Far North District Council

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Website: www.fndc.govt.nz

Office Use Only
Application Number:

APPLICATION FOR RESOURCE CONSENT OR FAST-TRACK RESOURCE CONSENT

(Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA))
(If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Form 9)

Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges – both available on the Council's web page.

1. Pre-Lodgement Meeting

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

2. Type of Consent being applied for (more than one circle can be ticked):

☑ Land Use ○ Fast Track Land Use* ○ Subdivision ○ Discharge
○ Extension of time (s.125) ○ Change of conditions (s.127) ○ Change of Consent Notice (s.221(3))
○ Consent under National Environmental Standard (e.g. Assessing and Managing Contaminants in Soil)
○ Other (please specify) _____

***The fast track for simple land use consents is restricted to consents with a controlled activity status and requires you provide an electronic address for service.**

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

~~Yes~~ / No

4. Applicant Details:

Name/s: Please refer to signed billing details attached.

Electronic Address for Service (E-mail): _____

Phone Numbers: Work: _____ Home: _____

Postal Address: (*or* alternative method of service under section 352 of the Act) _____

_____ Post Code: _____

5. Address for Correspondence: *Name and address for service and correspondence (if using an Agent write their details here).*

Name/s: Steven Sanson - Sanson & Associates Limited

Electronic Address for Service (E-mail): [redacted]

Phone Numbers:

Postal Address: (*or* alternative method of service under section 352 of the Act)

Post Code:

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

6. Details of Property Owner/s and Occupier/s: *Name and Address of the Owner/Occupiers of the land to which this application relates (where there are multiple owners or occupiers please list on a separate sheet if required)*

Name/s: Refer Record of Titles appended to the AEE

Property Address/: Location

7. Application Site Details:

Location and/or Property Street Address of the proposed activity:

Site Address/ Location: 23 Kohuhu Street, Kaitaia

Legal Description: Part Lot 2 DP 12051 Val Number:

Certificate of Title: NA35B/367

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

Site Visit Requirements:

Is there a locked gate or security system restricting access by Council staff? ~~Yes~~ / No

Is there a dog on the property? Yes / No

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

Please contact applicant prior to site visit - refer billing details

8. Description of the Proposal:

Please enter a brief description of the proposal here. Attach a detailed description of the proposed activity and drawings (to a recognized scale, e.g. 1:100) to illustrate your proposal. Please refer to Chapter 4 of the District Plan, and Guidance Notes, for further details of information requirements.

Provide 6 x additional cabisn for kuia / kaumatua [pensioner housing] a 2 x bedroom house and office

If this is an application for an Extension of Time (s.125); Change of Consent Conditions (s.127) or 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) or extension being sought, with reasons for requesting them.

9. Would you like to request Public Notification

~~Yes~~/No

10. Other Consent required/being applied for under different legislation (more than one circle can be ticked):

O Building Consent (BC ref # if known)

O Regional Council Consent (ref # if known)

O National Environmental Standard consent

O Other (please specify)

11. 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 (further information in regard to this NES is available on the Council's planning web pages):

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)

O yes O no O don't know

Is the proposed activity an activity covered by the NES? (If the activity is any of the activities listed below, then you need to tick the 'yes' circle).

O yes O no O don't know

O Subdividing land

O Changing the use of a piece of land

O Disturbing, removing or sampling soil

O Removing or replacing a fuel storage system

12. 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.

Please attach your AEE to this application.

13. 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 all names in full) _____

Email: _____

Postal Address: _____

_____

_____ Post Code: _____

Phone Numbers: Work: _____ Home: _____ Fax: _____

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 print)

Signature: _____ (signature of bill payer – **mandatory**) Date: _____

14. 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.

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

Name:_____(please print)

Signature:_____(signature) Date: _____

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

Checklist (please tick if information is provided)

- ○ Payment (cheques payable to Far North District Council)
- ○ A current Certificate of Title (Search Copy not more than 6 months old)
- ○ 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.

Only one copy of an application is required, but please note for copying and scanning purposes, documentation should be:

UNBOUND **SINGLE SIDED** **NO LARGER THAN A3 in SIZE**

10. Other Consent required/being applied for under different legislation (more than one circle can be ticked):

O Building Consent (BC ref # if known)

O Regional Council Consent (ref # if known)

O National Environmental Standard consent

O Other (please specify)

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

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Is the proposed activity an activity covered by the NES? (If the activity is any of the activities listed below, then you need to tick the 'yes' circle).

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Please attach your AEE to this application.

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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 all names in full) [redacted]

Email:

Postal Address:

t Code: 0410

Phone Numbers: [redacted] x: N/a

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.

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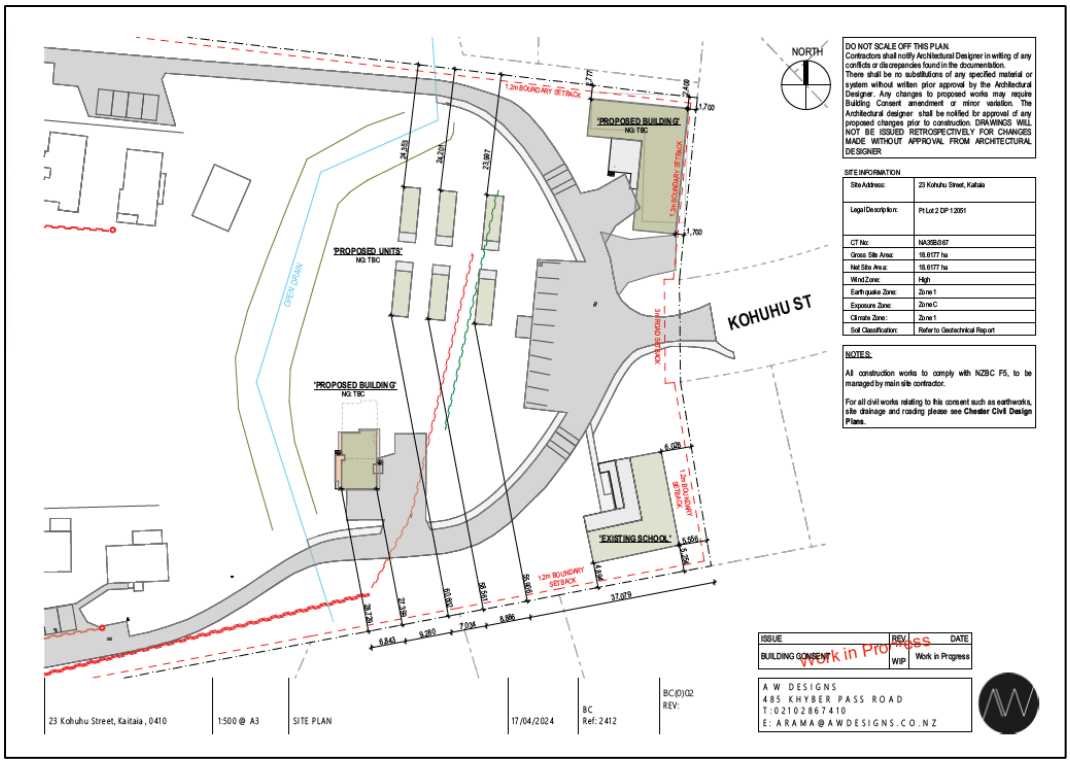
Name: [redacted] (please print)

Signature: [redacted] (signature of bill payer – **mandatory**) Date: 14.06.24

SANSON & ASSOCIATES LTD

Planners & Resource Consent Specialists



Assessment of Environmental Effects (AEE)

Application for Resource Consent: He Korowai Trust

Prepared for: He Korowai Trust

Prepared by: Steven Sanson | Consultant Planner

Date: June 2024

1. APPLICANT & PROPERTY DETAILS

Applicant	He Korowai Trust
Address for Service	Sanson & Associates Limited PO Box 318 PAIHIA 0247 C/O – Steven Sanson steve@sansons.co.nz 0211606035
Legal Description	Part Lot 2 DP 12051
Certificate Of Title	NA35B/367
Physical Address	23 Kohuhu Street, Kaitaia
Site Area	18.6177ha
Owner of the Site	He Korowai Trust
District Plan Zone / Features	Residential & Rural Production Operative District Plan (ODP) Maori Purpose Zone - Urban Proposed District Plan (PDP)
Archaeology	Nil
NRC Overlays	Flooding
Soils	2w2
Protected Natural Area	Nil
HAIL	Nil

Schedule 1

2. SUMMARY OF PROPOSAL

Proposal	To provide for 6 x additional kuia / kaumatua [pensioner] units an additional 2bedroom dwelling and office on the He Korowai Trust landholding at 23 Kohuhu Street, Kaitaia.
Reason for Application	The proposal is considered to breach the following rules of the ODP: Rule 12.7.6.1.1 Setbacks from Waterways Rule 15.1.6A.2 – Traffic Movements Rule 15.1.6B.1 – Car Parking Rule 15.1.6C.1.1[c] – Access The proposal is a **Discretionary Activity.** No consents are required under the PDP.
Appendices	Appendix 1 – Record of Title & Instruments Appendix 2 – Architectural Drawings & Reports Appendix 3 – Previous Approvals & Documents
Consultation	Nil
Pre Application Consultation	Nil

3. INTRODUCTION & PROPOSAL

3.1 Report Requirements

This report has been prepared for He Korowai Trust in support of a land use application at 23 Kohuhu Street, Kerikeri.

The application has been prepared in accordance with the provisions of Section 88 and the Fourth Schedule of the Resource Management Act 1991(RMA). 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 Far North District Plan, relevant Regional Planning documents, National Policy Statements and Environmental Standards, as well as Part 2 of the RMA.

3.2 Proposal

Application Site: A range of site details are outlined in Schedule 1 of this Report. These details are supplemented by the Record of Title and relevant instruments located in Appendix 1.

Land Use Consent: The proposal seeks further development on the site in the form of the following:

- 6 x Kuia / Kaumatua [Pensioner Units], 1 x bdr, ~30m^2 in size.
- 2 x bdr dwelling ~77m^2 in size.
- Proposed office ~288m^2 in size.

Details of these buildings are provided in the Architectural Drawings & Reports found in Appendix 2.

These buildings are already located on the site. Whilst the property has a split zone, the location of all development on the site is located within the Residential Zone.

For the purposes of assessment, we only consider the Residential Zone rules.

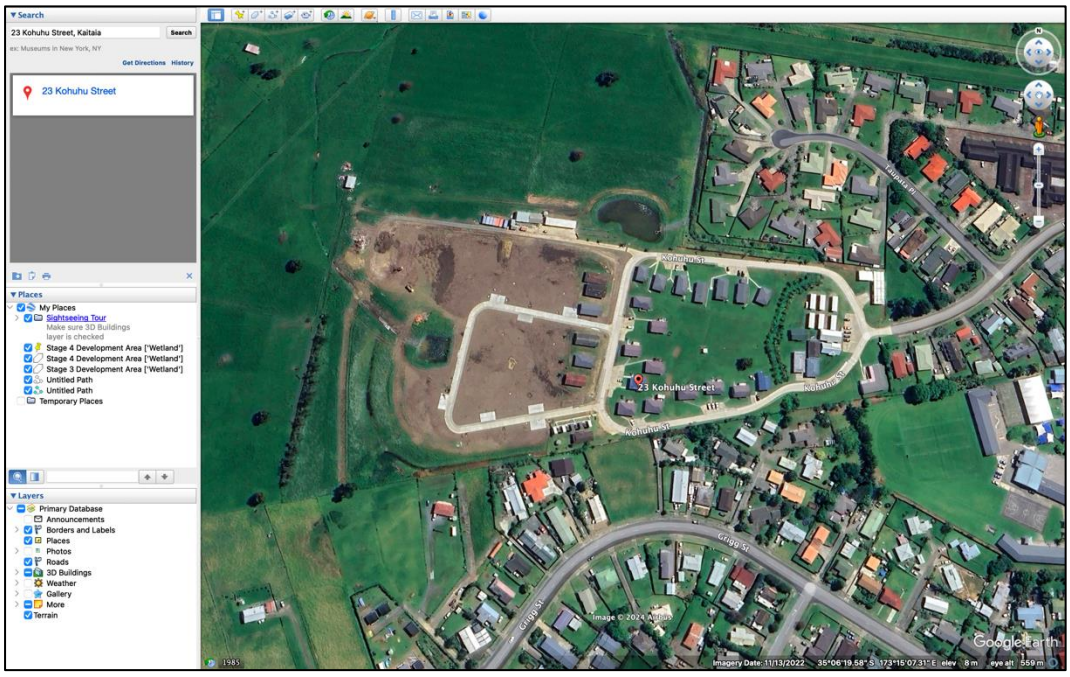


Figure 1 - Application Site [Google Earth]

Figure 2 – Proposed Units

The most recent approval for the site is included in Appendix 3. This also includes a range of supplementary reports that highlights details of the approved environment.

The proposal is considered to be a **Discretionary Activity** under the Operative District Plan.

4. SITE & SURROUNDING ENVIRONMENT

4.1 Zoning, Overlays, & Instruments

The property has a split zoning of the Rural Production Zone [west] and Residential Zone [east] where Kohuhu Street terminates before entering the site. The Residential Zone makes up 1.94ha of the overall site

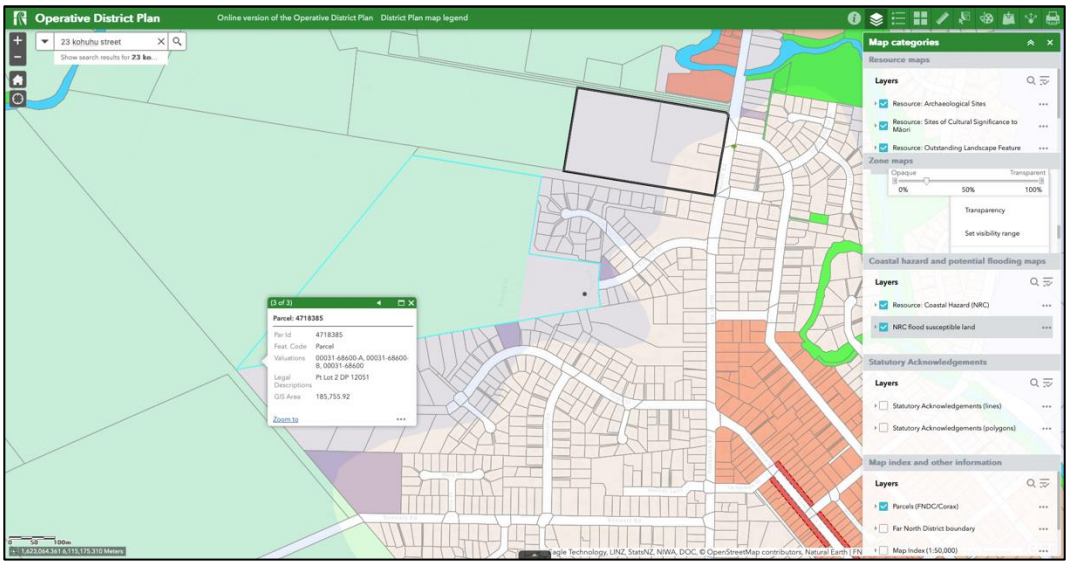


Figure 3 – ODP Zoning [Far North Maps]

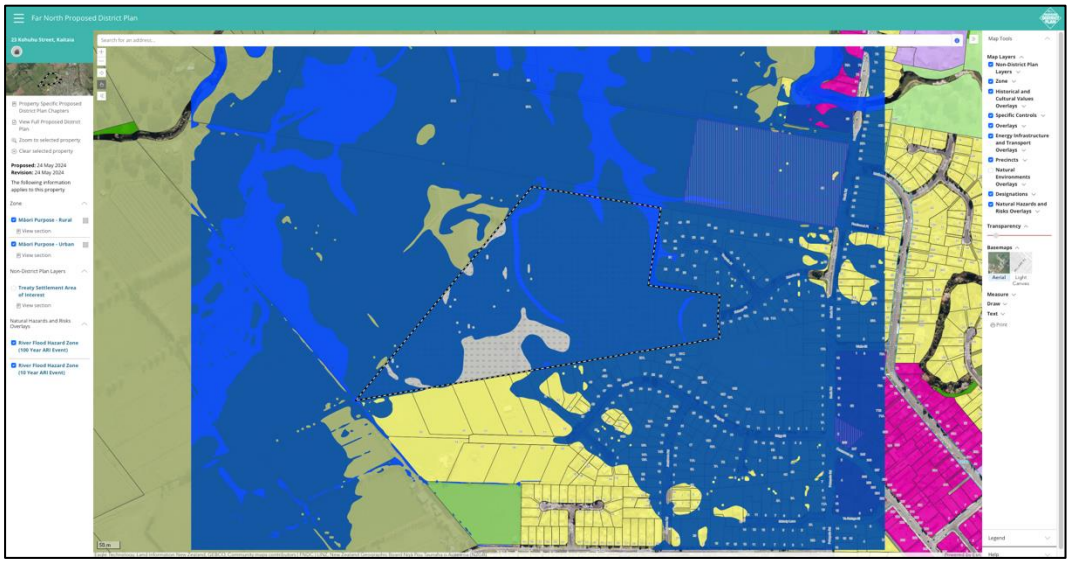


Figure 4 – PDP Zoning [Far North Maps]

The site is subject to flooding as per Figure 3 and 4 above.

4.2 Topography & Natural Features

Where development is proposed the landholding is low lying and generally flat. A drainage channel intersects the office building from the proposed dwellings.

4.3 Built Form & Access

The subject site contains a plethora of development both under development and existing. Our understanding of the development on site is outlined in Table 1 below.

Table 1 – Existing Approvals

Built Development Item(s)	Authorisation Reference
Nine dwellings, associated vehicle access, bulk earthworks and infrastructure deployment to the site.	RC 2130203-RMALUC & RC 2130203-RMAVAR/A
Puna Reo (childcare centre), with play area/equipment and acoustic fencing.	RC 2160272
Nine dwellings, 2 relocatable classroom blocks to be used as a trades training academy, temporary office and ablution block.	RC 2180402
Relocate 5, 10.5m2 self-contained units on the site	RC 2190233
24 relocatable houses with associated infrastructure	EPA Decision [Fast Track]

We provide the EPA decision in Appendix 3, however please request the other decisions if you require these.

4.4 Surrounding Environment

The site is flanked on three sides by existing residential development. The houses to the south of the site, Grigg Street, have screening in the form of fencing and landscaping on the boundary. To the north of the site are the relatively new residences of brick and tile of Taupata Street. These houses have a 1.8m to 2m high solid timber fence along their property boundaries.

A Far North District Council drainage reserves buffers the site to the north from these residences. The width of this reserve is at least 10m along most part of the northern boundary, although a smaller buffer also exists for a small portion. A small unnamed Far North District Council reserves adjoins the site near the Kohuhu Street entrance.

Kaitaia Intermediate and Kaitaia Abundant Life School are located in the surrounds. The Northerner Motor Inn and Loredo (accommodation services) are also located near the end of Kohuhu Street.

Overall, the immediate surrounds is characterised by residential use which contains a rural outlook. This characterisation is supported by FNDC zoning arrangements whereby, the Residential and Rural Production Zoning is prevalent in the area.

Taking a broader view, the site is between c. 1-2km from a range of activities and uses, including access to Kaitaia's Main Street as well as the recently commercialised and industrial areas of North Park.

The site also has ready access to many small and large scale reserves and recreational assets in the Kaitaia township. State Highway 1 does not provide access to the site, however is in close proximity, providing access both north and south through Kaitaia.

5. ASSESSMENT OF RELEVANT RULES

5.1 Far North District Plan

An assessment of the relevant rules of the ODP has been undertaken below:

Table 2 – Residential Zone Land Use Rules

Chapter 7 Urban Residential Zone	
Performance Standard	**Comment**
7.6.5.1.1 Relocated Buildings	The proposal includes relocated buildings, some of which are already closed in and completed. However, on approval a consent condition can be promoted to ensure that buildings are fully completed within 6 months of approval. **Permitted Activity**
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^2 This minimum net site area may be for the exclusive use of the residential unit, or as part of land held elsewhere on the property, provided that a ratio of one residential unit per minimum net site area (as stated above) is not exceeded. Except that this rule shall not limit the use of an existing site for a single residential unit for a single household, provided that all other standards for permitted activities are complied with.	The development is in the residential zone [1.94ha]. At 600m2 density the portion of the site could contain 32 residential units. There is an approved plan within the EPA Decision found in Appendix 3. This highlights that prior to this development, there are 9 dwellings within the Residential Zone. One straddles both the Residential and Rural Production Zone. Even using 10 houses, the proposed 7 x residential units remain permitted. **Permitted Activity**
7.6.5.1.3 Scale of Activities	Complies as residential use proposed.

	Permitted Activity
7.6.5.1.4 Building Height	No buildings are above the height limits. **Permitted Activity**
7.6.5.1.5 Sunlight	Please refer to Appendix 2 for evidence of compliance. **Permitted Activity**
7.6.5.1.6 Stormwater Management	The Engineering Report for the EPA Approval noted that the overall development at that time was 4.8% coverage of the site [Refer Appendix 3]. This included all impervious surfaces including driveways and parking areas. I have provided this report in Appendix 4 as a reference document to assist with matters. This proposal includes an additional 578m^2 of impervious surface. This equates to 5.1% coverage. **Permitted Activity**
7.6.5.1.7 Setback from boundaries	Please refer to Appendix 2 for evidence of compliance. **Permitted Activity**
7.6.5.1.8 Screening for Neighbours – Non Residential Activities	Non residential buildings / activities are all screened. **Permitted Activity**
7.6.5.1.9 Outdoor Activities	Not applicable
7.6.5.1.10 Visual Amenity	Not applicable
7.6.5.1.11 Transportation	Refer Table 4 below
7.6.5.1.12 Site Intensity Non Residential Activities	Non-residential activities do not increase to greater than 1,000m2 in coverage. **Permitted Activity**

7.6.5.1.13 Hours of Operation Non Residential Activities	The permitted standard will be adhered to. **Permitted Activity**
7.6.5.1.14 Keeping of Animals	Not applicable **Permitted Activity**
7.6.5.1.15 Noise	The permitted standard will be adhered to. **Permitted Activity**
7.6.5.1.16 Helicopter Landing Area	Not applicable **Permitted Activity**
7.6.5.1.17 Building Coverage	Total impervious surface coverage is 5.1% of the site. Building coverage is therefore permitted. **Permitted Activity**

Table 3 – Chapter 12 Performance Standards

Chapter 12 – District Wide	
12.1 Landscapes and Natural Features	Not relevant. **Permitted Activity**
12.2 Indigenous Flora and Fauna	Not clearance required. **Permitted Activity**
12.3 Soils and Minerals	Works are only required in relation to piling foundations which are exempt. No retaining walls are required. **Permitted Activity**
12.4 Natural Hazards	No dwellings within 20m of bush areas. Site not within a Coastal Hazard area. **Permitted Activity**
12.5 and 12.5A Heritage and Heritage Precincts	Not relevant. **Permitted Activity**
12.6 Air	Not relevant.

	Permitted Activity
12.7 Setbacks from Waterways	Development is located within the respective setback from the open drain within the immediate area. **Discretionary Activity**
12.8 Hazardous Substances	Not relevant. **Permitted Activity**
12.9 Energy Efficiency	Not relevant. **Permitted Activity**

Table 4 - Transportation Performance Standards

Chapter 15 - Transportation	
15.1.6A.2 Traffic Intensity	This proposal includes the following additional movements as per Appendix 3A: • 6 x kuia / kaumatua units = 12. • 2 x bdr house on Papakainga = 5. • Office = 30. **Discretionary Activity**
15.1.6B.1 Parking	This proposal includes the following additional movements as per Appendix 3C: • 6 x kuia / kaumatua units = 6. • 2 x bdr house on Papakainga = 1. • Office = 8. Overall, 15 parks are required. The proposal provides 9 formal parks at the site entry. This can cater for the units. The 2 x bdr unit has sufficient parking spaces area allocated as shown [2]. The office can provide 2 x car parks.

	This total is 13, two short of the requirement. **Discretionary Activity**
15.1.6C Access	The proposal adds additional users to the site in contravention of 15.1.6C.1.1[c]. **Discretionary Activity**

Overall, this subdivision 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.

5.2 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 (Appeals Version – July 2021) and no consents are required.

5.3 Proposed Far North District Plan 2022

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

Table 5 – 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	Not relevant as no such substances proposed.

	of significance to Māori, significant natural area or a scheduled heritage resource. HS-R5, HS-R6, HS-R9	
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
Historic Heritage	All rules have immediate legal effect (HH-R1 to HH-R10) Schedule 2 has immediate legal effect	Not relevant
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
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
Ecosystems and Indigenous Biodiversity	All rules have immediate legal effect (IB-R1 to IB-R5)	Not relevant
Activities on the Surface of Water	All rules have immediate legal effect (ASW-R1 to ASW-R4)	Not relevant
Earthworks	The following rules have immediate legal effect: EW-R12, EW-R13	These standards can be imposed and required at time of development.

	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
Orongo Bay Zone	Rule OBZ-R14 has partial immediate legal effect because RD-1(5) relates to water	Not relevant

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 6 – 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

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 6 below.

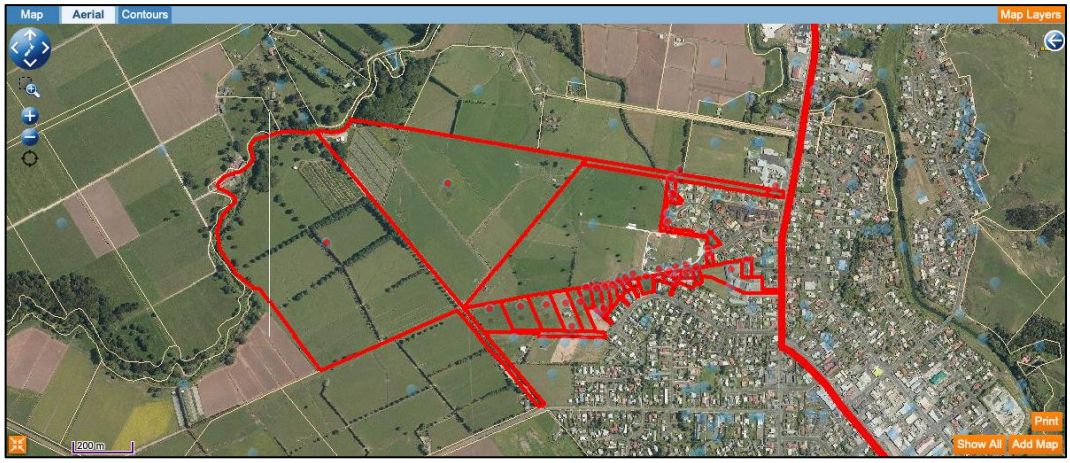


Figure 5 – Adjacent Sites [Prover]

7.2 Written Approvals

No written approvals have been sought

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.

Given the scale of activity on the site at present, very little could occur as a permitted activity.

It is noted however that in the residential zone there is still scope for the scale and size of the buildings to be located on the site in terms of building coverage and stormwater management so these effects can be disregarded.

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. The environment has steadily increased the overall built development on the site to cater to housing challenges in Kaitaia.

These dwellings will continue to utilize the existing site arrangements afforded at the time the resource consent was granted.

There are no known unimplemented consents with respect to this site or the surrounds.

7.5 Effects Assessment

The following assessment (refer Table 7) 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.

Table 7 – Effect Assessment (Environment)

Item	Assessment Criteria	Comments
Positive Effects	Nil	The proposal provides additional dwelling houses for elders [kuia / kaumatua]. This cohort of the housing population is often missed out in terms of large scale developments. The proposal includes an additional dwelling for a family in Kaitaia to be able to utilise. This adds to the overall housing stock on the site and in the surrounds. The additional administrative office assists with the on site management of tenants and other uses on the site and allows co-ordination of the He Korowai Trust service provision on site.
Traffic Effects	Derived from Chapter 15 and Chapter 11.	The context in which the proposal should be considered from a traffic perspective is as follows: • Double width commercial crossing in place from Kohuhu Street is existing and present. • One way 'ring road' system with appropriate signage, speed humps and markings. • A pedestrian path is provided around the development and internally through to house sites. The assessment criteria are addressed as follows: a) The site already includes uses above the permitted baseline. The proposal generates an additional 47 movements. b) The morning peak [9:00am – 10:00am] is likely to be when the majority of vehicle movements take place.

		c) The nearest adjacent movements are at Kohuhu Street [21 Kohuhu Street]. d) Kohuhu Street has a 9.6m carriageway between the kerbs and 3m wide berms with concrete footpaths. A give way control is at Kohuhu Street approach to North Road. e) Refer above – footpaths are located on Kohuhu Street and internal to the development. The volume is not clear but sufficient for a footpath on each side of the road and alongside the entirety of the internal ring road. f) The vehicle access has unobstructed sight lines from the site towards North Road. g) The Traffic Impact Assessment for the previous development noted that traffic counts were 138 vehicles per day [ADT] in 2016. h) There are no congestion or known safety problems. i) The design of the internal access and access crossing has been previously approved as a mitigation tool and is considered appropriate for this proposal. j) These have not been considered as required. k) From a traffic perspective this is nil. l) Dwellings can provide internal bike storage. m) The site has appropriate pedestrian access throughout. This is considered safe.
Parking Effects	Derived from Chapter 15 and Chapter 11.	The assessment criteria are addressed as follows: a) The shortfall of parking is relatively minor. Whilst the car parks could be provided on the site, they would not be in close proximity to the activities. b) Parking on Kohuhu Street is possible. c) No.

		d) The proposal is considered to meet the practicable parking demands for the activities proposed. e) The parking layout is shown in Appendix 2. There are no known issues with this layout. f) Length of stay will be long term for residents and short term for the use of the office. g) The total number of car parks is 13. This is two less than the permitted baseline. This is not considered an inappropriate baseline. h) Parking widths are appropriate. i) N/A j) Residents can cycle as there is an appropriate ring road and footpath available on site. k) There is sufficient accessible car parking proposed. l) Walking and cycling is a possible option for the site. m) Kohuhu Street is not an arterial road or strategic road. n) Nil. o) N/A. p) Nil. q) Staff will be there at varying times.
Access Effects	Derived from Chapter 15 and Chapter 11.	The assessment criteria are addressed as follows: a) Sight distances are adequate for the existing crossing. b) There are no congestion or known safety problems. c) There are no foreseeable changes in traffic patterns off Kohuhu Street. d) Nil formal restrictions however the entrance to Kohuhu Street is often closed via gate at night.

		e) The existing crossing has been built to a double width commercial crossing in accordance with FNDC Engineering Standards. f) There is suitable and existing alternative transport options such as walking and cycling promoted on the site. g) The management of stormwater from the accessways have been approved via previous council considerations. h) N/A i) The roading hierarchy is not known. j) The proposal is not in a business zone. k) No subdivision proposed. l) Not required. m) No access off State Highway promoted.
Natural Hazards / Setback from Waterway Effects	Derived from Chapter 12.7	The site is subject to flooding. This is not a new issue pertaining to development on the site. The Engineering Report for the EPA proposal sets an 11.75m RL for development on the site and this will be adhered to for the proposed buildings. Provided this is conditioned there are no other natural hazards of concern. In terms of the setback from the drain, this has been canvassed through previous consents and for clarity a breach has been applied for. The development has no impact on this asset of the drainage catchment for Kaitaia. Whilst there are increases in impervious surfaces these are proposed at expected levels within the residential zone. All of the previous development has been developed in accordance with stormwater conditions which have entirely mitigated those issues in the corresponding Rural Production Zone. Therefore, the applicant has a right to 'uptake' this level of development.

		As per previous developments this drain has no cultural or spiritual connections to the wider iwi / hapu of the area.
Cumulative Effects	Nil	The site has developed over numerous iterations reflecting the changing dynamics associated with housing including government funding availability. The site now reflects a multitude of housing typologies and approaches alongside on-site service provision to ensure that tenant needs are considered as part of the housing solution. At each iteration He Korowai Trust have sought appropriate consents and considered each housing solution alongside the necessary implications the ODP and PDP present. As part of this proposal, the key factors pertain to traffic, parking and access effects. These effects are mitigated through the large scale infrastructure investment provided in terms of the existing vehicle crossing and ring road infrastructure as well as the safety mechanisms therein. The character of the area is not considered to be adversely affected in the Residential Zone as the housing density and coverage is all permitted. However, to maintain appropriate character conditions can be applied to ensure that these units are appropriate closed in, connected to infrastructure with exteriors painted. For some of the units on site this is already provided.

		Hazards can be adequately mitigated and stormwater disposed of as a permitted activity. For the reasons above cumulative effects are considered to be less than minor.
Concluding Statement: Having considered the relevant actual and potential effects associated with the development, it is considered that the proposed land use 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 8 – 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

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 (<200m3) which can be undertaken with standard consent conditions imposed.
- There is no vegetation clearance required / proposed.
- Traffic, parking and access matters can be dealt with through existing arrangements. Natural hazards can be similarly mitigated on site through development.
- The provision of houses and on-site services follows existing approved development for the site.
- There are no special features / resources that apply to the site. There are no cultural or archaeological values that arise.

9. STATUTORY CONTEXT

9.1 National Policy Statements and 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 land use aligns with the objectives of the RPS. It entails the provision of housing and on-site services on maori land for the benefit of the community.

Existing and proposed measures are in place for access, as well as appropriate infrastructure servicing through connections to reticulated services. Therefore, it is considered that 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 ODP has been undertaken for the Residential zone:

Table 9 – 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 meets the density requirements of the Residential Zone.
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 applicable

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 applied to areas which are currently residential but where there is scope for new residential development	Noted
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	The proposed non-residential activity has a similar character to a dwelling so fits in with the overall area.
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.	Net effects do not exceed the policy as residential intensity is not breached.

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 General Residential objectives and policies have been assessed below.

Table 10 – 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: a. housing needs and demand; b. the adequacy and capacity of available or programmed development infrastructure; c. the amenity and character of the receiving residential environment; and	Noted.

d. 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 provided to the site.
GRZ-O5 Land use and subdivision in the General Residential zone provides communities with functional and high amenity living environments	The proposal is commensurate as it meets the density requirements.
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: a. there is adequacy and capacity of available or programmed development infrastructure to support it; and b. it is consistent with the scale, character and amenity	Services are available to the site.

anticipated in the residential environment	
GRZ-P2 Require all subdivision in the General Residential zone to provide the following reticulated services to the boundary of each lot: a. telecommunications: i. fibre where it is available; or ii. copper where fibre is not available; b. local electricity distribution network; c. 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.	Possible in the future.
GRZ-P4 Enable non-residential activities that: a. do not detract from the vitality and viability of the Mixed Use zone; b. support the social and economic well-being of the community; c. are of a residential scale; and	The on site services are considered to meet this policy.

are consistent with the scale, character and amenity of the General Residential zone.	
GRZ-P5 Provide for retirement villages where they: a. compliment the character and amenity values of the surrounding area; b. contribute to the diverse needs of the community; c. do not adversely affect road safety or the efficiency of the transport network; and d. can be serviced by adequate development infrastructure.	Not applicable.
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: a. consistency with the scale, design, amenity and character of the residential environment; b. the location, scale and design of buildings or structures,	The proposal is consistent with this Policy and follows a general trend of appropriate development for Kaitaia.

potential for shadowing and visual dominance; c. for residential activities: i. provision for outdoor living space; ii. privacy for adjoining sites; iii. access to sunlight; d. for non-residential activities: i. scale and compatibility with residential activities ii. hours of operation e. at zone interfaces, any setbacks, fencing, screening or landscaping required to address potential conflicts; f. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity, including: i. opportunities for low impact design principles ii. ability of the site to address stormwater and soakage; g. managing natural hazards; and h. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6	

Table 11 – Objectives and Policies Assessment of the PDP Subdivision Chapter

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, it is considered that the appropriate weighting to give the objectives and policies is 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 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 RMA, 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 Section 8 – Part 2 Conclusion

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

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 RMA.

Given the assessment carried out in this report, it is considered that this proposal can be determined non-notified under the RMA. We would appreciate a 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	**NA35B/367**
Land Registration District	**North Auckland**
Date Issued	10 September 1976

Prior References
NA466/3

Estate	Fee Simple
Area	18.6177 hectares more or less
Legal Description	Part Lot 2 Deposited Plan 12051
Registered Owners	

He Korowai Trust

Interests

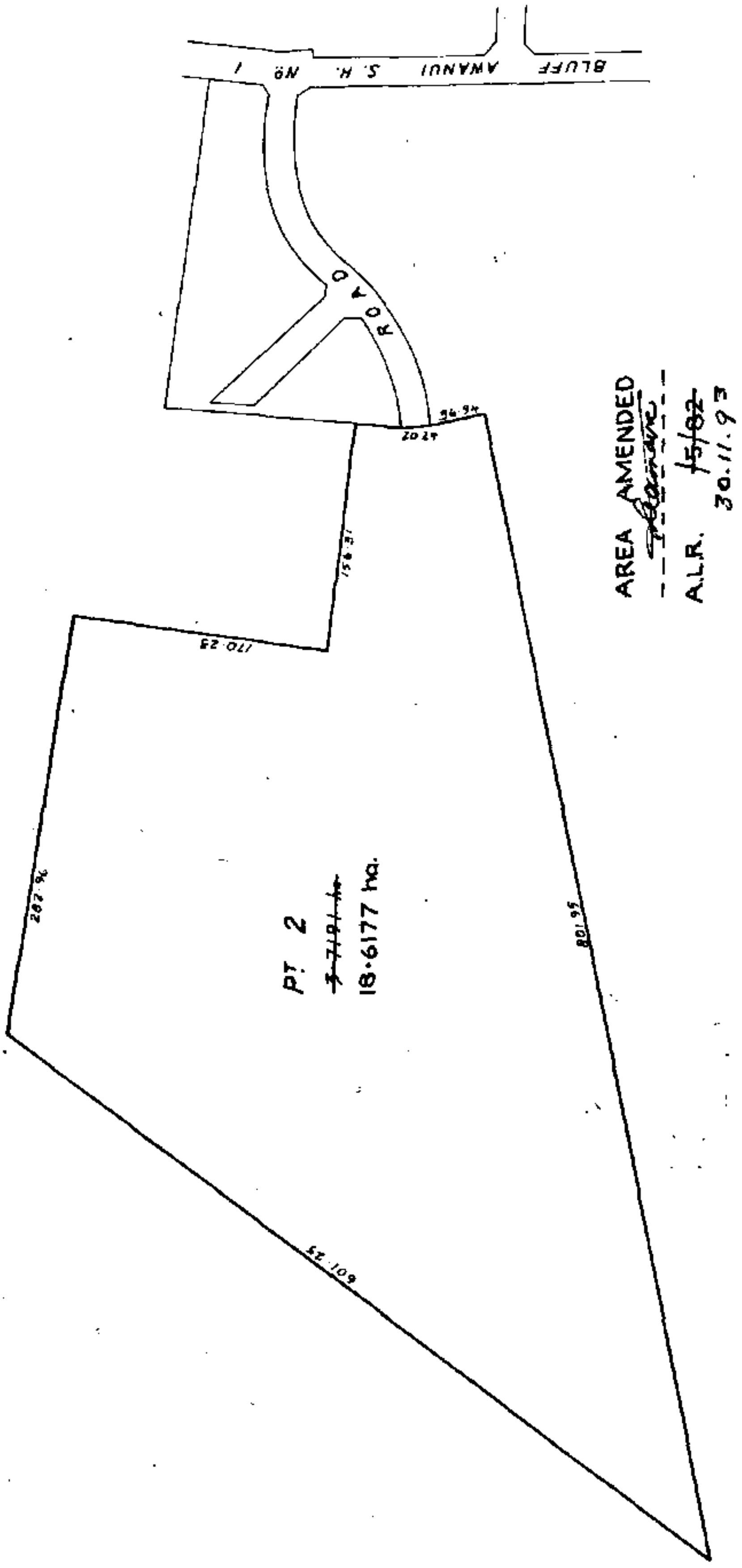
9315495.1 Notification that a building consent issued pursuant to Section 72 Building Act 2004 identifies flooding as a natural hazard - 19.2.2013 at 7:00 am

9364998.1 Status Order determining the status of the within land to be Maori Freehold Land - 11.4.2013 at 7:00 am

11678989.1 Notification that a building consent issued pursuant to Section 72 Building Act 2004 identifies inundation as a natural hazard - 10.2.2020 at 7:00 am

12778844.1 Notification that a building consent issued pursuant to Section 72 Building Act 2004 identifies inundation as (a) natural hazard(s) - 11.7.2023 at 7:00 am

13014177.1 Notification that a building consent issued pursuant to Section 72 Building Act 2004 identifies inundation as a natural hazard - 17.5.2024 at 7:00 am


BLUFF AWANUI S.H. No 1
ROAD
PT. 2
18·6177 ha.
AREA AMENDED
A.L.R.
30.11.93
56·94
20·24
156·31
170·23
287·96
801·95
601·23

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

Record(s) of Title

NA35B/367	Identified as potentially Maori Freehold Land

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

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

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

Private Bag 752, Kaikohe 0440, New Zealand
ask.us@fndc.govt.nz
0800 920 029
fndc.govt.nz

North Auckland
Land Registration District

NOTIFICATION TO THE REGISTRAR-GENERAL OF LAND OF CONDITION UNDER SECTION 73 OF THE BUILDING ACT 2004

Section 73(1)(c) and 73(3) Building Act 2004

Notification

The **Far North District Council** hereby gives notice that a building consent has been granted, affecting the land comprised in the numbered computer register(s) below - and is considered likely to be subject to Inundation.

Computer Register(s) of land on which building work is to be carried out

Title:	**Legal Description:**
NA-35B/367	Pt Lot 2 DP 12051

Building Consent details

Building Consent Number: EBC-2024-364/0
Name of Owner: He Korowai Trust
Address: 23 Kohuhu Street, Kaitaia 0410

Date: 10 May 2024

Trent Blakeman
Building Manager, District Services
Duly authorised to execute this form for and on behalf of the
Far North District Council

Far North District Council

C73 9315495.1 Build
Cpy - 01/03, Pgs - 002, 18/02/13, 10

DocID: 513846497

To: *The Land Registration District, North Auckland*

CERTIFICATE ISSUED UNDER SECTION 74 OF THE BUILDING ACT 2004

CERTIFICATE(S) OF TITLE: No(s): NA-35B/367

The **Far North District Council** hereby gives notice that the Council has granted a building consent to the land described in the above certificate(s) of title and listed in the schedule below. The building consent was granted pursuant to the provisions of section 72 of the Building Act 2004, enabling the building of new dwellings on land which is considered likely to be subject to **Flooding**.

Schedule

Legal Description:	Pt Lot 2 DP 12051
Address:	Pt Lot 2, Kohuhu Street, Kaitaia 0410
Name of owner:	Ricky Martin Houghton and Murray Alan Lay
Building Consent Number:	BC-2013-748/0

Date: 15 February 2013

Paul Cook
Building Manager
Environmental Management

MANUAL DEALING LODGEMENT FORM

C73 9315495.1 Build
Cpy - 02/03, Pgs - 002, 18/02/13, 10
Copies
(inc. original)
DocID: 513846497

Landonline User ID: mreihana001
LODGING FIRM: **Far North District Council**
Private Individual: **Attn: Marion Reihana**
Address: Private Bag 752
Memorial Ave
Kaikohe
ASSOCIATED FIRM:
Client Code / Ref: BC#: 2013-748

Dealing/SUD Number (LINZ use only):
Priority Barcode/Date Stamp (LINZ use only):
Plan Number Pre-Allocated or to be Deposited:
Rejected Dealing Number:

Priority Order	CT Ref	Type of Instrument	Names of Parties	Document Fees	Resubmission		Notices		Priority Capture*		FEES $ GST INCLUSIVE
1	NA358/367	Sec 72 C73		$176.00			✓				176.00
2											
3											
4											
5											

RECEIVED 18 FEB 2013

Land Information New Zealand Manual Dealing Lodgement Form

Fees Receipt and Tax Invoice

GST Registered Number 17-022-895

LINZ Form P005

Annotations (LINZ use only).

Original Signatures? _____

Subtotal	$176.00
Total for this dealing	$176.00
Less fees paid on Dealing #	
Debit my Landonline account for (Only available for Landonline customers)	**$176.00**
or Cash / Cheque enclosed for (Only pay in cash if depositing in drop box at a LINZ processing centre)	
or Eft-pos payment due for (Eft-pos only available if lodging the dealing in person at a LINZ processing centre)	

* Making a priority lodgement ensures the lodgement is entered into the LINZ work queue at the time and date it was handed over at the counter. Priority does not provide urgency in processing the dealing. For further details please reference the manual dealing user guide.

56 TTK 244-247

ORDER CHANGING STATUS OF GENERAL LAND

Te Ture Whenua Māori Act 1993, Section 133

In the Māori Land Court
of New Zealand
Taitokerau District

IN THE MATTER of Part Lot 2 Deposited Plan 12051 containing 18.6177 hectares more or less being the land described in NA35B/367, North Auckland Land Registry

At a sitting of the Court held at Kaitaia on the 18th day of March 2013 before David John Ambler, Judge

WHEREAS the above described land is General land

AND WHEREAS an application has been filed by Ricky Martin Houghton and Murray Alan Lay to change the status of the said land

NOW THEREFORE the Court upon reading and hearing all evidence adduced in support thereof and being satisfied on all matters upon which it is required to be so satisfied

HEREBY ORDERS pursuant to Section 133 of Te Ture Whenua Māori Act 1993 that the abovedescribed land shall cease to be General land and shall become Māori freehold land

AND THE COURT DOTH HEREBY FURTHER DECLARE pursuant to rule 7.5(2)(b) of the Māori Land Court Rules 2011 that this order do issue IMMEDIATELY from the office of the Court

AS WITNESS the hand of the Registrar and the Seal of the Court

DUPLICATE ORDER
This is a duplicate of an original order of the Māori Land/Appellate Court and has been issued by me as a Deputy/Registrar of the Māori Land/Appellate Court under rule 7.12 of the Māori Land Court Rules 2011
at Whangarei
on 21/4/13
CHIEF / DEPUTY REGISTRAR

REGISTRAR

THE MAORI LAND COURT OF NEW ZEALAND

A20120012688

MEMORANDUM
MAORI LAND COURT – TE TAITOKERAU DISTRICT

Date: **5 April 2013**

From: **Zeniff Haika**

To: **Land Information New Zealand**
Private Bag 3028
Waikato Mail Centre
Hamilton 3240

Subject: **Part Lot 2 Deposited Plan 12051 – North Auckland District**

CT Reference **NA35B/367**

File Reference: A20120012688

Attached are the following orders for registration:

No.	Order	Court Order Ref. and Date.
1.	MLCO – Order Changing Status of General Land	56 TTK 244-247 18/03/2013

OUTCOME:

Please register the following order against NA35B/367

MLCO.1 **Changing the status of land to Maori freehold land**

GENERAL COMMENTS:

Please register accordingly.

Thank you

Zeniff Haika

Zeniff Haika, Land Registry Officer – MLC Taitokerau District
Ph: 09 983 9968 – email: zeniff.haika@justice.govt.nz

Landonline User ID: Maorilcwh

LODGING FIRM: Maori Land Court

Address: DX AX10086

Whangarei 0140

Uplifting Box Number: Zeniff Haika

ASSOCIATED FIRM: MLC - Taitokerau

Client Code / Ref: A20120012688

HEREWITH

Survey Plan (#)	
Title Plan (#)	
Traverse Sheets (#)	
Field Notes (#)	
Calc Sheets (#)	
Survey Report	

Other (state)

Dealing / SUD Number (LINZ Use only)

Priority Barcode Date Stamp (LINZ use only)

MLCO 9364998.1 Maori I

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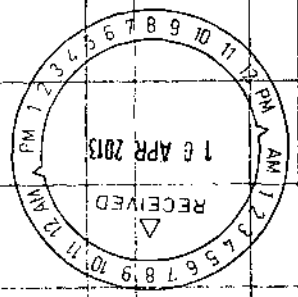
DocID 613961903

Plan Number Pre-Allocated or to be Deposited

Rejected Dealing Number

Priority Order	CT Ref	Type of Instrument	Names of Parties	DOCUMENT OR SURVEY FEES	MULTI-TITLE FEES	NOTICES	ADVERTISING	NEW TITLES	OTHER	RESUBMISSION & PRIORITY FEE	FEES $ GST INCLUSIVE
1	NA35B/367	MLCO	Maori freehold land								
2											
3											
4											
5											
6											



Land Information New Zealand Lodgement Form

Annotations (LINZ use only)

Subtotal (for this page)	
Total for this dealing	$0.00
Less Fees paid on Dealing #	
Cash/Cheque enclosed for	**$0.00**

Fees Receipt and Tax Invoice

GST Registered Number 17-022-895

LINZ Form P005

Original Signatures? _____

Far North District Council

North Auckland
Land Registration District

NOTIFICATION TO THE REGISTRAR-GENERAL OF LAND OF CONDITION UNDER SECTION 73 OF THE BUILDING ACT 2004

Section 73(1)(c) and 73(3) Building Act 2004

Notification

The **Far North District Council** hereby gives notice that a building consent has been granted, affecting the land comprised in the numbered computer register(s) below - and is considered likely to be subject to Inundation.

