in the Kaiaka Deed or Plan and the reserves must have been arranged after the sale.

The survey of the Wai Mamaku reserve is contained on land plan ML 106 from 1866 showing the reserve approximately on kilometre east of the State Highway 1/Takahue Road intersection. Maori Land Court Northern Minute Book 1: 7 contains the record of investigation into the Waimamaku title in December 1865. Wharerau Te Kanoho states that the block shown in the survey undertaken by Campbell was to be reserved from the sale of the Kaiaka Block for himself and Hehi Wharerau. Hehi Wharerau confirmed the others' statement. This was confirmed by Karaka Karau and there was no opposition to the claim, so title was granted to the two claimants in January 1866

Archives New Zealand contains a certificate of title for “Waimamaku at Victoria”, issued to Wharerau Te Kanoho and Hehi Wharerau in 1865-1866 (ANZ Record No. 1030). The Muriwhenua Report notes the land was sold in 1941, and Archives New Zealand has an alienation file wherein the land was purchased by James Maurice Panther (ANZ Record No. 33910C).

In 1868, a report was made by W. B. White, the Resident Magistrate in Mangonui, in Reports on the Social and Political State of the Natives in Various Districts at the Time of the Arrival of Sir G. F. Bowen (AJHR 1868 Session 01-A04: 36). He noted that on his first arrival, twenty years ago, on visiting Ahipara, he was struck by the size of the Rarawa population their large villages and pa, and the extent of the cultivations and quantities of produce being sent to Mangonui to supply the whalers then visiting the port, besides wheat, corn, onions, exported to Auckland, and even Sydney. By 1868 he described the area as a wasteland, the population dwindled to a few hundred. A census taken in 1858 gives the population of this district as 2,362. No census had been taken since, but he noted that year earlier, a dispute about some land assembled two-thirds of the male adult population in Victoria Valley, about 300 fighting men; he had heard from CMS Missioner Mr. Puckey, of Kaitaia, that fifty years earlier, Nopera Panakareao's father could lead over 2,000 fighting men.

By 1872, work had started on a road to connect the Victoria Valley with Mangonui, according to the 1872 Public Works Statement (AJHR Session 1 B-02A 1872: 5). In his 1875 report, Resident Magistrate White reported that the local Maori were enthusiastic regarding the establishment of a school at Victoria Valley, as had occurred at Ahipara. They had also engaged with building the bush track to Victoria Valley funded by the Auckland Provincial Government through the Ahipara and Mangonui Road Boards and constructing roads and culverts, but both Maori and European residents were disappointed that no work had been undertaken by the Public Works Board (AJHR Session 1 F-03 1872: 5).

The first European settlers into the valley included the Panthers, Switzers and Kitchen families, taking up lands under the Homestead Act and arriving via Mangonui in the 1870s.

A school was proposed for Mangataeore in 1873, shortly after the school at Kaitaia was proposed. The Mangataeore School would be the fifth in line, after Kaitaia, Peria, Kohumaru near Mangonui, and Parapara near Taipa, and ahead of schools at Taupo Bay, Herekino and Motukaka (Native Schools, AJHR Session 1, G-04, 1873: 7). At about that time, there were 57 Maori living at Mangataeore, identifying as Ngatiterangi hapu of Patu. There were 32 males and 25 females, 27 under fifteen (Approximate Census of the Maori Population. AJHR Session I, G-07, 1874: 1). George Kelly, writing in the absence of Resident Magistrate White of Mangonui noted that a typhoid and measles epidemic had hit the Maori population hard in late 1874 and early 1875, leaving to a decrease in population. There were 38 Maori at Mangataeore that year, 20 males and 18 females, and 20 were under fifteen (Census of Maori Population, 1878. AJHR Session I, G-02, 1878: 1, 11). Note in this report, they are referred to as being affiliated with Ngatitaranga.

The school was opened in Victoria Valley in 1880, under Master James Patton at a salary of £110 per annum. £53 was spent on the school building and furnishings that year (AJHR Session I, E-01 1881 Appendix: 9) and £219 in 1879 for the establishment (AJHR 1880).

### The Mangamuka-Victoria Valley Road

In the 1870s there were still no roads between Okaihau and Kaitaia. In the 1875 Public Works Statement reported to the House of Representatives, three miles of clearing, three quarters of a mile of side cutting, and a number of bridges and culverts had been undertaken between Okaihau and the Waihou River (AJHR 1875 Session 1, E-03: 53).

The Crown Lands Department report of 1880 (AJHR 1880 Session I C-0 1880: 6) states that 30 miles of bridle track had been surveyed from the north side of the Hokianga opposite Herds Point (Rawene) to Victoria Valley, with seven or eight miles completed at either end. The form of the bridle tracks under construction are described as a carefully-graded line which could easily be widened to dray road width and serve as a main road as time and money permitted, with the bush felled for at least half a chain and generally one chain wide. The road, via Papinga, Broadwood and Takahue was surveyed from 1878-

1880 and completed for horse traffic in 1880, was 28 miles in length and maintained a 1 in 10 grade despite a climb of 1160 feet to get over the saddle north of Broadwood. It cost £4,938, including some of the survey and was the first road to connect the Hokianga with the Far North (AJHR Session I, C-04 1881: 31).

In 1882, the Surveys of New Zealand Report for 1881-1882 (AJHR Session I, C-03 1882: 19) reported that J. Garsed had explored about 17 miles of the proposed route of the Great North Road between Okaihau and Kaitaia, crossing the Maungataniwha range at about 1,100 feet. The report noted that Garsed had obtained a grade of 1 in 21, suggesting that crossing the range would come at considerable cost due to the steepness of the required cuttings and because it would be made through forest. Work was due to start in the spring of the following year.

In 1883 the first tenders were let for the Okaihau to Victoria Valley Road were let. The European communities had been advocating for a road outlet since the late 1870s, but political inertia and delays in negotiating access over the substantial amount of Maori land involved meant that progress was relatively slow. In September of that year, a line through the gorge and over the range was surveyed by J. Garsed, and a specification for the road including bridges, embankments, and culverts was prepared.

A Joshua Garsed served as Forest Ranger for the Puhipuhi Forest in the mid-late 1880s, and was the nephew of Surveyor General S. Percy Smith, and may be the J. Garsed in question. He served in the militia in southern Taranaki and had connections with Whanganui. Regardless, as well as surveying the road and preparing the specification, Garsed was involved in its construction in 1884-1885, supervised by E. Fairburn.

The work was not without problems, even in the early stages. H. W. Bishop, the Resident Magistrate for Mangonui reported in May 1884 in Reports from Officers in the Native Districts that at the Victoria Valley end, Garsed was turned off the land and prevented from cutting his line through the Mangataeore Block by the owners. Despite being fined £10 and costs, the opponents continued to frustrate the survey as they did not want the road through their land (AJHR 1884 Session 2, G-01).



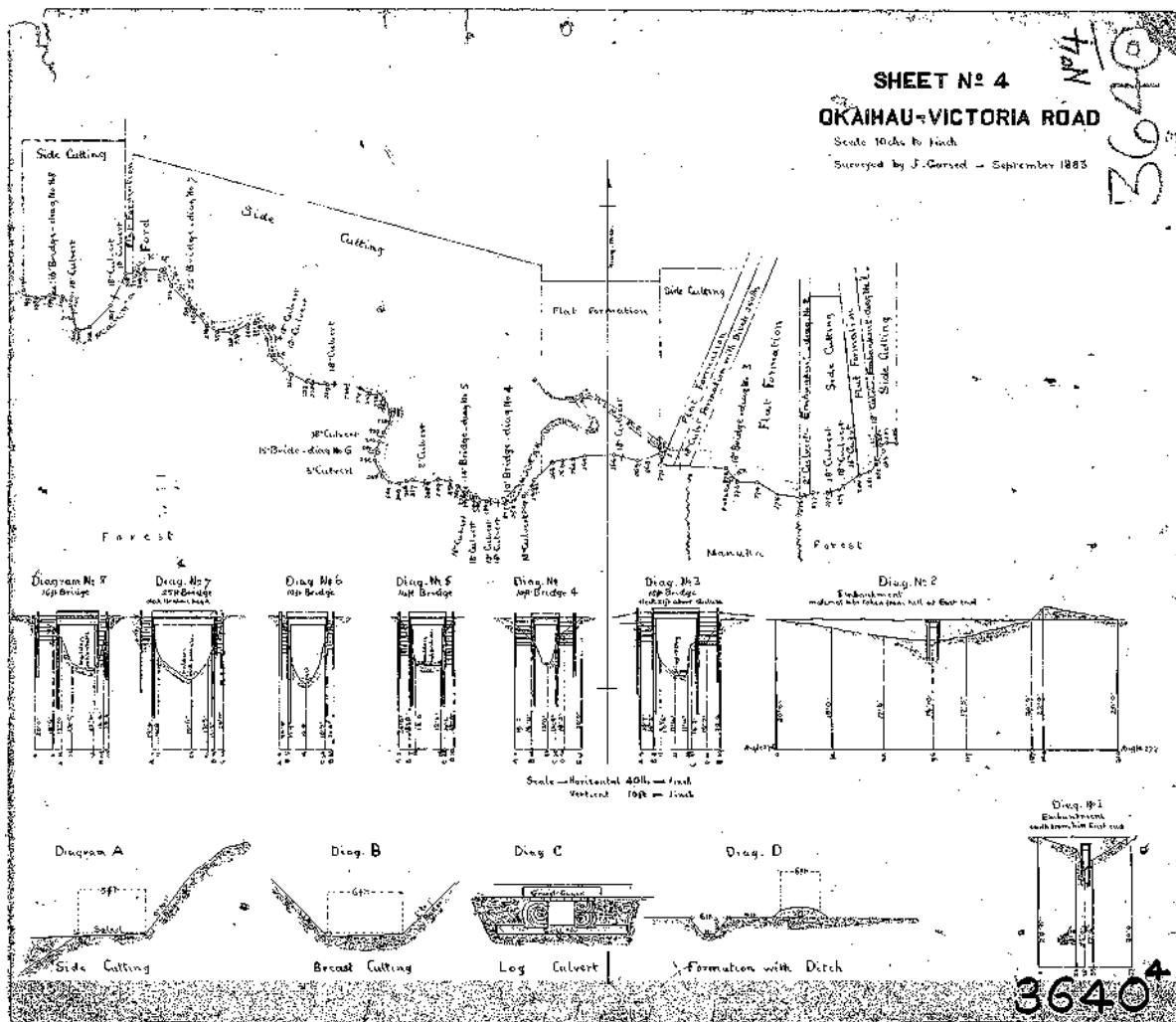


Figure 27: SO 3640/4 Okaihau-Victoria Valley Road. J. Garsed, 1883. This plan shows exemplary elevations road formation and structures which do not appear to have been built before 1900.

In 1884 the New Zealand Herald reported that access to Victoria Valley was available from three directions, including from Mangamuka Bridge where the surveyor had laid his line over the range to Victoria Valley and works on the road were progressing, although the road only extended seven miles north of Okaihau at that point (New Zealand Herald, 12 January 1884).

The Appendix to the Journal of the House of Representatives report on Surveys of New Zealand (AJHR 1886 Session 1, C-01A: 22) and specifically reporting on the progress of roads being opened up to access Crown Lands reported on progress on the Okaihau-Victoria Valley Road, noting that the 1885 report conveyed that 17 ¾ miles of road had been constructed north of Okaihau, with 10 miles of cart road and 7 ¾ miles of bridle track beyond that. Another 4 ½ miles was added in the most recent year, taking the road as far as Mangamuka, where a bridge was being constructed over the river by a contractor. There is no reporting on the road prior to this date.

The 1886 Surveys of New Zealand report (AJHR 1887 Session 2, C-02: 14) reported that the Mangamuka Bridge had been built and another half a mile of bridle track completed. From that point the road ran through Maori land and local Maori were under contract to build one and a half miles of bridle track. The works would soon reach the junction with the Oruru Road which was being built by the Mangonui

County, and while only 7200 acres of Crown Land would be opened by the government road, a huge additional acreage of Crown and private land would be indirectly served by the new road. The work was being project managed by E. Fairburn with direct supervision by G. G. Menzies. The bridge is likely to have been the one approximately 400m west/downstream of the Mangamuka bridge, which is shown on an 1894 survey plan discussed in the next section. The Oruru Road appears to run along the line of what is now Iwitaia Road and Abraham Road, running northwards from the later to Te Karoa Road on the north side of the Maungataniwha Range. This alignment is also shown on two other plans from 1894 where it is described as a cut road to Oruru.

The 1887 Surveys of New Zealand report (AJHR 1888 Session 2, C-01A: 15) noted that the bridge previously reported on over the Mangamuka River had a 130 foot span and that in the preceding season, 230 chains (almost three miles) had been constructed, comprising 27 chains of cart road and 203 of bridle track. The junction with the Oruru bridle track had also been met that year. The 1889 report (AJHR 1889 Session 1, C-01A: 18) noted little progress, as local Maori had been tied up with land disputes and sittings of the Native Land Court. One of the two contracts let the year before had been completed, and 34 chains of bridle track and 24 foot of bridging had been undertaken, with the road now extending past the Oruru road junction. The costs had not increased as inspection of the finished work had been done at the same time as the inspection of the Oruru\_Fern-Flat road. To the south, eleven miles of Bridle Road between Mangamuka and Waihou Bridge had been maintained and repaired.

The 1890 report (AJHR 1890 Session 1, C-05: 21) notes that in the year prior, work on the south side of the range had stopped in favour of the north side, as improving that end would have the greatest immediate positive impact for the European settlers. Accordingly, a six foot wide road formation 14 chains long and 20 foot of bridging was undertaken, along with four miles of grading and pegging by Mr Grut. Repairs had also been undertaken on the already formed piece of road, largely as a result of fires. Mr Menzies continued to have charge on the south side.

By 1891, an additional 17 chains of bridle road had been formed, largely on the northern side of the range, with an additional two miles and 20 chains of bridle road improved and six miles maintained. One hundred and eighty chains or two and a quarter miles of forest had been cleared (AJHR 1891 Session 2, C-01: 19).

Reporting changed at this time, with roading now reported in the Department of Lands and Survey's annual report to the House, with somewhat less specificity. The 1894 report (AJHR 1894 Session 1, C-01: 36) noted that three miles of bridle track had been opened on the Victoria Valley side, and eight miles on the Mungamuka side. The eight miles of bridle track between Mangamuka and the Waihou River had been put in good order and further work would be undertaken shortly to extend the bridle track northwards, the survey of the intervening land being in hand.

In 1893 a correspondent to the Northern Advocate (7 October 1893), noting the possibilities of settlement for Rangiahua noted that the road northwards was still only a bridle track "...which wise people shun as much as possible. If a good metal road were formed right through the Victoria valley it would give a wonderful impetus to settlement and would open up thousands of acres of land, a large extent of which is covered in valuable timber." He goes on to note that the land in the Mangamuka Valley is as good as anywhere in the colony but it "might as well be at Timbuctoo" as far as access went.

The 1896 Department of Lands and Survey annual report (AJHR 1896 Session 1, C-01: 47, 49) noted that to get from Ohaeawai to Awanui there were "two routes available, one via Kaeo-Iwitaia and Mangonui, the other vid Okaihau-Rangiahau and Victoria Valley. Neither of these roads are constructed, though the first is available for horse-traffic throughout; the other being only formed to Mangamuka. From here, however, connection is made with the Mangonui-Awanui Road by a branch line via Fern Flat. Should it

be determined to construct any of these roads so as to be available for wheel-traffic, it will be necessary to make several deviations to obtain better grades”.

The 1896 report later notes that “This road traverses a portion of three counties, and is of a total length of about forty miles. It is one of the routes referred to in my report on the Warkworth-Awanui Road, and, in my opinion, ought to be the one selected as the Great North Road. It is made available for wheel-traffic between Okaihau and Rangiahua, from Rangiahua to Mangamuka, about eight miles; at the Victoria Valley end about three miles are constructed a bridle-track, and nine miles are yet to be constructed. During the year about 29 chains of road have been constructed and metalled, and the bridges repaired as far as possible with the money available. If this line is to be properly formed, several deviations will be required, which will considerably shorten the road. The exceedingly dry summer and extensive bush fires have destroyed and injured several bridges and culverts, so that a considerable sum is now required to do general repairs during the coming year”.

In 1897, the Annual report (AJHR 1897 Session 2, C-01: 47), the road is still only a bridle track from Rangiahua to Mangamuka and has yet to be formed through to Takahue. Traffic still has to travel via the northern deviation via Fern Flat. The Surveyor General still supported the road being opened as it was the most direct route northwards but little more than repairs and maintenance has occurred on the existing formation in the previous year. The 1898 report suggested little progress being made, and that “from Mangamuka northwards the line was laid out but never constructed, except about two miles at the northern end, which was done to give access to settlers and to the Takahue Block” (AJHR 1898 Session 1, C-01: 44). In 1898 the situation had not progressed north of Mangamuka as the land was still in Maori ownership, although parts of the Rangiahua to Mangamuka section had been widened and improved. On the north side there was two miles of cart road to provide access between Victoria Valley and Takahue (AJHR 1899 Session 1, C-01: 47). The 1900 report (AJHR 1900 Session 1, C-01) provides no information on the road between Mangamuka and Victoria Valley.

The 1901 Annual report states the road had been formed three miles towards Victoria Valley from Mangamuka at that time but that very little had been done recently due to a lack of funds and the existing road was in very poor repair. Nine miles of road required forming and grading before the Victoria Valley and Takahue Block could be reached (AJHR 1901 Session 1, C-01: 67). After 1901, the annual reporting of progress on the road in the AJHR appears to have ceased, although the Public Works Department published its annual accounts which sometimes included money spent on the road through the first two decades of the new century.

On 4 May 1908, the Northern Advocate reported that work on the “through road” between mangamuka and Victoria Valley had been suspended due to a lack of funds. The report bemoaned the delay in completing the road as once finished it would open up thousands of acres for settlement including valuable timber country. The land was currently owned by Maori but the correspondent hoped the Native Land Court would find some way of “dealing with it”.

In 1910, the Maunganui Country A. and P. Association met in Kaitaia and among other business passed a resolution asking the government to build the Victoria Valley-Mangamuka Road in order to open up direct communication with the Bay of Islands (Northern Advocate, 9 May 1910). In July 1910, local settlers in Kaitaia asked Maunganui County Councillor Masters to ask via Member of Parliament Vernon Reed what steps had been taken to open up the road (Northland Age, 25 July 1910).

On 3 December 1910, the Northland Age reported that settler’s wishes were finally granted with £500 voted by the government for construction of the road. The correspondent stated it was astonishing that it had taken so long to secure a road through some of the richest land in the Dominion and which would save 40 miles on a trip between Kaitaia and the Bay of Islands.

In 1911, Vernon Smith and the Royal Commission of Inquiry into North Auckland Railroads visited the area, taking two days to travel from Kohukohu to Kaitaia via Mangamuka and returning via Broadwood. Over the Mangamuka road the party experienced great difficulty with MP Stalworthy thrown from his horse into a boghole, and Mr Reed's horse falling through a bridge (Northland Age, 22 April 1911). It is not clear whether they travelled by the northern deviation through Fern Flat and Peria, or via the road still under construction.

In 1915, local communities were still arguing about which route between Mangamuka and Kaitaia should be improved. A correspondent to the Northern Advocate argued (Northern Advocate, 15 March 1915) that the communities should put aside local jealousies and join together in one voice and lobby central government for a "thoroughly serviceable road" to link the Maungonui and Hokianga Counties and provide access to the railhead, and suitable for motorised traffic and other vehicles. While the easiest route would be via Oruru and Fern Flat to Mangamuka, the route from Victoria Valley to Mangamuka would be more central.

In the Public Works Statement of 1917 (AJHR 1917, Session D-01 :) bush had been felled for a distance of 34 chains, the road widened 86 chains, and 12 chains of dray road formed, 11 of which were in rock), and 230 chains of road repaired.

In April 1919, MP Vernon Reed attended a meeting of the Hokianga Council to present a proposal whereby central government and the two local councils would each contribute to the cost of metalling the road from Victoria Valley to Mangamuka and Rangiahoua, estimated to cost £18,000; the government would contribute £3000 per annum for three years to undertake the work.

Improvements to the roads had been delayed by disagreement over priorities between Mangonui and Hokianga County, and central Government. An attempt to fund improvements to the road over the Takahue saddle so it could act as a temporary mail route to the railhead at Rangiahoua was turned down by the counties in fear that they would lose the opportunity to improve the Mangamuka and Fern Flat Routes. Later in the year, Reed was successful in bringing the counties on board. at which he was informed the Council would sign up to his proposal to immediately metal the road from Rangiahoua through to Mangamuka and Victoria Valley, with Hokianga and Mangonui County contributing 25% each and central government 50% of the cost (Northland Age, )

In 1920, 270 chains were widened and 15 chains of new formation completed, and filling, metalling, culverting and removal of slips was carried out (AJHR 1920, Session 1, D-01: 27). The 1923 Statement reports 16 miles 32 chains first class formation, 9 miles 10 chains second-class surfacing, together with 3,809 lineal feet culverts completed on the Victoria Valley-Mangamuka Road (AJHR 1923 Session 1-2, D-01: 42). In 1924 six miles of dray road were completed and three miles metalled (AJHR 1924 Session 1, D-01: 42). By 1926 78 chains of road has been widened, 103 chains. metalled, and 280 chains blinded (AJHR 1926 Session 1, D-01: 47).

The 1928 Statement reports that for the first time a fully metalled road route was opened between Kaitaia and the railhead at Okaihau through Mangamuka. Six and half miles of deviation were completed, the base course of limestone was laid and rolled, and one mile of metal laid (AJHR 1928 Session 1, D-01: 142). This would appear to be the conclusion of a 45 year project to transform the road from a walking track to bridle track to dray road to metalled road suitable for motor vehicles.

There is one published account of a fatality of a road worker. Henry Clay was killed in 1921 while working on the road (Northland Age, 11 October 1921) but many accounts of car accidents, fatal and non-fatal in the 1920s and 1930s. There are no particulars of Mr Clay's death, and no inquest was subsequently reported on. There is a Coroner's inquest file from 1921 for Henry Clay, presumably the same man, in the Archives New Zealand Wellington repository (ANZ R23724037).

Throughout the period from 1890-1910, funds were being spent on the Mangamuka-Oruru Road via Te Korua and it appears that maintaining this link between the east coast and Hokianga was the priority by far, as it was far quicker than going the long way around via Broadwood and Kohukohu, or Kaeo and Okaihau. During the war years, the issue of roading was side-stepped as the alignment of the railway north of the Waihou was debated.

The road remained a bridle track through the gorge and there is no indication that the structures on the 1883 plan had been constructed by that time.

#### **5.4 Review of Historic Maps and Plans**

Ninety historic survey plans were examined in order to identify potential archaeological, historic and cultural heritage features, from Mangataipa/Mangamuka Bridge north to the Takahue Road intersection of State Highway 1, a stretch of approximately twenty kilometres of road. These plans were produced between 1862 and 1931. Thirty-two plan sheets illustrated the positions of features of archaeological, historic and/or cultural interest in the project area, and were georeferenced into GIS software. The features digitised into points, lines and polygons so their location assessed against State Highway 1 and areas of work.

Review of the plans identified more than 450 features in the vicinity of State Highway 1 including “Native Reserves”, wahi tapu and cemeteries, domestic, commercial and public or community buildings, sheds and other outbuildings, cultivations, orchards and individual fruit trees, tracks, bridges, culverts, names of places, owners and occupants, and descriptions of topography, vegetation and soils, some of which (such as clearings, areas in fern or light manuka/kanuka ‘scrub bush’ regenerating forest, or areas described as having good soil may be indicative of past human occupation or horticulture).

Key plans which indicate the locations of pre-1900 features which may have a physical/archaeological component or are otherwise potentially significant are discussed below in chronological order and illustrated in Figure 27-Figure 35. The plans are provided in Appendix C and tables of digitized features are provided in Appendix D.

##### SO 802

SO 802 (1862) is the plan of the Maunga Taniwha (Maungataniwha) West No. 1 and No. 2 Blocks undertaken by S. Campbell in 1862. The plan is in very poor condition and due to illegibility and skew the scanned copy is poorly registered. Nevertheless it shows the names of the original European settlers who took blocks on the difficult country north and south of the highway on the western side of the range and into the Victoria Valley.

##### ML 12805 and SO 867

ML 12805 (1862) is the plan of the 11,000 acre Maungataniwha West No. 2 Block, surveyed by Campbell and Richardson. Along with descriptions of topography and forest cover, it also shows the western end of the old bridle track from Victoria Valley to Mangamuka and Oruru. The line of the bridle track runs westwards towards Kaitaia, on or adjacent to the line of the current highway until the vicinity of the Takahue Road intersection, where it takes a more southerly route.

Half a kilometre west of the Kitchen Road intersection with the highway, the survey plan also shows a “Native Reserve” south of the Victoria River and cut by the highway, along with the annotation “Te Ure o Paraoa”, with the land further west being described as “Very good soil, Level Land”.

SO 867 (1862) is the plan of the almost 13,000 acre Maungataniwha No. 1 Block, also surveyed by Campbell and Richardson. It shows the bridle track splitting to Mangamuka, Oruru and Waimate at the

summit of Maungataniwha, and also shows the separate track from Victoria Valley to Oruru via Peria. It shows 6000 acres belonging to Wiremu and Reihana, and almost 7000 acres belonging to Wiremu alone.

#### ML 106

ML 106 (1866) is the survey of the 154 acre Wai Mamaku (Waimamaku) Block, between the Maungataniwha No. 2 and Kaiake Blocks and immediately east of the SH1/Takahue Road intersection. It straddles the Victoria River and the Highway and historic Missionary bridle track run along the southern boundary. Most of the land either side of the river is cleared, and there is a wetland south of the road/bridle track.

#### ML 109

ML 109 (1865?) is the plan of the Ta Keke (Takeke) Native Reserve, surveyed by Campbell and located immediately west of Wai Mamaku around what is now the Takahue Road intersection. It shows both the original surveyed road line following the bridle track, and the 1972 road taking for the current alignment of the highway and intersection.

Three enclosures are shown, two on the south side of the Victoria River and one on the northwest side. The central, southern enclosure appears to have a structure within it, adjacent to the bridle track alignment. These features are 180-200m from the highway, with the highway either following the bridle track or diverting up to 300m from the original alignment.

#### ML 389

ML 389 (1866) is S. Campbell's survey of the 581 acre Manga Tae Ore Block (Mangataiore) at the eastern end of Victoria Valley, on the south side of the river south east of the State Highway 1/Victoria Valley Road intersection.

The plan shows one apparent enclosure annotated "Cultivation" between the current highway and the river, and four other apparent enclosures, one with what appears to be a structure. The cultivation is 160m from the highway. The highway also cuts through a clearing immediately north west of the lower Kahikatea Stream annotated "Te Ure Praoa (sic)"; this is the ancestor Te Ure Paraoa through whom claim to the land was made at the 1866 title investigation.

The Oruru and Victoria Valley Road is shown. Two apparent later annotations show additional road lines, including one by Wheeler in 1888 along with the plan reference (SO) 5029.

#### SO 798

SO 798 (1867) is the plan of roads taken through the Kaiaka Block, surveyed by Campbell in 1867. The Kaiaka Block is the land north of the Victoria Valley River, excluding the Ta Keke and Wai Mamaku reserves.

This survey formally surveyed the line of the CMS missionary bridle track south of the river, and where it crosses over the river and along the southern side of W. F. Thompson's land as it turns northeast towards Mangonui, ultimately following the line of what is now Peria Valley Road.

#### SO 1031

SO 1031 (1876) shows homestead selections in the Kaiaka Block, north of the Victoria River. C. White's 100 acre Section 65 and W. F. Thompson's 200 acre Section 66 immediately north of the river are shown, with the land immediately adjacent to the river cleared, and the Victoria Valley road on the

southern side of the water. The road is what is now the highway, and Victoria Valley Road from the highway intersection east and over the river, being the-then road to Mangonui. The line of what is now Panther Road is surveyed, including the intersection with highway; that area is cleared but further north and over most of the Panther's Section 67 is forest, with a small central clearing.

#### SO 1426

SO 1476 (1870s) is the topographical plan of the Takahue District. It shows the lines of existing and proposed tracks from Victoria Valley to Ahipara and Takahue, and from Takahue to Whangape and Hokianga. Along with the tracks, groupings of small black squares suggest kainga or Maori villages in the different valleys.

#### SO 1969

SO 1969 (1879) is the plan of the Victoria Valley school site, surveyed out of W. F. Thomson's land by Sidney Weetman. The school site is an acre square on the north side of what is now Victoria Valley Road but then was the road between Ahipara and Mangonui. The school site is now the site of the Victoria Valley Hall, and is adjacent to closed 2020 spoil site.

#### ML 3608/A

ML 3608/A (1880) is a sketch map of the Mangamuka and Operehu Blocks. At the southern end it shows a tapu area in a bend of the Mangataipa Stream, and the 118 acre property of Webster and Campbell on the eastern side of the Mangamuka River, along with their house. On the western side of the river in the centre of the valley it shows Kauhoehoe, site of the old school. The edge of the bushline is shown around the Mangamuka and Operehu valleys.

#### ML 3007/4

ML 3007 (1880?) is the centreline survey of the section of the Okaihau-Victoria Valley road, from to the confluence of the Mangamuka River and Operehu Stream to the Waihou River. It is undated but has an annotation from 1880 and shows the location of the Mangamuka School established in 1879-1880. It shows the-then road survey through the valley on the eastern side of the river, with fenced enclosures on both sides of the river at/south of the Operehu outfall, each with multiple structures inside. A suggested bridge location is shown on the Operehu. The enclosures and whare on the western side of the river are likely to be in the vicinity of SH1.

#### SO 3228

SO 3228 (1891) is the survey of what is now Peria Valley Road, planned to replace the old bridle track to Mangonui and undertaken by Campbell and O'Neill. At the lower end by the school and Victoria Valley Road, the new alignment runs south of the old track while to the north east it runs north of the bridle track.

#### SO 3640

SO 3640 (1883) is the survey of the new road through Mangamuka Gorge and over the Mangamuka Range to Victoria Valley. Along with sections of older track, the plan (over four sheets) specifies the formation of the road in terms of cuttings, embankments, bridges and culverts, along with dimensioned elevations of the formation and structures. Approximately 200 of the recorded features are from this series of plans. However further research into the records of road building published by the Public Works Department in the Appendix to the Journal of the House of Representatives suggest that little or

no work was undertaken over the difficult ground through the gorge and over the range until after 1900.

The plan shows more than 150 timber boxed culverts 18 inches to three feet wide, along with 13 bridges ten to thirty eight feet long, and chainage for side cutting, breast cutting, embankments and flat formations with and without drains.

#### SO 5029

SO 5029 (1888) is Wheeler's 1888 road survey through the Manga Tae Ore Block, taken by proclamation in 1889, and as later annotated on ML 369 (1866). The line of this road is on or immediately adjacent to the existing highway. From the Victoria Valley Road intersection, the survey has a specification for 57 chains of flat formation, six chains of light side cutting, 2 chains of filling and fascining and a further 10 chains of flat formation.

#### SO 6314

SO 6314 (1891) is the plan of the north end of the Okaihau to Victoria Valley Road, surveyed by Wheeler in 1891. It shows multiple road alignments, including the north end of Garsed's road which was proposed for closing, Campbell's abandoned road which was surveyed 30 years prior as part of the earlier bridle track via the summit of Maungataniwha (both on the south side of the Victoria River), and Wheeler's new line of the road on the north side of the Victoria River. A fourth line of road runs between the other three, and south of the river but there is no annotation to say which iteration of the road it belongs to, but it appears to extend towards the Raetea Valley from a road shown on the Manga Tai Ore Block survey of 1866 (ML 389). All these old road alignments have sections within 100m of SH1.

The plan also shows three houses on the south side of the Victoria River, from north west to south east associated with settlers Switzer, George Kitchen, and Tracy. The Tracy house is 50m from the highway, the Switzer house is 75m from the highway. North of the river the Victoria Valley School Reserve and building is shown.

#### ML 3608/B and C

ML 3608/B (1894) is the plan of surveyed by W. G. G. Spencer. The survey shows the Mangamuka East or Operehu Block. It shows the northern part of the cut road to Oruru, running north from Mangamuka. A later annotation shows this road was closed on plan SO 29231 (1925). It also shows the extent of clearings around the confluence of the Operehu and Mangamuka River.

ML 3608/C (1894) is the plan of the subdivision of the Mangamuka East Block, also surveyed by Spencer. Notably it shows cultivations on the north side of the Mangamuka River, west of the confluence of the Operehu Stream. The alluvial flats east of the confluence are in fern and scrub. The plan also shows the southern part of the cut road to Oruru, starting just west of the confluence.

#### SO 7084/3 and SO 7084/4

The SO 7084 (1894) plans show the resurvey of the Victoria Valley – Okaihau Road undertaken by Spencer in 1894, with plans /3 and /4 showing the sections through the Mangamuka Valley and Gorge respectively.

SO 7084/3 shows "Native Cultivations" between the highway and river at the north western end of the valley, from the mouth of the gorge to approximately 700m south of the confluence with the Operehu Stream. The church is present 125m west of the highway, and Spencer's road runs past the church and skirts the edge of the flats and the high ground to the west.



In the centre of the valley, Spencer's road runs to the east of the old school house and an adjacent burial ground; the highway runs closer to these features, at a distance of less than 40m. At the southern end of the valley, Spencer's road and bridge is 400m downstream of the modern crossing, after which the road turns east again for 400m and rejoins the modern highway alignment.

SO 7084/4 generally followed the line of Garsed's road survey, ending at the first switchbacks north of the Tapapa Stream confluence.

#### ML 6700

ML 6700 (1898) is a plan of the Mangamuka West Block being all the land west of the Mangamuka River to the summit of the range, and north to the main west to east ridge north of the highway. The southern western boundary runs from Kumetewhiwhia west to Mangataipa. The block was surveyed for Te Rata Herewaka and Moko Herewaka, Maraea Pororua and others and was 12,600 acres

It has an annotation "Native cultivations" between the highway and the river at the western end of the valley. It also shows the new Kauhoehoe school site gazetted in 1895 just west of the highway but subsequent annotations suggest this was mislocated, and the actual school site is the current one to the north west. It also shows the original partitions of the block on the western side of the river, but while the acreages can be read, the owners names are largely illegible.

#### SO 12895

SO 12895 (1904) is the plan of Section 1 and 2 Block XII Takahue Survey District. It was surveyed in 1904 by Percy Ward for J. W. Groves and G. Kitchen and covers land from the highway southwest over the lower Raetea Valley and into the high ground above.

The plan shows the 1300 acre Section 1 and 200 acre Section 2, with access to the rear Section 2 via a road line through George Kitchen's Section 145 and 147. Two road alignments south of where the highway crosses the river near the mouth of the Raetea Valley form the northern boundary of Section 1, with the road immediately west of the current highway described as a graded line to Mangamuka. It also shows a new clearing in the valley. Presumably Groves was surveying access through to his section and breaking it in.

#### SO 12998

SO 12998 (1904) was surveyed for D. Kitchen, being Section 3 Block XII Takahue Survey District, east of Section 2 noted above and immediately south of the highway. One of the creeks forming the headwaters of the Victoria River runs south to north through the valley, before turning north west into the Raetea Valley proper. A road line is surveyed from the highway south, along the eastern side of the creek and the ground beside the creek is described as good land.

#### ML 6700

ML 6700 (1907) provides a snapshot of the settlement of the Mangamuka Valley at the start of the 20<sup>th</sup> century. Whare, from Mangamuka Bridge north to the Operehu. Outbuildings, whare nui, church, school, store and post office buildings are shown, along with wahi tapu, orchards and cultivations. The owners' and other names are shown and the map appears to have been produced with the help of multiple local informants. At this time, most of the river flats appear to have been cultivated in corn, kumera and pumpkins with peach and pear trees scattered throughout.

Many of the features shown will have been built prior to 1900 and depending on subsequent development in the immediate vicinity, will have archaeological features remaining, and most are within

100m of the highway. The river flats on both sides of the Mangamuka River from Mangamuka Bridge to the mouth of the gorge are highly archaeologically sensitive.

#### ML 9105/1 and ML 9105/4

ML 9105/1-4 (1913) are Percy Ward's surveys of the Mangamuka West Block for the Crown. ML 9105/1 shows the road alignment through the Mangamuka gorge to the road summit. It describes the road at the time as a formed bridle track, with an older line of track over some high ground to the north of the Tapapa confluence with the Mangamuka. This track is within 100m of the highway.

ML 9105/4 shows the road alignment from a kilometre east of the Tapapa confluence, to the centre of the valley. In the centre of the valley, 110m west of the highway alignment is the Puketapu or Kauhau (or Kauwhau) wahi tapu or cemetery. On the eastern side of the highway to the north is an enclosure, with two structures within, 180m from the road. Two school buildings are also shown, along with the post office and whare nui near the river at Iwitaia Road.

#### SO 18581

SO 18581 (1915) is assistant surveyor F. R. Burnley's plan of sections including Forest Reserve sections in Maungataniwha Block 1 and 2, and the Okaihau-Victoria Valley Road. It covers both sides of the highway alignment from the mouth of the Raeatea Valley to the summit of the road. Section 1, previously owned by Groves according to SO 12895 is now owned by H. J. Clapper, while Section 3 to the east is owned by J. Clark. The land either side of the highway summit is Forest Reserve. The area is described as good river flats with volcanic soil.

#### ML 9999

ML 9999 (1915) was surveyed by H. C. Cooper and is the plan of several sections in the Mangamuka West block, both north and south of the Mangamuka River at the western end of the valley near the mouth of the gorge. On the north side of the river are enclosures with houses, cultivations, and orchard belonging to Puhipi Tiwene, and enclosures, houses and cultivations belonging to Hemi te Hara and Stannaway.

South of the highway, the line of Makene Road has been surveyed but only the lower part around the intersection with State Highway 1 has been cleared; the area of the Makene Road spoil sites are still in primary forest. To the west, the boundaries of the Mangamuka West 3E Block has been cleared but the centre is still in forest, while further west part of the Mangamuka No.3 DD No. 5 has a fern-covered spur surrounded by forest.

## **6.0 Preliminary Findings**

### **6.1 Archaeological and Historic Heritage Features at the Slip and Spoil Sites**

There are no recorded archaeological sites in the project area. There is one scheduled Site of Cultural Significance to Maori in the project area, the Tapapa wahi tapu. This area is currently being used as a site office for the slip repair project and has been used for spoil dumping in the past. No additional ground disturbance or dumping should occur in this area without further assessment, and the effects of the existing dumpsite should be assessed, and the cultural values of the area identified. Another current active spoil dumpsite lies within an area that was cleared in 1866 and associated with the ancestor Te Ure Paraoa.

The highway through the Mangamuka gorge and over the range where the slips and slip repairs are being undertaken was not formed until after 1900, based on newspaper accounts and the records of

the Journal of the House of Representatives. This is despite the line through the most difficult country surveyed and specifications for bridges, culverts, cutting, embankments and a standard formation being prepared in 1883, and the approaches through the Mangamuka and Victoria Valleys being formed by.

The delay in building the road appears to be a result of the difficult terrain, problems with securing the route across Maori land, a lack of funds possibly relating to the Depression of the early 1890s (the worst until the GFC of 2008/2009), and the presence of a usable but longer and easier northern route via Fern Flat and Peria.

Historic research has suggested that every extant slip on the Mangamuka section of State Highway 1 may be within 50m of a structure specified on the 1883 Victoria Valley Road plan, but probably not built, if at all, until after 1900. It is not clear if these structures were actually built, and their locations in relation to the slips is imprecise owing to the poor scanning/plan quality and subsequent difficulty in georeferencing the plans.

Given the ongoing maintenance and improvement of the road since it was finally completed in 1928, the ongoing slips on the alignment, and the expected use-life of timber structures (many made of totara) in that environment, it is unlikely that any of the potential post-1900 structures have survived.

The works being undertaken to repair the slips and stabilise the highway are occurring in areas which have been highly modified by the existing highway formation, which can be expected to have largely destroyed prior iterations of the road, apart from where major deviations have occurred. The treatments being undertaken are also of a form and are in locations that are unlikely to uncover archaeological features. That is to say works on the upslope side of the highway comprise pavement, curbing, channelling and drainage at a level already cut down substantially for the current road formation, with subsurface drains into the hillside. Downslope works for retaining, guardrails etc are over active slips and areas of fill, with auguring for piles providing limited opportunities to view/identify features which may be buried below the current road level.

Nevertheless it is possible that these post-1900 archaeological or historic heritage features, which do not have statutory protection under the Heritage New Zealand Pouhere Taonga Act 2014, may be encountered and require consideration and management based on Waka Kotahi internal policy and general advice provided regarding historic heritage managed by Government departments and other agencies. A table of features in the vicinity of the Project area is provided below (Table 1).

## **6.2 Archaeological and Other Historic Heritage within 200m of State Highway 1**

Outside the specific area of works on the slips and associated locations, there are a large number of potential archaeological sites within 200m of the State Highway corridor between Victoria Valley and Mangamuka. The highway passes through or is immediately adjacent to three Native Reserves, carved out of the Kaiaka and Maungataniwha West No. 2 Block Crown purchases in the mid-1860s. The Ta Keke, Wai Mamaku and Manga Tai Ore blocks were those areas that were of particular significance and or use and which needed to be retained by the vendors in the Victoria Valley. Plans of the three Reserves show clearings, areas under cultivation, whare, and claimants, owners and occupiers of the land in the mid to late 19<sup>th</sup> century prior to European settlers arriving in the area. They also show the lines of the original tracks between Maori settlements and plantations at Takahue, Ahipara, Kaitaia, Oruru and Mangamuka through the valley and over the Maungataniwha Range, and wetlands and watercourses prior to changes wrought by farmer's drains and raised roadbeds.

Later plans from the 1880s-1900s show the lines of European Roads pushed through both Mangamuka and Victoria valleys, including Garsed's original line, and later lines surveyed by Campbell, Spencer and Wheeler.

Where the highway, roads and other 20<sup>th</sup> century developments have not occurred, it can be expected that archaeological features will remain from these occupations and activities – houses and whare will leave postholes, hearths, ovens and fire places, midden and rubbish pits, old roads and track may still be present as overgrown cuttings, embankments and raised formations, with culverts and piles for bridges over streams. Where deep ploughing has not occurred, features related to Maori horticultural activities across the river flats may still be present.

From the mouth of the Raetea Valley westwards to Kaitaia, and from the mouth of Mangamuka Gorge running east and then south to Mangamuka Bridge, the margins of State Highway 1 should be considered archaeologically sensitive. No work should occur outside the existing formation without an archaeological assessment and any future spoil dump sites or other off-line requirements will require an archaeological assessment.

Table 1: Slips, Spoil Sites, Other Activities, Features, Treatments and Risk in the State Highway 1 Corridor.

Slip/Spoil Site	Feature within 50m and 50-100m	Source	Treatment	Risk
A1	Graded line to Mangamuka 18" timber boxed culvert Side cutting	SO 12895 (1904) SO 3640 (1883)	Concrete pile and cap; concrete channel; guardrail. Manhole and bored drains	Low
A2	Graded line to Mangamuka 18" timber boxed culvert Side cutting	SO 12895 (1904) SO 3640 (1883)	Concrete pile and cap; concrete channel; guardrail. Manhole and bored drains	Low
A3	18" timber boxed culvert Earlier historic track 50-100m west Side cutting	SO 3640 (1883) SO 12998 (1904)	Concrete pile and cap; concrete channel; guardrail. Manhole and bored drains	Low
A4	18" timber boxed culvert Side cutting	SO 3640 (1883)		Low
A5	18" timber boxed culvert Side cutting	SO 3640 (1883)	Concrete pile and cap; guardrail. Manhole and bored drains	Low
A6	18" timber boxed culvert x3 Side cutting	SO 3640 (1883)		Low
A7	18" timber boxed culvert Side cutting	SO 3640 (1883)		Low
A8	18" timber boxed culvert	SO 3640 (1883)		Low
A9	3' timber boxed culvert Historic track 50-100m north Side cutting	SO 3640 (1883) SO 3640 (1883)	Concrete pile and cap; concrete channel; guardrail. Manhole and bored drains	Medium
A10	18" timber boxed culvert Side cutting	SO 3640 (1883)		Low
A11	15' timber bridge 2' timber boxed culvert 18" timber boxed culvert Side cutting	SO 3640 (1883) SO 3640 (1883) SO 3640 (1883)		Medium
A12	2'6" x 20' totara timber boxed culvert 2' x 25' totara timber	SO 3640 (1883) SO 3640 (1883) SO 3640 (1883)	Concrete pile and cap; concrete channel; guardrail. Manhole and bored drains	Medium

	boxed culvert 2" timber boxed culvert Side cutting *Earlier track 50-100m, upslope	ML 9105 (1913)		
A13	Side cutting *Earlier track 50-100m north	ML 9105 (1913)	Concrete pile and cap; concrete channel; guardrail. Manhole and bored drains	
A14	Side cutting	SO 3640 (1883)	--	
A15	16' bridge Side cutting	SO 3640 (1883)	Overslip cleaned up	Medium
Mangamuka Scenic Reserve	Tapapa Wahi Tapu Flat formation Flat formation with ditch Side cutting	FNDC DP SO 3640 (1883) SO 3640 (1883) SO 3640 (1883)		Medium
Mangamuka Church Road	--	--	--	
Makene Road 1	--	--	--	Low
Makene Road 2	--	--	--	Low
Mangatoetoe Road	--	--	--	Low
Victoria Valley Road	1879 School site	SO 6314 (1891) SO 6314 (1891)		Medium
SH 1	1867 Clearing, "Te Ure o Praoa" (sic)	ML 389 (1867)		Medium



Figure 28: Map Sheet 1 – Heritage Features.

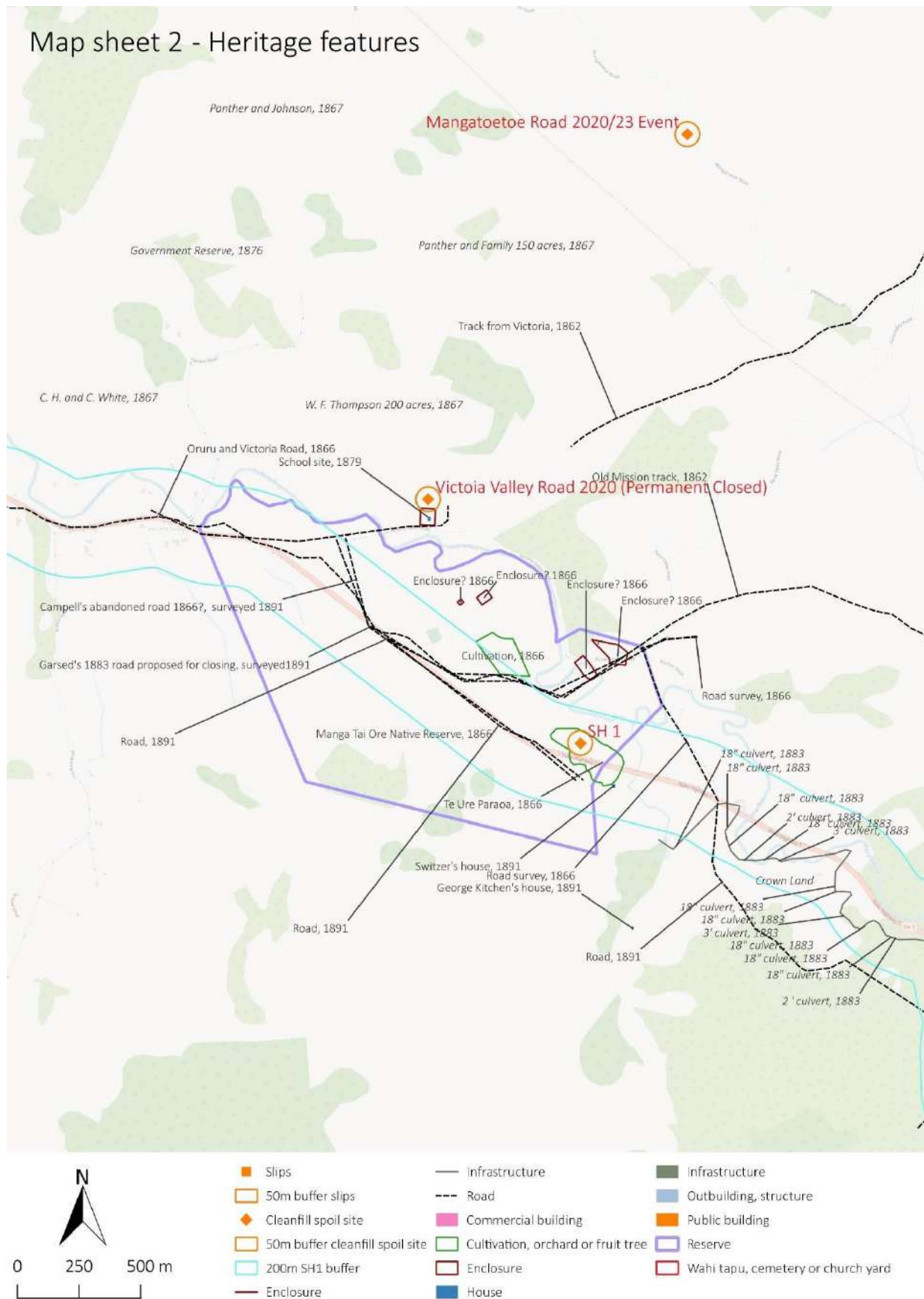


Figure 29: Map Sheet 2 – Heritage Features.

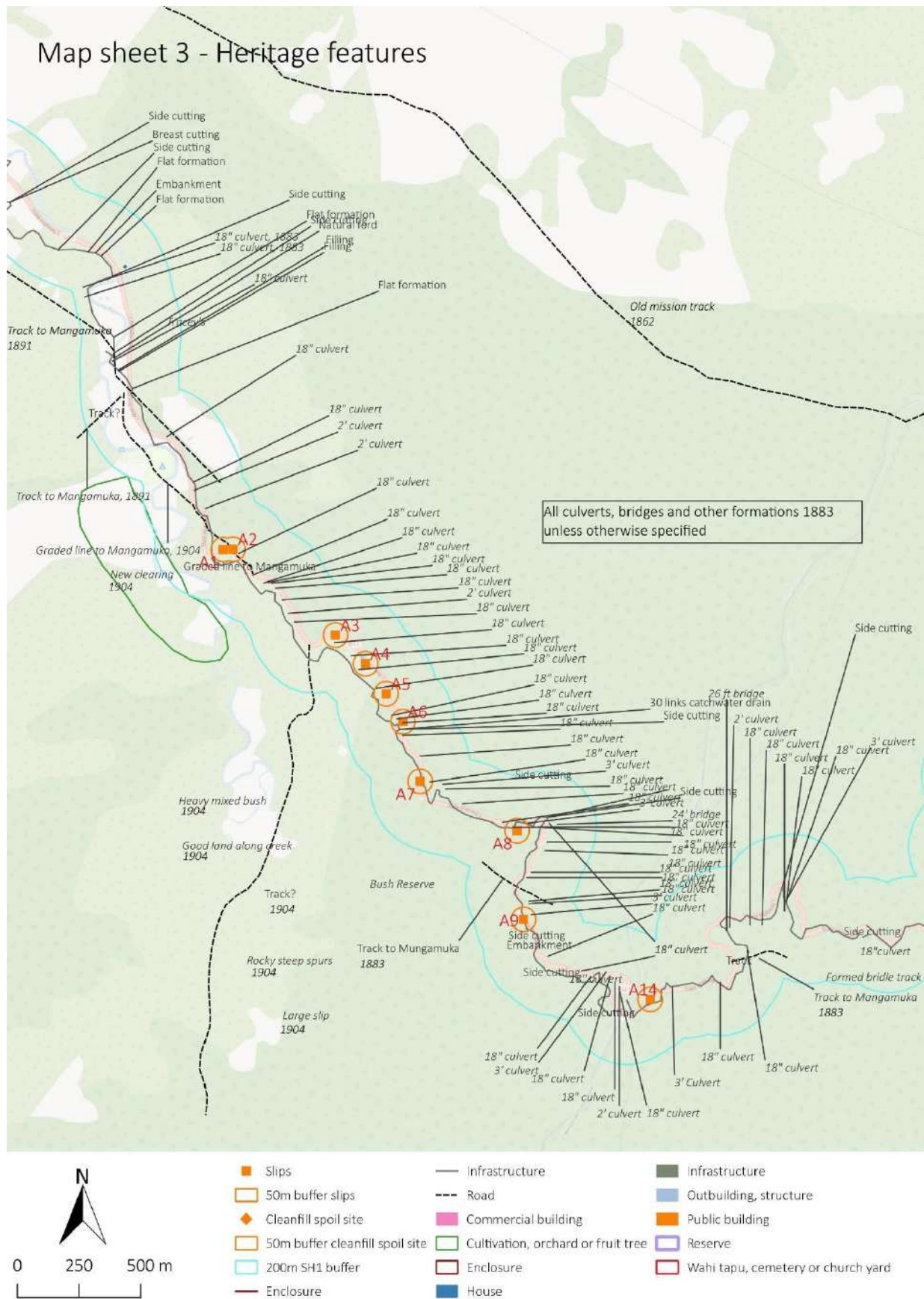


Figure 30: Map Sheet 3 – Heritage Features.



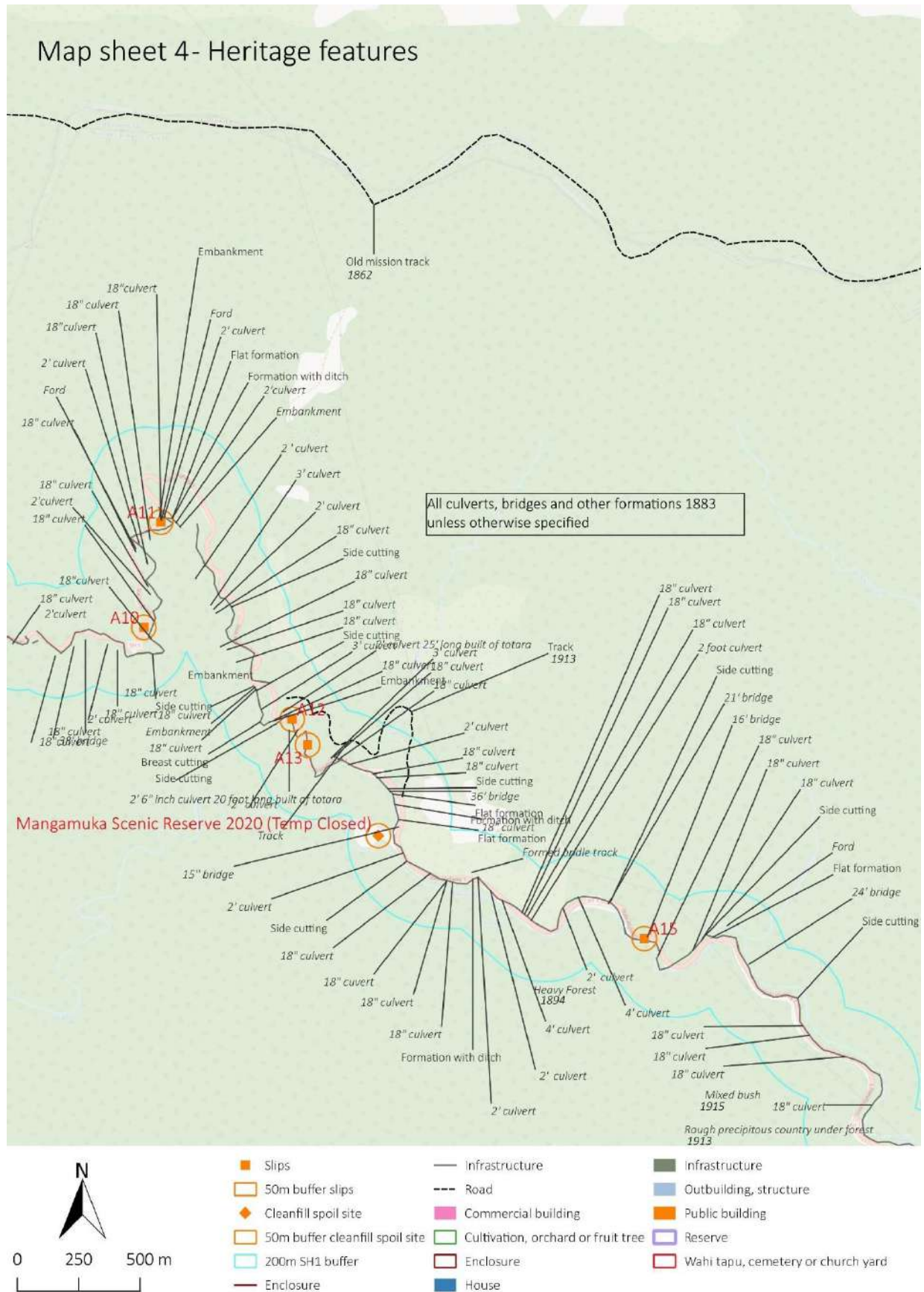


Figure 31: Map Sheet 4 – Heritage Features.



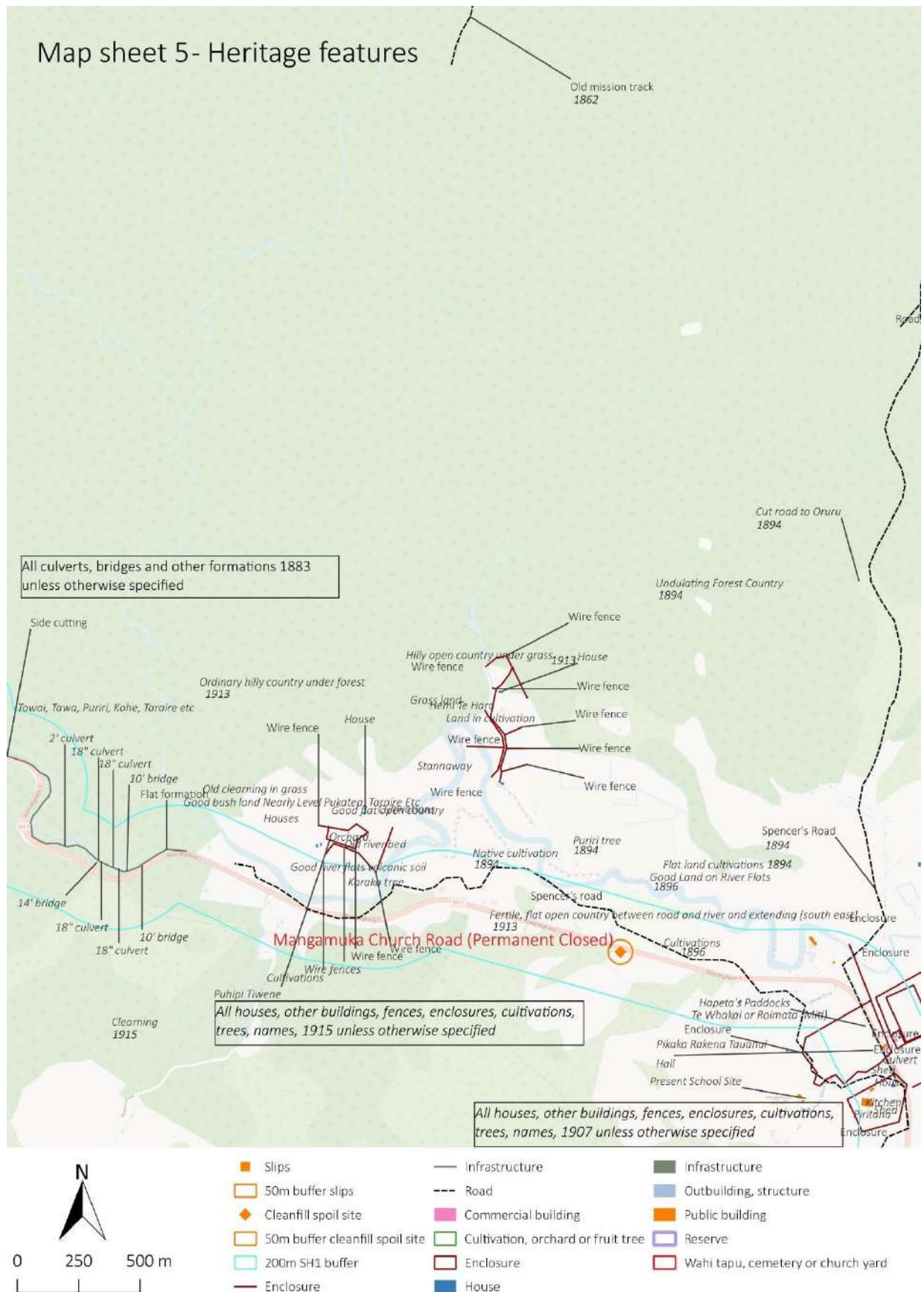


Figure 32: Map Sheet 5 – Heritage Features.

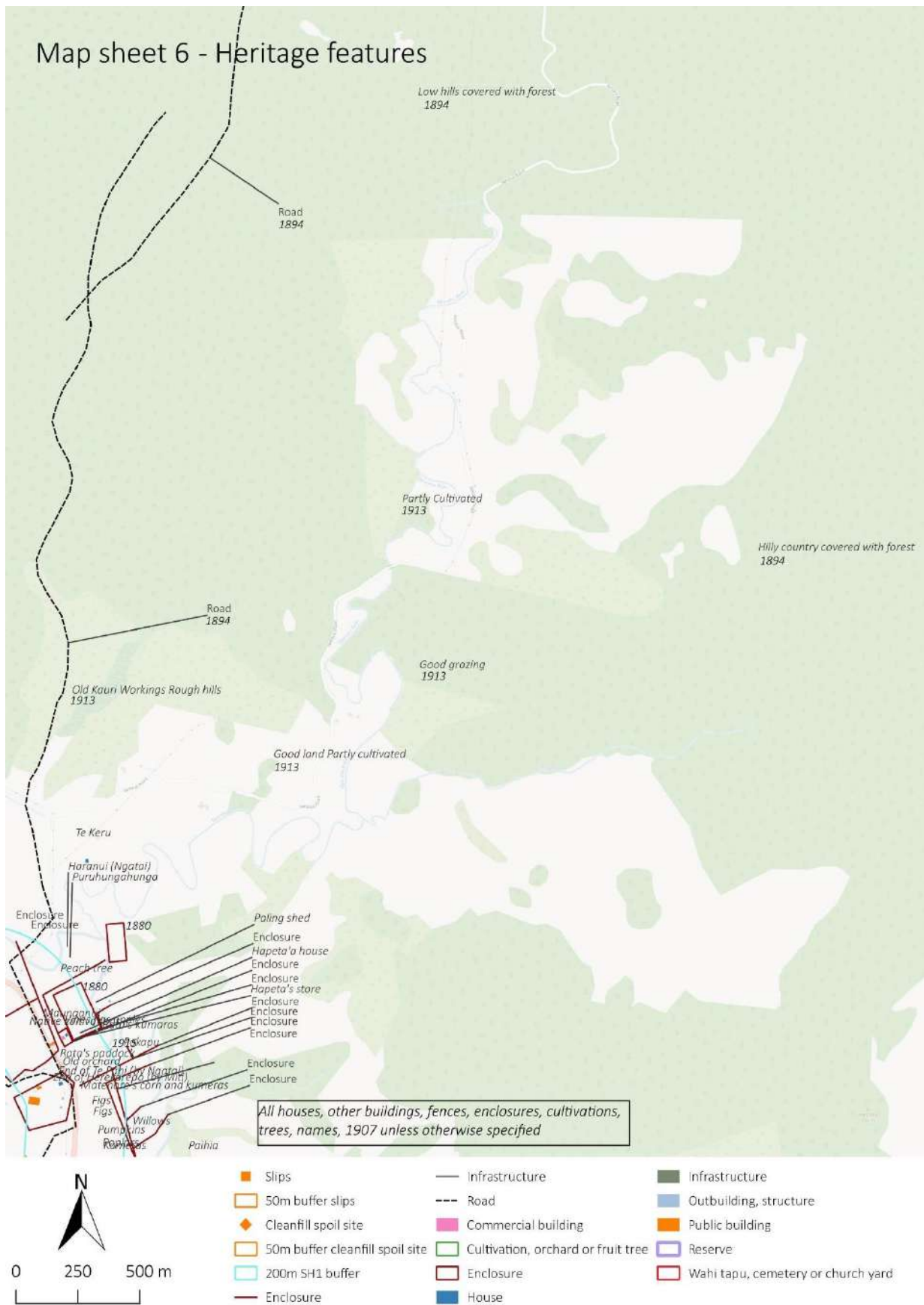


Figure 33: Map Sheet 6 – Heritage Features.

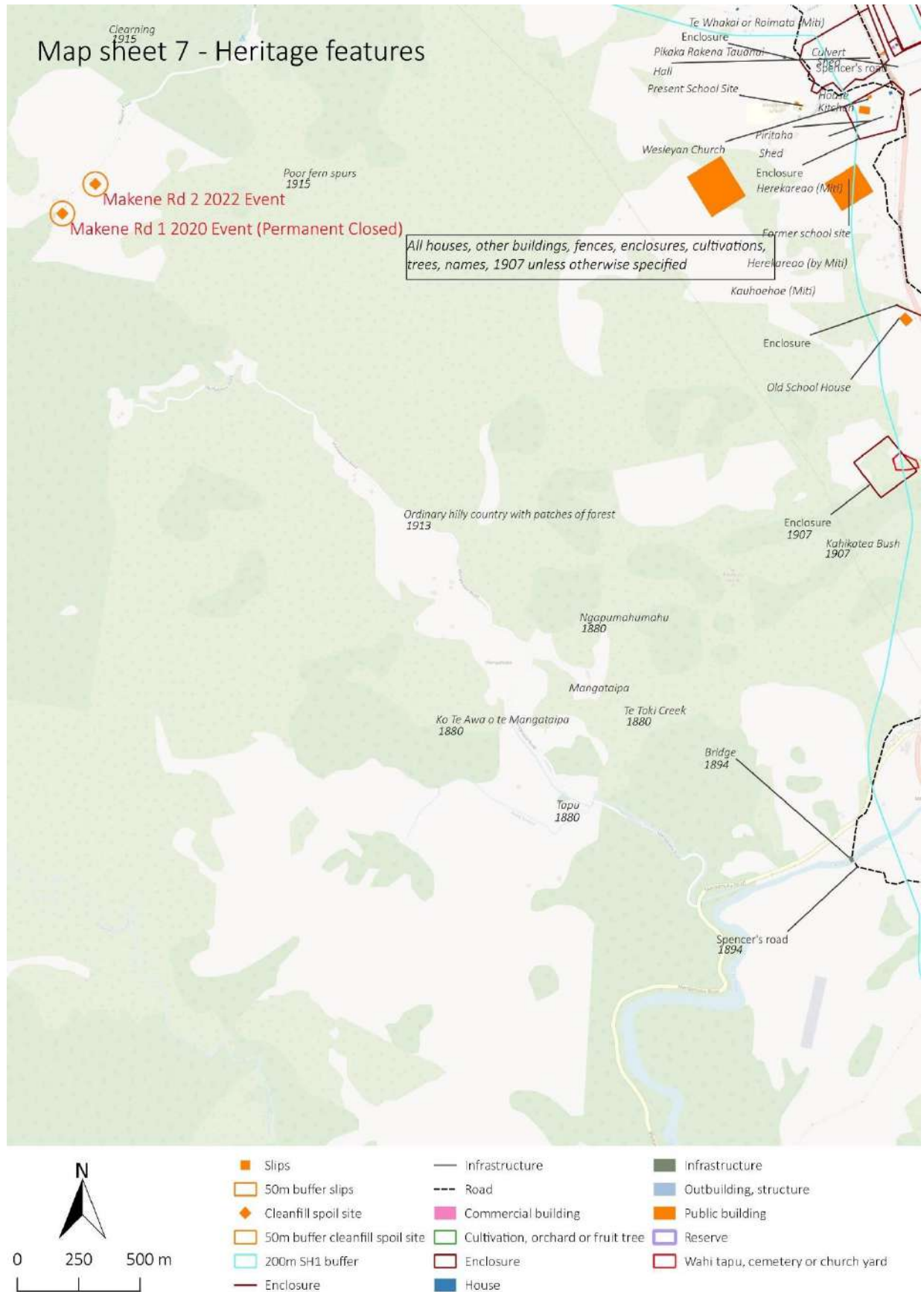


Figure 34: Map Sheet 7 – Heritage Features.

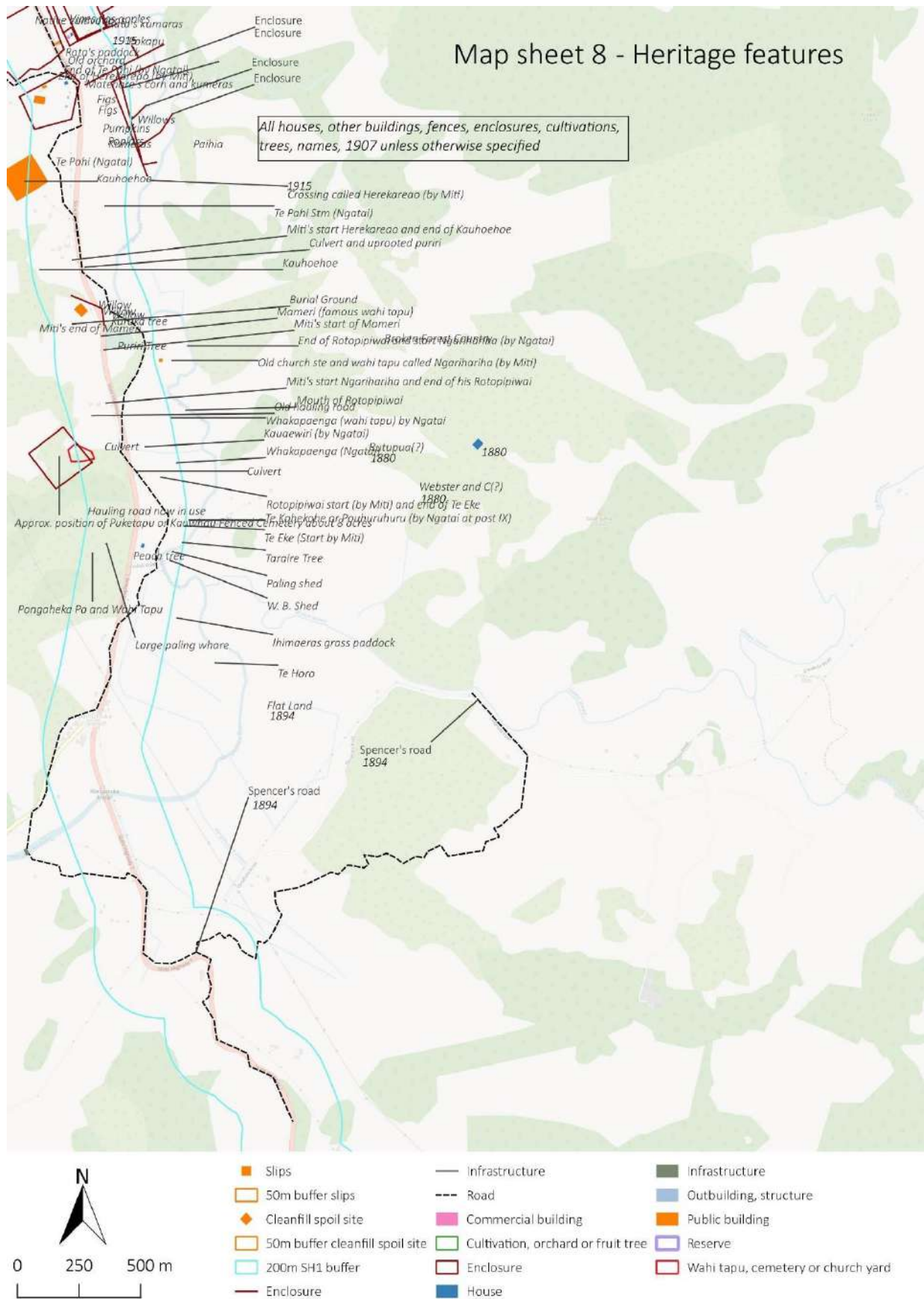


Figure 35: Map Sheet 8 – Heritage Features.

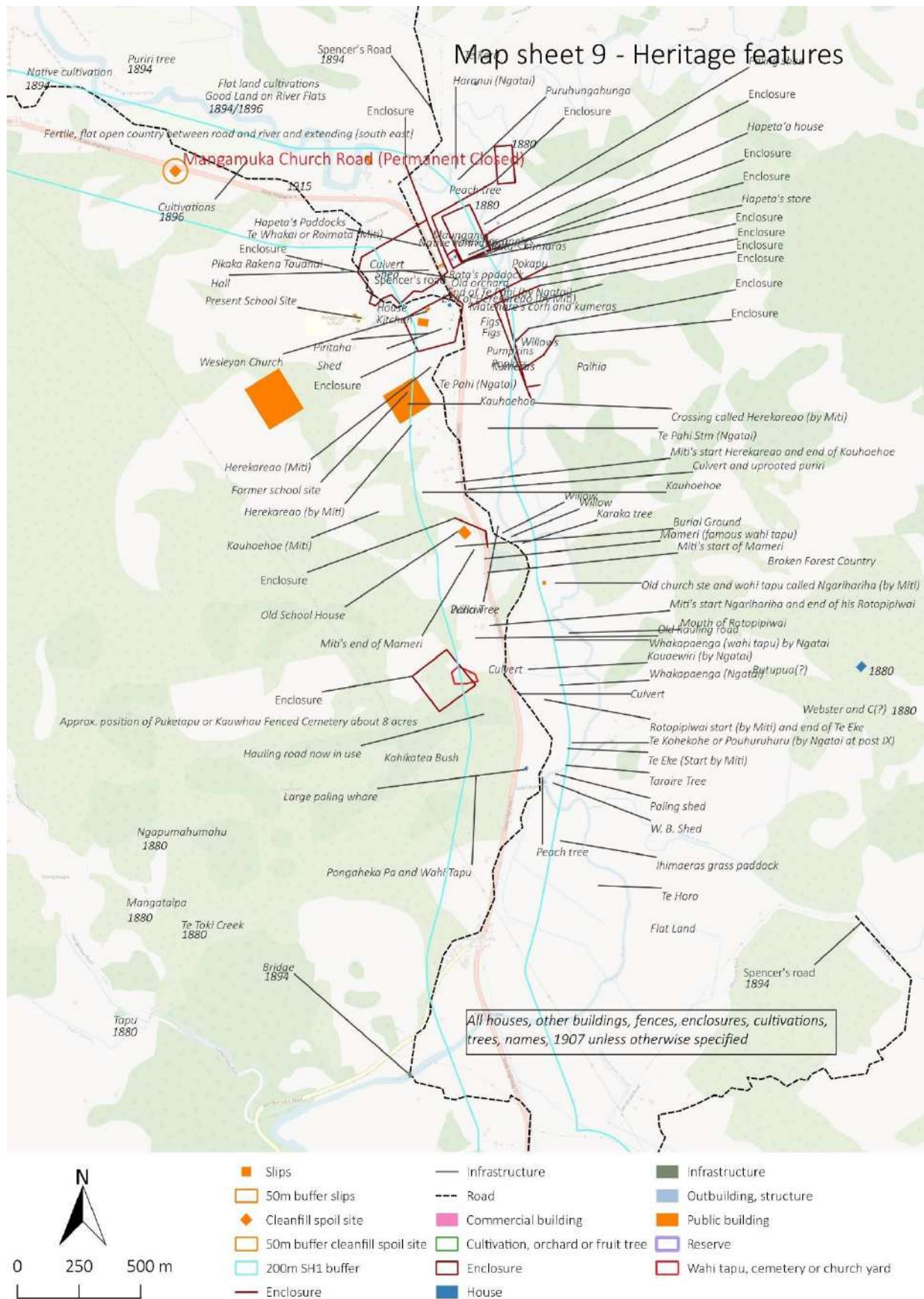


Figure 36: Map Sheet 9 – Heritage Features.

Table 2: Historic features within 200m of State Highway 1, Takahue Road Intersection to Mangamuka Bridge (Polygons).

Date	Source	Feature	Description/Comment
1861?	ML109	Enclosure	Enclosure?
1861?	ML109	Enclosure	Enclosure?
1865?	ML 109	Reserve	Ta Keke
1866	ML 389	Reserve	Manga Tai Ore
1866	ML 389	Cultivation, orchard or fruit tree	Cultivation
1866	ML 389	House	House?
	ML 389	Cultivation, orchard or fruit tree	Clearing, annotated "Te Ure o Praoa"
1866	ML 106	Reserve	Wai Mamaku
1880?	ML 3007	Enclosure	Enclosure and two structures (poor registration)
1891	SO 6314	House	House
1891	SO 6314	House	House
1894	SO 7084-3	Public building	Old School House
1894	SO 7084-3	Public building	Church
1907	ML 6700	House	House
1907	ML 6700	Commercial building	Hapeta's store
1907	ML 6700	Public building	Hall
1907	ML 6700	Outbuilding, structure	Shed
1907	ML 6700	Public building	Church
1907	ML 6700	House	House
1907	ML 6700	Outbuilding, structure	Kitchen
1907	ML 6700	Outbuilding, structure	Shed
1907	ML 6700	House	Whare
1907	ML 6700	Outbuilding, structure	Shed
1907	ML 6700	Outbuilding, structure	Shed
1907	ML 6700	Public building	Former School Site Kauhoehoe
1913	ML 9105-2	Public building	Post office
1913	ML 9105-2	Public building	Hui house
1913	ML 9105-2	House	Whare
1913	ML 9105-2	House	Whare

Table 3: Historic features within 200m of State Highway 1, Takahue Road Intersection to Mangamuka Bridge (Lines).

Date	Source	Feature type	Description/Comment
1861?	ML106	Road	Oruru and Victoria Road
1862	ML 12805	Road	Old Mission track
1862	SO12805	Road	Old Mission track
1865	ML109	Road	Road taking 1972
1866	ML389	Road	Oruru and Victoria Road
1866	ML389	Road	Road survey
1866	ML389	Road	Road survey
1866	ML389	Road	Road survey
1870s			Flat formation
1870s	SO 1426	Road	Road to Awanui
188	SO 3640	Infrastructure	Embankment
1880	ML 3608-S	Topography and vegetation	Bushline
1880	ML 3608-A	Topography and vegetation	Bushline
1883	SO 3640	Road	Track
1883	SO3640	Road	Track to Mungamuka
1883	SO 3640	Infrastructure	Natural ford



1883	SO3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Filling
1883	SO 3640	Infrastructure	30 links catchwater drain
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Formation with ditch
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Formation with ditch
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	Breast cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Formation with ditch
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	
1883	SO 3640	Infrastructure	Filling
1883	SO 3640	Infrastructure	Side cutting
1883?	ML 106	Road	Kaitaia-Oruru Road
1891	SO 6314	Road	Track?
1891	SO 6314	Road	Road
1891	SO 6314	Road	Road
1891	SO 6341	Road	
1894	SO 7084/3	Road	Spencer's road
1894	SO 7084	Road	Spencer's road
1894	SO 7084	Road	Spencer's road
1894	SO 7084/3	Road	Spencer's Road
1894	SO 7084	Road	Spencer's road
1904	SO 12998	Road	Track?
1904	SO 12895	Topography and vegetation	New clearing
1904	SO 12895	Road	Graded line to Mangamuka
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure

1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1913	ML 9105-1	Road	Track
1913	ML 9105-2	Wahi tapu or cemetery	Wahi tapu
1913	ML 9105-2	Enclosure	Enclosure
1913	ML 9105-2	Topography and vegetation	Bushline
1913	ML 9105-2	Topography and vegetation	Bushline
1913	ML 9105-2	Topography and vegetation	Bushline
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline

Table 4: Historic features within 200m of State Highway 1, Takahue Road Intersection to Mangamuka Bridge (Points).

Date	Source	Feature type	Description/Comment
1862	ML 12805	Name	Native Reserve
1862	ML 12805	Name	Te Ure Paraoa
1862	ML 12805	Topography and vegetation	Native Reserve
1862	ML 12805	Topography and vegetation	Very rich alluvial soil, level Land
1883	SO 3640	Infrastructure	16 ft bridge
1883	SO 3640	Infrastructure	24 ft bridge
1883	SO 3640	Infrastructure	14 ft bridge
1883	SO 3640	Infrastructure	10 ft bridge
1883	SO 3640	Infrastructure	Ford
1883	SO 3640-3	Infrastructure	26 ft bridge
1883	SO 3640	Infrastructure	17 f bridge
1883	SO 3640-3	Infrastructure	Ford
1883	SO 3640-3	Infrastructure	36 ft bridge
1883	SO 3640-3	Infrastructure	15 ' bridge
1883	SO 3640-3	Infrastructure	Ford
1883	SO 3640-3	Infrastructure	21 ft bridge
1883	SO 3640	Infrastructure	3 ' Culvert
1883	SO 3640	Infrastructure	18 ' culvert
1883	SO 3640	Infrastructure	18 ' culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	3 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	3 ' culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " culvert

1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	38 ' bridge
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	3 ' culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Road	Track to Mangamuka
1883	SO 3640	Infrastructure	3 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert 25 ' long built of totara
1883	SO 3640	Infrastructure	2 ' 6 " culvert 20 ' long built of totara
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	3 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " cuvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	4 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert



1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	3' culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	3' culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	2' culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	3 ' culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	18 " culvert
1883	SO 3640	Infrastructure	2 ' culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1891	SO 6314	Name	Campbell's abandoned Road surveyed about 30 years ago
1891	SO 6314	Name	Garsed's Road which it is proposed to close
1894	SO 3640	Wahi tapu or cemetery	Burial Ground
1894	SO7084-3	Public building	Old School House
1894	SO7084-3	Cultivation, orchard, fruit tree	Native cultivations
1896	ML 6700	Cultivation, orchard, fruit tree	Cultivations
1904	SO 12895	Road	Graded line to Mangamuka
1907	ML 6700-1	Name	Maunganui
1907	ML 6700-1	Name	Hapeta's Paddocks
1907	ML 6700-1	Name	Te Whakai or Roimata (Miti)
1907	ML 6700-1	Name	Hapeta'a house
1907	ML 6700-1	Name	Hapeta's store
1907	ML 6700-1	Name	Rata's paddock
1907	ML 6700-1	Cultivation, orchard, fruit tree	Old orchard
1907	ML 6700-1	Infrastructure	Culvert
1907	ML 6700-1	Name	Piritaha
1907	ML 6700-1	Outbuilding, structure	Kitchen
1907	ML 6700-1	Outbuilding, structure	Shed
1907	ML 6700-1	House	House
1907	ML 6700-1	Outbuilding, structure	Shed
1907	ML 6700-1	Name	End of Herekareao (by Miti)
1907	ML 6700-1	Topography and vegetation	Poplars
1907	ML 6700-1	Name	Miti's start Herekareao and end of

			Kauhoehoe
1907	ML 6700-1	Infrastructure	Culvert and uprooted puriri
1907	ML 6700-1	Topography and vegetation	Willow
1907	ML 6700-1	Topography and vegetation	Willow
1907	ML 6700-1	Topography and vegetation	Willow
1907	ML 6700-1	Cultivation, orchard, fruit tree	Karaka tree
1907	ML 6700-1	Name	Miti's end of Mameri
1907	ML 6700-1	Name	Mameri (famous wahi tapu)
1907	ML 6700-1	Topography and vegetation	Puriri Tree
1907	ML 6700-1	Name	Miti's start of Mameri
1907	ML 6700-1	Name	Miti's start Ngarihariha and end of his Rotopiwai
1907	ML 6700-1	Road	Old hauling road
1907	ML 6700-1	Infrastructure	Culvert
1907	ML 6700-1	Name	Whakapaenga (Ngatai)
1907	ML 6700-1	Infrastructure	Culvert
1907	ML 6700-1	Name	Rotopiwai start (by Miti) and end of Te Eke
1907	ML 6700-1	Road	Hauling road now in use
1907	ML 6700-1	House	Large paling whare
1907	ML 6700-1	Name	Pongaheka Pa and Wahi Tapu
1907	ML 6700-1	Outbuilding, structure	Paling shed
1907	ML 6700-1	Cultivation, orchard, fruit tree	Peach tree
1907	ML 6700-1	Outbuilding, structure	W. B. Shed
1907	ML 6700-1	Topography and vegetation	Taraire Tree
1907	ML 6700-1	Name	Kauawiri (by Ngatai)
1907	ML 6700-1	Name	Te Eke (Start by Miti)
1907	ML 6700-1	Name	Kauhoehoe
1907	ML 6700-1	Name	Te Pahi Stm (Ngatai)
1907	ML 6700-1	Name	Herekareao (by Miti)
1907	ML 6700-1	Name	Herekareao (Miti)
1907	ML 6700-1	Public building	Hall
1907	ML 6700-1	Name	Te Pahi (Ngatai)
1913	ML 9105	Road	Formed bridle track
1913	ML 9105-1	Road	Track
1913	ML 9105-1	Road	Formed bridle track
1913	ML 9105-2	Topography and vegetation	Fertile, flat open country between road and river and extending [south east]
1915	ML 9999	Topography and vegetation	Good river flats volcanic soil
1915	ML 9999	Cultivation, orchard, fruit tree	Karaka tree

## 7.0 Recommendations

An archaeological Authority is not required for the slip remediation and associated works in the Mangamuka gorge and over the range. The features recorded in the project area do not appear to have been constructed before 1900, and if they were are unlikely to have survived subsequent road building activity and slip, and/or the works being undertaken provide limited opportunity to identify or recognise such features. Nevertheless, an accidental discovery protocol should be in place and any potential features uncovered should be investigated.

An assessment of the Mangamuka Scenic Reserve should be undertaken, given the area is a scheduled site of significance to Maori and the area has already been affected by use as a spoil dump site and as a site office for the slip remediation. If additional ground disturbing activity is required in this area, it should be assessed.

An assessment of the spoil dump site at State Highway 1 Victoria Valley should be undertaken, given the area was a surveyed clearing associated with the descendants of Ure of Praoa (sic; probably Paraoa) however the area has already been affected by use as a spoil dump site and farm buildings/yards. If additional ground disturbing activity is required in this area, it should be assessed.

An extensive archaeological landscape is present to the northwest and southeast of the project area, within Mangamuka and Victoria Valleys/Takahue. Both valley systems were highly productive horticultural landscapes utilised by Maori, and recognised by European settlers. Extensive accounts of dense occupation and horticulture are available for Mangamuka in the 19<sup>th</sup> century and this likely extended into the pre-European contact period despite the few archaeological sites recorded in the area. In contrast, many sites have previously been recorded in the Victoria Valley area (at the western end near the confluence of the Victoria and Takahue River valleys) but there are fewer detailed 19<sup>th</sup> century descriptions, although its value to Maori and the recognition of the importance in maintaining ownership over it in the face of land sales is discussed in detail in the Muriwhenua Waitangi Tribunal report.

No work, including site establishment, spoil dump site establishment, disestablishment or other ground disturbance should occur in the vicinity of State Highway 1 between the SH1/Omahuta Road intersection and the Mangamuka Scenic Reserve or from the Raetea campground northwards to Kaitaia without an archaeological assessment. These assessments should be circulated to stakeholders and appended to this report as they are produced.

Work may occur on or within the existing formation without assessment through the gorge and over the range.

## 8.0 Summary

Geometria Ltd was commissioned by Waka Kotahi to provide an assessment of archaeological and historic heritage values for State Highway 1 from Mangamuka to Victoria Valley due to the need to undertake slip repairs on the highway through the Mangamuka gorge and over the range to the Raetea Valley.

The Mangamuka and Victoria Valleys were centres of pre- and post-European contact Maori settlement. European explorers describe a dense Maori occupation in the mid-19<sup>th</sup> century. A network of foot tracks and the navigable parts of the rivers connected kainga or undefended settlements and adjacent extensive plantations of traditional and more recently introduced crops and fruit trees with each other, traversing tracts of primary forest. European sawyers huts were present on the lower banks of the Mangamuka River. The Mangamuka gorge and Mangamuka/Maungataniwha range was an important route between the Hokianga, Oruru and Victoria/Takahue Valleys, but the earlier track networks were located away from the current alignment through the rough and broken country.

Improvements and realignments of existing tracks through the area was lobbied for by European settlers in the 1870s and 1880s seeking another outlet for their produce, but was hampered by terrain and the necessity of securing access over a substantial area of Maori land. A major centreline survey and specification for the road with numerous bridges, cuttings, embankments and several hundred culverts was undertaken in 1883 but it appears that none of this work was undertaken prior to 1900, with the main route deviating from the current alignment at the north western end of the Mangamuka Valley to the north through Fern Flat until the early 20<sup>th</sup> century.

By 1900 the settlement pattern in the Mangamuka and Victoria valley had changed to one of dispersed individual homesteads and adjacent paddocks, cultivations and orchards, but the old communal

plantations and kainga had probably been abandoned in favour of a more individualised living arrangements several decades earlier.

There is abundant evidence of potential archaeological sites in the Mangamuka and Victoria Valleys, with house sites, public and commercial buildings, cultivations, orchards and paddocks indicated, along with wahi tapu, burial grounds, and the sites of earlier settlements, defended and undefended. However within the project area where the slips are being resolved there are unlikely to be any archaeological effects and an archaeological Authority is not required for the current works. Ad-hoc work such as opening new spoil dump sites may have archaeological or other historic or cultural heritage effects if undertaken without assessment, so these should be carefully considered prior to establishment.



## 9.0 References

### 9.1 Published and unpublished Books and Reports

- Barrett, A, 1852. The Life of the Rev. John Hewgill Bumby. Letter from Brumby to MANGUNGU, December 20th, 1839.
- Buller, J., 1878. Forty years in New Zealand.
- Carpenter, J., 2019. Panther Hill Telecommunications Facility, Kaitaia. Unpublished letter report for the Rural Connectivity Group Ltd. Geometria Ltd, Whangarei.
- Gibb, R., 2017. Archaeological Assessment of Effects: Proposed Subdivision of Cutler Farms Ltd - Lot 4 DP 4133051 and Lot 2 DP 420766. Unpublished report for Cutler Farms. Geometria Ltd, Auckland.
- Gibb, R., 2019. Archaeological Assessment of Effects: Proposed subdivision of Lot 2 DP 419260. Unpublished report for Cutler Farms. Geometria Ltd, Auckland.
- Heaphy, C., 1860. A Sketch of the Topography of New Zealand. In Chapman's New Zealand Almanac. George T. Chapman, Auckland.
- Hensley, V., 2003. Archaeological Assessment prepared for Mrs Norma Francis, 1325 Oruru Rd, Kaitaia. Unpublished report for N. Francis. V. Hensley, Kaitaia.
- House of Commons, 1838. Report from the Select Committee of the House of Lords appointed to inquire into the present state of the Islands of New Zealand and the expediency of regulating the settlement of British subjects therein: with the minutes of evidence taken before the Committee and an index thereto / brought from the Lords 7th August 1838. British Parliament, London.
- Johnson, L., 1986. Aspects of the Prehistory of the Far North Valley Systems. Unpublished M.A. thesis, Anthropology Department, University of Auckland.
- Johnson, L., 1996. Archaeological Survey of The Peria Trust Forest, Peria, Oruru Valley, Doubtless Bay. Unpublished report for the Peria Trust. Northern Archaeological Research, Mangonui.
- Johnson, L., 2016. Archaeological Monitoring of Logging of Donovans West Block, Oruru, Doubtless Bay, Far North (HNZPT Authority 2015/779). Unpublished report for Summit Forests New Zealand Ltd. Northern Archaeological Research, Devonport.
- Mangamuka School Centenary Committee, 1983. Mangamuka School, 1879-1979. School and District. Mangamuka School Centenary Committee, Okaihau.
- Markham, E, 1863. New Zealand or Recollections of it. Part One.
- Matthews, P., 1985. Nga Taro O Aotearoa. Journal of the Polynesian Society, Vol. 94, No.3.
- New Zealander, 1859. In Voices From Auckland, New Zealand, As A Field Of Emigration. A. Ridgeway and Sons, London, 1860.
- Turton, H., 1877a. Maori Deeds of old Land Purchases. George Didsbury, Wellington.
- Turton, H, 1877b. Plans of Land Purchases in the North Island of New Zealand. Volume One: Province of Auckland. George Didsbury, Wellington.

Turton, H., 1883. An Epitome of Official Documents Relatives to Native Affairs and Land Purchases in the North Island of New Zealand. George Didsbury, Wellington.

Wade, W., 1842 A Journey in the Northern Island of New Zealand - Chapter II: Hokianga, pp.38-45

Waitangi Tribunal, 1997. Muriwhenua Report. GP Publications, Wellington.

Wakefield., E. G., 1837. The British Colonisation of New Zealand. The New Zealand Association, London

## 9.2 Unpublished Survey Plans

DP 6769

DP 6870

DP 15859

ML 106

ML 109

ML 389

ML 590

ML 2349

ML 2660

ML 3608/1

ML 3608/2

ML 3608/3

ML 3608/4

ML 6700/1

ML 6700/2

ML 9105/1

ML 9105/2

ML 9105/3

ML 9105/4

ML 9999

ML 12805/1

ML 12805/2

ML 12805/3

ML 12805/4

ML 12805

ML 13095

ML 15326

SO 798/1

SO 798/2

SO 798/3

SO 798/4

SO 802/1

SO 802/2

SO 802/3

SO 802/4

SO 802

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SO 3228/4

SO 3228

SO 3640/1

SO 3640/2

SO 3640/3

SO 3640/4

SO 6314

SO 6909

SO 7084/1

SO 7084/2

SO 7084/3

SO 7084/4

SO 8481

SO 12894

SO 12895

SO 12998

SO 16386

SO 18581

SO 18581

SO 19837

SO 23291

SO 24399



## Appendix A – Maori Land Court Minutes

Table 5: Mangamuka Block Records.

Minute Details	Kaikorero	Whakapapa	Tupuna	Iwi/Hapu	Note
Mangamuka West Plan ML 3608 Northern MB No. 19: 137-150 10 April 1897 Title investigation Rawene	Henare, Hapeta Pou, Tawhio Te Waru, Piraki Apatari, Tipene Mete, Rihari Kiroa, Hipirini Rore, Kare Hohaia Pero, Mange Hare, Rihari Otene, Mitikakau	Pou, Tawhio Mete, Rihari Rore, Kare Hohaia Pero, Mange Hare, Rihari	Raroa Roha Rihi Papanui Mawi Kanohi Kaiwhare Kahuti Tupoto	Te Kohatutaka Te Uri-o-Te Aho Te Uri-o-Rorokai Te Waiwhakahihi Te Patu Te Rarawa	Papatupu claim Arranging case
Mangamuka West Northern MB No. 19: 151- 13 April 1897 Title investigation Rawene	Pou, Tawhio Apatari, Tipene Otene, Mitikakau	Pou, Tawhio Apatari, Tipene Otene, Mitikakau	Paihia Moewaka Whata Tama Tamahaere	Ngati Rangitiniia Te Patu Te Rarawa	
Mangamuka West Northern MB No. 20: 1-72, 74-112, 116-145, 151, 161 23 April 1897 Title investigation	Otene, Mitikakau Hahakai, Karipa Kiroa, Hipirini	Hahakai, Karipa Kiroa, Hipirini Pero, Mange	Tamahotu Tama Kaiwhare	Te Uri-o-Te Aho Te Rarawa Te Patu / Te Rarawa	Kauri forests, p.90 Decision, pp.139-145 Index to witnesses,

Rawene	Rore, Kare Hohaia Pero, Mange Hare, Rihi Mato, Taniora Pororua, Tahere	Hare, Rihi Mato, Taniora Kiwa, Karena	Kahuti Papanui Te Hoe Moewaka Tariaho Rapehuamutu	Te Kohatutaka Ngai Tupoto Te Uri-o-Rorokai Ngati Kaiwhare Ngati Te Rauwawe = Te Kohatutaka	pp.191-195
Mangamuka West Northern MB No. 20: 176-195 31 May 1897 Title investigation Rawene	Whiu, Ropata Otene, Mitikakau Hare, Nui Kerenene, Hori Mato, Taniora Tauranga, Kurupae	Kerenene, Hori	Te Waha Parangia		Arranging lists Lists of trustees, pp.187-189 Index to witnesses, pp.191-195
Mangamuka West Northern MB No. 22: 33-34, 188-190 27 July 1897 Injunction	Hapeta, Henare				Re timber cutting

Rawene					
<p>Mangamuka West</p> <p>Northern MB No. 29: 168-189, 199-210, 265-269, 273-274</p> <p>11 May 1900</p> <p>Title Investigation, appeal</p> <p>Rawene</p>	<p>Hape, Hone</p> <p>Henare, Hapeta</p> <p>Te Waru, Paraki</p> <p>Kiroa, Hipirini</p> <p>Wepiha, Hone</p> <p>Henare, Hapeta</p>				<p>Decision, pp. 265-269</p> <p>List of owners, pp. 273-274</p>
<p>Mangamuka West</p> <p>Northern MB No. 35: 82, 85, 90-101, 104-112, 122</p> <p>8 January 1904</p> <p>Partition</p> <p>Rawene</p>	<p>Kiwa, Karena</p> <p>Otene, Mitikakau</p> <p>Mete, Rihari</p>			<p>Te Uri-o-Te Aho</p> <p>Te Patu</p>	<p>Decision, pp.111-112</p>
<p>Mangamuka West</p> <p>Northern MB No.</p>					



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Table 6: Mangataeore (Mangataiore, Manga Tai Ore) Block Records

Minute Details	Kaikorero	Whakapapa	Tupuna	Iwi/Hapu	Note
Mangataeore  Northern Minute Book 1: 33  15 March 1867  Title Investigation  Ahipara	Te Pau, Hemi  Kiriona, Nopera  Ehakai, Karipa		Te Ure Paraoa		381 acres
Mangataeore  Northern Minute Book 37: 72, 74, 88-91, 110-11  4 April 1905  Definition of Relatives Interests  Mangonui	Maihi, Wairama				

Table 7: Ta Keke (Takeke) Block Records

Minute Details	Kaikorero	Whakapapa	Tupuna	Iwi/Hapu	Note
Northern Minute Book 1: 7  30 December 1865  Title Investigation  Ahipara	Parihiku, Tohuora  Te Kanohi, Wharerau				79 acres

Table 8: Wai Mamaku (Waimamaku) Block Records

Minute Details	Kaikorero	Whakapapa	Tupuna	Iwi/Hapu	Note

Northern Minute Book 1: 7	Te Kanohi, Wharerau				154 acres
30 December 1865	Wharerau, Hehi Karaka, Kawau				
Title Investigation					
Ahipara					

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## Appendix B – European Descriptions of Mangamuka and Takahue/Victoria Valley

Wakefield., E. G., 1837. The British Colonisation of New Zealand. The New Zealand Association, London.

Wakefield quotes a letter from an English settler, Oakes, to The Colonist newspaper referring to a trip up the Mangamuka he took in February 1834 (260-261):

“On one of my excursions I met Mr White the Wesleyan missionary. I had two or three days previously the pleasure of making his acquaintance; he invited me to accompany him up the Mangamuka river another branch of the Hokianga. He proceeded fifteen miles up the river (Mangamuka) which is as far as it is navigable from about half way the river narrows gradually to about a hundred feet in width. Here the beautiful pines and other evergreens on each side meet at a considerable height in the centre and form a complete shelter from the heat of the sun. The village of Mangamuka is about three miles above the navigable part of the river which we walked. This valley exhibits by far the finest cultivation I have seen. It is cleared in patches from the thickest forest imaginable which extends for miles on both sides. Here Mr White is erecting a chapel some few of the natives have been baptized and a great proportion of them are much inclined to Christianity. After tea a very respectable congregation assembled with prayer books and bibles and hymns were sung; I believe a translation of Watts; in fact, all their books were in the New Zealand language but printed in the English character. Most of the natives present could read and write well.

The service was concluded by a short exhortation; some of the chiefs remained in cheerful conversation with Mr White till it was time to retire to rest. It would be absurd, were I from the little experience and information I have been able to acquire, to say that the missionaries have generally benefited the savage inhabitants of this country, for benighted and savage they will continue until they can be dissuaded from their barbarous propensity for war; but I have no hesitation in declaring as my opinion, that, were all the missionaries like Mr White, who is beloved and respected by natives and Europeans, there could be no doubt of the successful result of their labours; and I must say, to the infinite credit of this benevolent man and zealous Christian that the natives of Mangamuka are far more industrious, cleanly, and obliging, than any other tribe I have seen:- and many of them influenced by his persuasion, have become excellent sawyers. The cultivation of their land, in particular, affords an example worthy of imitation to the more experienced farmer of a civilized country. Mr White's colleague is likewise a very deserving and respectable young man; I am sorry I forget his name. They are both married, and their amiable wives are indefatigable in their exertions to instruct the native females in religious duties and useful knowledge I am so satisfied”.

Markham, E. 1863. New Zealand or Recollections of It. Part 1.

In 1834 Markham arrived in New Zealand and settled in Kohukohu (Coko) In March he travelled to Mangamuka:

“The beginning of this Month I went up the Mouna Mouca [Mangamuka], or Black flax River Twenty five miles above the Coko, to a Native Village (Kangar Mourie). There are Eleven different Sawyers settled up this River; some bought land, In fact most of it; about 20 Europeans living up there. I went up with Poynton, took 2 pieces of Pork, 2 or 3 Kits of Potatoes, a bottle of Rum. Poynton understands their Customs and is a pretty good Linguist, \*\* The River is beautiful. Fine Woods on both sides, here and there the Mud banks covered with Mangroves. Shot some King fishers and a Duck or two. As you get higher up the River the Native Settlements become thicker. They are all Missionaries as they call the Christians \*\*\* and the Sawyers Houses mostly Weather boarded and lined.

Some of them very nice and their Saw pits Sheded over, and Thatched and convenient for Water carriage. As the Coudie Forests is on the tops of the Hills all the way up and down the River. There is something so beautiful in the Rivers in this Country. A Stillness, fine sky over head! no Noise! now and then a Fish will leap or King fisher dart down and a beautiful little Bird called a

Colly Mocko [Marginal note]

"Colly Mocko" \*\*\*\* who flutters about a Flower more like a Butter fly with all his feathers spread so that he looks large, but is not the size of a Wall-nut.

Pea Walker [Marginal note]

There is an other small bird called a Pea Walker [piwakawaka]. The Natives call Russel at Showracky, Pea Walker as he is a very diminutive Fellow.

We at length arrived as near the head of the River as Boats can go, for fallen Timber. At a native settlement, The Chief and Priest for he is Tabbood, gave me a small hut to sleep in and cut fresh Palm leaves, and a clean Mat for me to sleep on, but in the first instance, I laid down in the front place of his Hut, a sort of Audience Chamber on clean Mat. Venus awoke me by killing a Rat close to me; about Sunset we had Pork and Potatoes and a Glass of Grog and lay down after to Talk by the light of the Fire. The Chief asked a number of questions. I was called a Rangatara tara, or great Chief \*\*\*\*\* come to see other Countries, and he asked me if I had a Waheinee [wahine]! No. Would I like one? Certainly. Then take my daughter. Which I did in New Zealand fashion. I took her out of his Womens Hut, She screaming till I put her into the Hut drest out for me.

\* Our first quarrell was about my boys. E. M.

\*\* Poynton was sent to NSW for white Boyism. E. M. The Whiteboys were members of a secret Irish agrarian association and were so called because they wore white shirts over their other clothes to distinguish each other during night raids.

\*\*\*I have seen 10 or 12 cannoes full of Natives go down this River, to the Wesleyan Mission on the Saturday afternoon ready for the Sunday. E. M.

\*\*\*\* 'Colly Mocko' suggests korimako, the bell bird, but the description points rather to the fantail {piwakawaka} which Markham goes on to mention.

\*\*\*\*\* A mistranslation; the only complimentary meanings of tara that fit the context are 'quick', 'active', or 'distant'.

The Row ceased and no further opposition was offered. Next morning we all went about 7 miles inland to a large Settlement To see a New Zealand Wake. I crossed a Stream a dozen times, mostly on a Mans back called a (Pekow [pikau] is to carry Upanga [hapainga], lift me up). \* I shot some small birds by the way. We had to go through Cultivation mostly all the way.

Tarrow or Yam [Marginal note]

Indian Corn, potatoes and Cumeras [kumara] or Sweet potatoes, Tarrow [taro] a kind of Yam. The Tarras comes I believe from the Southsea Islands. It grows about three feet from the Ground but it is not good. I was very fond of the Cumeras, and Venus got so knowing, that she used to go and Overhaul all their Canoes for them, as they keep them

cold, boiled. The land was rich on all sides and plentiful Crops of Maize or Indian Corn. Numbers of Immense Trees sticking up here and there half Burnt and blackened, in the midst of the Corn and showing that it could not have been in cultivation many years, having been all Forest. At last we came to the Village and were received by the Dogs in advance, but we

Peaches [Marginal note]

found some two or three hundred people sitting about in groups. I had Peaches given me in quantities, and have no doubt that some day the Natives will have all sorts of Fruits and Vegetables. On arriving I was requested to fire my two Purra [tupara] as the Natives call a double barreled Gun, in honour of the (Mattie Noue) [mate nui] dead. She was a young lady, who had been living with a Man named Cockrane [Cochrane] a Sawyer. She was to be buried the next day, and we saw her laid out on a Mat with her Cacahow over her as if she was asleep, with her Hair drest out with Feathers. You often see a red Box in which the Bodies are put, till

Tabboo or Tappoo [Marginal note]

the flesh is rotted off. Then the Priest scrapes the bones, or some people are Tabbood for the purpose. When people are Tabbood they are fed by Children, and they must not touch food with their own hands. There were people crying and very like an Irish howl going on, and plenty of Potatoes scraped. The place was a dead Flat in a Valley of high Wooded Hills on either side. I then took a walk round the settlement. A fine running stream over a gravelly bed winding through the Valley. Near the

\* Though the meaning of this sentence is fairly clear, punctuation and syntax are even more defective than usual: pikau means to carry on the back; hapainga is the passive form of hapai, lift up, raise.

Huts were plenty of Peach trees with Peaches on them. I saw the Potatoes on (Wutters) [whata] for the first time; there are two sorts, one is four upright Posts, 20 or 30 feet high and floored over like a hurdle so far apart that they can get their hands Through, and the Potatoes are in Kits \* or Baskets said to average 60 lb weight. They are drawn up and stowed and then Thatched over for some Months till They are wanted. The Rats attack them so that they have hit upon an ingenious plan of putting bark all round the upright Posts and trees, and the Rats get up into a kind of Extinguisher all round the Tree or Wutter but the Rats can not mount. Air being given from below they keep well. I have seen a Wutter or Plat form 80 feet above ground in an immense Tree all the Branches cut off and a Platform well secured, and the Potatoes on it and thatched over. They have no Frosts of any consequence to hurt them during their Winter, but I know to my cost, it is very Cold and I enjoyed a fire very much during the cold weather. The Natives wanted Venus as she was very much admired at this settlement. I was very much afraid of losing her. We returned the seven miles but found the Tide, ti Puddie [taipari] or Ebb Tide, \*\* had made so that the Boat would not float, so we staid that night. So we Cooked our Pork and Potatoes, drank my Grog and took a Stroll. I was delighted in seeing Miss Awattie \*\*\* [Watea?] having a Swim, previous to her taking up her abode in my Hut this night. No noise this evening; like a good girl she was awaiting her Lord; in the morning we had Potatoes done the Native way. I had to pay for my Nights amusement and asking Poynton how it

\* Markham may be using the Maori kete, 'basket made of flax', the English 'kit', meaning knapsack or valise, or a combination of both; the similarity between the two words and their respective referents has added to the New Zealand idiom a distinctive term of which this may be an early example.

\*\* The Maori phrase literally means flowing tide.

\*\*\* The 'A' which Markham prefixes to this and other personal names is probably the vocative 'E', corresponding to the English 'O'.

was to be managed, he advised me to give my Shirt so I took my Shirt off and gave it to the Priest her Father. A Box of Lucifers to light the pipe of her Lady Mother. A Pocket handkerchief to the young lady herself. And wishing the Aimable Family Good day returned down the River to the Coco, with a beautiful breeze. There was a laugh at my Expece at the Coco, about the Shirts and my Boys told the others and they were very Facetious on the Subject and every body knew what I had been about up and down the River.

Wade, W., 1842. A Journey in the Northern Island of New Zealand.

“Mr. Woon, having made arrangements for taking Mrs. Woon up the Mangamuka river, I was glad to avail myself of his friendly invitation to accompany them. At nine o'clock, A.M., we left the settlement in a large boat belonging to Capt. M'Donnell. The banks of the Mangamuka are thickly wooded. Here and there were seen the homely cottages of white settlers; those who were then living on the banks of the river being for the most part sawyers. The Hokianga is a noble river, running through a thickly timbered district, and supplying the spars which are so much in request for masts, &c; but the bar at the entrance of the harbour has always been a serious deduction from its other advantages...

After calling on one of the Mangamuka settlers, we came to Mangataipa, a retired pa, situated on a bend of the river. Beyond this, the stream becomes narrow and more winding, and as it takes its course through a forest of lofty evergreens, which grow close to the water's edge, and frequently overhang the river, the eye is refreshed by varying and lovely scenery. Higher up, the river is impassable for boats, the trees which have fallen into, and across it forming a serious obstruction. The natives, however, with their shallow canoes, easily manage to glide over or under. We landed on the western bank of the river, and, after a short and pleasant walk through the wood, arrived at Rotopipiwai, a native settlement fifteen miles or more up the river, and delightfully situated in a fertile valley. There was no pa, but only a few scattered houses, with low fences, and a large native built chapel. We could see the lofty peak of Maungataniwa in the distance.

Maungataniwa is one of the loftiest mountains in this part of New Zealand. It rises towering amid a wilderness of hills, clad to their very summits with the perpetual green of a dense forest. The road which has been cut through this forest runs within about a quarter of an hour's climb of the pointed top of Maungataniwa. Travelling once in that road, a splendid scene, near the great mountain's top, unexpectedly opened before us. Through an agreeable break in the seemingly interminable wood, we looked down upon what appeared to be an immense unruffled lake, its clear mirrored surface reflecting many a floating cloud of varied hue, while here and there a wooded island rose to add its interest to the scene. We looked up; not a cloud was visible. In truth, we had been gazing upon a brilliant mass of sunny clouds beneath us, and our imagined islands were neither more nor less than hill tops peeping through.

Mr. Woon informed me that many natives from the different villages on the Mangamuka, --some from a considerable distance higher up than Rotopipiwai, --were in the habit of assembling at Mangungu on Sundays; bringing their wives and families in canoes on the Saturday, and returning on the Monday. From other branches of the Hokianga, natives also attended in a similar manner.

We returned part of the way down the Mangamuka in a small canoe, in which we had to pass both over and under the fallen trees. To glide under one large tree, which had fallen completely across the river, we were compelled to lie perfectly flat in the canoe. It was about eight o'clock, P.M., when we got back to Mangungu”

Dieffenbach, E., 1843. Travels In New Zealand.

“[The Awaroa (Awanui) River] arrives at Kaitaia. A mission-station and native settlement is situated about eight miles from the western coast, on a hilly eminence, an offset of the chain of hills which run from near this point through the interior. Between this chain and the range of western coast hills which I have above mentioned, flows the Awaroa, having its source near that of the Mango-muka--a branch of the Hokianga river, from which it is separated by the Maunga Taniwa, a remarkable pyramidal peak which towers above the chain of hills, being nearly 1500 feet high.

Throughout its course the valley of the Awaroa is capable of being made very productive, as the soil is extremely fertile: from Kaitaia it narrows to the breadth of one mile. Several miles below Kaitaia the river is joined by another, coming from the eastern hills in the neighbourhood of Mangonui in Lauriston Bay, and at the point of junction scarcely inferior in size to the Awaroa. Above Kaitaia the Awaroa is only passable by canoes, in which the natives carry down food from their plantations to their principal settlement at Kaitaia. They prefer the upper part of the valley for cultivation, as indeed they usually do; and their fields are very extensive, and kept in good order. From Kaitaia to the western coast the land is equally good. In some places there is excellent grass, rather an unusual thing in New Zealand. A wooden bridge over the river has been built by the natives, under the guidance of the missionaries; and if we cross it, and pass to Waro on the western coast, several valleys are seen stretching from the western hills into the plain, in most of which natives reside. To the northward of Waro low ridges run parallel to the sea-coast, small creeks flowing between them, and the light soil there is eagerly sought after for the cultivation of kumeras. At one of these creeks, the Wai-mimi, there is an extensive bed of lignite. About two miles to the northward of Kaitaia is a small fresh-water lake, containing large eels and two kinds of small fishes; crawfish is also found there.

The natives form the tribe of the Rarewa, and their whole number is about 8000, including all those who inhabit the valley of the Awaroa. Of all the natives who are under the influence of the missionaries, this tribe is the most advanced in the arts of civilization. This must be ascribed partly to the endeavours of the missionaries and partly to the comparative isolation of the natives, resulting from their having been powerful enough to resist the aggressions of E'Ongi from the Bay of Islands, and of the neighbouring tribes. The traveller does not meet here with that begging and grasping behaviour which renders the natives on the coast so importunate; on the contrary, they are a quiet hard-working people, and they have, for a very small payment, cut a road thirty-two miles long through the primitive forest, between Kaitaia and Waimate, in the neighbourhood of the Bay of Islands; they have also cut roads in the neighbourhood of their own village. During my stay I saw them reap wheat and plough several acres of land, and the missionaries encourage them to exchange their former unwholesome food of decayed maize and

potatoes for bread. Several of the natives have one or two head of cattle and horses; and I have every reason to believe that here at least the missionaries will encourage their acquiring them, in order to dispose of the increase of their own stock.

The village has quite an English appearance; a large church, with a steeple of kauri boards, has been constructed almost entirely by the natives; gardens, with roses, are before the houses, and at the foot of the hill wheat alternates with vines, with hops, which thrive extremely well, and with various fruit-trees and vegetables: there are also several patches planted with tobacco.

The natives lived originally at the Hokianga, but about twenty-five years ago they took Kaitaia from the Haupouri and Nga-te-kuri, who must have been very numerous, judging from the remains of their pas on the neighbouring hills. A great portion of these tribes were slaughtered, and the rest either were made slaves or mixed with the conquerors. About eight years ago the missionaries established a station here, the wars between the native tribes having come to a termination, and they found it comparatively easy to obtain an influence over them.

The hills which stretch from Kaitaia, through the interior of the country, are wooded, and only a few miles from Kaitaia they are covered with kauri-forest. Near the entrance to Rangaunu Bay are very fine groves of this valuable tree, mixed with tanekaha, rata, towai, and other excellent timber-trees. An arm of the sea, which is joined here by a fresh-water creek, the Mangake, and which flows through a considerable extent of forest, affords facilities for floating the timber down, or for establishing saw-mills.

The alluvial land, as already observed, is for the most part fit for immediate cultivation: the herds of cattle and horses belonging to the missionaries are in excellent condition, and show that there is a sufficiency of pasturage.

In the neighbourhood of the mission-station there is found a white, hard, and very closely-grained sandstone, which would prove an excellent building-stone.

The hills near the western coast, on the left bank of the Awaroa, consist of basaltic masses, of rounded forms and of moderate height. They are covered with a mixed forest; no kauri is found there; and all the land to the westward of the Awaroa must be considered as excellent, notwithstanding its hilly character. The hills on the right bank, which extend through the interior of the island, are composed of a soft argillaceous slate, reposing upon a base of hard volcanic rock, phonolithe, or clinkstone. Where the claystone and the phonolithe are in contact, a transition from the hard condition of the latter to the soft state of the former is observable to the eye of the geologist, and displays an instructive phenomenon. Very near Kaitaia, about 150 feet above the level of the valley, a slaty marl crops out in perpendicular slabs in the depressions of the hills, and is an excellent material for improving the soil of certain kinds of fields, and is, in fact, extensively used in agriculture.

A bridle-road leads from Kaitaia for thirty-four miles through the forest: it was cut by fifty natives for as many blankets, and was completed in six weeks. They were, however, glad when they had finished their task, as they had suffered much from want during the time, as is shown by the following song, which was sung by them on the occasion: --

Ka ngaro te purapura,

Te pata kai:



Etiki ka mate: ko Taewa ka mate:

Ko te Paki ka mate:

Ko te Matiu ka mate:

Ka ka po nei te manawa:

Ka tahuri au ki te reinga:

He poro kaki ka mate.

The tobacco is gone: we have no food cooked in a pot: Etiki is hungry: Taewa is sick: Te Matiu is sick: Te Paki is hungry: all our good cheer is exhausted: we turn back towards the Reinga: we are sick for some food.

The days of such cheap work are now gone by in New Zealand. At a distance of seventeen miles and a half on this road is situated Maunga Taniwa.

The whole valley of the Awaroa cannot contain less than 120,000 acres of arable land. In respect to the quality of the soil, the facility of cultivation, as well as of water communication, the abundance of excellent wood and of other building materials, the district is one of the most favoured in New Zealand. A great portion of the land has been purchased by a few private individuals; but if the intentions of Government, of not allowing more than 2500 acres to any one individual, is strictly carried into effect, a great part of these purchases will come back to the natives, and, without injuring the interests of the latter, government will have no difficulty in acquiring a fine agricultural district. Kaitaia itself, which is eight miles from the western coast, and six from Southee's station, is a desirable place for a provincial town, as it is in the centre of the district, and in a healthy situation; it stands on an eminence commanding a view of the whole district, and is especially adapted to serve as a central point and market-place for the surrounding native population.

...

We now return to the western coast. If we travel from Kaitaia towards the source of the Awaroa, we see its valley separated from the coast by undulating hills of basaltic structure, and covered with forest. Where the basaltic rock is found, the soil is generally good; and I have no doubt that in the course of time these hills will all be cultivated, and thus increase the area which I have assigned to the district of Kaitaia. I do not include in this the hills in the middle of the island, to which Maunga Taniwa belongs: they are too steep ever to be anything but forest-land. The coast from Waro to Wangape, or False Hokianga, fifteen miles to the northward of Hokianga, is bold and rocky. Wangape has never been surveyed. Its entrance is about 200 yards wide; it then expands into a fine basin, surrounded by low wooded hills, and appears to afford no shelter for shipping. The natives have extensive plantations, and belong to the tribe which lives at Hokianga.

Passing from Kaitaia to Hokianga, the bridle-road ascends nearly to the summit of Maunga Taniwa, and then proceeds in a different direction. We leave it here by turning to the westward, and, descending rapidly, soon arrive in a valley, through which a mountain-stream flows, which in its upper part has formed alluvial land about five or six miles broad and eight miles long. This river is the Mangumuka; its length, from Maunga Taniwa to the

point where it joins the estuary called the Hokianga, is about twenty miles. At the upper part of the valley there is flat and fertile alluvial land, bounded on all sides by wooded hills; the river, running in a bed of whinstone pebbles, at some places deepens, at others shoals, and its banks bear signs of frequent floods. Lower down its depth becomes more equal, and for about ten miles from its embouchure into the Hokianga harbour it admits vessels of moderate burden. This lower part is bounded on both sides by steep hills covered with kauri-trees, but the best of them have been cut down near the water's edge."

Barrett, A. 1852. The Life of the Rev. John Hewgill Bumby.

In a letter from Brumby to the mission at Mangunu, December 20th, 1839:

REVEREND AND DEAR SIRs,--Having for some time contemplated a visit to Horuru to see the infant church there, and baptize some natives, who, on account of old age and numerous infirmities, were said to be unable to come to Mangungu, a distance of about sixty miles, when the business of the District-Meeting was over, I induced Mr. Whiteley to accompany me, in connexion with Mr. Ironside and Mr. Creed. An opportunity of sending to England offering, I forward a brief account of our expedition, particularly with the view of bringing Wangaroa, our first Missionary settlement in New-Zealand, before the attention of the Committee, as a place which I would very much like to have again enrolled in our list of Stations.

The first evening, after pulling hard for four hours, we arrived at the top of the Mangamuka river, where we left the boat hauled up on the bank, and walked through some beautiful plantations of potatoes and kumeras to Rotopipinai, an interesting settlement of Christian natives, with whom we held service, and spent the night. A hut was given up to us; but it was so small and disagreeable, that I made choice of the outside as my sleeping-place. The following morning, many of the Rotopipinai people accompanied us, so that we formed a numerous and respectable party. Soon after the commencement of the journey, the bottles of heaven were opened, and the rain came down in the most drenching torrents, which, together with the immense mountains we had to climb, and a deep river which had to be crossed about twenty times, rendered travelling rather laborious and disagreeable work. In the afternoon we arrived at the first native settlement, where, with some difficulty, we procured a house, about six feet square and four feet high, in the middle of which we kindled a fire; by which, having wrapped ourselves in blankets, we dried our wet clothes, and boiled the tea-kettle. Having taken food, we were refreshed, and forgot our toil and weariness in travelling up the valley: while we were delighted with the richness of the soil, and the loveliness of the scenery, sorrow filled our hearts in observing several ruined fortifications and desolated villages, from which it was evident, that the population was once much more numerous than at present. About noon we arrived at the chapel, a commodious and substantial native building, which stands in the midst of the valley, as the house of God and the gate of heaven.

Drury, Captain B., 1852 – Survey of the Western Portion of the Northern Province of New Zealand., HMS Pandora, 31 December 1852. Published in the Australian and New Zealand Gazette. 30 July 1853: 871-

There is no other stream of any consequence until we pass the and come to the Mongamuka a river of some considerable importance and down this river most of the timber is conveyed It is navigable three miles at low water for vessels drawing under twelve feet and channel is more than a cable broad Above this the channels are some distance small and intricate It improves again above and as water becomes fresh the timber ponds

are seen off the north banks Five miles from the mouth at the end of the mangroves the hills descend steep to the water's edge the channels are narrow and the come down with great force The tide has now little influence mile and a half we come to the village of Mongatipa on the south opposite this village the clay cliff is perpendicular 30 feet high is with the windings of the river two miles above this on the bank is a small compact settlement of Wesleyan missionary natives Above this no boat can proceed but the rapid stream winds through valley admirably cultivated for four miles There is a track and it is the main communication over the shoulder of the Maungataniwa Mountain to Kaitaia and Monganui There are or rather have been two English stations on the river The one belonging to Mr Cockrane a timber merchant now in the Waima the other to a Mr Murray who has built a wooden bridge that must have cost much labour connecting his establishment on an island with the main for driving his cattle to pasture The deserted site of Mr Cockrane's establishment three miles from the mouth is now overrun with peaches and figs growing in great luxuriance amongst the flax and fern There is a creek near this the Moturata up which I am told there is excellent limestone and the specimen we procured was almost equal to marble.

Kemp, H. T., 1856.

The valley of the Victoria, better known to the natives as Takahue, is situated on the northern side of the Rua Taniwah range, and about midway between the Oruru Valley and the western coast, the two valleys being separated by a bush of from seven to eight miles in length; which I traversed and through which a road might be easily opened up, thereby connecting the two districts and thus forming a nearly direct line of communication with the Harbour of Mangonui, the principal port of safety in that part of the island. The Victoria Valley is nearly triangular in shape, is well watered, and skirted with excellent timber, the soil of a rich alluvial deposit, and, at a rough estimate, may be said to contain about twenty thousand (20,000) acres. A large portion of it has been under cultivation by the Natives, and there exist at present some few scattered plantations of no very large extent. Noble Panakareao, the chief of the Rarawa tribe, is the principal owner of the valley, and upon my expressing a desire to visit, he informed me that it had never been offered for sale, that it was more than probable it would be required for the use of the Natives, whenever the surrounding districts shall have been purchased by the Government. At the same time he led me to infer that a large price would be asked if the Crown should propose to buy.

I regret that, owing to the very sudden and serious illness of Noble, further enquiries have been postponed; but judging from what I have heard in other influential quarters, I think a sum of £3,000 (Three thousand pounds) if the money were on the spot, and a few reserves, comprising in all about two thousand (2,000) acres, would effect the purchase. Of its importance taken in conjunction with the settlements of Oruru and Mangonui, there seems to be no doubt; and that a large portion of it would be taken up at once by settlers, if the Native title were extinguished. It is decidedly the finest district in that part of the Province, and presents great facilities for settling.

Buller, J., 1878. Forty years in New Zealand. Part 1.

In 1869 James Buller travelled to one of his old homes, the Hokianga.

“We dined with Mr. Von Sturmer, collector of customs, etc, and at night were accommodated at the Kohukohu, by Mr. J. Webster. When I was last here, this place was

occupied by the late Mr. Russell. His half-caste daughters were well educated; and their husbands carried on a flourishing trade in timber and gum.

In order to catch the flowing tide next morning, we had an early breakfast, and at six a.m. were on our way up the romantic tributary, the Mangamuka. Here every object seemed to have a tongue that spoke to me. I thought of Turner, Woon, Whiteley, and others, who are no more. There used to be, on the sharp jutting points of the river, European dwellings. Not a vestige of those remained;--a wild grassplot, or a few trees, marked the spots. It was a solitude! Saw no one till we came to Mangataipa, where we found some natives, squaring logs. The stream is shallow here; we left our boat, and horses were brought for us, to proceed up the valley. Broken bridles did good service, and strings of Korari, or flax, supplied the lack of stirrups. Thus we went to Rotopiwai. The old chapel was a ruin; a goodly number of cows and calves met the eye; a long line of Puriri, four-railed fence, indicated an improved method of cultivation, and this was confirmed by an ample supply of warm cow's milk to our dinner. At the foot of the Maunga-taniwha range, we found Te Otane, now old and feeble, a solitary remnant of a large class of Christian chiefs of thirty years ago.

Returning from Mangamuka, we landed at Mangungu at five P.M.”

Appendix C – Historic Plans

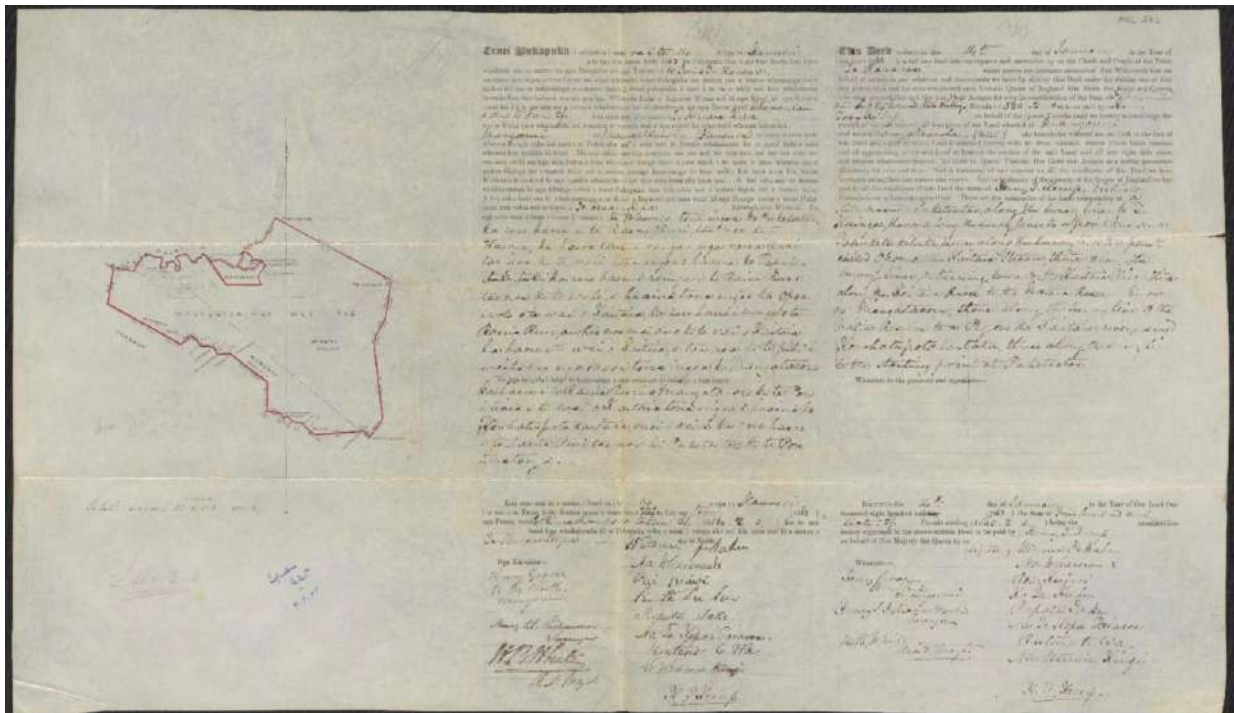


Figure 37: Maungataniwha West No. 2 Deed (1863; ANZ R12153645).

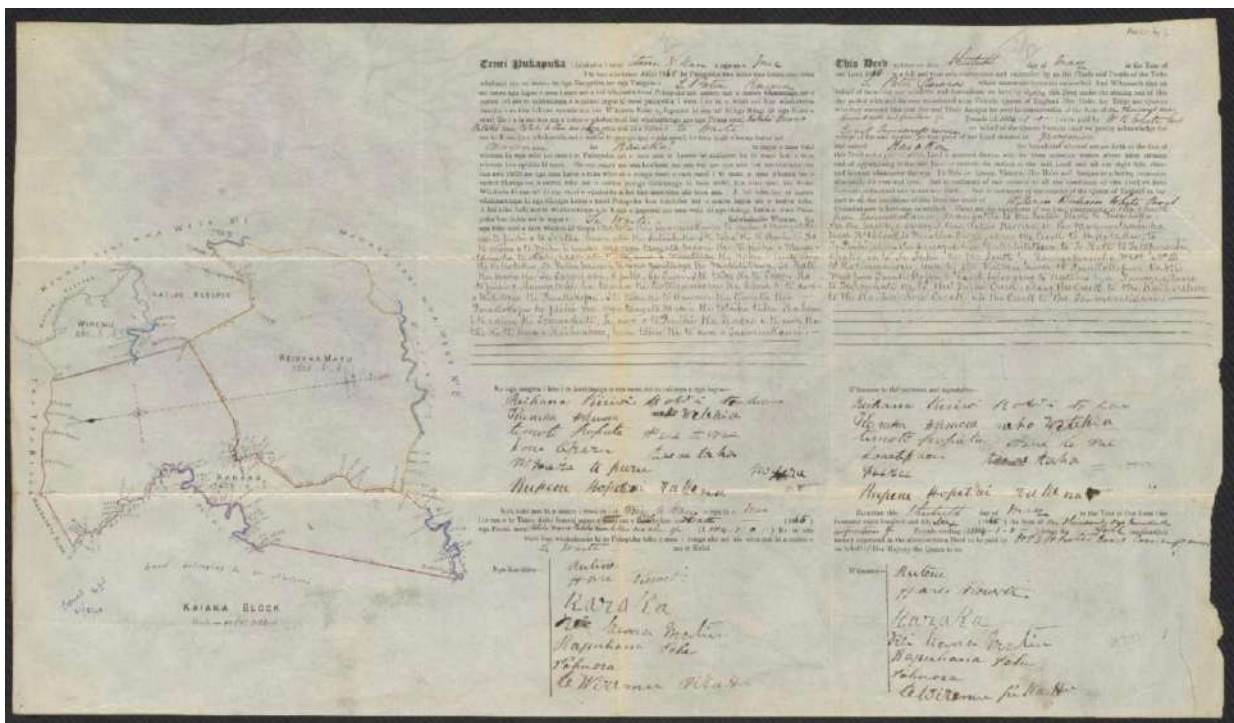


Figure 38: Kaiaka Block Deed (1865; ANZ R12153615).

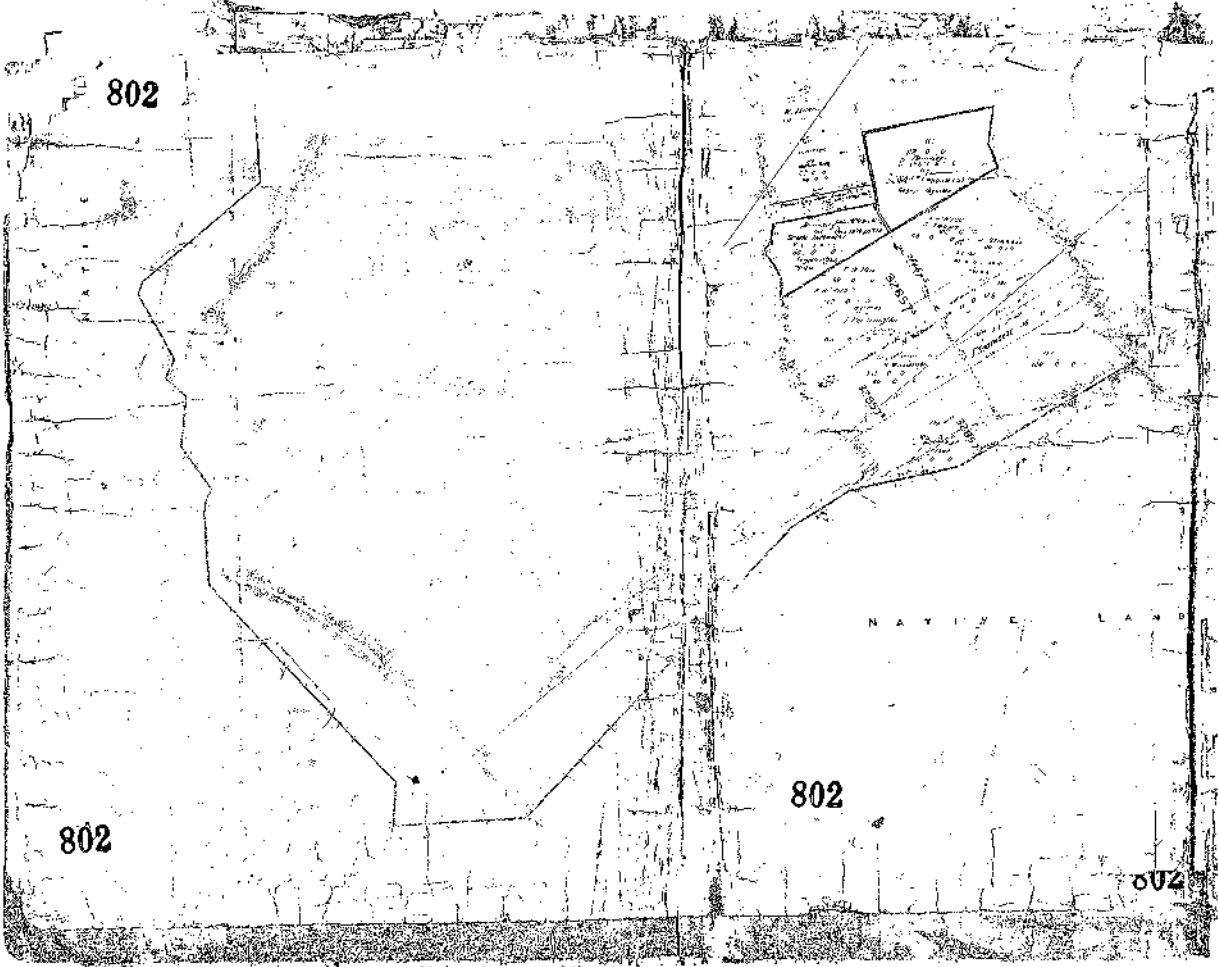


Figure 39: SO 802 (1862, part).

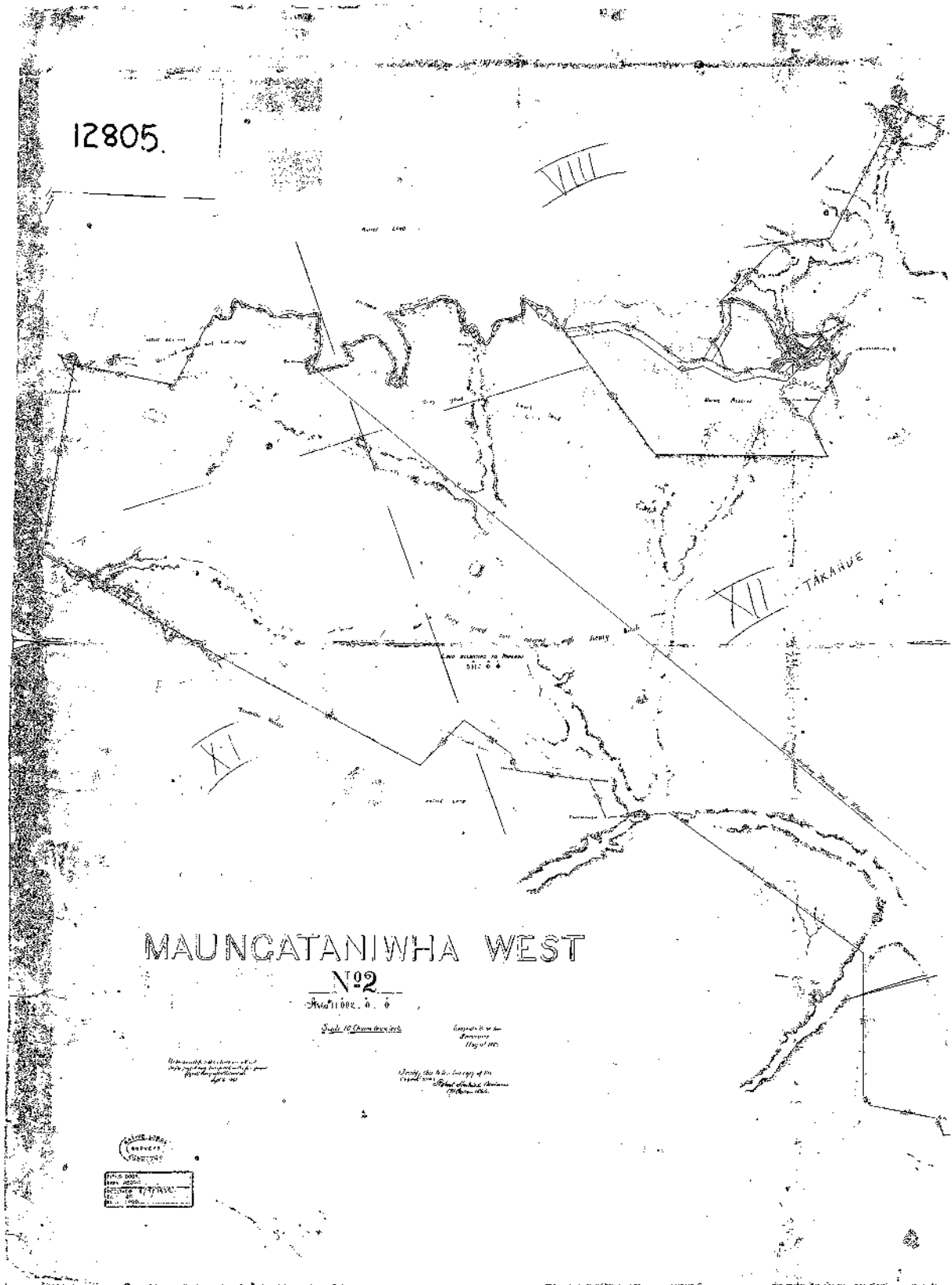


Figure 40: ML 12805 (1862, part).

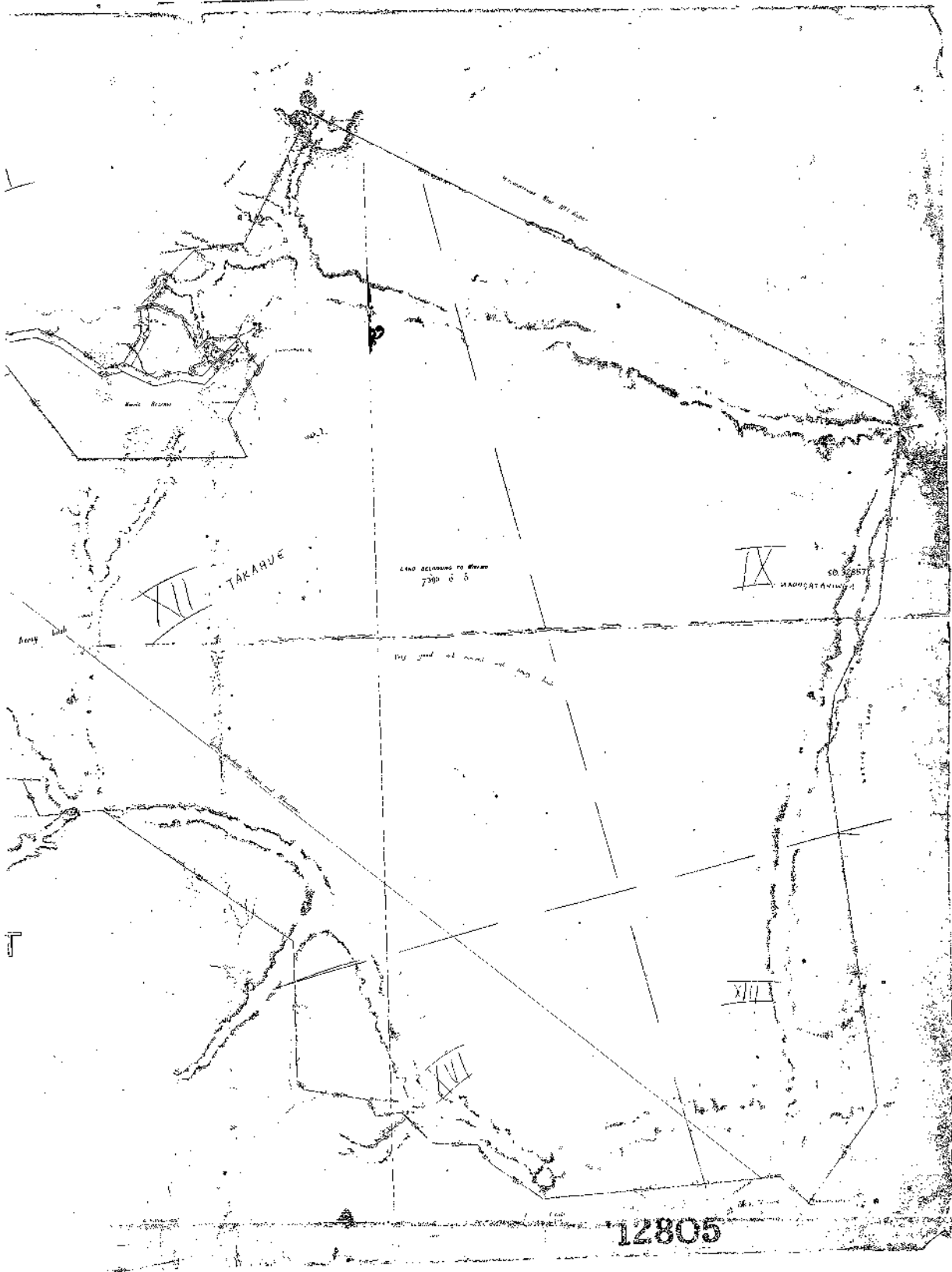


Figure 41: ML 12805 (1862, part).



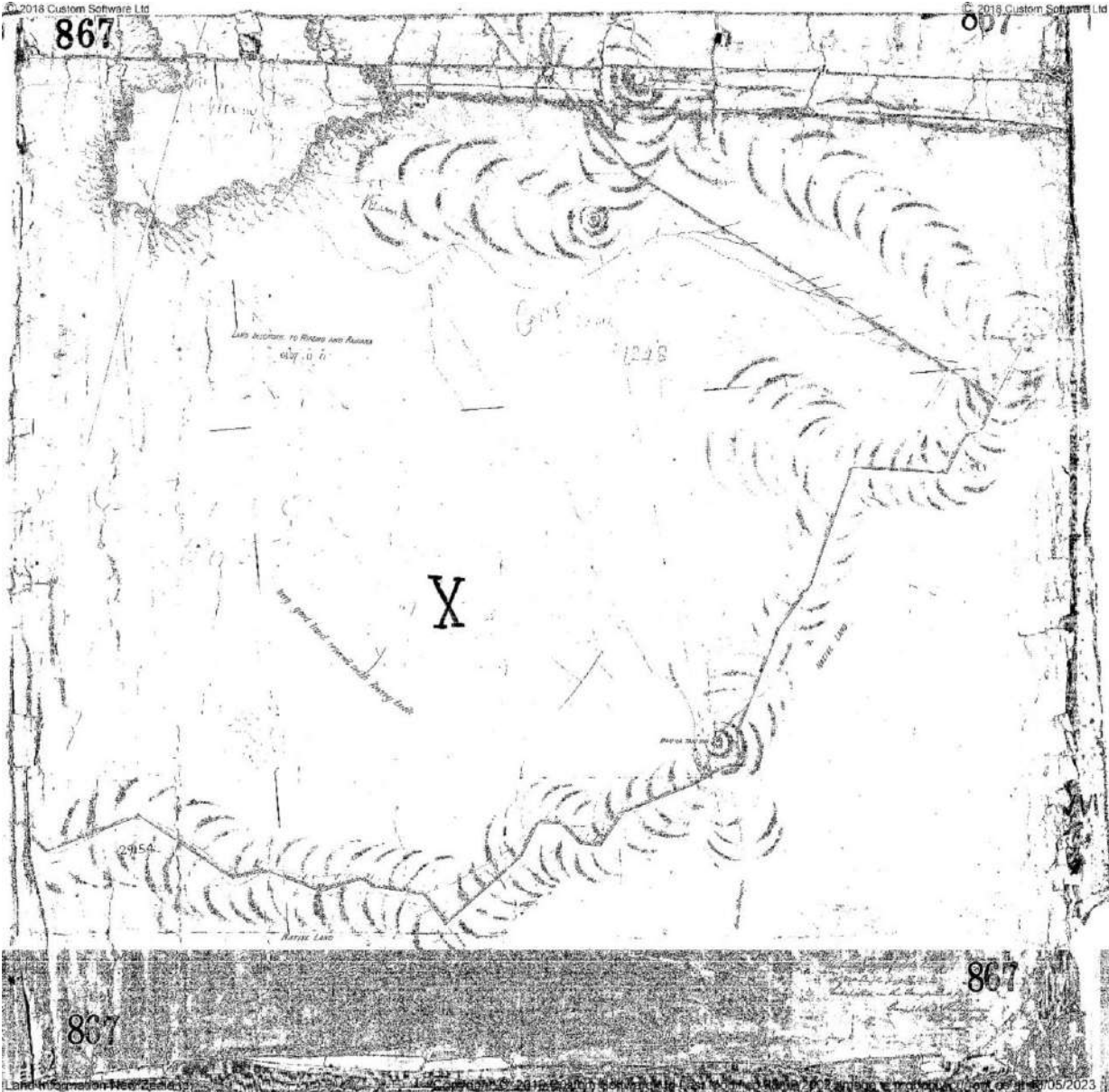


Figure 42: SO 867 (1862).

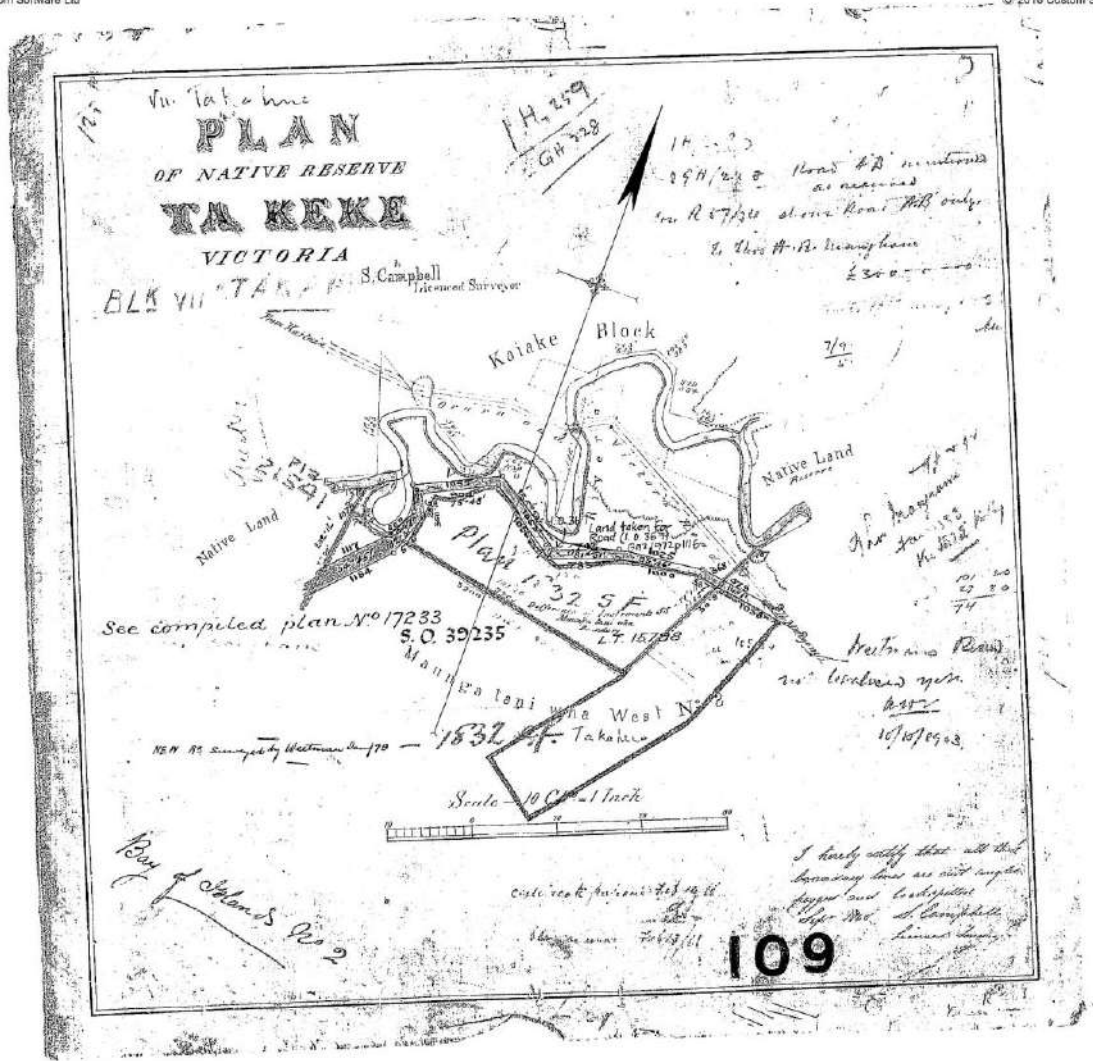
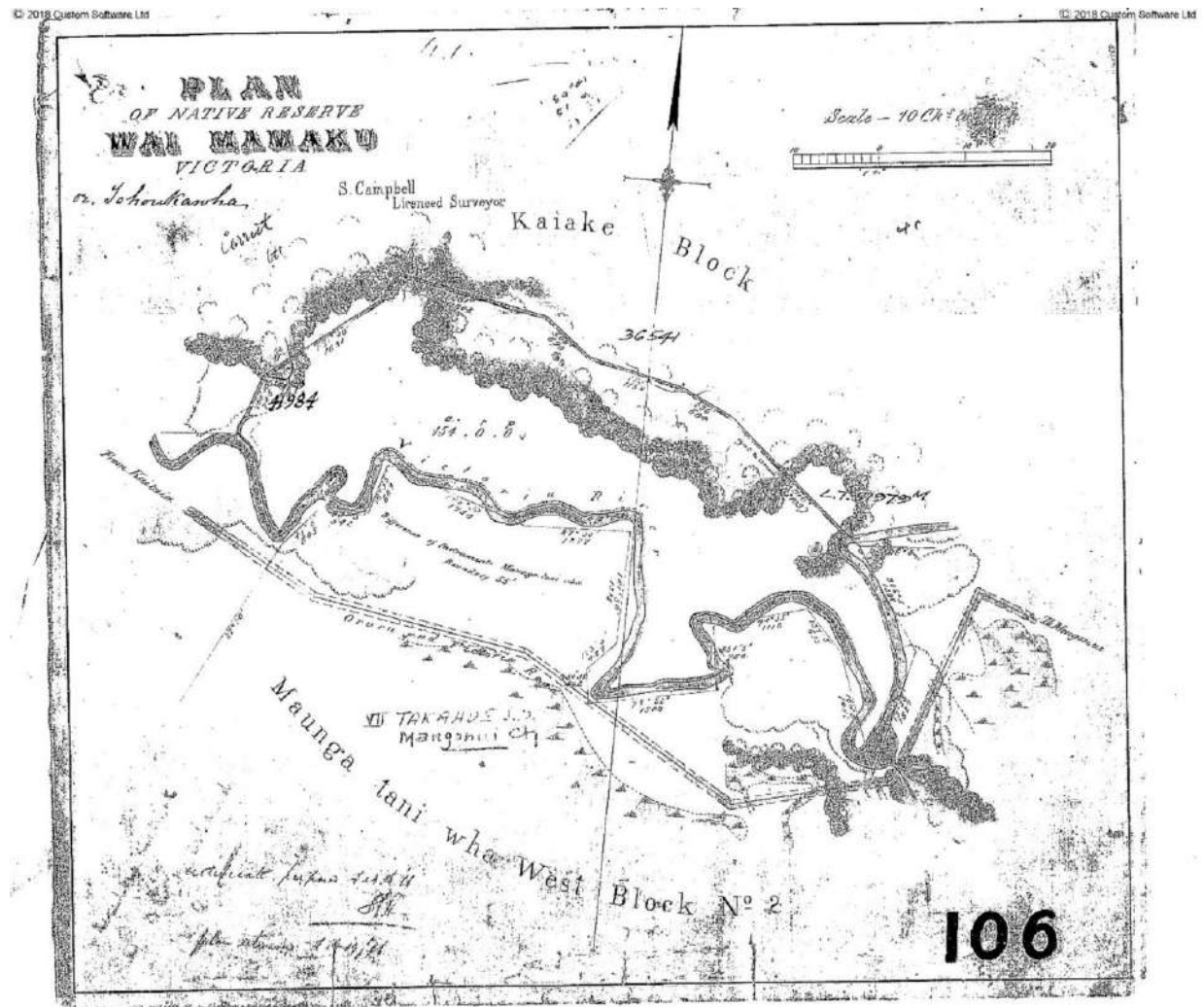


Figure 43: ML 105 (1865?).

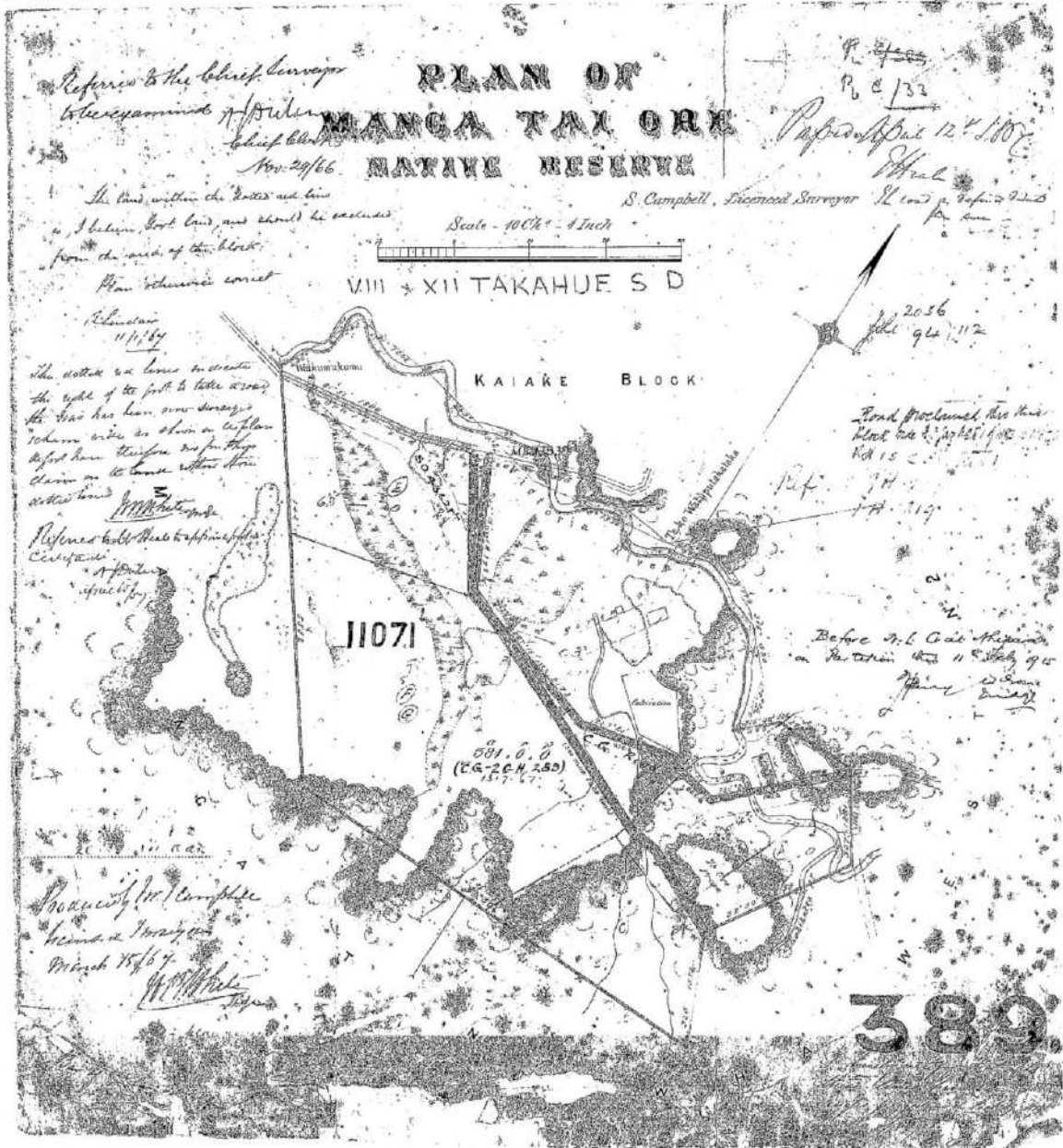


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Figure 44: ML 106 (1866).



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Figure 45: ML 389 (1866).



Figure 46: SO 798 (1867, part).



Figure 47: SO 1031 (1876).

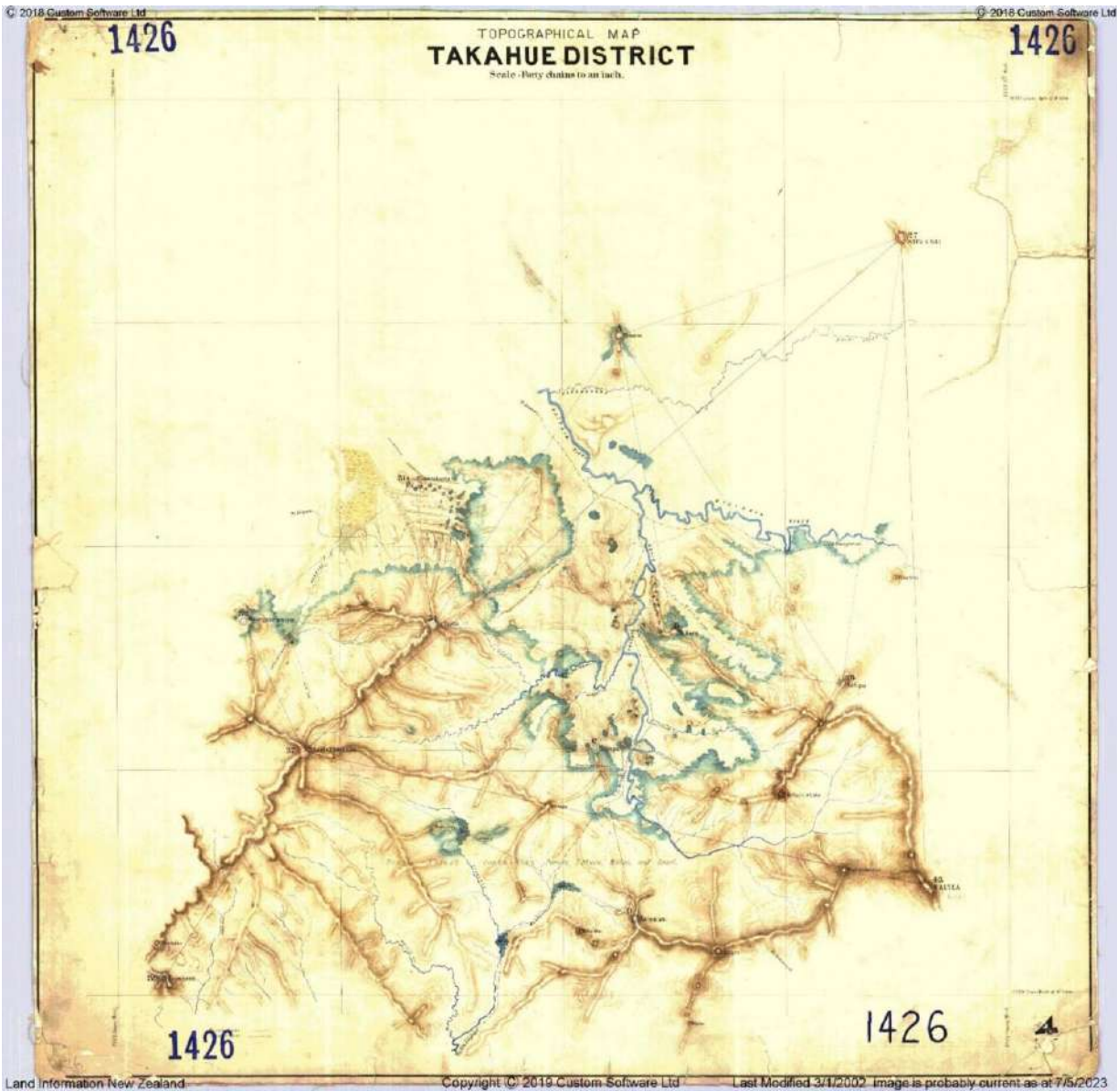


Figure 48: SO 1426 (1870s?).







Figure 50: ML 3608 A (1880?).

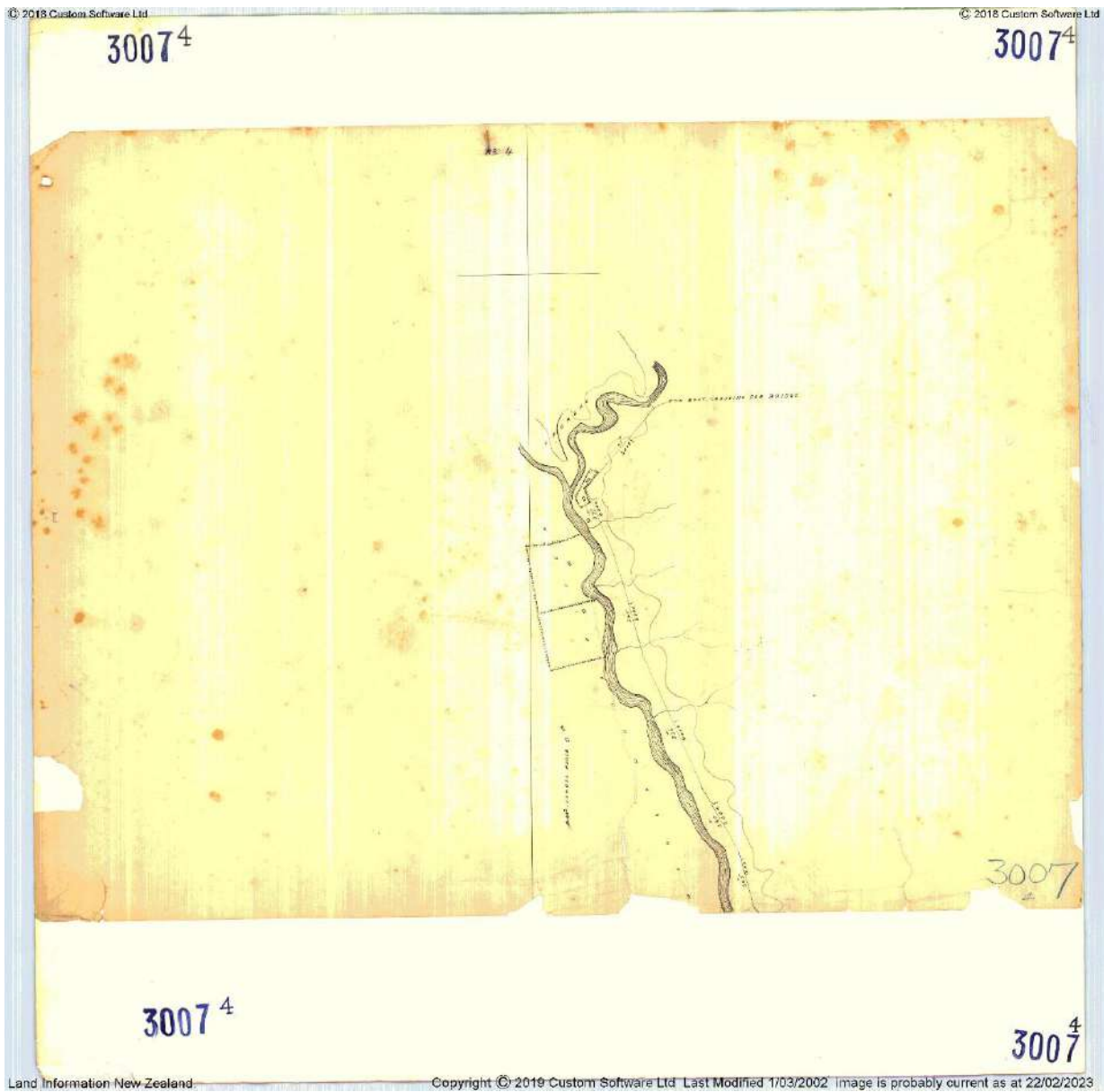
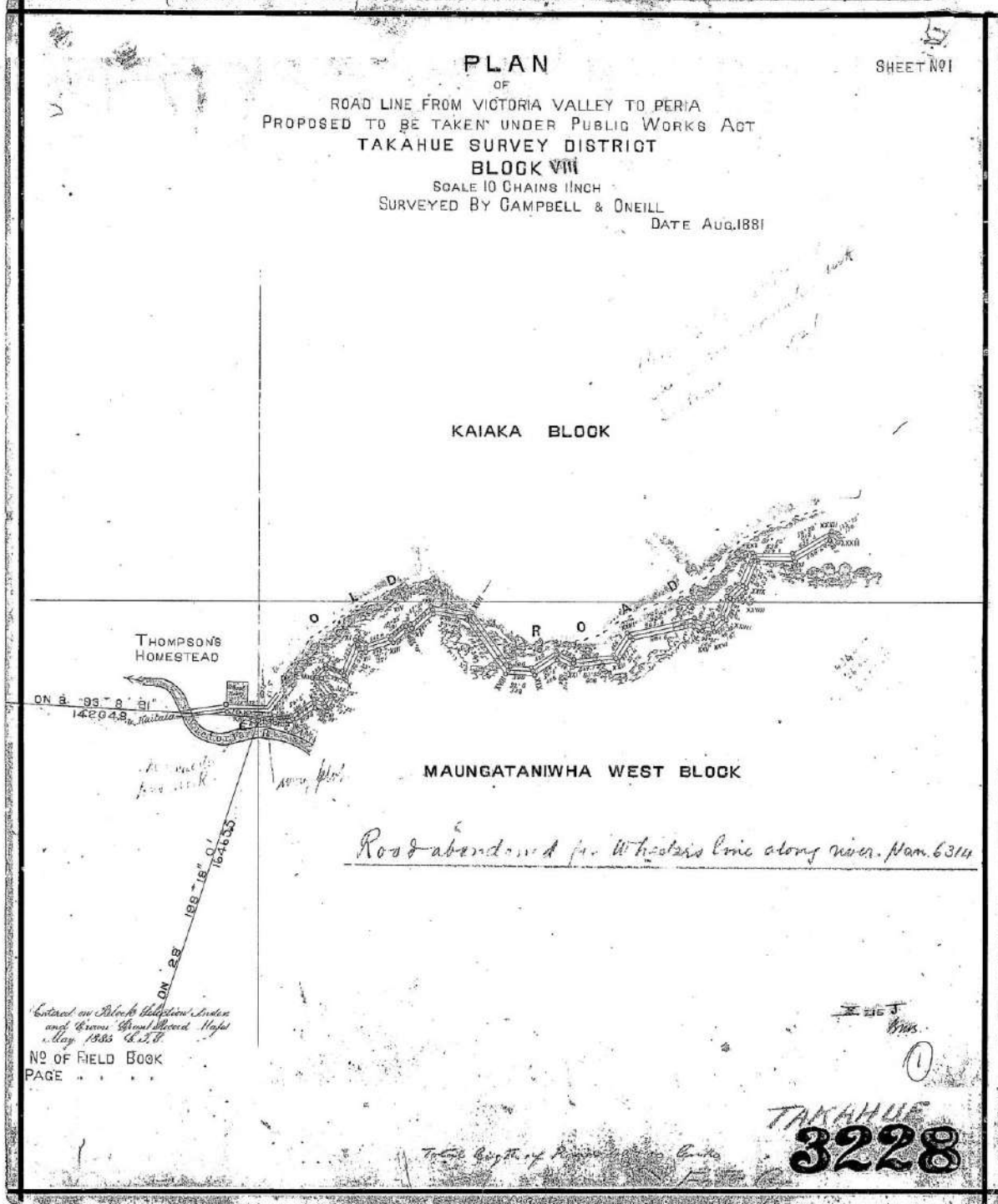


Figure 51: ML 3007/4 (1880?).



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Figure 52: SO 3228 (1881).

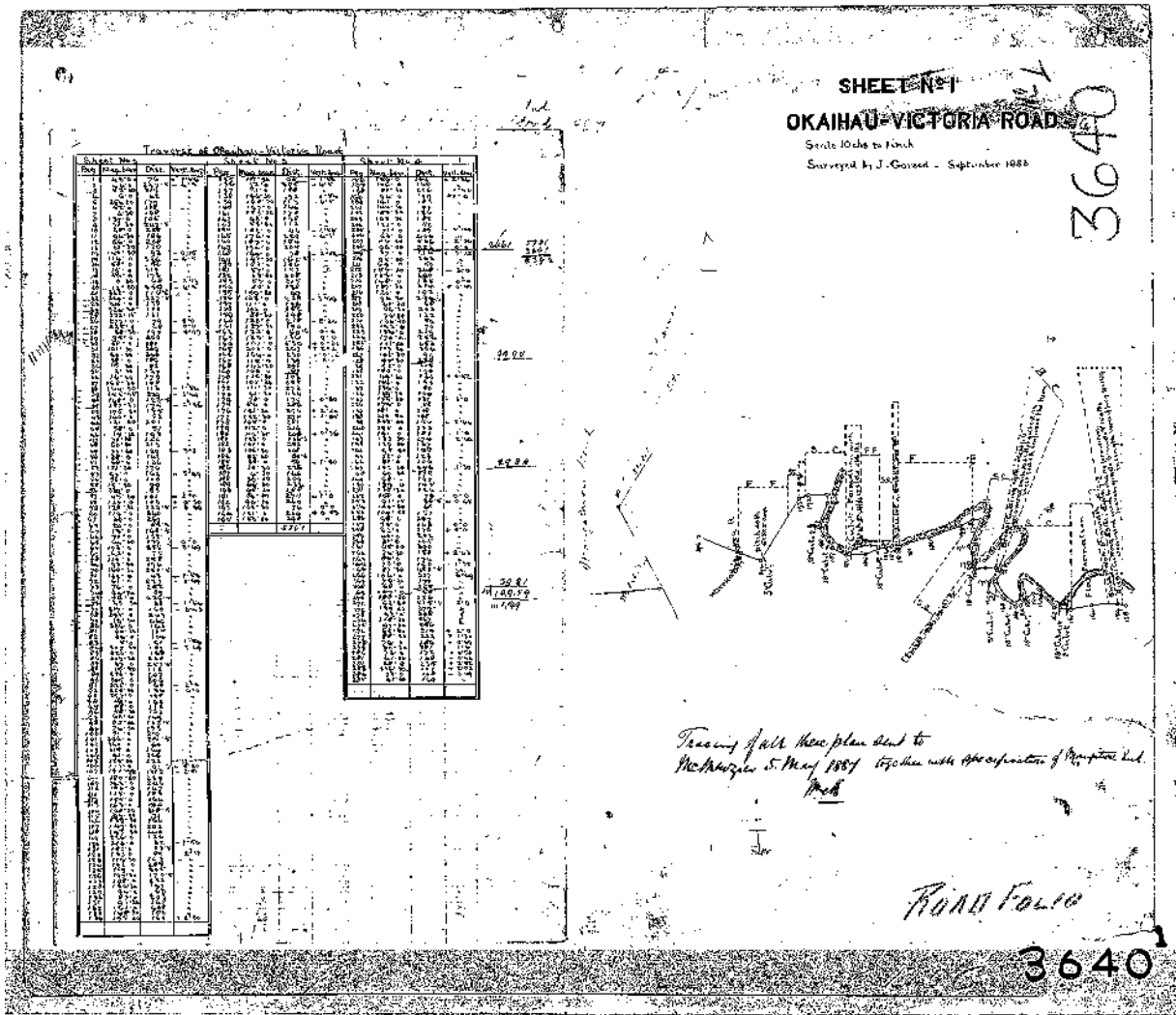


Figure 53: SO 3640/1 (1883).

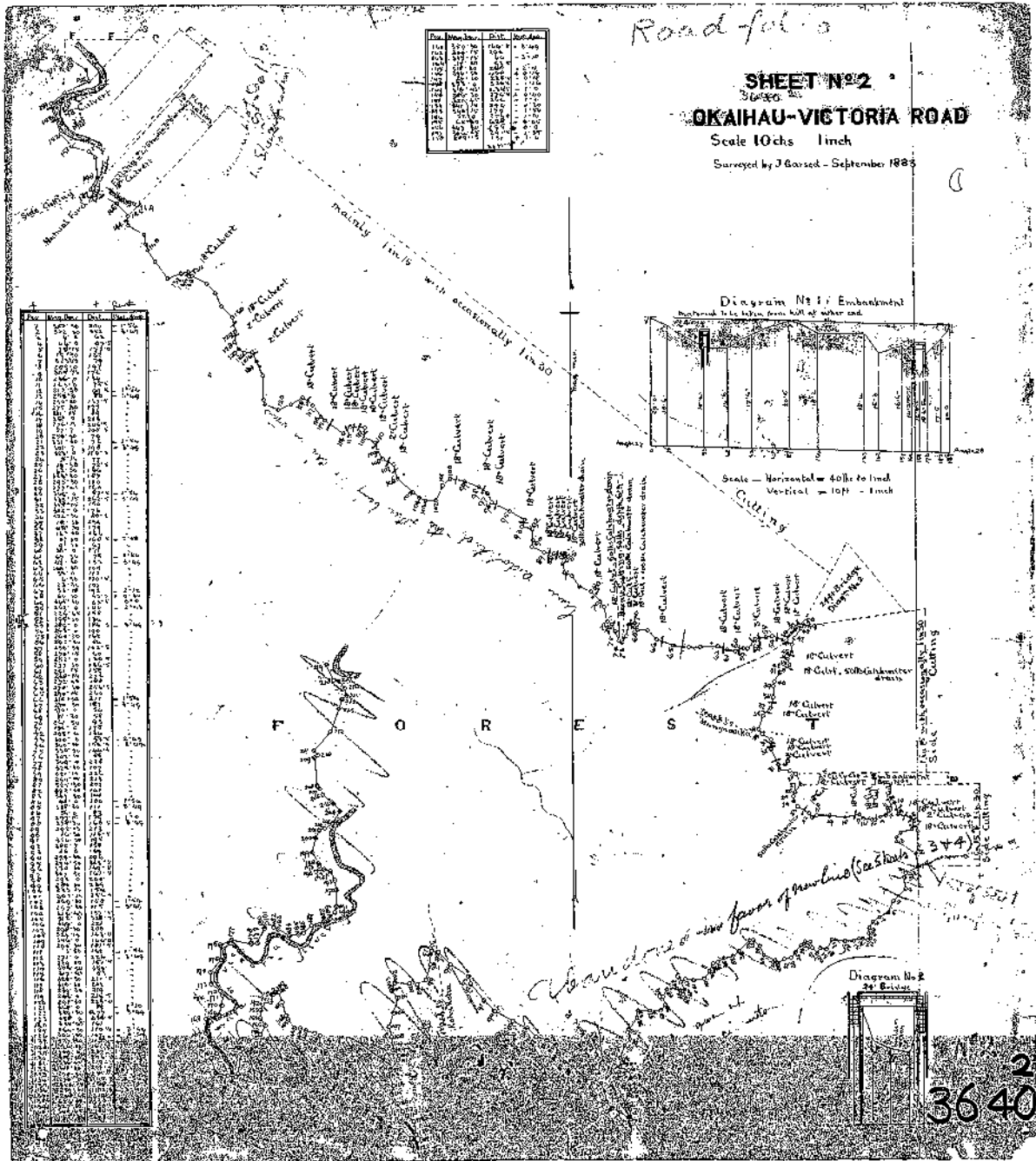


Figure 54: SO 3640/2 (1883).

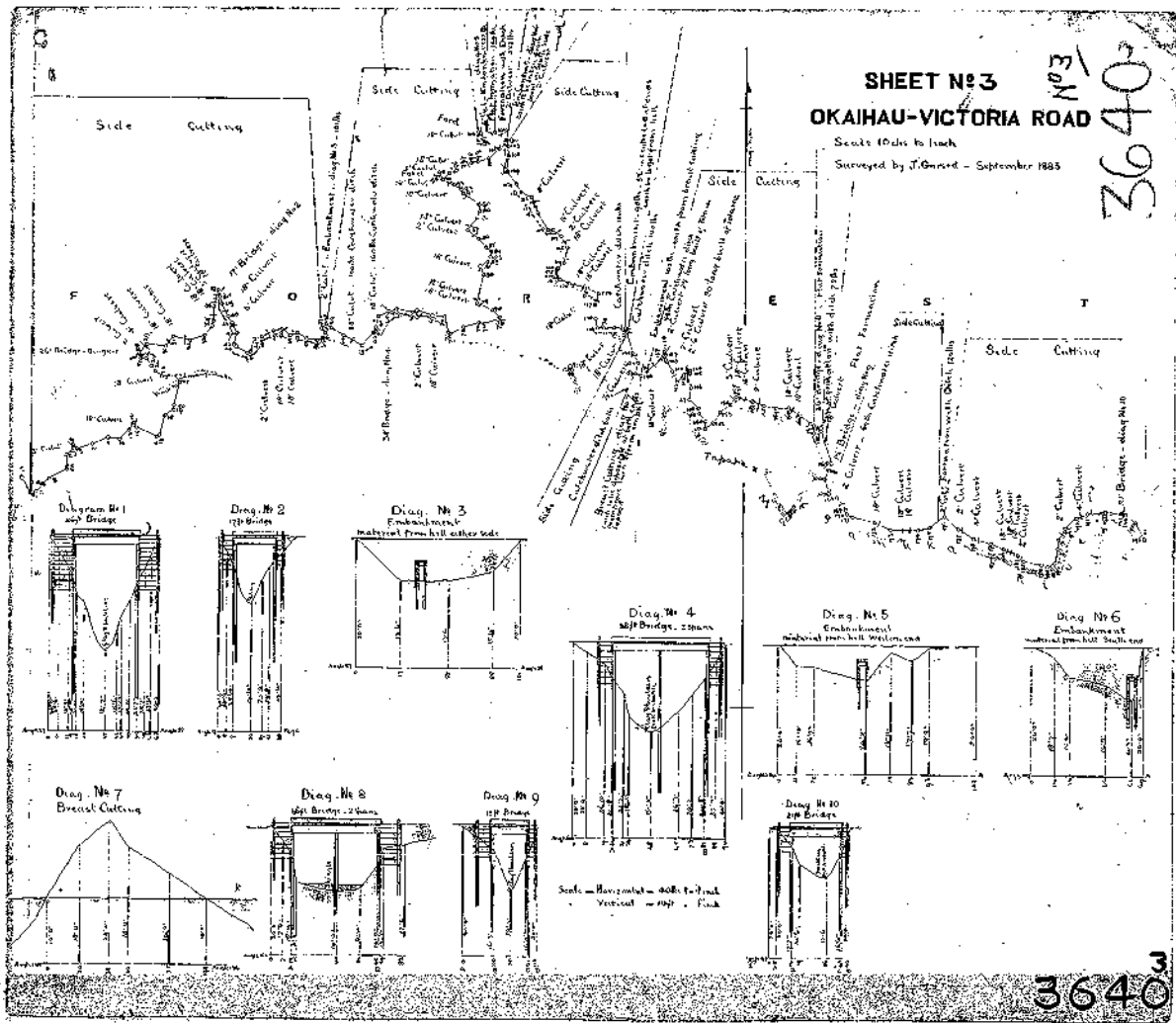


Figure 55: ML 3640/3 (1883).

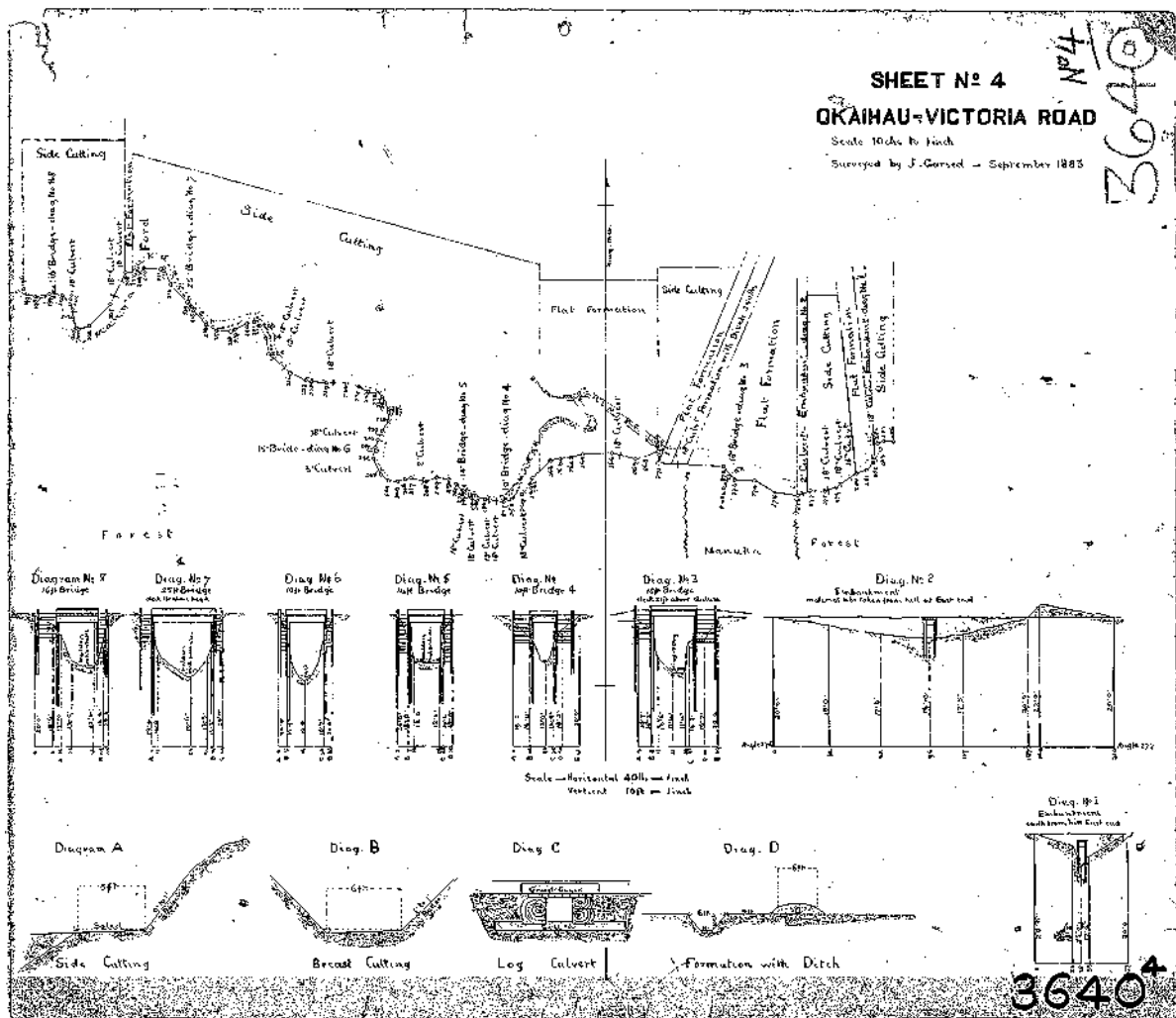


Figure 56: SO 3640/4 (1883).

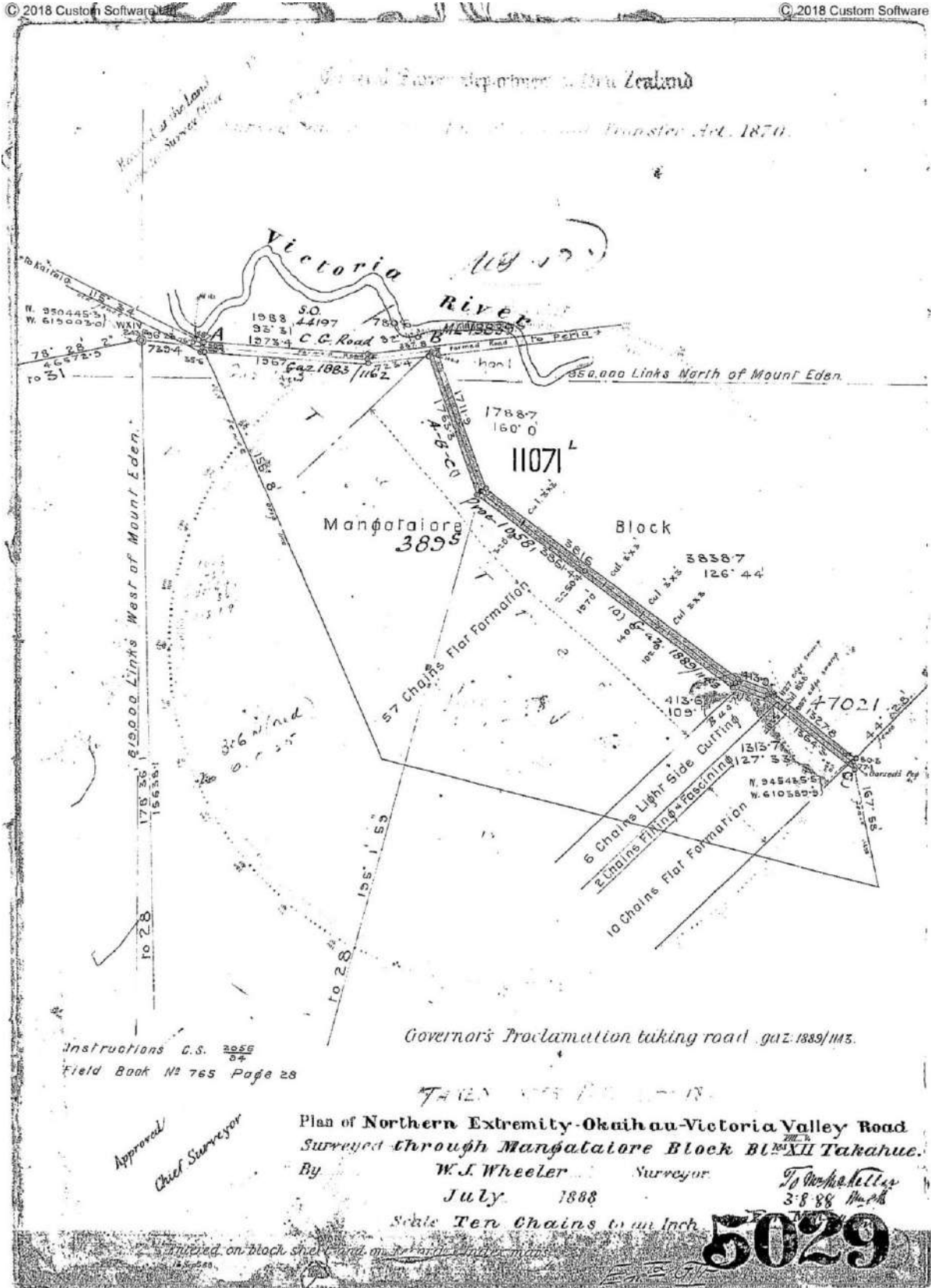
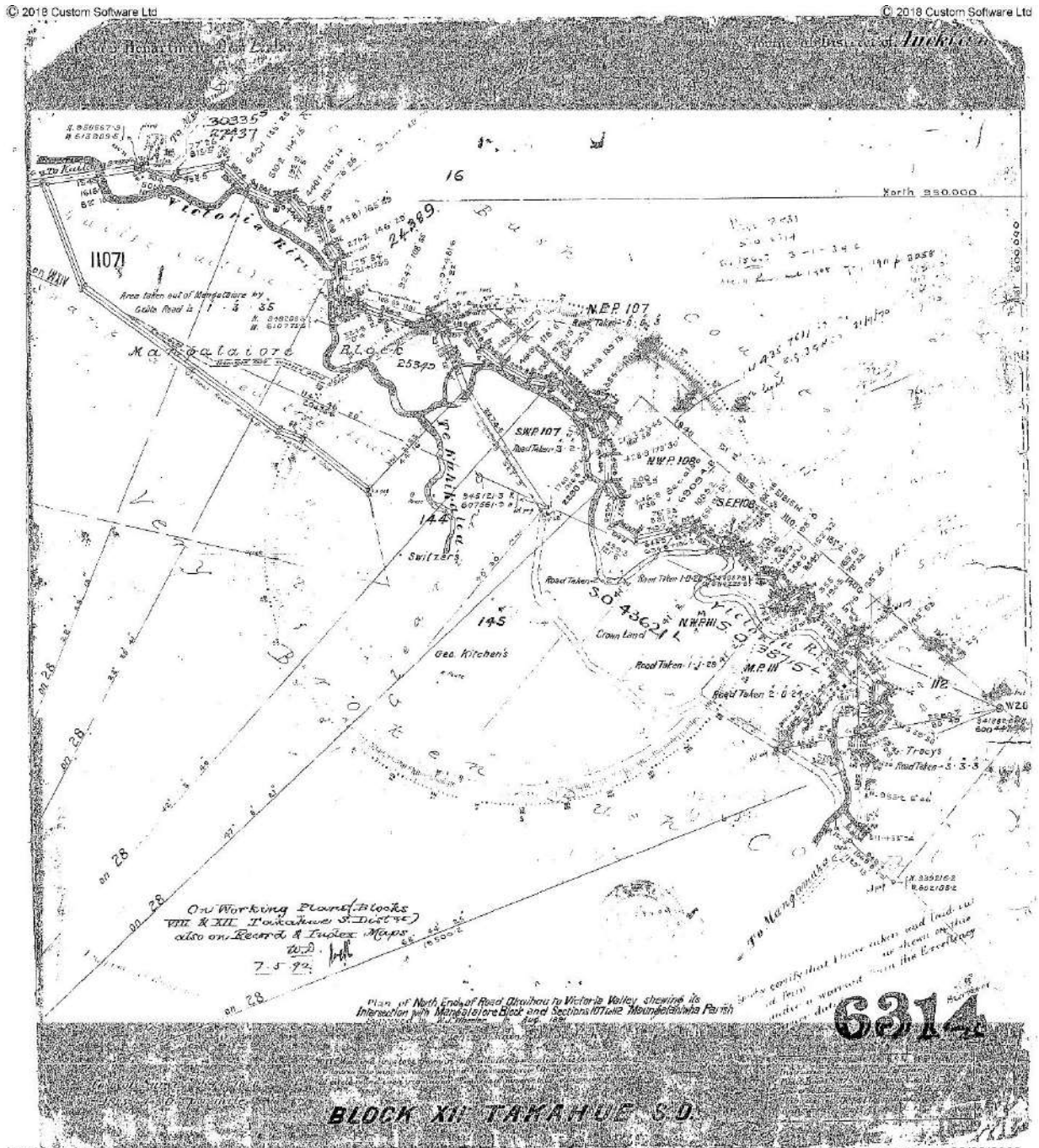


Figure 57: SO 5029 (1888).





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Figure 58: SO 6314 (1891).

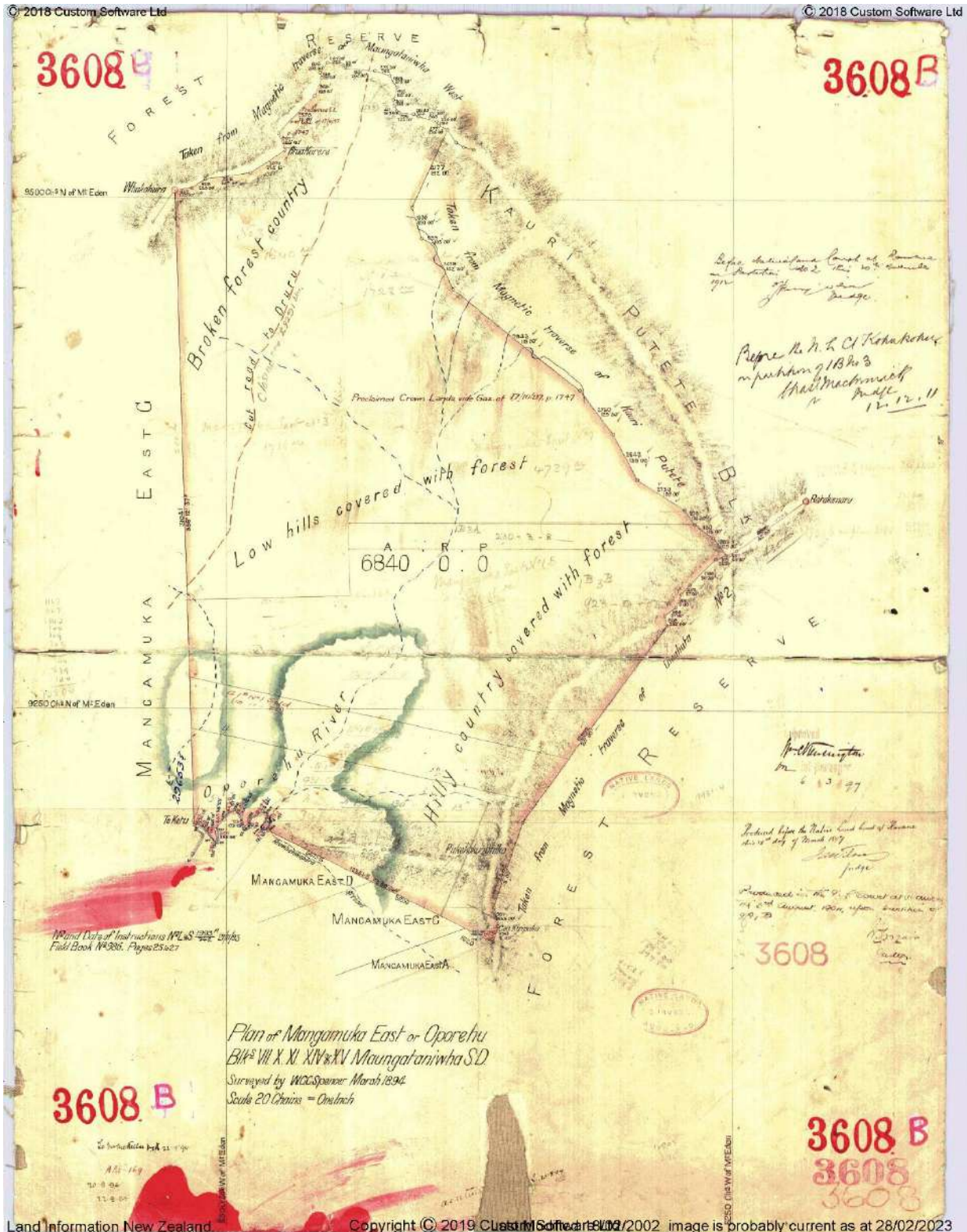


Figure 59: ML 3608 B (1894).

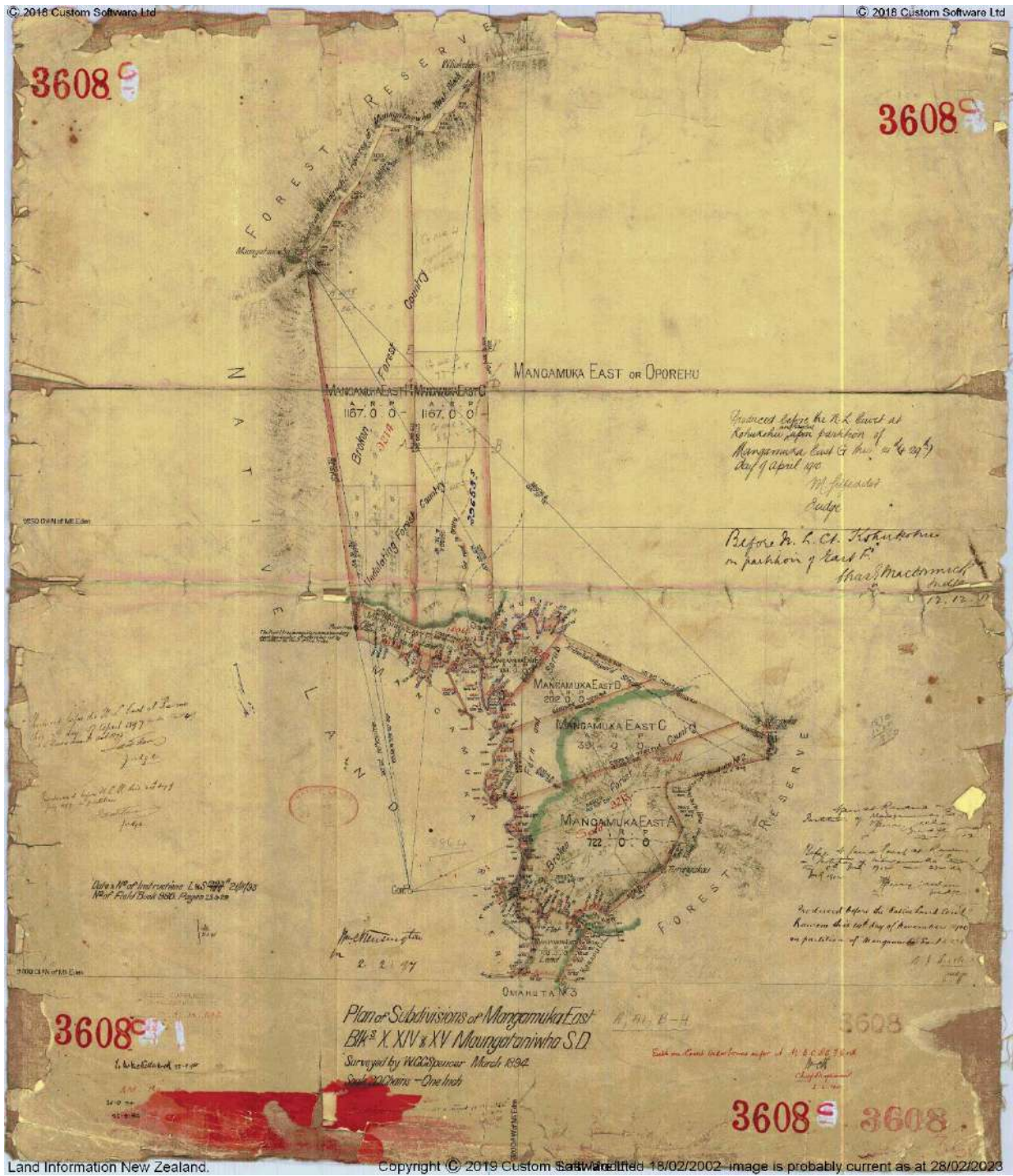


Figure 60: ML 3608 C (1894).





Figure 62: SO 7084/4 (1894).

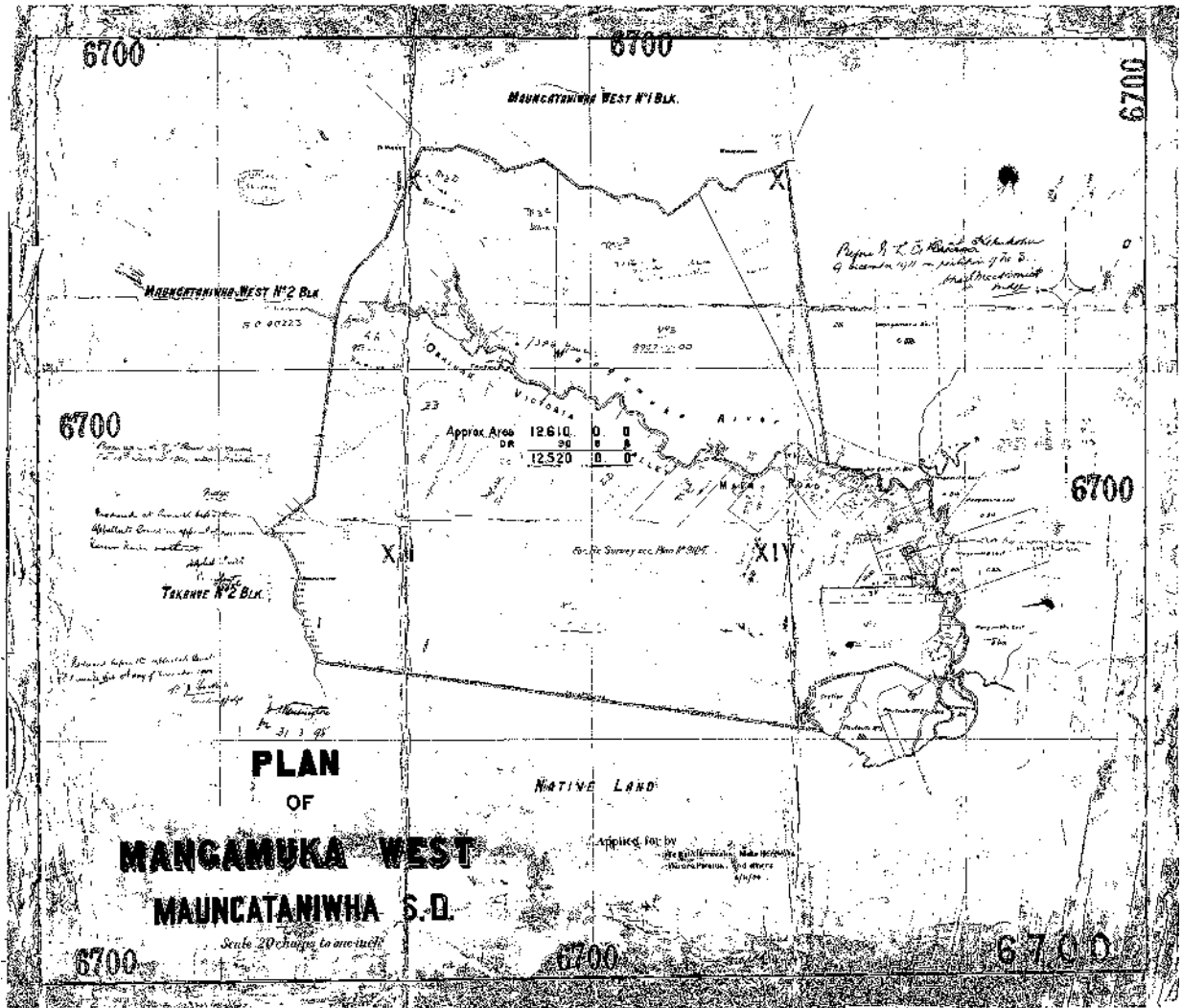


Figure 63: ML 6700 (1898).



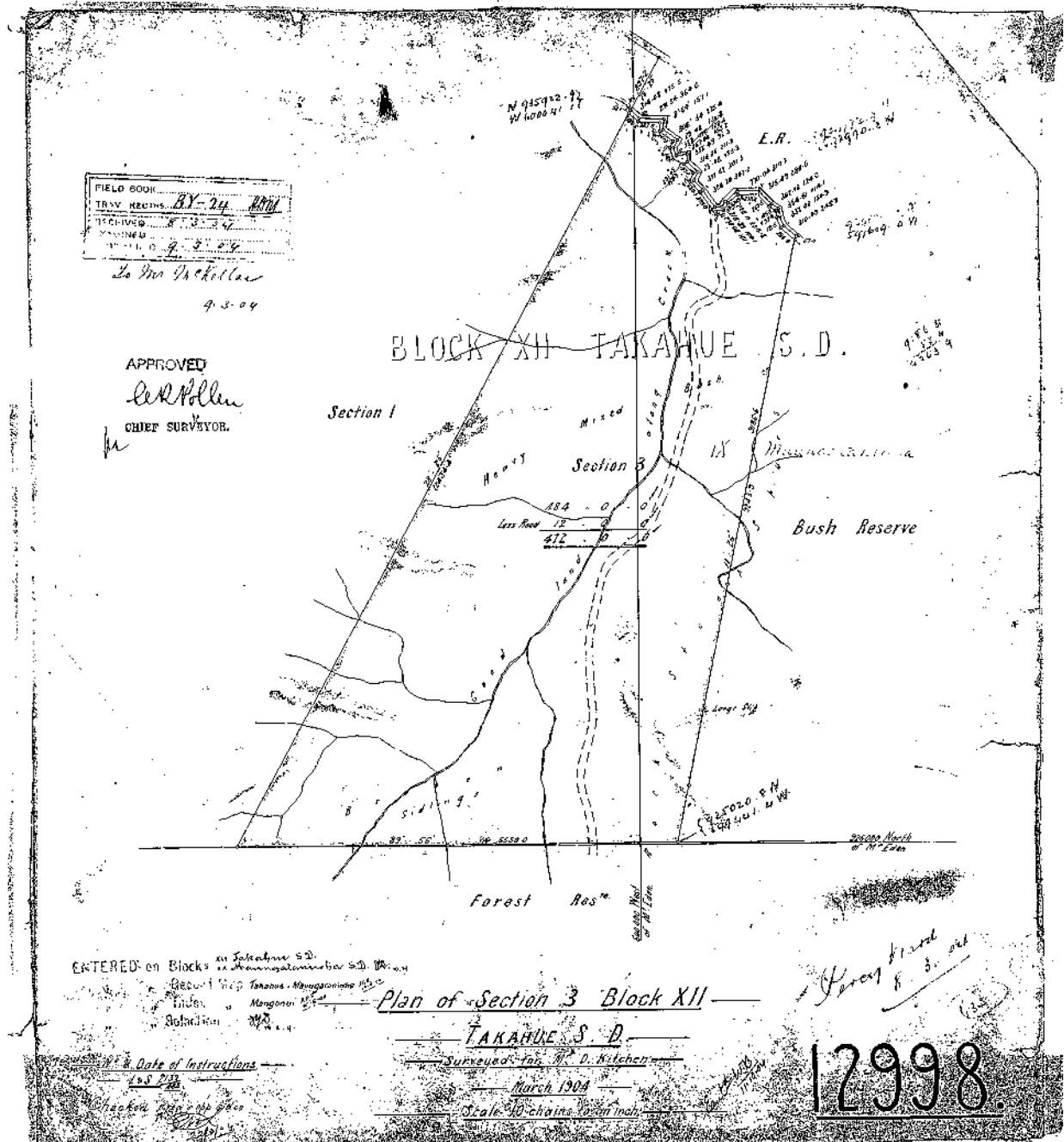


Figure 65: SO 12998 (1904).



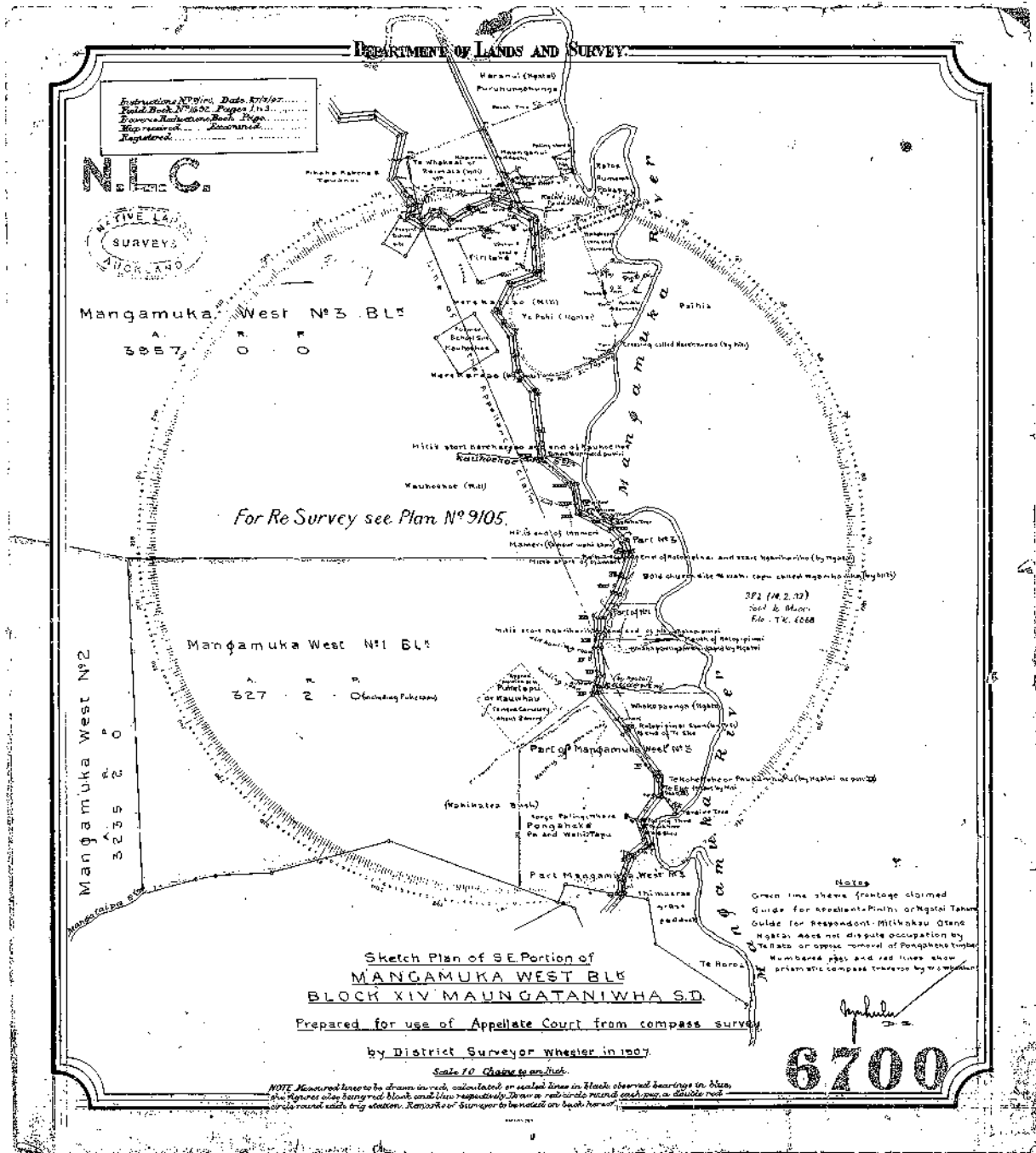


Figure 66: SO 6700 (1907).





Figure 68: ML 9105-4 (1913).

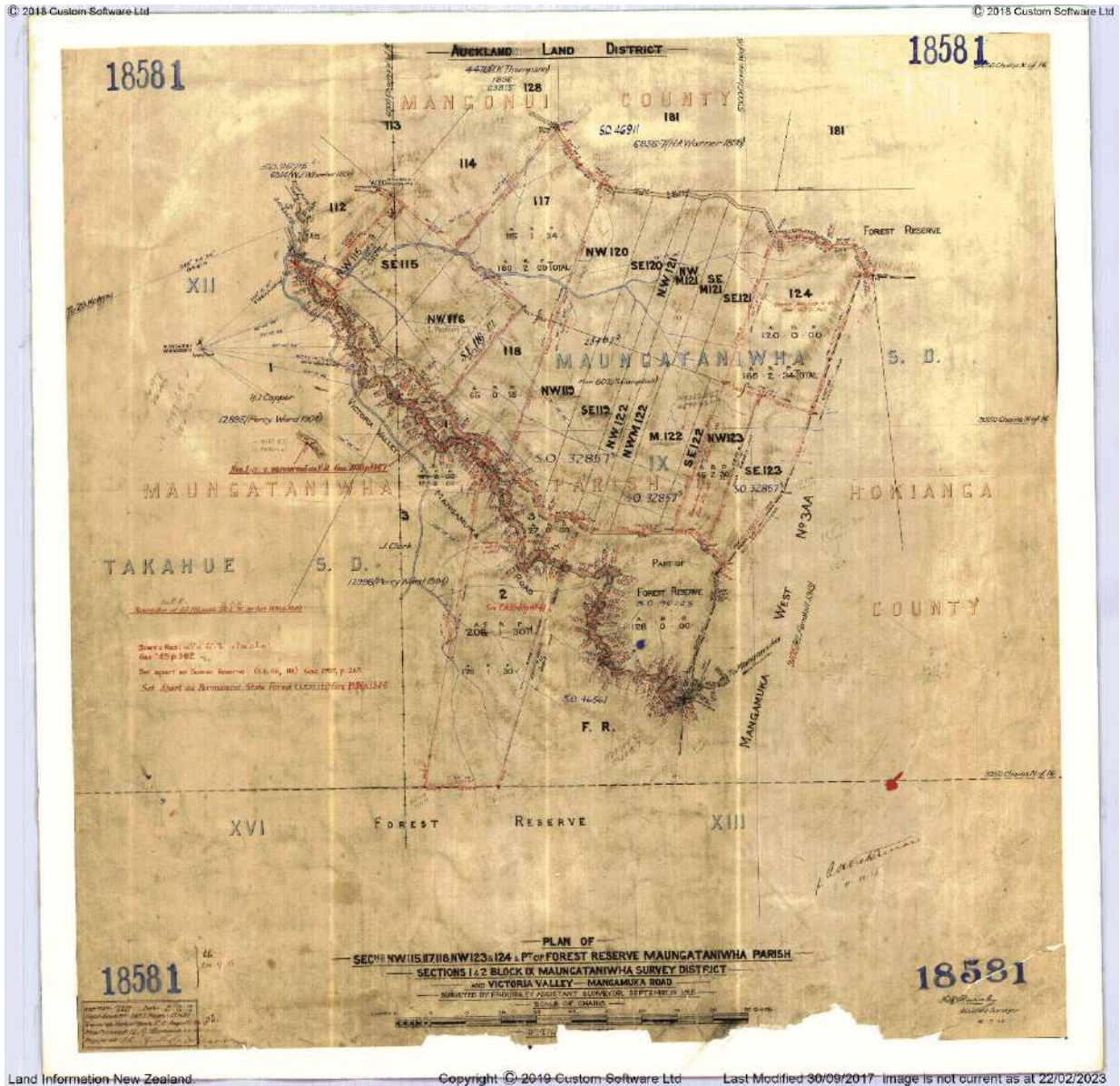


Figure 69: SO 18581 (1915).

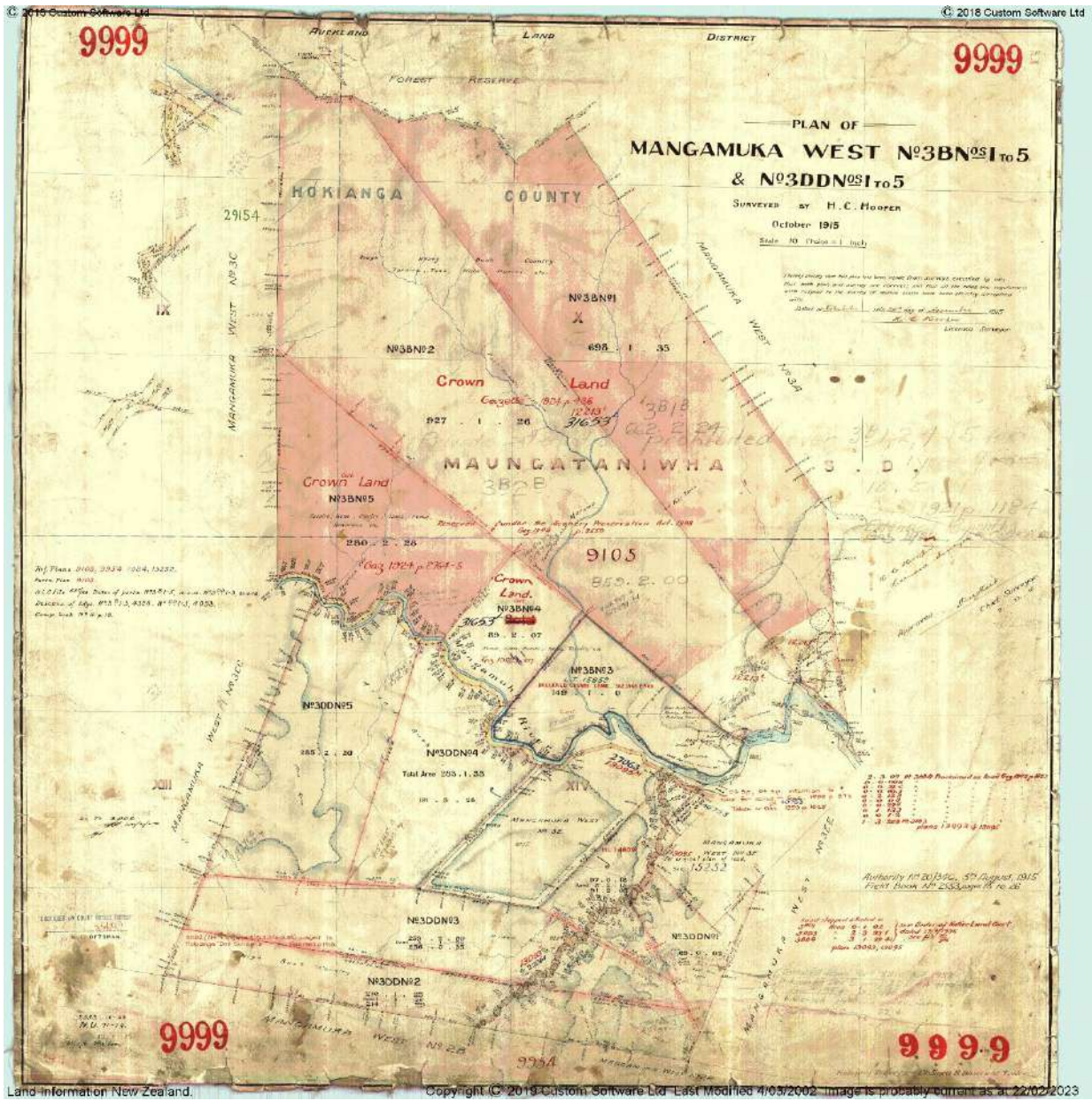


Figure 70: ML 9999 (1913).

## Appendix D – Features Recorded from Historic Plans

Table 9: Polygon features.

Date	Source	Feature Type	Description/Detail
1866	ML 106	Native Reserve	Wai Mamaku
1866	ML 109	Native Reserve	Ta Keke
1865?	ML 109	Enclosure	Enclosure?
1865?	ML 109	Enclosure	Enclosure?
1865?	ML 109	Enclosure	Enclosure
1865?	ML 109	House	House
1866	ML 389	Native Reserve	Manga Tai Ore
1866	ML 389	Cultivation, orchard or fruit tree	Cultivation
1866	ML 389	Enclosure	Enclosure?
1866	ML 389	House	House?
1866	ML 389	House	House?
1866	ML 389	Enclosure	Enclosure?
1866	ML 389	Enclosure	Enclosure?
1870s	SO 1426	Houses	Kainga?
1870s	SO 1426	Houses	Kainga?
1870s	SO 1426	Houses	Kainga?
1870s	SO 1426	Houses	Kainga?
1870s	SO 1426	Houses	Kainga?
1870s	SO 1426	Houses	Kainga?
1870s	SO 1426	Houses	Kainga?
1870s	SO 1426	Houses	Kainga?
1870s	SO 1426	Houses	Kainga?
1870s	SO 1426	Houses	Kainga
1870s	SO 1426	Houses	Kainga
1879	SO 1969	Public building	School site
1880	ML 3608-A	Name	Kauhoehoue
1880	ML 3608-A	House	House
1880?	ML 3007	Enclosure	Enclosure and three structures (poor registration)
1880?	ML 3007	Enclosure	Enclosure and two structures (poor registration)
1891	SO 6314	House	House
1891	SO 6314	House	House
1891	SO 6314	House	House
1891	SO 6314	House	House
1894	SO 7084-3	Public building	Old School House
1894	SO 7084-3	Infrastructure	Bridge
1894	SO 7084-3	Public building	Church
1907	ML 6700	House	House
1907	ML 6700	Commercial building	Hapeta's store
1907	ML 6700	Public building	Hall
1907	ML 6700	Outbuilding, structure	Shed
1907	ML 6700	Outbuilding, structure	Shed
1907	ML 6700	House	House
1907	ML 6700	Public building	Church
1907	ML 6700	House	House
1907	ML 6700	Outbuilding, structure	Kitchen
1907	ML 6700	Outbuilding, structure	Shed
1907	ML 6700	House	Whare
1907	ML 6700	Outbuilding, structure	Shed

Date	Source	Feature Type	Description/Detail
1907	ML 6700	Outbuilding, structure	Shed
1907	ML 6700-1	Public building	Church
1907	ML 6700	Public building	Former School Site Kauhoehoe
1913	ML 9105-2	Public building	Post office
1913	ML 9105-2	Public building	Hui house
1913	ML 9105-2	Public building	School
1913	ML 9105-2	Public building	School
1913	ML 9105-2	House	Whare
1913	ML 9105-2	House	Whare
1913	ML 9105-2	House	Whare
1913	ML 8864	House	House
1915	ML 9999	House	House
1915	ML 9999	House	House
1915	ML 9999	House	House
1915	ML 9999	House	House
1915	ML 9999	House	House

Table 10: Line features.

Date	Source	Feature Type	Description/Comment
1861?	ML 106	Road	Oruru and Victoria Road
1862	ML 12805	Road	Old Mission track
1862	SO12805	Road	Old Mission track
1862	SO 867	Road	Old mission track
1862	SO867	Road	Old Mission Track
1862	SO867	Road	Old Mission track
1862	SO862	Road	Old mission track
1862	SO867	Road	Track from Victoria
1865	ML109	Road	Road taking 1972
1866	ML389	Road	Oruru and Victoria Road
1866	ML389	Road	Road survey
1866	ML389	Road	Road survey
1866	ML389	Road	Road survey
			Flat formation
1870s	SO 1426	Road	Road to Awanui
1870s	SO 1426	Road	Road to Takahue
1870s	SO 1426	Road	Road to Taheke
1870s	SO 1426	Road	Road to Takahue
1870s	SO 1426	Road	Road to Takahue
1870s	SO 1426	Road	Road to Whangape
1870s	SO 1426	Road	Road to Hokiang
1870s	SO 1426	Road	Road to Ahipara
1870s	SO 1426	Road	Road to Ahipara
1870s	SO 1426	Road	Proposed road to Ahipara
1870s	SO 1426	Road	Road to Takahue
1870s	SO 1429	Road	Road to Ahipara
1870s	SO 1426	Road	Road to Takahue
188	SO 3640	Infrastructure	Embankment
1880	ML 3608-S	Topography and vegetation	Bushline

1880	ML 3608-A	Topography and vegetation	Bushline
<b>Date</b>	<b>Source</b>	<b>Feature Type</b>	<b>Description/Detail</b>
1883	SO 3640	Road	Track
1883	SO3640	Road	Track to Mungamuka
1883	SO 3640	Infrastructure	Natural ford
1883	SO3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Filling
1883	SO 3640	Infrastructure	30 links catchwater drain
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Formation with ditch
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Formation with ditch
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	Breast cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Formation with ditch
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	Side cutting
1883	SO 3640	Infrastructure	Flat formation
1883	SO 3640	Infrastructure	
1883	SO 3640	Infrastructure	Filling
1883	SO 3640	Infrastructure	Side cutting
1883?	ML 106	Road	Kaitaia-Oruru Road
1891	SO 6314	Enclosure	Enclosure
1891	SO 6314	Road	Track?
1891	SO 6314	Road	Road
1891	SO 6314	Road	Road
1891	SO 6341	Road	
1894	ML 3608-B	Road	Road
1894	ML 3608-B	Topography and vegetation	Bushline
1894	ML 3608-B	Topography and vegetation	Bushline
1894	ML 3608-C	Road	Road
1894	ML 3608-C	Topography and vegetation	Bushline



<b>Date</b>	<b>Source</b>	<b>Feature type</b>	<b>Description/Comment</b>
1894	ML 3608-C	Topography and vegetation	Bushline
1894	SO 7084/3	Road	Spencer's road
1894	SO 7084	Road	Spencer's road
1894	SO 7084	Road	Spencer's road
1894	SO 7084/3	Road	Spencer's Road
1894	SO 7084	Road	Spencer's road
1904	SO 12998	Road	Track?
1904	SO 12895	Topography and vegetation	New clearing
1904	SO 12895	Road	Graded line to Mangamuka
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1907	ML 6700-1	Enclosure	Enclosure
1913	ML 9105-1	Road	Track
1913	ML 9105-2	Wahi tapu or cemetery	Wahi tapu
1913	ML 9105-2	Enclosure	Enclosure
1913	ML 9105-2	Topography and vegetation	Bushline
1913	ML 9105-2	Topography and vegetation	Bushline
1913	ML 9105-2	Topography and vegetation	Bushline
1913	ML 9105-2	Topography and vegetation	Bushline
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Enclosure	Wire fence
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline

1915	ML 9999	Topography and vegetation	Bushline
1915	ML 9999	Topography and vegetation	Bushline
1915	ML9999	Topography and vegetation	Bushline

Table 11: Point features.

Date	Source	Feature	Description/Comment
1862	SO 867	Name	Land belonging to Wiremu and Reihana
1862	SO 867	Topography and vegetation	Very good land covered with heavy bush
1862	ML 12805	Name	Native Reserve
1862	ML 12805	Name	Te Ure Paraoa
1862	ML 12805	Topography and vegetation	Very good soil Level land
1862	ML 12805	Topography and vegetation	Native Reserve
1862	ML 12805	Topography and vegetation	Very rich alluvial soil, level Land
1866	SO798	Topography and vegetation	Broken Land Covered With Forest
1867	SO 3640	Name	Panther and Family 150 acres
1867	SO798	Name	W. F. Thompson 200 acres
1867	SO 798	Name	C. H. and C. White
1867	SO798	Name	Panther and Johnson
1867	SO798	Topography and vegetation	Tea Tree Scrub
1867	SO798	Topography and vegetation	Undulating land of good quality
1876	SO1031	Name	Government Reserve
1880	ML 3608-A	Wahi tapu or cemetery	Tapu
1880	ML 3608-A	Name	Rutupua(?)
1880	ML 3608-A	Name	Webster and C(?)
1880	ML 3608-A	Name	Ngapumahumahu
1880	ML 3608	Name	Mangataipa
1880	ML 3608	Name	Te Toki Creek
1880	ML 3608	Name	Ko Te Awa o te Mangataipa
1883	SO 3640	Infrastructure	16 ft bridge
1883	SO 3640	Infrastructure	24 ft bridge
1883	SO 3640	Infrastructure	14 ft bridge
1883	SO 3640	Infrastructure	10 ft bridge
1883	SO 3640	Infrastructure	Ford
1883	SO 3640-3	Infrastructure	26 ft bridge
1883	SO 3640	Infrastructure	17 f bridge
1883	SO 3640-3	Infrastructure	Ford
1883	SO 3640-3	Infrastructure	36 ft bridge
1883	SO 3640-3	Infrastructure	15 foot bridge
1883	SO 3640-3	Infrastructure	Ford
1883	SO 3640-3	Infrastructure	21 ft bridge
1883	SO 3640	Infrastructure	3 foot Culvert
1883	SO 3640	Infrastructure	18 Foot culvert
1883	SO 3640	Infrastructure	18 foot culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	3 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	3 foot culvert

1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
<b>Date</b>	<b>Source</b>	<b>Feature type</b>	<b>Description/Comment</b>
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	38 foot bridge
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	3 Foot culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Road	Track to Mangamuka
1883	SO 3640	Infrastructure	3 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert 25 foot long built of totara
1883	SO 3640	Infrastructure	2 foot 6 inch culvert 20 foot long built of totara
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	3 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert



1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	24' bridge
1883	SO 3640	Infrastructure	18" culvert
<b>Date</b>	<b>Source</b>	<b>Feature type</b>	<b>Description/Comment</b>
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	3' culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	3' culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	2' culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO3640	Infrastructure	Embankment
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	3 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	3 foot culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	18 inch culvert
1883	SO 3640	Infrastructure	2 foot culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1883	SO 3640	Infrastructure	18" culvert
1891	SO 6314	Public building	Public School
1891	SO 6314	Name	To Mangamuka
1891	SO 6314	Name	Tracey's
1891	SO 6314	Name	Crown Land
1891	SO 6314	Name	Geo Kitchen's
1891	SO 6314	Name	Switzer's
1891	SO 6314	Name	Campbell's abandoned Road surveyed about 30 years ago
1891	SO 6314	Name	Garsea's Road which it is proposed to close
1894	SO 6909	Topography and vegetation	Bush Very Broken fair soil
1894	SO 7842	Topography and vegetation	Heavy Forest
1894	ML 3608-C	Cultivation, orchard, fruit tree	Flat land cultivations
1894	ML 3608-C	Cultivation, orchard, fruit tree	Undulating Foreset Country
1894	ML 3608-C	Road	Cut road to Oruru

1894	ML 3608-C	Topography and vegetation	Broken Forest Country
1894	ML 3608-C	Topography and vegetation	Flat Land
1894	ML 3608-B	Topography and vegetation	Low hills covered with forest
1894	ML 3608-B	Topography and vegetation	Forest Reserve
<b>Date</b>	<b>Source</b>	<b>Feature type</b>	<b>Description/Comment</b>
1894	ML 3608-B	Topography and vegetation	Hilly country covered with forest
1894	ML 3608-B	Road	Cut road to Oruru
1894	ML 3608-B	Topography and vegetation	Broken forest country
1894	ML 3608-B	Name	Te Keru
1894	ML 3608-C	Topography and vegetation	Puriri tree
1894	SO 3640	Wahi tapu or cemetery	Burial Ground
1894	SO7084-3	Public building	Old School House
1894	SO7084-3	Infrastructure	Bridge
1894	SO7084-3	Cultivation, orchard, fruit tree	Native cultivations
1894	SO7084	Cultivation, orchard, fruit tree	Native cultivation
1896	ML 6700	Cultivation, orchard, fruit tree	Cultivations
1898	ML 6700	Name	Taipari and Rihari Mate
1898	ML 6700	Name	Hapeta
1904	SO 12998	Topography and vegetation	Heavy mixed bush
1904	SO 12998	Topography and vegetation	Good land along creek
1904	SO 12998	Topography and vegetation	Large slip
1904	SO 12998	Topography and vegetation	Bush Reserve
1904	SO 12998	Topography and vegetation	Rocky steep spurs
1904	SO 12895	Name	Kitchen, owner
1904	SO 12895	Road	Graded line to Mangamuka
1904	SO 12895	Topography and vegetation	New clearing
1907	ML 6700-1	Name	Haranui (Ngatai)
1907	ML 6700-1	Name	Puruhungahunga
1907	ML 6700-1	Cultivation, orchard, fruit tree	Peach tree
1907	ML 6700-1	Name	Maunganui
1907	ML 6700-1	Name	Hapeta's Paddocks
1907	ML 6700-1	Name	Te Whakai or Roimata (Miti)
1907	ML 6700-1	Name	Pikaka Rakena Tauanui
1907	ML 6700-1	Name	Hapeta'a house
1907	ML 6700-1	Name	Hapeta's store
1907	ML 6700-1	Cultivation, orchard, fruit tree	Vines figs apples
1907	ML 6700-1	Name	Rata's kumaras
1907	ML 6700-1	Name	Pokapu
1907	ML 6700-1	Name	Rata's paddock
1907	ML 6700-1	Cultivation, orchard, fruit tree	Old orchard
1907	ML 6700-1	Infrastructure	Culvert
1907	ML 6700-1	Name	Piritaha
1907	ML 6700-1	Outbuilding, structure	Kitchen
1907	ML 6700-1	Outbuilding, structure	Shed
1907	ML 6700-1	House	House
1907	ML 6700-1	Public building	Wesleyan Church
1907	ML 6700-1	Outbuilding, structure	Shed
1907	ML 6700-1	Name	End of Te Pahi (by Ngatai)
1907	ML 6700-1	Name	End of Herekareao (by Miti)
1907	ML 6700-1	Name	Matehare's corn and kumeras
1907	ML 6700-1	Topography and vegetation	Poplars
1907	ML 6700-1	Cultivation, orchard, fruit tree	Figs
1907	ML 6700-1	Cultivation, orchard, fruit tree	Figs

1907	ML 6700-1	Topography and vegetation	Willows
1907	ML 6700-1	Cultivation, orchard, fruit tree	Pumpkins
1907	ML 6700-1	Cultivation, orchard, fruit tree	Kumeras
1907	ML 6700-1	Name	Paihia
<b>Date</b>	<b>Source</b>	<b>Feature type</b>	<b>Description/Comment</b>
1907	ML 6700-1	Name	Crossing called Herekareao (by Miti)
1907	ML 6700-1	Public building	Former school site
1907	ML 6700-1	Name	Kauhoehoe
1907	ML 6700-1	Name	Miti's start Herekareao and end of Kauhoehoe
1907	ML 6700-1	Infrastructure	Culvert and uprooted puriri
1907	ML 6700-1	Topography and vegetation	Willow
1907	ML 6700-1	Topography and vegetation	Willow
1907	ML 6700-1	Topography and vegetation	Willow
1907	ML 6700-1	Cultivation, orchard, fruit tree	Karaka tree
1907	ML 6700-1	Name	Miti's end of Mameri
1907	ML 6700-1	Name	Mameri (famous wahi tapu)
1907	ML 6700-1	Topography and vegetation	Puriri Tree
1907	ML 6700-1	Name	Miti's start of Mameri
1907	ML 6700-1	Name	End of Rotopiwai and start Ngarihariha (by Ngatai)
1907	ML 6700-1	Wahi tapu or cemetery	Old church site and wahi tapu called Ngarihariha (by Miti)
1907	ML 6700-1	Name	Miti's start Ngarihariha and end of his Rotopiwai
1907	ML 6700-1	Name	Mouth of Rotopiwai
1907	ML 6700-1	Name	Whakapaenga (wahi tapu) by Ngatai
1907	ML 6700-1	Road	Old hauling road
1907	ML 6700-1	Infrastructure	Culvert
1907	ML 6700-1	Name	Whakapaenga (Ngatai)
1907	ML 6700-1	Infrastructure	Culvert
1907	ML 6700-1	Name	Rotopiwai start (by Miti) and end of Te Eke
1907	ML 6700-1	Road	Hauling road now in use
1907	ML 6700-1	Topography and vegetation	Kahikatea Bush
1907	ML 6700-1	House	Large paling whare
1907	ML 6700-1	Name	Pongaheka Pa and Wahi Tapu
1907	ML 6700-1	Outbuilding, structure	Paling shed
1907	ML 6700-1	Cultivation, orchard, fruit tree	Peach tree
1907	ML 6700-1	Outbuilding, structure	W. B. Shed
1907	ML 6700-1	Topography and vegetation	Taraire Tree
1907	ML 6700-1	Name	Kauawiri (by Ngatai)
1907	ML 6700-1	Name	Ihimaeras grass paddock
1907	ML 6700-1	Name	Te Horo
1907	ML 6700-1	Name	Te Eke (Start by Miti)
1907	ML 6700-1	Name	Te Kohekohe or Pouhuruuru (by Ngatai at post IX)
1907	ML 6700-1	Name	Approx. position of Puketapu or Kauwhau Fenced Cemetery about 8 acres
1907	ML 6700-1	Name	Kauhoehoe (Miti)
1907	ML 6700-1	Name	Kauhoehoe
1907	ML 6700-1	Name	Te Pahi Stm (Ngatai)

1907	ML 6700-1	Name	Herekareao (by Miti)
1907	ML 6700-1	Name	Herekareao (Miti)
1907	ML 6700-1	Public building	Present School Site
1907	ML 6700-1	Outbuilding, structure	Paling shed
1907	ML 6700-1	Public building	Hall
<b>Date</b>	<b>Source</b>	<b>Feature type</b>	<b>Description/Comment</b>
1907	ML 6700-1	Name	Te Pahi (Ngatai)
1913	ML 9105	Road	Formed bridle track
1913	ML 9105-1	Road	Track
1913	ML 9105-1	Road	Formed bridle track
1913	ML 9105-2	Topography and vegetation	Fertile, flat open country between road and river and extending [south east]
1913	ML 9105-2	Topography and vegetation	Good flat open country
1913	ML 9105-2	Topography and vegetation	Ordinary hilly country under forest
1913	ML 9105-2	Topography and vegetation	Hilly open country under grass
1913	ML 9105-2	Topography and vegetation	Rough precipitous country under forest
1913	ML 9105-2	Topography and vegetation	Ordinary hilly country with patches of forest
1913	ML 9999	Name	Hemi Te Hara
1913	ML 8864	Topography and vegetation	Good Land on River Flats
1913	ML 8864	Topography and vegetation	Old Kauri Workings Rough hills
1913	ML 8864	Topography and vegetation	Good land Partly cultivated
1913	ML 8864	Topography and vegetation	Good grazing
1913	ML 8864	Topography and vegetation	Partly Cultivated
1915	M 9999	Cultivation, orchard, fruit tree	Land in cultivation
1915	ML 9999	Name	Stannaway
1915	ML 9999	Cultivation, orchard, fruit tree	Cultivations
1915	ML 9999	House	House
1915	ML 9999	Cultivation, orchard, fruit tree	Orchard
1915	ML 9999	Cultivation, orchard, fruit tree	Cultivations
1915	ML 9999	Topography and vegetation	Good river flats volcanic soil
1915	ML 9999	Cultivation, orchard, fruit tree	Karaka tree
1915	ML 9999	House	Houses
1915	ML 9999	Name	Puhihi Tiwene
1915	ML 9999	Topography and vegetation	Old clearing in grass
1915	ML 9999	Topography and vegetation	Good bush land Nearly Level Pukatea, Taraire Etc
1915	ML 9999	Topography and vegetation	Towai, Tawa, Puriri, Kohe, Taraire etc
1915	ML 9999	Topography and vegetation	Mixed bush
1915	ML 9999	Topography and vegetation	Fern spur
1915	ML 9999	Topography and vegetation	2 chains wide Fell and Burnt
1915	ML 9999	Topography and vegetation	Clearing
1915	ML 9999	Topography and vegetation	High Bush Country
1915	ML 9999	Topography and vegetation	Poor fern spurs
1915	ML 9999	Topography and vegetation	Old river bed
1915	ML 9999	Enclosure	Wire fences
1915	ML 9999	Topography and vegetation	Grass land
1915	ML 9999	House	House



## Appendix E – Southern Spoil Dump Site

### E1.0 Proposal

Waka Kotahi proposes establishing three dump sites on the Mangamuka West 3G G Block, 4321 State Highway 1, Mangamuka including establishment of sediment control around the sites, topsoil stripping and improvements to the existing access track, and other tracks and fences. The area is located west of State Highway 1, with the road crossing to access the sites 1800m north of the SH1/Mangamuka Road intersection.

The proposal has been provided in the form of the planning checklist document prepared by Stellar Projects Ltd provided by S. Brooke in late July 2023, Mangamuka 2022 Slip Response. Southern Fill Site. 4321 State Highway 1, and construction notes for spoil dump site 1, the closest of the three dump sites to the highway, provided by CLL Ltd.

### E2.0 Desktop Review

No archaeological sites are recorded in the vicinity.

The nearest recorded potential archaeological or heritage feature is the site of the original Mangamuka School property and buildings, established in 1879. This site is located on a five-acre parcel, Pt Kauhoehoe block west of SH1, immediately south of the road crossing and track to the dump site. The block is illustrated on survey plan ML 5097 (1881) just after the school was established, and later on plans SO 7084 (1894) and ML 9105 (1913). ML 9105 also shows dump site 3 was under forest in the early 20<sup>th</sup> century while dump sites 1 and 2 had been cleared by that time. The current alignment of State Highway 1 was taken through the eastern side of the Pt Kauhoehoe block in 1959 as shown on (ML 5097) and subsequent road development may have modified or destroyed the old school site. The partition of the Kauhoehoe Block was investigated in 1886 and recorded in Judge Puckey's Minute Book 8: 20 of the Native Land Court but this has not been reviewed to-date.

The next nearest site is the Mameri urupa, 250m south of the subject site road crossing the eastern side of SH1, on the Mangamuka West 3 M Block.

There is no indication of potential archaeological features in the historic or modern aerial imagery. Aerial image SN 356-C-4 (1944) shows the area under fern land or scrubby forest with established forest in the stream gullies, but a number of narrow tracks provide access to the higher ground/interior west of the river flats including along the line of the current track. The area must have been abandoned and left to revegetate at some point after the ML 9105 survey in 1913.

Aerial image SN 1417-F-4 (1961) shows dump site 1 and 2 under scrubby forest, but dump site 3 and the level ground to the southwest was in pasture by that time. Aerial image SN 3025-5025-1 (1968) shows all three dump sites in pasture by that time as do subsequent images SN 5006-D-13 (1977) and image SN 5932-I-19 (1981) shows all three dump sites in pasture.

### E3.0 Site Visit

The proposed dump sites were visited in the company of T. Otene over the course of an hour on 14 August 2023. The dump sites appear to be located over ancient marine terraces as noted in Section 2.1.

T. Otene related that his cousins owned the property, and he had helped clear vegetation off the area of the dump sites as a young man. He also noted he had hunted extensively in the surrounding areas and had not seen or been told of any wahi tapu or potential archaeological or heritage features in the vicinity.

No archaeological sites or features were observed on the ground surface.

#### **E4.0 Findings and Recommendations**

There are no archaeological or historic sites or features on the proposed dump sites. The rolling to level high ground appears to have been cleared by the early 20<sup>th</sup> century but had revegetated by the time of World War II. It is likely that the area was grazed in the late 19<sup>th</sup> century but the extensive cultivations recorded on the flats of the Mangamuka valley floor do not seem to have extended to the higher ground nearby and other use or occupation of the area seems unlikely although the area is north facing and relatively well-drained and sheltered.

There is a small chance of encountering isolated archaeological features such as hearths, ovens or anthropogenic or made garden soils (i.e. imported river gravels, sand, charcoal etc added to natural soils to improve growing properties) related to land clearance and horticultural activities but these are unlikely to be identified prior to large-scale topsoil stripping and does not meet the threshold of requiring an archaeological Authority on a precautionary basis and may be adequately managed under an accidental discovery protocol.

- 1) An archaeological Authority is not required for the establishment of the spoil dump sites on the Mangamuka West 3G Block.
- 2) An accidental discovery protocol should be in place during site establishment, track/road improvements and topsoil stripping for sediment control features and the dump sites themselves.
- 3) T. Otene should monitor the establishment and topsoil stripping for the dump sites.
- 4) If archaeological remains or buried cultural deposits are encountered during works, such as layers of shell midden, oven stones, black, charcoal-rich or stained soils, artefacts etc., work should cease in the immediate vicinity and Heritage New Zealand and Geometria Ltd should be contacted for advice on how to proceed according to the site instruction protocols.

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## Appendix F – Peria Valley Road Spoil Dump Site

### E1.0 Proposal

Waka Kotahi proposes establishing a dump site at 184 Peria Valley Road, including improvements to the road crossing establishment of sediment control around the site, topsoil stripping and changes to drainage, fencing and farm tracks.

The dump site is located on Lot 1 DP 35169.

The proposal has been provided in the form of the planning checklist document prepared by Stellar Projects Ltd provided by S. Brooke in late July 2023, Mangamuka 2022 Slip Response. Northern Fill Site. 184 Peria Valley Road.

### E2.0 Desktop Review

No archaeological sites are recorded in the vicinity.

The nearest recorded potential archaeological or heritage feature is the line of the old road from Victoria Valley to Peria, which was surveyed in 1881 when the new road to be taken was surveyed. This is shown on SO 3288 (1881) Plan of Road Line from Victoria Valley Road to Peria Proposed To Be Taken Under the Public Works Act, with the track as a dashed line along the northern side of the dump site, with the new road survey to the south more or less on its current alignment. In the area of the dump site, the old road is shown as cleared while the high ground above with the new road is still forested.

In 1894 when Sections 17, 18 and 19 Parish of Maungataniwha south of Peria Valley Road were surveyed (SO 6883, 1894), the old road was formally surveyed and described as “Old Ridge Road to Victoria Valley” and the end of the formation of the current alignment is shown, 300m to the northeast of the dumpsite near the intersection with Mangatoetoe Road.

There is no indication of potential archaeological features in the historic or modern aerial imagery, aside from the old track/road.

### E3.0 Site Visit

The proposed dump site was visited on 12 September 2023 and J. Tahere of Tahere Contractors Ltd was on-site at the time.

The existing upper winter works were walked over, with particular attention paid to swales and spoil, after which the lower, summer dump site was inspected, along with the spurs above.

No archaeological sites or features were observed.

### E4.0 Findings and Recommendations

There are no archaeological or historic sites or features on the proposed dump site. The steep to rolling country along Peria Valley Road appears to have been cleared by the late 19<sup>th</sup> century with the current road following more or less the original Maori track between Victoria Valley and Peria with minor deviations to traverse the steeper country. Pre-1900 use and occupation of the area seems unlikely, apart from transiting the area via the different iterations of the track and road, until after 1894 when the modern sections were surveyed out of the Maungataniwha Block and opened for settlement.

There is little to know chance of archaeological or other heritage sites or features being affected.

- 1) An archaeological Authority is not required for the establishment of the spoil dump site on Lot 1 DP 35169.
- 2) An accidental discovery protocol should be in place during site establishment, track/road improvements and topsoil stripping for sediment control features and the dump site itself.
- 3) If archaeological remains or buried cultural deposits are encountered during works, such as layers of shell midden, oven stones, black, charcoal-rich or stained soils, artefacts etc., work should cease in the immediate vicinity and Heritage New Zealand and Geometria Ltd should be contacted for advice on how to proceed according to the site instruction protocols.

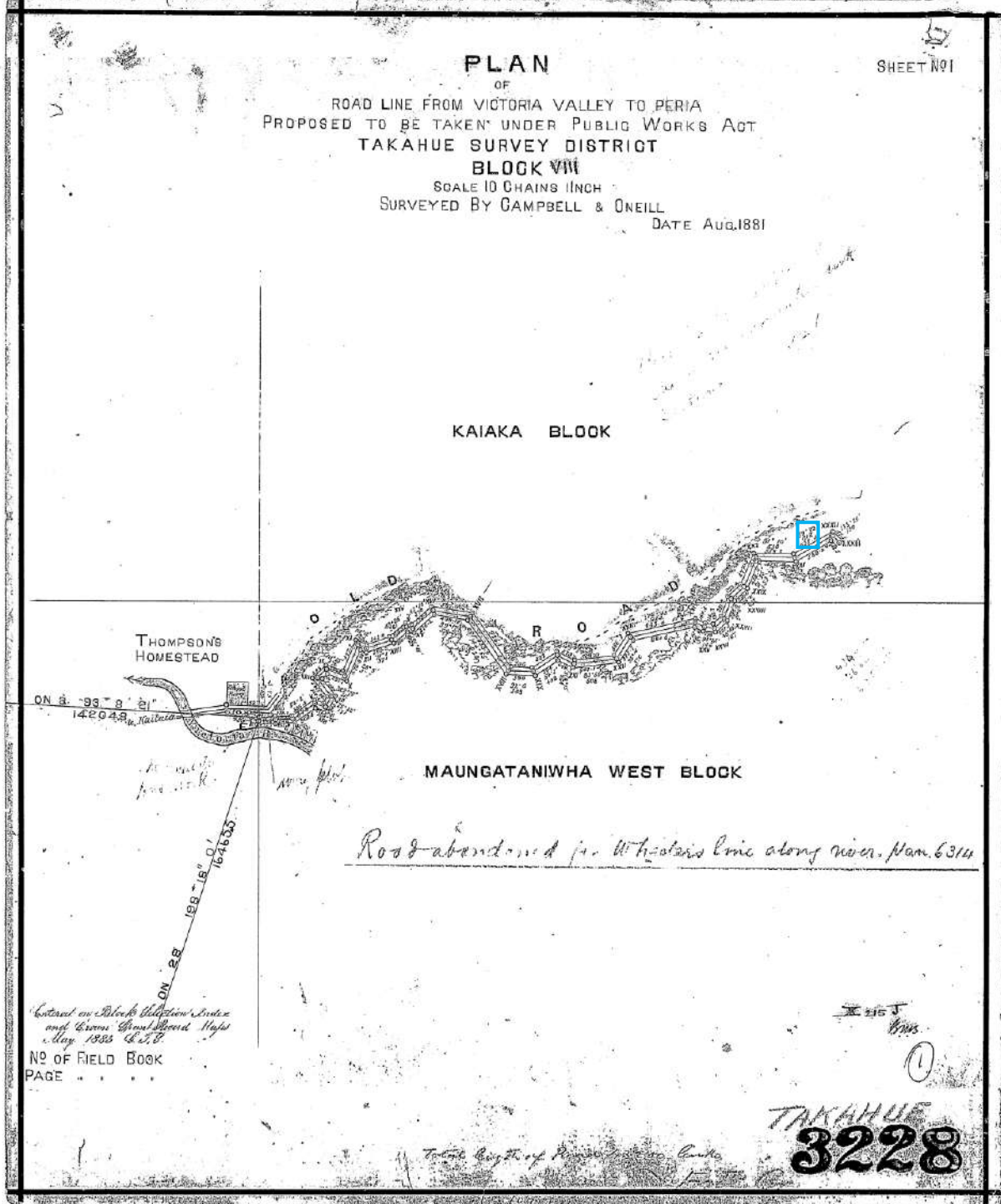


Figure 71: SO 3288-1 (1881) with approximate location of spoil dump site in blue.



Figure 72: SO 6933 (1894) with approximate location of spoil dump site in blue.



Figure 73: Peria Valley Road spoil dump site, looking west.



Figure 74: Looking north.



Figure 75: Looking northeast along farm track/old road alignment.



## Appendix G – Pamapurua Spoil Dump Site

### G1.0 Proposal

Waka Kotahi proposes establishing a dump site at 7189 State Highway 1 Pamapurua, including improvements to the road crossing establishment of sediment control around the site, topsoil stripping and changes to drainage and fencing. Some retaining would also probably be required.

The proposal has been provided in the form of the planning checklist document prepared by Stellar Projects Ltd provided by S. Brooke in September 2023, MANGAMUKA 2022 SLIP RESPONSE Possible Northern Fill Site 7189 State Highway 1, Kaitaia, dated 31 May 2023.

The dump proposed site is located on the western side of the 2ha Te Konoti Block A6B Block, with the level eastern side of the block containing the urupa and church. The western side of the block is in rank grass, and is separated from the church and urupa by a post and wire fence. It is bisected by a gully rising west to east towards the dividing fence. A road crossing and gate to the highway on the northern side of the bare block provides access to a narrow strip of level land adjacent to the highway, which then drops away into the gully. On the south side of the gully the ground rises steeply to meet a spur which rises west to east to the level ground.

The proposal calls for placing spoil on the upper slope of the north side of the gully to raise the ground level and provide room for the expansion of the urupa. The gully has a moderate slope and the earthworks would likely require specific geotechnical design to ensure land stability is achieved. There has been no geotechnical investigation or civil design of the proposed activity.

### G2.0 Desktop Review

Archaeological site O04/210 site is recorded on the south side of the property. It was originally recorded by Forest Service superintendent and avocational archaeologist R. Lawn who recorded the site as a ridge pā with 'levels' (terraces) under grass on the low ridge south of the church. The site was re-recorded by A. Leahy in 1979 who noted that most of the site had been destroyed by the urupa with the rest in poor pasture. She recorded a dozen ill-defined terraces on the ridge, with a possible in-filled ditch behind the urupa, east of the terraces (Figure 76). The site was viewed from the western side of the river by E. Callaghan in 2014, when she was asked to relocate the site by an adjacent landowner as it was mislocated on their property at the time, according to the ArchSite database.

The urupa and churchyard is also a scheduled Site of Cultural Significance to Māori in the Far North District Plan, MS05-78 Tarakaka Cemetery Reserve & waahi tapu. A five acre cemetery was partitioned out of the Te Konoti Block in 1894 (Te Konoti A2), according to Maori Land Court records and a historic narrative prepared by T. Latimer.

The current church is the third on the site, the second church being visible in the 1950 aerial imagery to the south west of the current building, and aligned parallel to the highway, rather than perpendicular like the current building. This building was replaced by the new church in 1956 and this area is now in graves; the old church was to be used as the local hall.

Both modern and historic aerial imagery (Figure 77 - Figure 80) show the remains of what appears to be a defensive earthwork with multiple flanking angles suggestive of gun-fighting adaptation on the northern face, most obvious in the 1950 aerial. A western return of the ditch back towards the river is most visible in the 1973 aerial.

It seems probable that there was a gunfighting pa established on the edge of the escarpment above the river, with the defensive ditch on the western and northern side enclosing approximately 900m<sup>2</sup>, and

the southern and eastern side protected by the steep slope down to the river. It is not clear whether the terraces on the western spur are part of the same occupation, or pre- or post-date the pā.

A review of approximately 20 historic survey plans for the area did not reveal any additional information about the pā or other occupation in the vicinity of the spoil dump site and urupa/churchyard. ML 677 (1867) is the original survey of the Te Konoti Block produced in the course of the original title investigation. The name “Hikutara” is shown on ML 677 (1867; Figure 81) approximately 300m to the southeast of the project area. Other cultivation areas, whare, names and descriptions of physical features are shown in the wider area on other plans from this period through to 1917. Survey plan ML 2347 (1871; Figure 82) Orakiroa shows the next nearest historic feature, a cultivation on the south side of the river, approximately 200m south of the pā.

ML 677/A (~1884?; Figure 83) probably dates to the first partition of Te Konoti, with subsequent subdivisions marked up on the plan, along with the various dates it was produced at the Native Land Court. It shows the survey of the five acre Te Konoti A2, the original appellation of the urupa which was partitioned out of Te Konoti A in 1894.

Features recorded in the vicinity are illustrated on Figure 84 - Figure 85.

### **G3.0 Site Visit**

The proposed spoil dump site (Figure 86) was visited for an hour on 9 September 2023, in the company of T. Latimer, R. Gabel, and G. Latimer. The possible infilled defensive ditch in the urupa was visible as a slightly darker line of vegetation and shallow swale running across the rear of the urupa under closely mowed grass, but was not visible beneath the rank grass on the western side of the internal fence (Figure 87).

A number of possible terraces were observed on the southern descending spur to the west of the fence. There were larger transverse terraces on the spur which were 10-15 x 10 x 0.3m in size, and smaller lateral terraces around the head of the gully which are more likely to be erosional features. However they were all relatively indistinct and while they looked like they started as erosion features, have probably been modified by occupation and/or gardening (Figure 88).

A track has been benched along the western side of the fence line north to south, but no archaeological features, layering or artefacts were visible in the batter where it was visible.

### **G4.0 Preliminary Findings and Recommendations**

There is an archaeological site present in the project area, O04/210 and it is likely to have been a pā at some point. Some of the features recorded in Leahy’s 1979 are present in the area of the proposed spoil dump site on the northwest side of the parcel, but the bulk of the site is on the southern half of Te Konoti A6B.

There is a moderate likelihood of modifying archaeological features if the northern part of the property is used as a spoil dump site. Archaeological features are likely to be relatively shallow, would be modified by topsoil stripping and other otherwise minor works like sediment control and retaining. The features may or may not be associated with the occupation suggested by the pā site and terraces. Likely features include postholes, ovens and hearths, food refuse, and given the presence of the wahi tapu, formal burials may be present.

A formal archaeological significance assessment is likely to find the site as being of high archaeological significance, based on the site type and association with the urupa.

Heritage New Zealand Pouhere Taonga has a long-standing policy of not granting Authorities or allowing development on pā or wahi tapu, with limited exceptions for e.g. walking tracks, signage and toher visitor amenities over pā in public ownership, stabilisation of sites, and management activities associated with the ongoing and use of such places.

However, if the establishment of the spoil dump site provides additional room for the future expansion of the urupa and if this can be accomplished in lieu of extending burials into the pā and the pā can be protected from further modification, this may be a net gain for protecting archaeological and historic heritage values.

In summary:

- 1) An archaeological Authority is required for the establishment of the spoil dump site on the Te Konoti A6B block.
- 2) Any earthworks including enabling works and topsoil stripping should be monitored by an archaeologist.
- 3) Any features encountered would need to be investigated.
- 4) Given the ongoing use of the urupa, and long-term plans for extending westwards into the as yet undeveloped part of the property, the development of the northern part as a spoil dump site could be used as an opportunity to confirm or otherwise the presence of a pā by test excavation of the possible infilled defensive ditch while excavators are on site for the spoil site, followed by permanent protection of the pā and reserving it from future burials.
- 5) If archaeological remains or buried cultural deposits are encountered in the project area in the meantime, such as layers of shell midden, oven stones, black, charcoal-rich or stained soils, artefacts etc., work should cease in the immediate vicinity and Heritage New Zealand and Geometria Ltd should be contacted for advice on how to proceed according to the site instruction protocols.

Ill-defined stepped terraces beside Awanui River. Possible ditch across ridge but now filled in where cemetery is.

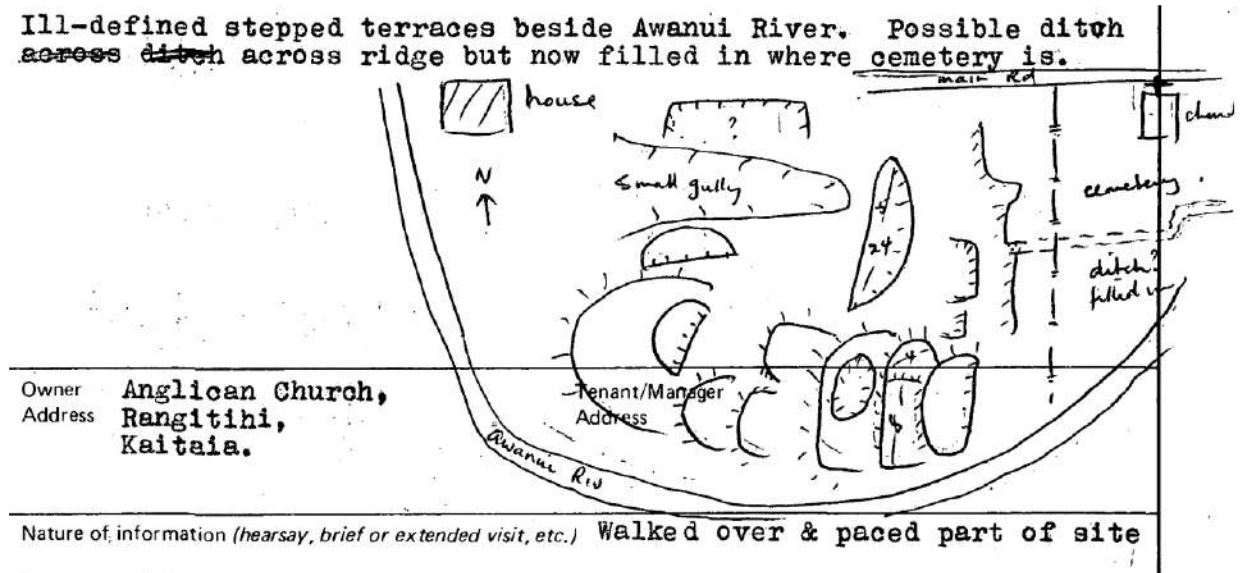


Figure 76: Sketch map of site by Leahy (1979).



Figure 77: Detail from aerial image SN 350 1365/16 (1950) showing clearest image of possible defensive ditch with gun-fighting flanking angles at rear of urupa (in blue).



Figure 78: Detail from SN 1417 B/12 (1961) showing possible defensive ditch with gun-fighting features at rear of urupa.



Figure 79: Detail from aerial image SN 3675 C/3 (1973) with defensive ditch and possible terraces.



Figure 80: Detail from 2016 aerial showing possible terraces, and defensive ditch (Google Earth).



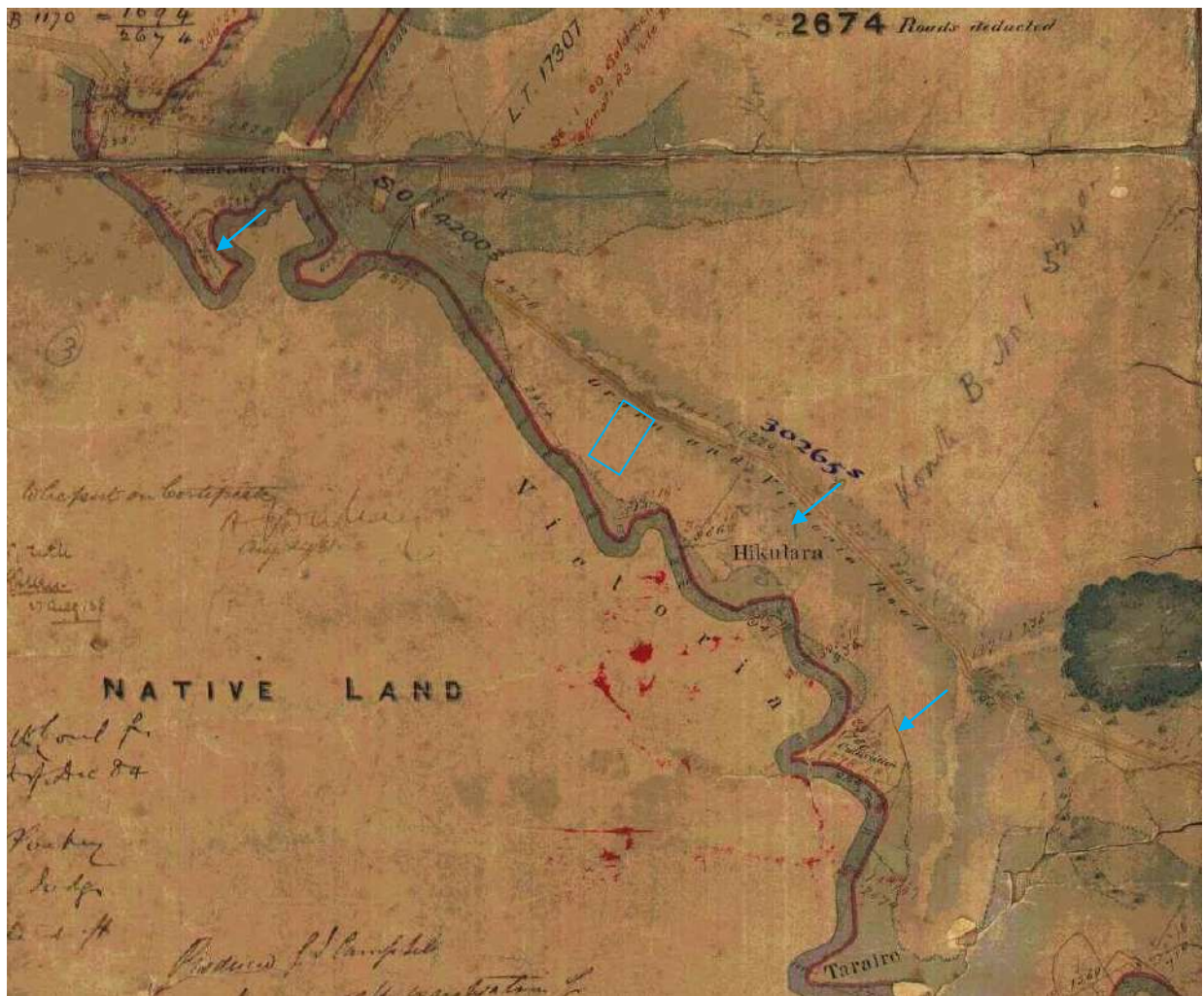


Figure 81: Detail from ML 677 (1867) Plan of the Te Konoti Block, showing "Hikutara" southwest of project area, and neighbouring cultivations.

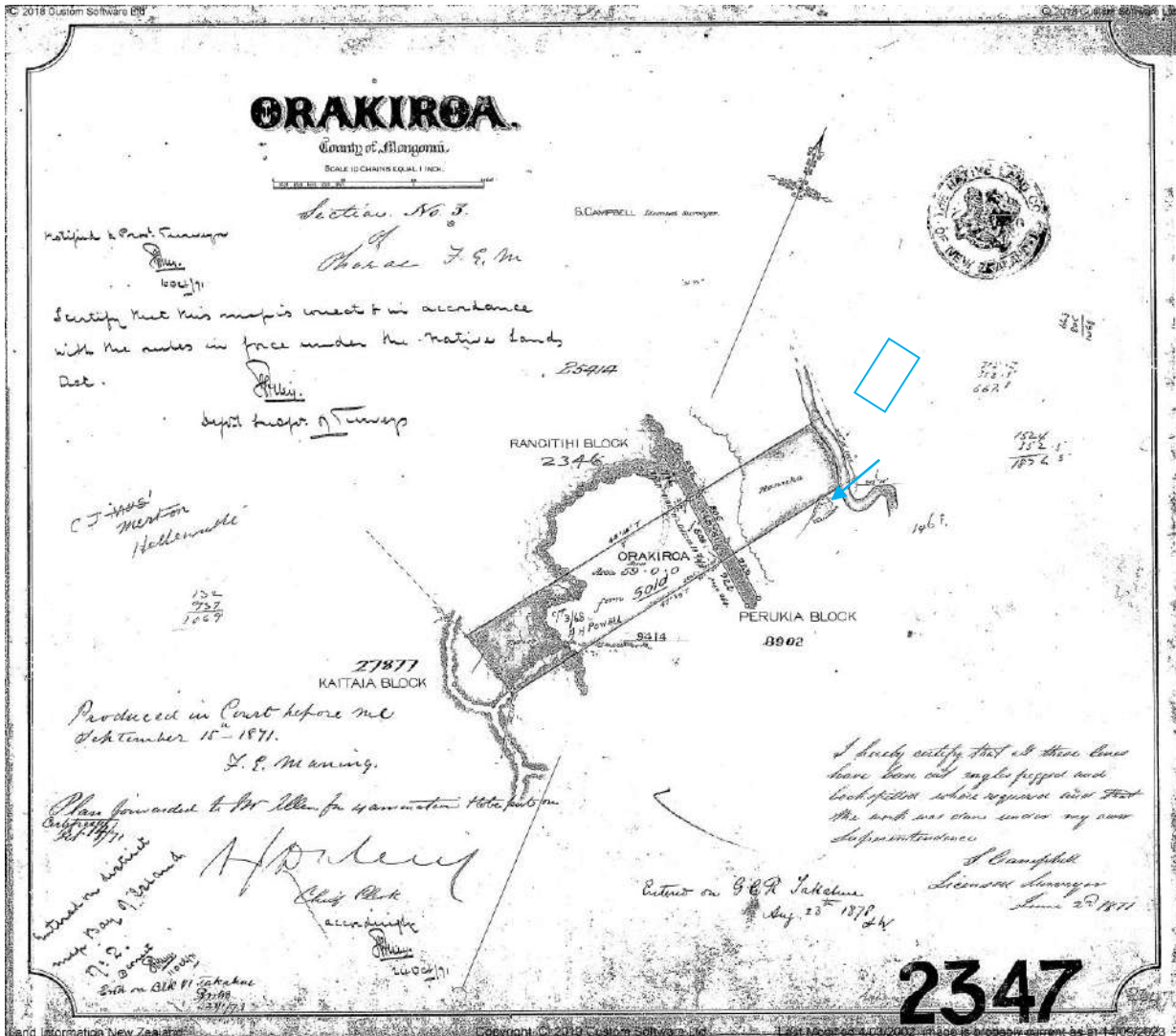


Figure 82: ML 2347 (1871) Orakiroa, with cultivation on the eastern side of the block adjacent to the river, south of the project area.



Figure 83: ML 677/A (~1884) with partition of the five acre Te Kōtiti A2 block for the urupa.

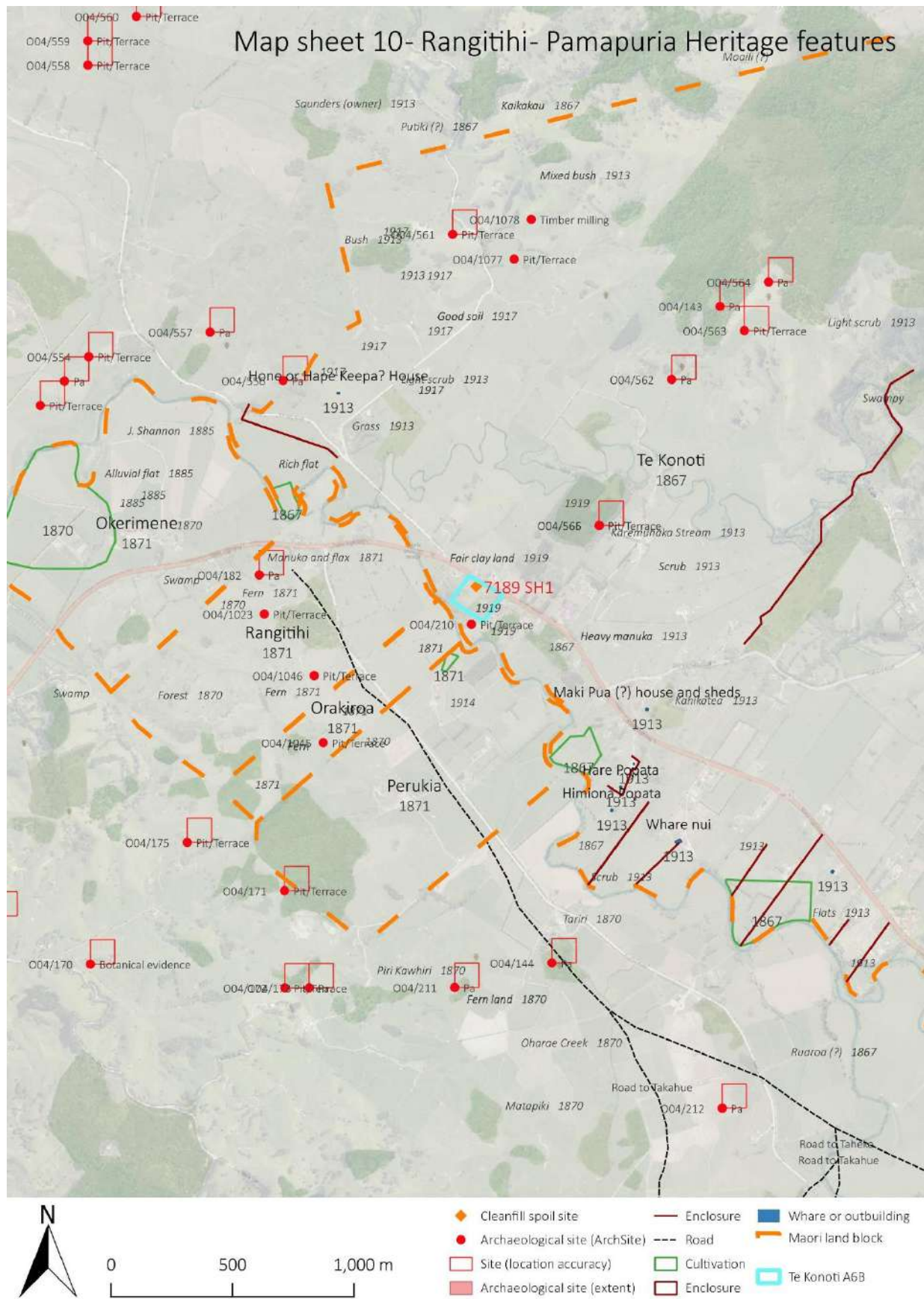


Figure 84: Archaeological and historic heritage features at Rangitihī-Pamapurīa.

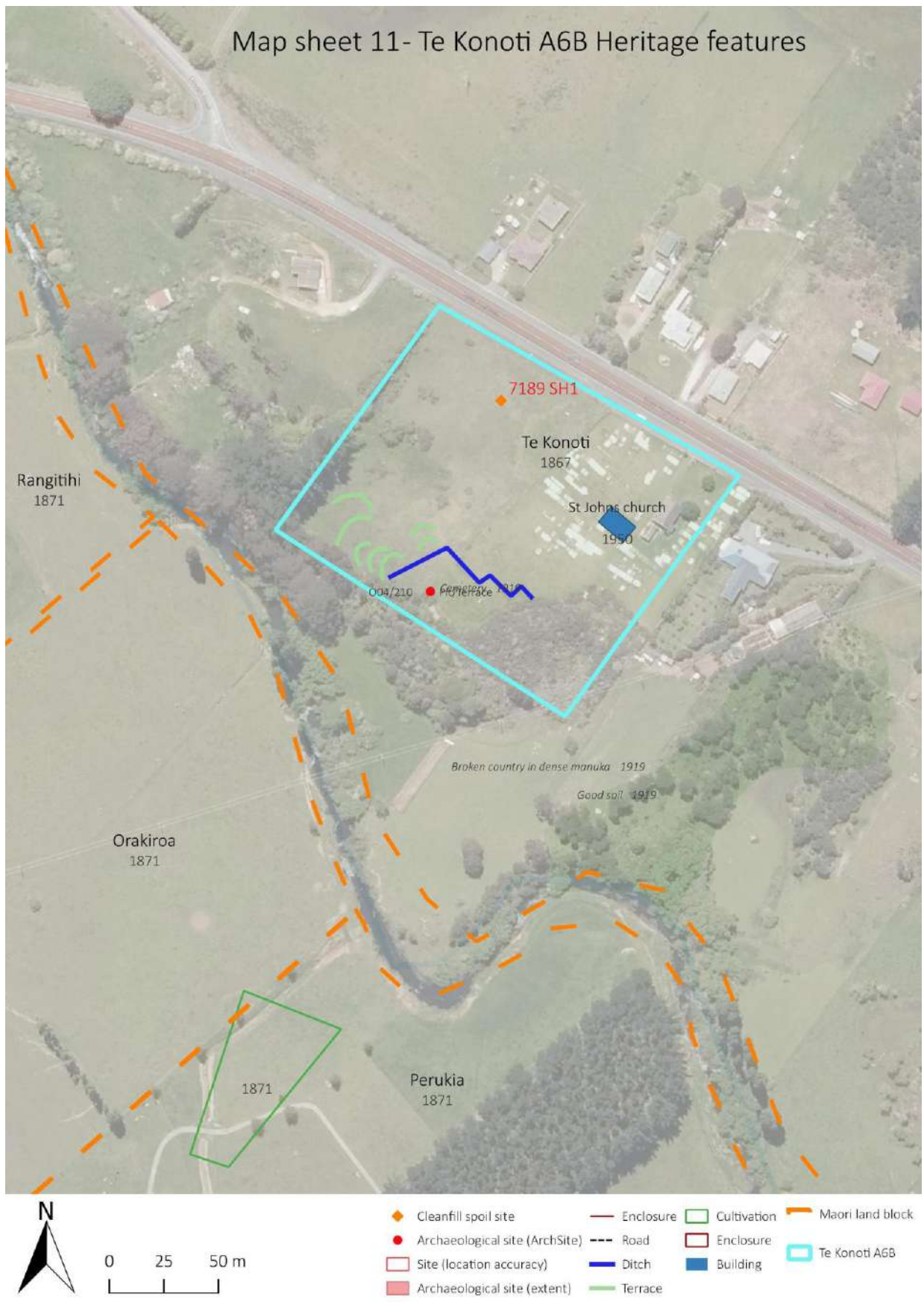


Figure 85: Archaeological and historic heritage features at Te Konoti A6B.



Figure 86: Looking north towards proposed spoil dump site.



Figure 87: Looking south over rear of urupa with possible infilled ditch.



Figure 88: Possible terraces down western ridgeline.



## Site Record Form

**NZAA SITE NUMBER:** O04/210

**SITE TYPE:** Pit/Terrace

**SITE NAME(s):**

**DATE RECORDED:**

**SITE COORDINATES (NZTM) Easting:** 1630225

**Northing:** 6113419

**Source:** On Screen

**IMPERIAL SITE NUMBER:** N10/13

**METRIC SITE NUMBER:** O04/210



### Finding aids to the location of the site

South of main road. West of Anglican Church and cemetery.

### Brief description

Terraced ridge, and possible in-filled ditch.

### Recorded features

Terrace

### Other sites associated with this site



**SITE RECORD HISTORY****NZAA SITE NUMBER:** O04/210**Site description**

Updated 31/10/2014 (Field visit), submitted by elisabethcallaghan , visited 21/10/2014 by Callaghan, Elisabeth  
Grid reference (E1630225 / N6113419)

The site is located on the northern side of the Victoria/Awanui River in the Victoria Valley. Refer to the original site record form sketch diagram of the site. Site viewed from across the river on an adjacent property to the west on the western side of the river. The site visit was as a result of a request by the owners agent to confirm location of site O04/210. The site was incorrectly located on ArchSite database.

**Condition of the site****Statement of condition**

Updated: 01/09/2015, Visited: 21/10/2014 - Poor - Visible features are incomplete, unclear and/or the majority have been damaged in some way

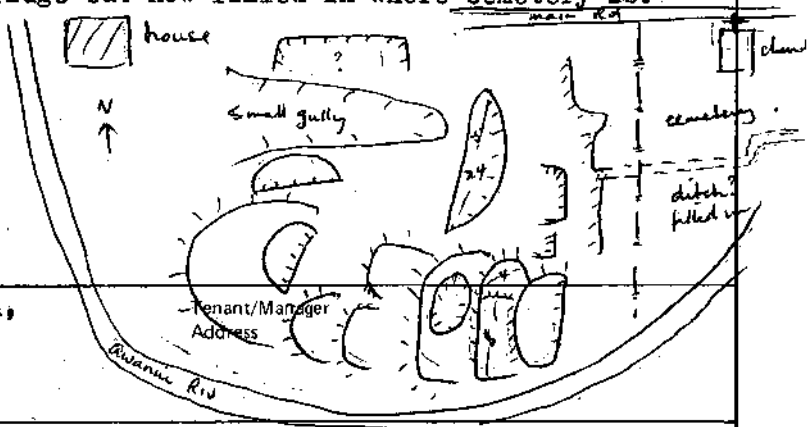
**Current land use:****Threats:**

SITE RECORD INVENTORY	NZAA SITE NUMBER: O04/210
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Supporting documentation held in ArchSite

AD AW - AA AA DRO

<p>NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION  <b>SITE RECORD FORM</b>                  Map number 10                  Map name <i>Kaitiaki</i>                  Map edition Aug. 1965                  Grid Reference 835683</p>	<p style="text-align: center;">10/13 SITE NUMBER <i>N10/13</i></p> <hr/> <p>SITE NAME: MAORI OTHER</p> <hr/> <p>SITE TYPE Ridge pa</p>
<p style="text-align: center;"><i>E083500 N868300</i></p> <p>1. Aids to relocation of site Just below church on south of SHI on edge of Awanui River where it crosses SHI.</p>	
<p>2. State of site; possibility of damage or destruction</p>	
<p>3. Description of site <i>(NOTE: This section is to be completed ONLY if no separate Site Description Form is to be prepared.)</i></p> <p style="padding-left: 40px;">Levels show up on low ridge below church. Few chains off SHI. Area grassed.</p>	
<p>4. Owner Address</p>	<p>Tenant/Manager Address</p>
<p>Attitude</p>	<p>Attitude</p>
<p>5. Methods and equipment used</p> <p>Photographs taken: Yes/No (Describe on Photograph Record Form)                  Date recorded 9/71</p>	
<p>6. Aerial photograph or mosaic No. <span style="float: right;">Site shows: Clearly/badly/not at all</span></p>	
<p>7. Reported by Address</p>	<p>Filekeeper <i>[Signature]</i></p>
<p>Date <i>9/71</i></p>	<p>Date <i>25/4/73</i></p>

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION <b>SITE RECORD FORM (NZMS1)</b>		NZAA NZMS 1 SITE NUMBER <b>N10/13</b> DATE VISITED <b>12/3/79</b> SITE TYPE <b>terraced ridge (pa)</b> SITE NAME: MAORI OTHER													
NZMS 1 map number <b>N10</b> NZMS 1 map name <b>Kaitaia</b> NZMS 1 map edition <b>2nd 1977</b>		Grid Reference Easting <b>0 8 3 6 0 0</b> Northing <b>8 6 8 3 0 0</b>													
1. Aids to relocation of site (attach a sketch map) <b>East of Awanui River bridge at Rangitihī &amp; south of main road, West of Anglican church &amp; cemetery.</b>															
2. State of site and possible future damage <b>Part of site totally destroyed by cemetery, rest in poor pasture. May have once been a pa with ditch now filled in.</b>															
3. Description of site (Supply full details, history, local environment, references, sketches, etc. If extra sheets are attached, include a summary here) <b>Ill-defined stepped terraces beside Awanui River. Possible ditch across ditch across ridge but now filled in where cemetery is.</b>															
4. Owner <b>Anglican Church,</b> Address <b>Rangitihī,</b> <b>Kaitaia.</b>															
6. Reported by <b>A. Leahy,</b> Address <b>Auckland.</b> <i>Previously recorded.</i>		Filekeeper <b>p.p. S.M.B.</b> Date <b>11/12/79</b>													
5. Nature of information (hearsay, brief or extended visit, etc.) <b>Walked over &amp; paced part of site</b> Photographs (reference numbers, and where they are held) Aerial photographs (reference numbers, and clarity of site) <b>2589/5-6 shows badly</b>															
7. Key words <b>ridge terraces on river bend.</b>															
8. New Zealand Register of Archaeological Sites (for office use) NZHPT Site Field Code															
<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td style="padding: 2px;">A</td><td style="padding: 2px;">P</td></tr> <tr><td style="padding: 2px;">A</td><td style="padding: 2px;">W</td></tr> <tr><td style="padding: 2px;">A</td><td style="padding: 2px;">E</td></tr> </table> Type of site Local environment today Land classification		A	P	A	W	A	E	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td style="padding: 2px;">B</td><td style="padding: 2px;">B</td></tr> <tr><td style="padding: 2px;">A</td><td style="padding: 2px;">A</td></tr> <tr><td style="padding: 2px;">D</td><td style="padding: 2px;">R</td></tr> </table> Present condition and future danger of destruction Security code Local body		B	B	A	A	D	R
A	P														
A	W														
A	E														
B	B														
A	A														
D	R														

## Appendix G – Pamapurua Spoil Dump Site

### G1.0 Proposal

Waka Kotahi proposes establishing a dump site at 7189 State Highway 1 Pamapurua, including improvements to the road crossing establishment of sediment control around the site, topsoil stripping and changes to drainage and fencing. Some retaining would also probably be required.

The proposal has been provided in the form of the planning checklist document prepared by Stellar Projects Ltd provided by S. Brooke in September 2023, MANGAMUKA 2022 SLIP RESPONSE Possible Northern Fill Site 7189 State Highway 1, Kaitaia, dated 31 May 2023.

The dump proposed site is located on the western side of the 2ha Te Konoti Block A6B Block, with the level eastern side of the block containing the urupa and church. The western side of the block is in rank grass, and is separated from the church and urupa by a post and wire fence. It is bisected by a gully rising west to east towards the dividing fence. A road crossing and gate to the highway on the northern side of the bare block provides access to a narrow strip of level land adjacent to the highway, which then drops away into the gully. On the south side of the gully the ground rises steeply to meet a spur which rises west to east to the level ground.

The proposal calls for placing spoil on the upper slope of the north side of the gully to raise the ground level and provide room for the expansion of the urupa. The gully has a moderate slope and the earthworks would likely require specific geotechnical design to ensure land stability is achieved. There has been no geotechnical investigation or civil design of the proposed activity.

### G2.0 Desktop Review

Archaeological site O04/210 site is recorded on the south side of the property. It was originally recorded by Forest Service superintendent and avocational archaeologist R. Lawn who recorded the site as a ridge pā with 'levels' (terraces) under grass on the low ridge south of the church. The site was re-recorded by A. Leahy in 1979 who noted that most of the site had been destroyed by the urupa with the rest in poor pasture. She recorded a dozen ill-defined terraces on the ridge, with a possible in-filled ditch behind the urupa, east of the terraces (Figure 76). The site was viewed from the western side of the river by E. Callaghan in 2014, when she was asked to relocate the site by an adjacent landowner as it was mislocated on their property at the time, according to the ArchSite database.

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The current church is the third on the site, the second church being visible in the 1950 aerial imagery to the south west of the current building, and aligned parallel to the highway, rather than perpendicular like the current building. This building was replaced by the new church in 1956 and this area is now in graves; the old church was to be used as the local hall.

Both modern and historic aerial imagery (Figure 77 - Figure 80) show the remains of what appears to be a defensive earthwork with multiple flanking angles suggestive of gun-fighting adaptation on the northern face, most obvious in the 1950 aerial. A western return of the ditch back towards the river is most visible in the 1973 aerial.

It seems probable that there was a gunfighting pa established on the edge of the escarpment above the river, with the defensive ditch on the western and northern side enclosing approximately 900m<sup>2</sup>, and

the southern and eastern side protected by the steep slope down to the river. It is not clear whether the terraces on the western spur are part of the same occupation, or pre- or post-date the pā.

A review of approximately 20 historic survey plans for the area did not reveal any additional information about the pā or other occupation in the vicinity of the spoil dump site and urupa/churchyard. ML 677 (1867) is the original survey of the Te Konoti Block produced in the course of the original title investigation. The name “Hikutara” is shown on ML 677 (1867; Figure 81) approximately 300m to the southeast of the project area. Other cultivation areas, whare, names and descriptions of physical features are shown in the wider area on other plans from this period through to 1917. Survey plan ML 2347 (1871; Figure 82) Orakiroa shows the next nearest historic feature, a cultivation on the south side of the river, approximately 200m south of the pā.

ML 677/A (~1884?; Figure 83) probably dates to the first partition of Te Konoti, with subsequent subdivisions marked up on the plan, along with the various dates it was produced at the Native Land Court. It shows the survey of the five acre Te Konoti A2, the original appellation of the urupa which was partitioned out of Te Konoti A in 1894.

Features recorded in the vicinity are illustrated on Figure 84 - Figure 85.

### **G3.0 Site Visit**

The proposed spoil dump site (Figure 86) was visited for an hour on 9 September 2023, in the company of T. Latimer, R. Gabel, and G. Latimer. The possible infilled defensive ditch in the urupa was visible as a slightly darker line of vegetation and shallow swale running across the rear of the urupa under closely mowed grass, but was not visible beneath the rank grass on the western side of the internal fence (Figure 87).

A number of possible terraces were observed on the southern descending spur to the west of the fence. There were larger transverse terraces on the spur which were 10-15 x 10 x 0.3m in size, and smaller lateral terraces around the head of the gully which are more likely to be erosional features. However they were all relatively indistinct and while they looked like they started as erosion features, have probably been modified by occupation and/or gardening (Figure 88).

A track has been benched along the western side of the fence line north to south, but no archaeological features, layering or artefacts were visible in the batter where it was visible.

### **G4.0 Preliminary Findings and Recommendations**

There is an archaeological site present in the project area, O04/210 and it is likely to have been a pā at some point. Some of the features recorded in Leahy’s 1979 are present in the area of the proposed spoil dump site on the northwest side of the parcel, but the bulk of the site is on the southern half of Te Konoti A6B.

There is a moderate likelihood of modifying archaeological features if the northern part of the property is used as a spoil dump site. Archaeological features are likely to be relatively shallow, would be modified by topsoil stripping and other otherwise minor works like sediment control and retaining. The features may or may not be associated with the occupation suggested by the pā site and terraces. Likely features include postholes, ovens and hearths, food refuse, and given the presence of the wahi tapu, formal burials may be present.

A formal archaeological significance assessment is likely to find the site as being of high archaeological significance, based on the site type and association with the urupa.

Heritage New Zealand Pouhere Taonga has a long-standing policy of not granting Authorities or allowing development on pā or wahi tapu, with limited exceptions for e.g. walking tracks, signage and toher visitor amenities over pā in public ownership, stabilisation of sites, and management activities associated with the ongoing and use of such places.

However, if the establishment of the spoil dump site provides additional room for the future expansion of the urupa and if this can be accomplished in lieu of extending burials into the pā and the pā can be protected from further modification, this may be a net gain for protecting archaeological and historic heritage values.

In summary:

- 1) An archaeological Authority is required for the establishment of the spoil dump site on the Te Konoti A6B block.
- 2) Any earthworks including enabling works and topsoil stripping should be monitored by an archaeologist.
- 3) Any features encountered would need to be investigated.
- 4) Given the ongoing use of the urupa, and long-term plans for extending westwards into the as yet undeveloped part of the property, the development of the northern part as a spoil dump site could be used as an opportunity to confirm or otherwise the presence of a pā by test excavation of the possible infilled defensive ditch while excavators are on site for the spoil site, followed by permanent protection of the pā and reserving it from future burials.
- 5) If archaeological remains or buried cultural deposits are encountered in the project area in the meantime, such as layers of shell midden, oven stones, black, charcoal-rich or stained soils, artefacts etc., work should cease in the immediate vicinity and Heritage New Zealand and Geometria Ltd should be contacted for advice on how to proceed according to the site instruction protocols.

Ill-defined stepped terraces beside Awanui River. Possible ditch across ridge but now filled in where cemetery is.

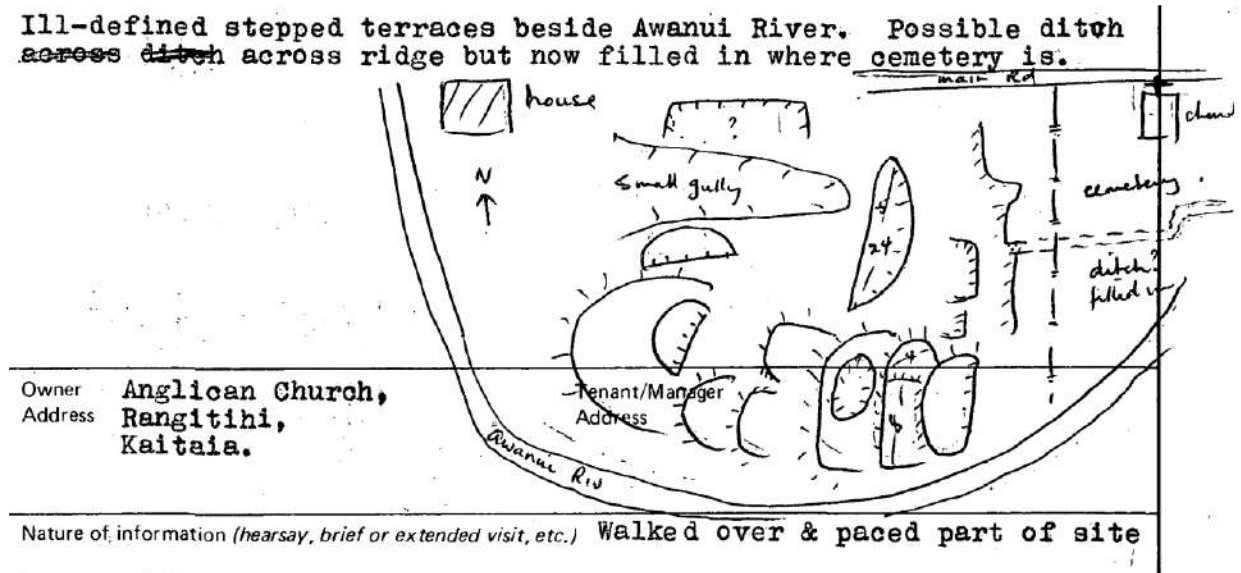


Figure 76: Sketch map of site by Leahy (1979).



Figure 77: Detail from aerial image SN 350 1365/16 (1950) showing clearest image of possible defensive ditch with gun-fighting flanking angles at rear of urupa (in blue).





Figure 78: Detail from SN 1417 B/12 (1961) showing possible defensive ditch with gun-fighting features at rear of urupa.



Figure 79: Detail from aerial image SN 3675 C/3 (1973) with defensive ditch and possible terraces.



Figure 80: Detail from 2016 aerial showing possible terraces, and defensive ditch (Google Earth).

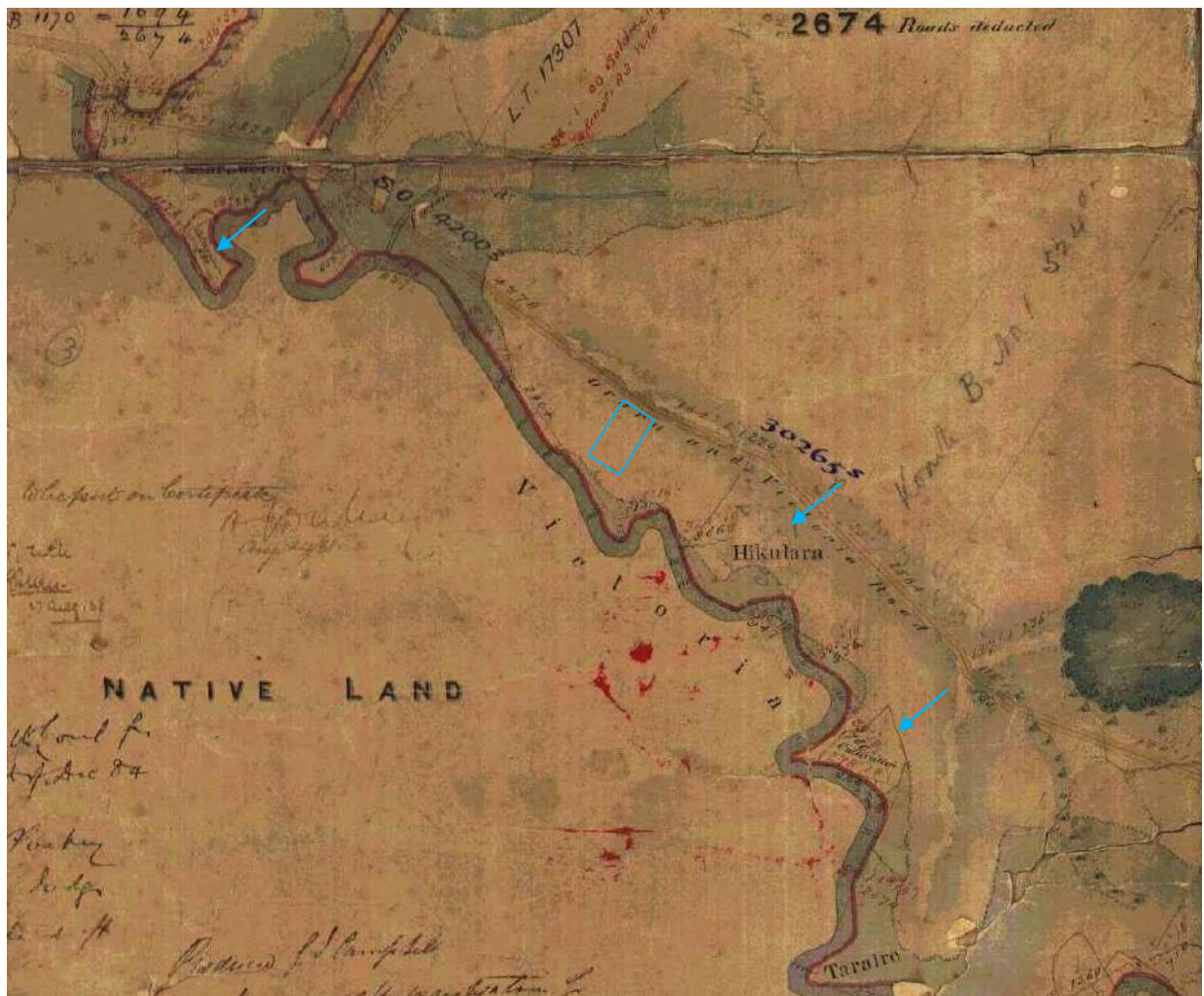


Figure 81: Detail from ML 677 (1867) Plan of the Te Konoti Block, showing "Hikutara" southwest of project area, and neighbouring cultivations.

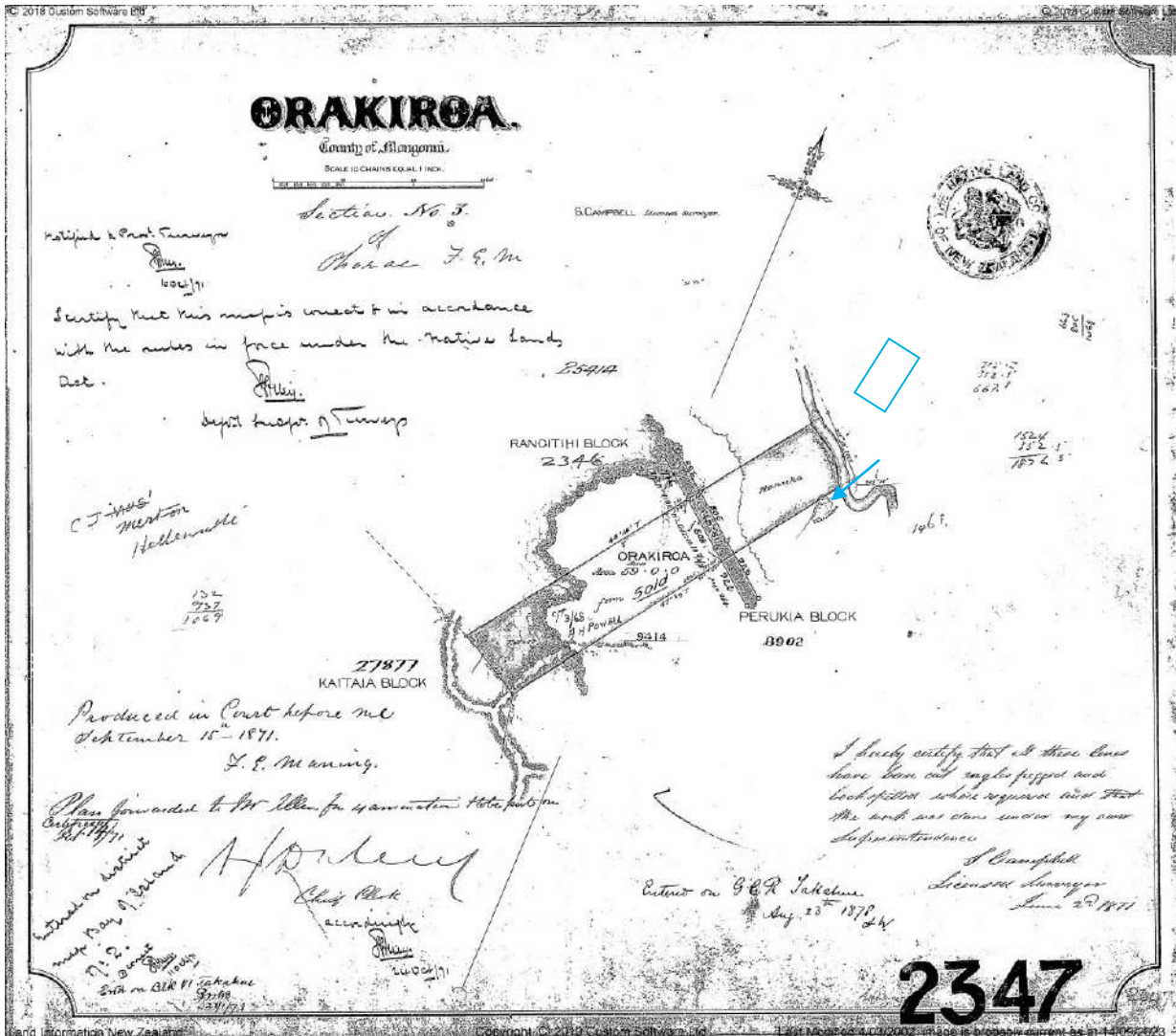


Figure 82: ML 2347 (1871) Orakiroa, with cultivation on the eastern side of the block adjacent to the river, south of the project area.



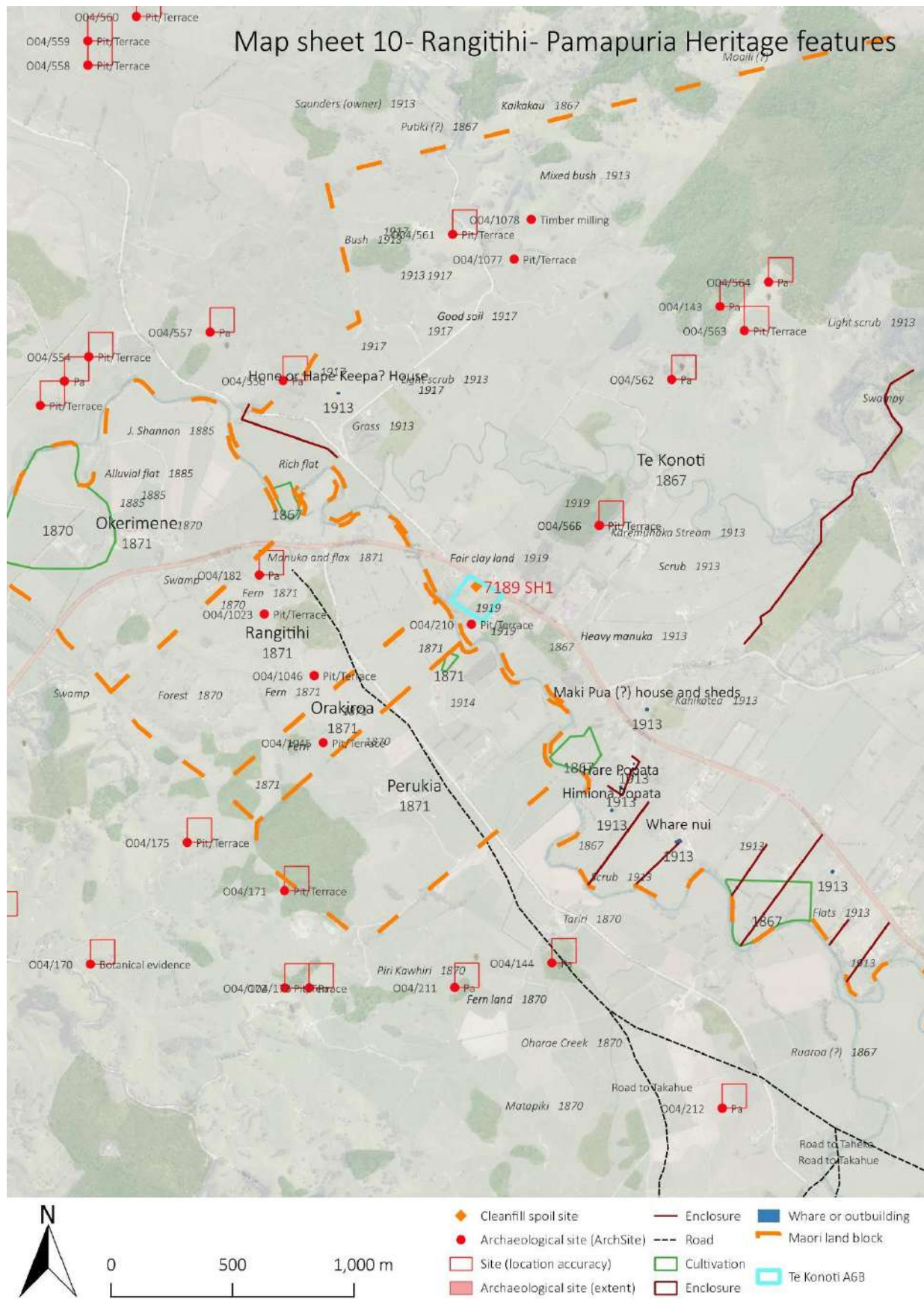


Figure 84: Archaeological and historic heritage features at Rangitihī-Pamapurīa.

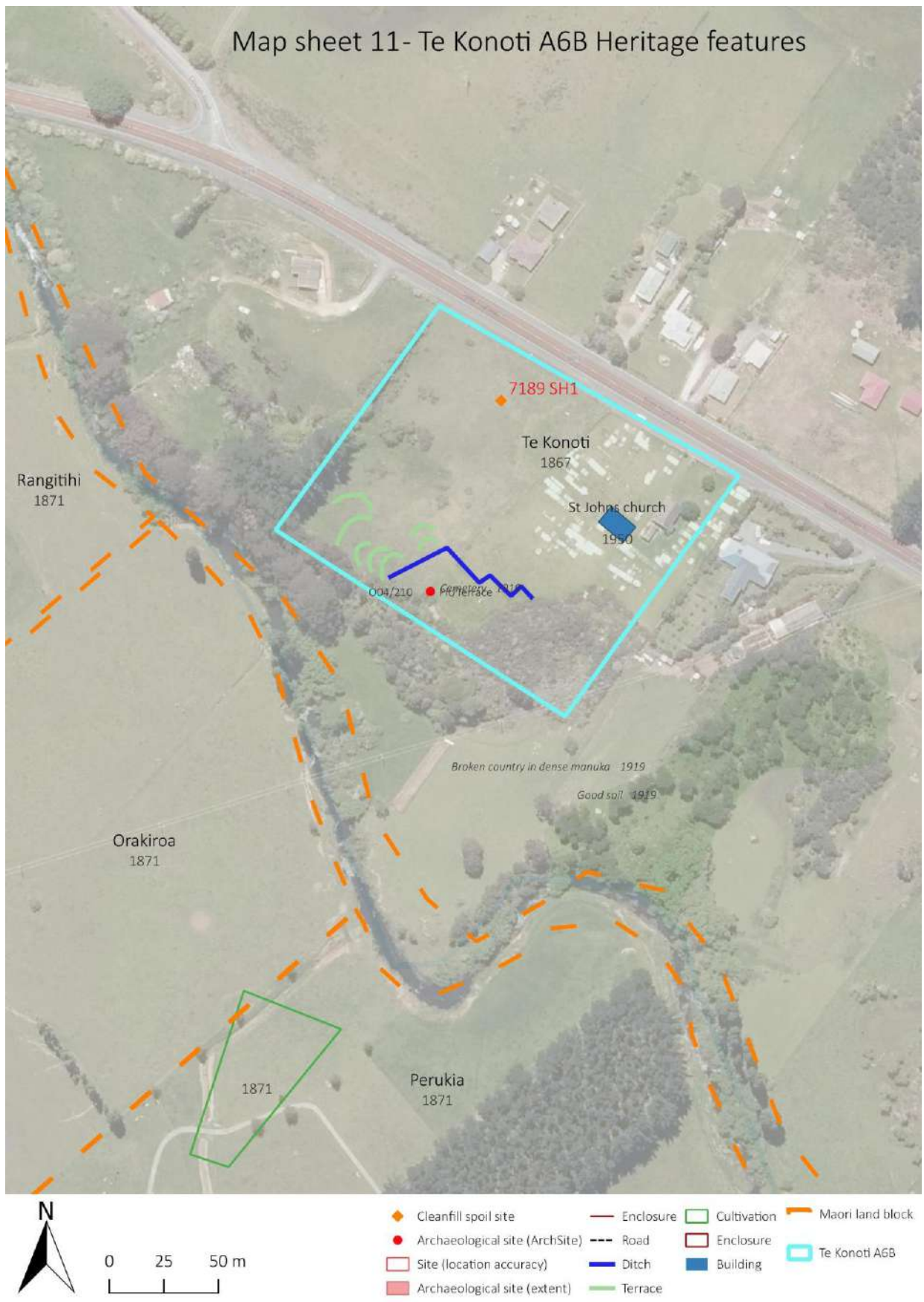


Figure 85: Archaeological and historic heritage features at Te Konoti A6B.





Figure 86: Looking north towards proposed spoil dump site.



Figure 87: Looking south over rear of urupa with possible infilled ditch.



Figure 88: Possible terraces down western ridgeline.



## Site Record Form

**NZAA SITE NUMBER:** O04/210

**SITE TYPE:** Pit/Terrace

**SITE NAME(s):**

**DATE RECORDED:**

**SITE COORDINATES (NZTM) Easting:** 1630225

**Northing:** 6113419

**Source:** On Screen

**IMPERIAL SITE NUMBER:** N10/13

**METRIC SITE NUMBER:** O04/210



### Finding aids to the location of the site

South of main road. West of Anglican Church and cemetery.

### Brief description

Terraced ridge, and possible in-filled ditch.

### Recorded features

Terrace

### Other sites associated with this site

**SITE RECORD HISTORY****NZAA SITE NUMBER:** O04/210**Site description**

Updated 31/10/2014 (Field visit), submitted by elisabethcallaghan , visited 21/10/2014 by Callaghan, Elisabeth  
Grid reference (E1630225 / N6113419)

The site is located on the northern side of the Victoria/Awanui River in the Victoria Valley. Refer to the original site record form sketch diagram of the site. Site viewed from across the river on an adjacent property to the west on the western side of the river. The site visit was as a result of a request by the owners agent to confirm location of site O04/210. The site was incorrectly located on ArchSite database.

**Condition of the site****Statement of condition**

Updated: 01/09/2015, Visited: 21/10/2014 - Poor - Visible features are incomplete, unclear and/or the majority have been damaged in some way

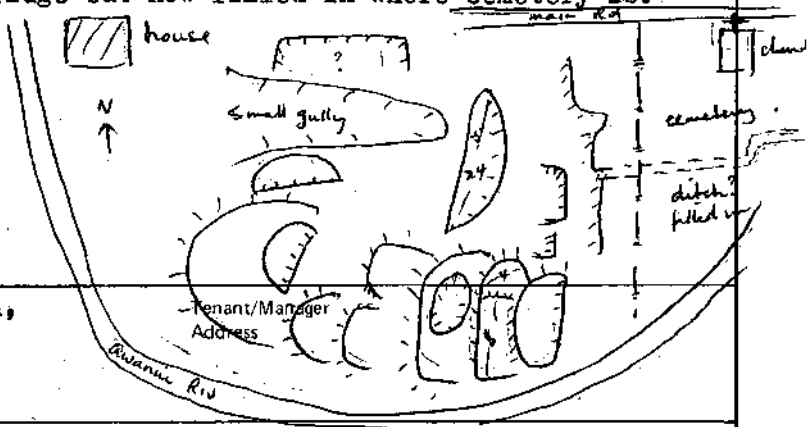
**Current land use:****Threats:**

<b>SITE RECORD INVENTORY</b>	<b>NZAA SITE NUMBER:</b> O04/210
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Supporting documentation held in ArchSite

AD AW - AA AA DRO

<p>NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION  <b>SITE RECORD FORM</b>                  Map number 10                  Map name <i>Kaitiaki</i>                  Map edition Aug. 1965                  Grid Reference 835683</p>	<p style="text-align: center;">10/13 SITE NUMBER <i>N10/13</i></p> <hr/> <p>SITE NAME: MAORI OTHER</p> <hr/> <p>SITE TYPE Ridge pa</p>
<p style="text-align: center;"><i>E083500 N868300</i></p> <p>1. Aids to relocation of site Just below church on south of SHI on edge of Awanui River where it crosses SHI.</p>	
<p>2. State of site; possibility of damage or destruction</p>	
<p>3. Description of site <i>(NOTE: This section is to be completed ONLY if no separate Site Description Form is to be prepared.)</i></p> <p style="padding-left: 40px;">Levels show up on low ridge below church. Few chains off SHI. Area grassed.</p>	
<p>4. Owner Address</p>	<p>Tenant/Manager Address</p>
<p>Attitude</p>	<p>Attitude</p>
<p>5. Methods and equipment used</p> <p>Photographs taken: Yes/No (Describe on Photograph Record Form)                  Date recorded 9/71</p>	
<p>6. Aerial photograph or mosaic No.</p>	<p>Site shows: Clearly/badly/not at all</p>
<p>7. Reported by Address</p> <p style="text-align: center;"><i>hawn</i></p>	<p>Filekeeper <i>[Signature]</i></p>
<p>Date</p> <p style="text-align: center;"><i>9/71</i></p>	<p>Date <i>25/4/73</i></p>

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION <b>SITE RECORD FORM (NZMS1)</b>		NZAA NZMS 1 SITE NUMBER <b>N10/13</b> DATE VISITED <b>12/3/79</b> SITE TYPE <b>terraced ridge (pa)</b> SITE NAME: MAORI OTHER													
NZMS 1 map number <b>N10</b> NZMS 1 map name <b>Kaitaia</b> NZMS 1 map edition <b>2nd 1977</b>		Grid Reference Easting <b>0 8 3 6 0 0</b> Northing <b>8 6 8 3 0 0</b>													
1. Aids to relocation of site (attach a sketch map) <b>East of Awanui River bridge at Rangitihī &amp; south of main road, West of Anglican church &amp; cemetery.</b>															
2. State of site and possible future damage <b>Part of site totally destroyed by cemetery, rest in poor pasture. May have once been a pa with ditch now filled in.</b>															
3. Description of site (Supply full details, history, local environment, references, sketches, etc. If extra sheets are attached, include a summary here) <b>Ill-defined stepped terraces beside Awanui River. Possible ditch across ditch across ridge but now filled in where cemetery is.</b>															
4. Owner <b>Anglican Church,</b> Address <b>Rangitihī,</b> <b>Kaitaia.</b>		Tenant/Manager Address 													
5. Nature of information (hearsay, brief or extended visit, etc.) <b>Walked over &amp; paced part of site</b> Photographs (reference numbers, and where they are held) Aerial photographs (reference numbers, and clarity of site) <b>2589/5-6 shows badly</b>															
6. Reported by <b>A. Leahy,</b> Address <b>Auckland.</b> <b>Previously recorded.</b>		Filekeeper <b>p.p. S.M.B.</b> Date <b>11/12/79</b>													
7. Key words <b>ridge terraces on river bend.</b>															
8. New Zealand Register of Archaeological Sites (for office use) NZHPT Site Field Code															
<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td style="padding: 2px;">A</td><td style="padding: 2px;">P</td></tr> <tr><td style="padding: 2px;">A</td><td style="padding: 2px;">W</td></tr> <tr><td style="padding: 2px;">A</td><td style="padding: 2px;">E</td></tr> </table> Type of site Local environment today Land classification		A	P	A	W	A	E	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td style="padding: 2px;">B</td><td style="padding: 2px;">B</td></tr> <tr><td style="padding: 2px;">A</td><td style="padding: 2px;">A</td></tr> <tr><td style="padding: 2px;">D</td><td style="padding: 2px;">R</td></tr> </table> Present condition and future danger of destruction Security code Local body		B	B	A	A	D	R
A	P														
A	W														
A	E														
B	B														
A	A														
D	R														

**APPENDIX E Wildlife Permit 111521-FAU**



# Consent in respect of protected wildlife

Consent Number: 111521-FAU

**Pursuant** to section 71 of the Wildlife Act 1953:

## **New Zealand Transport Agency / Waka Kotahi**

Is authorised to exercise its powers under the Government Roding Powers Act 1989 in respect of protected wildlife as specified in this consent, and subject to the conditions specified in this consent.

### **BACKGROUND:**

The Minister of Conservation and the Minister of Transport’s delegated authorities are empowered to issue consents in respect of any protected wildlife under the Wildlife Act 1953.

The New Zealand Transport Agency (NZTA) needs to do emergency works under the ‘Mangamuka 2022 Slip Response Project’ (the Project) along State Highway 1 through the Maungataniwha Range south of Kaitaia. NZTA is empowered by section 61(4) of the Government Roding Powers Act 1989 to construct and maintain State highways.

In the course of construction, NZTA is expected to incidentally kill and disturb (including by taking steps to minimise harm to wildlife) protected wildlife. To do so requires the prior consent of the Minister of Conservation and the Minister of Transport delegated authority, under section 71 of the Wildlife Act.

This consent authorises NZTA (hereinafter, the Consent Holder) to undertake activities under the Government Powers Roding Act 1989 in respect of wildlife as specified in this consent, and subject to the conditions specified in this consent and its schedules.

**SIGNED by the Minister of Conservation’s Delegated Authority  
Senior Manager Regulatory Delivery**

  
\_\_\_\_\_  
Stacey Wrenn

**SIGNED by the Minister of Transport’s Delegated Authority  
Transport Secretary**

  
\_\_\_\_\_  
Bronwyn Turley



## SCHEDULE 1

1.	<p><b>Consented activity in respect of Wildlife (including the species, any approved quantities and collection methods)</b></p> <p>(Subject to Schedule 2, clause 2, Schedule 3)</p>	<p>1. <u>The activities consented to are:</u></p> <ul style="list-style-type: none"> <li>i. To catch or otherwise obtain alive, possess, and liberate protected wildlife identified in Schedule 4 for the purpose of species management.</li> <li>ii. To take or otherwise obtain the eggs of Northland brown kiwi <i>Apteryx mantelli</i> as listed in Schedule 5.</li> <li>iii. To kill protected wildlife identified in Schedule 4.</li> </ul> <p>2. <u>Quantity:</u></p> <ul style="list-style-type: none"> <li>i. As required.</li> </ul> <p>3. <u>Methodology:</u></p> <ul style="list-style-type: none"> <li>i. All activities must be carried out in a way that protects wildlife to the greatest extent possible and in accordance with the relevant species management plans found in Schedule 6 attached to this consent and in addition to any further conditions as required by this consent.</li> </ul>
2.	<p><b>The Land</b></p> <p>(Schedule 2, clause 2)</p>	<ul style="list-style-type: none"> <li>i. As shown on the maps in Schedule 7 being approximately 0.5 hectares of vegetation removal</li> </ul>
3.	<p><b>Personnel authorised to undertake activities</b></p> <p>(Schedule 2, clause 3)</p>	<ul style="list-style-type: none"> <li>i. Qualified experts with expertise relevant to the protected wildlife species concerned.</li> <li>ii. Others under the direct supervision of the qualified experts</li> </ul>
4.	<p><b>Term</b></p> <p>(Schedule 2, clause 4)</p>	<p>Commencing on and including 29 February 2024 and ending on and including 28 February 2028.</p>
5.	<p><b>Consent Holder's address for notices</b></p> <p>(Schedule 2, clause 7)</p>	<p>The Consent Holder's address in New Zealand</p> <p>Level 5 AON Centre 29 Customs Street West Auckland</p>
6.	<p><b>Department of Conservation address for notices</b></p>	<p>Address for all correspondence is:</p> <p>Permissions Team Department of Conservation Level 4 73 Rostrevor Street Hamilton, 3204</p> <p>Email: <a href="mailto:permissionshamilton@doc.govt.nz">permissionshamilton@doc.govt.nz</a></p>

## **SCHEDULE 2**

### **STANDARD TERMS AND CONDITIONS OF THE CONSENT**

#### **1. Interpretation**

- 1.1. The Consent Holder is responsible for the acts and omissions of its employees, contractors or agents. The Consent Holder is liable under this Consent for any breach of the terms of the Consent by its employees, contractors, or agents as if the breach had been committed by the Consent Holder.
- 1.2. Where obligations bind more than one person, those obligations bind those persons jointly and separately.

#### **2. Activities being Consented to**

- 2.1. The Consent Holder is only allowed to carry out the activities specified in Schedule 1, clause 1, on the Land described in Schedule 1, clause 2.
- 2.2. Any arrangements necessary for access over private land or leased land are the responsibility of the Consent Holder. This consent does not warrant that such access can be obtained.
- 2.3. The Consent Holder must comply with any reasonable request from the Minister of Conservation, delegate of the Minister of Conservation or Department of Conservation Ranger, for access to any wildlife.
- 2.4. The Consent Holder must immediately notify the Department of Conservation Kaitaia District Office Operations Manager ([kaitaia@doc.govt.nz](mailto:kaitaia@doc.govt.nz)) of any taxa found which are new to science. In addition, the Consent Holder must lodge holotype specimens and a voucher specimen of any new taxa with a recognised national collection.

#### **3. Authorised Personnel**

- 3.1. Only the Consent Holder, through the Authorised Personnel described in Schedule 1, clause 3(i)-(ii), must carry out the activities unless otherwise agreed in writing by the Department of Conservation Kaitaia District Office Operations Manager.

#### **4. Term of the Consent**

- 4.1. This Consent commences and ends on the dates set out in Schedule 1, clause 4.

#### **5. Compliance with statutory instruments, notices and directions**

- 5.1. The Consent Holder will comply with all notices, directions and requisitions and any competent authority relating to the conduct of the Activities.

#### **6. Terminating or varying the Consent by the Minister of Transport and Minister of Conservation**

- 6.1. This Consent may be terminated at any time in whole or in any part of the Activities if the Consent Holder breaches any of the conditions of this Consent.
- 6.2. Pursuant to section 48 of the Legislation Act 2019 and section 71 of the Conservation Act, the Minister of Transport and Minister of Conservation or their delegates may:

- 6.2.1. review, amend, delete, add to or otherwise vary the conditions or any other part of this Consent; or
- 6.2.2. terminate this Consent;

where they consider there has been a material change to the circumstances under which the Consent was granted (including, for example, because the effects of the Project on wildlife are more extensive or severe than foreseen) and the variation or revocation is appropriate considering the purposes of the Wildlife Act and the Government Rooding Powers Act.

- 6.3. Before varying or revoking the Consent through Schedule 2, clause 6.2, the Minister of Transport and Minister of Conservation or their delegates will:
  - 6.3.1. serve notice of their intention to do so on the Consent Holder stating the reasons for that proposed action and any information relied on in forming that intention;
  - 6.3.2. invite the Consent Holder to submit on the proposed action within 20 working days; and
  - 6.3.3. consider any submission from the Consent Holder provided within 20 working days.

## **7. Address for notices**

- 7.1. If the Consent Holder's details specified in Schedule 1, clause 5 change then the Consent Holder must notify the Department of Conservation within five working days of such change.

## **8. Payment of costs**

- 8.1. The Authority Holder must pay the standard Department of Conservation charge-out rates for any staff time and mileage required to monitor compliance with this Consent and to investigate any alleged breaches of the terms and conditions of it.
- 8.2. The Department of Conservation may at any time furnish the Consent Holder with an invoice for costs identified in Schedule 2, clause 8.1 of this Consent. The Consent Holder will pay the invoice within 20 working days of receipt of that invoice.

## **9. Varying the Consent by request of the Authority Holder**

- 9.1. The Authority Holder may apply to have this Consent varied by lodging an application with the Department of Conservation.

## **10. Special Conditions**

- 10.1. Special conditions are specified in Schedule 3. In the event of inconsistency or conflict, the Special Conditions will prevail over this Schedule 2.

## SCHEDULE 3

### SPECIAL CONDITIONS

#### 1. General

- 1.1. The Consent Holder must address the effects that the Activities will have on wildlife in accordance with the associated effects management measures set out in the species management plans, dated February 2024 (SMPs) under Schedule 6. As such, the Consent Holder will not undertake the Activities under Schedule 1, clause 1 until it is certain that it will implement the full suite of effects management measures specified in the SMPs.
- 1.2. The provisions of the SMPs form a part of this Consent. For the avoidance of doubt where the provisions of the SMPs conflict with the terms and conditions of this Consent, the Consent prevails.
- 1.3. The Consent Holder must undertake the Activities including the methodologies, in accordance with the SMPs.
- 1.4. When woody vegetation is felled, and where it is safe and practical to do so, every effort must be made to move the vegetation a minimal distance outside the project footprint to a location of similar woody habitat and then left to degrade naturally.
- 1.5. Prior to mulching felled, woody vegetation, the Consent Holder must make every effort identify, catch, and remove protected wildlife that is within or upon the vegetation.
- 1.6. The Consent Holder must immediately notify the Department of Conservation Kaitaia District Office Operations Manager if it encounters wildlife that are not covered by this Consent and seek to obtain further Consent under the Act, as required. The Consent Holder must bear all costs associated with or connected to obtaining such further Consent.
- 1.7. North Island kiwi eggs must only be removed using Department of Conservation approved standard techniques (see <https://www.doc.govt.nz/globalassets/documents/science-and-technical/sap262entire.pdf> for the best practice model).

#### 2. Ownership of Protected Wildlife

- 2.1. All wildlife remains the property of the Crown. This includes any dead wildlife, live wildlife, any parts thereof, any eggs or progeny of the wildlife, genetic material, and any replicated genetic material.
- 2.2. The Consent Holder may possess protected wildlife in accordance with the terms and conditions of this Consent.
- 2.3. Unless expressly authorised by the New Plymouth district office operations manager in writing, the Consent Holder must not donate, sell, or otherwise transfer to any third party any wildlife subject to this Consent.

#### 3. Death of Protected Wildlife Associated with Activities Covered by the Consent

- 3.1. If any Threatened, At Risk or Data Deficient species (see NZ Threat Classification System and Lists: <http://www.doc.govt.nz/about-us/science-publications/conservation-publications/nz-threat-classification-system/>) should die, the Consent Holder must:
  - 3.1.1. inform the Kaitaia District Officer Operations Manager within 48 hours of the death; and

- 3.1.2. chill the body if it can be delivered within 72 hours of the death, or freeze the body if delivery will take longer than 72 hours; and
- 3.1.3. notwithstanding clause 5.3, send the body to Massey University Wildlife Post-mortem Service for necropsy along with details of the animal's history; and
- 3.1.4. pay for all costs incurred in investigating the death of any Threatened, At Risk or Data Deficient species; and
- 3.1.5. if required by the Kaitaia District Office Operations Manager, cease the Activities for a period determined by that person.

#### **4. Injured Protected Wildlife and Euthanasia**

- 4.1. If any protected wildlife are injured in the course of undertaking activities associated with the Project, the Consent Holder must contact a suitably qualified person to get advice on management of the protected wildlife, including how to best address the injury.
- 4.2. The Consent Holder will take all reasonable steps to rehabilitate protected wildlife in consultation with the Department of Conservation's Kaitaia Operations Manager.
- 4.3. The Consent Holder must notify the Department of Conservation's Kaitaia Operations Manager within 48 hours of euthanizing protected wildlife. The notification will include details of the species of wildlife euthanized and personnel involved in the euthanizing of the wildlife.

#### **5. Salvage, Relocation and Handling**

- 5.1. Protected wildlife capture, handling and relocation must be undertaken at a suitable time of year when wildlife are active, as advised by the personnel in Schedule 1, clause 3(i).
- 5.2. The Consent Holder must ensure that the relevant suitably qualified experts are at the on-site induction prior to works commencing.

#### **6. Capture and handling methods for all species**

- 6.1. Capture and handling methods (including North Island brown kiwi egg removal) must follow those described in the inventory and monitoring toolbox <http://www.doc.govt.nz/our-work/biodiversity-inventory-and-monitoring>.

#### **7. Lizard Capture and Survey**

- 7.1. The Consent Holder must sterilise any instruments that come in contact with the lizards and/or are used to collect or measure lizards between each location. A separate holding bag such as those described in clause 12.2 must be used for each animal. All equipment must be thoroughly cleaned and dried between sites.
- 7.2. The Consent Holder must ensure lizards are held temporarily in a suitable container (such as a breathable cloth bag) and placed out of direct sunlight to minimise the risk of overheating, stress and death as advised and supervised by a qualified herpetologist approved by the Department of Conservation's Kaitaia Operations Manager.
- 7.3. The Consent Holder must be supervised by a qualified expert (i.e., a herpetologist) as per Schedule 1., clause 3(i).
- 7.4. Lizard capture, handling and relocation should be undertaken at a suitable time of year when lizards are active, as advised by a suitably experienced herpetologist.

- 7.5. Capture and handling of lizards must involve only techniques that avoid or minimise the risk of infection or injury to the animal.
- 7.6. The Consent Holder must ensure all live capture traps are covered to protect lizards from exposure and minimise stress. Damp leaf litter or other similar natural materials must be provided to reduce desiccation risk and the bottom of the pit-fall trap must be perforated to allow drainage of water.

## **8. Bat Conditions**

- 8.1. Any injured bats found must be taken to a suitable veterinarian confirmed by the Department of Conservation's Kaitaia Operations Manager for triage or further care. If the veterinarian determines that the bat is in a healthy condition, a qualified expert (i.e., a chiropterologist) appointed by the Consent Holder as per Schedule 1., clause 3(i), is authorised to immediately liberate the bats provided that the bat(s) are:
  - 8.1.1. only liberated in an area where works are not occurring; and
  - 8.1.2. are liberated into an appropriate habitat as determined by the qualified expert at least one hour after dusk and before midnight; and
  - 8.1.3. are liberated in appropriate environmental conditions: Little to no rain with temperatures above 12 degrees Celsius.
- 8.2. In the event any bat is killed or injured by enabling construction works, or if any vegetation is removed and on inspection bats are found in it during or post-felling, then the following shall take place:
  - 8.2.1. works must cease immediately on sighting the bat(s); and
  - 8.2.2. the Consent Holder must report the death or injury within 48 hours to the Department of Conservation's Kaitaia Operations Manager ; and
  - 8.2.3. a review of the development methodology in question must then be undertaken in conjunction with the Department of Conservation's Kaitaia Operations Manager and an agreed process to minimise the further killing or injury to wildlife implemented, prior to works recommencing.
- 8.3. The Consent Holder shall ensure that all tree felling is in accordance with the [Bat Roost Protocols](#) and the Applicant's Bat Management Plan.
- 8.4. The Consent Holder must ensure that all supervisors, managers, or others in a leadership capacity working under this Consent carry a copy of this Consent and the Bat Roost Protocols at all times and must ensure the Consent terms and conditions are complied with.

## **9. Reporting**

- 9.1. A full report of all bat monitoring data must be provided to the Department of Conservation at the conclusion of the tree felling and at any reasonable time upon request by the Department of Conservation during the felling operations. All reports shall be forwarded to: [kaitaia@doc.govt.nz](mailto:kaitaia@doc.govt.nz) and titled "Attention: community ranger"; and to [permissionsupdates@doc.govt.nz](mailto:permissionsupdates@doc.govt.nz) citing Consent number 111521-FAU, by 30 June each year for the duration of this Consent.
- 9.2. A salvaging report must be submitted to [kaitaia@doc.govt.nz](mailto:kaitaia@doc.govt.nz) and titled "Attention: community ranger" and to [permissionsupdates@doc.govt.nz](mailto:permissionsupdates@doc.govt.nz) citing permission number 111521-FAU, by 30 June each year for the duration of this Consent, summarising outcomes in accordance with the Species Specific Management Plan. Each report must include:
  - 9.2.1. the species and number of any animals caught and released;

- 9.2.2. the GPS location (and/or a detailed map) of the collection point(s) and release point(s);
- 9.2.3. copies of approved Assessment of Environment Effects (lizards); Lizard Management Plans or similar; and
- 9.2.4. results of all surveys and monitoring.

Completed Amphibian and Reptile Distribution System (ARDS) cards for all herpetofauna sightings and captures (<http://www.doc.govt.nz/conservation/native-animals/reptiles-and-frogs/species-information/herpetofauna-data-collection/ards-card/>) must be sent to Herpetofauna, Department of Conservation, National Office, PO Box 10420 Wellington 6143 or [herpetofauna@doc.govt.nz](mailto:herpetofauna@doc.govt.nz).

## **10. Kiwi conditions**

- 10.1 All activities must be carried out as per the latest Kiwi Best Practice Manual (<https://www.doc.govt.nz/globalassets/documents/science-and-technical/sap262entire.pdf>) and in accordance with related provisions of the Avifauna Management Plan.
- 10.2 A kiwi shall only be captured using the assistance of a contracted certified kiwi dog handler.
- 10.3 Vegetation removal of the two largest areas (slips A8 and A11) shall occur prior to June, to avoid kiwi nests.
- 10.4 Where vegetation removal is proposed, roadside vegetation shall initially be cut down to a height of approximately 1 metre to scare kiwi away and then removed completely on the same day. Larger vegetation removal shall involve hand cutting to scare kiwi away. Any vegetation slash that is to be removed by machinery shall be done on the same day as vegetation clearance to avoid kiwi sheltering in it.

## **11. Kauri snails and other invertebrates**

- 11.1 Either:
  - a) no kauri snail or other invertebrates transfers are made,
- OR
- b) Kauri snails or other invertebrates are placed downslope of each discovery below a slip or within ten metres adjacent.

## SCHEDULE 4

	Common name	Scientific name
1	Kauri snail	<i>Paryphanta busbyi busbyi</i>
2	copper skink	<i>Oligosoma aeneum</i>
3	Forest gecko	<i>Mokopirirakau granulatus</i>
4	Ornate skink	<i>Oligosoma ornatum</i>
5	<b>Pacific gecko</b>	<b><i>Dactylocnemis pacificus</i></b>
6	Northland green gecko	<i>Naultinus grayii</i>
7	Te paki gecko	<i>D. "North Cape"</i>
13	Northland brown kiwi	<i>Apteryx mantelli</i>

## SCHEDULE 5

	Common name	Scientific name
1	Northland brown kiwi	<i>Apteryx mantelli</i>

## SCHEDULE 6 – Species Management Plans

Refer to the attached species management plans in the 111521-FAU bundle of documents.

## SCHEDULE 7

Refer to the attached maps in the 111521-FAU bundle of documents.





# Variation to a Wildlife Act Consent under the Wildlife Act 1953

Authorisation Number: 111521-FAU

**THIS DEED OF VARIATION OF A CONSENT** is made this 14th day of October 2024

**PARTIES:**

**The Minister of Conservation and the Minister of Transport** (the Grantor)

**AND**

**New Zealand Transport Agency** (the Consent Holder)

**BACKGROUND**

- A. By an authorisation dated the 18<sup>th</sup> day of March 2024 the Minister of Conservation and the Minister of Transport granted Consent under Section 71 of the Wildlife Act 1953 to the Consent Holder upon the terms and conditions expressed and implied in the Consent.
- B. The Grantor hereby varies that Consent.

**NOW BY THIS DEED the Grantor consents to the following:**

**1. Variation**

In exercise of the Grantor's powers under the Wildlife Act the Grantor varies the Consent as follows:

- (i) Clause 1.1 of Schedule 3 is deleted and replaced with:

The Consent Holder must address the effects that the Activities will have on wildlife in accordance with the associated effects management measures set out in the species management plans(SMPs), including the updated Avifauna Management Plan dated April 2024 under Schedule 6.

As such, the Consent Holder will not undertake the Activities under Schedule 1, clause 1 until it is certain that it will implement the full suite of effects management measures specified in the SMPs.

- (ii) Clause 2.3 of Schedule 3 is deleted and replaced with:

Unless expressly authorised by the Kaitaia district office operations manager in writing, the Consent Holder must not donate, sell, or otherwise transfer to any third party any wildlife subject to this Consent.

- (iii) Clause 10.4 of Schedule 3 is deleted and replaced with:

“Where vegetation removal is proposed, roadside vegetation shall initially be cut down to a height of approximately 1 metre to scare kiwi away and then removed completely

on the same day, unless the following measures are applied, and kiwi were not detected:

- a) A kiwi dog sweep through is conducted on a day of vegetation removal; and
- b) Kiwi call recordings are conducted and analysed for kiwi activity the night prior to vegetation removal.

Larger vegetation removal shall involve hand cutting to scare kiwi away. Any vegetation slash that is to be removed by machinery shall be done on the same day as vegetation clearance to avoid kiwi sheltering in it.”

**2. Confirmation of other Consent Covenants**

Except to the extent to which they are amended by this Variation the provisions expressed and implied in the Consent continue to apply.

The Consent Holder must keep a copy of this Deed of Variation together with the original Consent at all times and present it when requested by a member of the Department of Conservation.

**3. Costs**

The Consent Holder must pay the costs of and incidental to the preparation and completion of this Variation.

**SIGNED by the Minister of Conservation's Delegated Authority  
Director of Regulatory Services**



\_\_\_\_\_  
**Phillippa Fox**

**SIGNED by the Minister of Transport's Delegated Authority  
Deputy Chief Executive Policy Group**



\_\_\_\_\_  
**Ruth Fairhall**

**APPENDIX F DOC Concession 113662-OTH**



Permission: 113662-OTH

6 May 2024

New Zealand Transport Agency, *Waka Kotahi*  
Private Bag 6995  
Wellington 6141

For the attention of, Kim Cottle and Hendrik Postma  
[Kim.Cottle@nzta.govt.nz](mailto:Kim.Cottle@nzta.govt.nz)

[Hendrik.Postma@nzta.govt.nz](mailto:Hendrik.Postma@nzta.govt.nz)

[stuart.b@stellarprojects.co.nz](mailto:stuart.b@stellarprojects.co.nz)

Tēnā koe Kim Cottle and Hendrik Postma

## **CONCESSION APPLICATION APPROVAL**

### **Easement for stormwater infrastructure - Mangamuka Gorge Scenic Reserve near SH1**

I am pleased to advise you that your application for a concession has been approved and we are now able to offer you a concession document outlining the terms and conditions of this approval. Please find attached a copy of this for your consideration.

This document contains all the terms and conditions of your concession to operate on public conservation land and represents the formal agreement between the Department and New Zealand Transport Agency.

Please read it carefully before signing so that you clearly understand your obligations. It is advised that you seek legal advice.

The conditions listed in your concession are related only to the role and responsibilities of the Minister of Conservation and/or the Director-General of Conservation. It does not cover the role or responsibilities of local or regional councils, other government agencies e.g., Ministry of Transport, Civil Aviation Authority or Police. You may need to contact other agencies to ensure you have all other required legal documentation in place.

### **Acceptance of Offer**

You can accept the terms and conditions of the concession document by signing a copy of the document. Please make sure that your signature is formally witnessed.

The document has already been signed by the Minister of Conservation's representative. Once you have signed the document, please return it to Michelle Pearce at [mpearce@doc.govt.nz](mailto:mpearce@doc.govt.nz) by 6<sup>th</sup> June 2024. If we do not receive a signed copy of the document by this date, your concession document may be cancelled.

### **Reconsideration of Decision**

You have the right to request that this decision is reconsidered, at your cost, under section 17ZJ of the Conservation Act. If, for any reason, you wish to apply for reconsideration please inform me by 6<sup>th</sup> June 2024. I am happy to outline the reconsideration process for you if this is something that you wish to know more about. If this is the case, please contact me.

### **Insurance**

Your concession requires you to have current insurance to the prescribed limits. While you are not required to provide evidence of this at this time, please be aware that it may be requested at any time during the term of your concession.

### **Payment of Processing Fees**

The final cost of processing your concession was \$2,065.00 + GST. I have arranged for an invoice to be sent to you for this amount.

### **Public Works Act**

Given an easement does not restrict public access to the site of structures and maintenance areas and there are low conservation values in the area, the New Zealand Transport Agency *Waka Kotahi* could apply under the Public Works Act to acquire this area.

If you have any queries regarding this letter or the enclosed/attached concession document, please do not hesitate to contact me by email [dliddell@doc.govt.nz](mailto:dliddell@doc.govt.nz) .

Nāku noa, nā



Darcy Liddell  
Permissions Advisor  
Hamilton Office  
Department of Conservation | Te Papa Atawhai  
[www.doc.govt.nz](http://www.doc.govt.nz)



## Concession Document (Easement)

Concession Number: 113662-OTH

**THIS CONCESSION** is made this 3rd day of May 2024

### **PARTIES:**

**Minister of Conservation** (the Grantor)

**New Zealand Transport Agency, *Waka Kotahi*** (the Concessionaire)

### **BACKGROUND**

- A.** The Department of Conservation ("Department") Te Papa Atawhai is responsible for managing and promoting conservation of the natural and historic heritage of New Zealand on behalf of, and for the benefit of, present and future New Zealanders.
- B.** The Department is under the control of the Grantor.
- C.** The carrying out of these functions may result in the Grantor granting concessions to carry out activities on public conservation land.
- D.** The Grantor administers the public conservation land described in Schedule 1 as the Easement Land.
- E.** The Conservation legislation applying to the Easement Land authorises the Grantor to grant a concession over the Easement Land.
- F.** The Concessionaire wishes to carry out the Concession Activity on the Easement Land subject to the terms and conditions of this Concession.
- G.** The Concessionaire acknowledges that the Easement Land may be the subject of Treaty of Waitangi claims.
- H.** The Parties wish to record the terms and conditions of this Concession.

### **OPERATIVE PARTS**

- I.** In exercise of the Grantor's powers under the Conservation legislation the Grantor **GRANTS** to the Concessionaire an **EASEMENT** to carry out the Concession Activity on the Easement Land subject to the terms and conditions contained in this Concession, including its Schedules.



SIGNED on behalf of the Minister of Conservation by Sue Reed-Thomas, Director Operations for the Northland Region acting under delegated authority

in the presence of:



Permissions Advisor

Witness Signature

A copy of the Instrument of Delegation may be inspected at the Director-General's office at 18-22 Manners Street, Wellington.



SIGNED on behalf of the New Zealand Transport Agency by Wayne Loader, Principal Property Acquisition Manager - Regional Lead.

in the presence of:



Don Harrington

Witness Signature  
[INSERT DIGITAL SIGNATURE]

## SCHEDULE 1

1.	<p><b>Easement Land</b> (burdened land - the land where the easement activity occurs) (Schedule 4)</p>	<p>Three separate locations within Mangamuka Gorge Scenic Reserve, being: (1) Slip A3: 35°10'34.09"S,173°26'33.93"E (2) Slip A4: 35°10'37.41"S, 173°26'39.73"E (3) Slip A8: 35°10'58.30"S, 173°27'1.37"E. As marked on the attached plans in Schedule 4 being: Physical Description/Common Name: Mangamuka Gorge Scenic Reserve Land Status: Scenic Reserve</p>
2.	<p><b>Land</b> (benefited land - the land that benefits from the easement) (If none then select "in gross") (Schedule 4)</p>	<p>Is the easement in gross? Yes</p>
3.	<p><b>Concession Activity</b> (clause 2)</p>	<p>(a) a right to convey water: 15 bored drains at slip A8 (b) a right to drain water: 3 stormwater pipes at each of slips A3, A4 and A8 (c) a right of way: Access track at slip A8  For the purpose of reducing the risk of slip failure adjoining State Highway 1 near Kaitaia</p>
4.	<p><b>Term</b> (clause 3)</p>	<p>60 years commencing on 1 May 2024</p>
5.	<p><b>Final Expiry Date</b> (clause 3)</p>	<p>30 April 2084</p>
6.	<p><b>Concession Fee</b> (clause 4)</p>	<p><b>Concession Activity Fee:</b> \$5,330.00 per annum plus GST <b>Concession Management Fee:</b> \$250.00 per annum plus GST <b>Environmental Monitoring Fee:</b> Standard Department charge-out rates for staff time and mileage required to monitor the effects of the Concession Activity and compliance with concession conditions</p>
7.	<p><b>Concession Fee Payment Date</b> (clause 4)</p>	<p>1 May Annually</p>



8.	<b>Penalty Interest Rate</b> (clause 4)	Double the current Official Cash Rate (OCR). <a href="#">See Reserve Bank of New Zealand website</a>
9.	<b>Concession Fee Review Date(s)</b> (clause 5)	1 May 2027, 1 May 2030, 1 May 2033 then three (3) yearly on the anniversary (and for the duration) of this Concession.
10.	<b>Insurance</b> (To be obtained by Concessionaire) (clause 11)	Types and amounts: Public Liability Insurance for general indemnity for an amount no less than \$1,000,000.00; and Third party vehicle liability for an amount no less than \$500,000.00.
11.	<b>Addresses for Notices</b> (clause 20)	The Grantor's address is: <u>Physical Address:</u> Department of Conservation 265 Princes Street Dunedin 9016  <u>Postal Address:</u> Department of Conservation Att: National Transaction Centre PO Box 5244 Dunedin 9054  Phone: (03) 477 0677 Email: <a href="mailto:transactioncentre@doc.govt.nz">transactioncentre@doc.govt.nz</a>
		The Concessionaire's address in New Zealand is: Level 5 AON Centre 29 Customs Street West Auckland  Email: <a href="mailto:consents@nzta.govt.nz">consents@nzta.govt.nz</a>
12.	<b>Special Conditions</b> (clause 25)	See Schedule 3
13.	<b>Processing Fee</b> (clause 4)	\$2,065.00 plus GST

Note: The clause references are to the Grantor's Standard Terms and Conditions set out in Schedule 2.

## **SCHEDULE 2**

### **STANDARD TERMS AND CONDITIONS**

#### **1. Interpretation**

- 1.1 The Concessionaire is responsible for the acts and omissions of its employees, contractors, agents, clients and invitees (excluding other members of the public accessing the Easement Land). The Concessionaire is liable under this Concession for any breach of the terms of the Concession by its employees, contractors, agents, clients and invitees (excluding other members of the public accessing the Easement Land), as if the breach had been committed by the Concessionaire.
- 1.2 Where this Concession requires the Grantor to exercise a discretion or give any approval or provides for any other actions by the Grantor, then the Grantor must act reasonably and within a reasonable time. When a consent is required under this Concession such consent must not be unreasonably withheld.

#### **2. What is being authorised?**

- 2.1 The Concessionaire is only allowed to use the Easement Land for the Concession Activity.
- 2.2 The Concessionaire must not commence the Concession Activity until the Concessionaire has signed the Concession Document and returned one copy of this Document to the Grantor, as if it were a notice to be given under this Concession.

#### **3. How long is the Concession for - the Term?**

- 3.1 This Concession commences on the date specified in Item 4 of Schedule 1 and ends on the Final Expiry Date specified in Item 5 of Schedule 1.

#### **4. What are the fees and when are they to be paid?**

- 4.1 The Concessionaire must pay the Processing Fee (Item 13 of Schedule 1) to the Grantor in the manner directed by the Grantor. Except where the Grantor's written consent has been given, the Concessionaire cannot commence the Concession Activity until the Processing Fee has been paid.
- 4.2 The Concessionaire must pay to the Grantor in the manner directed by the Grantor the Concession Fee plus GST on the Concession Fee Payment Date specified in Items 6, and 7 of Schedule 1.
- 4.3 If the Concessionaire fails to make payment within 14 days of the Concession Fee Payment Date then the Concessionaire is to pay interest on the unpaid Concession Fee from the Concession Fee Payment Date until the date of payment at the Penalty Interest Rate specified in Item 8 of Schedule 1.

#### **5. When can the fee be reviewed?**

- 5.1 The Grantor is to review the Concession Fee on the Concession Fee Review Date in Item 9 of Schedule 1 in the following manner:
- (a) The Grantor must commence the review not earlier than 3 months before a Concession Fee Review Date and no later than 9 months

following the Concession Fee Review Date by giving notice to the Concessionaire.

- (b) Subject to clause 5.1(e) the notice must specify the Concession Fee which the Grantor considers to be the market value for the Concession Activity as at the Concession Fee Review Date having regard to the matters specified in section 17Y(2) of the Conservation Act 1987.
- (c) If, within 28 days of receipt of the Grantor's notice, the Concessionaire gives notice to the Grantor that the Concessionaire disputes the proposed new Concession Fee the new Concession Fee is to be determined in accordance with clause 5.2.
- (d) If the Concessionaire does not give notice to the Grantor under clause 5.1(c) the Concessionaire is to be deemed to have accepted the Concession Fee specified in the Grantor's notice.
- (e) Notwithstanding clause 5.1(b) the new Concession Fee so determined or accepted must not be less than the Concession Fee payable during the year preceding the particular Concession Fee Review Date and is to be the Concession Fee payable by the Concessionaire from the Concession Fee Review Date.
- (f) Until determination of the new Concession Fee, the Concession Fee payable by the Concessionaire from the Concession Fee Review Date is to be the Concession Fee specified in the Grantor's notice. On determination of the new Concession Fee in accordance with clause 5.2 an adjustment is to be made and paid, either by the Grantor or by the Concessionaire, whichever is applicable.

5.2 Immediately the Concessionaire gives notice to the Grantor under clause 5.1(c) the parties are to endeavor to agree on a new Concession Fee. If the parties are unable to reach agreement within 28 days the new Concession Fee is to be determined either:

- (a) By one party giving notice to the other requiring the new Concession Fee to be determined in accordance with the Disputes clause (clause 19) or, if the parties agree,
- (b) by registered valuers acting as experts and not as arbitrators as follows:
  - (i) Each party must appoint a valuer and give notice of the appointment to the other party within 14 days of the parties agreeing to determine the new Concession Fee by this means.
  - (ii) If the party receiving a notice does not appoint a valuer within the 14 day period the valuer appointed by the other party is to determine the new Concession Fee and that valuer's determination is to be binding on both parties.
  - (iii) Before commencing their determination the respective valuers must appoint an umpire who need not be a registered valuer.
  - (iv) The valuers are to determine the new Concession Fee which they consider to be the market value for the Concession Activity as at the Concession Fee Review Date having regard to the matters specified in section 17Y(2) of the Conservation Act 1987 but in no case is the new Concession Fee to be less than the Concession Fee payable during the year preceding the particular Concession Fee Review Date. If the valuers fail to agree, the Concession Fee is to be determined by the umpire.

- (v) In determining the Concession Fee the valuers or umpire are to disregard the annual cost to the Concessionaire to maintain or provide access to the Easement Land.
  - (vi) Each party is to be given the opportunity to make written or oral representations or submissions to the valuers or the umpire subject to such reasonable time and other limits as the valuers or the umpire may prescribe.
  - (vii) The valuers or the umpire must have regard to any such representations but are not bound by them.
- (c) The valuers or umpire must give written notice to the parties once they have determined the new Concession Fee. The notice is to be binding on the parties and is to provide how the costs of the determination are to be borne.
- (d) If a Concession Fee Review Date is postponed because of a moratorium imposed by law the Concession Fee Review is to take place at the date the moratorium is lifted or so soon afterwards as is practicable and the following applies:
- (i) the Concession Fee Review is to establish the market value for the Concession Activity as at that date instead of the date fixed under clause 5.1 having regard to the matters specified in section 17Y(2) of the Conservation Act 1987 but in no case is the new Concession Fee to be less than the Concession Fee payable during the year preceding the particular Concession Fee Review Date; and
  - (ii) each subsequent Concession Fee Review is to take place in accordance with the procedure fixed in clause 5.1.

## **6. Are there any other charges?**

- 6.1 The Concessionaire must pay all levies rates and other charges, including utility charges payable in respect of the Easement Land or for the services provided to the Easement Land which relate to the Concessionaire's use of the Easement Land or the carrying on of the Concession Activity.
- 6.2 The Grantor is not liable for any cost incurred in re-establishing the supply of any utilities in the event of any of them becoming unavailable for any reason.
- 6.3 Where the Grantor has paid such levies, rates or other charges the Concessionaire must on receipt of an invoice from the Grantor pay such sum to the Grantor within 14 days of receiving the invoice. If payment is not made within the 14 days then the Concessionaire is to pay interest on the unpaid sum from the date payment was due until the date of payment at the Penalty Interest Rate specified in Item 8 of Schedule 1.

## **7. When can the Concession be assigned?**

- 7.1 The Concessionaire must not transfer, sublease, assign, mortgage or otherwise dispose of the Concessionaire's interest under this Concession or any part of it (which includes the Concessionaire entering into a contract or any other arrangement whatsoever whereby the Concession Activity would be carried out by a person (called the Assignee) other than the Concessionaire) without the prior written consent of the Grantor.
- 7.2 The Grantor may in the Grantor's discretion under clause 7.1:

- (a) decline any application for consent; or
  - (b) grant consent subject to such conditions as the Grantor thinks fit.
- 7.3 Sections 17S to 17ZC of the Conservation Act 1987 apply to applications for consent under this clause unless the Grantor, in the Grantor's discretion, decides otherwise.
- 7.4 If the Grantor gives consent under this clause then the Concessionaire remains liable to observe and perform the terms and conditions of this Concession throughout the Term and is to procure from the Assignee a covenant to be bound by the terms and conditions of this Concession.
- 7.5 The Concessionaire must pay the costs reasonably incurred by the Grantor incidental to any application for consent, whether or not such consent is granted.
- 7.6 If the Concessionaire is not a publicly listed company any change in the shareholding of the Concessionaire altering the effective control of the Concessionaire is to be deemed to be an assignment and requires the consent of the Grantor.

**8. What are the obligations to protect the environment?**

- 8.1 The Concessionaire must not, without the prior consent of the Grantor:
- (a) cut down or damage any vegetation; or
  - (b) damage any natural feature or historic resource on the Easement Land; or
  - (c) light any fire on the Easement Land.
- 8.2 The Concessionaire must, at its cost:
- (a) keep the easement facility (as defined in Schedule 5) now or hereafter upon the Easement Land, in good order, condition and repair; and
  - (b) must keep the Easement Land in a clean and tidy condition.
- 8.3 The Concessionaire must not store hazardous materials on the Easement Land nor store other materials on the Easement Land where they may obstruct the public or create a nuisance.

**9. When can structures be erected?**

- 9.1 The Concessionaire must not erect, nor place any structures on, under or over the Easement Land without the prior consent of the Grantor.

**10. What if the Concessionaire wishes to surrender the Concession?**

- 10.1 If the Concessionaire wishes to surrender this Concession during the currency of the Term, then the Grantor may accept that surrender on such conditions as the Grantor considers appropriate.

**11. What are the liabilities and who insures?**

- 11.1 The Concessionaire agrees to use the Easement Land at the Concessionaire's own risk and releases to the full extent permitted by law the Grantor (and the

Grantor's employees, agents and contractors) from all claims and demands of any kind and from all liability which may arise in respect of any accident, damage or injury occurring to any person or property in or about the Easement Land.

- 11.2 The Concessionaire must indemnify the Grantor against all claims, actions, losses and expenses of any nature which the Grantor may suffer or incur or for which the Grantor may become liable arising from the Concessionaire's performance of the Concession Activity.
- 11.3 This indemnity is to continue after the expiry or termination of this Concession in respect of any acts or omissions occurring or arising before its expiry or termination.
- 11.4 The Concessionaire has no responsibility or liability for costs, loss, or damage of whatsoever nature arising from any act or omission or lack of performance or any negligent or fraudulent act or omission by the Grantor, or any contractor or supplier to the Grantor, or any employee or agent of the Grantor.
- 11.5 Despite anything else in clause 11 the Concessionaire is not liable for any indirect or consequential damage or loss howsoever caused.
- 11.6 The Grantor is not liable and does not accept any responsibility for damage to or interference with the Easement Land, the Concession Activity, or to any structures, equipment or facilities on the Easement Land or any other indirect or consequential damage or loss due to any natural disaster, vandalism, sabotage, fire, or exposure to the elements except where, subject to clause 11.7, such damage or interference is caused by any wilful act or omission of the Grantor, the Grantor's employees, agents or contractors.
- 11.7 Where the Grantor is found to be liable in accordance with clause 11.6, the total extent of the Grantor's liability is limited to \$1,000,000 in respect of the Concessionaire's structures, equipment and facilities.
- 11.8 Despite anything else in clause 11 the Grantor is not liable for any indirect or consequential damage or loss howsoever caused.
- 11.9 Without prejudice to or in any way limiting its liability under this clause 11 the Concessionaire at the Concessionaire's expense must take out and keep current policies for insurance and for the amounts not less than the sums specified in Item 10 of Schedule 1 with a substantial and reputable insurer.
- 11.10 After every three year period of the Term the Grantor may, on giving 10 working day's notice to the Concessionaire, alter the amounts of insurance required under clause 11.9. On receiving such notice the Concessionaire must within 10 working days take out and keep current policies for insurance and for the amounts not less than the sums specified in that notice.
- 11.11 The Concessionaire must provide to the Grantor within 5 working days of the Grantor so requesting:
  - (a) details of any insurance policies required to be obtained under this Concession, including any renewal policies if such renewal occurs during the Term; and/or;
  - (b) a copy of the current certificate of such policies.

**12. What about Health and Safety?**

12.1 The Concessionaire must exercise the rights granted by this Concession in a safe and reliable manner and must comply with the Health and Safety at Work Act 2015 and its regulations and all other provisions or requirements of any competent authority relating to the exercise of this Concession. The Concessionaire must comply with any safety directions of the Grantor.

**13. What are the compliance obligations of the Concessionaire?**

13.1 The Concessionaire must comply where relevant:

- (a) with the provisions of any conservation management strategy or conservation management plan under the Conservation Act 1987 or Part IIA of the Reserves Act 1977, or any general policy statement made under the Conservation Act 1987, Reserves Act 1977, National Parks Act 1980, or Wildlife Act 1953, or management plan under section 45 of the National Parks Act 1980, whichever is appropriate to the Easement Land, together with any amendment or review of any policy, strategy or plan whether approved before, on, or after the date on which this Concession takes effect; and
- (b) with the Conservation Act 1987, the Reserves Act 1977, the National Parks Act 1980, Wildlife Act 1953, Climate Change Response Act 2002 and any other statute, ordinance, regulation, bylaw, or other enactment (collectively the “Legislation”) affecting or relating to the Easement Land or affecting or relating to the Concession Activity, including any regulations made under the Conservation Act 1987 and Wildlife Act 1953 or bylaws made under the Reserves Act 1977 or the National Parks Act 1980; and
- (c) with all notices and requisitions of any competent authority affecting or relating to the Easement Land or affecting or relating to the conduct of the Concession Activity; and
- (d) with all Department signs and notices placed on or affecting the Easement Land

13.2 The Concessionaire must comply with this Concession.

13.3 A breach or contravention by the Concessionaire of a relevant conservation management strategy, conservation management plan, management plan or any statement of general policy referred to in clause 13.1(a) is deemed to be a breach of this Concession.

13.4 A breach or contravention by the Concessionaire of any Legislation affecting or relating to the Easement Land or affecting or relating to the Concession Activity is deemed to be a breach of this Concession.

**14. When can the Concession be terminated?**

14.1 If the Concessionaire breaches any of the conditions of this Concession the Grantor may terminate this Concession at any time in respect of the whole or any part of the Easement Land. Before so terminating the Grantor must give the Concessionaire either:

- (a) one calendar month's notice in writing; or
- (b) such other time period which in the sole opinion of the Grantor appears reasonable and necessary;



of the Grantor's intention so to terminate this Concession. If this Concession is terminated then the Grantor, at the Grantor's sole discretion, may adjust the Concession Fee payable or refund any Concession Fee paid in advance.

- 14.2 The Grantor may choose to remedy at any time any default by the Concessionaire under this Concession. Where that occurs, the Concessionaire must pay forthwith on demand all reasonable costs incurred by the Grantor in remedying such default. Before electing to so remedy in accordance with this clause the Grantor must, if practicable, first give the Concessionaire notice of the default and a reasonable opportunity to remedy the default.

**15. What happens on termination or expiry of the Concession?**

- 15.1 On expiry or termination of this Concession, either as to all or part of the Easement Land, the Concessionaire is not entitled to compensation for any structures or other improvements placed or carried out by the Concessionaire on the Easement Land.

- 15.2 The Concessionaire may, with the Grantor's written consent, remove any specified structures and other improvements on the Easement Land. Removal under this clause must occur within the time specified by the Grantor and the Concessionaire is to make good any damage and leave the Easement Land and other public conservation land affected by the removal in a clean and tidy condition.

- 15.3 The Concessionaire must, if the Grantor gives written notice, remove any specified structures and other improvements on the Easement Land. Removal under this clause must occur within the time specified by the Grantor and the Concessionaire is to make good any damage and leave the Easement Land and other public conservation land affected by the removal in a clean and tidy condition and replant the Easement Land with indigenous vegetation of a similar abundance and diversity as at the commencement of the Term. If before the expiry of the Term the Concessionaire makes an application for a further concession in respect of the same Concession Activity on the Easement Land then the Grantor cannot require such removal and reinstatement until such time as that concession application has been determined. If a new concession is granted then removal and reinstatement cannot be required until the expiry or termination of the new concession.

**16. When is the Grantor's consent required?**

- 16.1 Where the Grantor's consent or approval is expressly required under this Concession then the Concessionaire must seek that approval or consent for each separate time it is required even though the Grantor may have given approval or consent for a like purpose on a prior occasion. Any such consent or approval may be made on such conditions as the Grantor considers appropriate.

**17. Are there limitations on public access and closure?**

- 17.1 The Concessionaire acknowledges that the Easement Land is open to the public for access and that the Grantor may close public access during periods of high fire hazard or for reasons of public safety or emergency.

**18. What about other concessions?**

18.1 Nothing expressed or implied in this Concession is to be construed as preventing the Grantor from granting other concessions, whether similar or not, to other persons provided that the Grantor must not grant another concession that would derogate in any material way from the Concessionaire's ability to carry out the Concession Activity.

**19. How will disputes be resolved?**

19.1 If a dispute arises between the parties in connection with this Concession the parties must, without prejudice to any other rights or entitlements they may have, attempt to resolve the dispute by agreement using informal dispute resolution techniques such as negotiation, mediation, independent expert appraisal or any other alternative dispute resolution technique. The rules governing any such technique adopted are to be agreed between the parties.

19.2 If the dispute cannot be resolved by agreement within 14 days of written notice by one party to the other (or such further period as the parties may agree to in writing) either party may refer the dispute to the Disputes Tribunal, where relevant, or to arbitration, which arbitration is to be carried out in accordance with the provisions of the Arbitration Act 1996.

19.3 If the parties do not agree on an arbitrator within 10 working days of a party giving written notice of the requirement to appoint an arbitrator the President of the New Zealand Law Society is to appoint the arbitrator. In either case the arbitrator must not be a person who has participated in an informal dispute resolution procedure in respect of the dispute.

19.4 The arbitrator must include in the arbitration award reasons for the determination.

19.5 Despite the existence of a dispute, each party must continue to perform its obligations under this Concession.

**20. How are notices sent and when are they received?**

20.1 Any notice to be given under this Concession is to be in writing and made by personal delivery, by pre-paid post or email to the receiving party at the address, or email address specified in Item 11 of Schedule 1. Any such notice is to be deemed to have been received:

- (a) in the case of personal delivery, on the date of delivery;
- (b) in the case of post, on the 3<sup>rd</sup> working day after posting;
- (c) in the case of email,
  - (i) if sent between the hours of 9am and 5pm on a working day, at the time of transmission; or
  - (ii) if subclause (i) does not apply, at 9am on the working day most immediately after the time of sending.

Provided that an email is not deemed received unless (if receipt is disputed) the party giving notice produces a printed copy of the email which evidences that the email was sent to the email address of the party given notice.

20.2 If either party's details specified in Item 11 of Schedule 1 change then the party

whose details change must within 5 working days of such change provide the other party with the changed details.

**21. What about the payment of costs?**

21.1 The Concessionaire must pay the Grantor's legal costs and expenses of and incidental to preparing and signing this Concession or any extension or variation of it.

21.2 The Concessionaire must pay in full immediately and on demand all costs and fees (including solicitor's costs and fees of debt collecting agencies engaged by the Grantor) arising out of and associated with steps taken by the Grantor to enforce or attempt to enforce the Grantor's rights and powers under this Concession including the right to recover outstanding money owed to the Grantor.

**22. What about the powers implied by statute?**

22.1 The rights and powers implied in the relevant easements by Schedule 5 to the Land Transfer Regulations 2018 (as set out in Schedule 5 of this Concession) apply to this Concession **EXCEPT** to the extent set out in Schedule 3 of this Concession.

22.2 The rights and powers implied by Schedule 5 to the Property Law Act 2007 do not apply to this Concession.

**23. What about Co-Siting?**

23.1 In this clause "Co-Site" means the use of the Concessionaire's structures or facilities on the Easement Land by a third party for an activity; and "Co-Sitee" and "Co-Siting" have corresponding meanings.

23.2 The Concessionaire must not allow Co-Siting on the Easement Land without the prior written consent of the Grantor.

23.3 The Grantor's consent must not be unreasonably withheld but is at the Grantor's sole discretion and subject to such reasonable terms and conditions as the Grantor thinks fit including a requirement that the Co-Sitee be liable for direct payment to the Grantor of a concession fee and any environmental premium assessed in respect of the Co-Sitee's activity on the Easement Land.

23.4 In addition, the Grantor must withhold consent if:

- (a) the Co-Siting would result in a substantial change to the Concession Activity on the Easement Land; or
- (b) the Grantor considers the change to be detrimental to the environment of the Easement Land.

23.5 Subject to clause 23.4 the Concessionaire must, if required by the Grantor, allow Co-Siting on the Easement Land.

23.6 Where the Concessionaire maintains that Co-Siting by a third party on the Easement Land would:

- (a) detrimentally interfere physically or technically with the use by the Concessionaire of the Easement Land; or

- (b) materially prejudice any resource consents obtained by the Concessionaire or cause more onerous conditions to be imposed on it by the relevant authority; or
  - (c) obstruct or impair the Concessionaire's ability effectively to operate from the Easement Land; or
  - (d) interfere with or prevent future forecast works of the Concessionaire, the Grantor, must, as a pre-condition to consideration of an application to grant a concession to a third party, require that third party to obtain, at its own cost, a report prepared by an independent consultant acceptable to the Grantor confirming or rejecting the presence of the matters specified in this clause 23.6. The Grantor must not grant a concession to a third party where the report confirms that the proposed concession would give rise to one or more of the matters specified in this clause 23.6.
- 23.7 If the independent consultant report rejects the Concessionaire's concerns, the Concessionaire may dispute this in accordance with the procedure set out in clause 19 of this Schedule 2.
- 23.8 Where the Concessionaire is required under clause 23.5 to allow Co-Siting on the Easement Land, the Concessionaire is, subject to clause 23.10 entitled to enter into commercial agreements with third parties for them to conduct an activity on the Easement Land and to receive a reasonable fee from them for any agreed activity they intend to carry out on the Easement Land. If a dispute arises between the Concessionaire and a third party such dispute must be determined by the Grantor having regard to, but not limited to, the following matters:
- (a) any written comments or submissions of the Concessionaire and third party;
  - (b) market value for the concession activity proposed by the third party having regard to the matters specified in Section 17Y(2) of the Conservation Act 1987;
  - (c) any other matters the Grantor considers relevant.
- 23.9 If the Concessionaire does not accept the Grantor's determination, the Concessionaire may dispute this in accordance with the procedure set out in clause 19 of this Schedule 2.
- 23.10 For the avoidance of doubt, a Co-Sitee permitted on the Easement Land must enter into a separate concession with the Grantor in terms of which the Co-Sitee may be required to pay to the Grantor a concession fee and environmental premium assessed in respect of the Co-Sitee's activity on the Easement Land. This separate concession must not contain provisions that conflict with the Concessionaire's rights and obligations in relation to the Easement Land.
- 23.11 The Grantor must not authorise the third party to commence work on the Easement Land until all relevant resource consents are issued, an agreement is executed between the Concessionaire and third party, and any conditions imposed by the Concessionaire have been met.

**24. Jointly and severally liable**

24.1 In the event that this Concession is held by multiple Concessionaire's, they will be jointly and severally liable.

**25. Are there any Special Conditions?**

25.1 Special conditions are specified in Schedule 3. If there is a conflict between this Schedule 2 and the Special Conditions in Schedule 3, the Special Conditions shall prevail.

**26. The Law**

26.1 This Concession is to be governed by and interpreted in accordance with the laws of New Zealand.

## SCHEDULE 3

### SPECIAL CONDITIONS

1. The rights and powers implied in easements under Schedule 5 of the Land Transfer Regulations 2018, apply as is relevant to the class of easement provided for in this Concession. Schedule 5 of the Regulations (excluding clauses 13 and 14) is set out in Schedule 5 of this Concession and the clauses are varied as follows:
  - (a) Clause 1 is amended by adding the words “in Schedule 4” after the words “on a plan” in paragraph (a) of the interpretation of “**easement area**”
  - (b) Clause 1 is amended by deleting the words “grantee and” from the interpretation of “**grantee and grantor**”
  - (c) Schedule 5 is amended by adding a new clause 1A: “Any reference to “grantee” in this Schedule is to be read as “Concessionaire” and includes the Concessionaire’s agents, employees, contractors, tenants, licensees and invitees.”
  - (d) Clause 11(2) is deleted and clause 11(4) is amended by deleting the reference to (2).
  - (e) Clauses 13 and 14 are deleted.
2. If the Concessionaire wishes the easement to be registered, the Concessionaire must at its own expense:
  - (a) prepare an easement instrument in accordance with the Land Transfer Act 2017 and the rights and powers provided in the easement as set out in this Concession; and
  - (b) arrange for any necessary survey; and
  - (c) register the easement.
3. The Grantor, if satisfied the easement instrument implements this Concession, must sign the easement instrument to enable registration.

### Climate change considerations

4. The Concessionaire acknowledges that the Grantor and the Department of Conservation are reviewing their obligations under the Climate Change Response Act 2002 and developing responses to address greenhouse gas emissions from activities conducted on public conservation land and waters. The reviews are likely to result in policies which seek to measure, manage and reduce greenhouse gas emissions from Concession Activities. The Grantor wishes to signal to the Concessionaire that new concession conditions related to both climate change mitigation and adaptation may be imposed during the life of this Concession to address greenhouse gas emissions associated with the Concession Activity.
5. If the Grantor requests data relating to greenhouse gas emissions associated with the Concession Activity, the Concessionaire must provide any relevant data that is reasonably available to it within 6 months of the Grantor’s request.
6. The Grantor may review and amend the conditions of this Concession to reflect climate change-related legislation and government or Departmental policy and those conditions (“Revised Conditions”) may, amongst other things, require the Concessionaire to measure, manage and reduce the greenhouse gas emissions of the Concession Activity.
7. Before amending the conditions of this Concession in accordance with clause 4, the Grantor will provide the Concessionaire the draft Revised Conditions. The

Concessionaire may provide written comments on those draft Revised Conditions within 60 days. The Grantor must take into account any comments received from the Concessionaire on the Revised Conditions before finalising the Revised Conditions.

8. The Revised Conditions will apply to the Concession Activity 4 months after the Grantor has notified the Concessionaire of the Revised Conditions in accordance with clause 5 or any later date specified in the Revised Conditions.

### **Construction conditions (pipeline)**

9. The pipeline intake must be suitably disguised so as to blend in with the surroundings.
10. That, prior to the right of way construction, the Concessionaire must:
  - (a) Mark the centre line of the right of way easement with tape on the ground, for the approval of the Grantor; and the Concessionaire must use best endeavours to conform to that approved route. Any deviation or variance from the approved route requires the prior written consent from the Grantor.
  - (b) Provide to the Grantor, a work plan detailing the contractors to be used, commencement dates, timelines, construction methods and standards and amend the work plan if required by the Grantor.
  - (c) Prepare an annual maintenance programme for the approval of the Grantor.
  - (d) The Concessionaire must implement an on-going weed control programme to the satisfaction of the Grantor, to keep the Easement Land free from all introduced weeds, resulting from the Concessionaire's use of the Easement Land.

### **Construction conditions (general)**

11. Any vegetation removal and soil disturbance necessary to install and undertake the activity must be kept to a minimum.
12. The surface of the ground must be reinstated in a tidy manner following the installation of the easement facility.
13. No alterations to the easement facility requiring earth disturbance must be undertaken without prior consent in writing of the Grantor.
14. The Concessionaire must ensure that all machinery, tools and equipment used in undertaking the Concession Activity is steamed cleaned and weed free prior to being taken onto the Easement Land.
15. The Concessionaire must ensure that all gravel and other materials used in undertaking the Concession Activity are from a weed free source.

### **Accidental Discovery Protocol**

16. The Concessionaire must take all reasonable care to avoid any archaeological values on the Land which includes (but is not limited to) historic sites and protected New Zealand objects on the Easement Land. In the event that archaeological sites or other features with heritage values are found during any approved earth disturbance work on the Easement Land:
  - (a) Work must cease immediately until further notice and advice must be sought from the Grantor;

- (b) If it is an archaeological site as defined by the Heritage New Zealand Pouhere Taonga Act 2014 then Heritage New Zealand must be contacted and its advice sought;
  - (c) If it is an archaeological site relating to Māori activity then local iwi must be contacted and their advice sought;
  - (d) If it is an artefact as defined by the Protected Objects Act 1975 then the Ministry for Culture and Heritage must be notified within 28 days;
  - (e) If it is human remains the New Zealand Police should also be notified;
  - (f) In the event of cessation of approved work because of discovery of potential historical artefact or archaeological site the Concessionaire must not recommence work until permitted to do so by the Grantor.
17. The Concessionaire must take reasonable and proper care not to damage any property of the Grantor and must promptly repair any such damage.
18. If the Concessionaire opens up the surface of the Easement Land the Concessionaire must immediately upon completion of any works restore the surface of the Easement Land as nearly as possible to its former condition to the satisfaction of the Grantor.
19. Nothing contained or implied in this Concession requires the Grantor or the Concessionaire to supply services on or under the Easement Land or entitles the Concessionaire to interfere with the services of any other user of the Easement Land.

### **Myrtle Rust Protocols**

20. The Concessionaire must know the plants that are affected by myrtle rust and what the rust symptoms look like. This serious fungal disease only affects plants in the Myrtle (Myrtaceae) Family which includes pohutukawa, manuka, kanuka, and ramarama. See <https://www.mpi.govt.nz/protection-and-response/responding/alerts/myrtle-rust/>.
21. If the Concessionaire encounters suspected symptoms of myrtle rust, the Concessionaire must not touch it and must take the following steps:
- (a) Call the MPI Exotic Pest and Disease Hotline immediately on 0800 80 99 66;
  - (b) Take clear photos, including the whole plant, the whole affected leaf, and a close-up of the spores/affected areas of the plant;
  - (c) Don't touch or try to collect samples as this may increase the spread of the disease;
  - (d) If accidental contact with the affected plant or rust occurs, bag clothing and wash clothes, bags and shoes as soon as possible.

### **Kauri Dieback**

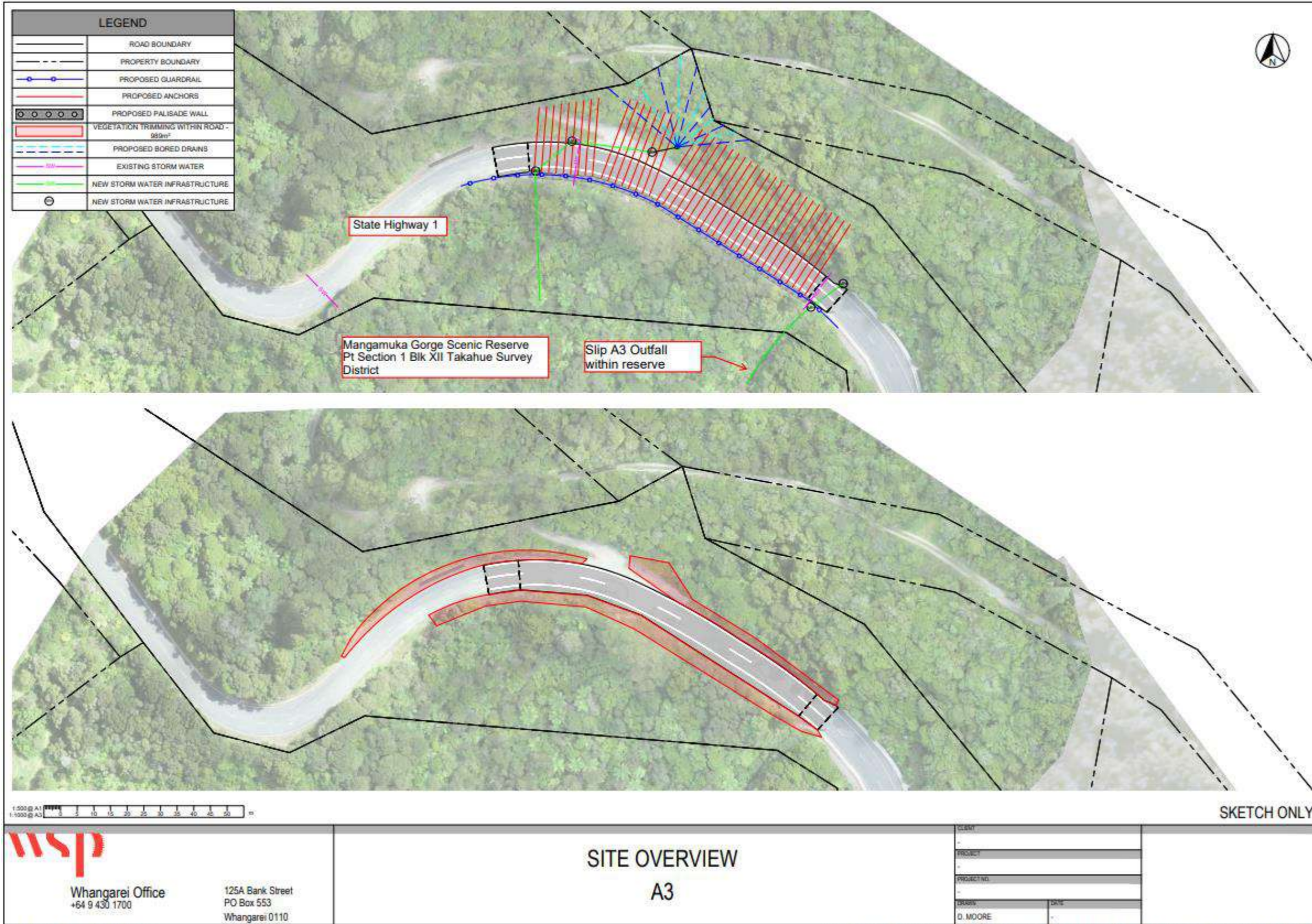
22. The Concessionaire must comply with all guidelines and notices issued by the Kauri Dieback Programme (lead by Ministry of Primary Industry) to prevent and avoid the spread of the pest organism *Phytophthora taxon Agathis* (PTA) Kauri Dieback Disease as specified by the website <http://www.kauridieback.co.nz/>. The Concessionaire must comply with the [general guidelines](#) and for specific concession activities the relevant guidelines as specified on <http://www.kauridieback.co.nz/publications>. The Concessionaire must update itself on these websites on a regular basis.
23. The Concessionaire must ensure that all vehicles and equipment are thoroughly cleaned of all visible soil and that footwear once cleaned is sprayed with SteriGENE (formally known as Trigene) solution before entering and when moving between areas where there are kauri. This is to reduce the potential for spread of PTA. Contact details for suppliers of SteriGENE may be obtained through the Department of Conservation.

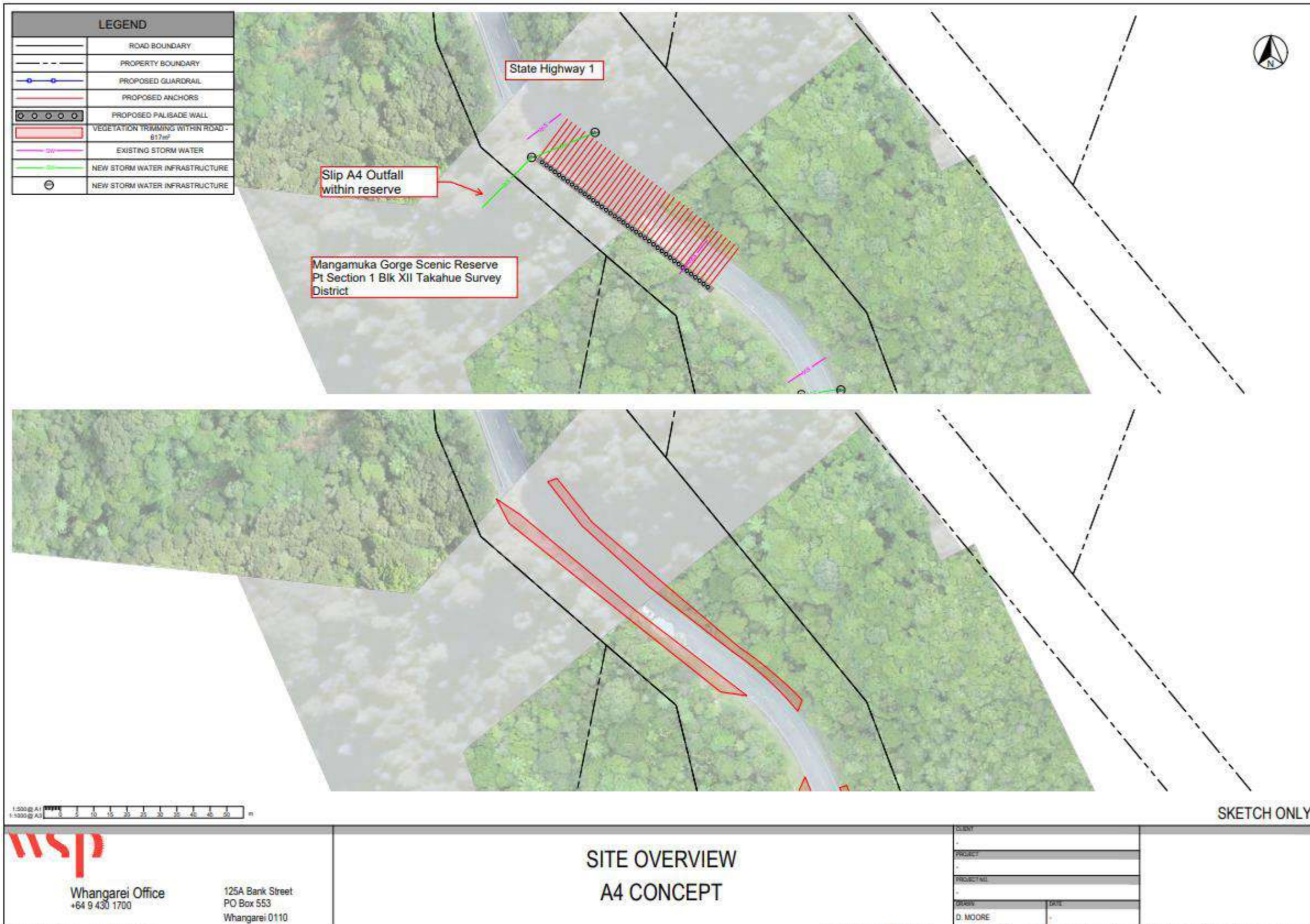


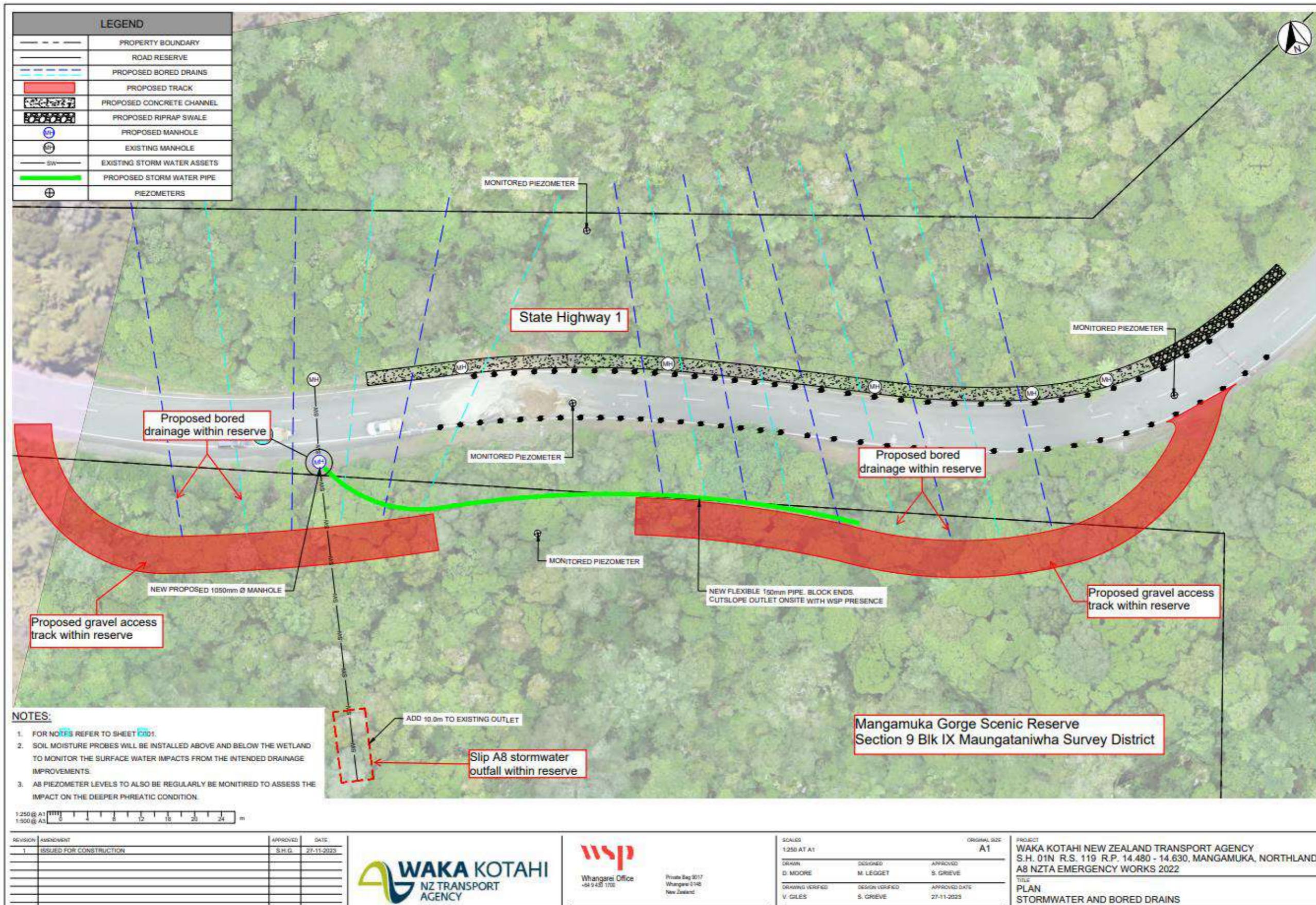
**Swamp Forest Monitoring**

24. In the event the monitoring of water levels by a piezometer at the swamp forest at the A8 slip site located above the road (shown on sheet C021 of the application) identifies that water levels have reduced, then the amount of water removed by the bored drains shall be reduced so that the original swamp forest water level is maintained.

# SCHEDULE 4







# SCHEDULE 5

## RIGHTS AND POWERS IMPLIED IN EASEMENTS

### LAND TRANSFER REGULATIONS 2018

The following are the rights and powers implied in easements as set out in Schedule 5 of the Land Transfer Regulations 2018. The Regulation Schedule applies to all classes of easement and so it is only the specific provisions which relate to the class of easement dealt with in this Concession which apply, along with those that apply to all forms of easement. This Schedule does not include clauses 13 and 14 of Schedule 5 of the Regulations as they are deleted and replaced by the specific default and dispute provisions of the Concession. Refer to Schedule 3 of the Concession for changes to these implied rights and powers.

#### 1 Interpretation

In this schedule, unless the context otherwise requires,—

**benefited land**, in relation to an easement that benefits land, means the land that takes the benefit of the easement and that is described by reference to the register in the relevant easement instrument, transfer instrument, or deposit document

**burdened land**, in relation to an easement,—

- (a) means the land over which the easement is registered and that is described by reference to the register in the relevant easement instrument, transfer instrument, or deposit document; and
- (b) includes the easement area

**easement area**, in relation to an easement, means an area that—

- (a) is shown on a plan in Schedule 4; and
- (b) is referred to in the relevant easement instrument, transfer instrument, or deposit document as the area to which the easement applies

**easement facility**,—

- (a) for a right to convey water, means pipes, pumps, pump sheds, storage tanks, water purifying equipment, other equipment suitable for that purpose (whether above or under the ground), and anything in replacement or substitution:
- (b) for a right to convey electricity or a right to convey telecommunications, means wires, cables (containing wire or other media conducting materials), ducts, surface boxes, towers, poles, transformers, switching gear, other equipment suitable for that purpose (whether above or under the ground), and anything in replacement or substitution:
- (c) for a right of way, means the surface of the land described as the easement area, including any driveway:
- (d) for a right to drain water, means pipes, conduits, open drains, pumps, tanks (with or without headwalls), manholes, valves, surface boxes, other equipment suitable for that purpose (whether above or under the ground), and anything in replacement or substitution:

- (e) for a right to drain sewage, means pipes, conduits, pumps, tanks (with or without headwalls), manholes, valves, surface boxes, other equipment suitable for that purpose (whether above or under the ground), and anything in replacement or substitution:
- (f) for a right to convey gas, means pipes, conduits, valves, other equipment suitable for that purpose (whether above or under the ground), and anything in replacement or substitution

**grantor—**

- (a) has the meanings given by section 107 of the Act; and
- (b) in clauses 3 to 9 and 12(1), include those persons’ agents, employees, contractors, tenants, licensees, and invitees

**repair and maintenance**, in relation to an easement facility, includes the replacement of the easement facility

**telecommunication** means the conveyance by electromagnetic means from one device to another of any encrypted or non-encrypted sign, signal, impulse, writing, image, sound, instruction, information, or intelligence of any nature, whether for the information of any person using the device or not.

**1A** Any reference to “grantee” in this schedule 5 is to be read as “Concessionaire” and includes the Concessionaire’s agents, employees, contractors, tenants, licensees and invitees.

**2 Classes of easements**

For the purposes of regulation 21, easements are classified by reference to the following rights:

- (a) a right to convey water:
- (b) a right to drain water:
- (c) a right to drain sewage:
- (d) a right of way:
- (e) a right to convey electricity:
- (f) a right to convey telecommunications:
- (g) a right to convey gas.

*Rights and powers implied in easements granting certain rights*

**3 Right to convey water**

- (1) A right to convey water includes the right for the grantee, in common with the grantor and other persons to whom the grantor may grant similar rights, at all times, to take and convey water in free and unimpeded flow from the source of supply or point of entry through the easement facility and over the easement area and (for an easement that benefits land) to the benefited land.
- (2) The right to take and convey water in free and unimpeded flow is limited to the extent required by any period of necessary cleansing, renewal, modification, or repair of the easement facility.

- (3) The easement facility for the relevant easement is the easement facility laid or to be laid along the easement area in accordance with clause 10(1).
- (4) The grantor must not do and must not allow to be done anything on the burdened land that may cause the purity or flow of water in the water supply system to be polluted or diminished.

#### **4 Right to drain water**

- (1) A right to drain water includes the right for the grantee, in common with the grantor and other persons to whom the grantor may grant similar rights, at all times, to convey water (whether sourced from rain, springs, soakage, or seepage) in any quantity—
  - (a) from the benefited land through the easement facility and over the easement area; or
  - (b) for an easement in gross, through the easement facility and over the easement area.
- (2) The right to drain water is limited to the extent required by any period of necessary cleansing, renewal, modification, or repair of the easement facility.
- (3) The easement facility for the relevant easement is the easement facility laid or to be laid along the easement area in accordance with clause 10(1).

#### **5 Right to drain sewage**

- (1) A right to drain sewage includes the right for the grantee, in common with the grantor and other persons to whom the grantor may grant similar rights, at all times, to drain, discharge, and convey sewage and other waste material and waste fluids in any quantity—
  - (a) from the benefited land through the easement facility and over the easement area; or
  - (b) for an easement in gross, through the easement facility and over the easement area.
- (2) The right to drain, discharge, and convey sewage and other waste material and waste fluids is limited to the extent required by any period of necessary cleansing, renewal, modification, or repair of the easement facility.
- (3) The easement facility for the relevant easement is the easement facility laid or to be laid along the easement area in accordance with clause 10(1).

#### **6 Rights of way**

- (1) A right of way includes the right for the grantee, in common with the grantor and other persons to whom the grantor may grant similar rights, at all times, to go over and along the easement facility.
- (2) The right to go over and along the easement facility includes the right to go over and along the easement facility with or without any kind of—
  - (a) vehicle, machinery, or implement.

- (3) A right of way includes the right to have the easement facility kept clear at all times of obstructions (whether caused by parked vehicles, deposits of materials, or unreasonable impediment) to the use and enjoyment of the easement facility.
- (4) The right to go over and along the easement facility, and to have the easement facility kept clear, is limited to the extent by any period of necessary repair or maintenance of the easement facility.
- (5) The easement facility for the relevant easement is the surface of the land described as the easement area, including any easement facility laid or to be laid along the easement area in accordance with clause 10(1).

## **7 Right to convey electricity**

- (1) A right to convey electricity includes the right for the grantee, in common with the grantor and other persons to whom the grantor may grant similar rights, at all times, to lead and convey electricity and electrical impulses without interruption or impediment from the point of entry through the easement facility and over the easement area and (for an easement that benefits land) to the benefited land.
- (2) The right to convey electricity without interruption or impediment is limited to the extent required by any period of necessary renewal or repair of the easement facility.
- (3) The easement facility for the relevant easement is the easement facility laid or to be laid along the easement area in accordance with clause 10(1).

## **8 Right to convey telecommunications**

- (1) A right to convey telecommunications includes the right for the grantee, in common with the grantor and other persons to whom the grantor may grant similar rights, at all times, to lead and convey telecommunications without interruption or impediment through the easement facility and over the easement area and (for an easement that benefits land) to and from the benefited land.
- (2) The right to convey telecommunications without interruption or impediment is limited to the extent required by any period of necessary renewal or repair of the easement facility.
- (3) The easement facility for the relevant easement is the easement facility laid or to be laid along the easement area in accordance with clause 10(1).

## **9 Right to convey gas**

- (1) A right to convey gas includes the right for the grantee, in common with the grantor and other persons to whom the grantor may grant similar rights, at all times, to lead and convey gas without interruption or impediment from the point of entry through the easement facility and over the easement area and (for an easement that benefits land) to the benefited land.
- (2) The right to lead and convey gas without interruption or impediment is limited to the extent required by any period of necessary renewal or repair of the easement facility.



- (3) The easement facility for the relevant easement is the easement facility laid or to be laid along the easement area in accordance with clause 10(1).

*Rights and powers implied in all classes of easement*

**10 General rights**

- (1) All the easements referred to in this schedule include—
  - (a) the right to use any easement facility already situated in the easement area for the purpose of the easement granted; and
  - (b) if no suitable easement facility exists in the easement area, the right to lay, install, and construct in the easement area (including the right to excavate land for the purpose of that construction) an easement facility that the grantee reasonably requires and for which the grantor has given prior consent; and
  - (c) the right to repair and maintain the easement facility.
- (2) The grantor must not unreasonably withhold consent under subclause (1)(b).
- (3) The grantor must not do and must not allow to be done on the burdened land anything that may interfere with or restrict the rights of any other party or interfere with the efficient operation of the easement facility.
- (4) The grantee must not do and must not allow to be done on the benefited land (if any) or the burdened land anything that may interfere with or restrict the rights of any other party or interfere with the efficient operation of the easement facility.
- (5) To avoid doubt, all the easements referred to in this schedule (other than for a right to convey electricity) include the right to convey electricity necessary to operate a pump or other equipment that is part of the easement facility.

**11 Repair, maintenance, and costs**

- (1) If the 1 or more grantees have exclusive use of the easement facility, each grantee is responsible for arranging the repair and maintenance of the easement facility, and for the associated costs, so as to keep the facility in good order and to prevent it from becoming a danger or nuisance.
- (2) Deleted.
- (3) If the easement is in gross, the grantee bears the cost of all work done outside the burdened land.
- (4) The parties responsible for maintenance under subclause (1), , or (5) (as the case may be) must meet any associated requirements of the relevant local authority.
- (5) Any repair or maintenance of the easement facility that is attributable solely to an act or omission by the grantor or the grantee must be promptly carried out by that grantor or grantee at their sole cost.

- (6) However, if the repair and maintenance of the easement facility is only partly attributable to an act or omission by the grantor or grantee,—
  - (a) that party must pay the portion of the costs of the repair and maintenance that is attributable to that act or omission; and
  - (b) the balance of those costs is payable in accordance with subclause (2).
- (7) The costs of any electricity used for the conveyance of water must be apportioned between users of the water in proportion to their usage of the water.

**12 Rights of entry**

- (1) The grantee may, for the purpose of exercising any right or power, or performing any related duty, implied in an easement by these regulations,—
  - (a) enter upon the burdened land by a reasonable route and with all necessary tools, vehicles, and equipment; and
  - (b) remain on the burdened land for a reasonable time for the sole purpose of completing the necessary work; and
  - (c) leave any vehicles or equipment on the burdened land for a reasonable time if work is proceeding.
- (2) However, the grantee must first give reasonable notice to the grantor.
- (3) The grantee must ensure that as little damage or disturbance as possible is caused to the burdened land or to the grantor.
- (4) The grantee must ensure that all work is performed properly.
- (5) The grantee must ensure that all work is completed promptly.
- (6) The grantee must immediately make good any damage done to the burdened land by restoring the surface of the land as nearly as possible to its former condition.
- (7) The grantee must compensate the grantor for all damage caused by the work to any crop (whether ready for harvest or not) or to any buildings, erections, or fences on the burdened land.

**13 Default**

Deleted.

**14 Disputes**

Deleted.

# APPENDIX G Kauri Dieback Procedure



## PROCEDURE

Project Name:	Mangamuka Gorge	Code:	
Procedure:	Appendix C: Kauri Dieback Procedure		

### 1 Application

This Plan forms a part of the Erosion and Sediment Control Plan (ESCP) for Mangamuka Gorge Road Rehabilitation works (the Project). The purpose of this Plan is to have the procedures in place to manage the risk of kauri dieback disease and to reduce the potential environmental impact the works may have on the spread of kauri dieback disease.

### 2 Scope of works

The construction activities of the Project include the following:

- Ground stability improvements (anchors);
- Retaining wall construction;
- Culvert works;
- Road reinstatement.

### 3 Potential Environmental Impacts of Activities.

Kauri (*Agathis australis*) are a cornerstone of the indigenous forests of the upper North Island and have had a large part to play not just in the landscape of Aotearoa but also in its culture and early history<sup>1</sup>. Kauri dieback is caused by a soil-borne pathogen. Minimising the movement of soil or plant material that is potentially contaminated with kauri dieback by people, animals, and limited natural spread (over small distances) is fundamental to the management of kauri dieback.

Kauri dieback spreads through the movement of contaminated soil and soil water and it is possible that it is also spread by streams and rivers particularly in times of flooding.

When working or conducting any activity within or around kauri or in native forests in Northland there is a risk of spreading kauri dieback. Kauri forests and stands can be less easily identifiable and have the potential to be in remnant forests across the region.

The key potential situations and the environmental impacts of these are:

Aspects	Impacts
Spread of kauri dieback disease around the local Native forests around the works area through the movement of soil via people, equipment/tools, heavy machinery, and vehicles.	Acute and chronic harm to local kauri by the spread of kauri dieback disease to healthy/uninfected kauri.

<sup>1</sup> Kauri Dieback Hygiene, Best Practice Guidelines; Northland Regional Council, March 2020



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## 4 Key Responsibilities

### Responsibilities.

The **Project Director** is responsible for:

- Ensuring controls to prevent kauri dieback spreading are in place; and
- Ensuring protocols and procedures to manage the risk of kauri dieback are in place.

The **Project Manager** is responsible for:

- Ensuring the implementation of this Plan;
- Communicating requirements to relevant site personnel; and
- Ensuring all personnel have received appropriate instruction and training in avoiding and following kauri dieback procedures.

The **Site Engineer** is responsible for:

- Ensuring adequate hygiene points and wash down stations are available for all soil disturbing activities where kauri may be present;
- Ensuring that all hygiene kits are in stock; and
- Ensuring all site personnel have received appropriate instruction and training in avoiding and following kauri dieback procedures.

All **Site Personnel** are responsible for:

- Following the requirements of this Procedure; and
- Reporting any concerns, incidents, or observations to the Earthworks Manager or Site/Contract Manager

## 5 Kauri Dieback Disease Prevention Procedures

### 5.1 Hygiene Procedures

- Ensure all gear (footwear, tools, equipment, and machinery) is clean before entering and after leaving if Kauri have been identified nearby the work site. It is recommended that all gear is cleaned at the beginning and end of each day if leaving the site. 'Clean' refers to completely soil-free. Soil and organic material cleaned from equipment (including vehicles and heavy machinery), where possible should be collected and disposed of appropriately at an approved landfill. Alternatively, the material can be left in situ at the source.
  - Wheeled or tracked machinery and vehicles pose a high risk and therefore must be cleaned thoroughly to remove all soil.
  - Where possible, machinery and vehicles should remain on sealed road for the duration of the project.
  - When moving from one area of Kauri to another (between work sites), all equipment should be cleaned prior to moving. A full wash-down of soil and debris should occur on site prior to movement as this contains any problems at the source.
  - Where the above recommendation cannot occur, vehicles and machinery may be taken off site and cleaned in a wash-down facility, but all loose soil and debris must be removed at the kauri site prior to moving and care should be taken to ensure that risk of spread during transport to that facility is minimised.
  - Operators are expected to carry out their own inspections and cleaning, however these may be checked by local Department of Conservation (DOC) or council staff.
- Vehicles and personnel should remain on roads and tracks where possible, particularly in wet conditions. If it is required that vehicles or personnel need to move onto/off tracks, portable



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phytosanitary packs are required to be used to ensure that kauri dieback is not carried onto the track from surrounding kauri or between high-risk areas.

- Phytosanitary kits must be used when leaving an area showing symptoms of kauri dieback disease.
- Operations should be carried out under dry soil conditions where possible.
- Work sites should ideally be located downslope of kauri areas.
- When entering or exiting a stream system, you must use portable phytosanitary packs to ensure kauri dieback is not carried into the stream from surrounding kauri or between high-risk areas.
- Raw materials (soil/substrate/gravel) should not be sourced from kauri areas. Materials should be sourced from a 'clean' source not containing kauri.
- If any vegetation removal is required, methods that do not disturb the soil should be used.
  - If any diseased kauri and vegetation (including weeds and native vegetation in diseased zones) are trimmed or cleared they must be left in-situ, composted for use on site, or disposed of at an appropriate landfill site.
  - If any soil/plant material is to be removed from a "controlled area" this must be managed with biosecurity approval.

### 5.2 Additional General Considerations

- Avoid or restrict introduction of high-risk products (soil/substrate/gravel/vegetation) to the area. If any high-risk products are required, they must be from reputable/biosecurity accredited sources.
- Managing or limiting vehicle access where appropriate should be considered.
- Managers, visitors and users must be aware when undertaking high-risk activities in an infected area.
- Good hygiene practices by all users/visitors should be encouraged.
- If both infected/symptomatic and uninfected sites are identified within an area, hygiene measures must be taken to avoid soil transfer from infected to uninfected. Activity should be planned to move from uninfected to infected areas (not vice-versa where possible).

### 5.3 Phytosanitary information

Kauri dieback spores can be removed from footwear and equipment simply by scrubbing them with clean water to remove all soil then allowing gear to dry. However, while not essential, using Sterigene will increase the effectiveness of these hygiene measures. Sterigene should be used at a 2% mix.

It is recommended that Sterigene disinfectant is used on footwear, equipment, machinery and other items that have been in contact with soil. Sterigene is a broad-spectrum disinfectant which is non-toxic, non-corrosive, biodegradable and environmentally friendly compared to other products.

Alternatively, Virkon and Janola (Bleach) may be used, however its application is limited in a forest situation and any application should be in accordance with the product's label instructions and Material Safety Data Sheet. Options for mixes are outlined below:

- 70% Methylated Spirits, 30% water.
- 25% Bleach, 75% water.
- 2% Sterigene Mix

All gear should first be cleaned to remove soil. Sterigene should then be sprayed onto the clean surfaces (and left to dry). Sterigene will not kill kauri dieback spores that are embedded in soil hence it is important to remove soil before applying the disinfectant.

Water, soil, or slurry and Sterigene from cleaning dirty equipment needs to be disposed of carefully:

- Solution must be drained into waste water drains, not the stormwater system, or disposed of on a lawn or gravel pad.
- If necessary, expired Sterigene may be discarded on a lawn or gravel pad.



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- Do not let Sterigene drain into septic systems.
- Sinks connected to waste water systems are ideal for cleaning equipment off site.

Wearing reusable non disposable overshoe booties is an option for each kauri area. Sourcing an overshoe bootie that is durable and can be washed and reused regularly is recommended. These need to be cleaned at the hygiene point (disinfectant location at the edge of the works or forest area) like footwear. Disposable ones are not recommended.

### 5.4 Hygiene Kit Requirements

Outlined below are the items needed in hygiene kits around the site and at hygiene and wash down points:

- Stiff bristle scrubbing brush or broom;
- 500ml spray bottle with disinfectant (disinfectant mixes are outlined in Section 5.3);
- Boot bags;
- 1 litre pump sprayer with water.

For vehicle and heavy machinery wash down points the volumes of disinfectant and water will be larger than those listed above. These volumes will be dictated by the frequency of cleaning and the amount of equipment that needs to be cleaned on site. The same mixes of disinfectant will be used as listed in Section 5.3.

## 6 Wash-Down Sites

Wash down of vehicles and/or heavy machinery that was used within a kauri root zone should occur within that area where possible. If the vehicles/machinery have been operating outside a root zone, the wash-down should occur prior to exiting a kauri forest.

When selecting a suitable wash-down site, the following should be considered:

- Hard stand area and well drained surface (e.g., road near the edge, firm grass or gravel).
- At least 30m away from a water course or water body. This includes drains that discharge to water courses such as stormwater drains and culverts.
- An area within the root zone, if use of equipment and vehicles has occurred in this area.
- Is of gentle slope to drain wastewater away from:
  - The wash-down area and into a kauri root zone.
  - Water catchment.
  - Areas outside the kauri root zone.
  - Vehicles and heavy machinery being washed to prevent potential re-contamination.
- Enable cleaned objects to exit without being re-contaminated.
- Undertaking a risk assessment of the site to inform a health and safety risk management plan e.g., working around powerlines.

Where runoff cannot be managed to an acceptable standard (e.g., large quantity of wastewater and/or an extensive runoff) construction of a bund and sump may be required to safely dispose of the wastewater. DO not drive through wash down wastewater as this may re-contaminate the vehicle/machinery.

If wash down cannot occur in the forest, then the vehicles and/or heavy machinery should be taken to a suitable facility off site for decontamination. All loose soil and vegetation should be physically removed (preferably when dry) where possible before the vehicle or heavy machinery is transported offsite. This can be removed using a hard brush or broom or by using compressed air. Pay attention to the underside, between dual wheels,



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sump guards, mud flaps, hollow sections, foot wells, and bumper bars. The amount of water used should be minimised.

Footwear and equipment/tool hygiene points should be installed at the entrance and exit of a kauri forest site. If the same access point is used when moving from one area of kauri to another, a hygiene point should be set up between the two areas. Footwear should be cleaned following the procedures outlined in Section 5.3 and Section 5.4.

## 7 External Contacts

Kauri Dieback Helpline	0800 NZ KAURI
Kauri Dieback Team – Northland Regional Council	<a href="mailto:kauridieback@nrc.govt.nz">kauridieback@nrc.govt.nz</a>

### Project Team Contacts

Project Director: Vaughn Robbins	027 492 3576
Project Manager: Chris Tuxford	0272695275
ESC & Environmental: Campbell Stewart	021 837825
Site Engineer: Tim Hunger	0275719111



**ADDENDUM 1 – ASSESSMENT OF ENVIRONMENTAL  
EFFECTS -RESOURCE CONSENT PACKAGE  
2B**