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

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

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

1. Pre-Lodgement Meeting

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

2. Type of Consent being applied for

(more than one circle can be ticked):

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

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

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

◯ **Yes** ✔ **No**

4. Consultation

Have you consulted with Iwi/Hapū? ◯ **Yes** ✔ **No**

If yes, which groups have you consulted with?	
Who else have you consulted with?	

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

5. Applicant Details

Name/s: TE HAU ORA O NGAPUHI LIMITED C/O TIA ASHBY

Email: [redacted]

Phone number: [redacted]

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

6. Address for Correspondence

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

Name/s: STEVEN SANSON

Email: [redacted]

Phone number: [redacted]

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

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

7. Details of Property Owner/s and Occupier/s

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

Name/s: TE HAU ORA O NGAPUHI LIMITED

Property Address/ Location: 15 GUY ROAD, KAIKOHE

Postcode 0405

8. Application Site Details

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

Name/s: TE HAU ORA O NGAPUHI LIMITED

Site Address/ Location: 15 GUY ROAD, KAIKOHE

Postcode 0405

Legal Description: LOT 1 DP 4730235 **Val Number:**

Certificate of title: NA1586/70

Please remember to attach a copy of your Certificate of Title to the application, along with relevant consent notices and/or easements and encumbrances (search copy must be less than 6 months old)

Site visit requirements:

Is there a locked gate or security system restricting access by Council staff? ☑ **Yes** ☐ **No**

Is there a dog on the property? ☐ **Yes** ☑ **No**

Please provide details of any other entry restrictions that Council staff should be aware of, e.g. health and safety, caretaker's details. This is important to avoid a wasted trip and having to re-arrange a second visit.

PLEASE CALL AGENT PRIOR TO SITE VISIT FOR ACCESS DETAILS [LOCKED GATE]

9. Description of the Proposal:

Please enter a brief description of the proposal here. Please refer to Chapter 4 of the District Plan, and Guidance Notes, for further details of information requirements.

5 X NEW DWELLINGS AND WRAP AROUND SUBDIVISION AT THE SITE

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

10. Would you like to request Public Notification?

☐ **Yes** ☑ **No**

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

(more than one circle can be ticked):

- ◯ **Building Consent** Enter BC ref # here (if known)
- ◯ **Regional Council Consent (ref # if known)** Ref # here (if known)
- ◯ **National Environmental Standard consent** Consent here (if known)
- ◯ **Other (please specify)** Specify 'other' here

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

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

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

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

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

13. Assessment of Environmental Effects:

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

Your AEE is attached to this application ✔ **Yes**

13. Draft Conditions:

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

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

14. Billing Details:

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

Name/s: (please write in full) Tia Ashby

Email: [redacted]

Phone number: [redacted]

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

Fees Information
An instalment fee for processing this application is payable at the time of lodgement and must accompany your application in order for it to be lodged. Please note that if the instalment fee is insufficient to cover the actual and reasonable costs of work undertaken to process the application you will be required to pay any additional costs. Invoiced amounts are payable by the 20th of the month following invoice date. You may also be required to make additional payments if your application requires notification.

Declaration concerning Payment of Fees
I/we understand that the Council may charge me/us for all costs actually and reasonably incurred in processing this application. Subject to my/our rights under Sections 357B and 358 of the RMA, to object to any costs, I/we undertake to pay all and future processing costs incurred by the Council. Without limiting the Far North District Council's legal rights if any steps (including the use of debt collection agencies) are necessary to recover unpaid processing costs I/we agree to pay all costs of recovering those processing costs. If this application is made on behalf of a trust (private or family), a society (incorporated or unincorporated) or a company in signing this application I/we are binding the trust, society or company to pay all the above costs and guaranteeing to pay all the above costs in my/our personal capacity.

Name: (please write in full) Tia Ashby

Signature: [redacted] Date 03-Oct-2024
(signature of bill payer)

MANDATORY

15. Important Information:

Note to applicant
You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.
You may apply for 2 or more resource consents that are needed for the same activity on the same form.
You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

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

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

15. Important information continued...

Declaration

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

Name: (please write in full) STEVEN SANSON

Signature: [redacted] Date 03-Oct-2024

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

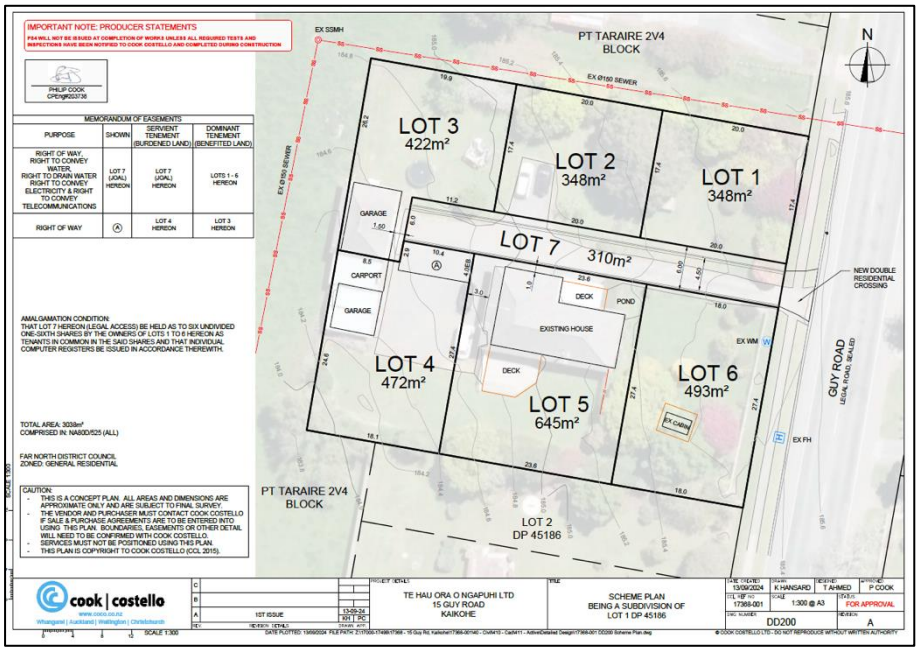
Checklist (please tick if information is provided)

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

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

SANSON & ASSOCIATES LTD

Planners & Resource Consent Specialists



Assessment of Environmental Effects (AEE)

Application for Resource Consent: Proposed 7 Lot Subdivision and Land Use Consent for 5 Dwellings in the Residential Zone, Kaikohe

Prepared for: Te Hau Ora O Ngapuhi Limited

Prepared by: Steven Sanson | Consultant Planner

1. APPLICANT & PROPERTY DETAILS

Applicant	Te Hau Ora O Ngapuhi Limited
Address for Service	Sanson & Associates Limited PO Box 318 PAIHIA 0247 C/O - Steven Sanson steve@bayplan.co.nz 021-160-6035
Legal Description	Lot 1 DP 4730235
Certificate Of Title	NA1586/70
Physical Address	15 Guy Road, Kaikohe
Site Area	3,038m^2
Owner of the Site	Te Hau Ora O Ngapuhi Limited
District Plan Zone / Features	Residential Zone [ODP] General Residential Zone [PDP]
Archaeology	Nil
NRC Overlays	Nil
Soils	Town
Protected Natural Area	Nil
HAIL	Nil
Kiwi	Nil

Schedule 1

2. SUMMARY OF PROPOSAL

Proposal	To undertake a 7 lot subdivision in the Residential Zone at 15 Guy Road, Kaikohe and develop 5 new houses.
Reason for Application	The proposal is considered to breach the following rules of the Operative Far North District Plan: • 7.6.5.1.2 – Restricted Discretionary • 7.6.5.1.1 – Discretionary • 7.6.5.1.5 – Restricted Discretionary • 7.6.5.1.7 – Restricted Discretionary • 13.7.2.1[v] – Discretionary • 15.1.6A.2.1 – Discretionary • 15.1.6C.1.1[a] – Discretionary • 15.1.6C.1.1[e] – Discretionary • 15.1.6C.1.2[a] – Discretionary There are no PDP rule breaches. The proposal overall is a Discretionary Activity.
Appendices	Appendix A – Record of Title & Instruments Appendix B – Scheme Plan, Engineering Reports & Plans Appendix C – Architectural Plans & Elevations Appendix D – Consultation Documents
Consultation	Chorus, Top Energy, NZTA, FNDC IAM's
Pre Application Consultation	Nil

3. INTRODUCTION & PROPOSAL

3.1 Report Requirements

This report has been prepared for Te Hau Ora O Ngapuhi Limited in support of a subdivision and land use consent application at 15 Guy Road, Kaikohe. The details of the site are provided in Schedule 1 above and in the Record of Title found in **Appendix A**.

The application has been prepared in accordance with the provisions of Section 88 and the Fourth Schedule of the Resource Management Act 1991. This report serves as the Assessment of Environmental Effects required under both provisions.

The report also includes an analysis of the relevant provisions of the Operative Far North District Plan [**ODP**], the Proposed Far North District Plan [**PDP**], relevant Regional Planning documents, National Policy Statements and Environmental Standards, as well as Part 2 of the Resource Management Act 1991.

3.2 Proposal

The proposal seeks to subdivide the existing 3,038m^2 site into 7 allotments as follows:

Lot 1	348m^2
Lot 2	348m^2
Lot 3	422m^2
Lot 4	472m^2
Lot 5	645m^2
Lot 6	493m^2
Lot 7	310m^2 [Jointly Owned Access Lot]

Figure 1 below outlines the proposed scheme plan for the development.

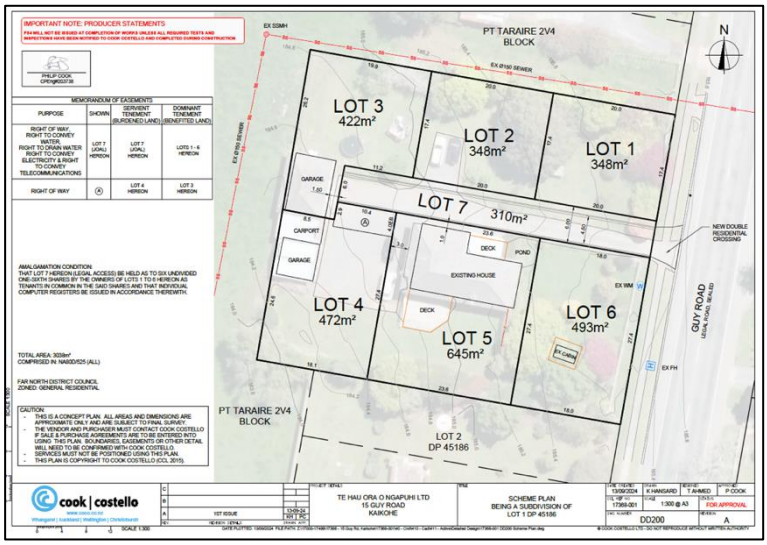


Figure 1 – Proposed Scheme Plan [Source: Cook Costello]

The proposal seeks consent for 5 new Panel Lock dwellings. These dwellings are proposed to be developed off site [off site manufacturing], and on completion will be delivered to the property.

All of the new dwellings are 78m^2 which includes 2 bdr, open kitchen and dining areas, bathroom and laundry, and outside decks and steps. The general layout of the housing is provided in Figure 2 below.

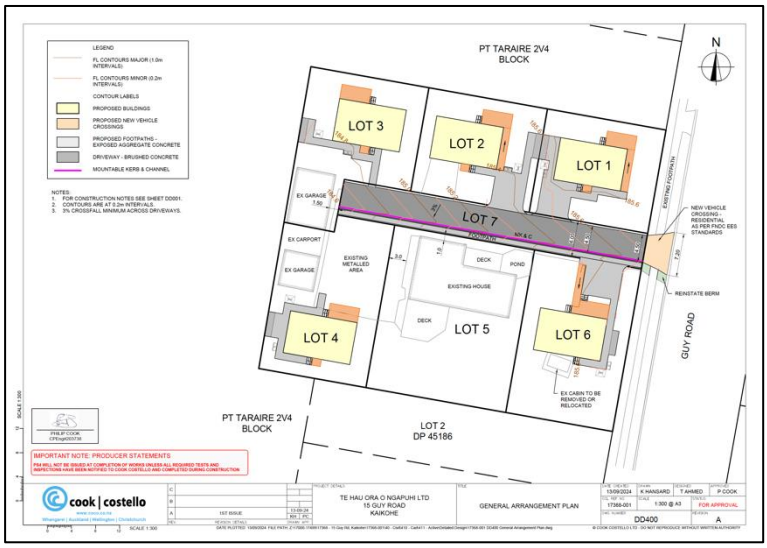


Figure 2 – Proposed Housing Layout Plan [Source: Cook Costello]

The dwellings proposed form part of Te Hau Ora o Ngapuhi's strategy to reduce homelessness in Kaikohe and the surrounds.

Physical works are required for the development. The works are largely contained within Lot 7, but are across an overall area of 544m^2. Volumes are comprised of a total cut of 8.8m^3 with total fill of 11.7m^3 [balance 2.9m^3].

The proposal will require a new vehicle crossing from Guy Road, where required the berm will be reinstated. From the new vehicle crossing, a 4.5m Jointly Owned Access Lot [**JOAL**] is proposed to service all lots / dwellings.

The JOAL incorporates a mountable kerb and channel and appropriately provides a common services trench for three waters, power and telecoms. A 0.95m footpath is located adjacent to the JOAL to provide pedestrian access to and from the site.

In terms of three waters services, the proposal seeks to connect to FNDC owned services. For wastewater, each house will gravity feed west along the JOAL to a centralised sewer storage tank, which will then pump wastewater back towards the existing rising main along the Guy Road [near Pt Taraire 2V4] road reserve.

For water a new multi box will be installed for Lot 1-5, whilst Lot 6 will use the existing meter. All lots will rely on Council reticulation. In terms of stormwater, the allotments / dwellings will contain 2,000l or 5,000l slimline tanks which will ultimately discharge to the southwestern corner of Lot 4.

Lot 4 is the site primarily implicated by flooding, as such engineers have determined an appropriate floor level for this as well as other allotments potentially implicated by flooding.

All of the above are proposed to be undertaken in accordance with the following details found in the FNDC Engineering Standards:

- Sheet 18 – Vehicle Crossing Residential.

- Sheet 31 – Pipe Bedding & Backfill.
- Sheet 34 – Catch Pit Details.
- Sheet 37 – Stormwater and Sewer Connections.
- Sheet 39 – Standard Precast Manholes.
- Sheet 47 – Multiple Water Connections.

The general arrangement will be that the land development aspects will be undertaken, with subdivision occurring on completion of all works.

Details of the proposal as described above are all provided in **Appendix B** and **Appendix C**.

4. SITE & SURROUNDING ENVIRONMENT

The site is located at 15 Guy Road, Kaikohe which contains an existing crossing, dwelling, garages, carport, internal access, parking and manouvring areas. The existing house is brick and tile and contains 3 bdr and 2 bathrooms.

Various specimen trees are scattered across the site. The site is well screened from Guy Road via a 1.8m-2.0m timber fence.

Figure 3 – Site [Source: Prover]

Under the ODP, the site is zoned Residential. Under the PDP the site is zoned General Residential. The site has connections to Council three waters infrastructure.

The site is subjected to flooding as outlined in Figure 6. The proposal has considered this potential impact and is fully assessed in **Appendix B**.

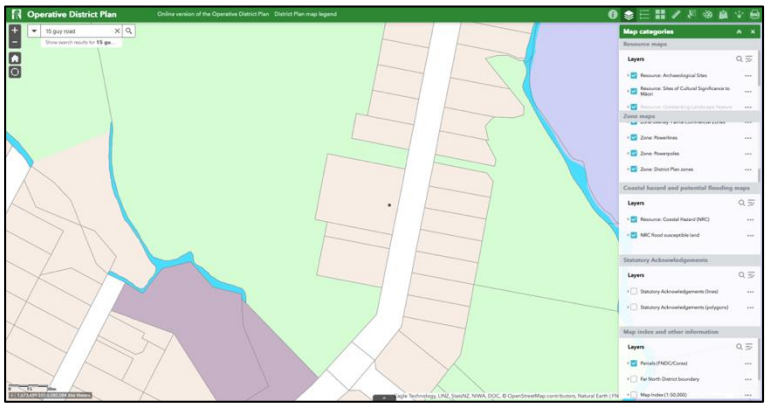


Figure 4 – ODP Zoning [Source: Far North Maps]

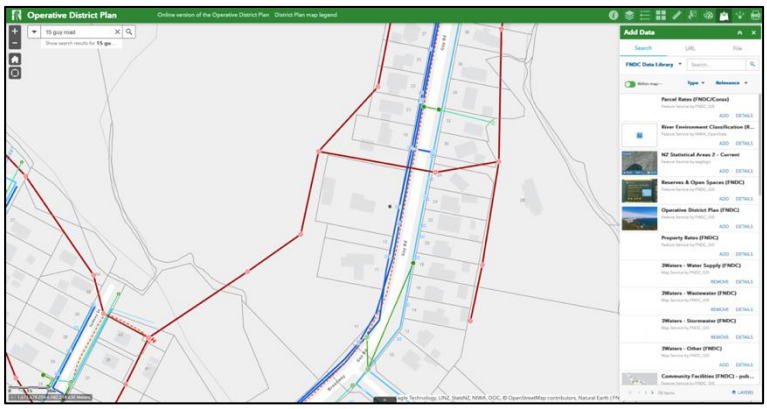


Figure 5 – Council 3 Waters (Source: Far North Maps)

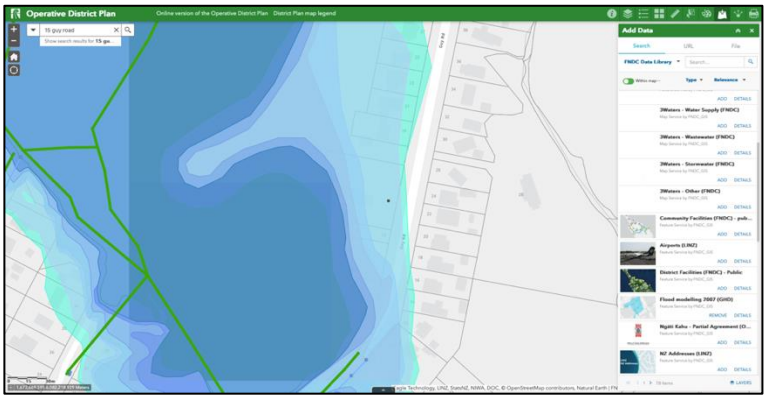


Figure 6 – Flooding GHD 2007 (Source: Far North Maps)

The site does not contain any Highly Productive Land, is not within a Kiwi density area, contain any known archaeological features / sites, or any historic heritage, notable tree, or any significant natural area.

The site is not impacted by any zoning or resource features of the Northland Regional Council.

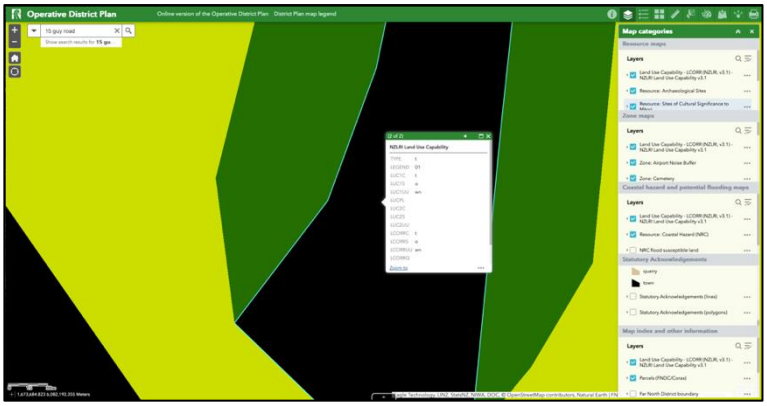


Figure 7 – Soils (Source: Far North Maps)

Figure 8 – PDP Zone Maps (Source: Far North Maps)

These surrounds are typically characterized by residential allotments along Guy Road with larger allotments to the rear of these.

The Rawiri Taiwhanga Park is located to the south. The Park and the landholding to the rear of the site are implicated by flooding. The Mangamutu Stream runs through the Park and heads south east.

When viewing the site from Guy Road, it with the surrounds have an urban character and sense of place.

5. ASSESSMENT OF RELEVANT RULES

5.1 Far North District Plan

An assessment of the relevant rules of the Far North District Plan has been undertaken below.

Table 1: Residential Zone Rule Assessment

Rule	Assessment
7.6.5.11 Relocated Buildings	The dwellings will be manufactured off site and delivered to the site, fixed to the ground and completed. This

	process will be completed within 6 months. **Complies**
7.6.5.1.2 Residential Intensity (a) Each residential unit for a single household shall have available to it a minimum net site area of: Sewered sites: 600m^2 Unsewered sites: 3,000m	The proposal seeks 6 houses from a 3,038m^2 site. This results in 1 house per 506m^2. **Restricted Discretionary Activity**
7.6.5.1.3 Scale of Activities	The proposal is for residential use only. **Complies**
7.6.5.1.4 Building Height	The proposed buildings are all less than 9m in height. **Complies**
7.6.5.1.5 Sunlight	The proposal does not comply with sunlight angles as per **Appendix C**. **Restricted Discretionary Activity**
7.6.5.1.6 Stormwater Management	The post development impervious surfaces for the entire development are 1,248m^2 [41%]. **Complies**
7.6.5.1.7 Setback from boundaries	Each new building is appropriately setback from the boundaries as outlined in **Appendix B** and **Appendix C**. **Complies**

7.6.5.1.8 Screening for Neighbours – Non Residential Activities	Only residential uses are proposed. **Complies**
7.6.5.1.9 Outdoor Activities	Not applicable **Complies**
7.6.5.1.10 Visual Amenity	Not applicable **Complies**
7.6.5.1.11 Transportation	Refer Table 2. **Discretionary Activity**
7.6.5.1.12 Site Intensity Non Residential	Only residential uses are proposed. **Complies**
7.6.5.1.13 Hours of Operation Non Residential	Not applicable **Complies**
7.6.5.1.14 Keeping of Animals	Not applicable **Complies**
7.6.5.1.15 Noise	Not applicable **Complies**
7.6.5.1.16 Helicopter Landing Area	Not applicable **Complies**
7.6.5.1.17 Building Coverage	On completion there will be 673m^2 of buildings [22%]. **Complies**

Table 2: District Wide Rule Assessment

Rule	Assessment
12.1 Landscape & Natural Features	Not applicable **Complies**
12.2 Indigenous Flora & Fauna	Clearance complies with Rule 12.2.6.1.1[o]. **Complies**
12.3 Soils & Minerals	Excavation / Filling does not exceed 200m^3. There are no retaining walls required. **Complies**
12.4 Natural Hazards	The dwellings are not within 20m of a dripline of naturally occurring or deliberately planted scrub, shrub, woodlot or forest. **Complies**
12.5 Heritage	Not applicable **Complies**
12.7 Lakes, Rivers, Wetlands and the Coastline	Not applicable **Complies**
12.8 Hazardous Substances	Not applicable **Complies**
12.9 Renewable Energy & Energy Efficiency	Not applicable **Complies**
13 Subdivision	The proposal requires consent under 13.7.2.1[v]. The allotments are proposed to be at least 300m^2 in size.

	Discretionary Activity In terms of 13.7.2.2, all allotments can contain a 14m x 14m building envelope. **Complies** In terms of 13.7.2.6, this is adhered to in terms of the proposed JOAL. **Complies** All other rules are not relevant within this section. **Complies**
14 Financial Contributions	No reserves are required. **Complies**
15 Transport	The proposal results in 60 traffic movements. **Discretionary Activity** The proposal provides 2 x car parks for each unit. **Complies** In terms of access, the JOAL is undersized in terms of Appendix 3B-1. Therefore, consent is required under 15.1.6C.1.1[a]. Guy Road is a State Highway. Although access is existing, the proposal seeks to increase use. Therefore, consent is required under 15.1.6C.1.1[e][i].

	In addition, the proposal does not comply with 15.1.6C.1.2[a] because of the width of the JOAL is not 5m. **Discretionary Activity**
16 Signs and Lighting	No signage is required. **Complies**
17 Designations & Utility Services	Not applicable. **Complies**
18 Special Areas	Not applicable. **Complies**
19 GMO's	Not applicable. **Complies**

Overall, this combined application falls to be considered as a 'Discretionary Activity' under the ODP.

Clause 2(1)(d) of Schedule 4 of the RMA requires applicants to identify other activities of the proposal with the intention of capturing activities which need permission or licensing under other enactments. These are considered below.

5.3 Northland Regional Council Requirements

The relevant matter to consider in terms of the proposal is with respect to the matters under management of the Northland Regional Council.

The proposal has been assessed against the Proposed Regional Plan for Northland and no consents are considered to be required.

5.4 Proposed Far North District Plan 2022

The PDP has rules which have immediate legal effect for the following chapters:

Table 3 – Assessment of the PDP Rules

Matter	Rule/Std Ref	Evidence
Hazardous Substances	Rule HS-R2 has immediate legal effect but only for a new significant hazardous facility located within a scheduled site and area of significance to Māori, significant natural area or a scheduled heritage resource. HS-R5, HS-R6, HS-R9	Not relevant as no such substances proposed. **Complies**
Heritage Area Overlays	All rules have immediate legal effect (HA-R1 to HA-R14) All standards have immediate legal effect (HA-S1 to HA-S3)	Not relevant. **Complies**
Historic Heritage	All rules have immediate legal effect (HH-R1 to HH-R10) Schedule 2 has immediate legal effect	Not relevant. **Complies**

Notable Trees	All rules have immediate legal effect (NT-R1 to NT-R9) All standards have legal effect (NT-S1 to NT-S2) Schedule 1 has immediate legal effect	Not relevant. **Complies**
Sites and Areas of Significance to Māori	All rules have immediate legal effect (SASM-R1 to SASM-R7) Schedule 3 has immediate legal effect	Not relevant. **Complies**
Ecosystems and Indigenous Biodiversity	All rules have immediate legal effect (IB-R1 to IB-R5)	Not relevant. **Complies**
Activities on the Surface of Water	All rules have immediate legal effect (ASW-R1 to ASW-R4)	Not relevant. **Complies**
Earthworks	The following rules have immediate legal effect: EW-R12, EW-R13	These standards can be imposed and required at time of EPA. **Complies**

	The following standards have immediate legal effect: EW-S3, EW-S5	
Signs	The following rules have immediate legal effect: SIGN-R9, SIGN-R10 All standards have immediate legal effect but only for signs on or attached to a scheduled heritage resource or heritage area	Not relevant. **Complies**
Orongo Bay Zone	Rule OBZ-R14 has partial immediate legal effect because RD-1(5) relates to water	Not relevant. **Complies**

No consents are required under the PDP.

6. NOTIFICATION ASSESSMENT

6.1 Public Notification

The table below outlines the steps associated with public notification insofar as it relates to s95 of the Act.

Table 4 – s95 Assessment

Step 1	Mandatory public notification in certain circumstances	
S95A(3)(a)	Has the applicant requested that the application be publicly notified?	No
S95A(3)(b)	Is public notification required under section 95C? (after a request for further information)	TBC
S95A(3)(c)	Has the application been made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.	No
Step 2	if not required by step 1, public notification precluded in certain circumstances	
S95A(5)(a)	Is the application for a resource consent for 1 or more activities and each activity is subject to a rule or national environmental standard that precludes public notification?	No
S95A(5)(b)	Is the application for a resource consent for 1 or more of the following, but no other, activities. (i) a controlled activity. (ii) a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity.	No
Step 3	if not precluded by step 2, public notification required in certain circumstances	
S95A(7)(a) / (b)	Determine whether the application meets the criteria set out in Clause 8.	TBC
S95A(8)A	The application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification.	No
S95A(8)B	The consent authority decides, in accordance with s95D, that the activity will have or is likely to have adverse effects on the environment that are more than minor	TBC
Step 4	Public notification in certain circumstances	

S95A(9)	Determine whether special circumstances exist in relation to the application that warrant the application being publicly notified	No

The proposed development does not meet the tests for mandatory public notification, nor does it meet the tests for precluding public notification.

Therefore, an assessment of environmental effects is required to consider whether these matters should be further explored.

7. EFFECTS ON THE ENVIRONMENT

7.1 Effects That Must Be Disregarded

Effects on persons who are owners and occupiers of the land in, on, or over which the application relates, or of adjacent land must be disregarded when considering effects on the environment (s 95D(a)).

Those properties / persons are shown in Table 5 and shown in Figure 9 below.

Table 5: Adjacent Persons

Download CSV

Address	Suburb	Town	Capital Value	Owners	Last Sale Date	Last Sale Price	Land Area	Floor Area
11 Guy Road	Kaikohe	Far North	595000	Mary Goretti Grant,Ross Andrews Grant,Mary Goretti Grant,Ross Andrews Grant	25 Mar 2022	570000	2,061 m²	167 m²
26 Guy Road	Kaikohe	Far North	360000	Housing New Zealand Limited, Housing New Zealand Limited	01 Jan 1900	70000	837 m²	90 m²
24 Guy Road	Kaikohe	Far North	360000	Noema Miriam Geneva Albert,Troy Martin Harry Marshall	05 Apr 2016	165000	795 m²	110 m²
22 Guy Road	Kaikohe	Far North	425000	Kane Lyden	16 May 2016	185000	796 m²	127 m²
20 Guy Road	Kaikohe	Far North	360000	Judith Barbara Davis	01 Jan 1900	61000	800 m²	110 m²
53 Guy Road	Kaikohe	Far North	1020000	J A R Whanau Limited	10 Mar 2016	610000	13.8315 ha	227 m²

Figure 9 – Adjacent Persons [Source: Prover]

7.2 Written Approvals

Formal written approval has been sought from NZTA and is expected to be received. Consultation has been undertaken with Chorus, Top Energy, and FNDC's Infrastructure Division. Communications are found in **Appendix D**.

7.3 Effects That May Be Disregarded

Sections 95D(b) and 95E(2)(a) provide that when determining the extent of the adverse effects of an activity or the effects on a person respectively, a council 'may disregard an adverse effect if a rule or national environmental standard permits an activity with that effect'. This is known as the permitted activity baseline test.

The purpose of the permitted baseline test is to isolate and make effects of activities on the environment that are permitted by a plan or NES, irrelevant.

When applying the permitted baseline such effects cannot then be taken into account when assessing the effects of a particular resource consent application.

The baseline has been defined by case law as comprising non-fanciful (credible) activities that would be permitted as of right by the plan in question.

In terms of the development site and proposal at hand, the following is considered relevant:

- The site can accommodate up to 200m^3 of earthworks. Only 20.5m^3 of earthworks are required, making this aspect permitted in all respects.
- Residential intensity is capped at 1 house per 600m^2 of land. Given the size of the site, this would allow for up to 5 houses on the site as a permitted activity. The proposal is for 6 houses in total.
- Traffic rules limit the total number of houses on a site to 3 houses. Access rules limit this further to 1 house to come off a state highway. However, these are access limitations, not density restrictions.
- Building coverage and impervious surfaces are limited to 45% and 50% respectively, the proposal has 41% total impervious coverage.

It is contended that the above effects should be isolated from consideration of the overall effects of the development in terms of s95D, s95E and 104(1)(a) of the RMA.

7.4 Existing Environment

The receiving environment is the environment upon which a proposed activity might have effects. It is permissible (and often desirable or necessary) to consider the future state of the environment upon which effects will occur, including:

- the future state of the environment as it might be modified by the utilization of rights to carry out permitted activities (refer above).

- the environment as it might be modified by implementing resource consents that have been granted at the time a particular application is considered, where it appears likely that those resource consents will be implemented.

The existing environment in this instance is characterized by the existing and legalized built development already located on site.

There are no known unimplemented consents in the environment.

7.5 Effects Assessment

The following assessment (refer Table 6) has been prepared in accordance with Section 88 and Schedule 4 of the Act which specifies that the assessment of effects provided should correspond with the scale and significance of the proposal.

The effects assessment is largely linked to the rules breached as well as any other matter that is considered relevant to the scope and context of the overall development.

The effects considered include positive effects associated with the proposed development.

Table 6 – Effect Assessment (Environment)

Item	Assessment Criteria	Comments
Positive Effects	Nil	Te Hau Ora O Ngapuhi are a Community Housing Provider in Kaikohe. The proposal seeks to increase housing options and solutions for the most vulnerable. This development is targeted to those who are experiencing homelessness and other types of transitional need for housing. The development will provide six houses overall for those needing this type of housing solution. The tenants will eventually be wrapped around with other services Te Hau Ora O Ngapuhi provide such as health and social services, financial management, education, and cultural programmes. The proposal will include various goods and services to be used / required to provide for the development. These services will be coming from the Northland Region and will support the Far North District and its community. The addition of six houses will have an effect on social deprivation in terms of assisting homeless into houses and wrap around services.
Residential Intensity	11.1	The character and appearance of the proposed dwellings will be as shown in **Appendix C**. These are modern dwellings with weatherboard cladding and steel roof. The proposed use complements the use of the site and surrounds. Siting and design has been undertaken through a number of iterations to ensure that each house / occupants receive appropriate privacy and passive solar gain.

		The area of open space provided overall remains as 59% of the total site on completion of impervious surfaces and buildings. This is within the permitted baseline. Consultation has been conducted with NZTA and we await their feedback on traffic effects, however, the density of development proposed is only one dwelling above the permitted baseline. The location and design of vehicular and pedestrian access is as shown on plans provided in **Appendix B** and **Appendix C**. The standard of internal and external works are typical of multi unit developments of that proposed. In terms of the roading hierarchy, consultation has been conducted with NZTA and they will provide details on appropriateness of the vehicular and pedestrian measures promoted. Hours of operation will be residential in nature with no additional effects beyond this type of use. Similarly, noise generation will be of a similar standard. In terms of adequate provision of three waters, initial consultation has been undertaken with FNDC IAM's and there is the ability to connect in principle. Cook Costello has augmented this with additional on-site measures to buffer FNDC reticulated services. Stormwater is not relied upon in terms of FNDC assets, and the approach is to capture it in a controlled manner through slimline tanks and then to discharge at the specified point on the site. The site will retain its landscaped fence and new fencing will likely be promoted external site boundaries for the parent site. As the overall

		site will be managed by Te Hau Ora O Ngapuhi, internal fencing is not envisaged but internal landscaping may be undertaken to provide additional privacy and allocated open space on each subdivided allotment. Natural hazards have been considered in terms of the finished floor levels of the proposed buildings where they interact with the known flooding implications on the site as well as appropriate stormwater discharge through engineering design as previously described.
Sunlight	7.6.5.3.4	There are no elevation / sunlight breaches on the western / eastern perspectives. This is important to note as these perspectives relate to existing development along Guy Road. There are breaches both internal to the development, and externally from the northern / southern perspectives as shown below.  Effects are only received at 1 x adjacent party. There are no environmental effects to the environment.
Property Access	13.7.3.1 & Chapter 15.6C	The proposal will generate 60 traffic movements [50 when the existing house is discounted]. This is 30 [20] more than the permitted baseline.

		The time of day the extra vehicle movements will occur will be commensurate with residential use, however noting the purpose of the proposal to provide dwellings for homelessness we expect less traffic / vehicle use. The location of adjacent vehicle crossing are noted on plans. This proposal simply seeks to upgrade the existing crossing to meet FNDC Engineering standards. Pedestrian volumes are not large, however the proposal does not impact the existing footpath network. It also provides a footpath internal to the site to promote walking. Sight distances are addressed in the engineering report. They currently meet NZTA standards. Guy Road / SH12 is a relatively busy stretch of road as it connects people from east to west through Kaikohe. However, there are no known safety or congestion issues at or along this stretch of road as it has a 50km / hr speed limit with good visibility. Natural hazards do not affect the road where the proposal is located. No formal right turn bays or extensions to Guy Road / SH12 are proposed as the road is relatively wide and the crossing proposed will allow swift access / egress to and from the site. The internal access proposed although undersized is commensurate with multi unit developments undertaken by Kainga Ora and other similar development across the district. The internal JOAL is augmented with a pedestrian footpath to ensure that both modes are catered to.

		The JOAL is appropriately connected to the internal stormwater system. There are considered to be no known effects resulting to NZTA however we await their final comments and approval letter for this development.
Natural & Other Hazards	13.7.3.2	This aspect has already been addressed above in terms of flooding hazards, but to summarise, the proposal includes minimum floor levels for hazards and includes an appropriate stormwater system that does not further impact others in terms of the flooding hazard. Provided these recommendations are adhered to there are no resulting effects. From a land stability perspective, the proposal is supplemented by a geotechnical report prepared by Cook Costello. Provided the recommendations within that report are adhered to the proposal is considered to be appropriate. In terms of s106, there is therefore no reasons not to approve the proposal.
Water Supply	13.7.3.3	The proposal is to be appropriately serviced in terms of water. Refer engineering reports and drawings. Provided development is undertaken in accordance with the reports and plans there are considered to be no effects resulting.
Stormwater Disposal	13.7.3.4	The proposal appropriately manages stormwater generated by the proposal. Refer engineering reports and drawings. Provided development is undertaken in accordance with the reports and plans there are considered to be no effects resulting.
Sanitary Sewage Disposal	13.7.3.5	The proposal is to be appropriately serviced of wastewater. Refer engineering reports and drawings. Provided development is undertaken in accordance with the reports and plans there are considered to be no effects resulting.

Energy Supply	13.7.3.6	Top Energy has been consulted to provide approved and this is attached at **Appendix D**.
Telecommunications	13.7.3.7	Chorus requirements are attached at **Appendix D**.
Easements for Any Purpose	13.7.3.8	Please refer to the scheme plan in **Appendix B.**
Preservation of Heritage Resources, Vegetation, Fauna and Landscape, and Land Set Aside for Conservation Purposes	13.7.3.9	None of these items implicate the site.
Access to Reserves and Waterways	13.7.3.10	The site does not adjoin a waterway.
Land Use Compatibility	13.7.3.11	The proposal is for residential end use in the residential zone. Whilst the site does adjoin a neighbouring rural production site, there is little evidence of such use being undertaken [low intensity grazing]. Housing and low intensity rural production are activities that can co-exist with little effects resulting. The underlying flooding matters across the neighbouring rural production site limits genuine rural production use of a larger scale.
Proximity to Airports	13.7.3.12	Not relevant.
Effects Conclusion:		

Having considered the relevant actual and potential effects associated with the development, it is considered that the proposed activity promotes effects that are no more than minor on the environment.

8. EFFECTS TO PEOPLE

8.1 Limited Notification

The table below outlines the steps associated with limited notification insofar as it relates to s95 of the Act.

Table 7 – s95 Assessment

Step 1	certain affected groups and affected persons must be notified	
S95B(2)(a)	Are there any affected protected customary rights groups?	No
S95B(2)(b)	Are there any affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity)?	No
S95B(3)(a)	Is the proposed activity on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11?	No
S95B(3)(b)	Is the person to whom the statutory acknowledgement is made is an affected person under section 95E?	No
Step 2	if not required by step 1, limited notification precluded in certain circumstances	
S95B(6)(a)	the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification:	No
S95B(6)(b)	the application is for a controlled activity (but no other activities) that requires a resource consent under a district plan (other than a subdivision of land)	No
Step 3	If not precluded by step 2, certain other affected persons must be notified	
S95B(7)	In the case of a boundary activity, determine in accordance with section 95E whether an owner of an allotment with an infringed boundary is an affected person.	No

S95B(8)	In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.	Refer below
S95B(9)	Notify each affected person identified under subsections (7) and (8) of the application.	No
Step 4	Further notification in special circumstances	
S95B(10)	Determine whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited notification under this section (excluding persons assessed under section 95E as not being affected persons), and,— (a)if the answer is yes, notify those persons; and (b)if the answer is no, do not notify anyone else.	No

8.2 Affected Person Determination

As the proposed activity does not trigger mandatory limited notification, nor is it precluded, an assessment of potential affected persons must be undertaken.

The consent authority has discretion to determine whether a person is an affected person. A person is affected if an activity's adverse effects are minor or more than minor to them.

The potential effects of the proposal on adjacent landowners has been undertaken below in context of those parties outlined earlier in Section 7.

8.3 Effects on Persons Assessment

The proposal is not considered to result in any potential affected persons for the following reasons:

- The proposal requires minimal earthworks (<200m^3) which can be undertaken with standard consent conditions imposed.
- There is no vegetation clearance required / proposed.
- Services are provided / proposed to each lot. There is no wastewater disposal to land in this instance. Waterways are not implicated.
- There are no special features / resources that apply to the site.
- The proposal will result in residential end use, in the residential zone and the density proposal aligns with the Restricted Discretionary Activity standard, although following subdivision, aligns with the Discretionary Activity standards.
- In terms of sunlight, the only potentially affected person is that at 17 Guy Road, Kaikohe. The potentially affected site is currently vacant, in pasture and zoned Rural Production. The small breach from the gable on Lot 4 is therefore considered to be less than minor from the sunlight infringement.
- The land use breach for a limited legal width does not implicate any persons. Access is not shared with any other parties.

9. STATUTORY CONTEXT

9.1 National Policy Statements & Plans

In terms of NPS' and NES' the following is provided:

- With respect to the National Environmental Standard – Soil Contamination, the site is not HAIL.
- The site is not Coastal as per the Regional Policy Statement and therefore the New Zealand Coastal Policy Statement is not relevant.
- The site is within an urban area and is considered to be contributing to the outcomes outlined in the NPS – Urban Development.
- The site has no wetlands attributed to it as defined in various planning documents. The NPS for Freshwater Management is not considered relevant.

- The site is zoned Residential and therefore the NPS Highly Productive Land does not apply.

9.2 Regional Policy Statement for Northland

The Regional Policy Statement (RPS) for Northland sets the broad direction and framework for managing the region's natural and physical resources. It identifies significant resource management issues for the region and sets out how resources such as land, water, soil, minerals, plants, animals, and structures will be managed.

The RPS recognises that there are activities and land that should be protected from the negative impacts brought about through subdivision, as further development can result in incompatible land use, effects on receiving environments, reverse sensitivity issues and sterilisation of productive land.

In this context, the proposed subdivision aligns with the objectives of the RPS. It entails the division of existing residential activities within an established residential area. Importantly, the proposed lots are intended for residential purposes, which is consistent with the current and foreseeable use of the land.

Existing measures are in place for access and servicing through appropriate on-site infrastructure and connections to reticulated services. Therefore, the proposal is in accordance with the principles outlined in the RPS.

9.3 Far North District Plan Assessment

An assessment of the relevant objectives and policies associated with the Far North District Plan has been undertaken:

Chapter 13 - Subdivision

Objectives: 13.3.1, 13.3.2, 13.3.5, 13.3.7, 13.3.8, 13.3.9 and 13.3.10

Policies: 13.4.1, 13.4.2, 13.4.3, 13.4.8, 13.4.11 and 13.4.14

The subdivision is consistent with the objectives and policies which underscore the importance of ensuring development does not compromise the environment, infrastructure, or the character of the area. The proposed subdivision aims to integrate with existing activities while adhering to sustainable land use practices.

The relevant policies (identified above) guide development towards maintaining environmental and cultural values, promoting efficient land use, and minimising adverse effects on infrastructure. The proposal's design and adherence to these policies demonstrate a commitment to responsible development that is an efficient use of urban land, complements the existing landscape, supports community needs, and respects the district's unique characteristics.

The site itself lacks identified landscape values and poses no hindrance to the continued operation of adjacent land uses. The existing occupied lots have satisfactory access to essential services, ensuring their functionality. Adequate and secure access is already established for all lots.

This proposed subdivision, creating four new lots in the vicinity of pre-approved development, will inherently exhibit negligible visual and physical effects on the broader environment.

The spacious layout of the development and the scale of the dwellings align with the Plan's expectations. Moreover, the subdivision pattern mirrors the prevailing development trend in the locality and conforms to common subdivision practices.

The new lots are appropriately equipped with essential easements to facilitate legal servicing rights. Additionally, the site demonstrates stability, with no concerns regarding flooding, waterways, or overall site integrity. Consequently, the proposal aligns with the objectives and policies of the subdivision chapter.

Table 8 – ODP Residential Zone Assessment

Objectives	Assessment

7.6.3.1 To achieve the development of new residential areas at similar densities to those prevailing at present.	The proposal seeks a Restricted Discretionary Activity density.
7.6.3.2 To enable development of a wide range of activities within residential areas where the effects are compatible with the effects of residential activity	As the density is compatible, so too are the activities which are residential in nature.
7.6.3.3 To protect the special amenity values of residential sites on the urban fringe, specifically Lot 1 DP 28017, Lot 1 DP 46656, Lot 1 DP 404507, Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333, Pt Lot 1 DP 58333 (and any sites created as a result of a subdivision of these lots), and those having frontage to Kerikeri Road between its intersection with SH10 and Cannon Drive.	Not relevant.
Policies	Assessment
7.6.4.1 That the Residential Zone be applied to those parts of the District that are currently predominantly residential in form and character.	Noted.
7.6.4.2 That the Residential Zone be	Noted.

applied to areas which are currently residential but where there is scope for new residential development	
7.6.4.3 That the Residential Zone be applied to areas where expansion would be sustainable in terms of its effects on the environment	Noted.
7.6.4.4 That the Residential Zone provide for a range of housing types and forms of accommodation.	Noted.
7.6.4.5 That non-residential activities only be allowed to establish within residential areas where they will not detract from the existing residential environment	No non-residential activities are proposed.
7.6.4.6 That activities with net effects that exceed those of a typical single residential unit, be required to avoid, remedy or mitigate those effects with respect to the ecological and amenity values and general peaceful enjoyment of adjacent residential activities.	Not relevant.

9.4 Proposed Far North District Plan

Section 88A(2) provides that "any plan or proposed plan which exists when the application is considered must be had regard to in accordance with section

104(1)(b).” This requires applications to be assessed under both the operative and proposed objective and policy frameworks from the date of notification of the proposed district plan.

In the event of differing directives between objective and policy frameworks, it is well established by case law that the weight to be given to a proposed district plan depends on what stage the relevant provisions have reached, the weight generally being greater as a proposed plan moves through the notification and hearing process. In Keystone Ridge Ltd v Auckland City Council, the High Court held that the extent to which the provisions of a proposed plan are relevant should be considered on a case by case basis and might include:

- The extent (if any) to which the proposed measure might have been exposed to testing and independent decision making;
- Circumstances of injustice; and
- The extent to which a new measure, or the absence of one, might implement a coherent pattern of objectives and policies in a plan.

In my view the PDP has not gone through the sufficient process to allow a considered view of the relevant objectives and policies. However, for fullness the Subdivision and General Residential objectives and policies have been assessed below.

Table 9 – PDP General Residential Zone Assessment

Objective	Assessment
GRZ- O1 The General Residential zone provides a variety of densities, housing types and lot sizes that respond to:	Noted.

housing needs and demand; the adequacy and capacity of available or programmed development infrastructure; the amenity and character of the receiving residential environment; and historic heritage.	
GRZ- O2 The General Residential zone consolidates urban residential development around available or programmed development infrastructure to improve the function and resilience of the receiving residential environment while reducing urban sprawl.	Noted.
GRZ-O3 Non-residential activities contribute to the well-being of the community while complementing the scale, character and amenity of the General Residential zone	Noted.
GRZ-O4 Land use and subdivision in the General Residential zone is supported where there is adequacy and capacity of available or programmed development infrastructure.	There are adequate services to the site.
GRZ – O5 Land use and subdivision in the General Residential zone provides communities with functional and high amenity living environments	The proposed subdivision represents an efficient use of residential zoned land providing the community with much needed housing in Kaikohe.

GRZ -O6 Residential communities are resilient to changes in climate and are responsive to changes in sustainable development techniques.	Noted.
Policy	**Assessment**
GRZ-P1 Enable land use and subdivision in the General Residential zone where: there is adequacy and capacity of available or programmed development infrastructure to support it; and it is consistent with the scale, character and amenity anticipated in the residential environment	Services are available to the site.
GRZ-P2 Require all subdivision in the General Residential zone to provide the following reticulated services to the boundary of each lot: telecommunications: fibre where it is available; or copper where fibre is not available; local electricity distribution network; wastewater; and potable water and stormwater where it is available.	These are provided.

GRZ – P3 Enable multi-unit developments within the General Residential zone, including terraced housing and apartments, where there is adequacy and capacity of available or programmed development infrastructure.	Not relevant.
GRZP4 Enable non-residential activities that: do not detract from the vitality and viability of the Mixed Use zone; support the social and economic well-being of the community; are of a residential scale; and are consistent with the scale, character and amenity of the General Residential zone.	Not relevant.
GRZ P5 Provide for retirement villages where they: compliment the character and amenity values of the surrounding area; contribute to the diverse needs of the community; do not adversely affect road safety or the efficiency of the transport network; and	Not relevant.

can be serviced by adequate development infrastructure.	
GRZ P6 Encourage and support the use of on-site water storage to enable sustainable and efficient use of water resources	Noted.
GRZ P7 Encourage energy efficient design and the use of small-scale renewable electricity generation in the construction of residential development.	Noted.
GRZ P8 Manage land use and subdivision to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application: consistency with the scale, design, amenity and character of the residential environment; the location, scale and design of buildings or structures, potential for shadowing and visual dominance; for residential activities: provision for outdoor living space; privacy for adjoining sites; access to sunlight; for non-residential activities:	The application proposes to provide much needed housing in Kaikohe at a scale/density anticipated by the plan. An assessment of effects has been provided in section 7 of this report addressing the matters in this policy.

scale and compatibility with residential activities hours of operation at zone interfaces, any setbacks, fencing, screening or landscaping required to address potential conflicts; the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity, including: opportunities for low impact design principles ability of the site to address stormwater and soakage; managing natural hazards; and any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6	

Table 10: Objectives and Policies Assessment of the Subdivision Chapter

Objective	Assessment
SUB-O1 Subdivision results in the efficient use of land, which: a. achieves the objectives of each relevant zone, overlays and district wide provisions; b. contributes to the local character and sense of place; c. avoids reverse sensitivity issues that would prevent or adversely	The land is zoned general residential and anticipates development of this scale / density. An assessment of effects has been provided in section 7 of this report addressing the matters in this policy.

affect activities already established on land from continuing to operate; d. avoids land use patterns which would prevent land from achieving the objectives and policies of the zone in which it is located; e. does not increase risk from natural hazards or risks are mitigates and existing risks reduced; and f. manages adverse effects on the environment.	
SUB-O2 Subdivision provides for the: a. Protection of highly productive land; and b. Protection, restoration or enhancement of Outstanding Natural Features, Outstanding Natural Landscapes, Natural Character of the Coastal Environment, Areas of High Natural Character, Outstanding Natural Character, wetland, lake and river margins, Significant Natural Areas, Sites and Areas of Significance to Māori, and Historic Heritage.	None of these matters are implicated.
SUB-O3 Infrastructure is planned to service the proposed subdivision and development where: a. there is existing infrastructure connectio n, infrastructure should provided in an integrated, efficient, coordinated and	Infrastructure can be provided.

future-proofed manner at the time of subdivision; and b. where no existing connection is available infrastructure should be planned and consideration be given to connections with the wider infrastructure network.	
SUB-O4 Subdivision is accessible, connected, and integrated with the surrounding environment and provides for: a. public open spaces; b. esplanade where land adjoins the coastal marine area; and c. esplanade where land adjoins other qualifying waterbodies.	The development is within an urban environment and provides safe pedestrian access to guy Rd.
Policy	**Assessment**
SUB-P1 Enable boundary adjustments that: a. do not alter: i. the degree of non compliance with District Plan rules and standards; ii. the number and location of any access; and iii. the number of certificates of title; and b. are in accordance with the minimum lot sizes of the zone and comply with access, infrastructure and esplanade provisions.	No boundary adjustment is proposed.

SUB-P2 Enable subdivision for the purpose of public works, infrastructure, reserves or access.	Noted.
SUB-P3 Provide for subdivision where it results in allotments that: a. are consistent with the purpose, characteristics and qualities of the zone; b. comply with the minimum allotment sizes for each zone; c. have an adequate size and appropriate shape to contain a building platform; and d. have legal and physical access.	The proposal is a density provided for as a Discretionary Activity in the plan. These matters have all been addressed in this report.
SUB-P4 Manage subdivision of land as detailed in the district wide, natural environment values, historical and cultural values and hazard and risks sections of the plan.	Noted. Hazards have been addressed earlier in the report, supported by reports in **Appendix B**.
SUB-P5 Manage subdivision design and layout in the General Residential, Mixed Use and Settlement zone to provide for safe, connected and accessible environments by: a. minimising vehicle crossings that could affect the safety and efficiency of the current and future transport network; b. avoid cul-de-sac development unless the site or the topography prevents future public access and connections;	It is considered that the proposed development provides a safe, well connected, accessible environment.

c. providing for development that encourages social interaction, neighbourhood cohesion, a sense of place and is well connected to public spaces; d. contributing to a well connected transport network that safeguards future roading connections; and e. maximising accessibility, connectivity by creating walkways, cycleways and an interconnected transport network.	
SUB-P6 Require infrastructure to be provided in an integrated and comprehensive manner by: a. demonstrating that the subdivision will be appropriately serviced and integrated with existing and planned infrastructure if available; and b. ensuring that the infrastructure is provided is in accordance the purpose, characteristics and qualities of the zone.	The subdivision can be serviced.
SUB-P7 Require the vesting of esplanade reserves when subdividing land adjoining the coast or other qualifying waterbodies.	Not relevant.
SUB-P8 Avoid rural lifestyle subdivision in the Rural Production zone unless the subdivision: a. will protect a qualifying SNA in perpetuity and result in	Not relevant.

the SNA being added to the District Plan SNA schedule; and b. will not result in the loss of versatile soils for primary production activities.	
SUB-P9 Avoid subdivision rural lifestyle subdivision in the Rural Production zone and Rural residential subdivision in the Rural Lifestyle zone unless the development achieves the environmental outcomes required in the management plan subdivision rule.	Not relevant.
SUB-P10 To protect amenity and character by avoiding the subdivision of minor residential units from principal residential units where resultant allotments do not comply with minimum allotment size and residential density.	Not relevant.
SUB-P11 Manage subdivision to address the effects of the activity requiring resource consent including (but not limited to) consideration of the following matters where relevant to the application: a. consistency with the scale, density, design and character of the environment and purpose of the zone; b. the location, scale and design of buildings and structures; c. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; or the capacity of the site to cater for on-	These matters are addressed throughout this report.

site infrastructure associated with the proposed activity; d. managing natural hazards; e. Any adverse effects on areas with historic heritage and cultural values, natural features and landscapes	

Overall, and considering the above, the proposal is considered to be consistent with the objectives and policies of all relevant statutory documents. In the context of the PDP, the appropriate weighting to give those objectives and policies are nil as they have yet to go through sufficient public scrutiny to determine the application at hand.

10 PART 2 ASSESSMENT

10.1 Section 5 – Purpose of The Act

Section 5 in Part 2 of the Act identifies the purpose as being the sustainable management of natural and physical resources. This means managing the use of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being which sustain those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding remedying or mitigating adverse effects on the environment.

It is considered that the proposal represents a sustainable use of existing resources that allow people and the community to provide for its social and economic wellbeing in a manner that mitigates adverse effects on the environment.

10.2 Section 6 – Matters of National Importance

In achieving the purpose of the Act, a range of matters are required to be recognised and provided for. This includes:

a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:
b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:

c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:
d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:
e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:
f) the protection of historic heritage from inappropriate subdivision, use, and development:
g) the protection of protected customary rights:
h) the management of significant risks from natural hazards.

In context, the relevant items to the proposal and have been recognised and provided for in the design of the development.

10.3 Section 7 – Other Matters

In achieving the purpose of the Act, a range of matters are to be given particular regard. This includes:

(a) kaitiakitanga:
(aa) the ethic of stewardship:
(b) the efficient use and development of natural and physical resources:
(ba) the efficiency of the end use of energy:
(c) the maintenance and enhancement of amenity values:
(d) intrinsic values of ecosystems:
(e) [Repealed]
(f) maintenance and enhancement of the quality of the environment:
(g) any finite characteristics of natural and physical resources:
(h) the protection of the habitat of trout and salmon:

(i) the effects of climate change:

(j) the benefits to be derived from the use and development of renewable energy.

These matters have been given particular regard through the design of the proposal.

10.4 Section 8 – Treaty of Waitangi

The Far North District Council is required to take into account the principles of the Treaty of Waitangi when processing this consent. This consent application may be sent to local iwi and hapū who may have an interest in this application.

10.5 Part 2 Conclusion

Given the above, it is considered that the proposal meets the purpose of the Act.

11. CONCLUSION

Discretionary Activity resource consent is sought from the Far North District Council to carry out the proposed development.

The proposal is not precluded from public notification and is considered to have less than minor effects on the wider environment. Through assessment, there are considered to be no affected persons.

The proposal is consistent with the objectives and policies of the Far North District Plan, the Regional Policy Statement for Northland, and achieves the purpose of the Act.

Given the assessment carried out in this report, it is considered that this proposal can be determined non-notified under the RMA 1991.

We would appreciate the review of draft conditions when available.

Regards,

Steven Sanson

Consultant Planner

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

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

R.W. Muir
Registrar-General
of Land

Identifier **NA1586/70**

Land Registration District **North Auckland**

Date Issued 12 September 1958

Prior References
NA1035/255

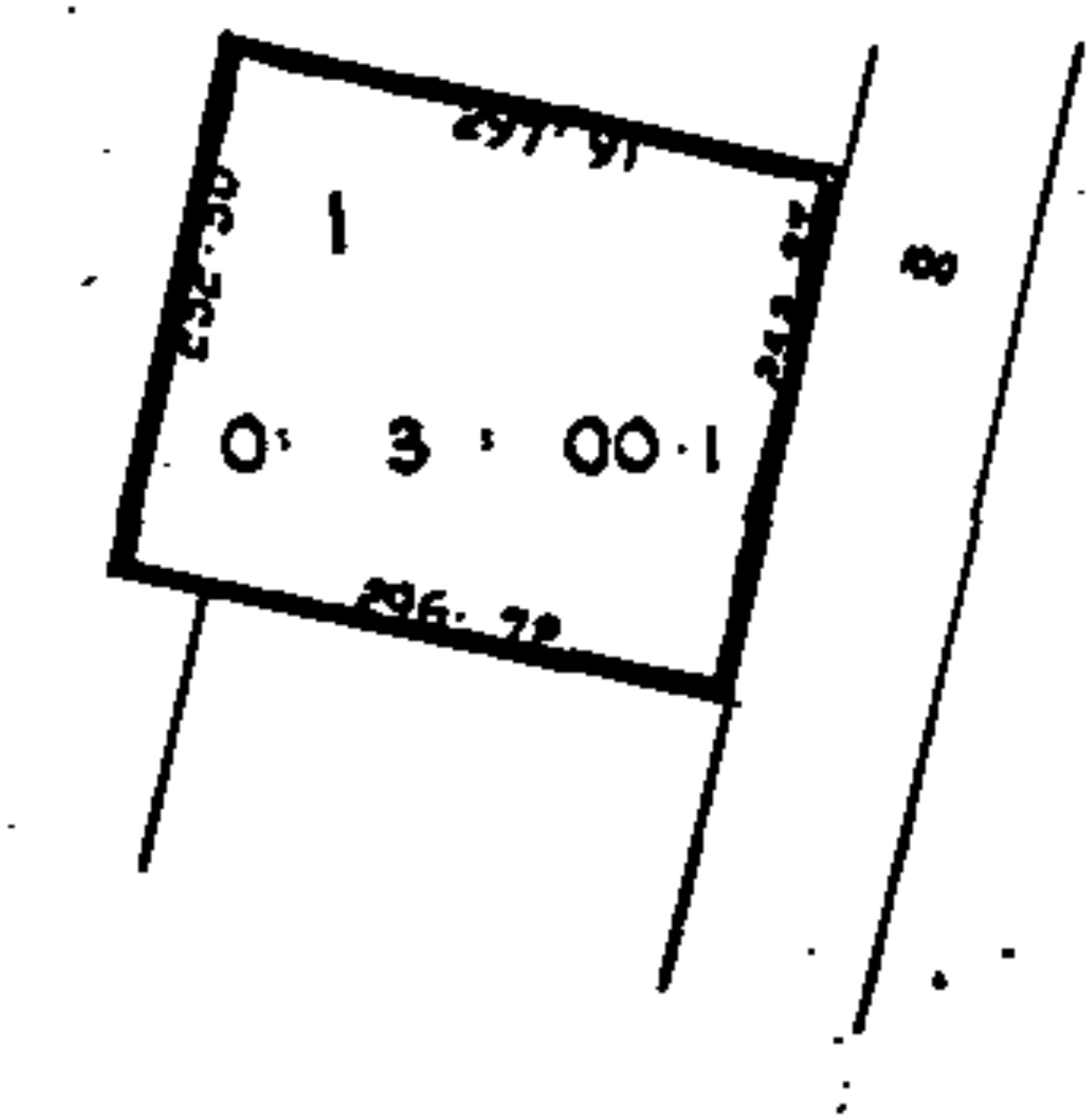
Estate Fee Simple

Area 3038 square metres more or less

Legal Description Lot 1 Deposited Plan 45186

Registered Owners
Te Hau Ora o Ngapuhi Limited

Interests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IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738

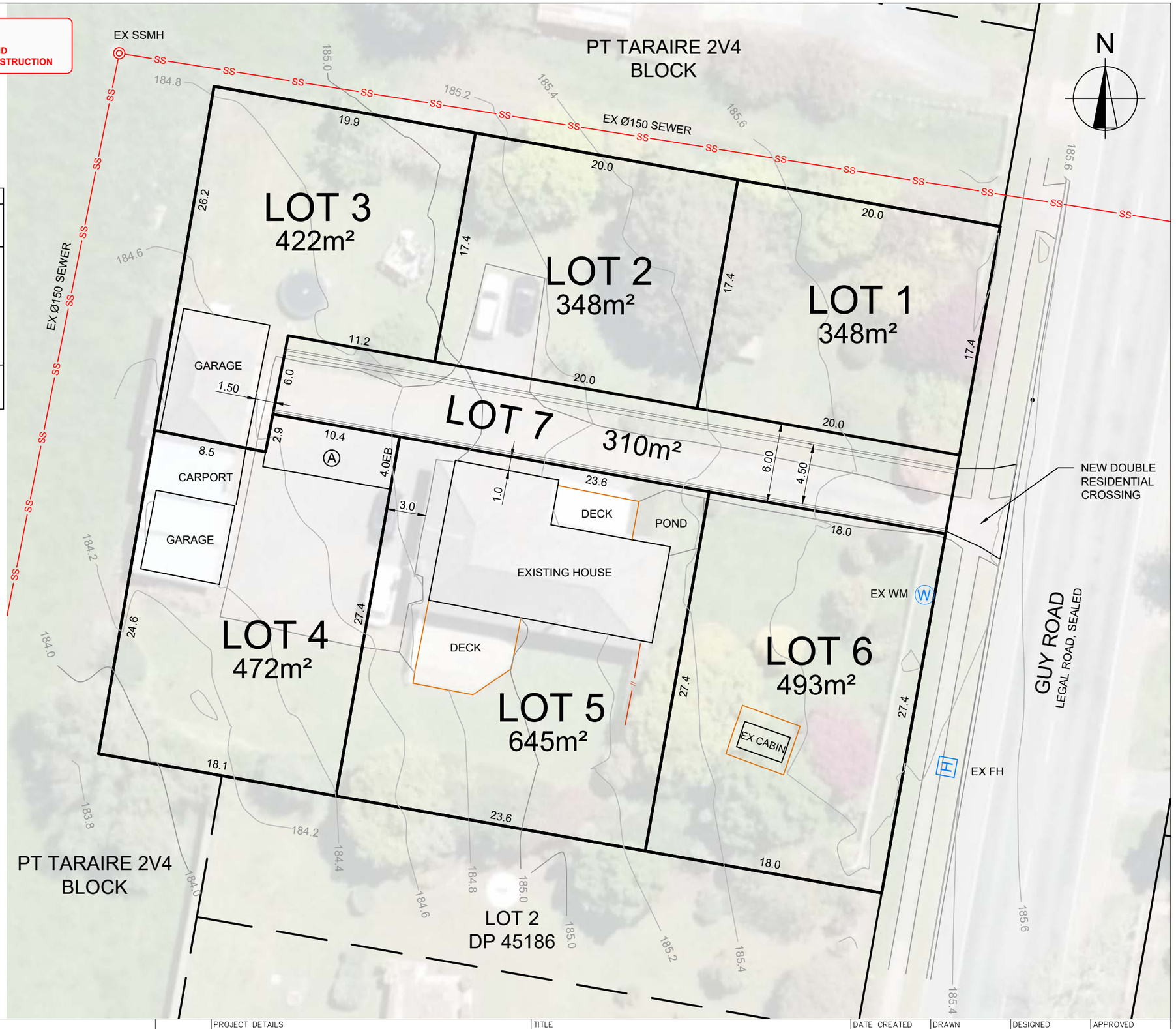
MEMORANDUM OF EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT (BURDENED LAND)	DOMINANT TENEMENT (BENEFITED LAND)
RIGHT OF WAY, RIGHT TO CONVEY WATER, RIGHT TO DRAIN WATER RIGHT TO CONVEY ELECTRICITY & RIGHT TO CONVEY TELECOMMUNICATIONS	LOT 7 (JOAL) HEREON	LOT 7 (JOAL) HEREON	LOTS 1 - 6 HEREON
RIGHT OF WAY	Ⓐ	LOT 4 HEREON	LOT 3 HEREON

AMALGAMATION CONDITION:
THAT LOT 7 HEREON (LEGAL ACCESS) BE HELD AS TO SIX UNDIVIDED ONE-SIXTH SHARES BY THE OWNERS OF LOTS 1 TO 6 HEREON AS TENANTS IN COMMON IN THE SAID SHARES AND THAT INDIVIDUAL COMPUTER REGISTERS BE ISSUED IN ACCORDANCE THEREWITH.

TOTAL AREA: 3038m²
COMPRISED IN: NA80D/525 (ALL)

FAR NORTH DISTRICT COUNCIL
ZONED: GENERAL RESIDENTIAL

CAUTION:
- THIS IS A CONCEPT PLAN. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.
- THE VENDOR AND PURCHASER MUST CONTACT COOK COSTELLO IF SALE & PURCHASE AGREEMENTS ARE TO BE ENTERED INTO USING THIS PLAN. BOUNDARIES, EASEMENTS OR OTHER DETAIL WILL NEED TO BE CONFIRMED WITH COOK COSTELLO.
- SERVICES MUST NOT BE POSITIONED USING THIS PLAN.
- THIS PLAN IS COPYRIGHT TO COOK COSTELLO (CCL 2015).



SCALE 1:300

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B			
A	1ST ISSUE	13-09-24 KH	PC

PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
SCHEME PLAN
BEING A SUBDIVISION OF
LOT 1 DP 45186

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK
CCL REF NO	SCALE		STATUS
17368-001	1:300 @ A3		FOR APPROVAL
DWG NUMBER			REVISION
DD200			A

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD200 Scheme Plan.dwg

cook | costello

Geotechnical Report

Te Hau Ora o Ngapuhi Limited

15 Guy Road, Kaikohe

Lot 1 DP 45186

Kaikohe

Project Number: 17368-001

Date: 10/05/2024

ACENZ

DOCUMENT CONTROL RECORD

Client:	Te Hau Ora o Ngapuhi Limited
Project description:	Geotech Report
Client address:	15 Guy Road Kaikohe
Date of issue:	Friday, 10 May 2024
Status:	Issued

Originator

Shashank S Pai
Geotechnical Engineer
BE (Civil), MCE-Geotech (NZ)

Approved for issue:

PJ Cook
Chartered Professional Engineer
MACENZ, CMEngNZ, MInstD, CPEng, IntPE (NZ)
BE (Hons), Dip Ag.

Office of origin:	Whangarei
Telephone:	09 438 9529
Contact email:	ccl@coco.co.nz

Version	Date	Comment	By
1.0	19th April 2024	For review	S. Pai
1.0	10th May 2024	For issue	P. Cook

Table of Contents

1. Executive Summary

Site Classification:

Site Classification:

NZ Building Code Expansive Soil Class	H – Highly Expansive Soils
AS/NZS 1170.5 Soil Class	C – Shallow soil sites

Groundwater Level:

Hand Auger:	>1.0 mbgl (not encountered)

Bearing Bearing Capacity Summary:

Depth to 200kPa Uncorrected Ultimate Bearing Capacity:	0.2 mbgl
Depth to 300kPa Uncorrected Ultimate Bearing Capacity:	0.5 mbgl

Site Foundation Options:

Shallow Foundations:	Stiffened slab (i.e. RibRaft) foundation can be designed for an UBC of 200 kPa or 300 kPa if founded a minimum of 0.2 m or 0.3 m below the existing ground level, below any topsoil respectively for Units 1,2 and 5. Stiffened slab (i.e. RibRaft) foundation can be designed for an UBC of 200 kPa or 300 kPa if founded a minimum of 0.2 m or 0.5 m below the existing ground level, below any topsoil respectively for Units 3 and 4. The stiffened slab should be specifically designed in accordance with NZ Building Code Clause B1 for Class 'H' soils for a characteristic surface movement of 78 mm.
Pile Foundations:	Specifically designed piles foundations embedded to a minimum depth of 1.5 mbgl, adhering to NZ Building code B1/VM4. Pile foundation design should be carried out in accordance with NZ Building Code B1/VM4 and will require specific engineering design by a suitably qualified engineer.

2. Introduction

Cook Costello has been engaged by Te Hau Ora o Ngapuhi Limited to provide a Geotechnical Report for use in support of a building consent application with the Far North District Council.

It is proposed to subdivide the existing residential property at Lot 1 DP 45186 15 Guy Road, Kaikohe. The proposal comprises constructing five number of 2 bedroom residential structures/buildings (78 m^2 each) within the grounds of the existing property.This report is to provide a geotechnical assessment for the five proposed residential buildings.

The design plans are attached in Appendix 1. A site testing plan is attached as Appendix 2 showing the property boundaries, and associated site investigations.

2.1. Relevant Documentation

- AS 2870: 2011 - Construction of residential slabs and footings
- NZS 3604: 2011 - Timber-framed buildings
- NZS 4402:1986 - Methods of testing soils for civil engineering purposes
- Far North District Council – GIS Maps
- Far North District Council Engineering Standards 2023
- Resource Management Act 1991
- Far North District Council District Plan
- Northland Regional Council Proposed Regional Plan (PRP)

2.2. Building Code – B1 Good ground definition

The requirement for specific engineer design is dependent on whether or not the site subsoils fall within the NZS3604:2011 & B1 / VM4 definition of ‘good ground’. ‘Good Ground’ – means any soil or rock capable of permanently withstanding an ultimate bearing pressure of 300 kPa (i.e. a dependable bearing capacity of 150 kPa using a reduction factor of 0.5) but excludes;

a) Potentially compressible ground such as topsoil, soft soils such as clay which can be moulded easily in the fingers, and uncompacted loose gravel which contains obvious voids,

b) Expansive soils being those that have a liquid limit of more than 50% when tested in accordance with NZS4402 Test 2.2 and linear shrinkage of more than 15% when tested from the liquid limit in accordance with NZS 4402 Test 2.6 and,

c) Any ground which could foreseeably experience a movement of 25 mm or greater for any reason including one or a combination of the following: land instability, ground creep, subsidence, seasonal swelling and shrinking, frost heave, changing groundwater level, erosion, dissolution of soil in water, and effects of tree roots.

3. Desktop Study

3.1. Site Description

The entirety of the property has a legal description of Lot 1 DP 45186. The existing buildings are positioned in the middle and on the western perimeter of the property. The property spans approximately 3038 m^2 in total and is situated on mostly even terrain adorned with grass and trees. The approximate site boundary can be seen in Figure 1.

Figure 1: Image displaying approximate site location and extent, WDC GIS Maps

3.2. Proposed Development

It is proposed to subdivide the lot into five separate accommodations, each measuring approximately 78 m^2, as depicted in Figure 2. The designs for the five accommodations are fairly similar, each featuring a living room, two bedroom, and a toilet. Plan of the proposed development is provided in Figure 2 below.

Geotechnical testing has been carried out across the footprint of the proposed development.

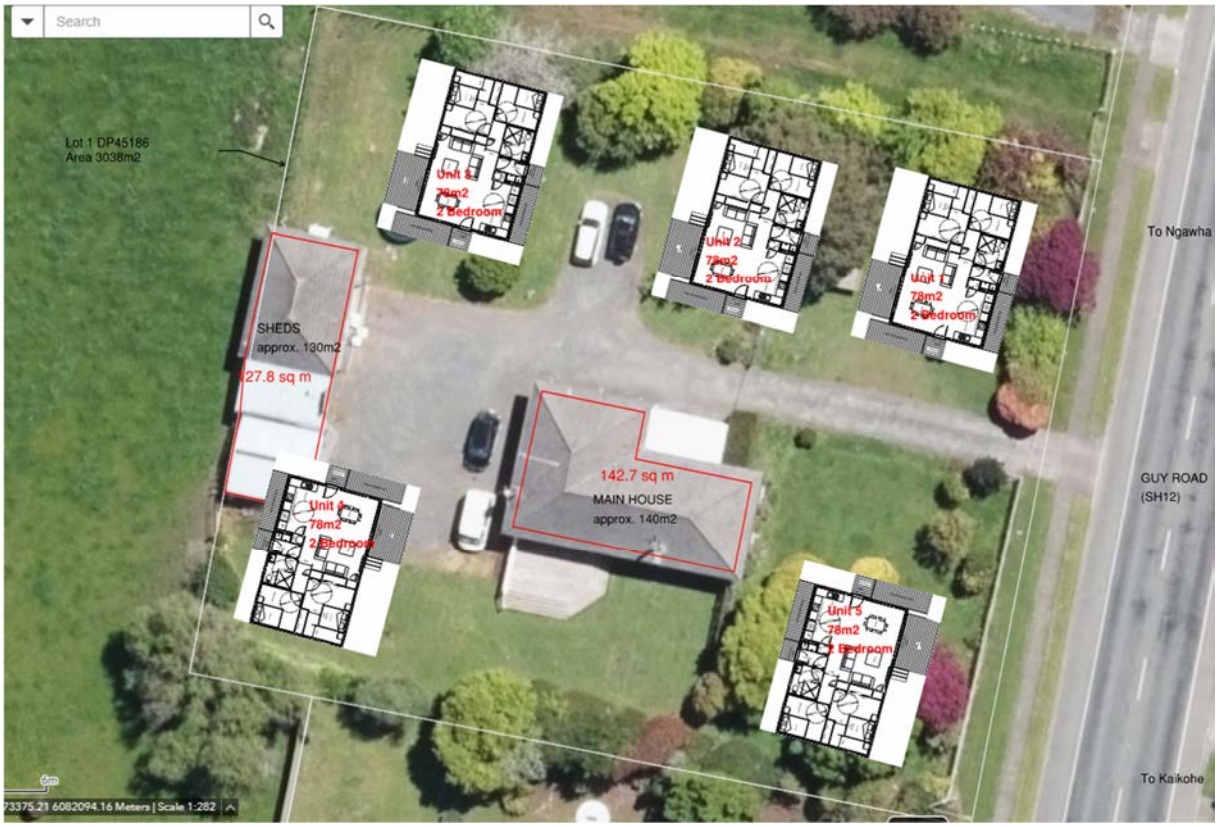


Figure 2: Plan of the proposed development areas

3.3. Published Geology

The GNS Science online geology map defines the underlying geology of the site as Early to middle Pleistocene undifferentiated estuary, river and swamp deposits. Refer to Figure 3 below.

The soil type of the building site is mapped on the Northland Regional Council's Soils factsheet viewer as Waiotu friable Clay (YO) which comprises compact crumbly clay with alumina concentrations. These soils are often well to moderately drained.

However, these are regionally scaled documents and should not be relied on for site-specific acceptance.

Figure 3: 1:250k GNS Geological Map of New Zealand

3.4. Hazards

Northland Reginal Hazard maps do not identify the site as prone to coastal or river flooding.

However, these are regionally scaled documents and should not be relied on for site-specific information.

4. Investigations and Analysis

A site visit was undertaken by a Cook Costello Geotechnical Engineer on 18th April 2024. A ground investigation was undertaken across the five build sites with the following investigation points undertaken within the area of the proposed accommodation units:

- 5 no. Hand-augured boreholes (HA01 and HA05) to determine the nature of near surface soils
- 15 no. Scala penetrometer (SP01 to SP15) tests to determine the strength/stiffness of near surface soils

The test locations are shown on the site investigation plan attached as Appendix 2. Full test results can be found in Appendix 3. Testing has been spread across the site to account for any variation in building orientation.

4.1. Site walkover observations

A site walkover was carried out by a Cook Costello geotechnical engineer on 18th April 2024. The following observations were noted:

- The lot is mostly covered in grass and tress, with sections cleared for access and existing dwellings
- At the time of visit the site was fairly moist and expansive soil cracks were not observed in the shallow site soils around the wider site
- The site is fairly flat with little to no possibility of slope instability

4.2. Hand Auger Investigations

The results from the hand auger investigation carried out at the site are summarised in Table 1. The location of the tests is shown in Appendix 2. For more detailed logs and testing results, refer to Appendix 3.

Table 1: Summary of Hand Auger results

Test ID	Depth (mbgl)[1]	Groundwater depth (mbgl)	Test Results	
			(mbgl)	Soil Type
HA01	0.9 (refusal)	>0.9 (Not encountered)	0.0 – 0.2	TOPSOIL
			0.2 – 0.5	Silty CLAY with traces of gravel
			0.5 – 0.9	Silty CLAY
HA02	0.7 (refusal)	>0.7 (Not encountered)	0.0 – 0.15	TOPSOIL
			0.15 – 0.7	Clayey SILT with minor gravel

Test ID	Depth (mbgl)[1]	Groundwater depth (mbgl)	Test Results	
			(mbgl)	Soil Type
HA03	0.6 (refusal)	>0.6 (Not encountered)	0.0 – 0.3	TOPSOIL
			0.3 – 0.6	Clayey SILT with minor gravel
HA04	0.7 (refusal)	>0.7 (Not encountered)	0.0 – 0.3	TOPSOIL
			0.3 – 0.7	Silty CLAY
HA05	0.75 (refusal)	>0.75 (Not encountered)	0.0 - 0.3	TOPSOIL
			0.3 – 0.75	CLAY with some silt, traces of root/rootlets for first 100 mm, traces of fine gravels

1. mbgl = meters below ground level

4.3. Scala Penetrometer Investigations

Scala penetrometer results show that an ultimate bearing capacity (UBC) is in excess of 200 kPa (100 kPa dependable) from approximately 0.2 m below the existing ground level across the site, below any topsoil or fill. An ultimate bearing capacity is in excess of 300 kPa (150 kPa dependable) from approximately 0.3 m below the existing ground level, below any topsoil or fill for Units 1, 2 and 5. Also, an ultimate bearing capacity is in excess of 300 kPa (150 kPa dependable) from approximately 0.5 m below the existing ground level, below any topsoil or fill for Units 3 and 4. The results from the scala test carried out at the site are summarised in Table 2.

Uncorrected ultimate bearing capacities derived from Scala penetrometer tests were estimated using the procedure presented by M.J. Stockwell in the paper 'Determination of allowable bearing pressure under small structures (June 1977)'. Bearing capacities should be corrected for the proposed foundation dimensions once these are known.

Table 2: Summary of uncorrected ultimate bearing capacity identified at each SP location

Test ID	Depth Below Ground (m)	Scala Penetrometer (blows/100mm)	Uncorrected Ultimate Bearing Capacity (kPa)
SP01	0.1	2	>200
	0.2	4	>300
SP02	0.1	3	>300
SP03	0.1	2	>200
	0.2	3	>300

Test ID	Depth Below Ground (m)	Scala Penetrometer (blows/100mm)	Uncorrected Ultimate Bearing Capacity (kPa)
SP04	0.1	2	>200
	0.3	3	>300
SP05	0.1	2	>200
	0.3	3	>300
SP06	0.1	2	>200
	0.3	3	>300
SP07	0.1	2	>200
	0.2	6	>300
SP08	0.1	3	>300
SP09	0.2	3	>300
SP10	0.1	2	>200
	0.2	4	>300
SP11	0.2	2	>200
	0.5	5	>300
SP12	0.1	2	>200
	0.3	3	>300
SP13	0.1	2	>200
	0.5	3	>300
SP14	0.2	2	>200
	0.3	3	>300
SP15	0.2	2	>200
	0.3	3	>300

4.4. Water Table

The groundwater table was not encountered within any of the hand augers as part of the wider site investigation. Therefore, the natural water table is considered to be at a greater depth than that achieved in this investigation (>0.9 m).

5. Geotechnical Assessment

5.1. Site Subsoil Profile

The subsoil profile for the development is generally dominated by stiff to very stiff silty CLAY layers. For a basic geological interpretation based on the shallow geotechnical investigations refer to Table 3 and Table 4.

Table 3: Subsoil profile based on shallow soil investigations for Unit 1, Unit 2 and Unit 5

Soil Type	Depth (m)	Unit Weight (γ)	Effective Cohesion (c')	Effective Angle of Internal Friction (ϕ)	Undrained Shear Strength (S_u)
TOPSOIL	0.0 – 0.25	16.0	0	20	24
Stiff silty CLAY with minor sand	0.25 – 0.5	17.0	3	28	100
Very Stiff Silty CLAY with minor gravels	0.5 – 2.8*	18.0	4	30	129

* - The depth is based on scala penetrometer readings. The assumption of uniformity in the stratigraphy from 0.9 to 2.7 m is a conservative approach.

Table 4: Subsoil profile based on shallow soil investigations for Unit 3 and Unit 4

Soil Type	Depth (m)	Unit Weight (γ)	Effective Cohesion (c')	Effective Angle of Internal Friction (ϕ)	Undrained Shear Strength (S_u)
TOPSOIL	0.0 – 0.3	16.0	0	20	24
Stiff silty CLAY with minor sand	0.3 – 0.5	17.0	3	28	100
Very Stiff Silty CLAY with minor gravels	0.5 – 1.5*	18.0	4	30	129

* - The depth is based on scala penetrometer readings. The assumption of uniformity in the stratigraphy from 0.7 to 1.5 m is a conservative approach.

5.2. Site Subsoil Classification

Generally, across the entire site, the soils encountered are consistent with site subsoil classification Class C – Shallow Soil sites as per NZS1170.5 – 2004.

5.3. Liquefaction Susceptibility

Considering the soil stratigraphy at the site consisted of atleast 1.0 m thick firm to very stiff silty CLAY. The fines content in the soil layers is higher than 35%, indicating that the behaviour of the soil layers would be dominated by cohesive soil properties due to the soil classification being CLAY with a relatively high plasticity index. Given that the fines content in the CLAY layers is greater than 35% and the plasticity index is possibly greater than 12%, based on Lade et.al. 1988 and Bray et. al. 2004b the soil

can be classified as “non-susceptible to liquefaction”. Based on these preliminary liquefaction risk identifiers the site can be classified as non-susceptible to liquefaction..

5.4. Foundation Recommendations

5.4.1. Expansive soils

The expansive soils beneath the site have been classified as Class H in terms of New Zealand Building Code B1/AS1 (Amendment 19). Foundations should be designed in accordance with NZ Building Code – B1 for a characteristic surface movement of 78 mm.

5.4.2. Shallow Foundations

Shallow foundations are suitable for the proposed building site, shallow foundations can only be carried out if a flat building platform is constructed prior to shallow foundation installation.

In order to mitigate the effects of expansive soils for a slab foundation, we recommend designing a stiffened concrete slab (e.g. RibRaft) specifically designed in accordance with NZ Building Code Clause B1 for Class ‘H’ soils for a characteristic surface movement of 78 mm. Further design will be needed at the detailed design stage.

Scala penetrometer results show that an Ultimate Bearing Capacity (UBC) in excess of 200 kPa (100 kPa dependable) is available from approximately 0.2 m below the existing ground level, below any topsoil or fill across the entire site. An UBC exceeding 300 kPa (with a dependable value of 150 kPa) is observed from 0.3 m for Units 1, 2, and 5, and from 0.5 m for Units 3 and 4, measured below the existing ground level and below any topsoil or fill.

5.4.1. Pile Foundations

Specifically designed pile foundations are suitable for the proposed building site.

In order to mitigate the effects of the potentially expansive soils, we recommend designing piles to be embedded a minimum of 1.5 m below the cleared ground level. At this depth, it is considered to be below the effects of seasonal moisture variations that cause the expansive soils to shrink and swell, inducing uplift forces on the piles.

For shaft capacity and lateral capacity of piles, the upper 0.75 mbgl should not be relied upon to provide shaft resistance due to the presence of expansive soils.

The lateral capacity of the piles can be calculated using NZ Building Code B1/VM4 and the design parameters provided in Table 5 below. Due to the presence of expansive soils which can shrink away from the piles and considering the relatively shallow angle of the sloping ground, we do not consider there to be any additional lateral loading resulting from soils creep/sloping slope stability.

Table 5: Pile design parameters

Soil Type	Depth (m)	Unit Weight (γ) kN/m^3	Effective Cohesion (c') kPa	Effective Friction Angle (ϕ') deg.	Undrained Shear Strength (S_u) kPa	Undrained adhesion (C_a) kPa	Skin Friction kN [1]	End Bearing KN [1]
Very stiff Silty CLAY with some gravel	0.75 - 1.5	18.0	4	30	129	58.1	47.9	88.9

[1]Skin friction and end bearing calculations have been undertake assuming a bored piles of 350 mm diameter. These are uncorrected values and suitable strength reduction factors should be applied.

[2]A conservative assumption was made that the very stiff silty CLAY layer is present upto 1.5 m below the ground.The assumption was made based on the scala penetrometer readings

5.4.2. Strength Reduction Factor

As required by Section B1/VM4 of the New Zealand Building Code Handbook, a strength reduction factor of 0.45 or 0.60 must be applied to all recommended geotechnical ultimate soil capacities in conjunction with their use in factored design load cases for static and earthquake overload conditions respectively.

5.5. Earthworks

Any earthworks conducted at the site should be undertaken and tested in accordance with NZS4431:2022.

- All engineered or structural hardfill should be placed in ≤ 300 mm lifts and be compacted to a minimum of 95% of maximum dry density, at no less than optimum moisture content. Compaction should be achieved using standard plant and methodology suitable for the imported material. A water source should be maintained on-site for moisture control. The fill must be tested and certified in accordance with NZS4431 if the thickness exceeds 300 mm and monitored by a suitably qualified engineer. Fill may be battered down to the natural ground at a maximum grade of 1V in 2.0H if possible. Alternatively, any compacted fill on-site should be retained by retaining structures.
- Wherever filling or soft native ground is present at the foundation level it should be undercut and replaced with approved compacted hardfill. Its suitability or otherwise as a bearing material beneath the floor slab should be determined on-site by the Engineer.
- Compacted hard FILL beneath the building platform exceeding a depth of 300 mm will require testing and certification by a suitably qualified engineer.
- All cuts should not be left exposed for a long period of time, cuts should be made efficiently in conjunction with the construction of retaining walls.
- Where site-won fill is proposed to be used as hard FILL material, this material must be approved for use by a suitably qualified geotechnical engineer.

6. Construction Monitoring

It is recommended that a Cook Costello engineer observes the excavations to confirm whether the ground conditions encountered are as assumed during the preparation of this report. In the case that the actual ground conditions deviate from the ground conditions presented in this report, Cook Costello would be in a position to recommend appropriate design and/or construction modifications that suit the actual ground conditions.

The following inspections are suggested as a minimum:

- Review of foundation excavations to confirm founding material is of suitable bearing capacity.
- Compaction testing if engineered fill exceeding 300mm depth is used on site.
- Pre-pour inspection of any retaining walls/pile foundation if required.

Inspections in addition to those stated above may be required depending on the chosen foundation solution and this should be confirmed in consultation with the structural engineer once the final foundation solution has been chosen. Inspections should be undertaken by a suitably qualified engineer.

7. Conclusions

Geotechnical investigations indicate that the site is presently stable, and the subsoil properties have adequate strength parameters necessary for the proposed development provided that the recommendations made in this report are followed.

The development will need to be carried out in accordance with proper engineering practice and the following guidelines:

1. Soils are assessed to be Highly Expansive, Class H soils as per NZ Building Code Clause B1. This means that the encountered clays may be prone to moderate volume changes (swelling and shrinking) that are directly related to changes in water content. Shrinkable soils are a significant risk to foundations. Expansive soils fall outside the definition of "good ground" according to NZS 3604:2011, therefore specific foundation design is required for the site.
2. The site meets the definition of Class C – Shallow soil sites as per NZS1170.5.
3. Scala penetrometer testing shows the >200kPa uncorrected ultimate bearing capacity is generally available from the existing ground level to 0.2 mbgl across the site.
4. Scala penetrometer testing shows the >300kPa uncorrected ultimate bearing capacity is generally available below 0.3 mbgl for Units 1, Units 2 and Unit 5.
5. Scala penetrometer testing shows the >300kPa uncorrected ultimate bearing capacity is generally available below 0.5 mbgl for Units 3 and Unit 4.
6. <u>Shallow foundations</u>
    a. Shallow foundations are a suitable option for the proposed development.
    b. Shallow foundations can be designed for an UBC of 200 kPa or 300 kPa if founded at a minimum of 0.2 m and 0.3 m, respectively, below the existing ground level and any topsoil for Units 1, 2 and 5.
    c. Shallow foundations can be designed for an UBC of 200 kPa or 300 kPa if founded at a minimum of 0.2 m and 0.3 m, respectively, below the existing ground level and any topsoil for Units 3 and 4.
    d. The shallow foundations such as a stiffened concrete slab (e.g. RibRaft) specifically designed in accordance with NZ Building Code Clause B1 for Class 'H' soils for a characteristic surface movement of 78 mm are suitable and recommended for the proposed lot.
7. <u>Pile Foundation Recommendations</u>
    a. Specifically designed timber piles embedded to a minimum depth of 1.5 mbgl is a suitable foundation option for the site and will mitigate the effects of expansive soils.
    b. The lateral and shaft capacity of the upper 0.75 mbgl should not be relied upon to provide resistance due to the presence of expansive soils.
8. Any earthworks conducted at the site should be undertaken and tested in accordance with NZS4431:2022. Compacted hardfill beneath the building platform exceeding a depth of 300mm will require testing and certification by a suitably qualified engineer.

All work should be carried out under the guidance of a Chartered Professional Engineer with relevant geotechnical experience.

8. Limitations

This report has been prepared for the benefit of Te Hau Ora o Ngapuhi Limited as our client(s) with respect to an investigation of the proposed development and the Whangarei District Council's approval of the proposal as defined in the brief. It shall not be relied upon for any other purpose. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing, be at such parties' sole risk.

Opinions and judgments expressed herein are based on our understanding and interpretation of current regulatory standards and should not be construed as legal opinions. Where opinions or judgments are to be relied on, they should be independently verified with appropriate legal advice. Any recommendations, opinions, or guidance provided by Cook Costello in this report are limited to technical engineering requirements and are not made under the Financial Advisers Act 2008.

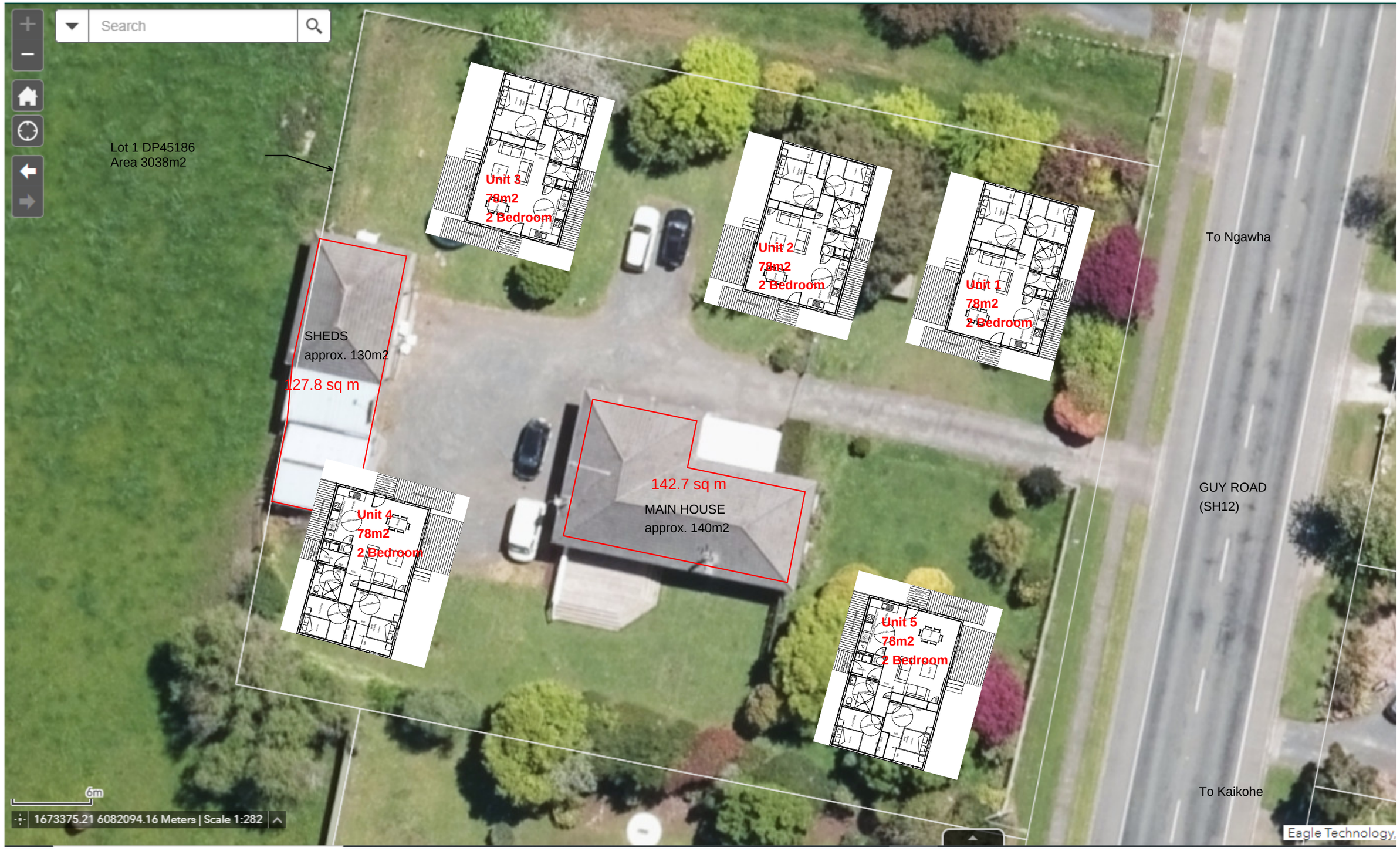
Recommendations and opinions in this report are based on data from testing and observations undertaken on-site. The nature and continuity of subsoil conditions away from the tests are inferred and it must be appreciated that actual conditions could vary considerably from the assumed model.

During excavation and construction, the site should be examined by a Cook Costello Engineer or Engineering Geologist to judge whether the exposed subsoils are compatible with the inferred conditions on which the report has been based. It is possible that the nature of the exposed subsoil may require further investigation and modification of the design based on this report. In any event, it is essential that the firm is notified if there is any variation in subsoil conditions from those described in the report as it may affect the design parameters recommended in the report.

Cook Costello has performed the services for this project in accordance with the standard agreement for consulting services and current professional standards for environmental site assessment. No guarantees are either expressed or implied.

There is no investigation that is thorough enough to preclude the presence of materials at the site which presently, or in the future, may be considered hazardous. Because regulatory evaluation criteria are constantly changing, concentrations of contaminants present and considered to be acceptable now may in the future become subject to different regulatory standards which cause them to become unacceptable and require further remediation for this site to be suitable for the existing or proposed land use activities.

Appendix 1: Site-wide master plan



Revision	Amendment	Approved	Revision Date

FNR LTD CONSULTING

Designed	Approved	Approved Date
-	-	-

Drawn	Scales
-	-

Project

15 Guy Road Kaikohe
Legal Description Lot 1 DP 45186

Sheet

Scheme Plan
Option 1 5 x 2 Bedroom Units

Project No.	Sheet. No.	Revision

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1:2 @ A3
0 10 20 30 40 50 60 70 80 90 100 mm

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RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

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R.W. Muir
Registrar-General of Land

Identifier	**NA1586/70**
Land Registration District	**North Auckland**
Date Issued	12 September 1958

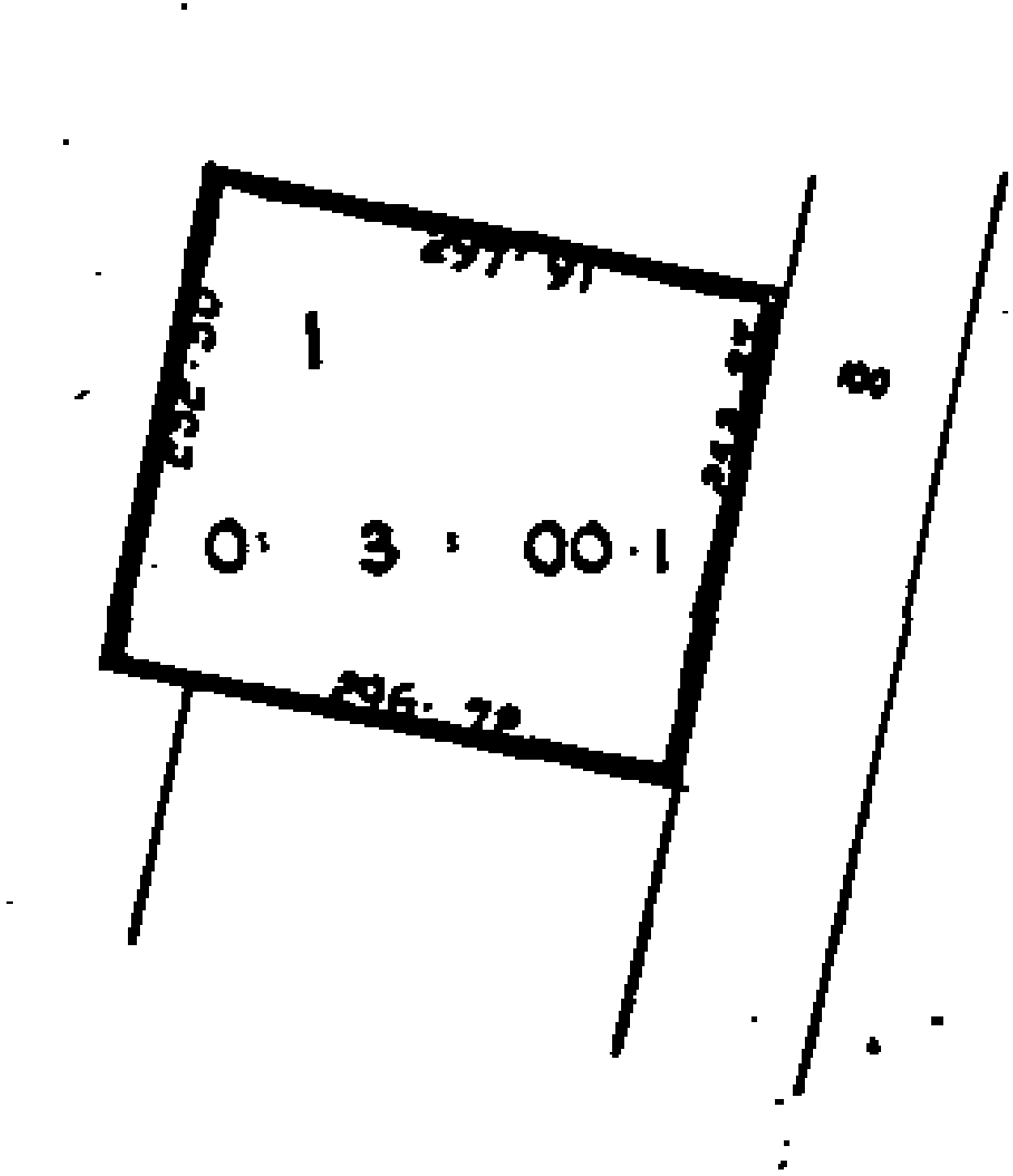
Prior References
NA1035/255

Estate	Fee Simple
Area	3038 square metres more or less
Legal Description	Lot 1 Deposited Plan 45186
Registered Owners	

Jacob Cohen

Interests

12102148.1 Mortgage to ASB Bank Limited - 29.4.2021 at 2:09 pm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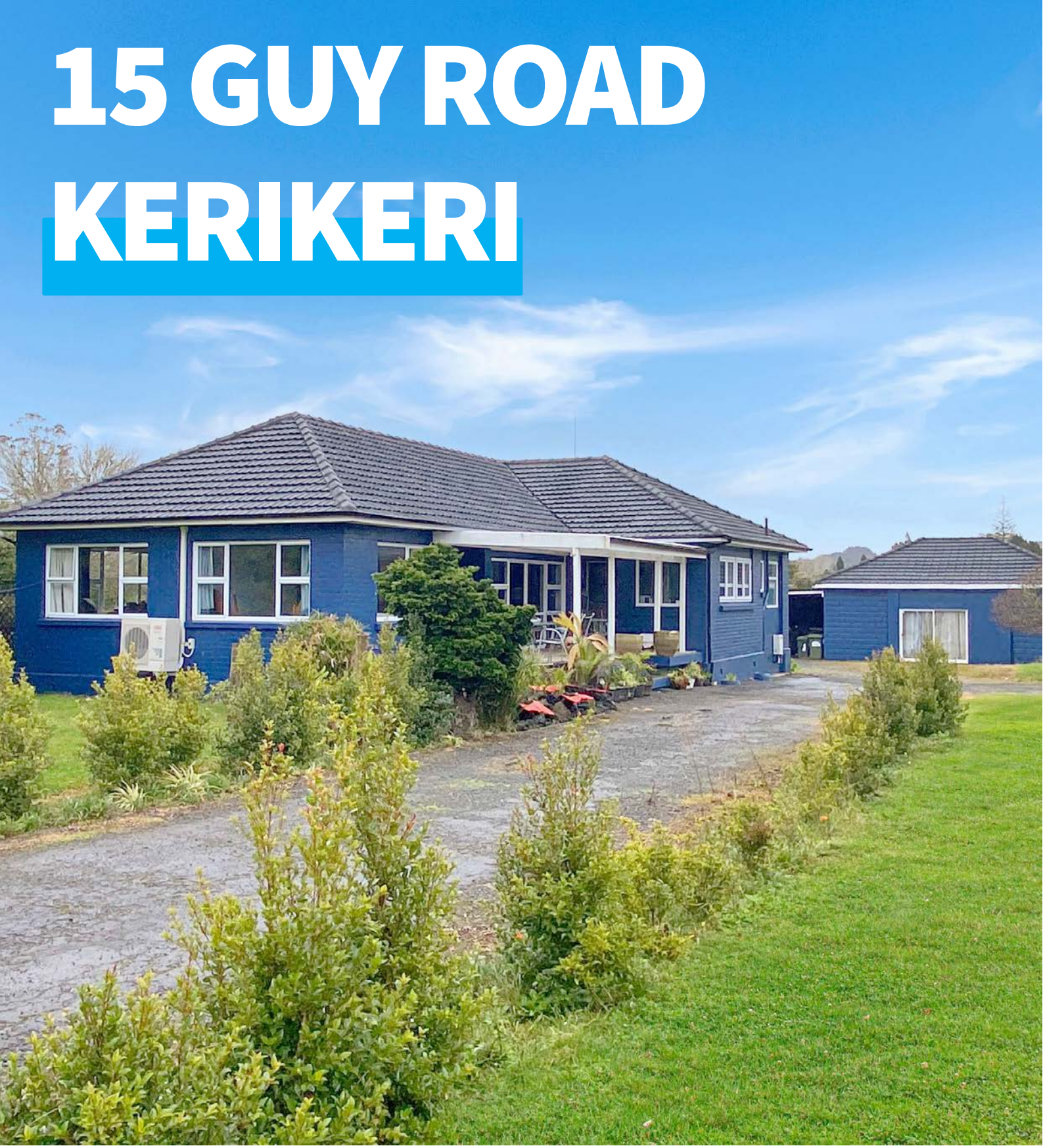
15 GUY ROAD KERIKERI



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Harcourts Bay of Islands

PROPERTY INFORMATION

Harcourts

KAIKOHE,
15 Guy Road

3 2 2

Brick and Tile Home with Heaps of Extras

This hidden gem boasts many features that must be seen to be appreciated. The current owner has made several improvements to his beloved home just over a year ago, but it is now time for him to move on.

Astute buyers will appreciate this low-maintenance brick dwelling, the private setting, the fully fenced section, fruit and ornamental trees, and is on town services.

It sits just outside of the Kaikohe main residential neighbourhood, approximately 20 kilometres from the Kerikeri area.

The selection of outbuildings including lockable garage, carport, huge stand-alone brick and tile storage/garage all connected to power, and a natural wood cabin.

The property land area is 3,038 sqm and current council regulations may allow subdivisions down to 600 sqm each. Buyers are advised to do their own investigation with regards to subdivision possibilities.

The list of features includes:
1. Spacious and open living/kitchen area that is the heart of the house
2. Three good-sized bedrooms, two bathrooms (one ensuite)…

For Sale
$739,000

Web harcourts.net/L23382590

Council Rates $3019.37 pa **Approx Land Area** 3,038sqm
Approx Year Built 1955

Jan Danilo
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jan.danilo@harcourtsboi.co.nz

PROPERTY FEATURES

Property Details

Hot Water	Gas
Heating	Closed Fire, Gas Bottles, Heat Pump, Ventilation System
Kitchen	Modern, Open Plan
Dining	Separate Dining
Bathrooms	Ensuite
Lounge	Separate
Stove	Gas (bottled)
Interior Condition	Excellent
Exterior	Masonry Block/Brick
Exterior Condition	Very Good
Roof	Concrete Tile
Flooring	Tiles, Vinyl
Garaging	Boat Parking, Carport, Double, Off St Parking
Fencing	Fully Fenced
Aspect	Northerly
Views	Private, Rural
Sewage	Mains
Water	Town
Frontage	Street
Amenities	Close to Schools, Close to Shops, Close to Transport

Features & Chattels

Chattels	Blinds, Cooktop, Curtains, Dishwasher, Fixed Floor Coverings, Heated Towel Rail, Light Fittings, Wall Oven
Other Features	2nd heated towel rail, glass surround for shower (require intstalation), Doors for bedrooms, Washing machine, Tumble dryer, Fridge in kitchen, Sleepout studio in garden

Additional Information

More Details URL	harcourts.net/L23382590

RECORD OF TITLE

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

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

R. W. Muir
Registrar-General of Land

Identifier	**NA1586/70**
Land Registration District	**North Auckland**
Date Issued	12 September 1958

Prior References
NA1035/255

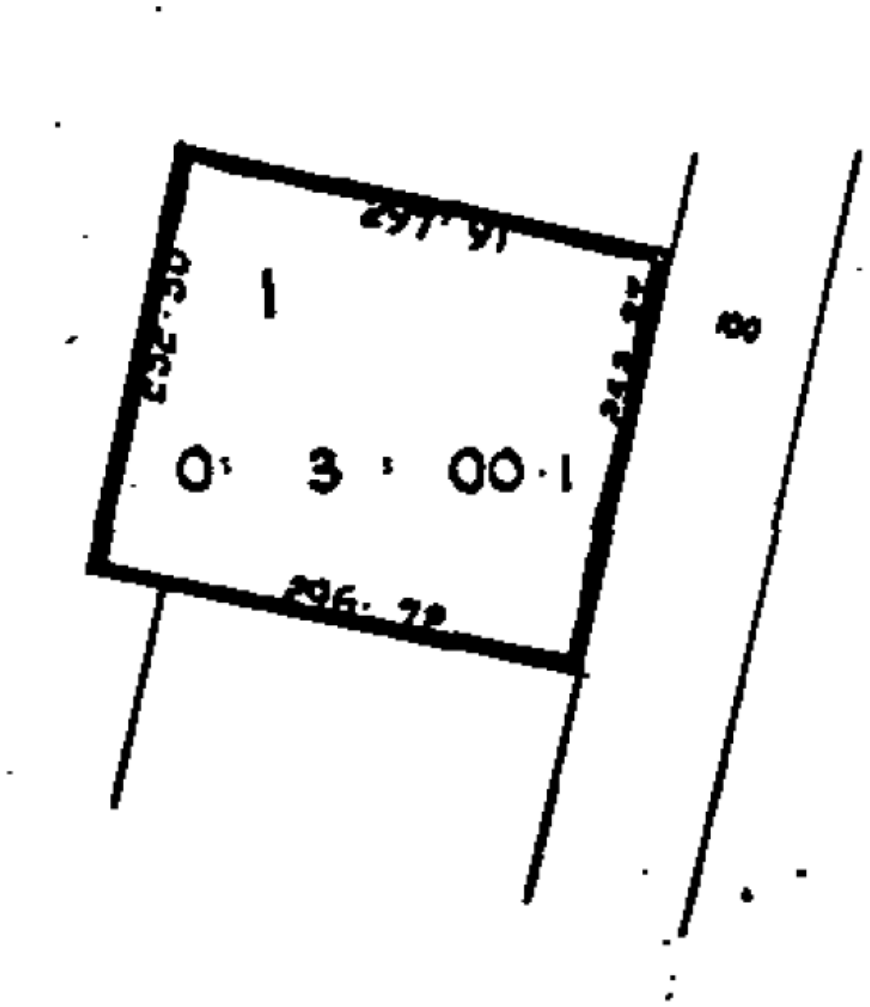
Estate	Fee Simple
Area	3038 square metres more or less
Legal Description	Lot 1 Deposited Plan 45186
Registered Owners	
Jacob Cohen	

Interests

12102148.1 Mortgage to ASB Bank Limited - 29.4.2021 at 2:09 pm

RECORD OF TITLE PLAN

Identifier NA1586/70



A BIRD'S EYE VIEW

Boundary lines are indicative only

IN THE AREA

Mail Delivery – Standard

Broadband – Fibre available (from Chorus website, please contact your provider)

School Zone – TKKM o Kaikohe, Kaikohe East School, Kaikohe Intermediate, Northland College

Countdown & New World supermarkets

Central retail shopping

Medical Centres and Chemists

Cafes

Takeaway facilities

Library

Post shop

Childcare facilities

Petrol Station

Twin coast cycle trail

Ngawha Springs

30 minutes to Kerikeri

Walking tracks

Park and playground

PHOTO GALLERY

PHOTO GALLERY

RENTAL APPRAISAL

HARCOURTS PROPERTY MANAGEMENT
RENTAL APPRAISAL

Harcourts

26th July 2023

15 Guy Road, Kaikohe

Thank you for the opportunity to provide you with a professional rental appraisal for the property situated at **15 Guy Road, Kaikohe**

This is an estimated rental appraisal as the property has not been viewed, therefore considering all information provided, we have made an appraisal based on current market conditions, experience, comparative rental analysis, and our expert opinion.

Description of Property

Three Bedroom, Two Bathroom House in Kaikohe
This property has a lovely North facing deck and plenty of parking

The property at **15 Guy Road, Kaikohe**

In my opinion, on the current rental market the property could achieve approximately $-**$500 - $550 per week** as a long term let

It should be noted that the rental values quoted are relevant to the market at the time of conducting the appraisal and may change as market conditions fluctuate.

To achieve the above appraisal, it should also be noted that all rental properties must be compliant with all current RTA Legislation should the property be rented out. This includes heating, insulation, ventilation, moisture and drainage and draught stopping.

Here at Harcourts Bay of Islands, we have a specialist property management division providing a high level of service and expertise. We are more than happy to assist you with any property management queries you may have, and we encourage you to please get in touch should you wish to discuss the services we offer. I would also welcome the opportunity to meet with you to discuss a tailored package that best meets your requirements.

If you have any questions regarding this appraisal, then please do not hesitate to contact me on 09 407 6677 or via email at propertymanagement@harcourtsboi.co.nz.

Kind regards

Rose Pitcaithly
Property Manager

Appendix 2: Site Investigation Plan

Search

Lot 1 DP45186
Area 3038m2

SHEDS
approx. 130m2
127.8 sq m

142.7 sq m
MAIN HOUSE
approx. 140m2

Unit 3
78m2
2 Bedroom
HA04/SP10
SP11
SP12

Unit 2
78m2
2 Bedroom
HA03
SP09
SP07
SP08

Unit 1
78m2
2 Bedroom
HA02/SP05
SP06
SP04

Unit 4
78m2
2 Bedroom
HA05/SP13
SP14
SP15

Unit 5
78m2
2 Bedroom
HA01/SP03
SP03
SP02

To Ngawha

GUY ROAD
(SH12)

To Kaikohe

6m

1673375.21 6082094.16 Meters | Scale 1:282

Eagle Technology

Survey	-	-
Drawing	-	-
Design	-	-
Checked	Date	

300 mm
200
100
50
10 mm
0

Revision	Amendment	Approved	Revision Date

FNR LTD CONSULTING

Designed	Approved	Approved Date
-	-	-
Drawn	Scales	
-	-	

Project
15 Guy Road Kaikohe
Legal Description Lot 1 DP 45186

Sheet
Scheme Plan
Option 1 5 x 2 Bedroom Units

Project No.	Sheet. No.	Revision

1:1 @ A1
1:2 @ A3
0 10 20 30 40 50 60 70 80 90 100 mm

Original Sheet Size A1 [841x594] Plot Date 2016-05-27 at 3:51:38 PM Path C:\Users\whrkc0\Documents\TEMP PDFS and DWGs\Dwg template.dwg Layout1

Appendix 3: Site Investigation Results

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www.coco.co.nz

BOREHOLE LOG AND TEST SHEET

NZGS December 2005

Ref.: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Borehole No.: HA01
Location: 15 Guy Road Kaikohe
Drilling Method: Hand Auger

Page: 1
Tested by: SP
Logger: SP

Depth (mbgl)	Legend	Soil Description	Water Level	Vane Shear Strength maximum/ residual corrected (kPa)
0.2		Clayey SILT (TOPSOIL)	>0.9 (not encountered)	
0.5		Silty CLAY with traces of gravel, dark brown, very stiff, moist, moderate plasticity (Gravels: white, very weak, angular small)		205+
0.9		Silty CLAY, dark brown, very stiff, moist, low to moderate plasticity		205+
		End of borehole (Squeeze refusal)		

Remarks:

Topsoil
Fill
Clay
Silt
Sand
Gravel
Peat
Rock

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BOREHOLE LOG AND TEST SHEET

NZGS December 2005

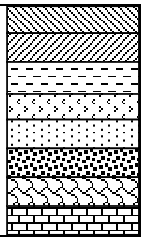
Ref.: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Borehole No.: HA02
Location: 15 Guy Road Kaikohe
Drilling Method: Hand Auger

Page: 1
Tested by: ET
Logger: ET

Depth (mbgl)	Legend	Soil Description	Water Level	Vane Shear Strength maximum/ residual corrected (kPa)
0.15		Clayey SILT (TOPSOIL) with traces of gravel and rootlets, brown, soft, dry, low plasticity (Gravel: orange, extremely weak, subangular	>0.7 (not encountered)	
0.5		Clayey SILT with minor gravel, brown with orange streaks, firm to stiff increasing with depth, moist, moderate plasticity (Gravel: brownish orange, weak, angular, small to medium)		205+
0.7				UTP
		End of borehole (Squeeze refusal)		

Remarks: UTP = Unable to penetrate

Topsoil
Fill
Clay
Silt
Sand
Gravel
Peat
Rock



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BOREHOLE LOG AND TEST SHEET

NZGS December 2005

Ref.: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Borehole No.: HA03
Location: 15 Guy Road Kaikohe
Drilling Method: Hand Auger

Page: 1
Tested by: ET
Logger: ET

Depth (mbgl)	Legend	Soil Description	Water Level	Vane Shear Strength maximum/ residual corrected (kPa)
0.3		SILT (TOPSOIL) with some gravel, traces of sand, traces of rootlets, brown, soft, dry, low plasticity (Gravel: brown, extremely weak, subangular small)	>0.7 (not encountered)	
0.5		Clayey SILT with minor gravel, brown with orange mottle, stiff, dry, friable, low plasticity (Gravel: brown, extremely weak, subangular, small)		205+
0.6				205+
		End of borehole (Squeeze refusal)		

Remarks: UTP = Unable to penetrate

Topsoil
Fill
Clay
Silt
Sand
Gravel
Peat
Rock

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BOREHOLE LOG AND TEST SHEET

NZGS December 2005

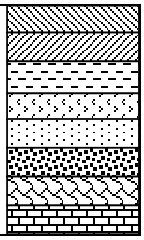
Ref.: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Borehole No.: HA04
Location: 15 Guy Road Kaikohe
Drilling Method: Hand Auger

Page: 1
Tested by: SP
Logger: SP

Depth (mbgl)	Legend	Soil Description	Water Level	Vane Shear Strength maximum/ residual corrected (kPa)
0.3		Clayey SILT (TOPSOIL) with minor gravel, traces of rootlets, brown, soft, dry, low plasticity (Gravel: orange, extremely weak, subangular, small to big increasing with depth)	>0.7 (not encountered)	
0.5		Silty CLAY, brown, firm to stiff increasing with depth, moist, moderate plasticity		180/64
0.7				168/88
		End of borehole (Squeeze refusal)		

Remarks: UTP = Unable to penetrate

Topsoil
Fill
Clay
Silt
Sand
Gravel
Peat
Rock



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BOREHOLE LOG AND TEST SHEET

NZGS December 2005

Ref.: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Borehole No.: HA05
Location: 15 Guy Road Kaikohe
Drilling Method: Hand Auger

Page: 1
Tested by: ET
Logger: ET

Depth (mbgl)	Legend	Soil Description	Water Level	Vane Shear Strength maximum/ residual corrected (kPa)
0.3		Clayey SILT (TOPSOIL) with traces of medium sand, traces of rootlets, brown, soft, dry to moist, medium to low plasticity	>0.75 (not encountered)	
0.5		CLAY with some silt, traces of root/rootlets for first 100 mm, traces of fine gravels, brown, firm to stiff increasing with depth, moist, high plasticity		164/76
0.75				205+
		End of borehole (Squeeze refusal)		

Remarks:

Topsoil
Fill
Clay
Silt
Sand
Gravel
Peat
Rock

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F 64 9 4304282
E ccl@coco.co.nz

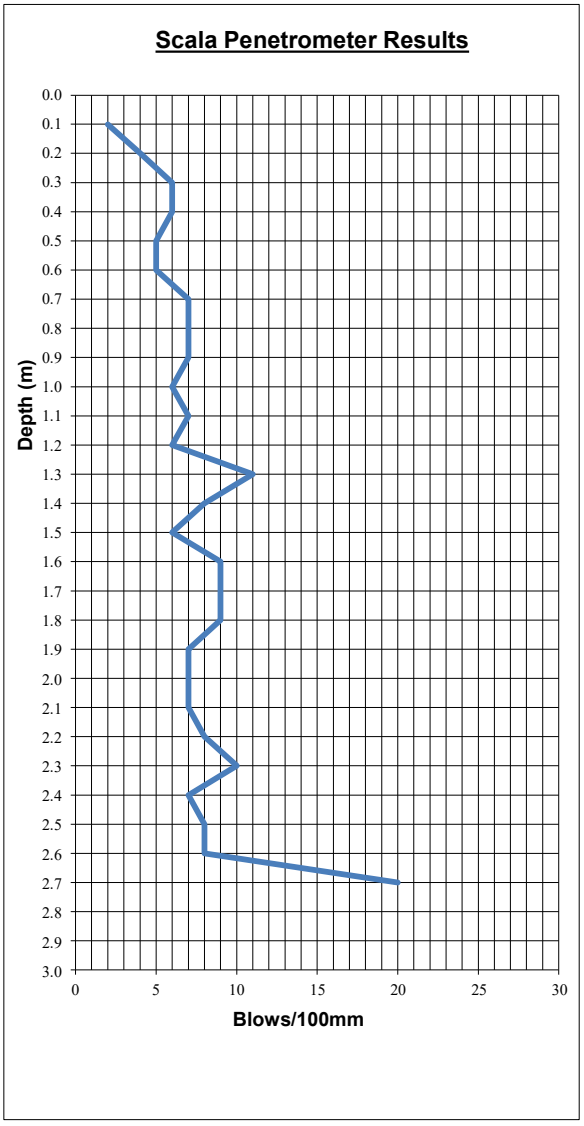
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP01

Tested by: ET
Logged by: ET

blows/100 mm	depth (m)
	0.0
2	0.10
4	0.20
6	0.3
6	0.40
5	0.50
5	0.6
7	0.70
7	0.80
7	0.9
6	1.00
7	1.10
6	1.2
11	1.30
8	1.40
6	1.5
9	1.60
9	1.70
9	1.8
7	1.90
7	2.00
7	2.1
8	2.20
10	2.30
7	2.4
8	2.50
8	2.60
20	2.7
	2.80
	2.90
	3.0



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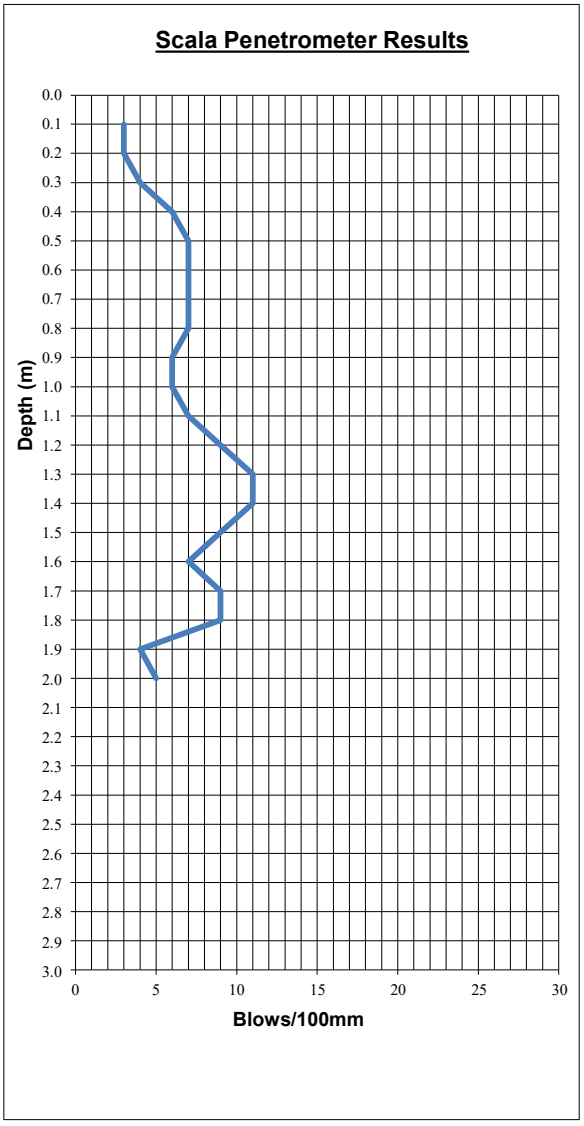
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP02

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
	0.0
3	0.10
3	0.20
4	0.3
6	0.40
7	0.50
7	0.6
7	0.70
7	0.80
6	0.9
6	1.00
7	1.10
9	1.2
11	1.30
11	1.40
9	1.5
7	1.60
9	1.70
9	1.8
4	1.90
5	2.00
6	2.1
7	2.20
7	2.30
7	2.4
8	2.50
8	2.60
8	2.7
	2.80
	2.90
	3.0



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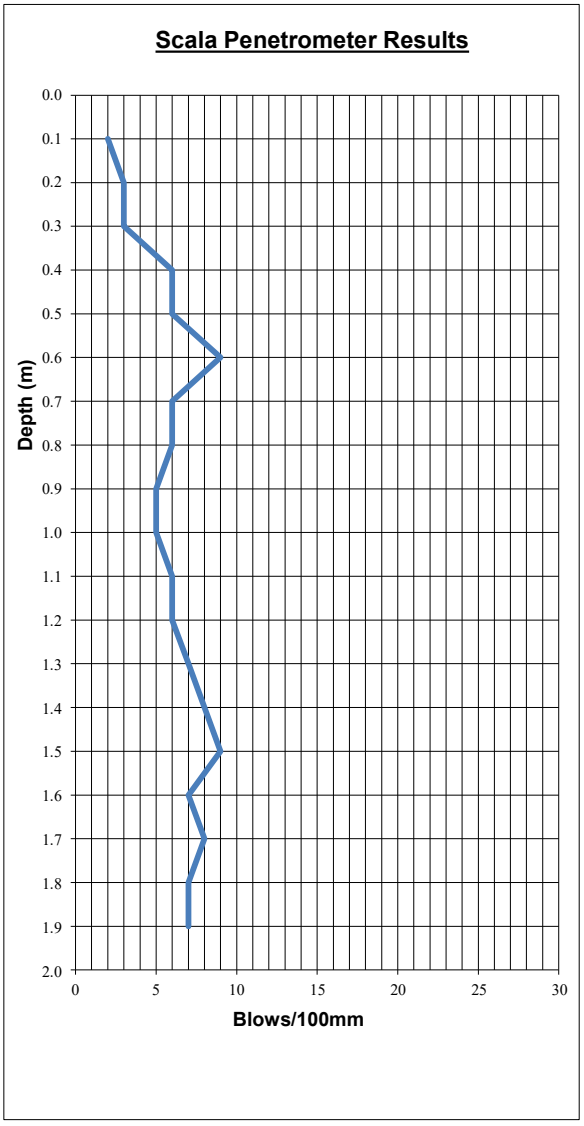
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP03

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
	0.0
2	0.10
3	0.20
3	0.3
6	0.40
6	0.50
9	0.6
6	0.70
6	0.80
5	0.9
5	1.00
6	1.10
6	1.2
7	1.30
8	1.40
9	1.5
7	1.60
8	1.70
7	1.8
7	1.90
9	2.00
8	2.1
8	2.20
8	2.30
8	2.4
11	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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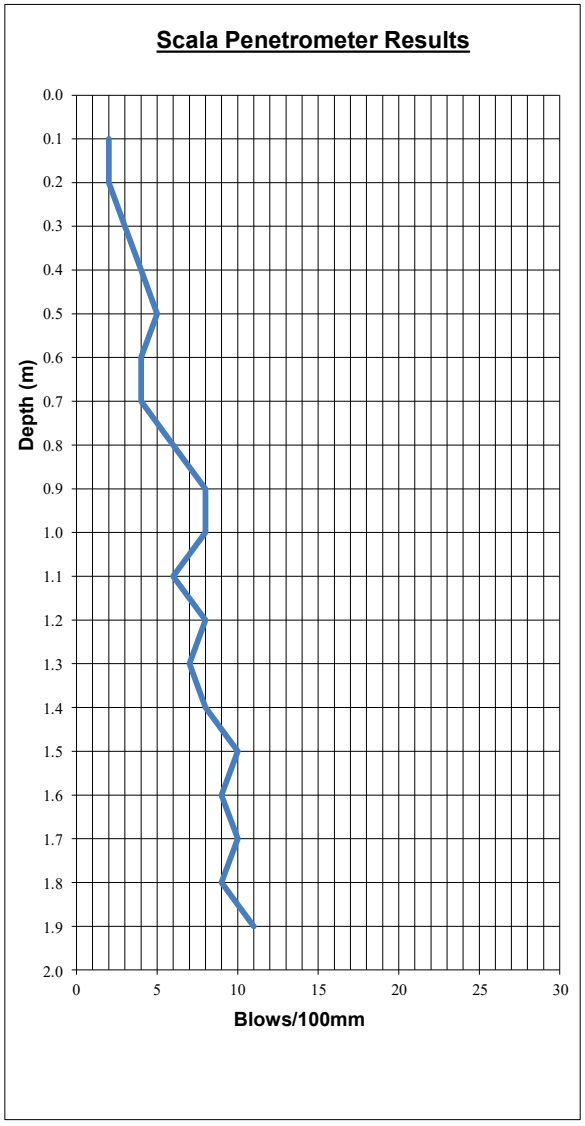
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP04

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
	0.0
2	0.10
2	0.20
3	0.3
4	0.40
5	0.50
4	0.6
4	0.70
6	0.80
8	0.9
8	1.00
6	1.10
8	1.2
7	1.30
8	1.40
10	1.5
9	1.60
10	1.70
9	1.8
11	1.90
9	2.00
11	2.1
12	2.20
13	2.30
11	2.4
12	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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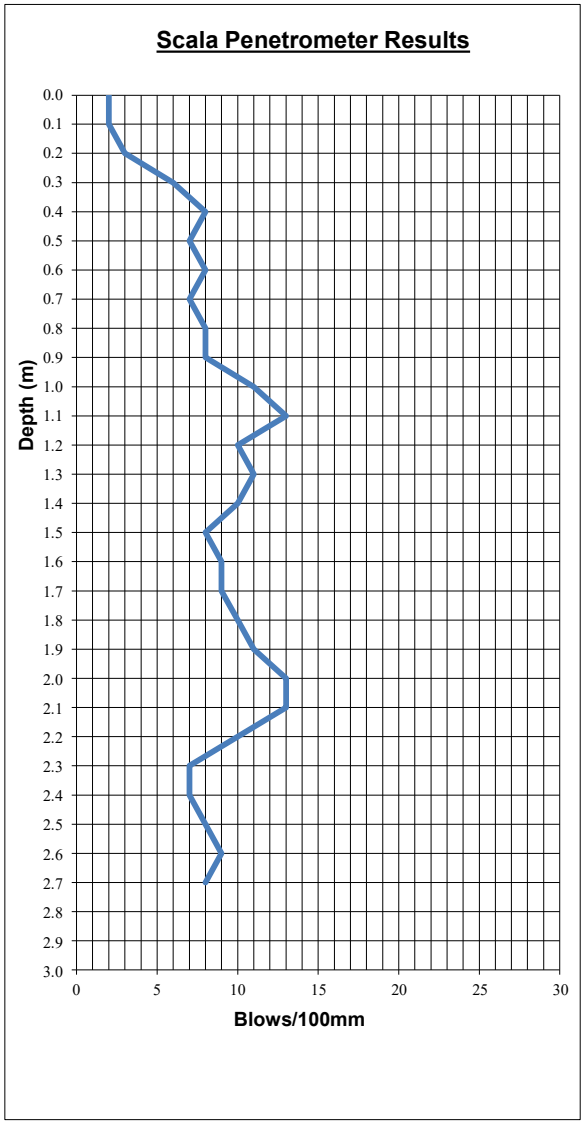
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP05

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
	0.0
2	0.10
2	0.20
3	0.3
6	0.40
8	0.50
7	0.6
8	0.70
7	0.80
8	0.9
8	1.00
11	1.10
13	1.2
10	1.30
11	1.40
10	1.5
8	1.60
9	1.70
9	1.8
10	1.90
11	2.00
13	2.1
13	2.20
10	2.30
7	2.4
7	2.50
8	2.60
9	2.7
8	2.80
	2.90
	3.0



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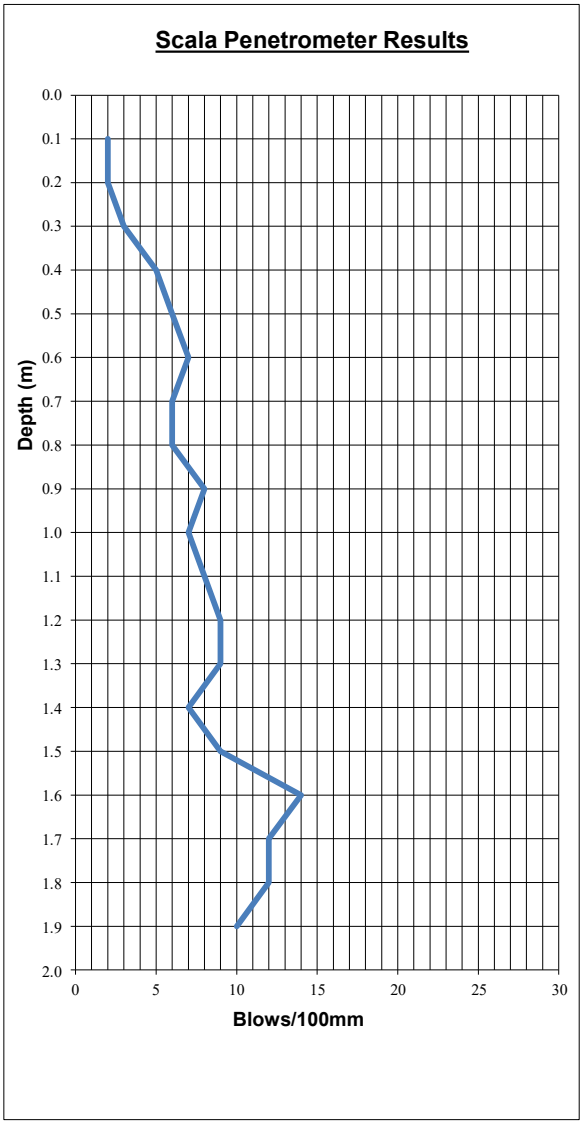
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP06

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
	0.0
2	0.10
2	0.20
3	0.3
5	0.40
6	0.50
7	0.6
6	0.70
6	0.80
8	0.9
7	1.00
8	1.10
9	1.2
9	1.30
7	1.40
9	1.5
14	1.60
12	1.70
12	1.8
10	1.90
	2.00
	2.1
	2.20
	2.30
	2.4
	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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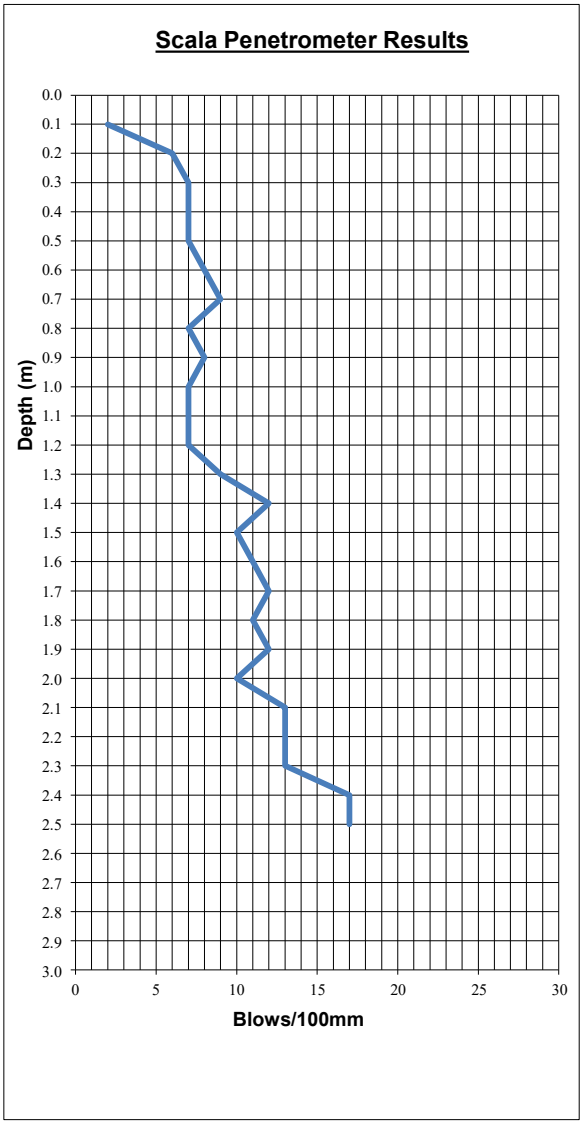
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP07

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
	0.0
2	0.10
6	0.20
7	0.3
7	0.40
7	0.50
8	0.6
9	0.70
7	0.80
8	0.9
7	1.00
7	1.10
7	1.2
9	1.30
12	1.40
10	1.5
11	1.60
12	1.70
11	1.8
12	1.90
10	2.00
13	2.1
13	2.20
13	2.30
17	2.4
17	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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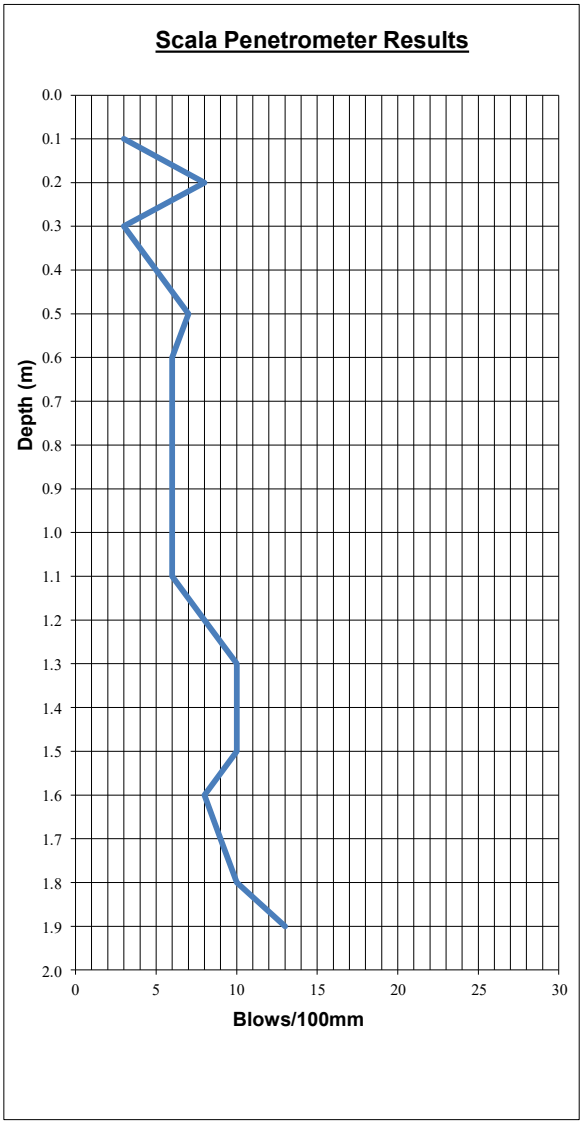
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP08

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
	0.0
3	0.10
8	0.20
3	0.3
5	0.40
7	0.50
6	0.6
6	0.70
6	0.80
6	0.9
6	1.00
6	1.10
8	1.2
10	1.30
10	1.40
10	1.5
8	1.60
9	1.70
10	1.8
13	1.90
	2.00
	2.1
	2.20
	2.30
	2.4
	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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E ccl@coco.co.nz

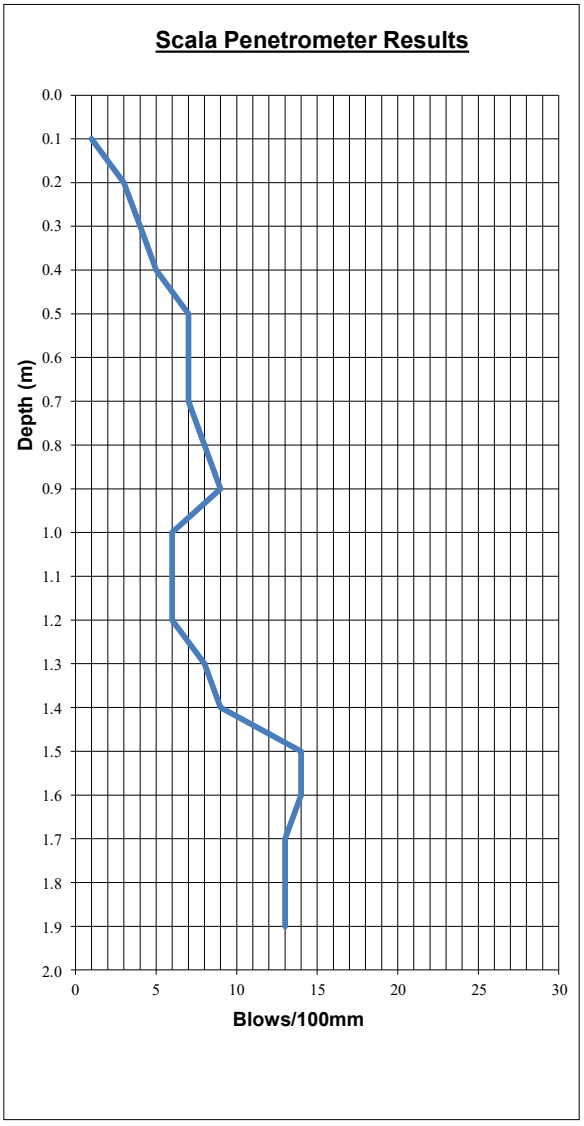
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP09

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
	0.0
1	0.10
3	0.20
4	0.3
5	0.40
7	0.50
7	0.6
7	0.70
8	0.80
9	0.9
6	1.00
6	1.10
6	1.2
8	1.30
9	1.40
14	1.5
14	1.60
13	1.70
13	1.8
13	1.90
	2.00
	2.1
	2.20
	2.30
	2.4
	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP10

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
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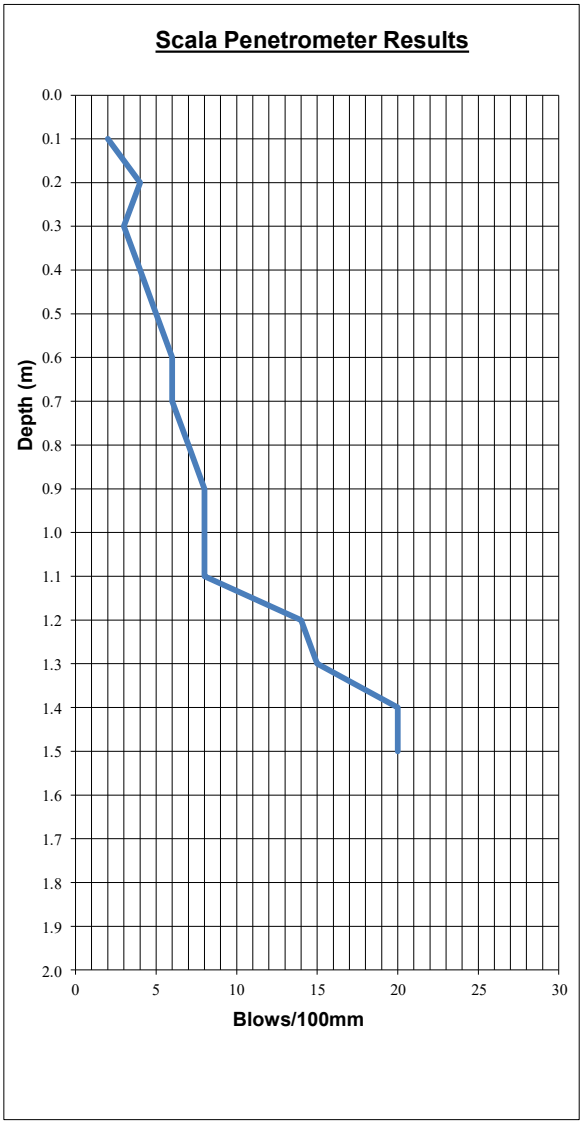
2	0.10
4	0.20
3	0.3
4	0.40
5	0.50
6	0.6
6	0.70
7	0.80
8	0.9
8	1.00
8	1.10
14	1.2
15	1.30
20	1.40
20	1.5
	1.60
	1.70
	1.8
	1.90
	2.00
	2.1
	2.20
	2.30
	2.4
	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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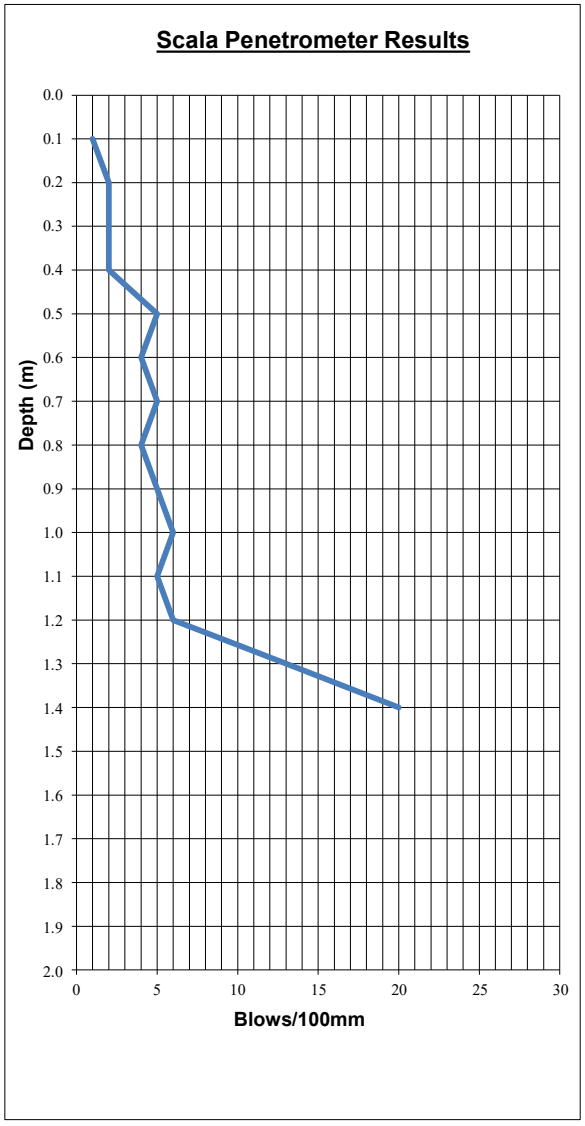
DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP11

Tested by: SP
Logged by: SP

blows/100 mm	depth (m)
	0.0
1	0.10
2	0.20
2	0.3
2	0.40
5	0.50
4	0.6
5	0.70
4	0.80
5	0.9
6	1.00
5	1.10
6	1.2
13	1.30
20	1.40
	1.5
	1.60
	1.70
	1.8
	1.90
	2.00
	2.1
	2.20
	2.30
	2.4
	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP12

Tested by: ET
Logged by: ET

blows/100 mm	depth (m)
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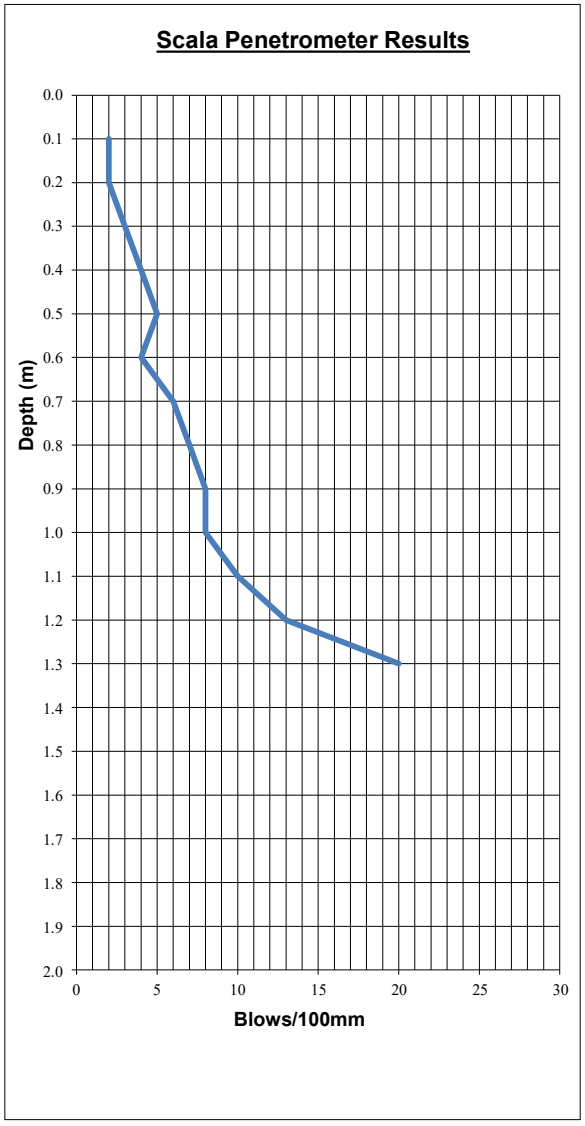
4	0.40
5	0.50
4	0.6
6	0.70
7	0.80
8	0.9
8	1.00
10	1.10
13	1.2
20	1.30
	1.40
	1.5
	1.60
	1.70
	1.8
	1.90
	2.00
	2.1
	2.20
	2.30
	2.4
	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP13

Tested by: ET
Logged by: ET

blows/100 mm	depth (m)
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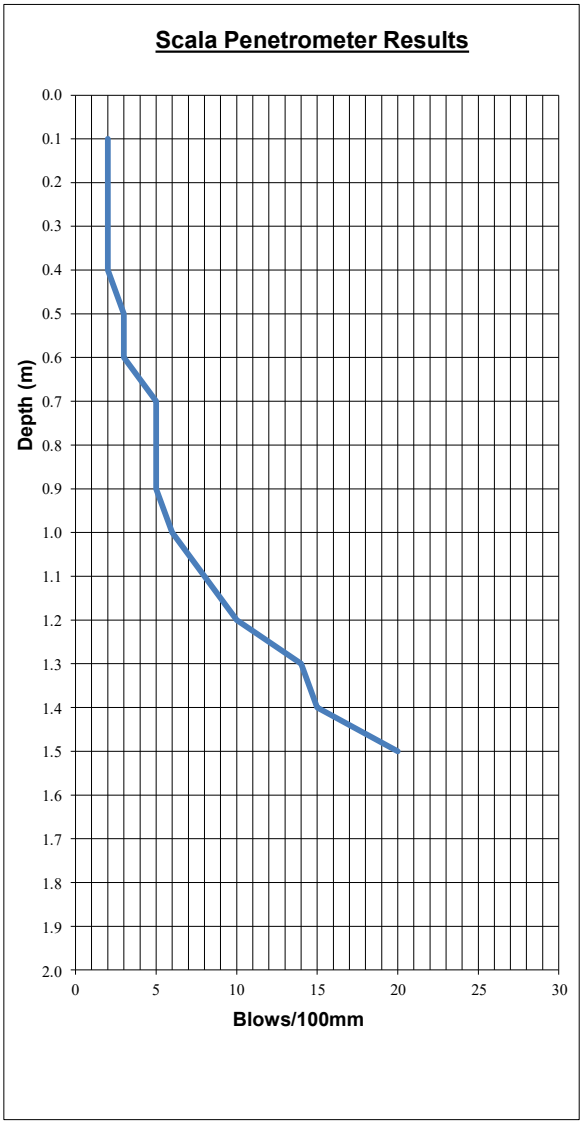
2	0.20
2	0.3
2	0.40
3	0.50
3	0.6
5	0.70
5	0.80
5	0.9
6	1.00
8	1.10
10	1.2
14	1.30
15	1.40
20	1.5
	1.60
	1.70
	1.8
	1.90
	2.00
	2.1
	2.20
	2.30
	2.4
	2.50
	2.60
	2.7
	2.80
	2.90
	3.0



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DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP14

Tested by: SP
Logged by: ET

blows/100 mm	depth (m)
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5	0.6
5	0.70
6	0.80
6	0.9
6	1.00
9	1.10
14	1.2
20	1.30
	1.40
	1.5
	1.60
	1.70
	1.8
	1.90
	2.00
	2.1
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	2.7
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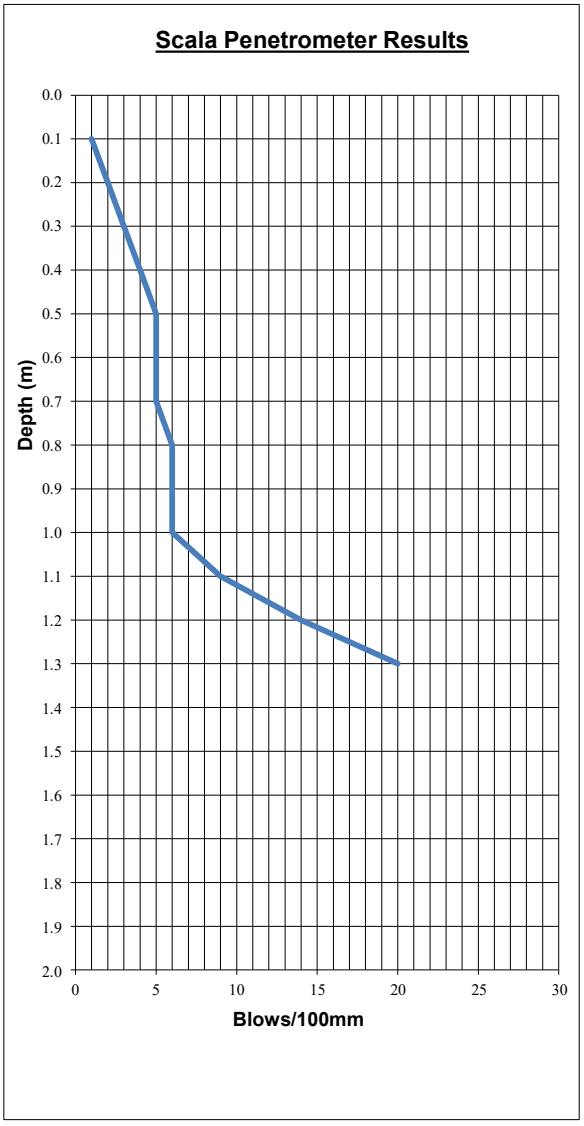

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DYNAMIC CONE (SCALA) PENETROMETER

Test 23 / NZS 4402 : 1988 Test 6.5.2

Job: 17368-001
Client: Te Hau Ora o Ngapuhi Limited
Date: 18/04/2024
Location: 15 Guy Road
Scala No.: SP15

Tested by: SP
Logged by: ET

blows/100 mm	depth (m)
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3	0.3
4	0.40
4	0.50
7	0.6
8	0.70
11	0.80
18	0.9
20	1.00
	1.10
	1.2
	1.30
	1.40
	1.5
	1.60
	1.70
	1.8
	1.90
	2.00
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	2.50
	2.60
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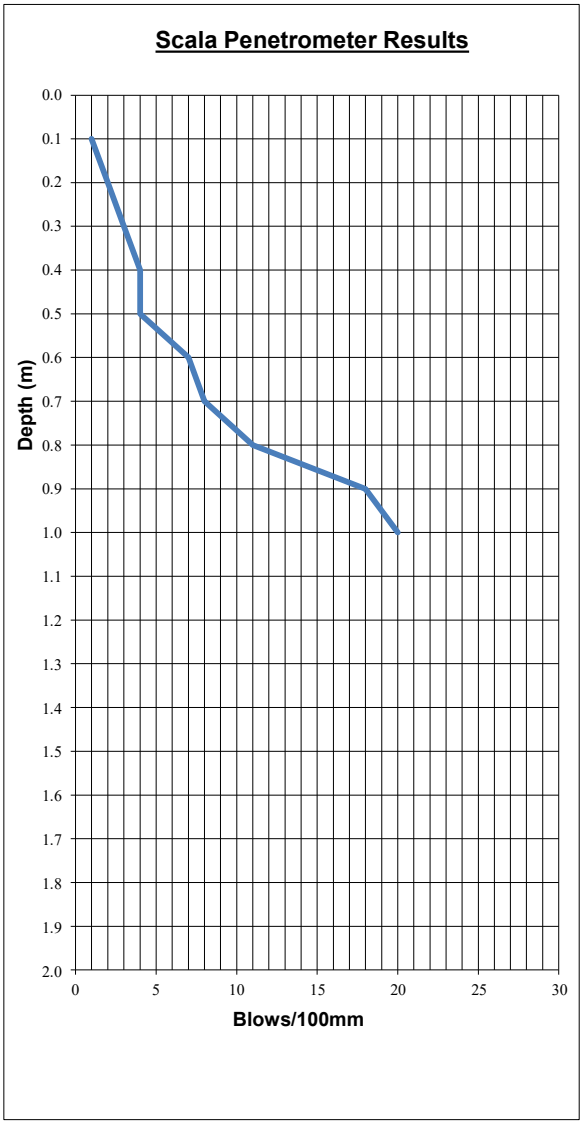
	2.90
	3.0



Appendix 4: Site Photographs

Photo 1: View across grass covered garden area (proposed unit 1)

Photo 2: View across grass covered garden area in front of dwelling (proposed unit 2)

Photo 3: View of driveway accessing the dwelling

Photo 4: View of grass covered garden area with location of proposed unit 5

Photo 5: View of grass covered garden area, location of proposed unit 4

Photo 5: View of driveway to western side of the site

FOR APPROVAL

SIGNED 13/09/2024 DATE

cook | costello

DETAILED DESIGN CIVIL PLANS

FOR TE HAU ORA O NGAPUHI LIMITED

15 GUY ROAD
KAIKOHE
LOT 1 DP 45186

JOB NO: 17368-001

DATE: 13 SEPTEMBER 2024

SCHEDULE OF DRAWINGS		
SHEET #	**TITLE**	**REV**
	DD000 - GENERAL	
DD000	COVER SHEET & LOCATION DIAGRAM	A
DD001	GENERAL NOTES	A
	DD100 - EXISTING SITE	
DD100	EXISTING SITE PLAN	A
	DD200 - SCHEME PLAN	
DD200	PROPOSED SCHEME PLAN	A
	DD300 - BULK EARTHWORKS & ESCP	
DD300	ESCP & BULK EARTHWORKS PLAN	A
DD310	EROSION SEDIMENT CONTROL TYPICAL DETAILS - SHEET 1	A
DD311	EROSION SEDIMENT CONTROL TYPICAL DETAILS - SHEET 2	A
	DD400 - GENERAL ARRANGEMENT	
DD400	GENERAL ARRANGEMENT PLAN	A
DD410	PAVEMENT DETAILS	A
DD411	PAVEMENT DETAILS	A
	DD500 - THREE WATERS	
DD500	PROPOSED THREE WATERS PLAN	A
DD510	STORMWATER LONGSECTIONS	A
DD520	SEWER LONGSECTIONS	A
DD530	TYPICAL DRAINAGE DETAILS - SHEET 1	A
DD531	TYPICAL DRAINAGE DETAILS - SHEET 2	A
DD532	TYPICAL DRAINAGE DETAILS - SHEET 3	A
DD533	TYPICAL DRAINAGE DETAILS - SHEET 4	A
DD534	TYPICAL DRAINAGE DETAILS - SHEET 5	A
DD535	TYPICAL DRAINAGE DETAILS - SHEET 6	A
DD536	TYPICAL DRAINAGE DETAILS - SHEET 7	A
DD537	TYPICAL DRAINAGE DETAILS - SHEET 8	A
	DD600 - VEHICLE TRACKING	
DD600	VEHICLE TRACKING PLAN	A

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

LOCATION DIAGRAM

DWG NUMBER	REV.
DD000	A

SIZE A3

GENERAL

G1: THIS SET OF DRAWINGS IS TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATION AND ALL OTHER CONTRACT DRAWINGS.

G2: THE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF THE WORK TO BE CARRIED OUT ONLY AND DIMENSIONS SHALL NOT BE OBTAINED BY SCALING.

G3: ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER FOR DECISIONS BEFORE PROCEEDING WITH THE WORK.

G4: THE CONTRACTOR IS TO CONFIRM THE LOCATION AND LEVEL OF ALL UNDERGROUND SERVICES PRIOR TO UNDERTAKING ANY EARTHWORKS OR FOUNDATION CONSTRUCTION.

G5: ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT CODES OF PRACTICE EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION AND/OR DRAWINGS:
- NZS 3101:2017 CONCRETE STRUCTURES STANDARD
- NZS 3109 CONCRETE CONSTRUCTION
- NZS 3121 WATER AND AGGREGATE FOR CONCRETE
- AS/NZS 4671 STEEL REINFORCING MATERIALS

G6: GENERAL ABBREVIATIONS
- NTS - NOT TO SCALE
- UNO - UNLESS NOTED OTHERWISE
- FFL - FINISHED FLOOR LEVEL
- EGL - EXISTING GROUND LEVEL
- FGL - FINISHED GROUND LEVEL
- FSL - FINISHED SLAB LEVEL

G7: WHERE PROPRIETARY PRODUCTS ARE SPECIFIED IN THE DOCUMENTS THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE PRODUCT FOR APPROVAL AND SUBJECT TO FNDC APPROVAL.

G8: ALL WORKS ARE TO COMPLY WITH THE HEALTH & SAFETY AT WORK ACT 2015.

G9: ALL WORKS TO COMPLY WITH THE FAR NORTH DISTRICT COUNCIL (FNDC) CODE OF PRACTICE FOR CIVIL ENGINEERING WORKS, AND NZS4404:2010.

G10: FNDC STANDARD DETAILS HAVE NOT BEEN INDEPENDENTLY VERIFIED BY COOK COSTELLO. WE HAVE ACCEPTED THAT THEY WILL PERFORM FOR THE REQUIRED LIFE EXPECTANCY AS STATED IN THE FNDC CODE OF PRACTICE FOR CIVIL ENGINEERING WORKS. WE ACCEPT NO LIBILITY IF THE STANDARD DETAILS DO NOT ACHIEVE THIS DESIGN LIFE.

G11: FNDC INSPECTIONS REQUIRED IN ACCORDANCE WITH CoP, ONLY FNDC APPROVED CONTRACTORS TO WORK ON FNDC RETICULATION (OR THAT TO VEST), REINSTATEMENT, WRITTEN APPROVAL PRIOR TO UNDERTAKING WORKS WITHIN PRIVATE PROPERTY, WORKS ARE TO COMPLY WITH CoP, CONTRACTOR IS RESPONSIBLE FOR LOCATING SERVICES PRIOR TO EXCAVATION, AS-BUILT REQUIREMENTS ETC. FNDC TO PROVIDE WRITTEN CERTIFICATION WHERE THEY UNDERTAKE TESTING AND INSPECTION.

G12: THE CONTRACTOR MUST REINSTATE AND/OR REPAIR DAMAGE TO THE KERB & CHANNELING AND FOOTPATH ALONG THE PROPERTY ROADSIDE FRONTAGE.

G13: SITE SURVEY, EXISTING SEWER, STORMWATER, AND POTABLE WATER, BASED ON DIGITAL AS-BUILT DATA RECEIVED. COORDINATES ARE IN TERMS OF NZGD 2000 MT EDEN CIRCUIT 2000. VERTICAL DATUM IN TERMS OF ONE TREE POINT DATUM 1964. ALL LEVELS AND CONNECTION POINTS TO BE CHECKED AND CONFIRMED ON SITE PRIOR TO CONSTRUCTION.

G14: EROSION CONTROL - ALL SILT CONTROL MEASURES SHALL BE PLACED PRIOR TO COMMENCEMENT OF EARTHWORKS. SUCH MEASURES SHALL BE SUBJECT TO FURTHER ADDITIONS AND ALTERATIONS, WHERE CONSIDERED NECESSARY, AS DIRECTED BY THE PROJECT MANAGER OR COUNCIL, DURING THE PROGRESSION OF WORKS. IT IS ADVISED TO CONTACT NRC PRIOR TO COMMENCEMENT OF EARTHWORKS, AFTER INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES TO ENSURE THEY HAVE BEEN INSTALLED TO THE SATISFACTION OF NRC.

G15: BUILDING LOCATIONS ON THE PLANS ARE INDICATIVE ONLY. FOR BUILDING SET OUTS REFER TO ARCHITECTS PLANS.

EARTHWORKS

E1: ALL PROJECT PAVEMENT SIZES AND DETAILS INDICATED IN THIS DRAWING SET ARE BASED ON A CBR OF 5%.

E2: ALL SITE EARTHWORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF NZS4431. SOIL BEARING CAPACITY IS TO BE VERIFIED UPON COMPLETION OF SITE EARTHWORKS AND DURING FOUNDATION EXCAVATION TO ENSURE ACTUAL SITE CONDITIONS ARE COMPATIBLE WITH THE INFERRED GEOTECHNICAL MODEL. OVER EXCAVATION AND BACKFILLING WITH ENGINEERED FILL OR SITE CONCRETE MAY BE NECESSARY WHERE SOFT SOIL / FILL IS ENCOUNTERED WITH PRIOR VARIATION APPROVAL.

E3: COMPACTION IN BASE OF PIPE TRENCHES TO ACHIEVE CLEGG 25.

CONCRETE

C1: ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NZS3109 AND NZS3101 SUBJECT TO RELEVANT SECTIONS OF THE SPECIFICATION.

C2: NO CONCRETE SHALL BE PLACED UNTIL THE DESIGNER HAS HAD THE OPPORTUNITY TO OBSERVE THAT THE DRAWINGS AND SPECIFICATIONS HAVE BEEN COMPLIED WITH.

C3: ALL CONCRETE SUPPLY AND PRODUCTION SHALL BE IN ACCORDANCE WITH NZS 3104, 3101:2017.

C4: WHERE THE LOCATION OF CONSTRUCTION JOINTS IS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS, CONSTRUCTION JOINTS SHALL BE COORDINATED WITH THE ENGINEER AS REQUIRED. THE CONSTRUCTOR SHALL ALLOW FOR ALL SUCH CONSTRUCTION JOINTS.

CONCRETE PAVEMENTS

CP1: UPON EXPOSURE OF SUBGRADE AT PAVEMENT BASE CONTACT ENGINEER FOR INSPECTION AND INSTRUCTION TO REMOVE AND REPLACE ANY SOFT AREAS PRIOR TO COMMENCING CONSTRUCTION OF PAVEMENT LAYERS. EXCAVATED MATERIAL TO BE REMOVED FROM SITE.

CP2: SUPPLY AND COMPACT BASECOURSE LAYER IN ACCORDANCE WITH CROSS SECTIONS SUPPLIED.

CP3: CONCRETE USED SHALL BE SPECIAL GRADE WITH 28 DAY COMPRESSIVE STRENGTH OF 30MPA.

CP4: ALL JOINTS SHALL BE INSTALLED AT THE LOCATIONS INDICATED. SAW CUT JOINTS SHALL BE CUT WITHIN 24 HOURS OF CONCRETE PLACEMENT.

CP5: ALL CONCRETE SHALL BE CURED BY AN APPROVED METHOD FOR AT LEAST 7 DAYS AFTER POURING. CURING METHOD SHALL BE PROPOSED TO ENGINEER FOR APPROVAL. SOME PROPRIETARY SURFACE TREATMENTS MAY NOT BE APPROVED.

CP6: SLAB SURFACE TOLERANCES SHALL NOT EXCEED 5MM DEVIATION IN A 3M STRAIGHT EDGE.

CP7: SLAB THICKNESSES GIVEN ARE MINIMUM THICKNESSES AND EXCLUSIVE OF ANY APPLIED FINISHES.

CP8: SLAB SURFACES SHALL BE NEATLY BROOM FINISHED.

CP9: ALL SLAB JOINTS ARE TO BE SEALED WITH AN APPROVED WATERPROOF FLEXIBLE SEALANT AFTER 28 DAYS AND PRIOR TO PRACTICAL COMPLETION.

CP10: CROSSING TO COMPLY WITH FNDC VEHICLE CROSSING REQUIREMENTS.

DRAINAGE

D1: ALL WORK AND MATERIALS SHALL COMPLY WITH THE PROJECT DRAWINGS AND SPECIFICATIONS AND CURRENT FNDC STANDARDS AND SPECIFICATIONS. ANY CONFLICT BETWEEN THE PROJECT DOCUMENTS AND COUNCIL STANDARDS SHALL BE RAISED WITH THE ENGINEER FOR RESOLUTION, PRIOR TO CONSTRUCTION.

D2: ALL TRENCH EXCAVATION, SHORING AND DEWATERING SHALL COMPLY WITH ALL WORKPLACE HEALTH AND SAFETY REQUIREMENTS.

D3: THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, CERTIFICATION, APPROVAL AND CONSTRUCTION OF ALL TEMPORARY WORKS INCLUDING BOTH STRUCTURAL ENGINEERING AND GROUNDWATER CONTROL. SUITABLY QUALIFIED PROFESSIONALS CARRYING ACCEPTABLE LEVELS OF PROFESSIONAL INDEMNITY INSURANCE SHALL BE PROPOSED TO THE ENGINEER BEFORE WORK COMMENCEMENT AND THE USE OF ANY PERSONS UNDERTAKING THIS TYPE OF WORK SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.

D4: FOR PIPE BEDDING, SURROUND AND BACKFILL DETAILS REFER TO PIPE BEDDING DETAILS.

D5: WHERE PIPES ARE LAID IN FILL THE FILL SHALL BE PLACED TO FINAL SURFACE LEVELS BEFORE TRENCHING IS COMMENCED. THE FILL SHALL BE PLACED IN LAYERS NOT EXCEEDING 200MM LOOSE THICKNESS AND COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS FOR EARTHWORKS (IF REQUIRED). A CERTIFICATE PROVIDED BY THE CONTRACTOR'S INDEPENDENT TESTING AGENCY CONFIRMING THE FILL MEETS THE SPECIFIED COMPACTION STANDARDS SHALL BE PROVIDED BEFORE ANY PIPE LAID IN NEW FILL WILL BE APPROVED BY THE ENGINEER OR ACCEPTED BY THE CONTROLLING AUTHORITY.

D6: WASTEWATER STORAGE TANK SHALL BE INSTALLED AS PER MANUFACTURES DETAILS AND SPECIFICATIONS.

INSPECTIONS / SITE VISITS REQUIRED

I1: PRE-CONSTRUCTION SITE MEETING WITH CONTRACTOR, ENGINEER AND UFNDC PRESENT. WRC TO BE INFORMED OF WORKS ON SITE PRIOR TO COMMENCING WORKS.

I2: STRIPPED GROUND INSPECTIONS OF ALL SUBGRADES AND SITE FILL AREAS.

I3: CONTROLLED FILL TESTING TO BRING FILL UP TO SUBGRADE LEVELS TO BE CONSTRUCTED IN 200mm MAX LIFTS AND TESTED EVERY 600mm.

I4: BASECOURSE PAVEMENT TESTING IN ACCORDANCE WITH PAVEMENT DETAILS. CONTRACTOR TO ALSO PROVE BASECOURSE METAL DEPTHS WITH STRING LINES.

I6: CONCRETE PAVEMENT PREPOUR BOXING INSPECTION.

I7: STORMWATER & WASTEWATER RETICULATION TRENCH COMPACTION TEST.

18: HYDRAULIC ELEMENTS

I9: TIMBER POLE RETAINING WALL HOLE INSPECTION PRIOR TO CONCRETE POUR. FINAL WALL INSPECTION WITH ENGINEER POST COMPLETION.

I10: TIMBER POLE RETAINING WALL HOLE INSPECTION.

I11: WAFFLE RAFT INSPECTIONS
a) STRIPPED GROUND FOR FOUNDATIONS
b) PRE-POUR INSPECTION. ALL REINFORCED CONCRETE AND MASONRY.
c) COMPACTION TESTING OF BACKFILL.

I12: FINAL INSPECTION WITH FNDC, ENGINEER AND CONTRACTOR TO ENSURE ALL WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED ENGINEERING PLANS FOR FINAL SIGNOFF.

I13: ALL OTHER INSPECTIONS AS REQUIRED IN THE APPROVED INSPECTIONS AND TEST PLAN (ITP). ALL WORKS SHOULD ENSURE THE INSPECTION AND TEST PLAN IS CAREFULLY ACTIONED PRIOR TO PROCEEDING WITH CONSTRUCTION.

ASBUILT CHECKLIST

AB1: WASTEWATER AND STORMWATER PIT & PIPES AND TRENCH METALS, INCLUDING ALL DOCKETS.

AB2: WASTE WATER PIPE NETWORK.

AB3: WATER RETICULATION.

AB4: SUBGRADE SURFACE AND UNDERCUT OF UNSUITABLE MATERIAL (IF ANY).

AB5: CROSSING RAW DATA.

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B			
A	IST ISSUE	13-09-24	KH PC

PROJECT DETAILS
TE HAU ORA O NGAPUHI LILITED
15 GUY ROAD
KAIKOHE

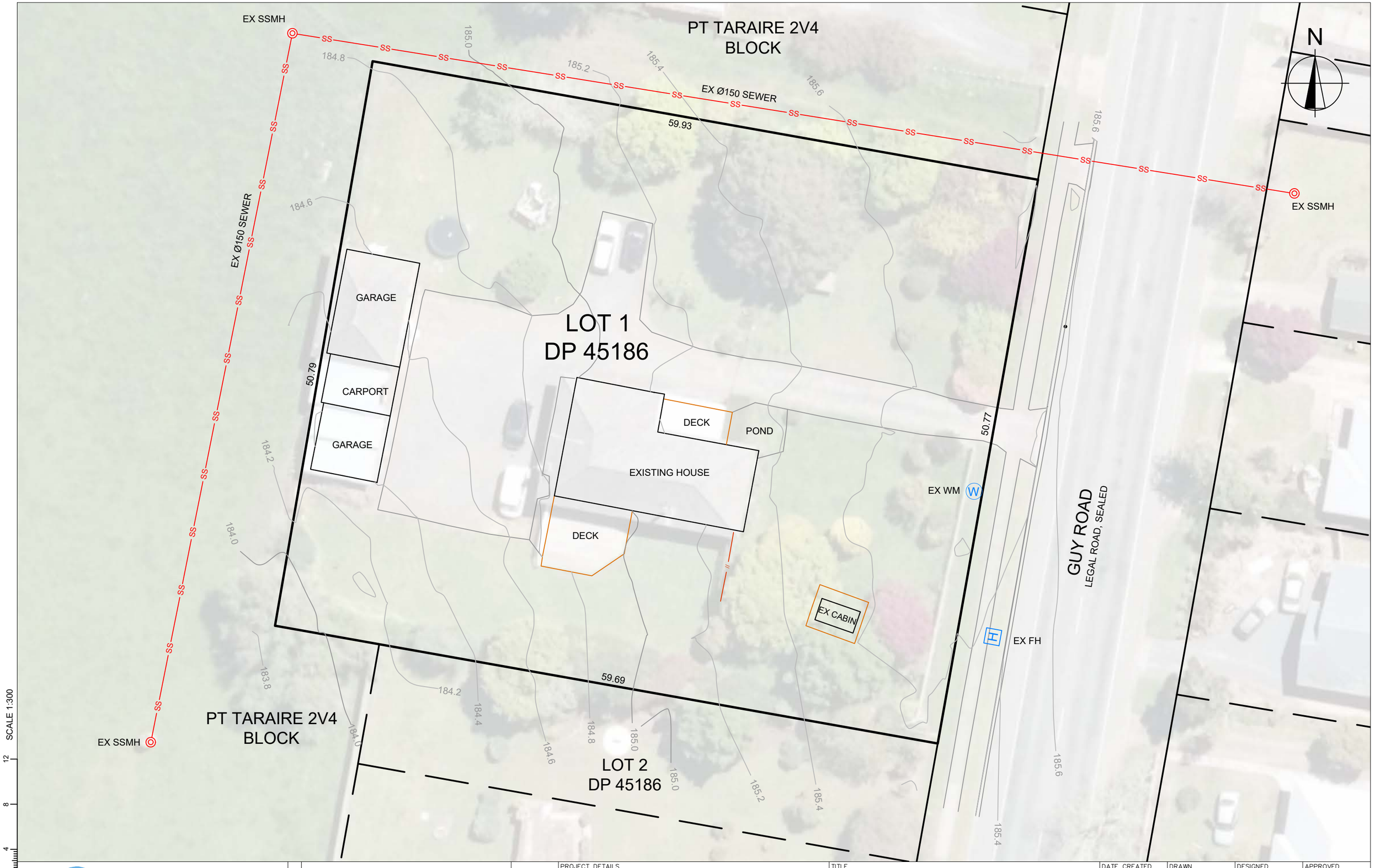
TITLE
GENERAL NOTES

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

CCL REF NO	SCALE	STATUS
17368-001	NTS @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD001	A

DATE PLOTTED: Friday, 13 September 2024 1:50:08 pm FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD00 Cover Sheet.dwg



SCALE 1:300

0 4 8 12

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B			
A	1ST ISSUE	13-09-24 KH	PC

PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
EXISTING SITE PLAN

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

CCL REF NO	SCALE	STATUS
17368-001	1:300 @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD100	A

SCALE 1:300

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD100 Existing Site Plan.dwg

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738

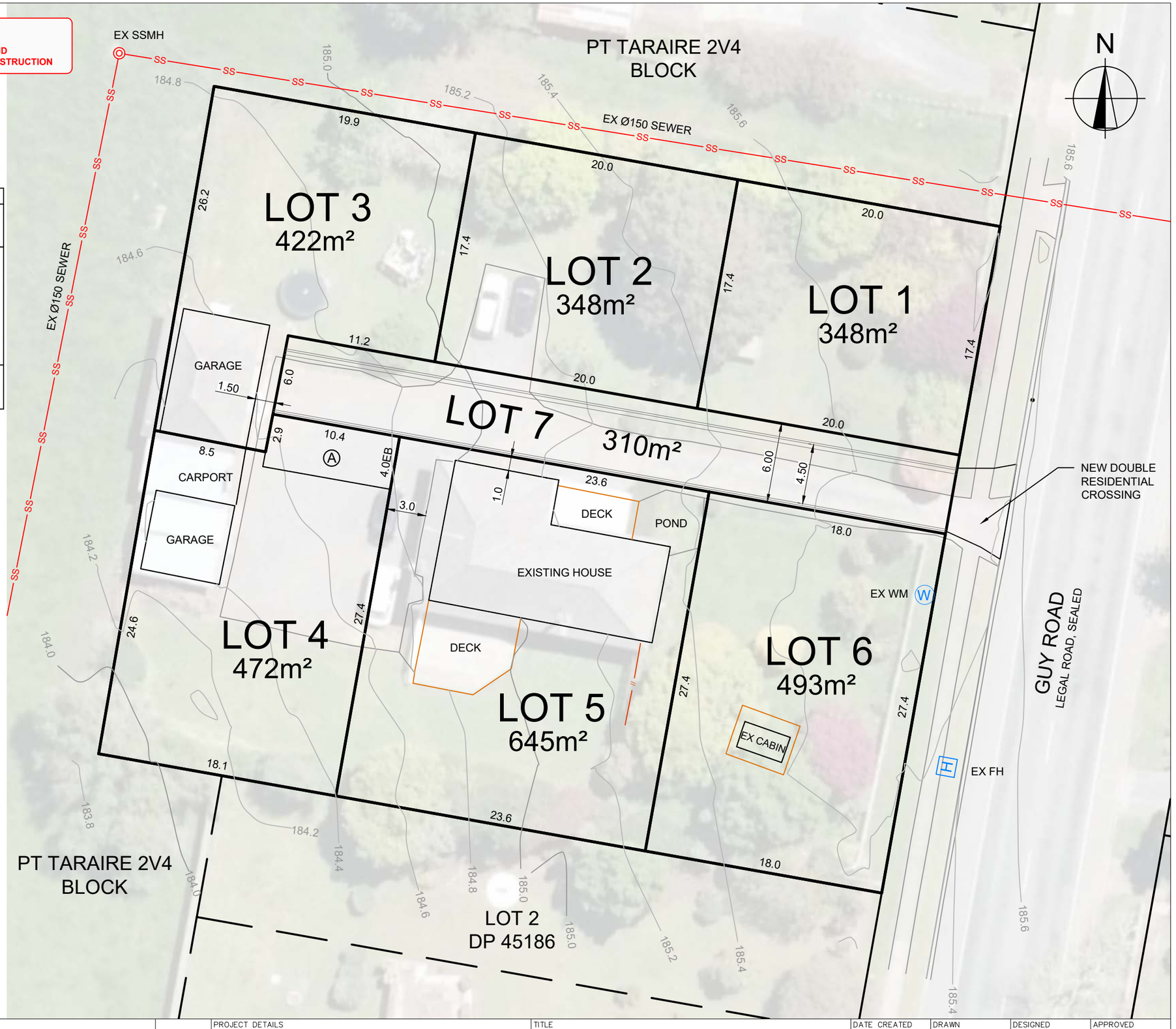
MEMORANDUM OF EASEMENTS			
PURPOSE	SHOWN	SERVIENT TENEMENT (BURDENED LAND)	DOMINANT TENEMENT (BENEFITED LAND)
RIGHT OF WAY, RIGHT TO CONVEY WATER, RIGHT TO DRAIN WATER RIGHT TO CONVEY ELECTRICITY & RIGHT TO CONVEY TELECOMMUNICATIONS	LOT 7 (JOAL) HEREON	LOT 7 (JOAL) HEREON	LOTS 1 - 6 HEREON
RIGHT OF WAY	Ⓐ	LOT 4 HEREON	LOT 3 HEREON

AMALGAMATION CONDITION:
THAT LOT 7 HEREON (LEGAL ACCESS) BE HELD AS TO SIX UNDIVIDED ONE-SIXTH SHARES BY THE OWNERS OF LOTS 1 TO 6 HEREON AS TENANTS IN COMMON IN THE SAID SHARES AND THAT INDIVIDUAL COMPUTER REGISTERS BE ISSUED IN ACCORDANCE THEREWITH.

TOTAL AREA: 3038m²
COMPRISED IN: NA80D/525 (ALL)

FAR NORTH DISTRICT COUNCIL
ZONED: GENERAL RESIDENTIAL

CAUTION:
- THIS IS A CONCEPT PLAN. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.
- THE VENDOR AND PURCHASER MUST CONTACT COOK COSTELLO IF SALE & PURCHASE AGREEMENTS ARE TO BE ENTERED INTO USING THIS PLAN. BOUNDARIES, EASEMENTS OR OTHER DETAIL WILL NEED TO BE CONFIRMED WITH COOK COSTELLO.
- SERVICES MUST NOT BE POSITIONED USING THIS PLAN.
- THIS PLAN IS COPYRIGHT TO COOK COSTELLO (CCL 2015).



SCALE 1:300

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
SCHEME PLAN
BEING A SUBDIVISION OF
LOT 1 DP 45186

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK
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17368-001	1:300 @ A3		FOR APPROVAL
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DD200			A

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IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738

KEY

- SILT FENCE
- CLEAN WATER DIVERSION CHANNEL
- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- 185.0 CONTOUR LABELS
- AREA OF BUILDING PLATFORM

LEGEND

- CUT HATCH
- FILL HATCH
- CUT CONTOURS
- FILL CONTOURS
- -0.0 CONTOUR LABELS

TOPSOIL VOLUME:
AREA OF DISTURBED WORKS = 544m²

BULK EARTHWORKS VOLUMES:
TOTAL CUT = -8.8m³
TOTAL FILL = 11.7m³
BALANCE = 2.9m³

EARTHWORKS QUANTITIES BASED ON:
- EXISTING SURFACE TO DESIGN FINISHED SURFACE. THE CUT FILL VOLUME SHALL NOT BE USED FOR PRICING FOR EARTHWORKS.

PT TARAIRE 2V4
BLOCK

GARAGE
CARPORT
GARAGE
EXISTING HOUSE
DECK
POND
DECK
EX CABIN

STABILISED CONSTRUCTION ENTRANCE. POSITION TO BE CONFIRMED ON SITE.

GUY ROAD
LEGAL ROAD, SEALED

PT TARAIRE 2V4
BLOCK

LOT 2
DP 45186

N

SCALE 1:300
0 4 8 12

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
BULK EARTHWORKS &
EROSION SEDIMENT CONTROL PLAN

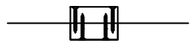
DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

CCL REF NO	SCALE	STATUS
17368-001	1:300 @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD300	A

SCALE 1:300

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD300 Bulk Earthworks & ESCP.dwg

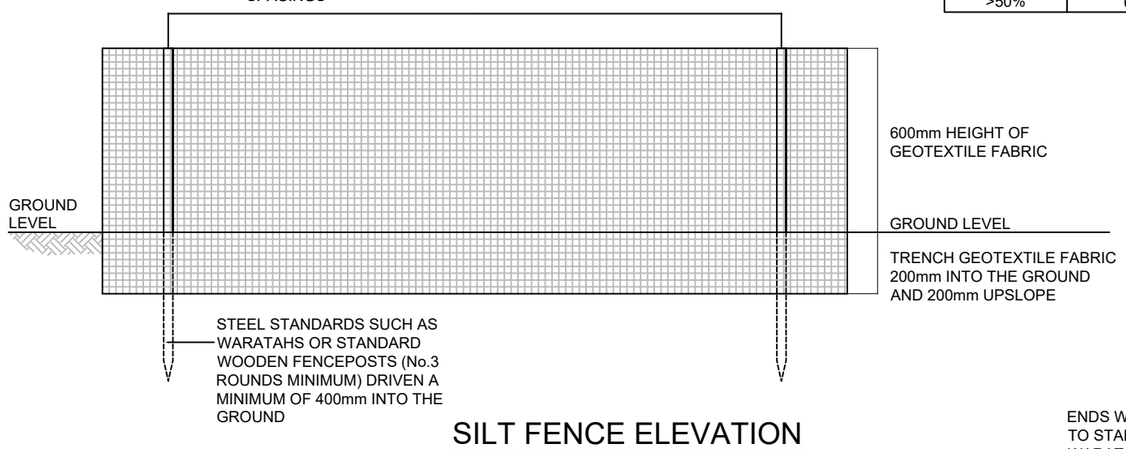


WRAP BOTH ENDS OF THE FABRIC AROUND ONE STAKE AND CLAMP THE OTHER STAKE TO IT USING SELF TAPPING WOOD SCREWS AT 150mm SPACINGS

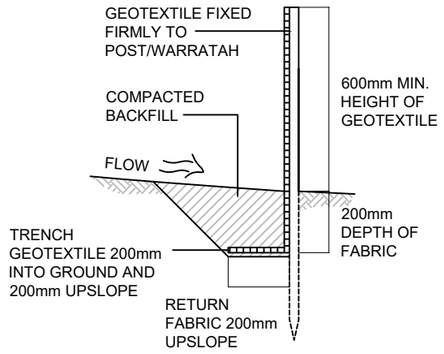
STANDARD DETAIL FOR FABRIC JOIN

SILT FENCE DESIGN CRITERIA

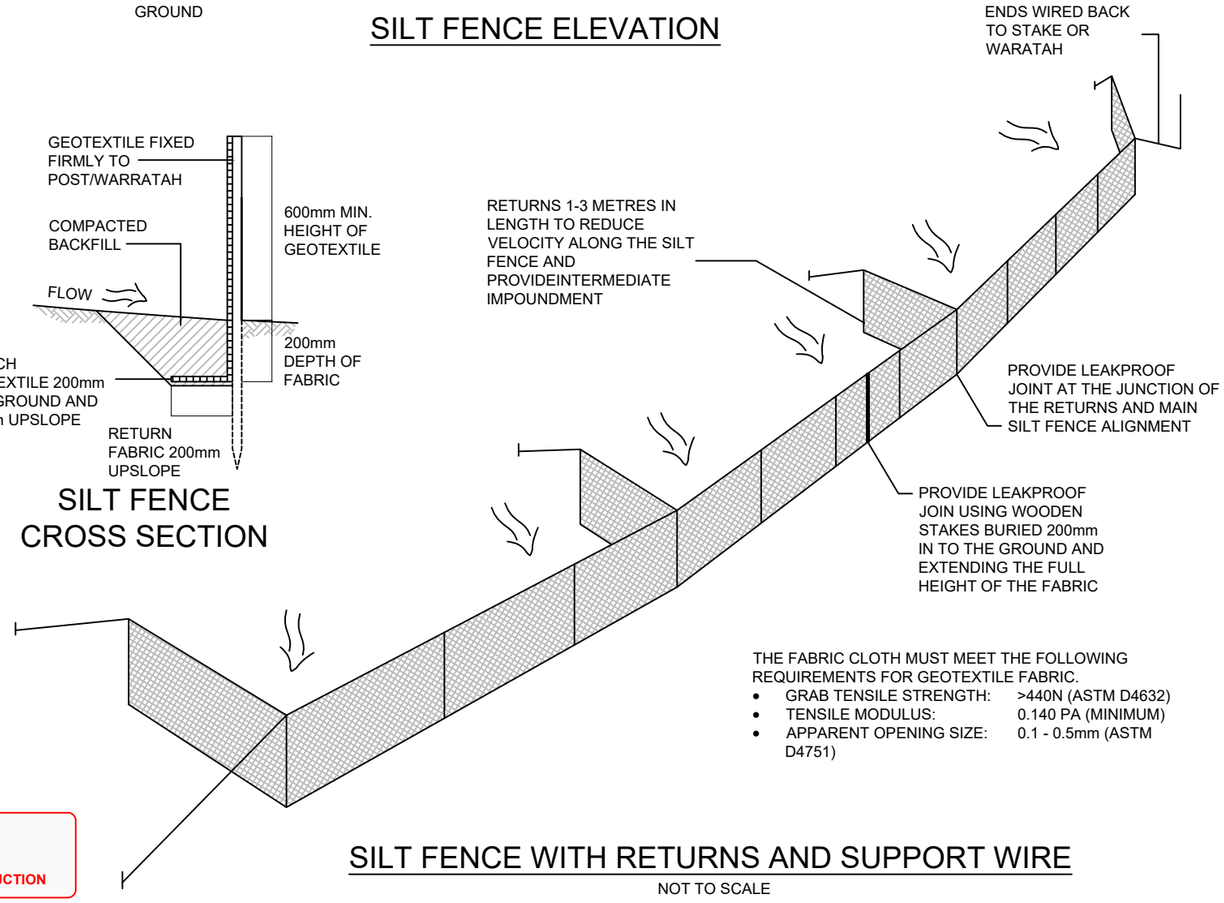
SLOPE STEEPNESS %	SLOPE LENGTH (m) (MAXIMUM)	SPACING OF RETURNS (m)
<2%	N/A	UNLIMITED
2- 10%	40	60
10 - 20%	30	50
20 - 33%	20	40
33 - 50%	15	30
>50%	6	20



SILT FENCE ELEVATION



SILT FENCE CROSS SECTION



THE FABRIC CLOTH MUST MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE FABRIC.

- GRAB TENSILE STRENGTH: >440N (ASTM D4632)
- TENSILE MODULUS: 0.140 PA (MINIMUM)
- APPARENT OPENING SIZE: 0.1 - 0.5mm (ASTM D4751)

SILT FENCE WITH RETURNS AND SUPPORT WIRE

NOT TO SCALE

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
EROSION SEDIMENT CONTROL DETAILS
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

CCL REF NO	SCALE	STATUS
17368-001	NTS @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD310	A

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD310 ESCP Details.dwg

STABILISED CONSTRUCTION ENTRANCE
SPECIFICATIONS:

APPLICATION

USE A STABILISED CONSTRUCTION ENTRANCE AT ALL POINTS OF CONSTRUCTION SITE INGRESS AND EGRESS WITH A CONSTRUCTION PLAN LIMITING TRAFFIC TO THESE ENTRANCES ONLY. THEY ARE PARTICULARLY USEFUL ON SMALL CONSTRUCTION SITES BUT CAN BE UTILISED FOR ALL PROJECTS.

DESIGN:

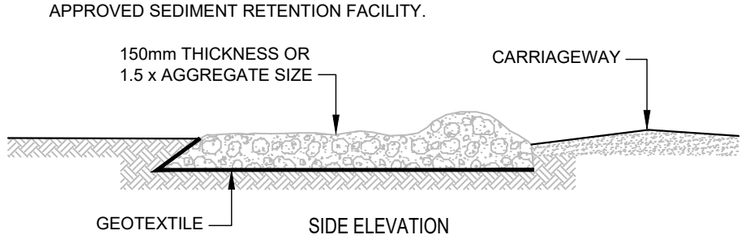
CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS AND OTHER UNSUITABLE MATERIAL AND PROPERLY GRADE IT.

1. LAY WOVEN GEOTEXTILE; PIN DOWN EDGES AND OVERLAP JOINTS.
2. PROVIDE DRAINAGE TO CARRY RUNOFF FROM THE STABILISED CONSTRUCTION ENTRANCE TO A SEDIMENT CONTROL MEASURE.
3. PLACE AGGREGATE TO THE SPECIFICATIONS BELOW AND SMOOTH IT.
4. STABILISED CONSTRUCTION ENTRANCE AGGREGATE SPECIFICATIONS:

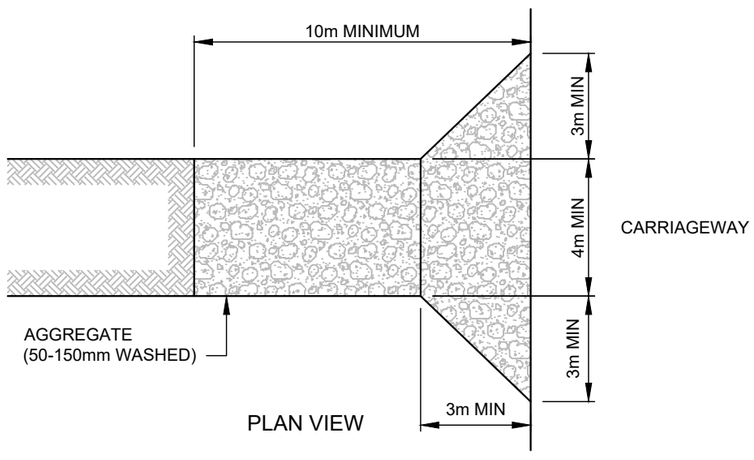
AGGREGATE SIZE	5-150mm WASHED AGGREGATE
THICKNESS	150mm MINIMUM OR 1.5 X AGGREGATE SIZE
LENGTH	10m MINIMUM LENGTH RECOMMENDED
WIDTH	4m MINIMUM

MAINTENANCE

1. MAINTAIN THE STABILISED CONSTRUCTION ENTRANCE IN A CONDITION TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. AFTER EACH RAINFALL INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT FROM THE STABILISED CONSTRUCTION ENTRANCE AND CLEAN OUT AS NECESSARY.
2. WHEN WHEEL WASHING IS ALSO REQUIRED, ENSURE THIS IS DONE ON AN AREA STABILISED WITH AGGREGATE WHICH DRAINS TO AN APPROVED SEDIMENT RETENTION FACILITY.



SIDE ELEVATION



PLAN VIEW

STABILISED CONSTRUCTION ENTRANCE

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
EROSION SEDIMENT CONTROL DETAILS
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

CCL REF NO	SCALE	STATUS
17368-001	NTS @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD311	A

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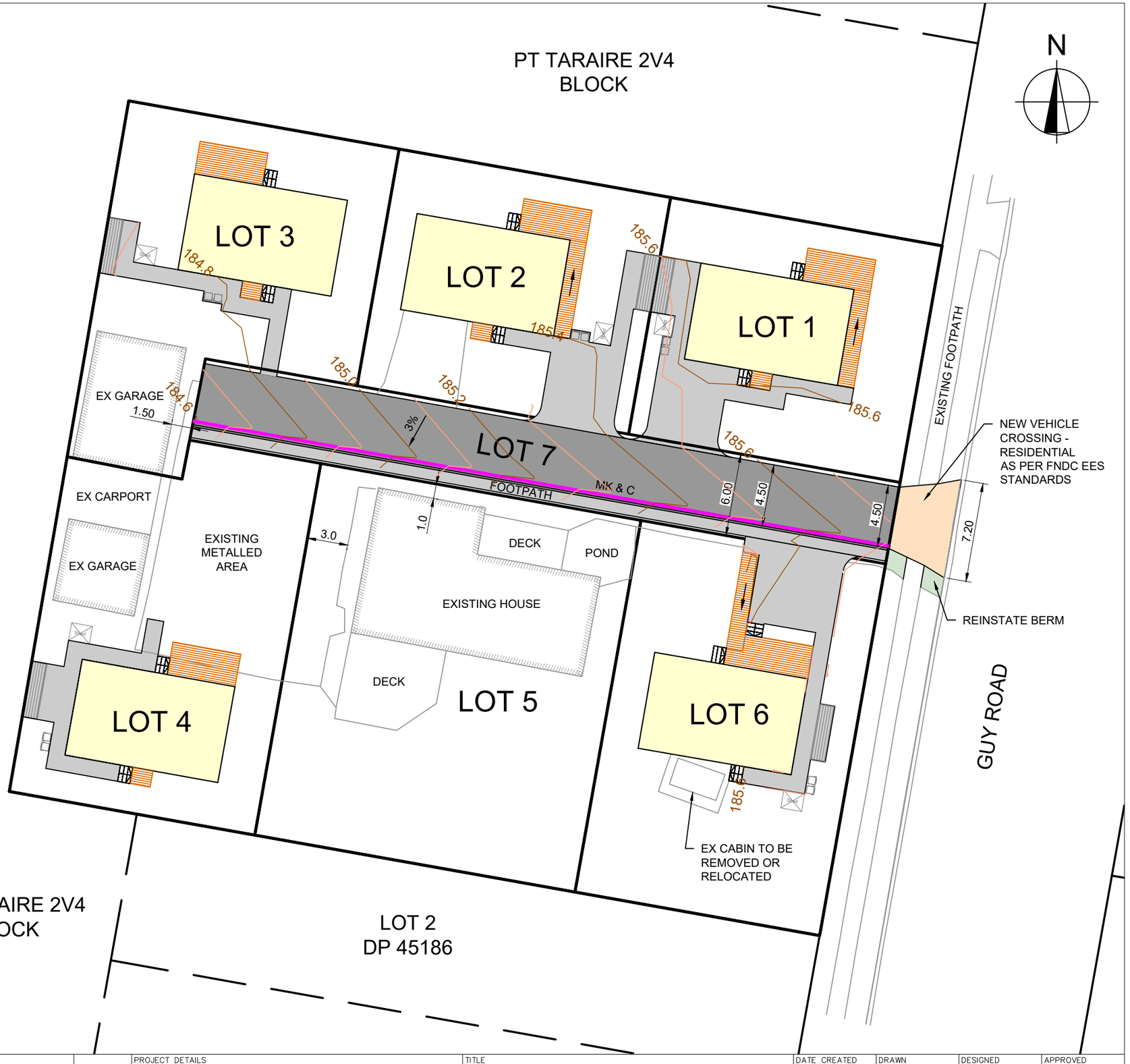
LEGEND

- FL CONTOURS MAJOR (1.0m INTERVALS)
- FL CONTOURS MINOR (0.2m INTERVALS)
- CONTOUR LABELS
- PROPOSED BUILDINGS
- PROPOSED NEW VEHICLE CROSSINGS
- PROPOSED FOOTPATHS - EXPOSED AGGREGATE CONCRETE
- DRIVEWAY - BRUSHED CONCRETE
- MOUNTABLE KERB & CHANNEL

NOTES:
1. FOR CONSTRUCTION NOTES SEE SHEET DD001.
2. CONTOURS ARE AT 0.2m INTERVALS.
3. 3% CROSSFALL MINIMUM ACROSS DRIVEWAYS.



SCALE 1:300

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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SCALE 1:300

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
GENERAL ARRANGEMENT PLAN

DATE CREATED	DRAWN	DESIGNED	APPROVED
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17368-001	1:300 @ A3		FOR APPROVAL
DWG NUMBER			REVISION
DD400			A

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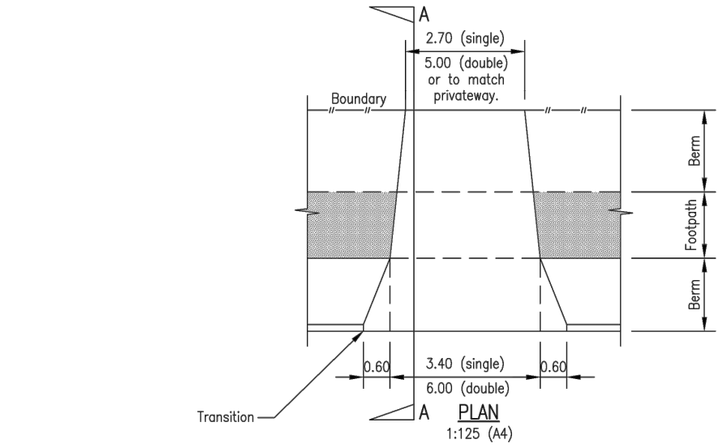
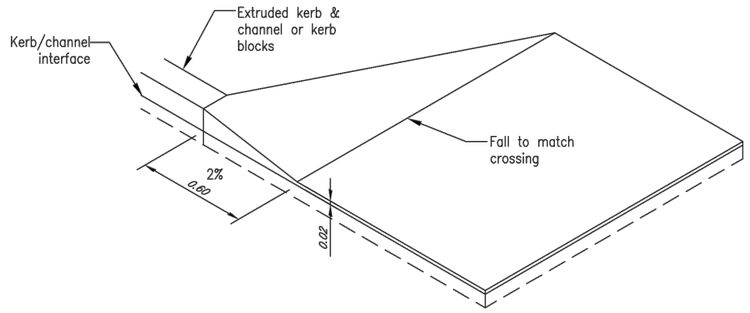
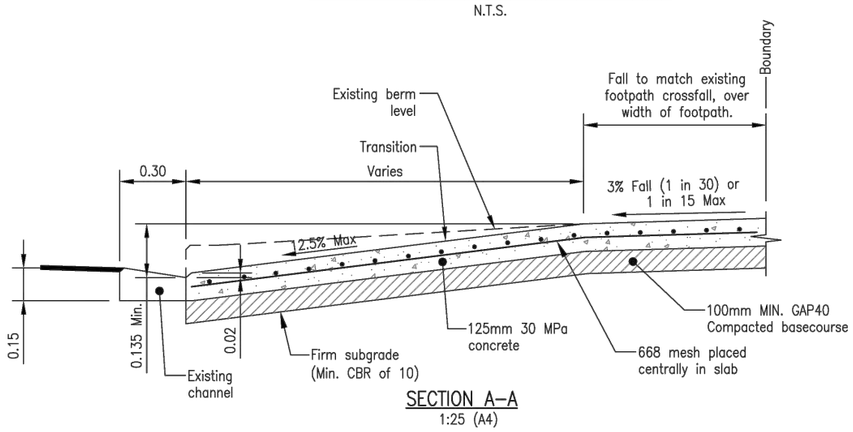
Sheet 18 Vehicle Crossing - Residential





DETAIL OF KERB TRANSITION AT CROSSING
N.T.S.



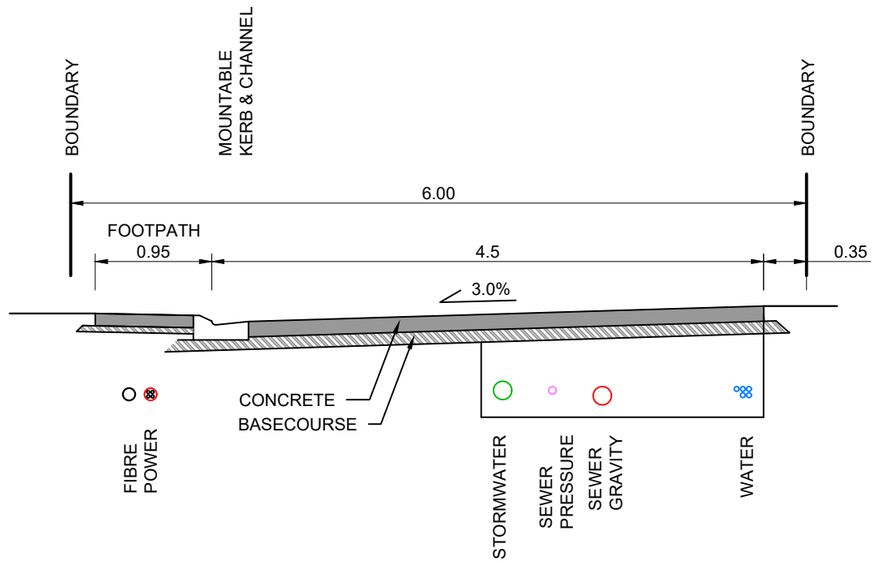
SECTION A–A
1:25 (A4)

For further notes refer to Sheet 22

VEHICLE CROSSING – RESIDENTIAL

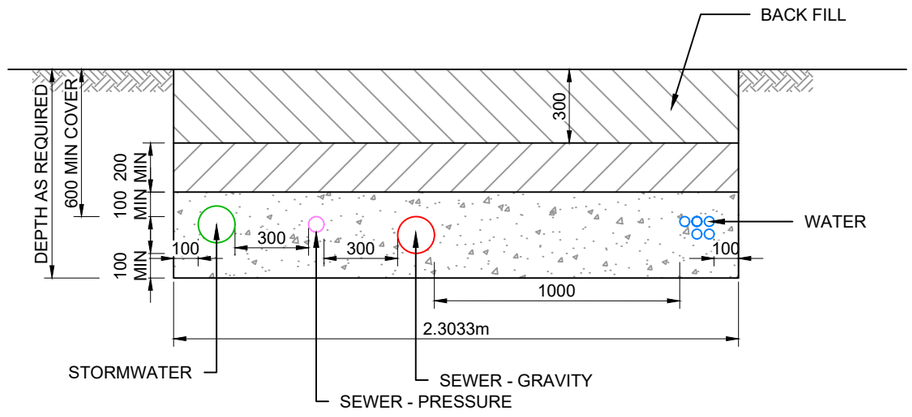
FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Date:	JAN 2021
Revision:	0.1
Scale:	AS SHOWN
SHEET No.	18



TYPICAL JOAL X-SECTION

SCALE 1:50



COMBINED SERVICE TRENCH

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
PAVEMENT DETAILS

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK
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17368-001	NTS @ A3	FOR APPROVAL	
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DD410		A	

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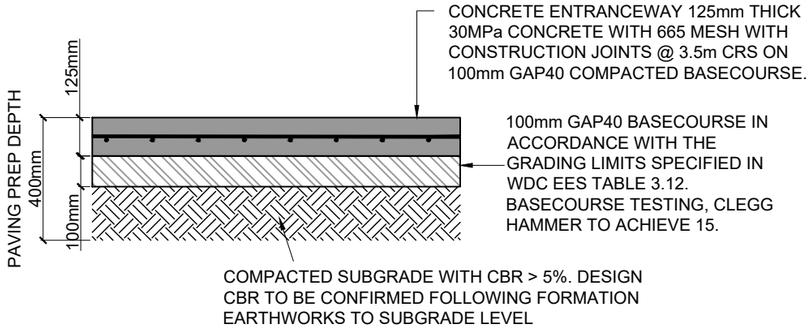
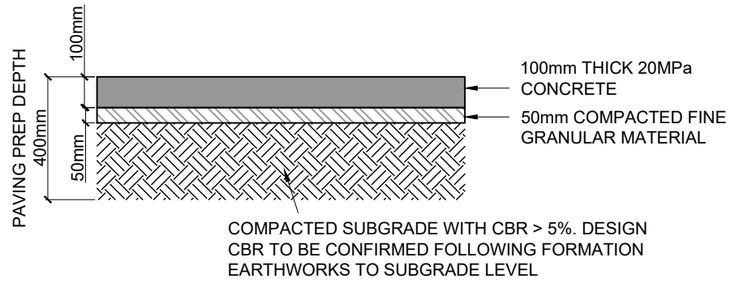


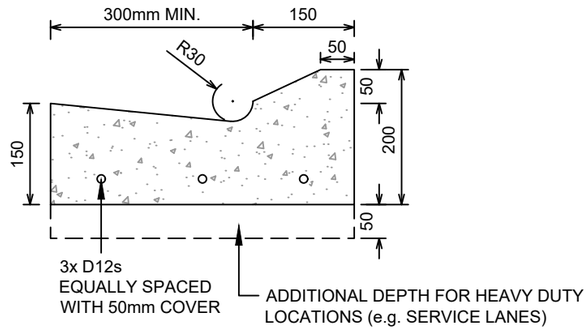
PAVEMENT DETAILS FOR JOAL, FOOTPATH ADJOINING THE MOUNTABLE KERB & CHANNEL AND CONCRETE PARKING AREAS IN FRONT OF LOTS 1, 2 & 6

SCALE 1:20



PAVEMENT DETAILS FOOTPATHS

SCALE 1:20



MOUNTABLE KERB & CHANNEL

NOT TO SCALE

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
PAVEMENT DETAILS

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

CCL REF NO	SCALE	STATUS
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DD411	A

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD410 Pavement Details.dwg

LEGEND

- FL MAJOR CONTOURS (1.0m INTERVALS)
- FL MINOR CONTOURS (0.2m INTERVALS)
- 128.0 — CONTOUR LABELS
- PROPOSED STORMWATER
- SW — PROPOSED STORMWATER (ROOF TO TANK)
- PROPOSED SUMP
- PROPOSED STORMWATER MANHOLE
- Stormwater Tank — 2000L SLIMLINE TANKS (2.25L x 0.57W x 2.15H)
- Stormwater Tank — 5000L SLIMLINE TANKS (3.00L x 0.91W x 2.15H)
- SS — EXISTING SEWER
- EXISTING SEWER MANHOLE
- PROPOSED SEWER - GRAVITY
- PROPOSED SEWER - PUMPED
- PROPOSED SEWER MANHOLE
- W — EXISTING WATER
- W — EXISTING WATER METER
- W — PROPOSED WATER
- PROPOSED WATER CONNECTIONS
- MB — PROPOSED MULTIBOX
- P — PROPOSED POWER / TELCOMMUNICATIONS

NOTE:
BEFORE PURCHASING THE TANK, SUPPLY THE DRAINAGE PLAN TO AQUTEC TO ENSURE POWER SUPPLY, INLETS AND OUTLETS DETAILS.

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

N

EX SSMH
LL: 185.09
IL: 182.84

PT TARAIRE 2V4
BLOCK

EX Ø150 SEWER

NEW SSMH
Ø1050

LOT 3

LOT 2

LOT 1

SSMH A-1
NEW Ø600
MINI
MANHOLE

NEW SUMP

POWER
CABINET

EX GARAGE

EX CARPORT

EX GARAGE

SEWER
STORAGE
TANK
5,000 LITRE

Ø100 uPVC SN8

Ø150 uPVC SN16

Ø150 uPVC SN8

Ø400 uPVC SN8

SSMH A-2
NEW Ø600
MINI
MANHOLE

EC1-4 Ø63 PE100 PN16

SWMH 1-3
NEW Ø600
MINI
MANHOLE
(SEE NOTE)

DECK

POND

EXISTING HOUSE

DECK

LOT 5

LOT 6

LOT 4

LEVEL
SPREADER.
FOR DETAIL SEE
SHEET DD538

Ø150 uPVC SN8

SWMH 1-2
NEW Ø600
MINI
MANHOLE

EX Ø180 MDPE WATER

EX Ø180 SEWER / RISING MAIN

ALL EXISTING SERVICES IN THE ROAD RESERVE TO BE LOCATED PRIOR TO START OF CONSTRUCTION

NEW MULTIBOX WITH SEPARATE LOT CONN'S FOR LOTS 1-5

EX WATER METER TO BE USED BY LOT 6

EX FOOTPATH

EX FH

GUY ROAD

EX Ø50 uPVC WATER

PT TARAIRE 2V4
BLOCK

LOT 2
DP 45186

EX SSMH
LL: 185.36
IL: 182.43

SCALE 1:300

SCALE 1:300

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
THREE WATERS PLAN

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

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17368-001	1:300 @ A3	FOR APPROVAL

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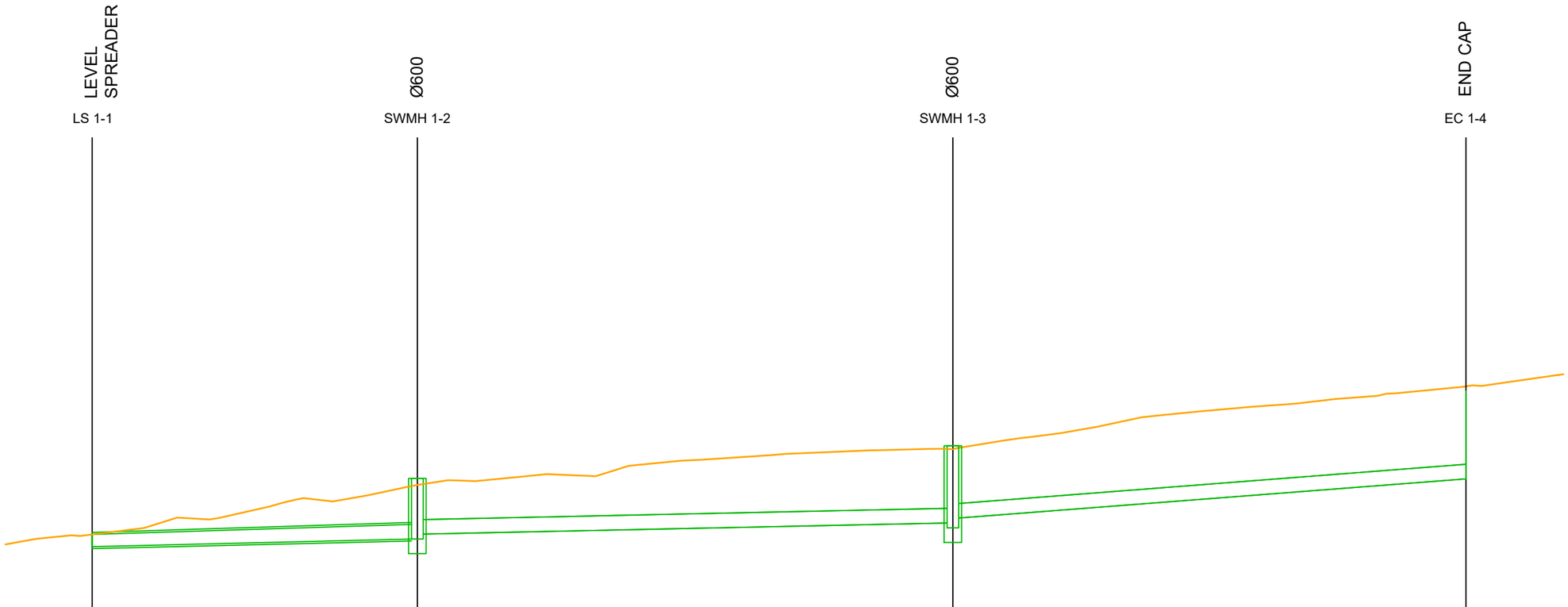
CPEng#203738



Pipe Size/Type	150 PVC-U	150 uPVC SN16	150 uPVC SN16
Grade (%)	0.47	0.42	1.53
Datum	180.000		
Depth To Invert	0.125 / 0.622	0.572 / 0.792	0.842 / 0.742 / 0.901
Invert Levels	183.800 / 183.878	183.928 / 184.043	183.993 / 184.093 / 184.496
Finished Surface	183.925	184.500	184.836 / 185.397
Chainage	0.00	16.709	44.225 / 70.589

SCALE 1:250 (H), 1:50 (V)

SW LINE 1

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:50 (0, 1, 2)

SCALE 1:250 (0, 5, 10)

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

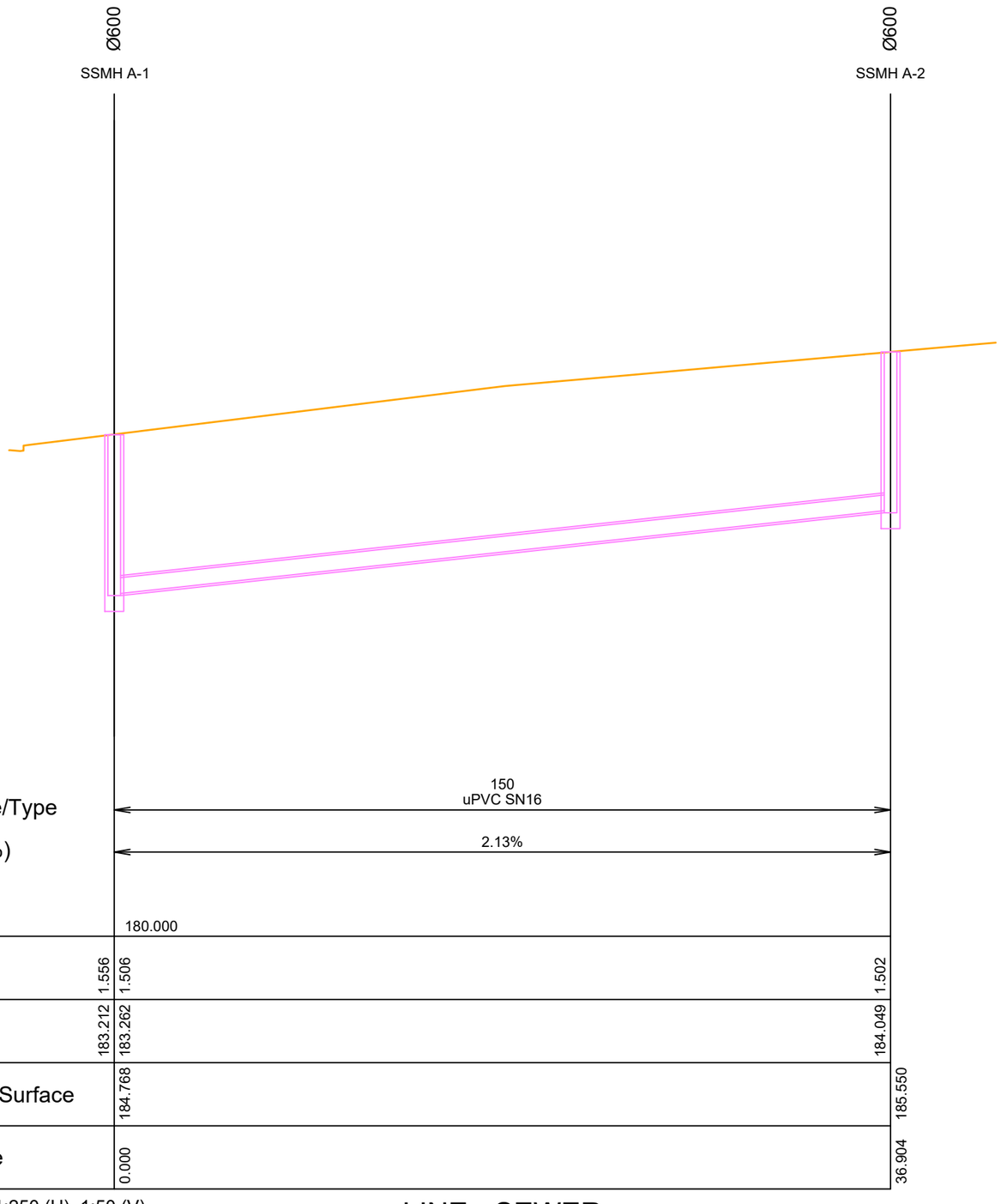
TITLE
STORMWATER LONGSECTIONS

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

CCL REF NO	SCALE	STATUS
17368-001	Hz 1:250 @ A3 Vt 1:50 @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD510	A

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD510 Stormwater Longsections.dwg



Pipe Size/Type		150 uPVC SN16	
Grade (%)		2.13%	
Datum		180.000	
Depth To Invert	1.556	1.506	1.502
Invert Levels	183.212	183.262	184.049
Finished Surface		184.768	185.550
Chainage		0.000	36.904

SCALE 1:250 (H), 1:50 (V)

LINE - SEWER

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738

SCALE 1:50 (0, 1, 2)

SCALE 1:250 (0, 5, 10)

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B			
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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
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TITLE
SEWER LONGSECTIONS

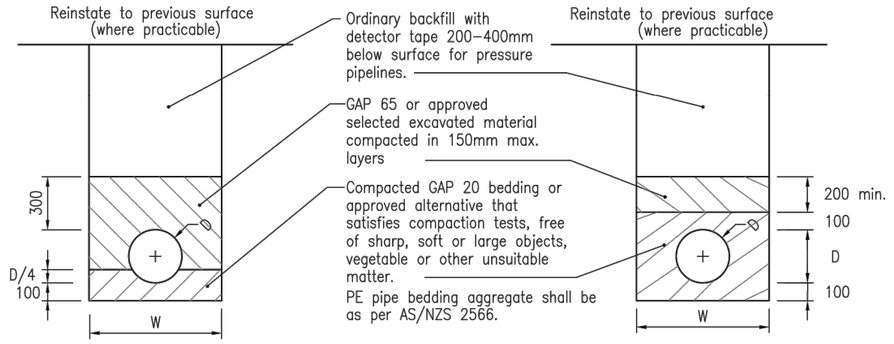
DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

CCL REF NO	SCALE	STATUS
17368-001	Hz 1:250 @ A3 Vt 1:50 @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD520	A

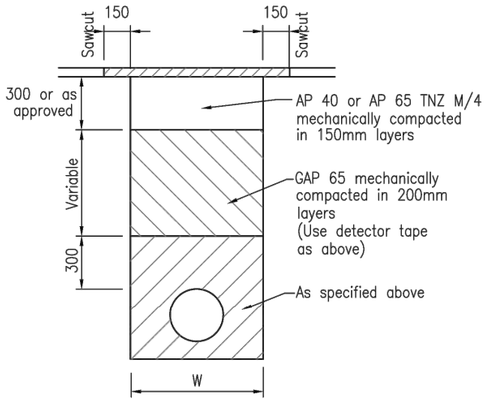
DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD520 Sewer Longsections.dwg

Sheet 31 Pipe Bedding and Backfill



CONCRETE, DUCTILE IRON, STEEL OR VITRIFIED CLAY PIPE

(Where specifically approved)



ADDITIONAL BACKFILL REQUIREMENTS UNDER CARRIAGEWAYS

(All types of pipe)

W	TYPE OF PIPE
D + 600	Steel, DI
D + 450	Concrete
D + 450	Vitrified clay
D + 400	uPVC, PE & PP

Variations in W require additional design compensation.

PVC, PE & PP PIPE

(PVC & PP not approved for water supply)

NOTES

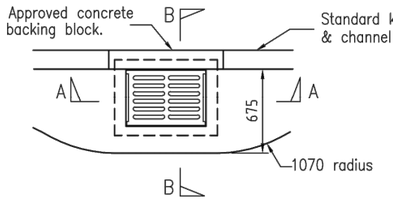
1. Concrete pipes to be RCRRJ to AS/ NZS 4058 installed to manufacturers requirements.
2. Ordinary backfill shall be free from stones or rocks greater than 150mm nominal diameter compacted in 300mm layers.
3. Replace topsoil to original depth as necessary.
4. Existing sealed roadway excavations are to be resurfaced with 50mm of asphaltic concrete.
5. Clegg Hammer test:
   0–300mm depth range Clegg reading not less than 45.
   300mm–1.5m depth range Clegg reading not less than 30.
   1.5m–top of pipe bedding material Clegg reading not less than 25.
6. PRIVATEWAY base course metalling within pipe trenches may be in accordance with the Privateway Standards.
7. Trench width shall not exceed W at the pipe crown level.
8. Unsatisfactory trench material is to be undercut and replaced with compacted hardfill.
   In poor soils such as swamp, peat, and in rock the minimum depth of granular bedding material below the invert is to be 200mm or specific design as necessary.
9. Pipelines at 1:8 gradient or steeper shall have cement stabilised bedding and/or surrounds.
10. Pipelines at 1:3 gradient or steeper shall have weak mix concrete bedding (10MPa) in accordance with Sheet 32. Large pipes will require specific pier design.
11. Concrete bedding shall be allowed to cure for 48 hours prior to backfilling.
12. Backfilling – carriageways may be with 'flowable fill' (low strength fly–ash concrete).
13. Granular bedding is to satisfy N.Z.S. 7643 Appendix B.
14. Minimum cover over pipes (unless specifically designed or protected in accordance with sheet 32).
    A. 600mm if not subjected to traffic loading
    B. 900mm under carriageways and trafficed areas.
15. Sand is not permitted as PE Pipe Bedding

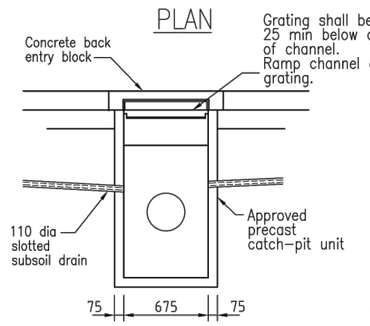
PIPE BEDDING & BACKFILL
(FOR ALL ENVIRONMENTS)

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

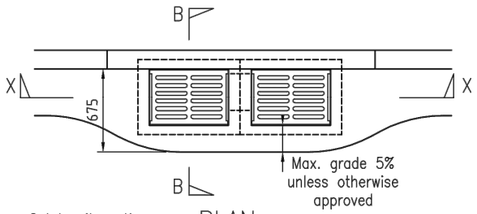
Date:	FEB 2022
Revision:	0.2
Scale:	AS SHOWN
SHEET No.	31

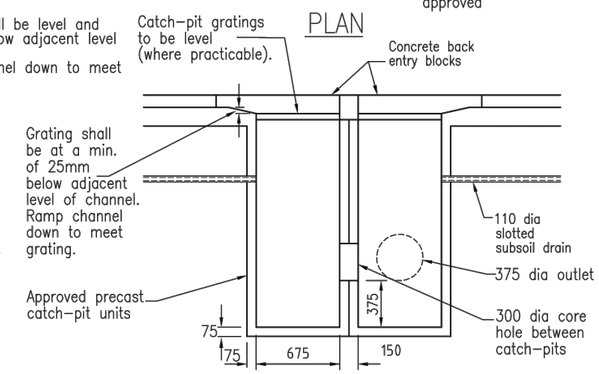
Sheet 34 Catch-Pit Details



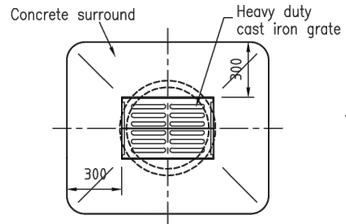


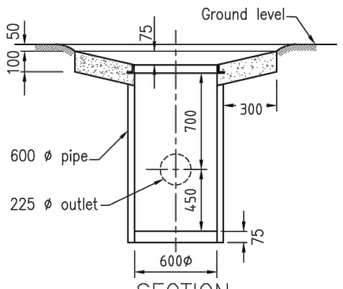
SECTION A–A
SINGLE CATCH–PIT





SECTION X–X
DOUBLE CATCH–PIT

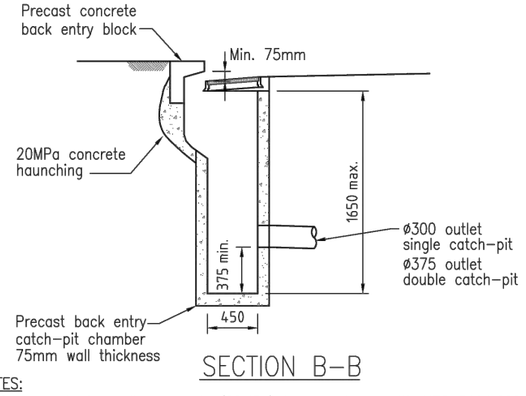




SECTION
FIELD CATCH–PIT DETAIL

ALTERNATIVE CAST IRON GRATE CONFIGURATION

(perpendicular slots) for cycle routes



SECTION B–B

NOTES:

1. Concrete to be ordinary grade (20MPa) in accordance with NZS 3104:2021
2. Catch–pit outlet pipes to be 1:100 min gradient.
3. Mega catch–pits require specific design and approval.
4. Grates to be cycle friendly. Refer Section 3.2.14.6.

CATCH–PIT DETAILS
FOR ENVIRONMENTS LIVING 1 AND 2, AND BUSINESS 1–5

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Date:	FEB 2022
Revision:	0.2
Scale:	AS SHOWN
SHEET No.	34

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

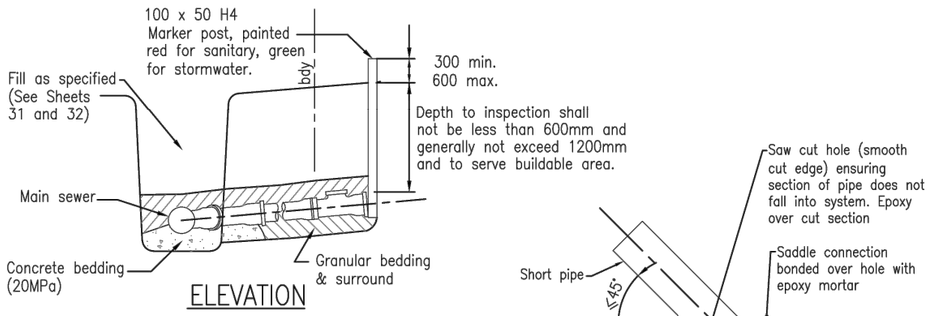
TITLE
TYPICAL DETAILS
SHEET 1

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

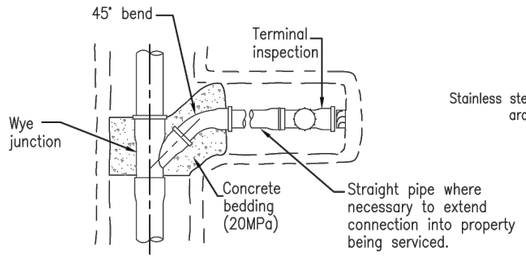
CCL REF NO	SCALE	STATUS
17368-001	NTS @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD530	A

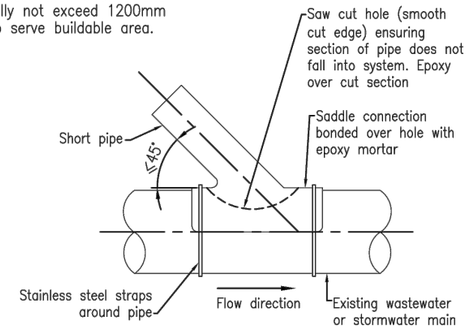
Sheet 37 Stormwater and Sewer Connections



ELEVATION



PLAN STANDARD CONNECTION

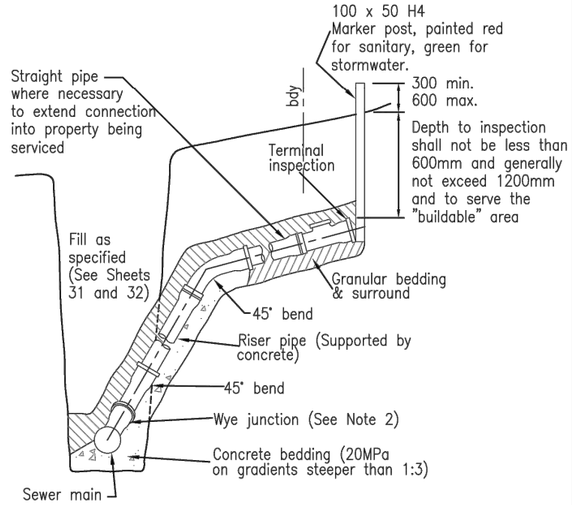


SADDLE CONNECTION

If main > 225mm

NOTES:

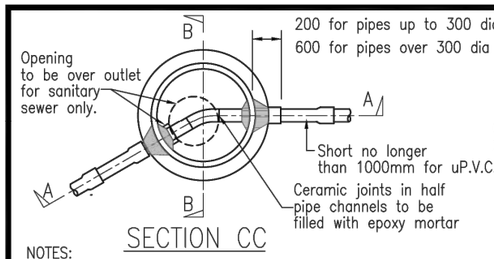
1. The terminal inspection shall be located not less than 300mm inside the property being serviced and be free of obstructions
2. For stormwater connections, junctions to be: (in order of preference)
   a. Prefabricated standard wye junctions,
   b. Prefabricated factory special connection, epoxy mortared saddled flange connection with appropriate insert adapter > DN 225.
3. Terminal blank end required for stormwater connections.
4. Pipes and fittings are to be sewer grade uPVC, or concrete to relevant NZ Standard
5. Pipelines that are likely to carry commercial or industrial waste are to satisfy the manufacturers requirements.
6. Specific design may be required in potentially unstable areas.
7. Joint flexibility is to be maintained where pipelines are in contact with concrete. Pipes shall be separated from concrete using DPC.
8. AS–BUILT plans are required for all connections.



RAMPED RISER CONNECTION

STORMWATER AND SEWER CONNECTIONS FOR ALL ENVIRONMENTS	
FAR NORTH DISTRICT COUNCIL ENGINEERING STANDARDS	Date: JAN 2021
	Revision: 0.1
	Scale: AS SHOWN
	SHEET No. 37

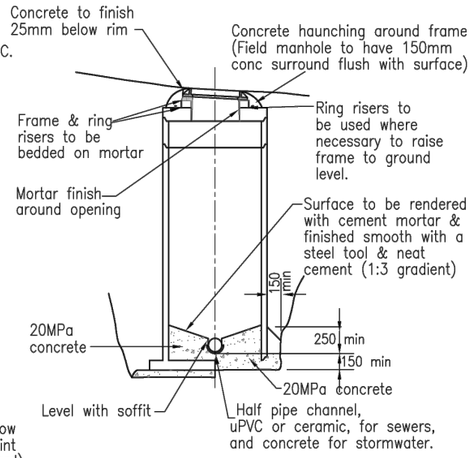
Sheet 39 Standard Precast Manhole



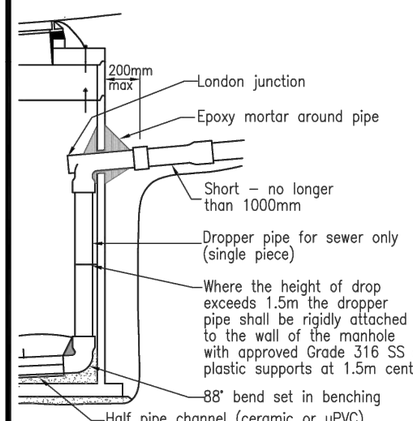
SECTION CC

NOTES:

1. This detail is applicable for pipe diameters up to 600mm & for manhole depths up to 5.0m.
2. 150mm thick reinforced concrete lids with heavy duty ductile iron frames & covers to be used in driveways, carriageways & berms. 100mm thick concrete lids with light duty cast iron frames & covers may be used elsewhere.
3. Precast manhole bases shall be used in all instances with minimum sized holes cut for pipe entry.
4. No additional thin plastering of benching or benching of inverts is permitted.
5. All concrete to be 20MPa.
7. Where non–concrete pipe connections are made to concrete manholes, then a gritted starter pipe shall be installed to allow bond between manhole and pipe material. Also, a 3flexible joint should be specified as part of gritted starter pipe (as standard).
8. All manholes >1.2m in depth shall be provided with manhole step rungs. These shall follow the requirements on sheet 40

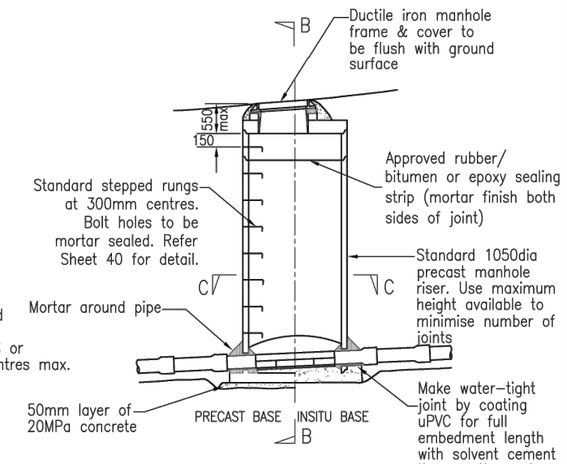


SECTION BB



SECTION A–A INTERNAL DROP

Note:
1. This detail is applicable for pipe diameters up to 250mm & for manhole depth up to 5.0m & for manhole diameters ⩾ 1200mm.
2. External drops shall not be used



SECTION AA

STANDARD PRECAST MANHOLE SEWER AND STORMWATER FOR ALL ENVIRONMENTS	
FAR NORTH DISTRICT COUNCIL ENGINEERING STANDARDS	Date: FEB 2022
	Revision: 0.2
	Scale: AS SHOWN
	SHEET No. 39

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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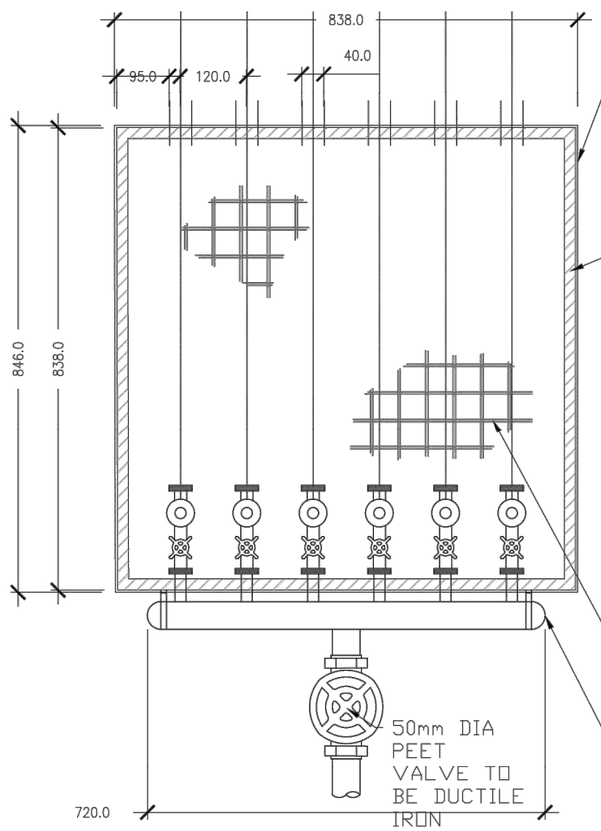
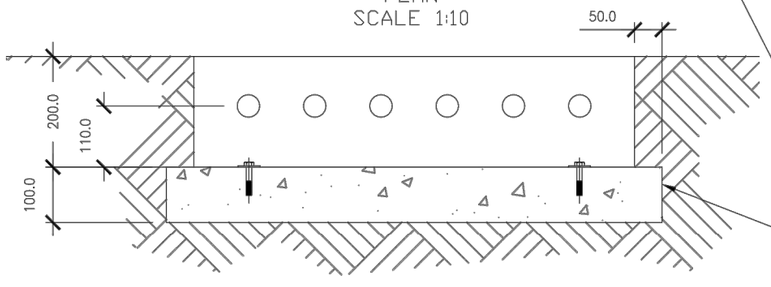
PROJECT DETAILS: TE HAU ORA O NGAPUHI LTD, 15 GUY ROAD, KAIKOHE

TITLE: TYPICAL DETAILS SHEET 2

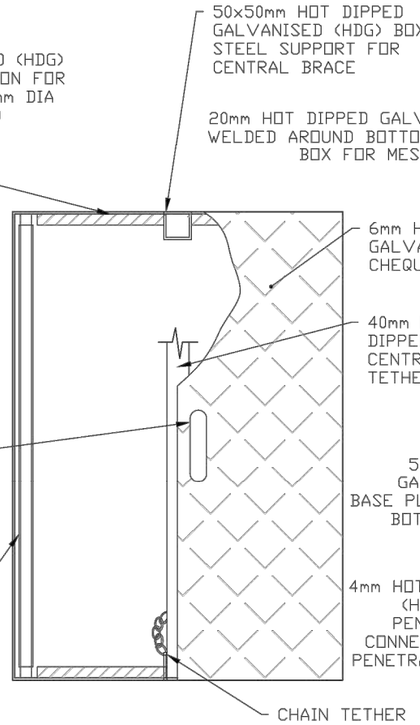
DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK
CCL REF NO	SCALE	STATUS	
17368-001	NTS @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD531		A	



6 WAY MANIFOLD - TYPICAL PLAN
SCALE 1:10



6 WAY MANIFOLD - TYPICAL FRONT ELEVATION
SCALE 1:10

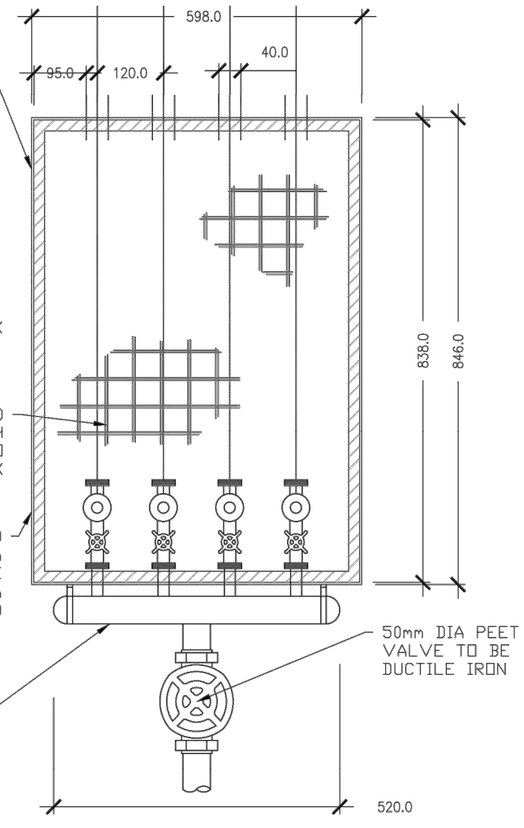


CHAMBER BOX - TYPICAL LID DETAIL
SCALE 1:10

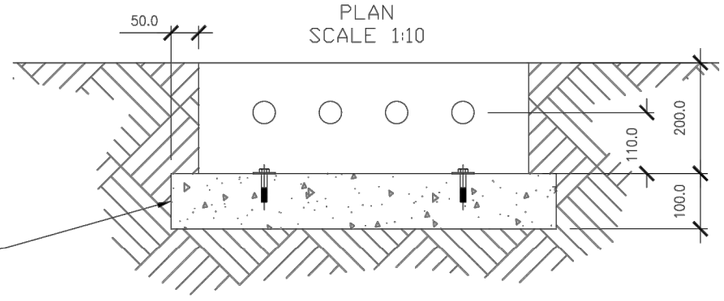
50x50x4mm HOT DIPPED GALVANISED (HDG) MESH BASE PLATE TO BE FIXED TO BOTTOM OF CHAMBER BOX

50mm DIA STAINLESS STEEL (SS) MANIFOLD FIXED TO BOX EXTERIOR. 6/4x30mm DIA PENETRATIONS FOR INDIVIDUAL MANIFOLD FEED

100mm CONCRETE BASE POURED ON GOOD GROUND. CHAMBER BOX TO BE FIXED TO BASE BY 4 CHEMSETS OR CAST INSITU RAG END BOLTS. MIN OF 50mm EMBEDMENT. MINIMUM 75x75mm HOT DIPPED GALVANISED (HDG) WASHER OR PLATE TO BE USED TO SPAN GAP IN MESH.



4 WAY MANIFOLD - TYPICAL PLAN
SCALE 1:10



4 WAY MANIFOLD - TYPICAL FRONT ELEVATION
SCALE 1:10

IMPORTANT NOTE: PRODUCER STATEMENTS

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PHILIP COOK
CPEng#203738

MULTIPLE WATER CONNECTIONS
FOR ALL ENVIRONMENTS

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Date: FEB 2022
Revision: 0.2
SHEET No. 47

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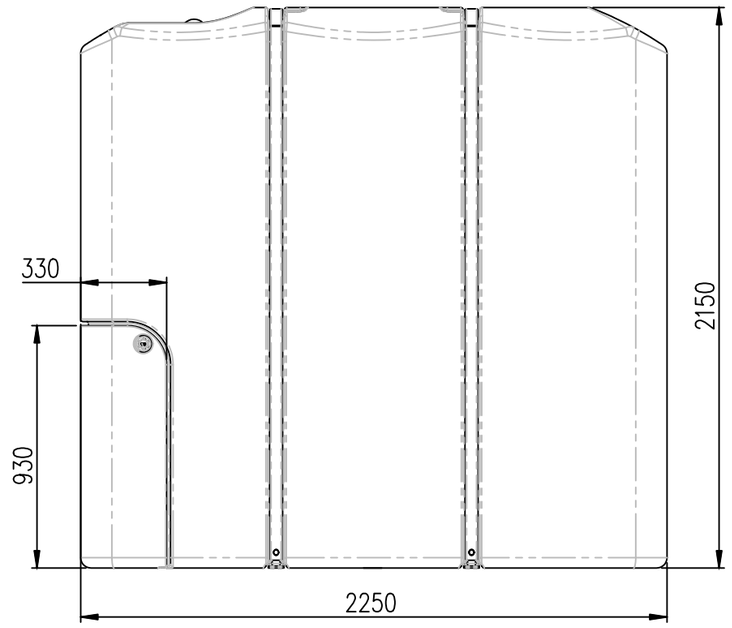
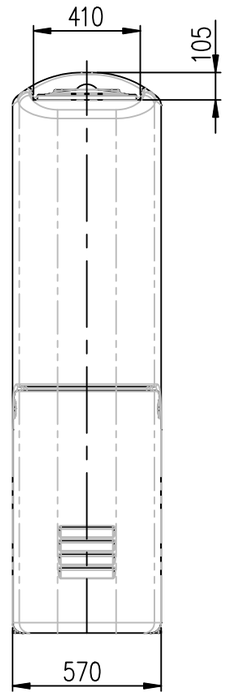
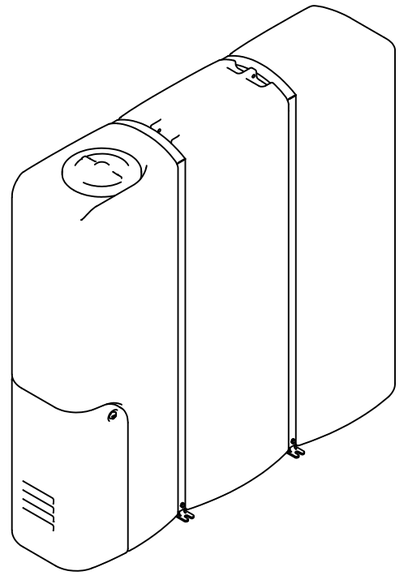
PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

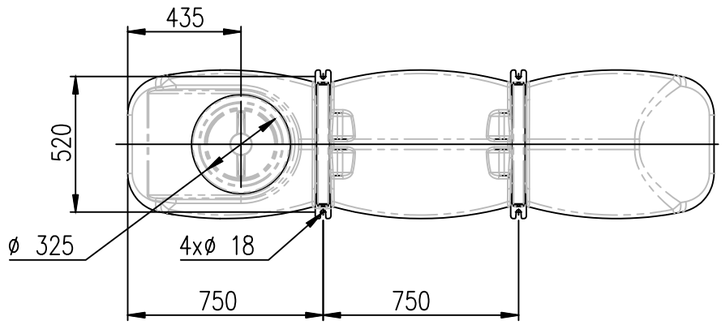
TITLE
TYPICAL DETAILS
SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK
CCL REF NO	SCALE	STATUS	
17368-001	NTS @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD532		A	









PROMAX SLIMLINE TANKS
2000L
SL1002000

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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B			
A	1ST ISSUE	13-09-24 KH	PC

PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

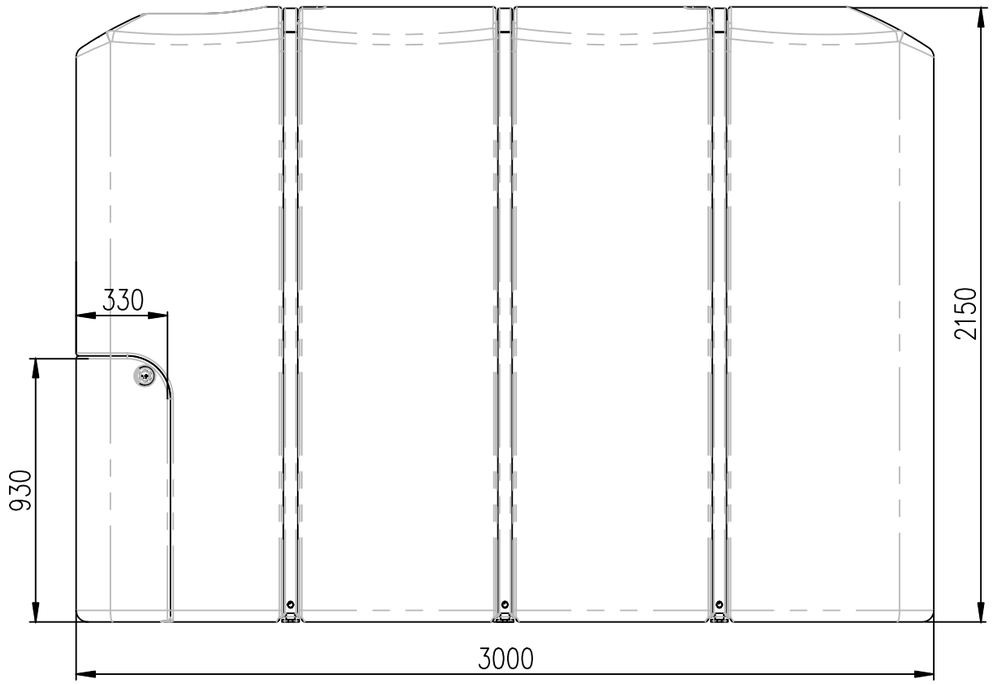
TITLE
TYPICAL DETAILS
SHEET 4

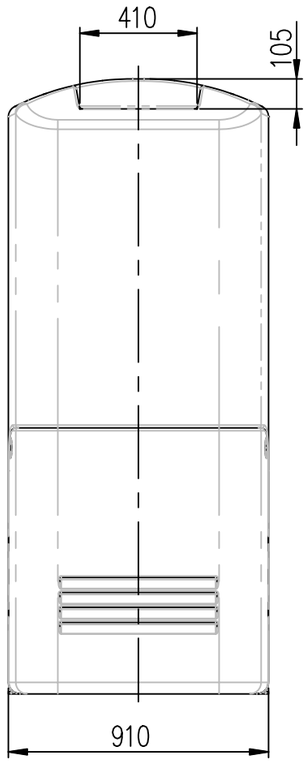
DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

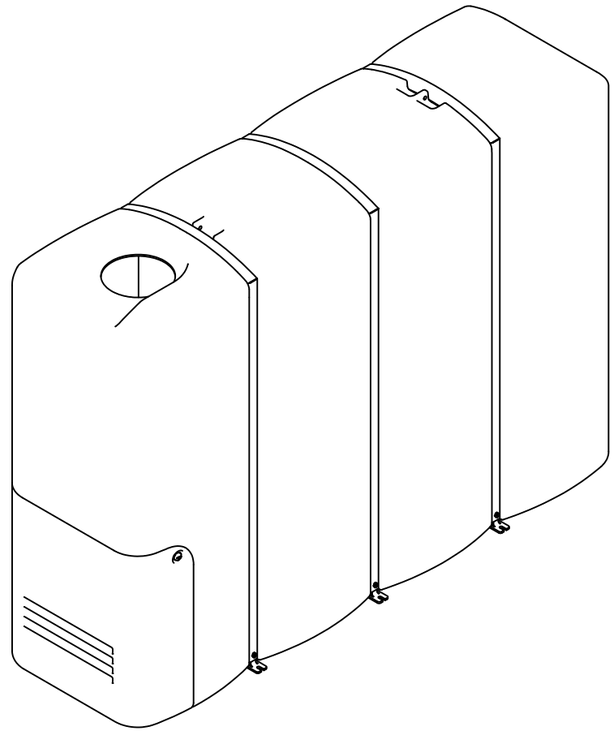
CCL REF NO	SCALE	STATUS
17368-001	NTS @ A3	FOR APPROVAL

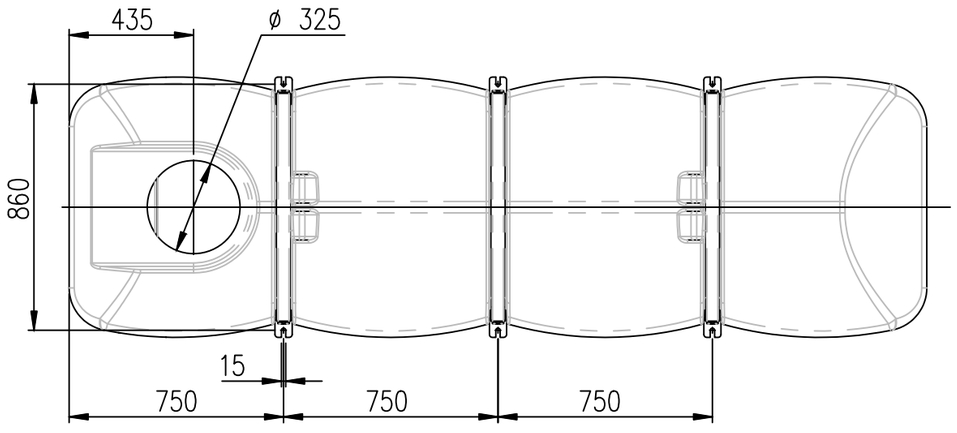
DWG NUMBER	REVISION
DD533	A

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD530 Typical Details.dwg









IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738

PROMAX SLIMLINE TANKS
5000L
SL1005000

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C			
B			
A	1ST ISSUE	13-09-24	KH PC

PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

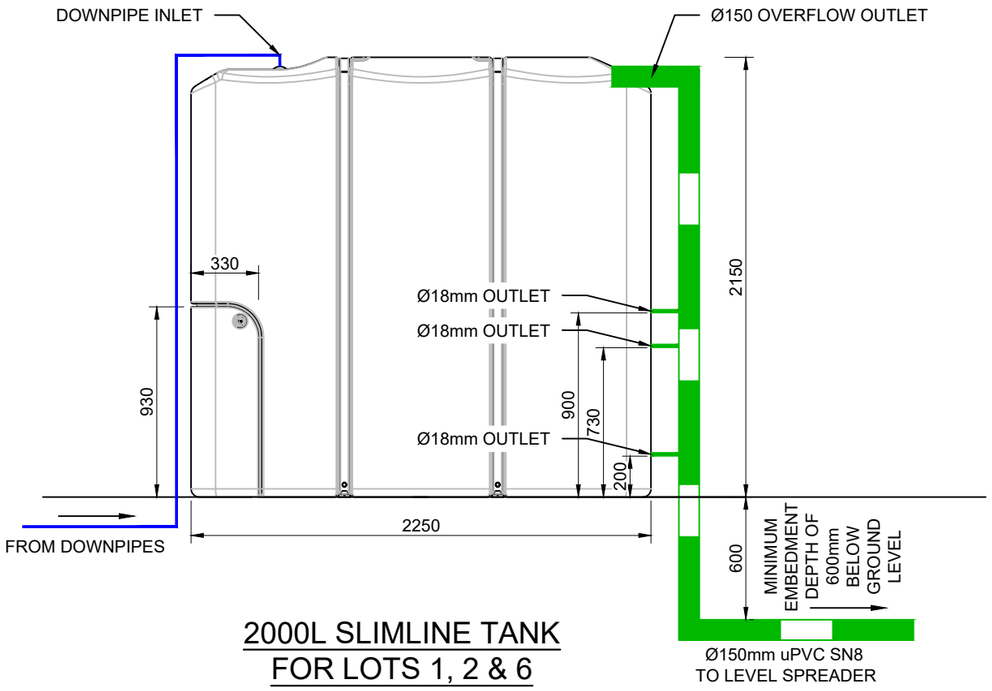
TITLE
TYPICAL DETAILS
SHEET 5

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

CCL REF NO	SCALE	STATUS
17368-001	NTS @ A3	FOR APPROVAL

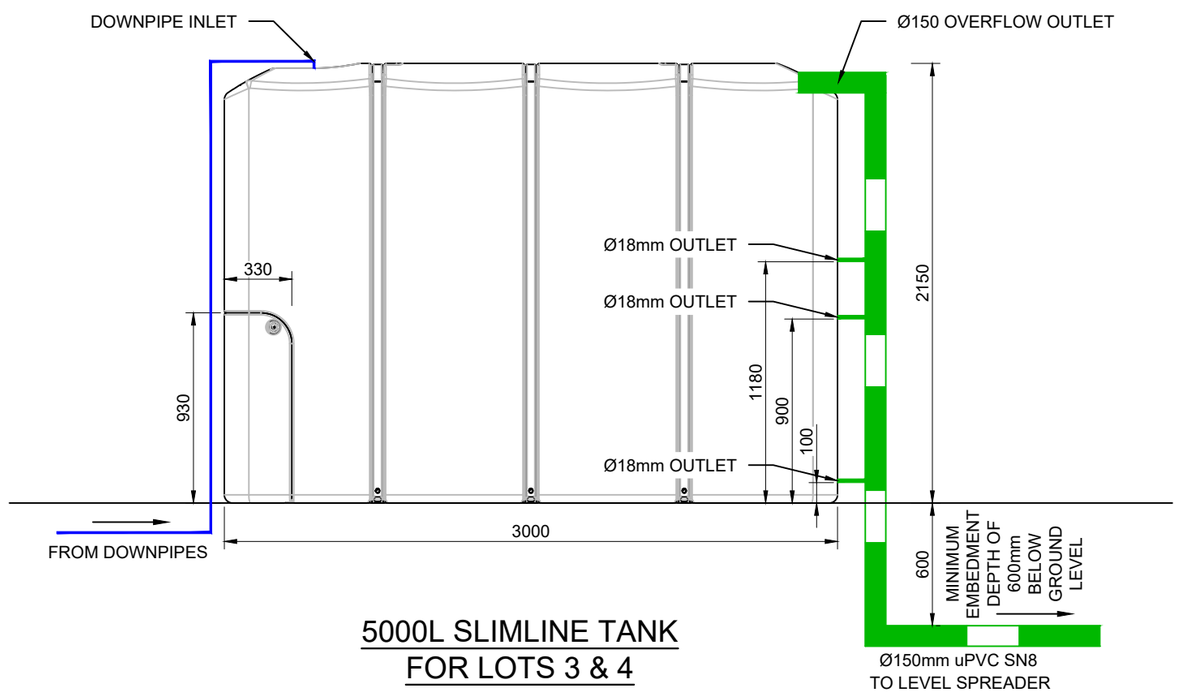
DWG NUMBER	REVISION
DD534	A

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD530 Typical Details.dwg



2000L SLIMLINE TANK
FOR LOTS 1, 2 & 6

SCALE 1:30



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FOR LOTS 3 & 4

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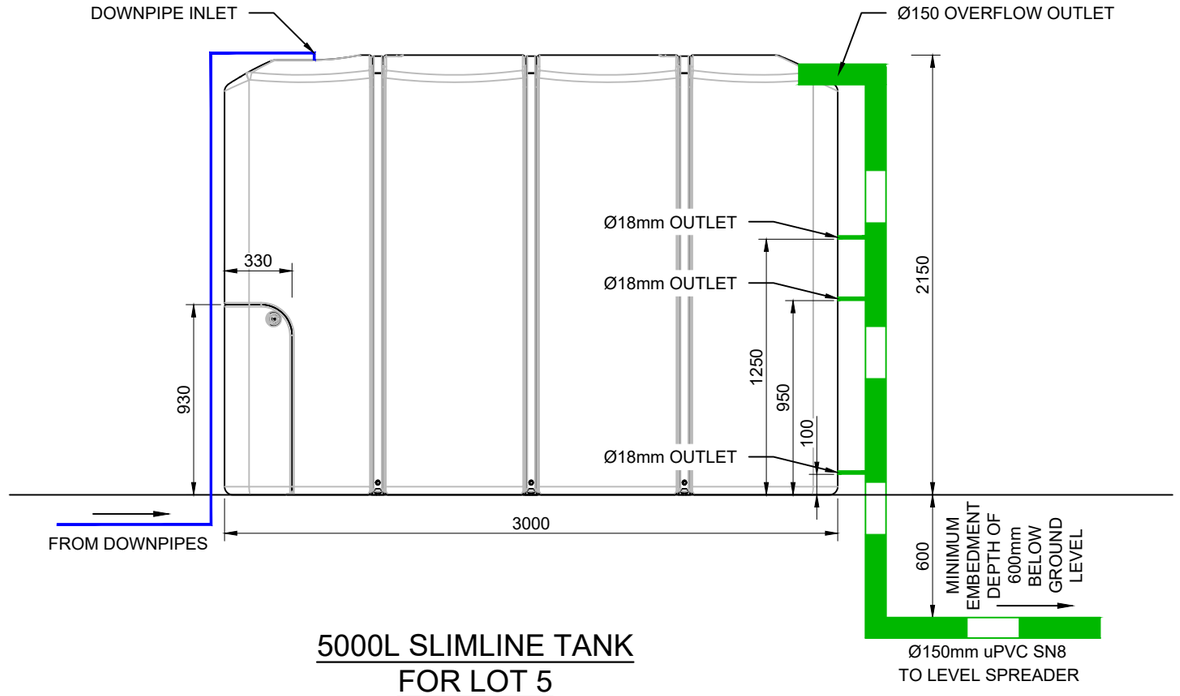

5000L SLIMLINE TANK
FOR LOT 5

SCALE 1:30

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CPEng#203738

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

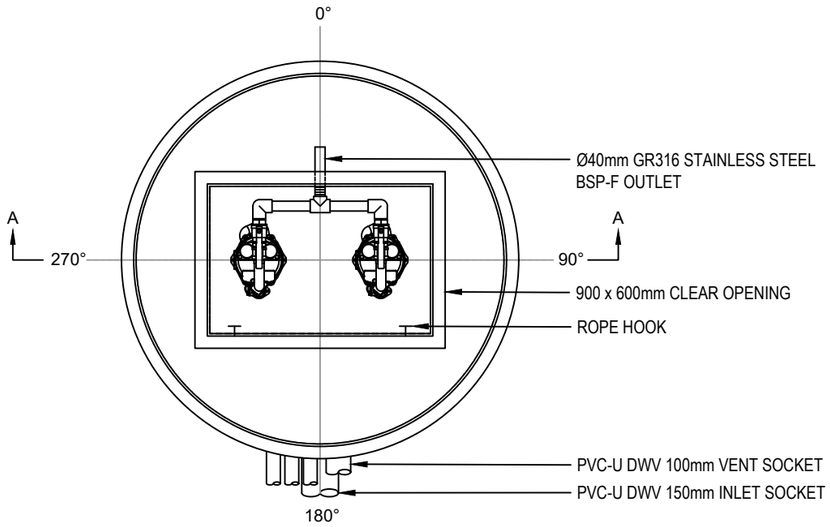
TITLE
TYPICAL DETAILS
SHEET 6

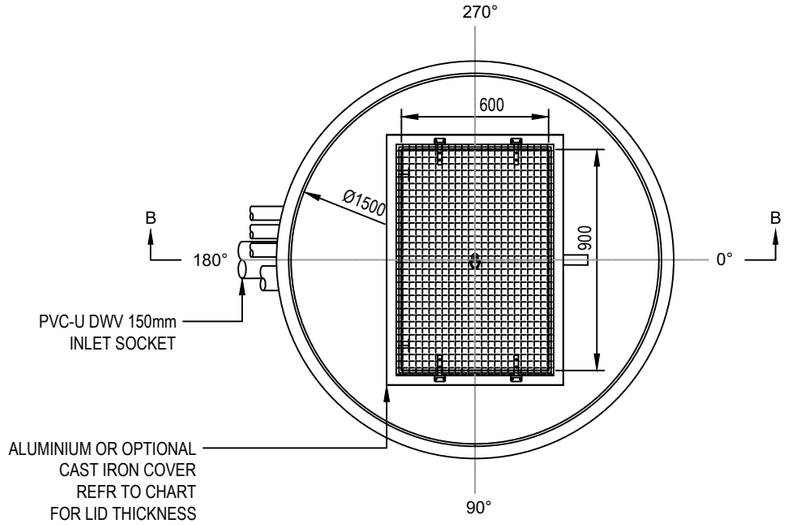
DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

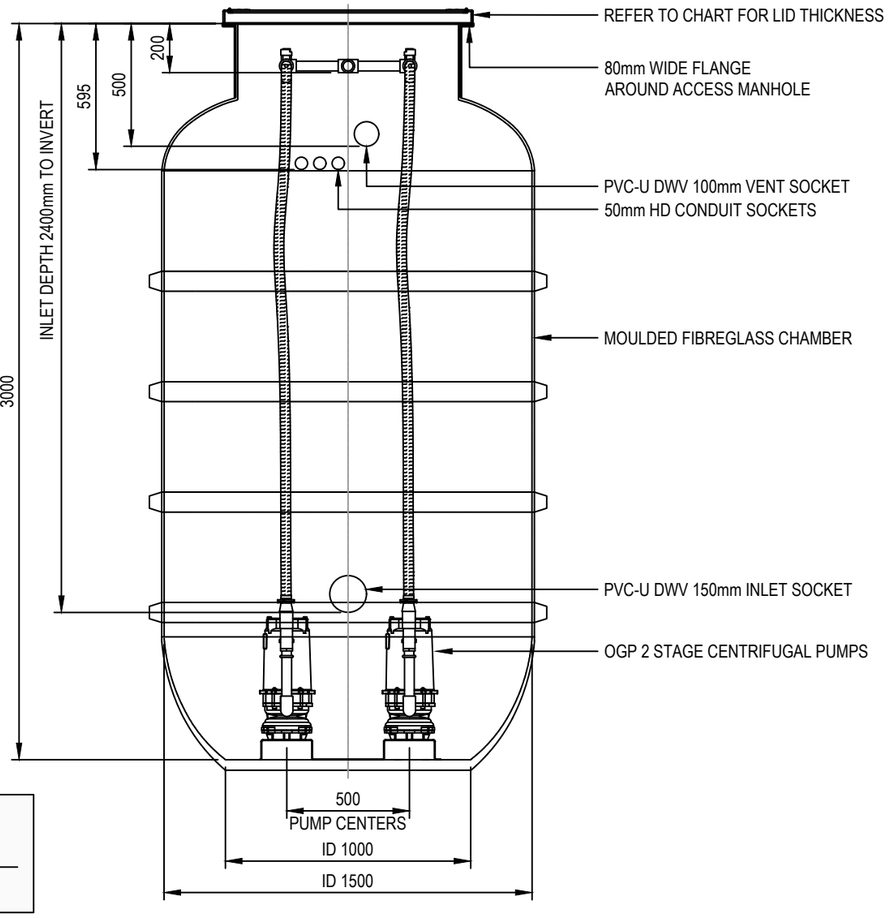
CCL REF NO	SCALE	STATUS
17368-001	NTS @ A3	FOR APPROVAL

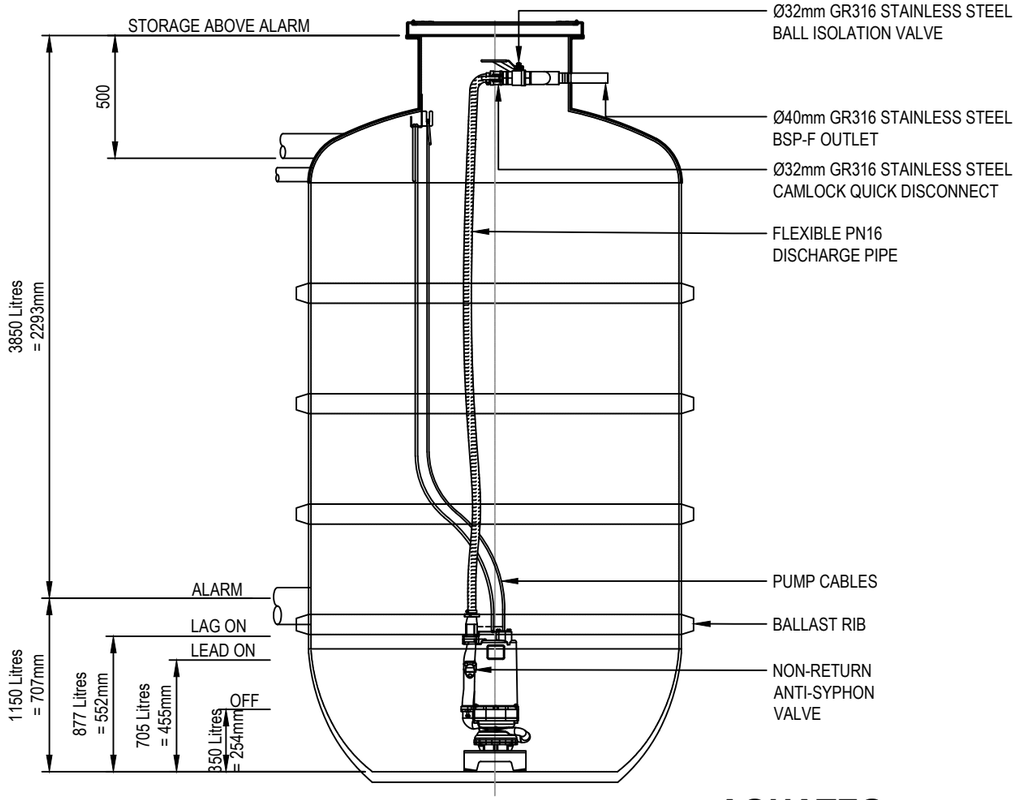
DWG NUMBER	REVISION
DD535	A

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD530 Typical Details.dwg









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AQUATEC
PRESSURE SEWER PUMP UNIT
DUPLEX OGP 5000L

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PROJECT DETAILS
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15 GUY ROAD
KAIKOHE

TITLE
TYPICAL DETAILS
SHEET 7

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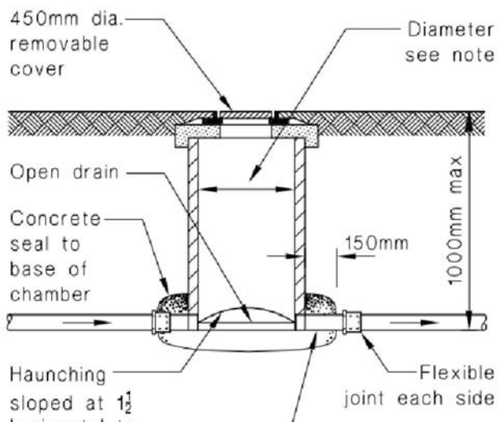
17368-001	NTS @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD536	A

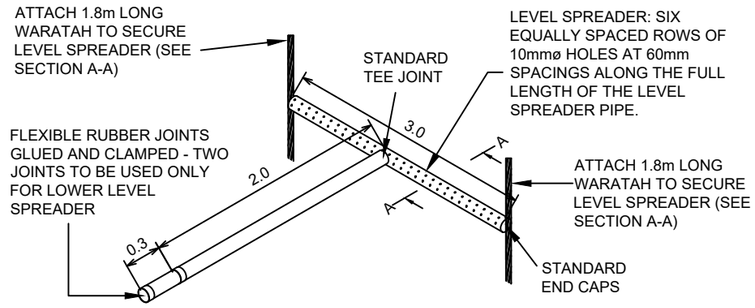
DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD530 Typical Details.dwg

Figure 11: **Typical Inspection Chamber**
Paragraphs 3.5.3, 3.7.1 and 3.7.4



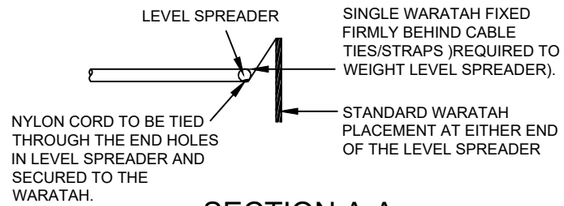
SECTION

NOTE:
Inspection chamber diameter to be:
-450 mm for drains 100 mm dia or less.
-600 mm for drains greater than 100 mm dia.



LEVEL SPREADER DETAIL

NOT TO SCALE



SECTION A-A

NOT TO SCALE

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PROJECT DETAILS
TE HAU ORA O NGAPUHI LTD
15 GUY ROAD
KAIKOHE

TITLE
TYPICAL DETAILS
SHEET 8

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK

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17368-001	NTS @ A3	FOR APPROVAL

DWG NUMBER	REVISION
DD537	A

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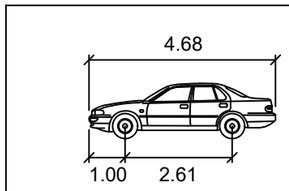

90-CAR

	Meters
Width	: 1.75
Track	: 1.75
Lock to Lock Time	: 6.0 s
Steering Angle	: 22.8 deg

PT TARAIRE 2V4
BLOCK

N

LOT 3

LOT 2

LOT 1

LOT 7

FOOTPATH

EXISTING FOOTPATH

184.8

185.6

185.4

185.0

185.2

184.6

185.6

185.6

EX GARAGE

EX CARPORT

EX GARAGE

EXISTING METALLED AREA

DECK

POND

EXISTING HOUSE

DECK

LOT 4

LOT 5

LOT 6

185.6

GUY ROAD

PT TARAIRE 2V4
BLOCK

LOT 2
DP 45186

SCALE 1:300

0 4 8 12

SCALE 1:300

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS

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15 GUY ROAD
KAIKOHE

TITLE
VEHICLE TRACKING PLAN

DATE CREATED	DRAWN	DESIGNED	APPROVED
13/09/2024	K HANSARD	T AHMED	P COOK
CCL REF NO	SCALE	STATUS	
17368-001	1:300 @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD600		A	

DATE PLOTTED: 13/09/2024 FILE PATH: Z:\17000-17499\17368 - 15 Guy Rd, Kaikohe\17368-001\40 - Civil\410 - Cad\411 - Active\Detailed Design\17368-001 DD600 Vehicle Tracking Plan.dwg

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Project				Job Ref.	
15 GUY ROAD, KAIKOHE				17368-001	
Section				Sheet no.	
STORMWATER MANAGEMENT				1	
Calc. by	Date	Chck'd by	Date	App'd by	Date
ET	12/09/2024			TA	13/09/2024

******** STORMWATER QUANTITY –**********

Te Hau Ora o Ngāpuhi has requested Cook Costello to address the reporting and design requirements of the stormwater for 4 DP 189557 (15 Guy Road, Kaikohe) This memo addresses the attenuation requirement for the proposed development.

******** Proposed Development –**********

The existing site is relatively flat. Drainage currently discharges to the neighbouring western properties via sheet flow.

The new development will collect stormwater from the driveway, hard-standing areas and roofs through kerbs, channels sumps and downpipes and discharge the water to the southwestern corner through a spreader bar. Stormwater from the roofs onsite will be attenuated via slimline tanks attached to the side of the existing and proposed dwellings, these attenuation tanks will also discharge to the proposed stormwater pipelines through the property which discharges to the southwestern corner via a spreader bar.

Figure 1: Existing Layout for 15 Guy Road Street

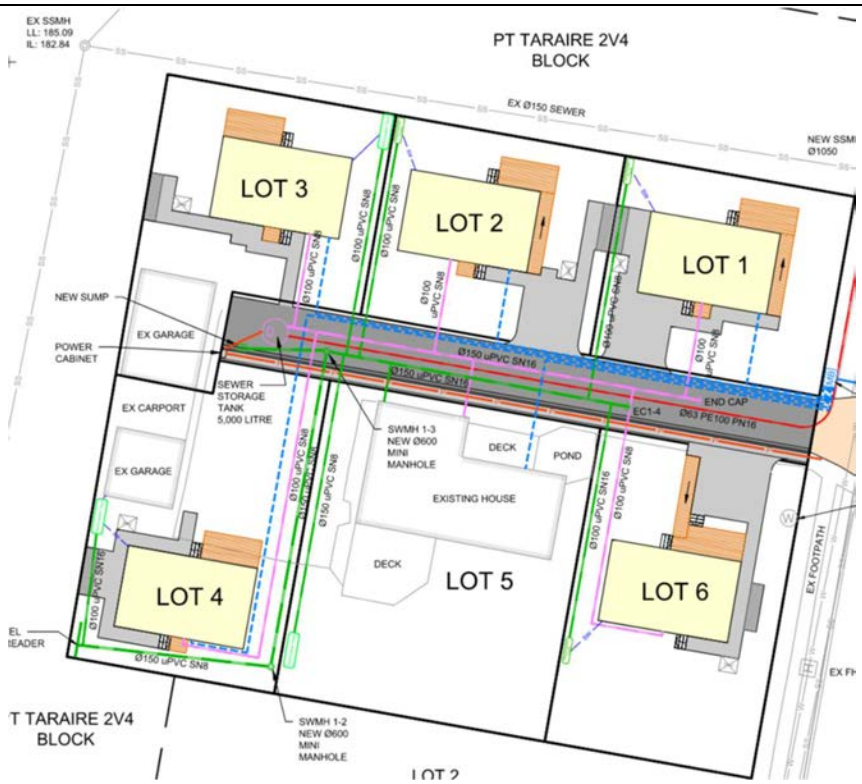


Figure 2: Proposed Design Layout for 15 Guy Road Street

******** CATCHMENT ANALYSIS – SCS UNIT HYDROGRAPH METHOD: **********

Catchment Pre-Development	Comment	Area (m²)	CN	ToC (min)	Lag time (min)	Ia (mm)
Roof	Roof of dwelling and garages	283	98	10	6	0
Gravel	Gravel hardstand areas	49	89	10	6	2
Paving	Concrete hardstand areas	228	98	10	6	0
Permeable	Grass and gardens	2259	79	10	6	5
Catchment Post development	Comment	Area (m²)	CN	ToC (min)	Lag time (min)	Ia (mm)
Roof	Roof of dwelling and garages	673	98	10	6	0
Gravel	Gravel hardstand areas	49	89	10	6	2
Paving	Concrete hardstand areas	526	98	10	6	0
Permeable	Grass and gardens	1571	61	10	6	5

Table 1: Post Development Catchment Analysis

******** STORMWATER QUANTITY – ATTENUATION, SOAKAGE & ELEMENT DESIGN: **********

The stormwater neutrality assessment will follow the 'Far North District Council Engineering Standard 2023' referred to as (FNDC ES 2023) from this point forward.

Stormwater analysis has been conducted with a desktop study using DHI Mike+ 2022 software. Hydrological model methods follow the SCS Generalised Method (UHM).

To mitigate the effect of climate change 2yr, 5yr and 100yr storm events, the required post-development peak discharge rate has been calculated to be 20% less than pre-development peak discharge rates during both +RCP8.5 storm events.

Rainfall depth data for a climate change event RCP+8.5 is sourced from NIWA HIRDS4 for the site-specific area being assessed. RCP+8.5 2050-2100 is selected as it reflects the worst possible scenario for climate change-adjusted rainfall depth and intensity. This HIRDS Rainfall data was used to develop 24-hour nested storm profiles for all three rainfall events as per the FNDC ES2023. The depths used from NIWA HIRDS4 are below.

HYDROLOGIC & HYDRAULIC MODEL (MIKE+2021 – UHM):

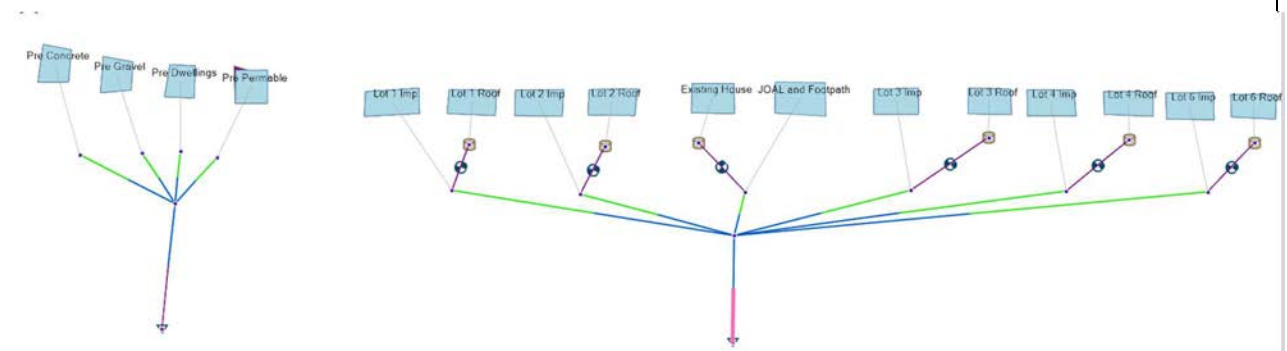


Figure 3: Predevelopment (Left) post development (right) models

HYDRAULIC ELEMENT SIZING AND CHECKS:

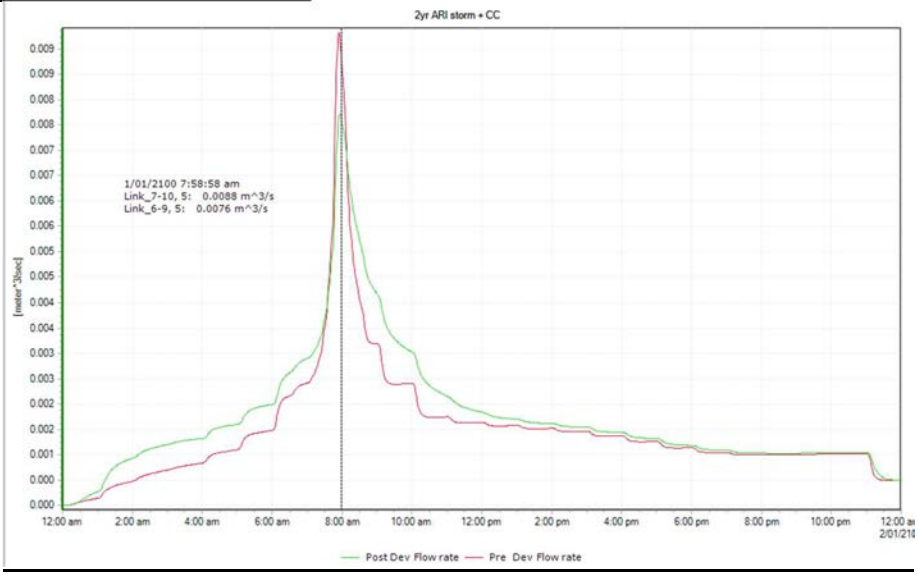


Figure 4: 2yr+cc discharge comparison to pre and post

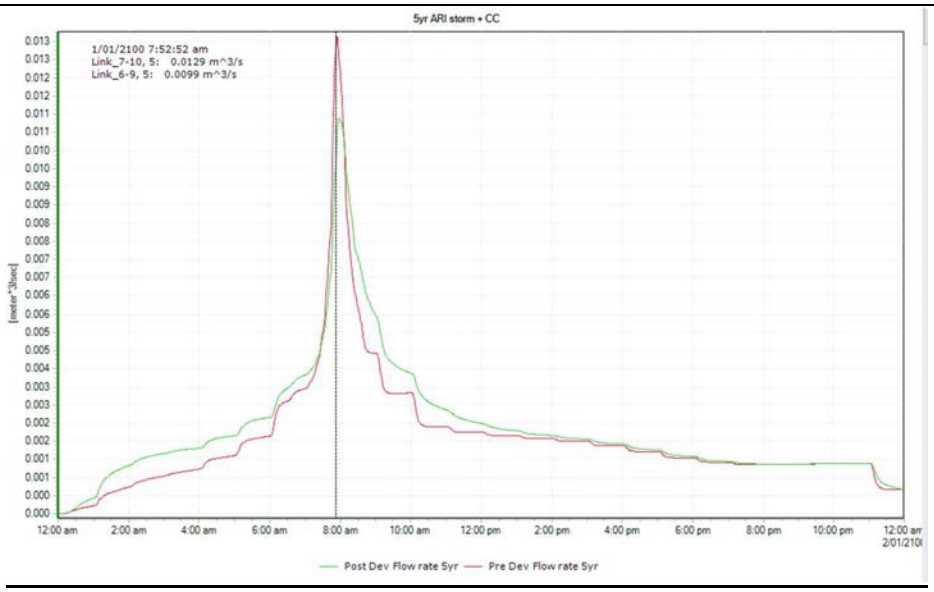


Figure 4: 5yr+cc discharge comparison to pre and post

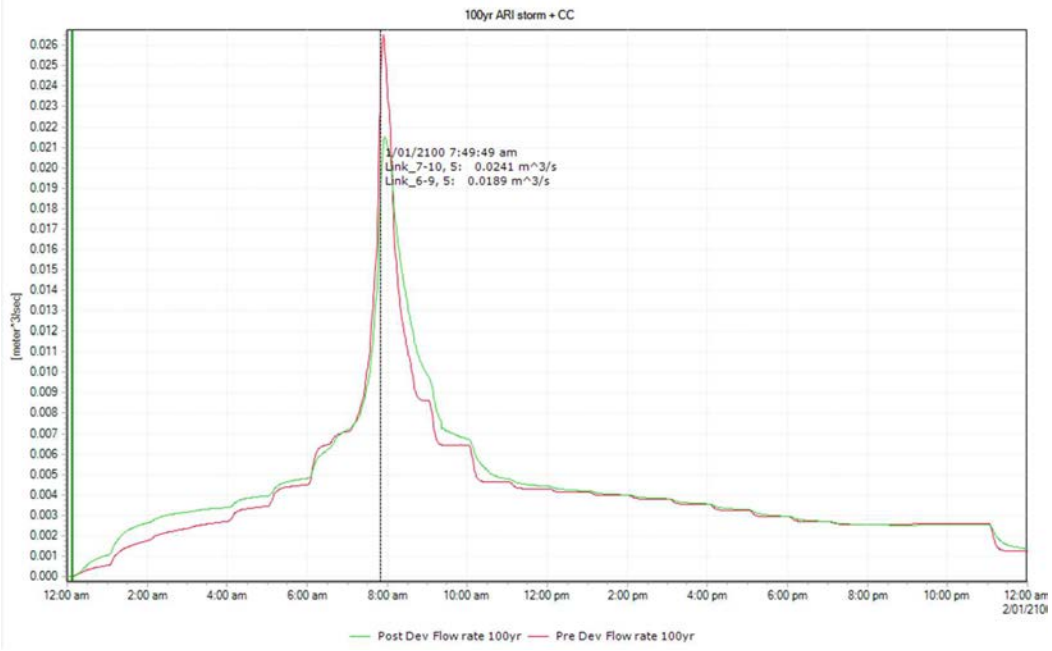


Figure 5: 100yr+cc discharge comparison to pre and post

*******Stormwater Design *******

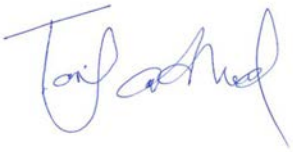
It is proposed to attenuate all roofs at 15 Guy Road to offset stormwater flow increases from the new development, including the pavement areas. Each lot will have a separate tank with the specifications from the table below. If a different tank sizing or dimensions is to be used, the engineer should be notified and allowed to alter the orifice sizing and heights.

Promax Slimline tanks

Tank Size:	2000L	2000L	5000L	5000L	5000L	2000L
Lot	1	2	Existing (5)	3	4	6
Height of invert	0.2	0.2	0.1	0.1	0.1	0.2
Height of orifice 2	0.73	0.73	0.95	0.9	0.9	0.73
Height of orifice 3	0.9	0.9	1.25	1.18	1.18	0.9

********* WATER QUANTITY DESIGN PASSES *********

Emily Thompson
Civil/Geotechnical Engineer
BE(Hons), MEngNZ



Tarif Ahmed
Chartered Professional Engineer
CMEngNZ, CPEng, BEng Tech (Civil)

Civil Report

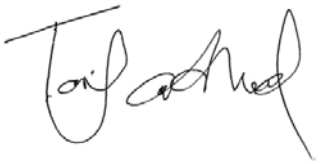
Te Hau Ora o Ngāpuhi

15 Guy Road

Kaikohe, Northland

Project Number:	17368
Legal Description:	Lot 4 DP 189557
Date:	29/05/2024

DOCUMENT CONTROL RECORD

Client:	Te Hau Ora o Ngāpuhi
Project description:	Civil Report
Client address:	15 Guy Road, Kaikohe, Northland
Date of issue:	Wednesday, 29 May 2024
Status:	Issue
Originator:	 **Sammy Musgrave** **Civil Engineer** BE(Hons)
Approved for issue:	 Tarif Ahmed **Senior Civil Engineer** BEng Tech (Civil), CMEngNZ, CPEng
Office of origin:	Auckland
Telephone:	09 438 9529
Contact email:	ccl@coco.co.nz

Version	Date	Comment	By
0.1	29/05/2024	For review	S. Musgrave
1.0	29/05/2024	Approved for Issue	T. Ahmed

Table of Contents

List of Tables

List of Figures

Introduction

Cook Costello has been engaged by Te Hau Ora o Ngāpuhi to provide a Civil Site Suitability Report to support a residential property development at 15 Guy Road.

The proposal seeks to construct five units in addition to the existing structures on the site.

This report considers the following aspects of site development:

- Site Description
- Access
- Stormwater Attenuation
- Wastewater
- Water Supply
- Fire Safety
- Power & Telecommunications

1.1. Relevant Documentation

- Far North Maps
- Northland Regional Council Natural Hazards GIS Maps
- Far North District Plan 2019
- Northland District Council Proposed Regional Plan for Northland
- NZS 4404:2010
- FNDC Engineering Standards Version 0.6 2023
- Fire and Emergency New Zealand SNZ PAS 4509:2008.
- Resource Management Act 1991

2. Site Description

The property is located at 15 Guy Road, Kaikohe and has the legal description of Lot 1 DP 45186 with an area of approximately 3038m^2.

The site's highest elevation is approximately 185.8mRL near the road and the lowest elevation is approximately 184.0mRL at the southwestern corner as per Land Information New Zeland terrain data. This gives an average slope of 3% across the site.

As shown in Figure 1, the property can be accessed via a vehicle crossing from Guy Road near the centre of the property boundary fronting the road. There is a 4m wide driveway that leads to the existing main dwelling and shed, with a few other minor ancillary structures on site. There are sufficient parking areas and further manoeuvrability space to accommodate turning vehicles to exit the property facing forward.

The property is zoned as "Residential" in the Far North District Plan 2009.

Figure 1: Image displaying approximate lot location and existing boundaries, Contours and images generated with QGIS using data from LINZ (2016).

2.1. Proposal

A preliminary scheme plan has been provided in Figure 2, showing a potential development option of adding five 2-bedroom units at approximately 78m^2 each. Further access, parking facility, and service connection details for individual dwellings still need to be confirmed. We understand that the existing dwelling is to remain, while the other minor ancillary structures may be removed. A more detailed proposal can be found in Appendix 1, however, it is also a preliminary drawing which is yet to be finalised.

The proposed earthworks are limited, as the proposed units will elevated on timber rather than building up the earth under them. Earthworks will be confined to the accessway and parking facilities.

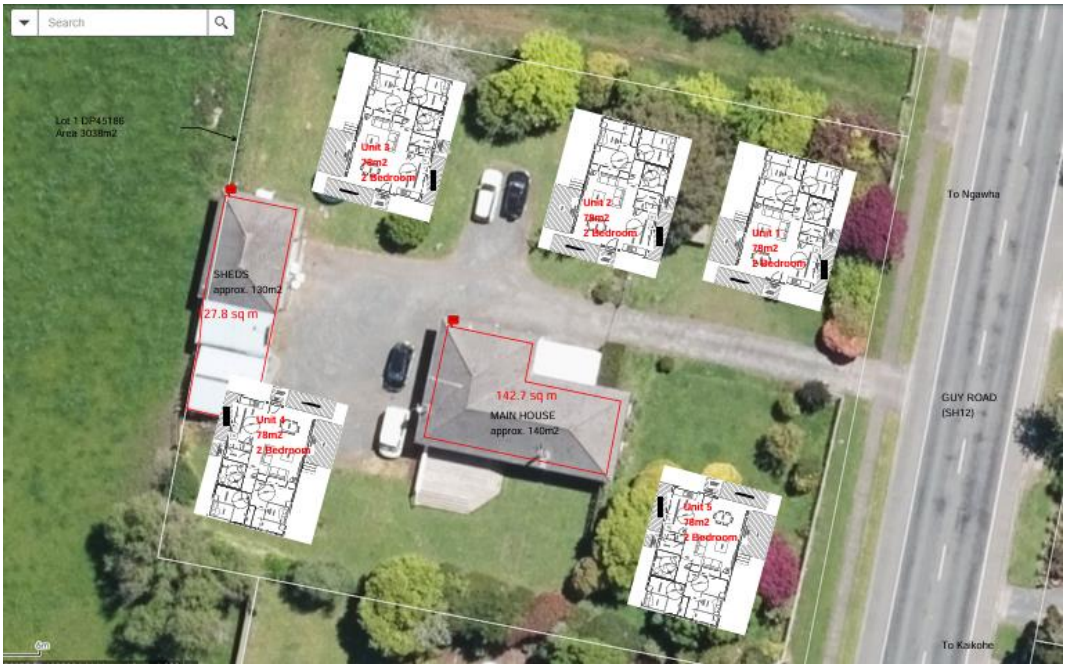


Figure 2: Preliminary site proposal.

2.2. Northland Regional Council Natural Hazard Maps

Figure 3: Northland Regional Council Hazards Map – Flood Susceptible Land

The Northland Natural Hazards map shows areas within 60m of the site to be Flood Susceptible Land seen above in Figure 3. No river flood hazard zones were noted near the site.

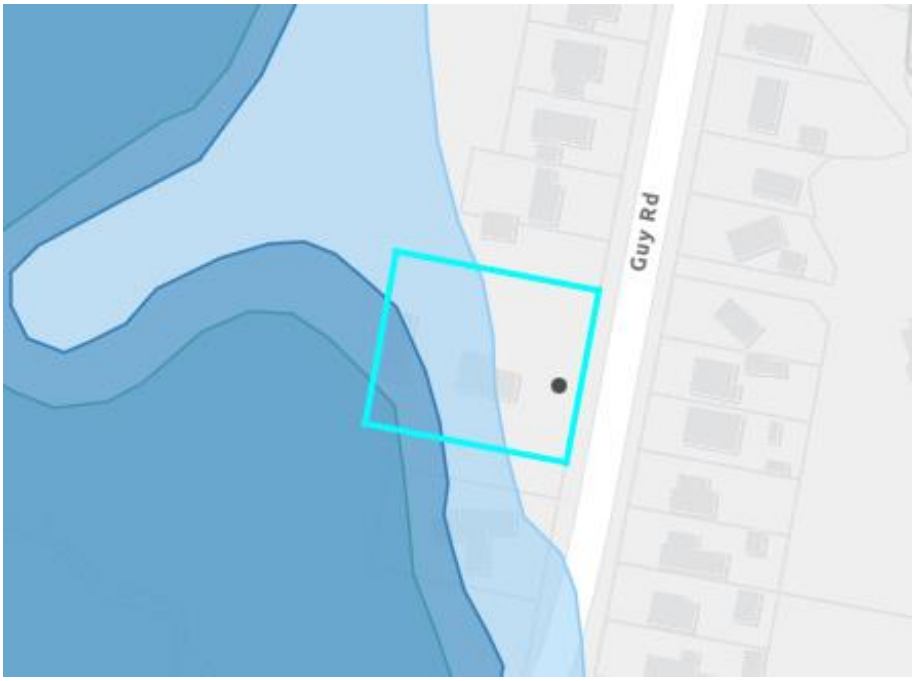


Figure 4: Far North District Council Flood Modelling 2007 (GHD) map with 5, 10, and 100-year existing development floodplains.

The Far North District Council Flood Model 2007 (GHD) map for existing development shows the southwestern sections of the site inundated in as low as a 20% average exceedance event, with a 1% AEP inundating up half the site area as shown in Figure 4.

Figure 5: Far North District Council Flood Modelling 2007 (GHD) map with 5, 10, and 100-year maximum probable development and climate change floodplains.

The Far North District Council Flood Model 2007 (GHD) map for maximum probable development and climate change shows a moderate section at the southwest of the site inundated in as low as a 20% average exceedance event, with a 1% AEP inundating the entire site area as shown in Figure 5 above.

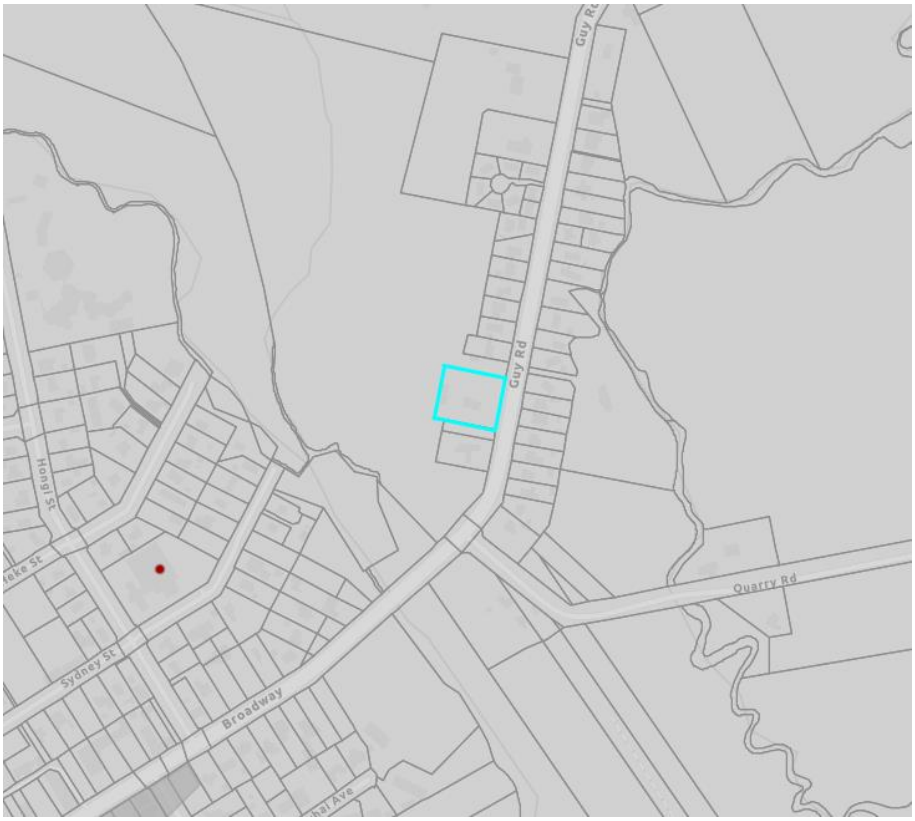


Figure 6: Far North Regional Council HAIL sites map.

The site is not listed on the Hazardous Activities and Industries List (HAIL). No other properties in close proximity to the site are registered on the list either. A single site located 600m away has been identified as an A13 Petroleum or Petrochem industrial site which is currently home to a local Church.

Due to the flooding risk associated with the site, a minimum Finished Floor Level of 185.8mRL has been recommended. For more information, consult the Preliminary Stormwater and Flood Assessment for the site published by Cook Costello dated 13th May 2024.

FNDC and Northland Regional Council hazard maps have not mapped the property as being susceptible to any other natural hazards. However, it should be noted that these are regionally scaled documents and should not be relied upon for site-specific acceptance.

3. Access

3.1. Description

This site is located along Guy Road in Kaikohe, also known as State Highway 12, which is listed as a Primary Collector according to the One Network Road Classification system with an estimated Average Daily Traffic of 8,796. The road which passes by the proposed site has a posted speed limit of 50km/h according to the National Speed Limit Register.

Access to the site is provided by a single vehicle crossing from the site onto Guy Road, the accessway continues from the vehicle crossing into the site with a width of 3.5m for approximately 40 meters before terminating at a car parking area. The proposal seeks to utilise the existing vehicle crossing and access to service the entire proposed development.

3.2. Assessment

The Far North District Council Engineering Standard (FNDC ES 2023) has been used as the basis for the assessment of vehicular access.

As per FNDC ES Section 3.2.28.2, the maximum gradient for a private access way is 12.5% for the first 5m from the road reserve boundary and 22.2% for the remainder. The entire accessway has a maximum gradient of 3% which meets the requirements. The proposed development consists of one unit along with five additional which brings the total units to 6. According to Table 3-16 of the FNDC ES, the site will require a category B private access which requires a fully sealed/concrete access way and states a minimum width of 6 meters, including a carriageway surfaced width of 4.5m. The existing access is 3.5m wide, it will need to be upgraded to comply with the FNDC ES requirements.

As per FNDC ES (2023) Sheet 4, a minimum sight distance of 70 meters is required from the vehicle crossing, as the posted speed limit is 50km/h and the road is classified as a primary collector. Greater than 100 m sight distance is available to the north and south of the existing vehicle crossing as seen below in Table **1**. Both sight distances comply with the NZTA Standards.

	
Southern view from the existing driveway (Google Street View 2024) >100m site distance	Northern view from the existing driveway (Google Street View 2024) >100m site distance

Table 1: **Approximate sight distance view from the proposed new entrance to 15 Guy Road**

3.3. Recommendations

The proposed development requires a 6m wide accessway to service the six units proposed in the current proposal. This width can be reduced to 4.0 or 5.0 meters if the total number of units serviced is dropped to 4 or fewer. The access will need to be sealed or concrete as per FNDC ES 2023 Table 3-16.

4. Stormwater

4.1. Attenuation

The stormwater assessment follows the FNDC ES 2023 for compliance. Any increase in impermeable area will require attenuation bringing peak flow rates down to 80% of the predevelopment flows. As there are downstream flooding hazards, the flow attenuation should apply for a 50%, 20%, and 1% AEP event.

As the proposal seeks to increase the impervious area of the lot, therefore attenuation is required. The existing structures are not being removed or modified, and therefore they will not need any attenuation.

As the design is preliminary, Cook Costello has made assumptions about the final impervious area and driveways. The areas used to calculate the tank sizing are found below in Table 2. The model only considers the site area which is being modified. It assumes the entire existing gravel and concrete driveway is being replaced with a 460m^2 driveway, and that each of the five new units has a roof area of 98m^2. If a larger driveway area is decided upon than the 460m^2 assumed, additional attenuation of the main existing dwelling is recommended. It is assumed that all the grass not being developed will continue to self-attenuate.

	Roof (m^2)	Gravel (m^2)	Concrete (m^2)	Grass (m^2)	Total (m^2)
Pre-development	187 (ex dwelling) + 49 (garage)	280	236	385	1,137
Post-development	5 x 98 + 187	0	460	0	1,137

Table 2: Table of areas used for modelling tank sizing.

The result of the modelling concludes that each new is to be installed with a 5,000L tank, with four orifices as described in Table 3.

5x 5,000L Promax Enduro Water Tank EN1005000 or similar	2-year Orifice	5-year Orifice	100-year Orifice	Overflow
Height	150mm	1,550mm	1,950mm	2,550mm
Diameter	10mm	20mm	10mm	150mm

Table 3: Table of Orifices for each tank.

Details of the Tank model can be found in Appendix 2.

4.2. Discharge

The existing site runoff flows off the site to the west as sheet flow. The existing dwelling discharges straight to the driveway surface before joining the overland flow. Additionally, a method of discharging the five additional proposed dwellings must be found.

Kerb discharge via an inverted syphon is possible and cost-effective, however, it is not a preferred solution for the Council nor is there a precedent noticed in the area. Alternatively, discharge straight into the catch pit on the eastern side of Guy Road could be acceptable, however, this would require extensive traffic management across State Highway 12 and significant disruptions to the state highway which is costly and time-consuming. Additionally, the road level is higher in comparison to the ground level at the rear of the site. Therefore, connecting to the public line on the road would need further investigation.

The solution Cook Costello recommends is a level spreader bar such as the one described in Figure C22 of the Countryside Living Toolbox and found in Appendix 3. The use of such a device is to ensure discharge flow does not concentrate into a single narrow stream and cause scour and erosion. It is recommended that the Spreader Device is installed within a garden protected by a geotextile fabric with at least 2 meters of flow within the garden before being discharged over the western boundary.

Discharge to the west is protected by natural servitude as the land naturally drains to the west. The spreader device combined with the attenuation tanks will ensure that the downstream properties do not experience flows greater than the existing natural flow discharge.

5. Wastewater

Through correspondence with a the FNDC representative, we received advice that the downstream network is subject to capacity constraints and requested that the development take steps to mitigate the wastewater discharge.

Due to this, it is recommended that each proposed unit be equipped with a pump and tank with storage for at least 24 hours of Average Dry Weather. These pumps shall be calibrated to avoid discharging during high flow times, and instead discharge during periods where the wastewater network is underutilised, and at minimum, discharging at least once every 24 hours.

Average Dry Weather Flows per unit = 200L/p/day x 4 people/household

= 800 L/day

A combined pump and tank system such as the Aquatec Enviro Enduraplex or Ecoflow E/one (please check the name) can be used.

These pumps will discharge into a proposed Discharge Chamber which will then be connected to the wastewater network via a new gravity connection on the road reserve in front of 17 and 19 Guy Road. The existing discharge for the dwelling on site can remain as is.

This is a preliminary proposal which will require a more detailed design as the project progresses.

An alternative design could use a shared tank and pump to service all proposed units and optionally the existing dwelling. This would require a larger tank, more specific easements, a lot layout, and a maintenance plan.

6. Water Supply

6.1. Potable Water

There is a 180mmØ potable water trunk line located in the berm of 15 Guy Road. The water line is connected to the site via an existing water meter. It is suggested that a 5-bank water meter is installed to service the proposed dwellings. The existing water meter can remain to service the existing dwelling. This will allow for separately metered connections for the existing unit and five proposed units.

According to Table 6-3 of the FNDC ES, a 180mm water main can service between 160 and 400 residential lots. An examination of the FNDC water service map shows approximately 100 units directly connected to the line, therefore potable water supply should be sufficient.

6.2. Fire Supply

Section 6.2.4.2 of the FNDC ES requires that hydrant pressure is 100 kPa or greater at any hydrant, and Table 6-2 shows that a residential dwelling requires a source of firefighting water within 135m and a second within 270m both capable of supplying greater than 12.5L/s.

There are three hydrants within 135 meters of the site and an additional hydrant within 270m. It is unknown what pressures and flow rates are available at these hydrants, therefore it is recommended that a hydrant pressure and flow test is performed to ensure the requirements are met by the existing hydrants nearest to the site if the site is flagged as a low water pressure zone by the council.

7. Power and Telecommunications

It is assumed that the existing lot is being adequately serviced with power and telecommunications.

The five proposed units will require connections to the existing power and telecommunications utilities. The power and telecom lines will be laid underground along the accessway.

8. Conclusions

8.1. Hazards

A flood hazard is present on site as described further in the Preliminary Stormwater and Flood Assessment dated 13th May 2024. A minimum Finished Floor Level of 185.8mRL is recommended to ensure adequate freeboard to prevent the proposed dwellings from becoming inundated during a storm event.

No other relevant hazards were mapped in the FNDC and NRC GIS maps.

8.2. Access

The access way will require upgrading to fully sealed/concrete and 6-meter minimum legal width to accommodate the requirements in Table 3-16 of the FNDC ES.

The vehicle crossing's sight distances comply with the FNDC requirements in the northern and southern directions.

8.3. Stormwater

5,000L tanks are to be installed on each proposed dwelling to attenuate the runoff from the units and offset the increased runoff from the proposed accessway. Tanks are to be installed with orifices to fully accommodate the 2, 5 and 100-year storm events down to 80% of existing peak flows.

Site runoff is to be dispersed by a horizontal spreader bar to ensure no concentration occurs due to the development. It is recommended that this spreader structure discharges through a garden of at least 2 meters in length and that is stabilised by geofabric before discharging over the western boundary.

8.4. Wastewater

The downstream wastewater network is under capacity constraints. It is recommended that each proposed lot be provided with a combined tank and pump system to store wastewater to be discharged during off-peak times to avoid adverse effects downstream.

The dwelling can remain as is.

8.5. Water Supply

An existing water meter supplies potable water to the existing dwelling. A water meter bank is to be installed using the existing connection to service the existing dwelling in addition to the 5 proposed units.

8.6. Fire Supply

Three hydrants appear within 135m and an additional hydrant appears within 270m of the site on the FNDC GIS maps. These hydrants require testing to confirm the hydrants supply adequate water in order to adhere to the standards.

8.7. Power and Telecommunications

The existing dwelling is adequately serviced by the existing infrastructure. Any proposed units can be connected to this infrastructure.

9. Limitations

This report has been prepared for the benefit of Te Hau Ora o Ngāpuhi as our client with respect to the investigation for a proposed subdivision and amalgamation and for the Far North District Council's approval of the proposal as defined in the brief. It shall not be relied upon for any other purpose. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing, be at such parties' sole risk.

Opinions and judgments expressed herein are based on our understanding and interpretation of current regulatory standards and should not be construed as legal opinions. Where opinions or judgments are to be relied on, they should be independently verified with appropriate legal advice. Any recommendations, opinions, or guidance provided by Cook Costello in this report are limited to technical engineering requirements and are not made under the Financial Advisers Act 2008.

Recommendations and opinions in this report are based on data from testing and observations undertaken on site. The nature and continuity of subsoil conditions away from the tests are inferred and it must be appreciated that actual conditions could vary considerably from the assumed model.

During excavation and construction, the site should be examined by a Cook Costello Engineer or Engineering Geologist to judge whether the exposed subsoils are compatible with the inferred conditions on which the report has been based. It is possible that the nature of the exposed subsoil's may require further investigation and the modification of the design based on this report. In any event, it is essential that the firm is notified if there is any variation in subsoil conditions from those described in the report as it may affect the design parameters recommended in the report.

Cook Costello have performed the services for this project in accordance with the standard agreement for consulting services and current professional standards for environmental site assessment. No guarantees are either expressed or implied.

There is no investigation that is thorough enough to preclude the presence of materials at the site which presently, or in the future, may be considered hazardous. Because regulatory evaluation criteria are constantly changing, concentrations of contaminants present and considered to be acceptable now may in the future become subject to different regulatory standards which cause them to become unacceptable and require further remediation for this site to be suitable for the existing or proposed land use activities.

Appendix 1: Preliminary Site Plan

Search

Lot 1 DP45186
Area 3038m2

SHEDS
approx. 130m2
127.8 sq m

142.7 sq m
MAIN HOUSE
approx. 140m2

Unit 3
78m2
2 Bedroom
HA04/SP10
SP11
SP12

Unit 2
78m2
2 Bedroom
SP09
SP07
SP08

Unit 1
78m2
2 Bedroom
HA02/SP05
SP06
SP04

Unit 4
78m2
2 Bedroom
HA05/SP13
SP14
SP15

Unit 5
78m2
2 Bedroom
HA01/SP03
SP03
SP02

To Ngawha

GUY ROAD
(SH12)

To Kaikohe

6m
1673375.21 6082094.16 Meters | Scale 1:282

Eagle Technology

-

Revision	Amendment	Approved	Revision Date

FNR LTD CONSULTING

Designed	Approved	Approved Date
-	-	-

Drawn	Scales
-	-

Project
15 Guy Road Kaikohe
Legal Description Lot 1 DP 45186

Sheet
Scheme Plan
Option 1 5 x 2 Bedroom Units

Project No.	Sheet. No.	Revision

1:1 @ A1
1:2 @ A3
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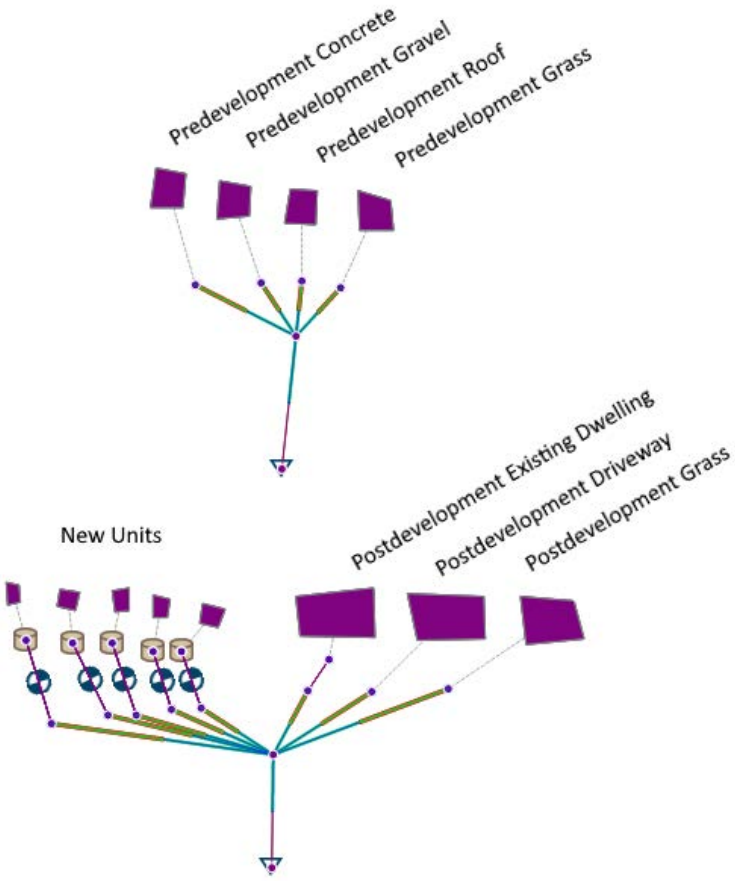
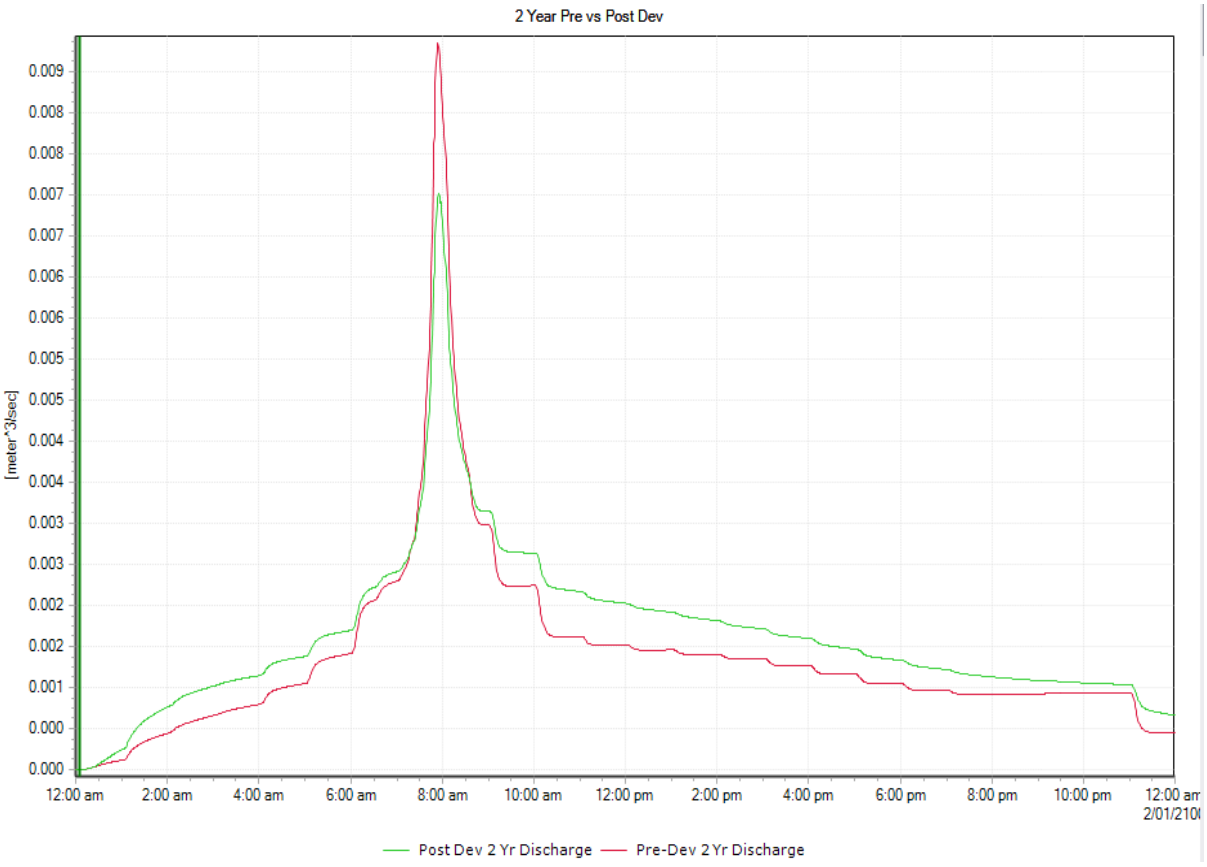
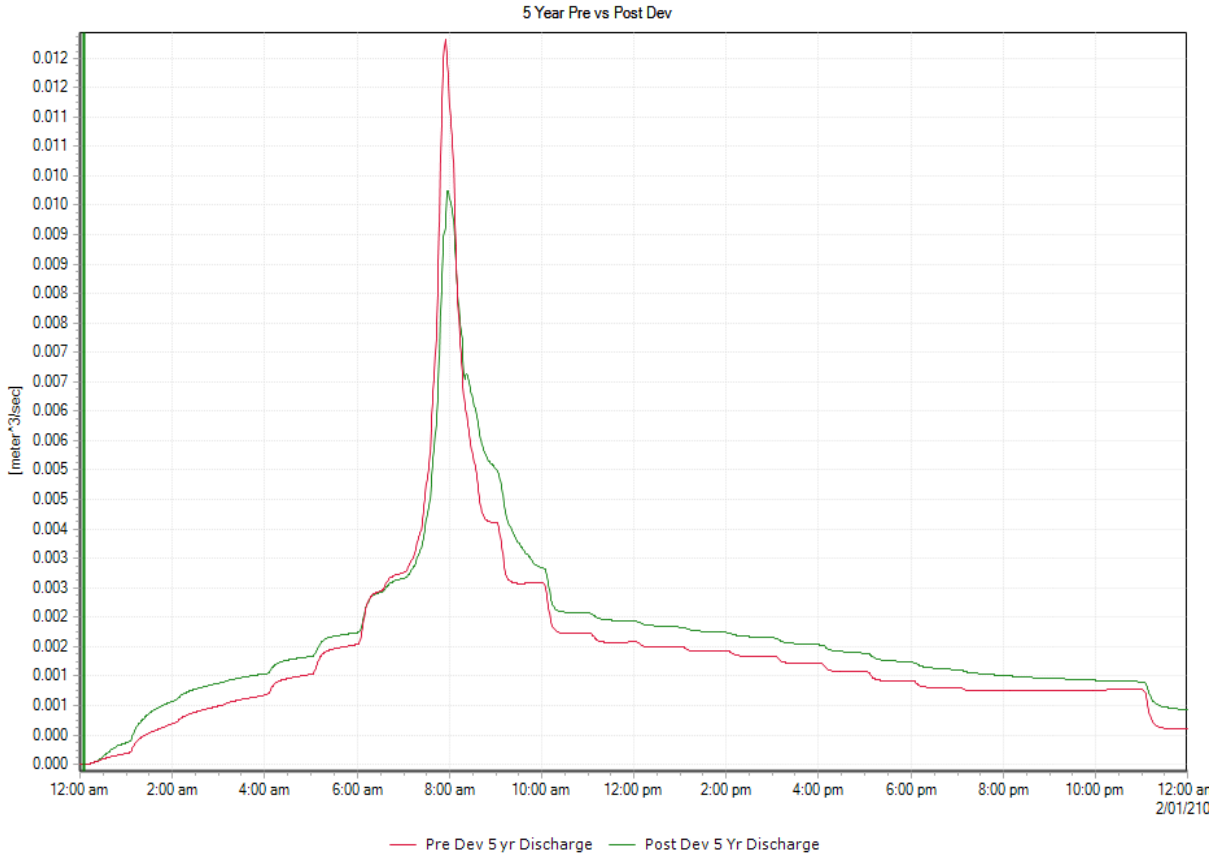
Appendix 2: MIKE+ Attenuation Calculations



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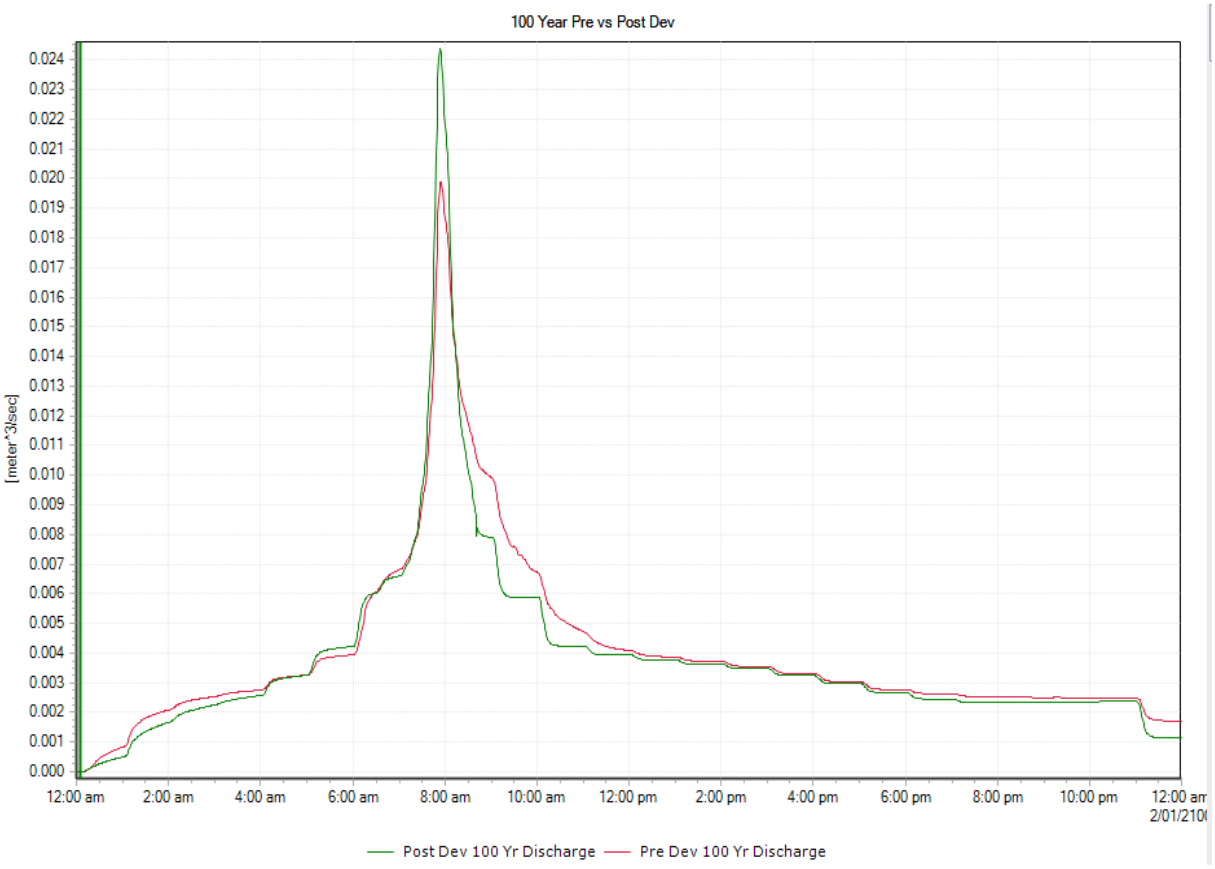
2/01/210
Pre Dev 5 yr Discharge
Post Dev 5 Yr Discharge


100 Year Pre vs Post Dev
[meter^3/sec]
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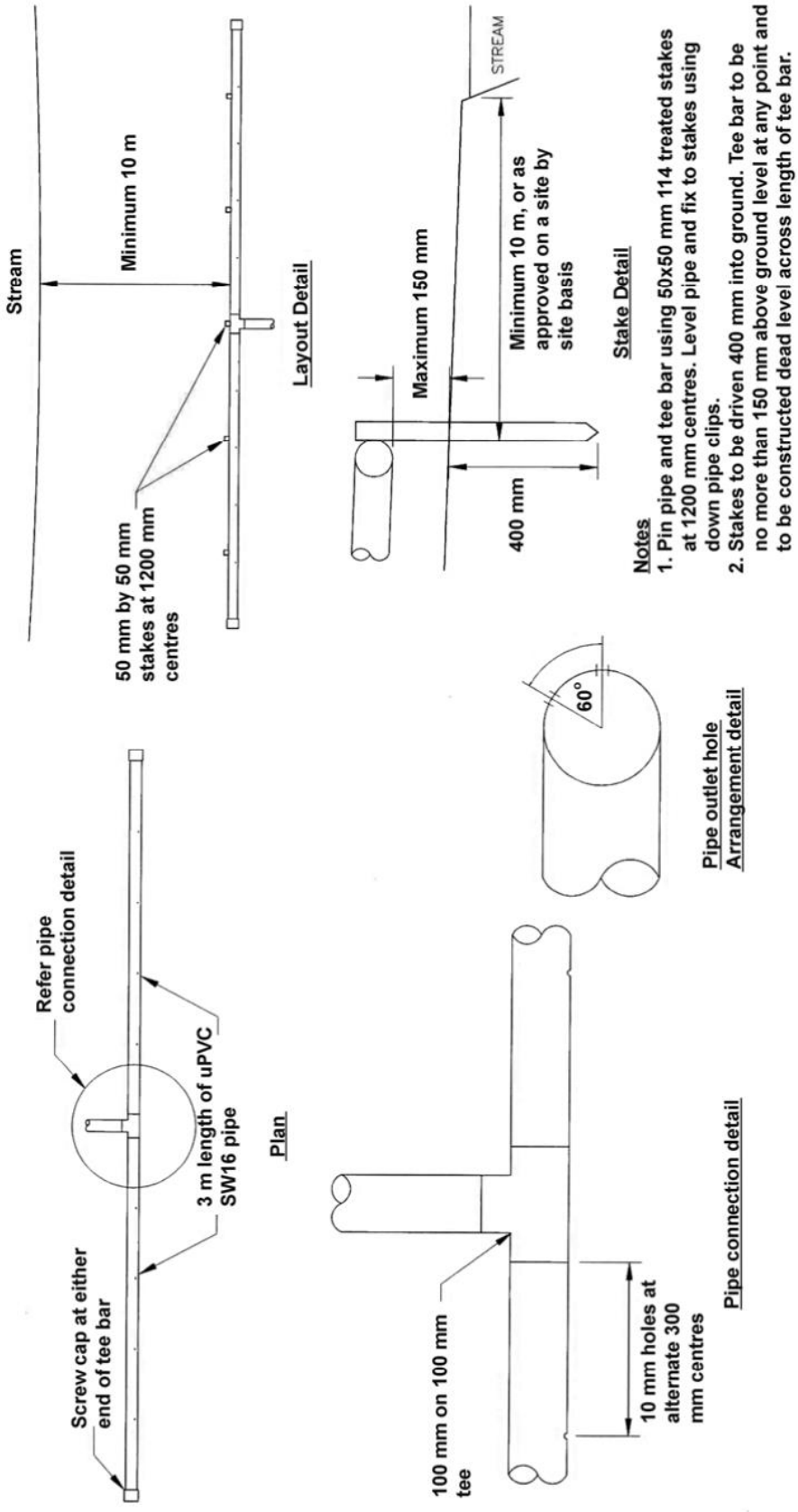
2/01/210
Post Dev 100 Yr Discharge
Pre Dev 100 Yr Discharge

Appendix 3: Level Spreader Bar Detail

Figure C22
Above Ground Flow Dispersal



Preliminary Stormwater and Flood Assessment

Te Hau Ora o Ngāpuhi

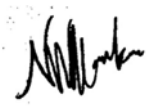
15 Guy Road

Kaikohe

Project Number: 17368

Date: 13/05/2024

DOCUMENT CONTROL RECORD

Client:	Te Hau Ora o Ngāpuhi
Project description:	Stormwater and Flood Assessment
Site address:	15 Guy Road, Kaikohe
Date of issue:	Monday, 13 May 2024
Status:	Issued
Originator:	 **Ngarui Manukau** **Civil Engineer** BE(Hons)
Approved for Issue:	 **PJ Cook** **Chartered Professional Engineer** MACENZ, CMEngNZ, MInstD, CPEng, IntPE (NZ) BE (Hons), Dip Ag.
Office of origin:	Whangarei
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Contact email:	ccl@coco.co.nz

Version	Date	Comment	By
1.0	8 May 2024	For review	N. Manukau
2.0	13 May 2024	Approval	P. Cook

Table of Contents

List of Figures

1. Introduction

Cook Costello has been engaged by Te Hau Ora o Ngāpuhi to provide a stormwater and flood assessment of the property at 15 Guy Road, Kaikohe.

This has been prepared to assist in planning for the future development of the property.

This report considers the following aspects:

- Desktop investigation
- Existing site components
- Current and future flood considerations
- Existing stormwater infrastructure
- Proposed stormwater management

1.1 Relevant Documentation

- Far North District Council (FNDC) GIS Maps
- Northland Regional Council Natural Hazards GIS Maps
- Far North District Plan 2009
- NZS 4404:2010
- FNDC Engineering Standards Version 0.6 2023
- Resource Management Act 1991
- Assessment of July 2020 Flood In Northland

2 Site

2.1 Site Description

The property is located at 15 Guy Road, Kaikohe and has the legal description of Lot 1 DP 45186 with an area of approximately 3038 m^2.

As shown in Figure 1, the property can be accessed via a vehicle crossing from Guy Road near the centre of the property boundary fronting the road. There is a 4m wide driveway that leads to the existing main dwelling and shed, with a few other minor ancillary structures on site. There are sufficient parking areas and further manoeuvrability space to accommodate turning vehicles to exit the property facing forward.

The property is zoned as “Residential” in the Far North District Plan 2009.

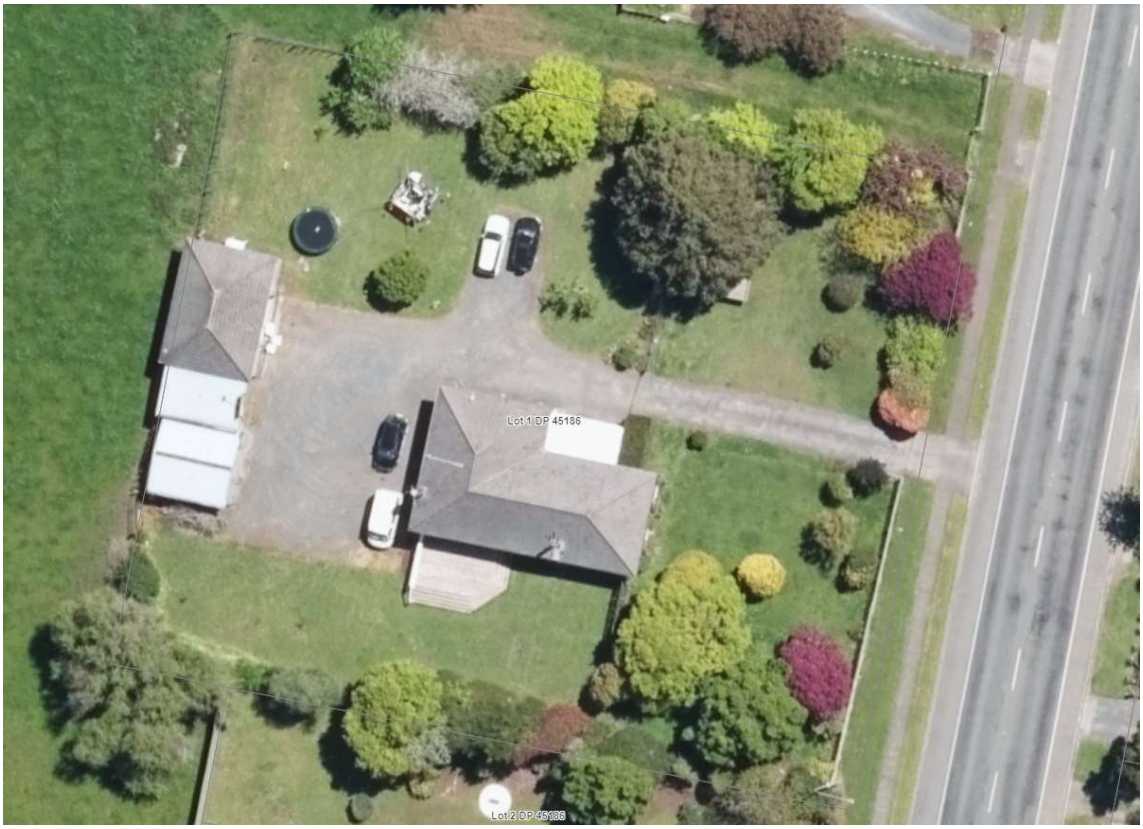

Figure 1: Plan view of 15 Guy Road, Kaikohe from FNDC GIS maps

2.2 Existing Site Contours

The existing site contours have been taken from 2020 lidar data as shown in Figure 2 below. The maximum level in the site is approximately 185.8m RL and the minimum level is 184m RL. This gives an average slope of 3%.

Figure 2: Existing site contours for 15 Guy Road from 2020 lidar data

2.3 Proposed Development

A preliminary scheme plan has been provided (refer to Figure 3) showing a potential development option of adding five 2-bedroom units at approximately 78m2 each. Further access and service connection details still need to be confirmed. The existing dwelling is remaining, while the other minor ancillary structures may be removed.

Figure 3: Proposed development scheme plan

3 Flooding

3.1 Northland Regional Council GIS Maps

The Northland Regional Council (NRC) Natural Hazards Map has mapped the site as being in proximity to flood susceptible land identified as recent soils (refer to Figure 4). A surveyed flood level of 184.53m RL from July 2020 has also been identified 130m downstream of the site. However, no river flood hazard zones have been mapped by NRC in the area.

Figure 4: NRC GIS Hazard Map showing mapped hazards near 15 Guy Road

3.2 Far North District Council GIS Maps

The Far North District Council (FNDC) Flood Modelling 2007 (GHD) GIS Map shows flooding within the site in relation to the existing development (ED) at the time, and future cases for maximum probable development (MPD), and maximum probable development and climate change (MPD & CC).

3.2.1 Existing Development

FNDC has mapped half the site in the ED 100-year floodplain, with the extent at approximately 185.2m RL (refer to Figure 5). The southwest corner of the property has been identified in the 10-year floodplain at 184.6m RL.

Figure 5: FNDC 2007 Flood Modelling (GHD) showing ED floodplains affecting 15 Guy Road

3.2.2 Maximum Probable Development

FNDC have mapped the whole site within the MPD 100-year floodplain, with the flood level at approximately 185.7mRL (refer to Figure 6). The 10-year flood level is at 184.8mRL and the 5-year flood level is at 184.6mRL.

Figure 6: FNDC 2007 Flood Modelling (GHD) showing MPD floodplains

3.2.3 Maximum Probable Development and Climate Change

FNDC have mapped the whole site within the MPD & CC 100-year ARI floodplain, with the flood level at approximately 185.8mRL (refer to Figure 7). The 10-year flood level is at 185.3mRL and the 5-year flood level is at 184.8mRL.

Figure 7: FNDC 2007 Flood Modelling (GHD) showing MPD & CC floodplains

3.2.4 Flood Level Node

The nearest quantified flood level readings to the site from the FNDC model is 80m downstream. Figure 8 summarises the 5-year, 10-year, and 100-year flood levels for the ED, MPD and MPD & CC cases. The worst-case scenario is the MPD & CC 100-year flood level of 185.283m RL.

Figure 8: FNDC 2007 Flood Modelling (GHD) node details nearest 15 Guy Road

3.3 NRC July 2020 Floods – Assessment Report

NRC released a report on the intense weather system that led to heavy rain and flooding in Northland during 15-18 July 2020, that was particularly intense in Kaikohe. According to the report, “Kaikohe rain gauge exceeded the 100-year Average Recurrence Intervals (ARIs) for all short periods, 30 minutes to 24 hours… Northern Kaikohe received 380mm [over 3 days] exceeding 96-year ARI”.

The NRC surveyed flood level of 184.53m RL identified 130m downstream of the site, as mentioned previously, was captured during this time.

3.4 Further Investigation

A high-level internet search revealed photographs of the flooding at the time in Kaikohe at the Rawiri Taiwhanga Park near the NRC surveyed flood level, confirming that the reading was relatively accurate. This would’ve meant partial flooding of the site at 15 Guy Road, but not yet reaching the southwestern corner of the existing house.

As the rainfall was representative of a 100-year event for short periods and a 96-year event across 3 days, there is a notable difference between the ED 100-year flood level in the FNDC 2007 Flood Model and the storm event that occurred in 2020, equating to approximately 0.67m. This should be considered

when determining finished floor levels for the new dwellings and accounting for the required 0.5m of freeboard above the 100-year flood level.

During a discussion with a FNDC stormwater engineer, it was mentioned that the model could have been potentially influenced by deficiencies in the stormwater infrastructure at the time and possibly the infrastructure could have improved since then. Although the model is quite dated, it appears it is still somewhat relevant as flooding has occurred in the area relatively recently. The existing contours show that there isn't much fall in the stream area where the site discharges to, which makes it prone to flooding. However, no severe flooding in Kaikohe was reported in the recent Cyclone Gabrielle event.

3.5 Proposed 100-Year Flood Level Estimation

Given the conservative levels within the FNDC flood model, we propose utilising the MPD & CC 100-year flood level assuming the 0.5m freeboard required is included in this value. This would require the new dwellings to have a finished floor level of 185.8m RL. This will need to be discussed and agreed with FNDC. It is expected that larger events will have little impact on the flood level due to the large width of the flooded channel in comparison to the increase in runoff volume.

3.6 Proposed Flood Solutions

Due to the relatively high finished floor level requirement, consideration be given to moving the position of Unit 4 further north as it is near the lowest point of the site. As the site is in a flood hazard zone, the volume of detention for the 100-year flood event must be maintained. Flood levels can't be increased due to the development, therefore any fill completed on the site would mean a proportionate cut from somewhere else on the site or additional detention storage in stormwater tanks.

Potentially to allow some capacity to fill the low area near Unit 4 once it is moved as far from the corner as possible, Unit 5 can also be shifted further north and a cut for a designated low area can be made along the southern boundary to maintain the necessary detention volume required. Maximising the stormwater tanks required for stormwater attenuation is also an option.

The foundations for Unit 2 and 3 may need to be piles to allow for the required elevation of approximately 1m in the worst case. Shallow foundations should be sufficient for Units 1 and 5.

4 Stormwater

4.1 Existing Council Stormwater Infrastructure

The FNDC GIS Asset Maps show minimal council stormwater infrastructure along Guy Road. Stormwater runoff from the road upstream of the site flows to catchpits on both sides of the carriageway and outlets to the watercourse east of Guy Road.

The closest cesspit downstream of the site is 20m away on the opposite side of the road. There is no invert and lid level information for this cesspit. The next closest is a double cesspit that is 80m away on the same side of the road and the invert level is 183.44m RL and the lid level is 184.33m RL. The closest manhole is at the intersection of Quarry Road with Guy Road and the invert level is 183.32m RL and the lid level is 185.01m. The outlet of the cesspits and manhole is the stream 200m south from the site.

Figure 9: FNDC Stormwater Asset Map

4.2 Site Stormwater

No stormwater runoff should enter the site from the road due to the existing vehicle crossing, and kerb and channel. As the site slopes away from the road and there is no stormwater infrastructure located conveniently near the site, the reasonable stormwater discharge point would be to land via sheet flow from the lowest point of the site at the southwest corner. Surface runoff naturally flows to this point already. Connection into the council stormwater system for this development is not ideal.

4.3 Stormwater Attenuation

Due to the proximity of the site to an identified flooding hazard, attenuation of the 2-year, 5-year, and 100-year flood events is required for the site to limit the post-development flow rates to 80% of the pre-development flows.

The attenuation will apply to the new impervious areas introduced by the proposed dwellings, extension of the access, and parking areas. Any minor structures or existing impervious areas that are removed can offset the new introduced areas.

Above ground tanks for the attenuation should be sufficient and could be installed with each of the dwellings. Over-attenuation of the roof areas would allow partial offsetting of any other impervious areas on the site. Shallow underground tanks could be an option also but would be significantly more expensive to supply and install.

5 Conclusions

5.1 Flood

The site has been mapped in the FNDC 2007 Flood Model (GHD) 100-year extents for the ED, MPD, and MPD & CC cases. The site and downstream area are flood prone, however the levels calculated in the model appear conservative. The proposed finished floor level of the new dwellings to account for the 100-year event and freeboard is 185.8m RL. Consideration to be given to unit positioning, unit foundations, and maintaining detention volumes within site by tank or site contouring.

5.2 Stormwater

Stormwater attenuation of the 2-year, 5-year, and 100-year event is required to limit the post-development flow rates to 80% of the pre-development flows. Attenuated flows will be discharged to land to sheet flow downstream.

6 Limitations

This report has been prepared for the benefit of our client Te Hau Ora o Ngāpuhi with respect to the investigation for a proposed residential dwelling development. It shall not be relied upon for any other purpose. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing, be at such parties' sole risk.

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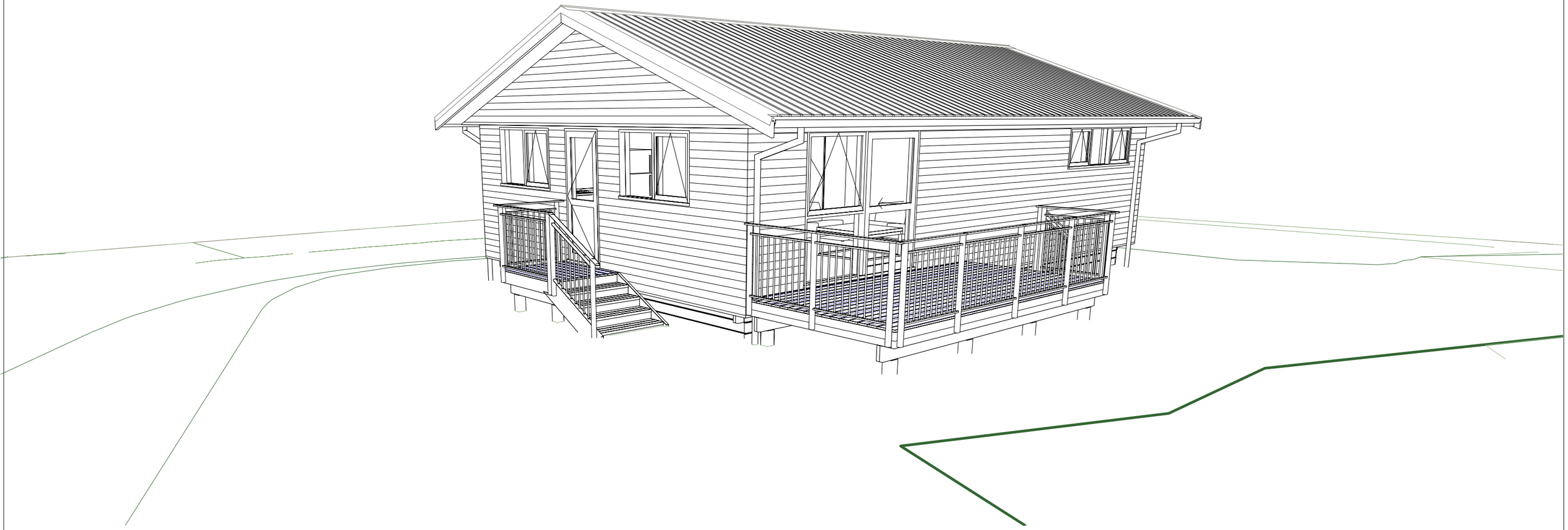
During excavation and construction, the site should be examined by a Cook Costello Engineer or Engineering Geologist to judge whether the exposed subsoils are compatible with the inferred conditions on which the report has been based. It is possible that the nature of the exposed subsoil's may require further investigation and the modification of the design based on this report. In any event, it is essential that the firm is notified if there is any variation in subsoil conditions from those described in the report as it may affect the design parameters recommended in the report.

Cook Costello have performed the services for this project in accordance with the standard agreement for consulting services and current professional standards for environmental site assessment. No guarantees are either expressed or implied.

There is no investigation that is thorough enough to preclude the presence of materials at the site which presently, or in the future, may be considered hazardous. Because regulatory evaluation criteria are constantly changing, concentrations of contaminants present and considered to be acceptable now may in the future become subject to different regulatory standards which cause them to become unacceptable and require further remediation for this site to be suitable for the existing or proposed land use activities.

Appendix 1 – Contours of Surrounding Area


0
25
50 m



Two Bedroom 78m^2 Dwelling at 15 Guy Road

LICENSED BUILDING PRACTITIONER BP133067 BUILDING CONFIDENCE

marr
Architectural Design & Draughting Services

PROJECT: 2 Bedroom FUD			PROJECT ID: THOON-1
CLIENT: Te Hau Ora o Ngapuhi / 15 Guy Road		DATE: 6/06/2024	SHEET NO: 1
SHEET TITLE: COVER PAGE		DRAWN: Jens Marr	TOTAL SHEETS: 44
		ISSUE:	REVISION:

Jens Marr 63 Tasman Heights Ahipara 0481 **T**: 02102514431 **E**: jens.marr@gmail.com

1

ELEVATION SOUTH

Scale: 1:50

LICENSED BUILDING PRACTITIONER BP133067 BUILDING CONFIDENCE

marr
Architectural Design & Draughting Services

PROJECT: 2 Bedroom FUD			PROJECT ID: THOON-1
CLIENT: Te Hau Ora o Ngapuhi / 15 Guy Road		DATE: 6/06/2024	SHEET NO: 4
SHEET TITLE: ELEVATIONS-SOUTH		DRAWN: Jens Marr	TOTAL SHEETS: 44
		ISSUE:	REVISION:

Jens Marr 63 Tasman Heights Ahipara 0481 **T**: 02102514431 **E**: jens.marr@gmail.com

1

ELEVATION-NORTH

Scale: 1:50

LICENSED BUILDING PRACTITIONER BP133067 BUILDING CONFIDENCE

PanelLock.co.nz
Superior Panel Construction

PROJECT: 2 Bedroom FUD		PROJECT ID: THOON-1
CLIENT: Te Hau Ora o Ngapuhi / 15 Guy Road	PROJECT DATE: 6/06/2024	SHEET NO: A4.1
SHEET TITLE: ELEVATION-NORTH	DRAWN: Jens Marr	TOTAL SHEETS: 44
		REVISION:

PanelLock 142 North Road SH1, Kaitaia **W**: www.panellock.co.nz
PO Box 96 Kaitaia New Zealand **T**: (09) 408 7921 **M**: 027 3585 363 **E**: luke@panellock.co.nz

1

ELAVATION-EAST

Scale: 1:50

LICENSED BUILDING PRACTITIONER BP133067 BUILDING CONFIDENCE

marr
Architectural Design & Draughting Services

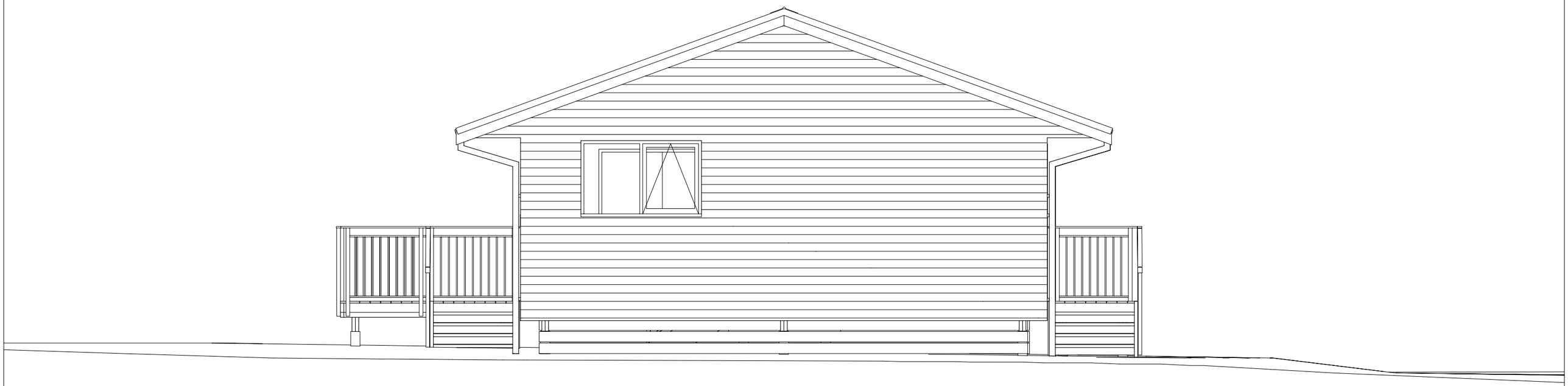
PROJECT: 2 Bedroom FUD			PROJECT ID: THOON-1
CLIENT: Te Hau Ora o Ngapuhi / 15 Guy Road		DATE: 6/06/2024	SHEET NO: 4.2
SHEET TITLE: ELEVATION-EAST		DRAWN: Jens Marr	TOTAL SHEETS: 44
		ISSUE:	REVISION:

Jens Marr 63 Tasman Heights Ahipara 0481 **T**: 02102514431 **E**: jens.marr@gmail.com

1

ELEVATION-WEST

Scale: 1:50



LICENSED BUILDING PRACTITIONER BP133067 BUILDING CONFIDENCE

marr
Architectural Design & Draughting Services

PROJECT: 2 Bedroom FUD			PROJECT ID: THOON-1
CLIENT: Te Hau Ora o Ngapuhi / 15 Guy Road		DATE: 6/06/2024	SHEET NO: 4.3
SHEET TITLE: ELEVATION-WEST		DRAWN: Jens Marr	TOTAL SHEETS: 44
		ISSUE:	REVISION:

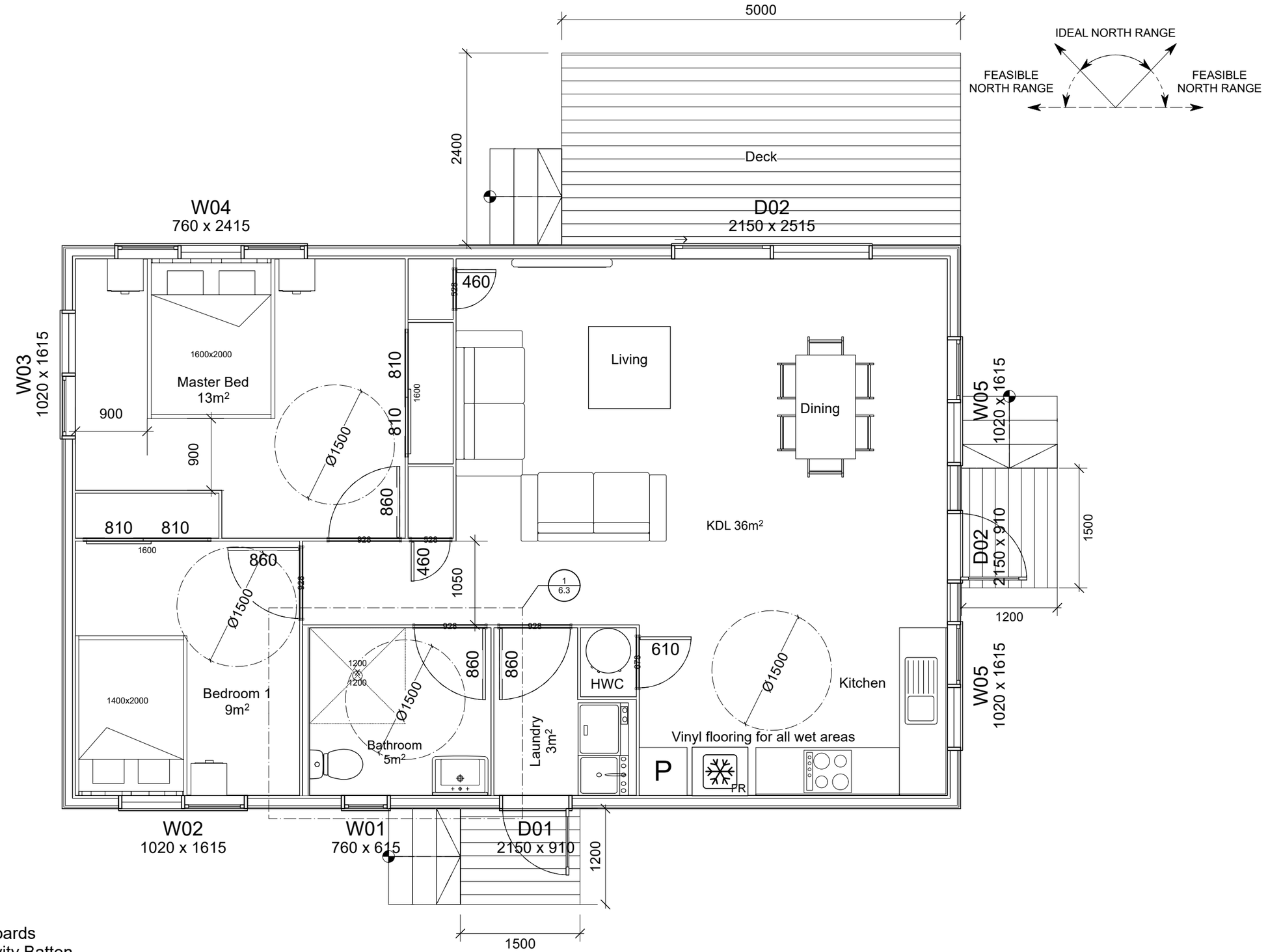
Jens Marr 63 Tasman Heights Ahipara 0481 **T**: 02102514431 **E**: jens.marr@gmail.com

1

FLOOR PLAN

Scale: 1:50

Total Gross Floor Area: 78m²



WALL LEGEND

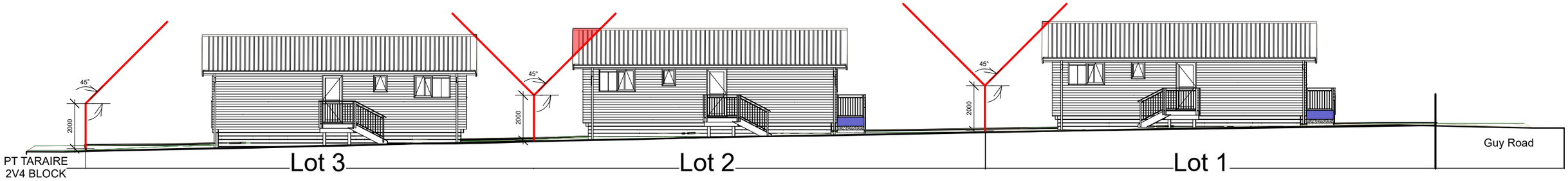
Ext. Wall	Weatherboards 20mm Cavity Batten 90 mm Wall Batten 36 mm Triboard
Int. Wall	36 mm Triboard
Int. Cavity Wall	36 mm Triboard 90 mm Wall Batten 18 mm Triboard

LICENSED BUILDING PRACTITIONER BP133067 BUILDING CONFIDENCE

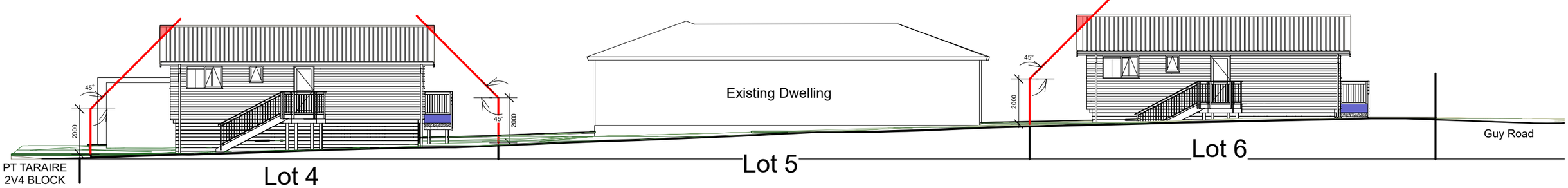
marr
Architectural Design & Draughting Services

Jens Marr 63 Tasman Heights Ahipara 0481 T: 02102514431 E: jens.marr@gmail.com

PROJECT: 2 Bedroom FUD			PROJECT ID: THOON-1
CLIENT: Te Hau Ora o Ngapuhi / 15 Guy Road		DATE: 6/06/2024	SHEET NO: 5
SHEET TITLE: FLOOR LAYOUT		DRAWN: Jens Marr	TOTAL SHEETS: 44
		ISSUE:	REVISION:



1 HTB Elevation South Lot 1-3
Scale: 1:175



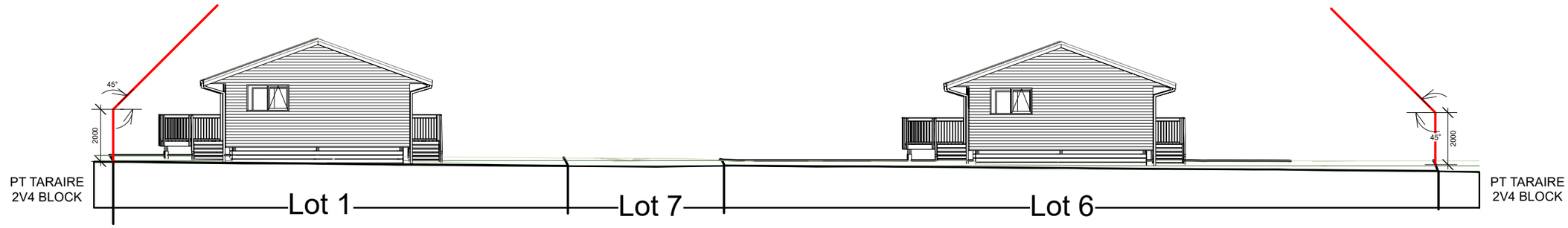
2 HTB Elevation South Lot 5 and 6
Scale: 1:175

LICENSED BUILDING PRACTITIONER BP133067 BUILDING CONFIDENCE

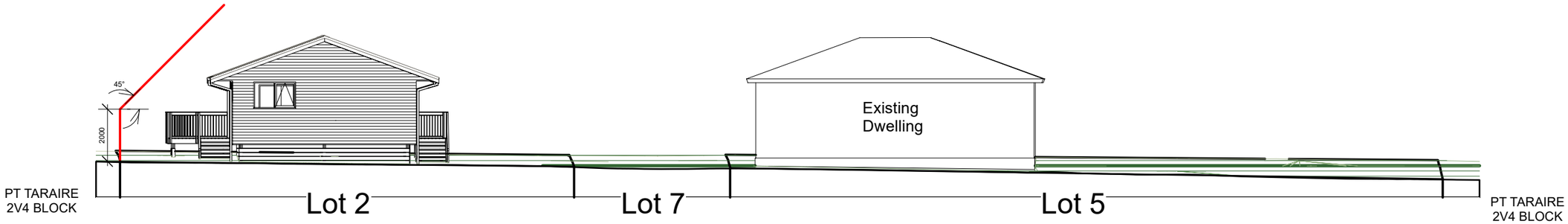
PanelLock.co.nz
Superior Panel Construction

PROJECT: 2 Bedroom FUD		PROJECT ID: THOON-1
CLIENT: Te Hau Ora o Ngapuhi / 15 Guy Road	PROJECT DATE: 6/06/2024	SHEET NO: ASht-1
SHEET TITLE: ELEVATION HTB SOUTH	DRAWN: Jens Marr	TOTAL SHEETS: 46
		REVISION:

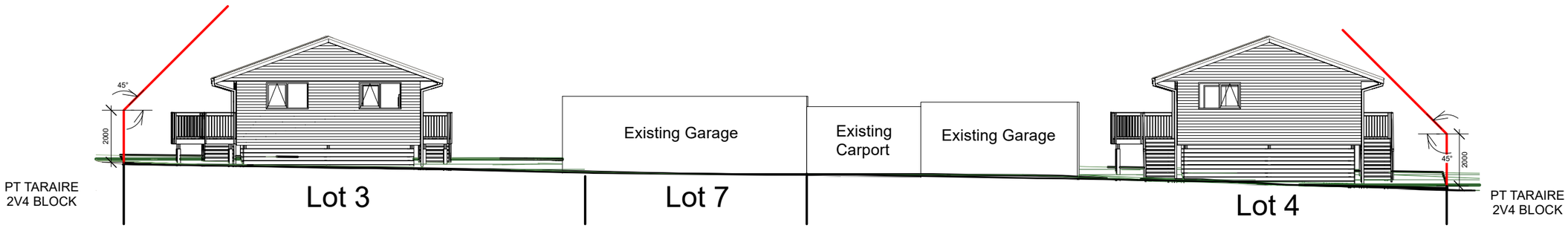
PanelLock 142 North Road SH1, Kaitaia **W**: www.panellock.co.nz
PO Box 96 Kaitaia New Zealand **T**: (09) 408 7921 **M**: 027 3585 363 **E**: luke@panellock.co.nz



3 HTB Elevation West Lot 1 and 6
Scale: 1:175



2 HTB Elevation West Lot 2 and 5
Scale: 1:175



1 HTB Elevation West Lot 3 and 4
Scale: 1:175

LICENSED BUILDING PRACTITIONER BP133067 BUILDING CONFIDENCE

PanelLock.co.nz
Superior Panel Construction

PROJECT: 2 Bedroom FUD		PROJECT ID: THOON-1
CLIENT: Te Hau Ora o Ngapuhi / 15 Guy Road	PROJECT DATE: 6/06/2024	SHEET NO: ASht-2
SHEET TITLE: ELEVATION HTB WEST	DRAWN: Jens Marr	TOTAL SHEETS: 46
		REVISION:

PanelLock 142 North Road SH1, Kaitaia **W**: www.panellock.co.nz
PO Box 96 Kaitaia New Zealand **T**: (09) 408 7921 **M**: 027 3585 363 **E**: luke@panellock.co.nz

15 Guy Road Kaikohe.

Ranjan Khadka <Ranjan.Khadka@fndc.govt.nz> Wed, Mar 6, 2024 at 9:01 AM
To: Steven Sanson <steve@sansons.co.nz>
Cc: Sujeet Tikaram <Sujeet.Tikaram@fndc.govt.nz>

Kia Ora Steven,

In principle, the site has the capability to connect to both sewer and water services. An assessment of capacity will need be provided, and if any upgrades are necessary to accommodate the site, the developer will be responsible for them.

Regarding stormwater, there are no stormwater reticulation services accessible for the site, and it is susceptible to flooding. To prevent worsening the current flooding situation, mitigation measures must be implemented, and stormwater should be dispersed through natural overland flow paths.

Nga mihi,

Ranjan Khadka He/him Hours: Mon-Fri 8:30-17:00

3 Waters Infrastructure Engineer - Infrastructure Strategy

M 273876286 | **P** 6494070359 | Ranjan.Khadka@fndc.govt.nz

An alliance between Far North District Council and Ventia

Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029

fndc.govt.nz

From: Steven Sanson <steve@sansons.co.nz>
Sent: Tuesday, March 5, 2024 5:48 PM
To: Sujeet Tikaram <Sujeet.Tikaram@fndc.govt.nz>; Ranjan Khadka <Ranjan.Khadka@fndc.govt.nz>
Subject: 15 Guy Road Kaikohe.

is safe.

[Quoted text hidden]

Chorus New Zealand Limited

17 September 2024

Chorus reference: 10987440

Attention: Steven Sanson

Quote: New Property Development

6 connections at 15 Guy Road , Kaikohe, Far North District, 0405

Your project reference: N/A

Thank you for your enquiry about having Chorus network provided for the above development.

Chorus is pleased to advise that, as at the date of this letter, we are able to provide reticulation for this property development based upon the information that has been provided:

Fibre network	$7,200.00
Pre-built fibre	$0.00

The total contribution we would require from you is **$8,280.00 (including GST)**. This fee is a contribution towards the overall cost that Chorus incurs to link your development to our network. This quote is valid for 90 days from 17 September 2024. This quote is conditional on you accepting a New Property Development Contract with us for the above development.

If you choose to have Chorus provide reticulation for your property development, please log back into your account and finalise your details. If there are any changes to the information you have supplied, please amend them online and a new quote will be generated. This quote is based on information given by you and any errors or omissions are your responsibility. We reserve the right to withdraw this quote and requote should we become aware of additional information that would impact the scope of this letter.

Once you would like to proceed with this quote and have confirmed all your details, we will provide you with the full New Property Development Contract, and upon confirmation you have accepted the terms and paid the required contribution, we will start on the design and then build.

For more information on what's involved in getting your development connected, visit our website www.chorus.co.nz/develop-with-chorus

Kind Regards

Chorus New Property Development Team

Copy of submitted land use/state highway access application form

1 message

EnvironmentalPlanning@noreply.nzta.govt.nz <EnvironmentalPlanning@noreply.nzta.govt.nz>
Reply-To: EnvironmentalPlanning@nzta.govt.nz
To: steve@sansons.co.nz

17 September 2024 at 10:01

Select reason for contact
Submit application

Contact details

First name
Steven

Last name
Sanson

Consultant name (if applicable)
Sanson & Associates Limited

Email address
steve@sansons.co.nz

Phone number
0211606035

Preferred method of contact
Email

Proposal details

What is your reason for applying?
Subdivision

Describe your proposal
6 x lot subdivision with 6 x dwellings [5 x new] proposed at 15 Guy Road, Kaikohe [SH 12] - 50km/hr.

Give site address
15 Guy Road, Kaikohe

Legal description of the property
Lot 1 DP 4730235

Select your region
Northland

Select your local council (Northland region)
Far North District Council

Attachment 1
17368-001-DD-Sheet-20240913.pdf - Download File - *You must be logged in to view this file*

Attachment 2

Attachment 3

TOP ENERGY
Te Puna Hihiko
www.topenergy.co.nz

Top Energy Limited
Level 2, John Butler Centre
60 Kerikeri Road
P O Box 43
Kerikeri 0245
New Zealand
PH +64 (0)9 401 5440
FAX +64 (0)9 407 0611

18 September 2024

Steven Sanson
Sanson & Associates Limited

Email: steve@bayplan.co.nz

To Whom It May Concern:

RE: PROPOSED SUBDIVISION
Te Hau Ora O Ngapuhi Limited – 15 Guy Road, Kaikohe. Lot 1 DP 45186.

Thank you for your recent correspondence with attached proposed subdivision scheme plans.

Top Energy's requirement is that power be made available for the additional lots. Costs to make power available would be provided after application and an on-site survey have been completed. Link to application: Top Energy | Top Energy.

In order to get a letter from Top Energy upon completion of your subdivision, a copy of the resource consent decision must be provided.

Yours sincerely

Aaron Birt
Planning and Design
T: 09 407 0685
E: aaron.birt@topenergy.co.nz