Computer Register(s) of land on which building work is to be carried out

Title:	**Legal Description:**
NA-35B/367	Part Lot 2 Deposited Plan 12051

Building Consent details

Building Consent Number: EBC-2020-11478/0

Name of Owner: He Korowai Trust

Address: 23 Kohuhu Street, Kaitaia 0410

Date: 30 January 2020

Trent Blakeman
Building Manager, District Services
Duly authorised to execute this form for and on behalf of the
Far North District Council

MANUAL DEALING LODGEMENT FORM

C73 11678989.1 Buildi
Cpy – 02/02, Pgs – 002, 07/02/20, 11:23
Copies (inc. original)
DocID: 620192333

Landonline User ID: mreihana001

LODGING FIRM: **regulatorycska**

Private Individual: **Attn: Marion Reihana**

Address: Private Bag 752
Memorial Ave
Kaikohe

ASSOCIATED FIRM:

Client Code / Ref: EBC-2020-11638-0

Dealing/SUD Number (LINZ use only)

Priority Barcode/Date Stamp (LINZ use only)

Plan NumberPre-Allocated or to be Deposited:

Rejected Dealing Number:

Priority Order	CT Ref	Type of Instrument	Names of Parties	Document Fees	Resubmission		Notices		Priority Capture*		FEES $ GST INCLUSIVE
1	NA-35B/367	S72		$176.00							176.00
2											
3											
4											
5											

Land Information New Zealand Manual Dealing Lodgement Form

Fees Receipt and Tax Invoice

GST Registered Number 17-022-895

LINZ Form PC05

Annotations (LINZ use only)

RECEIVED
7 FEB 2020
BY:

Original Signatures? _____

Subtotal	$176.00
Total for this dealing	$176.00
Less fees paid on Dealing # _____	
Debit my Landonline account for (Only available for Landonline customers)	**$176.00**
or Cash / Cheque enclosed for (Only pay in cash if depositing in drop box at a LINZ processing centre)	
or Eft-pos payment due for (Eft-pos only available if lodging the dealing in person at a LINZ processing centre)	

* Making a priority lodgement ensures the lodgement is entered into the LINZ work queue at the time and date it was handed over at the counter. Priority does not provide urgency in processing the dealing. For further details please reference the manual dealing user guide.

Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

Private Bag 752, Kaikohe 0440, New Zealand
ask.us@fndc.govt.nz
0800 920 029
fndc.govt.nz

North Auckland
Land Registration District

NOTIFICATION TO THE REGISTRAR-GENERAL OF LAND OF CONDITION UNDER SECTION 73 OF THE BUILDING ACT 2004

Section 73(1)(c) and 73(3) Building Act 2004

Notification
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Computer Register(s) of land on which building work is to be carried out

Title:	**Legal Description:**
NA-35B/367	Part Lot 2 DP 12051

Building Consent details

Building Consent Number:	EBC-2023-1031/0
Name of Owner:	He Korowai Trust
Address:	23 Kohuhu Street, Kaitaia 0410

Date: 30 June 2023

Trent Blakeman
Building Manager, District Services
Duly authorised to execute this form for and on behalf of the
Far North District Council

MANUAL DEALING LODGEMENT FORM

Title Schedule | Page Two | LINZ Fees

Landonline User ID: ltane001

LODGING FIRM: **regulatorycska**

Private Individual: Aroha Chase

Address: Private Bag 752
Memorial Ave
Kaikohe

ASSOCIATED FIRM: Far North District Council

Client Code / Ref: EBC-2023-1031/0

Print This Page

Print All Pages

Clear All

Plan Number Pre-Allocated or to be Deposited:

Rejected Dealing Number:

Please debit my Landonline account
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e dealing in person at a LINZ processing centre)

Blank All Payment Fields

Priority Order	CT Ref	Type of Instrument	Names of Parties	Document Fees	Resubmission		Notices		Priority Capture*		FEES $ GST INCLUSIVE
1	**NA35B/367**	c73	He Korowai Trust	$180.00							180.00
2											
3											
4											

Land Information New Zealand Manual dealing Lodgement Form

Fees receipt and Tax Invoice

GST Registered Number 17-022-895

LINZ Form P005

Annotations (LINZ use only)

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10 JUL 2023
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Subtotal	$180.00
Total for this dealing	$180.00
Less fees paid on Dealing #	
Debit my Landonline account for (Only available for Landonline customers)	**$180.00**
or Cash / Cheque enclosed for (Only pay in cash if depositing in drop box at a LINZ processing centre)	
or Eft-pos payment due for (Eft-pos only available if lodging the dealing in person at a LINZ processing centre)	

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Sheet Index	
Sheet No:	**Sheet Name:**
BC(0)00	COVER SHEET
BC(1)01	LOCATION PLAN
BC(0)02	SITE PLAN
BC(0)03	SITE PLAN
BC(0)04	SITE PLAN
BC(0)05	SITE PLAN
BC(#.1)00	FLOOR PLAN
BC(#.1)01	FOUNDATION PLAN
BC(#.1)02	PLUMBING PLAN
BC(#.1)03	ROOF PLAN
BC(#.2)00	ELEVATIONS
BC(#.2)01	ELEVATIONS
BC(#.3)00	SECTIONS
BC(4)00	ORDINARY PILE DETAILS
BC(4)01	ANCHOR PILE DETAILS
BC(4)02	BRACED PILE DETAILS
BC(4)03	ORDINARY PILE DETAILS
BC(4)04	ANCHOR PILE DETAILS
BC(4)05	BRACED PILE DETAILS
BC(4)06	TYPICAL DETAILS
BC(4)07	TYPICAL DETAILS
BC(4)08	TYPICAL DETAILS
BC(4)09	TYPICAL DETAILS
BC(4)10	TYPICAL DETAILS

REPRESENTS HOUSE NUMBER

STATUS: BUILDING CONSENT

PROJECT NAME + ADDRESS: 2412 WHARE ORA_FRONT SITE

23 Kohuhu Street,

Kaitaia, , 0410

DATE: 18/06/2024

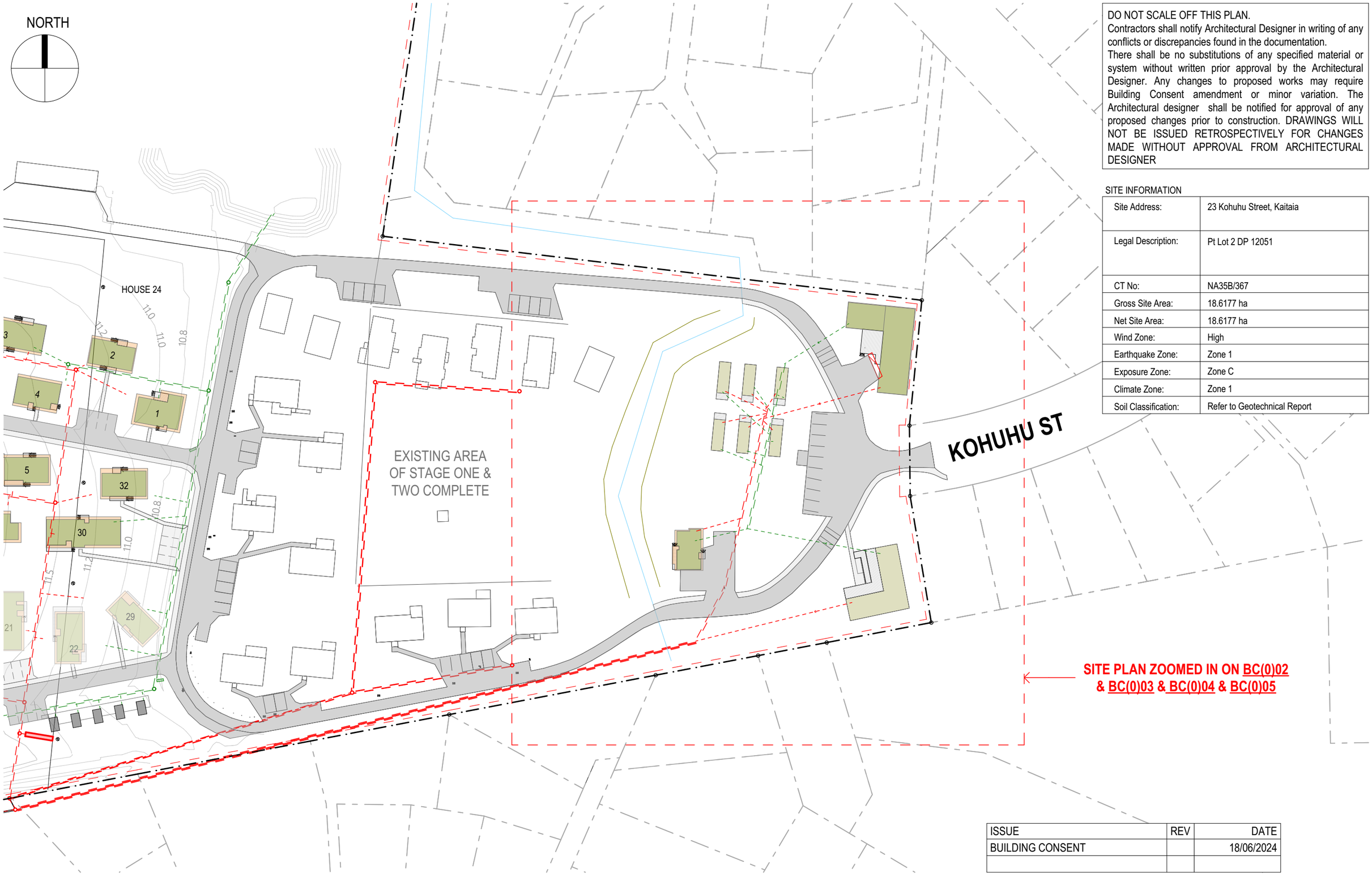
PROJECT NUMBER: 2412

A W DESIGNS
485 KHYBER PASS ROAD
T:02102867410
E:ARAMA@AWDESIGNS.CO.NZ

SHEET NUMBER BC(0)00

REVISION

NORTH



DO NOT SCALE OFF THIS PLAN.
Contractors shall notify Architectural Designer in writing of any conflicts or discrepancies found in the documentation.
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SITE INFORMATION

Site Address:	23 Kohuhu Street, Kaitaia
Legal Description:	Pt Lot 2 DP 12051
CT No:	NA35B/367
Gross Site Area:	18.6177 ha
Net Site Area:	18.6177 ha
Wind Zone:	High
Earthquake Zone:	Zone 1
Exposure Zone:	Zone C
Climate Zone:	Zone 1
Soil Classification:	Refer to Geotechnical Report

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410 | 1:1000 @ A3 | LOCATION PLAN | 18/06/2024 | BC Ref: 2412 | BC(1)01 REV:

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485 KHYBER PASS ROAD
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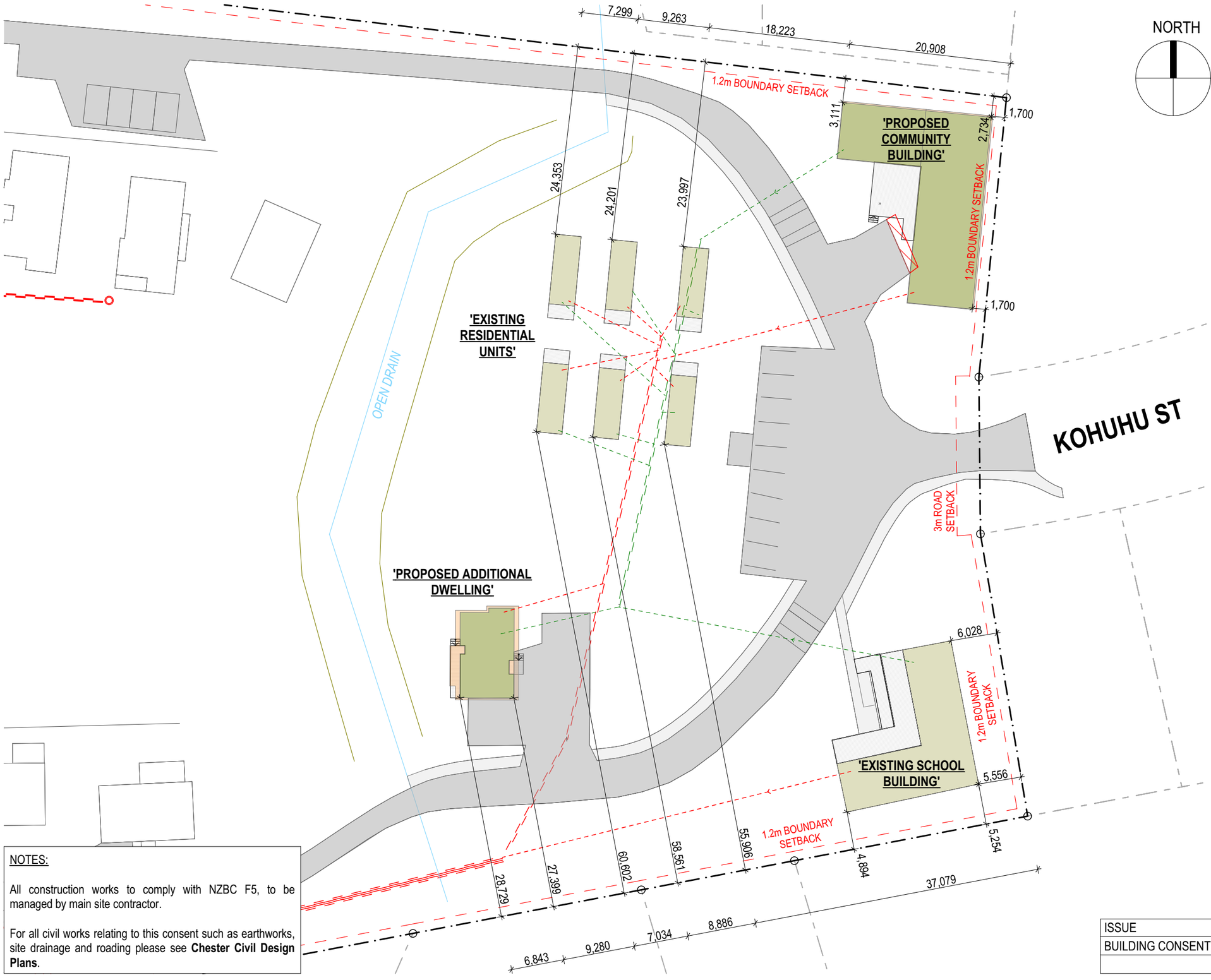
E: ARAMA@AWDESIGNS.CO.NZ



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COVERAGES

House No:	Building Coverage:	Impermeable Area:
House 1	88m2	119m2
House 2	96m2	125m2
House 3	127m2	160m2
House 4	101m2	128m2
House 5	102m2	134m2
House 6	112m2	144m2
House 7	89m2	112m2
House 8	100m2	129m2
House 10	109m2	146m2
House 11	88m2	115m2
House 12	90m2	121m2
House 13	96m2	126m2
House 14 (10Tiaka)	100m2	131m2
House 15 (37 Marlowe)	98m2	132m2
House 16 (7Tiaka)	103m2	137m2
House 9 (34Winth)	93m2	118m2
House 17 (11Court)	157m2	192m2
House 18 (13Court)	143m2	179m2
House 19 (15Court)	167m2	199m2
House 20 (41Marl)	98m2	138m2
House 21 (43Marl)	103m2	143m2
House 22 (71Bolt)	89m2	121m2
House 23 (79Bolt)	90m2	119m2
House 24 (81Bolt)	90m2	116m2
Proposed Community Building	288m2	298m2
Proposed Additional Dwelling	77m2	100m2
6x Existing Residential Units	1080m2	1080m2
Existing School Building	191m2	191m2
Total for this consent:	**1,636m2**	**1,669m2**
Total site coverage:	**4,165m2**	**4,953m2**

NOTES:

All construction works to comply with NZBC F5, to be managed by main site contractor.

For all civil works relating to this consent such as earthworks, site drainage and roading please see **Chester Civil Design Plans**.

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410	1:500 @ A3	SITE PLAN	18/06/2024	BC Ref: 2412	BC(0)02 REV:

A W DESIGNS
485 KHYBER PASS ROAD
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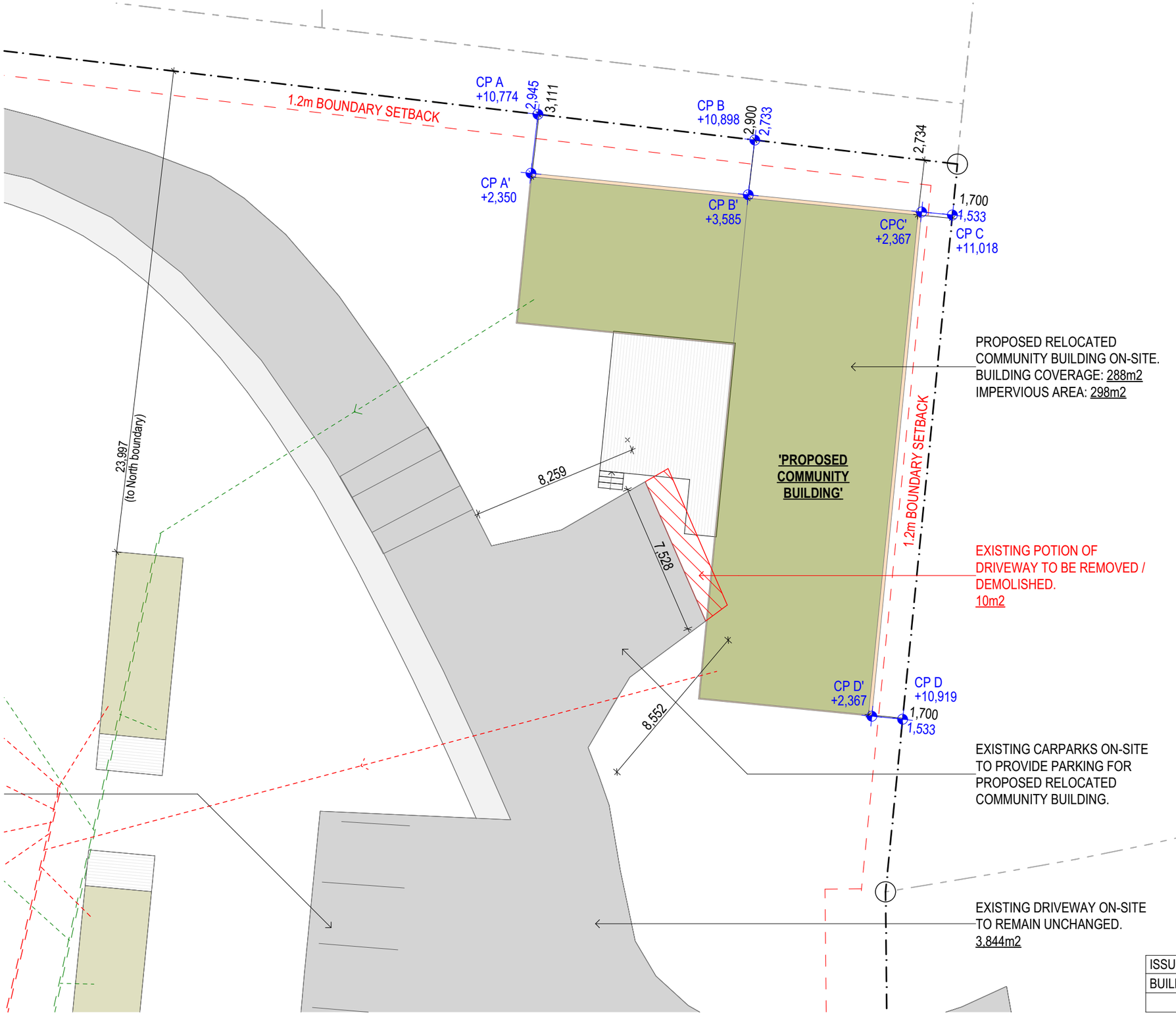
E: ARAMA@AWDESIGNS.CO.NZ



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ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410	1:200 @ A3	SITE PLAN	18/06/2024	BC Ref: 2412	BC(0)03 REV:

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ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410	1:200 @ A3	SITE PLAN	18/06/2024	BC Ref: 2412	BC(0)04 REV:

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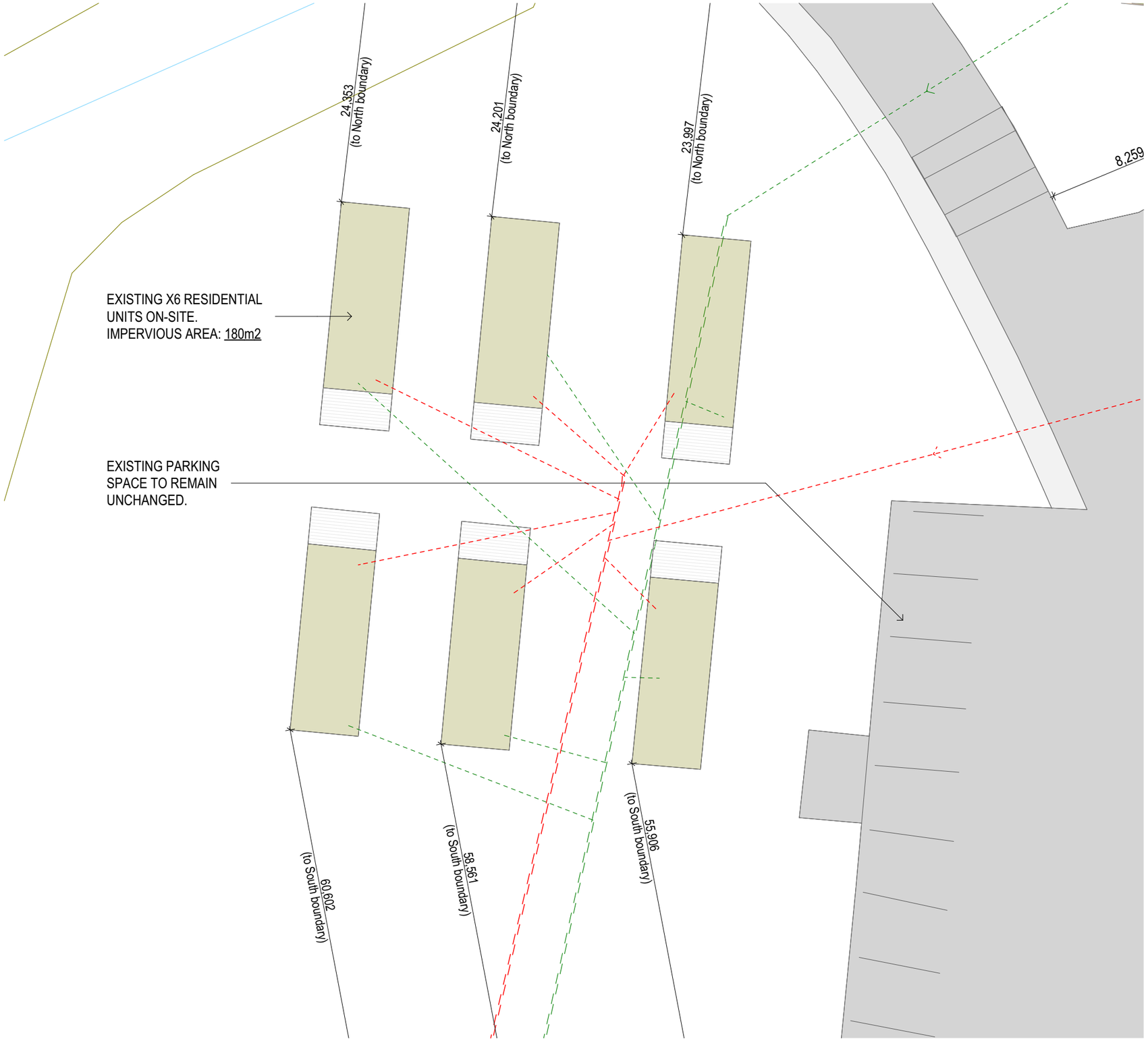

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ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410

1:200 @ A3

SITE PLAN

18/06/2024

BC
Ref: 2412

BC(0)05
REV:

A W DESIGNS
485 KHYBER PASS ROAD
T: 02102867410
E: ARAMA@AWDESIGNS.CO.NZ

NORTH

FLOOR STATUS

Existing Carpet overlay.

Existing Lino overlay.

Refer to Keynote for floor type/construction.

NOTES: ENSURE DEFECTS NOTED IN BUILDING REPORT ARE CHECKED BY MAIN CONTRACTOR AND REQUIRED REMEDIAL WORKS TO BE COMPLETED ON A LIKE FOR LIKE/REMEDIAL BASIS.

ALL DIMENSIONS TO BE VERIFIED WITH EXISTING BUILDING.

In-case Hazardous materials are detected on-site (including asbestos) it is to be properly disposed off and dealt with as per F1/AS1 and health and safety (asbestos) regulations 2016.

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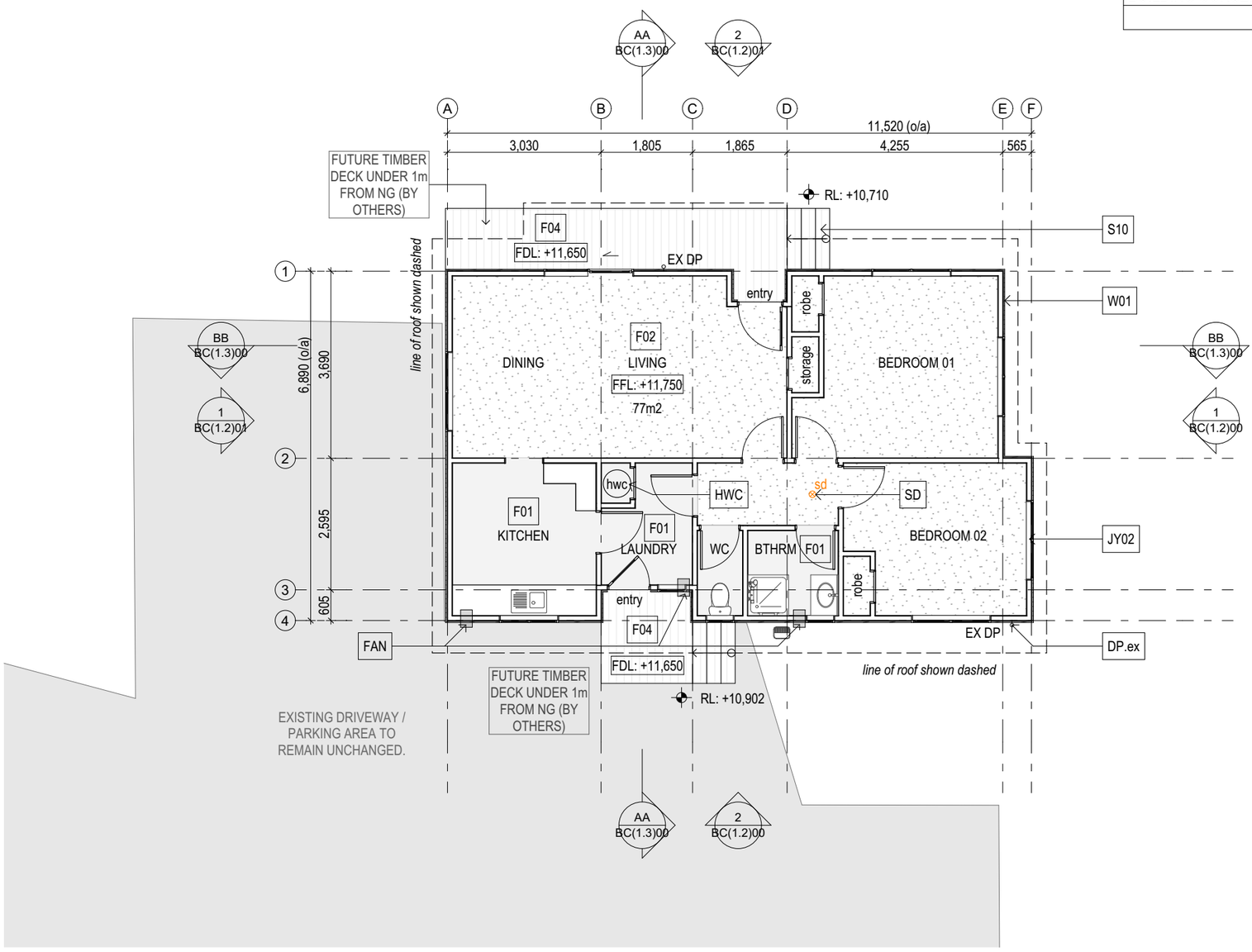
ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024



KEYNOTES

FLOORS

F01 TIMBER FLOOR - LINO
Existing Lino to remain over existing timber floor structure. Ensure floor finish installed is compliant with Watersplash impervious finish required as per E3/AS1.

F02 TIMBER FLOOR - CARPET
Carpet floor overlay existing or new to be replaced on a like for like basis.

F04 TIMBER DECK
New Timber deck, to be under 1m from NG to FDL & by others (not apart of this consent). Ensure to be built/completed prior to CCC.

WALLS

W01 EXISTING CLADDING
Existing timber Bevelback weatherboard wall cladding to remain on existing timber framed walls. Allow to make good as required on a like for like basis.

EXTERIOR JOINERY

JY02 EXISTING ALUMINIUM JOINERY
Existing aluminium joinery to remain. Replace any finishing lines or units that are effected from move.

SERVICES - ELECTRICAL

FAN EXTRACT FAN
Existing or new wall-mounted extract fan ducted to exterior. Ensure meets G4/AS1 requirements. Min. extraction rate to be 25L/s in bathroom areas and 50L/s in kitchen (cooking areas)

SD SMOKE DETECTOR
New Smoke detector to be installed and be within a 3m diameter reach to all bedrooms in the dwelling. As per F7/AS1.

SERVICES - RAINWATER DISPOSAL

DP.ex DOWNPIPE - EXISTING
Existing downpipes to remain.

SERVICES - PLUMBING

HWC HOT WATER CYLNDER
Existing HWC, COS and upgrade/replace as required to suit. Ensure seismic restraints to comply with G12/AS1 Fig. 14. Also to comply with G13

STRUCTURE

S10 NEW TIMBER STAIR
New Timber framed stair (min. 280mm run, max. 190mm riser) and hand rail to comply with D1/AS1. Deck structures under 1m from NG to FDL and by others (not apart of this consent). Decks to be built prior to CCC.

23 Kohuhu Street, Kaitaia 0410	1:100 @ A3	DWELLING FLOOR PLAN	18/06/2024	BC Ref: 2412	BC(1.1)01 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T: 02102867410
E: ARAMA@AWDESIGNS.CO.NZ

ENSURE PILE AT JOIN BELOW EVERY FLOOR BEARER TAKING DWELLING LOAD.

READ IN CONJUNCTION WITH GEOTECHNICAL ENGINEERING.

GEOTECHNICAL ENGINEER's
FAR NORTH ROADING LTD.
CONTACT DETAILS:
021 711 383

FRAMING/FOUNDATION PLAN NOTES:

Min 450mm of crawl space to underside of new and existing floor joists. Subfloor ventilation as per NZS3604:2011, 6.14.

All new fixings within 600mm of ground to be 304 stainless steel.

Please refer to subfloor bracing calcs attached.
Subfloor ventilation as per NZS3604:2011 6.14.2
Ensure sufficient access to subfloor area via hatch door.

Ensure all Anchor Piles pile/pole is no more than 600mm from NG to top of pole (height) out of ground.

FIXING & DURABILITY NOTES NOTES:

Use Stainless Steel fixings for subfloor if:
- Seaspray zone (500m from Coast)

- Exposed subfloor (including baseboards)

Fixings in contact w/ CCA treated timber

- Within 600mm of ground to be 304 stainless steel.

otherwise galv. steel fixings.

SUBFLOOR BRACING REQUIREMENTS:

BRACING ACROSS REQ:	BRACING PROVIDED:
Wind = 740bU's	Wind = **960bU's** ✓
Earthquake = 669bU's	Earthquake = **720bU's** ✓

BRACING ALONG REQ:	BRACING PROVIDED:
Wind = 591bU's	Wind = **960bU's** ✓
Earthquake = 669bU's	Earthquake = **720bU's** ✓

Refer to GIB Ezy Brace calcs attached.

Substitutes of Braced piles will result in change in height of relocate. Discuss any proposed changes with Architectural Designer prior to undergoing work.

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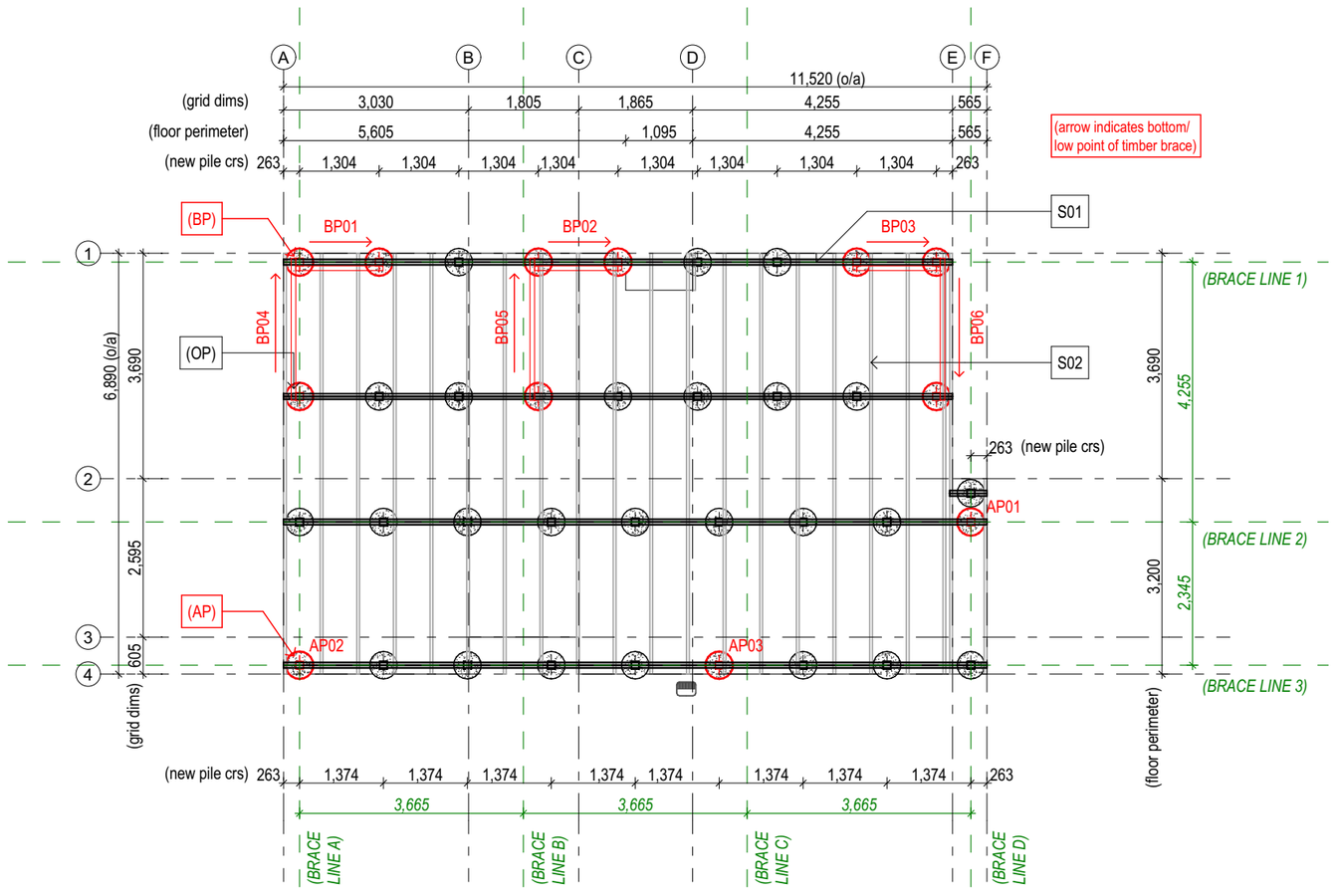

KEYNOTES

FOUNDATIONS

(AP) ANCHOR PILE
New 125x125sq H5 timber anchor piles embedded into 450øx1200mm deep concrete footings (min depth noted) below origional ground surface as per Geotechnical report. Ensure Geotech engineer inspects pile holes pre to pouring foundations and provide PS4 post inspection. Refer to Geotech report. Ensure pile/pole is no more than 600mm max. height from cleared ground. Concrete strength to be 20MPa min. Lumberlok 12kN fixing.

(BP) 125 SQ. BRACED TIMBER PILES
New 125x125sq H5 timber braced piles embedded into 450øx1200mm deep concrete footings (min depth noted) below origional ground surface as per Geotechnical report. Ensure Geotech engineer inspects pile holes pre to pouring foundations and provide PS4 post inspection. Refer to Geotech report. Concrete strength to be 20MPa min. Lumberlok 12kN fixing.

(OP) 125 SQ. ORDINARY TIMBER PILES
New 125x125sq H5 timber ordinary piles embedded into 450øx1200mm deep concrete footings (min depth noted) below origional ground surface as per Geotechnical report. Ensure Geotech engineer inspects pile holes pre to pouring foundations and provide PS4 post inspection. Refer to Geotech report. Concrete strength to be 20MPa min. Fix with 2x wiredogs and 2x 100x3.75 skew nails up into bearer.

STRUCTURE

S01 FLOOR BEARER EXISTING
Existing 2/140x45 timber bearer, 200mm max cantilever. COS.

S02 FLOOR JOIST EXISTING
Existing 140x45 timber joists @ 600crs.

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia 0410	1:100 @ A3	DWELLING FOUNDATION PLAN	18/06/2024	BC Ref: 2412	BC(1.1)01 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T: 02102867410
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NOTES:

1. Plumbing is a schematic only. Plumber to confirm all drain runs on-site and provide as built drawing.

2. Size stormwater drainage in accordance to NZBC/E1.

3. Ensure all cess pits located at low points with fall towards them. Size cesspits in accordance to min noted in NZBC/E1.

4. Ensure all plumbing pipes and wastes are concealed when in walls.

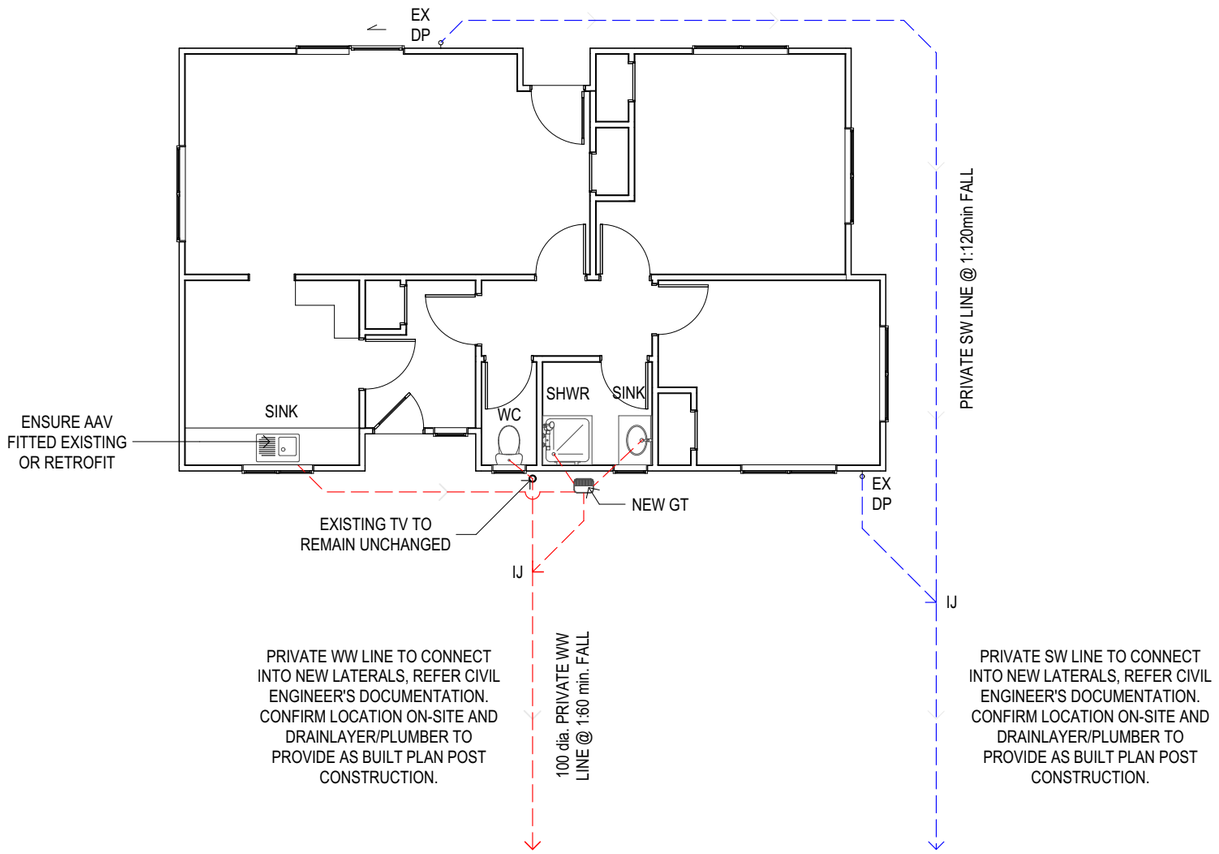
5. 100Ø uPVC waste pipe 1:60 fall

6. 100Ø uPVC roof catchment pipe 1:120 fall.

7. Private drainage to comply with AS/NZS 3500.2.

8. Provide as-built plumbing & drainage plans post construction.

Min service pipe sizes
Sink 40Ø : min 1:40 fall
Bath 40Ø : min 1:40 fall
Laundry tub 40Ø : min 1:40 fall
Sewerpipes 100Ø : min 1:60 fall
WC 100Ø : min 1:60 fall
Downpipes 80Ø



ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia 0410

1:100 @ A3

DWELLING PLUMBING PLAN

18/06/2024

BC
Ref: 2412

BC(1.1)01
REV:

A W DESIGNS
485 KHYBER PASS ROAD
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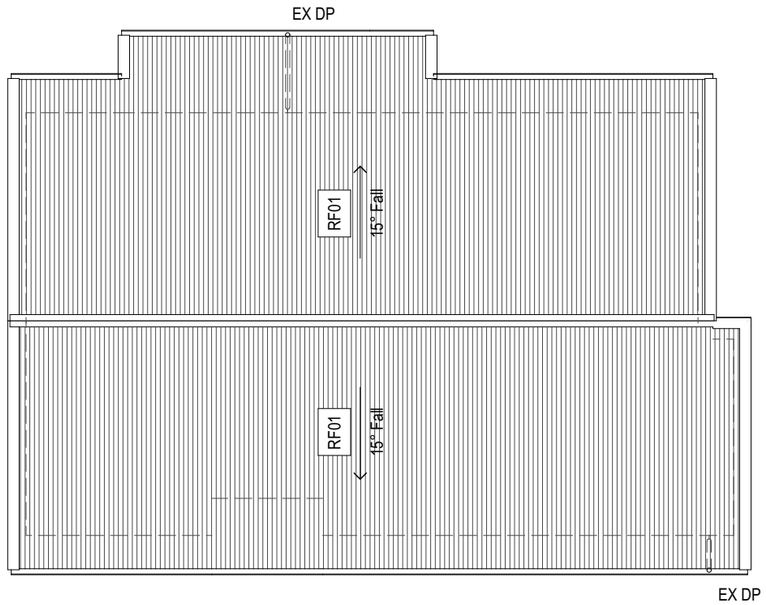
KEYNOTES

ROOFS

RF01 EXISTING ROOF
Existing metal roofing to remain over existing timber roof tructure. Refer to building report condition of structure and materials. Replace sheets of roofing if effected by move on a like by like basis.



ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia 0410

1:100 @ A3

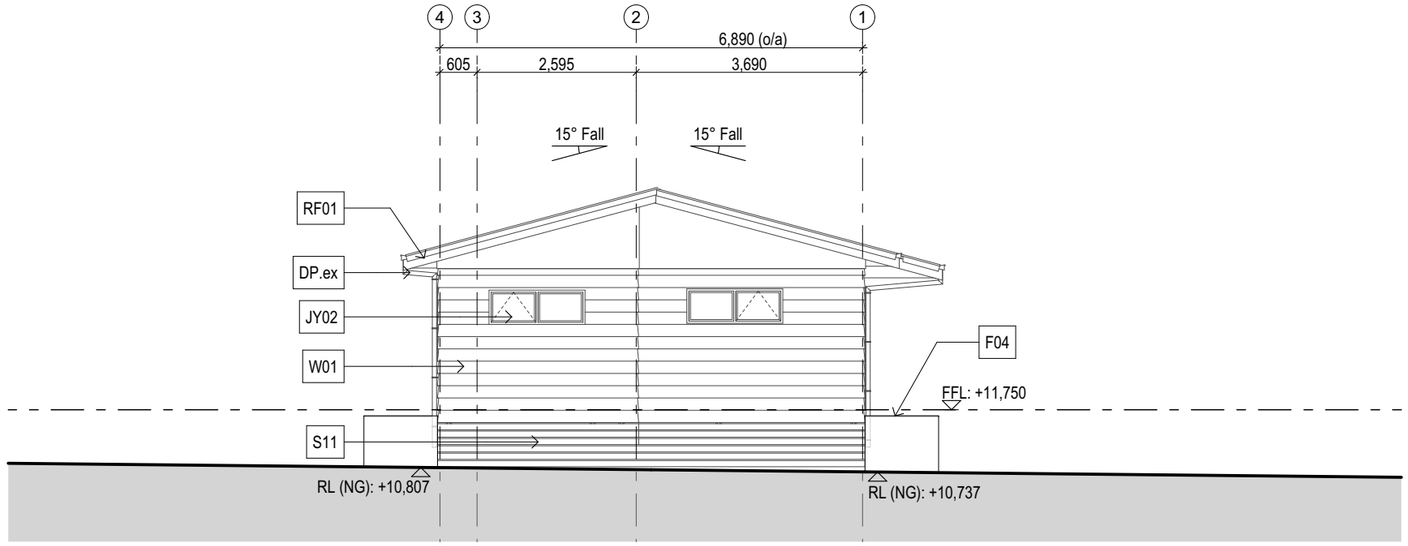
DWELLING ROOF PLAN

18/06/2024

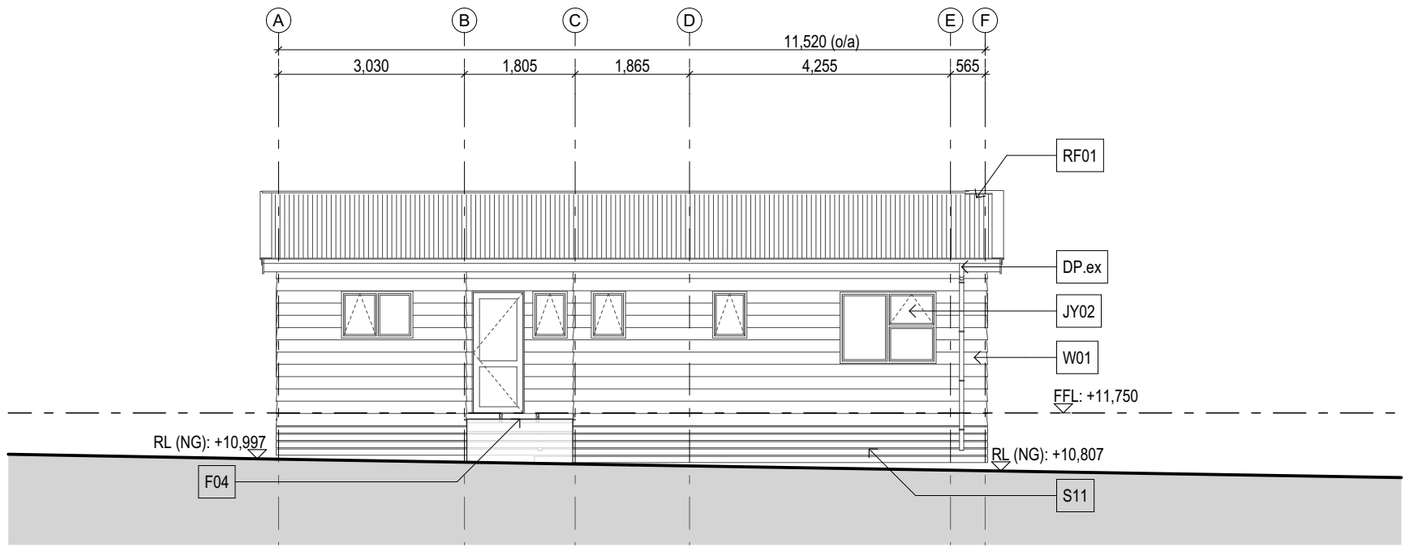
BC
Ref: 2412

BC(1.1)01
REV:

A W D E S I G N S
4 8 5 K H Y B E R P A S S R O A D
T : 0 2 1 0 2 8 6 7 4 1 0
E : A R A M A @ A W D E S I G N S . C O . N Z



1 / - NORTH ELEVATION



2 / - EAST ELEVATION

MINIMUM FLOOD LEVEL REQUIRED BUILDINGS FFL 11.750.
ENSURE THIS IS MET ON-SITE FOR EACH BUILDING

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KEYNOTES

FLOORS

F04 TIMBER DECK
New Timber deck, to be under 1m from NG to FDL & by others (not apart of this consent). Ensure to be built/completed prior to CCC.

WALLS

W01 EXISTING CLADDING
Existing timber Bevelback weatherboard wall cladding to remain on existing timber framed walls. Allow to make good as required on a like for like basis.

ROOFS

RF01 EXISTING ROOF
Existing metal roofing to remain over existing timber roof tructure. Refer to building report condition of structure and materials. Replace sheets of roofing if effected by move on a like by like basis.

EXTERIOR JOINERY

JY02 EXISTING ALUMINIUM JOINERY
Existing aluminium joinery to remain. Replace any finishing lines or units that are effected from move.

SERVICES - RAINWATER DISPOSAL

DP.ex DOWNPIPE - EXISTING
Existing downpipes to remain.

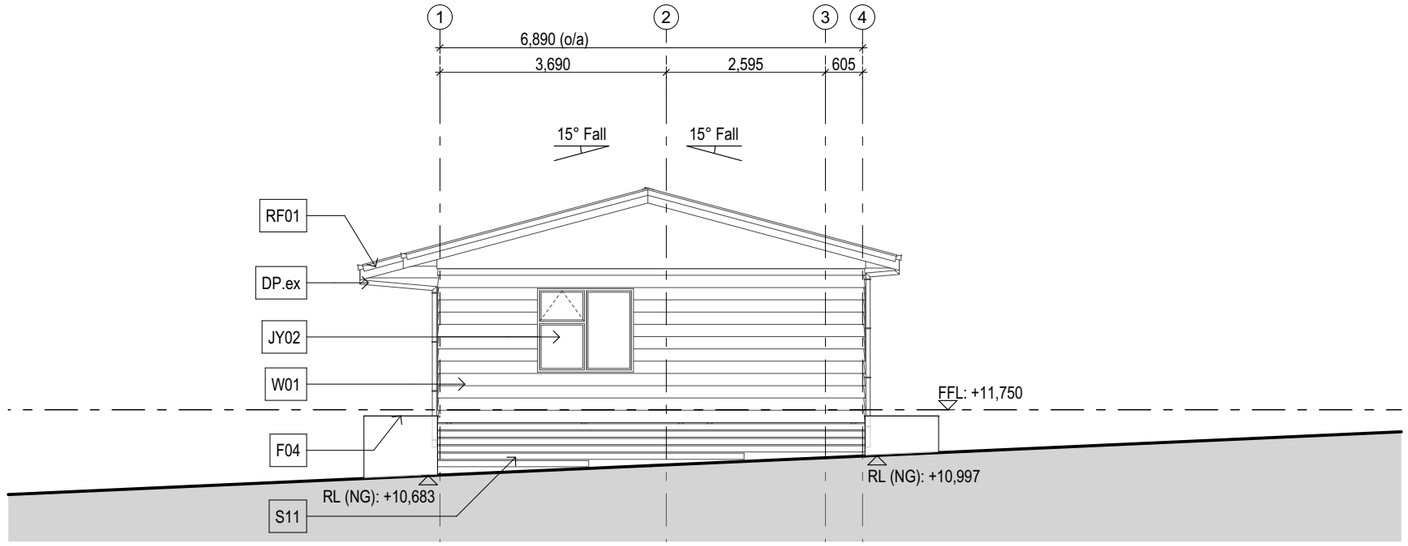
STRUCTURE

S11 SUBFLOOR BOARDS
New Timber 100x20 subfloor boards w/ min 20mm ventilation gaps between boards to comply as per NZS3604:2011 sec 6:14. Ensure sufficient subfloor access.

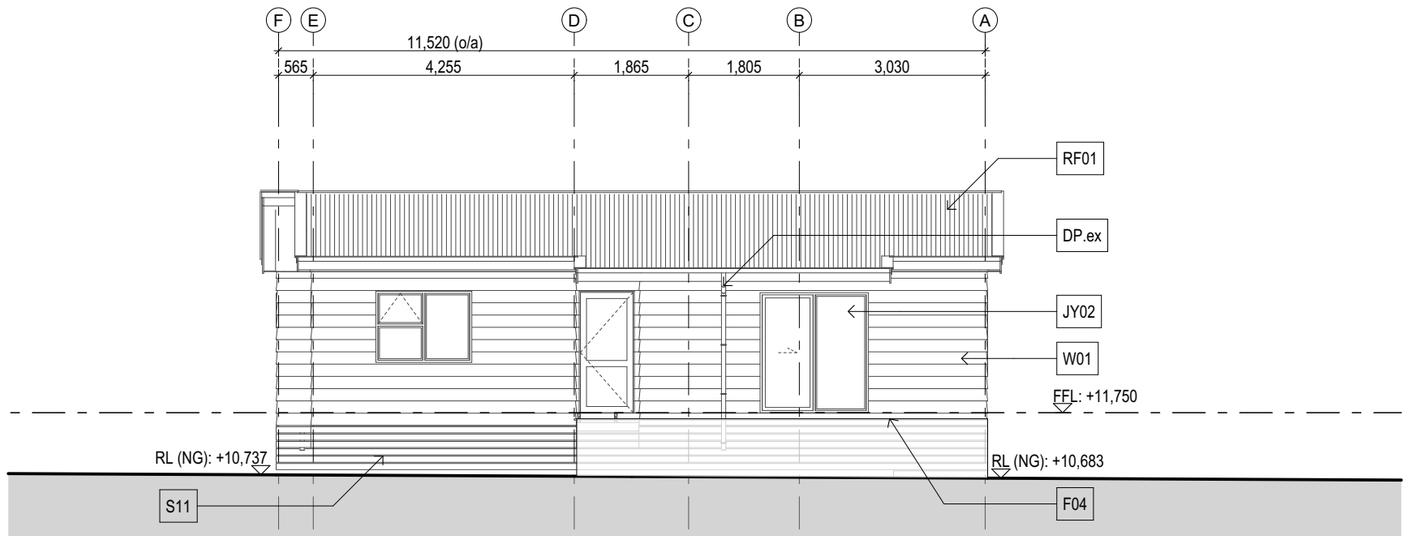
ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia 0410	1:100 @ A3	DWELLING ELEVATIONS	18/06/2024	BC Ref: 2412	BC(1.2)00 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T: 02102867410
E: ARAMA@AWDESIGNS.CO.NZ



1 - SOUTH ELEVATION



2 - WEST ELEVATION

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KEYNOTES

FLOORS

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ROOFS

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EXTERIOR JOINERY

JY02 EXISTING ALUMINIUM JOINERY
Existing aluminium joinery to remain. Replace any finishing lines or units that are effected from move.

SERVICES - RAINWATER DISPOSAL

DP.ex DOWNPIPE - EXISTING
Existing downpipes to remain.

STRUCTURE

S11 SUBFLOOR BOARDS
New Timber 100x20 subfloor boards w/ min 20mm ventilation gaps between boards to comply as per NZS3604:2011 sec 6:14. Ensure sufficient subfloor access.

ISSUE	REV	DATE
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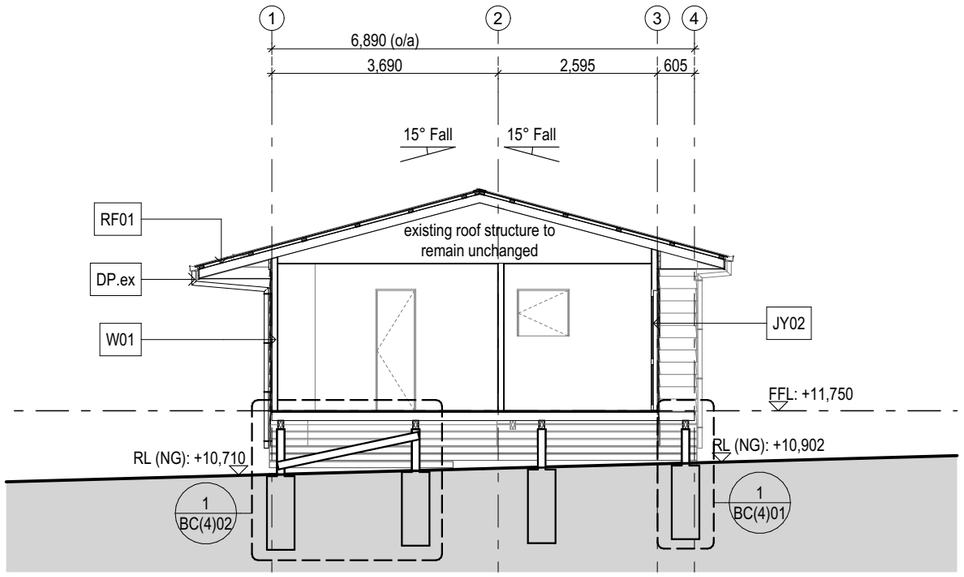
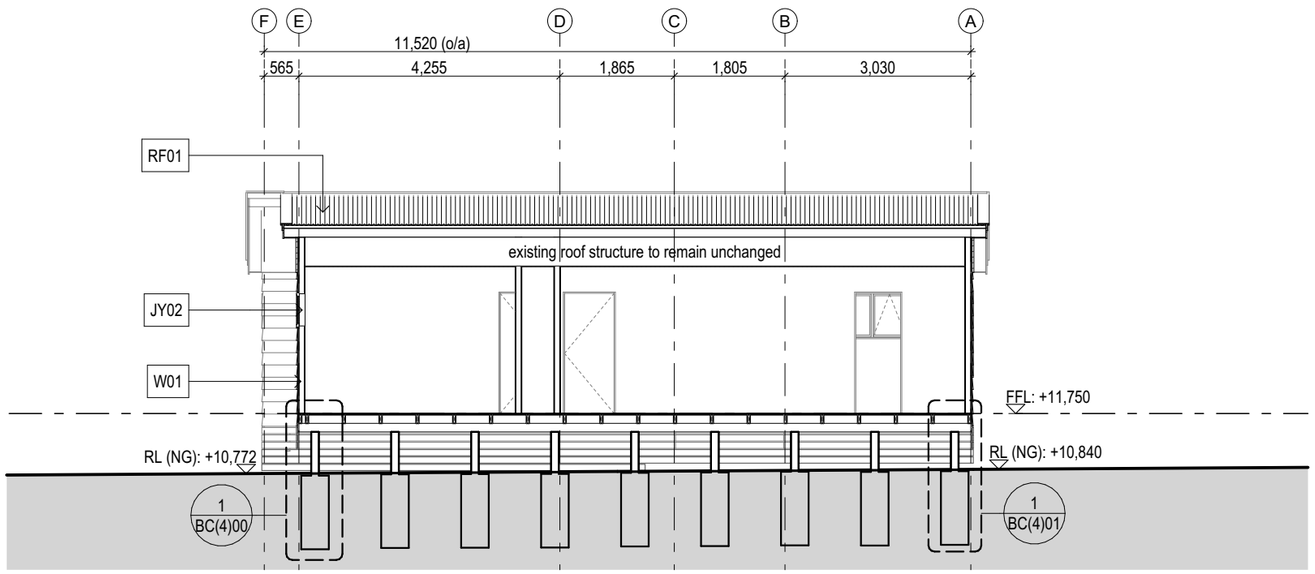


1 - SECTION AA



2 - SECTION BB

MINIMUM FLOOD LEVEL REQUIRED BUILDINGS FFL 11.750.
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KEYNOTES

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ROOFS

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EXTERIOR JOINERY

JY02 EXISTING ALUMINIUM JOINERY
Existing aluminium joinery to remain. Replace any finishing lines or units that are effected from move.

SERVICES - RAINWATER DISPOSAL

DP.ex DOWNPIPE - EXISTING
Existing downpipes to remain.

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia 0410	1:100 @ A3	DWELLING SECTION	18/06/2024	BC Ref: 2412	BC(1.3)00 REV:

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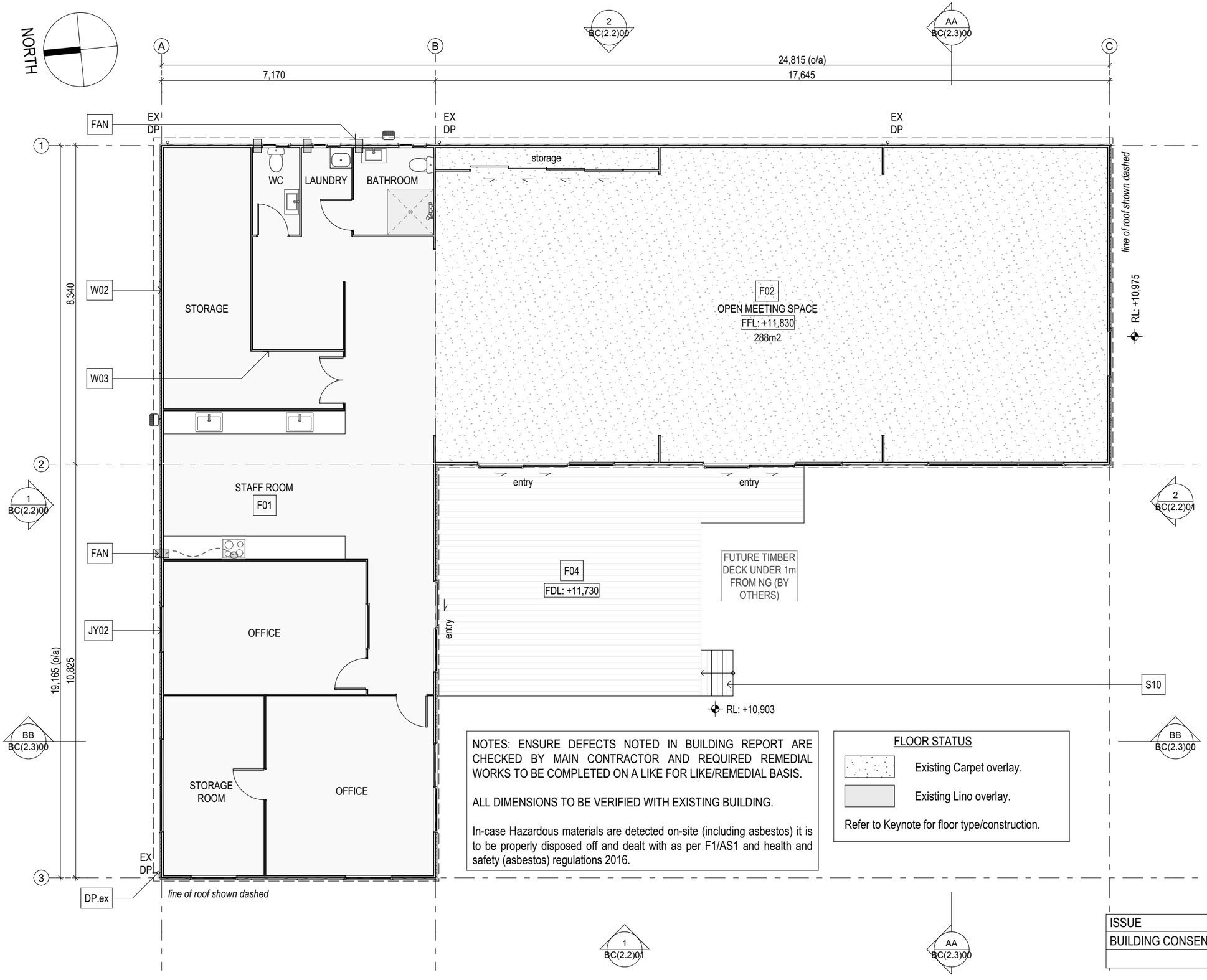

NOTES: ENSURE DEFECTS NOTED IN BUILDING REPORT ARE CHECKED BY MAIN CONTRACTOR AND REQUIRED REMEDIAL WORKS TO BE COMPLETED ON A LIKE FOR LIKE/REMEDIAL BASIS.

ALL DIMENSIONS TO BE VERIFIED WITH EXISTING BUILDING.

In-case Hazardous materials are detected on-site (including asbestos) it is to be properly disposed off and dealt with as per F1/AS1 and health and safety (asbestos) regulations 2016.

FLOOR STATUS

Existing Carpet overlay.

Existing Lino overlay.

Refer to Keynote for floor type/construction.

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KEYNOTES

FLOORS

F01 TIMBER FLOOR - LINO OVERLAY
Existing Lino floor overlay over existing timber floor structure. Ensure floor finish in bathroom & laundry areas are compliant w/ watersplash impervious finish required as oer E3/AS1.

F02 TIMBER FLOOR - CARPET
Existing carpet floor overlay existing to remain over existing timber foor structure.

F04 TIMBER DECK
New Timber deck, to be under 1m from NG to FDL & by others (not apart of this consent). Ensure to be built/completed prior to CCC.

WALLS

W02 EXISTING PANEL WALL
Existing panel walls to remain. Allow to make good as required on a like for like basis.

W03 EXISTING INTERNAL PANEL WALL
Existing panel walls to remain. Allow to make good as required on a like for like basis.

EXTERIOR JOINERY

JY02 EXISTING JOINERY
Existing aluminium joinery. Replace any finishing lines or units that are effected from move.

SERVICES - ELECTRICAL

FAN EXTRACT FAN
Existing or new wall-mounted extract fan ducted to exterior. Ensure meets G4/AS1 requirements. Min. extraction rate to be 25L/s in bathroom areas and 50L/s in kitchen (cooking areas)

SERVICES - RAINWATER DISPOSAL

DP.ex DOWNPIPE - EXISTING
Existing downpipes to remain.

STRUCTURE

S10 NEW TIMBER STAIR
New Timber framed stair (min. 280mm run, max. 190mm riser) and hand rail to comply with D1/AS1. Deck structures under 1m from NG to FDL and by others (not apart of this consent). Decks to be built prior to CCC.

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia, 0410

1:100 @ A3

COMMUNITY BUILDING _ FLOOR PLAN

18/06/2024

BC
Ref: 2412

BC(2.1)00
REV:

A W D E S I G N S
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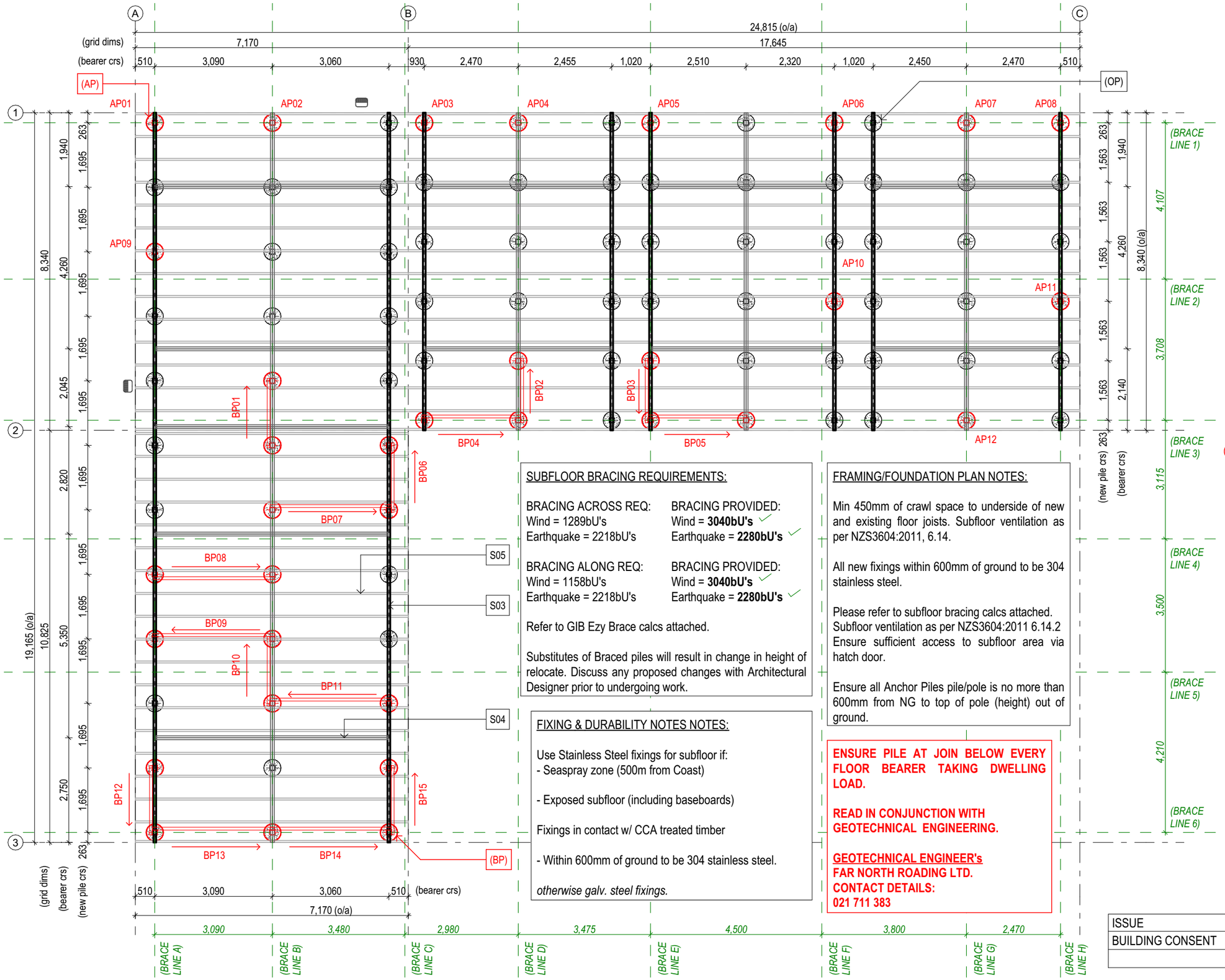
E : A R A M A @ A W D E S I G N S . C O . N Z



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KEYNOTES

FOUNDATIONS

(AP) ANCHOR PILE
New 125x125sq H5 timber anchor piles embedded into 450øx1200mm deep concrete footings (min depth noted) below origional ground surface as per Geotechnical report. Ensure Geotech engineer inspects pile holes pre to pouring foundations and provide PS4 post inspection. Refer to Geotech report. Ensure pile/pole is no more than 600mm max. height from cleared ground. Concrete strength to be 20MPa min. Lumberlok 12kN fixing.

(BP) 125 SQ. BRACED TIMBER PILES
New 125x125sq H5 timber braced piles embedded into 450øx1200mm deep concrete footings (min depth noted) below origional ground surface as per Geotechnical report. Ensure Geotech engineer inspects pile holes pre to pouring foundations and provide PS4 post inspection. Refer to Geotech report. Concrete strength to be 20MPa min. Lumberlok 12kN fixing.

(OP) 125 SQ. ORDINARY TIMBER PILES
New 125x125sq H5 timber ordinary piles embedded into 450øx1200mm deep concrete footings (min depth noted) below origional ground surface as per Geotechnical report. Ensure Geotech engineer inspects pile holes pre to pouring foundations and provide PS4 post inspection. Refer to Geotech report. Concrete strength to be 20MPa min. Fix with 2x wiredogs and 2x 100x3.75 skew nails up into bearer.

STRUCTURE

S03 EXISTING STEEL BEAM
Existing 200x70 steel PFC beam. COS.

S04 EXISTING STEEL BEAM
Existing 2/100x50 steel beam. COS.

S05 STEEL FLOOR JOIST EXISTING
Existing 50x50 steel floor joists @ 600crs.

SUBFLOOR BRACING REQUIREMENTS:

BRACING ACROSS REQ:
Wind = 1289bU's
Earthquake = 2218bU's

BRACING PROVIDED:
Wind = **3040bU's** ✓
Earthquake = **2280bU's** ✓

BRACING ALONG REQ:
Wind = 1158bU's
Earthquake = 2218bU's

BRACING PROVIDED:
Wind = **3040bU's** ✓
Earthquake = **2280bU's** ✓

Refer to GIB Ezy Brace calcs attached.

Substitutes of Braced piles will result in change in height of relocate. Discuss any proposed changes with Architectural Designer prior to undergoing work.

FRAMING/FOUNDATION PLAN NOTES:

Min 450mm of crawl space to underside of new and existing floor joists. Subfloor ventilation as per NZS3604:2011, 6.14.

All new fixings within 600mm of ground to be 304 stainless steel.

Please refer to subfloor bracing calcs attached. Subfloor ventilation as per NZS3604:2011 6.14.2 Ensure sufficient access to subfloor area via hatch door.

Ensure all Anchor Piles pile/pole is no more than 600mm from NG to top of pole (height) out of ground.

FIXING & DURABILITY NOTES NOTES:

Use Stainless Steel fixings for subfloor if:
- Seaspray zone (500m from Coast)

- Exposed subfloor (including baseboards)

Fixings in contact w/ CCA treated timber

- Within 600mm of ground to be 304 stainless steel.

otherwise galv. steel fixings.

ENSURE PILE AT JOIN BELOW EVERY FLOOR BEARER TAKING DWELLING LOAD.

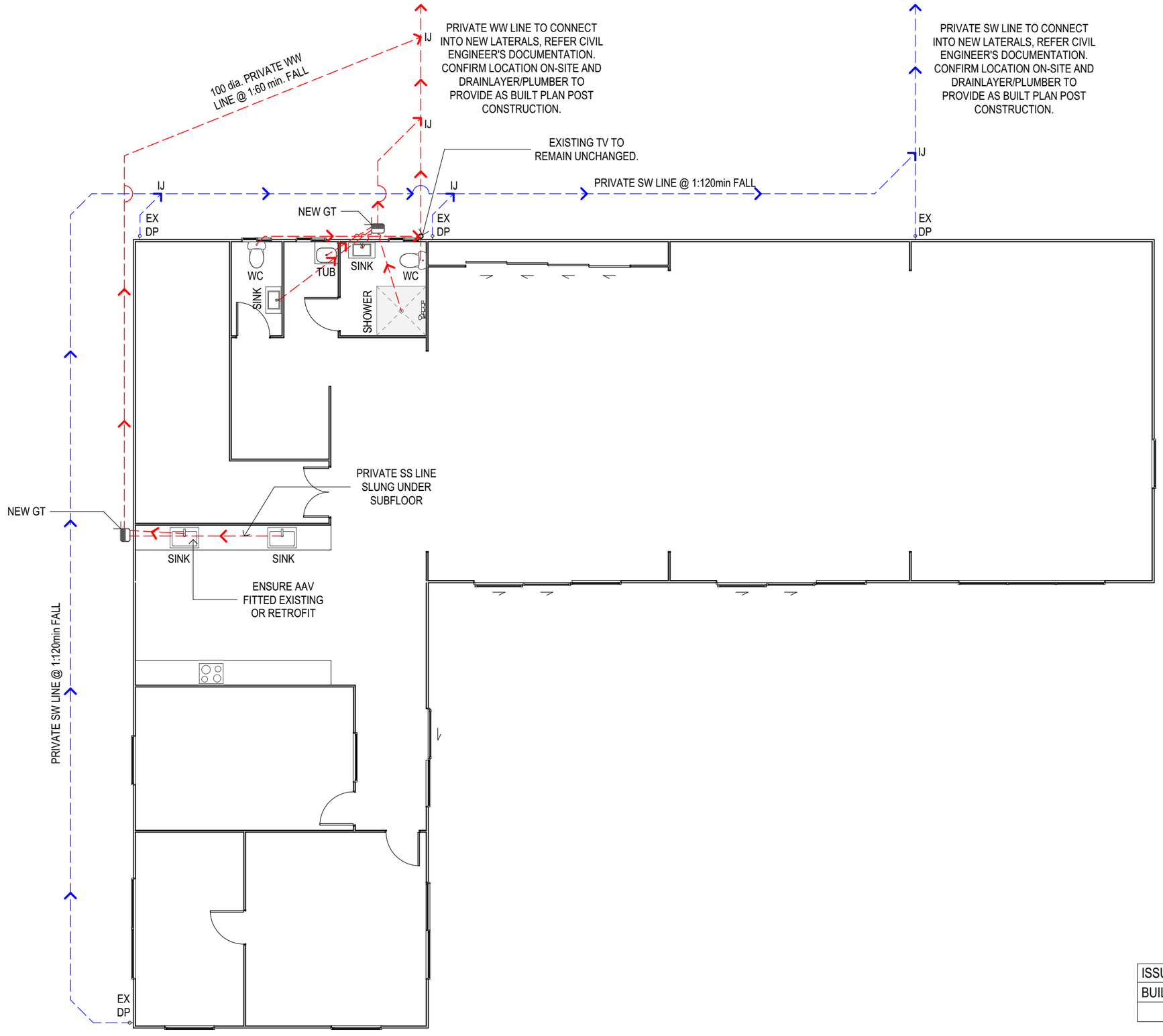
READ IN CONJUNCTION WITH GEOTECHNICAL ENGINEERING.

GEOTECHNICAL ENGINEER's
FAR NORTH ROADING LTD.
CONTACT DETAILS:
021 711 383

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia, 0410 | 1:100 @ A3 | COMMUNITY BUILDING _ FOUNDATION PLAN | 18/06/2024 | BC Ref: 2412 | BC(2.1)01 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T: 02102867410
E: ARAMA@AWDESIGNS.CO.NZ



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NOTES:

1. Plumbing is a schematic only. Plumber to confirm all drain runs on-site and provide as built drawing.

2. Size stormwater drainage in accordance to NZBC/E1.

3. Ensure all cess pits located at low points with fall towards them. Size cesspits in accordance to min noted in NZBC/E1.

4. Ensure all plumbing pipes and wastes are concealed when in walls.

5. 100Ø uPVC waste pipe 1:60 fall

6. 100Ø uPVC roof catchment pipe 1:120 fall.

7. Private drainage to comply with AS/NZS 3500.2.

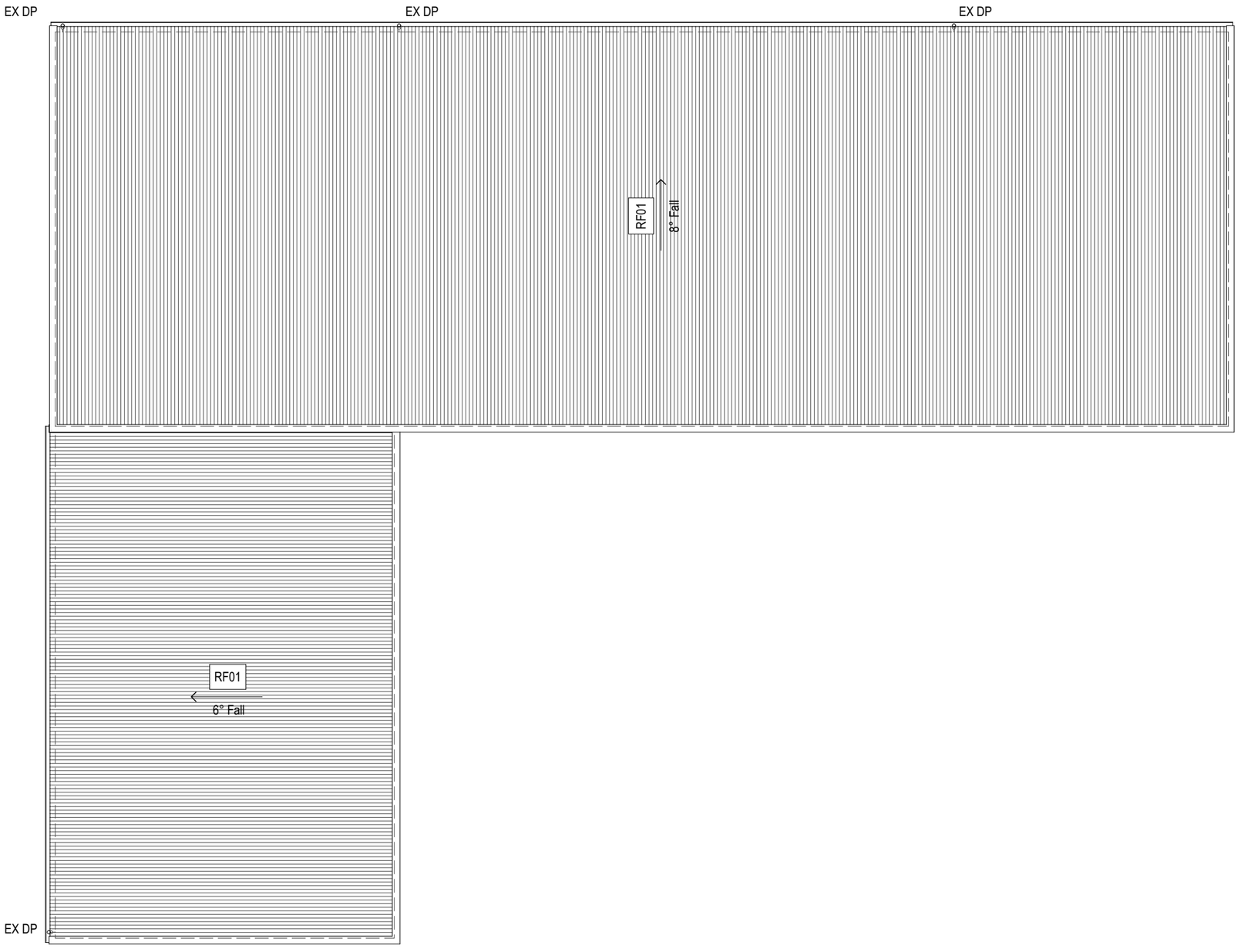
8. Provide as-built plumbing & drainage plans post construction.

Min service pipe sizes
Sink 40Ø : min 1:40 fall
Bath 40Ø : min 1:40 fall
Laundry tub 40Ø : min 1:40 fall
Sewerpipes 100Ø : min 1:60 fall
WC 100Ø : min 1:60 fall
Downpipes 80Ø

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia, 0410	1:100 @ A3	COMMUNITY BUILDING _ PLUMBING PLAN	18/06/2024	BC Ref: 2412	BC(2.1)02 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T: 02102867410
E: ARAMA@AWDESIGNS.CO.NZ



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BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia, 0410

1:100 @ A3

COMMUNITY BUILDING _ ROOF PLAN

18/06/2024

BC
Ref: 2412

BC(2.1)03
REV:

A W DESIGNS
485 KHYBER PASS ROAD
T:02102867410
E: ARAMA@AWDESIGNS.CO.NZ

MIN FLOOD LEVEL REQUIRED
BUILDING FFL: 11,750
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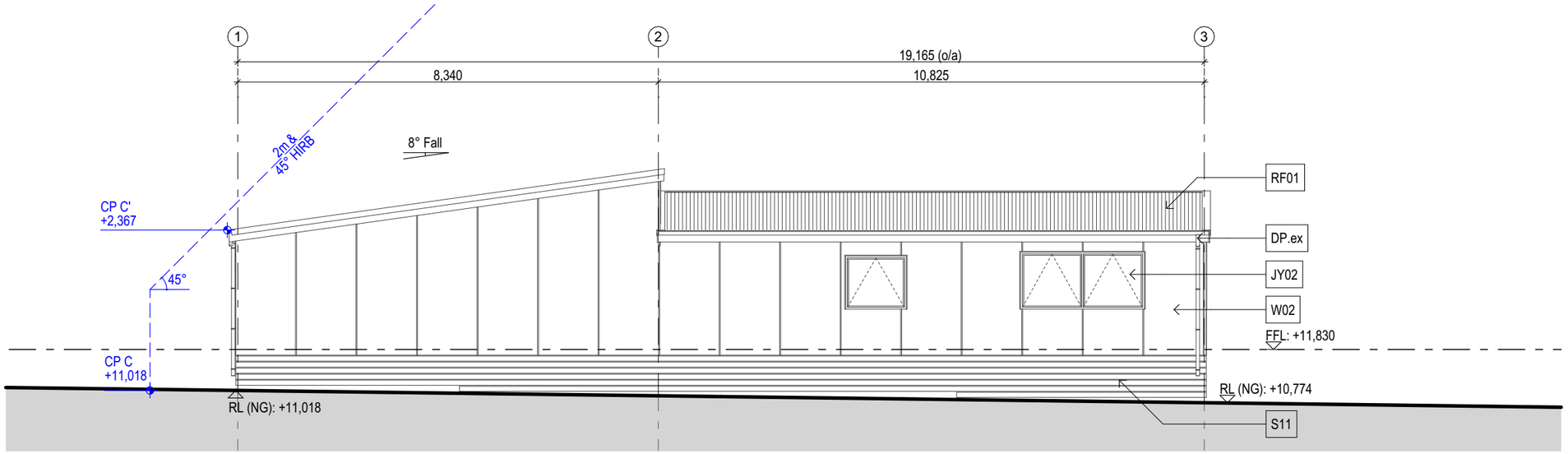
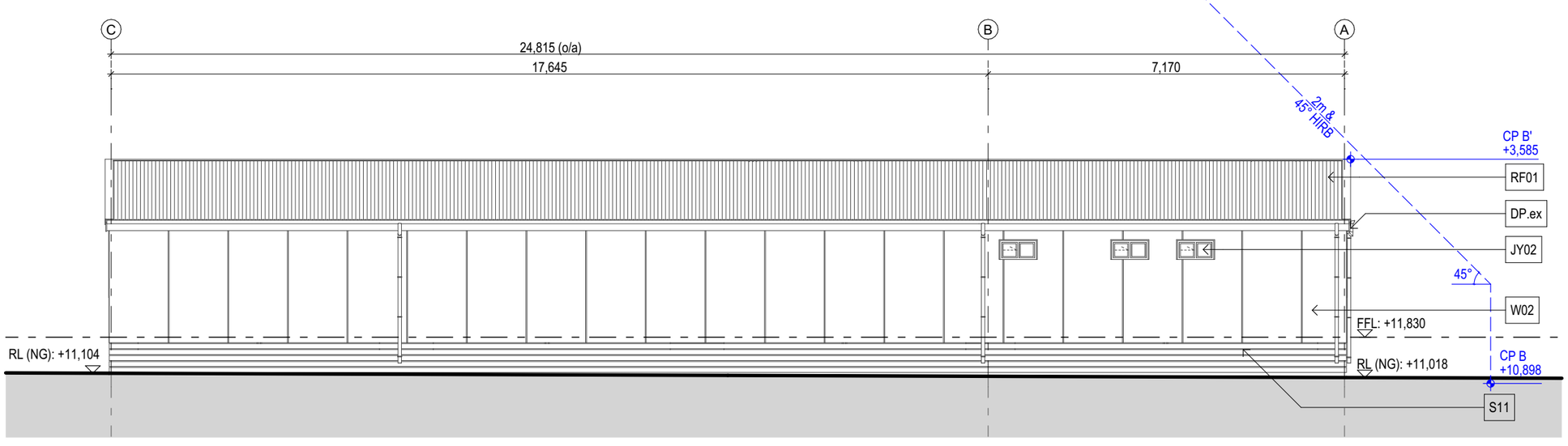


1 - NORTH ELEVATION



2 - EAST ELEVATION

KEYNOTES

WALLS

W02 EXISTING PANEL WALL
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ROOFS

RF01 EXISTING ROOF
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EXTERIOR JOINERY

JY02 EXISTING JOINERY
Existing aluminium joinery. Replace any finishing lines or units that are effected from move.

SERVICES - RAINWATER DISPOSAL

DP.ex DOWNPIPE - EXISTING
Existing downpipes to remain.

STRUCTURE

S11 SUBFLOOR BOARDS
New Timber 100x20 subfloor boards w/ min 20mm ventilation gaps between boards to comply as per NZS3604:2011 sec 6:14. Ensure sufficient subfloor access.

ISSUE	REV	DATE
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23 Kohuhu Street, Kaitaia, 0410 | 1:100 @ A3 | COMMUNITY BUILDING _ ELEVATIONS | 18/06/2024 | BC Ref: 2412 | BC(2.2)00 REV:

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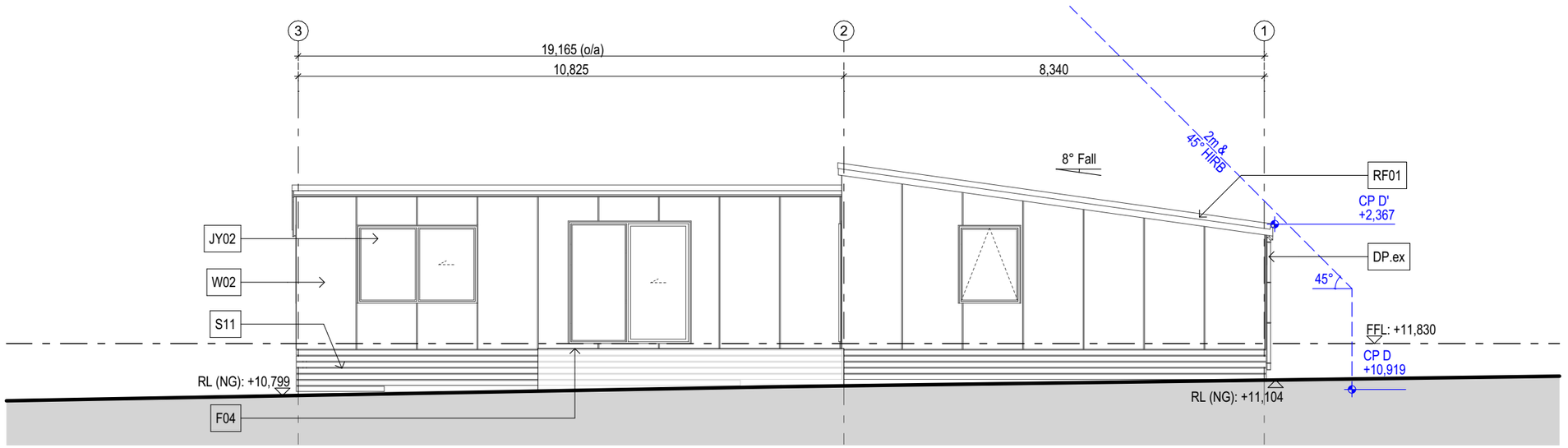
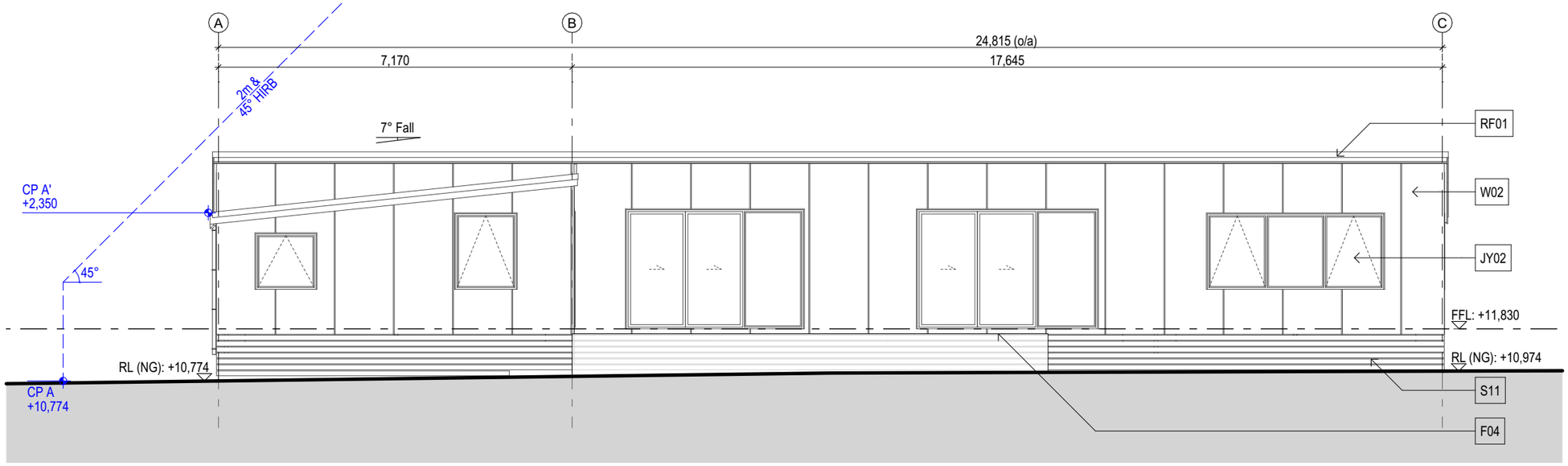


2 - SOUTH ELEVATION



1 - WEST ELEVATION

KEYNOTES

FLOORS

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STRUCTURE

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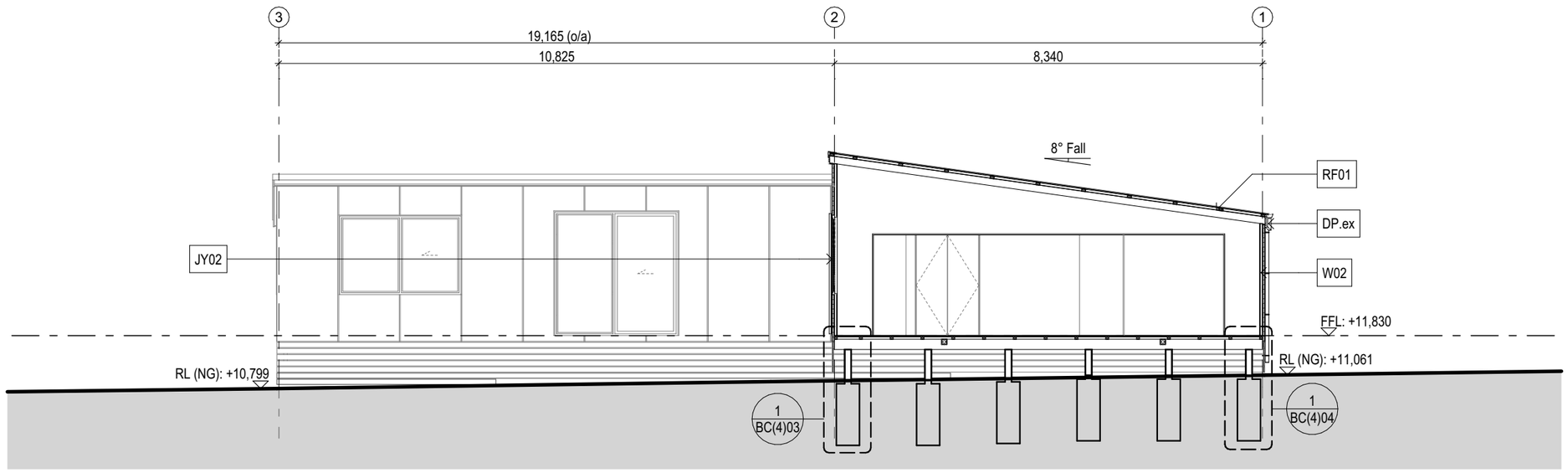
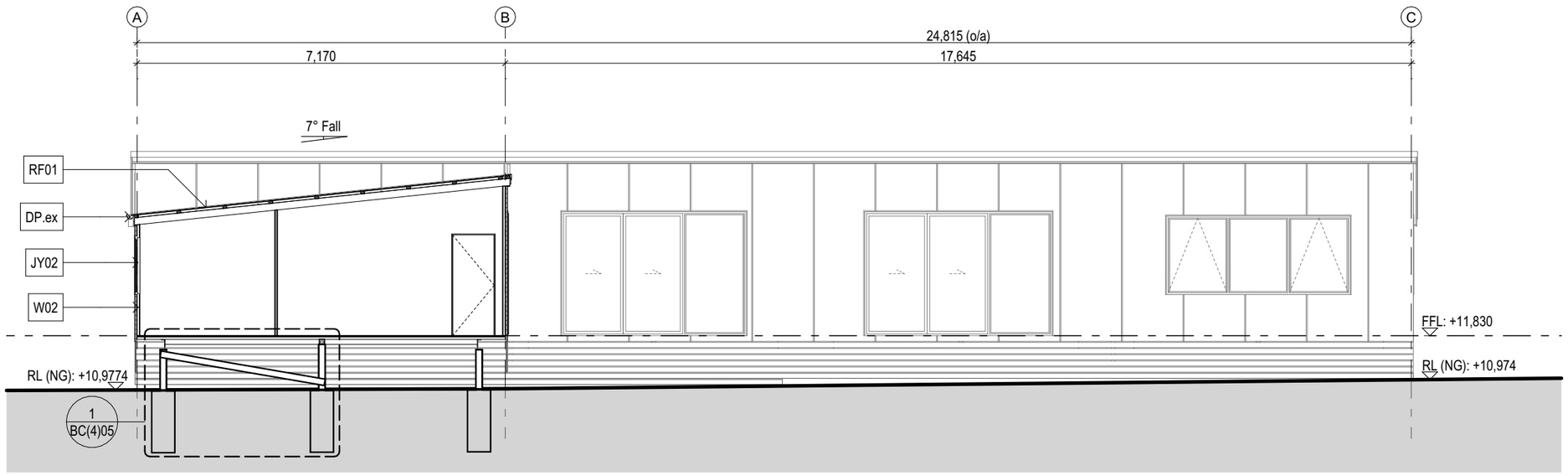
Contractors shall notify Architectural Designer in writing of any conflicts or discrepancies found in the documentation.
There shall be no substitutions of any specified material or system without written prior approval by the Architectural Designer. Any changes to proposed works may require Building Consent amendment or minor variation. The Architectural designer shall be notified for approval of any proposed changes prior to construction. DRAWINGS WILL NOT BE ISSUED RETROSPECTIVELY FOR CHANGES MADE WITHOUT APPROVAL FROM ARCHITECTURAL DESIGNER



1 / - SECTION AA



2 / - SECTION BB

KEYNOTES

WALLS

W02 EXISTING PANEL WALL
Existing panel walls to remain. Allow to make good as required on a like for like basis.

ROOFS

RF01 EXISTING ROOF
Existing metal roofing to remain over existing timber roof tructure. Refer to building report condition of structure and materials. Replace sheets of roofing if effected by move on a like by like basis.

EXTERIOR JOINERY

JY02 EXISTING JOINERY
Existing aluminium joinery. Replace any finishing lines or units that are effected from move.

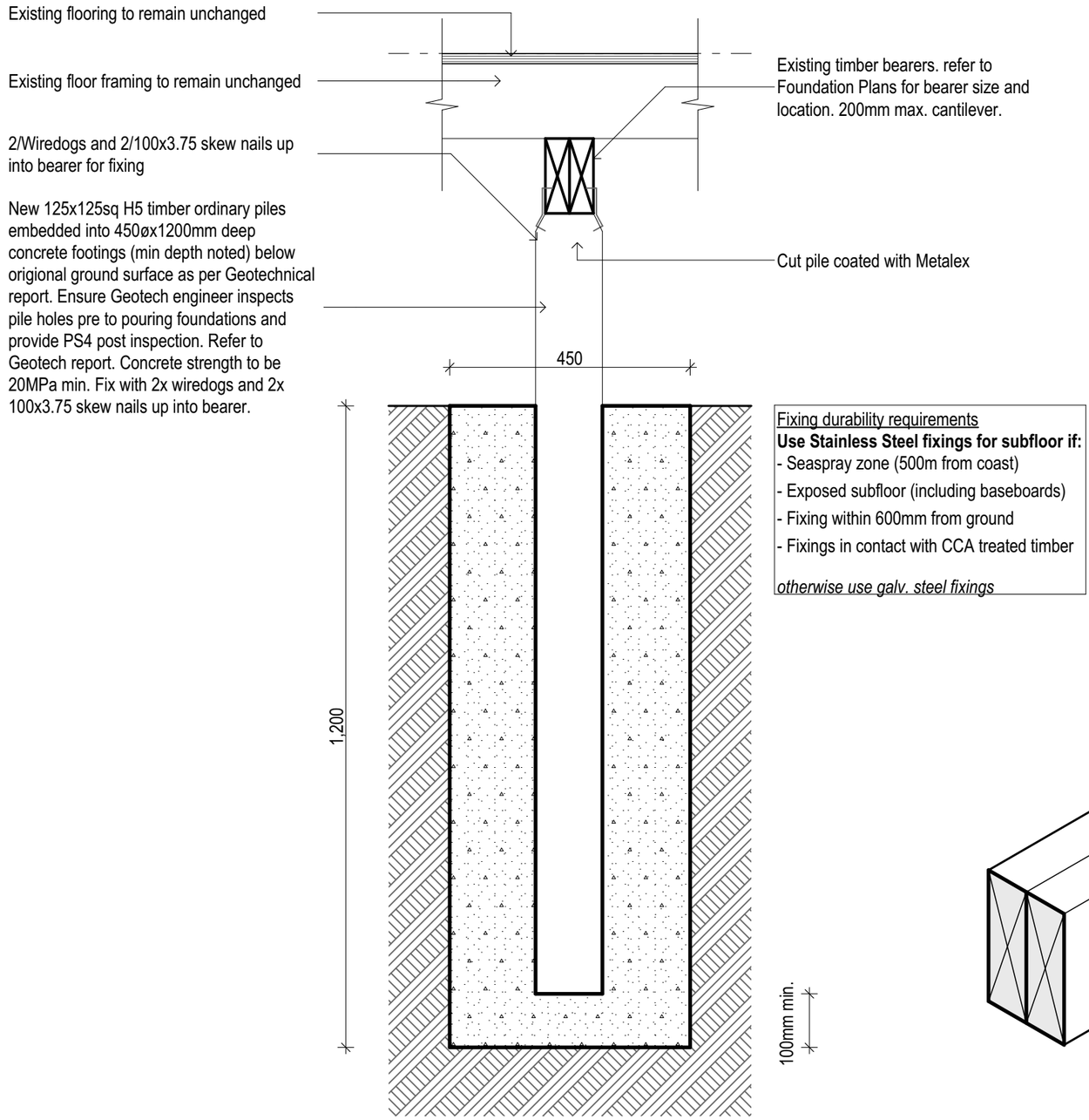
SERVICES - RAINWATER DISPOSAL

DP.ex DOWNPIPE - EXISTING
Existing downpipes to remain.

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia, 0410	1:100 @ A3	COMMUNITY BUILDING _ SECTION A	18/06/2024	BC Ref: 2412	BC(2.3)00 REV:

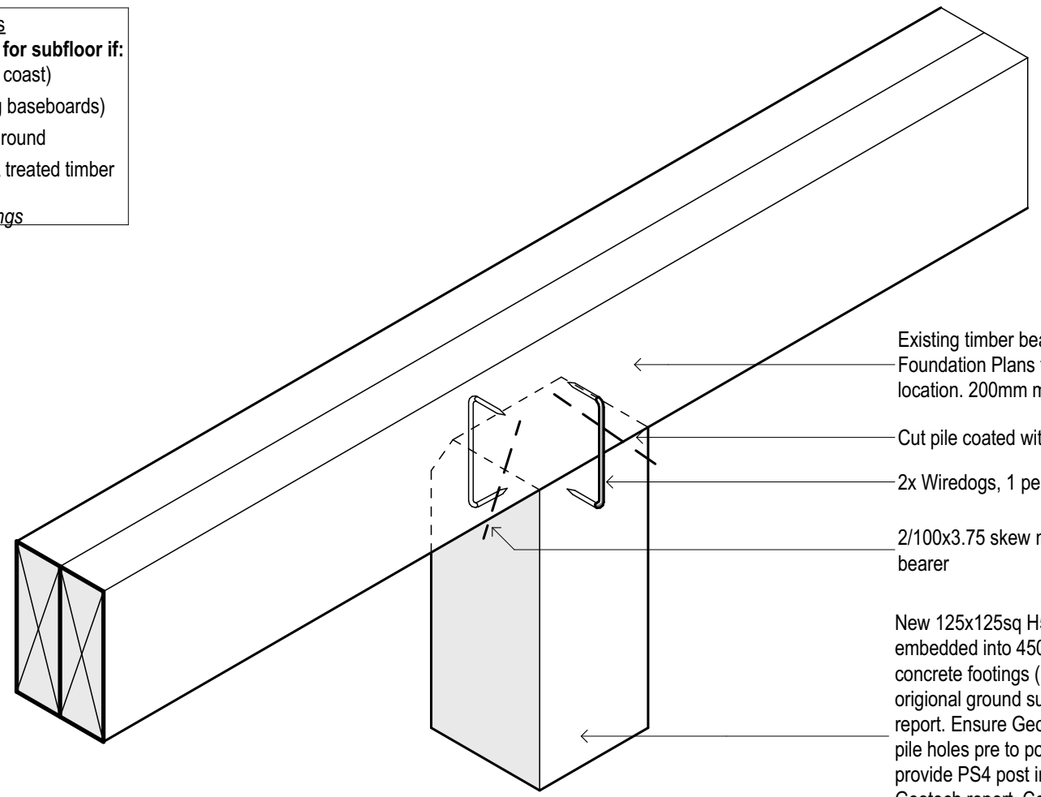
A W DESIGNS
485 KHYBER PASS ROAD
T: 02102867410
E: ARAMA@AWDESIGNS.CO.NZ



Fixing durability requirements
Use Stainless Steel fixings for subfloor if:
- Seaspray zone (500m from coast)
- Exposed subfloor (including baseboards)
- Fixing within 600mm from ground
- Fixings in contact with CCA treated timber

otherwise use galv. steel fixings

1 - ORDINARY PILE DETAIL (2D)



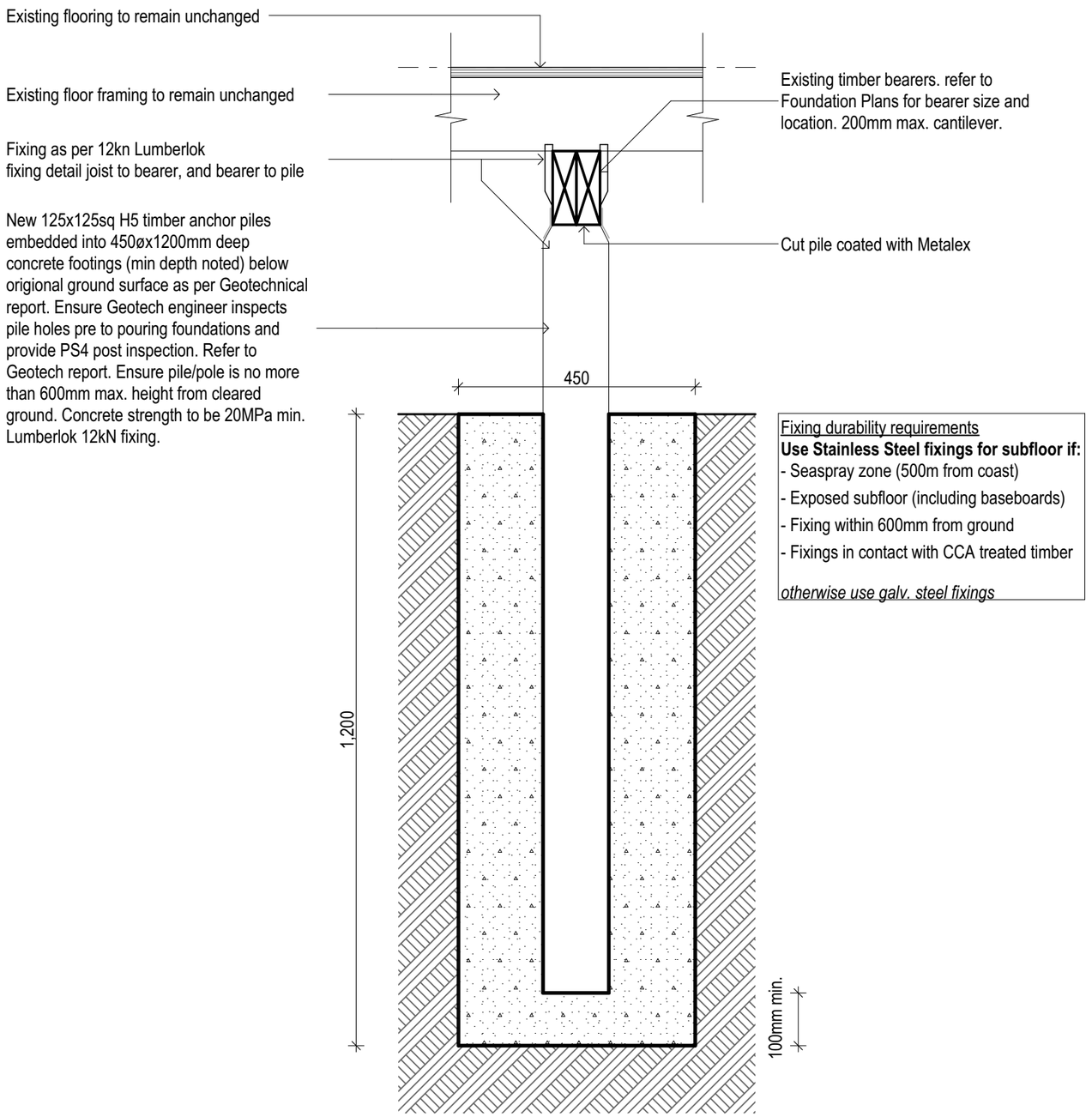
2 - ORDINARY PILE DETAIL (3D)

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410	1:10 @ A3	ORDINARY PILE DETAILS

18/06/2024	BC Ref: 2412	BC(4)00 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T: 02102867410
E: ARAMA@AWDESIGNS.CO.NZ



1 - ANCHOR PILE DETAIL

Fixing durability requirements

Use Stainless Steel fixings for subfloor if:

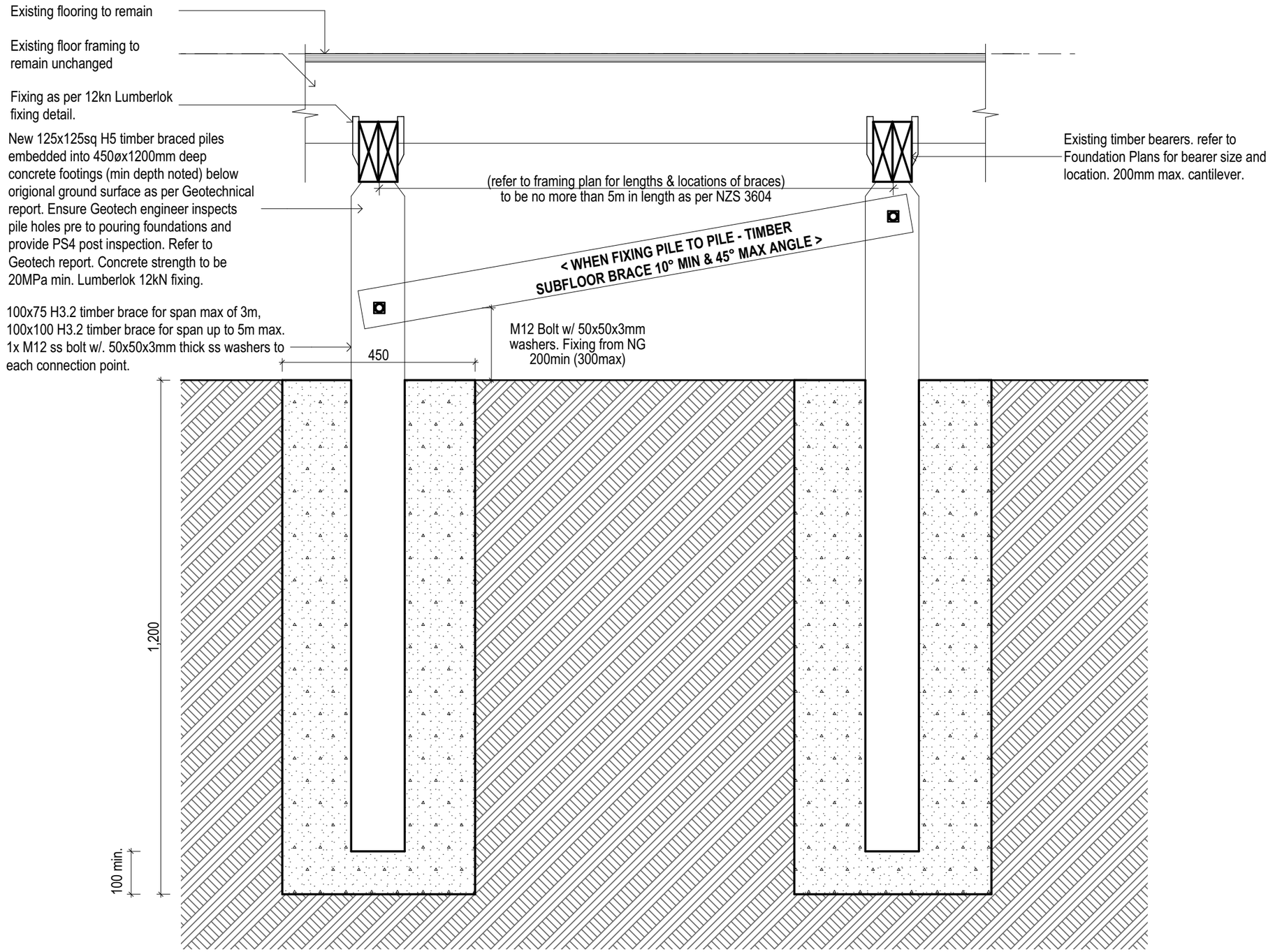
- Seaspray zone (500m from coast)
- Exposed subfloor (including baseboards)
- Fixing within 600mm from ground
- Fixings in contact with CCA treated timber

otherwise use galv. steel fixings

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410	1:10 @ A3	ANCHOR PILE DETAILS	18/06/2024	BC Ref: 2412	BC(4)01 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T:02102867410
E: ARAMA@AWDESIGNS.CO.NZ

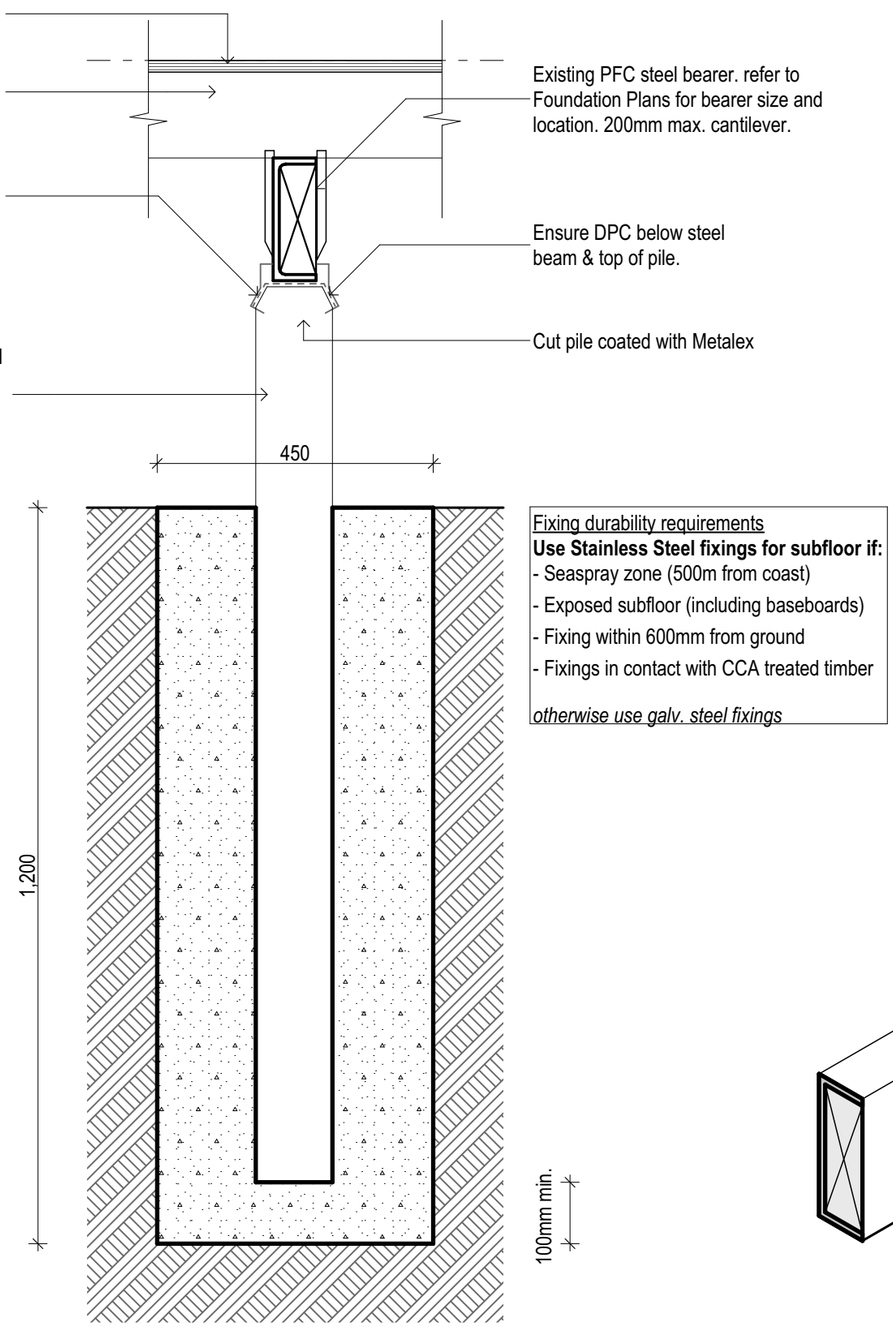


1
-
BRACED PILE DETAIL

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410	1:10 @ A3	BRACED PILE DETAILS	18/06/2024	BC Ref: 2412	BC(4)02 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T:02102867410
E: ARAMA@AWDESIGNS.CO.NZ



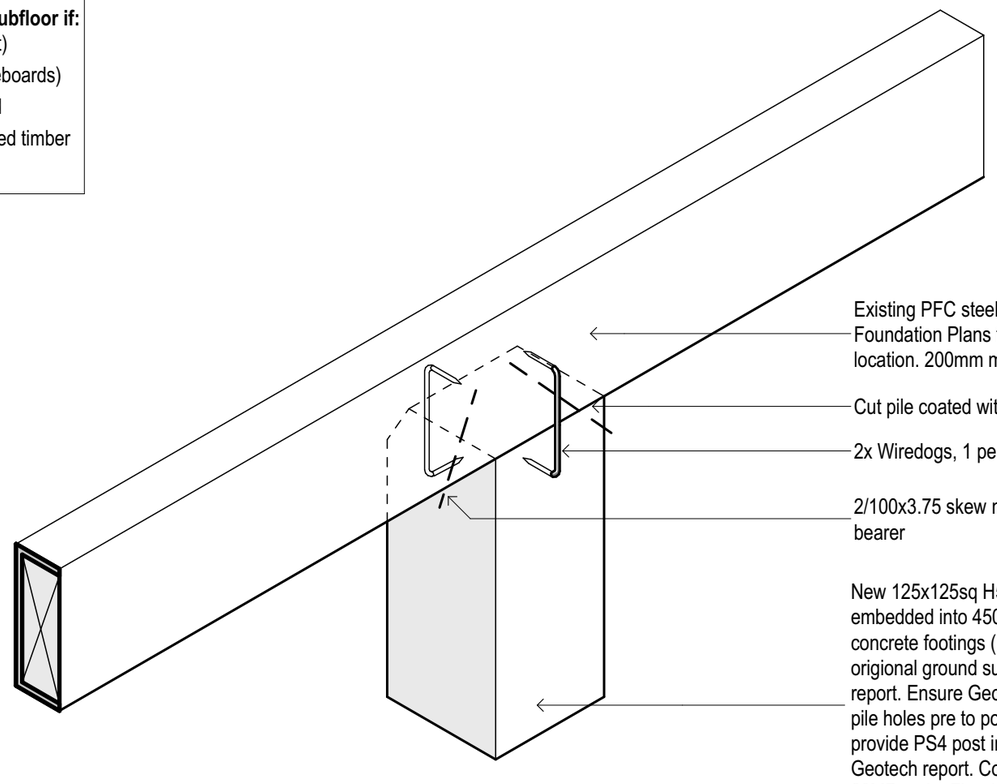
Fixing durability requirements

Use Stainless Steel fixings for subfloor if:

- Seaspray zone (500m from coast)
- Exposed subfloor (including baseboards)
- Fixing within 600mm from ground
- Fixings in contact with CCA treated timber

otherwise use galv. steel fixings

1 - ORDINARY PILE DETAIL (2D)



2 - ORDINARY PILE DETAIL (3D)

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

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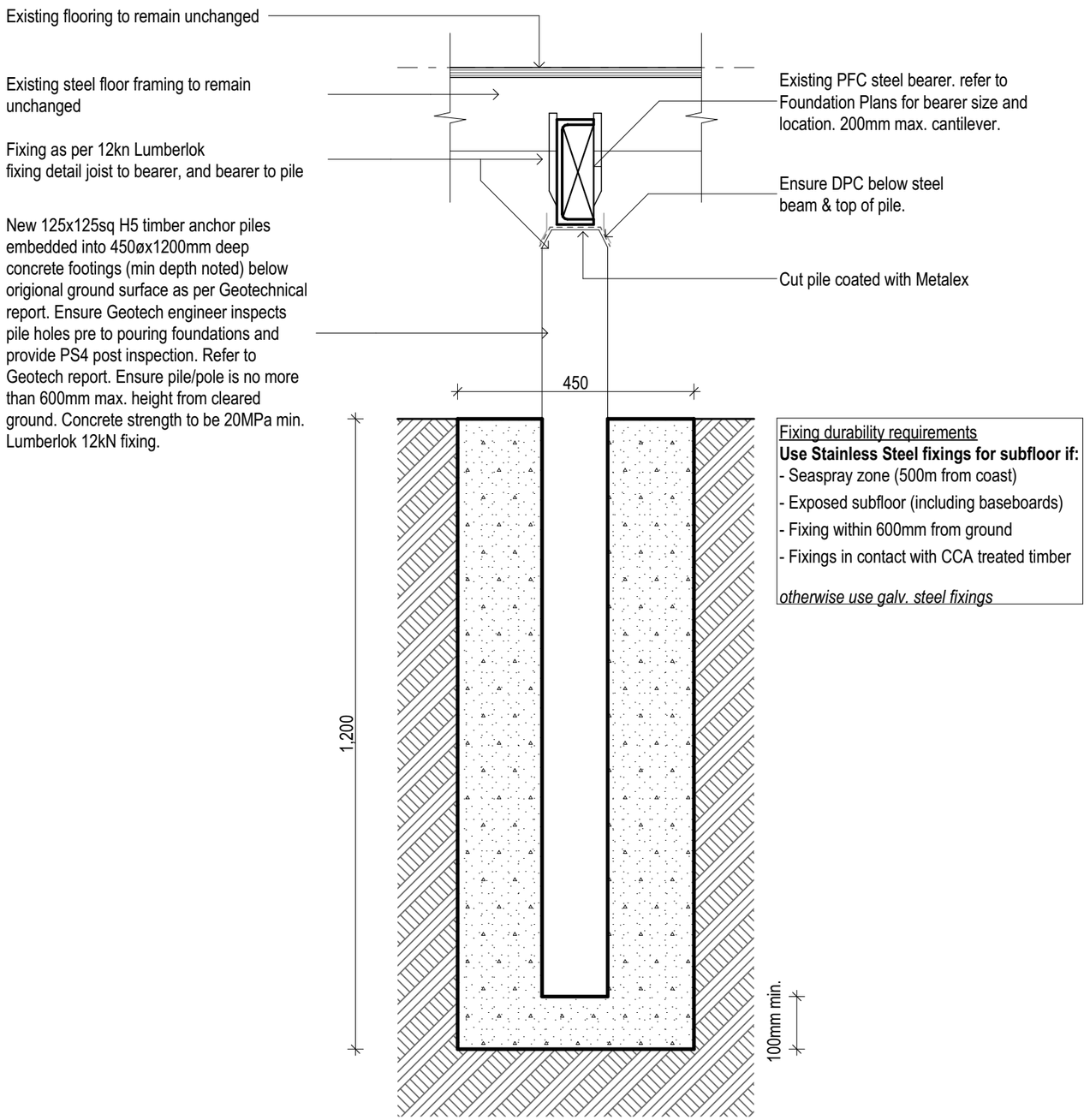
A W DESIGNS
485 KHYBER PASS ROAD
T:02102867410
E: ARAMA@AWDESIGNS.CO.NZ



1 - ANCHOR PILE DETAIL

Fixing durability requirements

Use Stainless Steel fixings for subfloor if:

- Seaspray zone (500m from coast)
- Exposed subfloor (including baseboards)
- Fixing within 600mm from ground
- Fixings in contact with CCA treated timber

otherwise use galv. steel fixings

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410

1:10 @ A3

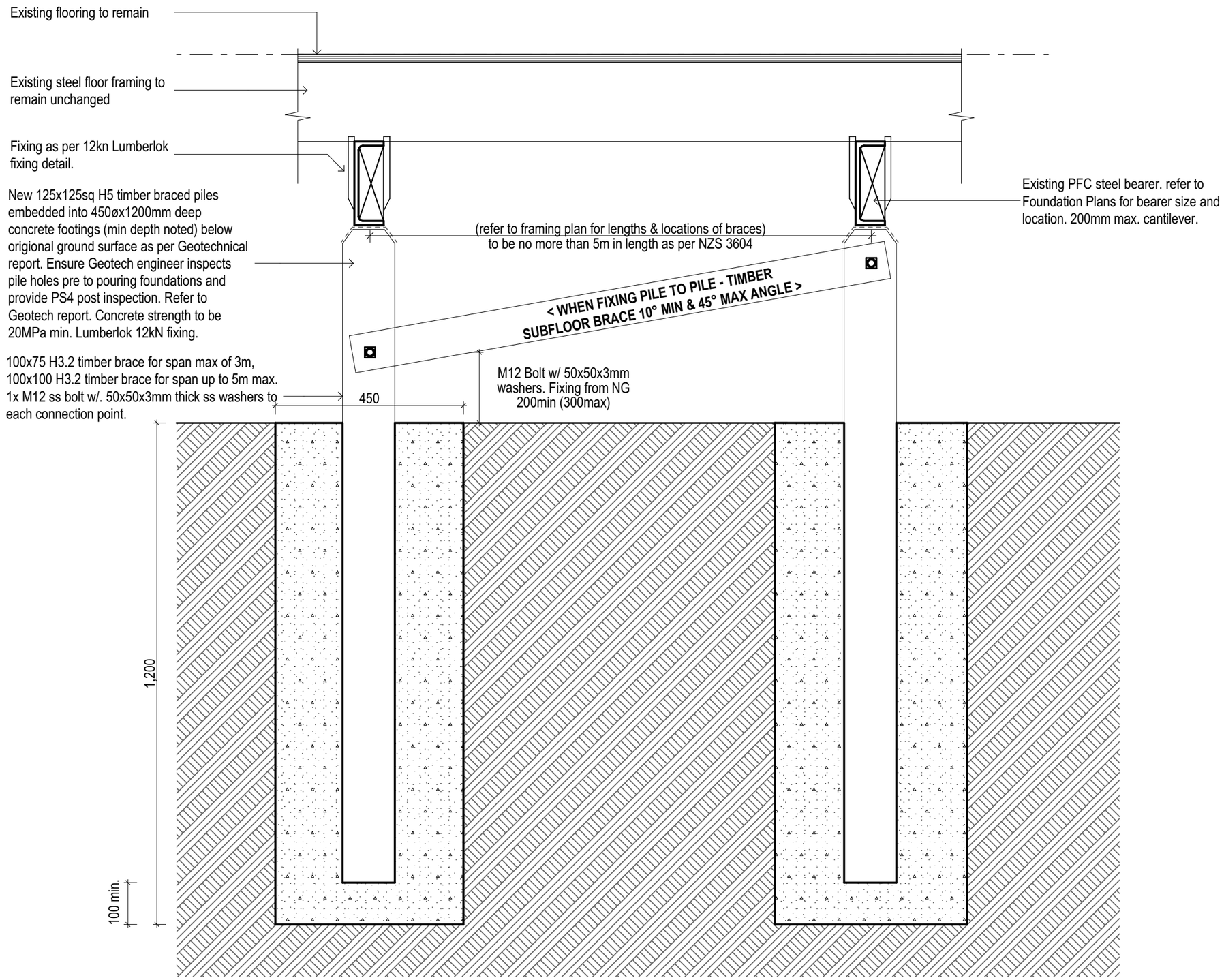
ANCHOR PILE DETAILS

18/06/2024

BC
Ref: 2412

BC(4)04
REV:

A W DESIGNS
485 KHYBER PASS ROAD
T:02102867410
E: ARAMA@AWDESIGNS.CO.NZ



1 - BRACED PILE DETAIL

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

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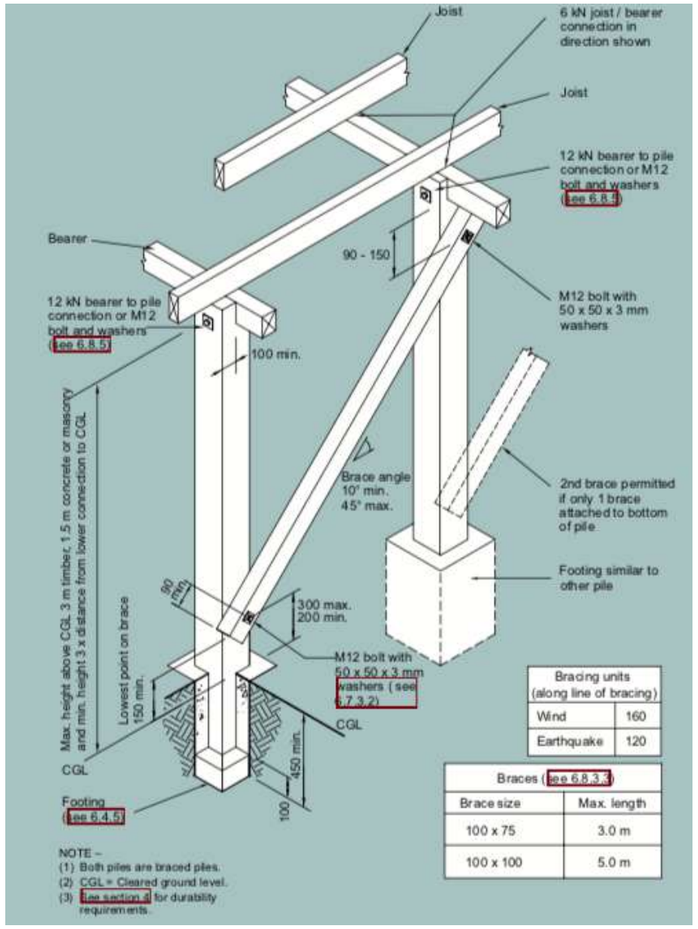
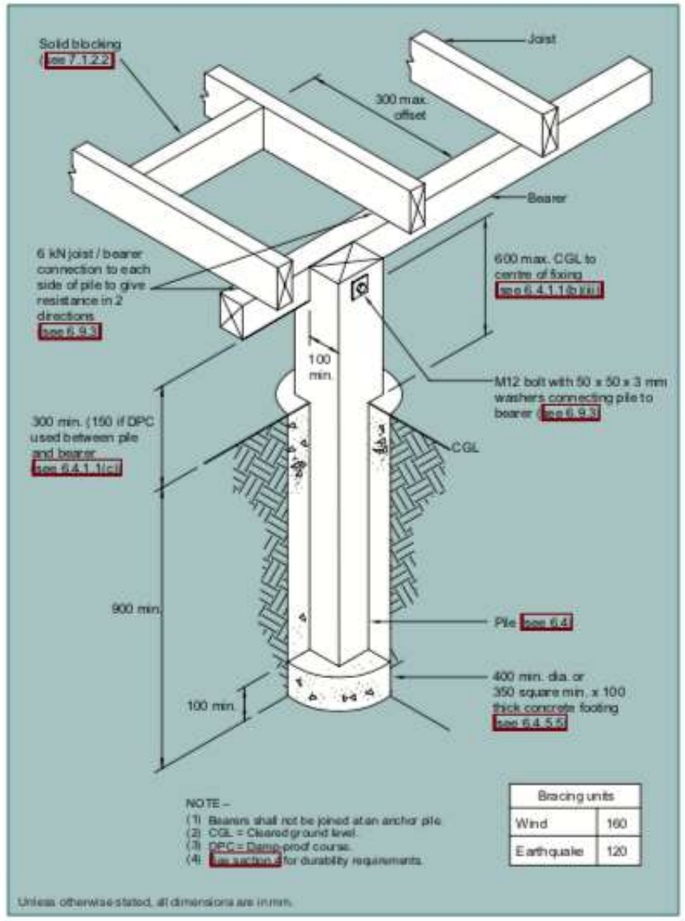
A W DESIGNS
485 KHYBER PASS ROAD
T: 02102867410
E: ARAMA@AWDESIGNS.CO.NZ

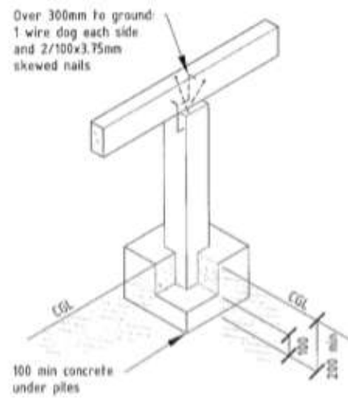


1 - BRACED PILE_PILE TO PILE CONNECTION 3604

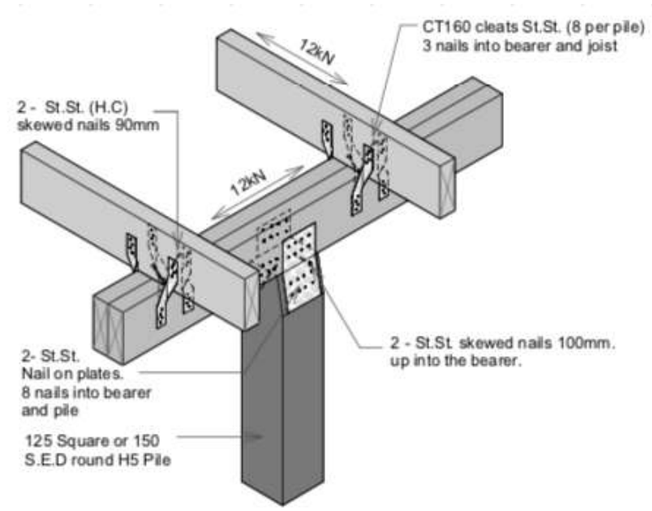


2 - ANCHOR PILE_PILE TO BEARER ONLY 3604

Figure 3.3.1 Ordinary pile directly connected to bearer
Paragraph 3.3.4



3 - STANDARD PILE DETAIL



12kN Connection

4 - 12KN PILE CONNECTION

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410	NTS @ A3	TYPICAL DETAILS	18/06/2024	BC Ref: 2412	BC(4)06 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T:02102867410
E: ARAMA@AWDESIGNS.CO.NZ

LUMBERLOK®

01/2017

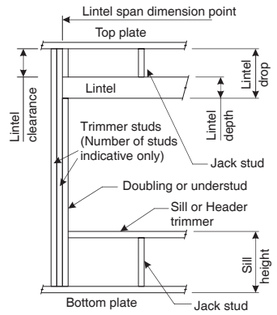
LINTEL FIXING SCHEDULE

ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12
NZS 3604:2011

NOTE:

- ★ All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20kPa.
- ★ Refer to Table 8.19 NZS 3604:2011 for nailing schedule to resist horizontal loads.
- ★ These fixings assume the correct choice of rafter/truss to top plate connections have been made.
- ★ All fixings assume bottom plate thickness of 45mm maximum. Note: TYLOK options on timber species.
- ★ Wall framing arrangements under girder trusses are not covered in this schedule.
- ★ All timber selections are as per NZS 3604:2011.

DEFINITIONS



Lintel Supporting Girder Trusses

Roof Tributary Area	Light Roof Wind Zone			Heavy Roof Wind Zone		
	L, M, H	VH	EH	L, M, H	VH	EH
8.6m²	G	G	H	G	G	H
11.6m²	G	H	H	G	G	H
12.1m²	G	H	H	G	H	H
15.3m²	H	H	-	G	H	H
19.1m²	H	-	-	G	H	-
20.9m²	H	-	-	H	H	-
21.8m²	H	-	-	H	-	-
34.3m²	-	-	-	H	-	-

NOTES:
1. Roof Tributary Area = approx. 1/2 x (Total roof area on girder and rafter trusses supported by lintel)
2. Assumed girder truss is at mid-span or middle third span of lintel
3. Use similar fixings for both ends of lintel
4. All other cases require specific engineering design

Lintel Span (m)	Loaded Dimension (m) (See Fig. 1.3 NZS 3604:2011)	Light Roof Wind Zone					Heavy Roof Wind Zone				
		L	M	H	VH	EH	L	M	H	VH	EH
1.0	2.0	E	E	E	F	F	E	E	E	E	F
	3.0	E	E	F	F	F	E	E	E	F	F
	4.0	E	F	F	F	G	E	E	F	F	F
	5.0	E	F	F	G	G	E	E	F	F	G
	6.0	E	F	F	G	G	E	E	F	F	G
1.2	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	E	F	F	F	E	E	F	F	F
	4.0	E	F	F	G	G	E	E	F	F	G
	5.0	E	F	F	G	G	E	E	F	F	G
	6.0	F	F	G	G	H	E	E	F	G	G
1.5	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	F	F	F	G	E	E	F	F	F
	4.0	E	F	F	G	G	E	E	F	F	G
	5.0	F	F	G	G	H	E	E	F	G	G
	6.0	F	F	G	H	H	E	E	F	G	H
2.0	2.0	E	F	F	F	G	E	E	F	F	F
	3.0	E	F	F	G	G	E	E	F	F	G
	4.0	F	F	G	G	H	E	E	F	G	G
	5.0	F	F	G	H	H	E	E	F	G	H
	6.0	F	G	G	H	H	E	F	G	H	H
2.4	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	G	H	E	E	F	G	G
	4.0	F	F	G	H	H	E	E	F	G	H
	5.0	F	G	G	H	H	E	F	G	H	H
	6.0	F	G	H	H	-	E	F	G	H	H
3.0	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	H	H	E	E	F	G	H
	4.0	F	G	G	H	H	E	F	G	H	H
	5.0	F	G	H	H	-	E	F	G	H	H
	6.0	F	G	H	-	-	E	F	G	H	-
3.6	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	F	G	H	H	E	F	G	G	H
	4.0	F	G	H	H	-	E	F	G	H	H
	5.0	F	G	H	-	-	E	F	G	H	-
	6.0	G	H	H	-	-	E	F	H	-	-
4.2	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
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	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.8	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.2	F	G	H	H	-	E	F	G	H	H
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	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
5.1	2.0	F	F	G	H	H	E	F	G	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
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	2.8	F	G	H	H	-	E	F	G	H	H
	3.0	F	G	H	-	-	E	F	G	H	-
	4.0	G	H	H	-	-	E	F	H	-	-
	5.0	G	H	-	-	-	E	F	H	-	-
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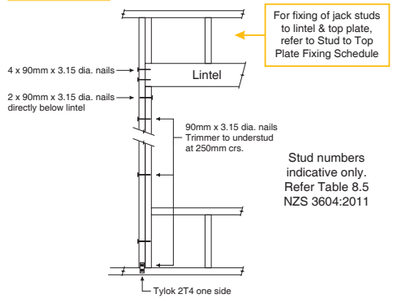
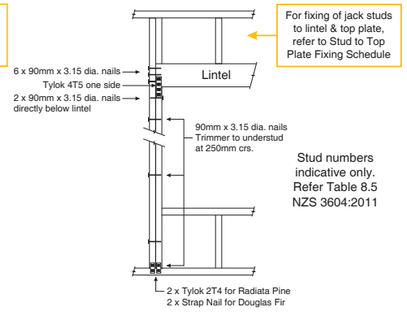
LINTEL FIXING OPTIONS

LUMBERLOK®

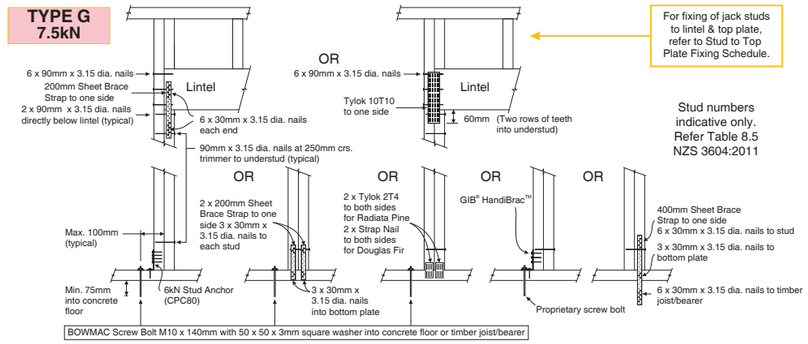
TYPE E 1.4kN



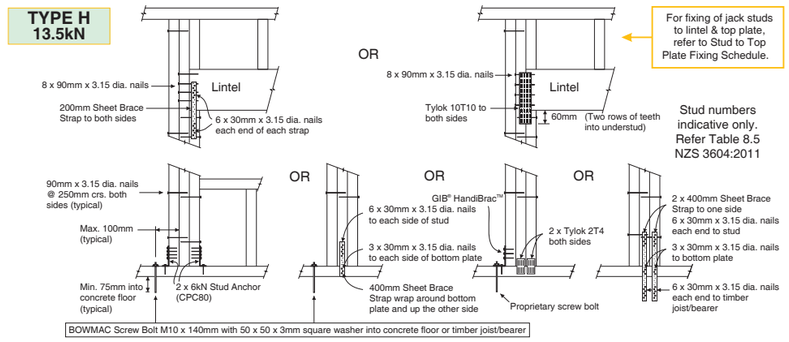
TYPE F 4.0kN



TYPE G 7.5kN



TYPE H 13.5kN



MiTek New Zealand Limited

AUCKLAND
PO Box 58-014, Botany 2163
Phone: 09-274 7109
Fax: 09-274 7100

CHRISTCHURCH
PO Box 8387, Riccarton 8440
Phone: 03-348 8691
Fax: 03-348 0314

www.miteknz.co.nz

MITEK® LUMBERLOK® BOWMAC®

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410

NTS @ A3

TYPICAL DETAILS

18/06/2024

BC
Ref: 2412

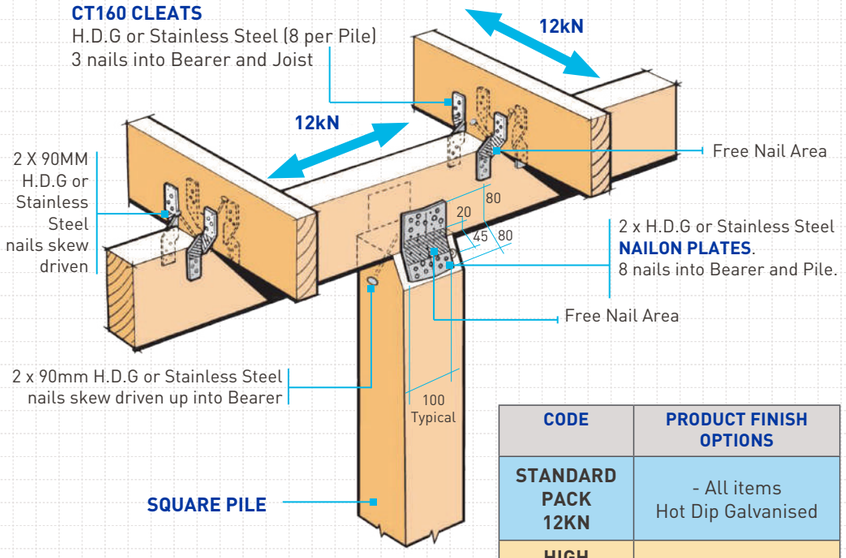
BC(4)07
REV:

A W DESIGNS
485 KHYBER PASS ROAD
T:02102867410
E: ARAMA@AWDESIGNS.CO.NZ

12kN PILE FIXING

FOR BRACED PILES OR ANCHOR PILES

- The 12kN Pile Fixing must be installed in accordance with this brochure.
- Auckland University Tested Ref. 4613.
- All Subfloor construction must be in accordance with NZS 3604:2011.
- NZS 3604 requires lines of lateral support to floor joists within 300mm of bearer or bracing lines, refer clause 7.1.2.
- Joists deeper than 150mm require solid nogging over braced or anchor pile.



Anchor / Brace Pile Shown
(on internal bracing line)

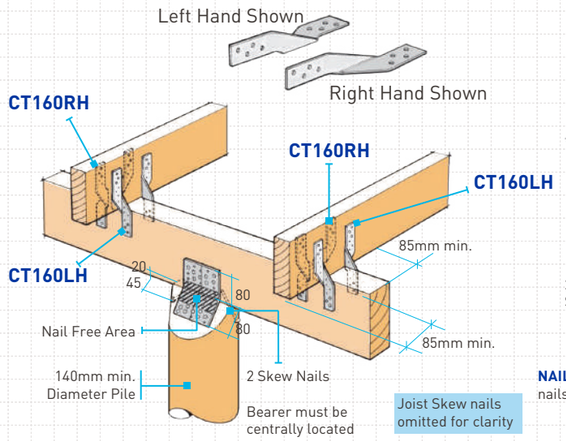
CODE	PRODUCT FINISH OPTIONS
STANDARD PACK 12KN	- All items Hot Dip Galvanised
HIGH CORROSION PACK 12KNH	- All items Stainless Steel

AVAILABLE FROM LEADING BUILDERS SUPPLY MERCHANTS THROUGHOUT NEW ZEALAND

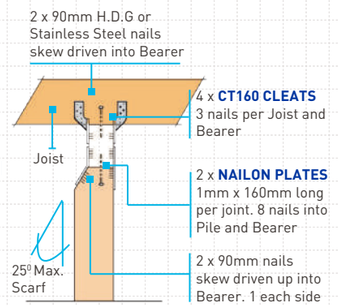
MiTek®
LUMBERLOK®
Timber Connectors

www.miteknz.co.nz

12kN PILE FIXING

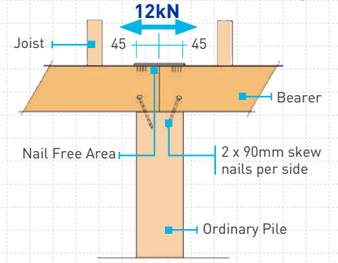


CORROSION HAZARD USE TABLE	
Standard Pack (12KN) - Zones B & C - All fixings ABOVE 600mm from ground level	- All items Hot Dip Galvanised
High corrosion pack (12KNH) - Zone D - All fixings BELOW 600mm from ground level	- All items Stainless Steel (304)

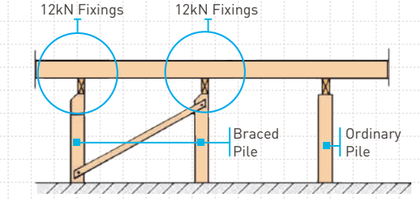


SQUARE PILE

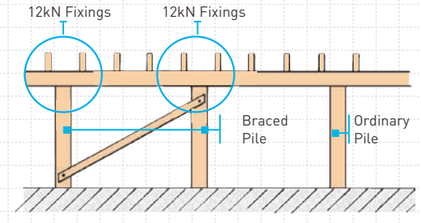
NAILON PLATE 1mm x 160mm (ex 12kN Pack) 8 nails per end. No nails within 18mm of timber edge



12kN BEARER SPLICE
Clause 6.12.7.2 NZS 3604:2011



12kN Fixing - Pile to Bearer



12kN Fixing - Joist to Bearer

12kN Joint Fixing Schedule

PILE TO BEARER
- Nailon Plate (2 per joint) 1mm x 100mm (Typical) x 160mm long
- 8 Nails per Plate into Pile
- 8 Nails per Plate into Bearer
- 2 Skew Nails 90mm (1 per face)

JOIST TO BEARER
- CT160 Cleats (4 per Joist) 160mm long
- 3 Nails per Cleat into Joist
- 3 Nails per Cleat into Bearer
- 2 Skew Nails 90mm (1 per side)

NAILS
- 80 x 45mm x 3.55 dia. Spiral Nails
- 6 x 90mm x 4 dia. St. Steel Nails (12KNH Pack only)

12kN Pile Set Contents

Each set represents 1 x 12kN Pile Fixing (4 per carton)
2 x Nailon Plates 160mm long
8 x CT160 Cleats
80 x 45mm x 3.55 dia. Spiral Nails
90mm x 4 dia. St. Steel Angular Groove 6 - 12KNH Pack

MiTek®

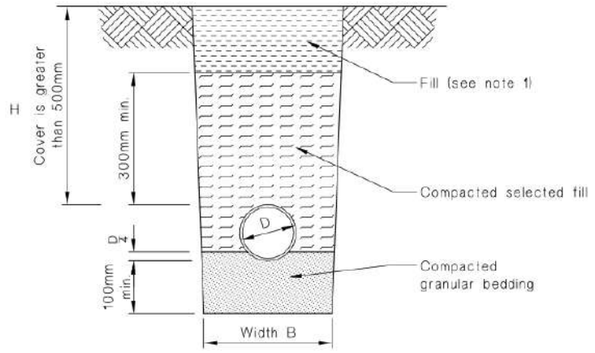
www.miteknz.co.nz

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

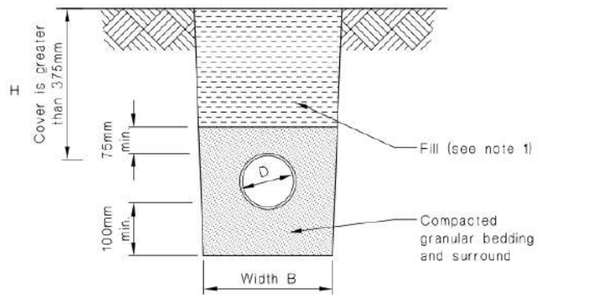
23 Kohuhu Street, Kaitaia , 0410	NTS @ A3	TYPICAL DETAILS	18/06/2024	BC Ref: 2412	BC(4)08 REV:

A W DESIGNS
485 KHYBER PASS ROAD
T:02102867410
E: ARAMA@AWDESIGNS.CO.NZ

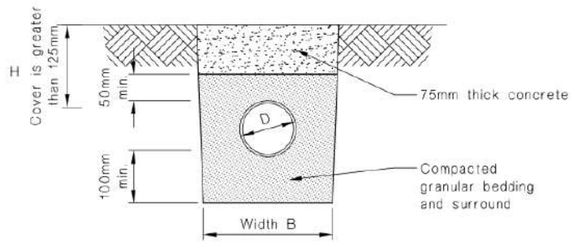
Figure 7: **Bedding and backfilling**
Paragraphs 5.2.1, 5.3.1 and 5.4.1



(a) Bedding type 'B' of NZS 7643
Cover greater than 500mm

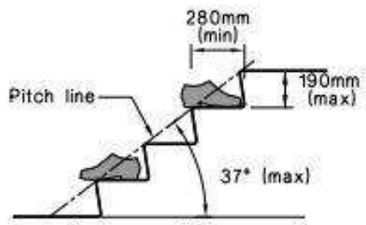


(b) Bedding type 'D' of NZS 7643
Cover greater than 375mm



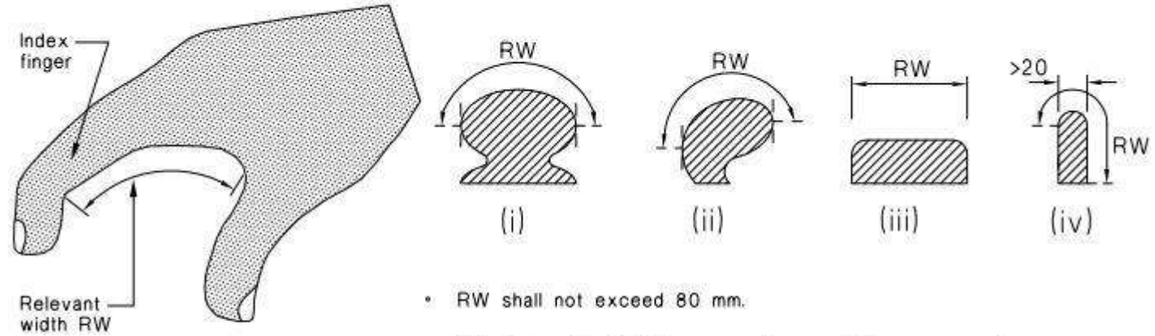
(c) Cover between 125mm and 375mm

NOTE:
1. Fill shall be:
-Ordinary fill where drains are located below gardens and open country.
-Compacted selected fill where the drains are located below residential driveways and similar areas subject to light traffic.



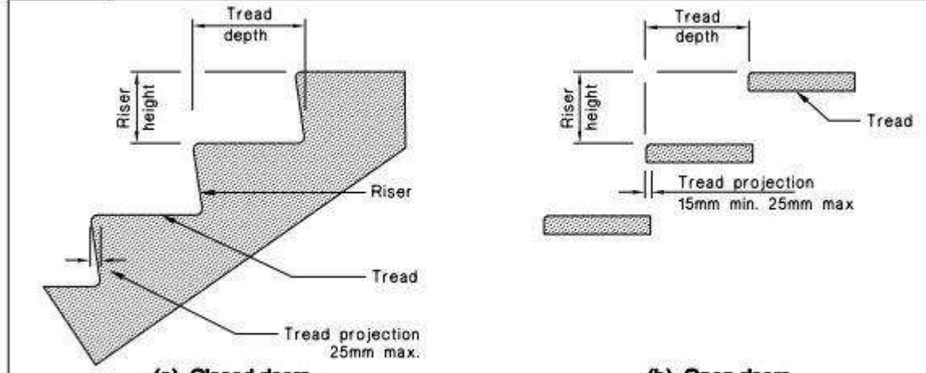
Common stairways and main private stairways

Figure 26: **Handrail Profiles and Clearances**
Paragraphs 6.0.8 and 6.0.9



- RW shall not exceed 80 mm.
- RW (relevant width) is measured around the upper surface perimeter of the handrail section between the vertical tangents on either side.
- Variations in shape are acceptable provided the effective grip is not reduced. For example, the side faces shown as vertical in details (iii) and (iv) are still acceptable even if slightly curved or sloped up to 5° from vertical.
- See fig. 26 (b) for wall clearances.

Figure 12: **Measurement of Rise and Tread Depth**
Paragraphs 4.1.2 and 4.1.6



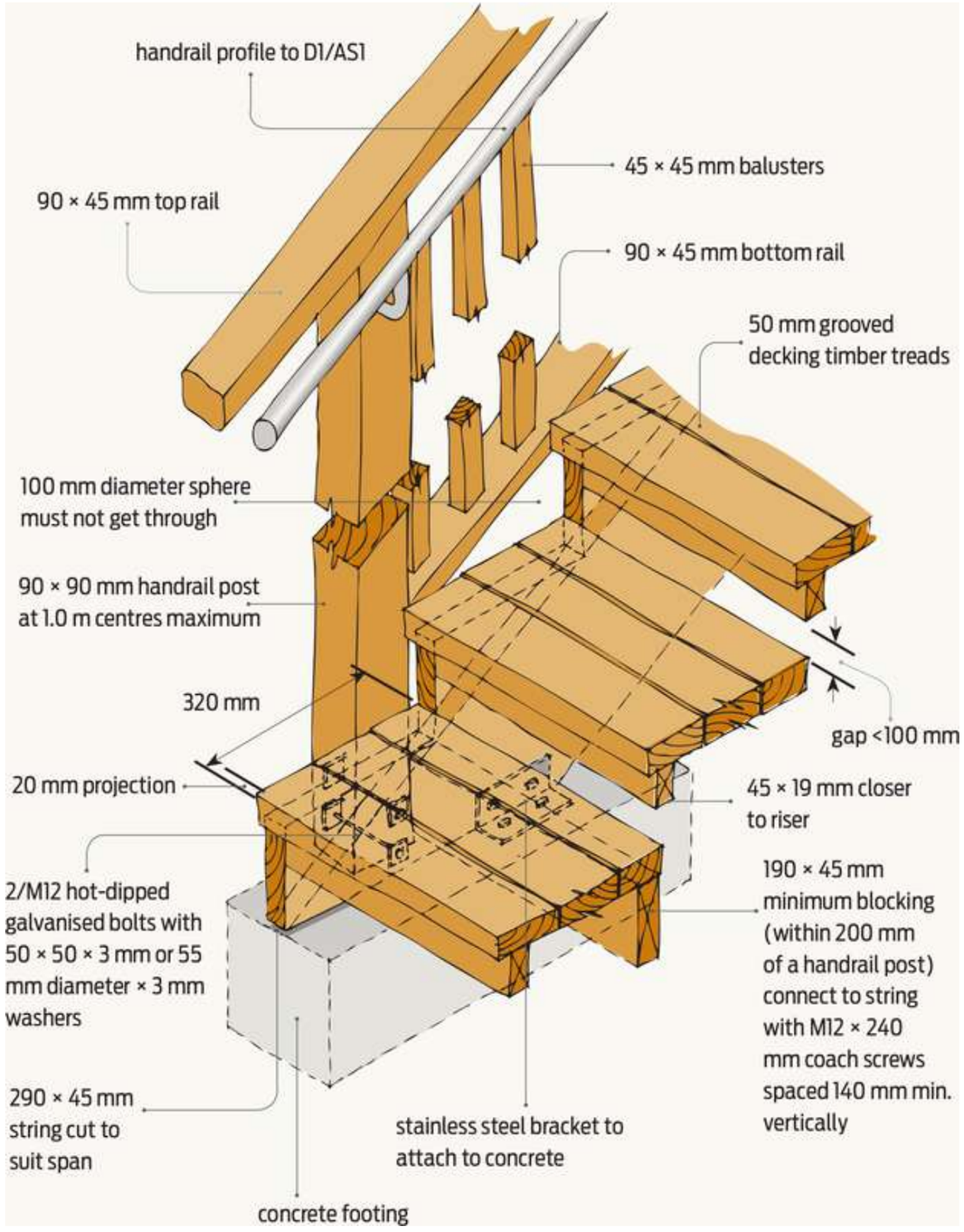
(a) Closed risers

(b) Open risers
Not permitted for accessible stairways

TYPICAL DETAILS

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410	NTS @ A3	TYPICAL DETAILS	18/06/2024	BC Ref: 2412	BC(4)09 REV:	A W DESIGNS 485 KHYBER PASS ROAD T:02102867410 E: ARAMA@AWDESIGNS.CO.NZ



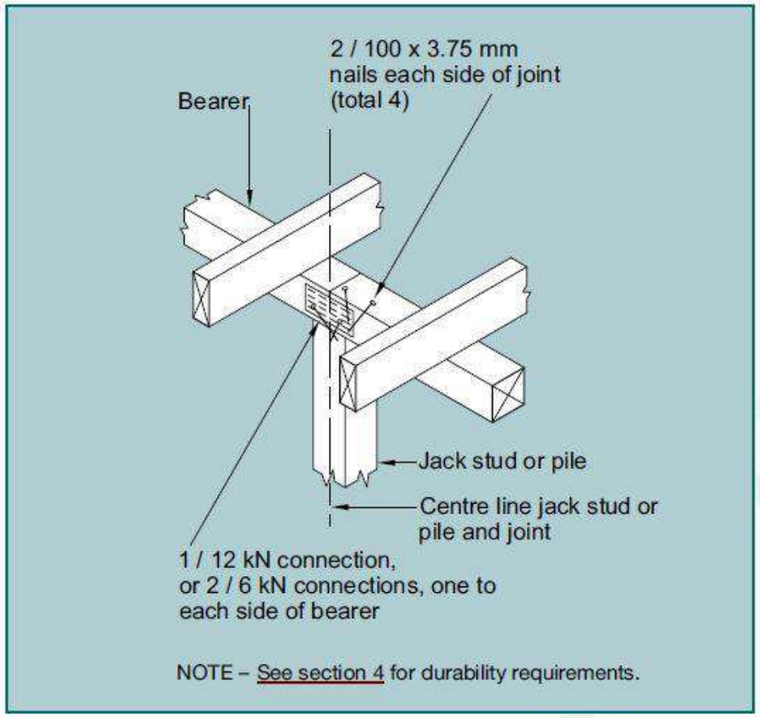
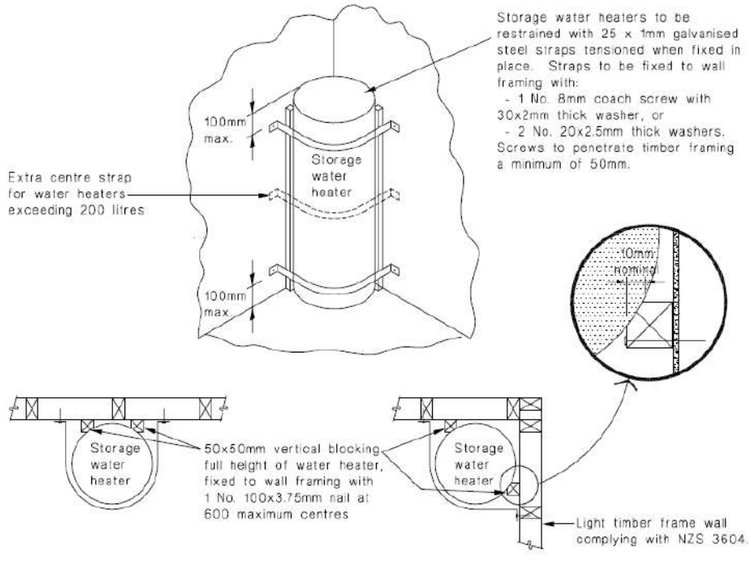


Figure 6.19 – Joints in bearers (see 6.12.7.1 and 6.12.7.2)

Figure 14: **Seismic Restraint of Storage Water Heaters 90 – 360 litres**
Paragraph 6.11.4



TYPICAL DETAILS

ISSUE	REV	DATE
BUILDING CONSENT		18/06/2024

23 Kohuhu Street, Kaitaia , 0410	NTS @ A3	TYPICAL DETAILS	18/06/2024	BC Ref: 2412	BC(4)10 REV:	A W DESIGNS 485 KHYBER PASS ROAD T:02102867410 E: ARAMA@AWDESIGNS.CO.NZ

SECOND HAND BUILDING REPORT

_____

DATE: Thursday, 13th June 2023

JOB: 2245 Whare Ora (Front site)

BUILDING NUMBER: Proposed Community Building

To whom this may concern, the following is a second-hand building report for the inspected building.

BUILDING TYPE: Single storey building.

PROPOSED LOCATION OF BUILDING: 23 Kohuhu Street, Kaitaia, 0410. Pt Lot 2 DP 12051

EXISTING USE: Office building / community meeting space

PROPOSED USE: Office building / community meeting space

YEAR OF CONSTRUCTION: Circa 2000.

GENERAL:

This report has been undertaken to assess the suitability of the specified existing dwelling for relocation.

The building was inspected on the 11th March 2024.

OVERALL DESCRIPTION:

The building is largely open plan with separate rooms for bathroom, WC, laundry, kitchen and 2x enclosed office rooms too.

ROOF AND CEILING:

Metal sheet roofing over trusses and rafters.
Panel ceiling with plasterboard lining.
All appears to be in ok condition.
Any missing sheets of roofing or damaged sheets of ceiling lining to be replaced on a like for like basis.

EXTERIOR WALLS:

Panel cladding walls.
Condition of all cladding looks to be ok.
Any areas of damage to be replaced on a like for like basis.

EXTERIOR JOINERY:

Aluminium joinery looks to be in good condition and to remain as is.
No signs of leakage across all joinery.

GUTTERS AND DOWNPIPES:

Existing PVC gutters and downpipes are in good condition. Any damage to be repaired on a like for like basis.

INTERNAL WALLS AND FLOOR:

Internal panel walls lined with plasterboard all in a ok condition.
Any damaged sheets to be replaced on a like for like basis.
Flooring is a mix of vinyl and carpet over timber substrate. All in a good condition.

SUBFLOOR STRUCTURE:

Steel Joists: 50x50mm at 600 centres.
Steel Beam: 200x70mm PFC
Steel Beam: 2/100x50mm

REFER TO FOUNDATION PLANS FOR INFORMATION.

All framing looks to be in a ok condition and to remain as is.
New piles to be constructed as per NZS3604:2011.

GENERAL COMMENTS:

Overall, the building looks to be in ok condition and suitable for its proposed relocation.
Any minor damage from moving the building can be repaired on a like for like basis.

LIMITATIONS:

This report has been prepared solely for the benefit of the purchaser of the building. The comments made herein are limited to the purposes of this report.

No liability is accepted of AW Designs Ltd in respect of its use by others, and person who relies upon the information noted in this report does so entirely at their own risk.

The report is based upon the building elements that could be inspected and does not include any item that is closed in or concealed such as walls, framing, flooring, heating, ventilation, wiring, insulation etc. We are therefore unable to report that any such part of the dwelling is completely free from defect.

Yours sincerely,

Arama Wigmore
AW Designs
arama@awdesigns.co.nz

ADDITIONAL IMAGES:

SECOND HAND BUILDING REPORT

_____

DATE: Thursday, 13th June 2023

JOB: 2245 Whare Ora (Stage 3 – Part Three)

BUILDING NUMBER: Additional dwelling

To whom this may concern, the following is a second-hand building report for the inspected building.

BUILDING TYPE: Resedential dwelling

PROPOSED LOCATION OF BUILDING: 23 Kohuhu Street, Kaitaia, 0410. Pt Lot 2 DP 12051

EXISTING USE: Private dwelling.

PROPOSED USE: Private dwelling (No change).

YEAR OF CONSTRUCTION: Circa 1990.

GENERAL:

This report has been undertaken to assess the suitability of the specified existing dwelling for relocation.

The building was inspected on the 11th March 2024.

OVERALL DESCRIPTION:

The building is two-rooms with separate bathroom, WC, laundry, kitchen, and a combined open space room.

ROOF AND CEILING:

Metal sheet roofing over trusses and rafters.
Internal plasterboard ceiling lining.
All appears to be in good condition. Any missing sheets of roofing or damaged sheets of ceiling lining to be replaced on a like for like basis.

EXTERIOR WALLS:

Timber Bevelback weatherboards direct fix over 100mm timber framing.
Condition of all cladding looks to be good. Any boards that are damaged to be replaced on a like for like basis.
Existing wall framing (where revealed) looks to be in a good condition and to remain as is.

EXTERIOR JOINERY:

Aluminium joinery looks to be in good condition and to remain as is.
No signs of leakage across all joinery.

GUTTERS AND DOWNPIPES:

Existing PVC gutters and downpipes are in good condition. Any damage to be repaired on a like for like basis.

INTERNAL WALLS AND FLOOR:

Internal walls lined with plasterboard all in a good condition. Any damaged sheets to be replaced on a like for like basis.
Flooring is a mix of vinyl and carpet over timber substrate. All in a good condition.

SUBFLOOR STRUCTURE:

Joists: 140x45mm at 600 centres.
Bearers: 2/140x45mm

All framing looks to be in a good condition and to remain as is. New piles to be constructed as per NZS3604:2011.

GENERAL COMMENTS:

Overall, the building looks to be in good condition and suitable for its proposed relocation.
Any minor damage from moving the building can be easily repaired on a like for like basis.

LIMITATIONS:

This report has been prepared solely for the benefit of the purchaser of the building. The comments made herein are limited to the purposes of this report.

No liability is accepted of AW Designs Ltd in respect of its use by others, and person who relies upon the information noted in this report does so entirely at their own risk.

The report is based upon the building elements that could be inspected and does not include any item that is closed in or concealed such as walls, framing, flooring, heating, ventilation, wiring, insulation etc. We are therefore unable to report that any such part of the dwelling is completely free from defect.

Yours sincerely,

Arama Wigmore
AW Designs
arama@awdesigns.co.nz

ADDITIONAL IMAGES:

BUILDING ASSESSMENT REPORT

Existing Residential Units

He Korowai Trust

23 Kohuhu Street

Kaitaia

Reference Number: 2314

Revision Number: 0

Date of Issue: 20/09/2023

Contents

Table 1: Document History

Revision No.	Description	Date
0	COA Issue	20/09/2023

1. Introduction

1.1 Purpose

Inferno Solutions Limited has been engaged by He Korowai Trust to provide a Building Assessment Report for 6 x existing residential units. The report should be submitted to the Far North District Council to accompany a Certificate of Acceptance (COA) Application. The purpose of the report is to determine whether the buildings in question comply with the New Zealand Building Code applicable at the time of inspection, highlight any areas of non-compliance and provide recommendations for any remedial work to be carried out.

1.2 Project Description

The property located at 23 Kohuhu Street, Kaitaia consists of a community housing development with multiple residential dwellings that have been relocated onto permanent foundations and connected to services over the previous 10 years. The owner advises that all properties are under the single ownership of the Trust and are used as long-term rental properties.

Figure 1: Existing site

In 2021, 6 x existing buildings were relocated to the property to then be converted to 1-bedroom residential units for the elderly. The buildings are of identical size, layout and dimensions. The existing subfloor, wall and roof framing remained unaltered at the time of inspection. The new work completed onsite is restricted to new foundations, landings, external stairs, installation of floor coverings, new sanitary fixtures, and partial installation of services. The COA application should be limited to the new work only, however Far North District Council may require additional remedial work be included at their discretion.

Figure 2: Existing buildings

The other buildings adjacent to the 6 x units shown in Figure 1 had been moved elsewhere onsite at the time of inspection and do not form part of this report.

Figure 3: Existing site (enlarged)

Inferno Solutions have not been made aware of the contractors who have carried out the building work onsite. Additionally, Inferno Solutions have not been made aware of the legality of the buildings onsite. The documentation provided by the client is limited to the floor plans attached.

1.3 Inspection Summary

Table 3: Inspection and Building Details

Existing 1-bedroom residential dwelling	
Date of inspection	31 August 2023
Time of inspection	9:00am
Wind Zone	Medium (based on NZS 3604:2011 assessment)
Corrosion Zone	C (based on NZS 3604:2011 maps)
Classified Use	2.0.2 – detached dwellings
Foundation	Timber piles
Wall Framing	Insulated panels
Roof Framing	Insulated panels
Wall Cladding	Insulated panels
Roof Cladding	Insulated panels
Joinery	Aluminium
External Decks	Timber
Internal Lining	Galvanised and coated steel panels
Downpipes/Spouting	Nil
Sewer Disposal	Reticulated (incomplete)
Potable Water Supply	Reticulated (incomplete)
Electrical Supply	Mains supply (incomplete)
Gas Supply	Onsite storage (Incomplete)

1.4 Legislation

The Building Act (2004) sets out the rules for the construction, alteration, demolition and maintenance of new and existing buildings in New Zealand. The following Sections of the Building Act (2004) relate to this project.

17 All building work must comply with building code

All building work must comply with the building code to the extent required by this Act, whether or not a building consent is required in respect of that building work.

96 Territorial authority may issue certificate of acceptance in certain circumstances

(1) A territorial authority may, on application, issue a certificate of acceptance for building work already done—

(a) if—

(i) the work was done by the owner or any predecessor in title of the owner; and

(ii) a building consent was required for the work but not obtained; or

(b) if section 42 (which relates to building work that had to be carried out urgently) applies; or

(c) if subsections (3) and (4) of section 91 (which apply if a building consent authority that is not a territorial authority or a regional authority is unable or refuses to issue a code

compliance certificate in relation to building work for which it granted a building consent) apply.

(d) *[Repealed]*

(2) A territorial authority may issue a certificate of acceptance only if it is satisfied, to the best of its knowledge and belief and on reasonable grounds, that, insofar as it could ascertain, the building work complies with the building code.

(3) This section—

(a) does not limit section 40 (which provides that a person must not carry out any building work except in accordance with a building consent); and

(b) accordingly, does not relieve a person from the requirement to obtain a building consent for building work.

97 How to apply for certificate of acceptance

An application for a certificate of acceptance must—

(a) be in the prescribed form; and

(b) if available, be accompanied by plans and specifications that are—

(i) required by regulations made under section 402; or

(ii) if the regulations do not so require, required by the territorial authority; and

(c) contain or be accompanied by any other information that the territorial authority reasonably requires; and

(d) be accompanied by any fees and charges imposed by the territorial authority under section 219; and

(e) in the case of an application under section 96(1)(a), be accompanied by any fees, charges, or levies that would have been payable had the owner, or the owner's predecessor in title, applied for a building consent before carrying out the building work; and

(f) if a project information memorandum for the building work has been issued under section 34, be accompanied by the project information memorandum; and

(g) if a compliance schedule is required as a result of the building work, have attached to it a list of all specified systems for the building; or

(h) if an amendment to an existing compliance schedule is required as a result of the building work, have attached to it a list of all specified systems that are being—

(i) altered in the course of the building work:

(ii) added to the building in the course of the building work:

(iii) removed from the building in the course of the building work.

98 Processing application for certificate of acceptance

(1) A territorial authority must, within 20 working days after receiving an application for a certificate of acceptance,—

(a) grant the application; or

(b) refuse the application.

(2) A territorial authority may, within the period specified in subsection (1), require further reasonable information in respect of the application, and, if it does so, the period is suspended until it receives the information.

99 Issue of certificate of acceptance

(1) A certificate of acceptance must—

(a) be issued in the prescribed form; and

(b) have attached to it,—

(i) if a compliance schedule is required as a result of the building work, the compliance schedule for the building; or

(ii) if an amendment to an existing compliance schedule is required as a result of the building work, the amended compliance schedule for the building.

(2) A certificate of acceptance may, if a territorial authority inspected the building work, be qualified to the effect that only parts of the building work were able to be inspected.

(3) A territorial authority's liability for the issue of a certificate of acceptance is limited to the same extent that the territorial authority was able to inspect the building work in question.

99AA Withholding certificate of acceptance

If a territorial authority grants an application for a certificate of acceptance but withholds the certificate under section 208 of the Local Government Act 2002, the territorial authority must give the applicant written notice of—

(a) the grant of the application; and

(b) the withholding of the certificate; and

(c) the development contribution required to be paid or made before the certificate will be issued.

99A Refusal of application for certificate of acceptance

If a territorial authority refuses to grant an application for a certificate of acceptance, the territorial authority must give the applicant written notice of—

(a) the refusal; and

(b) the reasons for the refusal.

2. Building Overview

This section comments on the elements that are consistent across each of the 6 x units. Where there are issues relating to one specific building, they will be commented on specifically within the Addendum.

2.1 Structure

2.1.1 Foundations and subfloor

New foundations consist of 125x125mm timber piles cast into concrete footings with piles spaced at 3.3m centres. The depth of the foundations is unknown, however the owner's representative advised that foundations were 450mm deep. Based on the concrete visible at ground level, the plan area is 400mm diameter. Bracing consists of 4 x braced piles per building, fixed in accordance with NZS 3604:2011.

Figure 4: Subfloor framing

The subfloor framing is part of the existing structure that was relocated to the site. The bearers are 200x100 steel I-beams with galvanised coatings, located 1800mm apart. 4 x 120x120 SHS struts are located between the bearers and fixed to them with 4/M12 bolts. Bearers are fixed to piles with straps run over bearers and tied back to piles with nail fixings either side. Joists consist of cold formed 80x40 channel sections at 400mm centres.

2.1.2 Roof and wall framing

The wall and roof structure consists of cold formed channel bottom plates, 80x80 boxed section columns and roof beams, and channel section top plates. Roof and wall framing support infill insulated panels with galvanised steel coated sheet linings either side. Most structural fixings to the roof and wall framing were not visible at the time of inspection.

2.1.3 Level of compliance

The plans provided suggest the building was designed for an ultimate wind speed of 40m/s and a serviceable wind speed of 26m/s. There is a likelihood that the building would result in structural failure in a high wind zone and suffer deflection and/or damage in a low wind zone. As the building is in a medium wind zone it would not meet the requirements for a building life not less than 50 years.

Although the depth of the foundations could not be confirmed, there were no signs of settlement or structural failure noted and they appear to be in a serviceable condition.

The bracing installed to the subfloor is insufficient across the building. Bracing calculations show that 2 x additional braces are required to achieve compliance with NZS 3604:2011.

Figure 5: Subfloor bracing

The straps installed over the bearers are unlikely to achieve the required 12kN connection rating required for braced piles.

Although the channel sections are in a serviceable condition, there are signs of corrosion starting. If left untreated, it is unlikely the building will remain in a serviceable condition for more than 5 years before significant alterations are required.

2.2 External Envelope

2.2.1 Wall cladding

As noted above, wall cladding is incorporated into the insulated panel. The external exposed surface is a coated steel sheet with panels being a tongue and groove/clip type system. Insulation between the panels is polystyrene. External corners are flashings with an angle flashing riveted to the panels. The top and bottom edges of the panels are closed off with channels that run around the perimeter of the building as noted above.

Figure 6: Wall cladding

2.2.2 Roof cladding

Roof cladding is similar to the wall cladding being insulated panels joined through a tongue and groove/clip type system. The internal and soffit surfaces are a flat coated sheet with a trapezoidal profiled sheet cladding to the exposed side. The profile is suitable for the roof pitch which is approximately 10°.

Figure 7: Roof cladding and soffit linings

2.2.3 Joinery

Existing joinery is single glazed aluminium joinery. Profiles were consistent with commercial joinery, however it did not include any markings as required by NZS 4211:2008. Openings within the insulated panels were closed off with additional channels and joinery units were sealed to the face of the panels with silicone sealant. There were no head, jamb, or sill flashings present.

Figure 8: Aluminium joinery

2.2.4 Level of compliance

Roof and wall panels appear to be in good condition with minimal signs of corrosion present.

Corner flashings to the external corners of the building do not continue the full height of the wall panels and insulation and the end of the channel is exposed.

The trapezoidal profiled roof cladding does not overhang the end capping of the panel and there are gaps present between the two materials. Joins within the roof cladding are visible at the eaves due to caps missing to close off the profile.

Joinery does not appear to meet the requirements of NZS 4211:2008 as there are no markings present. The joinery units are a sliding configuration and condensate drains through to the exterior are visible from within the building. One of the joinery units does not close fully and there were gaps between the sliding door and the aluminium frame. We were unable to locate any markings on the glazing to confirm whether safety glass was present. Flashings around the openings are non-existent and rely on sealant preventing any moisture ingress. As the joinery units are face fixed within the openings, there are unlikely to be any air seals present.

Figure 9: Aluminimum joinery (internal)

Aluminium joinery has condensation channels and drains present. However, due to the joinery assembly the drains are clearly visible from within the building. This will result in unnecessary drafts, waterproofing in adverse weather conditions and mould growth over time.

Figure 10: Condensation drains (internal)

2.3 Interior

2.3.1 Wall and ceiling linings

As noted above, the wall and roof panels are a flat coated steel sheet. The internal linings are in good condition.

2.3.2 Floor coverings

Floor coverings consist of vinyl sheet flooring installed over 18mm composite flooring sheets throughout each of the buildings. The vinyl sheets have been cut to suit the room sizes and are not coved up the wall linings.

Figure 11: Internal layout

2.3.3 Energy efficiency

Expol insulation has been installed below the floor between joists. Polystyrene insulation is present within both the roof and wall panels. All joinery within the building is single glazed. Insulation materials appear to be in good condition.

2.3.4 Fixtures

New sanitary fixtures have been installed within each of the buildings. The fixtures are modular units and include a kitchen sink, and hand basin, toilet and an acrylic shower within each bathroom. Fixtures are fixed in place, junctions sealed to floor and walls, and pipework connected.

Figure 12: Bathroom layout

2.3.5 Waterproofing

The showers within each building are acrylic bases with enclosed wall linings and glass shower doors. Vinyl flooring was laid within bathrooms also.

2.3.6 Ventilation

Natural ventilation is provided via 5 x opening windows and 1 x ranch slider per building. The opening sizes are suitable for the room sizes present.

There was no mechanical ventilation present at the time of inspection.

2.3.7 Level of compliance

Floor coverings within most of the buildings was lifting along some edges and within centre of the kitchen/living rooms. There also appeared to be debris left under some of the vinyl sheets prior to them being installed which may have been the cause of it lifting. The vinyl did not appear to be sealed along the edges at the junction with the wall linings.

Insulation under the floor was in good condition. Thickness of the insulation would suggest an R value of R1.4 which would achieve compliance with the requirements of H1/AS1 at the time of construction. Some sheets had fallen out at the time of inspection and require replacing. The R values achieved for roof and wall panels are unknown. Given the thickness of the panels, it is unlikely that the roof, and possibly the wall R values will achieve the minimum requirements of H1/AS1 using the schedule method. Joinery is single glazed and fails to meet the minimum requirements of the schedule method.

Figure 13: Underfloor insulation

Ventilation provided to the bathrooms is via an opening window only. Mechanical ventilation is required to this space complying with G4/AS1 also.

At the time of the inspection there were no cooking facilities present. It is likely that there will be at some stage in the future, and this will require suitable mechanical ventilation be installed in accordance with G4/AS1. Ventilation within the bathroom was via a small opening window only. Mechanical ventilation is required to this space complying with G4/AS1 also.

2.4 Services

2.4.1 Potable water and stormwater

Potable water and stormwater connections are available onsite. The buildings are yet to be connected and an application is to be lodged soon as noted in Section 3.3. Potable water supply pipework has been installed to all fixtures within the buildings and is capped under the floor. The product used is Buteline and appears to be installed in accordance with the manufacturer's literature. No evidence of a pressure test has been provided and as there is no connection to the reticulated supply, we are unable to confirm if any leaks are present.

There were no gutters, downpipes or stormwater drains from the building present at the time of inspection. Stormwater runoff from the buildings is discharging directly to ground.

2.4.2 Sewer

A sewer connection is available onsite. The buildings are yet to be connected and an application is to be lodged soon as noted in Section 3.3. sanitary plumbing has been installed from each fixture and connected under the floor. The drain has then been capped above ground for connection at a later date. Plumbing has been completed in PVC with correct sizes, junctions and gradients used. A 50mm terminal vent has also been installed in a compliant location. All pipes are adequately supported under or against the building.

2.4.3 Electrical

Electrical work has been completed within the building however it is yet to be connected to any power supply. Work appears to be completed in a professional manner. All electrical

work must be completed by a certified electrician and energy works certificate provided. The electrical work does not form part of this report other than noting that it is present. The energy works certificate should form part of the Certificate of Acceptance documentation.

2.4.4 Gas

Gas work has been completed to the exterior of the building ready for connection to a gas hot water heater and LPG bottles. Pipe work is in place, as well as restraints for gas bottles. Work appears to be completed in a professional manner. All gas fitting must be completed by a certified gasfitter and energy works certificate provided. The gas fitting work does not form part of this report other than noting that it is present. The energy works certificate should form part of the Certificate of Acceptance documentation.

2.4.5 Level of compliance

Potable water – The water supply pipework installed thus far has been completed to a high standard and appears to be compliant with the manufacturer's literature. Pressure testing of the pipework should be confirmed by the certifying plumber.

Stormwater – Stormwater drainage was not present at the time of inspection. This includes spouting, downpipes and drains. As noted above, the roof cladding does not overhang the end capping therefore there is no allowance for runoff to be captured by the spouting.

Sewer – The work completed thus far appears to be compliant with AS/NZS 3500.2:2018. Connection to the reticulated sewer and the installation of a compliant overflow relief gully is yet to be completed.

Electrical – Electrical work as been partially completed within the building and has been completed to a high standard. All work is to be covered by an energy works certificate.

Gas – As for electrical section. The gas hot water heater and gas bottles are yet to be connected. A permanent base will also be required to support gas bottles prior to their installation.

2.5 Access

2.5.1 Access routes

Access from the car parking area is via a lawn area leading to external timber stairs, timber landings and small timber deck. The landing and stairs are new construction, supported by 90x90 H5 posts within concrete footings. Boundary joists are bolted to the posts, deck joists are fixed to boundary joists with joist hangars.

A barrier has been installed to the decks and stairs and is continuous from ground level through to the edges of the building at the deck level.

The deck structure forms part of the main building subfloor and was constructed offsite.

2.5.2 Level of compliance

The posts supporting the landings are 90x90. The minimum pile size under NZS 3604:2011 is 125x125. Although the posts are undersized, the size of the landing supported by them is relatively small. The loadings on the posts is also relatively small due to the use of the building and the area able to support people at any given time. There is no settlement or deflection visible. Therefore, the posts appear to be sufficient.

Although the deck structure is part of the existing subfloor, there are signs of corrosion present. This is more extensive than other areas due to its exposed location. If left untreated there is potential for the deck to fail prematurely.

Figure 14: Corrosion to deck structure

While tread and riser dimensions are sufficient, stairs from each of the landings have varying riser heights at the top and bottom which is non compliant with D1/AS1. The maximum variation between risers on a flight of stairs must be limited to +/- 5mm.

The stairs have open risers with gaps exceeding 100mm, which again is non compliant with D1/AS1.

Figure 15: Riser height variations

The barrier around the deck and stairs for the most part is 1m in height. Balusters have been installed to achieve spacings not exceeding 100mm. Handrails are bolted to the existing structure and new 90x90 posts which extend from the footing to the top of the barrier.

Figure 16: Barrier height variations

In some areas the deck handrail is slightly out of level resulting in the height fluctuating from 980mm to 1m. The minimum height for a barrier is 1m as per F4/AS1. Due to the use of the buildings, the minor variance is not considered to be of any concern and the barrier is still deemed compliant as an alternative solution.

3. Recommendations

3.1 Building Defects

A separate Addendum, 2314-A: Addendum to Building Assessment Report, has been issued to the owner identifying the remedial work required to bring the buildings to a reasonable level of compliance. The client advises that they will carry out the recommended remedial work prior to the buildings being occupied.

3.2 Further Investigations

As the buildings have not been designed in accordance with recognised standards, and there are concerns with the existing structure, it is recommended that a monitoring schedule be put in place. The schedule should allow for inspection of the buildings at regular intervals and following adverse weather conditions. Should any damage or deflection be identified, a structural engineer should be engaged to carry out a more detailed structural survey of the buildings to confirm the buildings are still suitable for occupation. This plan should also address how occupants can be re-homed at short notice should the need arise.

Given the lower level of compliance, it is recommended that a specified intended life of 5 years be applied to the buildings should Far North District Council issue a Certificate of Acceptance for any or all of the building work.

3.3 Additional Applications

The client has advised that a separate building consent application will be applied for to connect the buildings to reticulated services. The buildings shall not be occupied until such time as a building consent is obtained, the work is completed, and a Code Compliance Certificate is obtained.

3.4 Summary

As noted above, it is reasonable to issue a Certificate of Acceptance for work that can be inspected and is compliant with the building code, as determined by the Territorial Authority. The scope of the COA must be made clear, as well as any remedial work that is to be covered under the application.

4. Liability

This report has been prepared solely for the benefit of our client and Far North District Council in relation to the application for which this report has been prepared. The comments in it are limited to the purpose stated in this report. No liability is accepted by Inferno Solutions Ltd in respect of its use by any other person, and any other person who relies upon any matter contained in this report does so entirely at their own risk.

The Building Assessment Report is based on an above ground, visual, non-invasive inspection only. General comments made are based on the condition of the buildings in question at the time of inspection and the instructions received from the client. The report is assessed against commonly used standards and acceptable solutions that do not include specific design. Therefore, the report does not constitute a structural survey or engineer's report.

Inferno Solutions Limited has acted with reasonable care and skill while undertaking the inspection to identify all defects at the time. As the report is based on a visual inspection only, it may not identify all past, present and future defects. Not responsibility or liability is accepted for any defects that are not reasonably visible at the time of inspection.

Items relating to electrical work, plumbing, drainage and/or gas fitting have been inspected to the extent reasonably expected of a typical building inspector only. Electrical work and gas fitting must still be certified by a registered person.

The report does not determine compliance with the Resource Management Act 1991, applicable District Plan, local bylaws. A Land Information Memorandum (LIM) has not been reviewed in the preparation of this report and this report should not be used in place of a LIM.

Prepared by

Stu Jobe

Director

NZDE (Civil), Dip. Building Surveying

Inferno Solutions Limited

5. Appendices

5.1 Client provided plans

5.2 Bracing calculations (bracing achieved)

5.3 Bracing calculations (bracing required)

ADDENDUM 1 TO BUILDING ASSESSMENT REPORT

21 September 2023

He Korowai Trust

23 Kohuhu Street, Kaitaia

Existing residential units

Ref: 2314-1

1.1 Purpose

The purpose of this addendum is to highlight areas of non-compliance identified during the inspection of the existing residential units. Rectification of the issues have been separated into two categories- work that is likely to be required to obtain the Certificate of Acceptance, and work that is recommended to be completed to make the buildings suitable for occupation.

This addendum is to be read in conjunction with the existing fire report.

1.2 Remedial work required to obtain the Certificate of Acceptance

1.2.1 Legislation

For council to issue a COA it must be satisfied on reasonable grounds to the best of its knowledge and belief, that, insofar as it can ascertain, the building work complies with the building code. As there is clearly work that does not comply with the building code, remedial work needs to be undertaken to achieve compliance. The extent of the remedial work to be carried out is at the discretion of the council, however it is recommended that all work be carried out regardless of their decision.

A building consent is required for certain work. As the building work required is of a minor nature, council may allow the remedial work to be completed under the COA application, rather than a separate building consent for that work alone. Council should be consulted prior to any work starting.

1.2.2 Subfloor/structure

- 2 x additional subfloor braces are required across the building. Braces shall be fixed with stainless steel M12 bolts and installed in a manner that no two braces are connected at the top of one pile.
- Install additional connections from the steel I beam bearers to timber piles to achieve a 12kN connection. Recommend a B51 Bowmac bracket with 1 x 12mm bolt to each flange. Alternatively, a structural engineer could confirm the existing straps are adequate.

- Replace Expol insulation that has fallen out from between floor joists.

1.2.3 Exterior cladding

- The junction between the roof cladding and the end capping needs to be modified to provide adequate overhang of 75mm. Care must be taken to ensure there is adequate support and fixing points.

1.2.4 Interior

- Flooring within Unit 1 needs to be secured within kitchen area and adjacent room.
- Vinyl flooring within affected units needs to be secured along wall junctions and adequately sealed.
- Sanitary fixtures and potable water supply are to be connected once the building consent for connection to services is obtained.
- Mechanical ventilation to be installed within each bathroom and vent penetration adequately sealed. The flow rate of the extraction fan shall be 25L/s minimum. Due to the type of internal wall linings, it is recommended that the minimum requirements G4/AS1 are doubled to 50L/s.
- Smoke alarms to be installed within 3m of sleeping spaces.

1.2.5 Stormwater drainage

- External gutters are to be installed to collect all roof water. Care must be taken to ensure there is adequate fixing points.
- 1 x 80mm downpipe is to be installed either side of the building to collect roof water from gutters. Downpipes are then to discharge to the stormwater connection once the building consent for connection to services is obtained.

1.2.6 Access

- Paving to be installed from the car parking area through to the bottom of the stairs to each unit.
- Stairs are to be reconstructed to ensure that there are consistent riser heights from ground level to the deck level.

1.3 Recommended remedial work

- Treat corrosion to existing base channels and joists where exposed to the weather.
- Replace external corner flashings to ensure adequate cover over the full length of the corner junction. Custom flashings installed over the top of the existing flashing may be possible, however they must be adequately lapped and sealed.

- Mitres in channels to the joinery openings require sealing.
- Damage to aluminium ranch slider of Unit 1 to be repaired, or joinery unit to be replaced.
- Aluminium ranch slider door to Unit 5 to be altered to allow door to close fully and lock, or joinery unit to be replaced.
- Aluminium joinery drainage channels to be covered with a suitable cowl in a manner to prevent the amount of draft while still maintaining drainage properties. Alternatively, joinery to be replaced.
- Where cooktops are installed, mechanical ventilation is to be installed within kitchens. The flow rate of the extraction fan shall be 50L/s minimum.

1.4 Monitoring Schedule

Due to the type of buildings and the structural loads they have been built to, it is imperative that a monitoring schedule is put in place. This will also assist council in their decision to approve the COA application. The following should be inspected at 6-month intervals, and after any adverse weather conditions:

- Foundations and subfloor for any differential settlement.
- Connections from piles to steel bearers.
- Joinery units and associated junctions with wall cladding for ingress of moisture.
- Deflection of floor joists, wall columns and/or roof beams.
- Deflection of deck subfloor structure.
- Wall and roof cladding panels for movement, deflection, delamination and separation.
- Corner flashings for ingress of moisture.
- Any lifting of composite flooring and/or vinyl floor coverings.
- Internal linings and floor coverings, in particular wet areas, are inspected for excess internal moisture due to condensation and/or moisture ingress.

These requirements are additional to routine maintenance or tenancy inspections that are required to be carried out in any case.

By undertaking all the above, the owner will be well aware of any defects and can address them accordingly before they become unsafe or insanitary.

Alternative means of accommodation should also be available for tenants should the buildings become unsuitable for occupation at short notice.

1.5 Liability

This report has been prepared solely for the benefit of our client and Far North District Council in relation to the application for which this report has been prepared. The comments in it are limited to the purpose stated in this report. No liability is accepted by Inferno Solutions Ltd in respect of its use by any other person, and any other person who relies upon any matter contained in this report does so entirely at their own risk.

Regards,

Stu Jobe

Director

NZDE (Civil), Dip. Building Surveying

Inferno Solutions Limited

BEFORE THE EXPERT CONSENTING PANEL

CONCERNING A PAPKAINGA DEVELOPMENT AT KOHUHU STREET, KAITAIA

IN THE MATTER	of the of the COVID-19 Recovery (Fast-Track Consenting) Act 2020 (the FTA) and the deliberations and final decision of the Expert Consenting Panel appointed under Clauses 2, 3, and 4 of Schedule 5 of the COVID-19 Recovery (Fast-Track Consenting) Act 2020 to consider applications for consents for a Papa kāinga development at Kohuhu Street, Kaitaia
Expert Consenting Panel:	Sarah Shaw (Chair) Jaroz Popata (Member) David Clendon (Member) David Badham (Member)
Legal Representation:	N/A
Comments received under Clause 17(4) of Schedule 6 to the FTA:	7 July 2021
Details of any hearing if held under Clause 21 of Schedule 6 of the FTA:	No hearing was held (refer Clause 20, Schedule 6 to the FTA)
Date of Hearing if held:	Nil
Date of Decision:	11 August 2021
Date of Issue:	11 August 2021

RECORD OF DECISION OF THE EXPERT CONSENTING PANEL UNDER CLAUSE 37 OF SCHEDULE 6 OF THE FTA

Contents

PART A: EXECUTIVE SUMMARY

[1] This application relates to a proposal by He Korowai Trust (**the Trust**) to relocate 24 houses – ex-Kāinga Ora stock that are being saved from demolition in Auckland – as stage 3 of an existing urban papa kāinga in Kaitaia.

[2] This is a listed project under Schedule 2 of the COVID-19 Recovery (Fast-track Consenting) Act 2020 (**FTA**).

[3] The application requires land use consents from Far North District Council (**FNDC**) and from Northland Regional Council (**NRC**) (earthworks).

[4] The Panel visited the site at 23 Kohuhu Street (**the site**) and adjacent Grigg Street.

[5] The Panel considered the application and identified parties that it would invite comment from. Comments were received from nine parties (including one late comment).

[6] The Trust responded to those comments.

[7] The Panel requested further information from the Trust with respect to wetlands. That further information was provided by the Trust.

[8] The Panel invited comment on draft conditions. Comment on the draft conditions was received from four parties who had provided comments on the application and from the Trust.

[9] The Panel has considered the application under the FTA and the Resource Management Act 1991 (**RMA**).

[10] Subject to conditions, the Panel **grants** consent to the application.

PART B: INTRODUCTION AND PROCEDURE

Introduction

[11] This application by the Trust seeks land use consents from FNDC and NRC for stage 3 of an existing urban papa kāinga at 23 Kohuhu Street, Kaitaia.

[12] The Trust supports whānau to move from homelessness or emergency / transitional housing into permanent housing.

[13] This is a listed project under Schedule 2 of the FTA.

[14] The proposal is to relocate 24 houses – ex-Kāinga Ora stock that are

being saved from demolition in Auckland – onto the site. The typical specifications for the stock houses are single storey, three bedroom, and weatherboard clad with iron roof. The final mix of housing stock will however depend on availability for relocation.

[15] Once relocated, the houses are to be refurbished by the on-site rangatahi trades academy and made ready for occupation.

[16] The flat grassed site was once farmland. After being purchased by the Trust the site was converted to Māori freehold land by order of the Māori Land Court. Trustees of the Trust whakapapa to the land, and the Trust is kaitiaki of the site.

[17] The site currently contains a consented papa kāinga development comprising nine houses, five 'tiny house' units, a puna reo / childcare centre, and two relocated classroom blocks and associated facilities used for the trades training academy.

[18] The site is accessed from the end of Kohuhu Street, 1-2km from the centre of Kaitaia. The site is split zoned. The front portion is zoned Residential and the remainder is zoned Rural Production. The 24 houses will be sited entirely within the Rural Production part of the site, contiguous with the existing papa kāinga development.

[19] The proposal includes the provision of reticulated water supply and wastewater, private access, stormwater management via shallow open channels and private piped gravity network, two proposed stormwater detention basins, and bulk earthworks.

[20] Land use consent is required from FNDC as a non-complying activity and from NRC (for earthworks) as a controlled / discretionary activity respectively under the operative and proposed regional plans.

Procedure

[21] The Panel records the following matters.

Meetings/Site visits

[22] The Panel met and conducted a site visit to Kaitaia on 20 July 2021. This included a walkover of the site and along adjacent Grigg Street.

[23] The Panel conducted an in-person meeting in Kaitaia following the site visit. All other deliberations of the Panel have been conducted by exchange of emails.

Invitations to comment

[24] By letters dated 16 June 2021 the Panel invited comments on the application, to be received by 7 July 2021, from those parties listed in

Clause 17(4) of Schedule 6.

[25] Eight comments were received by 7 July 2021.

[26] All comments received were sent to the Trust. In accordance with Clause 19 of Schedule 6, the Panel received the Trust's response on 15 July 2021.

Further Information from Applicant

[27] On 9 July 2021 the Panel sent a request for further information to the Trust, to be provided by 23 July 2021.

[28] The information request cited the definitions of "natural wetland" in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (**NES-F**) and National Policy Statement for Freshwater Management (**NPS-FM**) and the definition of "wetland" in the RMA, and asked:

With specific reference to sections 4.2 and 6.1 of the KGA geotechnical report:

1. *Please provide confirmation from a suitably qualified and experienced professional as to whether any areas of the site in the vicinity of the proposed works meet the definition of "natural wetland" in the NES-F and*
2. *If yes;*
   a) confirm if resource consent is required and the activity status of proposed works in terms of the NES-F, and
   b) provide an assessment of environmental effects in response.

[29] On 23 July 2021 the Trust provided a wetlands assessment prepared by Wildlands Consultants Ltd which confirmed that:

(a) A survey of the site did not identify any areas of "natural wetland"' according to the definitions in the NES-F and NPS-FM.

(b) The vegetation over the entire site, including the area of temporary rain-derived water pooling, was dominated by exotic pasture plants.

(c) Installation of a small stormwater retention pond at the eastern end of the intermittently flowing stream does not constitute reclamation under the provisions of the NES-F and the National Planning Standards 2019.

[30] The Panel were satisfied with that response and did not consider that any peer review or further information was required.

Draft Conditions

[31] The Panel prepared draft conditions of consent drawn from the application, comments received, and the Panel's site visit.

[32] An invitation to comment on the draft conditions was sent to the Trust and commenters on 29 July 2021, with comments to be received by the EPA by 5 August 2021.

[33] Responses were received from the Trust and four commenters (including the late comment discussed below) for consideration by the Panel.

Late comment

[34] On 30 July 2021 the EPA was contacted by Ms Felicity Foy ("Ms Foy") regarding invitations to comment. Ms Foy advised that Marion Foy, who owns an adjacent property, had not received an invitation to comment on the application. The EPA checked and confirmed that as an owner of an adjacent property, an invitation to comment had been sent to Marion Foy.

[35] The Panel agreed:

(a) to afford a late comment to be received from Marion Foy, provided that it was received by the EPA no later than 2 August 2021;

(b) if a comment was received, that the Panel would exercise their discretion to consider the comment;

(c) as all persons who provided comment on the application must be invited to comment on the draft conditions, to provide the draft conditions to Marion Foy; and

(d) to afford an opportunity to comment on the draft conditions by 5 August 2021, provided that a comment on the application was received by the EPA no later than 2 August 2021.

[36] A comment on the application was received by the EPA, which included comments on the draft conditions, by Ms Foy on behalf of Marion Foy on 2 August 2021 ("the late comment").

[37] The late comment was sent to the Trust on 2 August 2021. The Panel afforded the Trust an opportunity to respond to the late comment, provided that the response was received by the EPA (alongside the Trust's comments on the draft conditions) no later than 5 August 2021.

[38] The Trust's response was received on 4 August 2021 together with the Trust's comments on the draft conditions.

Potential conflict of interest

[39] The late comment was prepared for Marion Foy by Ms Foy (a qualified planner). Ms Foy is a current Councillor with FNDC.

[40] Panel Member David Clendon is also a current Councillor with FNDC.

[41] The Panel Chair did not consider that there was an actual conflict of interest, but accepted that there could be a perceived conflict of interest. In order to ensure that any perception of conflict of interest is managed:

(a) The late comment was not provided to Panel Member David Clendon.

(b) Review and consideration of the late comment, deliberation with respect to the requested conditions, review of the response from the Trust, and drafting of the part of the decision and consent conditions in response to the late comment were all undertaken by the remaining Panel Members and Panel Chair.

Consideration by Panel

[42] All comments received, and the responses to those comments from the Trust, have been considered by the Panel. They are referred to in detail below at Part G: Evaluation of Effects.

[43] All of the comments and suggestions made with respect to the draft conditions have contributed to our final conditions.

Hearing

[44] No commenters requested a hearing, and the Panel's decision was that a hearing was not required on any issue.

Decision

[45] This report of our decision must state[1]:

(a) Our decision on the listed project;

(b) Our reasons for this decision;

(c) The principal issues that are in contention; and

(d) Our findings of fact on those issues.

[46] The Panel's decision is to **grant** consent subject to conditions. Our reasons for this decision follow in the report.

[47] We record that the Panel considers the principal issues in contention to be those discussed below at Part G: Evaluation of Effects. Our findings of fact on those issues are found in the same section.

[1] Clause 37(6) of Schedule 6 FTA

PART C: LEGAL CONTEXT

[48] The role of an expert panel appointed under the FTA has been carefully described in the decision on the Matawii Water Storage Reservoir at Kaikohe dated 27 October 2020.

[49] The Matawii decision was in respect of a listed project. This application is also for a listed project.

Power to decline consent applications

[50] The FTA specifies that the Panel may only decline the application for this listed project on the grounds that we consider that granting the resource consent, with or without conditions, would be inconsistent with[2]:

(a) any national policy statement, including the New Zealand Coastal Policy Statement (**NZCPS**); or
(b) section 6 FTA (Treaty of Waitangi).

[51] This provision applies notwithstanding that the application is for a discretionary activity (regional consents) and non-complying activity (district consents). The "gateway test" in s104D RMA does not apply.[3]

[52] For reasons outlined later in this decision, the Panel record that we do not consider that granting this consent would be inconsistent with (a) or (b) above. Consent must therefore be granted.

Consideration of a listed project

[53] When considering the conditions to be imposed on this listed project and the comments received, the Panel must (subject to Part 2 RMA and section 4 FTA) have regard to[4]:

[2] Clause 34 of Schedule 6 to the FTA
[3] Clause 30(6) & (7) of Schedule 6 to the FTA
[4] Clause 29(1) and (2) of Schedule 6 FTA

(a) any actual and potential effects on the environment of allowing the activity;
(b) any measure proposed, or agreed to, by the consent applicant to ensure positive effects on the environment to offset or compensate for any adverse effects that will or may result from allowing the activity;
(c) any relevant provisions of any of the following documents:
    (i) a national environmental standard;
    (ii) other regulations made under the RMA;
    (iii) a national policy statement;
    (iv) the NZCPS;
    (v) a regional policy statement or proposed regional policy statement;
    (vi) a plan or proposed plan;
    (vii) a planning document recognised by a relevant iwi authority and lodged with a local authority;
(d) any other matter the panel considers relevant and reasonably necessary to determine the application.

[54] These matters are relevant only to our decision on conditions to be imposed, and are not relevant to whether the consent should be granted.[5]

[55] If a Treaty settlement imposes an obligation on a local authority or other decision maker when determining an application for resource consent, we must comply with that obligation as if we were the local authority / decision maker.[6]

Lapse & Term

Lapse

[56] We must include a condition specifying the date on which the resource consent lapses unless it is given effect to by that date, which must not be later than 2 years from the date of commencement.[7]

[57] The Panel has determined that a 2 year lapse date is appropriate for this application given the civil engineering design, certification and construction involved.

Term

[58] The period for which a land use consent is granted is unlimited, unless otherwise specified in the consent.[8] In this instance the land use consents are from FNDC, and from NRC for earthworks.

[59] The application included prior FNDC land use consents granted for

[5] Clause 30(8)(a) of Schedule 6 FTA
[6] Clause 29(3) of Schedule 6 FTA
[7] Clause 37(7) & (8) of Schedule 6 FTA
[8] s123 RMA

earlier stages of the papa kāinga which did not include conditions as to term.[9]

[60] NRC has confirmed that a five year term would normally be imposed on a regional council earthworks consent of this scale and nature.

[61] The Panel has determined that:

(a) No term should be specified for the FNDC land use consent, so that the term of that consent is unlimited.

(b) A 5 year term should be specified for the NRC land use consent.

PART D: MANA WHENUA

The Trust

[62] The applicant and owner of the site, He Korowai Trust, is a registered charitable trust.[10] He Korowai refers to the "cloak" of social services and housing stability wrapped around whānau. The site is Māori freehold land.

Iwi Authorities

[63] The application records that the site is within the rohe of NgāiTakoto, and assesses the proposal against "Toi Te Kupu, Toi Te Mana, Toi Te Whenua" the iwi management plan of Te Runanga o NgāiTakoto.[11] That plan supports papa kāinga development.[12]

[64] Section 6 of the FTA requires all persons performing functions and exercising powers to act in a manner that is consistent with the principles of Te Tiriti o Waitangi (**Te Tiriti**) and Treaty Settlements. All applications require additional information, namely:

Clause 9(1)(i): information about Treaty settlements;

Clause 9(5): a Cultural Impact Assessment ("CIA") or a statement of reasons given by the relevant iwi authority for not providing a CIA;

Clause 9(6)(b): information about Customary Marine Title groups; and

Clause 10(1)(h): information about Protected Customary Rights.

[9] Appendix 3 to the application
[10] Charities Services – Charities register
[11] Clause 29(2)(g)
[12] Section 9.8 of the Application

Te Tiriti and Treaty Settlements

[65] There are four potentially relevant Treaty Settlements:

(a) NgāiTakoto Claims Settlement Act 2015;

(b) Te Rarawa Claims Settlement Act 2015;

(c) Ngāti Kuri Claims Settlement Act 2015; and

(d) Te Aupouri Claims Settlement Act 2015.

[66] Section 9.9 of the application addresses the relevant Treaty settlements and Statutory Acknowledgments. No Statutory Acknowledgments apply to or adjoin the site. The application acknowledges that the Awanui River is significant and that parts of the Awanui River are in reasonable proximity to the site, and records that the stormwater aspects of the proposal have been designed to achieve hydraulic neutrality.

Cultural Impact Assessment & Te Tiriti principles

[67] The application included written approval from Te Runanga o Te Rarawa.[13]

[68] In response to the EPA's preliminary assessment of a draft application, the Trust provided waivers for the requirement for a CIA with stated reasons as follows[14]:

(a) Te Runanga o Te Rarawa: *The whenua is already developed with whānau housing & this is an extension to add additional whānau housing. It's already a going concern.*

(b) Te Paatu Marae: *The land in question has been used for many years as farmland for different types of farming.*

[69] The Trust also sought a response with respect to a CIA from NgāiTakoto.

[70] Comment was invited by the Panel from the following:

Te Runanga o NgāiTakoto

Te Runanga Nui o Te Aupouri Trust

Te Runanga o Te Rarawa

Te Runanga-a-Iwi o Ngāti Kahu

Ngā Taonga o NgāiTakoto Trust

[13] Appendix 16 to the Application
[14] Appendix 3 to the Addendum to the Application

[71] No comments were received.

[72] The Panel therefore consider that no CIAs are required to be provided for this application, and that the proposal accords with the principles of Te Tiriti.

Customary Marine Title and Protected Customary Rights

[73] An assessment of planning documents prepared by a Customary Marine Title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011 is not required in this instance as the site is not located in or adjacent to the coastal marine area.

PART E: NATIONAL PLANNING DOCUMENTS

National Policy Statements

[74] The national policy statements addressed in the application and addendum are the National Policy Statement on Urban Development 2020 (**NPS-UD**) and the National Policy Statement on Freshwater Management 2020 (**NPS-FM**).

[75] We accept that the proposal does not confront any other national policy statements. We record that the site is not located in the coastal environment and as such the NZCPS is not engaged.

National Policy Statement on Urban Development 2020

[76] The NPS-UD applies to "urban environments".[15] We did not receive any evidence about whether Kaitaia has or is intended to have a population (10,000 people) that would fall within that definition. We note that:

(a) Kaitaia is not recorded as a Tier 1 or Tier 2 urban environment in the NPS-UD.[16] If Kaitaia is an "urban environment", it would fall in Tier 3.

(b) District plans of Tier 1, 2, or 3 authorities must be amended to remove any objectives, policies, rules, or assessment criteria that have the effect of requiring a minimum number of car parks to be provided for a particular development, land use, or activity.[17]

(c) Objective 4 and policy 6 anticipate that:

(i) the planned urban built form in RMA planning documents may involve significant changes to an area;

(ii) those changes may detract from amenity values appreciated

[15] Clause 1.3 NPS-UD
[16] Appendix to the NPS-UD
[17] Clause 3.38 NPS-UD

by some people but improve amenity values appreciated by other people, communities, and future generations (including by providing increased and varied housing densities and types); and

(iii) those changes are not of themselves an adverse effect.

(d) The site is split zoned for residential and rural purposes, with the proposal to take place on the rural zoned portion.

[77] We consider that the proposal is an integrated and well serviced urban papa kāinga development, and that it is not inconsistent with the NPS-UD.

National Policy Statement on Freshwater Management 2020

[78] The NPS-FW is assessed in the addendum to the application.

[79] In response to an information request from the Panel, the Trust provided a wetlands assessment prepared by Wildlands Consultants Ltd which confirmed that a survey of the site did not identify any areas of "natural wetland"' according to the definition in the NPS-FM.

[80] Extensive stormwater works are proposed on site, including the creation of two new stormwater detention ponds. Comment was invited from Mana Whenua and from NRC. No comments were provided that engage the NPS-FW.

[81] The Panel is satisfied that the proposal is consistent with the NPS-FM.

National Environmental Standards and RMA regulations

[82] The application identifies the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (**NES for Soil Contaminants**) as relevant to the proposal.

[83] The Panel requested information from the Trust with respect to the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (**NES-F**).

NES for Soil Contaminants

[84] The application records that the site is not considered to be a "piece of land" as described in clause 5(7) of the NES and is not identified on the NRC Selected Land Use Register.[18]

[85] Comment was invited and received from NRC and FNDC. No comments were provided with respect to the NES for Soil Contaminants.

[86] We are therefore satisfied that the proposal does not engage the NES for Soil Contaminants.

NES-F

[87] In response to an information request from the Panel, the Trust provided a wetlands assessment prepared by Wildlands Consultants Ltd which confirmed that a survey of the site did not identify any areas of "natural wetland"' according to the definition in the NES-F, and that installation of a small stormwater retention pond at the eastern end of the intermittently flowing stream does not constitute reclamation under the provisions of the NES-F.

[88] Comment was invited and received from NRC. No comments were provided with respect to the NES-F.

[89] We are therefore satisfied that the proposal does not engage the NES-F.

PART F: REGIONAL & DISTRICT PLANNING DOCUMENTS

Regional Policy Statement

[90] The application briefly assesses the proposal against Northland Regional Policy Statement (**RPS**).[19]

[91] The application does not cite individual issues, objectives or policies, but discusses the proposal at a high level against thematic headings drawn from the RPS objectives.

[92] Having reviewed the issues, objectives and policies, we consider that the following are the key RPS policies with respect to this proposal and discuss each in turn.

> ***Policy 5.1.1 – Planned and coordinated development***
> *Subdivision, use and development should be located, designed and built in a planned and co-ordinated manner which:*
> *(a) Is guided by the 'Regional Form and Development Guidelines' in Appendix 2;*

[18] Section 9.3 of the application
[19] Section 9.6 of the application

(b) Is guided by the 'Regional Urban Design Guidelines' in Appendix 2 when it is urban in nature;
(c) Recognises and addresses potential cumulative effects of subdivision, use, and development, and is based on sufficient information to allow assessment of the potential long-term effects;
(d) Is integrated with the development, funding, implementation, and operation of transport, energy, water, waste, and other infrastructure;
(e) Should not result in incompatible land uses in close proximity and avoids the potential for reverse sensitivity;
(f) Ensures that plan changes and subdivision to / in a primary production zone, do not materially reduce the potential for soil-based primary production on land with highly versatile soils10, or if they do, the net public benefit exceeds the reduced potential for soil-based primary production activities; and
(g) Maintains or enhances the sense of place and character of the surrounding environment except where changes are anticipated by approved regional or district council growth strategies and / or district or regional plan provisions.
(h) Is or will be serviced by necessary infrastructure.

[93] We consider that the proposal is carefully designed to integrate with the existing stages of the papa kāinga and the residential character of the surrounding area and will be appropriately serviced by infrastructure.

Policy 5.1.3 – Avoiding the adverse effects of new use(s) and development
Avoid the adverse effects, including reverse sensitivity effects of new subdivision, use and development, particularly residential development on the following:
Primary production activities in primary production zones (including within the coastal marine area); …

[94] We consider that incompatible land uses and reverse sensitivity issues associated with the adjacent rural land to the north are managed by generous setbacks and the intervening trades academy buildings.

Policy 5.2.1 – Managing the use of resources
Encourage development and activities to efficiently use resources, particularly network resources, water and energy, and promote the reduction and reuse of waste.

[95] We consider that the proposal will be efficiently serviced by infrastructure, and that the concept of the relocation and refurbishment of Kāinga Ora housing is inherently promoting the reduction and re-use of waste (houses otherwise scheduled for demolition).

7.1.2 Policy – New subdivision and land use within 10-year and 100-year flood hazard areas
New subdivision, built development (including wastewater treatment and

disposal systems), and land use change may be appropriate within 10-year and 100-year flood hazard areas provided all of the following are met:
(a) Hazardous substances will not be inundated during a 100-year flood event.
(b) Earthworks (other than earthworks associated with flood control works) do not divert flood flow onto neighbouring properties, and within 10-year flood hazard areas do not deplete flood plain storage capacity;
(c) A minimum freeboard above a 100-year flood event of at least 500mm is provided for residential buildings.
(d) Commercial and industrial buildings are constructed so as to not be subject to material damage in a 100 year flood event.
(e) New subdivision plans are able to identify that building platforms will not be subject to inundation and / or material damage (including erosion) in a 100-year flood event;
(f) Within 10-year flood hazard areas, land use or built development is of a type that will not be subject to material damage in a 100-year flood event; and
(g) Flood hazard risk to vehicular access routes for proposed new lots is assessed.

[96] The Chester land development report accompanying the application[20] (**the Chester report**) notes that the proposed development area is entirely within the recently updated NRC 100-year flood extent.[21] The Chester report assesses and makes recommendations for finished floor levels, egress, earthworks, and fences.

Policy 7.1.6 – Climate change and development
When managing subdivision, use and development in Northland, climate change effects will be included in all estimates of natural hazard risk, taking into account the scale and type of the proposed development and using the latest national guidance and best available information on the likely effects of climate change on the region or district.

[97] The Chester report is stated as considering the effects of climate change.[22]

Policy 8.2.1 – Support for iwi and hapū management plans
The regional council will recognise the value of iwi and hapū management plans in decision-making under the Resource Management Act 1991 and the need to support tangata whenua in the development and implementation of these plans.

Policy 8.3.1 – Kaitiaki role
The regional and district councils shall support tangata whenua to have a kaitiaki role in the management of their land, resources, and other taonga.

[20] Appendix 9 to the application
[21] Section 5 of the Chester report
[22] Section 4.5.4 of the Chester report

8.3.2 Policy – Marae and Papa kāinga
The regional and district councils shall recognise the historical, cultural, and social importance of marae and papa kāinga, and enable their ongoing use and development in regional and district plans.

[98] The iwi management plan and kaitiaki role of the Trust have been discussed in Part D: Mana Whenua.

[99] The district plan includes provisions for papa kāinga which are discussed below.

Summary: RPS

[100] We are satisfied that the proposal, subject to conditions, is consistent with the RPS.

Regional Water & Soil Plan

[101] The application includes a detailed assessment against the rules of the operative Regional Water & Soil Plan for Northland (**Water & Soil Plan**)[23] and states that the proposal requires consent as a controlled activity under that Plan for land disturbance (earthworks)[24].

[102] The addendum to the application includes a detailed assessment of the proposal against the objectives and policies of the Water & Soil Plan.[25]

[103] We do not repeat either assessment in this decision.

[104] We received comment from NRC which did not raise any concerns with respect to the Trust's assessment of the Water & Soil Plan.

[105] We are satisfied that the proposal, subject to conditions, is consistent with the objectives and policies of that plan.

Proposed Regional Plan

[106] The application includes a detailed assessment against the rules of the proposed Regional Plan for Northland (**PRP**)[26] and states that the proposal requires consent as a controlled activity under that Plan for land disturbance (earthworks)[27].

[107] NRC's comment on the draft conditions included the following:

"On a matter not directly related to the conditions, it is noted that the earthworks have been assessed by the applicant as being a controlled

[23] Appendix 4 to the application
[24] Section 8 of the application
[25] Appendix 17 to the application
[26] Appendix 4 to the application
[27] Section 8 of the application

activity in accordance with Rule C.8.3.2 of the Proposed Regional Plan for Northland (PRP). The application clearly states that the works are within a mapped flood area and so cannot be considered under this rule. The works would therefore need to be assessed under the controlled activity rule C.8.3.3 of the PRP. If however the volume of works in the mapped flood area is greater than 1,000 m^3 in any 12 month period, then the works cannot be considered under this rule either and would be deemed a discretionary activity under Rule C.8.3.4 of the PRP."

[108] The application indicates that some 13,961m^3 of earthworks (cut and fill) are proposed. We accept that it is likely that the volume of works in the mapped 100-year flood area is greater than 1,000 m^3 in any 12 month period, and that the application is properly considered a discretionary rather than controlled activity under the PRP.

[109] The application does not cite any objectives or policies from the PRP.

[110] Having reviewed the objectives and policies, we consider that the following are the key PRP policies with respect to this proposal and discuss each in turn. We note that the PRP is still subject to appeals and that consent orders issuing may amend provisions that we cite below, which are current as at the date of this decision on the information available to us.

Policy D.4.27 Land preparation, earthworks and vegetation clearance
When assessing an application for a resource consent for an earthworks, vegetation clearance or land preparation activity and any associated discharge of a contaminant, ensure that the activity:
1) will be done in accordance with established good management practices, and
2) avoids significant adverse effects, and avoids, remedies or mitigates other adverse effects on:
a) drinking water supplies, and
b) areas of high recreational use, and
c) aquatic ecosystem health, indigenous biodiversity in water bodies and coastal water and receiving environments that are sensitive to sediment or phosphorus accumulation.

D.6.5 Flood hazard management – development within floodplains
Development in flood hazard areas and continually or intermittently flowing rivers (including high-risk flood hazard areas) must not increase the risk of adverse effects from flood hazards on other property or another person's use of land or property.

Policy D.2.3 Climate change and development
Particular regard must be had to the potential effects of climate change on a proposed development requiring consent under this Plan, taking into account the scale, type and design-life of the development proposed and with reference to the latest national guidance and best available climate

change projections.

[111] We rely on the Chester report which assesses the proposed earthworks, flood risks and climate change. Flood hazard effects on other property is discussed in Part G: Evaluation of Effects.

D.2.2 Social, cultural and economic benefits of activities

Regard must be had to the social, cultural and economic benefits of a proposed activity, recognising significant benefits to local communities, Māori and the region including local employment and enhancing Māori development, particularly in areas of Northland where alternative opportunities are limited.

[112] The application details the social, cultural and economic benefits of the proposal.

Policy D.1.1 When an analysis of effects on tangāta whenua and their taonga is required
A resource consent application must include in its assessment of environmental effects an analysis of the effects of an activity on tangāta whenua and their taonga if one or more of the following is likely:
1) adverse effects on mahinga kai or access to mahinga kai, or
2) any damage, destruction or loss of access to wāhi tapu, sites of customary value and other ancestral sites and taonga with which Māori have a special relationship, or
3) adverse effects on indigenous biodiversity in the beds of waterbodies or the coastal marine area where it impacts on the ability of tangāta whenua to carry out cultural and traditional activities, or
4) the use of genetic engineering and the release of genetically modified organisms to the environment, or
5) adverse effects on tāiapure, mataitai or Māori non-commercial fisheries, 117 or
6) adverse effects on protected customary rights, or
7) adverse effects on sites and areas of significance to tangāta whenua mapped in the Regional Plan (refer I Maps | Ngā mahere matawhenua).

[113] None of the listed matters are at issue in the proposal. Nonetheless, the application includes an analysis of effects on tangata whenua values.

Summary: PRP

[114] We are satisfied that the proposal, subject to conditions, is consistent with the PRP.

District Plan

[115] The application includes a detailed assessment against the rules of the

operative Far North District Plan (**District Plan**)[28] and states that the proposal requires consent as a non-complying activity under that Plan[29].

[116] The application includes a detailed assessment of the proposal against the objectives and policies of the District Plan.[30]

[117] We do not repeat either assessment in this decision.

[118] We note that the application states that the proposal meets the density requirements of district plan rule 8.6.5.2.2 (Papakāinga Housing[31]) and that this view is endorsed in the comments received from FNDC Resource Consents Department.

[119] We received comment from FNDC which did not raise any particular concerns with respect to the Trust's assessment of the District Plan.

[120] We are satisfied that the proposal, subject to conditions, is consistent with the objectives and policies of the District Plan.

PART G: EVALUATION OF EFFECTS

[121] The Panel record that we have read and considered the entire application, all comments received, all comments on our draft conditions, and all identified environmental effects of the proposal (positive and adverse).

[122] This section of the report identifies the primary issues in contention and our findings of fact in relation to those issues.

Flooding / Stormwater

[123] The site is subject to a mapped 100-year flooding extent according to NRC flood maps. The Chester report provides a flood risk assessment which recommends a number of development controls to address the flood risk. This includes a minimum finished floor level for all new relocated dwellings of 11.75mRL and restrictions on imported fill.

[124] The proposed approach to stormwater is outlined in section 4.4 and 4.5 of the Chester report, which highlights that the receiving environment and greater catchment are sensitive to changes in hydrology. Existing stormwater management is via a combination of open channels and a private piped gravity network discharging to a publicly managed open watercourse to the north east, named Matthew's Outfall.

[125] To service the additional 24 houses a piped network is proposed to

[28] Appendix 4 to the application
[29] Section 8 of the application
[30] Section 9.7 of the application
[31] Appendix 4 to the application

convey primary flows up to and including the 10-year storm event, with secondary flow up to the 100-year storm to be managed by the driveway and open channels. All flow will then be directed to one of two proposed shallow detention ponds where flows are attenuated until they are eventually discharged from the site. No specific water quality measures are considered necessary by Chester.

Comments received

[126] Gary Rush and Kathleen Johnson identified concerns relating to historical and future flooding of the subject site and surrounding area (including Grigg Street properties), and the potential impact this will have on their property. Photographs were included with the comments.

[127] Imla Wati supported the comments from Mr Rush and Ms Johnson and reiterated concerns relating to flooding on the Wati property.

[128] Comments received from NRC did not raise any concerns with regard to flooding or stormwater management.

[129] Comments received from FNDC Infrastructure Department included recommended conditions of consent for stormwater management.

[130] Comments received from FNDC Resource Consents Department note the flooding hazard on site and recommend conditions that the 11.75RL minimum floor level should be established by a surveyor post bulk earthworks and prior to development.

Comments received on draft conditions

[131] In the draft conditions the Panel identified that the Chester report did not specify a datum for the proposed minimum floor level RL. This was provided to us in the Trust's comments on the draft conditions.

Panel findings and conditions imposed

[132] The Panel acknowledges the careful comments received from commenters Rush, Johnson and Wati. The site and surrounding area is clearly located within a 100-year flood plain as per the NRC flood maps. However, it appears that the comments received relate to flooding perceived to be associated with the existing development and previous work on site, including the filling in of a water course on the south western portion of the subject site. It appears from the comments and prior consents that side agreements may have been previously entered into.

[133] The current application is for an additional 24 houses as part of Stage 3 of the papa kāinga. No changes have been sought by the Trust to the existing development nor are any works proposed to the existing filled in watercourse.

[134] We consider that these effects are not within the scope of what the Panel can consider as they fall outside the application before us.

[135] Notwithstanding this, the Panel note that Chester have provided an expert assessment of stormwater and flood risk for the proposed development. The Chester report concludes at section 4.4.2, subject to the stormwater mitigation proposed in section 4.4 and 4.5 of their report, that:

> *"The proposed earthworks delineate and define the catchments to manage stormwater in such a way that the impact on neighbouring properties are less than minor."*

[136] The Panel rely on the expert assessment of Chester and on this basis consider that any actual or potential adverse effects of flooding *associated with this application* on neighbouring properties will be less than minor, and mitigated to an acceptable level by the proposed stormwater management measures that have been proposed by the Trust.

[137] The Panel have included suitable conditions of consent to ensure that these measures are appropriately designed, constructed and maintained for the duration of the consent. These also account for the recommended conditions provided by the FNDC Infrastructure and Resource Consents Departments.

Wastewater

[138] An existing private wastewater network services the site currently, with discharge ultimately reaching a 450mm diameter trunk main.

[139] The proposal seeks to extend this network from an existing satellite manhole. A storage tank is proposed to cope with peak flows to minimise the impact on the existing network. Further details of proposed wastewater management are outlined in section 4.3 of the Chester report.

Comments received

[140] Mr Rush and Ms Johnson identify concerns relating to wastewater and whether the system is capable of handling additional connections.

[141] FNDC Infrastructure Department have not identified any concerns relating to wastewater management within their comments, however they have provided a number of recommended conditions of consent.

Panel findings and conditions imposed

[142] The Chester report highlights that an appropriate reticulated wastewater network is available and a private network extension is included within the proposal. The FNDC Infrastructure Department have not identified

any immediate capacity issues within the reticulated wastewater network. On this basis, the Panel consider that the system does have adequate capacity for the proposed development and have recommended conditions of consent to ensure that these connections are appropriately designed, constructed and maintained for the duration of the consent.

Water Supply

[143] Water supply to the site is provided from a 100mm water main line into the site from Kohuhu Street, after which a private 100mm water main loop services existing development on the site.

[144] An additional looped network is proposed using a 110mm pipe from which all new proposed dwellings will have a connection via eleven meter banks located close to the main. Further details for water supply and water supply for firefighting purposes are outlined in section 4.1 and 4.2 of the Chester report.

Comments received

[145] FNDC Infrastructure Department have provided recommended conditions relating to water supply.

[146] FNDC Resource Consents Department have suggested that each house should have potable storage (e.g. water tanks) to reduce pressure on municipal services over summer.

[147] The Trust's response to the comments does not agree that potable water storage is needed and notes that this was not required in the recommended conditions from FNDC Infrastructure Department.

Panel findings and conditions imposed

[148] Based on the assessment by Chester, the Panel is satisfied that suitable potable water supply is available to service the needs of the development and that it is not necessary to require water tank storage on site as requested by the FNDC Resource Consents Department. Conditions of consent have been included based on the recommendations of FNDC Infrastructure Department.

Roading & Traffic Effects

[149] The proposed development will access the wider roading network via the existing accessway at the end of 23 Kohuhu Street.

[150] The Trust has provided a Traffic Impact Assessment (**TIA**) from Team Traffic.[32] The TIA concludes at section 4 that:

- *"[The proposal] is expected to generate approximately 24 trips*

[32] Appendix 10 to the application

during the morning peak. It is considered that these would have few, if any, traffic effects that could be cause for concern from a traffic engineering perspective.

- *The existing vehicle crossing is to be widened to 6.0metres and it is expected that this crossing will operate safely and efficiently.*

- *32 parking spaces are proposed on-site where a minimum of 48 car parks are required by the FNDC Plan. It is expected that the proposed number of parking spaces will be able to cater for the parking demand for this residential development*

- *The dimensions of the parking spaces and manoeuvering areas comply with the FNDC Plan dimensional requirements. All parking spaces are considered to be appropriate for their intended use and are of no cause for concern from a traffic engineering perspective.*

- *No loading space is proposed for this development although heavy vehicle access is available if required."*

Intersection

Comments received

[151] FNDC Infrastructure Department requested an assessment of the intersection of Kohuhu Street and North Road.

[152] The Trust's response to the comments points to the TIA.

Panel findings and conditions imposed

[153] The Panel relies on the TIA. That assessment has considered the intersection of Kohuhu Street and North Road, both in terms of sight distances and traffic generation, and concludes that there are unlikely to be any adverse effects.[33]

[154] We do not consider it necessary for additional information or assessment to be provided with respect to the intersection. Suitable conditions of consent have been included regarding roading, parking and access.

Parking

Comments received

[155] FNDC Infrastructure Department requested clarity as to how the parking shortfall will be managed so as to avoid effects on other residents of

[33] At sections 3.1 and 3.2 of the TIA

Kohuhu Street.

[156] FNDC Resource Consents Department:

(a) queried the suitability of the level of car parking shown on the site plan; and

(b) requested a review condition to assess whether carparking is sufficient, and the provision of additional visitor carparking if not.

[157] The Trust's response to the comments points to the TIA.

Panel findings and conditions imposed

[158] The Panel relies on the TIA. On this basis, the Panel consider that the Trust has provided an adequate assessment of the parking shortfall which concludes that the level of parking is appropriate to cater for parking demand on site.

[159] We do not consider it necessary for additional information or assessment to be provided with respect to parking, or a review condition. Suitable conditions of consent have been included regarding roading, parking and access.

Internal Roading

Comments received

[160] FNDC Infrastructure Department recommended conditions requiring concrete paths linking building entrances with car parking spaces, and the provision of a lighting design for car parking areas.

[161] Mr Rush and Ms Johnson identify concerns relating to fire appliance access.

[162] The Trust's response to the comments with respect to fire appliance access points to the TIA.

Panel findings and conditions imposed

[163] The Panel agree with the FNDC Infrastructure Department's recommendation that concrete footpaths linking building entrances with car parking spaces should be provided. We have included a condition of consent requiring this.

[164] The TIA already recommends at section 3.5 that security lighting be provided at the time of building consent. The Panel agree that lighting of parking areas should be provided. Rather than waiting for a design to be provided at building consent stage however, we have included a condition that a lighting design plan be provided as part of the engineering plan approval process prior to the commencement of

construction. In our view this is more appropriate to integrate the lighting with the parking layout and design.

[165] With respect to fire appliance access, the Panel relies on the TIA which states that fire appliance access arrangements are considered to be acceptable.[34] Suitable conditions of consent have been included regarding roading, parking and access.

Landscaping and Fencing

[166] The Trust has volunteered a condition relating to the establishment of landscaping for the proposed development to ensure that vegetation, landscaping and other measures are used to integrate the development into the locality.

[167] Landscaping 1.5m wide is shown on the Akau site plan[35] along that part of the northern boundary adjoining the residential properties on Taupata Place.

Comments received

[168] FNDC Resource Consent Department have recommended that a landscape plan be required prior to building consent and implementation required prior to occupation of the houses, with six months to be provided for each stage, and maintenance of the landscaping for the duration of the consent. The comment refers to “privacy, amenity & separation”.

Panel findings and conditions imposed

[169] The Panel agree that the provision of and implementation of a landscaping plan for the proposed development is an important component of ensuring that the development integrates well within the neighbourhood setting.

[170] To the extent that the comment from FNDC Resource Consent Department reference to “privacy, amenity & separation” refers to those matters *as between the houses within the papa kāinga*, the Panel do not consider it necessary or appropriate to stipulate that purpose in the conditions. The site is Māori freehold land and the proposal is for extension of an existing papa kāinga development by the kaitiaki. We consider that it is for the Trust to determine with their landscape architect whether “privacy, amenity & separation” *as between the houses within the papa kāinga* is tika.

[171] To the extent that the comment refers to “privacy, amenity & separation” *as between the papa kāinga and the adjacent residential streets* this is addressed in the section on visual effects & buffers below.

[34] Section 3.7 of the TIA
[35] Appendix 12 to the application

[172] We have included conditions of consent that require

(a) The provision of a landscaping plan prepared by a suitably qualified and experienced landscape architect that shows a number of key components such as areas to be planted, boundary fencing, schedule of species, ongoing maintenance and monitoring requirements, and construction details.

(b) That the landscaping under the approved landscaping plan be completed prior to the occupation of any of the 24 houses.

(c) That the planting be maintained for the duration of the consent.

Visual Effects & Buffers

Comments received

[173] Rosemary and Ernie Anderson state that they purchased their property adjacent to the site in January 2021, and that there is no privacy on the north side of their property which includes their back yard and side yards, lounge, dining room and kitchen windows. Photos of the views from these windows are attached.

[174] Mr Rush and Ms Johnson query why there is no “buffer zone” between their property and the proposed development.

[175] The Trust’s response to the comments states:

(a) Some further landscaping could be provided along the Anderson boundary.

(b) The houses are set back 10m as required by the District Plan and that this is considered to be a sufficient separation distance.

Panel findings and conditions imposed

[176] We note that Mr & Mrs Anderson appear to be primarily concerned with privacy and visual effects associated with the existing ‘tiny houses’ which do not form part of the application before us.

[177] We agree that the 10m setback proposed is appropriate in the context of an urban papa kāinga adjoining residentially zoned land.

[178] We note that paragraphs 85 and 86 of the application state:

85. Although the site adjoins a number of properties along Grigg Street, in the context of the proposed development, the relevant extent of those persons who may be potentially affected from the proposal should be limited to 39- 81 Grigg Street as these properties more or less align with the mirrored development design.

86. Similar to previous authorisations, fencing and landscaping is expected along the boundaries and this will be a primary mitigation measure promoted to deal with any interface issues.…

[179] The Panel requested clarification from the Trust as to extent of any fencing and landscaping anticipated along the Grigg Street boundary, as this was not shown on the Akau site plan. We were provided with an updated site plan (annexed to the decision as Appendix 4) showing that proposed extent.

[180] We have included conditions of consent that require a landscaping plan to be prepared in accordance with the site plan. We are satisfied that the setbacks and the volunteered landscaping appropriately address any visual and buffer effects of this application.

Anti-Social Behaviour

Comments received

[181] The comments received from Rosemary and Ernie Anderson identify concerns associated with anti-social behaviour of residents of the papa kāinga. Details of specific alleged incidents are included within the comments received including damage to the boundary fence.

[182] Mr Rush and Ms Johnson also identify concerns relating to anti-social behaviour.

[183] The Trust's response to the comments received states:

(a) Some further landscaping could be provided along the Anderson boundary to alleviate concerns but would not stop behaviour entirely, and that it is assumed that there are remedies under the Fencing Act.

(b) Landscaping along the Rush & Johnson boundary could assist.

Panel findings and conditions imposed

[184] The Panel acknowledges these concerns and does not seek to diminish the issues raised by these parties. However, these are not relevant matters that the Panel can turn its mind to under the RMA or FTA.

[185] On this basis, there is nothing in these matters that causes the Panel to consider it necessary to impose additional conditions on the consent. Landscaping conditions have been imposed as volunteered by the Trust in the application and on the revised site plan. The Panel encourage the Trust to have ongoing open dialogue with its neighbours.

Archaeological Effects

[186] The Panel understands that there are no recorded archaeological sites on the subject site or within the immediate vicinity. No archaeological

assessment was provided with the application. The application identifies that no archaeology has been identified through previous development on the site[36] and that there are no known archaeological sites or features on the property[37]. An accidental discovery advice note was included in the draft conditions of consent accompanying the application.[38]

Comments Received

[187] Heritage New Zealand Pouhere Taonga (**HNZPT**) have recommended using their Accidental Recovery Protocol as a condition of consent with a standard advice note about the requirements of the Heritage New Zealand Pouhere Taonga Act.

[188] The Minister for Arts, Culture and Heritage has supported the request from Heritage New Zealand Pouhere Taonga.

[189] The Trust's response to the comments received notes that the comments are "accepted and supported".

Panel findings and conditions imposed

[190] The Panel has carefully considered whether a condition or advice note is more appropriate.

[191] There is no evidence before the Panel of any actual or potential archaeological sites within the site or immediate vicinity. Written approval to the proposal has been provided by Te Runanga o Te Rarawa, and waivers for the requirement for a CIA from Te Runanga o Te Rarawa and Te Paatu Marae. Comments on the application were invited from Mana Whenua and no comments were received.

[192] After careful deliberation the Panel has concluded that an advice note is more appropriate than a condition. In reaching this conclusion the Panel have relied on the expertise of Panel Member Jaroz Popata. The Panel understand the potential risk identified by HNZPT but support the mana whenua voice in this matter. The Panel are satisfied that the Trust is kaitiaki.

[193] We note that the Heritage New Zealand Pouhere Taonga Act applies irrespective of this consent application and any advice notes or conditions imposed.

[194] The Panel have retained an advice note in the conditions of consent in preference to imposing a condition.

Late comment received on behalf of Marion Foy

[195] As discussed earlier in this report when discussing the late comment, this

[36] Paragraph 19 of the application
[37] Paragraph 100(d) of the application
[38] Appendix 13 to the application

section of the report has been prepared by Panel Chair Sarah Shaw and Panel Members Jaroz Popata and David Badham.

[196] The late comment received on behalf of Marion Foy raises two issues:

(c) The bulk, scale, location and future use of a relocatable building currently situated at the rear of Marion Foy's property. The comment requests a condition that the building be removed from the site within 2 months.

(d) That the 1.5m wide landscaping on the northern boundary shown on the Akau site plan have a minimum height of 3m and maximum height of 4m, and be maintained in perpetuity.

[197] The Trust's response to the late comment states:

"In our view the proposed submission is not in scope. The building referred to is correctly stated as not being referred to in any technical documentation or the Fast-Track Consent documentation.

The building has been placed here during winter as it was too wet to place further to the rear of the site. Its final placement is yet to be determined. FNDC compliance have already considered the building following compliance processes and there are no actions for He Korowai Trust to take in this regard.

The project is clearly for 24 dwellings and conditions should be associated with the 24 dwellings, not other buildings not within this scope.

The issue with a building temporarily placed on the site is rightly a building and resource management act compliance matter that needs to be dealt with through the appropriate processes. This has been undertaken as above.

Conditions sought should not tie the moving of this building to the 24 houses which are in scope.

Notwithstanding the above, our client is willing to engage with the submitter to provide landscaping and or a trellis along the boundary fence on the basis of being a good neighbour. This doesn't require conditions of consent nor is this volunteered, but the two parties can come to an arrangement which facilitates this outcome out of respect for the elderly neighbour."

Panel findings and conditions imposed

[198] We observed the building currently situated adjacent to Marion Foy's boundary on our site visit.

[199] The project is described in Schedule 2 to the FTA as “The addition of 24 new dwellings to an existing papakainga”. The building is not shown on the Akau site plan or referenced anywhere in the application documentation.

[200] We find that the building does not form part of the application we are considering, and as such we cannot include a condition of consent requiring its removal. We agree with the Trust that these are matters of compliance to be addressed by FNDC.

[201] As discussed earlier in this section with respect to landscaping and fencing, landscaping 1.5m wide is shown on the Akau site plan along that part of the northern boundary adjoining the residential properties on Taupata Place.

[202] The 24 houses consented by this application are shown on the Akau site plan as being located a considerable distance from Marion Foy’s property.

[203] The Panel have included conditions of consent requiring that development proceeds in general accordance with the Akau site plan and requiring the preparation and implementation of a landscape plan. The landscape plan will therefore implement the landscaping shown on the site plan.

[204] We do not consider that there are any effects of the application in the vicinity of Marion Foy’s boundary which warrant any further conditions of consent requiring minimum and maximum landscaping height in that location, and we note that the Trust has expressly recorded that such a condition is not volunteered.

[205] We have therefore not included any additional conditions in response to the comments on behalf of Marion Foy.

Positive effects

[206] The Panel must have regard to any actual and potential effects on the environment of allowing the application. “Effect” is defined in the FTA as having the same meaning as in the RMA, where the definition includes both positive and adverse effects.

[207] We must therefore have regard to the positive effects of the proposed development. Some of these are acknowledged by commenters and others by the Trust in the application.

Panel findings and conditions imposed

[208] The Panel agrees that the proposed development will have positive effects associated with the establishment of housing for those in need in a location already used for that purpose, and the provision of economic growth and employment during construction.

PART H: OFFSET & COMPENSATION

[209] We are required when considering the application to have regard to any measure proposed or agreed to by the applicant to ensure positive effects on the environment to offset or compensate for (as distinct from to mitigate) any adverse effects that will or may result from allowing the activity.[39]

[210] We record that the Trust has not identified, offered or agreed to any offset or compensation measures.

PART I: CONDITIONS

[211] A summary of the comments received on our draft conditions is attached at Appendix 2. We have generally covered discussion on conditions within our findings for each topic in our evaluation of effects.

[212] We are satisfied that the adverse effects of the proposal are capable of being avoided, remedied or mitigated through the imposition of the appended final conditions.

[213] These final conditions approved by us have had the benefit of recommendations in the comments received, and responses to our draft conditions, from FNDC and NRC. Any further refinement can be made through an RMA variation process if required.

PART J: PURPOSE AND PRINCIPLES

[214] The purpose of the FTA is:[40]

> … to urgently promote employment to support New Zealand's recovery from the economic and social impacts of COVID-19 and to support the certainty of ongoing investment across New Zealand, while continuing to promote the sustainable management of natural and physical resources.

[215] The Panel accepts that this listed project urgently promotes employment, through engineering and site works and the relocation and remediation of 24 houses, to support New Zealand's recovery from the economic and social impacts of COVID-19 and to support the certainty of ongoing investment in Kaitaia. The proposal together with the conditions of consent ensure the promotion of the sustainable management of natural and physical resources.

[216] Section 12 of the FTA sets out the relationship between the FTA and the RMA. The process for obtaining a consent under Schedule 6 of the FTA applies in place of the process under the RMA, but remains subject to its purpose and principles. The Panel must however apply section 6 FTA (Treaty

[39] Clause 29(1)(b) of Schedule 6 FTA
[40] Section 4 of the FTA

of Waitangi) instead of section 8 RMA.[41]

[217] As clause 29 of Schedule 6 FTA is expressed as "subject to" Part 2 RMA (as is section 104 RMA) the Panel have undertaken our own assessment of relevant Part 2 matters (sections 5, 6 and 7 RMA) having regard to the Court of Appeal decision in *R J Davidson Family Trust v Marlborough District Council.*[42]

[218] Those aspects of Part 2 RMA that the Panel considers particularly relevant to this listed project are:

Section 6(e): the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga

The site was purchased by the Trust and in 2013 converted to Māori freehold land. In making that status order the Māori Land Court recorded that key members of the Trust whakapapa to the land.[43] We considered s6 matters in the Mana Whenua section of the report.

Section 6(h): the management of significant risks from natural hazards

Mitigation of stormwater and flooding issues are a key component of the application.

Section 7(a): kaitiakitanga

Section 7(aa) stewardship

It is evident to the Panel from the application and the Panel's site visit that exercising kaitiakitanga is at the heart of this listed project.

Section 7(b): the efficient use and development of natural and physical resources

The application proposes not only efficient use and development of the site, which is bounded on three sides by established residential development and served by reticulated services, but also of the 24 houses and their component resources being salvaged from demolition for refurbishment and renewal.

Section 7(c): the maintenance and enhancement of amenity values

Section 7(f): maintenance and enhancement of the quality of the environment

The Panel see these matters as interlinked. The high degree of amenity within the existing papa kāinga, and the residential (and rural to the rear) amenity of the surrounding environment, was evident during the Panel's

[41] Clause 29(3) of Schedule 6 to the FTA
[42] [2018] 3 NZLR 283
[43] Appendix 8 to the Application

site visit. We are satisfied that further site works and landscaping associated with the 24 additional houses will maintain and continue to enhance the site and surrounding amenity values and quality of the environment.

[219] We considered s6 FTA in the Mana Whenua section of the report.

[220] Having reviewed the application and its appendices and all of the information and comments received, both on the application and on the draft conditions, we consider that the project will enable the communities of Kaitaia to provide for their social and economic wellbeing and for their health and safety. It will also sustain the potential of the locality to meet the reasonably foreseeable needs of future generations by contributing to the supply of housing in that part of Kaitaia for people in need.

[221] Overall, we consider that the proposal subject to the attached conditions is consistent with Part 2 and with the purpose of the FTA.

PART K: FINAL DECISION

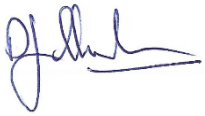
[222] We are satisfied that the requirements of clause 29 of Schedule 6 FTA are met for this listed project and that the dual purposes of the FTA and the RMA are achieved by this decision.

[223] The consents are granted as sought subject to the conditions appended to this decision.

[224] As required by clauses 38 and 45 of Schedule 6 FTA, persons entitled to appeal are to commence any appeals within the 15-day working period from the day they are notified of this decision.

Sarah Shaw (Chair)

Jaroz Popata (Member)



David Clendon (Member)

David Badham (Member)

APPENDIX 1

Summary of Comments Received

Name/organisation	Summary of comments
Far North District Council	Wastewater infrastructure within the area zoned Rural Production Producer statements PS1, PS2, PS3 in relation to stormwater infrastructure Council approval prior to stormwater infrastructure works commencing. Council approval prior for the construction of car parking spaces and manoeuvring areas, including all road markings, footpaths and access approaches Landscape plan and implementation needs a timeframe Each house should have potable water storage Carparking is limited – appears only 1 per household
Northland Regional Council	No further comments from what was provided as part of the pre-application consultation included in Appendix 14
Minister for Arts Culture and Heritage	Supports application Support Heritage NZ comments Wants to review conditions
Heritage New Zealand Pouhere Taonga	Suggested additional conditions around New Zealand Pouhere Taonga Accidental Recovery Protocol.
Rosemary and Ernie Anderson	No consultation with applicant Behaviour of people using the project site (back fence set on fire)
Wesley and Ruth Koro	Have no significant concerns about the application
Gary Rush and Kathleen Johnson	Increase to flooding, existing drain was filled in on project site Only one access into site No consultation with applicant The re-zoning of the land from rural to residential Increase in pressure on wastewater and sewage
Imla Wati	Increase in flooding Support issues raised by Gary Rush and Kathleen Johnson
M Foy[44]	Large building on project site close to back boundary of resident – unclear of its purpose, and it is not included on site plan of AEE – it is non-compliant with council stormwater management rules Project site has significant cumulative increase in consented activities over a number of years Additional cumulative stormwater, traffic and parking effects from extra dwellings

[44] Late comment received on the application

APPENDIX 2

Summary of Comments on Draft Conditions

Name/organisation	Summary of comments
M Foy[45]	Suggested draft conditions relating to removing large building on project site Proposed planting strip have hedge species of 3-4m height.
Heritage New Zealand	Suggested additional conditions around New Zealand Pouhere Taonga Accidental Recovery Protocol.
Far North District Council	Track changes made on draft conditions
Northland Regional Council	Reference needs to be made to consents required form Northland Regional Council Compliance monitoring can be undertaken by FNDC Include lapse date conditions Include an expiry date for clarity
He Korowai Trust (applicant)	Track changes made on draft conditions

[45] Late comment received on the application included comments on conditions

APPENDIX 3

Conditions of Consent

Land use consent is granted for Far North District Council (FNDC) and Northland Regional Council (NRC).

GENERAL CONDITIONS

The following Conditions shall be complied with on an on-going basis to the satisfaction of the FNDC Environmental Services Manager or duly delegated officer.

1. The activity shall be carried out in general accordance with the plans and reports submitted with the application, outlined below and attached to this consent with the FNDC's "Approved Stamp" affixed to them.

   Ākau

   a. *"Site Plan"* Whare Ora Stage 3 Kohuhu St, Kaitaia dated October 2020 as annexed to the Panel's decision at Appendix 4 "Amended site plan".

   Chester Ltd

   b. *"Land Development Report"*, Ref. No. 14235, dated 26 October 2020.

   c. *"Proposed Site Plan"*, Sheet No. 101, dated 21 September 2020.

   d. *"Earthworks Plan"*, Sheet No. 200, dated 21 September 2020.

   e. *"Cut Fill Plan"*, Sheet No. 201, dated 21 September 2020.

   f. *"Erosion and Sediment Control Plan"*, Sheet No. 210, dated 21 September 2020.

   g. *"Earthworks Profile Views"*, Sheet No. 220-221, dated 21 September 2020.

   h. *"Retaining Wall Plan",* Sheet No. 300, dated 21 September 2020.

   i. *"Stormwater Layout Plan"*, Sheet No. 400-401, dated 21 September 2020.

   j. *"Stormwater Details – Pond Detail"*, Sheet No. 420, dated 21 September 2020.

   k. *"Stormwater Catchment Plan"*, Sheet No. 430, dated 21 September 2020.

   l. *"Wastewater Layout Plan"*, Sheet No. 500, dated 21 September 2020.

   m. *"Wastewater Details – Storage Tank Detail"*, Sheet No. 520, dated 21 September 2020.

   n. *"Water Supply Layout Plan"*, Sheet No. 600, dated 21 September 2020.

   o. *"Roading Plan Overview"*, Sheet No. 700, dated 21 September 2020.

   p. *"Roading Plan 1-4"*, Sheet No. 701-704, dated 21 September 2020.

   q. *"Loop Road Alignment"*, Sheet No. 710, dated 21 September 2020.

r. *"Loop Road Profile View"*, Sheet No. 711, dated 21 September 2020.

s. *"Roading Typical Details"*, Sheet No. 720, dated 21 September 2020.

t. *"Vehicle Tracking – B85 Vehicle"*, Sheet No. 730, dated 21 September 2020.

u. *"Vehicle Tracking – Heavy Rigid Vehicle"*, Sheet No. 731, dated 21 September 2020.

Traffic Engineering & Management Ltd

v. *"Proposed Residential Development 23 Kohuhu Street, Traffic Impact Assessment"*, Ref. No. 20236, dated 28 September 2020.

KGA Geotechnical Group Ltd

w. *"Geotechnical Engineering Investigation Whare Ora Stage 3, Kohuhu Street Kaitaia"*, Ref. No. RC-000, dated October 2020.

PRIOR TO COMMENCING CONSTRUCTION WORKS

The following conditions shall be complied with prior to any construction associated with the development commencing to the satisfaction of the FNDC Environmental Services Manager or duly delegated officer:

Engineering

2. The Consent Holder shall submit plans, reports and details of all works for the approval of the Far North District Council prior to commencing construction. Such works shall be designed in accordance with the Far North District Council's Engineering Standards and Guidelines 2004 – Revised 2009 and NZS4404:2004 ("FNDC Engineering Standards").

   The geotechnical recommendations outlined in sections 10 to 15 of the KGA Geotechnical Report dated 30 October 2020 are to be specifically addressed.

   In particular, the plans and details shall show:

   Stormwater

   a. The proposed approach to stormwater management for the development including details of:

      i. All new connection points to the existing public stormwater network.

      ii. Stormwater assets that are to be vested in Council and assets that are to remain in private ownership.

      iii. Setbacks of proposed detention ponds from existing flood hazards on the site.

      iv. How stormwater runoff from new buildings and impermeable surface areas is to be attenuated back to pre-development levels via detention

basins for the 10% and 1% AEP storm events plus an allowance for climate change.

v. How overland/secondary flowpaths are to remain unobstructed by new buildings, road infrastructure, other structures or landscaping.

vi. How stormwater runoff from deck, roof and impervious areas on site is to be collected and discharged into the stormwater system.

Wastewater

b. The proposed approach to wastewater management for the development including details of:

i. All new connection points to the existing public wastewater network.

ii. A wastewater storage chamber with emergency overflow connected to the public sewer scheme, prepared by a Chartered Professional Engineer.

iii. Wastewater assets that are to be vested in Council and assets that are to remain in private ownership.

Water Supply

c. The proposed approach to water supply for the development including details of:

i. New connection points to the existing public water supply network.

ii. A backflow prevention device at the point of connection between the private reticulation network and the Council water supply scheme, with drawings specifications and calculations prepared by a Chartered Professional Engineer.

iii. Water supply assets that are to be vested in Council and assets that are to remain in private ownership.

Roading

d. The proposed roading and access arrangements to service the development, including details of:

i. The extended internal road, upgrades to the existing internal road, speed calming measures, road markings and vehicle crossing to Kohuhu Street.

ii. A minimum of 32 car parking spaces and associated manoeuvring areas.

iii. Lighting design for car parking areas in accordance with section 3.5 of the Traffic Engineering & Management Ltd report dated 28 September 2020, and for any street lighting proposed for the extended internal road.

iv. Internal signage.

v. Concrete footpaths linking building entrances with car parking spaces.

vi. A concrete footpath adjoining the extended internal road to a minimum of 1.5m wide in accordance with 3.3.12.1 (Urban) of the FNDC Engineering Standards.

vii. How fire appliances will be able to access the site from Kohuhu St and park within 20 metres of the buildings on the site, in accordance with the requirements of Fire and Emergency New Zealand.

Design certificate

e. The plans and details required by Conditions 2(a)-(d) shall include a design certificate (PS1) signed by a Chartered Professional Engineer certifying that the designs are in accordance with the FNDC Engineering Standards.

Telecommunications & Electricity

f. Details of telecommunications and electricity infrastructure to service the development.

Earthworks

g. An Erosion and Sediment Control Plan for the site including details of the mitigation measures required to be installed prior to, during and following the completion of earthworks for the proposed development.

3. Following approval of the plans in Condition 2 and selection of the contractor engaged to undertake the works, provide to FNDC within 10 working days prior to construction commencing:

a. Details of the:

i. Successful contractor.

ii. Planned date and duration of the contract.

iii. Supervising engineer.

b. Details from a Chartered Professional Engineer regarding the level of construction monitoring (CM1-CM5) required to certify a PS4 for the following:

i. Stormwater

ii. Wastewater

iii. Water supply

iv. Roading (extended internal road pavement and surfacing).

4. The Consent Holder shall carry out hydrant flow / pressure testing to ensure that the hydrants available to the site have the required flows / pressure for firefighting under the FNDC Engineering Standards and NZS PAS 4509:2008.

a. Should the required flow / pressure not be available, then the Consent Holder shall provide details for the approval of Council of the measures proposed to provide adequate flows for firefighting to service the development.

b. Should the flow rate be satisfactory, then the results of the testing are to be provided to Council.

Earthworks

5. Prior to earthworks commencing the Consent Holder shall install the mitigation measures proposed in the approved Erosion and Sediment Control Plan in Condition 2(g).

Construction Management

6. A Construction Management Plan (CMP) shall be submitted to and approved by FNDC. The CMP shall contain information on, and site management procedures, for the following:

    a. The timing of building demolition and construction works, including hours of work and key project and site management personnel.

    b. The transportation of demolition and construction materials from and to the site and associated controls on vehicles through sign-posted site entrance/exits and the loading and unloading of materials.

    c. Control of dust and noise on-site and any necessary avoidance or remedial measures.

    d. Details of how earth and other materials will be prevented from being deposited on surrounding roads from vehicles and identified remedial actions should it occur.

    e. Publicity and safety measures, including signage, to inform adjacent landowners and occupiers, pedestrians and other users of Kohuhu Street that construction is occurring the site.

    f. A Construction Traffic Management Plan for the development in accordance with the recommendations in section 3.8 of the Traffic Engineering & Management Ltd report dated 28 September 2020.

7. The Consent Holder shall mark the position of all existing underground public services on site.

8. The Consent Holder shall hold a pre-start meeting that:

    a. Is located on the subject site;

    b. Is scheduled not less than five days before the commencement of the activity;

    c. Includes Council Monitoring Officer(s), or delegated representative(s); and

d. Includes representation from the contractors who will undertake operations on site.

The purpose of the pre-start meeting is to ensure that all relevant parties are aware of and understand the requirements for compliance with the conditions of this consent and the approved CMP in accordance with Condition 6. A copy of the final conditions of consent and approved CMP shall be made available by the Consent Holder at the pre-start meeting.

Landscaping

9. A detailed Landscaping and Planting Plan is to be prepared by a suitably qualified Landscape Architect to the satisfaction of FNDC Environmental Services Manager or duly delegated officer. As a minimum, the plan shall show:

    a. A plan of the areas to be planted on site, including details of perimeter planting around the proposed stormwater attenuation ponds.

    b. The location materiality, height and design of fencing and retaining walls including a 1.8m high boundary fence along boundaries with adjoining properties (with the exception of any adjoining land zoned Rural Production) or alternative boundary treatment.

    c. For the avoidance of doubt, (a) and (b) includes the areas shown as subject to landscaping and fencing along the northern and southern boundaries of the site as shown on the approved Site Plan.

    d. A schedule of the species to be planted, including the name, numbers, location, spacing and size of plant species at time of planting, planting density, details on the timing of plantings, and details of any existing vegetation to be retained.

    e. Proposed site preparation and plant establishment measures.

    f. Ongoing maintenance and monitoring requirements, including pest and weed controls necessary to be undertaken to ensure plant survival.

    g. The construction details of hard landscaping elements (paving, internal fences and gates, seating, letter boxes and areas for waste collection).

    h. Consideration of:

        i. Conflict between landscaping measures and traffic safety.

        ii. Fire-retardant species to minimise fire risk.

        iii. Crime Prevention Through Environmental Design (CPTED) principles.

DURING CONSTRUCTION:

The following conditions shall be complied with during any construction associated with the consent to the satisfaction of the FNDC Environmental Services Manager or duly delegated officer:

Construction Management

10. All construction works on the site are to be undertaken in accordance with the approved CMP in Condition 6.

11. The Consent Holder shall protect existing underground public services marked on site as per Condition 7 during construction work on the site. Should any damage occur it shall be repaired to the satisfaction of FNDC Environmental Services Manager or duly delegated officer, and at the cost of the Consent Holder.

12. Noise from construction activities shall not exceed the limits recommended in, and shall be measured and assessed in accordance with, New Zealand Standard NZS 6803: 1999.

Engineering Works

13. All engineering works are to be undertaken in accordance with the engineering plans approved in Condition 2 to the satisfaction of FNDC Environmental Services Manager or duly delegated officer.

Earthworks

14. The Consent Holder shall ensure that all erosion and sediment control measures required in Condition 2(g) and implemented in Condition 5 shall be maintained until non-erodible cover has been established over the site.

15. Any debris deposited on the public road as a result of the earthworks during construction shall be removed by or at the expense of the Consent Holder.

ON COMPLETION OF CONSTRUCTION:

The following conditions shall be complied with on completion of construction associated with the consent to the satisfaction of the FNDC Environmental Services Manager or duly delegated officer:

16. As-built information, RAMM data and test results in accordance with the requirements of the FNDC Engineering Standards and NZS 4404:2004 are to be submitted to Council on completion of the works with respect to:

    a. Stormwater

    b. Wastewater

    c. Water Supply

    d. Roading

17. Roadside drains, kerb and channelling, footpaths and berms on Kohuhu St are to be reinstated to the satisfaction of FNDC Environmental Services Manager or duly delegated officer on completion of the works.

PRIOR TO THE OCCUPATION OF ANY DWELLINGS:

The following conditions shall be complied with prior to the occupation of any dwellings (with the exception of Condition 23 which is required to be met within six months of the relocation of each dwelling) to the satisfaction of the FNDC Environmental Services Manager or duly delegated officer.

Landscaping

18. All landscape planting detailed within the Landscaping and Planting Plan approved under Condition 9 above shall be implemented by the Consent Holder. Evidence from a suitably qualified landscape architect shall be provided to the satisfaction of the FNDC Environmental Services Manager or duly delegated officer that confirms the requirements of the approved Landscaping and Planting Plan have been met.

Survey

19. The proposed location for any dwelling within the 100 year ARI flood extent shall be surveyed and established by a suitably qualified and experienced surveyor in order to determine ground level RL (with reference to One Tree Point 1964 Datum) in accordance with paragraph 5.1.1 of the Chester Ltd report dated 26 October 2020.

Finished Floor Levels

20. Any dwelling located within the 100 year ARI flood extent must have a minimum finished floor level of 11.75m RL (500mm above the estimated peak post development 100 year flood level) in accordance with the RL established in Condition 19.

Engineering

21. Contractors are to provide certification (PS3) that all work on site has been completed in accordance with the approved engineering plans in Condition 2.

22. A Chartered Professional Engineer is to provide certification (PS4) in accordance with Condition 3(b).

Dwelling Relocation

23. Within 6 months of relocation for each dwelling, the Consent Holder shall provide evidence to FNDC Environmental Services Manager or duly delegated officer that the exterior, including painting and joinery, and connections to all infrastructure services and closing in and ventilation of the foundations have been repaired and reinstated.

ONGOING / REVIEW CONDITIONS

The following Conditions shall be complied with on an on-going basis to the satisfaction of the FNDC Environmental Services Manager or duly delegated officer:

Landscaping

24. All landscaping required under the approved Landscaping and Planting Plan in Condition 9 and implemented under Condition 18 shall be maintained for the duration of this consent. If planting species fail or are removed, they shall be replaced in the next available planting season by suitable species to the approval of the FNDC Environmental Services Manager or duly delegated officer.

Engineering

25. Overland/secondary flowpaths are to be unobstructed by new buildings, road infrastructure, other structures or landscaping for the duration of this consent.

26. The Consent Holder shall be responsible for the ongoing maintenance and operation of the stormwater detention devices on site.

LAPSE

27. These consents lapse **2 years** after the date of commencement of the consent.

EXPIRY

28. There is no expiry date specified for the FNDC land use consent.

29. The NRC land use consent expires **5 years** after commencement of the consent.

ADVICE NOTES

1. Archaeological sites are protected pursuant to the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence, pursuant to the Act, to modify, damage or destroy an archaeological site without an archaeological authority issued pursuant to that Act. Should any site be inadvertently uncovered, the procedure is that work should cease, with the Trust and local iwi consulted immediately. The New Zealand Police should also be consulted if the discovery includes koiwi (human remains). A copy of Heritage New Zealand's Archaeological Discovery Protocol (ADP) is attached for your information. This should be made available to all person(s) working on site.

2. The conditions of this consent will be monitored by the Far North District Council's Resource Consent Monitoring Officers. Any documentation relating to compliance with the above conditions of consent can be sent to rcmonitoring@fndc.govt.nz.

3. The applicant is responsible for the repair and reinstatement of any underground services damaged as a result of the earthworks.

4. A copy of this consent should be held on site at all times during the establishment and construction phase of the activity.

5. A vehicle crossing permit and Traffic Management Plan for works on the public road may be required prior to works commencing.

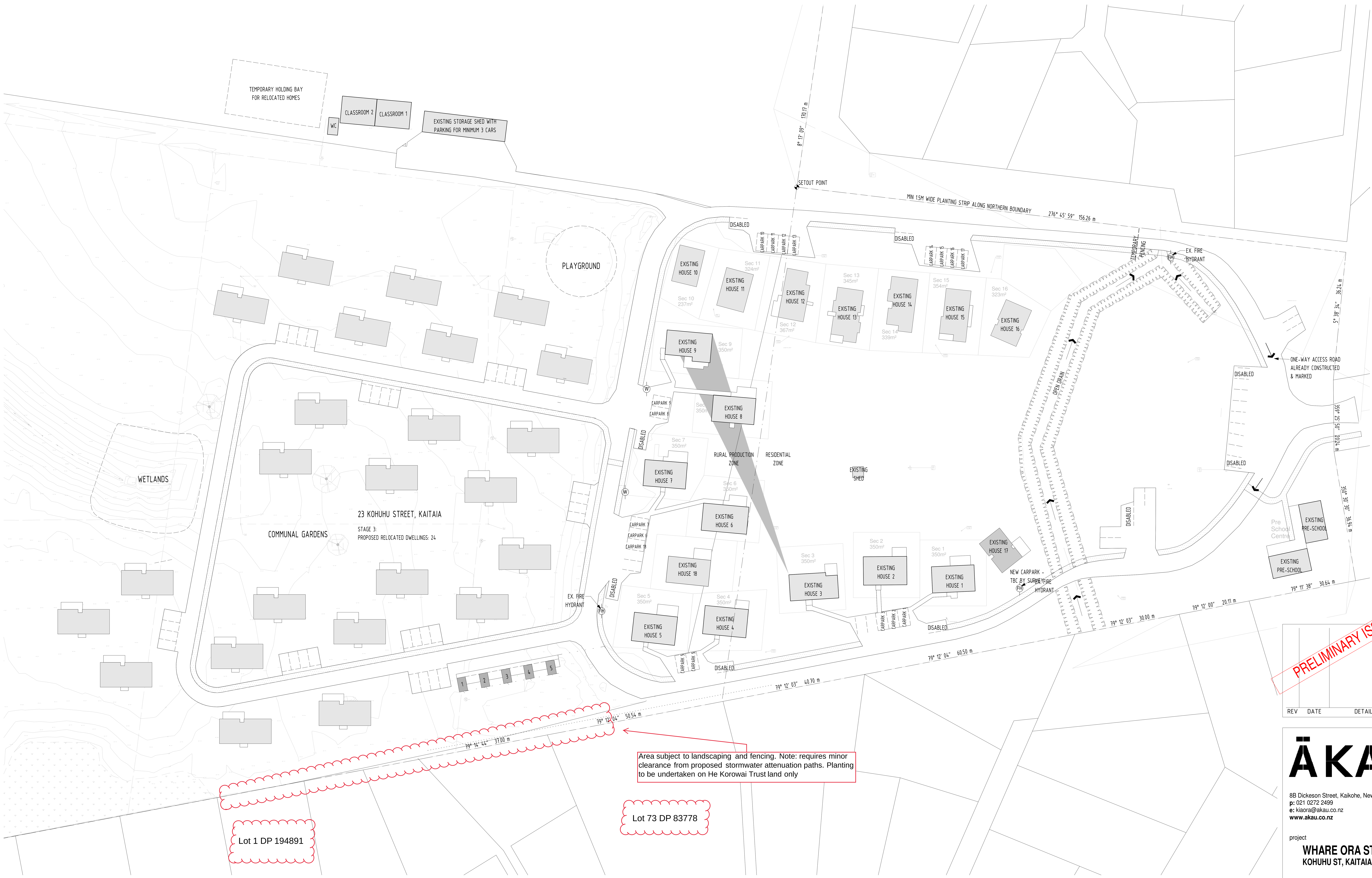
6. Any works within 10m of the Matthews Outfall Drain is subject to the Far North District Council's Land Drainage Bylaw and will require approval which is independent of the

Resource Consent process. The Consent Holder is informed of its obligation to provide evidence of an approval from the Far North District Council's Stormwater Engineer or designate in relation the Far North District Council's Land Drainage Bylaw.

7. The stormwater attenuation ponds may be subject to fencing requirements in accordance with the Building Act.

APPENDIX 4

Amended site plan



TEMPORARY HOLDING BAY FOR RELOCATED HOMES
CLASSROOM 2
CLASSROOM 1
WC
EXISTING STORAGE SHED WITH PARKING FOR MINIMUM 3 CARS
SETOUT POINT
MIN 1.5M WIDE PLANTING STRIP ALONG NORTHERN BOUNDARY
PLAYGROUND
WETLANDS
COMMUNAL GARDENS
23 KOHUHU STREET, KAITAIA
STAGE 3:
PROPOSED RELOCATED DWELLINGS: 24
EXISTING HOUSE 1
EXISTING HOUSE 2
EXISTING HOUSE 3
EXISTING HOUSE 4
EXISTING HOUSE 5
EXISTING HOUSE 6
EXISTING HOUSE 7
EXISTING HOUSE 8
EXISTING HOUSE 9
EXISTING HOUSE 10
EXISTING HOUSE 11
EXISTING HOUSE 12
EXISTING HOUSE 13
EXISTING HOUSE 14
EXISTING HOUSE 15
EXISTING HOUSE 16
EXISTING HOUSE 17
EXISTING HOUSE 18
EXISTING SHED
RURAL PRODUCTION ZONE
RESIDENTIAL ZONE
EXISTING PRE-SCHOOL
Pre School Centre
ONE-WAY ACCESS ROAD ALREADY CONSTRUCTED & MARKED
EX. FIRE HYDRANT
NEW CARPARK - TBC BY SURVEY
OPEN DRAIN
TEMPORARY FENCING
DISABLED
Area subject to landscaping and fencing. Note: requires minor clearance from proposed stormwater attenuation paths. Planting to be undertaken on He Korowai Trust land only
Lot 1 DP 194891
Lot 73 DP 83778
PRELIMINARY ISSUE

REV | DATE | DETAILS | INIT

ĀKAU

8B Dickeson Street, Kaikohe, New Zealand
p: 021 0272 2499
e: kiaora@akau.co.nz
www.akau.co.nz

project
WHARE ORA STAGE 3
KOHUHU ST, KAITAIA

drawing
SITE PLAN

scale	1:400	date	OCT 2020 ©
drawn	FB	plot date	29/05/19
job number	17.06	dwg number	RC-000
		issue	A

CHESTER

Land Development Report

23 Kohuhu Street, Kaitaia

Prepared For:
He Korowai Trust

Chester Job Number:
14235

Date:
26 October 2020

Revision History

Revision No.	Prepared By	Description	Date
0	M Buhr	Original	26 October 2020

Action	Name	Signed	Date
Prepared by	M Buhr		26 October 2020
Reviewed by	N Jull		30 October 2020
Approved by	N Jull		30 October 2020

Table of Contents

1 Introduction

Chester Consultants Ltd has been engaged by He Korowai Trust to provide a Land Development Report with respect to the proposed development at 23 Kohuhu Street, Kaitaia.

This report has been prepared solely for the benefit of this specific project, the Far North District Council, Northland Regional Council and the Environmental Protection Authority. Chester Consultants Ltd accepts no liability for inaccuracies in third party information used as part of this report. The reliance by other parties on the information or opinions contained in the report shall, without our prior review and agreement in writing, be at such parties' sole risk.

This report is based on development data provided by Ākau, Boundary Hunter Ltd, Traffic Engineering & Management Ltd (TEAM) and KGA Geotechnical Group Ltd (KGA) as well as data obtained from the Far North District Council and Northland Regional Council maps current to the site at the time of this document's production. Should alterations be made which impact upon the development not otherwise authorised by this report then the design / comments / recommendations contained within this report may no longer be valid.

In the event of the above, the property owner should immediately notify Chester Consultants Ltd to enable the impact to be assessed and, if required, the design and or recommendations shall be amended accordingly and as necessary.

1.1 Accompanying Drawings

This report is to be read in conjunction with the civil design drawings: Civil Design – Whare Ora Stage 3; Revision 0; dated 21/09/2020; Prepared by Chester.

2 Site Description

The subject site is located at 23 Kohuhu Street, Kaitaia, with a total site area of approximately 18.59ha. The site is legally described as Pt Lot 2 DP 12051. The development site consists of an existing residential area whereby 17 dwellings and 5 tiny houses are accessed from a private one-way lane. All dwellings have access to stormwater, wastewater, water supply, and power infrastructure. Much of the infrastructure is private, with supply from or discharge to a public network. 'Mathew's Outfall' drainage channel runs through the subject site. The site is generally flat, with much of it existing as pasture, with well-defined drainage channels. Refer to Figure 1 below for an aerial photograph of the area of interest.

Figure 1: Aerial photograph of development area (Sourced: Google Maps, 26.10.2020)

3 Proposal

24 additional relocatable dwellings are proposed over the site, with accompanying infrastructure to service the dwellings.

The architectural site plan illustrates the proposed site configuration and is shown below in Figure 2 and is attached to the appendix.

This report is intended to accompany a Resource Consent application under the Covid-19 Recovery (Fast-track Consenting) Act 2020, and comments how the site is to be serviced with respect to:

- Water Supply
- Firefighting Water Supply
- Wastewater Disposal
- Stormwater Disposal
- Stormwater Mitigation
- Utility Services
- Flood Risk
- Earthworks

An assessment of the District and Regional Plans with respect to the proposed services is also provided.

Figure 2: Proposed site layout provided by Ākau Studio, dated 06.10.2020

4 Infrastructure

This section correlates to civil the design drawings produced to illustrate how the development is to be serviced. For further information, refer to the civil design drawings accompanying this report.

All infrastructure to service the proposed development is considered private. However, where possible, infrastructure has been designed to a public standard in accordance with NZS4404:2010 and FNDC Engineering Standards and Guidelines (2004). This allows for some infrastructure to be vested as public should the need arise.

A body corporate/resident's association or similar legal instrument is recommended to manage all shared private infrastructure servicing the development site for maintenance and dispute resolution purposes.

4.1 Water

4.1.1 Existing Network

Point of supply is from a 100mm water main into the site from Kohuhu Street, after which a private 100mm water main loop services the existing site.

4.1.2 Proposed Potable Supply

It is proposed to create an additional looped network using 110mm OD PE100 SDR11 pipe from which all proposed dwellings are to have a 20mm service connection via eleven meter banks located close to the water main.

Comment was sought from Far North District Council (FNDC) on the ability for the existing wider network to support the additional loading. A Site meeting was held with Council representatives and it was confirmed verbally that the existing network has capacity for the proposed development.

4.1.3 Water Supply Demand

An assessment in accordance with the FNDC Engineering Standards and Guidelines (2004) was undertaken. The following summarises the assessment;

Table 1: Water supply demand

Units/Lots	Occupancy	Population	Daily Consumption (L/p/d)	Average Daily Demand (L/s)	PF	Peak Domestic Demand (L/s)	Cumulative Peak Domestic Demand (L/s)
24	4	96	300	0.33	3	0.83	0.83

4.2 Firefighting Water Supplies

We have assumed the water supply classification for firefighting to be FW2 in accordance with SNZ PAS 4509:2008. The requirement for FW2 is 12.5L/s within a distance of 135m (hose run) and an additional 12.5L/s within 270m (hose run) from a maximum of 2 hydrants.

There are 2 hydrants located within the existing private loop main. One of which is able to service the proposed development. A new hydrant is proposed over the proposed private network extension.

We have assumed that there is sufficient water supply to satisfy the FW2 requirements. No hydrant tests have been carried out at this stage; however, these can be arranged if required.

4.3 Wastewater

4.3.1 Existing Network

An existing private network services the site currently. Discharge ultimately reaches a 450mm diameter trunk main. There is evidence that the network surcharges from the debris sited within manholes.

4.3.2 Proposed Wastewater Disposal

The proposed development seeks to extend the network from an existing satellite manhole. The main line being extended to service the development is to be as deep as possible to support future development. In addition, temporary storage tanks in line with the network are proposed to minimise the impact the proposal may have on the capacity of the existing network. During peak flows, the storage tanks would fill and empty as the loading subsides.

The storage tank has nominally been sized to hold 10 hours of average dry weather flows. This equates to an 8,000L tank. To ensure debris does not lodge itself withing the tank all surfaces are to be smooth, and the tank and associated pipe is to be installed with a minimum fall of 1 in 200 toward the point of discharge. A vent pipe is also required in the throat of the tank access chamber.

All proposed dwellings are to have service connections into the network. The network extension is considered private infrastructure.

4.3.3 Wastewater Loading

An assessment in accordance with the FNDC Engineering Standards and Guidelines (2004) was undertaken. The following summarises the assessment;

Table 2: Wastewater Loading

Units/Lots	Occupancy	Population	ADWF (L/p/d)	ADWF (L/s)	DW PF	PDWF (L/s)	WW PF	PWWF (L/s)
24	4	96	200	0.22	2.5	0.56	2	1.11

4.4 Stormwater

4.4.1 Existing Stormwater Network and Disposal

Existing stormwater management is via a combination of open channels and a private piped gravity network discharging to a publicly managed open watercourse to the north east of the development area, named the 'Matthew's Outfall'.

4.4.2 Proposed Stormwater Network and Disposal

A piped network is proposed to convey primary flows up to and including the 10-year storm event. Secondary flow up to the 100-year storm is to be managed via the driveway and open channels. All flow is directed to either one of two proposed shallow detention ponds where flows are attenuated and then discharged from the site.

Approximately two thirds of the development will discharge via detention pond 1 directly to the Mathew's Outfall drainage channel at the north east of the site. The other third will discharge to the existing open channel via detention pond 2 at the west of the site. All discharge eventually reaches Mathew's Outfall therefore will be subject to the FNDC Land Drainage Bylaw 2019. The design complies with all conditions.

The proposed earthworks delineate and define the catchments to manage stormwater in such a way that the impact on neighbouring properties are less than minor.

4.5 Stormwater Mitigation

The receiving environment and the greater catchment are sensitive to changes in hydrology therefore stormwater mitigation measures as outlined in the following sections are proposed.

4.5.1 Water Quantity

To manage water quantity the 2, 10 and 100-year storms are to be mitigated such that the equivalent discharge from the area is less than or equal to the pre-development state. This is to be achieved in the shallow detention ponds. For further details on how the detention ponds were designed and sized please refer to Section 4.5.4 below.

4.5.2 Water Quality

No specific water quality measures are proposed as it is deemed that the proposed impervious area being the low volume driveway and dwelling roofs are low contaminant yielding. However, we note that the detention ponds will provide some sediment removal thus provide an element of quality treatment.

4.5.3 Aquatic Resource Protection

Extended detention is proposed to protect the downstream aquatic resource from stream channel erosion. The first 34.5mm of rainfall (EDV) is to be captured and released over a 24-hour period. This will be achieved in the downstream detention ponds.

Re-use Retentions Tanks

We note that during the pre-lodgement site meeting held with the Far North District it was indicated that rainwater tanks would be used to provide mitigation for roof areas. As the design developed it was determined more practical to achieve this in the downstream detention ponds. The main reasons for this are:

- Given all the houses are to be existing relocatable houses they will not necessarily have the plumbing to accommodate non-potable water re-use efficiently.
- Adding additional maintenance requirements to induvial houses was deemed impractical given this stormwater mitigation element could be achieved and maintained at two central locations in the ponds.
- Over time, houses may be taken from the site and other relocatable houses put in their place, not requiring tanks simplifies this process.
- Although we do not propose water tanks as a development requirement they can still be used.

4.5.4 Catchment Hydrology

HEC-HMS was used in accordance with Auckland Council's Technical Publication 108 to determine the peak flow for the 2, 10, and 100-year average recurrence interval (ARI) design storm through the subject site. A minimum time of concentration of 10 minutes has been used due to the relatively small catchment area. Rainfall input data was retrieved from NIIWA's HIRDS database, and the Representative Concentration Pathway (RCP) 6.0 scenario for the period between the years 2081-2100 was used. The time period is chosen to align with the design life of the stormwater assets. This rainfall depth considers the effects of climate change based on a trajectory of carbon missions.

Table 3:Rainfall Depths, retrieved using NIWA's HIRDS database

Storm Event (ARI)	Rainfall Scenario (RCP)	Period (year)	Rainfall Depth (mm/24hours)
2-year	6.0	2081-2100	97.2mm
10-year	6.0	2081-2100	152mm
100-year	6.0	2081-2100	237mm

The final anticipated impervious coverage of the development is unknown, as it is subject to the availability, shape and size of relocatable homes suitable for the site. As a result, an assumed maximum imperviousness

of 50% withing each catchment is assumed and aligns with urban environment zoning limits. This is well below the current designed impervious area of 6,304m², and makes up only 21% of the impervious area within the catchments identified below. Or else 4.8% of the total site area.

The developed area is divided into 2 catchments, catchment 1 flows down to the north east into 'pond 1', and catchment 2 flow down to the west into 'pond 2'. The table below illustrates the areas and associated model inputs of each for the pre-development. An elevation-storage, and storage-discharge function was created for each pond, details of which are attached to the appendix.

Table 4: HEC-HMS model inputs

Catchment	Pre-development areas	Post-development areas	SCS Curve Number	Initial abstraction
Catchment 1 (Pond 1)		Impervious – 103065m²	98	0mm
	Pervious – 206130m²	Pervious – 103065m²	74	5mm
Catchment 2 (Pond 2)		Impervious – 4529.5m²	98	0mm
	Pervious – 9059m²	Pervious – 4529.5m²	74	5mm

Figure 3 below illustrates the model configuration;

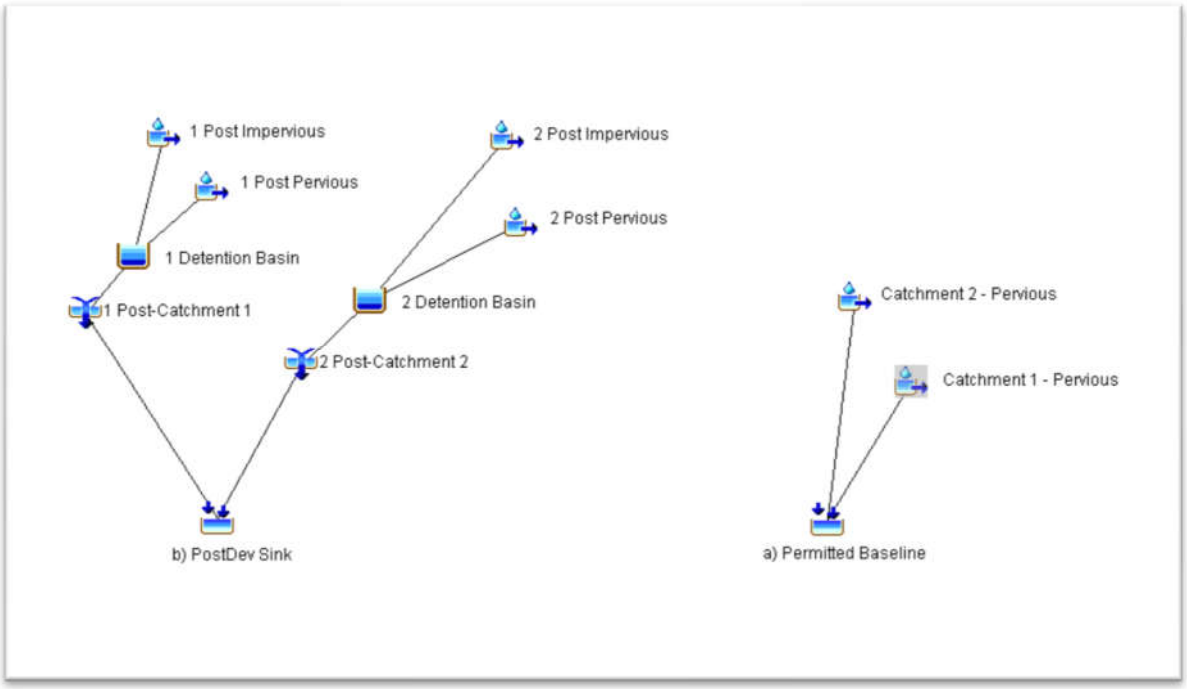


Figure 3: HEC-HMS model configuration

The ponds are designed to attenuate flows via a control orifice, a rectangular notch weir, scruffy dome overflow, and an emergency spillway. The table on the following page illustrates and compares the pre and post development discharge flow rates. For additional HEC-HMS outputs refer to the appendix.

Table 5: HEC-HMS Outputs

Storm Event (ARI)	Pre-development discharge flow rate (m^3/s)	Post-development discharge flow rate (m^3/s)	Adequate mitigation (Yes/no)
2-year	0.23438	0.11942	Yes
10-year	0.46531	0.31386	Yes
100-year	0.85523	0.48365	Yes

The modelled results do not account for potential back water effects within the receiving environment that may hinder discharge flow rates. Consequently, a nominal additional storage volume has been included to mitigate these effects.

4.6 Utility Services

4.6.1 Power

The existing houses completed under previous stages have power supply and it is proposed to extend from the existing network to supply power to stage 3. We have contacted Top Energy to investigate the constraints and opportunities with regards to power supply and note the following from our discussions:

- Power is available.
- An additional transformer will be required.
- Given the location of the development area the transformer will likely need to be located within private property in which case an easement will be required.
- From the transformer, reticulation throughout the development can be public or private. If public, easements will be required, if private, maintenance and faults are the owner's responsibility.

Final power lay plans and details will be confirmed at detailed design stage.

4.6.2 Telecommunications

Telecommunication services are available in Kohuhu Street but not currently reticulated throughout the site and previous stages. The existing houses rely on 4G wireless connections. The proposed development can continue to rely on wireless options or reticulation can be brought in from Kohuhu Street in which case an easement in favour of Chorus will be required over the site. Final telecommunication servicing will be determined at detailed design.

5 Flood Risk Assessment

While localised flooding up to and including the 100-year ARI event is being managed within the development extents. The Awanui River is subject to flooding, and surrounding drainage channels may be subject to backwater effects, resulting in widespread flooding in low lying areas. As a result, development controls in relation to flooding must be based on the Council held information as it represents the worst-case scenario.

Northland Regional Council (NRC) have recently updated the Awanui catchment model, and results have been published on the hazard maps GIS viewer. Figure 4 below illustrates the estimated 100yr ARI flood extents over the development site and based upon this the flood level is 11.25mRL.

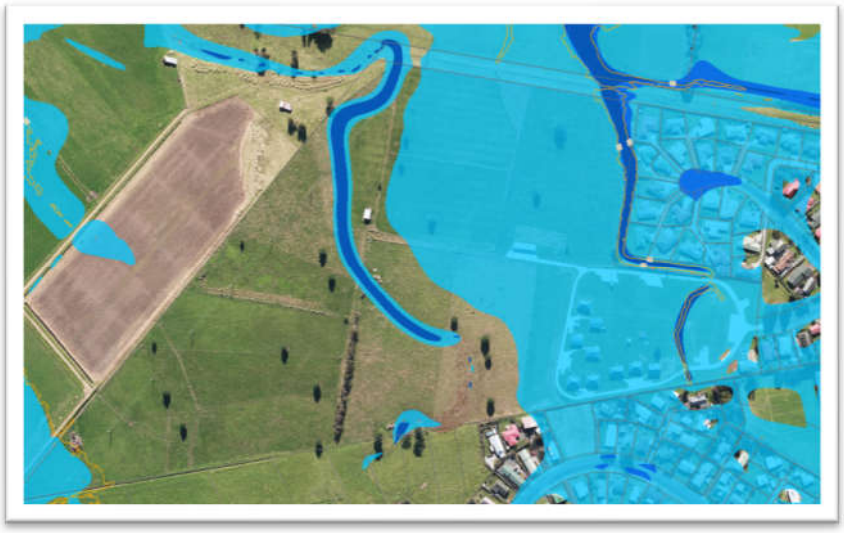


Figure 4: 100-year flood extent (Sourced: NRC, Natural Hazards, 26.10.2020)

5.1 Development Controls

5.1.1 Structures - Finished Floor Levels

The proposed dwelling should be designed with a minimum habitable floor level 500 mm above the estimated peak post development 100-year flood level at the upslope boundary of the proposed dwelling.

The minimum finished floor level for all new dwellings must be 11.75mRL.

We note that in some cases the existing ground level may be higher than this in which case the standard requirements of the New Zealand building code will dictate.

5.1.2 Egress

Egress may not be possible during an extreme rainfall event. However, flow velocities may be low, allowing some users and emergency services to wade through the flood waters. However, refuge within respective dwellings is recommended to wait for flood waters to subside.

5.1.3 Earthworks

Earthworks are proposed to delineate catchments and allow for the infrastructure to service the development. Due to the widespread flooding within the catchment, imported fill, other than that required for roading and drainage, is not allowed. This is recommended in order to minimise the effects that flood storage displacement may have on upstream and downstream properties.

5.1.4 Fences

While fencing is generally not proposed as part of this development. Should fencing be erected at a later stage, semi-permeable fencing is recommended within the estimated flood extents in order to allow flood waters to flow through affected properties unimpeded.

6 Earthworks

Earthworks are required to provide access to the site and delineate stormwater catchments. The table below summarises the bulk earthworks required. Excess cut is to be placed elsewhere over the site and will made up of mostly topsoil.

Table 6 - Bulk earthworks summary

Description	Area (m^2)	Cut (m^3)	Fill (m^3)	Net (m^3)
A comparison surface was generated using Autodesk Civil 3D to measure the volume of material between the existing ground level and the finished ground level. Bulking factors have been excluded.	31,939	6,311	3,640	2671 (Cut)

Earthworks may generally follow the methodology outlined below, but is subject to site conditions, geotechnical recommendations, contractor's available plant, labour and timing constraints.

- Install all erosion and sediment control devices
- Execution of demolition works, removing material from site as and where required
- Removing vegetation within the earthwork's extent
- Strip and stockpile topsoil from site as and where required. Staging this operation is preferred
- Perform cut to fill operation, likely using an excavator, scraper, grader and bobcat, checking and maintaining erosion and sediment control devices daily, and particularly before and after severe storm events
- Construct driveway
- Reinstate topsoil, and reseed, managing this until well established
- Erosion and sediment control devices can be disestablished

Provided that all erosion and sediment control devices are regularly checked and maintained, less than minor effects on the receiving environment is expected.

6.1 Erosion and Sediment Control

Erosion and sediment control is to be carefully manged within the development site, and within the earthworks extent identified within the Civil Design drawing set, as not to have a detrimental effect on the downstream environment. Erosion and sediment controls are to be implemented in accordance with Auckland Council's 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region', also known as Guidance Document 2016/005 (GD05). The following items are recommended to be implemented, however, actual management and devices chosen are the contractor's responsibility.

- 900m of silt fence around perimeter of site
- clean water diversion bunds as required
- a stabilised construction entrance, and laydown area
- Decanting earth bunds in or close to pond locations

7 Conclusion

7.1 Infrastructure Summary

7.1.1 Water Supply

A private network extension is proposed, supply to meet demand is assumed to be adequate based upon verbal confirmation from the Far North District Council.

7.1.2 Firefighting Water Supply

A new fire hydrant is proposed over the private network extension and is deemed adequate to service the development for firefighting water supply.

7.1.3 Wastewater Disposal

A reticulated network is available, and a private network extension is proposed. A storage tank is proposed to cope with peak flows to minimise the impact on the existing network.

7.1.4 Stormwater Disposal

Discharge is proposed to two stormwater ponds, after which discharging to existing drainage channels. A private piped gravity network is proposed.

7.1.5 Stormwater Mitigation

Mitigation of the 2, 10 and 100-year ARI storm event as well as Extended Detention is proposed via retention tanks, and a controlled orifice in two proposed detention ponds.

7.1.6 Utility Services

The development has access to both power and telecommunication utility services. Final servicing plans will be confirmed at detailed design.

7.2 Flood Risk Summary

The flood risk assessment has informed the proposed site development controls as outlined in section 5.4 of this report. It is important however, that all future property owners accept the nature and scale of the identified hazards and are fully aware of the risks associated to both people and property with respect to actual or potential harm/damage.

7.3 Earthworks Summary

6,311m^3 of cut and fill is required over 31,939m^2 to facilitate the infrastructure needed for the proposed development.

8 Limitations

- This assessment contains the professional opinion of Chester Consultants as to the matters set out herein, in light of the information available to it during the preparation, using its professional judgement and acting in accordance with the standard of care and skill normally exercised by professional engineers providing similar services in similar circumstances. No other express or implied warranty is made as to the professional advice contained in this report.

- We have prepared this report in accordance with the brief as provided and our terms of engagement. The information contained in this report has been prepared by Chester Consultants at the request of He Korowai Trust and is exclusively for its client use and reliance. It is not possible to make a proper assessment of this assessment without a clear understanding of the terms of engagement under which it has been prepared, including the scope of the instructions and directions given to and the assumptions made by Chester Consultants Ltd. The assessment will not address issues which would need to be considered for another party if that party's particular circumstances, requirements and experience were known and, further, may make assumptions about matters of which a third party is not aware. No responsibility or liability to any third party is accepted for any loss or damage whatsoever arising out of the use of or reliance on this assessment by any third party.

- The assessment is also based on information that has been provided to Chester Consultants Ltd from other sources or by other parties. The assessment has been prepared strictly on the basis that the information that has been provided is accurate, completed, and adequate. To the extent that any information is inaccurate, incomplete or inadequate, Chester Consultants Ltd takes no responsibility and disclaims all liability whatsoever for any loss or damage that results from any conclusions based on information that has been provided to Chester Consultants Ltd.

9 Appendix

Appendix A

Site plan prepared by Ākau Studio


TEMPORARY HOLDING BAY FOR RELOCATED HOMES
CLASSROOM 2
CLASSROOM 1
WC
EXISTING STORAGE SHED WITH PARKING FOR MINIMUM 3 CARS
SETOUT POINT
MIN 1.5M WIDE PLANTING STRIP ALONG NORTHERN BOUNDARY
276° 45' 59" 156.26 m
PLAYGROUND
DISABLED
EXISTING HOUSE 10
EXISTING HOUSE 11
EXISTING HOUSE 12
EXISTING HOUSE 13
EXISTING HOUSE 14
EXISTING HOUSE 15
EXISTING HOUSE 16
EXISTING HOUSE 9
EXISTING HOUSE 8
EXISTING HOUSE 7
EXISTING HOUSE 6
EXISTING HOUSE 18
EXISTING HOUSE 5
EXISTING HOUSE 4
EXISTING HOUSE 3
EXISTING HOUSE 2
EXISTING HOUSE 1
EXISTING HOUSE 17
EX. FIRE HYDRANT
ONE-WAY ACCESS ROAD ALREADY CONSTRUCTED & MARKED
OPEN DRAIN
RURAL PRODUCTION ZONE
RESIDENTIAL ZONE
EXISTING SHED
WETLANDS
COMMUNAL GARDENS
23 KOHUHU STREET, KAITAIA
STAGE 3:
PROPOSED RELOCATED DWELLINGS: 24
EX. FIRE HYDRANT
NEW CARPARK - TBC BY SURVEY
EXISTING PRE-SCHOOL
Pre School Centre
PRELIMINARY ISSUE
79° 12' 04" 60.50 m
79° 12' 03" 40.70 m
79° 12' 04" 50.54 m
79° 14' 44" 37.00 m
79° 12' 03" 30.00 m
79° 12' 00" 20.11 m
79° 11' 38" 30.64 m

REV	DATE	DETAILS	INIT

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project
WHARE ORA STAGE 3
KOHUHU ST, KAITAIA

drawing
SITE PLAN

scale	1:400	date	OCT 2020 ©
drawn	FB	plot date	29/05/19
job number	17.06	dwg number	RC-000
issue	A		

Appendix B

Civil Design Drawings (Bound Separately)

Appendix C

Calculation Worksheets

STORMWATER CALCULATION SHEET

USING RATIONAL AND MANNING'S - ASSUMING 10min T.o.C AND FULL PIPE FLOW

SITE: Stage 3, 23 Kohuhu Street, Kaitaia
JOB #: 14235
DATE: 26.10.2020
AUTHOR: M Buhr

RAINFALL PROPERTIES

Intensity (I):	104	mm/hr
Return Period (ARI)	10	year

LINE A			Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
A7	-	A6	0.0500	0.0500	0.900	13.0	300	0.07069	0.942478	1.10	0.012	**1.55**	**109.9**	96.9
A6	-	A5	0.8576	0.9076	0.496	135.9	450	0.15904	1.413717	0.30	0.012	**1.06**	**169.2**	33.3
A5	-	A4	0.0450	0.9526	0.900	163.2	450	0.15904	1.413717	0.30	0.012	**1.06**	**169.2**	5.9
A4	-	A3	0.8999	1.8525	0.494	291.7	525	0.21648	1.649336	0.40	0.012	**1.36**	**294.7**	2.9
A3	-	A2	N/A - pond											
A2	-	A1	See HEC-HMS model outputs and the pond storage discharge function for capacity assessment											

LINE B			Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
B6	-	B5	0.0600	0.0600	0.900	15.6	225	0.03976	0.706858	0.50	0.012	**0.87**	**34.4**	18.8
B5	-	B4	0.0000	0.0600	0.000	15.6	225	0.03976	0.706858	0.50	0.012	**0.87**	**34.4**	18.8
B4	-	B3	0.9062	0.9662	0.467	165.3	450	0.15904	1.413717	0.40	0.012	**1.23**	**195.3**	30.0
B3	-	B2	N/A - pond											
B2	-	B1	See HEC-HMS model outputs and the pond storage discharge function for capacity assessment											

LINE C			Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
C2	-	C1	0.0450	0.0450	0.9	11.7	225	0.03976	0.706858	0.40	0.012	**0.77**	**30.8**	19.1
C1	-	B4	0.0000	0.0450	0.64	27.3	300	0.07069	0.942478	0.50	0.012	**1.05**	**74.4**	47.0

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STORMWATER CALCULATION SHEET

USING RATIONAL AND MANNING'S - ASSUMING 10min T.o.C AND FULL PIPE FLOW

LINE D	Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
D2 - D1	0.0450	0.0450	0.9	11.7	300	0.07069	0.942478	1.20	0.012	**1.62**	**114.8**	103.0

LINE E	Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
E1 - C1	0.0600	0.0600	0.9	15.6	300	0.07069	0.942478	1.20	0.012	**1.62**	**114.8**	99.1

LINE F	Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
F1 - A5	0.0600	0.0600	0.9	15.6	225	0.03976	0.706858	0.50	0.012	**0.87**	**34.4**	18.8

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EDV ORIFICE CALCULATION SHEET

SITE: Pond 1, 23 Kohuhu Street, Kaitaia
JOB #: 14235
DATE: 29.10.2020

Extended Detention Volume (EDV) and associated design calculations are in accordance with Chapter 5 of Auckland Regional Councils TP10

Pervious Runoff Volume, from HEC-HMS	75.00	m³	
Impervious Runoff Volume	308.00	m³	
Total EDV Volume	**383.00**	m³	
Flow rate over 24 hours	**0.00443**	m³/s	$Q_i = \frac{\text{EDV Volume}}{24 * 60 * 60}$
Average discharge over 12 hours (Q max)	**0.00887**	m³/s	$Q_{max} = 2Q_i$
Orifice diameter where Q < Q max	**74**	mm	
pond height based EDV volume (check HEC-HMS elevation storage function)	0.60	m	
Area of chosen orifice	**0.00430**	m²	$A = \frac{\pi d^2}{4}$
height of EDV storage excluding dead storage and half orifice diameter	**0.56**	m	
Q where chosen orifice diameter is used	**0.00886**	m³/s	$Q = 0.62A(2gh)^{0.5}$

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EDV ORIFICE CALCULATION SHEET

SITE: Pond 2, 23 Kohuhu Street, Kaitaia
JOB #: 14235
DATE: 29.10.2020

Extended Detention Volume (EDV) and associated design calculations are in accordance with Chapter 5 of Auckland Regional Councils TP10

Pervious Runoff Volume, from HEC-HMS	33.00	m³	
Impervious Runoff Volume	135.00	m³	
Total EDV Volume	**168.00**	m³	
Flow rate over 24 hours	**0.00194**	m³/s	$Q_i = \frac{\text{EDV Volume}}{24 * 60 * 60}$
Average discharge over 12 hours (Q max)	**0.00389**	m³/s	$Q_{max} = 2Q_i$
Orifice diameter where Q < Q max	**54**	mm	
pond height based EDV volume (check HEC-HMS elevation storage function)	0.40	m	
Area of chosen orifice	**0.00229**	m²	$A = \frac{\pi d^2}{4}$
height of EDV storage excluding dead storage and half orifice diameter	**0.37**	m	
Q where chosen orifice diameter is used	**0.00384**	m³/s	$Q = 0.62A(2gh)^{0.5}$

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POND ELEVATION STORAGE

SITE: POND 1 - 23 Kohuhu Street, Kaitaia
JOB #: 14235
DATE: 26.10.2020

Design calculations are in accordance with Chapter 5 of Auckland Regional Councils TP10

Outlet type	RL (m)	Width / Diameter	Side Slope Dist. (Z)
Orifice	9	0.074	
Box Weir	9.60	0.2	
Emergency Spillway	10.30	2	30

Outlet Pipe Peak Discharge(450@0.5%): 0.22 m3/s

Pond Elevation Storage Volume							Outlet Flow			Pond Flow	
RL (m)	Elevation (m)	Area (m2)	Ave. Area (m2)	Change in Depth (m)	Voulme (m3)	Cumulative Volume (m3)	Orifice (m3/s)	Box Weir (m3/s)	Total Q Through Outlet (m3/s)	Emergency Spillway (m3/s)	Total Q From Pond (m3/s)
9.00	0.00					0	0.00	0.00	0.00	0.00	0.00000
9.10	0.10					6	0.00	0.00	0.00	0.00	0.00374
9.20	0.20					13	0.01	0.00	0.01	0.00	0.00528
9.30	0.30					66	0.01	0.00	0.01	0.00	0.00647
9.40	0.40					169	0.01	0.00	0.01	0.00	0.00747
9.50	0.50					277	0.01	0.00	0.01	0.00	0.00835
9.60	0.60					390	0.01	0.00	0.01	0.00	0.00915
9.70	0.70					509	0.01	0.04	0.05	0.00	0.05415
9.80	0.80					633	0.01	0.13	0.14	0.00	0.13578
9.90	0.90					763	0.01	0.23	0.22	0.00	0.21800
10.00	1.00					899	0.01	0.35	0.22	0.00	0.21800
10.10	1.10					1041	0.01	0.49	0.22	0.00	0.21800
10.20	1.20					1189	0.01	0.65	0.22	0.00	0.21800
10.30	1.30					1343	0.01	0.82	0.22	0.00	0.21800
10.40	1.40					1422	0.01	1.00	0.22	0.23	0.45220
10.50	1.50					1423	0.01	1.20	0.22	1.02	1.24173
10.60	1.60					1424	0.01	1.40	0.22	2.54	2.76250

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POND ELEVATION STORAGE

SITE: POND 2 - 23 Kohuhu Street, Kaitaia
JOB #: 14235
DATE: 26.10.2020

Design calculations are in accordance with Chapter 5 of Auckland Regional Councils TP10

Outlet type	RL (m)	Width / Diameter	Side Slope Dist. (Z)
Orifice	10.5	0.054	
Box Weir	10.90	0.4	
Emergency Spillway	11.20	2	30

Outlet Pipe Peak Discharge(300@1%): 0.11 m3/s

Pond Elevation Storage Volume							Outlet Flow			Pond Flow	
RL (m)	Elevation (m)	Area (m2)	Ave. Area (m2)	Change in Depth (m)	Voulme (m3)	Cumulative Volume (m3)	Orifice (m3/s)	Box Weir (m3/s)	Total Q Through Outlet (m3/s)	Emergency Spillway (m3/s)	Total Q From Pond (m3/s)
10.50	0.00					0	0.00	0.00	0.00	0.00	0.00000
10.60	0.10					23	0.00	0.00	0.00	0.00	0.00199
10.70	0.20					68	0.00	0.00	0.00	0.00	0.00281
10.80	0.30					117	0.00	0.00	0.00	0.00	0.00344
10.90	0.40					169	0.00	0.00	0.00	0.00	0.00398
11.00	0.50					225	0.00	0.09	0.09	0.00	0.09299
11.10	0.60					284	0.00	0.25	0.11	0.00	0.10500
11.20	0.70					315	0.01	0.46	0.11	0.00	0.10500
11.30	0.80					366	0.01	0.71	0.11	0.23	0.33920
11.40	0.90					414	0.01	0.99	0.11	1.02	1.12873
11.50	1.00					462	0.01	1.30	0.11	2.54	2.64950

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Appendix D

HEC-HMS Outputs

Project: Kohuhu 23 Simulation Run: 2 YEAR

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: 29Oct2020, 13:20:38

Basin Model: Kohuhu Stage 3 SW Mitigation
Meteorologic Model: 2 Year ARI
Control Specifications: Control 1

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (1000 M3)
2 Post-Catchment 2	0.0090590	0.06086	01Jan2000, 12:10	0.46846
2 Post Impervious	0.0045295	0.06695	01Jan2000, 12:00	0.41678
2 Post Pervious	0.0045295	0.03578	01Jan2000, 12:00	0.21130
1 Post Pervious	0.0103065	0.08141	01Jan2000, 12:00	0.48081
1 Post Impervious	0.0103065	0.15234	01Jan2000, 12:00	0.94835
1 Detention Basin	0.0206130	0.06878	01Jan2000, 12:30	1.05921
1 Post-Catchment 1	0.0206130	0.06878	01Jan2000, 12:30	1.05921
2 Detention Basin	0.0090590	0.06086	01Jan2000, 12:10	0.46846
b) PostDev Sink	0.0296720	0.11942	01Jan2000, 12:10	1.52767
Catchment 2 - Pervious	0.0090590	0.07156	01Jan2000, 12:00	0.42261
Catchment 1 - Pervious	0.0206130	0.16282	01Jan2000, 12:00	0.96161
a) Permitted Baseline	0.0296720	0.23438	01Jan2000, 11:50	1.38422

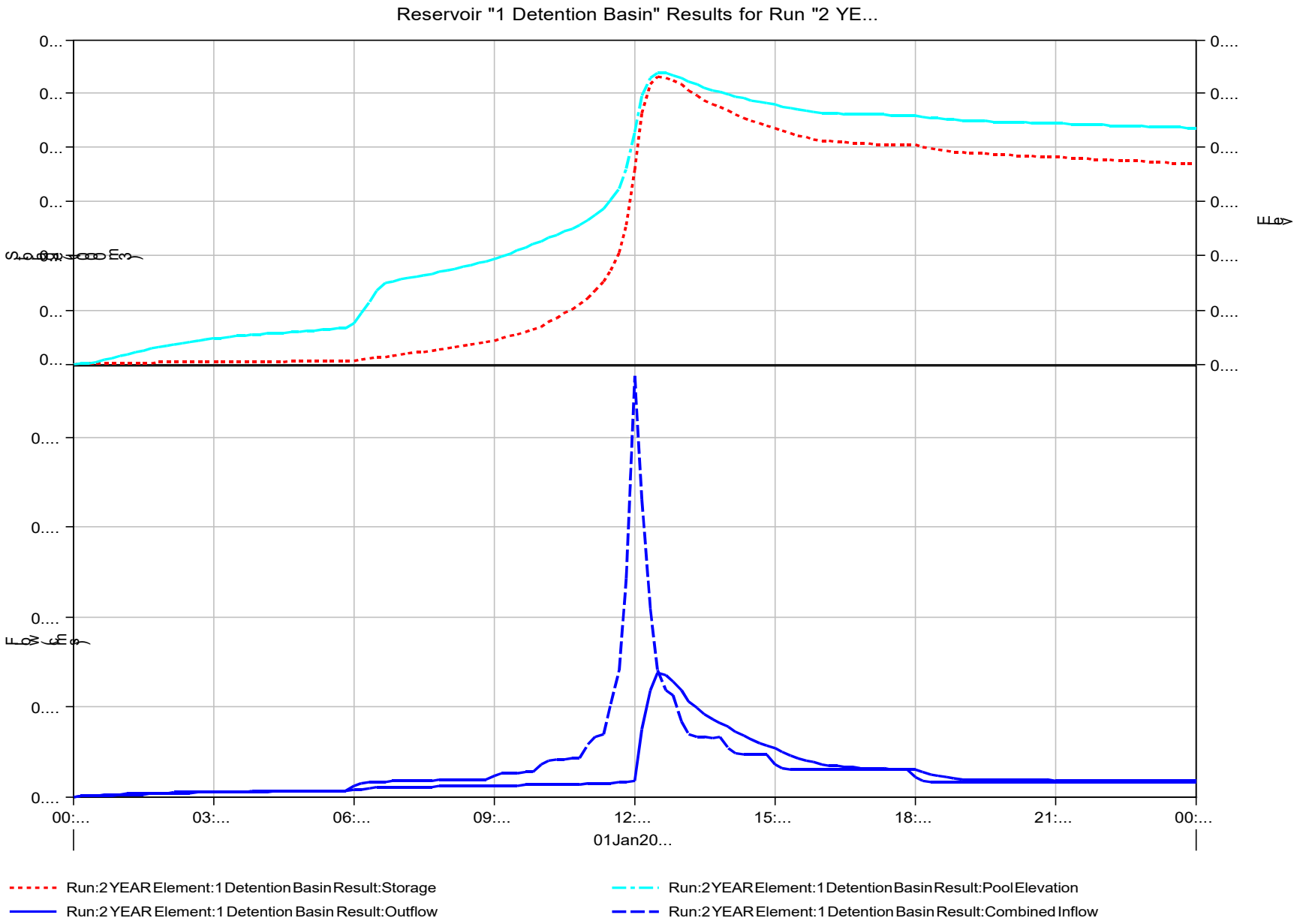
Project: Kohuhu 23 Simulation Run: 2 YEAR
Reservoir: 1 Detention Basin

Start of Run:	01Jan2000, 00:00	Basin Model:	Kohuhu Stage 3 SW Mitigation
End of Run:	02Jan2000, 00:00	Meteorologic Model:	2 Year ARI
Compute Time:	29Oct2020, 13:20:38	Control Specifications:	Control 1

Volume Units: 1000 M3

Computed Results

Peak Inflow:	0.23375 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 11:50
Peak Discharge:	0.06878 (M3/S)	Date/Time of Peak Discharge	01Jan2000, 12:30
Inflow Volume:	1.42913 (1000 M3)	Peak Storage:	0.53123 (1000 M3)
Discharge Volume	1.05921 (1000 M3)	Peak Elevation:	0.71793 (M)


Reservoir "1 Detention Basin" Results for Run "2 YE...
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
00:...
03:...
06:...
09:...
12:...
15:...
18:...
21:...
00:...
01Jan20...
Run:2 YEAR Element:1 Detention Basin Result:Storage
Run:2 YEAR Element:1 Detention Basin Result:Pool Elevation
Run:2 YEAR Element:1 Detention Basin Result:Outflow
Run:2 YEAR Element:1 Detention Basin Result:Combined Inflow

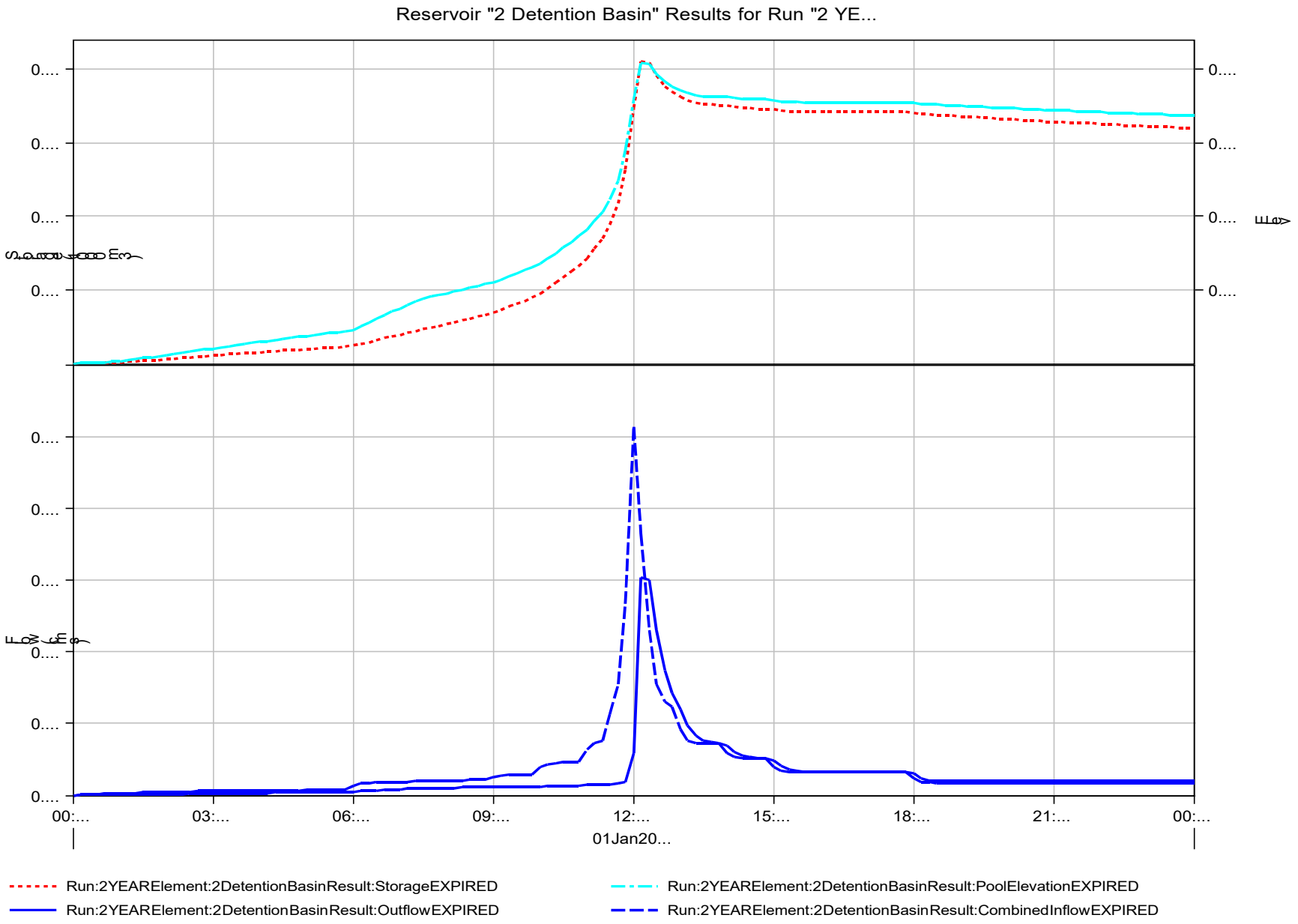
Project: Kohuhu 23 Simulation Run: 2 YEAR
Reservoir: 2 Detention Basin

Start of Run:	01Jan2000, 00:00	Basin Model:	Kohuhu Stage 3 SW Mitigation
End of Run:	02Jan2000, 00:00	Meteorologic Model:	2 Year ARI
Compute Time:	DATA CHANGED, RECOMPUTE	Control Specifications:	Control 1

Volume Units: 1000 M3

Computed Results

Peak Inflow:	0.10273 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 11:50
Peak Discharge:	0.06086 (M3/S)	Date/Time of Peak Discharge	01Jan2000, 12:10
Inflow Volume:	0.62807 (1000 M3)	Peak Storage:	0.20478 (1000 M3)
Discharge Volume	0.46846 (1000 M3)	Peak Elevation:	0.46390 (M)


Reservoir "2 Detention Basin" Results for Run "2 YE...
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
0....
00:...
03:...
06:...
09:...
12:...
15:...
18:...
21:...
00:...
01Jan20...
Run:2YEARElement:2DetentionBasinResult:StorageEXPIRED
Run:2YEARElement:2DetentionBasinResult:PoolElevationEXPIRED
Run:2YEARElement:2DetentionBasinResult:OutflowEXPIRED
Run:2YEARElement:2DetentionBasinResult:CombinedInflowEXPIRED

Project: Kohuhu 23 Simulation Run: 10 YEAR

Start of Run: 01Jan2000, 00:00 Basin Model: Kohuhu Stage 3 SW Mitigation
End of Run: 02Jan2000, 00:00 Meteorologic Model: 10 Year ARI
Compute Time: 29Oct2020, 13:20:38 Control Specifications: Control 1

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (1000 M3)
2 Post-Catchment 2	0.0090590	0.10202	01Jan2000, 12:10	0.90648
2 Post Impervious	0.0045295	0.10532	01Jan2000, 12:00	0.66391
2 Post Pervious	0.0045295	0.07103	01Jan2000, 12:00	0.41270
1 Post Pervious	0.0103065	0.16163	01Jan2000, 12:00	0.93907
1 Post Impervious	0.0103065	0.23964	01Jan2000, 12:00	1.51066
1 Detention Basin	0.0206130	0.21190	01Jan2000, 12:20	2.04921
1 Post-Catchment 1	0.0206130	0.21190	01Jan2000, 12:20	2.04921
2 Detention Basin	0.0090590	0.10202	01Jan2000, 12:10	0.90648
b) PostDev Sink	0.0296720	0.31386	01Jan2000, 12:10	2.95568
Catchment 2 - Pervious	0.0090590	0.14206	01Jan2000, 12:00	0.82541
Catchment 1 - Pervious	0.0206130	0.32325	01Jan2000, 12:00	1.87814
a) Permitted Baseline	0.0296720	0.46531	01Jan2000, 11:50	2.70355

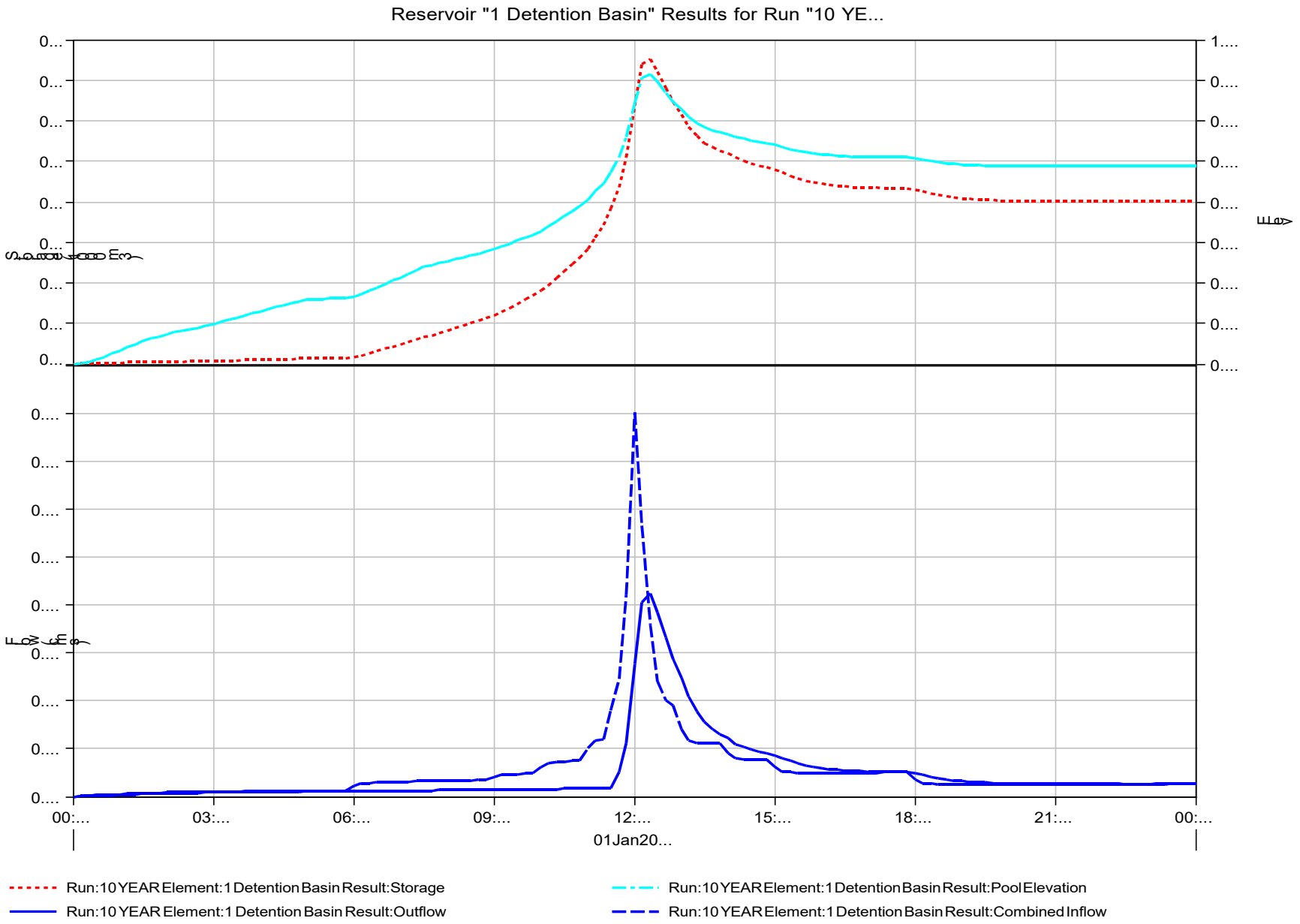
Project: Kohuhu 23 Simulation Run: 10 YEAR
Reservoir: 1 Detention Basin

Start of Run:	01Jan2000, 00:00	Basin Model:	Kohuhu Stage 3 SW Mitigation
End of Run:	02Jan2000, 00:00	Meteorologic Model:	10 Year ARI
Compute Time:	29Oct2020, 13:20:38	Control Specifications:	Control 1

Volume Units: 1000 M3

Computed Results

Peak Inflow:	0.40127 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 11:50
Peak Discharge:	0.21190 (M3/S)	Date/Time of Peak Discharge	01Jan2000, 12:20
Inflow Volume:	2.44966 (1000 M3)	Peak Storage:	0.75336 (1000 M3)
Discharge Volume	2.04921 (1000 M3)	Peak Elevation:	0.89259 (M)


Reservoir "1 Detention Basin" Results for Run "10 YE...
Storage (ac-ft)
Elev
Flow (cfs)
00:...
03:...
06:...
09:...
12:...
15:...
18:...
21:...
00:...
01Jan20...
Run:10 YEAR Element:1 Detention Basin Result:Storage
Run:10 YEAR Element:1 Detention Basin Result:Pool Elevation
Run:10 YEAR Element:1 Detention Basin Result:Outflow
Run:10 YEAR Element:1 Detention Basin Result:Combined Inflow

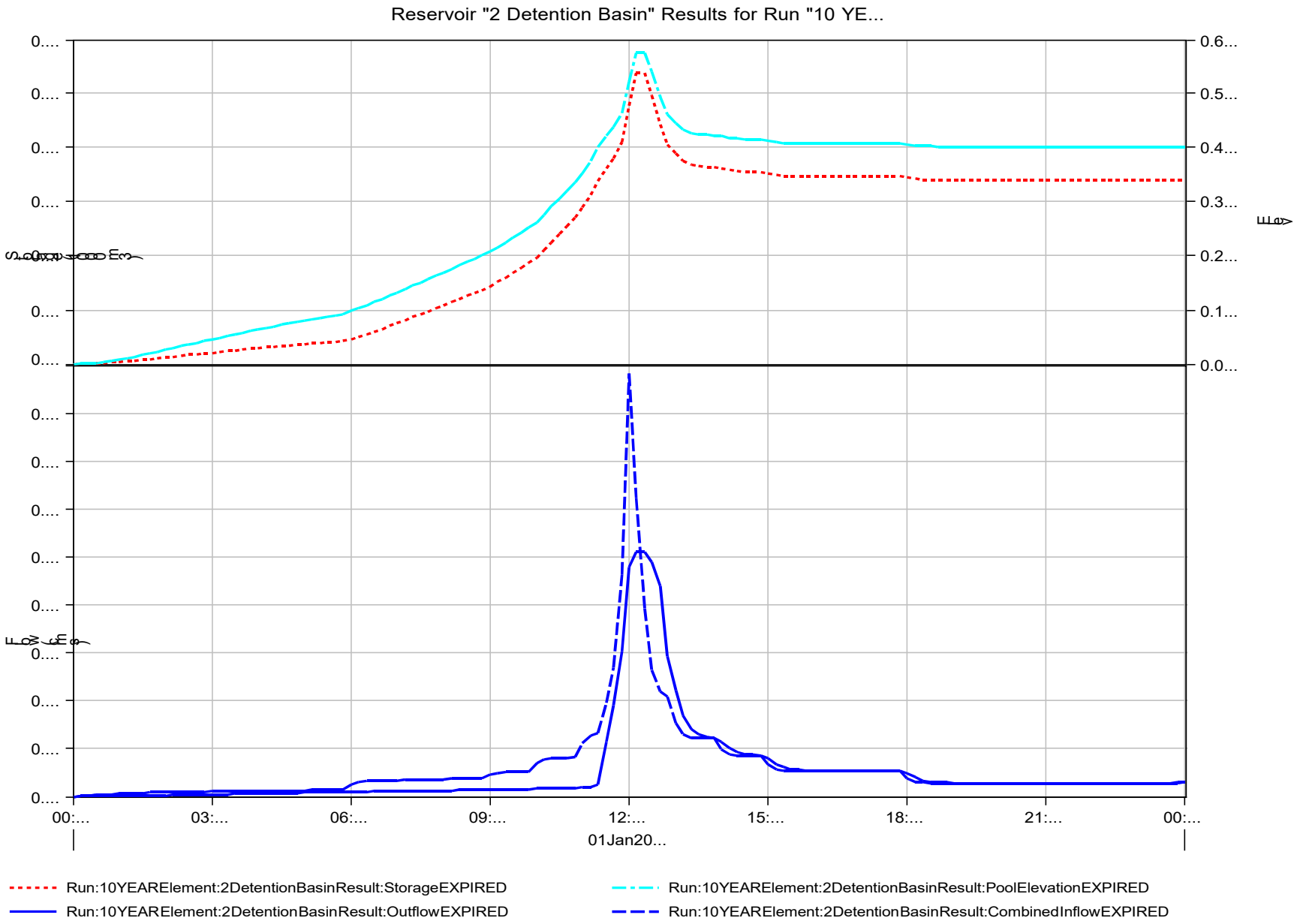
Project: Kohuhu 23 Simulation Run: 10 YEAR
Reservoir: 2 Detention Basin

Start of Run:	01Jan2000, 00:00	Basin Model:	Kohuhu Stage 3 SW Mitigation
End of Run:	02Jan2000, 00:00	Meteorologic Model:	10 Year ARI
Compute Time:	DATA CHANGED, RECOMPUTE	Control Specifications:	Control 1

Volume Units: 1000 M3

Computed Results

Peak Inflow:	0.17635 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 11:50
Peak Discharge:	0.10202 (M3/S)	Date/Time of Peak Discharge	01Jan2000, 12:10
Inflow Volume:	1.07658 (1000 M3)	Peak Storage:	0.26935 (1000 M3)
Discharge Volume	0.90648 (1000 M3)	Peak Elevation:	0.57517 (M)


Reservoir "2 Detention Basin" Results for Run "10 YE...
0....
0.6...
0.5...
0.4...
0.3...
0.2...
0.1...
0.0...
00:...
03:...
06:...
09:...
12:...
15:...
18:...
21:...
01Jan20...
Run:10YEARElement:2DetentionBasinResult:StorageEXPIRED
Run:10YEARElement:2DetentionBasinResult:PoolElevationEXPIRED
Run:10YEARElement:2DetentionBasinResult:OutflowEXPIRED
Run:10YEARElement:2DetentionBasinResult:CombinedInflowEXPIRED

Project: Kohuhu 23 Simulation Run: 100 YEAR

Start of Run: 01Jan2000, 00:00 Basin Model: Kohuhu Stage 3 SW Mitigation
End of Run: 02Jan2000, 00:00 Meteorologic Model: 100 Year ARI
Compute Time: 29Oct2020, 13:20:38 Control Specifications: Control 1

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (1000 M3)
2 Post-Catchment 2	0.0090590	0.26565	01Jan2000, 12:10	1.63144
2 Post Impervious	0.0045295	0.16465	01Jan2000, 12:00	1.04759
2 Post Pervious	0.0045295	0.13055	01Jan2000, 12:00	0.75622
1 Post Pervious	0.0103065	0.29706	01Jan2000, 12:00	1.72071
1 Post Impervious	0.0103065	0.37464	01Jan2000, 12:00	2.38371
1 Detention Basin	0.0206130	0.21800	01Jan2000, 12:00	3.68252
1 Post-Catchment 1	0.0206130	0.21800	01Jan2000, 12:00	3.68252
2 Detention Basin	0.0090590	0.26565	01Jan2000, 12:10	1.63144
b) PostDev Sink	0.0296720	0.48365	01Jan2000, 12:00	5.31393
Catchment 2 - Pervious	0.0090590	0.26110	01Jan2000, 12:00	1.51243
Catchment 1 - Pervious	0.0206130	0.59412	01Jan2000, 12:00	3.44141
a) Permitted Baseline	0.0296720	0.85523	01Jan2000, 11:50	4.95384

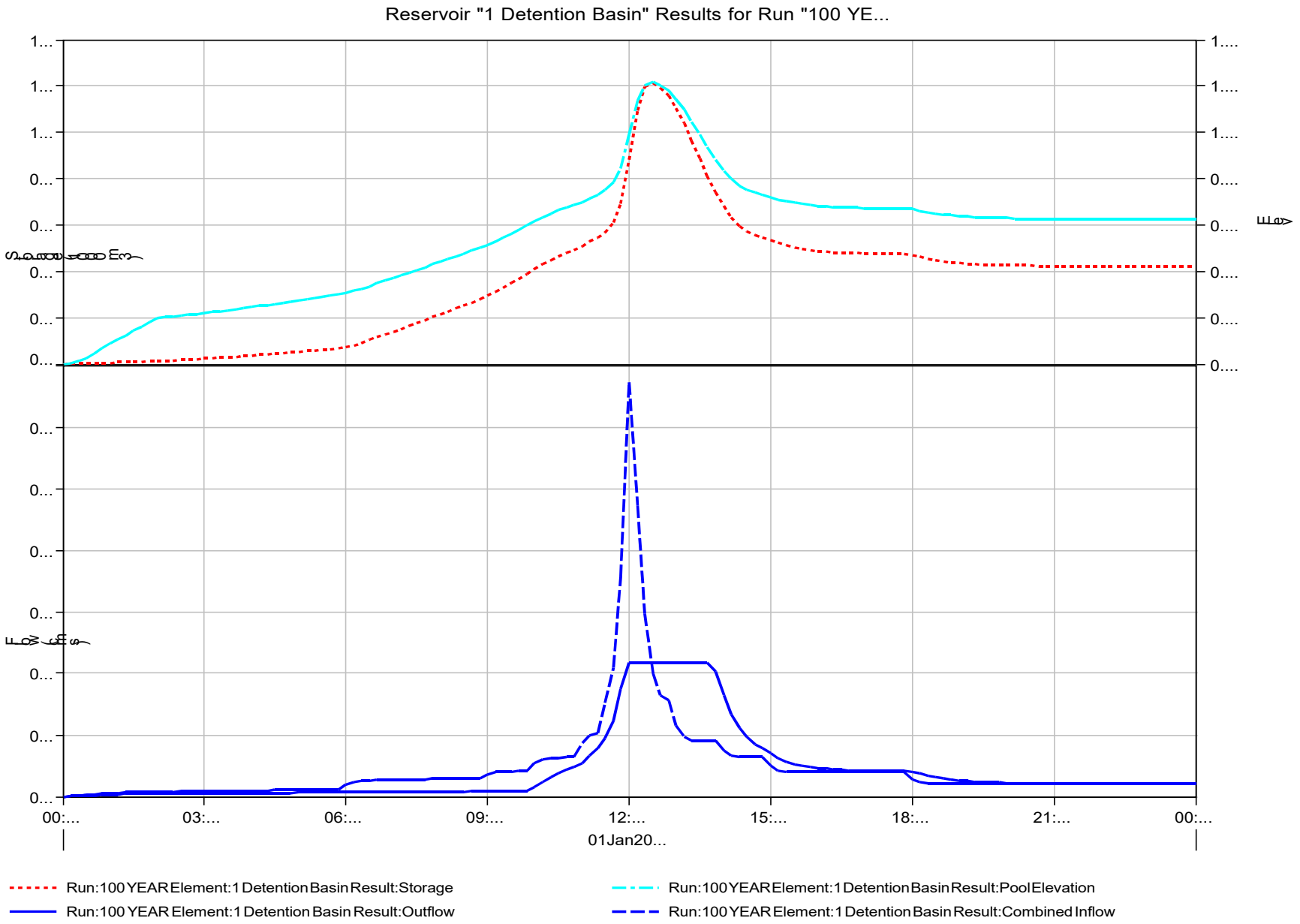
Project: Kohuhu 23 Simulation Run: 100 YEAR
Reservoir: 1 Detention Basin

Start of Run:	01Jan2000, 00:00	Basin Model:	Kohuhu Stage 3 SW Mitigation
End of Run:	02Jan2000, 00:00	Meteorologic Model:	100 Year ARI
Compute Time:	29Oct2020, 13:20:38	Control Specifications:	Control 1

Volume Units: 1000 M3

Computed Results

Peak Inflow:	0.67170 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 11:50
Peak Discharge:	0.21800 (M3/S)	Date/Time of Peak Discharge	01Jan2000, 12:00
Inflow Volume:	4.10425 (1000 M3)	Peak Storage:	1.21306 (1000 M3)
Discharge Volume	3.68252 (1000 M3)	Peak Elevation:	1.21562 (M)


Reservoir "1 Detention Basin" Results for Run "100 YE...
Storage (ac-ft)
Elev (ft)
Flows (cfs)
1....
0....
00:...
03:...
06:...
09:...
12:...
15:...
18:...
21:...
01Jan20...
Run:100 YEAR Element:1 Detention Basin Result:Storage
Run:100 YEAR Element:1 Detention Basin Result:Outflow
Run:100 YEAR Element:1 Detention Basin Result:Pool Elevation
Run:100 YEAR Element:1 Detention Basin Result:Combined Inflow

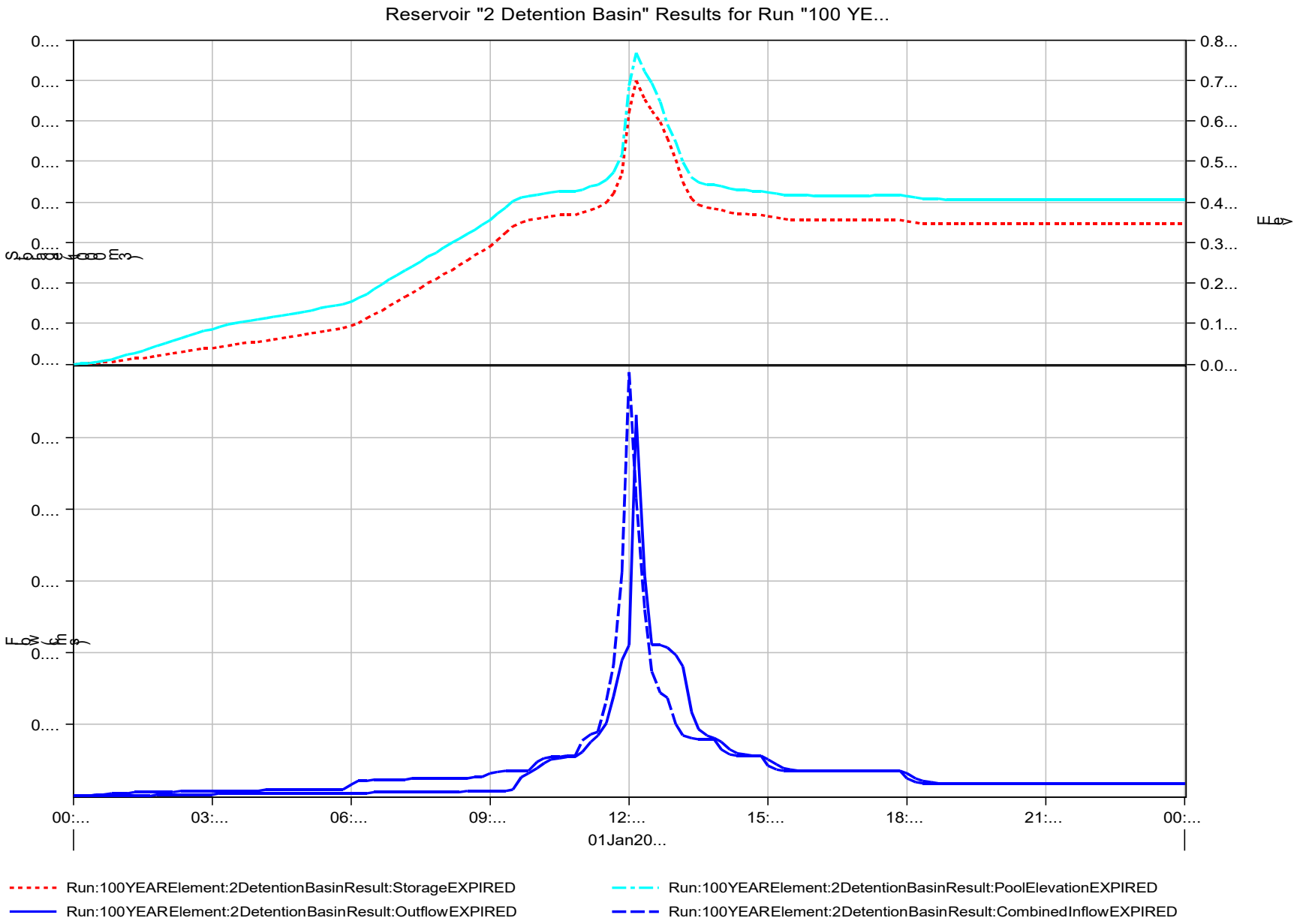
Project: Kohuhu 23 Simulation Run: 100 YEAR
Reservoir: 2 Detention Basin

Start of Run:	01Jan2000, 00:00	Basin Model:	Kohuhu Stage 3 SW Mitigation
End of Run:	02Jan2000, 00:00	Meteorologic Model:	100 Year ARI
Compute Time:	DATA CHANGED, RECOMPUTE	Control Specifications:	Control 1

Volume Units: 1000 M3

Computed Results

Peak Inflow:	0.29520 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 11:50
Peak Discharge:	0.26565 (M3/S)	Date/Time of Peak Discharge	01Jan2000, 12:10
Inflow Volume:	1.80373 (1000 M3)	Peak Storage:	0.35011 (1000 M3)
Discharge Volume	1.63144 (1000 M3)	Peak Elevation:	0.76860 (M)


Reservoir "2 Detention Basin" Results for Run "100 YE...
0....
0.8...
0.7...
0.6...
0.5...
0.4...
0.3...
0.2...
0.1...
0.0...
Elev
Storage
Flow
00:...
03:...
06:...
09:...
12:...
15:...
18:...
21:...
01Jan20...
Run:100YEARElement:2DetentionBasinResult:StorageEXPIRED
Run:100YEARElement:2DetentionBasinResult:PoolElevationEXPIRED
Run:100YEARElement:2DetentionBasinResult:OutflowEXPIRED
Run:100YEARElement:2DetentionBasinResult:CombinedInflowEXPIRED

Appendix E

Planning Assessment

Address	23 Kohuhu Street, Kaitaia
Subject	24 additional dwellings at site address
Rules being assessed	8.6.5.2.1, 12.3.6.1.1, 12.3.6.1.4, 12.3.6.2.3, 12.3.7,

Rule/ Parameter	Performance Standard	Engineering Comment
8.6.5.2.1 STORMWATER MANAGEMENT	The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 20%. In considering an application under this provision the Council will restrict the exercise of its control to: (a) the extent to which building site coverage and impermeable surfaces contribute to total catchment impermeability and the provisions of any catchment or drainage plan for that catchment; (b) the extent to which Low Impact Design principles have been used to reduce site impermeability; (c) any cumulative effects on total catchment impermeability; (d) the extent to which building site coverage and impermeable surfaces will alter the natural contour or drainage of the site or disturb the ground and alter its ability to absorb water; (e) the physical qualities of the soil type; (f) the availability of land for the disposal of effluent and stormwater on the site without adverse effects on the water quantity and water quality of water bodies (including groundwater and aquifers) or on adjacent sites; (g) the extent to which paved, impermeable surfaces are necessary for the proposed activity; (h) the extent to which landscaping and vegetation may reduce adverse effects of run-off; (i) the means and effectiveness of mitigating stormwater runoff to that expected by permitted activity threshold.	Total impervious site coverage is less than 20% a. At source flow attenuation is proposed to mitigate the impact of additional impervious area over the site b. Shared accessways and at source stormwater management has been implemented c. Effects have been mitigated by attenuating to flow rates less than or equal to pre-development levels for the 2, 10 and 100-year ARI rainfall event as well extended detention. d. At source stormwater management will ensure impacts on ground water absorption is minimised e. The proposed stormwater management devices are suitable for the site soil properties f. Stormwater is to be discharged in a controlled manner to the existing open channels around the site to which the catchment already discharges too. All wastewater is to be reticulated into the public network. g. The impermeable surfaces are required to facilitate the proposed development h. Planting within the ponds are recommended but not stipulated in the design i. The permitted activity requirements are met. However, given the nature of the activity being proposed, a controlled activity assessment was completed

12.3.6.1.1 EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RURAL PRODUCTION ZONE OR KAURI CLIFFS ZONE	Excavation and/or filling, excluding mining and quarrying, on any site in the Rural Production Zone or Kauri Cliffs Zone is permitted, provided that: (a) it does not exceed 5,000m3 in any 12 month period per site; and (b) it does not involve a continuous cut or filled face exceeding an average of 1.5m in height over the length of the face i.e. the maximum permitted average cut and fill height may be 3m.	a. Non-compliant – see 12.3.6.2.3 assessment below b. Noted and compliant
12.3.6.1.4 NATURE OF FILLING MATERIAL IN ALL ZONES	Filling in any zone shall meet the following standards: (a) the fill material shall not contain putrescible, pollutant, inflammable or hazardous components; and (b) the fill shall not consist of material other than soil, rock, stone, aggregate, gravel, sand, silt, or demolition material; and (c) the fill material shall not comprise more than 5% vegetation (by volume) of any load.	a. Noted. Imported fill is limited to the construction of roads and drainage needs b. Noted c. Noted
12.3.6.2.3 EXCAVATION AND FILLING, EXCLUDING MINING AND QUARRYING, IN THE RURAL PRODUCTION ZONE OR KAURI CLIFFS ZONE.	Excavation and/or filling, excluding mining and quarrying, on any site in the Rural Production Zone or Kauri Cliffs Zone is a restricted discretionary activity, provided that it does not exceed 20,000m3 in any 12 month period per site.	Noted – proposed earthworks volume is 13,961m³
12.3.7 ASSESSMENT CRITERIA	The matters set out in s104 and s105, and in Part II of the Act, apply to the consideration of all resource consents for land use activities. In addition to these matters, the Council shall also apply the relevant assessment matters set out below: (a) the degree to which the activity may cause or exacerbate erosion and/or other natural hazards on the site or in the vicinity of the site, particularly lakes, rivers, wetlands and the coastline; (b) any effects on the life supporting capacity of the soil; (c) any adverse effects on stormwater flow within the site, and stormwater flow to or from other properties in the vicinity of the site including public roads; (d) any reduction in water quality; (e) any loss of visual amenity or loss of natural character of the coastal environment;	a. At source stormwater management will minimise downstream erosion b. