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

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

(Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Form 9). Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges — both available on the Council's web page.

1. Pre-Lodgement Meeting

Have you met with a council Resource Consent representative to discuss this application prior to lodgement?

◯ **Yes** ✔ **No**

If yes, who have you spoken with?

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? Refer to attached application and AEE.

Who else have you consulted with?

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

5. Applicant details

Name/s: Louise Wilson, Senior Infrastructure Consents Planner, Far North District Council

Email: [redacted]

Phone number:

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

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

If yes, please provide details.

6. Address for correspondence

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

Name/s: Louise Wilson, Senior Infrastructure Consents Planner

Email: [redacted]

Phone number:

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

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

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

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

Name/s: FNDC - see attached Record of Title

Property address/
location:

Postcode

8. Application site details

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

Name/s:

Site address/ location: Church Road, Kaitaia

Postcode

Legal description: Part Lot 332 DP 12724 **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.

Please contact applicant prior to site visits as this is an activie worksite and an inducation may be required.

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.

Please refer to attached application - resource consent is sought for a replacement bridge and associated earthworks.

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

10. Would you like to request public notification?

◯ **Yes** ✔ **No**

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

(more than one circle can be ticked):

◯ **Building Consent** Enter BC ref # here (if known)

✔ **Regional Council Consent (ref # if known)** AUT. 046990.01.01

◯ **National Environmental Standard Consent** Consent here (if known)

◯ **Other (please specify)** Specify 'other' here

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

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

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

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

◯ **Subdividing land**

☑ **Disturbing, removing or sampling soil**

◯ **Changing the use of a piece of land**

◯ **Removing or replacing a fuel storage system**

13. 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**

14. Draft conditions:

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

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

15. 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)** As per cover email

Email: [redacted]

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.

15. Billing details continued...

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) FNDC

Signature: [redacted] Date

(signature of bill payer)

MANDATORY

16. Important Information:

Note to applicant

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

You may apply for 2 or more resource consents that are needed for the same activity on the same form.

You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

Fast-track application

Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement.

A fast-track application may cease to be a fast-track application under section 87AAC(2) of the RMA.

Privacy Information:

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

17. Declaration

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

Name (please write in full) Louise Wilson, Senior Infrastructure Consents Planner, FNDC

Signature [redacted] Date

application is made by electronic means

See overleaf for a checklist of your information...

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.

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

Kaitaia Resource Recovery Centre Bridge Replacement

Application for Landuse Consent
January 2026

Report Information and Quality Control

Prepared for:	Jeanette England, District Facilities Asset Manager, FNDC
Author:	Louise Wilson, Senior Infrastructure Planner, FNDC Signed:  Date: 22 January 2026
Reviewer:	Losaline Finekifolau, Team Leader Infrastructure Consenting Signed:  Date: 22 January 2026
Document Name:	Kaitaia Resource Recovery Centre – Replacement Bridge – Application for Landuse Consent, January 2026

Table of Contents

1 Applicant and Property Details

Applicant:	Far North District Council Infrastructure Consenting Attn: Louise Wilson, Senior Infrastructure Planner louise.wilson@fndc.govt.nz
Address for Service:	Far North District Council Memorial Avenue Private Bag 752 Kaikohe 0440
Legal Description: **Site Area:** **Owner of Site:** **Occupiers of Site:**	Part Lot 332 DP 12724 3.77ha Crown Land NA – Public Domain
Proposal:	It is proposed to construct a single span bridge with associated earthworks, retaining walls, abutments and access approach (see Fig 5.2 and 5.3)
Reasons for Consent:	The subject site is identified as a Hazardous Activities and Industries List (HAIL) site. The proposed 500m3 of earthworks/soil disturbance triggers Regulation 9 of the NESCS. The proposed bridge meets the definition of a building under FNDP rule 9.6.5.1.1 - Purpose of Buildings, and therefore requires a consent. The proposed earthworks breach FNDP rule 12.3.6.1.2 - Excavation and/or Filling.

2 Information Requirements

This application has been prepared in accordance with the requirements of Schedule 4 of the Resource Management Act 1991 (the Act) having particular regard to the relevant matters in the following documents:

- National Policy Statement for Freshwater Management 2020 (NPSFM).
- National Policy Statement for Infrastructure 2025 (NPSI).
- Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NESF).
- Regional Policy Statement for Northland 2016 (RPS).
- Proposed Regional Plan for Northland – February 2024 (PRPN).
- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NESCS).
- Operative Far North District Plan 2009 (FNDP).
- Proposed Far North District Plan 2024 (PDP).

This application refers to the following Appendices:

Appendix A - Record of Title
Appendix B - RS Engineering Bridge Design Drawings
Appendix C – RS Engineering Geotechnical Investigation
Appendix D – RS Engineering Design Features Report
Appendix E – Haigh Workman Consultant Engineers Preliminary and Detailed Site Investigation
Appendix F – Northland Regional Council Resource Consent AUT.046990.01.01

3 Background

The Far North District Council (FNDC) Infrastructure Group is applying to the FNDC Consent Authority for landuse consent to construct a new bridge on Part Lot 332 DP 12724. Landuse consent is required for the following reasons:

- The subject site is identified as a Hazardous Activities and Industries List (HAIL) site, and the proposed 500m3 of earthworks/soil disturbance triggers Regulation 9 of the NES-CS.
- The proposed bridge meets the definition of a building under FNDP rule 9.6.5.1.1 - Purpose of Buildings and therefore requires consent.
- The proposed earthworks breach FNDP rule 12.3.6.1.2 Excavation and/or Filling.

The existing bridge provides access to the Kaitāia Resource Recovery Centre (operated by Northland Waste) at 22 Church Road, Kaitāia (Fig. 3.1).

A condition assessment completed by RS Engineering conducted in July 2023 concluded that the bridge should be replaced within 12 months due to structural deterioration.

Fig. 3.1 – Location of subject site

Northland Regional Council (NRC) issued resource consent AUT.046990.01.01 on 3 November 2025 for the construction and ongoing use of a new bridge in and over a tributary of the Awanui River (refer to Appendix F) .

To align with the regional consent and enable construction to begin in 2026, complementary land use consents are now being sought.

4 The Site and Surrounding Environment

4.1 Subject Site

The subject site is located at Part Lot 332 DP 12724 (Fig.4.1). The site is 3.77ha and is accessed from Church Road via a Right of Way over Part Lot 18 DP 405. The record of title states the purpose of the parcel is public domain (see Appendix A – Record of Title).

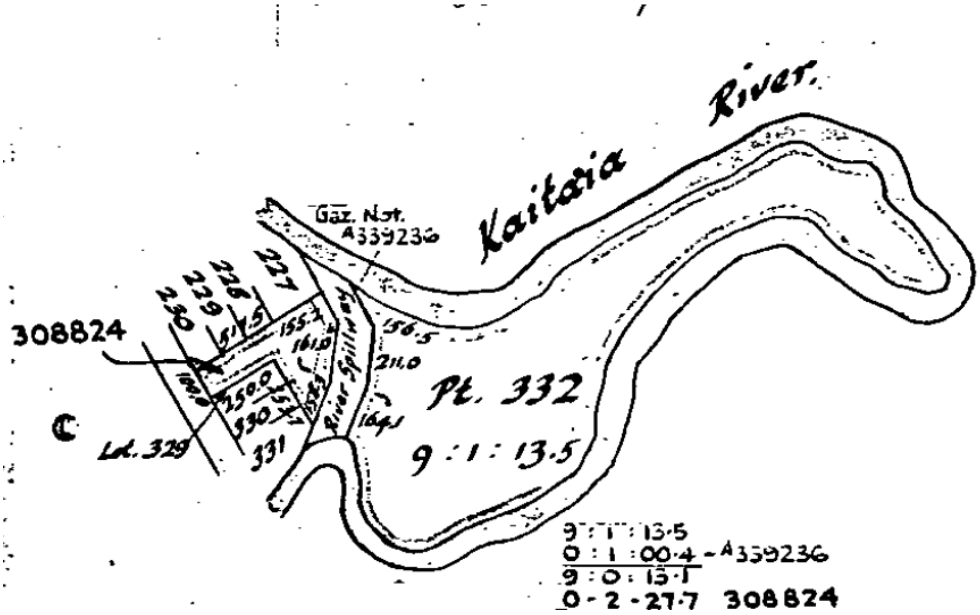


Fig. 4.1 Survey Plan of Pt Lot 332 DP 12724

The site provides access to the Resource Recovery and Recycling Station at 22 Church Road (Fig.4.2).

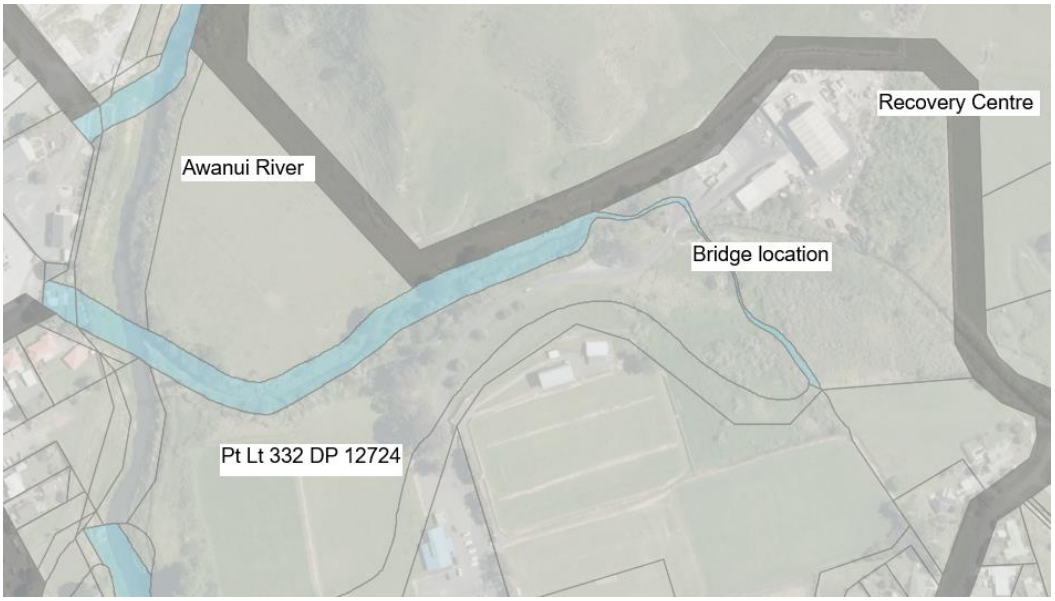


Fig. 4.2 Site in relation to Awanui River and Resource Recovery Centre

4.2 Surrounding Environment

The site is zoned *Recreational Activities* in the Operative Far North District Plan (Fig. 4.3).

To the south of the proposed bridge are several recreational areas managed by FNDC (Sunrae Park, Arnold Rae Park and Bedgood Park). To the north of the bridge the zoning is Rural Living and there is a site of cultural significance to Māori (Kerekere Pa/Bells Hill). To the east, the land is zoned Rural Production and to the west is the Awanui River.

The proposed bridge spans a tributary of the Awanui River.

Fig.4.3 Operative District Plan accessed 08.04.2025 site zoned Recreational Activities

The site is not subject to any relevant Proposed Regional Plan for Northland overlays (Fig 4.4)

Fig 4.4 Proposed Regional Plan accessed 08.04.2025 site is not subject to any Regional Plan overlays

The site is subject to several river flood hazard zones as depicted below (Fig 4.5).

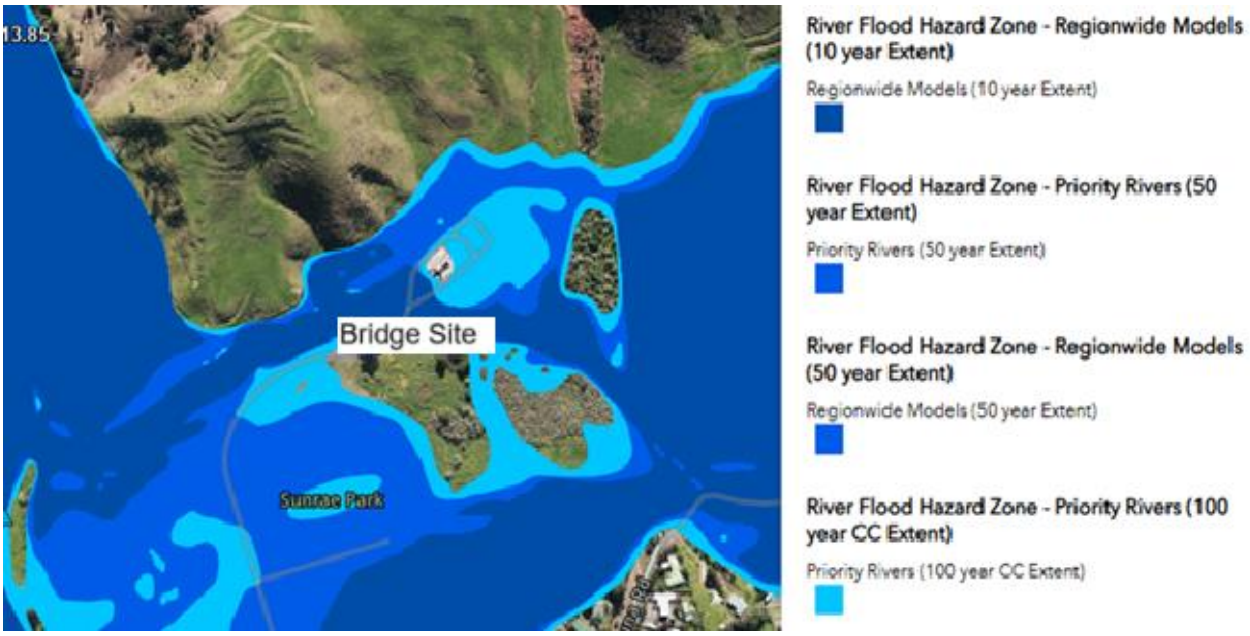


Fig. 4.5 Natural Hazards accessed 08.04.2025 bridge site is within a 10 year extent river flood hazard

Section G.6 of the Hazardous Activities and Industries List (HAIL) includes waste recycling sites. Consequently, the Kaitaia Resource Recovery Centre is a potentially contaminated site under the NES-CS.

In summary:

- The site and surrounding environment are affected by a river flood hazard.
- There is a mapped site of significance to tangata whenua (Kerekere Pa/Bells Hill) approximately 85m from the bridge site.
- The surrounding environment includes a HAIL site.

5 The Proposal

It is proposed to construct a single span bridge with associated earthworks, retaining walls, abutments and access approach (see Fig 5.2 and 5.3). The proposed bridge will be constructed in general accordance with the location, design and methodology prepared by RS Engineering (Appendices B, C and D). A brief description is provided below.

5.1 Bridge Location and Design

The proposed bridge will be downstream of the existing bridge shown in figure 5.1 below. The existing bridge will be removed after the new bridge is completed.

Fig. 5.1 Bridge Location as per RS Engineering Report

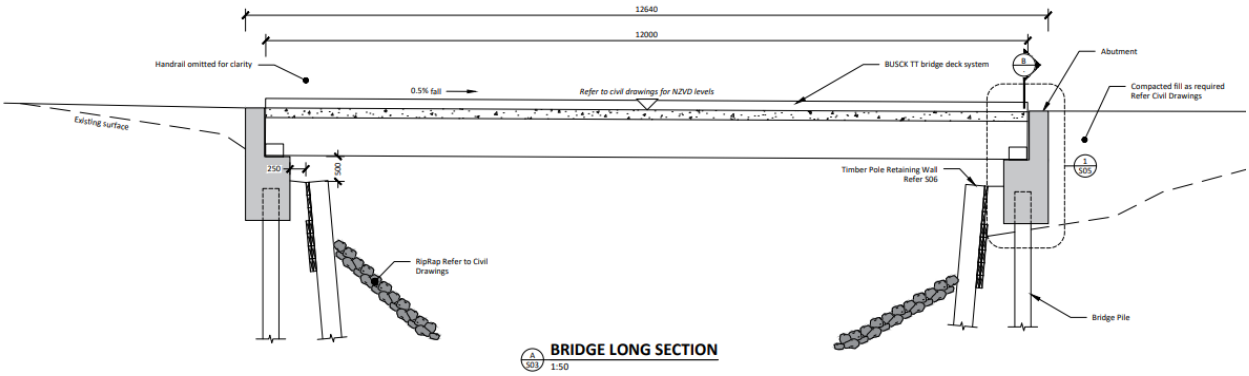


Fig. 5.2 Proposed single span bridge with abutments, retaining walls and piles as per RC Engineering reports

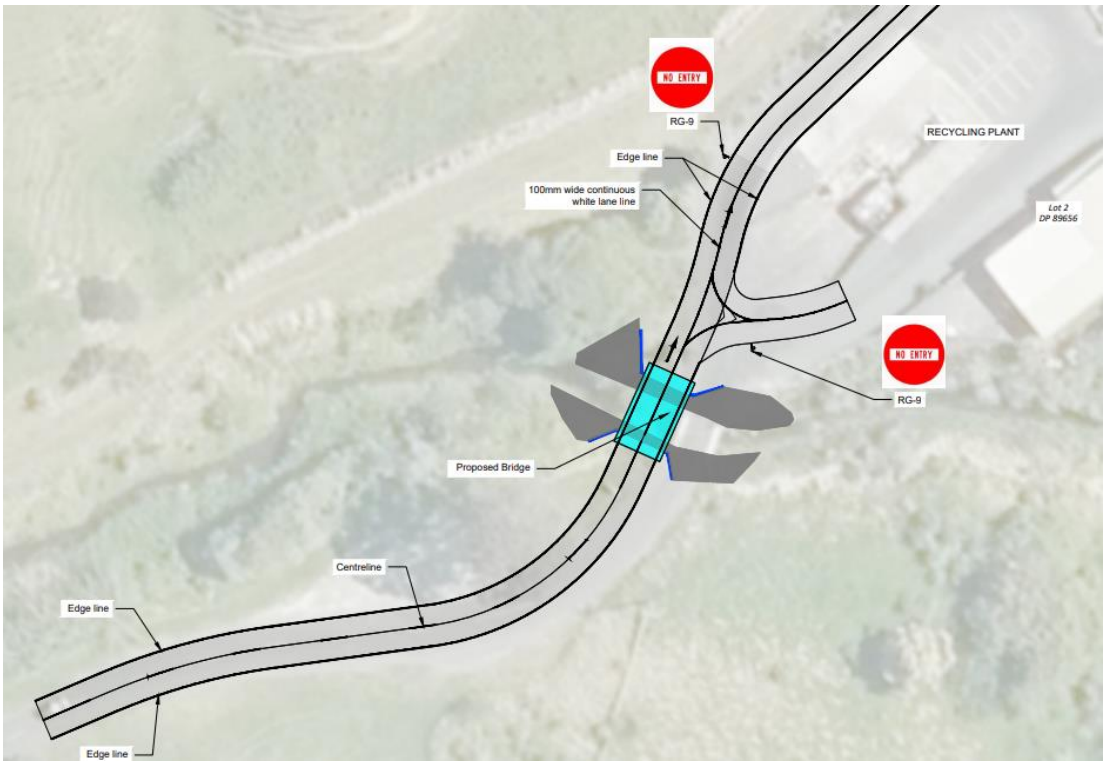


Fig. 5.3 Proposed access approach, bridge and abutments as per RS Engineering Reports

Earthworks

It is proposed to provide, as a condition of consent, an Earthworks Management Plan that describes the sequence of activities, estimates cut, fill and waste volumes, and details how conditions of consent relating to earthworks will be complied with.

Retaining walls and bridge piles are required to form the bridge abutments. The retaining walls and piles will be specifically designed by a Chartered Professional Engineer. The piles are expected to extend to the inferred mudstone 27-35m BGL.

5.3 Any Other Activities that are Part of the Proposal

Approximately 200m2 of vegetation clearance will be required. Vegetation cover will be replaced once construction is completed.

6 Reasons for Application

Landuse consent is required for the following reasons:

- The subject site is identified as a Hazardous Activities and Industries List (HAIL) site and, the proposed 500m3 of earthworks/soil disturbance triggers Regulation 9 of the NESCS.
- The proposed bridge meets the definition of a building under FNDP rule 9.6.5.1.1 - Purpose of Buildings, and therefore requires a consent.
- The proposed earthworks breach FNDP rule 12.3.6.1.2 - Excavation and/or Filling.

6.1 National Environmental Standard for Contaminants in Soils

The construction of the access approaches to the bridge will require approximately 500m3 of earthworks/soil disturbance within a *confirmed HAIL site*. A Preliminary Site Investigation (PSI) and Detailed Site Investigation (DSI) was carried out by Suitably Qualified and Experienced Practitioners (SQEP) Haigh Workman Consultant Engineers (see Appendix E).

This investigation confirmed the soil disturbance associated with the proposed bridge construction is a **Controlled Activity** under Regulation 9. This classification applies because:

- Soil contamination levels do not exceed the applicable standards in Regulation 7; however
- The proposed earthworks volume exceeds the permitted activity threshold in Regulation 8.

For the purposes of the NES-CS, the defined ‘piece of land’ corresponds to the,proposed earthworks footprint, which is an area of 2,139m2. Within this area, the permitted activity standards allow for 107m3 of soil disturbance and 21m3 of soil removalper year. The proposed acitivity involves approximately 500m3 of earthworks, which is 393m3 more than the permitted threshold.

6.2 Operative Far North District Plan

The site is zoned *Recreational Activities* in the Operative Far North District Plan (Fig. 4.3).

Purpose of Buildings

Resource consent is required under the Operative District Plan because the proposed bridge is a building that does not comply with permitted activity rule *9.6.5.1.1* (see below).

9.6.5.1.1 PURPOSE OF BUILDINGS

All new buildings shall be directly for, or ancillary to, the principal recreational activities on the site.

The proposed bridge does not comply with the discretionary activity rule 9.6.5.3, as it does not directly support a recreational activity. Consequently, the proposed bridge is a **Non-Complying Activity** (see below).

9.6.5.3 DISCRETIONARY ACTIVITIES

An activity is a discretionary activity in the Recreational Activities Zone if:

(a) it complies with ***Rules 9.6.5.1.1 Purpose of Buildings*** for permitted activities above; and

(b) it complies with the relevant standards for permitted, controlled, restricted discretionary or discretionary activities set out in ***Part 3 of the Plan - District Wide Provisions***; but

(c) it does not comply with one or more of the other standards for permitted or restricted discretionary activities in this zone as set out under ***Rules 9.6.5.1*** and ***9.6.5.2*** above.

The Council may impose conditions of consent on a discretionary activity or it may refuse consent to the application. When considering a discretionary activity application, the Council will have regard to the assessment criteria set out under ***Chapter 11***.

If an activity does not comply with the standards for a discretionary activity, it will be a non-complying activity in this zone.

The applicant considers the activity status to be a technical breach for the following reasons:

- It is unlikely the plan writers intended to discourage buildings/bridges enabling access through the Recreational Activity zone.
- The proposed bridge replaces an existing bridge. The Applicant considered whether RMA *s.10 Certain existing uses in relation to land protected* could be applied. See section 7.2 of this report.
- The proposed bridge is a permitted activity under the rules of the Proposed Far North District Plan (see section 6.3 below).

Excavation and Filling

Approximately 500m3 of earthworks are proposed, breaching FNDP rule 12.3.6.1.2 Excavation and/or Filling.

12.3.6.1.2 EXCAVATION AND/OR FILLING, INCLUDING OBTAINING ROADING MATERIAL BUT EXCLUDING MINING AND QUARRYING, IN THE RURAL LIVING, COASTAL LIVING, SOUTH KERIKERI INLET, GENERAL COASTAL, RECREATIONAL ACTIVITIES, CONSERVATION, WAIMATE NORTH AND POINT VERONICA ZONES

Excavation and/or filling, excluding mining and quarrying, on any site in the Rural Living, Coastal Living, South Kerikeri Inlet Zone, General Coastal, Recreational Activities, Conservation, Waimate North and Point Veronica Zones is permitted, provided that:

(a) it does not exceed 300m³ in any 12 month period per site; and

(b) it does not involve a cut or filled face exceeding 1.5m in height i.e. the maximum permitted cut and fill height may be 3m.

Resource Consent is therefore required as a **Restricted Discretionary Activity** pursuant to rule 12.3.6.2.1.

12.3.6.2.1 EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RURAL LIVING, COASTAL LIVING, SOUTH KERIKERI INLET, GENERAL COASTAL, RECREATIONAL ACTIVITIES, CONSERVATION, WAIMATE NORTH AND POINT VERONICA ZONES

Excavation and/or filling, excluding mining and quarrying, on any site in the Rural Living, Coastal Living, South Kerikeri Inlet Zone, General Coastal, Recreational Activities, Conservation, Waimate North and Point Veronica Zones is a restricted discretionary activity, provided that:

(a) it does not exceed 2,000m^3 in any 12 month period per site; and

(b) it does not involve a cut or filled face exceeding 1.5m in height i.e. the maximum permitted cut and fill height may be 3m.

The overall activity status under the FNDP is **Non-Complying.**

6.3 Proposed Far North District Plan

FNDC has notified the Proposed Far North District Plan. The PDP zoning is *Sport and Active Recreation* (see Fig. 6.1). Hearings regarding zoning have been held and it is unlikely the proposed zoning will be subject to appeal. Consequently, the proposed rules must be assessed.

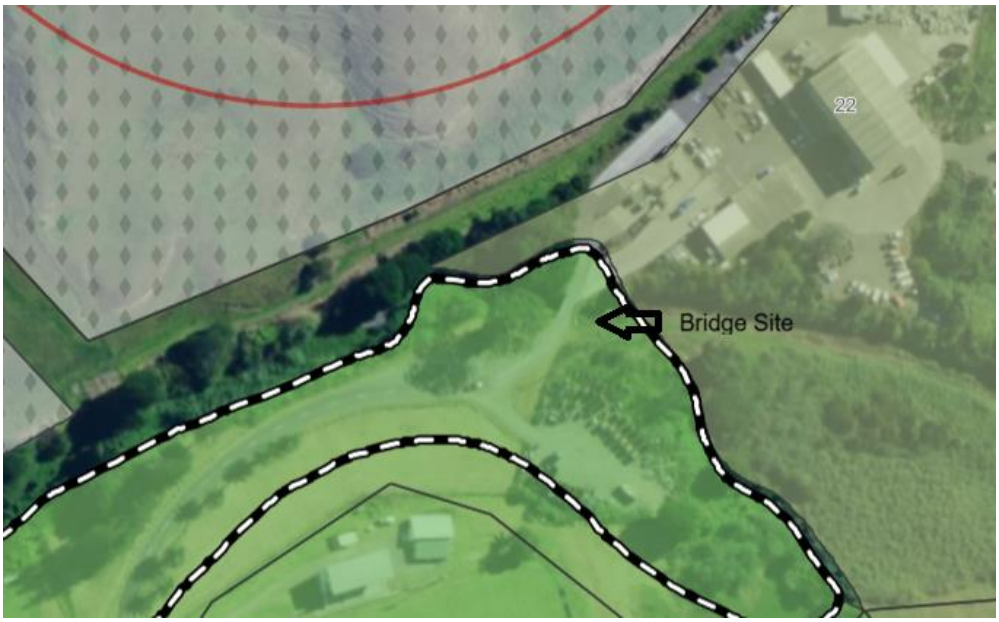


Figure 6.1 The proposed bridge site is zoned Sport and Active Recreation.

The proposed bridge is a **Permitted Activity** pursuant to rule SARZ – R1 because it is a new structure that complies with the relevant performance standards. See Figure 6.2 below.

SARZ-R1	New building or structure, and extension or alteration to an existing building or structure	
Sport and Active Recreation zone	**Activity status: Permitted** **Where:** **PER-1** The new building or structure, or extension to an existing building or structure, will accommodate a permitted activity. **PER-2** The new building or structure, or extension or alteration to an existing building or structure complies with standards: SARZ-S1 Maximum height; SARZ-S2 Height in relation to boundary; SARZ-S3 Setback(excluding from MHWS or wetland, lake and river margins); SARZ -S4 Setback from MHWS; and SARZ-S5 Building or structure coverage.	**Activity status where compliance not achieved with PER-2: Restricted Discretionary** **Matters of discretion are restricted to:** a. the matters of discretion of any infringed standard. **Activity status where compliance not achieved with PER-1: Discretionary**

The proposed earthworks are a **Restricted Discretionary Activity** pursuant to rule EW-R1 because the volume of earthworks exceeds the standard stated in EW-S1.

The overall activity status under the PDP is **Restricted Discretionary**.

6.4 Proposed Regional Plan for Northland

Pursuant to s.9(2), s.13(1), and s.13(2) of the Act, Regional Councils must manage the use, erection or placement of structures in the beds of rivers. Northland Regional Council (NRC) issued resource consent AUT.046990.01.01 on 3 November 2025 for the construction and use of a bridge in and over a tributary of the Awanui River (see Appendix F). No further assessment of the PRPN is provided here as resource consent has already been issued.

6.5 Scope and Overall Activity Status

Resource consent is sought as a **Non-Complying Activity** for breaches of the NESCS and FNDP. It is intended that the scope of this application covers all rule breaches associated with the proposed activity. The Applicant has carried out a Planning Assessment and has not identified any other rule breaches. The AEE provided in section 7 of this report is commensurate with the scale of the activity and covers all relevant effects.

7 Assessment of Environmental Effects

The Applicant has identified the reasons for this application in section 6. It is intended that the scope of this application and Assessment of Environmental Effects (AEE) covers all rule breaches associated with the proposed activity. This AEE provides the information required by Schedule 4 of the Act and is commensurate with the scale of the proposed activity.

7.1 Positive Effects

The purpose of the proposed bridge is to enable access to the Kaitaia Resource Recovery Centre (RRC). The proposed bridge will positively contribute to:

- Safeguarding the health and safety of the environment and community by replacing a bridge that is no longer structurally fit for purpose.
- Enabling the effective and efficient management of the existing waste management infrastructure.
- Enabling FNDC to meet obligations under the Waste Minimisation Act 2008.

7.2 Permitted Baseline and Existing Uses

Permitted Baseline

Sections 95D(b) and 95E(2)(a) of the Act provide that when determining the extent of the adverse effects of an activity, 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.

The Consent Authority can use discretion when determining whether to apply the baseline test. In this case, the Applicant considers it appropriate to apply the baseline test when assessing the breach of rule *9.6.5.1.1 Purpose of Buildings*. The proposed bridge does not breach any bulk or location rules. Consequently, any effects associated with bulk and location can be disregarded.

Existing Uses

Section 10(1) of the RMA addresses existing use rights for land use. Under this section, land may be used in a manner that contravenes a rule in a district plan or proposed district plan if both:

- The use was lawfully established before the rule became operative or the proposed plan was notified
- The effects of the use are the same or similar in character, intensity and scale.

Lawfull Establishment - RS Engineering has estimated the bridge to be 40 years old. This predates the introduction of the RMA in 1991 and the transitional provisions in s.383 of the Act may have been applied. Original design drawings could not be located. However, on the balance of probabilities, it is likely the bridge was lawfully established.

Outline Plans have previously been issued for the Resource Recovery Centre (RRC) implying that access to the RRC continued to be lawful. The RRC was legally established via Outline Plan RC2080277 back in 2008 when the site was a designated site. The designation was not carried through to the operative FNDP. However, the approved plan for RC2080277 shows the bridge (see Figure 7.1 below).

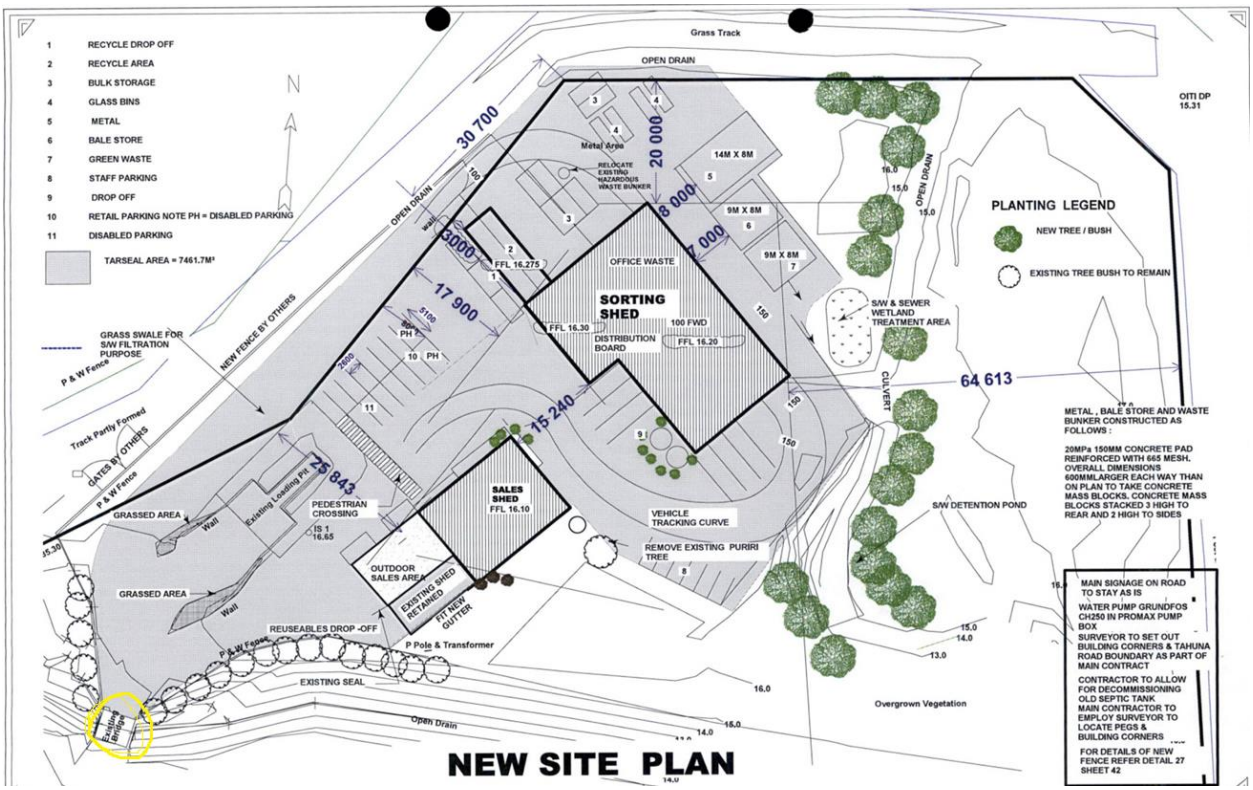


Figure 7.1 RC2080277 Approved Plan dated 26.05.08 showing existing bridge (yellow circle).

Character, Intensity and Scale –. The existing bridge will be removed when the replacement bridge is completed. The character, scale and intensity of the effects of the new bridge will be indiscernible from the existing effects. The proposed bridge is not intended to facilitate any new or more intense effects. The purpose of the replacement bridge is to safely enable existing lawfully established activities.

Assessment Criteria - Activities that cannot comply with rule 9.6.5.1.1 are non-complying activities pursuant to FNDP rule 9.6.5.3. The processing planner may consider any relevant matter when assessing a non-complying activity. However, section 11.17 of the FNDP states the following matters that are of particular interest:

11.17 PURPOSE OF BUILDINGS IN THE RECREATION/CONSERVATION ENVIRONMENT

(a) The necessity of the building for conducting the principal recreational or conservation activity on the site.

(b) The compatibility of the building with the natural or landscaped character of the site, and with the level of amenity in the surrounding area.

(c) The necessity of the building for a utility service.

11.17 (a) - The proposed bridge is necessary for access to the resource recovery centre which could be interpreted as a *conservation activity* as this term is not defined in the plan.

11.17 (b) - The proposed replacement bridge is compatible with the character and amenity of the surrounding area and indistinguishable from the existing bridge (see Figure 7.2).

11.17 (c) – The proposed bridge is essential to enable access to the resource recovery centre which could be interpreted as a utility service. Section 1.4 of the National Policy Statement for Infrastructure 2025 (NESI) includes resource recovery centres in the definition of additional infrastructure. The NESI post-dates the operative FNDP. Utility service is not a term used in the most recent NESI or the Proposed District Plan (see section 8.2 of this report).

Overall, the adverse effects of the proposed replacement bridge can be set aside as they will be indiscernible from the effects of the existing bridge. The balance of this AEE focuses on the potential adverse effects of the associated earthworks and disturbance of a HAIL site.

Figure 7.2 View of existing bridge when exiting recovery centre site.

7.3 Potential Adverse Effects

Contaminated Land Effects

The NES-CS describes a 'piece of land' as any land where a HAIL activity has occured, is occuring, or is more likely than not to have occured, and where soil disturbance is proposed. Consequently, the proposed 500m3 of earthworks is covered under the NES-CS regulations.

A PSI/DSI was carried out by Haigh Workman Consultant Engineers (see Appendix E). Using historical information available for the site and observations from site visit on 27 November 2025, Haigh Workman confirmed that HAIL category G.3 and G.6 activities have occurred at the site.

Thirteen soil samples were collected, including one duplicate soil sample for quality assurance purposes. All soil samples were submitted to the Eurofins laboratory for analysis. Laboratory results reported:

- All Contaminant of Concern (CoC) concentrations were below applicable MFE NES-CS Commercial/Industrial Human Health criteria.
- Asbestos was detected in one soil sample but with concentrations below asbestos human health guideline value for Commercial and Industrial sites, and
- Metals concentrations were above applicable background levels.

Soil sampling has confirmed that there are no significant contaminated land related constraints on redevelopment of the land for commercial/industrial purposes and that standard earthworks controls are appropriate.

Based on this investigation, the proposed 500m3 of soil disturbance is considered a Controlled Activity under NES-CS Regulation 9 because although the soil contamination volumes does not exceed thethresholds in Regulation 7, however the earthworks volumes exceed the permitted thresholdsunder Regulation 8.

Haigh Workman made the following recommendations which the Applicant offers as consent conditions:

- A site management plan (SMP) outlining control measures to be in place should be prepared for the site prior to earthworks commencing.
- Soil/fill material with metals concentrations above background levels is not 'Cleanfill' for disposal purposes. If material exceeding background level criteria must be removed from site it is to be disposed of at a facility licensed to accept such materials.
- Material exceeding background level criteria could be retained and re-used on-site as a sustainable option and to reduce disposal costs if suitable.
- Any visual/olfactory evidence of contamination discovered during site works must be segregated and analysed by a SQEP prior to disposal.

Subject to compliance with consent conditions, the soil disturbance will not pose a risk to human health.

Excavation and Filling Effects

The proposed 500m3 of earthworks are a Restricted Discretionary Activity pursuant to FNDP rule *12.3.6.2.1 Excavation and/or Filling*. When considering an application for a resource consent for a restricted discretionary activity, a consent authority must consider only those matters over which—

(a) a discretion is restricted in national environmental standards, wastewater environmental performance standards, stormwater environmental performance standards, infrastructure design solutions, or other regulations:
(b) it has restricted the exercise of its discretion in its plan or proposed plan.

The operative district plan has restricted the exercise of discretion to the following:

(i) the effects of the area and volume of soils and other materials to be excavated; and
(ii) the effects of height and slope of the cut or filled faces; and
(iii) the time of the year when the earthworks will be carried out and the duration of the activity; and
(iv) the degree to which the activity may cause or exacerbate erosion and/or other natural hazards on the site or in the vicinity of the site, particularly lakes, rivers, wetlands and the coastline; and
(v) the extent to which the activity may adversely impact on visual and amenity values; and
(vi) the extent to which the activity may adversely affect cultural and spiritual values; and
(vii) the extent to which the activity may adversely affect areas of significant indigenous vegetation or significant habitats of indigenous fauna; and
(viii) the number, trip pattern and type of vehicles associated with the activity; and
(ix) the location, adequacy and safety of vehicular access and egress; and
(x) the means by which any adverse environmental effects of the activity will be avoided, remedied or mitigated.

The proposed district plan has restricted the exercise of discretion to the following:

a) the location, scale and volume;
b) depth and height of cut and fill;
c) the nature of filling material and whether it is compacted;
d) the extent of exposed surfaces or stockpiling of fill;
e) erosion, dust and sediment controls;
f) the risks of natural hazards, particularly flood events;
g) stormwater controls;
h) flood storage, overland flow paths and drainage patterns;
i) impacts on natural coastal processes;
j) the stability of land, buildings and infrastructure;
k) natural character, landscape, historic heritage, spiritual and cultural values;
l) the life-supporting capacity of soils;

m) the extent of indigenous vegetation clearance and its effect on biodiversity;
n) impact on any outstanding natural character, outstanding natural landscapes and outstanding natural features;
o) riparian margins;
p) the location and use of infrastructure;
q) temporary or permanent nature of any adverse effect;
r) traffic and noise effects;
s) time of year earthworks will be carried out and duration of the activity; and
t) impact on visual and amenity values.

An assessment of the proposed earthworks against the relevant criteria is provided below.

Erosion and sediment control

- An Erosion and Sediment Control Plan, in accordance with the requirements of GD05, will be provided for FNDC and NRC approval prior to commencing construction.
- All vegetation will be reinstated within 3 months of the completion of the earthworks.
- Earthworks shall be carried out within the construction season, unless otherwise approved by NRC and FNDC.
- Earthworks will be carried out in accordance with the plans and specifications designed by RS Engineering. The applicant suggests a consent condition requiring a Silt and Sediment Control Plan be provided and approved by FNDC and NRC prior to construction commencing.
- Subject to compliance with consent conditions and the implementation of GD05 best practice, the adverse effects from erosion and sediment will be temporary and no more than minor.

Effects of flood hazard risks, land instability and land subsidence on other property

- The earthworks have been designed by a suitably qualified and experienced engineer and the design is appropriate for the location (refer to Appendix B, C & D).
- The bridge site is a reserve managed by FNDC. There will be no land instability or subsidence effects on adjacent properties.

Visual Effects and Amenity

- The vegetation on site is mostly grass (see Fig 7.2). The site will be revegetated within three months of the completion of earthworks.
- The built form will be consistent with the existing character of the reserve.

Adverse effects on water bodies, vegetation and habitat

- The proposed bridge is located in a modified watercourse. The single span design means there are no support structures in the middle of the water course to create barriers to fish passage. However, the single span design necessitates the construction of abutments with sufficient riprap to prevent bank scouring. This does reduce the width of the modified water course slightly. The riprap mimics the natural curve of a riverbed. With reference to the bridge cross section shown on RS Engineering drawing sheet SO4

(Appendix B), the bridge design does not include any physical across stream barriers, or modifications of flow, that would impede fish passage.

Cultural, Spiritual and Heritage Values

- FNDC has initiated engagement with Tangata Whenua regarding the bridge. The proposed bridge was discussed (along with other projects) at a hui on 2 April 2025. It was proposed to have a site visit on 30 April 2025. This was cancelled due to poor weather.
- This application is being lodged prior to the conclusion of engagement due to the potential risk of bridge failure as outlined in Section 3 of this report. The draft NRC application was circulated to representatives from Oturu Marae, Te Runanga o Te Rarawa, Ngati Kahu and Ngai Takoto with an invitation to provide input and attend a site visit. At time of lodgment no responses had been received regarding the draft application. NRC also circulated the application but did not receive any responses.
- Given the proximity of the proposed bridge site to a recycling and recovery centre, which was previously used as a landfill, FNDC has assumed it is unlikely that this site would be suitable for the collection of mahinga kai.

Traffic Safety and Vehicle Access

- A Construction Management Plan and Traffic Management Plan will be provided prior to construction commencing. This plan will outline how access across the existing bridge to the resource recovery centre will be safely managed while construction is carried out on the replacement bridge.
- Overall, the proposed activity will positively affect traffic safety by upgrading and modernising the bridge and associated accessway.

Northland Regional Council has already issued resource consent AUT.046990.01.01 (see Appendix F). Adverse effects managed by Regional Councils pursuant to s.30 of the Act have already been addressed in the AUT.046990.01.01 consent conditions.

7.4 Assessment of Effects Summary

Subject to compliance with proposed landuse consent conditions, and the conditions of AUT.046990.01.01, the adverse effects on the wider environment will be no more than minor. Replacing the existing bridge will improve the safety of access to an important community facility.

8 Statutory Assessment

8.1 Section 104(1)(a) of the Act

Section 104(1)(a) requires that when considering an application for a 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'. An assessment of the adverse effects of the proposal is set out in Section 7 above, where it was considered the adverse effects on the environment were no more than minor.

8.2 Section 104(1)(b) of the Act

Section 104(1)(b) of the Act requires that when considering an application for a resource consent, the council must, subject to Part 2, have regard to:

any relevant provisions of—
(i) a national environmental standard:
(ii) other regulations:
(iii) a national policy statement:
(iv) a New Zealand coastal policy statement:
(v) a regional policy statement or proposed regional policy statement:
(vi) a plan or proposed plan; and

The relevant documents to be assessed are tabled below.

Requirement	Document
National Policy Statement	National Policy Statement for Freshwater Management 2020 (NPSFM). National Policy Statement for Infrastructure 2025 (NPSI).
Regional Policy Statement	Regional Policy Statement for Northland 2016 (RPS)
Plan or Proposed Plan	Operative Far North District Plan 2009 (FNDP). Proposed Far North District Plan 2024 (PDP).

The proposed bridge is a non-complying activity. An assessment of the relevant statutory documents that corresponds with the scale and significance of the effects the activity has been provided below.

8.2.1 National Policy Statement for Freshwater Management 2020 (Amended October 2024)

The purpose of National Policy Statement is set out in Section 45 of the Act, which states:

> *"The purpose of national policy statements is to state objectives and policies for matters of national significance that are relevant to achieving the purpose of this Act*."

The NPS-FM predates the Proposed Regional Plan for Northland. The relevant provisions have been carried through and resource consent has been issued by NRC for s.30 functions. Consequently, an in-depth analysis of the NPS-FM is not required. However, an assessment of the proposed activity against the relevant policies is provided below to demonstrate alignment.

Policy 2: Tangata whenua are actively involved in freshwater management (including decision making processes), and Māori freshwater values are identified and provided for.
FNDC engaged with Oturu Marae, Te Runanga o Te Rarawa, Ngati Kahu and Ngai Takoto to provide an opportunity for kaitiakitanga. In accordance with the Ngai Takoto Environmental Management Plan, FNDC will continue to engage with Tangata Whenua to identify and manage any adverse effects of the proposed bridge and earthworks.

Policy 7: The loss of river extent and values is avoided to the extent practicable.
As stated in section 7 above, the adverse effects of the proposed bridge on the extent and values of the Awanui River will be less than minor and the loss of river extent and values will be avoided.

Policy 9: The habitats of indigenous freshwater species are protected.
As stated in section 7 above, the adverse effects of the proposed bridge on the habitats of indigenous freshwater species will be less than minor.

Policy 15: Communities are enabled to provide for their social, economic, and cultural wellbeing in a way that is consistent with this National Policy Statement.
The bridge will enable access to a waste transfer and recycling centre that contributes to the social, environmental and cultural wellbeing of the residents of Kaitaia.

Overall, the proposed activity is consistent with the NPS-FM.

8.2.2 National Policy Statement for Infrastructure 2025

This National Policy Statement applies to all infrastructure activities and infrastructure supporting activities except renewable electricity generation activities and the electricity transmission network.

The proposed bridge meets the definition of *ancillary infrastructure activity*. Vegetation clearance, earthworks, land disturbance; and the construction, maintenance, repair and upgrading of access tracks and bridges are included in the definition of *ancillary infrastructure activity* in s.1.4(1) of the NPSI.

The objective of the NPSI is to:

- *Ensure the national, regional and local benefits of infrastructure are provided for.*
- *Enable infrastructure to support the social, economic and cultural wellbeing of people and communities and their health and safety;*
- *Enable infrastructure to support the development and change of urban and rural environments to meet the diverse and changing needs of present and future generations and*
- *Ensure infrastructure is well-functioning, resilient and compatible, as far as practicable, with other activities; and*
- *Ensure infrastructure is delivered in a timely and efficient manner while managing adverse effects from or on infrastructure.*

The proposed activity gives effect to this National Direction by enabling access to an infrastructure activity (recycling centre).

8.2.3 Regional Policy Statement for Northland 2016

The purpose of a regional policy statement is set out in Section 59 of the Act, which states:

> *"The purpose of a regional policy statement is to achieve the purpose of the Act by providing an overview of the resource management issues of the region and policies and methods to achieve integrated management of the natural and physical resources of the whole region".*

The RPS was made operative in 2016 and predates the NPSFM. However, the relevant RPS and NPSFM provisions have been carried through to the PRPN 2024 and NRC has issued resource consent for s.30 functions . Consequently, an in-depth assessment of the proposed activities against the RPS is not required.

The proposed activity is consistent with the RPS.

8.2.4 Operative Far North District Plan 2009

The purpose of a district plan is set out in s.72 of the Act which states,

> *"The purpose of the preparation, implementation, and administration of district plans is to assist territorial authorities to carry out their functions in order to achieve the purpose of this Act."*

Note: The FNDP policy framework was drafted nearly 20 years ago. The policy framework of the PDP gives more recent and relevant direction (see section 8.2.5 of this report). The proposed activity is non-complying only because the bridge is a building that is not for a recreation purpose (see s.7.2).

Pursuant to s.104D (1)(b) of the RMA, the consent authority must be satisfied that the proposed non-complying activity is not contrary to the relevant proposed and operative plan OR that the adverse effects of the proposed activity are no more than minor (Gateway test). An assessment of the proposed activity against the relevant objectives and policies of the FNDP is set out below.

Recreational Activities Zone

The Recreational Activities zone is intended to provide areas for the recreational needs of the community (FNDP provision 9.6.2.1). The relevant Recreational Activities zone policies are copied below.

9.3 OBJECTIVES

9.3.1	To protect recreation and conservation areas for the purposes for which they have been set aside or reserved.
9.3.2	To identify and preserve areas that have high conservation value.
9.3.3	To ensure integrated management of the effects of recreational activities, especially where these cross the land/water interface.

9.4 POLICIES

9.4.1	That existing recreation and conservation areas be managed so as to ensure that the effects of activities remain similar to the existing situation or enhanced.
9.4.2	That areas identified as having a high priority for protection for conservation purposes and which are included in the Conservation or Recreational Activities Zone are managed so that the effects of activities in those areas do not compromise conservation values.
9.4.3	That the effects of recreational activities, especially where these cross the land/water interface, are managed by the regulatory authorities in an integrated way.
9.4.4	That the effects of activities in the vicinity of recreation and conservation areas are managed so that recreation and conservation areas are not compromised.

The subject site does not contain areas of high conservation value therefore the bridge will not adversely affect conservation values. As demonstrated in section 7 of this report, the adverse effects on the wider environment will be no more than minor.

Therefore, the proposed activity is consistent with the objectives and policies of the Recreational Activities zone.

Soils and Minerals (Earthworks)

The proposed earthworks and associated stormwater diversion are restricted discretionary activities in the Recreational Activities zone and 1:100 ARI flood hazard area. An assessment of the relevant objectives and policies relating to earthworks is set out below.

12.3.3 OBJECTIVES

12.3.3.1	To achieve an integrated approach to the responsibilities of the Northland Regional Council and Far North District Council in respect to the management of adverse effects arising from soil excavation and filling, and minerals extraction.
12.3.3.2	To maintain the life supporting capacity of the soils of the District.
12.3.3.3	To avoid, remedy or mitigate adverse effects associated with soil excavation or filling.
12.3.3.4	To enable the efficient extraction of minerals whilst avoiding, remedying or mitigating any adverse environmental effects that may arise from this activity.

The proposed earthworks and associated stormwater diversion are restricted discretionary activities in the Recreational Activities zone and 1:100 ARI flood hazard area. An assessment of the relevant objectives and policies relating to earthworks is set out below.

12.3.3.1 – This objective directs the consent authority to take an integrated approach with NRC. The applicant has received consent from NRC for the Regional Plan breaches. The Applicant anticipates FNDC will liaise with NRC regarding consent conditions for the proposed earthworks.

12.3.3.2 – The proposed earthworks are in an urban area. The site is not on production or conservation land that depends on life-supporting capacity of soil.

12.3.3.3, 12.3.4.1, 12.3.4.4 – Section 7 of this report demonstrates that, subject to compliance with conditions, the adverse effects of the proposed earthworks will be no more than minor. The work will be carried out and the site reinstated in accordance with industry best practice.

12.3.3.4-12.3.3.8 – Not applicable. The proposed activity is not mineral extraction.

12.3.4.3 – The site does not contain significant ecological, landscape, cultural or heritage values. The site is subject to flood hazards. The work has been designed by a suitably qualified engineer to ensure flooding effects are managed (see section 7 of this report).

12.3.4.9 – 12.3.4.10 – The proposed pumpstation and associated earthworks are not within the National Grid Yard.

The proposed activity is consistent with Chapter 12.3 objectives and policies for the following reasons:

- There will be an integrated approach to managing the adverse effects.
- Effects on the environment and neighborhood amenity will be no more than minor.

Overall, the proposed activity is consistent with the relevant objectives and policies of the Operative Far North District Plan.

8.2.5 Proposed Far North District Plan 2024

FNDC has notified the Proposed Far North District Plan (PDP). Pursuant to s.86B of the RMA most provisions of the PDP do not yet have legal effect. However, the objectives and policies of the proposed plan are a relevant indicator of changes in policy direction.

The PDP objectives and policies for earthworks do not differ significantly from the FNDP. The assessment provided in Section 8.2.4 above is still applicable. However, the PDP objectives and policies for the Sport and Active Recreation zone and Infrastructure (Utilities in FNDP) are significantly different from the FNDP.

The proposed bridge is a permitted activity in the Sport and Active Recreation zone. Only the associated earthworks would require consent as a Restricted Discretionary activity. The relevant objectives are assessed below.

Sport and Active Recreation

SARZ-O1-The Sport and Active Recreation zone is predominantly used for recreation activity.

SARZ-O2-Buildings or structures in the Sport and Active Recreation zone complement and are consistent with the purpose of the zone and provide for social and cultural wellbeing.

SARZ-P3 - Avoid land use and subdivision in the Sport and Active Recreation zone that would compromise the establishment and continuing use of land for sport and recreation purposes.

SARZ-P4 -Manage the effects of land use and subdivision in the Sport and Active Recreation Zone, including consideration of the following key matters when assessing proposals:

- *effects on public access and use;*
- *managing natural hazards;*
- *any adverse effects on areas with historic heritage and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and*

The proposed bridge and associated earthworks are consistent with the relevant objectives and policies of the Sport and Recreation zone for the following reasons:

- The use of the area for recreation will not be affected by the proposed activity.
- The proposed bridge will enable access to the RRC which is a facility enabling community wellbeing.
- The proposed activity can be managed to avoid adverse effects of natural, cultural and heritage values.
- The proposed activity has been designed by suitably qualified people who have taken natural hazard risks into account.

Earthworks

EW-O1 - Earthworks are enabled where they are required to facilitate the efficient subdivision and development of land, while managing adverse effects on waterbodies, the coastal marine area, public safety, surrounding land and infrastructure.

EW-O2 - Earthworks are appropriately designed, located and managed to protect historical and cultural values, natural environmental values, preserve amenity and safeguard the life-supporting capacity of soils.

EW-O3 - Earthworks are undertaken in a manner which does not compromise the stability of land, infrastructure and public safety.

The earthworks associated with the proposed bridge are consistent with the PDP Earthworks objectives and policies for the following reasosn:

- They will facilitate the development of access to a community facility (RRC).
- An Erosion and Sediment Control Plan and Traffic Management Plan are proposed to be provided as a condition of consent to appropriately manage erosion, sediment, and traffic safety effects (see s.7.3 of this report).
- The earthworks have been designed by a suitably qualified person taking the features of the surrounding environment into account.

Infrastructure

I-O1 The district has safe, efficient and resilient infrastructure that services the current and future needs of people and communities in the district.

I-O2 The economic and community benefits of infrastructure are recognised and provided for, including the benefits of regionally significant infrastructure to enhance economic, cultural, environmental and social well-being in the district.

The proposed bridge is critical to providing safe, efficient and resilient waste management infrastructure for the community of Kaitaia. The proposed activity is consistent with, and gives effect to, PDP objectives regarding infrastructure.

8.2.6 Section 104(1)(b) Summary

The above assessments demonstrate that the proposal is consistent with the relevant objectives and policies of the relevant statutory documents.

8.3 Section 104(1)(c) of the Act

Section 104(1)(c) of the Act states that consideration must be given to “any other matters that the consent authority considers relevant and reasonably necessary to determine the application.” All relevant matters have been considered above.

9 Notification Assessment – Sections 95A to 95G of the RMA

9.1 Public Notification Assessment

A public notification assessment has been conducted in accordance with Section 95A. Public notification is not required for the following reasons:

- The applicant has not requested notification.
- There is no mandatory requirement to notify
- There are no special circumstances requiring notification.
- The adverse effects on the wider environment will be no more than minor (see AEE in section 7).

A determination not to publicly notify the application should therefore be made.

9.2 Limited Notification

A limited notification assessment has been conducted in accordance with Section 95B. Limited notification is not required for the following reasons:

- The proposed activity will not adversely affect any land or persons that are the subject of a statutory acknowledgement.
- The adverse effects of the proposed activity on adjacent properties will be less than minor and there are no affected persons.
- No special circumstances exist.

FNDC recognises the statutory acknowledgements of Ngai Takoto and Te Rarawa in relation to the Awanui River. FNDC met with Tangata Whenua representatives on 2 April 2025 to introduce the bridge project. A draft of the NRC application was circulated in September 2025. At the time of lodging the NRC application, no responses to the draft application had been received. The proposed activity has not changed since the application was circulated.

9.3 Written Approvals

No written approvals have been provided with the application.

9.4 Notification Assessment Summary

Based on the assessment of effects, it is concluded that the application does not need to be notified.

10 Part 2 – Purpose of the Act

Part 2 Section 5 of the Act identifies the purpose of the Act as being the sustainable management of natural and physical resources.

The proposed bridge replacement and associated earthworks represents a sustainable use of existing resources that allows the community to provide for its social and economic well-being in a manner that avoids and mitigates adverse effects on the environment.

11 Conclusion

Pursuant to s.104D (1)(b) of the RMA, the consent authority must be satisfied that the proposed non-complying activity is not contrary to the relevant proposed and operative plan OR that the adverse effects of the proposed activity are no more than minor i.e satisfies the "gateway test".

104D Particular restrictions for non-complying activities

(1) Despite any decision made for the purpose of notification in relation to adverse effects, a consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either—

(a) the adverse effects of the activity on the environment (other than any effect to which section 104(3)(a)(ii) applies) will be minor; or

(b) the application is for an activity that will not be contrary to the objectives and policies of—

(i) the relevant plan, if there is a plan but no proposed plan in respect of the activity; or

(ii) the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or

(iii) both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.

This application and associated appendices have provided sufficient information to demonstrate that:

(a) the adverse effects of the proposed replacement bridge and associated earthworks on the wider environment will be no more than minor, and
(b) the proposed activity is not contrary to the relevant operative and proposed plan.

The notification assessment concluded that the adverse effects on the owners and occupiers of adjacent properties would be less than minor and there are no directly affected parties. A draft application was emailed to Oturu Marae, Te Runanga o Te Rarawa, Ngati Kahu and Ngai Takoto with an invitation to provide input and an offer to meet onsite. At the time of lodgement no responses have been received.

The proposed bridge replacement is necessary to address imminent health and safety concerns. The Applicant respectfully requests the FNDC Consent Authority grant consent without notification.

Schedule of Appendices

Appendix A - Record of Title
Appendix B - RS Engineering Bridge Design Drawings
Appendix C – RS Engineering Geotechnical Investigation
Appendix D – RS Engineering Design Features Report
Appendix E – Haigh Workman Consultant Engineers Preliminary and Detailed Site Investigation
Appendix F – Northland Regional Council Resource Consent AUT.046990.01.01

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **NA725/9**

Part-Cancelled

Land Registration District **North Auckland**

Date Issued 05 February 1940

Prior References
NA412/200

Estate	Fee Simple
Area	3.7775 hectares more or less
Legal Description	Part Lot 332 Deposited Plan 12724
Purpose	Public Domain

Registered Owners

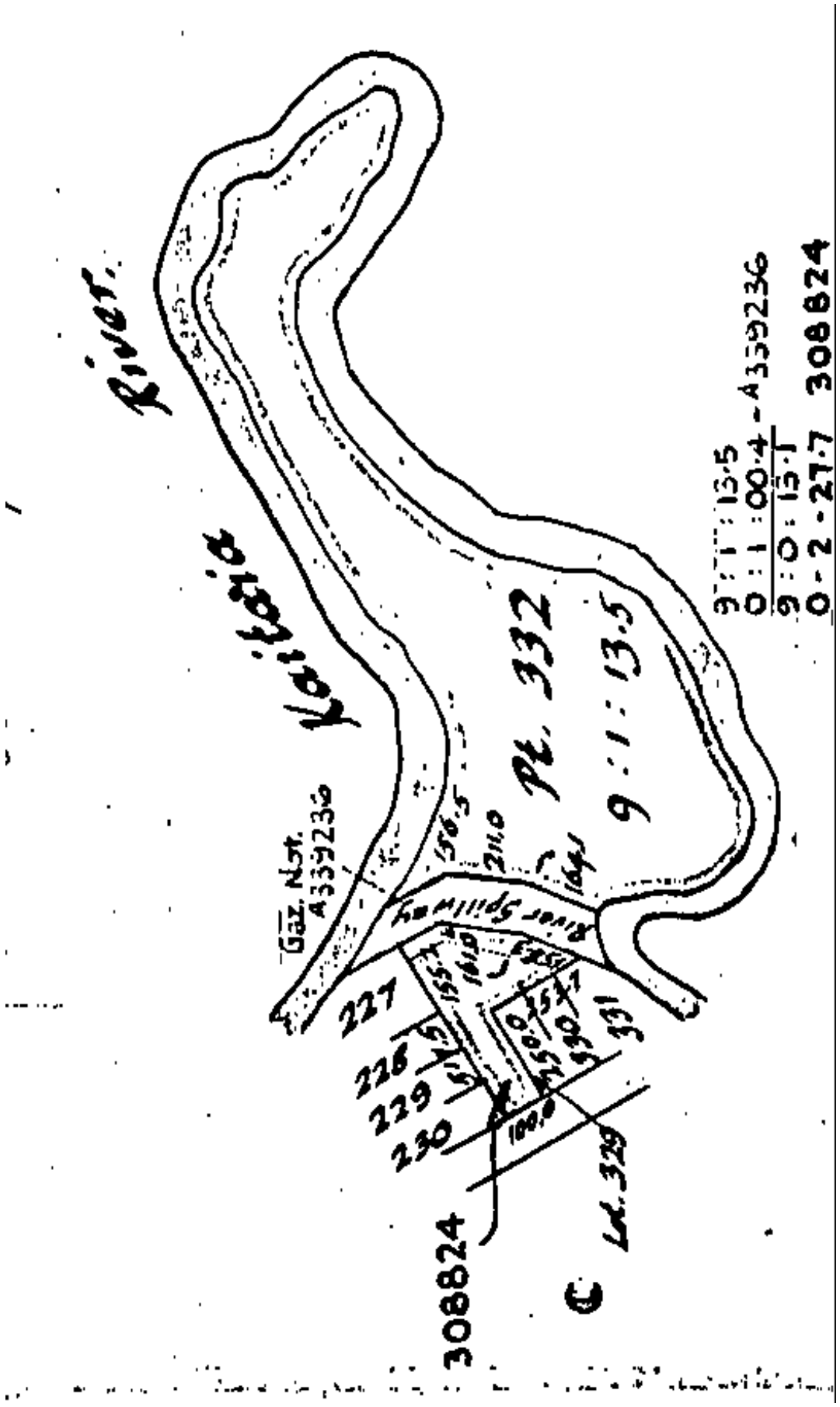
Her Majesty the Queen

Interests

Subject to Public Reserves, Domains, and National Parks Act 1928

A339236 Setting apart for river control purposes 1r 0.4p - 11.2.1969 at 9.00 am

308824.2 Gazette Notice declaring part (2.724m²) shall cease to be subject to part III Reserves and Domains Act 1953 - 30.9.1974 at 9.12 am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DETAILS		
JOB NO.	18781	
DATE	23/04/2025	
REVISION	A	FOR TENDER

SHEET INDEX			
NO.	SHEET NAME	REV	DATE
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C02	PROPOSED GENERAL ARRANGEMENT PLAN	B	23/04/2025
C03	EARTHWORK PLAN	B	23/04/2025
C04	PLAN AND LONG SECTION	B	23/04/2025
C05	CROSS SECTIONS CH65.0m TO CH80.0m	B	23/04/2025
C06	CROSS SECTIONS CH85.0m TO CH97.5m	B	23/04/2025
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STRUCTURAL DRAWINGS			
S01	GENERAL STRUCTURAL NOTES	B	23/04/2025
S02	GENERAL STEEL NOTES	B	23/04/2025
S03	BRIDGE PLAN	B	23/04/2025
S04	BRIDGE SECTIONS	B	23/04/2025
S05	BRIDGE DETAILS	B	23/04/2025
S06	TYPICAL TIMBER RETAINING WALL DETAILS	B	23/04/2025
S07	INDICATIVE BUSCK DETAILS	B	23/04/2025
S08	INDICATIVE BUSCK DETAILS	B	23/04/2025
S09	HANDRAIL DETAILS	B	23/04/2025

0 2.5 5 7.5 10 1:500
PLAN

PROPOSED BRIDGE

LOCALITY MAP

FAR NORTH DISTRICT COUNCIL

CHURCH ROAD, KAITAIA

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

NOTES:

- All services should be located on-site prior to commencement of works.
- All works to comply with all relevant local authority by-laws and council regulations where applicable.
- All works to comply with the FNDC ES 2023
- Contractors to confirm all dimensions on site prior to commencing any work.
- Do not scale off drawings.
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LEGEND

- SW — Stormwater Pipe
- W — Water Connection
- Communications

0 2,5 5 7,5 10 1:500
PLAN

Contours are shown at 0.5m crs.
Contours are derived from Topographical Survey data (2024) and are shown at NZVD2016 Vertical Datum.

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
EXISTING LAYOUT PLAN

Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

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

Scale 1:500
Original A3
Job No. 18781
Rev No. B
Sheet No. C01

NOTES:

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Lot 3
DP 442218

RECYCLING CENTER

Lot 2
DP 89656

CH160m
CH150m
CH140m
CH130m
CH120m
CH110m
CH100m
CH90m
CH80m
CH70m
CH60m
CH50m
CH40m
CH30m
CH20m
CH10m
CH00m
CH22m

Trees to be protected

Tie access into
existing surfaces

Proposed Bridge
Refer to structural drawings

Proposed Riprap
Refer Dwg C09 for detail

Part Lot 332
DP 12724

Culvert
300mmø RCRRJ Class 4

Tie-in to the existing
ground surface

SW
SW(pr)

LEGEND

- Proposed Access Road
- Proposed Bridge
- 5.0 Spot Level
- Water Table Drain
- Proposed Retaining Wall
- Sight Rail
- Riprap

0 2.5 5 7.5 10 1:500
PLAN

Contours are shown at 0.5m crs.
Contours are derived from Topographical Survey data (2024) and are shown at NZVD2016 Vertical Datum.

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
PROPOSED GENERAL ARRANGEMENT PLAN

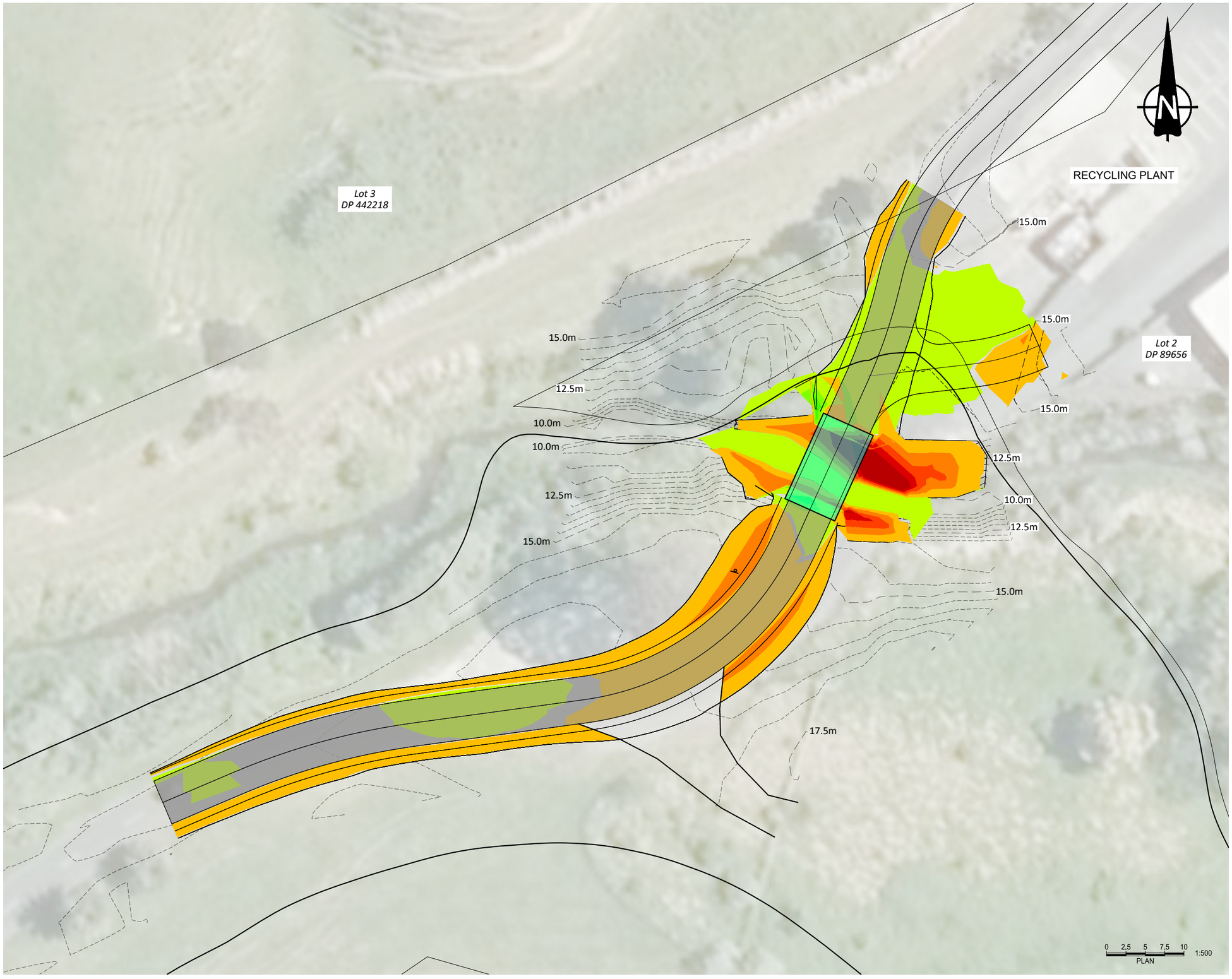
Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

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

Scale 1:500
Original A3
Job No. 18781
Rev No. B
Sheet No. C02



NOTES:

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CUT AND FILL

ELEVATION TABLE

Number	Min. Elevation	Max. Elevation	Color
1	-3.654	-3.200	
2	-3.200	-2.400	
3	-2.400	-1.600	
4	-1.600	-0.800	
5	-0.800	-0.050	
6	0.050	0.800	
7	0.800	1.600	
8	1.600	2.400	
9	2.400	3.200	
10	3.200	4.000	
11	4.000	4.308	

Contours are shown at 0.5m crs.
Contours are derived from Topographical Survey data (2024) and are shown at NZVD2016 Vertical Datum.

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
EARTHWORK PLAN

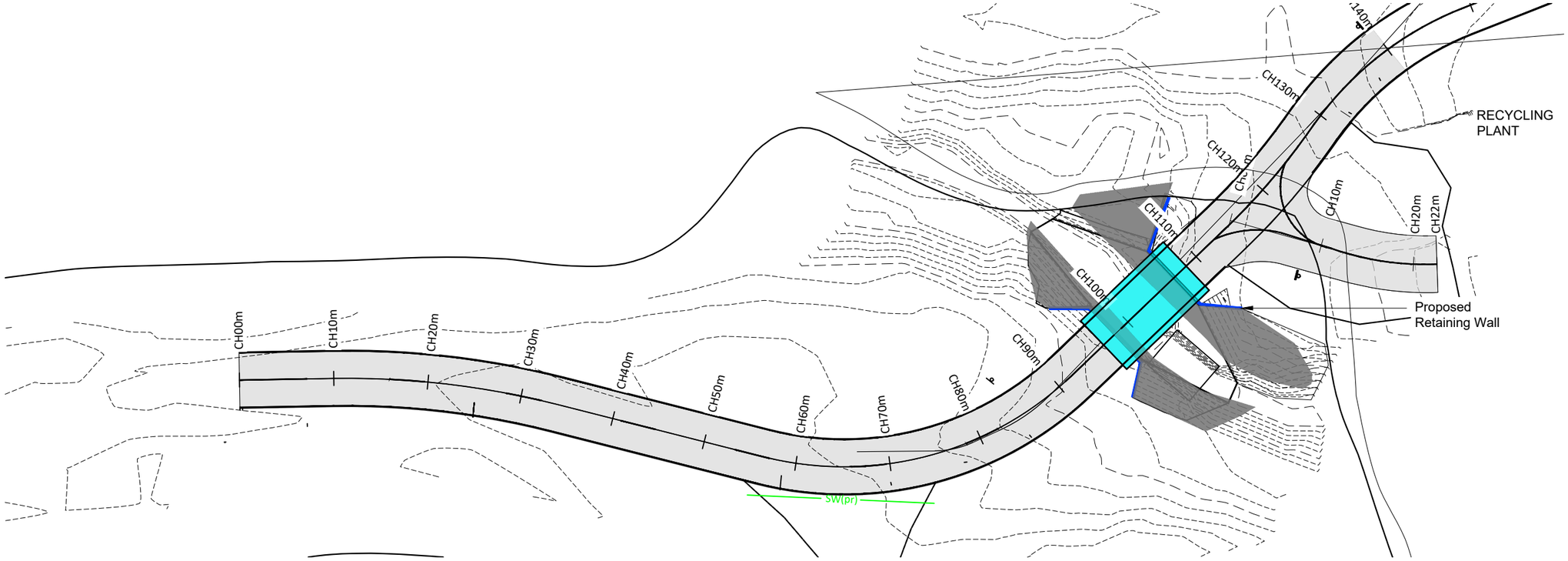
Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

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

Scale: 1:500
Rev No.: B
Original: A3
Sheet No.: C03
Job No.: 18781



NOTES:

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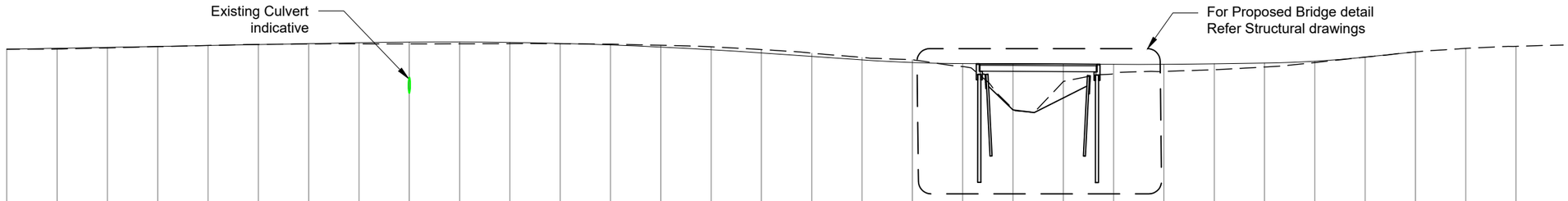

SCALE 1:1000horiz
1:200vert

Datum 0.000m R.L.

LEGEND

- Existing ground level
- Proposed ground level

DESIGN LEVELS	16.107	16.199	16.290	16.382	16.474	16.566	16.658	16.750	16.814	16.824	16.779	16.680	16.526	16.317	16.054	15.736	15.390	15.045	14.779	14.674	14.649	14.624	14.599	14.599	14.649	14.724	14.910	15.319	15.838			
DEPTH	0.000	0.078	0.055	0.025	0.002	-0.012	0.036	0.112	0.182	0.182	0.120	0.034	-0.083	-0.176	-0.290	-0.333	-0.324	-0.246	-0.279	0.304	4.465	1.736	0.926	0.700	0.592	0.389	0.137	-0.001	0.000			
EXISTING LEVELS	16.107	16.121	16.235	16.357	16.472	16.578	16.622	16.638	16.632	16.643	16.660	16.646	16.609	16.493	16.343	16.068	15.714	15.291	15.058	14.371	10.184	12.888	13.673	13.899	14.057	14.335	14.774	15.319	15.838	16.183	16.388	
VERT. GEOMETRY		1.84%							R457.34m								-6.91%		R156.04m		-0.50%			R500.00m	1.50%		R112.53m		10.39%			
HORIZ. GEOMETRY		9.94m Lth.		R23.97m					22.50m Lth.					R35.40m						22.51m Lth.				R13.15m	1.41m Lth.			R20.17m				30.62m Lth.
CHAINAGE	0.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000	75.000	80.000	85.000	90.000	95.000	100.000	105.000	110.000	115.000	120.000	125.000	130.000	135.000	140.000	145.000	150.000	155.000

0 2.5 5 7.5 10 1:500
PLAN

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
PLAN AND LONGITUDINAL SECTION

Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

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

Scale: As Shown
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: C04

NOTES:

- All services should be located on-site prior to commencement of works.
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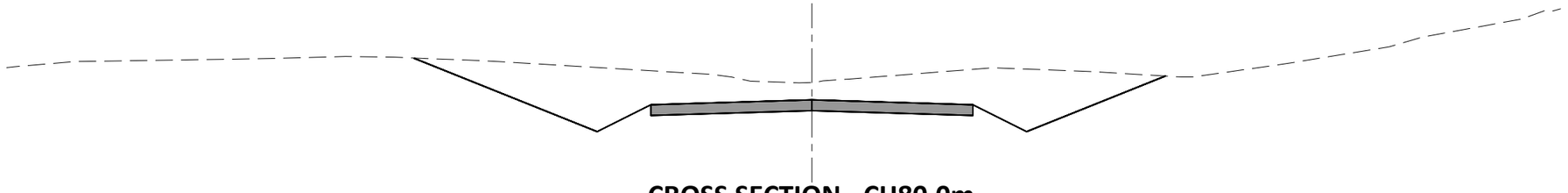
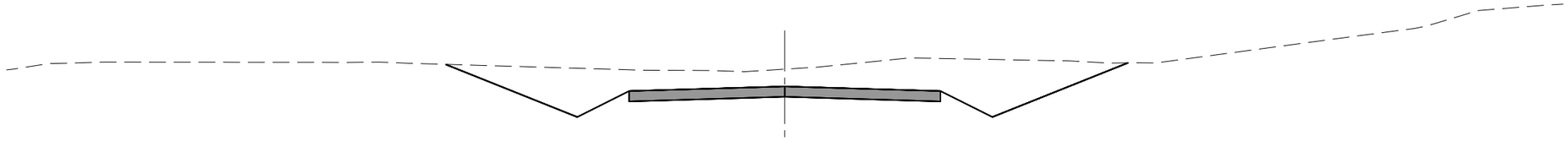


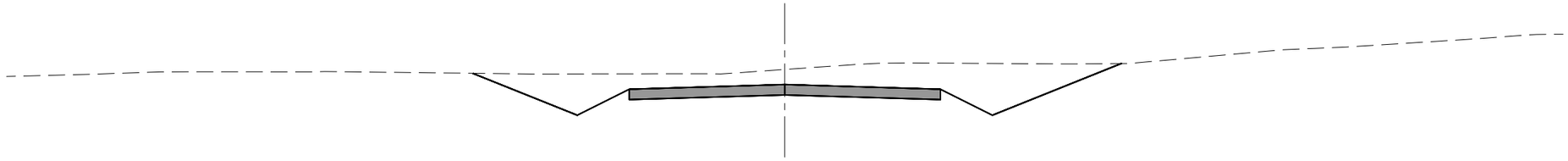
CROSS SECTION - CH80.0m

1:100



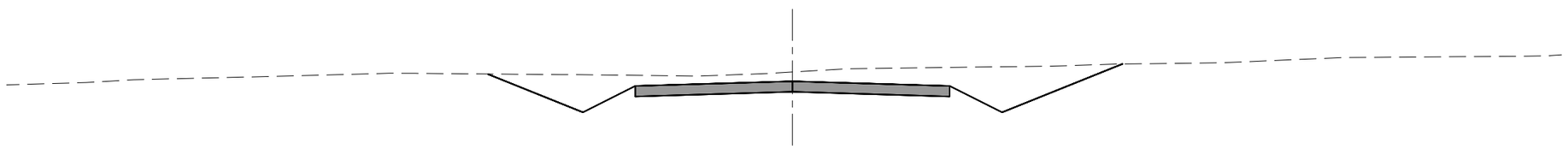
CROSS SECTION - CH75.0m

1:100



CROSS SECTION - CH70.0m

1:100



CROSS SECTION - CH65.0m

1:100

LEGEND

- Existing ground level
- Proposed ground level

0 0.5 1.0 1.5 2.0 1:100
SECTION

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
CROSS SECTIONS
CH65.0m TO CH80.0m

Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

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

Scale: As Shown
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: C05

NOTES:

- All services should be located on-site prior to commencement of works.
- All works to comply with all relevant local authority by-laws and council regulations where applicable.
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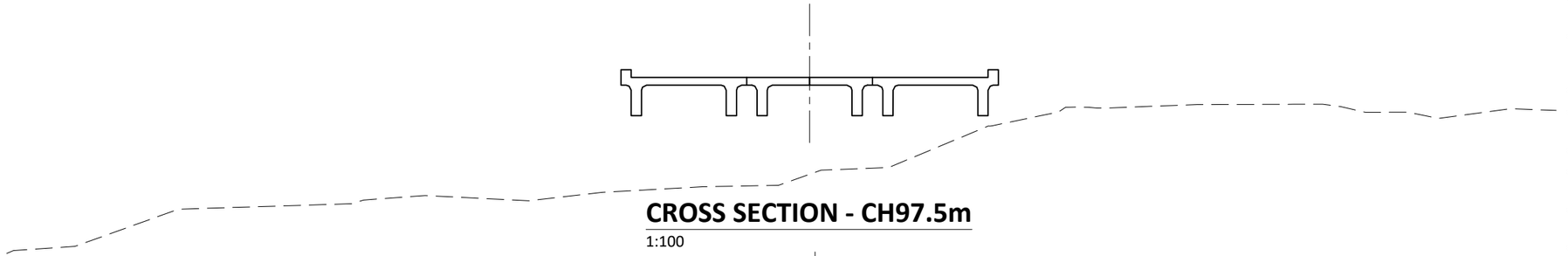
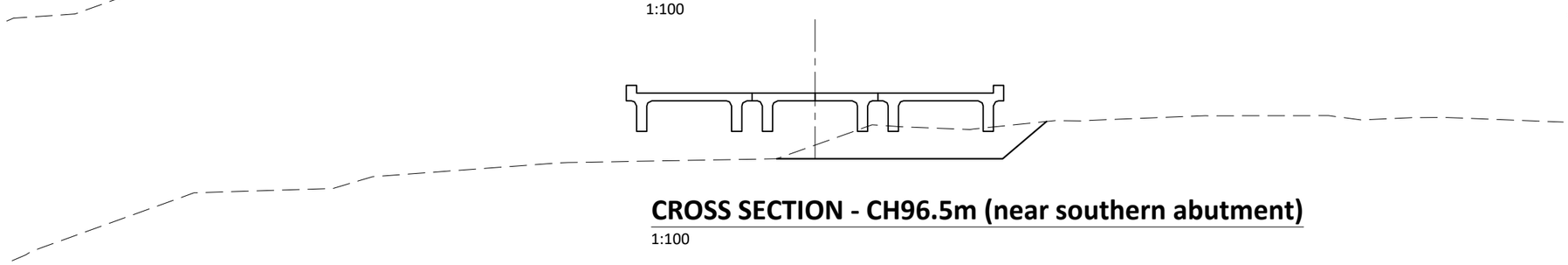


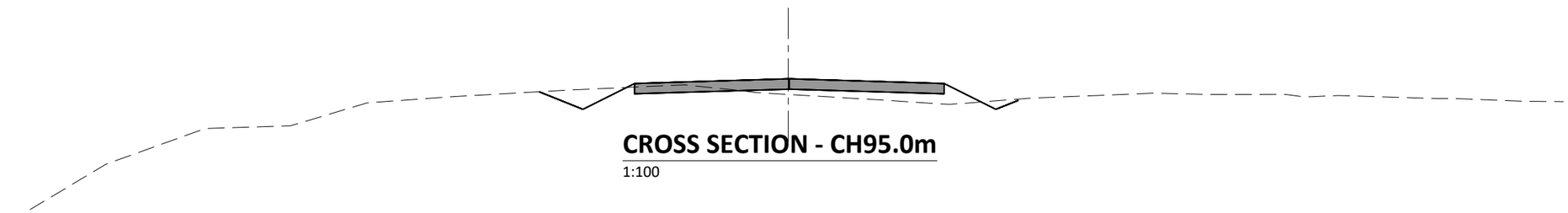
CROSS SECTION - CH97.5m

1:100



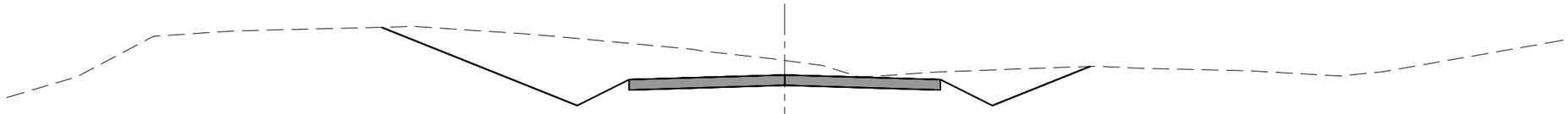
CROSS SECTION - CH96.5m (near southern abutment)

1:100



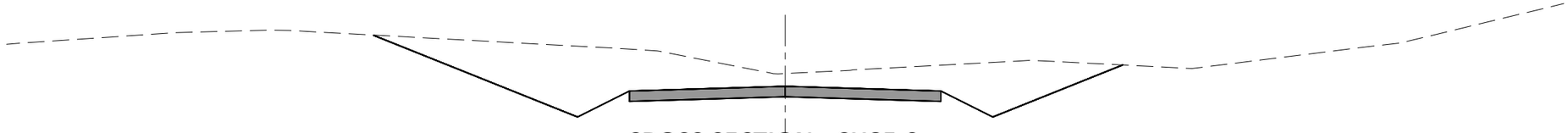
CROSS SECTION - CH95.0m

1:100



CROSS SECTION - CH90.0m

1:100



CROSS SECTION - CH85.0m

1:100

LEGEND

- Existing ground level
- Proposed ground level

0 0.5 1.0 1.5 2.0 1:100
SECTION

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
CROSS SECTIONS
CH85.0m TO CH97.5.0m

Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

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

Scale: As Shown
Rev No.: B
Original: A3
Sheet No.: C06
Job No.: 18781

NOTES:

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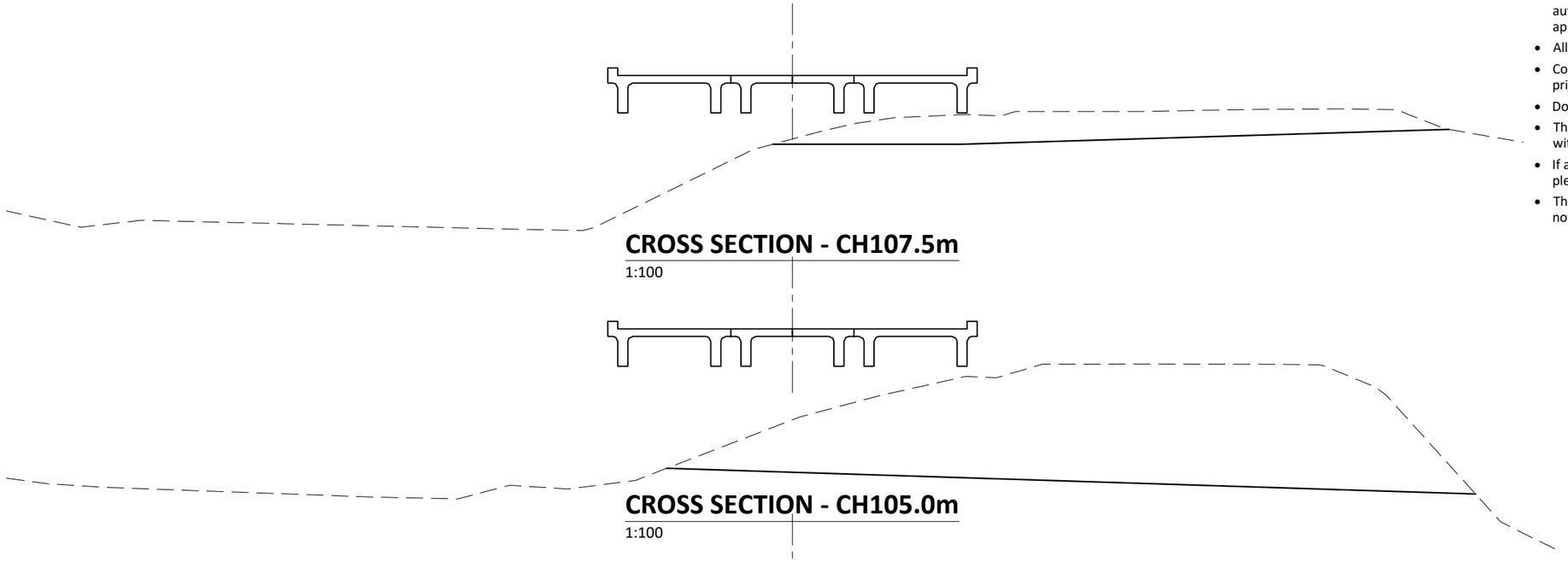


CROSS SECTION - CH107.5m

1:100

CROSS SECTION - CH105.0m

1:100

CROSS SECTION - CH102.5m

1:100

CROSS SECTION - CH100.0m

1:100

LEGEND

- Existing ground level
- Proposed ground level

0 0.5 1.0 1.5 2.0 1:100
SECTION

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
CROSS SECTIONS THRU BRIDGE
CH100.0m TO CH107.5m

Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

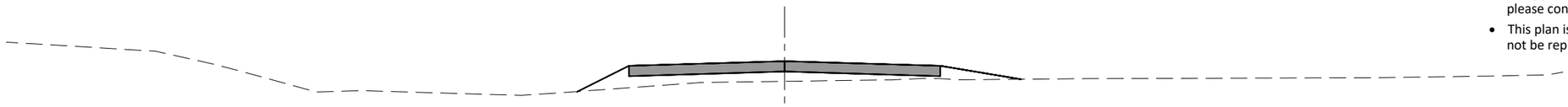
Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

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

Scale: As Shown
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: C07

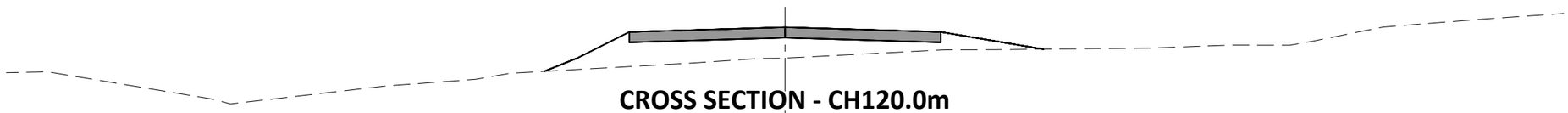
CROSS SECTION - CH130.0m

1:100



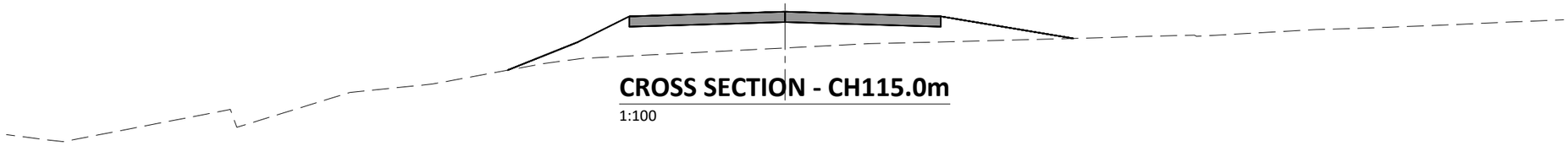
CROSS SECTION - CH125.0m

1:100



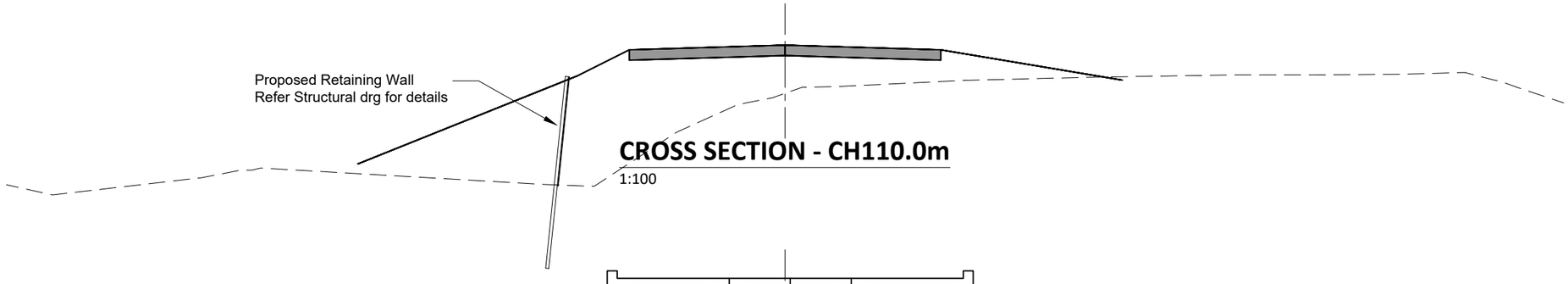
CROSS SECTION - CH120.0m

1:100



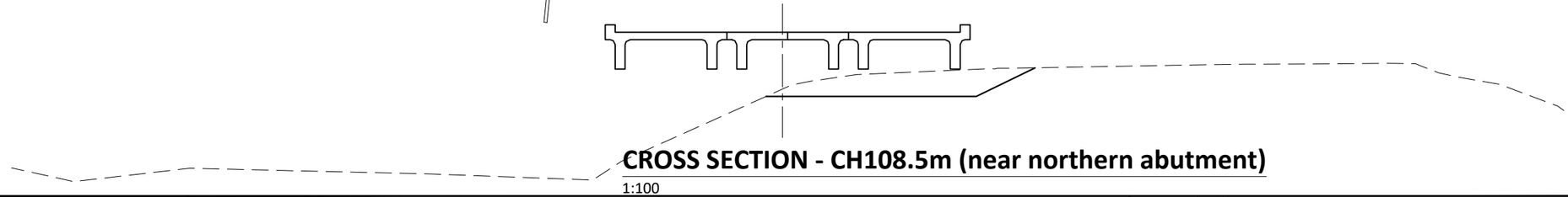
CROSS SECTION - CH115.0m

1:100



CROSS SECTION - CH110.0m

1:100



CROSS SECTION - CH108.5m (near northern abutment)

1:100

NOTES:

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LEGEND

- Existing ground level
- Proposed ground level

0 0.5 1.0 1.5 2.0 1:100
SECTION

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
CROSS SECTIONS
CH108.5m TO CH130.0m

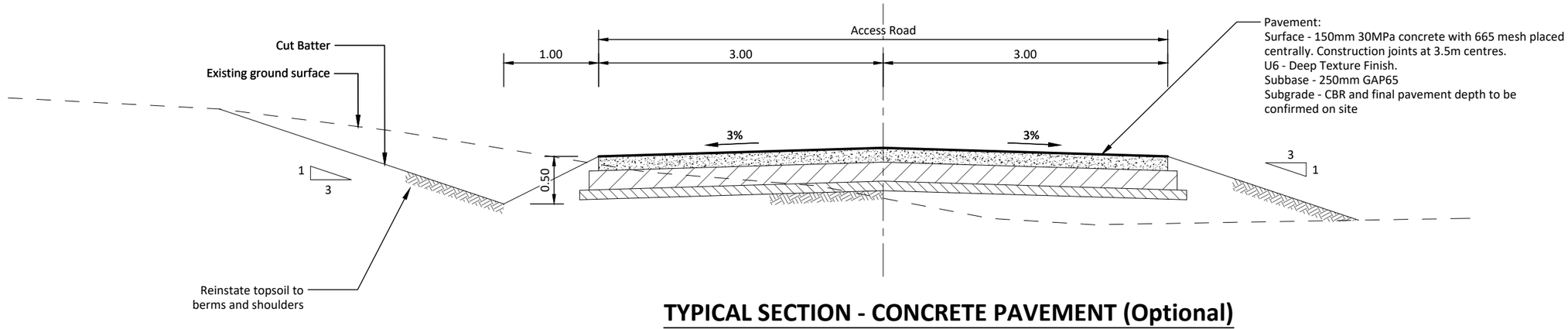
Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

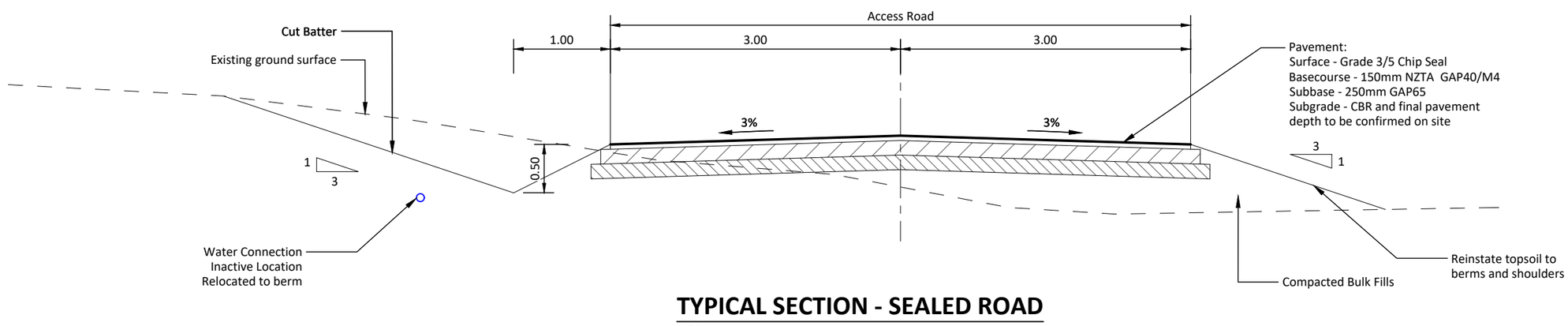
Drawn by: VDT | Reviewed by: NW | Approved by: MJ

Scale: As Shown
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: C08



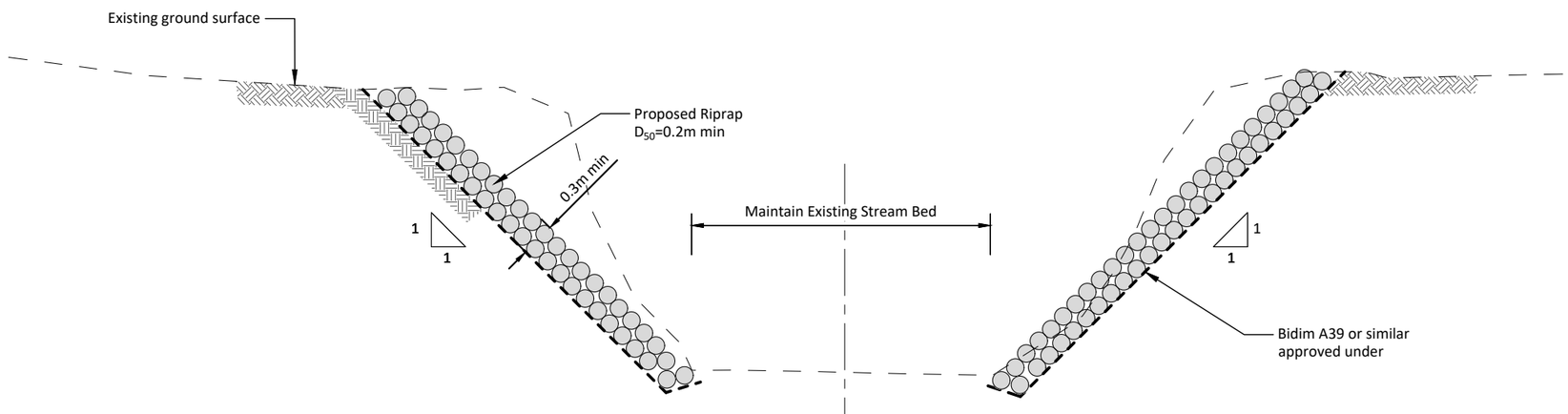
TYPICAL SECTION - CONCRETE PAVEMENT (Optional)

1:50



TYPICAL SECTION - SEALED ROAD

1:50



TYPICAL SECTION - Riprap

1:50

NOTES:

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- All works to comply with all relevant local authority by-laws and council regulations where applicable.
- All works to comply with the FNDC ES 2023
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LEGEND

- Existing ground level
- Proposed ground level

0 0.25 0.5 0.75 1.0 1:50
SECTION

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
TYPICAL CROSS SECTIONS

Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

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

Scale: As Shown
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: C09

NOTES:

- All services should be located on-site prior to commencement of works.
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NO ENTRY

RG-9

Edge line

100mm wide continuous white lane line

RECYCLING PLANT

Lot 2
DP 89656

NO ENTRY

RG-9

5

5km/hr sign

Centreline

Edge line

Edge line

N

LINEMARKING (as per MOTSAM)

Centreline	Reflectorised white 100mm width 3m Stripe, 7m Gap
Edge Line	Reflectorised white 100mm width Continuous Stripe

0 2.5 5 7.5 10 1:500
PLAN

Contours are shown at 0.5m crs.
Contours are derived from Topographical Survey data (2024) and are shown at NZVD2016 Vertical Datum.

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

Title
PROPOSED BRIDGE
CIVIL DRAWINGS
LINE MARKING AND SIGNAGE PLAN

Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

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

Scale 1:500
Original A3
Job No. 18781
Rev No. B
Sheet No. C10

GENERAL NOTES

- General notes shall apply unless noted otherwise on drawings.
- All dimensions are in mm unless noted otherwise.
- All services should be located on-site prior to commencement of works.
- Contractors to confirm all dimensions on site prior to commencing any work.
- These drawings shall be read in conjunction with all other consultant's drawings and specifications and with such other written instructions as may be issued during the course of the contract. Plans take precedence.
- Do not scale any drawings.
- Setting-out dimensions to be verified by the contractor.
- During the construction, the structure shall be maintained in a stable condition and no part shall be over-stressed. Temporary structures, propping, formwork, falsework, temporary bracing, shoring and equivalent shall be the responsibility of the contractor.
- All workmanship and materials shall be in accordance all relevant local authority by-laws, council regulations, and and NZBC where applicable.
- Substitutions shall be made only with the approval of the Engineer.
- Where the Engineers are engaged for inspection and/or construction monitoring, a minimum of 48 hours notice should be given.
- All workmanship and materials shall be accordance with the requirements of current AS and NZS standards, the related by-laws and ordinances of local and government authorities.
- The contractor shall be responsible for coordinating all service penetrations chases, rebates, nibs, small holes, etc, and confirm with engineer before commencing fabrication.

  POST DRILLED/INSTALLED PENETRATIONS ARE NOT PERMITTED. ALL PENETRATIONS MUST BE LOCATED AND CAST INTO CONCRETE ELEMENTS PRIOR TO INSTALLATION.

ABBREVIATIONS

AJ	armored joint	MS	mild steel
CHS	circular hollow section	NF	near face
CJ	construction joint	NTS	not to scale
COS	check on site	O/A	overall
crs	centres	OD	outside diameter
EA	equal angle	PFC	parallel flanged channel
EF	each face	PS	pour strip
EW	each way	RHS	rectangular hollow steel
FF	far face	RL	reduced level
FFL	finished floor level	SC	sawcut
FW	fillet weld	SHS	square hollow section
FWAR	fillet weld all round	SL	slab level
FGL	finished ground level	SS	stainless steel
HDG	hot dip galvanized	UA	unequal angle
ID	inside diameter	UB	universal beam
LBW	load bearing wall (to NZS3604)	UC	universal column
MJ	movement joint	UNO	unless noted otherwise

NAILS, BOLTS, AND SCREWS

- Steel, Stainless Steel and galvanized steel to suit the location/Durability section in NZS 3604:2011 and to BRANZ Bulletin 453 Fasteners selection. Unless plans specifically note a high class of protection.

CONNECTORS

- Galvanized/Stainless Steel connectors and structural brackets to the connector manufacturers design for particular locations shown on drawings.
- Connector brands may only be substituted with the Engineers permission, due to specific load requirements that may be required. Unless plans specifically note a high class of protection.

CONSTRUCTION MONITORING

- Contractor shall be responsible for reviewing approved building consent documentation and arranging any and all required site visits for construction monitoring purposes by other parties.
- Before commencing any work, contractor shall make additional enquiries with relevant local authorities to establish site inspection requirements, including identification of all items to be covered by engineers producer statement.
- Any item to be covered by engineers producer statement, must be observed by a chartered professional engineer or their representative.
- Contractor shall further request council inspector to make a written note specifying any requirement for engineering observations, at each council inspection.
- Engineers inspection does not replace council unless prior written approval by council.
- If a Construction Review Statement (PS4) is required as part of the consent documentation from the Local Authority, it is the contractor's responsibility to ensure the Engineer is booked in to carry out a complete schedule of inspections for the elements requiring a PS4 statement. Failure to have elements inspected at the correct time could result in either remedial works to open up the work for inspection or the Engineer not issuing the PS4 statement for elements that cannot be inspected.

GENERAL CONCRETE NOTES

- All services should be located on-site prior to commencement of works.
- All steel bars must be terminated; either by hook or by bend.
- No welding of reinforcing unless specifically approved by engineer.
- Reinforcing mesh should be lapped as per manufacturers recommendations, but generally a minimum one grid plus 50 mm minimum.
- All stirrups, ties and spirals to be terminated/lapped with a minimum 135° hook located near the compression edge of the member.
- Reinforcing covers minimum 75 mm casting against ground, 50 mm casting against DPM and 50 mm above ground unless confirmed otherwise.
- A structural element (reinforced concrete or concrete masonry) that is equal to or greater than 300 mm in depth, the top horizontal reinforcement lap length is to be the (length specified in the reinforcing lap lengths tables above x1.3).
- Rebending of Grade 300 bars should only be undertaken once. Re-bending of Grade 500 bars should generally not be undertaken. Consult engineer for further advice.

CONCRETE NOTES

- Reinforcement Notation: 3/HD16 @ 200 crs EW

  number of
  class of bar
  bar diameter
  suffix
  bar centres

  Bar Classes:
  R = plain round, f_y = 300 MPa
  D = deformed, f_y = 300 MPa
  HD = deformed, f_y = 500 MPa

  Suffix:
  T = top
  EF = each face
  EW = each way
  NF = near face
  B = bottom
  FF = far face
  C = central

- Splicing of reinforcement (unless shown on the drawings), should be as reinforcement splice lengths shown below:

(Lap/Splice Lengths)

BAR	GRADE 300 (D)			GRADE 500 (HD)		
f'_c (MPa)	20	25	30	20	25	30
10	340	300	270	560	500	460
12	400	360	330	670	600	550
16	540	480	440	900	800	730
20	670	600	550	1100	1000	910
25	1000	750	690	1600	1250	1140
32	1200	960	880	2000	1600	1460

Note: If plain bars are used, a hook is required. If more than 50% of beam bars are lapped at one location, the required splice length shall be increased by 30%. Lap length x1.3, if more than 300mm is cast below bar.

- The correct cover shall be maintained by the use of approved bar chairs at 1200 crs for bars up to 16 diameter, and 2000 mm crs for bars 20 diameter and larger or as required to prevent sag.
- Separate layers of beam reinforcing with 32 diameter dowels at 1500 crs (unless stated otherwise).
- Bars partially embedded in concrete shall not be site bent (unless specifically shown on drawings or approved).
- All workmanship and materials shall be in accordance with NZS 3101 & NZS 3109, current edition with amendments, except where varied by the contact documents.
- Concrete and formwork shall comply with the requirements of NZS 3109.
- All concrete shall be high or special grade in accordance with NZS 3109 to the following strengths:

(Concrete Strength)

ELEMENT	F'c at 28 days
Insitu Footing	30 MPa

Maximum Aggregate Size to be 19 mm

- Concrete quality control testing shall be in accordance with NZS 3109, section 9.
- No holes or chases other than those shown on the structural drawings shall be made in concrete members without the prior approval of the Engineer.
- Reinforcement is represented diagrammatically, it is not necessarily shown in true projection.
- Splices in reinforcement shall be made only on the positions shown, the written approval of the Engineer shall be obtained for any other splices where the lap length is not shown.
- All concrete to be efficiently compacted with an approved vibrator.
- All concrete shall be placed and “cured” in accordance with NZS 3109, where approved curing compound is used, it must be applied onto:
  - Slabs within 2 hours of finishing operation.
  - Walls and columns immediately after removal of formwork.
- PVA curing compounds are not permitted.
- Consideration must be given to curing compound compatibility with finishing products.
- Clear concrete cover to reinforcement is as indicated in the drawings.
- All reinforcement fabric shall comply with NZS 3422 and shall be supplied as flat sheets.

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

PROPOSED BRIDGE
BRIDGE DRAWINGS
GENERAL STRUCTURAL NOTES

Client: FAR NORTH DISTRICT COUNCIL
Location: CHURCH ROAD KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

Drawn by: ME | Reviewed by: MJ | Approved by: MJ

Scale: 1:50
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: S01

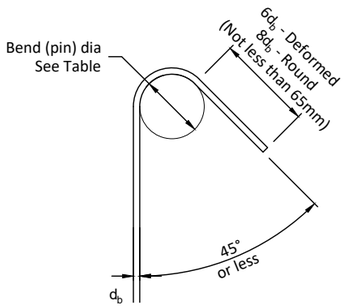
REINFORCING STEEL ELEVATIONS

- For simplicity a straight line may be shown representing vertical and horizontal steel. On-site the contractor must provide appropriate 90° bend or hook to terminate every bar. Similarly, stirrups may have been shown as shaded areas for clarity. See typical details and contact the engineer if unsure.

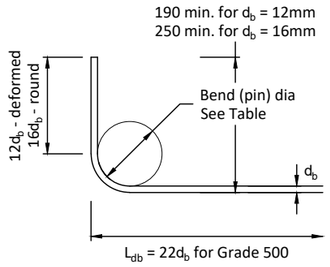
REINFORCING HOOKS

REBAR TYPE	Bar Diameter (d_b)								
	6	8	10	12	16	20	25	32	40
Plain Bars	30	40	50	60	80	100	150	200	240
Deformed Bars	30	40	50	60	80	100	150	200	240
Plain Bars (Stirrups & Ties)	12	16	20	24	32	40	80	-	-
Deformed Bars (Stirrups & Ties)	24	32	40	48	64	80	150	-	-

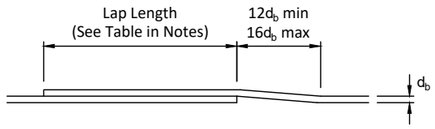
DIAMETER OF BENDS (INSIDE FACE)
Note: d_b = diameter of bar being bent



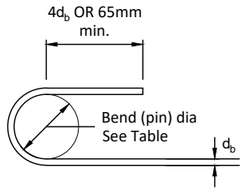
STANDARD STIRRUP ANCHORAGE



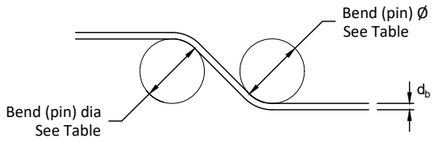
90° BEND (EQUIV. STD. HOOK)



OFFSET LAPS



STANDARD HOOK



45° CRANK

STRUCTURAL STEEL

- All workmanship and materials shall be in accordance with NZS 3404 and AS/NZS 1554 except where varied by contract documents.
- Unless noted otherwise all steel shall be in accordance with:
  - AS 3679-300 plus sections - hot rolled structural steel.
  - AS/NZS 3678 plates and floor plates - hot rolled structural steel.
  - AS 1163 welded and seamless steel - hollow sections for general structural purposes (metric units).
- The builder shall prepare workshop drawings and submit for approval. Fabrication shall not commence until approval has been received.
- Unless otherwise noted all bolts shall be 8.8/S high strength structural bolts of strength grade 8.8 manufactured to AS/NZS 1252, tightened using a wrench to a snug tightened condition.
- No bolt threads will be permitted in the bearing plane.
- All gusset plates, base plates, fin plates, stiffeners etc. shall be 10 mm thick unless noted otherwise.
- Hot dip galvanizing to be in accordance with AS/NZS 1650.
- The ends of the hollow sections shall be sealed with a minimum of 6 mm thick plate, unless noted otherwise.
- The builder shall provide all cleats and drill all holes necessary for fixing steel to steel and timber whether they are detailed on the drawings or not.
- Concrete encased steel work shall be wrapped with W5 wire at 150 mm crs and shall have a minimum of 50 mm cover unless noted otherwise.
- Structural steelwork shall be coated in accordance with the attached Carboline Specification.
- Steel members shall be the following grades

Member	Grade
UB, UC, PFC, & angle (125x125 or larger)	300
RHS, SHS, CHS	350

- All plates & cleats shall be grade 250 U.N.O.
- All holding down bolts and other fixing devices shall have a minimum yield stress of 300 MPa unless noted otherwise.
- All dry pack mortar/grout shall have a compressive strength of at least 30 MPa.
- Surface preparation and corrosion protection of steelwork shall be in accordance with the specification. Any damage to the protective coating of steelwork shall be made good.
- Review of shop drawings of all structural steel by RS Eng.

Bolts:

- Edge and end distance = 2d minimum (steel plate).
- All bolts shall have at least one washer which shall be not less than twice the nominal bolt size in diameter.
- The bolts shall be selected so that the projection beyond the nut is not less than two threads and not more than 10 mm.
- Mill certificates shall be provided to the engineer for all steelwork used in this contract.

Holing:

- Holes for bolts shall be drilled or punched and not gas cut.

Welds:

- All welded connections shall be of sp grade metal arc as shown on the drawings.
- All welding shall comply with AS 1554:part 1 "Welding of Steel Structures" U.N.O.
- Welds exposed in the completed building and in particular butt welds shall be neatly finished and ground smooth.
- All butt welds shall be full penetration, using backing plates as required.
- Welding of hollow sections shall incorporate internal sections or backing plates as necessary to complete the specified weld.

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

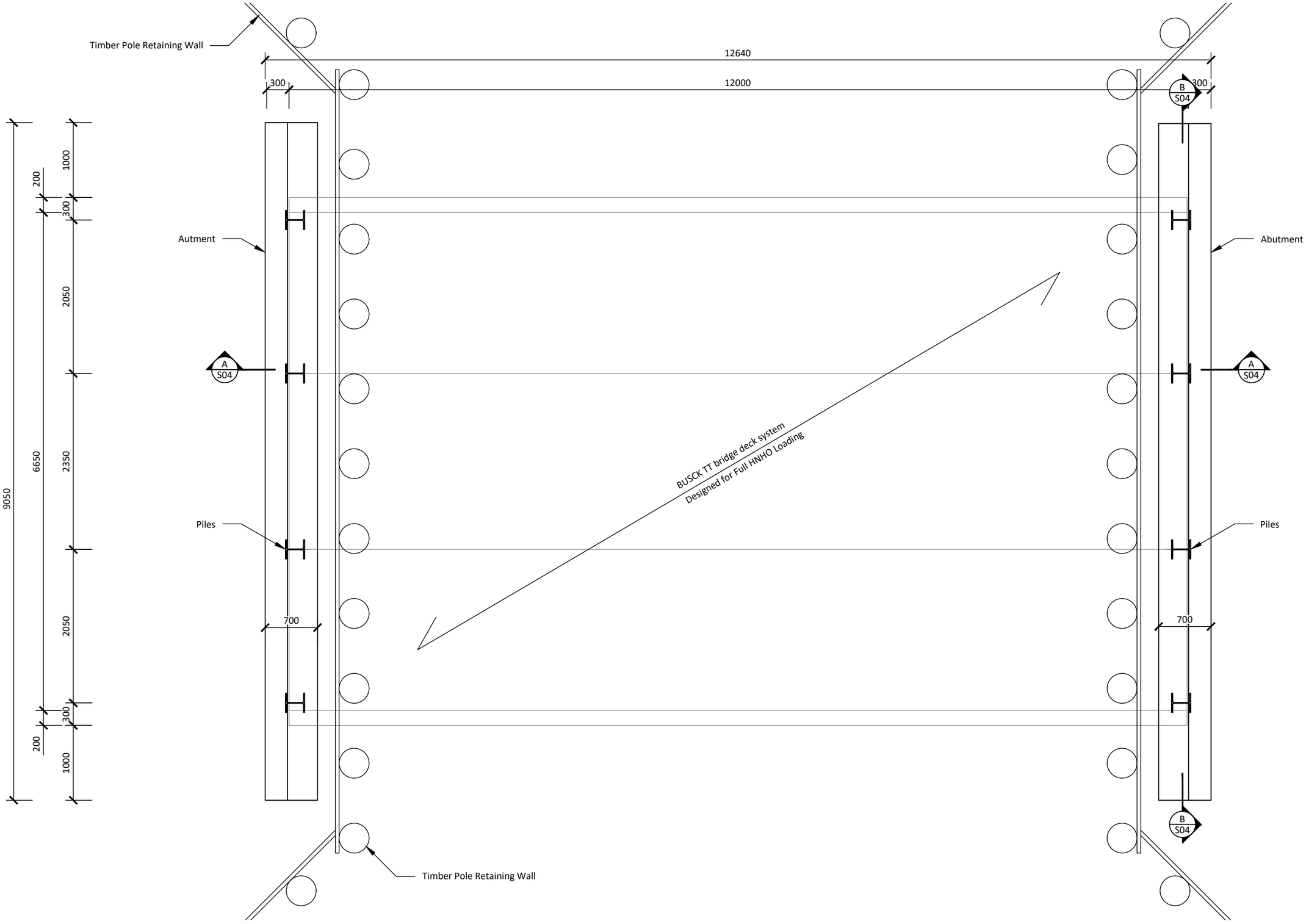
PROPOSED BRIDGE
BRIDGE DRAWINGS
GENERAL REINFORCING NOTES

Client: FAR NORTH DISTRICT COUNCIL
Location: CHURCH ROAD, KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

Drawn by: ME | Reviewed by: MJ | Approved by: MJ

Scale: 1:50
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: S02



0 0.5 1.0
PLAN 1:50

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

PROPOSED BRIDGE
BRIDGE DRAWINGS
BRIDGE PLAN

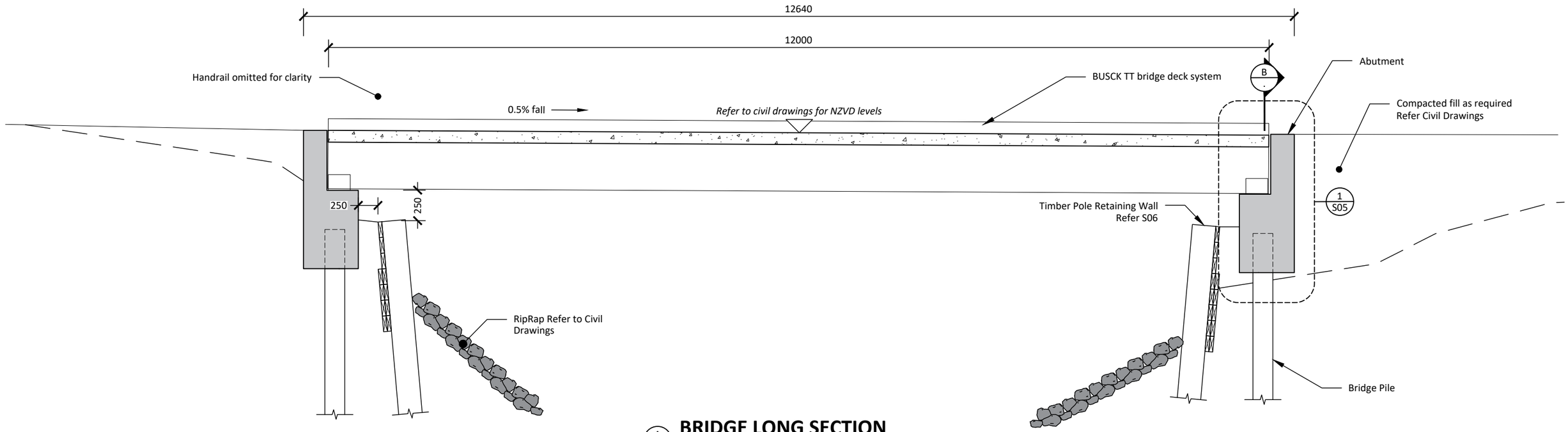
Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

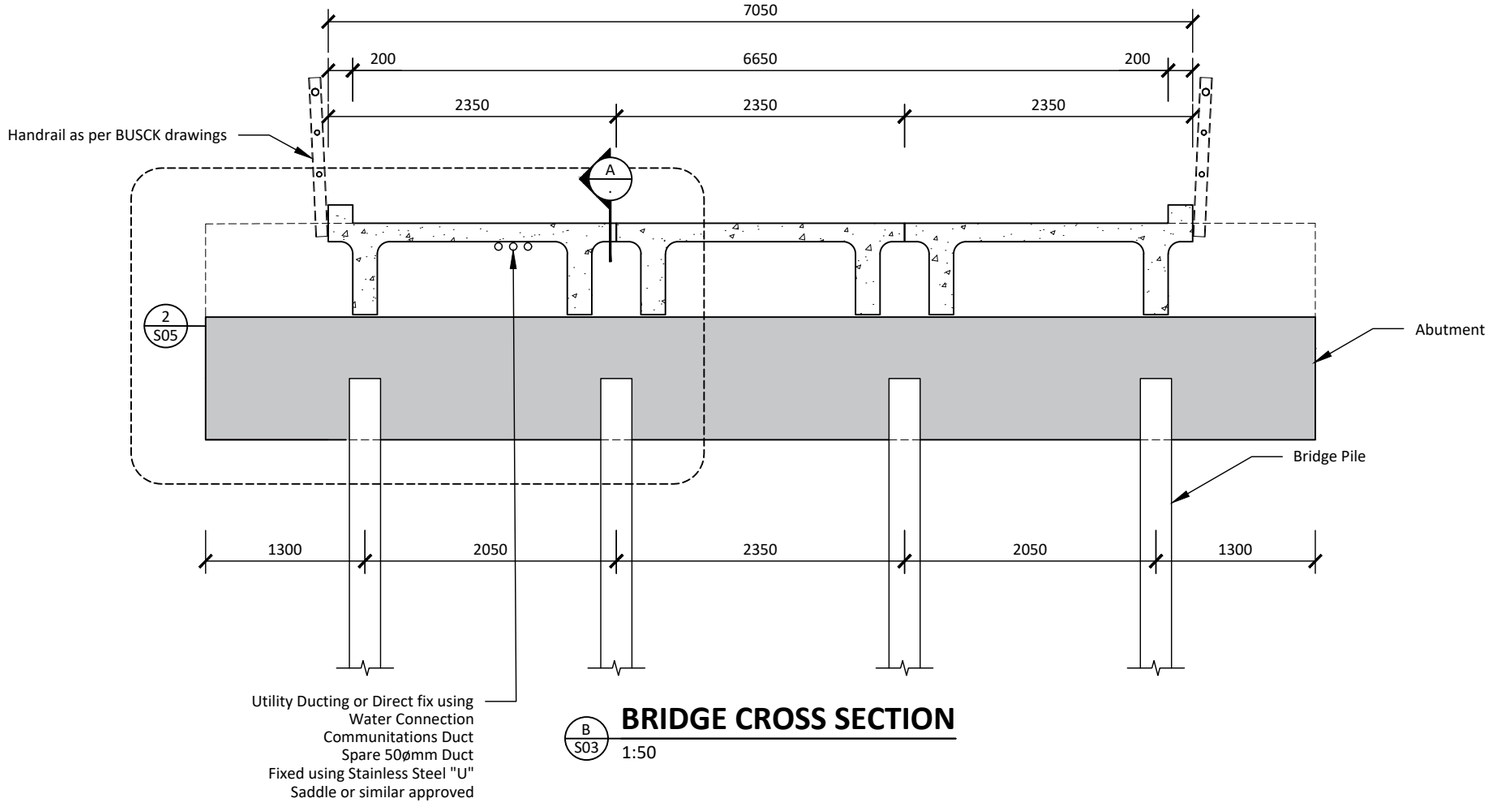
Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

Drawn by: ME | Reviewed by: MJ | Approved by: MJ

Scale 1:50
Rev No. B
Original A3
Sheet No. S03
Job No. 18781



A S03 **BRIDGE LONG SECTION**
1:50



B S03 **BRIDGE CROSS SECTION**
1:50

NOTES:

- All services should be located on-site prior to commencement of works.
- All works to comply with all relevant local authority by-laws and council regulations where applicable.
- Contractors to confirm all dimensions on site prior to commencing any work.
- Do not scale off drawings.
- These drawings are to be read in conjunction with specifications - plans take precedence.

LEGEND

— — — Existing ground level

——— Proposed ground level

0 0.5 1.0
SECTION 1:50

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

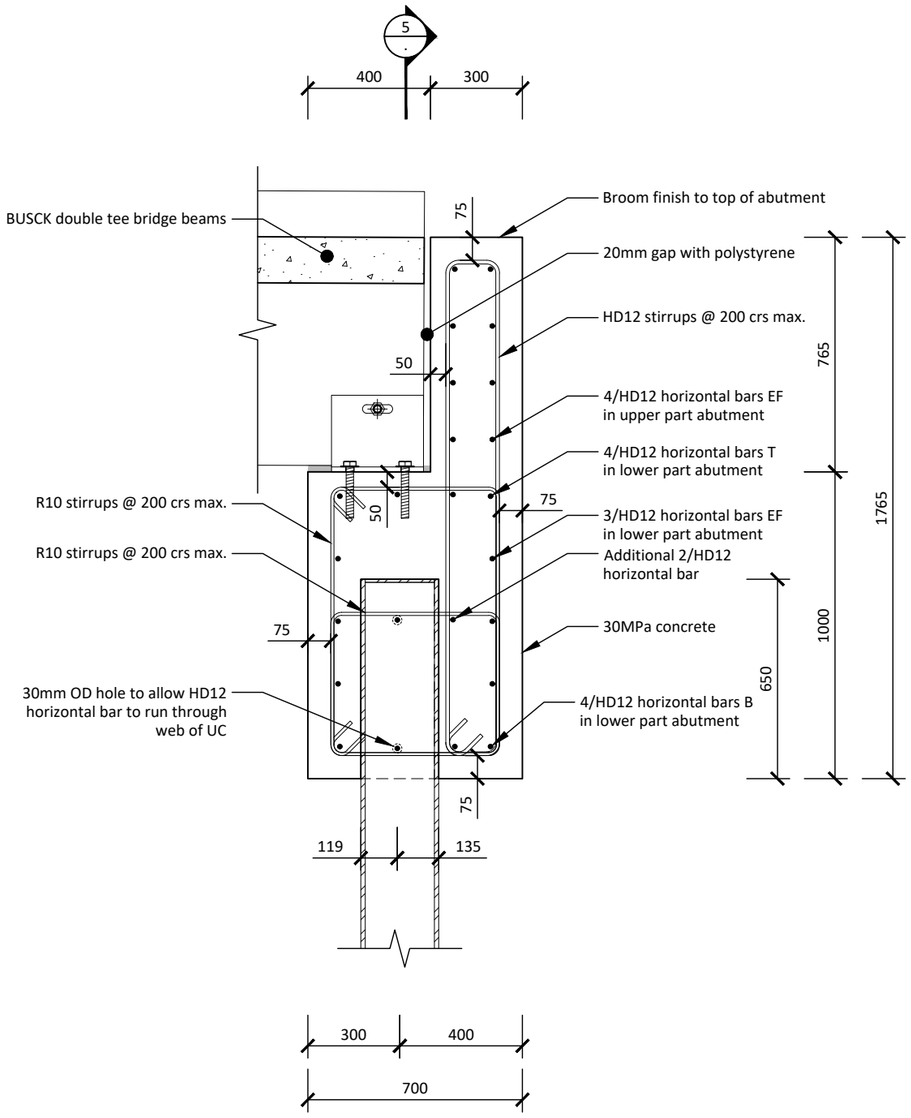
PROPOSED BRIDGE
BRIDGE DRAWINGS
BRIDGE SECTIONS

Client: FAR NORTH DISTRICT COUNCIL
Location: CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

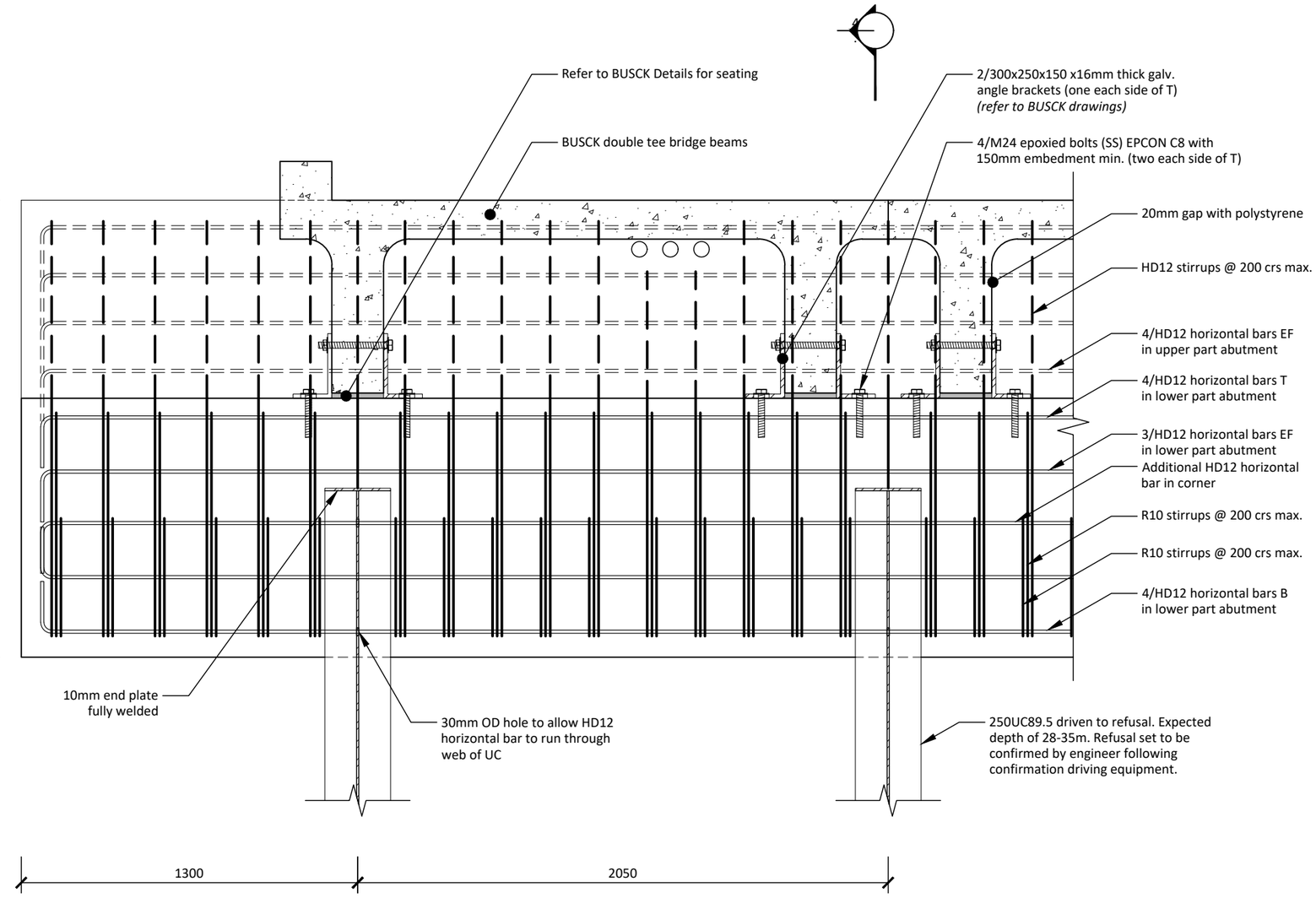
Drawn by: ME | Reviewed by: MJ | Approved by: MJ

Scale: 1:50
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: S04



1 S04 **ABUTMENT DETAIL**

1:20 SECTION



2 S04 **ABUTMENT DETAIL**

1:20 ELEVATION

0 0.2 0.4
SECTION 1:20

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

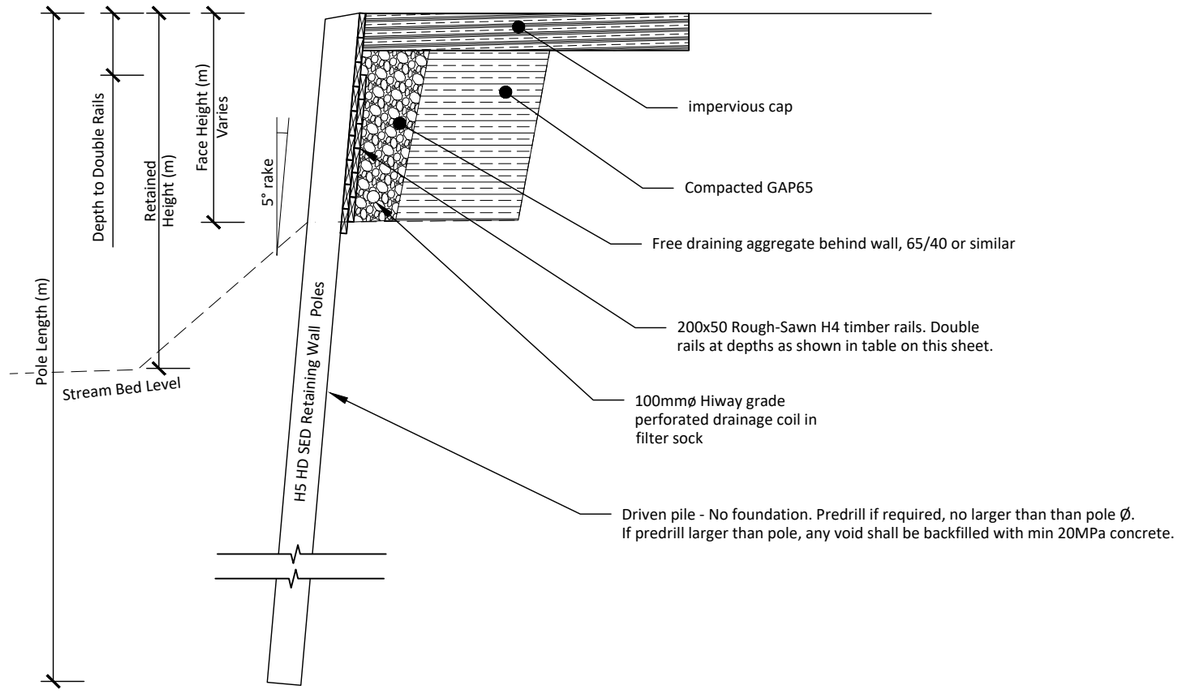
PROPOSED BRIDGE
BRIDGE DRAWINGS
BRIDGE DETAILS

Client: FAR NORTH DISTRICT COUNCIL
Location: CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

Drawn by: ME | Reviewed by: MJ | Approved by: MJ

Scale: 1:20
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: S05



DRIVEN RETAINING WALL - TYPICAL SECTION DETAIL

1:50

WALL TYPE 1				
RETAINED HEIGHT	POLE SIZE S.E.D. + POLE SPACING	POLE LENGTH	DEPTH TO DOUBLE RAILS	MAX. SLOPE BEHIND WALL
<3m	400mm @ 1.0m	12m	0.40m	-

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

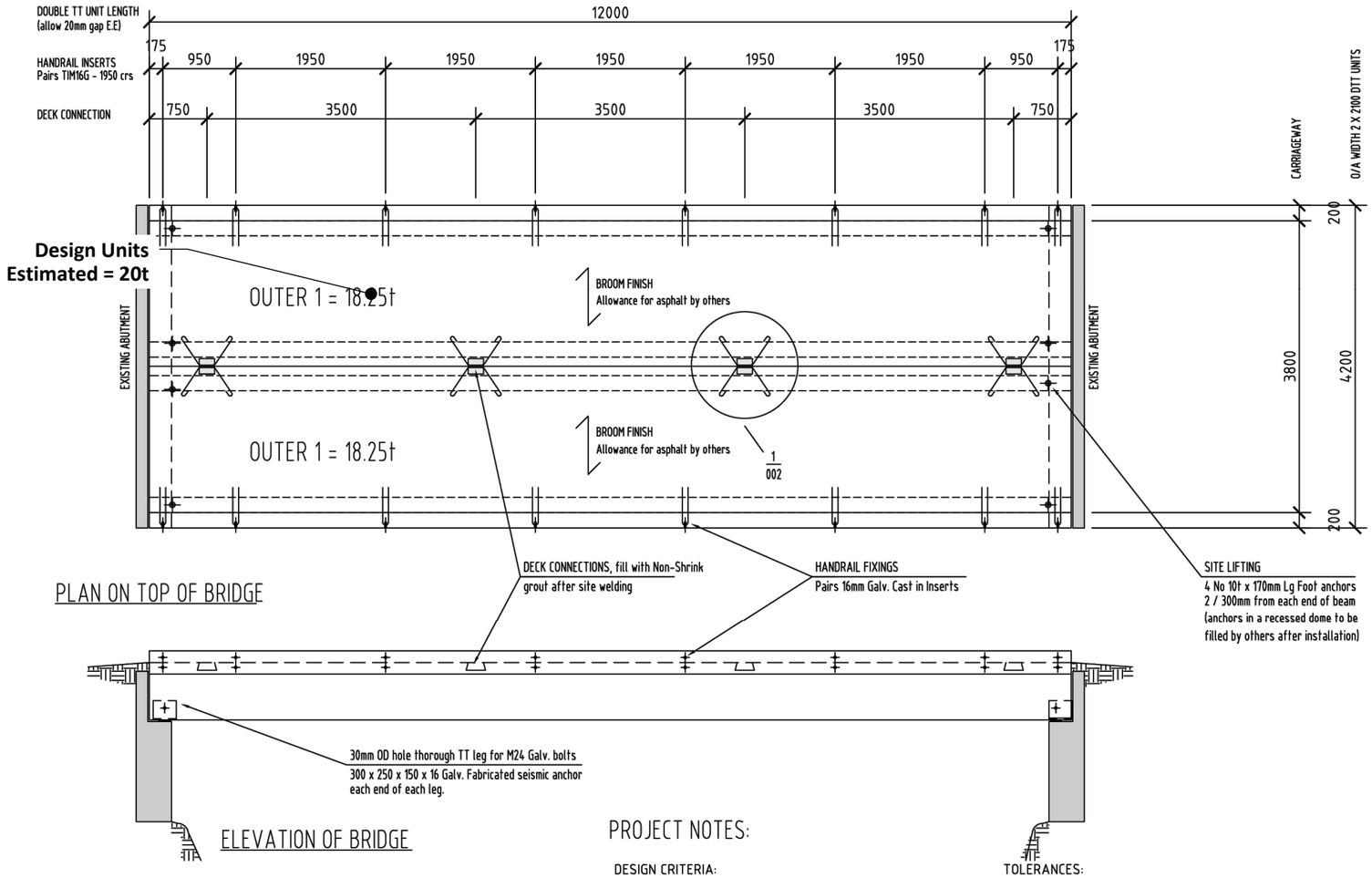
PROPOSED BRIDGE
BRIDGE DRAWINGS
TYPICAL TIMBER RETAINING WALL DETAILS

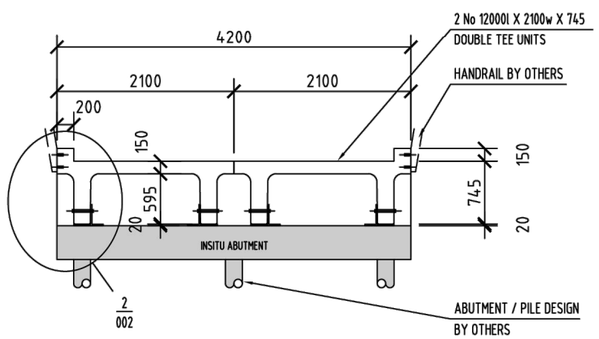
Client: FAR NORTH DISTRICT COUNCIL
Location: CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

Drawn by: ME | Reviewed by: MJ | Approved by: MJ

Scale: 1:20
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: S06





PROJECT NOTES:

DESIGN CRITERIA:
- DOUBLE TEE bridge beams and Connections by Busck only - abutments, central piers, piles linkage bars etc by Other Consulting Engineers
- NZTA Bridge Manual SP/M/022 (third edition) Appendix D
- NZS3101 2006
- Loading = Hn Ho 72
- 50 year life
- Exposure classification = B1/B2
- Light Handrail only - Outer beams have not been designed for any Guard Rails
- We have allowed 1.75kPa SDL (Services) Plus 60mm ave thickness for asphalt

CONCRETE STRENGTH:
- 50mPa fc 28 days
- 28mPa at transfer

CONCRETE COVER:
- Prestressing strand 30mm
- Reinforcing Steel 30mm

STRAND:
- 14No Total - 12.9mm dia S.S with Intial prestress force of 72% of 184kN.

TOLERANCES:
- Generally as per NZS 3109:1997 table 5.1 unless stated other wise
- Length +/- 25mm
- Maximum Hog 40mm
- Prestressing strand (any direction) +/-5mm
- Insert Positions (any direction) +/-3mm
- Surface Finish +/-10mm

SURFACE FINISHES:
- No allowance for any topping or asphalts
- Top surface Broom Finish
- Sides and undersides F5
- Connection recesses 5mm amplitude

SEATING:
- Each leg at 150mm from each end seat on abutment on a 200 x 150 x 20mm Rubber pad.

HANDLING:
- Units to be stacked with suitable dunage directly under lifting eyes at all times.
- only use lifting eyes to lift the units, refer PCNZ lifting and handling code

1 / The Precaster has allowed for lifting devices for factory use. The Builder is responsible for coordination with the persons engaged to handle the precast unit after arrival at site.

2 / Lifting, bracing and fixing of precast elements must only be undertaken by competent persons who must ensure no lifting or fastening device, including cast in items and attachments, is overloaded and load sharing devices are used where necessary.

NOTE: PLEASE COMPLETE ONE OF THE FOLLOWING

A / WE CONFIRM THAT THE DIMENSIONS AND DETAILS ON THESE DRAWINGS ARE CORRECT AND APPROVED FOR MANUFACTURE

AUTHORISED SIGNATURE:

B / WE REQUIRE THE FOLLOWING ALTERATIONS TO DIMENSIONS AND DETAILS AS PER THE MARK-UP'S PLEASE ACTION AND RESUBMIT

AUTHORISED SIGNATURE:

QR12	
QA MANAGER HAS INSPECTED THIS PRODUCT	
AND HAS CONFIRMED THAT IT CONFORMS TO	
ALL ASPECTS OF BUSCK PREPOUR CHECK QR12	
DATE:	
SIGN:	
DESIGN CHECK SIGN OFF:	
JOHN MARSHALL on behalf of: BUSCK prestressed concrete Ltd CPEng # 226365, BE(Hons)(Civil), CMEngNZ, IntPE(NZ)	
DATE:	

LIFTING AND HANDLING REFER PCNZ RIGGING CODE	
WEIGHT OF UNIT FOR LIFTING	SEE BELOW
STRONGBACK REQUIRED	NO
LOAD EQUALIZATION REQUIRED	YES
DEMOULD	D26
LOADING	L19
TRANSPORT	T5
SITE ERECTION/ROTATE	P33

FOR CONSTRUCTION	30/03/2020	A
Engineer Design Check	19/03/2020	1
Description	Dates	Revisions

BUSCK PRESTRESSED CONCRETE LTD
8 FRASER STREET - P.O Box 310 - WHANGAREI 0140 - Ph 09 438 3059

Project: 2 x STOCK 12m TT FARM BRIDGE (2023) Hn Ho 72 LOADING

Special Notes

Concrete mix code

Specified min concrete strenght: 50 mPa

m^3 | tonnes

Checked | Make | no. off

Scale 1:50 | Drawn GN | File No. 23172 | Sheet 001

Drawing: BRIDGE LAYOUT | Revision A

PRELIMINARY

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

PROPOSED BRIDGE
BRIDGE DRAWINGS
INDICATIVE BUSCK DETAILS

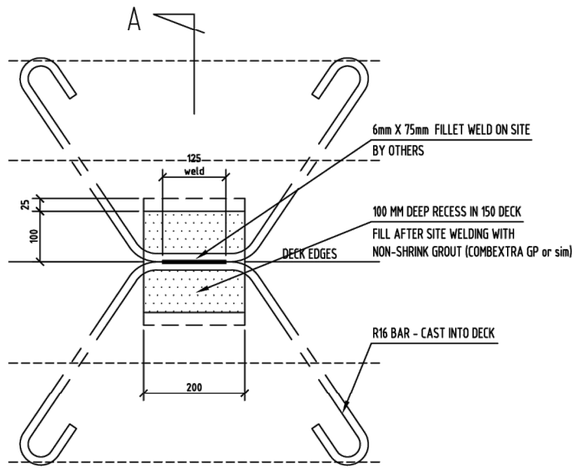
Client: FAR NORTH DISTRICT COUNCIL

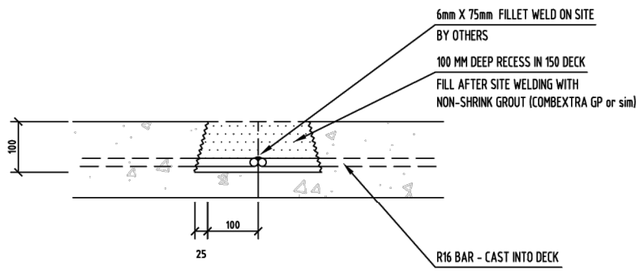
Location: CHURCH ROAD
KAITAIA

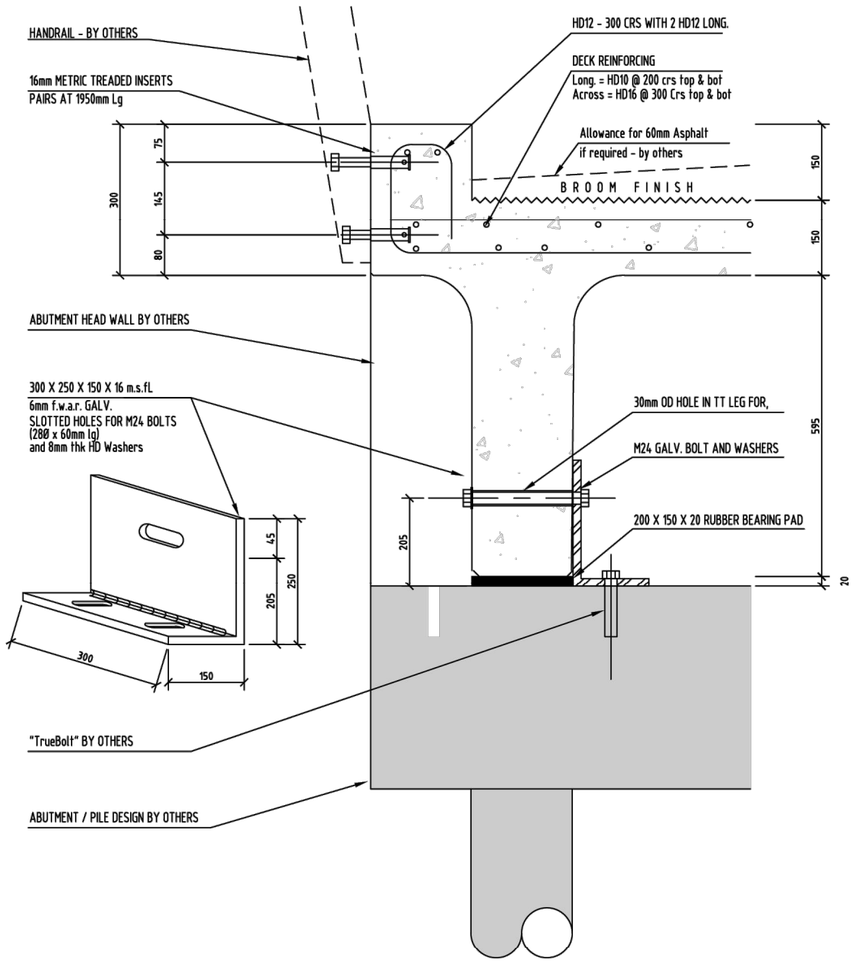
Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

Drawn by: ME | Reviewed by: MJ | Approved by: MJ

Scale 1:20 | Original A3 | Job No. 18781 | Rev No. B | Sheet No. S07







1 / The Precaster has allowed for lifting devices for factory use. The Builder is responsible for coordination with the persons engaged to handle the precast unit after arrival at site.

2 / Lifting, bracing and fixing of precast elements must only be undertaken by competent persons who must ensure no lifting or fastening device, including cast in items and attachments, is overloaded and load sharing devices are used where necessary.

NOTE: PLEASE COMPLETE ONE OF THE FOLLOWING

A / WE CONFIRM THAT THE DIMENSIONS AND DETAILS ON THESE DRAWINGS ARE CORRECT AND APPROVED FOR MANUFACTURE

AUTHORISED SIGNATURE:

B / WE REQUIRE THE FOLLOWING ALTERATIONS TO DIMENSIONS AND DETAILS AS PER THE MARK-UP'S PLEASE ACTION AND RESUBMIT

AUTHORISED SIGNATURE:

QA MANAGER HAS INSPECTED THIS PRODUCT
AND HAS CONFIRMED THAT IT CONFORMS TO
ALL ASPECTS OF BUSCK PREPOUR CHECK QR12
DATE:
SIGN:
DESIGN CHECK SIGN OFF:
JOHN MARSHALL on behalf of: BUSCK prestressed concrete Ltd
CPEng # 226365, BE(Hons)(Civil), CMEngNZ, IntPE(NZ)
DATE:

LIFTING AND HANDLING
REFER PCNZ RIGGING CODE

WEIGHT OF UNIT FOR LIFTING	SEE BELOW
STRONGBACK REQUIRED	NO
LOAD EQUALIZATION REQUIRED	YES
DEMOULD	D26
LOADING	L19
TRANSPORT	T5

Description	Dates	Revisions
FOR CONSTRUCTION	30/03/2020	A
Engineer Design Vheck	19/03/2020	1

BUSCK
8 FRASER STREET - P.O Box 310 - WHANGAREI 0140 - Ph 09 438 3059

Project: 2 X STOCK 12m TT FARM BRIDGE (2023)
Hn Ho LOADING

Special Notes:

Concrete mix code:

Specified min concrete strenght: 50 mPa

m^3 | tonnes

Checked | Make | no. off

Scale 1:50 | 23172 File No. | 002 Sheet

Drawn GN

Drawing: BRIDGE DETAILS | A Revision

PRELIMINARY

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

PROPOSED BRIDGE
BRIDGE DRAWINGS
INDICATIVE BUSCK DETAILS

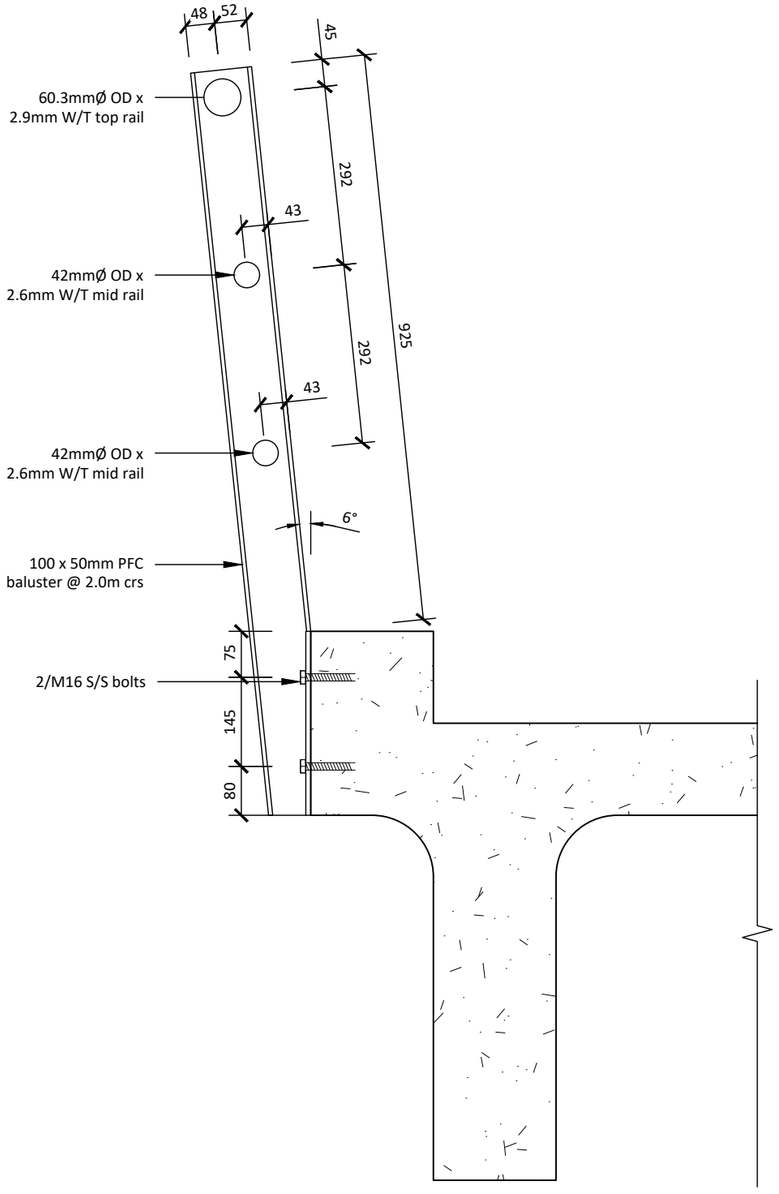
Client: FAR NORTH DISTRICT COUNCIL

Location: CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

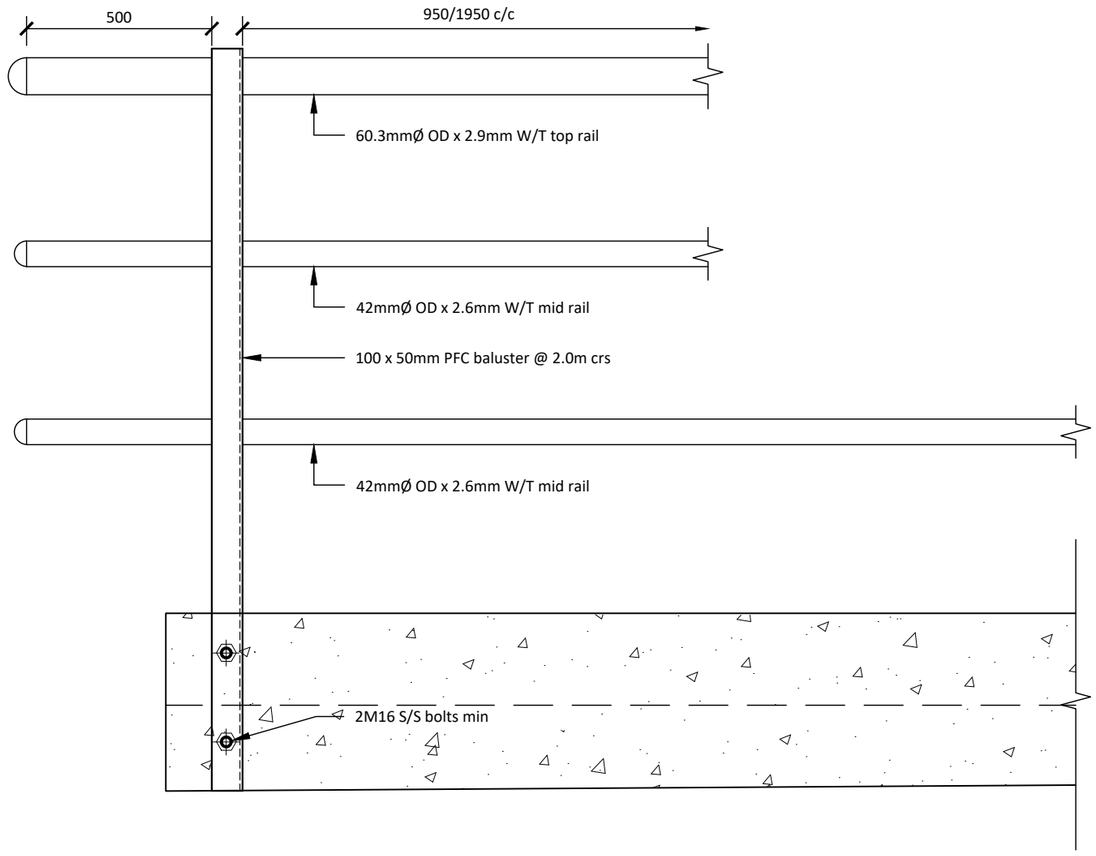
Drawn by: ME | Reviewed by: MJ | Approved by: MJ

Scale 1:20 | Rev No. B
Original A3 | Sheet No. S08
Job No. 18781



HANDRAIL SECTION DETAIL

1:10



Handrail to be Galvanised
600g/m² minimum

HANDRAIL ELEVATION DETAIL

1:10

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

PROPOSED BRIDGE
BRIDGE DRAWINGS
HANDRAIL DETAILS

Client: FAR NORTH DISTRICT COUNCIL

Location: CHURCH ROAD
KAITAIA

Date	Rev	Notes
23/04/2025	B	For Tender
28/03/2025	A	For Tender

Drawn by: ME | Reviewed by: MJ | Approved by: MJ

Scale: 1:10
Original: A3
Job No.: 18781
Rev No.: B
Sheet No.: S09

GEOTECHNICAL DESIGN REPORT

Church Road,

Kaitaia

(Lot 2 DP 89656 & Part Lot 332 DP 12724)

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

GEOTECHNICAL DESIGN REPORT

Church Road,

Kaitaia

(Lot 2 DP 89656 & Part Lot 332 DP 12724)

Report prepared for: Far North District Council

Report reference: 18781

Date: 7 February 2025

Revision: 1

Document Control

Date	Revision	Description	Prepared by:	Reviewed by:	Authorised by:
7/02/2025	1	Building Consent Issue	M Jacobson	C Hay	M Jacobson

Contents

Appendices

File: 18781
7 February 2025
Revision: 1

GEOTECHNICAL DESIGN REPORT

Church Road, Kaitaia

(Lot 2 DP 89656 & Part Lot 332 DP 12724)

1.0 Introduction

RS Eng Ltd (RS Eng) has been engaged by the Far North District Council to investigate Lot 2 DP 89656 & Part Lot 332 DP 12724 for the construction of a new bridge. The purpose of this report is to summarise the investigation and detail any recommendations.

2.0 Site Description

The proposed building site can be accessed off Bedgood Road, approximately 450m from its intersection with Church Road. The landform of the surrounding area is a plateau on the north and south, that fall sharply towards the watercourse. The proposed bridge is to provide road access to the nearby recycling centre.

Figure 1: Lot 2 DP 89656 & Part Lot 332 DP 12724 *(NRC Hazards GIS).*

3.0 Desk Study

3.1 Referenced/Reviewed Documents

The following documents have been referenced in this report:

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

3.2 Site Geology

The GNS 1:250,000 scale New Zealand Geology Web Map indicates that the property is located within an area that is underlain by Karioitahi Group, which has been described as follows: *"Unconsolidated to poorly consolidated sand, peat, mud and shell deposits (estuarine, lacustrine, swamp, alluvial and colluvial."*

4.0 Field Investigation

A Technician from this office visited the property on 22 October 2024 to undertake a walkover inspection and seven hand augers.

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

Four Cone Penetration Tests (CPTs) were completed by Geo Data Solutions on 15th October 2024. The CPTs extended to a maximum depth of 33.35m.

5.0 Subsoil Conditions

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

- Topsoil was encountered at the ground surface depths ranged between 0.1m BGL and 0.2m BGL.
- Fill was recorded in HA02, HA03 and HA07 extending to depths of 2.8m BGL, 1.4m BGL and 0.7m BGL, respectively. Fills were comprised of clays, silts, sands, gravels and assorted rubbish including fabric and plastic. In-Situ Undrained Shear Strengths in these materials ranged between 60kPa to 153kPa. Cone tip resistances in these materials ranged between 0.3MPa and 2MPa.
- Alluvial soils were recorded either below topsoil as in HA01 or below fill as in HA02 and HA03. The alluvium is inferred to extend to 27-35m BGL, where the CPTs refused. In-Situ Undrained Shear Strengths in these materials ranged between 35kPa to 184kPa. Cone tip resistances in these materials ranged between 0.5MPa and 5MPa.
- At 27-35m BGL where the CPTs refuse, mudstone of the Northland Allochthon is inferred.

- Groundwater is expected at 1-3mBGL.

6.0 Liquefaction

Sand, sandy gravels and sandy silts are potentially at risk of liquefaction induced by earthquake ground shaking. Soils potentially prone to liquefaction are generally classified by a normalised soil behaviours index (Ic) less than 2.6, assessed using the CPT. The CPTs observed various thin layers of potentially liquefiable silty sands and sandy silts at varying depths.

The proposed bridge is an Importance Level 1 structure, as per the NZTA Bridge Manual. The following values of peak ground acceleration and magnitude are based on the NZTA Bridge Manual.

In accordance with MBIE Geotechnical Engineering Module 3, using the software package, CLiq V.3 analysis was undertaken to assess the potential of earthquake-induced liquefaction and lateral spread. The results of the analysis are presented in Table 1 below.

Table 1: Liquefaction Analysis/Results.

Seismic Event	PGA	M_w	Liquefaction Potential (LPI)	Liquefaction Severity (LSN)	Free Field Settlement	Lateral Spread
DCLS (1:250)	0.09g	5.75	0 Low risk	0 No expression	0cm	0m
SLS (1:25)	0.03g	5.75	0 Low Risk	0 No expression	0cm	0m

7.0 Static Settlement

The site is underlain by very soft to firm, lightly over-consolidated alluvial clays. These clays pose a risk of consolidation settlements from the fills required to build up the northern abutment. Preliminary estimates indicate settlements of up to 30mm is possible.

Such settlements are not expected to affect the proposed bridge; however, they may affect the abutment and associated surfacing of the accessway. Such settlements are expected to be slow and to occur over many years.

The detailed design will need to consider the effects of the potential settlement on the bridge design.

8.0 Engineering Recommendations

8.1 Bridge Abutments

Retaining walls are required to form the bridge abutments. The retaining walls shall be specifically designed by a Chartered Professional Engineer. The retaining wall design shall adopt the parameters given in Table 2 below.

Table 2: Retaining Wall Design Soil Parameters

Parameter	Fills	Alluvium
Depth (m)	0-3m	>3m
Soil Density (kN/m³)	18	-
Friction Angle (°)	25	-
Drained Cohesion (kPa)	0	-
Undrained Shear Strength (kPa)	-	30

8.2 Driven Piles

The bridge piles are expected to utilise driven UCs. These piles shall be specifically designed by a Chartered Professional Engineer using acceptable methods. The piles are expected to extend to the inferred mudstone, some 27-35m BGL. Preliminary vertical pile capacities shall be determined using B1/VM4 of the NZ Building Code. Post driving pile capacities shall be confirmed using the Hiley Formula using a FoS=5 or a similar method. The soil parameters given in Table 3 below shall be adopted for the preliminary foundation design.

Table 3: Foundation Design Parameters

Parameter	Weathered Mudstone	Mudstone
Depth (m)	23.5-29	>29
Shaft Adhesion (kPa)	15	100
End Bearing (MPa)	0.6	3

For the preliminary Ultimate Limit State design, a strength reduction factor of 0.45 should be adopted for pile design. The final design strength reduction factor shall be calculated using AS2159.

9.0 Limitations

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

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

Prepared and approved by:

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

Reviewed by:

Codie Hay
Senior Technician
NZDE(Civil), MEngNZ

RS Eng Ltd

Appendix A

Drawings

NOTES:

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

KEY

- Hand Auger Location
- Cone Penetration Test Location

Contours are shown at 1.0m crs.
Contours are derived from LiDAR (2018) and are shown at NZVD(2016).
Horizontal Datum: Mt Eden 2000

0 1 2 3 4 1:200
PLAN

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

Title
PROPOSED BRIDGE
GEOTECHNICAL INVESTIGATION
SITE PLAN

Client
FAR NORTH DISTRICT COUNCIL

Location
CHURCH ROAD
KAITAIA

Date	Rev	Notes
7/02/2025	A	For Report

Scale	Original	Rev
1:200	A3	A

Drawn	Approved	File #	Sheet
ME	MJ	18781	3

Appendix B

Subsurface Investigations

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

HAND AUGER LOG

HOLE NO.: HA01

CLIENT: Jeanette England
PROJECT: Geotechnical Investigations
JOB NO.: 18781

SITE LOCATION: Church Rd, Kaitaia
CO-ORDINATES: 1624679mE, 6114440mN
ELEVATION: 14.15m
START DATE: 22/08/2024
END DATE: 22/08/2024
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO3603	Values	WATER
TS	TOPSOIL.		0.0	TS				
Kariotahi Gr	Clayey SILT, with trace rootlets and sand; brown . Stiff; moist; low plasticity.		0.2					
	0.6m - Some sand.		0.4				184	
			0.6				43	
			0.8					
			1.0				161	
			1.2				58	
			1.4					
	Silty CLAY, with minor sand; brown . Stiff; moist; low plasticity.		1.6				151	
			1.8				55	
			2.0					
			2.2				132	
			2.4				69	
			2.6					
			2.8				130	
	Clayey sandy SILT; brown . Firm; moist; low plasticity.		3.0				50	
			3.2					
			3.4				144	
	Clayey SILT, with minor sand; brownish. Stiff; moist; low plasticity.		3.6				72	
			3.8					
			4.0				144	
	End Of Hole: 4.00m		4.2				86	
			4.4					
			4.6				141	
			4.8				83	
			5.0					
			5.2					

Groundwater Not Encountered

PHOTO(S)

REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

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

HAND AUGER LOG

HOLE NO.: HA02

CLIENT: Jeanette England
PROJECT: Geotechnical Investigations
JOB NO.: 18781

SITE LOCATION: Church Rd, Kaitaia
CO-ORDINATES: 1624681mE, 6114441mN
ELEVATION: 13.96m
START DATE: 22/08/2024
END DATE: 22/08/2024
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO3603	WATER
TS	Gravelly TOPSOIL.		0.0	TS			
FILL	Clayey SILT, with minor gravel; brown . Stiff; moist; low plasticity; gravel, fine to medium, angular.		0.2			81 14	
	0.6m - Minor sand.		0.4				
	0.7m - Brown with some yellow and grey.		0.6			86 29	
	Silty CLAY, with minor sand, with trace gravel; yellow/orange/grey/brown. Firm; moist; high plasticity; gravel, fine.		0.8				
	Clayey SILT, with some sand; brown/orange/grey mottling. Firm to stiff; moist; low plasticity.		1.0			81 26	
	2.2m - Trace plastic.		1.2				
	2.5m - Plastic decreases.		1.4			153 58	
	2.5m - Buried fabric.		1.6				
	2.6m - Trace rubbish/plastic.		1.8			86 30	
Karioitahi Gr	Clayey sandy SILT; brown . Firm to stiff; moist; low plasticity.		2.0				
	3.0m - Some fine graded gravels, wet.		2.2			86 29	22/08/2024
	3.6m - Firm, saturated.		2.4				
	Silty sandy CLAY. Soft; moist; low plasticity.		2.6			92 29	
	End Of Hole: 5.00m		2.8				
			3.0			115 33	
			3.2				
			3.4			36 29	
			3.6				
			3.8			35 29	
			4.0				
			4.2				
			4.4				
			4.6				
			4.8				
			5.0				
			5.2				

Scala penetrometer: 2 4 6 8 10 12 14 16 18 (Blows / 0mm)
Vane shear strength (kPa): 50 100 150 200

PHOTO(S)

REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

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

HAND AUGER LOG

HOLE NO.: HA03

CLIENT: Jeanette England
PROJECT: Geotechnical Investigations

JOB NO.: 18781

SITE LOCATION: Church Rd, Kaitaia
CO-ORDINATES: 1624686mE, 6114452mN
ELEVATION: 13.71m

START DATE: 22/08/2024
END DATE: 22/08/2024
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO3603	Values	WATER
TS	Gravelly TOPSOIL.		0.0	TS				
FILL	Gravelly SILT, with some clay; brown . Stiff; moist; low plasticity.		0.2					
	Organic SILT, with minor clay; black and orange. Firm; moist; low plasticity.		0.4				124 35	
	Silty CLAY, with minor gravel; yellowish orange/brown. Firm; moist; low plasticity; gravel, angular.		0.6 0.8 1.0 1.2				60 16	
Kariotahi Gr	Clayey SILT, with some sand; brown . Stiff to very stiff; moist; low plasticity.		1.4				141 53	
	Silty CLAY, with some sand; greyish blue, bits of red. Stiff; moist; low plasticity.		1.6 1.8 2.0				127 58	
	2.2m - Large gravel (20 mm) found.		2.2 2.4				141 94	
	3.0m - Firm.		2.6 2.8 3.0 3.2 3.4 3.6 3.8				101 65 130 86	
	Silty sandy CLAY; greyish blue. Firm; wet; low plasticity.		4.0				79 43	
	Clayey silty SAND; grey/blue. Very stiff; saturated.		4.2 4.4 4.6 4.8				35 14	
	5.0m - Unable to Penetrate, Too dense to auger. End Of Hole: 5.00m		5.0 5.2				UTP -	

Groundwater Not Encountered

PHOTO(S)

REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

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

HAND AUGER LOG

HOLE NO.: HA04

CLIENT: Jeanette England
PROJECT: Geotechnical Investigations

JOB NO.: 18781

SITE LOCATION: Church Rd, Kaitaia
CO-ORDINATES: 1624686mE, 6114455mN
ELEVATION: 13.8m

START DATE: 22/08/2024
END DATE: 22/08/2024
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane:	WATER
TS	Gravelly TOPSOIL.		0.2	TS	2 4 6 8 10 12 14 16 18	50 100 150 200 Values	Not E
	0.2m - Unable to penetrate. End Of Hole: 0.20m		0.4, 0.6, 0.8, 1.0, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2, 2.4, 2.6, 2.8, 3.0, 3.2, 3.4, 3.6, 3.8, 4.0, 4.2, 4.4, 4.6, 4.8, 5.0, 5.2				

PHOTO(S)

REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

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

HAND AUGER LOG

HOLE NO.: HA05

CLIENT: Jeanette England
PROJECT: Geotechnical Investigations

JOB NO.: 18781

SITE LOCATION: Church Rd, Kaitaia
CO-ORDINATES: 1624687mE, 6114458mN
ELEVATION: 13.83m

START DATE: 22/08/2024
END DATE: 22/08/2024
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane:	WATER
TS	Gravelly TOPSOIL.		0.0	TS	2 4 6 8 10 12 14 16 18	50 100 150 200 Values	Not E
	0.2m - Unable to penetrate, large gravels. End Of Hole: 0.20m		0.2				
			0.4				
			0.6				
			0.8				
			1.0				
			1.2				
			1.4				
			1.6				
			1.8				
			2.0				
			2.2				
			2.4				
			2.6				
			2.8				
			3.0				
			3.2				
			3.4				
			3.6				
			3.8				
			4.0				
			4.2				
			4.4				
			4.6				
			4.8				
			5.0				
			5.2				

PHOTO(S)

REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

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

HAND AUGER LOG

HOLE NO.: HA06

CLIENT: Jeanette England
PROJECT: Geotechnical Investigations

JOB NO.: 18781

SITE LOCATION: Church Rd, Kaitaia
CO-ORDINATES: 1624687mE, 6114462mN
ELEVATION: 13.89m

START DATE: 22/08/2024
END DATE: 22/08/2024
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane:	WATER
TS	Gravelly TOPSOIL.		0.2	TS	2 4 6 8 10 12 14 16 18	50 100 150 200 Values	Not E
	0.2m - Unable to penetrate - large gravels. End Of Hole: 0.20m		0.4, 0.6, 0.8, 1.0, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2, 2.4, 2.6, 2.8, 3.0, 3.2, 3.4, 3.6, 3.8, 4.0, 4.2, 4.4, 4.6, 4.8, 5.0, 5.2				

PHOTO(S)

REMARKS

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

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

HAND AUGER LOG

HOLE NO.: HA07

CLIENT: Jeanette England
PROJECT: Geotechnical Investigations

JOB NO.: 18781

SITE LOCATION: Church Rd, Kaitaia
CO-ORDINATES: 1624685mE, 6114461mN
ELEVATION: 13.67m

START DATE: 22/08/2024
END DATE: 22/08/2024
LOGGED BY: CH

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: GEO3603	WATER
TS	Gravelly TOPSOIL.		0.0	TS			
FILL	Clayey SILT; brown . Firm; moist; low plasticity.		0.2				
	Silty CLAY; orangish brown, some grey streaks. Stiff; moist; low plasticity.		0.4			130	
	Clayey gravelly SILT; dark brown, bits of orange/grey. Firm; moist; low plasticity.		0.6			29	
	0.7m - Unable to penetrate, auger scraping. End Of Hole: 0.70m		0.8				

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

VANE SHEAR STRENGTH (kPa) Vane: GEO3603: 50 100 150 200 Values

WATER: Groundwater Not Encountered

PHOTO(S)

REMARKS

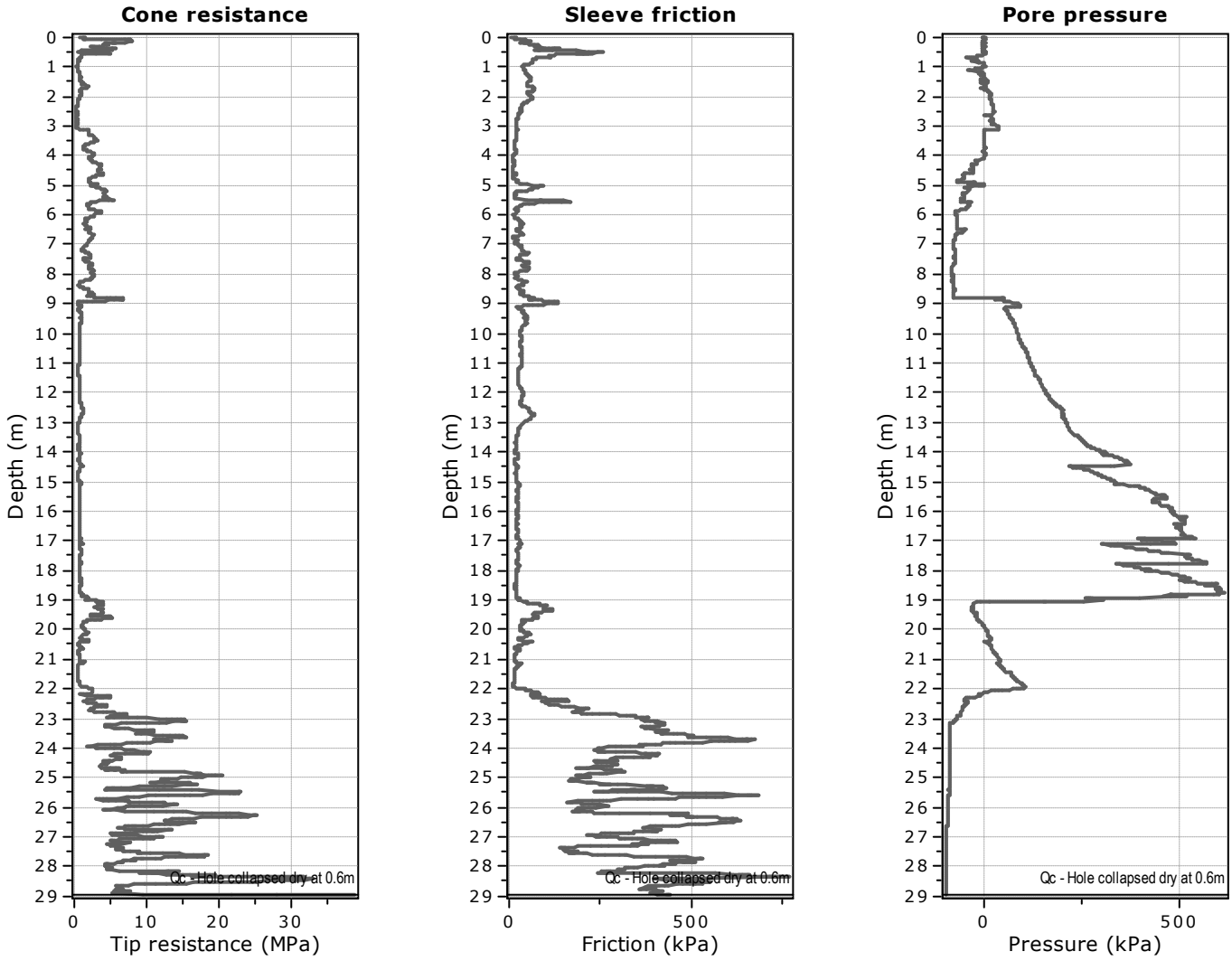
WATER
- Standing Water Level
- Out flow
- In flow

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

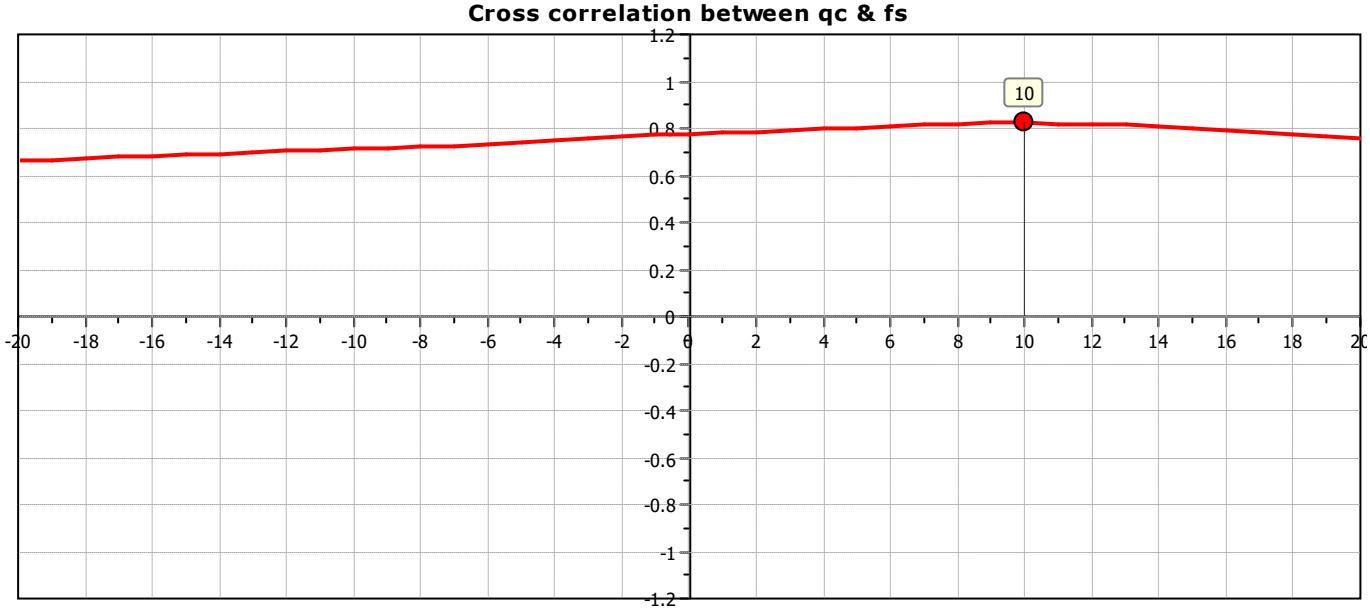
Geo Data Solutions (GDS) NZ Ltd.
Email: Josh@gdsnz.co. nz
www.gdsnz.co.nz

CPT: 01
Total depth: 28.95 m, Date: 16/08/2024
Coords: lat -35.112381° lon 173.270879°
Cone Type: DC10

Project: **RS Eng Ltd | GDS NZ Ltd**
Location: **Kaitaia Recycle Centre | Holes dipped onsite using Dipmeter**



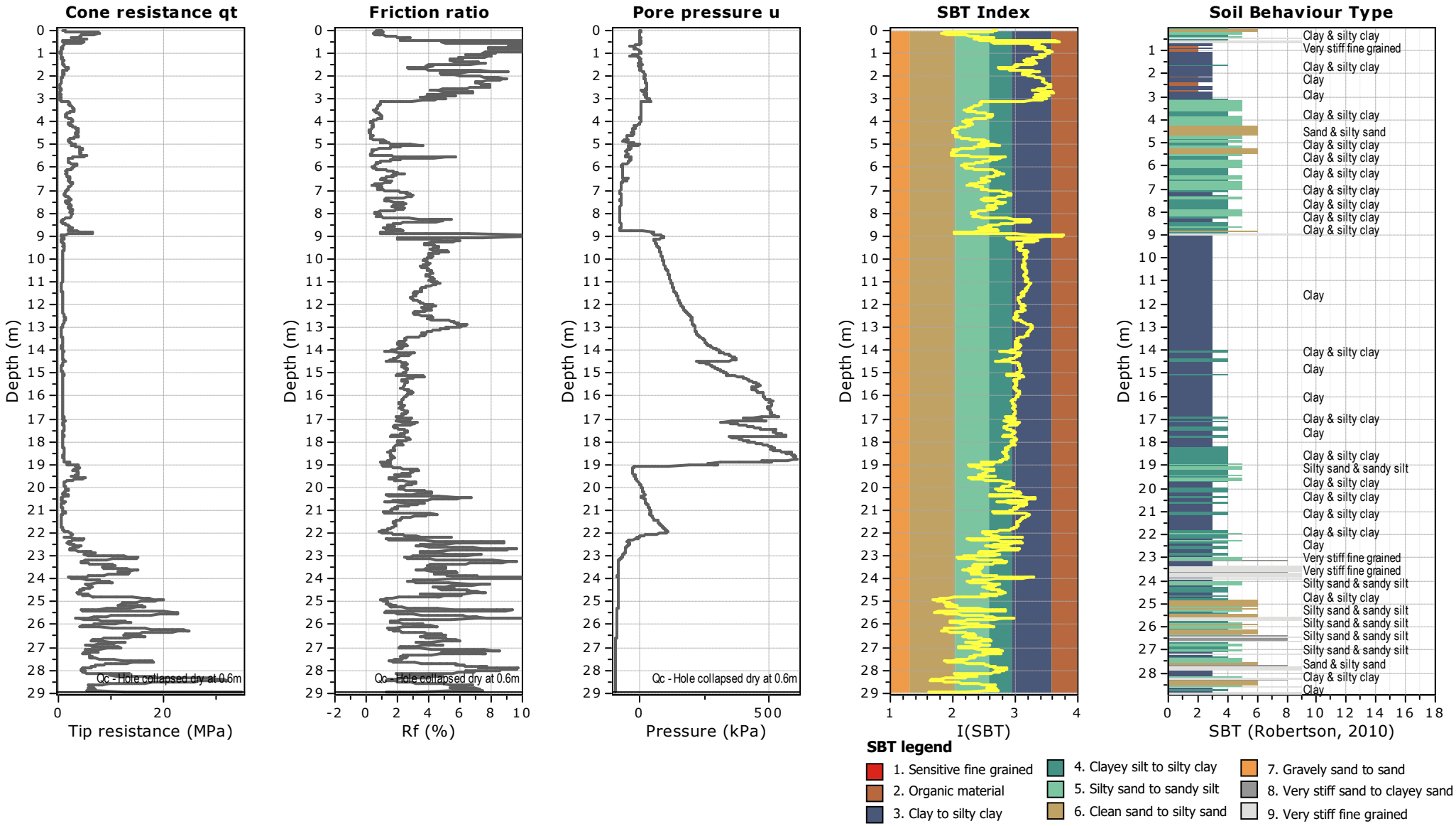
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



Geo Data Solutions (GDS) NZ Ltd.
Email: Josh@gdsnz.co. nz
www.gdsnz.co.nz

CPT: 01
Total depth: 28.95 m, Date: 16/08/2024
Coords: lat -35.112381° lon 173.270879°
Cone Type: DC10

Project: **RS Eng Ltd | GDS NZ Ltd**
Location: **Kaitaia Recycle Centre | Holes dipped onsite using Dipmeter**

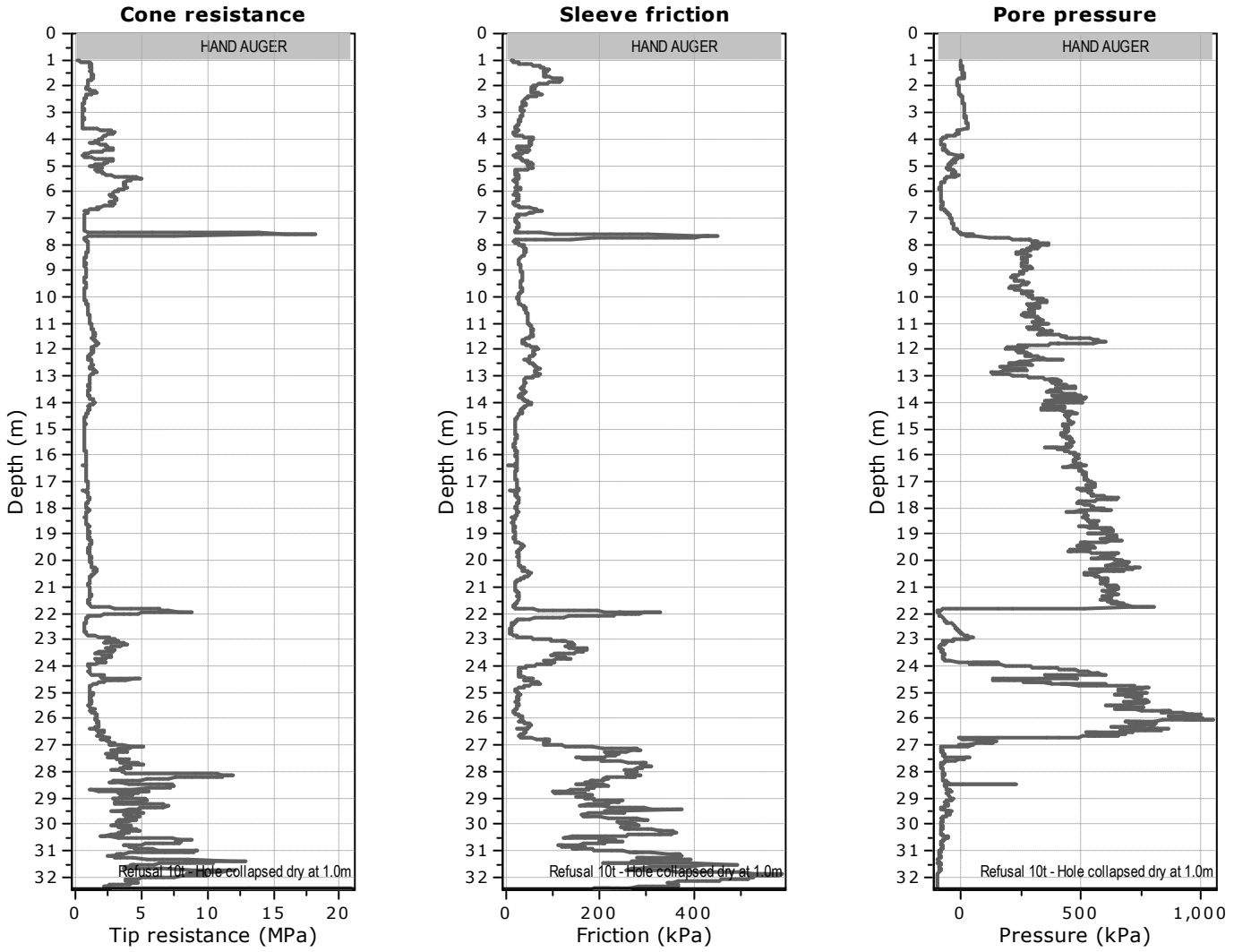


Geo Data Solutions (GDS) NZ Ltd.
Email: Josh@gdsnz.co. nz
www.gdsnz.co.nz

CPT: 02

Total depth: 32.45 m, Date: 16/08/2024
Coords: lat -35.112438° lon 173.270887°
Cone Type: DC10

Project: **RS Eng Ltd | GDS NZ Ltd**
Location: **Kaitaia Recycle Centre | Holes dipped onsite using Dipmeter**



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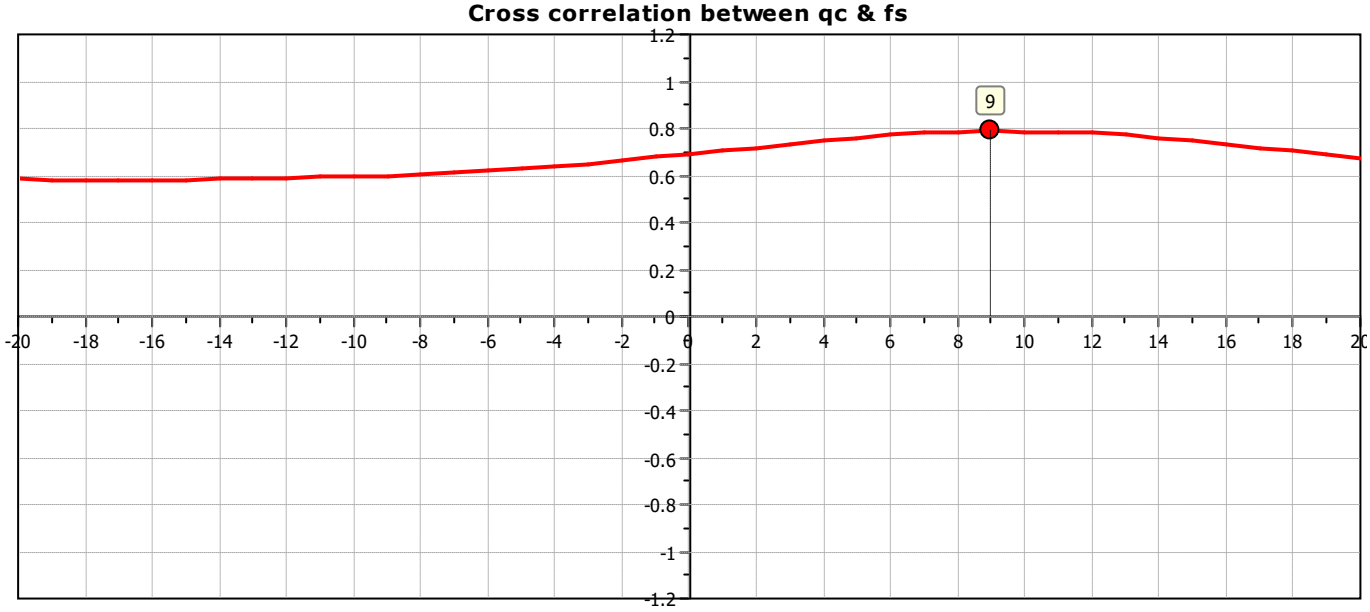
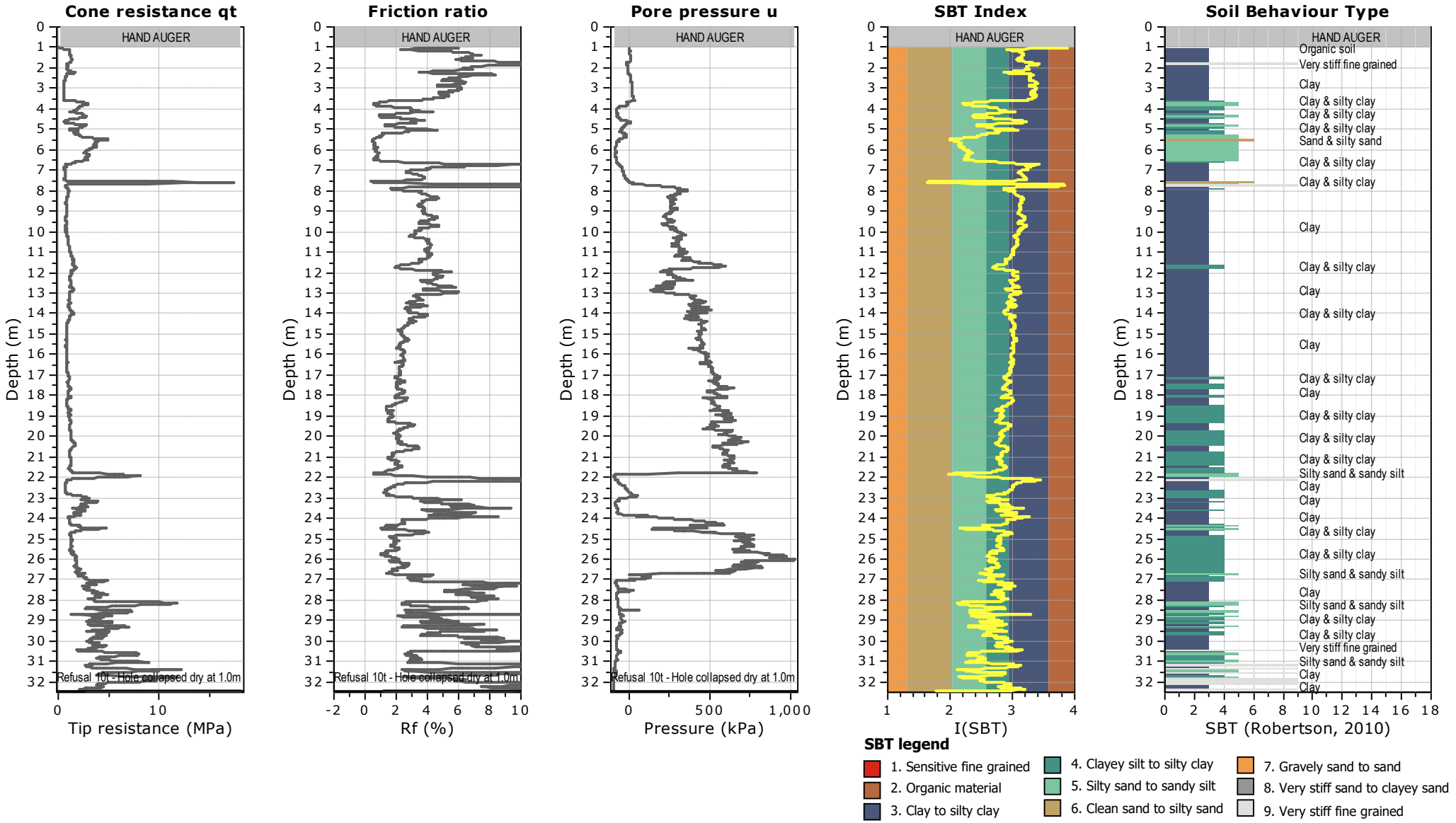


Geo Data Solutions (GDS) NZ Ltd.
Email: Josh@gdsnz.co. nz
www.gdsnz.co.nz

CPT: 02
Total depth: 32.45 m, Date: 16/08/2024
Coords: lat -35.112438° lon 173.270887°
Cone Type: DC10

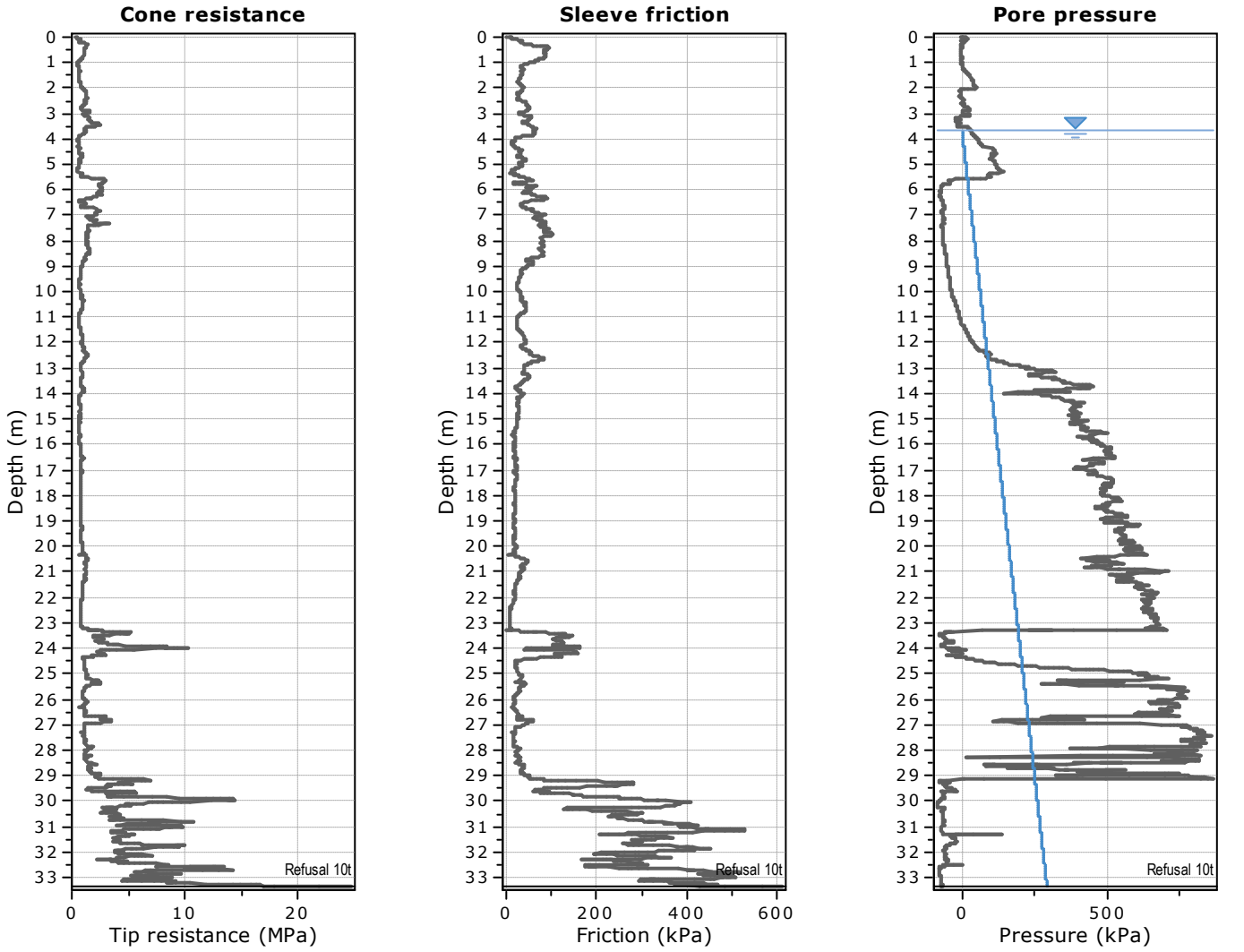
Project: **RS Eng Ltd | GDS NZ Ltd**
Location: **Kaitaia Recycle Centre | Holes dipped onsite using Dipmeter**



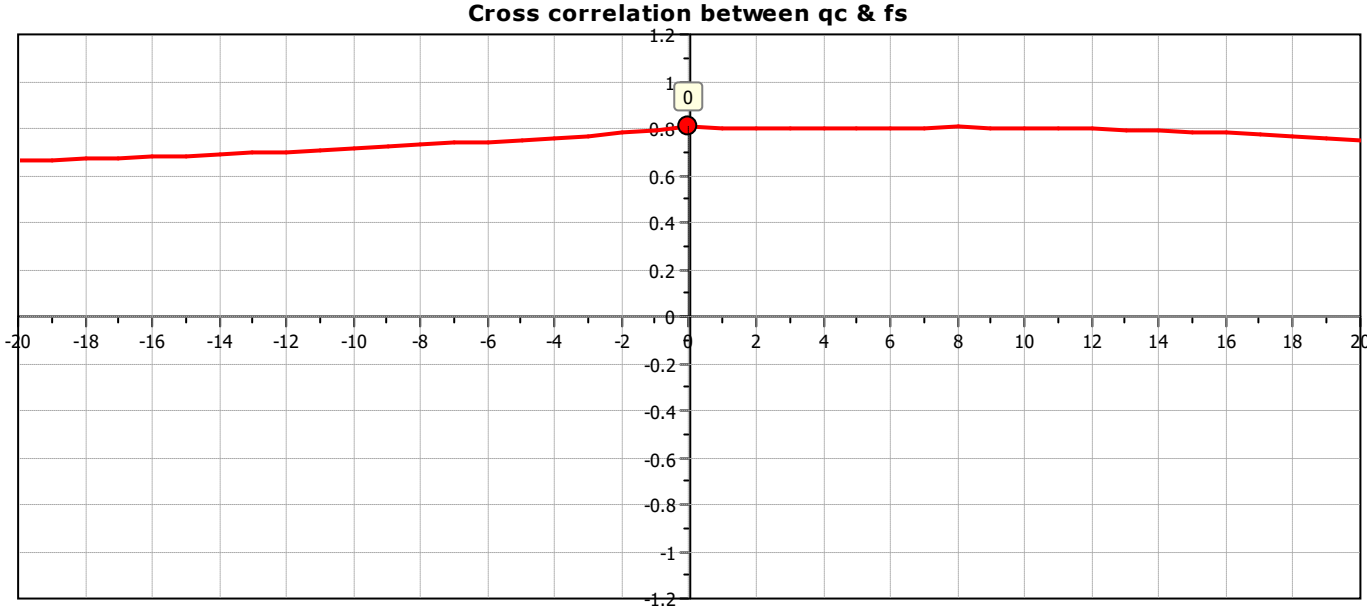
Geo Data Solutions (GDS) NZ Ltd.
Email: Josh@gdsnz.co. nz
www.gdsnz.co.nz

CPT: 03
Total depth: 33.35 m, Date: 16/08/2024
Coords: lat -35.11257° lon 173.270785°
Cone Type: DC10

Project: **RS Eng Ltd | GDS NZ Ltd**
Location: **Kaitaia Recycle Centre | Holes dipped onsite using Dipmeter**



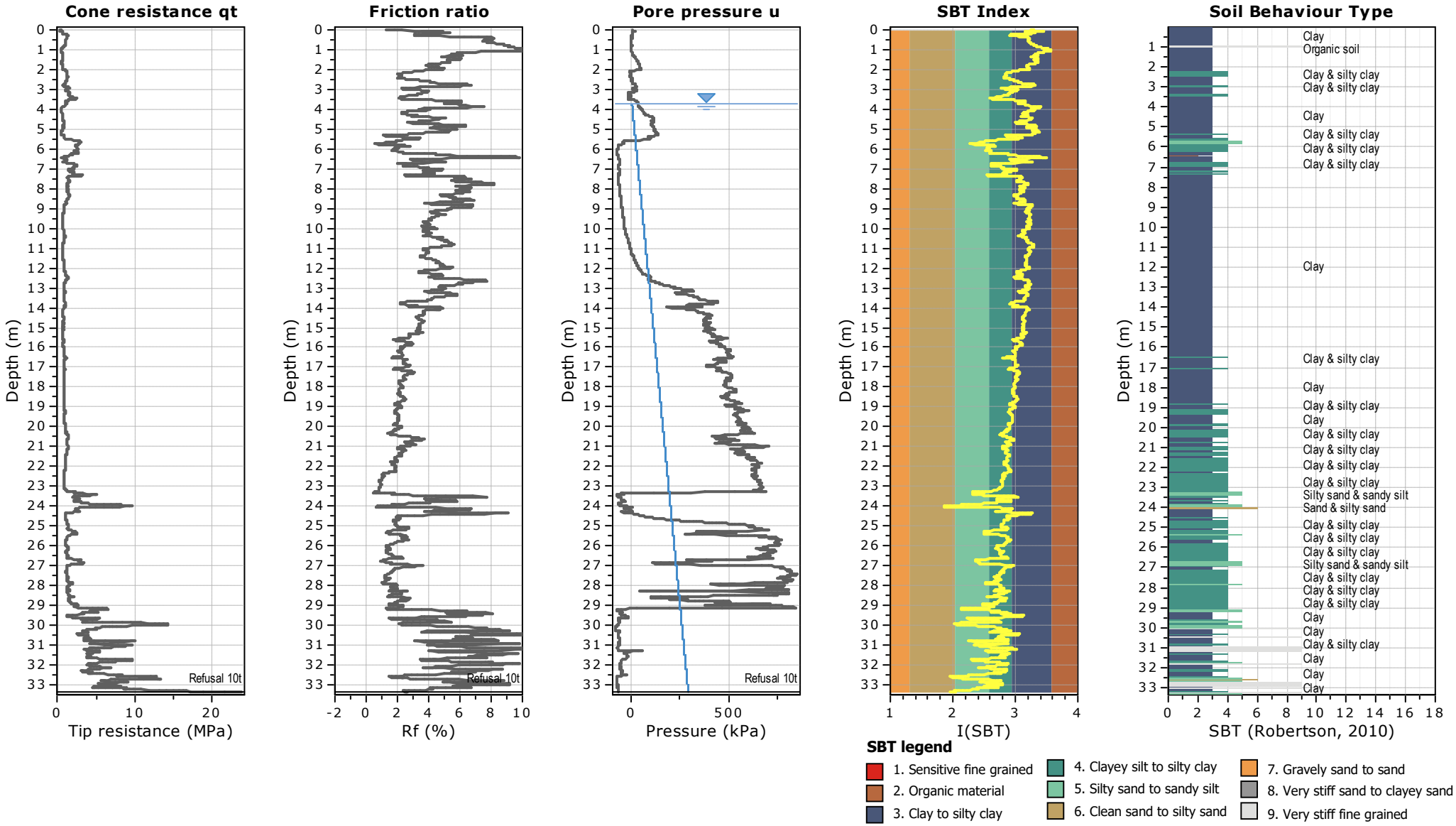
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



Geo Data Solutions (GDS) NZ Ltd.
Email: Josh@gdsnz.co. nz
www.gdsnz.co.nz

CPT: 03
Total depth: 33.35 m, Date: 16/08/2024
Coords: lat -35.11257° lon 173.270785°
Cone Type: DC10

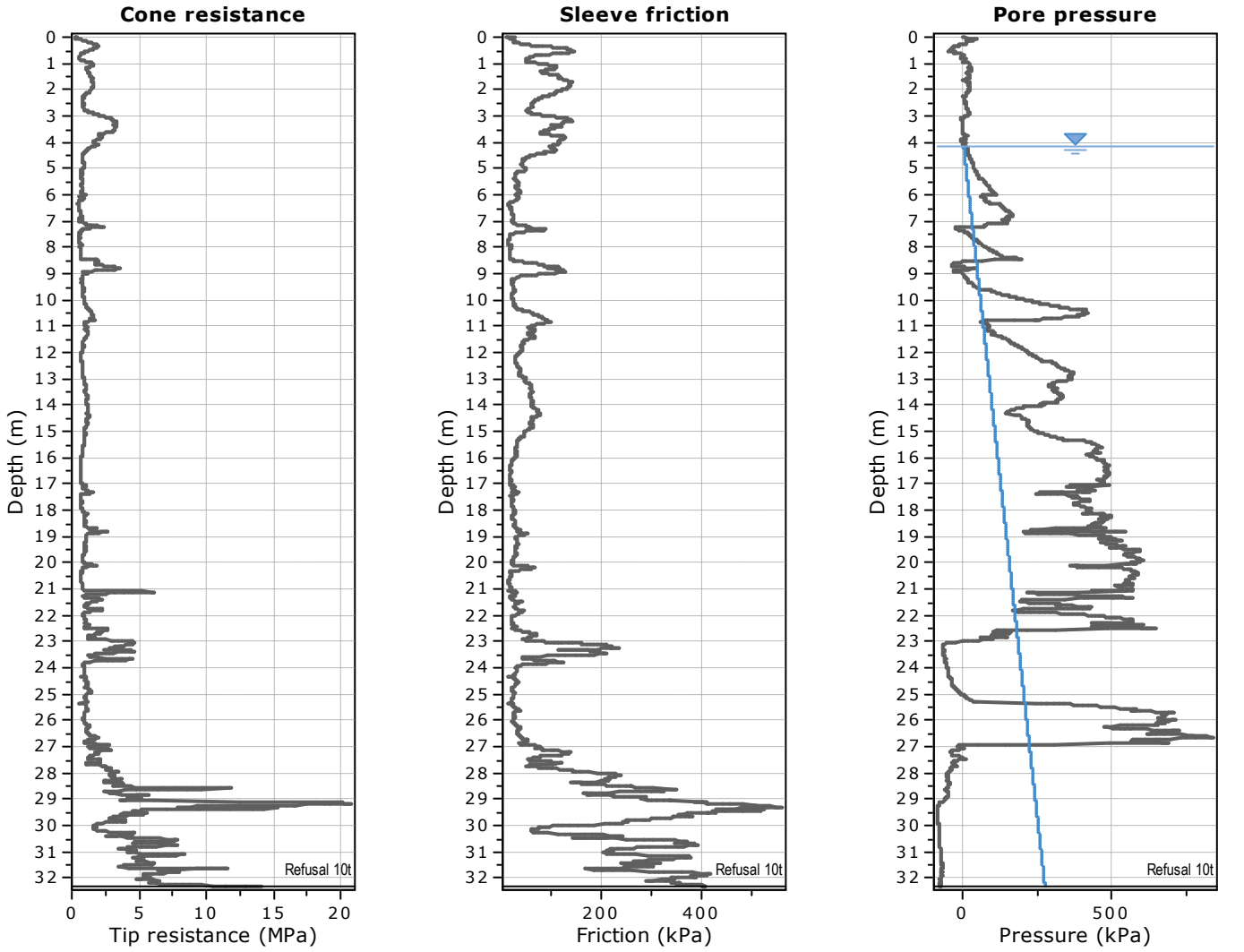
Project: **RS Eng Ltd | GDS NZ Ltd**
Location: **Kaitaia Recycle Centre | Holes dipped onsite using Dipmeter**



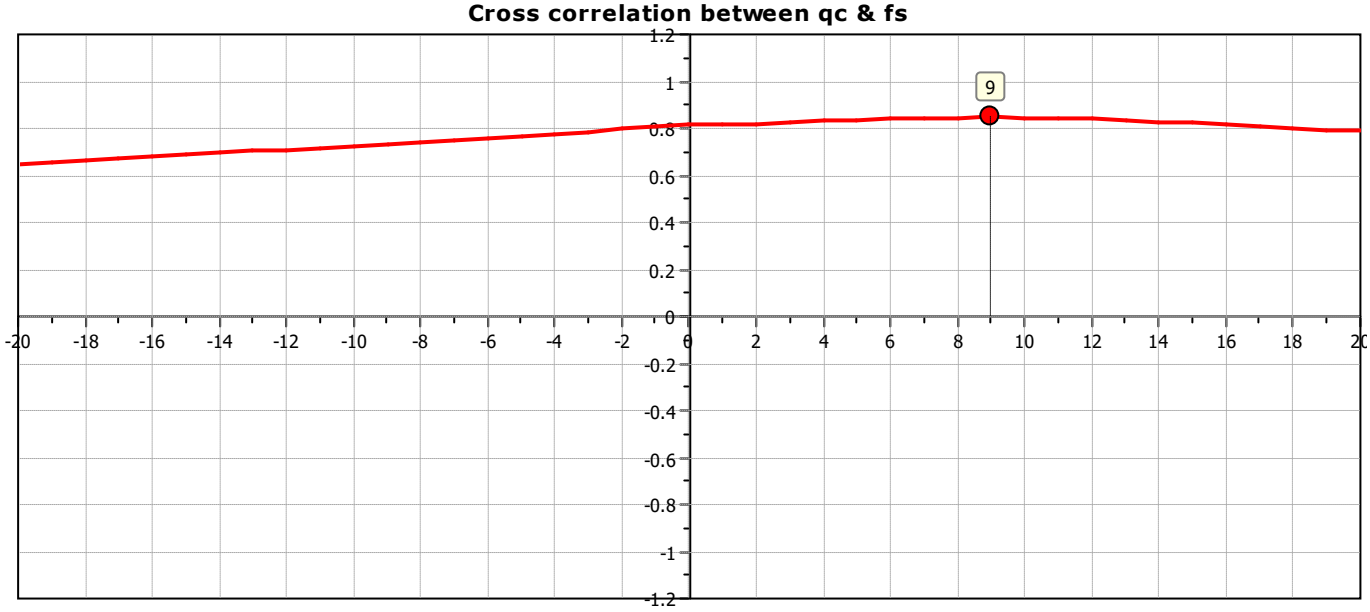
Geo Data Solutions (GDS) NZ Ltd.
Email: Josh@gdsnz.co. nz
www.gdsnz.co.nz

CPT: 04
Total depth: 32.31 m, Date: 16/08/2024
Coords: lat -35.112595° lon 173.270702°
Cone Type: DC10

Project: **RS Eng Ltd | GDS NZ Ltd**
Location: **Kaitaia Recycle Centre | Holes dipped onsite using Dipmeter**



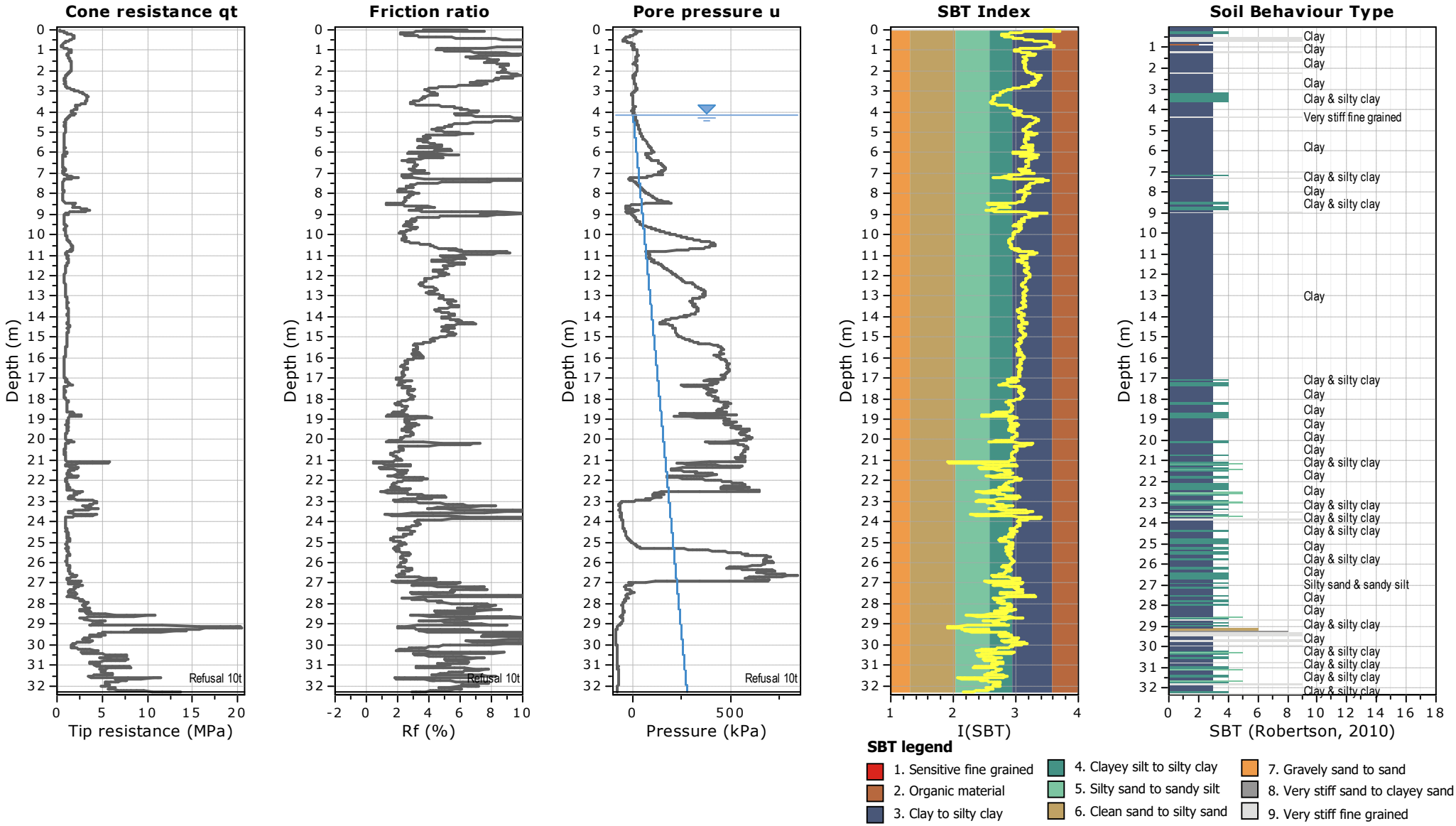
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



Geo Data Solutions (GDS) NZ Ltd.
Email: Josh@gdsnz.co. nz
www.gdsnz.co.nz

CPT: 04
Total depth: 32.31 m, Date: 16/08/2024
Coords: lat -35.112595° lon 173.270702°
Cone Type: DC10

Project: **RS Eng Ltd | GDS NZ Ltd**
Location: **Kaitaia Recycle Centre | Holes dipped onsite using Dipmeter**



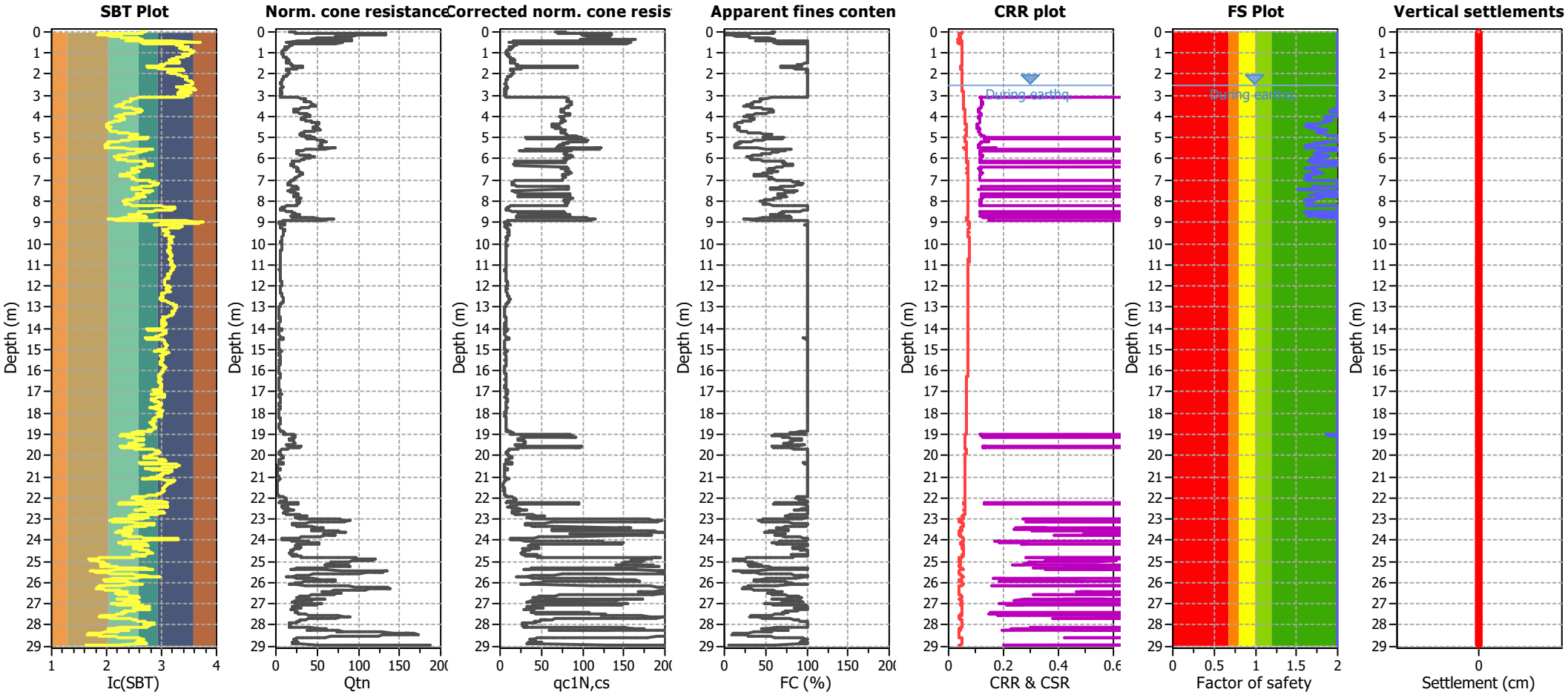
Appendix C

ULS Liquefaction Analysis

RS Eng Ltd
Geotechnical, Civil, Structural and Seismic Engineering
2 Seaview Road, Whangārei
https://www.rseng.co.nz/

Project: Kaitaia Recycling Centre
Location: Church Road, Kaitaia

CPT: CPT01
Total depth: 28.95 m

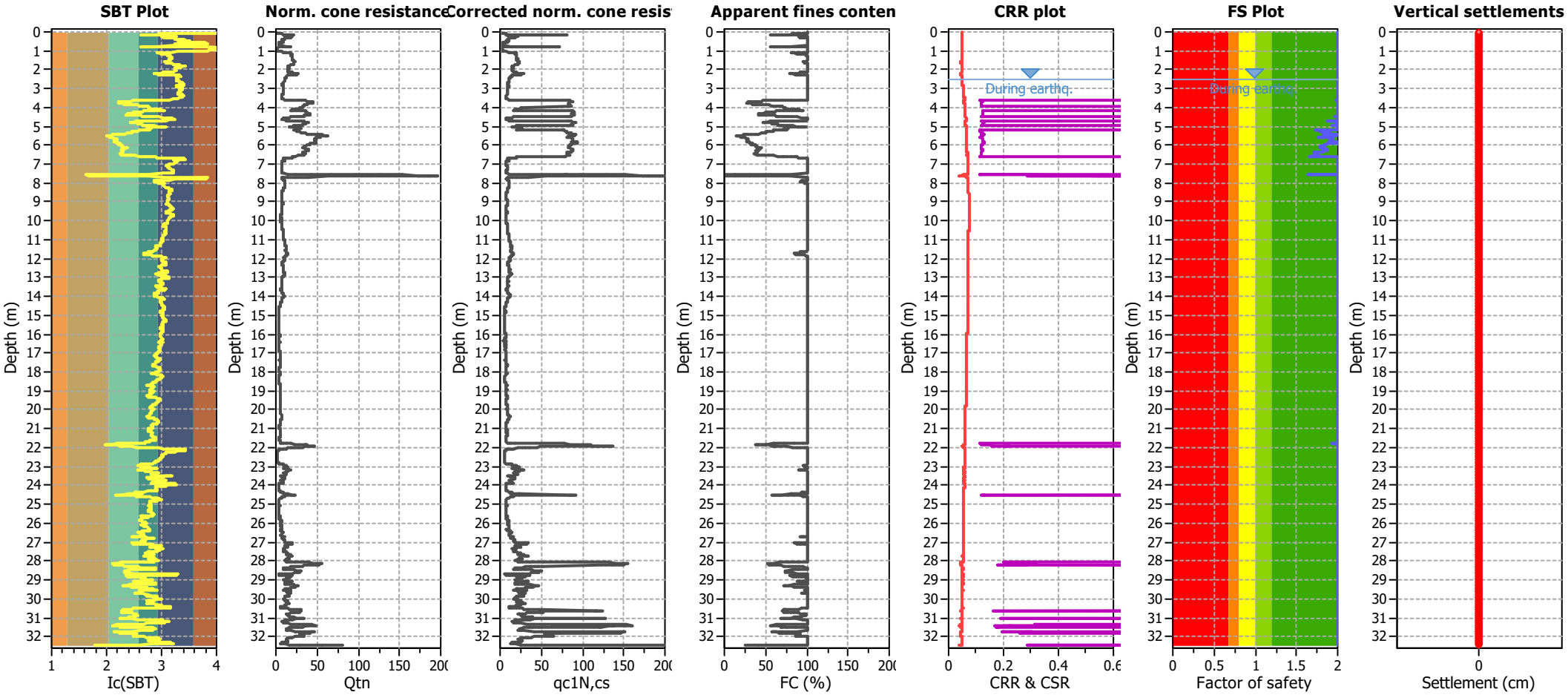


Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.50 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	2.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	5.75	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.09	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

RS Eng Ltd
Geotechnical, Civil, Structural and Seismic Engineering
2 Seaview Road, Whangārei
https://www.rseng.co.nz/

Project: Kaitaia Recycling Centre
Location: Church Road, Kaitaia

CPT: CPT02
Total depth: 32.45 m

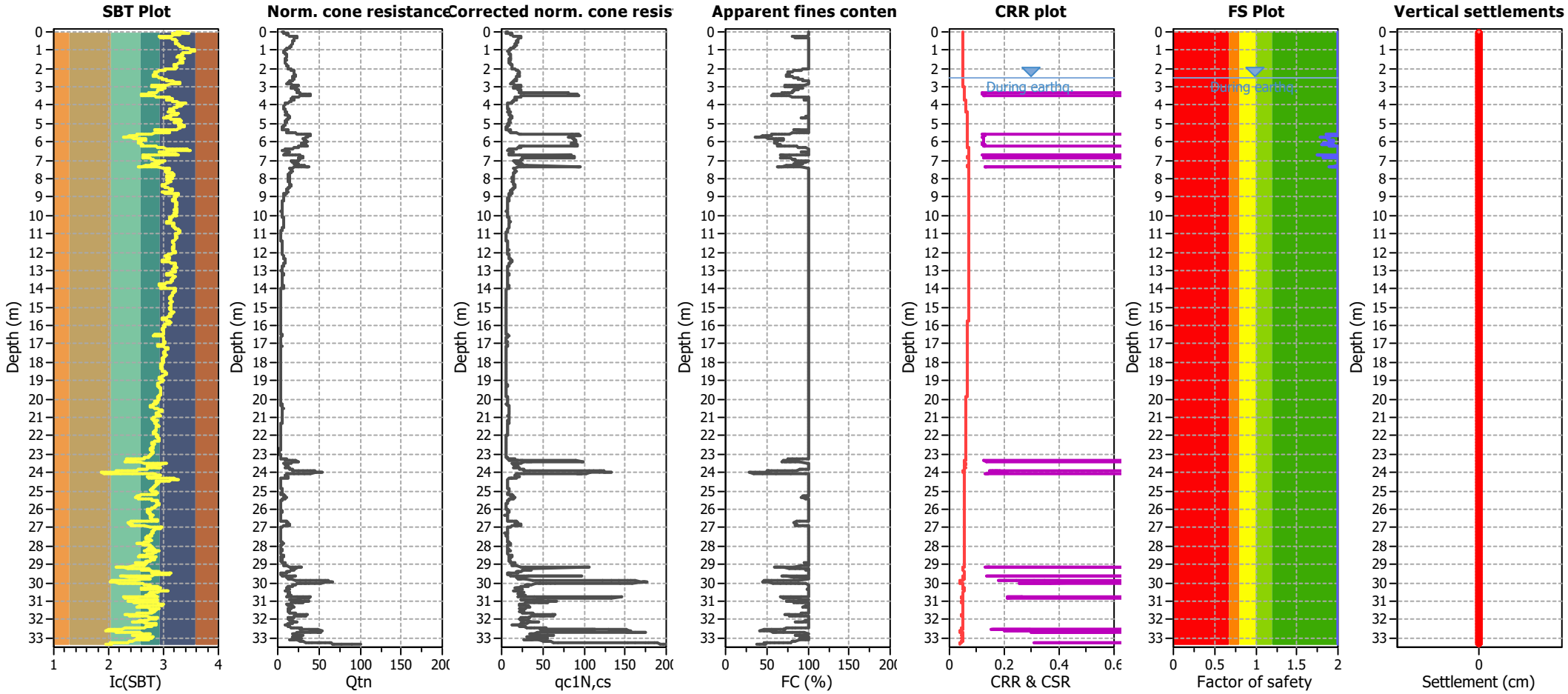


Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.50 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	2.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	5.75	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.09	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

RS Eng Ltd
Geotechnical, Civil, Structural and Seismic Engineering
2 Seaview Road, Whangārei
https://www.rseng.co.nz/

Project: Kaitaia Recycling Centre
Location: Church Road, Kaitaia

CPT: CPT03
Total depth: 33.35 m

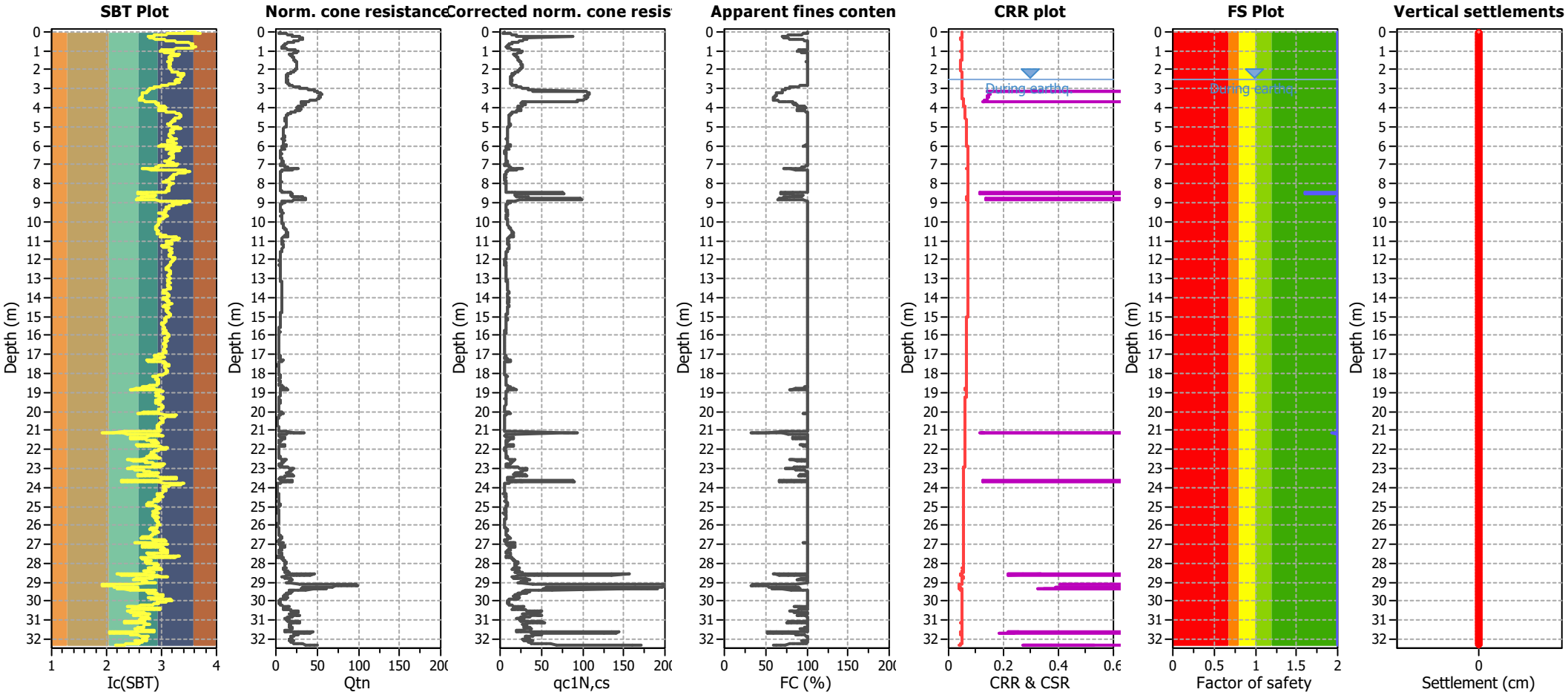


Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.50 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	2.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	5.75	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.09	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

RS Eng Ltd
Geotechnical, Civil, Structural and Seismic Engineering
2 Seaview Road, Whangārei
https://www.rseng.co.nz/

Project: Kaitaia Recycling Centre
Location: Church Road, Kaitaia

CPT: CPT04
Total depth: 32.31 m



Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.50 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	2.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	5.75	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.09	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

DESIGN FEATURES REPORT

PROPOSED BRIDGE

Church Road, Kaitaia

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

DESIGN FEATURES REPORT
PROPOSED BRIDGE
Church Road, Kaitaia

Report prepared for: Far North District Council

Report prepared by: Matthew Jacobson

Report reference: 18781

Date: 28 March 2025

Revision No.	Details	Date
1	Building Consent	28 March 2025

Contents

File: 18953
28 March 2025

DESIGN FEATURES REPORT
PROPOSED BRIDGE
Church Road, Kaitaia

1.0 GENERAL

1.1 Objective

The purpose of this report is to outline the design philosophy of the proposed bridge shown on the RS Eng drawings date 28 March 2025, attached. The bridge is located on private property accessed from Church Road.

This report outlines the structure's design criteria and records key recommendations for the design. It outlines the structural design philosophy and foundation requirements due to site constraints, with reference to the New Zealand Building Code.

1.2 Scope

The scope of work for this project is to provide structural design for the proposed vehicle bridge.

1.3 Means of Compliance

The design of the bridge is in compliance with the Bridge Manual, Third edition, and New Zealand Building Code (NZBC) and standards shown below. Specifically in relation to Section B1/VM1 (Verification Method 1) and B1/VM4. Alternative solutions are not proposed to be used in this project.

The following standards have been used:

- AS/NZS 1170.0:2002 – Structural design actions: General principles
- AS/NZS 1170.1:2002 – Structural design actions: Permanent, imposed and other actions
- NZS 1170.5:2004 – Structural design actions: Earthquake actions
- AS/NZS 2312.1:2014 – Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings
- NZS 3404:1997 – Steel structures standard
- NZS 3101:2006 – Concrete structures standard

1.4 Referenced / Reviewed Documents

- RS Eng – Geotechnical Investigation Report – 7 February 2025

- RS Eng – Assessment of Effects Flooding – 30 January 2025
- RS Eng – Technical Specification – 28 March 2025

2.0 Geotechnical

The site is typically underlain by alluvium overlying inferred Northland Allochthon Mudstone. Geotechnical investigation completed by RS Eng is summarised in the referenced report. Preliminary foundation design parameters for the mudstone were recommended as follows:

- Ultimate End Bearing Capacity – 3MPa.
- Ultimate Shaft Adhesion – 100kPa.

The foundations are proposed as driven universal columns.

3.0 Flooding

The site is mapped as being flood susceptible during a range of events including a 10%AEP+CC event. The proposed bridge is designed to be inundated during events of 10%AEP+CC and greater.

4.0 Structure

The vehicle bridge consists of double tees, designed by Busck, supported by concrete abutments and driven universal columns.

The Busck double tees are designed for HN-HO-72 (overload). The bridge abutments and foundations are designed for HN loading only. As a result, traffic live load/ braking load controls both vertical and lateral load for the bridge. Heavy vehicles greater than the standard 25 tonne truck are unlikely to require access to the facility.

5.0 SERVICEABILITY CRITERIA

5.1 Design Life for Durability

A structural design life of 50 years has been adopted for the vehicle bridge.

The driven universal column piles are steel and are design to allow for corrosive loss over the 50year design life, based on Table 13 of SNZ TS 3404:2018.

6.0 CONSTRUCTION MONITORING

6.1 Pre Construction

Shop drawings for construction should be supplied to RS Eng for review prior to construction. Review will enable confirmation that the design assumptions and intentions have been achieved.

6.2 RS Eng Monitoring

Construction Monitoring by a Chartered Professional Engineer or their representative should be carried out at various stages of the construction as listed in the Specification.

6.3 Producer Statements

It is the intention of RS Eng Ltd to supply a Producer Statement Construction Review (PS4) following the inspections outlined above. It should be noted that anything not inspected by this office cannot be included in a PS4.

A Producer Statement Construction (PS3) will be required from the contractor along with records of pile sets and embedment depths.

7.0 CONCLUSION

RS Eng Ltd has undertaken an investigation and prepared a design in accordance with Waka Kotahi Bridge manual and the NZ Building Code to the specification adopted by our client.

Some assumptions applied to the design are outlined in the report. Should conditions differ from those assumed, please contact the designer before proceeding.

Contact Details:
Ph – 09 438 3273
Email – office@rseng.co.nz

Prepared by:

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

RS Eng Ltd

PRODUCER STATEMENT – PS1
DESIGN

Building Code Clause(s):	B1,	Job number: 18781
ISSUED BY: *(Engineering Design Firm)*	RS Eng	
TO: *(Client)*	Far North District Council	
TO BE SUPPLIED TO: *(Building Consent Authority)*	Far North District Council	
IN RESPECT OF: *(Description of building work))*	New Bridge	
AT: *(Address)*	Church Road, Kaitaia	
LEGAL DESCRIPTION	Part Lot 332 DP 12724	

We have been engaged by Far North District Council to provide:

SED Bridge abutment and foundations.

in respect of the requirements of the Clause(s) of the Building Code specified above for part only, as specified in the attached Schedule, of the proposed building work.

In this document SED means "Specific Engineering Design".

The design carried out by RS Eng has been prepared in accordance with:

✓ compliance documents issued by the Ministry of Business, Innovation & Employment (Verification method /acceptable solution): B1/VM4 and NZTA Bridge Manual

The proposed building work covered by this producer statement is described in the drawings specified in the attached Schedule, together with the specification, and other documents set out in the attached Schedule.

On behalf of RS Eng, and subject to:

- all proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that:

- the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached Schedule, will comply with the relevant provisions of the Building Code specified above; and that
- the persons who have undertaken the design have the necessary competence to do so.

I recommend the CM3 level of construction monitoring.

I, Matthew Jacobson, am:

- CPEng number 1161533
- and hold the following qualifications: B.E. (Hons)

RS Eng holds a current policy of Professional Indemnity Insurance no less than $200,000.

✓ RS Eng is a member of ACE New Zealand.

SIGNED BY: Matthew Jacobson

(Signature):  Date: 28/03/2025

ON BEHALF OF: RS Eng

Note: This statement has been prepared solely for Far North District Council and shall not be relied upon by any other person or entity. Any liability in relation to this statement accrues to RS Eng only. As a condition of reliance on this statement, Far North District Council accepts that the total maximum amount of liability of any kind arising from this statement and all other statements provided to Far North District Council in relation to this building work, whether in tort or otherwise, is limited to the sum of $200,000.

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

SCHEDULE TO PS1

Please include an itemised list of all referenced documents, drawings, or other supporting materials in relation to this producer statement below:

- B2 Letter in Lieu - Design
- Engineering Drawing Set: RS Eng - Civil and Structural Drawings - 28/03/2025
- Engineering Calculations: RS Eng - Design Features Report - 28/03/2025
- Geotechnical Report: RS Eng - Geotechnical Investigation Report - 7/02/2025

Limited Scope of Engagement

We have been engaged by Far North District Council to provide services in respect of the requirements of the Clause(s) of the Building Code specified above for the following parts of the proposed building work:

SED Bridge abutment and foundations.

GUIDANCE ON USE OF PRODUCER STATEMENTS

Information on the use of Producer Statements and Construction Monitoring Guidelines can be found on either the **ACE New Zealand** or **Engineering New Zealand** websites.

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects (NZIA), Institution of Professional Engineers New Zealand (now Engineering New Zealand), Association of Consulting and Engineering New Zealand (ACE NZ) in consultation with the Building Officials Institute of New Zealand (BOINZ). The original suite of producer statements has been revised at the date of this form to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with part of the reasonable grounds necessary for the issue of a Building Consent or a Code Compliance Certificate, without necessarily having to duplicate review of design or construction monitoring undertaken by others.

PS1 DESIGN: Intended for use by a suitably qualified independent engineering design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;
PS2 DESIGN REVIEW: Intended for use by a suitably qualified independent engineering design review professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;
PS3 CONSTRUCTION: Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 20112
PS4 CONSTRUCTION REVIEW: Intended for use by a suitably qualified independent engineering construction monitoring professional who either undertakes or supervises construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.
This must be accompanied by a statement of completion of building work (Schedule 6).
The following guidelines are provided by ACE New Zealand and Engineering New Zealand to interpret the Producer Statement.

Competence of Engineering Professional

This statement is made by an engineering firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its personnel.
The person signing the Producer Statement on behalf of the engineering firm will have a professional qualification and proven current competence through registration on a national competence-based register such as a Chartered Professional Engineer (CPEng).
Membership of a professional body, such as Engineering New Zealand provides additional assurance of the designer's standing within the profession. If the engineering firm is a member of ACE New Zealand, this provides additional assurance about the standing of the firm.
Persons or firms meeting these criteria satisfy the term "suitably qualified independent engineering professional".

Professional Indemnity Insurance

As part of membership requirements, ACE New Zealand requires all member firms to hold Professional Indemnity Insurance to a minimum level.
The PI Insurance minimum stated on the front of this form reflects standard practice for the relationship between the BCA and the engineering firm.

Professional Services during Construction Phase

There are several levels of service that an engineering firm may provide during the construction phase of a project (CM1-CM5 for engineers3).
The BCA is encouraged to require that the service to be provided by the engineering firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4

BCAs should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued. No design professional should be expected to provide a producer statement unless such a requirement forms part of RS Eng's engagement.

Refer Also:

1 Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2013
2 NZIA Standard Conditions of Contract SCC 2011
3 Guideline on the Briefing & Engagement for Consulting Engineering Services (ACE New Zealand/Engineering New Zealand 2004)
4 PN01 Guidelines on Producer Statements

www.acenz.org.nz
www.engineeringnz.org

LETTER IN LIEU – DESIGN

To the Building Official,
Far North District Council
New Bridge at Church Road, Kaitaia

COMPLIANCE WITH BUILDING CODE CLAUSE B2 – DURABILITY

The purpose of this letter is to demonstrate how compliance with Clause B2 (Durability) of the Building Code will be achieved for the above project. We can confirm that for specifically designed structural elements that are included within our design documentation:

Material	Means of Compliance	Details
Reinforced concrete	B2/AS1	Concrete cover to reinforcing has been selected in accordance with NZS3101, Part 1, Section 3
Structural timber	B2/AS1	Timber treatment has been selected in accordance with Table 1A of B2/AS1

Yours faithfully,

Matthew Jacobson

For and on behalf of

RS Eng

RS Eng

PROJECT Katoa Bridge.

CLIENT FNDC

Page No.
File No.
Calculated by
Checked by
Date

Proposed Bridge.

Beck Double Tees

Width - Total 7050mm

Length - 12m

Designed to NZTA BM for Full HN Loading

As per Table 2.1 - 2.2 - IL 1 Bridge

ULS + DULS - 1/250yr.

SLS1 + SLS2 - 1/25yr.

System

Bridge abutments + Foundation - to resolve bridge loads.

Retaining walls to resolve earth pressures.

Loads.

Loads to consider

- Gravity
- Seismic
- Braking
- Flood.

RS Eng

PROJECT

CLIENT

Page No.
File No.
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Checked by
Date

Flood.

Loads based on AS5100.2 as per NZTA Bm.

Velocities based on HecRas Model for 1:100yr event. NZTA requires 1:2500yr event. Velocities considered similar due to backwater likely.

HecRas Model peak V ≤ 1.1m/s.

Adopt 1.5m/s - conservative. - fully submerged.

Drag.

$F_d = 0.5 C_d V^2 A_s$

From Fig 16.5.2(A) $S_r = 1$, $P_c = 4.4/0.75 = 5.8 \Rightarrow C_d = 1.3$

$= 0.5 \times 1.3 \times 1.5^2 \times 12 \times 0.9 = 16 KN$.

Lift

$F_L = 0.5 C_L V^2 A_L \quad C_L = -2.0$

$= 0.5 \times -2 \times 1.5^2 \times 12 \times 7.05 = 190 KN$.

Braking

As Cl 3.3.1 NZTA Bm. - take 70% HN on lane.

$= 240 \times 0.7 = 168 KN$.

RS Eng

PROJECT

CLIENT

Page No.
File No.
Calculated by
Checked by
Date

Seismic

To NZTA BM.

$PGA = C_{z(1,0)} \times R_u / 1.3 \times S \times g$.

From NZS 1170.5 R_u = 1:250 = 0.75
1:25 = 0.25

For site subsoil class D and E $S = 1.0$

$C_{z(1.0)} = 015$
$M_{eD} = 5.8$ } NZTA BM Com Table C6.1

=> PGA = 1/250 = 0.09g
1/25 = 0.05g

For structural check table conservative approach.

$C_d(T) = 0.25g$

EQ = 533 x 0.25 = 133kN

RS Eng

PROJECT

CLIENT

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Checked by
Date

Gravity

Double Tee (each unit) = 2.35 × 0.15 + 2 × 0.76 × 0.2 = 0.59

0.59 × 25 = 14.8 kN/m

Total = 14.8 × 3 × 12 = 533 kN

Live Load I = 1.3

Axle 120 kN × 1.3 = 156 kN

UDL = 3.5 × 1.3 = 4.55 × 3 × 2 × 12 = 328 kN.

Load Combinations - Table 3.3

Vertical.

1A (normal vehicle) = DL × 1.35 + LL × 2.25

2C (Primary theoretic Traffic) = DL × 1.35 + LL × 1.35 + 1.3 × FW

Horizontal

EA (Seismic) = EQ

1A (Normal) = 2.25 × Breaking

2C (primary flow) = 1.3 × FW

Vertical - Max wheel axle on abutment.

1A = 533/2 × 1.35 + [328/2 + 2(156 + 0.55 × 156)] × 2.25

= 360 + 369 + 1109

= 1838 kN

2C = 533/2 × 1.35 + [328/2 + 2(156 + 0.55 × 156)] × 1.35 + Trans × 1.3

= 1494 kN

RS Eng

PROJECT

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Horizontal.

5A = 5.23 x 0.25 = 1.33 KN - Critical in cross Direction

1A = 2.25 x 1.68 = 3.78 KN. Critical in traffic Direction

2C = 1.3 x 1.6 = 2.1 KN.

RS Eng

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Piles - Vertical.

Adopt 4 x Piles per abutment.

Load per pile = 1840/4 = 460kN.

Try 250UC72-9 Driven to 35m.

A_b = 9320mm²

f_c = 50MPa

$V_b = 9.32 \times 3 = 28kN$.

$V_s = 15 \times 1.5 \times 5.5 + 460 \times 15.5 \times 0.5$
$= 123.75 + 9500$
$= 1023.75$

$\phi V = 0.45 \times 23 \times 1023.75$
$= 473kN$.

∥ Adopt 250x72.9 - Driven to 35m ∥

Horizontal - Braking

$K_p = 3.0$ ($\beta = 30°$)

$P_p = 1.75^2 \times 0.5 \times 3 \times 18 \times 7.05 = 523kN$

$\phi P_p = 291.5kN$

$\Rightarrow 378 - 291.5 = 86.5kN$ into piles.

Lateral pile capacity - say 2m deep.

$= 40 MPa \times 9 \times 0.25 \times 4 \times 0.5 \times 2m$
$= 360kN$. ∴ O.K.

Horizontal - EQ

Say piles cantilever 3m. $\Rightarrow M^* = 3m \times 133/3 = 49kN$.

$\phi M_{pile} = 515 \times 320 \times 0.85 = 627kN$.

Adequate capacity, even with corroded section

Horizontal - Rod - Not critical.

RS Eng

PROJECT

CLIENT

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Abutment.

Double Tees Beam directly on piers.

$V_{spring} = 0.0025 \times 1765 \times 2.0 = 350 kN$

$V_{sup} = 113 \times 6 = 678 kN$ ⇒ OK.

$V_{shrink} = 0.0015 \times 1765 \times 10.0 = 264 kN$

$V_{shr} = 23 \times 113 = 2600 kN$ ⇒ OK.

max space = 1785 = 5 × 353 kN.

All reo zone d/c or less ⇒ O/K.

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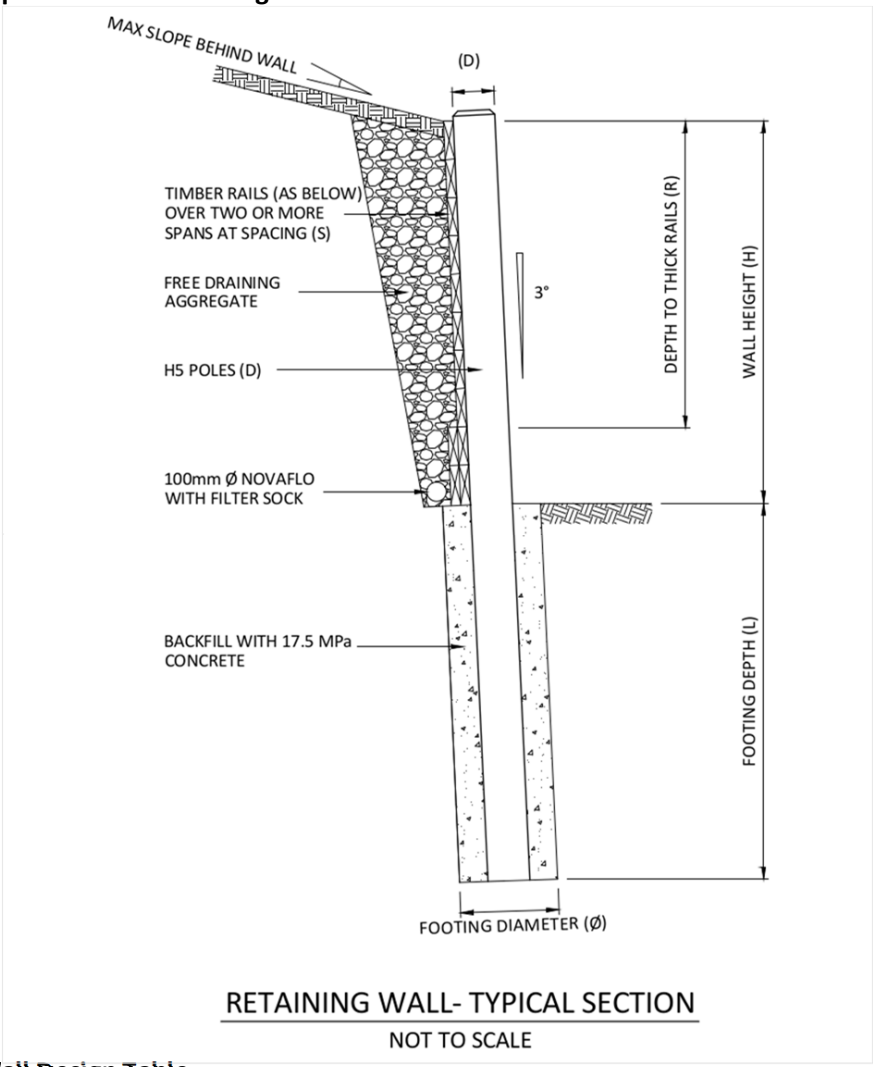
		Job No.	[ENTER]
		Calculated by:	[ENTER]
CLIENT	[ENTER]	Checked by:	[ENTER]
		Date	[ENTER]

Design of Typical Timber Retaining Wall for Cohesive Soils



RETAINING WALL- TYPICAL SECTION

NOT TO SCALE

Retaining Wall Design Table

Max Wall Height	Pole Size	Min Footing Depth	Footing Diameter	Depth to Thick Rails	Pole Spacing	Rail Size	Max Slope Behind Wall
(H)	**(D)**	**(L)**	**(Ø)**	**(R)**	**(S)**		
3.0m	400SED HD	9.0m	0.40m	0.5m	1.0m	200x50 RS	0°

Notes:

Safety from falling barrier required for walls over 1.0m high where access unrestricted

PROJECT Kaitaia Recycling

CLIENT FNDC

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Date

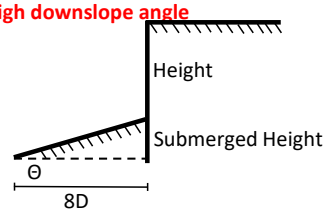
Design of Typical Timber Retaining Wall for Cohesive Soils

1.0 Site Parameters

Location		Northland
Subsoil Class		Class C
Performance Requirement Case	Case	6
Importance Level	IL	2
		ULS

Design Wall Parameters **Consider modelling in Wallap due to high downslope angle**

Height	H	3	m
Downslope Angle	Θ	0	deg
Allowance for Creep	creep	0.0	m
Submerged height	h	0.0	m
Retained Height	H_W	3.0	m
Ground Slope Behind Wall	i	0	deg
Rake on Wall	β	0	deg
Pole Spacing	S	1.0	m
Wall Friction Angle	δ	0	deg



Design Retained Soil Parameters

Soil Density	γ	18	kN/m³
Effective Stress Angle	ϕ	25	deg

Design Foundation Soil Parameters

Undrained Soil Strength	Su	30	kPa
Strength Reduction Factor for Soils	Φ	0.5	

Design Wall Surcharge

Permanent Surcharge	S_G	22.5	kPa
Variable Surcharge	S_Q	12.5	kPa
Construction Surcharge	S_{CON}	0.0	kPa

Seismic Parameters

Topographic Amplification Factor	A_{topo}	1.0	
Return Period	R	1.0	
Wall Displacement Factor	W_d	0.3	
Peak horizontal ground acceleration	a_{max}	0.15	g
Design horizontal acceleration	k_h	0.0	g
	θ	3	deg

Table 5.1, Module 6

$$a_{max} = C_{0,1000}\frac{R}{1.3}fg$$

$$k_h = a_{max}A_{topo}W_d$$

$$\theta = \tan^{-1} k_h$$

2.0 Pressure Coefficients

Ka	0.41
Ko	0.58
Kp	2.463912811
Kae	0.43
Kpe	0.43
Coefficient Chosen:	**Ka**

$$K_A = \frac{cos^2(\emptyset+\beta)}{\cos(\delta-\beta)cos^2(-\beta)[1+\sqrt{\frac{\sin(\emptyset+\delta)\sin(\emptyset-i)}{\cos(\delta-\beta)\cos(-i-\beta)}}]^2}$$

$$K_{AE} = \frac{cos^2(\emptyset-\theta-\beta)}{cos\theta cos^2\beta\cos(\delta+\beta+\theta)[1+\sqrt{\frac{\sin(\emptyset+\delta)\sin(\emptyset-\theta-i)}{\cos(\delta+\beta+\theta)\cos(i-\beta)}}]^2}$$

$$K_{PE} = \frac{cos^2(\emptyset-\theta+\beta)}{cos\theta cos^2\beta\cos(\delta-\beta+\theta)[1+\sqrt{\frac{\sin(\emptyset+\delta)\sin(\emptyset-\theta+i)}{\cos(\delta-\beta+\theta)\cos(i-\beta)}}]^2}$$

PROJECT Kaitaia Recycling

CLIENT FNDC

Page No. 3
Job No. 18781
Calculated by: MJ
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Date

Design of Typical Timber Retaining Wall for Cohesive Soils

3.0 Loading:

		Characteristic	Static	Earthquake	Construction
Soil Pressure	Fe	32.9	49.3	35.2	32.9
Permanent Surcharge	G	27.4	32.9	29.4	27.4
Variable Surcharge	Q	15.2	6.1	4.9	0.0
	Sum (kN)	75.5	88.3	69.5	60.3
	Average LF	1	1.3	1.0	1

$$P_{soil} = \frac{1}{2} LFK_{chosen}\gamma {H_w}^2 S$$

$$P_{sur} = LFK_{chosen} S_s H_w S$$

4.0 Bending Moments:

		Moment (kNm)	M/K1
Characteristic	M_C	96.8	161.3
Static	M_S	107.8	179.6
Earthquake	M_{EQ}	86.6	86.6
Construction	M_{CON}	74.0	74.0

$$M = P_{soil}\frac{H_w}{3} + P_{sur}\frac{H_w}{2}$$

Design Bending Moment (Pole)	M*	107.8	kNm	Critical Moment	Static
Design Bending Moment (Footing)	M*	107.8	kNm	Critical Moment	Static

Pole Data:

Strength Reduction Factor	Ø	0.8	
Load Duration Factor	K_1	0.6	
Shaving Factor	K_{20}	0.85	
Steaming Factor	K_{21}	0.85	
Strength in Bending	f_b	52	MPa

$$Z_{req} = \frac{M}{\emptyset K_1 K_{20} K_{21} f_b}$$

$$SED_{req} = D_{req} - 6_E{}^{-3} H_w \qquad D_{req} = \sqrt[3]{\frac{32 Z_{req}}{\pi}}$$

SED HD size required=		375	mm

Type of Log Chosen:	**SED HD**
Pole Size Chosen:	**400SED HD**

5.0 Choose Footing Depth

Footing Diameter	D	0.4	m
Spacing Factor	S_{fact}	0.63	
Total Force on Wall	P	88.3	kN
Height of Total Force on Wall	H	1.22	m
Depth to Effective Soil	F_0	0.60	m
Required Depth of Footing	L	8.94	m

$$H_{cap} = \Phi 9 S_u B \sqrt{\begin{matrix}(L+2H+F_0)^2 \\ +(L-F_0)^2 \\ -(L+2H+F_{0)}\end{matrix}}$$

F_0 Manual Entry (m)	
Footing Depth Chosen (m)	**9.00**

6.0 Check Rails

Choose Rail Size:	200x50 RS
Choose Timber Grade:	No. 1 Framing

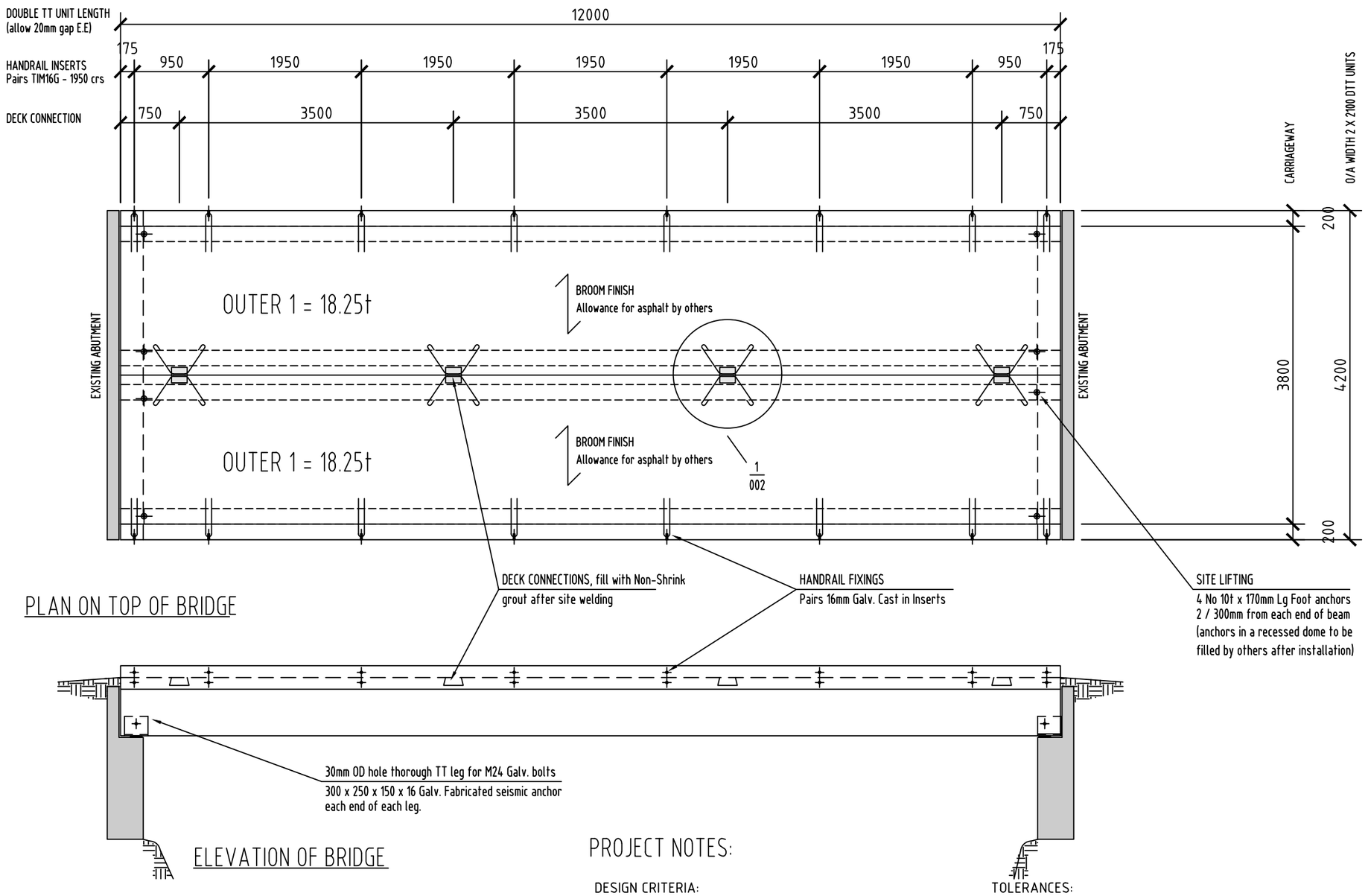
Ensure rails are continuous over more than one span.

Strength of Single Rail	ϕM_n	0.30	kNm
Maximum unrestrained depth for single	depth	0.53	m

$$\Phi M_n = \frac{\Phi k_1 f_b d b^2}{6}$$

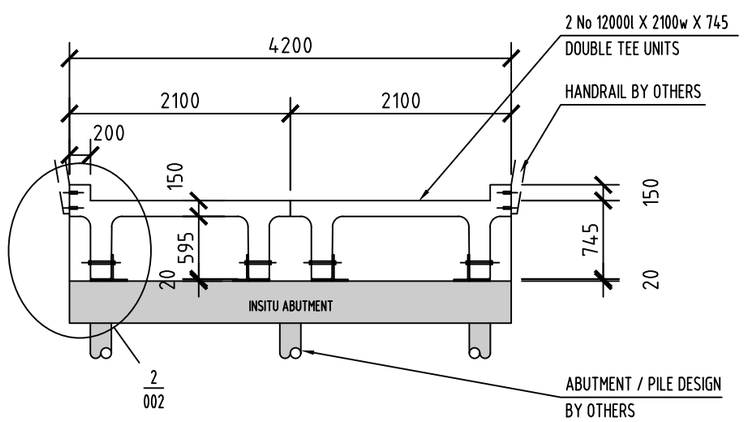
$$depth = \frac{\Phi M_n 10}{LFK_{chosen}(\gamma + S_S) d S^2}$$

Accept a 400SED HD pole in a 0.4m diameter hole 9.0m deep for a maximum retained height of 3.m. Below a depth of .53m use 200x75 rails or double thickness of 200x50 well spiked together.



PLAN ON TOP OF BRIDGE

ELEVATION OF BRIDGE



PROJECT NOTES:

DESIGN CRITERIA:
- DOUBLE TEE bridge beams and Connections by Busck only - abutments, central piers, piles linkage bars etc by Other Consulting Engineers
- NZTA Bridge Manual SP/M/022 (third edition) Appendix D
- NZS3101 2006
- Loading = Hn Ho 72
- 50 year life
- Exposure classification = B1/B2
- Light Handrail only - Outer beams have not been designed for any Guard Rails
- We have allowed 1.75kPa SDL (Services) Plus 60mm ave thickness for asphalt

CONCRETE STRENGTH:
- 50mPa fc 28 days
- 28mPa at transfer

CONCRETE COVER:
- Prestressing strand 30mm
- Reinforcing Steel 30mm

STRAND:
- 14No Total - 12.9mm dia S.S with Intial prestress force of 72% of 184kN.

TOLERANCES:
- Generally as per NZS 3109:1997 table 5.1 unless stated other wise
- Length +/- 25mm
- Maximum Hog 40mm
- Prestressing strand (any direction) +/-5mm
- Insert Positions (any direction) +/-3mm
- Surface Finish +/-10mm

SURFACE FINISHES:
- No allowance for any topping or asphalts
- Top surface Broom Finish
- Sides and undersides F5
- Connection recesses 5mm amplitude

SEATING:
- Each leg at 150mm from each end seat on abutment on a 200 x 150 x 20mm Rubber pad.

HANDLING:
- Units to be stacked with suitable dunage directly under lifting eyes at all times.
- only use lifting eyes to lift the units, refer PCNZ lifting and handling code

1 / The Precaster has allowed for lifting devices for factory use. The Builder is responsible for coordination with the persons engaged to handle the precast unit after arrival at site.

2 / Lifting, bracing and fixing of precast elements must only be undertaken by competent persons who must ensure no lifting or fastening device, including cast in items and attachments, is overloaded and load sharing devices are used where necessary.

NOTE: PLEASE COMPLETE ONE OF THE FOLLOWING

A / WE CONFIRM THAT THE DIMENSIONS AND DETAILS ON THESE DRAWINGS ARE CORRECT AND APPROVED FOR MANUFACTURE

AUTHORISED SIGNATURE:

B / WE REQUIRE THE FOLLOWING ALTERATIONS TO DIMENSIONS AND DETAILS AS PER THE MARK-UP'S PLEASE ACTION AND RESUBMIT

AUTHORISED SIGNATURE:

QR12

QA MANAGER HAS INSPECTED THIS PRODUCT AND HAS CONFIRMED THAT IT CONFORMS TO ALL ASPECTS OF BUSCK PREPOUR CHECK QR12

DATE:

SIGN:

DESIGN CHECK SIGN OFF:

JOHN MARSHALL on behalf of:
BUSCK prestressed concrete Ltd
CPEng # 226365, BE(Hons)(Civil), CMEngNZ, IntPE(NZ)
DATE:

LIFTING AND HANDLING
REFER PCNZ RIGGING CODE

WEIGHT OF UNIT FOR LIFTING	SEE BELOW
STRONGBACK REQUIRED	NO
LOAD EQUALIZATION REQUIRED	YES
DEMOULD	D26
LOADING	L19
TRANSPORT	T5
SITE ERECTION/ROTATE	P33

FOR CONSTRUCTION	30/03/2020	A
Engineer Design Check	19/03/2020	1
Description	Dates	Revisions

BUSCK
PRESTRESSED CONCRETE LTD
8 FRASER STREET - P.O Box 310 - WHANGAREI 0140 - Ph 09 438 3059

Project: 2 x STOCK 12m TT FARM BRIDGE (2023)
Hn Ho 72 LOADING

Special Notes

Concrete mix code

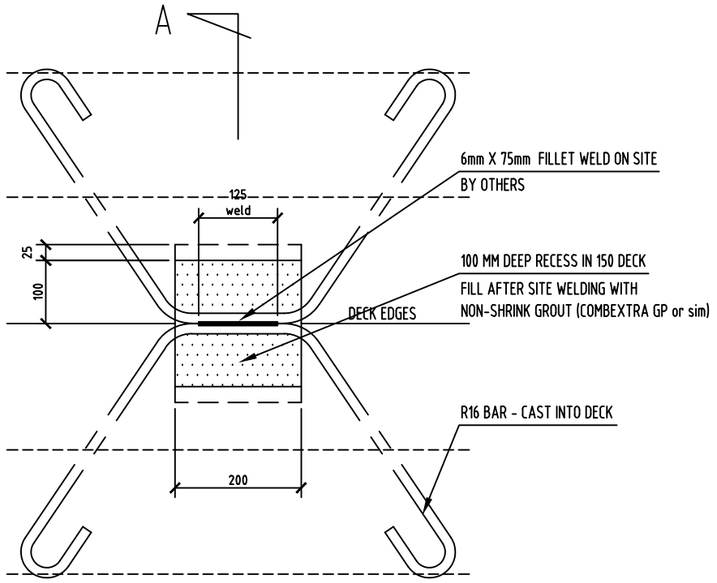
Specified min concrete strenght: 50 mPa

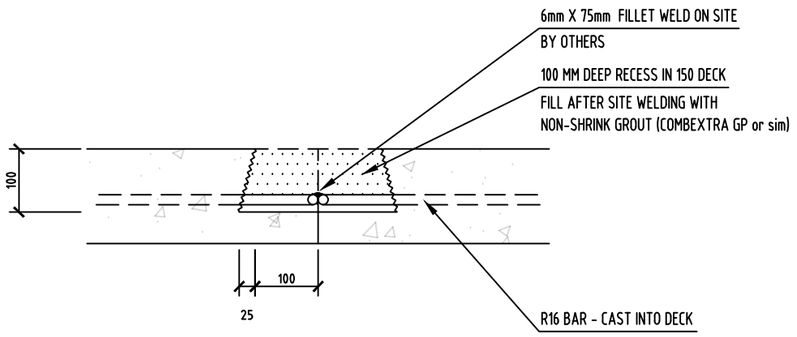
m^3 | tonnes

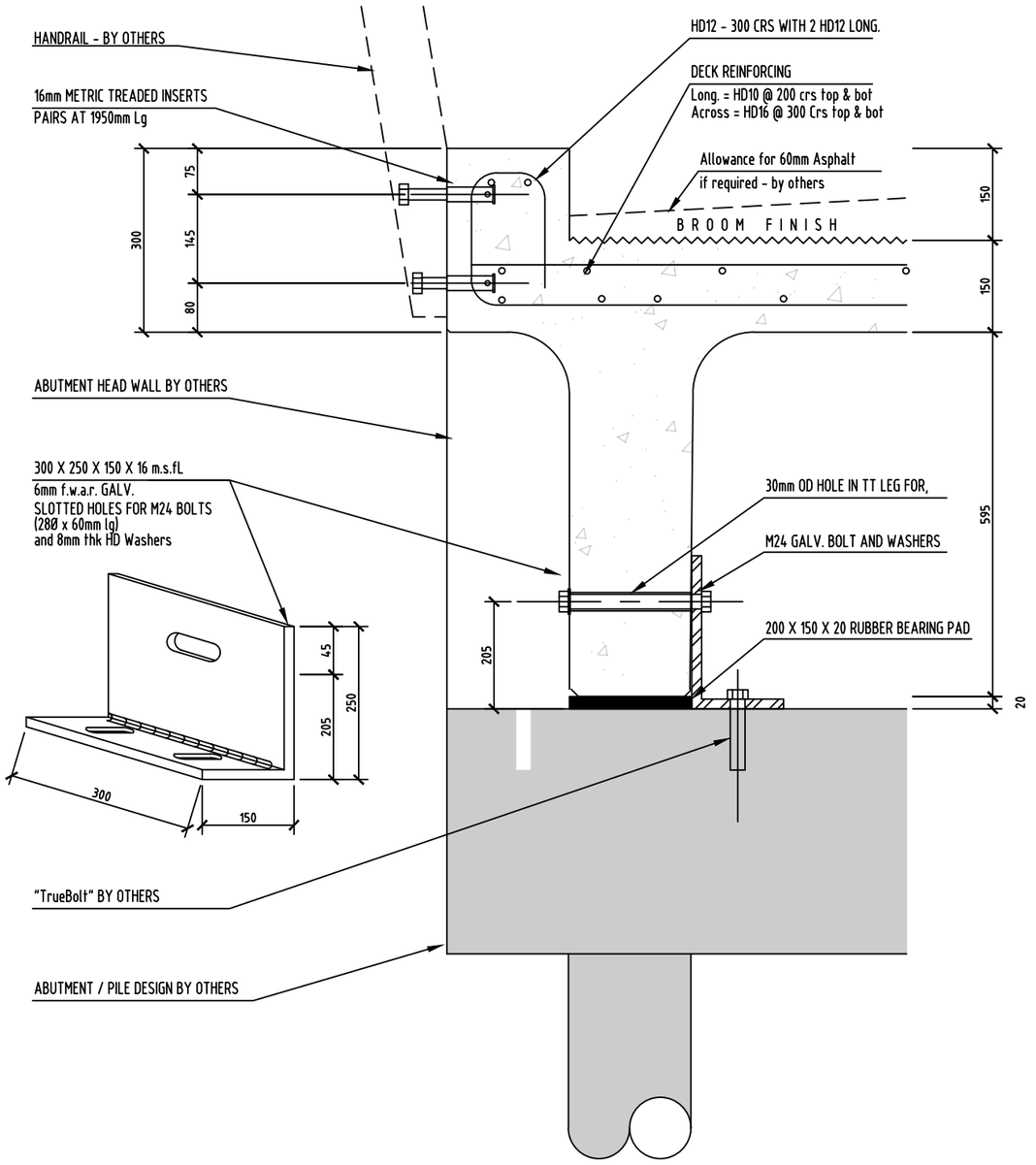
Checked | Make | no. off

Scale 1:50 | 23172 | 001
Drawn GN | File No. | Sheet

Drawing: BRIDGE LAYOUT | A Revision







1 / The Precaster has allowed for lifting devices for factory use. The Builder is responsible for coordination with the persons engaged to handle the precast unit after arrival at site.

2 / Lifting, bracing and fixing of precast elements must only be undertaken by competent persons who must ensure no lifting or fastening device, including cast in items and attachments, is overloaded and load sharing devices are used where necessary.

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AND HAS CONFIRMED THAT IT CONFORMS TO
ALL ASPECTS OF BUSCK PREPOUR CHECK QR12
DATE:
SIGN:

DESIGN CHECK SIGN OFF:

JOHN MARSHALL on behalf of:
BUSCK prestressed concrete Ltd
CPEng # 226365, BE(Hons)(Civil), CMEngNZ, IntPE(NZ)
DATE:

LIFTING AND HANDLING
REFER PCNZ RIGGING CODE

WEIGHT OF UNIT FOR LIFTING	SEE BELOW
STRONGBACK REQUIRED	NO
LOAD EQUALIZATION REQUIRED	YES
DEMOULD	D26
LOADING	L19
TRANSPORT	T5

FOR CONSTRUCTION	30/03/2020	A
Engineer Design Vheck	19/03/2020	1
Description	Dates	Revisions

BUSCK
PRESTRESSED CONCRETE LTD

8 FRASER STREET - P.O Box 310 - WHANGAREI 0140 - Ph 09 438 3059

Project
2 X STOCK 12m TT FARM BRIDGE (2023)
Hn Ho LOADING

Special Notes

Concrete mix code

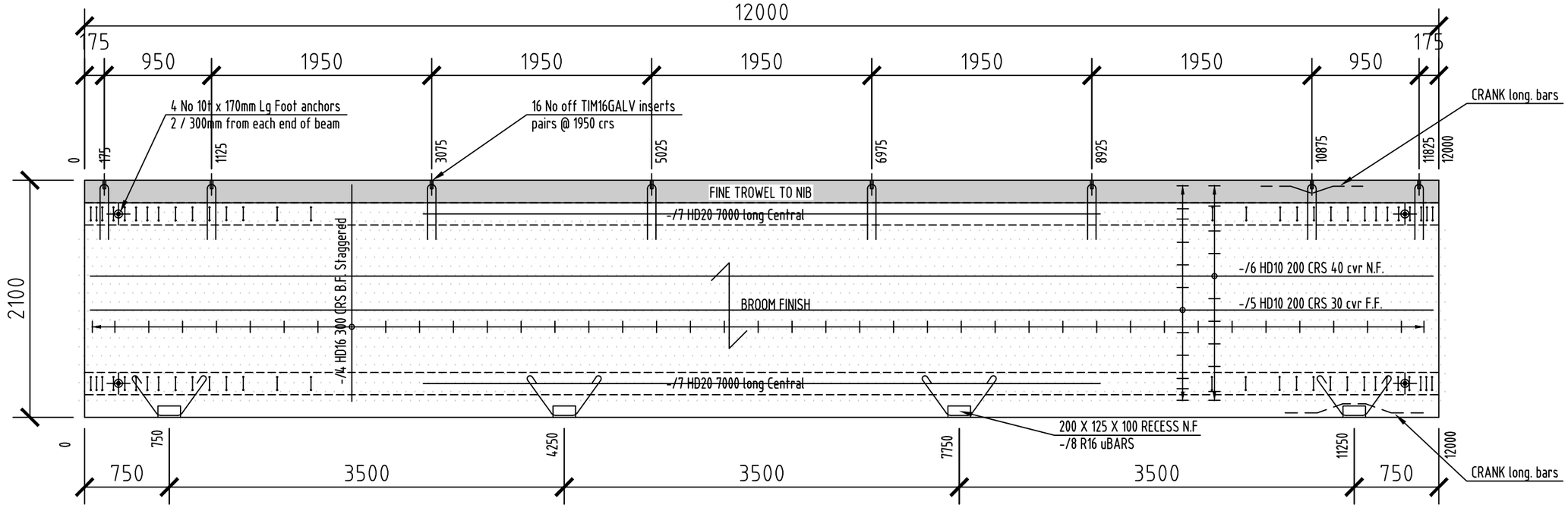
Specified min concrete strenght 50 mPa

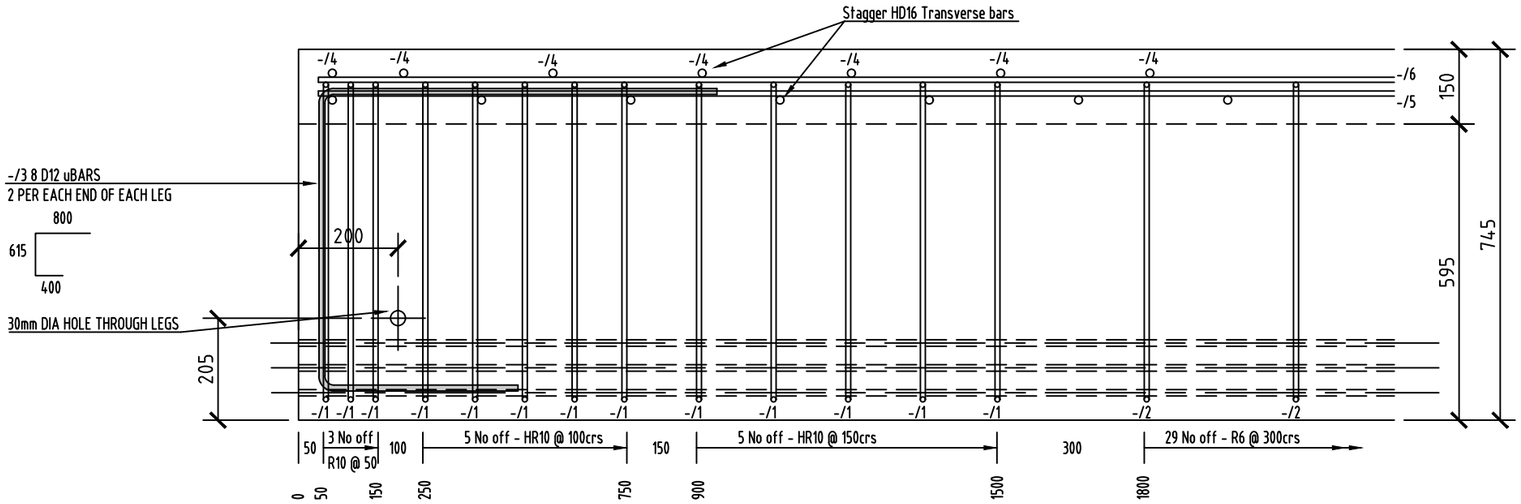
m^3	tonnes
Checked	Make no. off

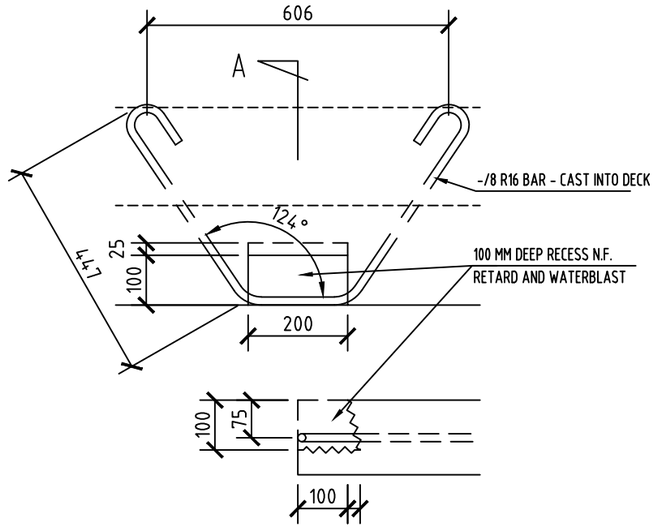
Scale 1:50	23172	002
Drawn GN	File No.	Sheet

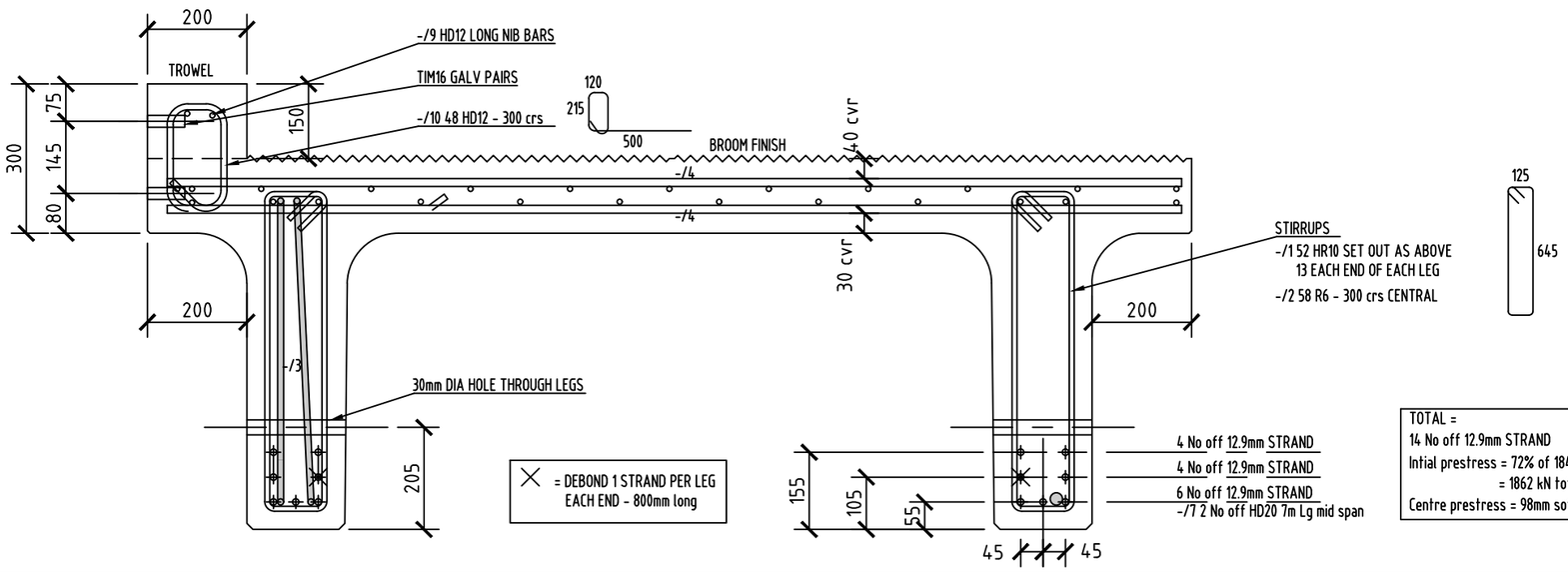
Drawing
BRIDGE DETAILS

A
Revision









TOTAL =
14 No off 12.9mm STRAND
Intial prestress = 72% of 184kN each strand
= 1862 kN total P/S force
Centre prestress = 98mm soffit

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Description	Dates	Revisions

BUSCK
PRESTRESSED CONCRETE LTD

8 FRASER STREET - P.O Box 310 - WHANGAREI 0140 - Ph 09 438 3059

Project
2 x STOCK 12m FARM BRIDGE (2023)
Hn Ho LOADING

Special Notes

Concrete mix code

Specified min concrete strenght 50 mPa

7.30	m^3	18.25	tonnes
Checked		Make 4	no. off

Scale 1:50	23172	003
Drawn GN	File No.	Sheet

Drawing
BRIDGE DETAILS

A
Revision

Preliminary and Detailed Site Investigation
for
Proposed Earthworks at

22 Church Road and 0 Tahuna Road, Kaitaia
(Lot 2 DP 89656 and Pt Lot 332 DP 12724)

Far North District Council

Haigh Workman reference 25 224

Rev A

15 December 2025

Phone: 0800 424 447 • info@haighworkman.co.nz • www.haighworkman.co.nz

Kerikeri • Whangarei • Warkworth

Document History and Status

Revision Nº	Date	Description	Issued By
A	15 December 2025	Preliminary and Detailed Site Investigation (PSI / DSI)	Josh Cuming

Prepared / Certified by	Reviewed by	Approved by
Josh Cuming	PP. Aaron Thorburn	John Papesch
Environmental Geologist	**Senior Environmental Advisor**	**Senior Civil Engineer / Director**
BSc (Env. Stu., Geol.), CEnvP	BAppSc (Env), CEnvP	BE (Civil Eng.), NZCE, CMEngNZ, CPEng

Executive Summary

Haigh Workman Limited were engaged by Far North District Council to undertake a Preliminary and Detailed Site Investigation in association with the proposed earthworks at 22 Church Road, Kaitaia.

It is understood that the proposed earthworks will enable the construction of a new bridge to access the Recycling and Refuse Centre.

The assessment of available information from our site walkover indicate that the following Hazardous Activities and Industries List activities have, or potentially have, occurred at the site.

- Landfill sites (HAIL Cat. G.3), and
- Waste recycling or waste or wastewater treatment (HAIL Cat. G.6).

Thirteen soil samples (seven shallow soil samples and six deep soil samples) were collected, including one duplicate soil sample. All soil samples were submitted to the laboratory (Eurofins) for analysis of Metals, Organochlorine Pesticides, Benzene, Toluene, Ethylbenzene and Xylenes, Total Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons and Asbestos (semi quantitative).

Laboratory analytical results reported:

- All CoC concentrations were below applicable Human Health criteria,
- Asbestos was detected in one soil sample but with Fibrous Asbestos / Asbestos Fines concentrations below Asbestos Human Health criteria, and
- Metals concentrations were above applicable Background Levels, and
- Total Petroleum Hydrocarbon and Polycyclic Aromatic Hydrocarbon concentrations were above laboratory Method Detection Limits in all soil samples.

Based on these findings:

- Soil sampling has confirmed that there are no significant contaminated land restraint on development of the land for commercial / industrial purposes and that standard earthworks controls are appropriate,
- Prior to earthworks a Site Management Plan should be prepared, outlining control measures to be in place to ensure site conditions are protective of Human Health and the Environment,
- Soil / fill material with Metals and / or Organic Contaminants of Concern concentrations above Background Levels / laboratory Method Detection Limits is not considered as 'Cleanfill' for disposal purposes:
    - If material exceeding Background Level criteria must be removed from site it is to be disposed of a facility licensed to accept such materials,
    - Material exceeding Background Level criteria could be retained and re-used on-site as a sustainable option and to reduce disposal costs if suitable,
- Any soil with visual / olfactory evidence of contamination discovered during site works must be segregated and analysed by a Suitably Qualified and Experienced Practitioner prior to disposal.

It is considered that the proposed earthworks are covered under the National Environmental Standard for Contaminants in Soils regulations. The National Environmental Standard for Contaminants in Soils describes a

'piece of land' as the piece of land that has had, or currently has, or most likely has had, activities listed on the Hazardous Activities and Industries List and soil disturbance is proposed.

Based on findings from this investigation, this proposal is a Controlled Activity (9) under the National Environmental Standard for Contaminants in Soils regulations as this Detailed Site Investigation states the soil contamination does not exceed the applicable standard in Regulation 7. However, earthworks volumes will exceed those allowed as a permitted activity.

Our findings, conclusions and recommendations are detailed in the following report and appendices.

Table of Contents

Appendices

1 Introduction

Haigh Workman Limited (Haigh Workman) were engaged by Far North District Council (FNDC) (the client) to undertake a Preliminary and Detailed Site Investigation (PSI / DSI) in association with the proposed earthworks at 22 Church Road, Kaitaia, the 'piece of land' is shown below in Figure 1 and provided in **Appendix A**.

Figure 1 - Site Location (Source: Land Information New Zealand)

1.1 Legislative Requirements

An assessment has been conducted under the Hazardous Activities and Industries List (HAIL)[1] and the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations (NES-CS)[2].

Assessment of the land-uses and exposure scenarios has been carried out in accordance with Ministry for Environment (MfE) Contaminated Land Management Guidelines[3] (CLMG), *Methodology for Deriving Contaminants for the Protection of Human Health*[4] (*Methodology*) and the NES-CS.

[1] Ministry for Environment, *Hazardous Activities and Industries List (HAIL),* March 2023.
[2] Resource Management (National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations, 2011
[3] Ministry for Environment, *Contaminated Land Management Guidelines Nos. 1 to 5*, 2011 *(Guidelines Nos. 1 & 2, Revised 2021)*,
[4] Ministry for Environment, *Methodology for Deriving Contaminants for Protection of Human Health,* 2011

The Far North District Plan identifies the two lots that the piece of land spans over to be zoned separately as: **Rural Production & Sport and Active Recreation**.

The adopted exposure scenario is: **Commercial / Industrial.**

1.2 Purpose and Scope

The purpose of the PSI / DSI investigation, under the NES-CS, is required:

1. To comply with regulation 3 of the NES-CS,
2. To establish whether or not the site is HAIL or has been HAIL (it is more likely than not that an activity or industry described in the HAIL is being or has been undertaken on it) (Regulation 5(7) or 6(3)), and
3. If the site is HAIL and the activity is a change of use or subdivision, to show the activity is permitted by demonstrating that it is highly unlikely that there will be a risk to human health in the particular circumstances of the site and proposed use or subdivision (Regulation 8(4)).

The investigation comprises a PSI / DSI, including the following:

- Site walkover,
- Review of available environmental investigation reports previously prepared for the site (or parts of the site),
- Review of environmental setting including topography, geology and hydrology,
- Review of historical aerial photographs, historical titles, Northland Regional Council (NRC) Contamination Enquiry and FNDC Property Files,
- Collection and laboratory analysis of soil samples for identified Contaminants of Concern (CoC),
- Interpretation of laboratory analytical results, and
- PSI / DSI reporting (this report).

This report comprises a PSI / DSI prepared by Haigh Workman in general accordance with MfE guidelines for contaminated site investigations, NES-CS and FNDC requirements. This investigation and reporting have been prepared, reviewed and authorised by Suitably Qualified and Experienced Practitioners (SQEP), in general accordance with MfE CLMG No. 1 Reporting on Contaminated Sites in New Zealand.

1.3 Limitations

This report has been prepared by Haigh Workman for the sole benefit of FNDC (the client), with respect to the brief outlined to us. This report is to be used by the client and their consultants and may be relied upon when considering geo-environmental advice. Furthermore, this report may be utilised in the preparation of building and / or resource consent applications with local authorities. The information and opinions contained within this report shall not be used in other context for any other purpose without prior review and agreement by Haigh Workman.

The comments and opinions presented in this report are based on the findings of a desktop study, and subsurface conditions encountered. Responsibility cannot be accepted for any conditions not revealed by this investigation. Should conditions encountered differ to those outlined in this report we should be notified. Allowance for a review of the design should be made should ground conditions vary from these assumed.

2 Site Description

The site is located at 22 Church Road, Kaitaia and 0 Tahuna Road, Kaitaia. The legal descriptions for the site are provided below in Table 1. The site is shown in Figure 1 above and provided in **Appendix A**.

Table 1 - Site Details

Street Address	22 Church Road, Kaitaia and 0 Tahuna Road, Kaitaia
Legal Description	Lot 2 DP 89656 and Pt Lot 332 DP 12724
Certificate of Title(s)	NA46D/469 and NA725/9
FNDC Zoning	Rural Production (Lot 2 DP 89656) & Sport and Active Recreation (Pt Lot 332 DP 12724)
Grid Reference NZ Map Grid	E 2535536, N 6676534
Approx. Site Area	27200m^2 and 34029m^2 respectively
Piece of land under investigation	2139m^2

The piece of land is currently developed as a bridge and accessway for the Kaitaia Recycling and Refuse centre.

2.1 Proposed Earthworks

Based on the information provided to Haigh Workman and drawings prepared by RS Eng Limited (dated 23 April 2025), it is understood that the proposed earthworks will enable the construction of a new bridge to access the Recycling and Refuse Centre, as shown in Figure 2 and provided in **Appendix A**.

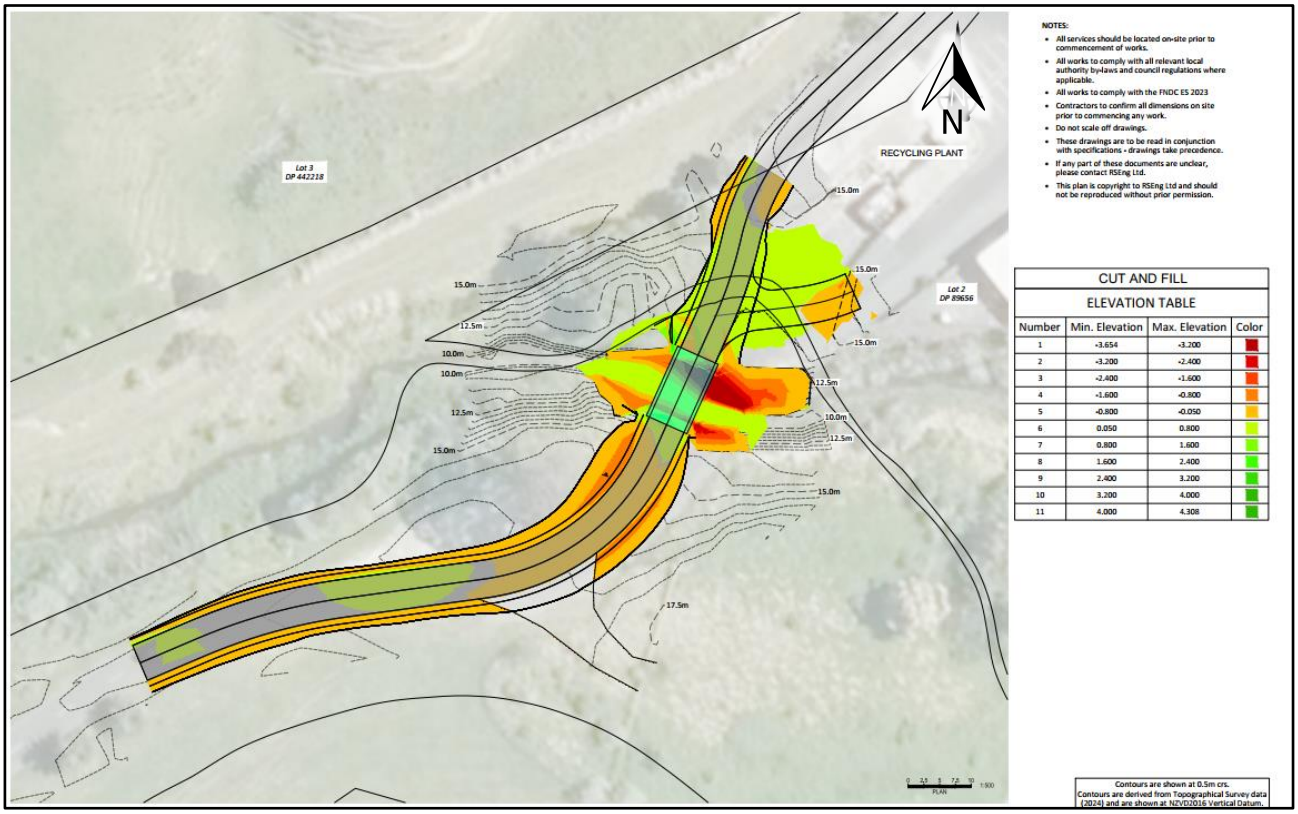


Figure 2 - Proposed Bridge Earthwork Plan (Source: RS Eng Limited, 23 April 2025)

2.2 Previous Investigations

In February 2025, a Geotechnical Design Report was prepared for the proposed bridge (18781) by RS Eng Limited. During the investigation fill was encountered up to a maximum depth of 2.8m, however several of the hand auger locations refused at shallow depths. The depths of fill are shown below in Figure 3. Groundwater was encountered at 3.0 m below ground level.

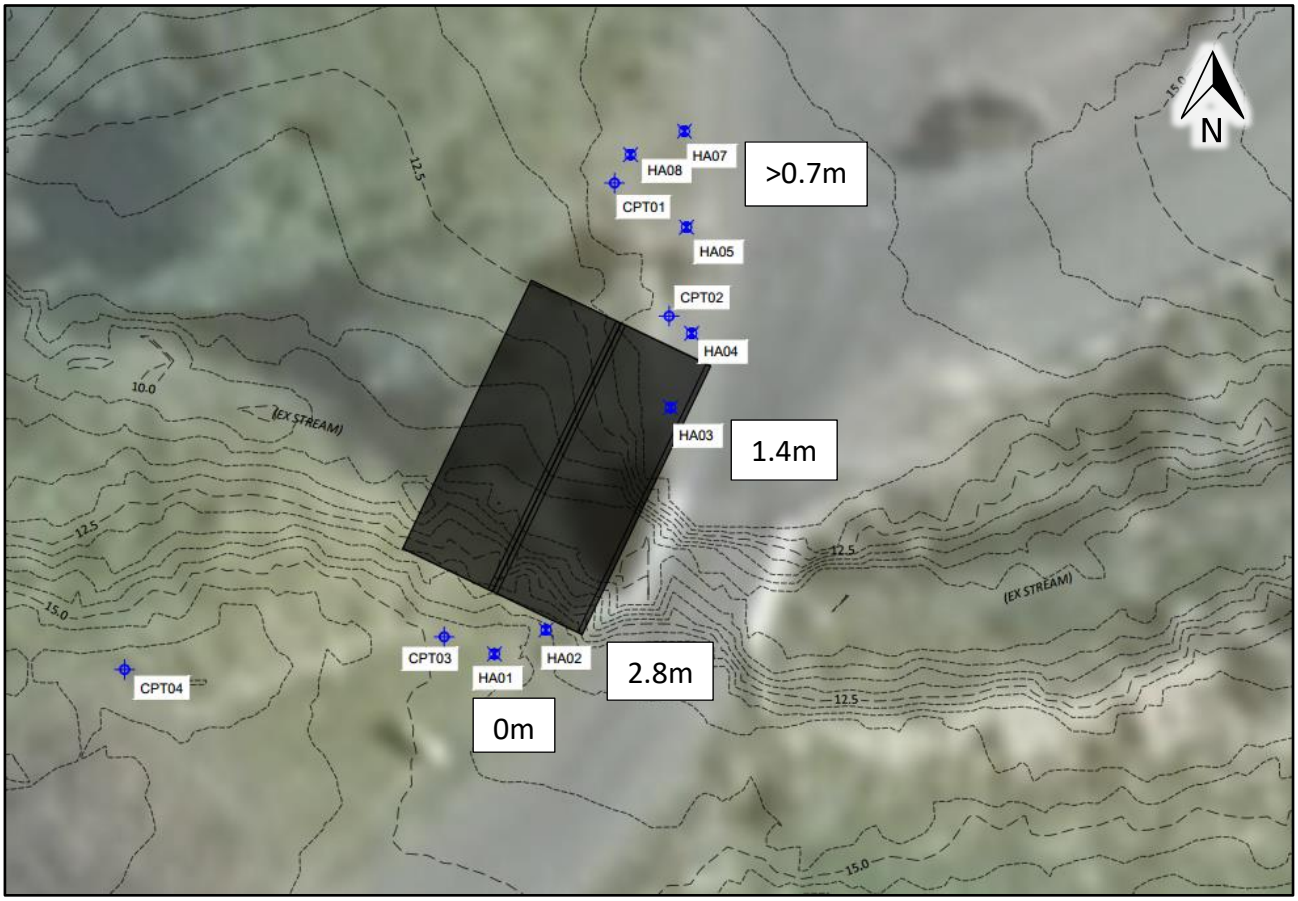


Figure 3 - Fill depths, RS Eng Limited

3 Environmental Setting

3.1 Site Layout and Surrounds

A site walkover was undertaken on 24 November 2025. Photographs from the site walkover are provided in **Appendix B**.

The following was observed on the site:

- The site is located in the southeast of Kaitaia,
- Site access is from the south via Church Street,
- The built development of the piece of land comprises a bridge and access way, the wider site buildings associated with the waste transfer station (Lot 2 DP 89656) and sports fields (Pt Lot 332 DP 12724),
- The piece of land slopes towards the stream that bisects it,
- Landfill material was observed in the banks of the stream,
- The piece of land and wider site was well kept, and
- Surface water from the piece of land drains into the stream that flows through the piece of land.

3.2 Geology, Hydrology and Hydrogeology

According to the GNS Science New Zealand Geology Web Map, 1:250,000 Scale, the site is underlain by estuary, river and swamp deposits (late Pleistocene to Holocene) and Punakitere Sandstone (Mangakahia Complex).

Figure 4 - Geological Map (Source: GNS Sciences Geology Website)

The nearest surface water to the site is the Church Road Gully Drain, located which runs through the piece of land. The Church Road Gulley Drain flows into the Awanui River.

The site surface and surrounding area are gently sloping towards the Church Road Gully Drain.

Relevant information relating to nearby hydrological sources and potential flood risks are provided below in Table 2.

Table 2 - Hydrology and Flooding (Source: NRC GIS WebMaps)

	Presence / Location	Comments
Watercourses & Water Features within 200 m (Coast, rivers, lakes)	The Church Road Gully Drain is located through the piece of land.	The Church Road Gully Drain, drains into the Awanui River.
Flood Risk	The majority of the piece of land is mapped as being within a flood hazard.	
Private wells within 200 m	No.	No wells are mapped within 200m of the piece of land.
Source Protection Zones within 200 m	None recorded.	The site is not within the main three Northland aquifers.

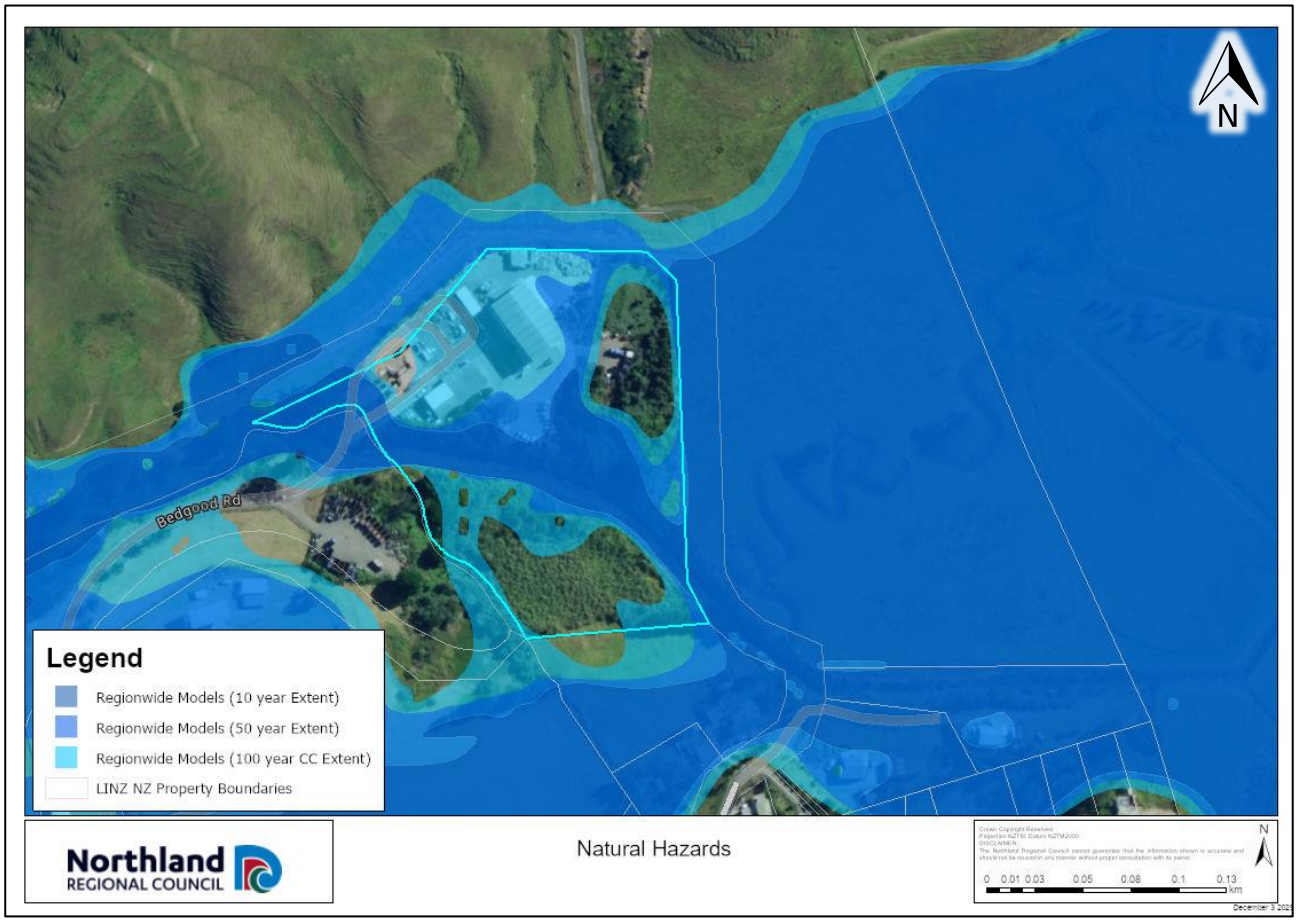


Figure 5 - Flood Modelled Areas (Source: NRC GIS Website)

4 Historical Information

The history of the site was established through a review of historical aerial photography, Land Information New Zealand (LINZ) Certificates of Title, NRC Contamination Enquiry, and FNDC Property Files.

4.1 Historical Aerial Photography

Historical aerial photography of the site was obtained from the Retrolens website (http://retrolens.nz/map) and Google Earth Pro. Photographs available for the subject area are dated from 1950 to 2024. A review of the historical aerial photography is provided below in Table 3. Historical aerial photographs are included in **Appendix C**.

Table 3 - Historical Aerial Photography review

Date	Source	Review
1950	Retrolens	• There is no development on the site, and • Farmland is present to the north, east and west, with sports fields to the south.
1968	Retrolens	• The site and surrounding areas are similar to the 1950 aerial photography.
1977	Retrolens	• The site now appears to be being used as a landfill, and • There is no significant change to the surrounding areas.
1981	Retrolens	• The site and surrounding areas are similar to the 1977 aerial photography.
2000	NRC	• The site is now a refuse transfer station. A bridge has been constructed over the Church Road Gully, and • There is no significant change to the surrounding areas.
2006, 2010	NRC	• The site is developed similar to its current configuration, and • There is no significant change to the surrounding areas.
2013, 2016, 2018, 2019, 2020, 2022, 2024	Google Earth Pro	• The site and surrounding areas are similar to the 2010 aerial photography.

The most recent historical aerial photograph was sourced from Google Earth Pro and is dated 2024. Site conditions observed in thaerial photograph are similar to those observed during the site walkover.

4.2 Certificates of Title

A review of Certificates of Title held by LINZ was completed for the site. No additional potential HAIL activities were identified through the title review.

Copies of the Certificates of Title are provided in **Appendix D**.

4.3 Contamination Enquiry

A site contamination enquiry was requested from the NRC Contaminated Land Team.

SITE ID: SLU. 803224
Site Classification: Verified HAIL: Risk not quantified

Potential HAIL for the site identified in the Contamination Enquiry includes:

- Landfill sites (HAIL Cat. G.3), and
- Waste recycling or waste or wastewater treatment (HAIL Cat. G.6).

The Contamination Enquiry also reports records of pollution incidents, bores, contaminated site and air discharges and industrial trade process consents, closed landfills and air quality permitted activities within approximately 200m of the site.

There are two incidents recorded that refer to stormwater discharges from the site dated 2018 and 2019. There are several resource consents for the site both expired and current that for the discharge of water, sediment and the construction of the bridge and associated earthworks.

A copy of the Contamination Enquiry is attached in **Appendix E**.

4.4 Property File

A Property File request was lodged with FNDC. Several buildings and resource consents relate to the site being used as a refuse transfer station.

Due to the large size of the documents property file, documents will be made available on request.

5 HAIL Assessment

Based on previous land-use and development information for the property, Table 4 below summarises the potential for contamination associated with previous site activities and land-uses classified under the HAIL.

- Landfill sites (HAIL Cat. G.3), and
- Waste recycling or waste or wastewater treatment (HAIL Cat. G.6).

Table 4 - Site Activities / Land Uses and Potential HAIL categories

Date	HAIL Activity	Primary Source	Potential Contaminants	Investigation Locations
c. 1977 – prior to 1998	G.3 - Landfill sites	Aerial Photography, NRC, FNDC Property file.	Metals, OCP, TPH, PAH, Asbestos.	Piece of land, Lot 2 DP 89656 and Pt Lot 332 DP 12724
1998 – present	G.6 - Waste recycling or waste or wastewater treatment	Aerial Photography, NRC, FNDC Property file.	Metals, OCP, TPH, PAH, Asbestos.	Lot 2 DP 89656

6 Contamination Investigation

6.1 Identified Contaminants of Concern

The site was identified for potential soil contamination during the review of historical documents and site walkover. Relevant to the HAIL assessment and site history, the potential CoC for the site investigation area included:

- Metals,
- Organochlorine Pesticides (OCP),
- Total Petroleum Hydrocarbons (TPH),
- Benzene, Toluene, Ethylbenzene and Xylene,
- Polycyclic Aromatic Hydrocarbons (PAH), and
- Asbestos.

6.2 Soil Investigation

Soil sampling from the site investigation area was undertaken on 24 November 2025 and comprised soil sampling by a SQEP from Haigh Workman. Sampling locations are provided in **Appendix A**. Photographic documentation from the investigation is provided in **Appendix B**.

Minor ground disturbance for sampling activities was conducted as a permitted activity under NES-CS regulation 8(2), where soil sampling is defined within regulation 5(3).

Soil sampling consisted of targeted sampling of fill material focusing the contamination assessment on the fill identified within the piece of land by the geotechnical report (RS Eng Limited, dated 25 February 2025).

Thirteen soil samples (seven shallow soil samples and six deep soil samples), including one duplicate soil sample for Quality Assurance / Quality Control (QA / QC) purposes were collected. All soil samples were submitted to the laboratory (Eurofins) for analysis of Metals, OCP, BTEX, TPH, PAH and Asbestos (semi quantitative).

The concentration and distribution of contaminants can vary significantly at different depths in the soil or groundwater at a site. It is influenced by numerous factors including the nature of the contaminant source (point source, diffuse source, surface, subsurface, single or multiple releases etc.) and the nature of the breakdown products of primary contaminants.

The exposure scenarios for the priority contaminants listed in Section 6.1 include soil ingestion, dermal exposure, and inhalation, soil samples were retrieved from below the surface between 0-0.075m bgl, deeper samples were collected in the known landfill areas.

- Landfill material was encountered across the investigation area from grade (0m) to 2.0m bgl, it is likely that the landfill depth varies across the piece of land and deeper than 2.0m, and
- Encountered fill material comprised of brown SILT with occasional fragments of plastic and fabric.

Soil sample descriptions are provided in **Appendix G.**

During the fieldwork access was not possible to parts of the piece of land due to the steep slopes present on either side of the Church Road Gully Drain.

6.3 Soil Sampling Protocol

Soil samples were collected from a spade or hand trowel from hand auger locations across the site investigation area. Soil sampling equipment was decontaminated between sampling locations and disposable nitrile gloves were used and replaced between sampling locations in order to prevent cross-contamination. All samples were collected in accordance with strict environmental sampling protocols to ensure reliable and representative results.

All sample containers and preservatives, where applicable, were supplied by the subcontract laboratory and were consistent with the specifications provided in Section 6.4 – Sample Handling, of the Contaminated Land Management Guidelines No. 5 – Site Investigation and Analysis of Soils (MfE, Revised 2021). All samples were labelled with unique identifiers indicating the sampling location. Samples were couriered directly to the laboratory (Eurofins) under continuous Chain of Custody (COC) documentation. Each COC form had a unique laboratory number.

6.3.1 Duplicate samples

A duplicate sample involves collecting two separate samples from a single sample location, storing these in separate containers, and submitting them for analysis to the laboratory as two separate samples. Samples are given separate sample numbers so the laboratory is unaware that the sample is a duplicate.

A duplicate sample measures the contaminant concentration difference between the two samples because of soil heterogeneity, the variability or error within the laboratory analysis and the variability or error related to field sampling technique. The results of duplicate variance analysis are presented in Section 10.1 . One duplicate for every 20 results was adopted.

7 Regulations

Within the Northland Region, investigations of contaminated and potentially contaminated sites are directed by rules under the following regulations:

- MfE NES-CS and Petroleum Hydrocarbon Guidelines (PHG) – National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (MfE, Revised 2021) and Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand (MfE, revised 2011),

- New Zealand Guidelines for Assessing and Managing Asbestos in Soil (2017).

7.1 National Environmental Standards – Contaminants in Soil

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS) 2011 Regulations, came into force on 1 January 2012, with Contaminated Land Management Guidelines revised in 2011 (No.2) and 2021 (No. 1 and 5). The NES-CS for contaminants in soil incorporates by reference MfE contaminated land documents, including MfE Contaminated Land Management Guidelines for the investigation, assessment and reporting of contaminated land within New Zealand. These documents aim to provide national consistency in the reporting of contaminated site information. These documents are:

- Contaminated Land Management Guidelines (No. 1, 2 and 5),
- HAIL,
- Methodology of Deriving Soil Guideline Values Protective of Human Health,
- Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand, and

Copies of the above guideline documents are available at www.mfe.govt.nz.

7.2 Background Concentrations Assessment

Background levels are particularly relevant when considering whether soils can be considered as 'Cleanfill'. Results have been assessed against the following criteria:

- Maanaki Whenua Landcare Research, Predicted Background Soil Concentrations.

7.3 New Zealand Guidelines for Assessing and Managing Asbestos in Soil.

The New Zealand Guidelines for Assessing and Managing Asbestos in Soil were published in 2017. The guidelines provide direction around identifying, assessing and managing Asbestos in soil in New Zealand and establish Human Health Soil Guideline Values (SGV) for Asbestos in soil.

8 Assessment Criteria

The piece of land is split between two lots which are zoned for different use. Rural Production on the northern side of the bridge Sport and Active Recreation for the southern side of the bridge. The piece of land encompasses the bridge and approaches which are only used to access the refuse transfer station; therefore it is considered appropriate that Commercial / Industrial criteria are adopted. For this assessment, soil analytical results were compared against:

- NES-CS Human Health criteria for Commercial / Industrial land-use, and
- Asbestos Human Health SGV for Commercial and Industrial sites.

Soil analytical results were also compared against:

- Upper 95% Predicted Background Soil Concentrations for Volcanic soils.

Guideline assessment criteria are included with the Soil Analytical Results summarised in **Appendix H**.

9 Analytical Results

Thirteen soil samples (seven shallow soil samples and six deep soil samples) were collected, including one duplicate soil sample for QA / QC purposes. All soil samples were submitted to the laboratory (Eurofins) for analysis of Metals, OCP, BTEX, TPH, PAH and Asbestos (semi quantitative).

Laboratory analytical results reported:

- All CoC concentrations were below applicable MfE NES-CS Commercial / Industrial Human Health criteria,
- Asbestos was detected in one soil sample but with Fibrous Asbestos / Asbestos Fines (FA / FA) concentrations below Asbestos Human Health SGV for Commercial and Industrial sites, and
- Metals concentrations were above Background Levels, TPH and / or PAH concentrations were above laboratory Method Detection Limits (MDL) in all the soil samples.

Laboratory analytical results are summarised in **Appendix H**. Soil sampling locations are provided in **Appendix A**. Laboratory analytical results and COC documentation are provided in **Appendix I.**

10 Quality Assurance / Quality Control

Quality assurance (QA) and quality control (QC) are essential elements for site investigation. QA relates to the planned activities implemented so that quality requirements will be met, and QC relates to the observation techniques and activities used to demonstrate the quality requirements have been met.
Soils were inspected for visual and olfactory indicators of contamination and logged with soil descriptions attached in **Appendix G**.

Between samples equipment was decontaminated by brushing, spraying with clean potable water and rinsing with high purity de-ionised water. To reduce the potential for cross-contamination, each sample was taken using disposable nitrile gloves that were discarded following the collection of each sample.

Appropriate Personal Protective Equipment (PPE) was used by Haigh Workman staff including disposable nitrile gloves, highly visible vest and steel toe capped boots. All disposable PPE was treated as contaminated and disposed of appropriately.

Soil samples were placed in sample containers supplied by Eurofins Laboratories, which were then capped, labelled with a unique identifier and placed in a chilly bin prior to transport by Courier. Standard chain of custody documentation is enclosed in **Appendix I**.

Any laboratory analysing samples of contaminated media must be able to show it has in-house quality assurance procedures and quality control checks (QA / QC) to ensure accurate testing and reporting of analyses. IANZ, or equivalent overseas accreditation, provides confidence that the receiving laboratory has appropriate QA / QC

procedures in place. Eurofins Environmental Testing NZ Limited[5] is IANZ and NZS/ISO/IEC 17025:2018 accredited, and was the laboratory elected for testing.

Following receipt of the samples by Eurofins Laboratories, the samples were scheduled for analysis of the identified contaminants of concern. Records of laboratory QA / QC and the results of chemical testing including methodologies as received from the laboratory are presented in **Appendix I**.

10.1 QA / QC Relative Percentage Difference

One duplicate soil sample set (HA8 0.075, duplicate of HA1 0.075) was collected for QA / QC purposes. The duplicate soil samples were collected using the same soil sampling procedures and analysed at the laboratory (Eurofins) using the same sample preparation and analysis procedures as the original soil samples. One QA / QC sample was collected for every 20 soil samples collected.

Relative Percentage Difference (RPD) calculations for analytes reported above the laboratory MDL ranged from 0.23 to 4.44%. RPD values for the duplicate pairs met Haigh Workman QA / QC acceptance criteria of less than 50%.

QA / QC results are presented in Table 5 below. Laboratory analytical results are provided in Appendix H.

Table 5 - Quality Assurance / Quality Control Results

Contaminants of Concern		Results (mg/kg)		RPD (%)
		HA1 0.075	HA8 0.075	
Heavy Metals	As	2.07	2.06	0.48%
	Cd	0.22	0.23	4.44%
	Cr	30.9	30.7	0.65%
	Cu	42.9	43	0.23%
	Pb	22.4	22.5	0.45%
	Hg	< 0.1	< 0.1	-
	Ni	21.8	22	0.91%
	Zn	145	147	1.37%

mg/kg – milligrams per kilogram RPD – Relative Percentage Difference

11 Discussion

11.1 Conceptual Site Model

The assessment provided below in Table 8 expands on the potential sources of contamination identified within the area of the proposed redevelopment and exposure pathways. It is based on the potential effects of the proposed land use and soil disturbance activities on human health and the environment associated with the commercial / industrial land-use (no change).

[5] Eurofins Environmental Testing NZ Limited, an IANZ[5] and NZS/ISO/IEC 17025:2018[5] accredited laboratory incorporating the aspects of ISO 9000:2015[5] relevant to testing laboratories. International Accreditation New Zealand which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). New Zealand Standard, General Requirements for the Competence of Testing and Calibration Laboratories, 2018. ISO9000: Quality Management Systems.

Table 6 - Conceptual Site Model

Potential Source	Potential Receptors	Potential Pathways	Assessment
Contaminated Soil	Construction, maintenance / excavation workers.	Inhalation of dust / ingestion and dermal contact.	Incomplete Pathway: Contaminant concentrations are below applicable Human Health criteria.
	Future site user(s).	Ingestion / dermal contact.	

12 Regulatory Requirements

12.1 NES-CS

It is considered that the site and proposed redevelopment are covered under the NES-CS regulations.

The NES-CS describes a 'piece of land' as the piece of land that has had, currently has, or most likely has had activities listed on the HAIL and soil disturbance is proposed.

12.1.1 Earthworks

Based on findings from this investigation, this proposal is a Controlled Activity (9) under the NES-CS as this DSI states the soil contamination does not exceed the applicable standard in Regulation 7. However, earthworks volumes will exceed those allowed as a permitted activity.

Table 8 below presents potential Resource Consent requirements for the proposed activity under the provisions of the NES-CS. This investigation presents factual information for the site. Matters of control and discretion, however, rest with the consenting authority (FNDC) based on their assessment of this report. It would be appropriate to seek clarification of FNDC or an Environmental Planning Specialist for further information on resource consenting requirements.

Table 8 –Potential Resource Consent Requirements

Potential Source	Potential Applicable Planning Rules
National Environmental Standards (NES)	CONTROLLED ACTIVITY (subject to requirements under Rule 9) • A DSI report (this investigation) has been prepared, • The consent authority must have the report, • Contamination concentrations comply with NES-CS Commercial / Industrial Human Health criteria, • Asbestos was detected, but at concentrations below Human Health SGV for Commercial / Industrial sites, and • Controlled Activity status assumes the site will be managed. Rule 9 conditions must be complied with.

12.1.2 **Earthworks volumes**

The NES-CS describes a *'piece of land'* as the area that has had, currently has, or has most likely has had activities listed on the HAIL:

8(3) Disturbing Soil

- *8(3)(c) The volume of the disturbance of soil of the piece of land must be no more than 25m^3 per 500m^2.*
- *8(3)(d)(ii) Soil must not be taken away in the course of the activity, except that for all other purposes combined, a maximum of 5m^3 per 500m^2 of soil may be taken away per year.*

The *'piece of land'* for this investigation is the area where earthworks are proposed, which is 2,139m^2. This allows for 107m^3 soil disturbance and 21m^3 soil removal (per year) as a Permitted Activity under the NES-CS.

12.2 Northland Regional Council

As per Rule C.6.8.1 of the Proposed Regional Plan for Northland, copies of site investigation reports must be provided to the NRC within three months of completion of the investigation (reports can be sent to: contamination@nrc.govt.nz).

13 Conclusion & Recommendations

This PSI / DSI was carried out for the investigation site in accordance with the scope of work and current applicable regulations. This report has been prepared in accordance with MfE Guidelines for Contaminated Site Investigations and FNDC requirements. This investigation and reporting have been prepared, reviewed and authorised by a SQEP, as required under the NES-CS.

Historical information available for the site and observations from the 27 November 2025 site walkover indicate that the following HAIL activities have, or potentially have, occurred at the site:

- Landfill sites (HAIL Cat. G.3), and
- Waste recycling or waste or wastewater treatment (HAIL Cat. G.6).

Thirteen soil samples (seven shallow soil samples and six deep soil samples) were collected, including one duplicate soil sample for QA / QC purposes. All soil samples were submitted to the laboratory (Eurofins) for analysis of Metals, OCP, BTEX, TPH, PAH and Asbestos (semi quantitative).

Laboratory analytical results reported:

- All CoC concentrations were below applicable MfE NES-CS Commercial / Industrial Human Health criteria,
- Asbestos was detected in one soil sample but with FA / FA concentrations below Asbestos Human Health SGV for Commercial and Industrial sites, and
- Metals concentrations were above applicable Background Levels, and
- TPH and / or PAH concentrations were above laboratory MDL in all the soil samples.

Based on these findings:

- Soil sampling has confirmed that there are no significant contaminated land related constraints on redevelopment of the land for commercial / industrial purposes and that standard earthworks controls are appropriate,
- A SMP may be prepared for the site prior to earthworks, outlining control measures to be in place,
- Soil / fill material with Metals concentrations above Background Levels is not considered as 'Cleanfill' for disposal purposes:
    - If material exceeding Background Level criteria must be removed from site it is to be disposed of a facility licensed to accept such materials,
    - Material exceeding Background Level criteria could be retained and re-used on-site as a sustainability option and to reduce disposal costs if suitable.
- Any visual / olfactory evidence of contamination discovered during site works must be segregated and analysed by a SQEP prior to disposal.

It is considered that the proposed earthworks are covered under the NES-CS regulations. The NES-CS describes a *'piece of land'* as the piece of land that has had, or currently has, or most likely has had, activities listed on the HAIL and soil disturbance is proposed.

Based on findings from this investigation, this proposal is a Controlled Activity (9) under the NES-CS regulations as this DSI states the soil contamination does not exceed the applicable standard in Regulation 7. However, earthworks volumes will exceed those allowed as a permitted activity.

14 Unverified Material Discovery

Should visual and / or olfactory evidence of gross contamination be identified during excavation works. It is recommended that works cease in that area and a SQEP familiar with the site attends to inspect the impacted soils. If required, the SQEP will undertake sampling to confirm the level and scope of contamination. The area should also be physically isolated using a high visibility fence if practicable.

Landfill material is anticipated on the site however the SQEP should be contacted if any of the following are encountered:

- Buried construction or demolition waste,
- Un-anticipated soil colours or odours,
- Buried tanks or drums, and
- Encountering materials that may contain Asbestos, including fibrous building materials and fibre cement construction products.

Site management should brief operatives onsite of the above signs during site inductions.

15 Practitioner Certifying Statement

I, Joshua Cuming of Haigh Workman Limited certify that:

This Preliminary / Detailed Site Investigation meets the requirements of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (the NES-CS) because it has been:

- Undertaken by a Suitably Qualified and Experienced Practitioner, and
- Reported on in accordance with the current edition of Contaminated Land Management Guidelines No. 5 – Site Investigation and Analysis of Soils,
- Reported on in accordance with the current edition of the Contaminated Land Management Guidelines No. 1 – Reporting on contaminated sites in New Zealand, and
- The report has been certified by a Suitably Qualified and Experienced Practitioner.

This Preliminary and Detailed Site Investigation concludes that:

- The results from ground investigations do not exceed the applicable standard in Regulation 7 of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations, and
- Based on the information reviewed, the proposed activity is a controlled activity.

I have completed a Bachelor of Science (Geology and Environmental Studies). I have over 10 years' experience in contaminated land management across New Zealand and overseas.

End of Report – Appendices to follow

Appendix A – Site Investigation Plans

Drawing No.	Title
25 244 / 1	Site Location
25 244 / 2	Piece of Land Plan
25 244 / 3	Site Investigation Plan
18781	Proposed Bridge Civil Drawings Earthwork Plan, RS Eng Limited, 23/04/2025.

Legend

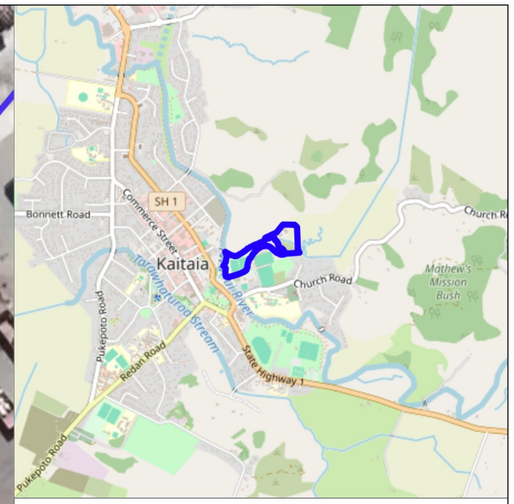
Lot Boundary

0 25 m 50 m

HAIGH WORKMAN Civil & Structural Engineers

Produced by **Datanest.earth**

Title: Site Location Plan		
Client: FNDC		Size: A3
Project: Kaitaia Recycling and Refuse Centre Birdge	Drawn: JCum	Drawing No.: 1
Date: 12-12-2025	Checked: AT	
Proj No: 25 224	Scale: 1:2500	Version: REV1



Legend

- Piece of Land
- Lot Boundary

0 5 m 10 m

HAIGH WORKMAN Civil & Structural Engineers

Produced by **Datanest.earth**

Title: Piece of Land Plan		
Client: FNDC		Size: A3
Project: Kaitaia Recycling and Refuse Centre Birdge	Drawn: JCum	Drawing No.: 2
Date: 12-12-2025	Checked: AT	
Proj No: 25 224	Scale: 1:500	Version: REV1

Legend

- Untitled Group - 2
- Piece of Land
- Lot Boundary

0 5 m 10 m

HAIGH WORKMAN Civil & Structural Engineers

Produced by **Datanest.earth**

Title: Site investigation Plan		
Client: FNDC		Size: A3
Project: Kaitaia Recycling and Refuse Centre Birdge	Drawn: JCum	Drawing No.: 3
Date: 12-12-2025	Checked: AT	
Proj No: 25 224	Scale: 1:500	Version: REV1

Appendix B – Photographic Documentation

1. Existing bridge to waste transfer station.

2. Landfill material in northern bank of Church Road Gully Drain.

3. Landfill material in northern bank of Church Road Gully Drain.

4. Northern side of bridge.

5. Textile material analysed for asbestos. Confirmed as not containing asbestos.

Appendix C - Historical Aerial Photography

NOTE: Site boundaries indicative only

1950, Retrolens.

1970, Retrolens.

1977, Retrolens.

1981, Retrolens.

2000, NRC.

2006, NRC

2010, NRC

2013, Google Earth Pro.

2016, Google Earth Pro.

2018, Google Earth Pro.

2019, Google Earth Pro.

2020, Google Earth Pro.

2022, Google Earth Pro.

2024, Google Earth Pro.

Appendix D – Certificate of Title

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA46D/469**
Land Registration District	**North Auckland**
Date Issued	26 March 1980

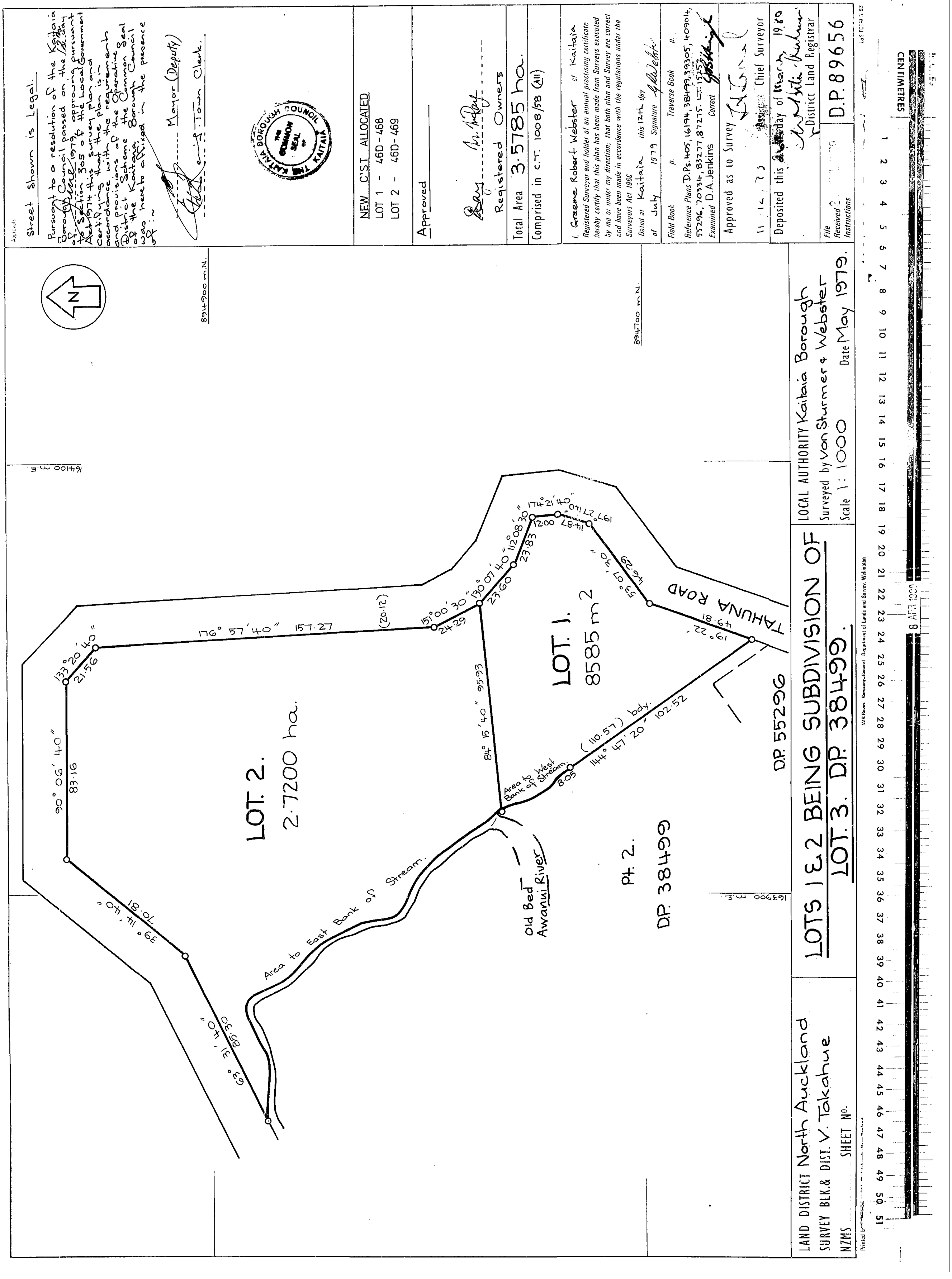
Prior References
NA1008/58

Estate	Fee Simple
Area	2.7200 hectares more or less
Legal Description	Lot 2 Deposited Plan 89656
Registered Owners	

Kaitaia Borough Council

Interests

13202443.1 CAVEAT BY TOP ENERGY LIMITED - 11.2.2025 at 9:27 am


Street shown is Legal.
Pursuant to a resolution of the Kaitaia Borough Council
THE KAITAIA BOROUGH COUNCIL THE COMMON SEAL OF
Mayor (Deputy)
Town Clerk.
NEW C'S'T ALLOCATED
LOT 1 - 46D-468
LOT 2 - 46D-469
Approved
Registered Owners
Total Area 3·5785 ha
Comprised in C.T. 1008/58 (All)
I, Graeme Robert Webster of Kaitaia Registered Surveyor and holder of an annual practising certificate hereby certify that this plan has been made from Surveys executed by me or under my direction; that both plan and Survey are correct and have been made in accordance with the regulations under the Surveyors Act 1966.
Dated at Kaitaia this 12th day of July 1979 Signature
Field Book p. Traverse Book p.
Reference Plans D.P.s 405, 16194, 38499, 39305, 40304, 55296, 70334, 83277, 87275.
Examined D.A. Jenkins Correct
Approved as to Survey Chief Surveyor
Deposited this day of March 1980
District Land Registrar
File
Received
Instructions
D.P. 89656
LOCAL AUTHORITY Kaitaia Borough
Surveyed by Von Sturmer & Webster
Scale 1:1000 Date May 1979.
LOTS 1 & 2 BEING SUBDIVISION OF
LOT 3. DP 38499.
LAND DISTRICT North Auckland
SURVEY BLK.& DIST. V. Takahue
NZMS SHEET No.
LOT 1. 8585 m2
LOT 2. 2·7200 ha.
TAHUNA ROAD
DP 55296
Pt. 2. DP 38499
Old Bed Awanui River
Area to East Bank of Stream.
Area to West Bank of Stream.
176° 57' 40" 157·27
84° 15' 40" 95·93
144° 47' 20" 102·52
90° 06' 40" 83·16
894900 m.N.
894700 m.N.
164100 m.E.
163900 m.E.
CENTIMETRES

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Historical Search Copy

R.W. Muir
Registrar-General
of Land

Constituted as a Record of Title pursuant to Sections 7 and 12 of the Land Transfer Act 2017 - 12 November 2018

Identifier **NA46D/469**

Land Registration District **North Auckland**

Date Issued 26 March 1980

Prior References
NA1008/58

Estate Fee Simple

Area 2.7200 hectares more or less

Legal Description Lot 2 Deposited Plan 89656

Original Registered Owners
Kaitaia Borough Council

Interests

13202443.1 CAVEAT BY TOP ENERGY LIMITED - 11.2.2025 at 9:27 am

References
Prior C/T 1008/58

Transfer No.
N/C. Order No. 763488.3

Land and Deeds 69

No. 46D / 469

REGISTER

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 26th day of March one thousand nine hundred and eighty under the seal of the District Land Registrar of the Land Registration District of NORTH AUCKLAND.

WITNESSETH that EDMOND CLAUDE RAY of Kaitaia civil servant and MYRA MARY RAY his wife are

~~xix~~ seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 2.7200 hectares more or less being Lot 2 on Deposited Plan 89656 and being part of Old Land Calim 242

DISTRICT LAND REGISTRAR NORTH AUCKLAND

Assistant Land Registrar

196758.1 Settled under the Joint Family Homes Act 1964 - 19.11.1975 at 10.56 o'c

A.L.R.

599697.1 CAVEAT BY KAITAIA BOROUGH COUNCIL - 24.4.1990 at 9.06 o'c

WITHDRAWN 13 Aug 96

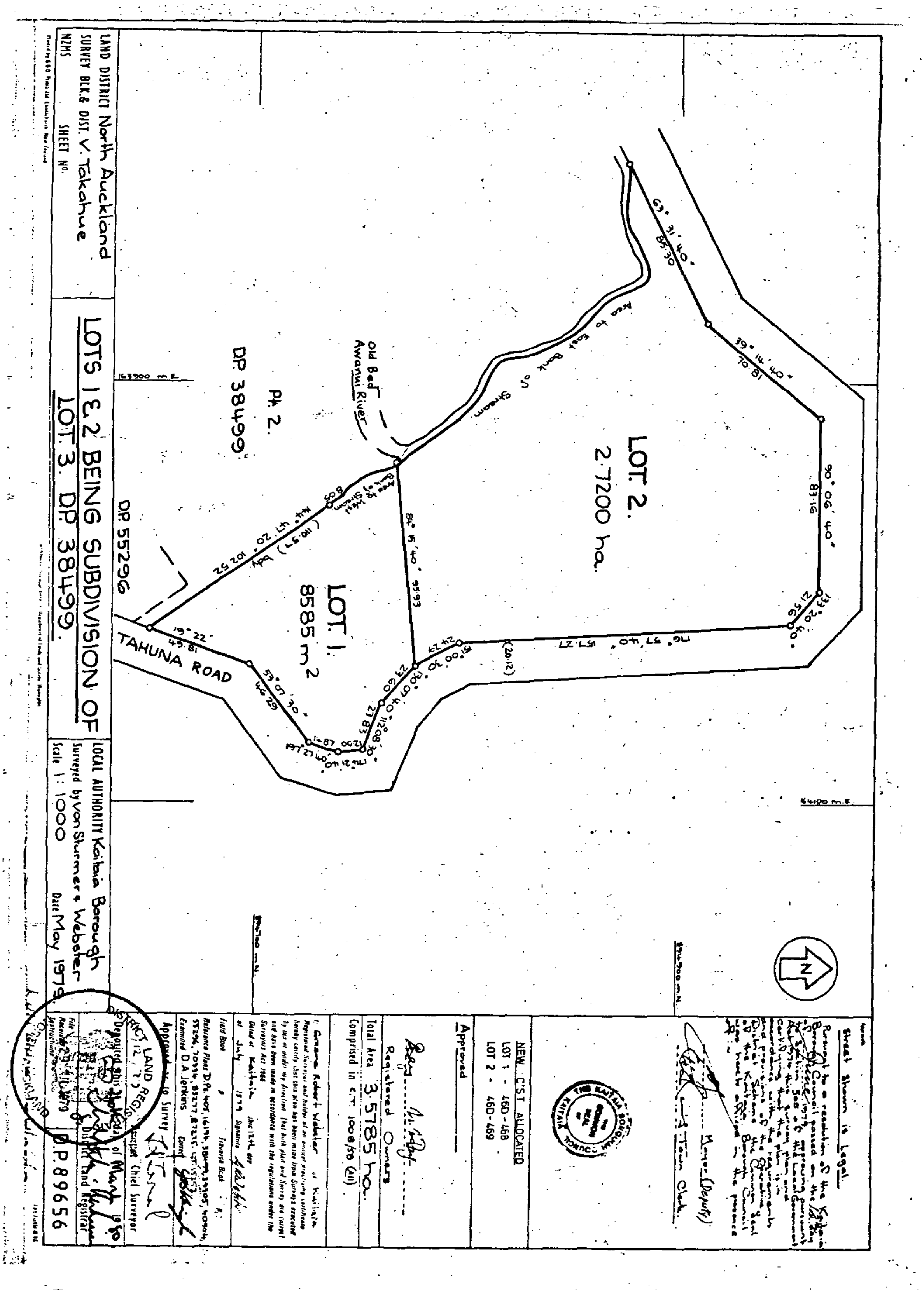
A.L.R.

B.505725.2 Transfer to Kaitaia Borough Council as Kaitaia - 13.2.1986 at 9.25oc

D Burrell
A.L.R.

No. 46D / 469

Measurements are Metric


LAND DISTRICT North Auckland
SURVEY BLK.& DIST. V. Takahue
NZMS SHEET No.
LOTS 1 & 2 BEING SUBDIVISION OF
LOT 3. DP 38499.
LOCAL AUTHORITY Kaitaia Borough
Surveyed by Von Sturmer & Webster
Scale 1: 1000
Date May 1979
Pt 2.
DP 38499
DP 55296
LOT 2.
2.7200 ha.
LOT 1.
8585 m2
TAHUNA ROAD
Old Bed Awanui River
Area to East Bank of Stream
NEW C/T ALLOCATED
LOT 1 - 46D-468
LOT 2 - 46D-469
Approved
Registered Owners
Total Area 3.5785 ha
Street shown is legal.
Mayor (Deputy)
Town Clerk
D.P. 89656

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **NA725/9**

Part-Cancelled

Land Registration District **North Auckland**

Date Issued 05 February 1940

Prior References
NA412/200

Estate	Fee Simple
Area	3.7775 hectares more or less
Legal Description	Part Lot 332 Deposited Plan 12724
Purpose	Public Domain

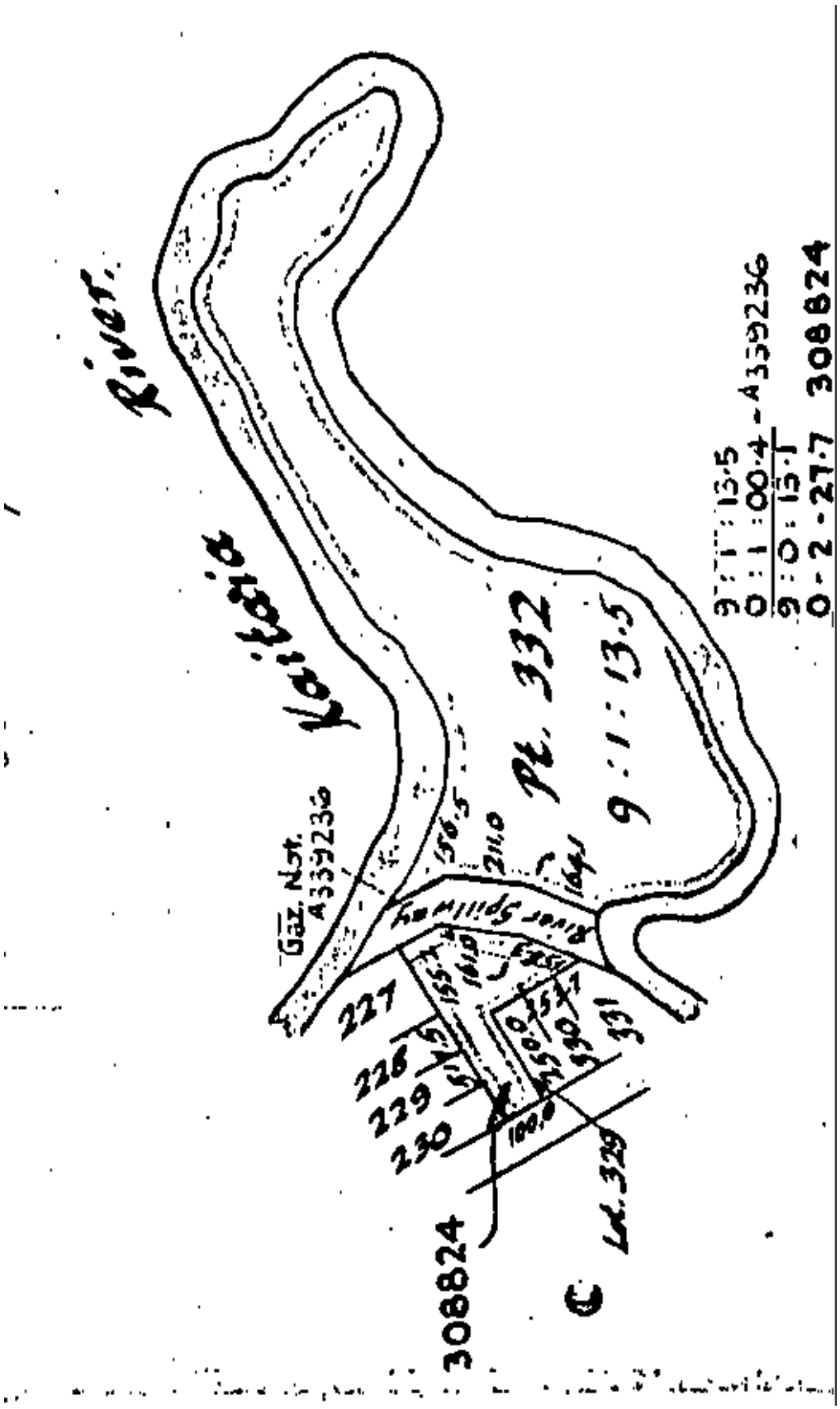
Registered Owners
Her Majesty the Queen

Interests

Subject to Public Reserves, Domains, and National Parks Act 1928

A339236 Setting apart for river control purposes 1r 0.4p - 11.2.1969 at 9.00 am

308824.2 Gazette Notice declaring part (2.724m²) shall cease to be subject to part III Reserves and Domains Act 1953 - 30.9.1974 at 9.12 am


River
Waipaoa
Gaz. Not. A339236
Pt. 332
9 : 1 : 13.5
9 : 1 : 13.5
0 : 1 : 00.4 - A339236
9 : 0 : 13.1
0 - 2 - 27.7 308824
227
226
229
230
311
Lot 329
308824

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Historical Search Copy

R.W. Muir
Registrar-General
of Land

Constituted as a Record of Title pursuant to Sections 7 and 12 of the Land Transfer Act 2017 - 12 November 2018

Identifier **NA725/9**

Part-Cancelled

Land Registration District **North Auckland**

Date Issued 05 February 1940

Prior References
NA412/200

Estate	Fee Simple
Area	3.7775 hectares more or less
Legal Description	Part Lot 332 Deposited Plan 12724
Purpose	Public Domain

Original Registered Owners
Her Majesty the Queen

Interests

Subject to Public Reserves Domains and National Parks Act 1928

A339236 Setting apart for river control purposes 1r 0.4p - 11.2.1969 at 9.00 am

308824.2 Gazette Notice declaring part (2.724m²) shall cease to be subject to part III Reserves and Domains Act 1953 - 30.9.1974 at 9.12 am

11734561.1 Departmental dealing correcting memorial to Public Reserves, Domains, and National Parks Act 1928 - 15.4.2020 at 7:00 am

REGISTER

[Land and Deeds—4

Form B.

PART CANCELLED

NEW ZEALAND.

PART TAKEN BY GAZETTE NOTICE

Reference: Vol. 412, Folio 200; Transfer No. 318056; Application No.; Order for N/C No.

Register-book, Vol. 725, folio 9.

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT.

This Certificate, dated the fifth day of February, one thousand nine hundred and forty under the hand and seal of the District Land Registrar of the Land Registration District of AUCKLAND Witnesseth that HIS MAJESTY THE KING for the purposes of a public domain,

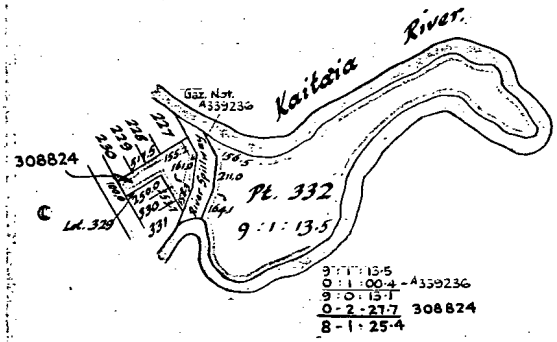
is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial under written or endorsed hereon; subject also to any existing right of the Crown to take and lay off roads under the provisions of any Act of the General Assembly of New Zealand) in the land hereinafter described, as the same is delineated by the plan hereon bordered green, be the several admeasurements a little more or less, that is to say: All that parcel of land containing nine acres one rood thirteen and five tenths perches more or less situated in the Kaitaia Town District being part of Lot three hundred and thirty-two (332) on a plan deposited in the Land Registry Office at Auckland as No.12724 and being portion of Old Land Claim No.7.

METRIC AREA IS 3.7774 ha

3.7774ha

Conversion Factors:
1 Acre = 4046m²
1 Perch = 25.29m²
1 Link = .2012 metres

Plan Dep 12724



Scale: 5 Chains to an Inch.

M. Williams

Assistant ~~District~~ Land Registrar.

The above described land vests in His Majesty the King pursuant to and is subject to the provisions of the Public Reserves Domains and National Parks Act 1928.

M. Williams
Asst. L.R.

A.339236 setting apart for river control purposes 1r 0:4p 4/7/1962 at 9.0

THIS REPRODUCTION (ON A REDUCED SCALE) ~~CERTIFIED TO BE A TRUE COPY OF THE~~ ORIGINAL REGISTER FOR THE PURPOSES OF SECTION 215A LAND TRANSFER ACT 1952.

L.G. Sterman
D.L.R.

308824.1 Order in Council declaring the within land to be subject to Part II Public Reserves Domains and National Parks Act 1928 and shall hereafter be known as SUNRAY PARK DOMAIN and be managed administered and dealt with as a public domain 30-9-1974 at 9.12 a.m.

308824.2 Gazette Notice declaring part (2724 m²) shall cease to be subject to part III Reserves and Domains Act 1953 and be deemed to be a recreation reserve subject to part II Reserves and Domains Act 1953 and further revokes the reservation for recreation purposes over the said reserve 30.9.1974 at 9.12 a.m.

Appendix E – Northland Regional Council Contamination Enquiry

Josh Cuming

From: Contaminated Land Management Team <contamination@nrc.govt.nz>
Sent: Tuesday, 11 November 2025 2:25 pm
To: Josh Cuming
Subject: RE: Contamination enquiry: 22 Church Road, Kaitaia

Kia ora Josh

Please see the SLU, consenting and environmental incident information we hold for 22 Church Road, Kaitaia (see Tahuna Road entry below this). There are no incidents recorded within 100 m of the site.

SLU:

IRIS ID:	SLU.803224
Site Name:	Closed landfill & waste transfer station - Church Road, Kaitaia
Description:	Church Road, Kaitaia. Site was historically a landfill, a waste transfer station is currently operational on site and has a resource consent for wastewater which is monitored by NRC under REG.019502.01.
Status	Verified HAIL: Risk not quantified
HAIL activities	G3. Landfill sites
	G6. Waste recycling or waste or wastewater treatment

Event notes:
11/08/2008 “The Kaitaia landfill was in use for many years and is sited just out of the town. The site is now used for a transfer station and recycling centre which is owned and managed by CBEC. There is very little further information available about the site. A low key investigation and sampling of the site is required. last data entry 19 June 2007 Category V site.”

Incidents

IRIS ID	Request subject	Description	Logged date
REQ.592004	Other water incident	Stormwater discharge to stream @ Church Rd, Kaitaia	31/10/2018, 12:00 am
REQ.407895	Other water incident	Excessive mud and ponded stormwater at CBEC	24/09/2002, 12:00 am
REQ.571081	Farm dairy effluent and dead stock	Two dead sheep in river @ Kaitaia	22/08/2013, 12:00 am

REQ.595425	Other water incident	Concerns over discharges from waste management site @ Church Rd, Kaitaia	24/06/2019, 12:00 am

Consents

IRIS ID	TYPE	SUBTYPE	AUTHORISATION NAME	STATUS
AUT.019502.01.01	Water discharge	Sewage	Far North District Council - Discharges from Kaitaia Resource Recovery Centre	Expired - S.124 Protection
AUT.019502.02.01	Water discharge	Water to Water	Far North District Council - Discharges from Kaitaia Resource Recovery Centre	Expired - S.124 Protection
AUT.046990.03.01	Water discharge	Other	Far North District Council - Discharge sediment tp water at 22 Church Road, Kaitaia	Current
AUT.046990.02.01	Water Permit	Diversion	Far North District Council - Divert water at 22 Church Road, Kaitaia	Current
AUT.046990.05.01	Water Permit	Diversion	Far North District Council - Diver SW during earthworks at 22 Church Road, Kaitaia	Current
AUT.046990.06.01	Land discharge	Stormwater	Far North District Council - Discharge SW to land at 22 Church Road, Kaitaia	Current
AUT.046990.01.01	Land Use Consent	Earthworks	Far North District Council - Bridge construction at 22 Church Road, Kaitaia	Current
AUT.046990.04.01	Land Use Consent	Earthworks	Far North District Council - Earthworks for site development at 22 Church Road, Kaitaia	Current

The property at Tahuna Road (Bedgood Park) is not listed on the SLU, and does not hold any current or expired resource consents. There is one environmental **incident** reported as follows:

IRIS ID	Request subject	Description	Logged date
REQ.405768	Dust nuisance	Dust and odour nuisance from industrial premises. Dust was causing a nuisance from Reed Earthmovers yard next door. Coming from piles of Woodchip, bark, compost etc.	07/11/2000, 12:00 am

Nāku noa, nā

Penelope Lindsay
Environmental Monitoring Officer – Waste Management and Contaminated Land
Northland Regional Council » Te Kaunihera ā rohe o Te Taitokerau

M 027 203 0826

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

From: Josh Cuming <joshcuming@haighworkman.co.nz>
Sent: Monday, 10 November 2025 4:13 pm
To: Contaminated Land Management Team <contamination@nrc.govt.nz>
Subject: Contamination enquiry: 22 Church Road, Kaitaia

Hi

Please may we have any information on file regarding HAIL and environmental incidents onsite and within 100 m of the below sites?

Property Details: 22 Church Road, Kaitaia, Far North

Parcel Details: Lot 2 DP 89656

Parcel ID:	5002491
Address:	22 Church Road, Kaitaia, Far North
Legal Parcel:	Lot 2 DP 89656
Centroid:	6114454.22 mN, 1624797.93 mE
Plan:	View Plan DP 89656 View Observations
Parcel Intent:	Digital Cadastral Database Conversion
Status:	Current
Non-survey Definition:	
Land District:	North Auckland
Area:	2.7200 ha
Calculated Area:	
Statutes:	
Titles:	Freehold: NA46D/469
Owners:	Kaitaia Borough Council

Property Details: 0 Tahuna Road, Kaitaia, Far North

Parcel Details: Marked C DP 404338

Parcel Details: Pt Lot 332 DP 12724

Parcel ID:	4716906
Address:	0 Tahuna Road, Kaitaia, Far North
Legal Parcel:	Pt Lot 332 DP 12724
Centroid:	6114276.17 mN, 1624452.02 mE
Plan:	View Plan DP 12724 View Observations
Parcel Intent:	Fee Simple Title
Status:	Current
Non-survey Definition:	
Land District:	North Auckland
Area:	3.4029 ha
Calculated Area:	
Statute:	1 statute
Titles:	Freehold: NA725/9 Freehold: NA412/200
Owners:	Her Majesty the Queen

Kind regards

Josh Cuming
Environmental Geologist
CEnvP, MEIANZ.
Phone 09 407 8327
joshcuming@haighworkman.co.nz

Appendix F –Far North Council Property Files (Available on request)

Appendix G – Soil Sample Descriptions

Date	Trial Pit ID	Depth (m bgl)	Soil Description	Analysis
24/11/2025	HA1	0.075	Silty TOPSOIL, brown (fill).	Metals, TPH, PAH, BTEX, OCP.
	HA2	0.075	Silty TOPSOIL, brown (fill).	Metals, TPH, PAH, BTEX.
	HA2	0.4	SILT, brown (fill).	Metals, TPH, PAH, BTEX.
	HA3	0.075	Silty TOPSOIL, brown (fill).	Metals, TPH, PAH, BTEX, OCP, Semi Quantitative Asbestos.
	HA3	0.8	SILT, brown (fill).	Metals, TPH, PAH, BTEX, OCP.
	HA3	1.5	SILT, brown (fill).	Metals, TPH, PAH, BTEX, OCP.
	HA4	0.075	Silty TOPSOIL, brown with plastic and glass (fill).	Metals, TPH, PAH, BTEX.
	HA4	0.3	SILT, brown with plastic and glass (fill).	Metals, TPH, PAH, BTEX.
	HA6	0.075	Silty TOPSOIL, dark brown (fill).	Metals, TPH, PAH, BTEX.
	HA6	0.3	SILT, brown with frequent gravel (fill).	Metals, TPH, PAH, BTEX.
	HA6	1.0	SILT, brown with frequent gravel (fill).	Metals, TPH, PAH, BTEX, OCP.
	HA7	0.075	SILT, brown, with some gravel (fill).	Metals, TPH, PAH, BTEX, OCP, Semi Quantitative Asbestos.
	HA8 (dup)	0.075	Silty TOPSOIL, brown (fill).	Metals

TP – Trial pit
m bgl – meters below ground level
TPH – Total Petroleum Hydrocarbons
dup – Duplicate sample
OCP – Organochlorine Pesticides
PAH – Polycyclic Aromatic Hydrocarbons

Appendix H – Laboratory Analytical Results Table(s)

Analyte	Units	Background levels	Human Health, Industrial	HA1 0.075	HA8 0.075	HA2 0.075	HA2 0.4	HA3 0.8	HA3 1.5	HA4 0.075	HA4 0.3	HA6 0.075	HA6 0.3	HA6 1.0	HA3 0.075	HA7 0.075
Depth																
Sampled Date				24-11-2025	24-11-2025	24-11-2025	24-11-2025	24-11-2025	24-11-2025	24-11-2025	24-11-2025	24-11-2025	24-11-2025	24-11-2025	24-11-2025	24-11-2025
2,4-DDT	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
4,4-DDE	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
a-BHC	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Acenaphthene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Acenaphthylene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03	0.11	< 0.02	< 0.02	0.03
Aldrin	mg/kg		160[1,5]	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Anthracene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03	< 0.02	< 0.02	< 0.02
Arsenic	mg/kg	**4.1**	70[1,13]	2.07	2.06	1.18	0.79	1.48	0.97	3.02	1.87	**19.4**	3.4	1.35	3.2	9.04
b-BHC	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Benzene	mg/kg		8[3]	< 0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a) pyrene	mg/kg		35[1,6,7,8]	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	0.03	< 0.02	0.05	0.14	< 0.02	0.03	0.06
Benzo(a)anthracene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	0.05	< 0.02	0.07	0.1	< 0.02	0.04	0.09
Benzo(a)pyrene TEQ (LOR)	mg/kg		35[1,6,7,8]	0.05	-	0.05	0.05	0.05	0.05	0.07	0.05	0.09	0.24	0.05	0.06	0.11
Benzo(a)pyrene TEQ calc (Half)	mg/kg		35[1,6,7,8]	0.02	-	0.02	0.02	0.02	0.02	0.06	0.02	0.08	0.24	0.02	0.05	0.1
Benzo(a)pyrene TEQ calc (Zero)	mg/kg		35[1,6,7,8]	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	0.05	< 0.02	0.07	0.24	< 0.02	0.04	0.09
Benzo(b+j)fluoranthene	mg/kg		-	0.02	-	0.03	< 0.02	< 0.02	< 0.02	0.08	< 0.02	0.11	0.31	< 0.02	0.06	0.14
Benzo(g,h,i)perylene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	0.05	< 0.02	0.08	0.22	< 0.02	0.06	0.1
BTEX (sum)	mg/kg		-	< 0.15	-	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
C10-C14 Fraction	mg/kg		1,400[4,9,10]	< 1	-	< 1	< 1	< 1	< 1	< 1	< 1	1.2	< 1	1.9	< 1	4
C15-C36 Fraction	mg/kg		20,000[4,11]	22	-	38	< 1	< 1	< 1	26	< 1	160	46	15	110	420
C7-C36 Fraction	mg/kg		-	22	-	38	< 1	< 1	< 1	26	< 1	160	46	17	110	430
C7-C9 Fraction	mg/kg		120[4,12]	< 1	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Cadmium	mg/kg	**0.2**	1,300[1,13,14]	**0.22**	**0.23**	0.14	0.14	**0.27**	0.18	**0.27**	**0.27**	**0.36**	**0.35**	**0.21**	**0.32**	**0.57**
Chlordane	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Chlordane (total)	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Chlordane (trans)	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Chromium (III+VI)	mg/kg	**15.5**	6,300[1]	30.9	30.7	75	80	74.5	79.4	37.7	75.6	85.3	38.7	65.2	52.3	41.1
Chrysene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	0.03	< 0.02	0.05	0.13	< 0.02	0.03	0.05
Copper	mg/kg	**15.7**	10,000[1,15]	**42.9**	**43**	**40.5**	**44.5**	**50.4**	**37.5**	**58.5**	**44.1**	**69.2**	**285**	**39.4**	**60**	**87.4**
d-BHC	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
DDD	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
DDT	mg/kg		-	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	-	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03	< 0.02	< 0.02	< 0.02
Dieldrin	mg/kg		160[1,5]	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Diuron	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Endosulfan I	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Endosulfan II	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Endosulfan sulphate	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Endrin	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Endrin aldehyde	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Endrin ketone	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Fluoranthene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	0.06	< 0.02	0.11	0.14	< 0.02	0.03	0.09
Fluorene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
g-BHC (Lindane)	mg/kg		14,000[2]	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Heptachlor	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Heptachlor epoxide	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Hexachlorobenzene	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Indeno(1,2,3-c,d)pyrene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	0.04	< 0.02	0.05	0.17	< 0.02	0.03	0.06
Lead	mg/kg	**11.4**	3,300[1]	**22.4**	**22.5**	7.8	3.9	**26.6**	**9.6**	**34.3**	**12.7**	**57.1**	**44.9**	**36**	**35**	**95**
Mercury	mg/kg		4,200[1]	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Methoxychlor	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Naphthalene	mg/kg		200[3]	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Nickel	mg/kg	**9.5**	-	**21.8**	**22**	**37.9**	**44.8**	**40.4**	**42**	**25.1**	**40.7**	**28.7**	**26.5**	**30.4**	**32.9**	**25.5**
o,p-DDD	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
o,p'-DDE	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Permethrin	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Phenanthrene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03	< 0.02	< 0.02	< 0.02
Procymidone	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Propanil	mg/kg		-	< 0.02	-	-	-	< 0.02	< 0.02	-	-	-	-	< 0.02	< 0.02	< 0.02
Pyrene	mg/kg		-	< 0.02	-	< 0.02	< 0.02	< 0.02	< 0.02	0.08	< 0.02	0.12	0.19	< 0.02	0.03	0.07
Toluene	mg/kg		600[3]	< 0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	mg/kg		-	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	-	< 0.05	< 0.05	< 0.05
Xylene (m & p)	mg/kg		-	< 0.15	-	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Xylene (o)	mg/kg		-	< 0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Zinc	mg/kg	**47.5**	-	**145**	**147**	**90**	**87**	**184**	**98**	**154**	**118**	**298**	**180**	**96**	**213**	**533**
Asbestos (FA/AF)	% w/w		0.001	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001

Scenarios:

Shaded	Indicates result exceeds for Human Health, Industrial
Shaded	Indicates a non-detect exceedance

Criteria adopted from the following guidelines:

[1]Methodology for Deriving Soil Guideline Values Protective of Human Health (NES, 2011) Criteria for Human Health, Industrial
[2]Identifying, Investigating and Managing Risks Associated with Former Sheep-dip Sites (MfE, 2006) Criteria for Human Health, Industrial
[3]Users' Guide to the Guidelines for Assessing and Managing Contaminated Gasworks Sites in New Zealand (MfE, 1997) Criteria for Human Health, Industrial
[4]Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand (MfE 1999) Criteria for Human Health, Industrial

Notes:

This table does not represent the full analytical results, please refer to the laboratory results for full details.

Guideline Notes:

[5]The SCS is applicable to either dieldrin or aldrin separately, or to the sum of aldrin and dielrin if both are involved.
[6]For benzo(a)pyrene, the equivalent BaP concentration is calculated as the sum of each of the detected concentrations of nine carcinogenic PAHs (benzo(a)anthracene, benzo(b)fluoranthene, benzo(j)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluoranthene and indeno(1,2,3-cd) pyrene), multiplied by their respective potency equivalency factors
[7]TEQ
[8]BaPs or mixtures
[9]Limiting pathway -PAH surrogate
[10]Likely to form residual separate phase
[11]Health based criterio is not applicable and 20,000mg/kg adopted. At 20,000 mg/kg residual separate phase is expected to have formed in soil matrix. Some aesthetic impact may be noted.
[12]Limiting pathway -Maintenance/excavation
[13]Human health
[14]pH 5. Concentrations increase with increasing pH.
[15]No limit – the derived value exceeds 10,000 mg/kg, a concentration that is unlikely to be exceeded in practice.

Appendix I – Laboratory Analytical Results (Eurofins) and Chain of Custody Documentation

Environment Testing NZ

ANALYTICAL REPORT

REPORT CODE **AR-25-NU-116890-01** REPORT DATE **03/12/2025**

Attention Haigh Workman Limited
Josh Cuming
6 Fairway Drive
230 Kerikeri
NEW ZEALAND
Phone +642885160190
Email joshcuming@haighworkman.co.nz

Contact for your orders: Frances Gilvray **Order code:** EUNZAU-00855996
Contract: Enviro
Reception Date & Time: 27/11/2025 7:00:00am
Submission Reference: Kaitaia Refuse Transfer Station,25224

SAMPLE CODE:	**816-2025-00316523**	**816-2025-00316524**	**816-2025-00316525**	**816-2025-00316526**
Sample Name:	HA1 0.075	HA8 0.075	HA2 0.075	HA2 0.4
Product Type:	Soil	Soil	Soil	Soil
Analysis Started on:	27/11/2025	27/11/2025	27/11/2025	27/11/2025
Analysis Ending Date:	03/12/2025	01/12/2025	03/12/2025	03/12/2025
Date & Time Received	27/11/2025 07:00	27/11/2025 07:00	27/11/2025 07:00	27/11/2025 07:00
Sampled Date & Time	24/11/2025 00:00	24/11/2025 00:00	24/11/2025 00:00	24/11/2025 00:00
Sampled By	Joshua Cuming	Joshua Cuming	Joshua Cuming	Joshua Cuming
Attempt to Chill was evident	Yes	Yes	Yes	Yes
Sample correctly preserved	Yes	Yes	Yes	Yes
Appropriate sample containers used	Yes	Yes	Yes	Yes

	LOQ	Unit				
ORGANICS						
②**NW04T Organochlorine Pesticides**						
2,3-Diuron	0.02	mg/kg	<0.02	-	-	-
2,4´-DDT	0.02	mg/kg	<0.02	-	-	-
2,4'-DDD	0.02	mg/kg	<0.02	-	-	-
2,4'-DDE	0.02	mg/kg	<0.02	-	-	-
a-BHC	0.02	mg/kg	<0.02	-	-	-
a-chlordane	0.02	mg/kg	<0.02	-	-	-
Aldrin	0.02	mg/kg	<0.02	-	-	-
b-BHC	0.02	mg/kg	<0.02	-	-	-
Chlordane (total)	0.04	mg/kg	<0.02	-	-	-
cis-Permethrin	0.02	mg/kg	<0.02	-	-	-
Dieldrin	0.02	mg/kg	<0.02	-	-	-
Endosulfan I	0.02	mg/kg	<0.02	-	-	-
Endosulfan II	0.02	mg/kg	<0.02	-	-	-
Endosulfan Sulfate	0.02	mg/kg	<0.02	-	-	-
Endrin	0.02	mg/kg	<0.02	-	-	-
Endrin Aldehyde	0.02	mg/kg	<0.02	-	-	-
Endrin ketone	0.02	mg/kg	<0.02	-	-	-
Gamma-Chlordane	0.02	mg/kg	<0.02	-	-	-

SAMPLE CODE:			816-2025-00316523	816-2025-00316524	816-2025-00316525	816-2025-00316526
Sample Name:			HA1 0.075	HA8 0.075	HA2 0.075	HA2 0.4
HCH, delta-	0.02	mg/kg	<0.02	-	-	-
Heptachlor	0.02	mg/kg	<0.02	-	-	-
Heptachlor Epoxide	0.02	mg/kg	<0.02	-	-	-
Hexachlorobenzene	0.02	mg/kg	<0.02	-	-	-
Lindane (g-BHC)	0.02	mg/kg	<0.02	-	-	-
Methoxychlor	0.02	mg/kg	<0.02	-	-	-
p,p'-DDD	0.02	mg/kg	<0.02	-	-	-
p,p'DDE	0.02	mg/kg	<0.02	-	-	-
p,p'-DDT	0.05	mg/kg	<0.05	-	-	-
Procymidone	0.02	mg/kg	<0.02	-	-	-
Propanil	0.02	mg/kg	<0.02	-	-	-
Sum of DDT and isomers	0.05	mg/kg	<0.05	-	-	-
Toxaphene	0.05	mg/kg	<0.05	-	-	-
②**NWEBH PAH BaP TEQ**						
Acenaphthene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Acenaphthylene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Anthracene	0.02	mg/kg	<0.02	-	<0.02	<0.02
benz (a) anthracene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Benzo(a)pyrene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Benzo(a)pyrene TEQ (lower bound)	0.02	mg/kg	<0.02	-	<0.02	<0.02
Benzo(a)pyrene TEQ (medium bound)	0.02	mg/kg	0.02	-	0.02	0.02
Benzo(a)pyrene TEQ (upper bound)	0.02	mg/kg	0.05	-	0.05	0.05
Benzo(b+k)fluoranthene	0.02	mg/kg	0.02	-	0.03	<0.02
Benzo(g,h,i)perylene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Chrysene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Dibenz(a,h)anthracene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Fluoranthene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Fluorene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Indeno(1,2,3-cd)pyrene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Naphthalene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Phenanthrene	0.02	mg/kg	<0.02	-	<0.02	<0.02
Pyrene	0.02	mg/kg	<0.02	-	<0.02	<0.02
②**NW37K TRH C7 - C36**						
TRH C10-C14	1	mg/kg	<1	-	<1	<1
TRH C15-C36	1	mg/kg	22	-	38	<1
TRH C7 - C9	1	mg/kg	<1	-	<1	<1
TRH C7-C36 (total)	1	mg/kg	22	-	38	<1
②**NW0AK BTEX**						
Benzene	0.05	mg/kg	<0.05	-	<0.05	<0.05

SAMPLE CODE:			816-2025-00316523	816-2025-00316524	816-2025-00316525	816-2025-00316526
Sample Name:			HA1 0.075	HA8 0.075	HA2 0.075	HA2 0.4
BTEX (sum)	0.15	mg/kg	<0.15	-	<0.15	<0.15
o-Xylene	0.05	mg/kg	<0.05	-	<0.05	<0.05
Toluene	0.05	mg/kg	<0.05	-	<0.05	<0.05
Total p,m Xylene, Ethylbenzene	0.15	mg/kg	<0.15	-	<0.15	<0.15
② **NW499 Arsenic - Total**	0.05	mg/kg	2.07	2.06	1.18	0.79
② **NW504 Cadmium - Total**	0.01	mg/kg	0.22	0.23	0.14	0.14
② **NW507 Chromium - Total**	0.2	mg/kg	30.9	30.7	75.0	80.0
② **NW509 Copper - Total**	0.3	mg/kg	42.9	43.0	40.5	44.5
② **NW511 Lead - Total**	0.1	mg/kg	22.4	22.5	7.8	3.9
② **NW515 Mercury - Total**	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
② **NW517 Nickel - Total**	0.2	mg/kg	21.8	22.0	37.9	44.8
② **NW528 Zinc - Total**	1	mg/kg	145	147	90	87

SAMPLE CODE:			816-2025-00316527	816-2025-00316528	816-2025-00316529	816-2025-00316530
Sample Name:			HA3 0.8	HA3 1.5	HA4 0.075	HA4 0.3
Product Type:			Soil	Soil	Soil	Soil
Analysis Started on:			27/11/2025	27/11/2025	27/11/2025	27/11/2025
Analysis Ending Date:			03/12/2025	03/12/2025	03/12/2025	03/12/2025
Date & Time Received			27/11/2025 07:00	27/11/2025 07:00	27/11/2025 07:00	27/11/2025 07:00
Sampled Date & Time			24/11/2025 00:00	24/11/2025 00:00	24/11/2025 00:00	24/11/2025 00:00
Sampled By			Joshua Cuming	Joshua Cuming	Joshua Cuming	Joshua Cuming
Attempt to Chill was evident			Yes	Yes	Yes	Yes
Sample correctly preserved			Yes	Yes	Yes	Yes
Appropriate sample containers used			Yes	Yes	Yes	Yes
	LOQ	**Unit**				
ORGANICS						
②**NW04T Organochlorine Pesticides**						
2,3-Diuron	0.02	mg/kg	<0.02	<0.02	-	-
2,4´-DDT	0.02	mg/kg	<0.02	<0.02	-	-
2,4'-DDD	0.02	mg/kg	<0.02	<0.02	-	-
2,4'-DDE	0.02	mg/kg	<0.02	<0.02	-	-
a-BHC	0.02	mg/kg	<0.02	<0.02	-	-
a-chlordane	0.02	mg/kg	<0.02	<0.02	-	-
Aldrin	0.02	mg/kg	<0.02	<0.02	-	-
b-BHC	0.02	mg/kg	<0.02	<0.02	-	-
Chlordane (total)	0.04	mg/kg	<0.02	<0.02	-	-
cis-Permethrin	0.02	mg/kg	<0.02	<0.02	-	-
Dieldrin	0.02	mg/kg	<0.02	<0.02	-	-
Endosulfan I	0.02	mg/kg	<0.02	<0.02	-	-
Endosulfan II	0.02	mg/kg	<0.02	<0.02	-	-
Endosulfan Sulfate	0.02	mg/kg	<0.02	<0.02	-	-
Endrin	0.02	mg/kg	<0.02	<0.02	-	-
Endrin Aldehyde	0.02	mg/kg	<0.02	<0.02	-	-
Endrin ketone	0.02	mg/kg	<0.02	<0.02	-	-
Gamma-Chlordane	0.02	mg/kg	<0.02	<0.02	-	-
HCH, delta-	0.02	mg/kg	<0.02	<0.02	-	-
Heptachlor	0.02	mg/kg	<0.02	<0.02	-	-
Heptachlor Epoxide	0.02	mg/kg	<0.02	<0.02	-	-
Hexachlorobenzene	0.02	mg/kg	<0.02	<0.02	-	-
Lindane (g-BHC)	0.02	mg/kg	<0.02	<0.02	-	-
Methoxychlor	0.02	mg/kg	<0.02	<0.02	-	-
p,p'-DDD	0.02	mg/kg	<0.02	<0.02	-	-
p,p'DDE	0.02	mg/kg	<0.02	<0.02	-	-
p,p'-DDT	0.05	mg/kg	<0.05	<0.05	-	-
Procymidone	0.02	mg/kg	<0.02	<0.02	-	-
Propanil	0.02	mg/kg	<0.02	<0.02	-	-
Sum of DDT and isomers	0.05	mg/kg	<0.05	<0.05	-	-

SAMPLE CODE:			816-2025-00316527	816-2025-00316528	816-2025-00316529	816-2025-00316530
Sample Name:			HA3 0.8	HA3 1.5	HA4 0.075	HA4 0.3
Toxaphene	0.05	mg/kg	<0.05	<0.05	-	-
②**NWEBH PAH BaP TEQ**						
Acenaphthene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
benz (a) anthracene	0.02	mg/kg	<0.02	<0.02	0.05	<0.02
Benzo(a)pyrene	0.02	mg/kg	<0.02	<0.02	0.03	<0.02
Benzo(a)pyrene TEQ (lower bound)	0.02	mg/kg	<0.02	<0.02	0.05	<0.02
Benzo(a)pyrene TEQ (medium bound)	0.02	mg/kg	0.02	0.02	0.06	0.02
Benzo(a)pyrene TEQ (upper bound)	0.02	mg/kg	0.05	0.05	0.07	0.05
Benzo(b+k)fluoranthene	0.02	mg/kg	<0.02	<0.02	0.08	<0.02
Benzo(g,h,i)perylene	0.02	mg/kg	<0.02	<0.02	0.05	<0.02
Chrysene	0.02	mg/kg	<0.02	<0.02	0.03	<0.02
Dibenz(a,h)anthracene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02	mg/kg	<0.02	<0.02	0.06	<0.02
Fluorene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
Indeno(1,2,3-cd)pyrene	0.02	mg/kg	<0.02	<0.02	0.04	<0.02
Naphthalene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
Phenanthrene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
Pyrene	0.02	mg/kg	<0.02	<0.02	0.08	<0.02
②**NW37K TRH C7 - C36**						
TRH C10-C14	1	mg/kg	<1	<1	<1	<1
TRH C15-C36	1	mg/kg	<1	<1	26	<1
TRH C7 - C9	1	mg/kg	<1	<1	<1	<1
TRH C7-C36 (total)	1	mg/kg	<1	<1	26	<1
②**NW0AK BTEX**						
Benzene	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
BTEX (sum)	0.15	mg/kg	<0.15	<0.15	<0.15	<0.15
o-Xylene	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Toluene	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Total p,m Xylene, Ethylbenzene	0.15	mg/kg	<0.15	<0.15	<0.15	<0.15
② **NW499 Arsenic - Total**	0.05	mg/kg	1.48	0.97	3.02	1.87
② **NW504 Cadmium - Total**	0.01	mg/kg	0.27	0.18	0.27	0.27
② **NW507 Chromium - Total**	0.2	mg/kg	74.5	79.4	37.7	75.6
② **NW509 Copper - Total**	0.3	mg/kg	50.4	37.5	58.5	44.1
② **NW511 Lead - Total**	0.1	mg/kg	26.6	9.6	34.3	12.7
② **NW515 Mercury - Total**	0.1	mg/kg	0.2	<0.1	<0.1	<0.1
② **NW517 Nickel - Total**	0.2	mg/kg	40.4	42.0	25.1	40.7
② **NW528 Zinc - Total**	1	mg/kg	184	98	154	118

	LOQ	Unit				
SAMPLE CODE:			**816-2025-00316531**	**816-2025-00316532**	**816-2025-00316533**	**816-2025-00316718**
Sample Name:			HA6 0.075	HA6 0.3	HA6 1.0	HA3 0.075
Product Type:			Soil	Soil	Soil	Soil
Analysis Started on:			27/11/2025	27/11/2025	27/11/2025	27/11/2025
Analysis Ending Date:			03/12/2025	03/12/2025	03/12/2025	03/12/2025
Date & Time Received			27/11/2025 07:00	27/11/2025 07:00	27/11/2025 07:00	27/11/2025 07:00
Sampled Date & Time			24/11/2025 00:00	24/11/2025 00:00	24/11/2025 00:00	24/11/2025 00:00
Sampled By			Joshua Cuming	Joshua Cuming	Joshua Cuming	
Attempt to Chill was evident			Yes	Yes	Yes	Yes
Sample correctly preserved			Yes	Yes	Yes	Yes
Appropriate sample containers used			Yes	Yes	Yes	Yes
ORGANICS						
②**NW04T Organochlorine Pesticides**						
2,3-Diuron	0.02	mg/kg	-	-	<0.02	<0.02
2,4´-DDT	0.02	mg/kg	-	-	<0.02	<0.02
2,4'-DDD	0.02	mg/kg	-	-	<0.02	<0.02
2,4'-DDE	0.02	mg/kg	-	-	<0.02	<0.02
a-BHC	0.02	mg/kg	-	-	<0.02	<0.02
a-chlordane	0.02	mg/kg	-	-	<0.02	<0.02
Aldrin	0.02	mg/kg	-	-	<0.02	<0.02
b-BHC	0.02	mg/kg	-	-	<0.02	<0.02
Chlordane (total)	0.04	mg/kg	-	-	<0.02	<0.02
cis-Permethrin	0.02	mg/kg	-	-	<0.02	<0.02
Dieldrin	0.02	mg/kg	-	-	<0.02	<0.02
Endosulfan I	0.02	mg/kg	-	-	<0.02	<0.02
Endosulfan II	0.02	mg/kg	-	-	<0.02	<0.02
Endosulfan Sulfate	0.02	mg/kg	-	-	<0.02	<0.02
Endrin	0.02	mg/kg	-	-	<0.02	<0.02
Endrin Aldehyde	0.02	mg/kg	-	-	<0.02	<0.02
Endrin ketone	0.02	mg/kg	-	-	<0.02	<0.02
Gamma-Chlordane	0.02	mg/kg	-	-	<0.02	<0.02
HCH, delta-	0.02	mg/kg	-	-	<0.02	<0.02
Heptachlor	0.02	mg/kg	-	-	<0.02	<0.02
Heptachlor Epoxide	0.02	mg/kg	-	-	<0.02	<0.02
Hexachlorobenzene	0.02	mg/kg	-	-	<0.02	<0.02
Lindane (g-BHC)	0.02	mg/kg	-	-	<0.02	<0.02
Methoxychlor	0.02	mg/kg	-	-	<0.02	<0.02
p,p'-DDD	0.02	mg/kg	-	-	<0.02	<0.02
p,p'DDE	0.02	mg/kg	-	-	<0.02	<0.02
p,p'-DDT	0.05	mg/kg	-	-	<0.05	<0.05
Procymidone	0.02	mg/kg	-	-	<0.02	<0.02
Propanil	0.02	mg/kg	-	-	<0.02	<0.02
Sum of DDT and isomers	0.05	mg/kg	-	-	<0.05	<0.05

SAMPLE CODE:			816-2025-00316531	816-2025-00316532	816-2025-00316533	816-2025-00316718
Sample Name:			HA6 0.075	HA6 0.3	HA6 1.0	HA3 0.075
Toxaphene	0.05	mg/kg	-	-	<0.05	<0.05
②**NWEBH PAH BaP TEQ**						
Acenaphthene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02	mg/kg	0.03	0.11	<0.02	<0.02
Anthracene	0.02	mg/kg	<0.02	0.03	<0.02	<0.02
benz (a) anthracene	0.02	mg/kg	0.07	0.10	<0.02	0.04
Benzo(a)pyrene	0.02	mg/kg	0.05	0.14	<0.02	0.03
Benzo(a)pyrene TEQ (lower bound)	0.02	mg/kg	0.07	0.24	<0.02	0.04
Benzo(a)pyrene TEQ (medium bound)	0.02	mg/kg	0.08	0.24	0.02	0.05
Benzo(a)pyrene TEQ (upper bound)	0.02	mg/kg	0.09	0.24	0.05	0.06
Benzo(b+k)fluoranthene	0.02	mg/kg	0.11	0.31	<0.02	0.06
Benzo(g,h,i)perylene	0.02	mg/kg	0.08	0.22	<0.02	0.06
Chrysene	0.02	mg/kg	0.05	0.13	<0.02	0.03
Dibenz(a,h)anthracene	0.02	mg/kg	<0.02	0.03	<0.02	<0.02
Fluoranthene	0.02	mg/kg	0.11	0.14	<0.02	0.03
Fluorene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
Indeno(1,2,3-cd)pyrene	0.02	mg/kg	0.05	0.17	<0.02	0.03
Naphthalene	0.02	mg/kg	<0.02	<0.02	<0.02	<0.02
Phenanthrene	0.02	mg/kg	<0.02	0.03	<0.02	<0.02
Pyrene	0.02	mg/kg	0.12	0.19	<0.02	0.03
②**NW37K TRH C7 - C36**						
TRH C10-C14	1	mg/kg	1.2	<1	1.9	<1
TRH C15-C36	1	mg/kg	160	46	15	110
TRH C7 - C9	1	mg/kg	<1	<1	<1	<1
TRH C7-C36 (total)	1	mg/kg	160	46	17	110
②**NW0AK BTEX**						
Benzene	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
BTEX (sum)	0.15	mg/kg	<0.15	<0.15	<0.15	<0.15
o-Xylene	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Toluene	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Total p,m Xylene, Ethylbenzene	0.15	mg/kg	<0.15	<0.15	<0.15	<0.15
② **NW499 Arsenic - Total**	0.05	mg/kg	19.4	3.40	1.35	3.20
② **NW504 Cadmium - Total**	0.01	mg/kg	0.36	0.35	0.21	0.32
② **NW507 Chromium - Total**	0.2	mg/kg	85.3	38.7	65.2	52.3
② **NW509 Copper - Total**	0.3	mg/kg	69.2	285	39.4	60.0
② **NW511 Lead - Total**	0.1	mg/kg	57.1	44.9	36.0	35.0
② **NW515 Mercury - Total**	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
② **NW517 Nickel - Total**	0.2	mg/kg	28.7	26.5	30.4	32.9
② **NW528 Zinc - Total**	1	mg/kg	298	180	96	213

SAMPLE CODE:		**816-2025-00316719**			
Sample Name:		HA7 0.075			
Product Type:		Soil			
Analysis Started on:		27/11/2025			
Analysis Ending Date:		03/12/2025			
Date & Time Received		27/11/2025 07:00			
Sampled Date & Time		24/11/2025 00:00			
Attempt to Chill was evident		Yes			
Sample correctly preserved		Yes			
Appropriate sample containers used		Yes			
	LOQ	**Unit**			
ORGANICS					
②**NW04T Organochlorine Pesticides**					
2,3-Diuron	0.02	mg/kg	<0.02		
2,4´-DDT	0.02	mg/kg	<0.02		
2,4'-DDD	0.02	mg/kg	<0.02		
2,4'-DDE	0.02	mg/kg	<0.02		
a-BHC	0.02	mg/kg	<0.02		
a-chlordane	0.02	mg/kg	<0.02		
Aldrin	0.02	mg/kg	<0.02		
b-BHC	0.02	mg/kg	<0.02		
Chlordane (total)	0.04	mg/kg	<0.02		
cis-Permethrin	0.02	mg/kg	<0.02		
Dieldrin	0.02	mg/kg	<0.02		
Endosulfan I	0.02	mg/kg	<0.02		
Endosulfan II	0.02	mg/kg	<0.02		
Endosulfan Sulfate	0.02	mg/kg	<0.02		
Endrin	0.02	mg/kg	<0.02		
Endrin Aldehyde	0.02	mg/kg	<0.02		
Endrin ketone	0.02	mg/kg	<0.02		
Gamma-Chlordane	0.02	mg/kg	<0.02		
HCH, delta-	0.02	mg/kg	<0.02		
Heptachlor	0.02	mg/kg	<0.02		
Heptachlor Epoxide	0.02	mg/kg	<0.02		
Hexachlorobenzene	0.02	mg/kg	<0.02		
Lindane (g-BHC)	0.02	mg/kg	<0.02		
Methoxychlor	0.02	mg/kg	<0.02		
p,p'-DDD	0.02	mg/kg	<0.02		
p,p'DDE	0.02	mg/kg	<0.02		
p,p'-DDT	0.05	mg/kg	<0.05		
Procymidone	0.02	mg/kg	<0.02		
Propanil	0.02	mg/kg	<0.02		
Sum of DDT and isomers	0.05	mg/kg	<0.05		
Toxaphene	0.05	mg/kg	<0.05		
②**NWEBH PAH BaP TEQ**					

SAMPLE CODE:			**816-2025-00316719**
Sample Name:			HA7 0.075
Acenaphthene	0.02	mg/kg	<0.02
Acenaphthylene	0.02	mg/kg	0.03
Anthracene	0.02	mg/kg	<0.02
benz (a) anthracene	0.02	mg/kg	0.09
Benzo(a)pyrene	0.02	mg/kg	0.06
Benzo(a)pyrene TEQ (lower bound)	0.02	mg/kg	0.09
Benzo(a)pyrene TEQ (medium bound)	0.02	mg/kg	0.10
Benzo(a)pyrene TEQ (upper bound)	0.02	mg/kg	0.11
Benzo(b+k)fluoranthene	0.02	mg/kg	0.14
Benzo(g,h,i)perylene	0.02	mg/kg	0.10
Chrysene	0.02	mg/kg	0.05
Dibenz(a,h)anthracene	0.02	mg/kg	<0.02
Fluoranthene	0.02	mg/kg	0.09
Fluorene	0.02	mg/kg	<0.02
Indeno(1,2,3-cd)pyrene	0.02	mg/kg	0.06
Naphthalene	0.02	mg/kg	<0.02
Phenanthrene	0.02	mg/kg	<0.02
Pyrene	0.02	mg/kg	0.07
②**NW37K TRH C7 - C36**			
TRH C10-C14	1	mg/kg	4.0
TRH C15-C36	1	mg/kg	420
TRH C7 - C9	1	mg/kg	<1
TRH C7-C36 (total)	1	mg/kg	430
②**NW0AK BTEX**			
Benzene	0.05	mg/kg	<0.05
BTEX (sum)	0.15	mg/kg	<0.15
o-Xylene	0.05	mg/kg	<0.05
Toluene	0.05	mg/kg	<0.05
Total p,m Xylene, Ethylbenzene	0.15	mg/kg	<0.15
② **NW499 Arsenic - Total**	0.05	mg/kg	9.04
② **NW504 Cadmium - Total**	0.01	mg/kg	0.57
② **NW507 Chromium - Total**	0.2	mg/kg	41.1
② **NW509 Copper - Total**	0.3	mg/kg	87.4
② **NW511 Lead - Total**	0.1	mg/kg	95.0
② **NW515 Mercury - Total**	0.1	mg/kg	<0.1
② **NW517 Nickel - Total**	0.2	mg/kg	25.5
② **NW528 Zinc - Total**	1	mg/kg	533

HOLDING TIMES

816-2025-00316523 HA1 0.075

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NW04T	Organochlorine Pesticides	24/11/2025	03/12/2025	9	14	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316524 HA8 0.075

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316525 HA2 0.075

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316526 HA2 0.4

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316527 HA3 0.8

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NW04T	Organochlorine Pesticides	24/11/2025	03/12/2025	9	14	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316528 HA3 1.5

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NW04T	Organochlorine Pesticides	24/11/2025	03/12/2025	9	14	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316529 HA4 0.075

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316530 HA4 0.3

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes

NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316531 HA6 0.075

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316532 HA6 0.3

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316533 HA6 1.0

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NW04T	Organochlorine Pesticides	24/11/2025	03/12/2025	9	14	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316718 HA3 0.075

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes

NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NW04T	Organochlorine Pesticides	24/11/2025	03/12/2025	9	14	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

816-2025-00316719 HA7 0.075

Test		Sampling Date	Holding End	Effective Holding (days)	Requirement (days)	Compliance
NW499	Arsenic - Total	24/11/2025	01/12/2025	7	180	Yes
NW0AK	BTEX	24/11/2025	02/12/2025	8	14	Yes
NW504	Cadmium - Total	24/11/2025	01/12/2025	7	180	Yes
NW507	Chromium - Total	24/11/2025	01/12/2025	7	180	Yes
NW509	Copper - Total	24/11/2025	01/12/2025	7	180	Yes
NW511	Lead - Total	24/11/2025	01/12/2025	7	180	Yes
NW515	Mercury - Total	24/11/2025	01/12/2025	7	28	Yes
NW517	Nickel - Total	24/11/2025	01/12/2025	7	180	Yes
NW04T	Organochlorine Pesticides	24/11/2025	03/12/2025	9	14	Yes
NWEBH	PAH BaP TEQ	24/11/2025	03/12/2025	9	14	Yes
NW37K	TRH C7 - C36	24/11/2025	03/12/2025	9	14	Yes
NW528	Zinc - Total	24/11/2025	01/12/2025	7	180	Yes

LIST OF METHODS

NW04T	**Organochlorine Pesticides:** Internal Method, GC-MS/MS
NW37K	**TRH C7 - C36:** Internal Method, GC-FID
NW504	**Cadmium - Total:** APHA 24th Edition 3125 B mod.
NW509	**Copper - Total:** APHA 24th Edition 3125 B mod.
NW515	**Mercury - Total:** APHA 24th Edition 3125 B mod.
NW528	**Zinc - Total:** APHA 24th Edition 3125 B mod.
NW0AK	**BTEX:** Internal Method, GC-MS
NW499	**Arsenic - Total:** APHA 24th Edition 3125 B mod.
NW507	**Chromium - Total:** APHA 24th Edition 3125 B mod.
NW511	**Lead - Total:** APHA 24th Edition 3125 B mod.
NW517	**Nickel - Total:** APHA 24th Edition 3125 B mod.
NWEBH	**PAH BaP TEQ:** Internal Method, GC-MS

Signature

Gabriela Carvalhaes — Business Unit Manager, Eurofins ELS Limited

EXPLANATORY NOTE

①Test is not accredited
②Test is subcontracted within Eurofins group and is accredited
③Test is subcontracted within Eurofins group and is not accredited
④Test is subcontracted outside Eurofins group and is accredited
⑤Test is subcontracted outside Eurofins group and is not accredited
⑥Test result is provided by the customer and is not accredited
⑦Tested at the sampling point by Eurofins and is not accredited
⑧Tested at the sampling point by Eurofins and is accredited
⑨Test is RLP accredited
⑩Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable
Not Detected means not detected at or above the Limit of Quantification (LOQ)
LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit
Symbol - in result column means not tested

General

1. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
2. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
3. Actual LOQs are matrix dependent. Quoted LOQs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
5. Analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
6. Samples were analysed on an 'as received' basis.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.
Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.
For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.
Holding times are expressed in days.

Units

mg/kg: milligrams per kilogram
µg/L: micrograms per litre
org/100 mL: Organisms per 100 millilitres
CFU: Colony Forming Unit
mg/L: milligrams per litre
ppb: parts per billion
NTU: Nephelometric Turbidity Units
Colour: Pt-Co Units (CU)
ppm: parts per million
%: Percentage
MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
US EPA	United States Environmental Protection Agency

Quality Controls

All test method Quality Controls including method blanks, reference samples, spikes, surrogates and duplicate sample testing have passed and are within the control limits.

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.
The tests are identified by a five-digit code, their description is available on request.
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Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 35 O'rorke Road, Penrose, Auckland, New Zealand.
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END OF REPORT

Certificate of Analysis

Client Haigh Workman Ltd
Client Contact Joshua Cuming
Phone Number 027 316 8362
Email joshcuming@haighworkman.co.nz;
Address Unit 3, 30 Rauiri Drive, Marsden Cove, Whangarei 1180

IANZ# 1308

Certificate ID	Q-01799	Date Sampled[2]	24/11/2025
Samples Taken By[2]	Joshua Cuming	Date Sample(s) Received	27/11/2025
Project Reference[2]	Kaitaia Refuse Transfer Station,25224	Date Sample(s) Analysed & Issued	02/12/2025
Site Address[2]	Kaitaia Refuse Transfer Station,25224		
Location Sample Analysed	Eurofins Environment Testing 35 O'Rorke Road, Penrose, Auckland 1061		

Qualitative Analysis of Asbestos

Lab ID	Sample ID[2]	Sample Details[2]	Sample type	Sample size (g)[2]	Fibres Identified
1	HA3 0.075	-	Soils	488	**ORF, NAD**
2	HA7 0.075	-	Soils	579	**AMO, ORF**

Opinions and interpretations expressed herein are outside the scope of Eurofins Environment Testing IANZ accreditation	
Analytical Notes	-

Fibre Identification Key:

*	See Analytical Notes	**ORF**	Organic Fibre
CHR	Chrysotile (White Asbestos)	**SMF**	Synthetic Mineral Fibre
AMO	Amosite (Brown / Grey Asbestos)	**NFD**	No Fibres Detected
CRO	Crocidolite – (Blue Asbestos)	**NAD**	No Asbestos Detected
UMF	Unknown Mineral Fibre		

Scope of Accreditation:

1. The analytical comments marked (*) stated in the semi-quantitative analysis and the calculations in the semi-quantitative analysis of asbestos in soil are beyond Eurofins Environment Testing's scope of accreditation.
2. Eurofins Environment Testing did not carry out any sampling, and the data presented are based on the samples submitted.Data supplied by the client is indicated with superscript [2] and may impact the results.
3. This certificate should be read in its entirety and shall not be reproduced except in full, without the written approval of the laboratory.

*Semi Quantitative Analysis of Asbestos in Soil

Date sample(s) received: 27/11/2025
Date sample(s) analysed: 02/12/2025

Lab ID	Sample ID	As received weight (g)	Dry weight (g)	Moisture (%)	Fraction size (mm)	Dry fraction weight (g)	Asbestos product weight (g)	Asbestos product type	Percentage of asbestos in product [a]	Total mass of Asbestos in sample [b]	Bonded Asbestos containing material in sample (% w/w) [c]	Asbestos as FA (% w/w) [d]	Asbestos as AF (% w/w) [e]	Total Fibrous Asbestos + Asbestos Fines (Friable) (% w/w) [f]
1	HA3 0.075	487.7	312.0	36.0	(>10mm) Fraction	0.0	-	NAD	-	-	-	<0.001	<0.001	<0.001
					(10-2mm) Fraction	183.2	-	NAD	-					
					(<2mm) Fraction	128.8	-	NAD	-					
2	HA7 0.075	578.6	514.6	11.1	(>10mm) Fraction	162.5	-	NAD	-	0.0002	-	<0.001	<0.001	<0.001
					(10-2mm) Fraction	211.0	0.0002	FFF	100					
					(<2mm) Fraction	141.1	-	NAD	-					

Analysis Method:

Samples submitted have been analysed to determine the mass fraction of asbestos in soil using low powered stereo microscopy followed by polarised light microscopy (PLM) including dispersion staining techniques as documented in (AS 4964-2004), Method for the qualitative identification of asbestos in bulk samples, BRANZ, New Zealand Guidelines for Assessing and Managing Asbestos in Soils:2017.

Product Identification Key:

BTP	Bituminous Product	INS	Insulation
CMP	Cement Product	NAD	No Asbestos Detected
COM	Composite	PPR	Paper Product
FFF	Free Fibres	RPL	Reinforced Plastics
FIB	Fibre Board	TXC	Textured Coating
GCP	Gaskets (compressed)	VNP	Vinyl Products
GRW	Gaskets (rope/woven)	VPP	Vinyl with paper backing
INB	Insulating Board	WVP	Woven Product

Interpretation of Key:

[a] Percentage of Asbestos in product is adopted from HSG 264 - 2012, Asbestos the survey guide, Appendix 2, ACMS in buildings and categorised in our internal Technical Procedure (NPM-TP02*) for Qualitative and Semi-Quantitative analysisof asbestos in soil. A dash (-) denotes that there was no asbestos found in that fraction.

[b] Total Mass of Asbestos is the sum mass of asbestos-by-asbestos type in product type([a]) plus the mass of free fibre asbestos. A dash (-) denotes that there was no total mass of asbestos calculated asbestos found in that fraction.

[c] Bonded Asbestos Containing Material in the greater than 10mm fraction as percentage of the total sample (% w/w). A dash (-) denotes that there was no bonded asbestos containing materials found in that fraction.
[d] Asbestos as Fibrous Asbestos (FA) in greater than 10mm fraction as percentage of total sample (% w/w).

[e] Asbestos as Asbestos Fines (AF) in less than 10mm fraction as a percentage of total sample (% w/w).

[f] Total Friable Asbestos combining Fibrous Asbestos and Asbestos Fines as the percentage weight for weight of the total sample (% w/w).

Sample History
Where samples are submitted/analysed over several days, the last extraction date is reported. If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time. Client samples are disposed of 1 month after analysis

Description	Testing Site	Extracted	Holding Time
AS4964-2004 and (*) In-house Method NPM - TP02	Auckland	02/12/2025	Indefinite

Comments

Asbestos Counter/Identifier:

Elsie Xu Analyst-Asbestos

Elsie Xu

Senior Analyst-Asbestos (Key Technical Personnel)

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

Measurement uncertainty of test data is available on request or please click here.

This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

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CHAIN OF CUSTODY RECORD

☐ Sydney Laboratory ☐ Brisbane Laboratory ☐ Perth Laboratory ☐ Melbourne Laboratory

Company	Haigh Workman Limited	Project №	25 224
Address	6 Fairway Drive, Kerikeri	Project Name	Kaitaia Refuse Transfer Station
Contact Name	Joshua Cuming	Project Manager	Joshua Cuming
Phone №	027 318 8562	EDD Format	
Special Directions		Facility Code	
Purchase Order		Sampler(s)	Joshua Cuming
Quote ID №		Handed over by	
		Email for Invoice	joshcuming@haighworkman.co.nz accounts@haighworkman.co.nz
		Email for Results	joshcuming@haighworkman.co.nz

Required Turnaround Time (TAT) — Default will be 5 days if not ticked: ☐ Overnight ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days ☑ 5 days (Standard) ☐ Other

Containers: 500mL Plastic, 250mL Plastic, 125mL Plastic, 200mL Amber Glass, 40mL VOA vial, 500mL PFAS Bottle, Jar (Glass or HDPE), Other (Asbestos AS4964, WA Guidelines)

№	Client Sample ID	Sampled Date/Time	Matrix	On Hold	B7	Metals Mix (NZ MfE)	OCP	Jar (Glass or HDPE)	Other (Asbestos)	Sample Comments / Dangerous Goods Hazard Warning
1	HA1 0.075	24/11/25	Soil	✓				1		
2	HA8 0.075	24/11/25	Soil	✓				1		
3	HA2 0.075	24/11/25	Soil	✓				1		
4	HA2 0.4	24/11/25	Soil	✓				1		
5	HA3 0.075	24/11/25	Soil	✓				1	1	
6	HA3 0.3	24/11/25	Soil	✓				1		
7	HA5 1.5	24/11/25	Soil	✓				1		
8	HA3 0.8 For ACM	24/11/25	Cloth	✓					1	Possible ACM
9	HA4 0.075	24/11/25	Soil	✓				1		
10	HA4 0.3	24/11/25	Soil	✓				1		
11	HA6 0.075	24/11/25	Soil	✓				1		
12	HA6 0.3	24/11/25	Soil	✓				1		
13	HA6 1.0	24/11/25	Soil	✓				1		
14	HA7 0.075	24/11/25	Soil	✓				1	1	
15										
16										
17										
18										
20										
			Total Counts					13	3	

Date/Time: 26/11/2025 1350
Chilled: Yes / (No) 19.7
Temp:
Correction:
Final Temp:

EUNZAU
00855996
Order
051-32762-987624-93

Hold

Method of Shipment: ☐ Hand Delivered ☐ Postal | Name | Signature | Date | Time

Laboratory Use Only								
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Temperature	
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Report №	

a-0179 9

CHAIN OF CUSTODY RECORD

Sydney Laboratory | Brisbane Laboratory | Perth Laboratory | Melbourne Laboratory

Company	Haigh Workman Limited	Project №	25 224	Project Manager	Joshua Cuming	Sampler(s)	Joshua Cuming
Address	[illegible] Drive, Kerikeri	Project Name	Kaitaia Refuse Transfer Station	EDD Format		Handed over by	
Contact Name	Joshua Cuming			Facility Code		Email for Invoice	joshcuming@haighworkman.co.nz accounts@haighworkman.co.nz
Phone №	027 [illegible]					Email for Results	joshcuming@haighworkman.co.nz
Special Directions							
Purchase Order							
Quote ID №							

Required Turnaround Time (TAT): Overnight / Same day / 1 day / 2 days / 3 days / 5 days (Standard) / Other

Containers: 500mL Plastic, 250mL Plastic, 125mL Plastic, 200mL Amber Glass, 40mL VOA vial, 500mL PFAS Bottle, Jar (Glass or HDPE), Other (Asbestos AS4964, WA Guidelines)

№	Client Sample ID	Sampled Date/Time	Matrix	On hold	B7	M8	OCP	Asbestos in bulk materials	ONP	Semi Quant Asbestos	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	[illegible]	24/11/25	Soil		AKL		AKL		AKL		1		
2	[illegible]	24/11/25	Soil			AKL					1		
3	[illegible]	24/11/25	Soil		AKL						1		
4	[illegible]	24/11/25	Soil		AKL						1		
5	[illegible]	24/11/25	Soil		AKL		AKL		AKL	AKL	1	1	
6	[illegible]	24/11/25	Soil		AKL		AKL		AKL		1		
7	[illegible]	24/11/25	Soil		AKL		AKL		AKL		1		
8	[illegible] ACM	24/11/25	Cloth					AKL				1	Possible ACM
9	[illegible]	24/11/25	Soil		AKL						1		
10	[illegible]	24/11/25	Soil		AKL						1		
11	[illegible]	24/11/25	Soil		AKL						1		
12	[illegible]	24/11/25	Soil		AKL						1		
13	[illegible]	24/11/25	Soil		AKL		AKL		AKL		1		
14	[illegible]	24/11/25	Soil		AKL		AKL		AKL	AKL	1	1	
Total Counts											13	3	

Method of Shipment	Hand Delivered	Postal	Name	Signature		Date	Time
Laboratory Use Only	Received By	SYD / BNE / MEL / PER / ADL / NTL / DRW	Signature	Date	Time	Temperature	
	Received By	SYD / BNE / MEL / PER / ADL / NTL / DRW	Signature	Date	Time	Report №	

EUNZAU
00856096
Order
051-32762-987724-93

CHAIN OF CUSTODY RECORD

Sydney Laboratory | Brisbane Laboratory | Perth Laboratory | Melbourne Laboratory

Company	Haigh Workman Limited	Project №	25 224
Address	6 Fairway Drive, Kerikeri	Project Name	Kaitaia Refuse Transfer Station
Contact Name	Joshua Cuming	Project Manager	Joshua Cuming
Phone №	027 316 8362	EDD Format	
Special Directions		Facility Code	
Purchase Order		Sampler(s)	Joshua Cuming
Quote ID №		Handed over by	
		Email for invoice	joshcuming@haighworkman.co.nz accounts@haighworkman.co.nz
		Email for Results	joshcuming@haighworkman.co.nz

Required Turnaround Time (TAT)

☐ Other

№	Client Sample ID	Sampled Date/Time	Matrix	Ori Hold	B7	M8	OCP	Asbestos in bulk materials	ONP	Semi Quant Asbestos	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
					✓	✓	✓	✓		✓									
1	HA1 0.075	24/11/25	Soil		AKL		AKL		AKL								1		
2	HA8 0.075	24/11/25	Soil			AKL											1		
3	HA2 0.075	24/11/25	Soil		AKL												1		
4	HA2 0.4	24/11/25	Soil		AKL												1		
5	HA3 0.075	24/11/25	Soil		AKL		AKL		AKL	AKL							1	1	
6	HA3 0.8	24/11/25	Soil		AKL		AKL		AKL								1		
7	HA3 1.5	24/11/25	Soil		AKL		AKL		AKL								1		
8	HA3 0.8 Pot ACM	24/11/25	Cloth					AKL										1	Possible ACM
9	HA4 0.075	24/11/25	Soil		AKL												1		
10	HA4 0.3	24/11/25	Soil		AKL												1		
11	HA6 0.075	24/11/25	Soil		AKL												1		
12	HA6 0.3	24/11/25	Soil		AKL												1		
13	HA6 1.0	24/11/25	Soil		AKL		AKL		AKL								1		
14	HA7 0.075	24/11/25	Soil		AKL		AKL		AKL	AKL							1	1	
15																			
16																			
17																			
18																			
32																			
1	Total Counts																13	3	

Method of Shipment	☐ Courier #	☐ Hand Delivered	☐ Postal	Name	Signature	Date	Time
Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №

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