

Applicant Information Form 1a Notified or Non-notified Process



Department of
Conservation
Te Papa Atawhai

New Zealand Government

Is this the right application form for me?

This **Applicant Information Form 1a** – Notified or Non-notified Process must be completed for **the following longer term applications** (i.e. not one-off applications):

- Grazing
- Land use: Tenanted and/or using existing DOC facility/structure
- Land use: Use of public conservation land for private commercial facility/structure
- Guiding/Tourism/Recreation: Watercraft activities
- Filming
- Sports events
- Marine reserves application form 11a: Structure in a marine reserve

For other activities use the specific activity application forms that combine applicant and activity information or book a pre-application meeting.

How do I complete this applicant information form?

- Complete all sections of this **applicant information form**.
- In addition, you must complete the **activity application form/s** that you wish to undertake.
- DOC encourages electronic applications (e.g. typed Word document), rather than handwritten applications. Electronic applications are easier to read and less likely to be returned to you for clarification.
- If you need extra space, attach or include extra documents and label them according to the relevant section. Record all attachments in the table at the back of the application information form section **F Attachments**.

How do I submit my application?

Email the following to permissions@doc.govt.nz:

- **Completed applicant information form 1a**
- **Completed activity application form**
- Any other relevant attachments.

If I need help, where do I get more information?

- Check the [DOC webpage for the activity you are applying](#)¹ for.

¹ <https://www.doc.govt.nz/get-involved/apply-for-permits/apply-for-a-permit/>

- Arrange a pre-application meeting (either face to face or over the phone) by contacting the [Department of Conservation Office](#)² closest to where the activity is proposed. You can use [DOC maps](#)³ to identify which District Office you should contact. Or arrange a meeting with any of our [four offices that process concessions](#)⁴ – choose the one closest to where the activity is proposed.
- If your application covers multiple districts, contact the office nearest most of the locations you are applying for, or nearest to locations you have a specific question about.

What happens next?

Once your application forms are received, your application will be assessed by DOC. If your application is complete, DOC will begin processing.

If your application is incomplete it will be returned to you for more information.

Why does DOC ask for this information?

The questions in this application information form and the activity application form/s are designed to cover the requirements set out in conservation legislation. Your answers allow us to assess:

- Your most up-to-date details so that DOC can contact you about your application.
- Your qualifications, resources, skills and experience to adequately conduct the activity on public conservation land.
- Your creditworthiness will help determine whether DOC should extend credit to you and set up a DOC customer accounts receivable credit account for cost recovery. To make this assessment DOC will supply your information to a credit checking agency.

Note:

- Personal information will be managed by DOC confidentially. For further information check [DOC's privacy and security statements](#)⁵.
- Information collected by DOC will be supplied to a debt collection agency in the event of non-payment of payable fees.

What fees will I pay?

You may be required to pay a **processing fee** for this application regardless of whether your application is granted or not. You may request an estimate of the processing fees for your application. If you request an estimate, DOC may require you to pay the reasonable costs of the estimate prior to it being prepared. DOC will not process your application until the estimate has been provided to you. In addition, if you are granted a guiding concession on public conservation land you may be required to pay annual **activity and management fees**. These fees are listed on the [DOC webpage for the activity you are applying](#)⁶ for.

DOC will invoice your processing fees after your application has been considered. If your application is large or complex, DOC may undertake billing at intervals periodically during processing until a decision is made. If you withdraw your application DOC will invoice you for the costs incurred up to the point of your withdrawal.

² www.doc.govt.nz/footer-links/contact-us/office-by-name/

³ <http://maps.doc.govt.nz/mapviewer/index.html?viewer=docmaps>

⁴ <https://www.doc.govt.nz/get-involved/apply-for-permits/contacts>

⁵ <https://www.doc.govt.nz/footer-links/privacy-and-security/>

⁶ <https://www.doc.govt.nz/get-involved/apply-for-permits/apply-for-a-permit/>

Your application will set up a credit account with DOC. See the checklist at the end of the form for the terms and conditions you need to accept for a DOC credit account.

Will my application be publicly notified?

Your application will be publicly notified if:

- It is a license with a term of more than 10 years.
- It is a lease.
- After having regard to the effects of the activity, DOC considers it appropriate to do so.

Public notification will increase the time and cost of processing of your application.

What does DOC require if my application is approved?

If your application is approved DOC requires:

- **Insurance** to indemnify the Minister of Conservation against any claims or liabilities arising from your actions. The level of insurance cover will depend on the activity.
- A copy of your **safety plan** audited by an external expert (e.g. Health and Safety in Employment (Adventure Activity) Regulations 2011 audit or a DOC listed organisation). See the [Safety Plan](#)⁷ information on the DOC website for further information.

Note: DOC/Minister can vary the concession if the information on which the concession was granted contained material inaccuracies. DOC may also recover any costs incurred.

⁷ <https://www.doc.govt.nz/get-involved/apply-for-permits/managing-your-concession/safety-plans/>

A. Applicant details

Legal status of applicant (tick)	<input type="checkbox"/> Individual (Go to ①)	
	<input type="checkbox"/> Registered company (Go to ②)	<input checked="" type="checkbox"/> Trust (Go to ②)
	<input type="checkbox"/> Incorporated society (Go to ②)	<input type="checkbox"/> Other e.g. Educational institutes (Go to ②)

①	Applicant name (individual)	Matakana Coast Trail Trust (MCTT)		
	Phone		Mobile phone	Sec 9(2)(a)
	Email	Sec 9(2)(a)		
	Physical address	PO Box 184 Matakana	Postcode	0948
	Postal address (if different from above)		Postcode	

②	Applicant name (full name of registered company, trust, incorporated society or other)	Matakana Coast Trail Trust (MCTT)		
	Trading name (if different from applicant name)	n/a		
	NZBN if applicable (to apply go to: https://www.nzbn.govt.nz)		Company, trust or incorporated society registration number	Charities Number CC54722 Services
	Registered office of company or incorporated society (if applicable)			
	Company phone	n/a	Company website	https://mctt.org.nz/
	Contact person and role	Sec 9(2)(a)	Fundraiser and Administrator (MCTT) Trail Working Group (MCTT)	
	Phone		Mobile phone	Sec 9(2)(a)
	Email	Sec 9(2)(a)		
	Postal address		Postcode	

Street address (if different from postal address)

Postcode

B. Pre-application meeting

Have you had a pre-application meeting or spoken to someone in DOC?

No	<input checked="" type="checkbox"/>
Yes	<input type="checkbox"/>

- If yes record the:

Date of DOC pre-application meeting	
Name of DOC staff member	
Name of person who had the pre-application meeting with DOC	

C. Activity applied for

Tick the **activity application form** applicable to the activity you wish to undertake on public conservation land. Complete the applicant information form and the activity application form and email them with any attachments to permissions@doc.govt.nz

ACTIVITY APPLICATION FORM*	FORM NO.	TICK
Grazing	2a	<input type="checkbox"/>
Land use: Tenanting and/or using existing DOC facility/structure	3a	<input type="checkbox"/>
Land use: Use of public conservation land for private/commercial facility/structure	3b	<input type="checkbox"/>
Guiding/Tourism/Recreation: Watercraft activities	4b	<input type="checkbox"/>
Filming	5a	<input type="checkbox"/>
Sporting Events	6a	<input type="checkbox"/>
Marine reserves application form: Structure in a marine reserve	11a	<input type="checkbox"/>
Other activities (not covered in the above forms or in the new activity application forms that combine applicant and activity information)	7a	<input type="checkbox"/>

Note: If the activity is not in this list check the activity on the DOC website to find the correct application form or book a pre-application meeting. Application forms that combine applicant and activity information on the DOC website include:

- [Aircraft activities](#)⁸
- [Easements](#)⁹

⁸ <https://www.doc.govt.nz/get-involved/apply-for-permits/business-or-activity/aircraft-activities/>

⁹ <https://www.doc.govt.nz/get-involved/apply-for-permits/business-or-activity/access-easements/>

- [Land based guiding](#)¹⁰

¹⁰ <https://www.doc.govt.nz/get-involved/apply-for-permits/business-or-activity/land-based-guided-activities/>

D. Are you applying for anything else?

Are you submitting any other application forms in relation to this application?

No	<input checked="" type="checkbox"/>
Yes	<input type="checkbox"/>

- If yes, state which application forms:

E. Background experience of applicant

Provide relevant information relating to your ability to carry out the proposed activity (e.g. details of previous concessions, membership of professional organisations, and relevant qualifications).

The MCTT has a partnership model, where it acts as an umbrella entity to coordinate individual community trail building groups and working with strategic partners.

The Matakana Coast Trail Trust (MCTT) is a registered Charitable Trust (CC54722). Figure 6 illustrates the organisational chart of The Trustees and Treasurer. Two part-time employees include a dedicated administrator and a fundraiser.

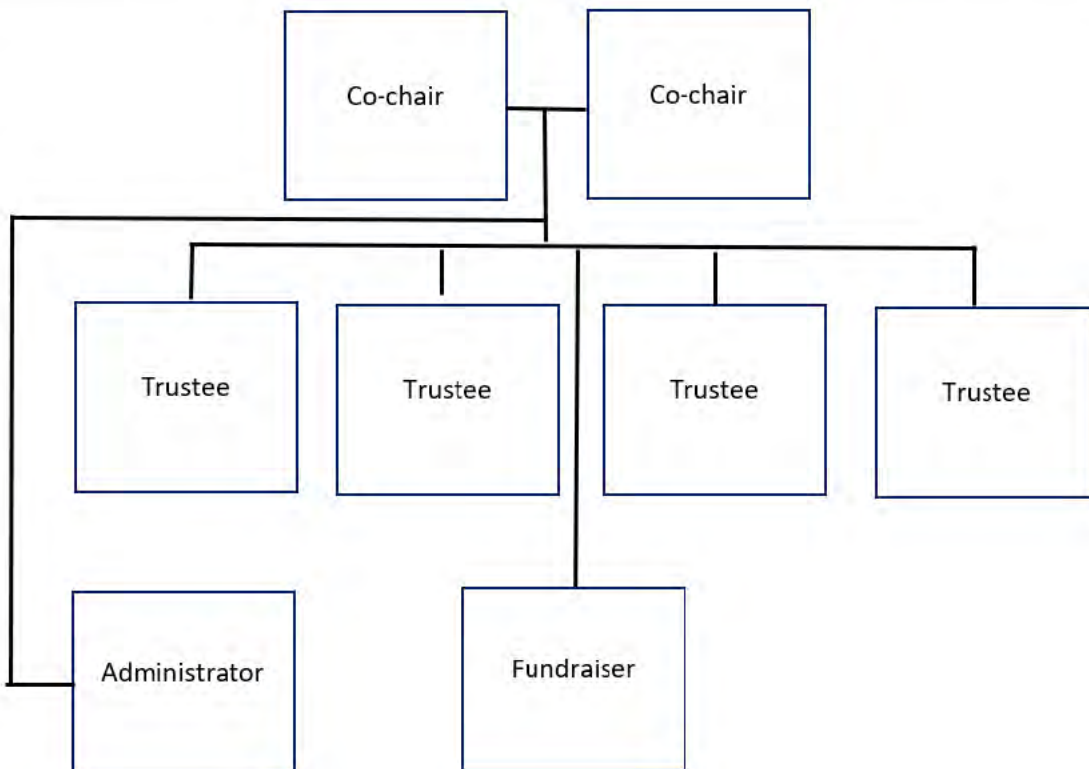


Figure 6 - Trust Organisation Chart

Hutchinson Engineering, and investment by the Rodney Local Board has been used to build the trail community structure, undertake engineering and planning tasks, and secure access security. This provides an investment ready existing project structure which is mature, well organised, and has five years of productive investment history.

The Trust uses a multi-agency-community model to deliver on community-led public access outcomes and represents many local community user groups. It works with local businesses and charitable trusts to undertake portions of the construction / trail building and maintenance work. The Trust itself is responsible for co-ordinating activity with specific focus on: Fund Raising, Planning, Consenting, Construction, Maintenance and Marketing.

The proposed trail will be placed on land owned by multiple strategic partner ownerships including Auckland Council, Auckland Transport, Watercare, Department of Conservation, Auckland Council Regional Parks, private landowners. Key stakeholders and collaborators have been identified including Ngāti Manuhiri's role as Mana Whenua.

F. Attachments

Attachments should *only* be used if there is:

- Not enough space on the form to finish your answer
- You have additional information that supports your answer
- You wish to make an additional request of DOC regarding the application.

Label each document clearly and complete the table below.

Section of the application form the attachment relates to	Document title	Document format (e.g. Word, PDF, Excel, jpg etc.)	Description of attachment
C	AUP Map Lawries	PDF	Auckland Council GIS map showing location of proposed path
C (effects)	65848 Lawrie Reserve AEE 20220817	PDF	Ecological Assessment by Consultants Bioreserches
C (effects)	Planning Desktop Assessment 2021 - 12	PDF	Resource and building consent assessment by Consultants 'The Planning Collective'
F	Ngati Manuhiri Letter of Support 10032022	PDF	Letter of support from Mana Whenua
C	Hydrology Map overland flow path	PDF	Auckland Council GIS map showing overland flow path
C	LawriesAAE(Thelma 2202-31-05)	Word	Ecological Assessment by Thelma Wilson ex DOC Ranger
F	WSP OPUS prelim design	PDF	Initial engineering design showing path cross sections
F	Additional route alignment map	PDF	Auckland Council GIS map showing location of proposed path

G. Checklist

Application checklist	Tick
I have completed all sections of this applicant information form relevant to my application and understand that the form will be returned to me if it is incomplete.	<input checked="" type="checkbox"/>
I certify that the information provided in this applicant information form, and any attached additional forms is, to the best of my knowledge, true and correct.	<input checked="" type="checkbox"/>

I have completed the activity application form. Advised it is not required at this point.	<input type="checkbox"/>
I have appropriately labelled all attachments and completed section F Attachments.	<input checked="" type="checkbox"/>
I will email permissions@doc.govt.nz my: <ul style="list-style-type: none"> Completed applicant information form Completed activity application form/s Any other attachments. 	<input checked="" type="checkbox"/>

H. Terms and conditions for a credit account with the Department of Conservation

Have you held an account with the Department of Conservation before?	Tick
No	<input checked="" type="checkbox"/>
Yes	<input type="checkbox"/>
If 'yes' under what name	

In ticking this checklist and placing your name below you are acknowledging that you have read and agreed to the terms and conditions for an account with the Department of Conservation

Terms and conditions	Tick
I/We agree that the Department of Conservation can provide my/our details to the Department's Credit Checking Agency to enable it to conduct a full credit check.	<input checked="" type="checkbox"/>
I/We agree that any change which affects the trading address, legal entity, structure of management or control of the applicant's company (as detailed in this application) will be notified in writing to the Department of Conservation within 7 days of that change becoming effective.	<input checked="" type="checkbox"/>
I/We agree to notify the Department of Conservation of any disputed charges within 14 days of the date of the invoice.	<input checked="" type="checkbox"/>
I/We agree to fully pay the Department of Conservation for any invoice received on or before the due date.	<input checked="" type="checkbox"/>
I/We agree to pay all costs incurred (including interest, legal costs and debt recovery fees) to recover any money owing on this account.	<input checked="" type="checkbox"/>
I/We agree that the credit account provided by the Department of Conservation may be withdrawn by the Department of Conservation, if any terms and conditions (as above) of the credit account are not met.	<input checked="" type="checkbox"/>
I/We agree that the Department of Conservation can provide my details to the Department's Debt Collection Agency in the event of non-payment of payable fees.	<input checked="" type="checkbox"/>

Typed applicant name/s	Sec 9(2)(a)	Date	16/06/23
	Fundraiser and Administrator MCTT		

For Departmental use			
Credit check completed			
Comments:			
Signed		Name	
Approved (Tier 4 manager or above)		Name	



The Department recommends that you contact the Department of Conservation Office closest to where the activity is proposed to discuss the application prior to completing the application forms. Please provide all information requested in as much detail as possible. Applicants will be advised if further information is required before this application can be processed by the Department.

This form is to be used when the proposed activity is the building or use of any private or commercial facility or structure on public conservation land managed by the Department of Conservation. Examples may include lease of land to erect an information centre; authorisation to erect a weather station; or construct or lease a private/commercial campground or lodge. This form is to be completed in conjunction with either Applicant Information Form 1a (longer term concession) or Applicant Information Form 1b (one-off concession) as appropriate.

Please complete this application form, attach Form 1a or Form 1b, and any other applicable forms and information and send to permissions@doc.govt.nz. The Department will process the application and issue a concession if it is satisfied that the application meets all the requirements for granting a concession under the Conservation Act 1987.

If you require extra space for answering please attach and label according to the relevant section.

A. Description of Activity

Please describe the proposed activity in detail – where the site is located, please use NZTM GPS coordinates where possible, what you intend to use the building for, whether you intend to make any changes to the infrastructure.

Please include the name and status of the public conservation land, the size of the area for which you are applying and why this area has been chosen.

If necessary, attach further information including a map, a detailed site plan and drawings of proposal and label Attachment 3b:A.

Lawrie's Scenic Reserve, Allot 197 SO 55382, Mahurangi East Road, Snells Beach. Allotment 197, Village of Matakana, Block V111, Mahurangi Survey District. The Scenic Reserve comprises 27.2658 hectares, a small portion of which is in pasture, with the majority in regenerating native bush. An archaeological survey has been undertaken for the reserve, with no sites found. The community and Auckland Council are developing a shared path connecting the communities of Warworth and Snells Beach. The objective of the path project is to create a safe and accessible connection which enables people to commute and recreate between the two towns. To increase the safety of path users from traffic accidents and improve the amenity experience of users, the project development team aim to move the path out of the road corridor where possible. Putting the path through Lawrie's Scenic Reserve offers an opportunity for path users to experience and access the natural environment. Please see attached plans for the path through the reserve.

B. Alternative sites considered

If your application is to **build, extend or add** to any permanent or temporary structures or facilities on public conservation land, please provide the following details:

- Could this structure or facility be reasonably located outside public conservation land? Provide details of other sites/areas considered.
- Could any potential adverse effects be significantly less (and/or different) in another conservation area or another part of the conservation area to which the application relates? Give details/reasons

The path could be placed in the road corridor next to the reserve, namely Mahurangi East Road. The reasons against using the road corridor are:

- Increased cost of construction: due to health and safety rules associated with operating in the road corridor and that there are only a small number of contractors, costs per metre for construction are significantly more.
- Risk of car vs cyclist/pedestrian: every metre where the path is away from the road corridor means path users are less likely to be accidentally struck by motorists (trucks/cars/motorbikes) travelling at high speeds. Separation of path users away from the road corridor enhances path user safety.
- Amenity and enjoyment value: path users being away from a noisy road corridor and travelling through nature increases the amenity value of the path and helps path users connect with the natural environment.

C. Larger area

Is the size of the area you are applying for **larger** than the structure/facility

YES / NO

If **yes**, please detail the size difference in the box below, and answer the following 3 questions, if **no** please go on to the next section:

Shared path through the reserve. Approximately 2m wide and 890m in length.

Is this necessary for safety or security purposes? **YES / NO**

Is this necessary as an integral part of the activity? **YES / NO**

Is this essential to carrying on the activity? **YES / NO**

If the answer to any of the above is yes, please provide details and attach supporting evidence if necessary and label Attachment 3b:C.

D. Exclusive possession

Do you believe you need **exclusive possession** of the public conservation land on which your structure/building is located, ie no one else can use the land during your use of it? **YES / NO**
(*Exclusive occupation requires a lease which requires public notification of the application*)

If **yes**, please answer the following 3 questions, if no please go to the next section:

Is exclusive possession necessary to protect public safety? **YES / NO**

Is exclusive possession necessary to protect physical security of the activity? **YES / NO**

Is exclusive possession necessary for the competent operation of the activity? **YES / NO**

If the answer to any of the above is yes, please provide details and attach supporting evidence if necessary and label Attachment 3b:D.

E. Technical Specifications (for telecommunications sites only)

Frequencies on which the equipment is to operate

Power to be used (transmitter output)

Polarisation of the signal

Type of antennae

The likely portion of a 24 hour period that transmitting will occur

Heaviest period of use

F. Term

Please detail the length of the term sought (i.e. number of years or months) and why.

Note: An application for a concession for a period over 10 years must be publicly notified, an application for a concession up to 10 years will not be publicly notified unless the adverse effects of the activity are such that it is required, or if an exclusive interest in the land is required.

In perpetuity. MCTT are open to DOC advice to determine the term of the licence to occupy.

G. Bulk fuel storage

Under the Hazardous Substances and New Organisms Act 1996 (HSNO Act) 'Bulk fuel storage' is considered to be any single container, stationary or mobile, used or unused, that has a capacity in excess of 250 litres of Class 3 fuel types. This includes petrol, diesel, aviation gasoline, kerosene and Jet A1. For more information on Hazardous Substances, go to:

<http://www.business.govt.nz/worksafe/information-guidance/legal-framework/hsno-act-1996>

Do you intend to store fuel in bulk on the land as part of the activity?

YES / NO

If you have answered yes, then please provide full details of how and where you intend to store the fuel, and label any attachments including plans, maps and/or photographs as Attachment 3b:G. If your concession application is approved you will be required to provide a copy of your HSNO compliance certification to the Department before you begin the activity.

H. Environmental Impact Assessment

This section is one of the most important factors that will determine the Department's decision on the application. Please answer in detail.

In column 1 please list all the locations of your proposal, please use NZTM GPS coordinates where possible. In column 2 list any special features of the environment or the recreation values of that area. Then in column 3 list any effects (positive or adverse) that your activity may have on the values or features in column 2. In column 4 list the ways you intend to mitigate, remedy or avoid any adverse effects noted in column 3. Please add extra information or supporting evidence as necessary and label Attachment 3b:H.

Refer to Steps 1 and 2 in your Guide to Environmental Impact Assessment to help you fill in this section.

Location on public conservation land	Special feature or value	Potential effects of your activity on the feature or value (positive or adverse)	Methods to remedy, mitigate or avoid any adverse effects identified
		<i>Damage to the plants by construction</i>	<i>Brief construction and maintenance staff of the location and importance of the species; clearly tape off areas with the species to avoid damage</i>
Lawrie Scenic Reserve	<i>Green and Northern Grey Gecko</i>	<p><i>Damage to the plants by construction</i></p> <p><i>[Refer attached AAE prepared by Thelma Wilson, ex DOC Ranger</i></p> <p><i>And Ecological Assessment by Bioresearches -</i> Sec 9(2)(a) <i>M.Sc]</i></p>	An assessment of the ecological values – mainly on vegetation – was undertaken along the marked route, envisioning that the track would be between 2.4 and 3m wide, with a compacted gravel surface. Enabling earthworks may be wider in some places. Methods of track construction will also impact on vegetation, soil compaction and ground disturbance outside the actual track footprint. For example, whether the trail earthworks are done by hand, small digger/ bobcat or larger machine, the location of water tables & drains, batter shape, use of filter cloth/ structures to retain track metal etc. The construction method will focus on a low-impact approach and the use of hand tools. The alignment of the path focuses on missing large native trees reducing the impact on vegetation.

I. Other

Is there any further information you wish to supply in support of your application? Please attach if necessary and label Attachment 3a:l.

Planning Assessment (Labelled Desk top assessment LR Planning 2021-12)

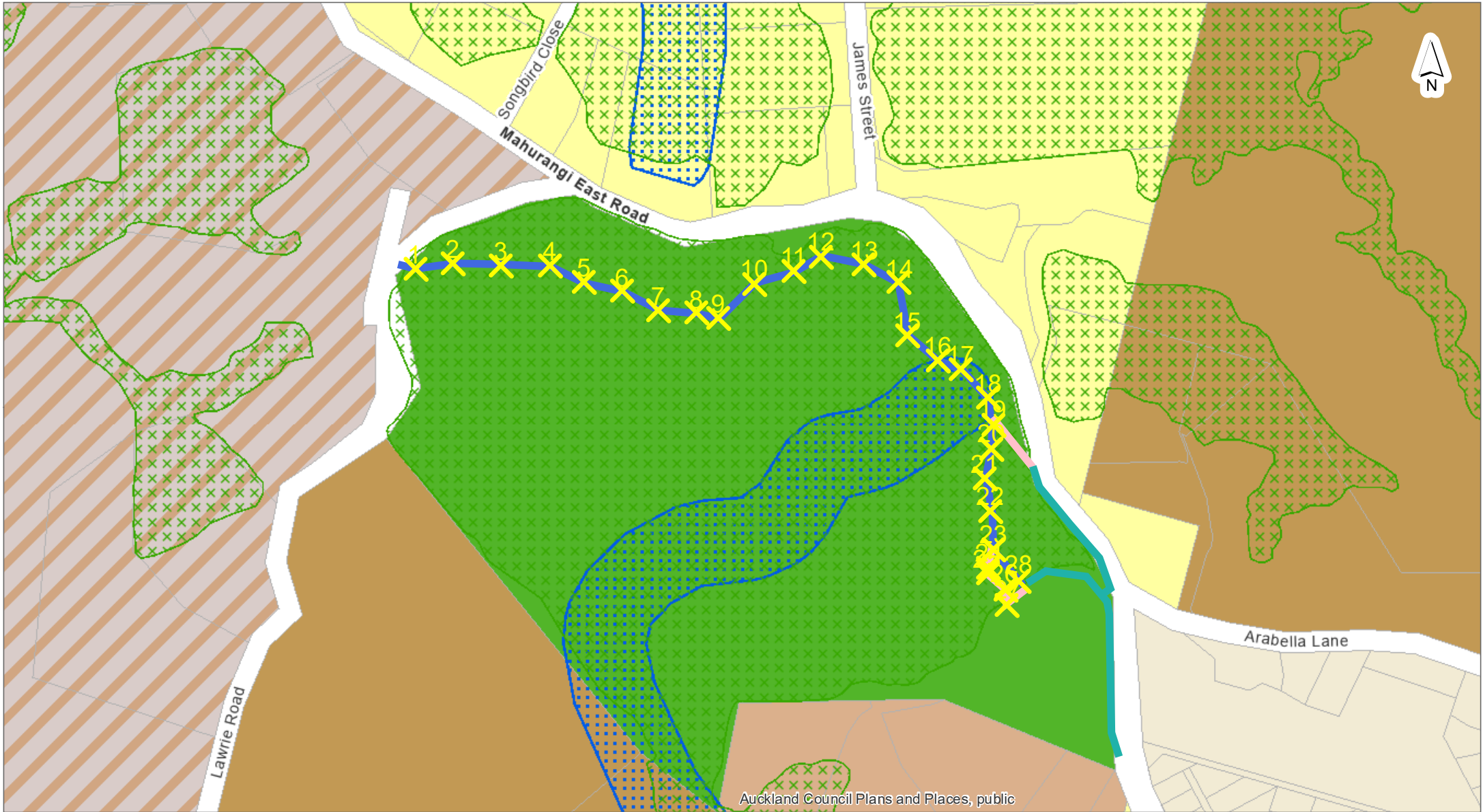
AAE Report (Thelma 2022-31-05)

Lawrie Scenic Reserve Letter of Support 10032002 (Ngati Manuhiri)

AUP Map Lawries – Unitary Planning layers

Hydrology Map showing overlays

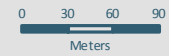
WSP OPUS Prelim Design pg14 Lawrie



Auckland Council Plans and Places, public

DISCLAIMER:
This map/plan is illustrative only and all information should be independently verified on site before taking any action.
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AUP Map - Lawries Bush



Scale @ A4 = 1:5,000

Date Printed: 9/12/2021



**Ecological Impact Assessment:
Lawries Scenic Reserve, Snells Beach**



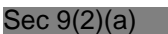
August 2022



Ecological Impact Assessment: Lawries Scenic Reserve, Snells Beach August 2022

DOCUMENT APPROVAL

Document title:	Ecological Impact Assessment: Lawries Scenic Reserve, Snells Beach
Prepared for:	Mahurangi Trail Society
Version:	1
Date:	16 August 2022
Document name:	65848 Lawries Reserve AEE

Author:	Sec 9(2)(a)  Ecologist	Sec 9(2)(a) 	
Reviewed by:	Sec 9(2)(a)  Senior Ecologist		

Reference: Bioresearches (2022). Ecological Impact Assessment: Lawries Scenic Reserve, Snells Beach. Report for Mahurangi Trail Society.

Cover Illustration: Vegetation within Lawries Scenic Reserve, Snells Beach.

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1. INTRODUCTION

Bioresearches was engaged by the Mahurangi Trail Society to undertake an ecological assessment of effects of vegetation removal within a Significant Ecological Area (SEA) for the construction of a public walking track. Lawrie Scenic Reserve (Allot 197 SO 55382) comprises 27.2658 hectares of predominately native vegetation that is subject to a SEA overlay (SEA_T_2301).

This report describes the existing terrestrial and freshwater ecological values of the site, assesses the potential effects of the proposed project on those values, and provides recommendations to avoid, minimise or mitigate any adverse effects where appropriate.



Figure 1. A map showing the reserve (blue polygon), with the SEA overlay (green hatch) as indicated on Auckland Council Geomaps GIS viewer.

2. METHODS

2.1 Terrestrial

A site assessment was undertaken by an experienced ecologist on 7 July 2022 to evaluate the vegetation and potential fauna habitats. Prior to the field surveys, a map of the site was created from Auckland Council Geomaps GIS viewer (GIS viewer), which defined the overland flow paths, stormwater services, contours of the property and any ecological overlays (biodiversity, SEAs). Fauna databases were also reviewed (e.g. Bioweb (ARDS and bats, Department of Conservation), ebird (Cornell Lab)).

Botanic values recorded included native and exotic vascular vegetation as well as the quality and extent of vegetation present on site. Fauna habitats were assessed qualitatively, and considered indigenous lizards, birds and long tailed bats (*Chalinolobus tuberculatus*). Observations of birds seen or heard within the site were recorded over the duration of the visit.

2.2 Freshwater

The site was assessed via a desktop review and site visit. The desktop assessment looked at factors such as changes in elevation, historical aerial images, a review of data such as the Current Biodiversity layers, predicted watercourses and contours on Auckland Council's Geomaps.

Watercourses were classified under the Auckland Unitary Plan Operative in Part (AUP OP) to determine, in accordance with the definitions in these plans, the ephemeral, intermittent or permanent status of these watercourses. During the site assessment (7 July 2022), the presence and extent of water was noted, reference photos were taken and freshwater habitats were marked using a handheld GPS unit. The quality of the aquatic habitat was assessed, noting ecological aspects such as channel modification, hydrological heterogeneity, riparian vegetation extent, substrate type and any fish or macroinvertebrate habitat observed.

Under the AUP OP, and **intermittent stream** is defined as:

'Stream reaches that cease to flow for periods of the year because the bed is periodically above the water table. This category is defined by those stream reaches that do not meet the definition of permanent river or stream and meet and least three of the following criteria:

- a) it has natural pools;*
- b) it has a well-defined channel, such that the bed and banks can be distinguished;*
- c) it contains surface water more than 48 hours after a rain event which results in stream flow;*
- d) rooted terrestrial vegetation is not established across the entire cross-sectional width of the channel;*
- e) organic debris resulting from flood can be seen on the floodplain; or*
- f) there is evidence of substrate sorting process, including scour and deposition.'*

Any potential areas that contained hydrophytic vegetation or wetland hydrology features were assessed, following the Ministry for the Environment's wetland delineation protocols¹, including,

¹ Ministry for the Environment. 2020. Wetland delineation protocols. Wellington: Ministry for the Environment.

where appropriate, vegetation assessments, hydric soils and wetland hydrology, to determine whether the areas meet the definition of a 'natural wetland' under the National Policy Statement for Freshwater Management 2020 (NPS-FM).

2.3 Ecological Impact Assessment Methodology

The assessments were undertaken in general accordance with Ecological Impact Assessment guidelines, published by the Environment Institute of Australia and New Zealand (EIANZ; Roper-Lindsay *et al.* 2018). The Guidelines provide criteria for assigning value to habitat for assessment purposes. Values are assigned (High, Moderate, Low, Very Low, Table 1) based on the following four assessment matters (as described in Roper Lyndsay *et al.* 2018):

1. Representativeness
2. Rarity / Distinctiveness
3. Diversity / Pattern
4. Ecological Context

The level of effect is then determined by determining the magnitude (Table 2) and combining the value of the ecological feature/attribute with the score or rating for magnitude of effect to create a criterion for describing the level of effects (Table 3). The cells in Table 3 italics in represent a 'significant' effect under the EIANZ 2018 guidelines.

Cells with low or very low levels of effect represent low risk to ecological values rather than low ecological values *per se*. A moderate level of effect requires careful assessment and analysis of the individual case. For moderate levels of effects or above, measures are expected to be introduced to avoid through design, or appropriate mitigation needs to be addressed (Roper-Lindsay *et al.* 2018).

Table 1. Criteria for assigning value to habitat/species for assessment.

Value	Determining Factors
Very High	Area rates 'High' for at least three of the assessment matters of Representativeness, Rarity/distinctiveness, Diversity and Pattern, and Ecological Context. Likely to be nationally important and recognised as such.
High	Area rates 'High' for two of the assessment matters, and 'Moderate' and 'Low' for the remainder OR area rates 'High' for one of the assessment matters and 'Moderate' for the remainder. Likely to be regionally significant and recognised as such.
Moderate	Area rates 'High' for one of the assessment matters, 'Moderate' or 'Low' for the remainder OR area rates as 'Moderate' for at least two of the assessment matters and 'Low' or 'Very Low' for the remainder. Likely to be important at the level of the Ecological District.
Low	Area rates 'Low' or 'Very Low' for majority of assessment matters, and 'Moderate' for one. Limited ecological value other than as local habitat for tolerant native species.
Negligible	Area rates 'Very Low' for three assessment matters and 'Moderate', 'Low' or 'Very Low' for the remainder.

Table 2. Criteria for describing the magnitude of effects (EIANZ 2018)

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

Table 3. Criteria for describing the level of effects (EIANZ 2018). Where text is italicised, it indicates 'significant effects' where mitigation is required.

Magnitude of Effect	Ecological Value				
	Very High	High	Moderate	Low	Negligible
Very High	Very High	Very High	High	Moderate	Low
High	Very High	Very High	Moderate	Low	Very Low
Moderate	High	High	Moderate	Low	Very Low
Low	Moderate	Low	Low	Very Low	Very Low
Negligible	Low	Very Low	Very Low	Very Low	Very Low
Positive	Net Gain	Net Gain	Net Gain	Net Gain	Net Gain

3. EXISTING ECOLOGY VALUES

3.1 Background and Ecosystem Classification

Historically (pre-human), the area would have comprised the forest ecosystem type of kauri, podocarp, broadleaved forest (WF11) (Singers *et al.*, 2017), however it is currently classified as WF10 kauri forest. In 1993/94, wilding pines were felled or removed from most the reserve to improve regeneration of native bush. The site has been densely vegetated for at least the last 60 years (Figure 2).

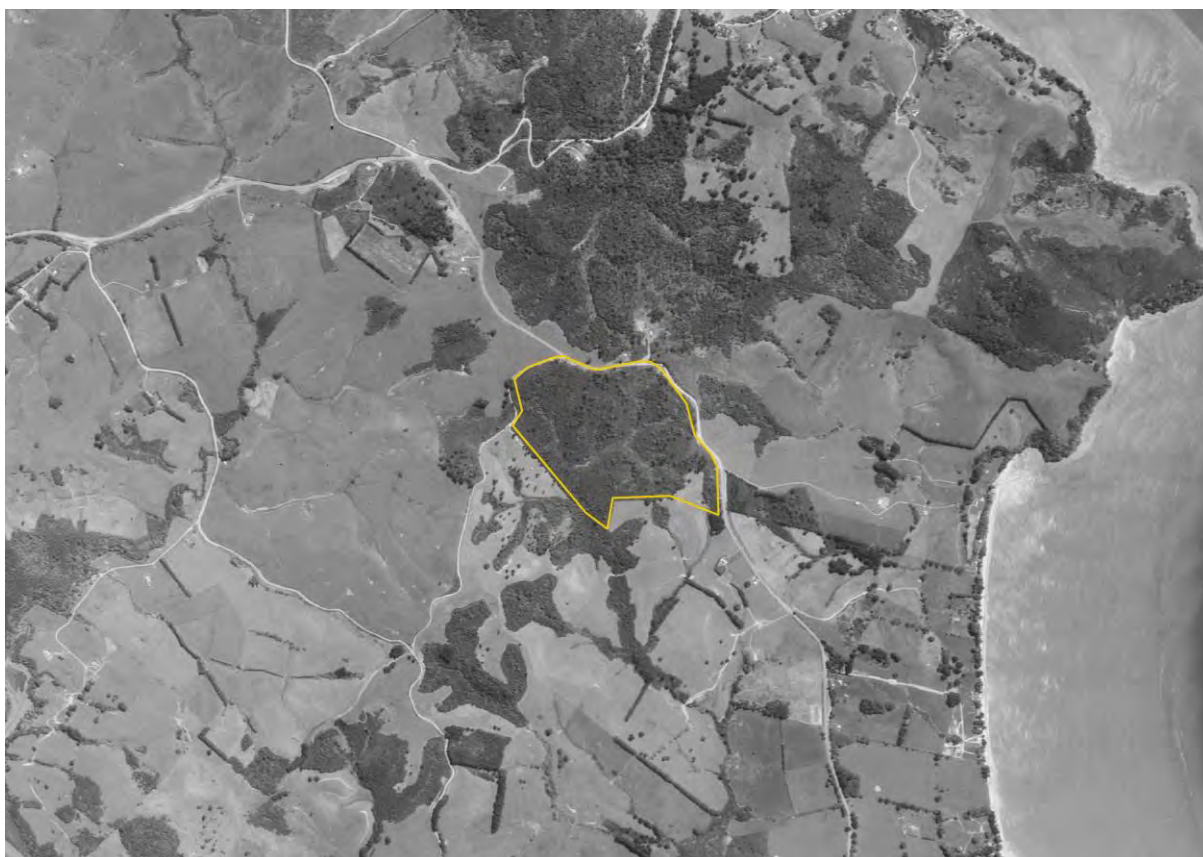


Figure 2. Historical aerial image of the site (yellow polygon) in 1966 (sourced from Retrolens).

The property is currently entirely vegetated under a SEA overlay. SEA_T_2301 triggers four of the significance criteria under Schedule 3 (Chapter L) of the AUP. These are 'Representativeness', 'Threat Status and Rarity', 'Stepping-Stones, Migration Pathways and Buffers' and 'Uniqueness or Distinctiveness'.

The 27.2 ha site is largely regenerating native bush with small area of pasture in the southeastern corner of the site. Native canopy vegetation consisted of mānuka (*Leptospermum scoparium*) / kānuka (*Kunzea ericoides*) / tānekaha (*Phyllocladus trichomanoides*), with rewarewa (*Knightia excelsa*) and young tōtara (*Podocarpus totara*). The understorey was dense with a wide variety of species such as pigeonwood (*Hedycarya arborea*), karamū (*Coprosma robusta*), hangehange (*Geniostoma ligustrifolium*), coprosma repens, nīkau (*Rhopalostylis sapida*), whekī (*Dicksonia squarrosa*), five finger (*Pseudopanax arboreus*), māpou (*Myrsine australis*). Additionally, the groundstorey was diverse with tōtara, tānekaha seedlings, astelias, supplejack (*Ripogonum scandens*), bushmans lawyer (*Rubus cissoides*).

There is an area on site (southern edge of the reserve) that contains mature pines. Several hectares of mature pines remain on the southern edge of the reserve, with more sparse native vegetation underneath.

Exotics consists of montbretia (*Crocoshia x crocosmiiflora*), several small ginger plants (*Hedychium gardnerianum*), and several hectares of mature pine in the southern edge of the reserve. However, the reserve is in good condition and representative of a native regenerating system.

The SEA vegetation is considered **high** value, due to the diversity and structure of the forest and low incursion of exotic species.



Photo 1. Dense understory and ground cover throughout Lawrie Reserve.

3.2 Herpetofauna

No formal herpetofauna surveys were undertaken. However, opportunistic searches and observations were undertaken as well as a review of historic lizard records from within 10 km of the project area (DOC BIOWEB Herpetofauna database).

Five species have been recorded in the Sandspit/ Snells Beach / Matakana area, including copper skink, *Oligosoma aeneum*; ornate skink, *Oligosoma ornatum*; forest gecko, *Mokopirirakau granulatus*; Pacific gecko, *Dactylocnemis pacificus*; elegant gecko, *Naultinus elegans*.

No indigenous lizards were observed on site. However, the SEA canopy and emergent trees, such as kānuka, could provide habitat value for indigenous arboreal geckos, such as forest gecko (*Mokopirirakau granulatus* – ‘At Risk- declining’), green gecko (*Naultinus elegans* - ‘At Risk- declining’) and pacific gecko (*Dactylocnemis pacificus* - ‘At Risk- declining’). All of which been recorded in similar vegetation in nearby areas.

The dense understorey may provide potential skink habitat for species such as copper skink (*Oligosoma aeneum*, ‘At Risk’) and ornate skink (*Oligosoma ornatum*, ‘At Risk- declining’). Overall, the habitat value of the site as they pertain to indigenous lizards, is considered to be **High**.

3.3 Avifauna

Two species of native birds were observed on site – fantail (*Rhipidura fuliginosa*) and kākā (*Nestor meridionalis*) (At Risk – Recovering). A review of various databases (inaturalist, New Zealand eBird, accessed 18 July 2022) indicates presence of a high diversity of common native birds within the area. More common ‘Low Value’ species that are likely to use the site permanently or intermittently for foraging, roosting and nesting purposes (but which were not recorded during the site visit), include grey warbler (*Gerygone igata*); kingfisher (*Todiramphus sanctus*); morepork (*Ninox novaeseelandiae*); kereru (*Hemiphaga novaeseelandiae*) tui (*Prosthemadera novaeseelandiae*) and silvereye (*Zosterops lateralis*).

The site has the potential to have a high habitat value for most of these species due to its proximity to large areas of native vegetation. The vegetation on site is regenerating, so currently there is a lack of mature fruiting and flowering plants and trees. Therefore, the value of the available habitat to those species is conservatively **Moderate**, given the potential for a higher diversity of intermittently rare birds species to the site (such as the kaka observed).

3.4 Freshwater Ecology

In the month prior to site assessment, two significant (>20 mm/24 hours) rainfall events occurred (Figure 3). Rainfall was relatively low across the month however there were periods of low (0 mm/48 hours) and high (24 mm/24 hours) within this time. In the 48 hours prior to site assessment, a cumulative 25 mm of rain fell (Figure 3). The sustained rainfall within the month prior to site assessment and relatively high rainfall 48 hours’ prior indicates the catchment was saturated and would result in the flow of intermittent streams.

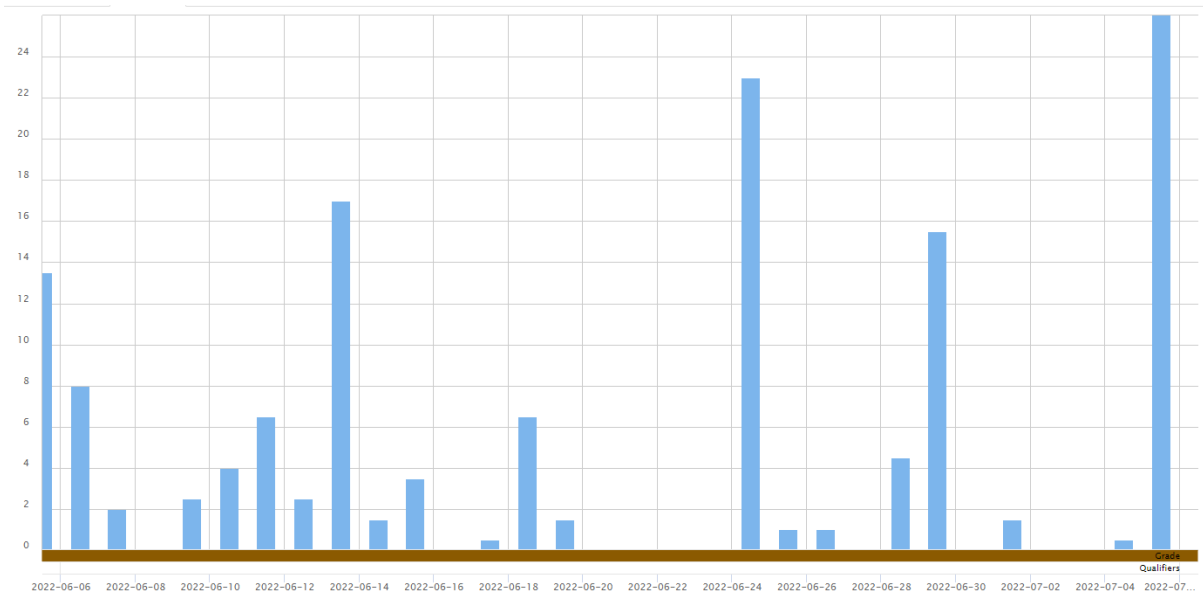


Figure 3. Totalled daily rainfall (mm) in the month prior to site assessment (06/06/2022-06/07/2022). Data sourced from Auckland Council Monitoring Station Mahurangi 644626.

During the site assessment, one watercourse was identified flowing between point 16 and 17 (Figure 5). The watercourse is a tributary of the Mahurangi Estuary and was classified as an intermittent stream due to the defined channel, flowing water and evidence of scouring processes. The watercourse flowed for approximately 1.5 km before entering the marine environment through north arm of the Mahurangi Estuary.

The banks of the intermittent water course were slightly incised. The dominant substrate throughout the stream consisted of compacted clay banks and beds. Roots, woody debris and leaf litter were observed within the channel, and no macrophytes were observed.

Vegetation within the riparian yard consisted of native species, including nīkau, silverfern, māhoe, hangehange, astelias, with a canopy of tānekaha and māpou. The riparian vegetation provided high levels of shade, as well as a high level of organic matter input. The riparian yard likely provides moderate filtration functions and bank stability to the watercourse. Fish habitat quality and abundance was considered to be very low with a lack of available habitat (Photos 2 & 3). However, banded kōkopu (*Galaxias fasciatus*), kōura (*Paranephrops planifrons*) and īnanga (*Galaxias maculatus*) have been recorded further down the catchment.



Photo 2. The upper reach of the intermittent stream showing evidence of high organic matter input and soft sediment



Photo 3. Native vegetation providing high shading for the upper reach of the intermittent stream.

The intermittent watercourse was assessed to be of **low** ecological value due to the low abundance of aquatic habitat suitable for native aquatic fauna.

The remaining overland flow paths within the vicinity of the proposed walkway were classified as ephemeral due to the lack of a clearly defined channel, natural pools, surface water, flood plain organic debris and evidence of scouring and erosion.

No hydrophytic vegetation, wetland hydrology features or other wetland indicators were observed within 100 m of the proposed walkway. As such, no natural wetlands, in accordance with the definitions of the NPS-FM, were identified and the NES-FW wetland regulations do not apply

3.5 Ecological Assessment Matters

3.5.1 Representativeness

The vegetation onsite was predominantly native. While species of WF 10 ecosystems are present, large podocarps are missing. The vegetation has structure and diversity. Fauna species that may be present are all representative and typical of this habitat type. Representativeness within the project area is **High**.

3.5.2 Rarity Distinctiveness

No rare or distinct plant or fauna species were observed during the site visit, however pale flowered kūmarahou (At Risk) has been observed². There is the potential for a range of rare avifauna species to pass through the project area and for 'At Risk' lizards to be present, given the availability of habitat and a high species diversity in the surrounding landscape. Rarity / distinctiveness is **High** due to the potential presence of at-risk and threatened fauna species.

3.5.3 Diversity / Pattern

The diversity of fauna is potentially very high, but this is likely to be seasonal for avifauna which may disperse or forage further (particularly over spring and summer) from other habitats. This would be highly influenced by season, when warmer temperatures and fruiting and flowering plants in summer may support greater foraging distances. Flowering and fruiting may otherwise be limited throughout the year. A potentially high diversity of reptiles could be present year-round. Diversity / Pattern, while probably intermittent or seasonally very high, is considered **High**.

3.5.4 Ecological Context

The subject site has good connectivity to vegetation and habitats throughout the Sandspit area and as such, it's potential faunal components (lizards, birds) are likely to have higher natural diversity. However contextually the area is largely surrounded by a rural landscape which limits the direct connectivity to larger areas of intact vegetation (Figure 4). Overall, the connectivity and ecological function of the SEA vegetation to the surrounding area was considered **moderate** ecological value.



Figure 4. The site (blue polygon) and SEA (green hatch) within the surrounding environment largely surrounded by farmland.

² Lawries Road Assessment of Environmental Effects. Undated.

3.5.5 Summary

The overall terrestrial ecological value of Lawrie Reserve is **high** based on scoring high for more than three assessment matters (Table 1). The freshwater ecological value of the freshwater features within close vicinity of the proposed walkway was considered low predominantly due to the lack of available freshwater habitat.

4. ASSESSMENT OF ECOLOGICAL EFFECTS

The proposed walkway will involve the permanent removal of SEA vegetation. By avoiding high value trees and using gaps where possible, the design of the walkway will minimise vegetation removal.

4.1 Vegetation Removal

The proposed walkway will be between 2.4 – 3 m wide with a compacted gravel surface. The track is approximately 944 m long (Figure 5). While this equates to an approximate area of 2200 – 2800 m², this does not equate to 2200 – 2800 m² of tree removal. The route has been selected to avoid larger higher value trees and utilise predominately clear areas or areas comprising of young low value regenerating scrub. Some native vegetation within the proposed footprint, includes hangehange, matipo, kānuka and tānekaha kauri seedlings.

The total SEA infringement proposed is potentially 2800 m², which forms a very small proportion of the total SEA (278,910 m²) on the site (0.01%). Proposed vegetation removal would avoid higher value features, such as trees with a DBH larger than 15 cm. As such, the magnitude of effect is considered **low**. That is, the walkway would represent a very slight change from existing conditions, including vegetation cover, composition, and characteristic features of the SEA. This would result in a low level of effect (Table 3).

4.2 Habitat Removal

It is presumed that native lizards and birds are present. None of the vegetation that is proposed to be removed supports any trees with potential for bat roosting (e.g. epiphytes, tree \geq 15 cm dbh (diameter at breast height)) and therefore no risk to bats is expected from vegetation removal. As such, the proposed vegetation removal within the site may cause harm or potential mortality to indigenous lizards and potentially nesting birds only. Therefore, mitigation measures to reduce and/or avoid potential harm or mortality to indigenous fauna are recommended as per Section 5. Provided the mitigation measures are undertaken, the level of effects will remain low.

4.3 Freshwater

A primary adverse ecological effect of the proposed development during earthworks is the potential for excess fine sediment entering the watercourse. To minimise potential erosion sediment input effects during and immediately after works, an Erosion and Sediment Control Plan or a works methodology outlining any proposed minimisation mechanism is recommended (Section 5)

The culvert is proposed between points 13 and 14 (Figure 5), over an ephemeral stream. This is a permitted activity provided that the activity complies with E3.6.1.1 (Table E3.4.1 (A53)). Additionally, it is proposed that the intermittent watercourse by point 17 is bridged with a boardwalk. No stream works are proposed. The construction of a bridge permitted activity provided that the bridge complies with the standards in E3.6.1.16 (Table e E3.4.1 (A29)).

Due to the fact that no direct streamworks are occurring and the fact that there is no aquatic habitat present for freshwater fauna, fish management is not recommended.

The magnitude of effect in relation to the installation of the culvert and bridge is considered negligible, provided erosion and sediment controls are in place or appropriate construction methodologies are undertaken. Overall, the level of effect on freshwater value would be **very low**.

4.3.1 Wetland

No wetlands were identified within 100m of the proposed walkway. Through a desktop analysis, examining the watercourse and contour lines it appears that there may be a putative wetland through the central area of the reserve. However, as this area is outside the 100 m buffer of the proposed track (Figure 5), a NES-FW assessment was not required.

4.4 Conclusion

The proposed low magnitude infringement of the high value SEA vegetation and habitat would represent an overall **low-level effect** (Table 3). The proposed vegetation removal within the reserve may cause harm or potential mortality to indigenous fauna. Therefore, mitigation measures to reduce and/or avoid potential harm or mortality to indigenous fauna are recommended (Section 5).

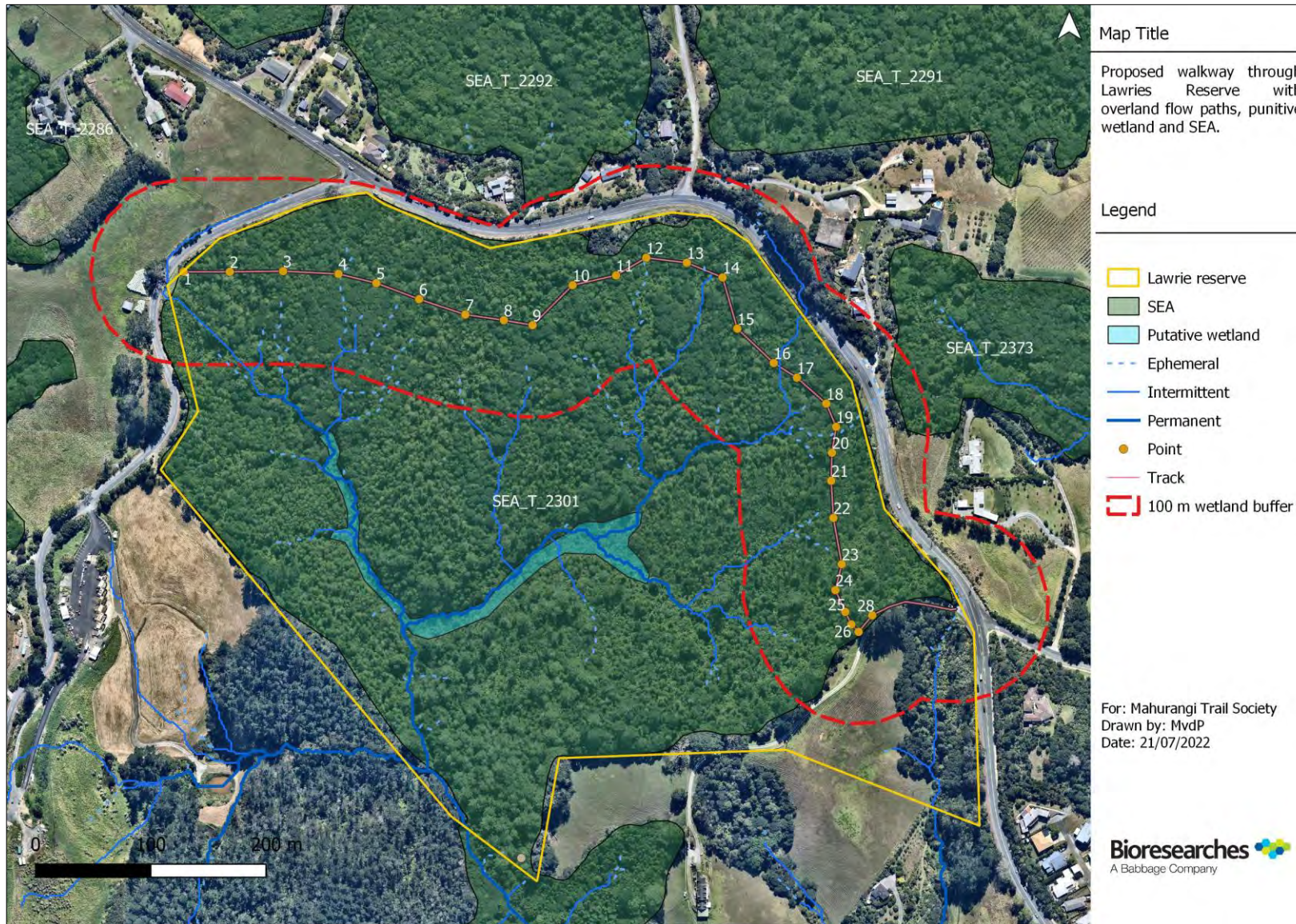


Figure 5. Map of proposed walkway through Lawrie's Reserve.

5. MITIGATION AND RECOMMENDATIONS

The following recommendations are provided to avoid and minimise any potential adverse effects to the ecological value of the terrestrial and freshwater environments during the undertaking of earthworks and development activities on the Site.

- An Erosion and Sediment Control Plan should be prepared and submitted to Auckland Council prior to any earthworks or vegetation removal commencing and should remain in place until the completion of construction activities. Stringent sediment control measures should be in place near the downstream receiving environment, including progressive stabilisation of the open areas near to the stream, earthworks should be timed to avoid heavy rain and the relevant management and procedures in GD05 should be utilised as a minimum standard.
- Earthworks activities, including temporary storage of materials, within the riparian yard should be minimised and restricted to the earthworks area.
- Site management should include ensuring that no rubbish, fuel, solvents, concrete wash-down material or other related materials enter the stream.
- Kauri dieback protocols including;
 - All personnel effects (e.g. footwear), equipment, machinery and vehicles will be cleaned of soil and organic material on an area of hard ground/concrete prior to entering and after leaving the property for vegetation removal and earthworks. Once cleaned, the machinery, shoes, etc. are to be sprayed with a 2% solution of sterigene.
 - Any woody vegetation felled shall be returned to vegetated areas within the site, to break down naturally and provide habitat and resources to native fauna.
- Vegetation removal should be carried out outside of the main native bird breeding season (September to February, inclusive). Alternatively, if vegetation is required to be removed within the native bird breeding season then the affected areas should be checked by a suitably qualified ecologist for nesting birds immediately prior to removal. If an active nest is found, a 10m exclusion zone should be enforced until chicks have fledged.
- A suitably qualified ecologist / herpetologist should be present during vegetation removal and / or earthworks to search tree foliage of felled trees and ground cover until the herpetologist is satisfied that the potential habitats are sufficiently degraded that lizards are highly unlikely to be present. All felled trees should be sectioned and returned (with any attached epiphytic vegetation) to adjacent areas of vegetation and habitats to break down naturally.

Lawries Scenic Reserve track

Sec 9(2)(a)

9 December 2021 at 15:19

I have reviewed the route for the proposed walking track through Lawrie's Scenic Reserve at Allot 197 SO 55382, [Mahurangi East Road Snells Beach 0982](#). I understand the track will be metalled at grade and may require some tree removal.

The track crosses through the Significant Ecological Area and Stream Management Area overlays within the Auckland Unitary Plan. The track also traverses two identified overland flow paths as shown on the maps attached. Therefore, while I have outlined the likely consenting triggers below, an ecological assessment needs to be carried out to conduct a full planning assessment.

The ecological assessment will need to classify all watercourses and the presence of any wetlands on the site (within 100m of the proposed track) in the first instance. The watercourse classification needs to identify any intermittent or permanent streams as per the relevant definitions in the AUP and the potential for any wetlands that meet the definition in the National Environmental Standard for Freshwater 2020 (namely the overland flow paths that cross the track). From a desktop review the central area in Lawries bush has wetland potential.

Some likely consenting requirements *if wetlands are present* are included below:

NES Freshwater 2020

- Earthworks within or within 10m of a wetland is Non-Complying. Earthworks within a wetland that results in any drainage is prohibited – can't apply for consent for this so would need to ensure no drainage could occur.
- Vegetation clearing within or within 10m of a wetland is Non-complying.
- Earthworks within 100m of a wetland (but further than 10m as above), if it results in the complete or partial drainage of a wetland, would be Non-complying. Otherwise this does not trigger consent.
- The taking, use, damming, diversion, or discharge of water within, or within a 100 m setback from, a natural wetland is Non-complying. This includes diverting any overland flow path.

The proposal will require assessment against the following rules too:

Significant Ecological Area Overlay

- Any land disturbance greater than 5 sq. m or 5 cubic m is Restricted Discretionary
- Vegetation alteration and removal not otherwise provided for is a Discretionary Activity
- The maintenance or repair of existing tracks or fences is permitted

Stream Management Area Overlay

- Vegetation alteration or removal of any vegetation within a Natural Stream Management Areas Overlay is Restricted Discretionary
- Any activities in, on, under or over the bed of lakes, rivers, streams and wetlands not otherwise provided for (E3.4.1(A1) (depends on watercourse and wetland classification recommended above).
- Depositing any material excluding litter, waste or other refuse is Non-Complying Activity.
- Pest plant removal is permitted if it meets the relevant standards.
- Channel clearance less than 100m complying with the standards is Discretionary.

- New reclama on or drainage is non-complying – this is relevant where any filling in a stream occurs.
- Culverts or fords less than 30m in length when measured parallel to the direction of water flow complying with the standards in E3.6.1.18 are Discretionary.

I presume the land is administered by DOC as it is a Scenic Reserve? If it is, this is considered Conserva on Land under the RMA, and it does not have to meet the district plan provisions (in this case AUPOP Chapter E15 Trees in open space and H7 Open space zones).


Hope this helps and please let me know if you have any further ques ons.

Ngā Mihi | Kind Regards

Sec 9(2)(a)



2 attachments — [Download all attachments](#)

 **AUP Map - Lawries.pdf**

344K [View as HTML](#) [Download](#)

 **Hydrology map showing overland flow.pdf**

1253K [View as HTML](#) [Download](#)



10 March 2022

Shared path through Lawries Scenic Reserve

To whom it may concern:

This letter is from the **Ngāti Manuhiri Settlement Trust** supporting the investigation of a shared path through Lawries Scenic Reserve to provide walking and cycling connectivity between Snells Beach and Warkworth townships.

In 2012, Ngāti Manuhiri settled and achieved their Treaty Settlement with the Crown. The Ngāti Manuhiri Settlement Trust (NMST) is a post settlement governance entity (PSGE) who are the mandated and approved entity to represent Ngāti Manuhiri and it's environs.

The **Ngāti Manuhiri Settlement Trust** support the work of the Matakana Coastal Trail Trust, Mahurangi Trails Society and Department of Conservation - Te Papa Atawhai, to investigate the feasibility of a shared path route through Lawries Scenic Reserve.


Ngāti Manuhiri Settlement Trust would expect to be engaged to complete a Cultural Values Assessments (CVAs) as part of any future resource consent application and approvals process.

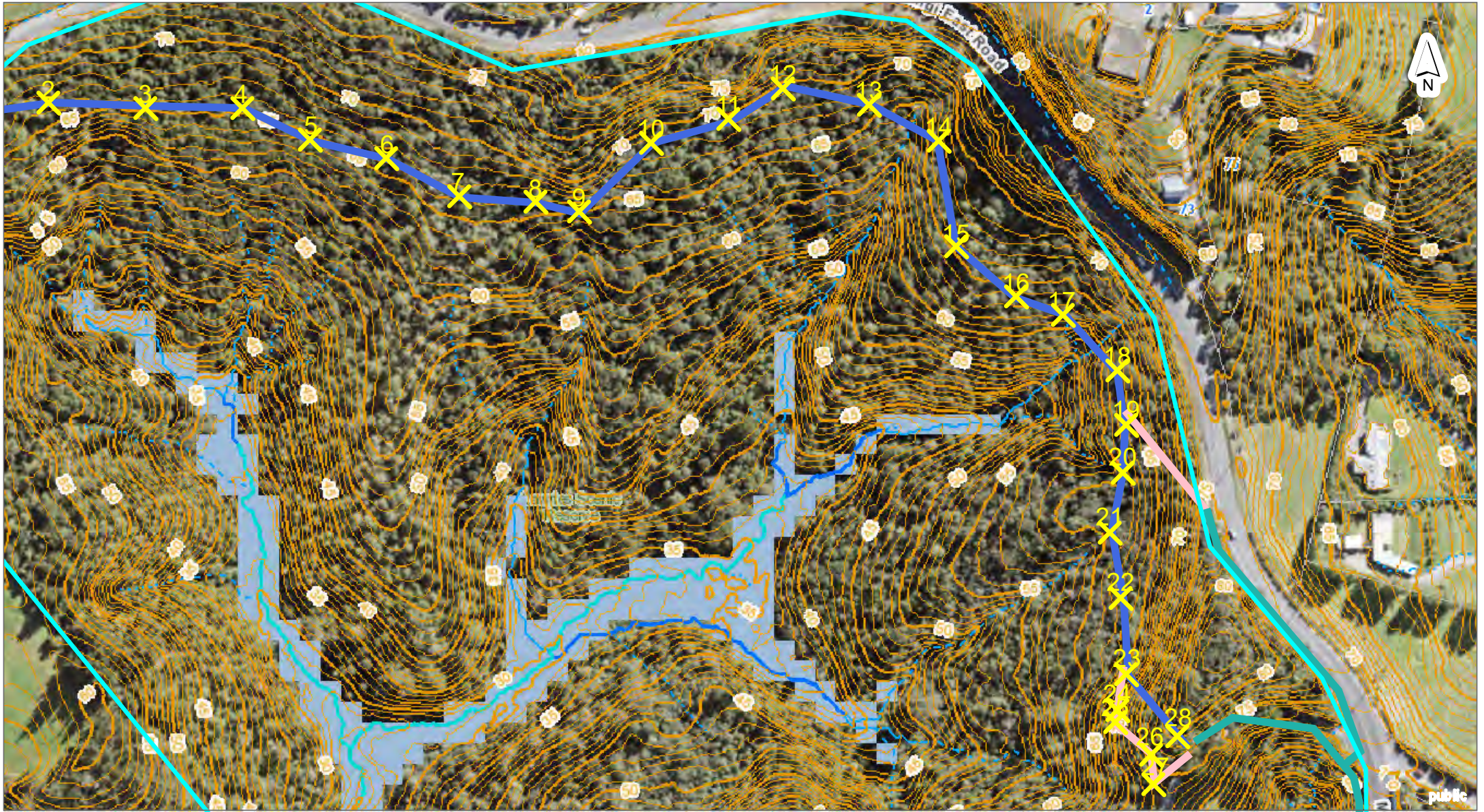
Ngāti Manuhiri Settlement Trust would also anticipate inputting into the location of the trail through Lawries Scenic Reserve, naming of key infrastructure, developing any cultural installations, way finders, educational material, and built or digital infrastructure to educate trail users.

I remain available if you require further information or have questions.

Ngā mihi nui,

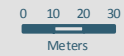
Sec 9(2)(a)

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Hydrology Map - Lawries Bush



Scale @ A4
= 1:2,500

Date Printed:
9/12/2021



ASSESSMENT OF ENVIRONMENTAL EFFECTS:

Proposed Cycling and Walking Track through Lawries Scenic Reserve

The Department of Conservation has received a proposal from the Mahurangi Trails Trust, to form a track / cycleway through the upper section of the Lawries Scenic Reserve. The track will be approximately 1km in length and is one part of a network of walking and cycling trails being developed in the area. The trail network utilises public and private land and has been largely driven by the local community, and has been previously supported in DOC and Council management strategies/ plans.

At this stage, no detailed prescription for construction has been prepared, or information on how this section fits within and links to the wider local cycle and walking trail infrastructure framework. The track is to be constructed to a grade 2 or 3 cycle track standard, of between 2.4 and 3 metres wide and suitable for beginner to intermediate skilled riders as well as walkers. The south eastern end of the trail is over the road from footpaths on Mahurangi East Road and Arabella Lane. The line of the proposed trail has been marked through the reserve by volunteers, and this assessment is based on the (upper, numbered) marked line as at 20 January 2022.



Photo 1: Markers on proposed track

This assessment does not take into account possible effects outside of the reserve boundary, such as parking or traffic impacts, or impacts from construction methods, as information has not been provided at this stage. However, it is expected that current “Best Practice” will be followed for design, construction and maintenance of the track and any structures will be built to meet or exceed the standards specified in SNZ HB 8630:2004.

LOCATION OF PROPOSED TRACK

Lawries Scenic Reserve is located on the corner of Lawrie Rd and Matakana East Road, approximately 5km South East of Warkworth and .5km North West of Snells Beach, in the Rodney District of Auckland.

Legal Description:

Allotment 197, Village of Matakana, Block V111, Mahurangi Survey District.

SITE DETAILS

The Scenic Reserve comprises 27.2658 hectares, a small portion of which is in pasture, with the majority in regenerating native bush.

An archaeological survey has been undertaken for the reserve, with no sites found.

Physical description: A basin shaped valley sloping from two roads, with a south westerly aspect. Several spurs lead into the main valley, which forms the head of a small water catchment and raupo wetland, running into the Mahurangi Harbour, entering the Harbour near Hamatana Road. The reserve rises from 18m to 75m above sea level. It is fenced to exclude stock, with only the southern boundary requiring fencing, as roads are on two sides. A small section, on the Snells Beach side, is managed as part of an adjacent property, including driveway access. The south west boundary is adjacent to the local refuse transfer station, which is sited on top of a closed Landfill site, owned by Auckland Council. Leachate is recycled on site, but is recognised as impacting on the stream below the reserve.

Soils are Warkworth clay / Onerahi chaos and sandy clay loams with some silt loams which are strongly leached, of low fertility and strongly acidic, with low nutrient reserves. The reserve, like most of the Mahurangi catchment, has been modified by land clearance. The remaining forest fragments provide important habitat values and contribute to the overall landscape quality of the area and harbour landscape.

Kauri milling began in the late 1820s and most of the Mahurangi catchment had been cleared by the late 1880's. With easy access to the harbour for transport, it is likely that kauri from this reserve was cleared at an early stage.

Vegetation: In 1993/94, wilding pines were felled or removed from most the reserve to improve regeneration of native bush. Varied native forest is regenerating through a manuka / kanuka / tanekaha canopy, with some rewarewa and young totara also joining the canopy. Several hectares of mature pines remain on the southern edge of the reserve, with more sparse native vegetation underneath.

Pale flowered kumarahou (*Pomaderris hamiltonii*), a threatened native plant and rongoa, is present in open areas and sections of boundary, where increased levels of sunlight penetrate, with one plant noted along the proposed route. More is likely on disturbed parts of the reserve and near edges, as after disturbance from tree felling the plant became relatively abundant, but has since been shaded out.

Apart from a few stray, smaller pine trees, weed species have been subject to ongoing control, with dead pampas & prickly hakea noted. A scattered area of Montbretia has become established below a roadside dumping side and several small ginger plants were found, but overall the reserve is in very good condition.

Fauna: Tui, Riroriro (Grey Warbler), Piwakawaka (Fantail), Koekoeā (long tailed cuckoo), Pipiwharauroa (Shining cuckoo) and Tauhou (Silver eye) were seen / heard during the inspection. Common bush birds are all regarded as present and Forest, Green and Northern Grey Gecko have been previously recorded. Noke / Giant earthworms were also recorded in the reserve during logging.

Introduced Animals: Common pest / predator species are assumed to be present. (Possums, rats, cats, mustelids) Feral cat numbers were once high, in association with the adjacent landfill, but should have declined with the capping of the open site. Limited possum control has previously been undertaken. The area borders a local community Pest Management Area (Sandspit / Snells Beach) but no recent control has been undertaken within the reserve.

Facilities: There are currently no facilities in the forested part of the reserve. A small carpark opposite James Street was blocked off by Auckland Transport in approximately 2018, in an attempt to reduce dumping of roadside rubbish.



Photo 2: Felled pine from approx. 1993/4, well-rotted and supporting regenerating bush.

Management history:

This area of Crown land was gazetted as a Water Conservation Reserve in 1961, and was subsequently changed to a Scenic Reserve in 1983, to reflect the regeneration of the bush and the potential for establishing walking tracks to serve the local community. A management plan for the reserve, published in 1983 (Lands & Survey) recommended removing exotic vegetation, particularly the mature pines and that there was the potential to establish tracks “when the vegetation further matures, say in (1993)” and that the reserve “could be a valuable asset for the expanding population of Snells Beach.

Under Department of Conservation Management, the 1995- 2005 Conservation Management Strategy included this reserve in a “Mahurangi” key area, recognising the ecological sequences of coastal vegetation and estuarine ecosystems and the long term potential for integrated management of the coastal edge of the Mahurangi Harbour for “natural and historic heritage conservation and recreational activities”. At the time, a network of walking tracks was requested by the local community, with the intention of using tracks formed by removing the wilding pines as the basis for recreational walking trails within this reserve, but this never eventuated.

In the most recent Conservation Management Strategy, Section 24.3.2, Provision for providing for mountain biking (non-motorised) is outlined:

Further opportunities for mountain biking on public conservation lands and waters are proposed for Great Barrier and Kawau Islands. Mountain biking on roads on Motutapu and Rangitoto Islands has also been proposed (refer Part Two). Other areas where the Department could partner with others to develop mountain biking tracks include Nukumea, Totara Peak, Sunnybrook and Lawries Scenic Reserves, and on unformed legal roads adjoining public conservation lands and waters. The role of other agencies and land managers in Auckland, the supply and demand for this activity, the primary purpose for which the land is held, and potential conflict with other recreational users will be taken into account when planning for future mountain biking opportunities.

The Auckland CMS restricts the use of “power cycles” great than 300 watts, regarding them as “vehicles” which would impact on many e-bike users. A clarification or amendment to this CMS provision should be sought, due to the advancement in e-bike technology and use since the 2014 CMS was published.

The intention to enable public access, especially for walking and cycling, has long been intended for this reserve and recognised in statutory plans. To this end, it appears this proposal complies with the Auckland Conservation Management Strategy 2014 – 2024 (Appendix 1) exemption from requiring a separate land use consent, with the possible exception of e-bikes exceeding 300 watts. Refer to summary, Appendix 1, P9 of this report.

Proposed Activity:

The Mahurangi Trails Trust has marked out a route for the proposed track, which is part of a connecting walking and cycleway network. A small section of this network has already been constructed on the Mahurangi East Marginal Strip, (between Grange Street and Hamatana Road), downstream of the reserve, where the un-named stream enters the Mahurangi Harbour. Other sections have been built on Council and private land.

An assessment of the ecological values – mainly on vegetation – was undertaken along the marked route, envisioning that the track would be between 2.4 and 3m wide, with a compacted gravel surface. Enabling earthworks may be wider in some places.

The track enters the reserve near the northern end of Lawries Road, opposite a farm gateway and exits the bush within the reserve at the Snells Beach end and onto Mahurangi East Road via an existing driveway within the reserve, approximately opposite Arabella Lane.

Assessment Method:

Vegetation 10 -20 meters above (uphill) of the route and 30 – 50 meters below (downhill) was searched for kauri trees / seedlings to assess any risks to kauri from the spread of “kauri dieback” / *Phytophthora agathidicida* oomycete from the proposed track. There is very little kauri in this part of the reserve, however some small plants were located.



Photo 3: Regenerating vegetation, showing undergrowth. Near Site #6



Photo 4: Regenerating vegetation, near site #8. Note tanekaha & mature manuka.



Photo 5: Young kauri, approx. 15m tall. (Pen for diameter comparison)

Several small kauri were located, all well above the proposed route. Seedlings were located approximately 12 – 15m above points #5-7 and ranged in height from 30cm to 15 – 20m



Photos 6 & 7: Examples of kauri seedlings growing > 15m above the proposed track. No seedlings were found <50m below the proposed track.

Until such time as a detailed prescription for construction is drawn up for the specific route, and the quantity of earth to be moved and fill / track metal required, specific section comments cannot be made. However, the route traverses an easy contour and no specific issues are expected.

Track metal / walkway mix (with a percentage of fines to lock the metal in place) will need to come from a source where weed management is undertaken (particularly for pampas), and preferably Plague / Rainbow skinks will not be further introduced. (Spinning metal in a crusher or mixer should destroy eggs & adults prior to loading) It is accepted with the Transfer station adjacent, Plague skinks are no doubt already nearby, if not in the reserve. Best Practice biosecurity will still be required to ensure pathogens and weeds are not carried in on machinery or materials. Stockpiling of material should be avoided inside the reserve and off of the intended track footprint to avoid compaction of any additional areas. Use of lime rock for the track surface should not cause any adverse effects on soil alkalinity, given it is commonly found in the area & used on adjacent roads, but should be monitored.(If used)

Methods of track construction will also have a significant impact on vegetation, soil compaction and ground disturbance outside the actual track footprint. For example, whether the trail earthworks are done by hand, small digger/ bobcat or larger machine, the location of water tables & drains, batter shape, use of filter cloth/ structures to retain track metal etc. The track will need to have frequent culverts or drains underneath, to avoid impacting on the natural drainage of the forest, rather than fewer, larger drains, creating “dry” patches down slope.

The route was assessed in summer, with no sign of any waterways encountered, excepting for a drainage area stemming from a culvert under Mahurangi East Road, approximately 40 - 50m uphill of a dry water course at site #17. As the source of this appears to come from a roadside drain and culvert, water flow is likely to be greater than if it was just normal rainfall and the track needs to be appropriately culverted / constructed to allow for additional runoff at this point.



Photo 8: Culvert running under Mahurangi East Road & forming a point source discharge across the proposed track above site # 17. The culvert is the opposite side of the road to the reserve.



Photo 9

Roadside slumping above culvert outlet, on the reserve / road edge.

(Opposite # 73 Mahurangi East Rd)

The track width, both during construction and on completion, will potentially expose the adjacent bush to “edge effect”, by allowing more sunlight and wind into the forest floor, enabling weed species to establish and become habitat for more “pioneer species”. This effect may be exacerbated due to the relatively low canopy of the regenerating forest, however this forest has very high seedling density and undergrowth is also well established. Forming a level / cambered or rounded track surface over a wider area, even by 50cm, will increase impacts, especially when digging batters into the slope, or building up outside edges. Reducing the width of the track, within reason, will also reduce the overall impact, so each section should be assessed for this compromise, rather than rigidly adhering to a track rule book.

Noise and visual impact:

There are no neighbouring houses within 200m of the proposed track. The closest houses are on the other side of Mahurangi East Road, a busy thoroughfare. As both cycling and walking do not generate any appreciable noise, neighbouring households are unlikely to be aware of people using the track. Track users, however, will always be aware of noise from the adjacent road.

The proposed track will remain out of sight, as it is within bush, and approximately 10 - 15m below road level. It is anticipated there will be entry signs and markers at either end, linking this section to the wider network, but these should have a minimal effect on adjacent land users. The track appears to cross rural property on the Snells Beach end of the track, however this driveway is an access easement within the Scenic Reserve. Additional markers may be required to ensure users do not venture further up the access drive than the start/ exit of the track.

Summary:

The track design needs to address entry and exit from the reserve, especially in relation to hazards crossing roads or being adjacent to the local roads, to meet Auckland Transport requirements. Lawries Road services the local Transfer Station and is a narrow gravel road with limited visibility, so cyclists or pedestrians may surprise or distract drivers. Similarly, people will need to cross the very busy Mahurangi East Road opposite Arabella Lane to continue along the route, and these hazards need to be considered in the wider walkway and cycleway plan, as they no doubt apply to other parts of the planned network.

Initial clearance of vegetation and track formation will have an impact on the immediate footprint within the reserve, however the route selected is of a relatively flat contour and level gradient to the slope. In the few areas where side slope is more pronounced, impacts will be reduced by a slight reduction in the overall track width, including water tables. Track construction will likely sever tree roots and impact on trees outside of the track footprint. This needs to be addressed in the construction prescription, however, as long as care is taken to avoid the larger trees, effects on track side vegetation should be minimised.

Construction and maintenance needs to meet or exceed SNZ HB 8630:2004 and follow biosecurity guidelines in respect of avoiding the introduction of weed seeds, pathogens or other pests on material or equipment used to construct the track. Ongoing track maintenance needs to include management of weeds on or near the track.

Once the track has “settled down”, natural regeneration of trackside vegetation should see minimal impacts on the rest of the reserve. No impacts on hydrology are expected outside of the track footprint or to the downstream wetland. There have been plans and policies to form visitor tracks within this reserve for over 40 years and there are expected to be social benefits in improving access for the rapidly expanding local population and reducing the reliance on having to drive elsewhere to experience a native bush reserve.

No kauri were detected below the track within 50m and those above the track should not be impacted by its use or construction. It is noted that since the removal of most of the pines, few kauri are surviving past the large seedling stage, which may be attributed to drought conditions or understory crowding in regenerating areas, rather than kauri dieback. Juvenile kauri seen were very spindly, once past seedling stage.

The track area identified as being below, and most likely impacted, by the road storm water runoff will require additional work to manage increased water flow from the road during storm events, but should be easily accommodated by standard track construction methods.

Young wilding pines identified along and near to the proposed route should be felled during track construction to prevent hazards and complications later. (Rather than poisoned, where falling debris will pose a hazard)

Appendix 1

Exemption from land use consents

Section 4(3) of the Resource Management Act 1991 (RMA) exempts the Department from obtaining district council land use consents where activities are consistent with a CMS, conservation management plan or similar document and do not have significant adverse effects beyond the boundary of public conservation lands. Appendix 1 of this CMS lists many activities that the Department considers meet the requirements for an exemption under section 4(3)(a) and (b) of the RMA. The facilities and activities listed in Appendix 1 are listed for the sole purpose of enabling the exemption under section 4(3) of the RMA and do not represent an undertaking in terms of the provision of these facilities.

Further, while certain activities may be exempt from land use consent, this does not remove the need to comply with other regulatory requirements of the RMA and other legislation, such as the archaeological provisions of the Heritage New Zealand Pouhere Taonga Act 2014.

Appendix 1 of the Auckland CMS 2014-2024 (P171) provides:

The Resource Management Act 1991 for exemptions from land use consents:

This table is presented to meet the requirements for enabling exemptions under Section 4(3) of the Resource Management Act 1991 (RMA). It does not exclude the need to meet all departmental requirements for the assessment of effects or other responsibilities under the RMA or other legislation (e.g. Building Act 2004, Historic Places Act 1993). Advice from the relevant local authority is required to determine whether a land use consent under the RMA is required.

All structures and tracks on public conservation land managed by the department are maintained, upgraded or built to the standards specified in SNZ HB 8630:2004.

This table does not imply that the facilities included within it will be managed in perpetuity.

Where work affecting historic assets potentially exempt from resource consent is planned, consultation would generally be expected with New Zealand Historic Places Trust prior to such work being carried out.

Auckland Conservation Management Strategy 2014–2024 addresses the construction of new tracks on land managed by the Department, as agreed in consultation with the community.

(Appendix 1, P171/ 172 Auckland Conservation Management Strategy 2014–2024)

Tracks, roads and car parking areas for visitor purposes:

Management actions covered, in respect of track construction include:

1. Construction of tracks and roads using cut to fill excavation, waste excavation and levelling using hand tools, motorised equipment and machinery.
2. Excavation of batter slopes to a maximum height of 1.5 m.

3. Vegetation removal from the full width of the track corridor and discretionary removal of any vegetation beyond the track and road corridor that is considered hazardous or that may adversely impact upon track components such as batter slopes, drainage or track surface
4. Aggregate surfacing, including placement and compaction of local and imported materials (from approved weed-free sources).
5. Use of local materials in the vicinity of the asset corridor where necessary for obtaining fill/surfacing materials.
6. Ground works of in-ground timber steps, including formation and levelling, drainage, and timber construction.
7. Construction of drainage and redirection of surface water from the track surface to existing natural contours using various means, such as culvert pipes, drainage sumps, cut-outs and cross boards.
8. Re-formation and widening of roads to provide safe access for two vehicles and road stability to the required standards. Drainage improvement to prevent erosion and deterioration of the road surface and structure, and to provide safe vehicle access.
9. Maintenance of historic heritage features associated with the track or road to ensure that they are not adversely impacted.

Environmental Impacts covered by the exemption:

1. Soil disturbance, including disturbance of the duff layer and subsoil. Disturbance and soil compaction in fill areas.
2. Surface water runoff, including modification of existing natural watercourses, and control and redirection of surface water using various means, such as culvert pipes, drainage sumps, cut-outs and cross boards.
3. Alterations to land contours and slopes during track construction and upgrade.
4. Removal of vegetation from the track corridor and from immediately adjacent to the asset corridor.
5. Disturbance of archaeological and historic features, including historic botanicals, on or in the immediate vicinity of the track or road.

Notes on proposed track slope & vegetation, influencing finished width:

#1: Requires removal of Tanekaha, approx. 20cm diameter. Flat / slight slope. <2m between mature Manuka trunks. At 20m in, utilises part of old bulldozer track. 24m in, removal of Nikau, slope earthworks / fill. Thick, small undergrowth, including supplejack, etc. 28m, flat. May pug / get wet in winter.

#2: Illegally felled Manuka. Side slope to obtain 2.5m width. Many small kahikatea & totara. Contour generally sits above slope, so best location. To obtain track width, leaning trees will also need to be removed, making a large cut in vegetation. (Old markers 20m lower down slope, from previous flagging of trail)

#3 Twin tanekaha just before site marker – consider narrowing track. Generally flat, little slope. Old pines that were logged in 1993/94, nearly rotted away.

#4 Flat / slight slope

#5 Slight side slope. Kauri seedlings above route >15m Dense seedling regrowth.

#6

#7

#8 Side slope, Left Turn after 15m, above gully head. Tree fern, steeper slope.

#9 – Side slope. Between (& 10 20m below route, 18 or so young pines – should be felled. (approx. 30cm diameter) (Killing trees standing will create a track hazard)

#10, 2 pines beside marked route, 15m west of #10 tag. Below old skid site.

#11. Dead hakea below track. Side slope. Montbrettia patch opposite James St. Route is on old bulldozer track, relatively open. Descends slightly into head of gully.

#12 / 13 Still fairly flat. Curves around gully head on old track. Manuka, 10 – 15m tall / 60cm DBH. Side slope. Occasional small gorse.

#14 / 15: Quite flat

#16 – one old, twisted pine to remove, by marker, uphill. Track splits (briefly) upper level is more level, following pink cotton tape to double tapes.

#17 Drain / ditch from road run-off / culvert, as mentioned above. Step up 40cm. will have increased winter flow.

#18 – climb side slope & over tree roots. Above gully head, as on topo / overland flow map. (flow is from road drainage) Signs of road slump / fill in bush.

#19 Side slope, old track & old earthworks from pine felling / extraction.

#19 – 20 Side slope. Consider moving a little higher at #20. Flat – may be boggy in winter.

#20 – 21. Using old track. Lower canopy regen bush. Side slope. Consider moving a little north.

#22 Steep side slope

#23 – old ramp / track going up. Probably too steep for cycle trail.

#24 – pink cotton

#25 –26 steep side slope. Will need considerable construction of obtain desired width at this point. ?
Boardwalk. Small pines, bracken, gorse if digging into bank. Possible stability issues.

#27 By driveway gate / bush edge.

Thelma Wilson

Casual Ranger

Sec 9(2)(a)



SHEET INDEX		
SHEET NO.	SHEET TITLE	REV NO.
C00	COVER SHEET	A
C01	OVERVIEW PLAN	A
WARKWORTH TO MATAKANA ROAD (WEST)		
C02	STN. 0.0 - 1400.0	A
C03	STN. 1400.0 - 2814.0	A
C04	STN. 2814.0 - 4221.0	A
C05	STN. 4221.0 - 5128.0	A
WARKWORTH TO MATAKANA ROAD (EAST)		
C06	STN. 0.0 - 1362.0	A
C07	STN. 1362.0 - 2724.0	A
C08	STN. 2724.0 - 4086.0	A
C09	STN. 4086.0 - 5448.0	A
C10	STN. 5448.0 - 6810.0	A
C11	STN. 6810.0 - 8172.0	A
C12	STN. 8172.0 - 9200.0	A

SANDSPIT TO SNELLS		
C13	STN. 0.0 - 1400.0	A
C14	STN. 1400.0 - 2814.0	A
C15	STN. 2814.0 - 4221.0	A
C16	STN. 4220.0 - 4400.0	A
MATAKANA ROAD TO MATAKANA		
C17	STN. 0.0 - 1400.0	A
C18	STN. 1400.0 - 2814.0	A
C19	STN. 2814.0 - 4221.0	A
C20	STN. 4221.0 - 4520.0	A
TYPICAL DETAILS		
C21	SHEET 1 OF 3	A
C22	SHEET 2 OF 3	A
C23	SHEET 3 OF 3	A
GEOLOGY INFORMATION		
C30	PLAN - ROCK TYPES	A
C31	PLAN - SOIL TYPES	A

MATAKANA COASTAL TRAIL TRUST





WARKWORTH TO MATAKANA, 24KM (STAGE ONE)

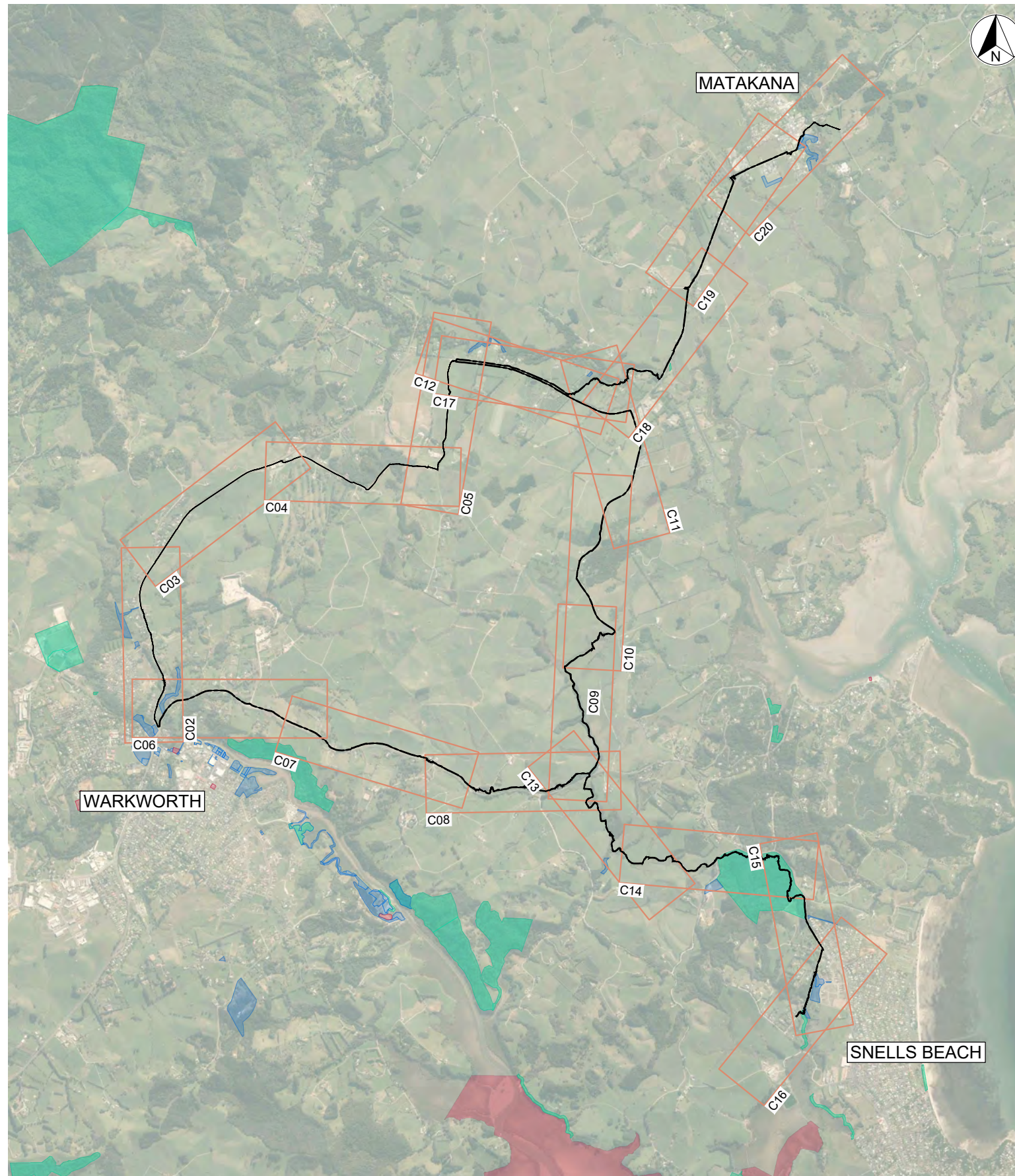
MATAKANA COASTAL PATH

CIVIL

FOR INFORMATION

Project No: 1-19298.00(01)
Date: JUNE 2021

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	COUNCIL LAND
	PROTECTED AREAS



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Whangarei Office
+64 9 430 1700

Private Bag 9017
Whangarei 0148
New Zealand

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DESIGN VERIFIED			
APPROVED DATE			

FOR INFORMATION

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MATAKANA COASTAL PATH	
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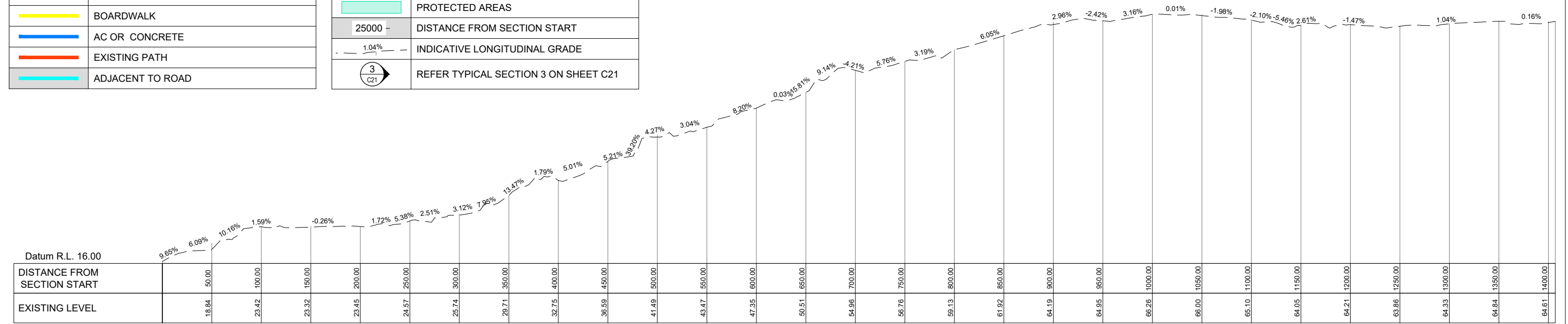


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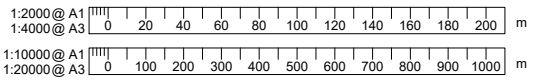
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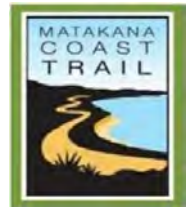
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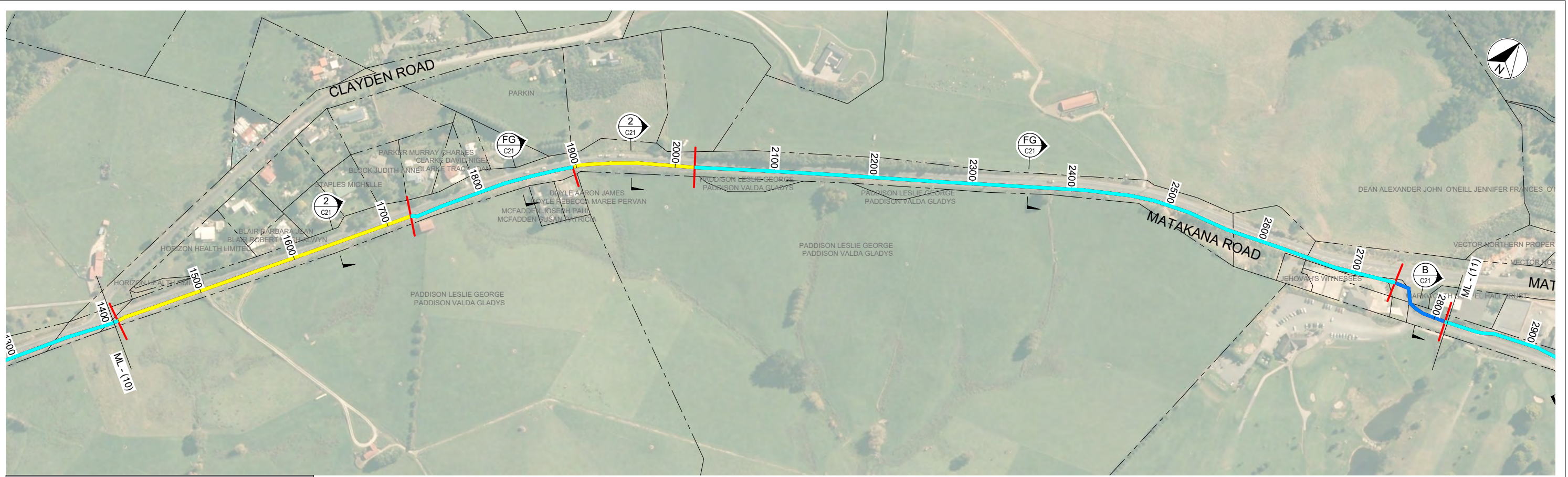
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Whangarei Office
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Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

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Sec 9(2)(a)
APPROVED
DRAWING VERIFIED DESIGN VERIFIED APPROVED DATE

FOR INFORMATION

PROJECT
MATAKANA COASTAL TRAIL TRUST
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MATAKANA COASTAL PATH
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1-19298.00(01)
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C02
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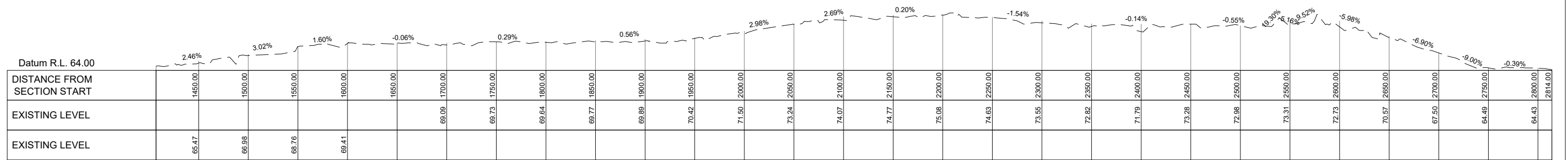


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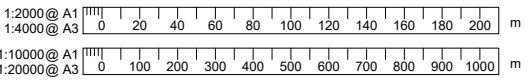
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Warkworth to Matakana Road (North)

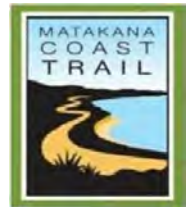
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SECTION - WARKWORTH TO MATAKANA ROAD (WEST)

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FOR INFORMATION

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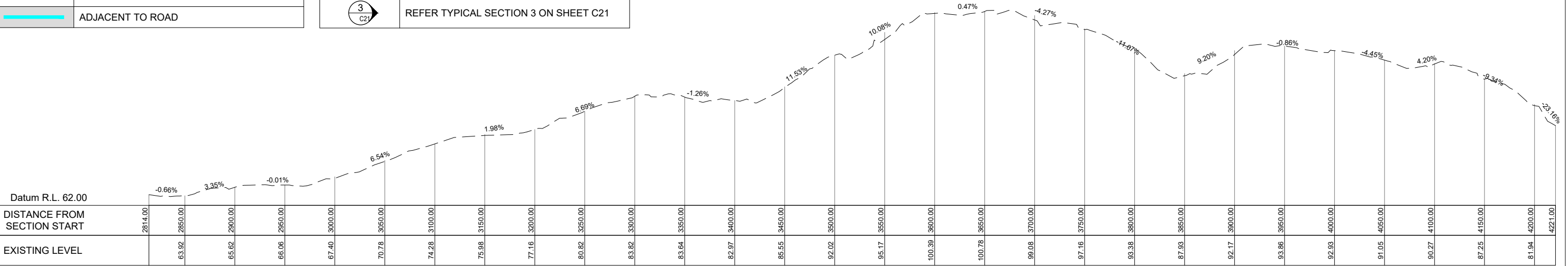
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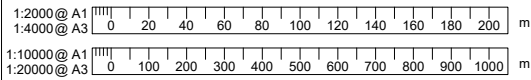
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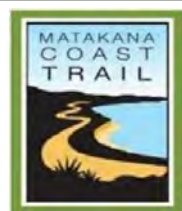


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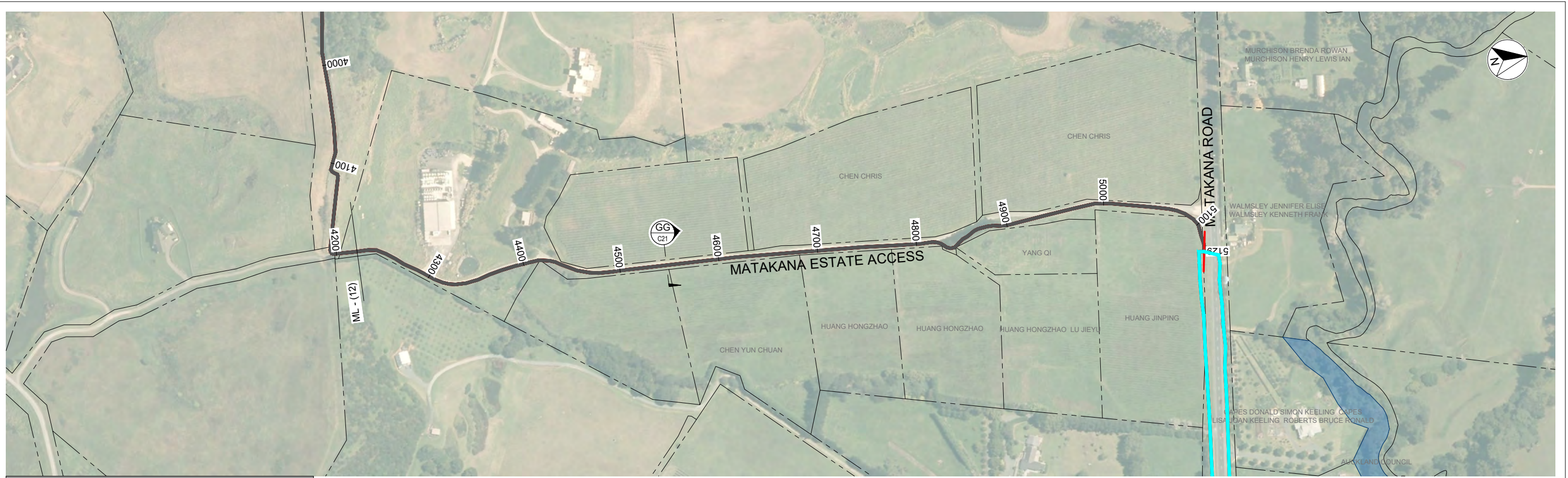
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+64 9 430 1700

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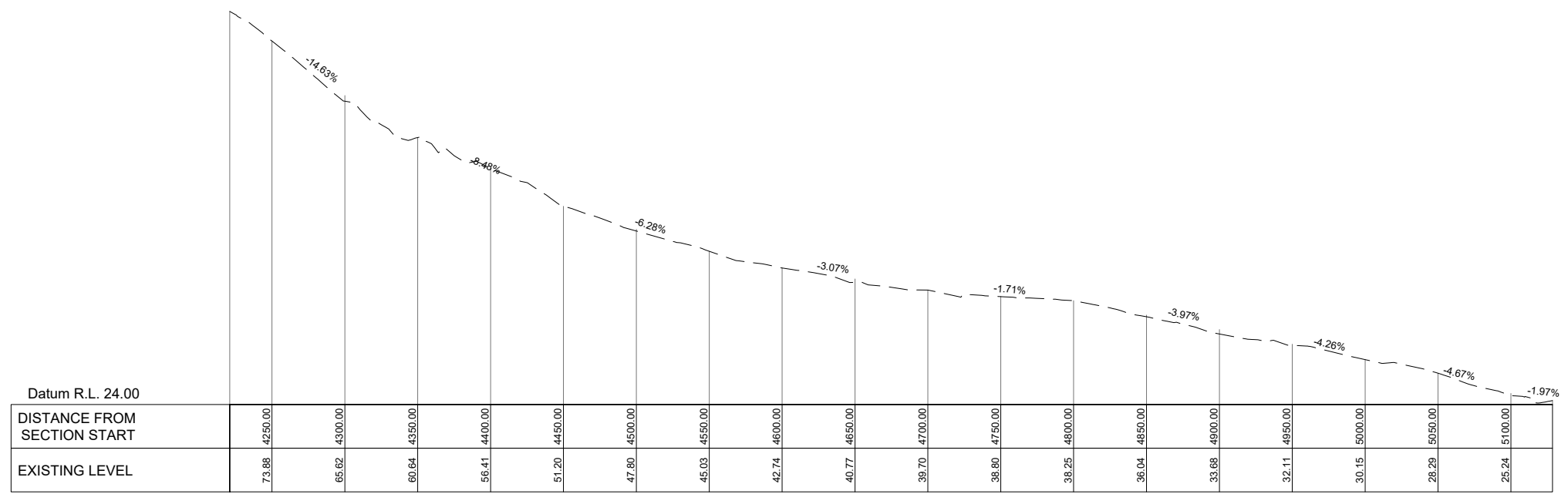
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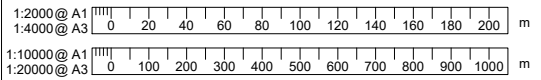
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PLAN - DISTANCE 4221.0 - 5128.0
SCALE: 1:2000



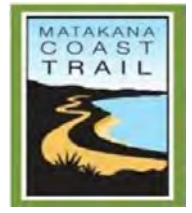
LONG SECTION - DISTANCE 4221.0 - 5128.0
SCALE: 1:2000(H), 1:10000(V)

SECTION - WARKWORTH TO MATAKANA ROAD (WEST)



WORK IN PROGRESS
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REVISION	AMENDMENT	APPROVED	DATE
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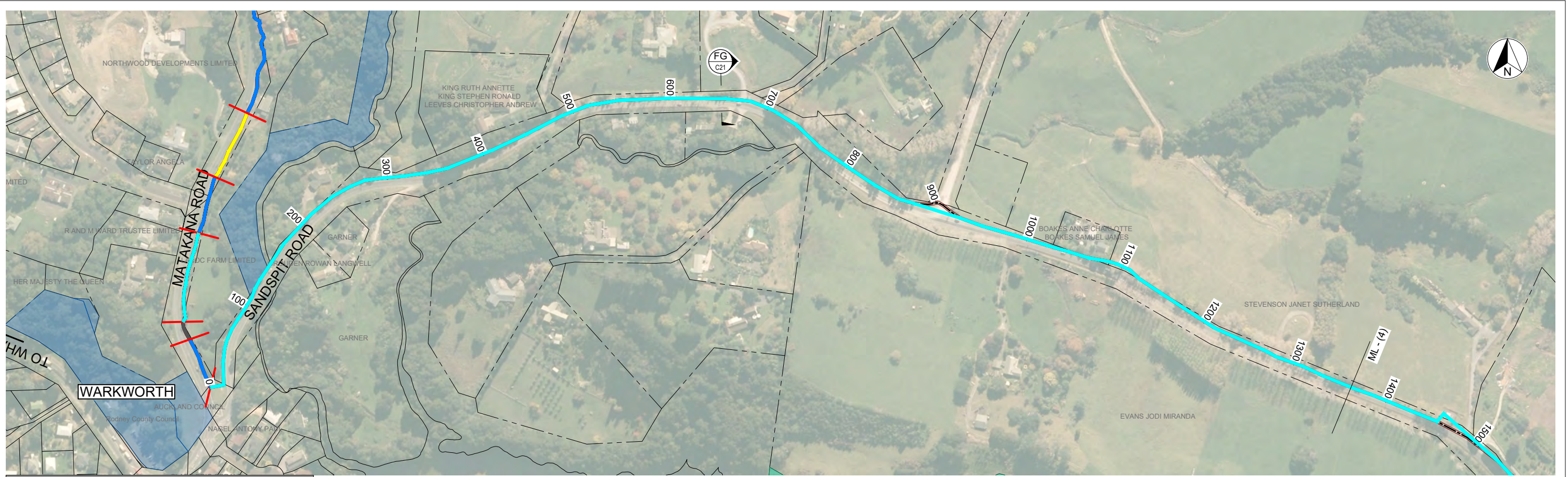
wsp
Whangarei Office
+64 9 430 1700
Private Bag 9017
Whangarei 0148
New Zealand

CIVIL

SCALES		ORIGINAL SIZE
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DRAWN	DESIGNED	APPROVED
Sec 9(2)(a)		
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE

FOR INFORMATION

PROJECT		SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH		C05	A
TITLE			
WARKWORTH TO MATAKANA ROAD (WEST) DISTANCE 4221.0 - 5128.0			
WSP PROJECT NO. (SUB-PROJECT)			
1-19298.00(01)			

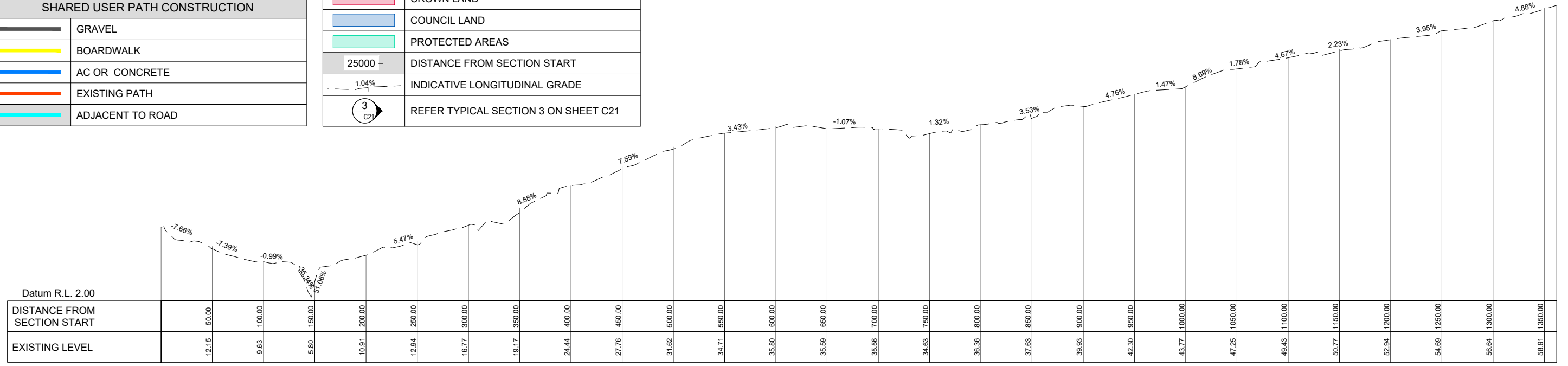


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0 10 mm

LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD

	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	25000 - DISTANCE FROM SECTION START
	1.04% - INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21

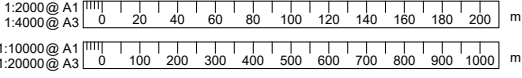
PLAN - DISTANCE 0.0 - 1362.0
SCALE: 1:2000



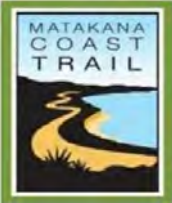
LONG SECTION - DISTANCE 0.0 - 1362.0
SCALE: 1:2000(H), 1:10000(V)

SECTION - WARKWORTH TO MATAKANA ROAD (EAST)

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REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	-	-



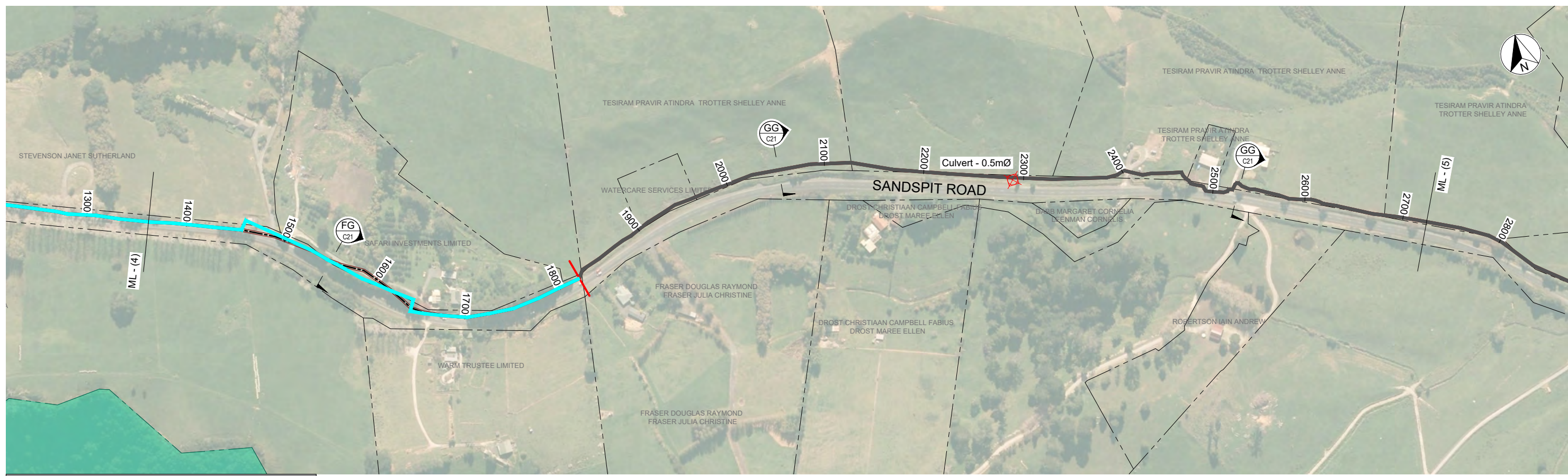
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CIVIL

SCALES		ORIGINAL SIZE
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Sec 9(2)(a)		
APPROVED	DESIGN VERIFIED	APPROVED DATE
-	-	-
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
-	-	-

FOR INFORMATION

PROJECT MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH		
TITLE WARKWORTH TO MATAKANA ROAD (EAST) DISTANCE 0.0 - 1362.0		
WSP PROJECT NO. (SUB-PROJECT) 1-19298.00(01)	SHEET NO. C06	REVISION A



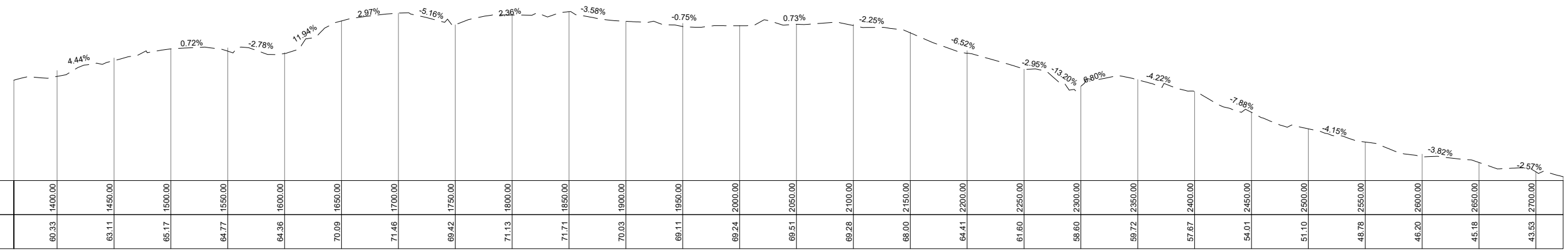
LEGEND

	PROPERTY BOUNDARIES / OWNERS		PINCH POINT, BRIDGE, CROSSING, ETC.
SHARED USER PATH CONSTRUCTION			CROWN LAND
	GRAVEL		COUNCIL LAND
	BOARDWALK		PROTECTED AREAS
	AC OR CONCRETE		25000 - DISTANCE FROM SECTION START
	EXISTING PATH		1.04% - INDICATIVE LONGITUDINAL GRADE
	ADJACENT TO ROAD		REFER TYPICAL SECTION 3 ON SHEET C21

PLAN - DISTANCE 1362.0 - 2724.0

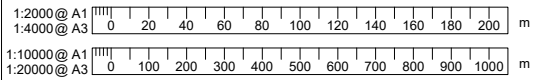
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LONG SECTION - DISTANCE 1362.0 - 2724.0

SCALE: 1:2000(H), 1:10000(V)

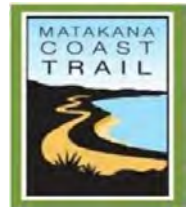


SECTION - WARKWORTH TO MATAKANA ROAD (EAST)

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REVISION	AMENDMENT	APPROVED	DATE
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CIVIL

SCALES	DESIGNED	APPROVED
1:2000, 1:10000 AT A1		
ORIGINAL SIZE A1		
Sec 9(2)(a)		
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
-	-	-

FOR INFORMATION

PROJECT	SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH	C07	A
TITLE WARKWORTH TO MATAKANA ROAD (EAST) DISTANCE 1362.0 - 2724.0		
WSP PROJECT NO. (SUB-PROJECT) 1-19298.00(01)		



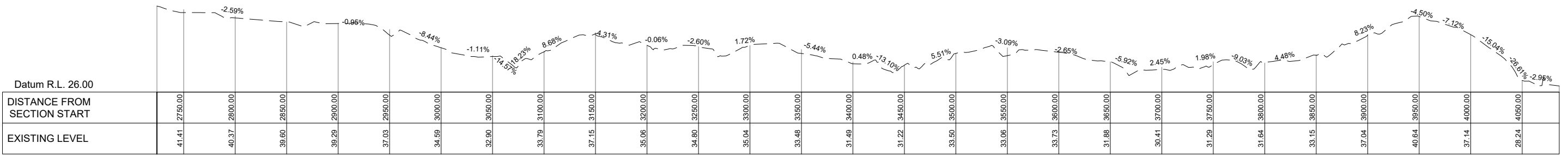
LEGEND

	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD
	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	25000 -
	INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21

PLAN - DISTANCE 2724.0 - 4086.0

SCALE: 1:2000

300 mm
200
100
50
0 10 mm



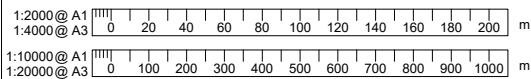
LONG SECTION - DISTANCE 2724.0 - 4086.0

SCALE: 1:2000(H), 1:10000(V)

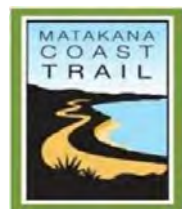
SECTION - WARKWORTH TO MATAKANA ROAD (EAST)

WORK IN PROGRESS

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SCALES		ORIGINAL SIZE
1:2000, 1:10000 AT A1		A1
DRAWN	DESIGNED	APPROVED
Sec 9(2)(a)	-	-
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
-	-	-

FOR INFORMATION

PROJECT		SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH		C08	A
TITLE			
WARKWORTH TO MATAKANA ROAD (EAST) DISTANCE 2724.0 - 4086.0			
WSP PROJECT NO. (SUB-PROJECT)			
1-19298.00(01)			

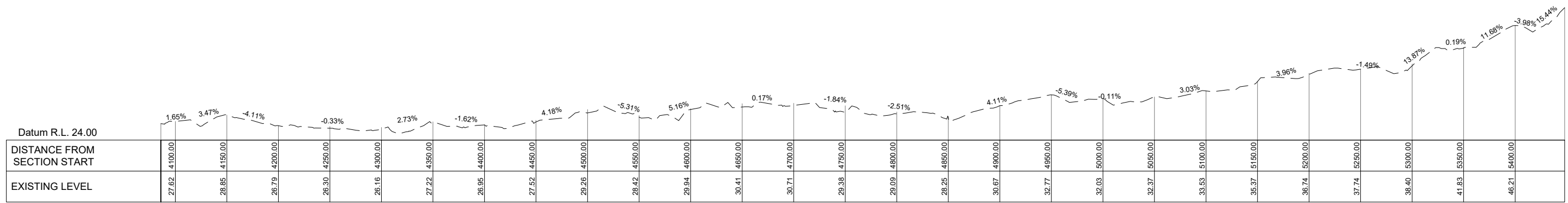


300 mm
200
100
50
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LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD

	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	25000 -
	INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21

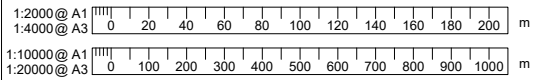
PLAN - DISTANCE 4086.0 - 5448.0
SCALE: 1:2000



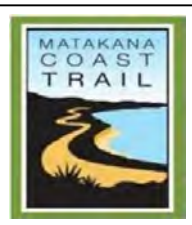
LONG SECTION - DISTANCE 4086.0 - 5448.0
SCALE: 1:2000(H), 1:10000(V)

SECTION - WARKWORTH TO MATAKANA ROAD (EAST)

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REVISION	AMENDMENT	APPROVED	DATE
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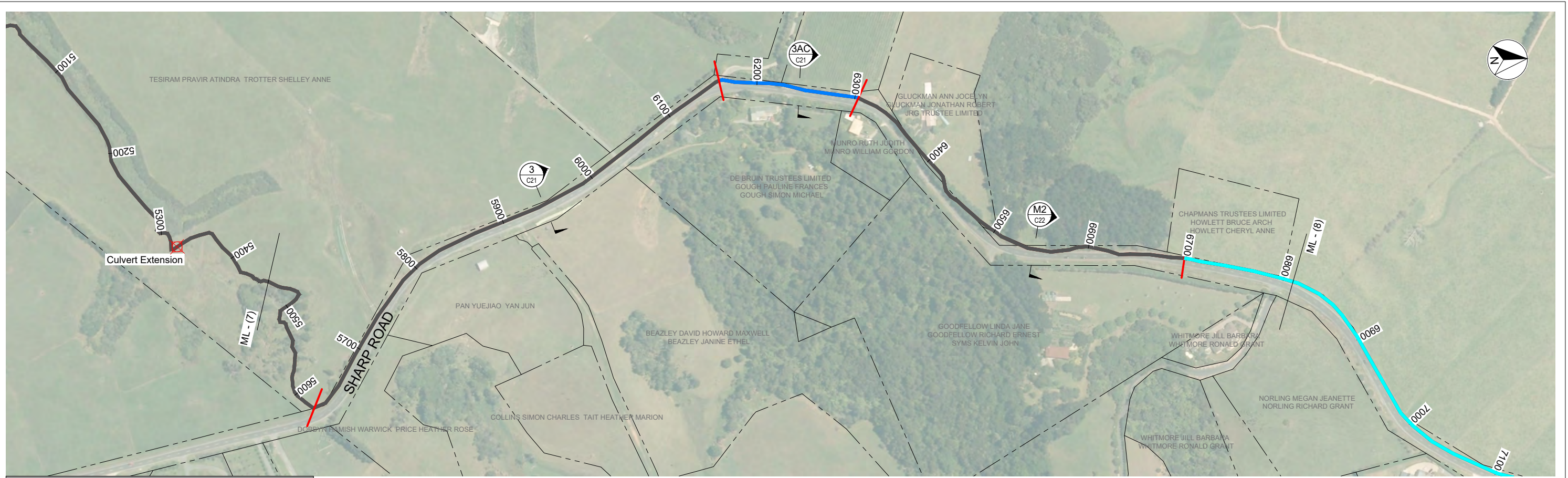
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New Zealand

CIVIL

SCALES		ORIGINAL SIZE
1:2000, 1:10000 AT A1		A1
DRAWN	DESIGNED	APPROVED
Sec 9(2)(a)		
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE

FOR INFORMATION

PROJECT		SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH		C09	A
TITLE			
WARKWORTH TO MATAKANA ROAD (EAST) DISTANCE 4086.0 - 5448.0			
WSP PROJECT NO. (SUB-PROJECT)			
1-19298.00(01)			

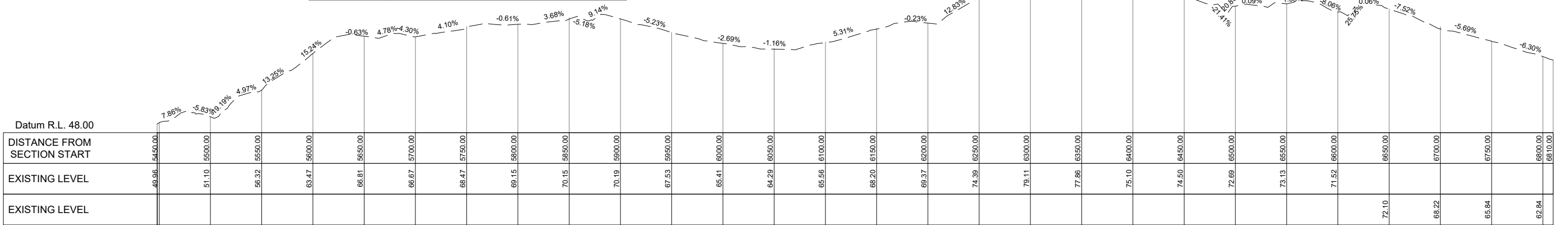


LEGEND

	PROPERTY BOUNDARIES / OWNERS		PINCH POINT, BRIDGE, CROSSING, ETC.
SHARED USER PATH CONSTRUCTION			CROWN LAND
	GRAVEL		COUNCIL LAND
	BOARDWALK		PROTECTED AREAS
	AC OR CONCRETE		DISTANCE FROM SECTION START
	EXISTING PATH		INDICATIVE LONGITUDINAL GRADE
	ADJACENT TO ROAD		REFER TYPICAL SECTION 3 ON SHEET C21

PLAN - DISTANCE 5448.0 - 6810.0

SCALE: 1:2000

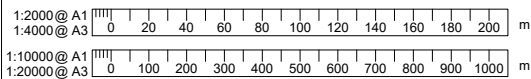


Warkworth to Matakana Road (South)

LONG SECTION - DISTANCE 5448.0 - 6810.0

SCALE: 1:2000(H), 1:10000(V)

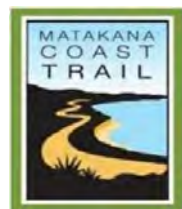
SECTION - WARKWORTH TO MATAKANA ROAD (EAST)



WORK IN PROGRESS

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SCALES	ORIGINAL SIZE
1:2000, 1:10000 AT A1	A1
Sec 9(2)(a)	APPROVED
DRAWING VERIFIED	DESIGN VERIFIED
-	-
APPROVED DATE	-

FOR INFORMATION

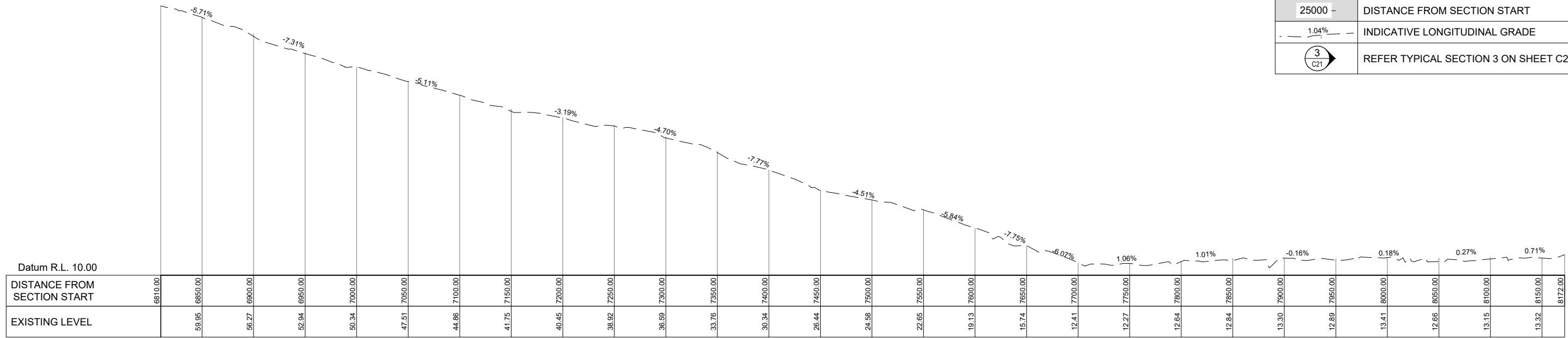
PROJECT	TITLE	WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH	WARKWORTH TO MATAKANA ROAD (EAST) DISTANCE 5448.0 - 6810.0	1-19298.00(01)	C10	A



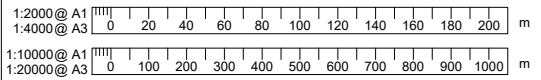
PLAN - DISTANCE 6810.0 - 8172.0
SCALE: 1:2000

LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD
	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	25000 - DISTANCE FROM SECTION START
	1.04% - INDICATIVE LONGITUDINAL GRADE
	3 C21 - REFER TYPICAL SECTION 3 ON SHEET C21

300 mm
200
100
50
0 10 mm



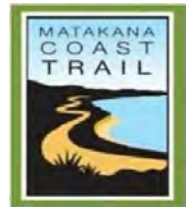
LONG SECTION - DISTANCE 6810.0 - 8172.0
SCALE: 1:2000(H), 1:10000(V)



SECTION - WARKWORTH TO MATAKANA ROAD (EAST)

WORK IN PROGRESS
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REVISION	AMENDMENT	APPROVED	DATE
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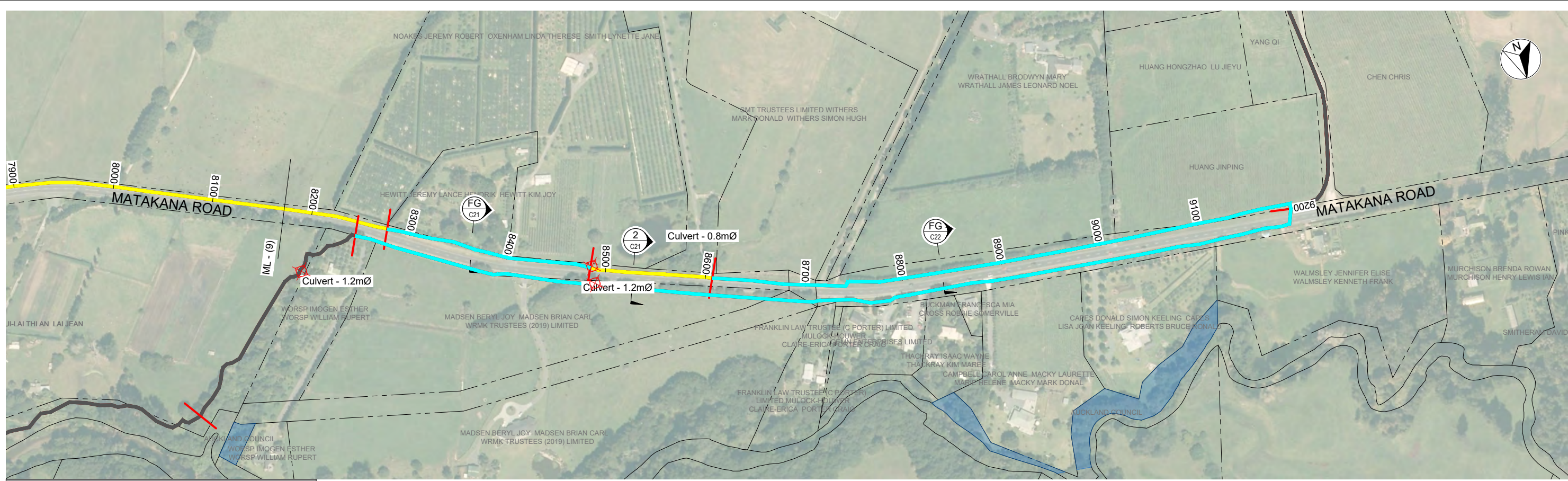


CIVIL

SCALES		ORIGINAL SIZE
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DRAWN	DESIGNED	APPROVED
Sec 9(2)(a)		
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE

FOR INFORMATION

PROJECT		SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH		C11	A
TITLE			
WARKWORTH TO MATAKANA ROAD (EAST) DISTANCE 6810.0 - 8172.0			
WSP PROJECT NO. (SUB-PROJECT)			
1-19298.00(01)			

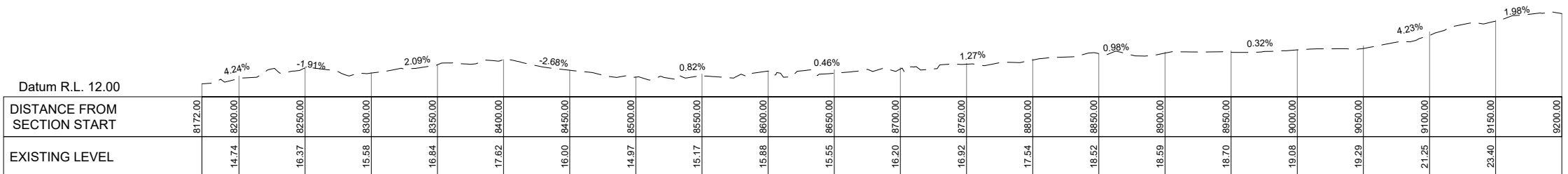


PLAN - DISTANCE 8172.0 - 9200.0

SCALE: 1:2000

LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD

	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	25000 - DISTANCE FROM SECTION START
	1.04% - INDICATIVE LONGITUDINAL GRADE
	3 C21 - REFER TYPICAL SECTION 3 ON SHEET C21

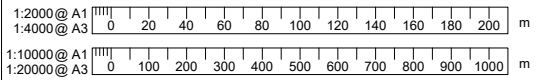


LONG SECTION - DISTANCE 8172.0 - 9200.0

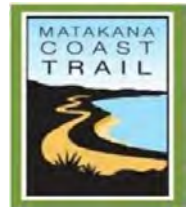
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SECTION - WARKWORTH TO MATAKANA ROAD (EAST)

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SCALES		ORIGINAL SIZE
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DRAWN	DESIGNED	APPROVED
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE

FOR INFORMATION

PROJECT	
MATAKANA COASTAL TRAIL TRUST	
SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE)	
MATAKANA COASTAL PATH	
TITLE	
WARKWORTH TO MATAKANA ROAD (EAST)	
DISTANCE 8172.0 - 9200.0	
WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.
1-19298.00(01)	C12
REVISION	A

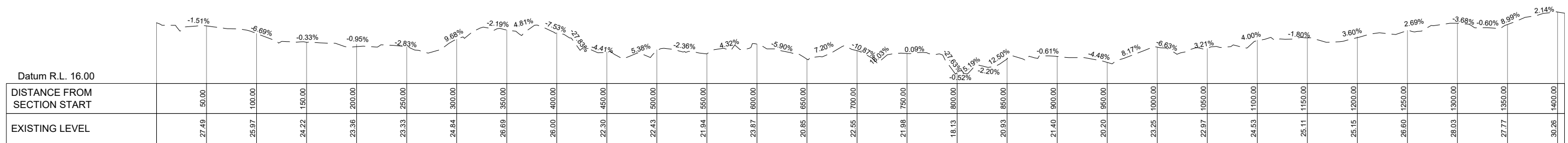


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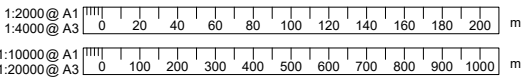
LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD

	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	25000 -
	INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21

PLAN - DISTANCE 0.0 - 1400.0
SCALE: 1:2000



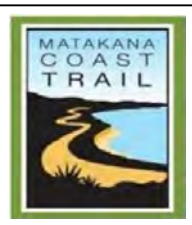
LONG SECTION - DISTANCE 0.0 - 1400.0
SCALE: 1:2000(H), 1:10000(V)



SECTION - SANDSPIT TO SNELLS

WORK IN PROGRESS
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REVISION	AMENDMENT	APPROVED	DATE
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CIVIL

SCALES		ORIGINAL SIZE
1:2000, 1:10000 AT A1		A1
Sec 9(2)(a)	DESIGNED	APPROVED
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
-	-	-

FOR INFORMATION

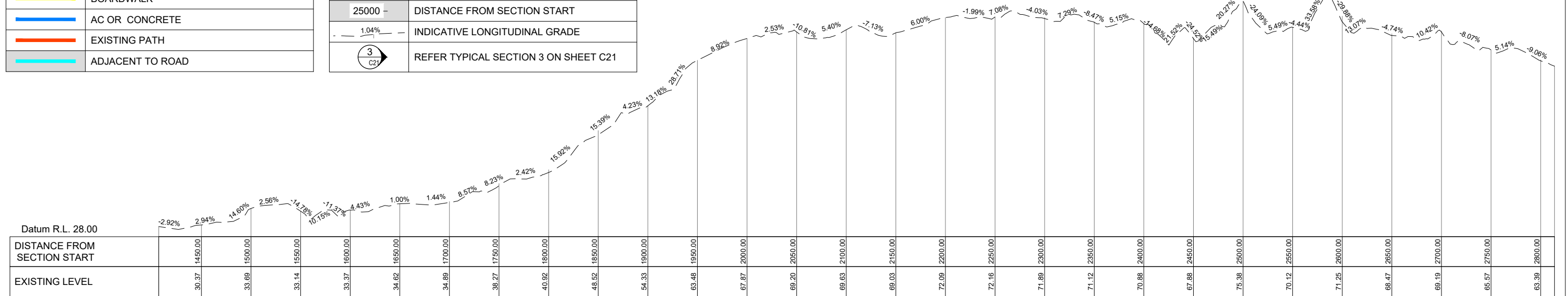
PROJECT	MATAKANA COASTAL TRAIL TRUST
SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE)	MATAKANA COASTAL PATH
TITLE	SANDSPIT TO SNELLS
	DISTANCE 0.0 - 1400.0
WSP PROJECT NO. (SUB-PROJECT)	1-19298.00(01)
SHEET NO.	C13
REVISION	A



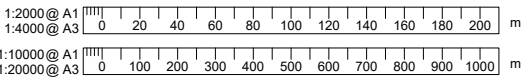
PLAN - DISTANCE 1400.0 - 2814.0
SCALE: 1:2000

LEGEND	
---	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
—	GRAVEL
—	BOARDWALK
—	AC OR CONCRETE
—	EXISTING PATH
—	ADJACENT TO ROAD

	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
25000 -	DISTANCE FROM SECTION START
1.04%	INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21



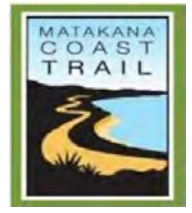
LONG SECTION - DISTANCE 1400.0 - 2814.0
SCALE: 1:2000(H), 1:10000(V)



SECTION - SANDSPIT TO SNELLS

WORK IN PROGRESS
PRINTED 23/06/2021 2:23:31 PM

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	-	-



CIVIL

SCALES		ORIGINAL SIZE
1:2000, 1:10000 AT A1		A1
DRAWN	DESIGNED	APPROVED
Sec 9(2)(a)		
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
-	-	-

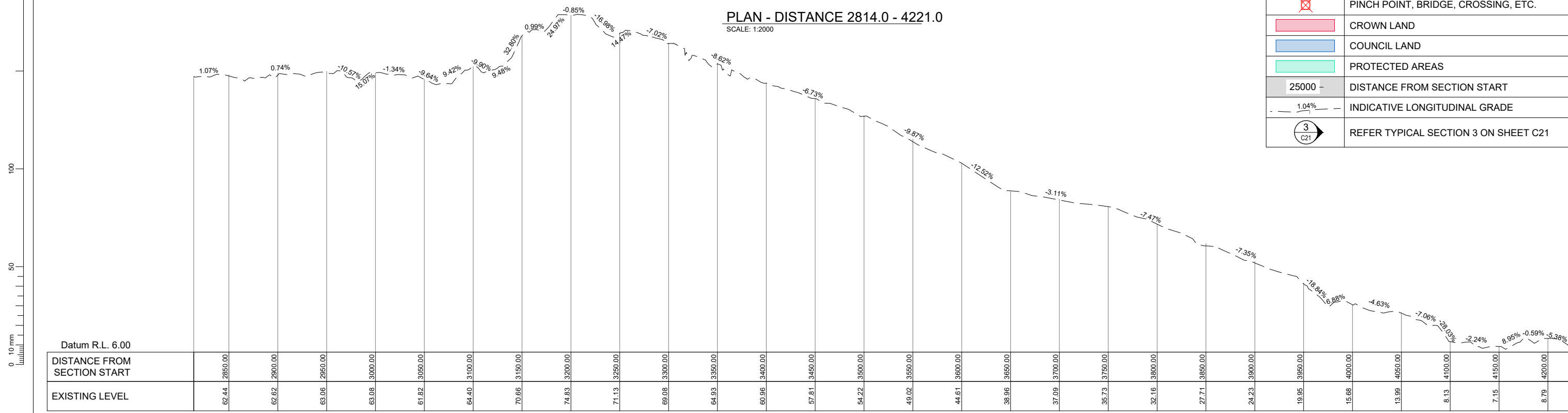
FOR INFORMATION

PROJECT	MATAKANA COASTAL TRAIL TRUST
SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE)	
MATAKANA COASTAL PATH	
TITLE	SANDSPIT TO SNELLS
DISTANCE 1400.0 - 2814.0	
WSP PROJECT NO. (SUB-PROJECT)	1-19298.00(01)
SHEET NO.	C14
REVISION	A

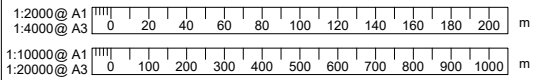


LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD
	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
25000 -	DISTANCE FROM SECTION START
	INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21

PLAN - DISTANCE 2814.0 - 4221.0
SCALE: 1:2000



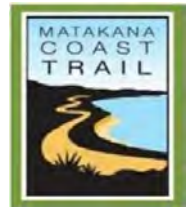
LONG SECTION - DISTANCE 2814.0 - 4221.0
SCALE: 1:2000(H), 1:10000(V)



SECTION - SANDSPIT TO SNELLS

WORK IN PROGRESS
PRINTED 23/06/2021 2:24:25 PM

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	-	-



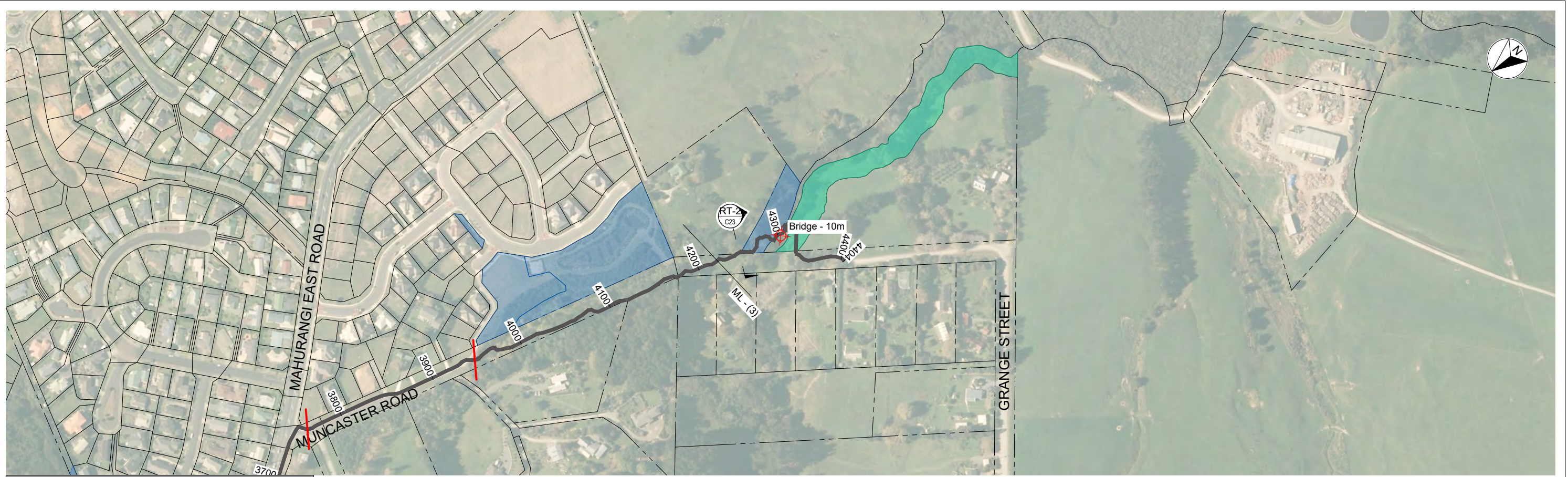
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CIVIL

SCALES	ORIGINAL SIZE
1:2000, 1:10000 AT A1	A1
DRAWN	DESIGNED
APPROVED	APPROVED
DRAWING VERIFIED	DESIGN VERIFIED
APPROVED DATE	APPROVED DATE

FOR INFORMATION

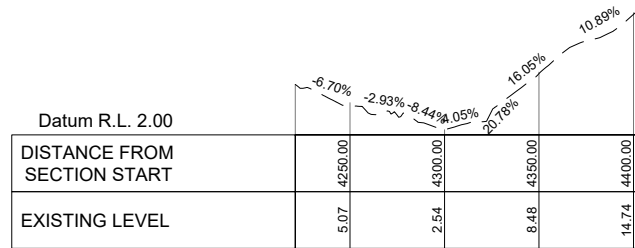
PROJECT
MATAKANA COASTAL TRAIL TRUST
SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE)
MATAKANA COASTAL PATH
TITLE
SANDSPIT TO SNELLS
DISTANCE 2814.0 - 4221.0
WSP PROJECT NO. (SUB-PROJECT)
1-19298.00(01)
SHEET NO.
C15
REVISION
A



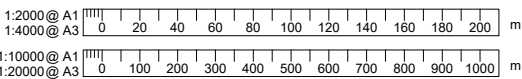
PLAN - DISTANCE 4220.0 - 4400.0
SCALE: 1:2000

LEGEND

	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD
	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	25000 - DISTANCE FROM SECTION START
	1.04% - INDICATIVE LONGITUDINAL GRADE
	3 C21 - REFER TYPICAL SECTION 3 ON SHEET C21



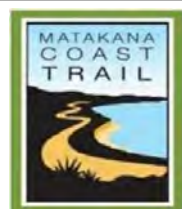
LONG SECTION - DISTANCE 4220.0 - 4400.0
SCALE: 1:2000(H), 1:10000(V)



SECTION - SANDSPIT TO SNELLS

WORK IN PROGRESS
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SCALES		ORIGINAL SIZE
1:2000, 1:10000 AT A1		A1
Sec 9(2)(a)	DESIGNED	APPROVED
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
-	-	-

FOR INFORMATION

PROJECT MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH
TITLE SANDSPIT TO SNELLS DISTANCE 4220.0 - 4400.0
WSP PROJECT NO. (SUB-PROJECT) 1-19298.00(01)
SHEET NO. C16
REVISION A

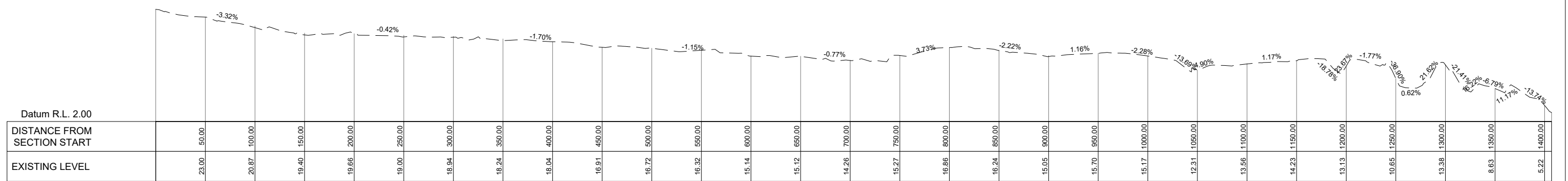


PLAN - DISTANCE 0.0 - 1400.0

SCALE: 1:2000

LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD

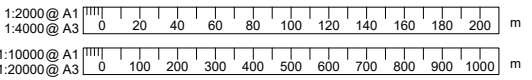
	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	25000 - DISTANCE FROM SECTION START
	1.04% - INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21



LONG SECTION - DISTANCE 0.0 - 1400.0

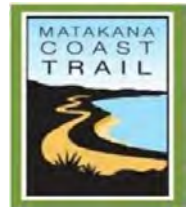
SCALE: 1:2000(H), 1:10000(V)

SECTION - MATAKANA ROAD TO MATAKANA



WORK IN PROGRESS
PRINTED 23/06/2021 2:26:10 PM

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	-	-



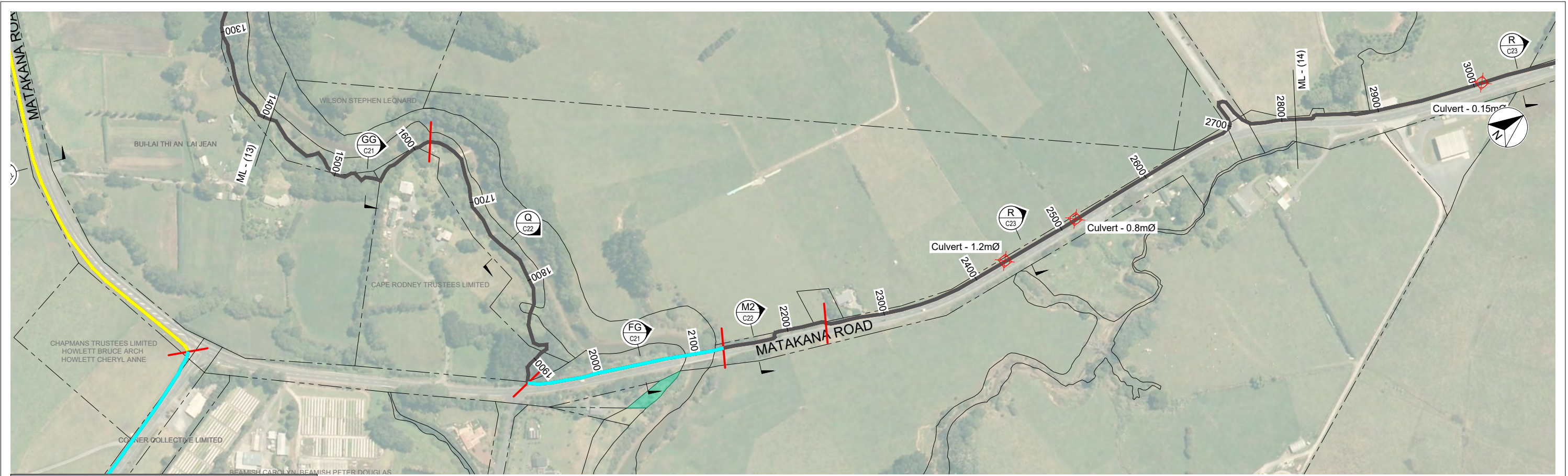
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SCALES		ORIGINAL SIZE
1:2000, 1:10000 AT A1		A1
DRAWN	DESIGNED	APPROVED
Sec 9(2)(a)		
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
-	-	-

FOR INFORMATION

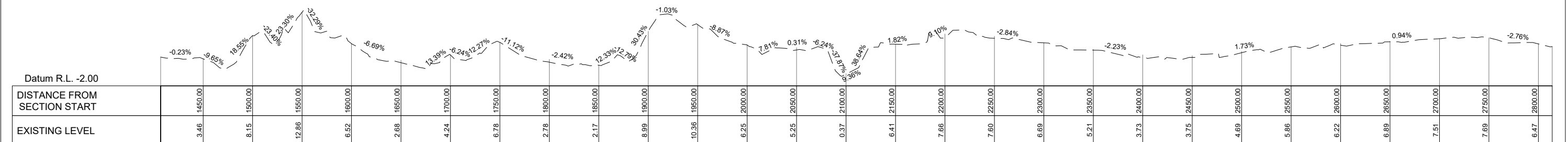
PROJECT		SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH		C17	A
TITLE			
MATAKANA ROAD TO MATAKANA DISTANCE 0.0 - 1400.0			
WSP PROJECT NO. (SUB-PROJECT) 1-19298.00(01)			



PLAN - DISTANCE 1400.0 - 2814.0
SCALE: 1:2000

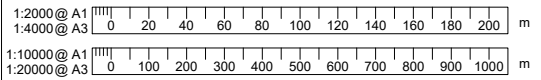
LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD

	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	DISTANCE FROM SECTION START
	INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21



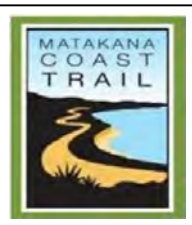
LONG SECTION - DISTANCE 1400.0 - 2814.0
SCALE: 1:2000(H), 1:10000(V)

SECTION - MATAKANA ROAD TO MATAKANA



WORK IN PROGRESS
PRINTED 23/06/2021 2:27:04 PM

REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	-	-



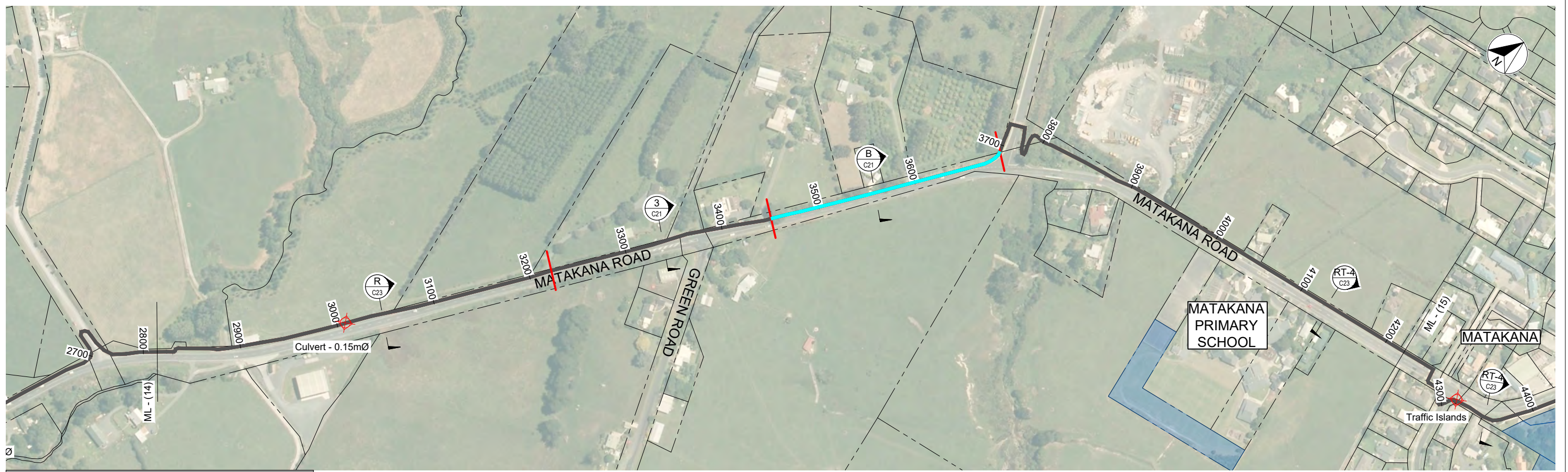
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CIVIL

SCALES	ORIGINAL SIZE
1:2000, 1:10000 AT A1	A1
DRAWN	DESIGNED
APPROVED	APPROVED
DRAWING VERIFIED	DESIGN VERIFIED
APPROVED DATE	APPROVED DATE

FOR INFORMATION

PROJECT	SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH	C18	A
TITLE MATAKANA ROAD TO MATAKANA DISTANCE 1400.0 - 2814.0		
WSP PROJECT NO. (SUB-PROJECT) 1-19298.00(01)		

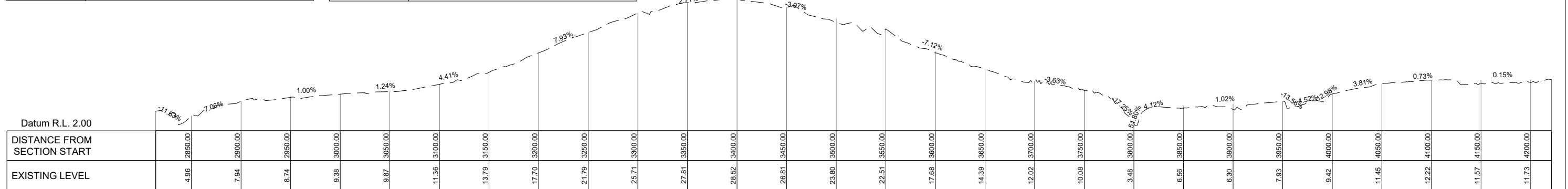


300 mm
200
100
50
0 10 mm

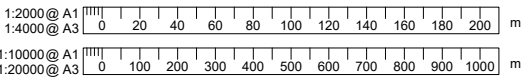
LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD

	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	DISTANCE FROM SECTION START
	INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21

PLAN - DISTANCE 2814.0 - 4221.0
SCALE: 1:2000



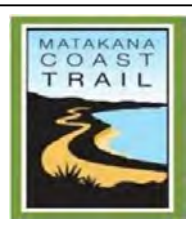
LONG SECTION - DISTANCE 2814.0 - 4221.0
SCALE: 1:2000(H), 1:10000(V)



SECTION - MATAKANA ROAD TO MATAKANA

WORK IN PROGRESS
PRINTED 23/06/2021 2:27:56 PM

REVISION	AMENDMENT	APPROVED	DATE
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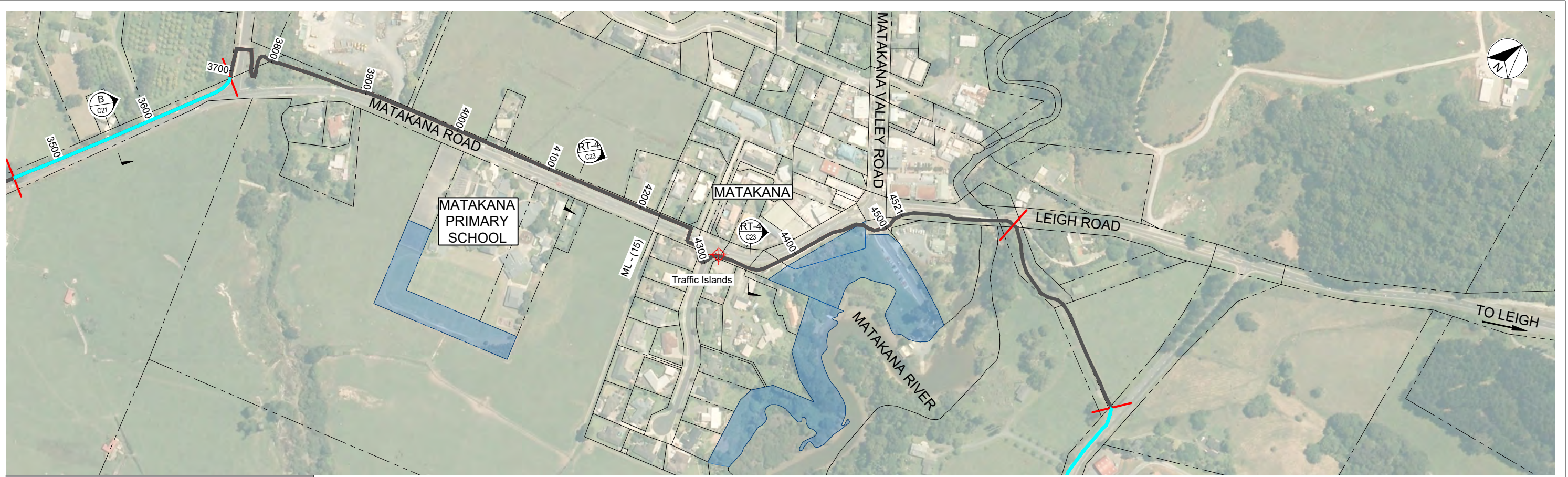
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SCALES		ORIGINAL SIZE
1:2000, 1:10000 AT A1		A1
DRAWN	DESIGNED	APPROVED
Sec 9(2)(a)		
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE

FOR INFORMATION

PROJECT		SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH		C19	A
TITLE			
MATAKANA ROAD TO MATAKANA DISTANCE 2814.0 - 4221.0			
WSP PROJECT NO. (SUB-PROJECT)			
1-19298.00(01)			



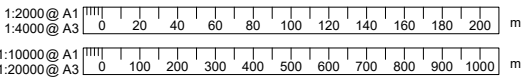
PLAN - DISTANCE 4221.0 - 4520.0
SCALE: 1:2000

300 mm
200
100
50
0 10 mm

LEGEND	
	PROPERTY BOUNDARIES / OWNERS
SHARED USER PATH CONSTRUCTION	
	GRAVEL
	BOARDWALK
	AC OR CONCRETE
	EXISTING PATH
	ADJACENT TO ROAD
	PINCH POINT, BRIDGE, CROSSING, ETC.
	CROWN LAND
	COUNCIL LAND
	PROTECTED AREAS
	DISTANCE FROM SECTION START
	INDICATIVE LONGITUDINAL GRADE
	REFER TYPICAL SECTION 3 ON SHEET C21

DISTANCE FROM SECTION START	0.26%	0.12%	1.63%	-1.79%	1.50%	0.90%	-1.00%
Datum R.L. 10.00							
DISTANCE FROM SECTION START	4250.00	4300.00	4350.00	4400.00	4450.00	4500.00	
EXISTING LEVEL	12.38	12.48	12.61	13.24	13.95	14.28	

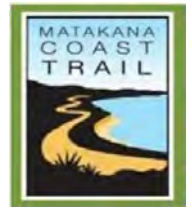
LONG SECTION - DISTANCE 4221.0 - 4520.0
SCALE: 1:2000(H), 1:10000(V)



SECTION - MATAKANA ROAD TO MATAKANA

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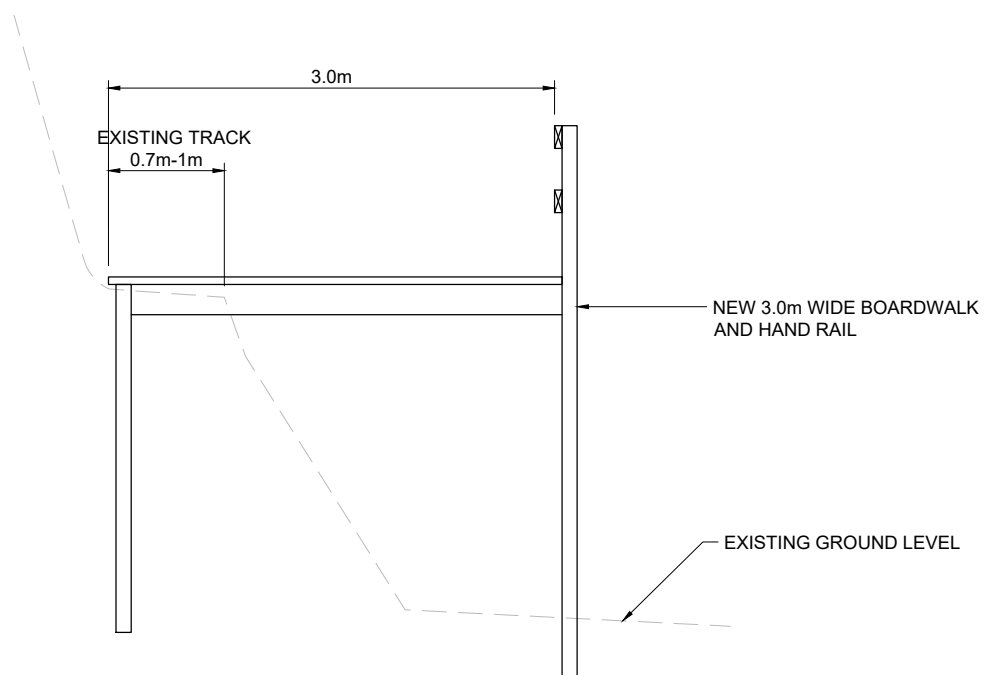
CIVIL

SCALES		ORIGINAL SIZE
1:2000, 1:10000 AT A1		A1
DRAWN	DESIGNED	APPROVED
Sec 9(2)(a)		-
DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
-	-	-

FOR INFORMATION

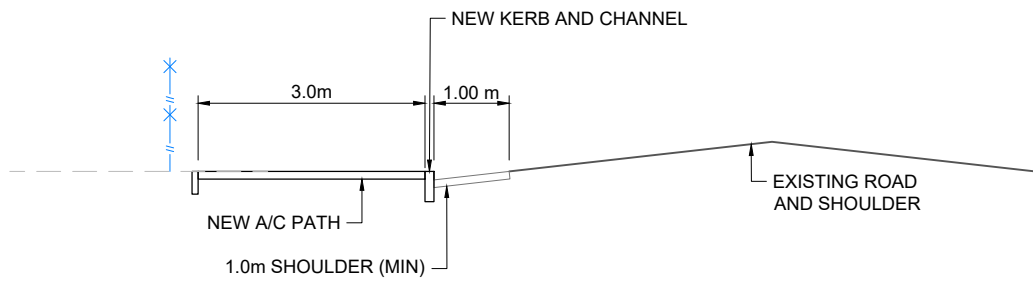
PROJECT		SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH		C20	A
TITLE			
MATAKANA ROAD TO MATAKANA DISTANCE 4221.0 - 4520.0			
WSP PROJECT NO. (SUB-PROJECT)			
1-19298.00(01)			

300 mm
200
100
50
0 10 mm

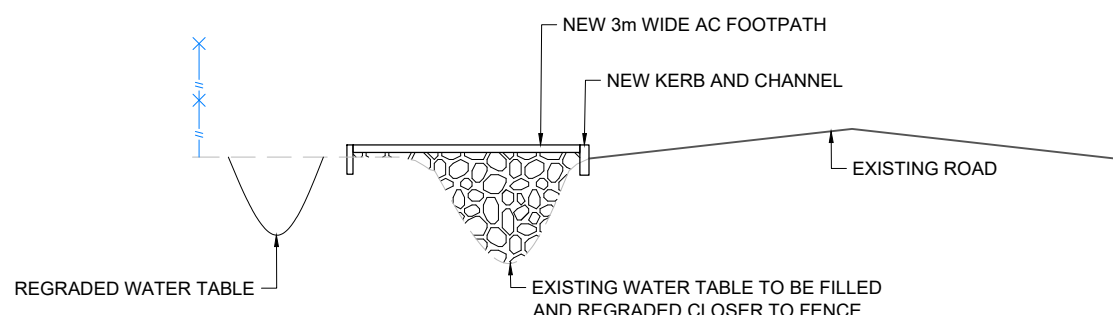


DETAIL - TYPE 2
SCALE: 1:25

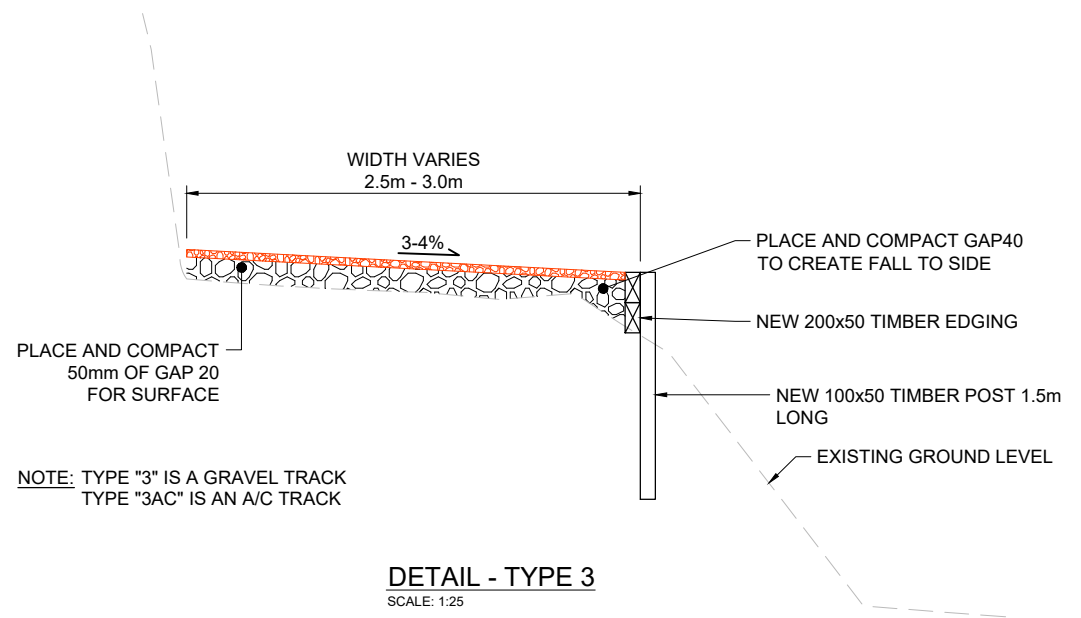
NOTE: DETAIL TYPE 2A TO HAVE HANDRAIL TO BOTH SIDES



DETAIL - TYPE B
SCALE: 1:50

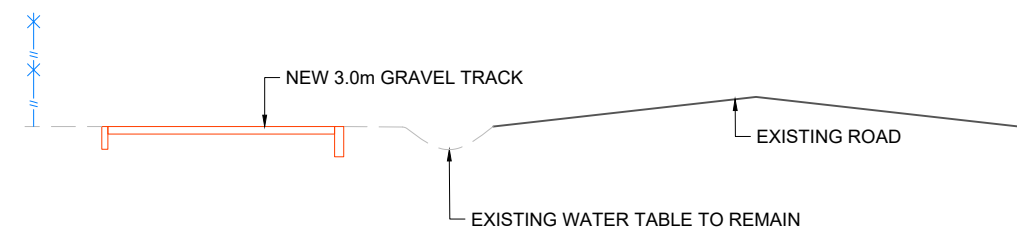


DETAIL - TYPE C
SCALE: 1:50



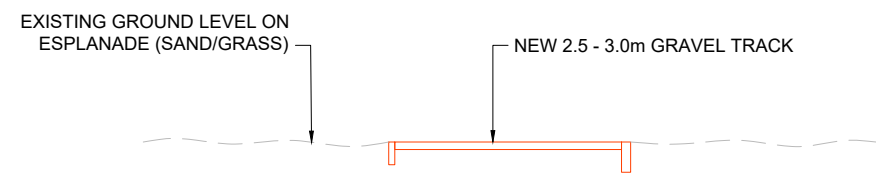
DETAIL - TYPE 3
SCALE: 1:25

NOTE: TYPE "3" IS A GRAVEL TRACK
TYPE "3AC" IS AN A/C TRACK



DETAIL - TYPE F
SCALE: 1:50

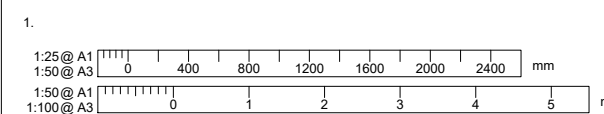
NOTE: TYPE "FG" IS A GRAVEL TRACK
TYPE "FAC" IS AN A/C TRACK



DETAIL - TYPE G
SCALE: 1:50

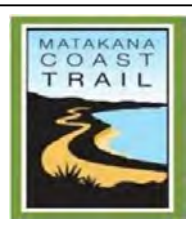
NOTE: TYPE "GG" IS A GRAVEL TRACK
TYPE "GAC" IS AN A/C TRACK

NOTES:



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REVISION	AMENDMENT	APPROVED	DATE
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SCALES	ORIGINAL SIZE
1:25, 1:50 AT A1	A1
Sec 9(2)(a)	
DRAWING VERIFIED	APPROVED
DESIGN VERIFIED	APPROVED DATE
-	-

FOR INFORMATION

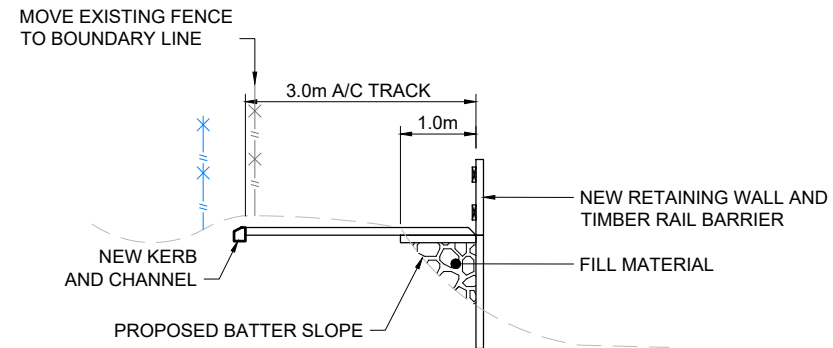
PROJECT	TITLE	SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH	TYPICAL DETAILS SHEET 1 OF 3	C21	A
WSP PROJECT NO. (SUB-PROJECT) 1-19298.00(01)			

EXISTING CONCRETE PATH WIDEN TO 3.0m

NOTE: TYPE "JG" IS A GRAVEL TRACK
TYPE "JC" IS A CONCRETE TRACK

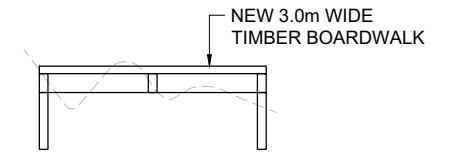
DETAIL - TYPE J

SCALE: 1:50



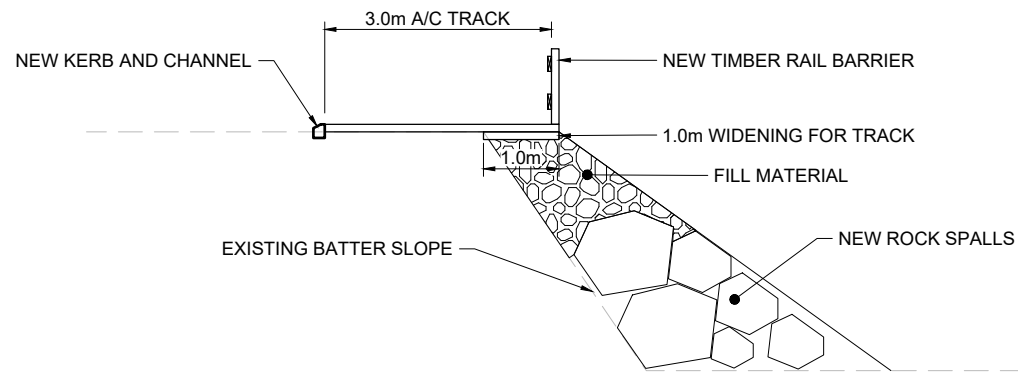
DETAIL - TYPE L3

SCALE: 1:50



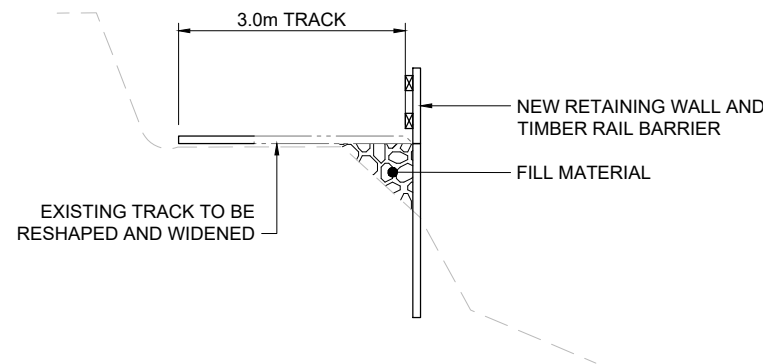
DETAIL - TYPE N

SCALE: 1:50



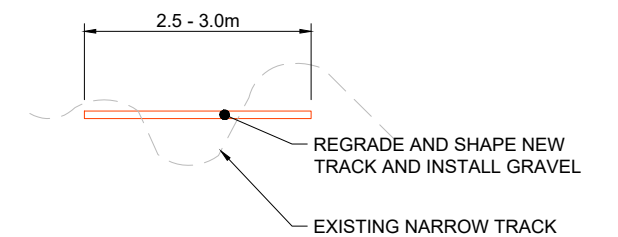
DETAIL - TYPE K

SCALE: 1:50



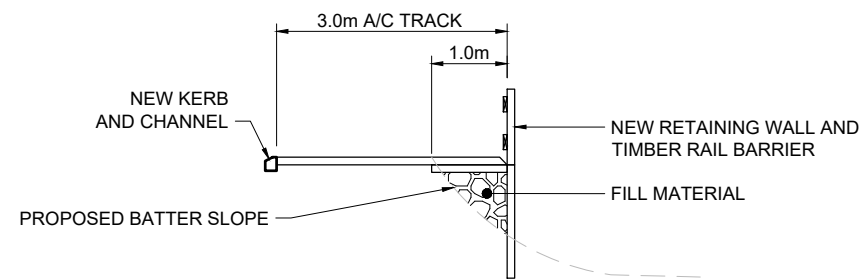
DETAIL - TYPE M

SCALE: 1:50



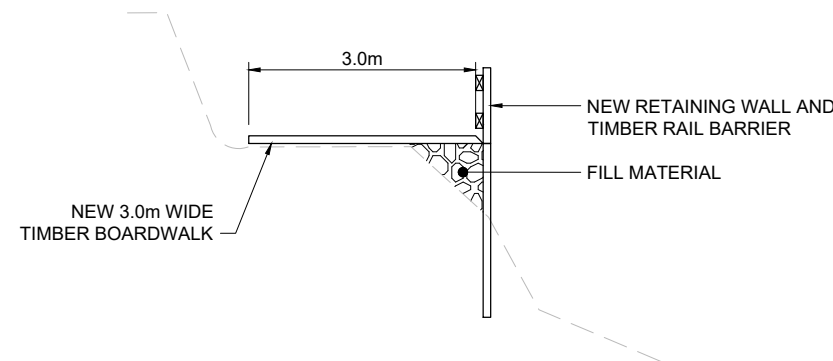
DETAIL - TYPE Q

SCALE: 1:50



DETAIL - TYPE L2

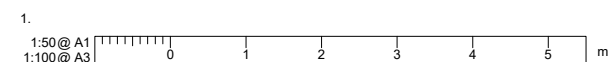
SCALE: 1:50



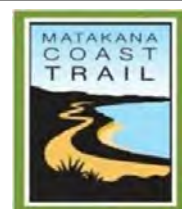
DETAIL - TYPE M2

SCALE: 1:50

NOTES:



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SCALES 1:50 AT A1 ORIGINAL SIZE A1

DRAWN Sec 9(2)(a) DESIGNED APPROVED

DRAWING VERIFIED DESIGN VERIFIED APPROVED DATE

FOR INFORMATION

PROJECT MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH

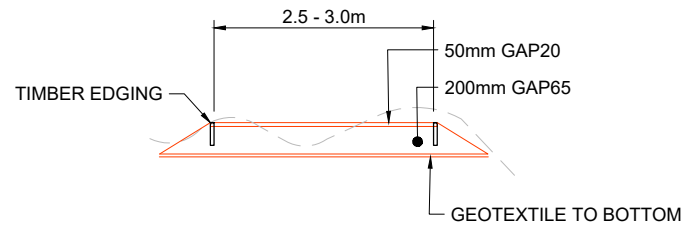
TITLE TYPICAL DETAILS SHEET 2 OF 3

WSP PROJECT NO. (SUB-PROJECT) 1-19298.00(01)

SHEET NO. C22 REVISION A

WORK IN PROGRESS

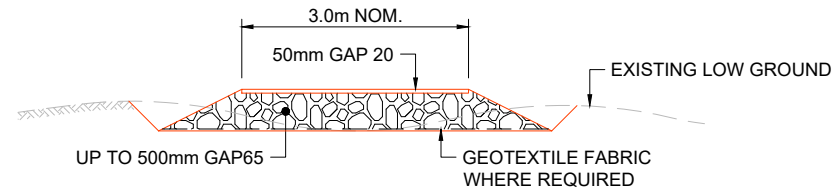
PRINTED 23/06/2021 2:29:17 PM



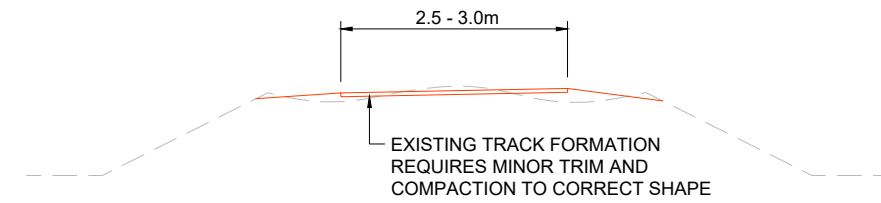
DETAIL - TYPE R
SCALE: 1:50



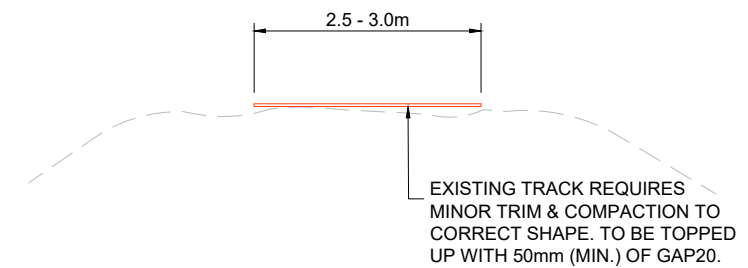
DETAIL - TYPE RT-3
SCALE: 1:50



DETAIL - TYPE RT-2
SCALE: 1:50



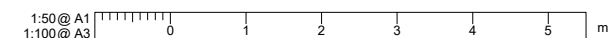
DETAIL - TYPE RT-4
SCALE: 1:50



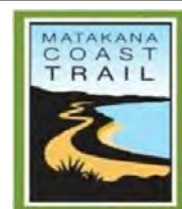
DETAIL - TYPE T
SCALE: 1:50

NOTES:

1.



REVISION	AMENDMENT	APPROVED	DATE
A	ISSUED FOR INFORMATION	-	-



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CIVIL

SCALES	ORIGINAL SIZE
1:50 AT A1	A1
DRAWN	DESIGNED
Sec 9(2)(a)	-
DRAWING VERIFIED	DESIGN VERIFIED
-	-
APPROVED	APPROVED DATE
-	-

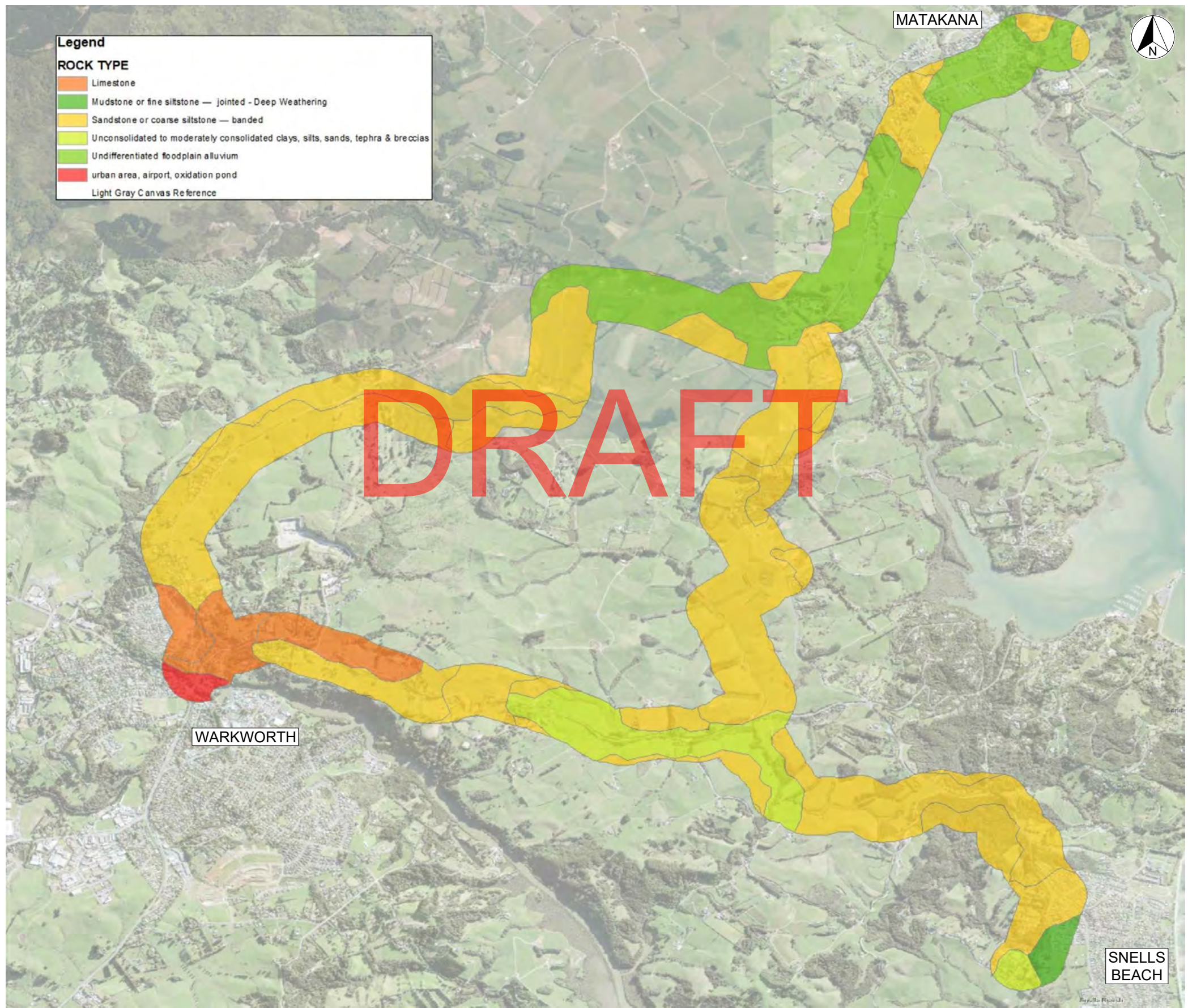
FOR INFORMATION

PROJECT	SHEET NO.	REVISION
MATAKANA COASTAL TRAIL TRUST SECTION - WARKWORTH TO MATAKANA, 24KM (STAGE ONE) MATAKANA COASTAL PATH	C23	A
TITLE		
TYPICAL DETAILS SHEET 3 OF 3		
WSP PROJECT NO. (SUB-PROJECT)		
1-19298.00(01)		

WORK IN PROGRESS

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300 mm
200
100
50
0 10 mm



Legend

ROCK TYPE

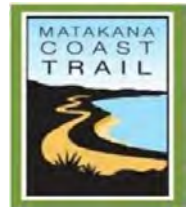
- Limestone
- Mudstone or fine siltstone — jointed - Deep Weathering
- Sandstone or coarse siltstone — banded
- Unconsolidated to moderately consolidated clays, silts, sands, tephra & breccias
- Undifferentiated floodplain alluvium
- urban area, airport, oxidation pond
- Light Gray Canvas Reference

PLAN - ROCK TYPES
SCALE: NTS

WORK IN PROGRESS

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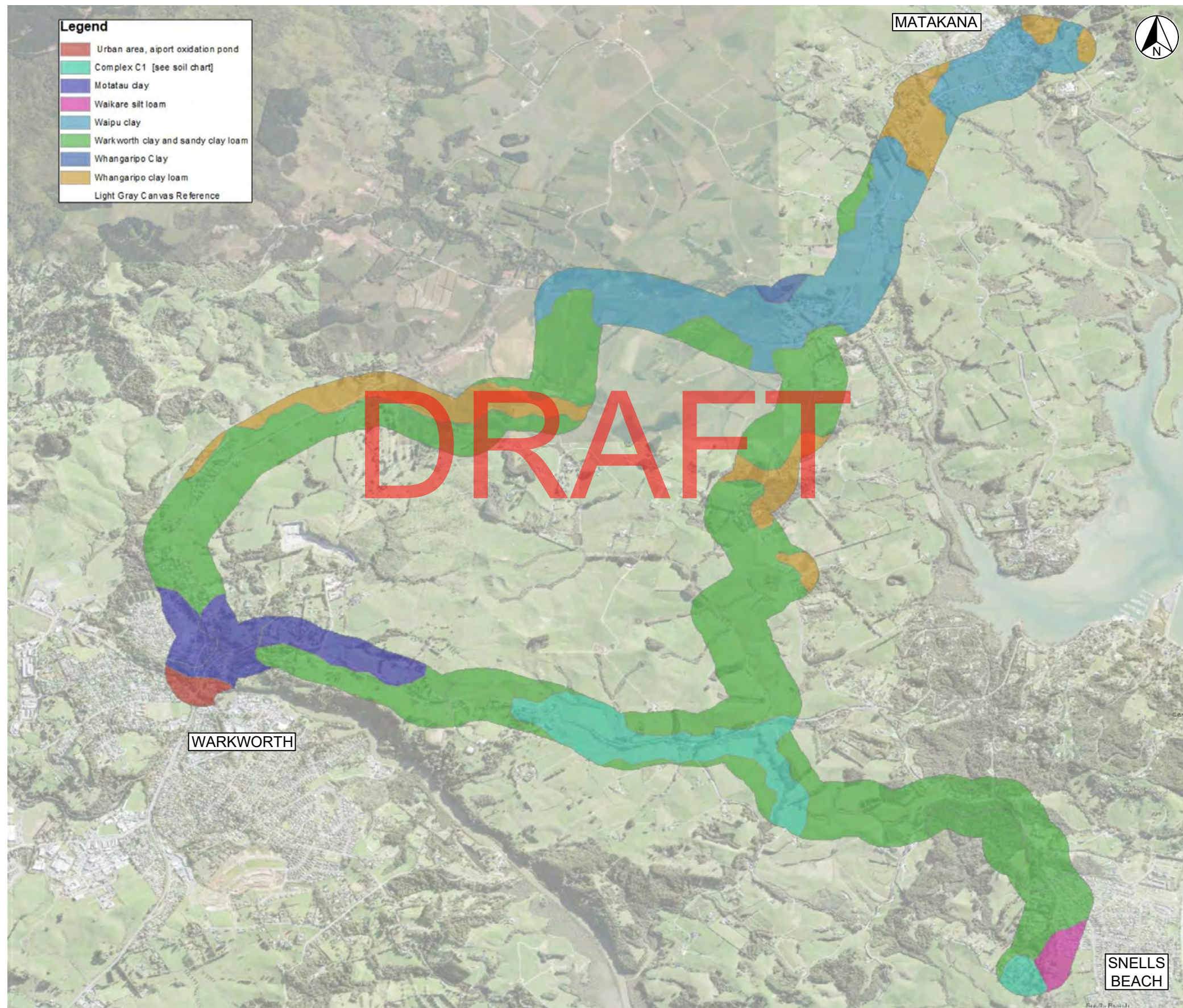
CIVIL

SCALES	ORIGINAL SIZE
NOT TO SCALE	A1
Sec 9(2)(a)	APPROVED
DRAWING VERIFIED	DESIGN VERIFIED
-	-
APPROVED DATE	-

FOR INFORMATION

PROJECT	
MATAKANA COASTAL TRAIL TRUST	
WARKWORTH TO MATAKANA, 24KM (STAGE ONE)	
MATAKANA COASTAL PATH	
TITLE	
GEOLOGY INFORMATION	
PLAN - ROCK TYPES	
WSP PROJECT NO. (SUB-PROJECT)	SHEET NO.
1-19298.00(01)	C30
REVISION	A

300 mm
200
100
50
0 10 mm



Legend

- Urban area, airport oxidation pond
- Complex C1 [see soil chart]
- Motatau clay
- Waikare silt loam
- Waipu clay
- Warkworth clay and sandy clay loam
- Whangaripo C clay
- Whangaripo clay loam
- Light Gray Canvas Reference



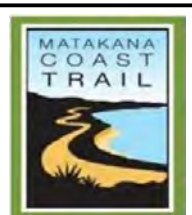
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PLAN - SOIL TYPES
SCALE: NTS

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CIVIL

SCALES		ORIGINAL SIZE
NOT TO SCALE		A1
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Sec 9(2)(a)		-
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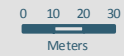
FOR INFORMATION

PROJECT	
MATAKANA COASTAL TRAIL TRUST	
WARKWORTH TO MATAKANA, 24KM (STAGE ONE)	
MATAKANA COASTAL PATH	
TITLE	
GEOLOGY INFORMATION	
PLAN - SOIL TYPES	
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1-19298.00(01)	C31
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Lawries Walk



Scale @ A4
= 1:2,500

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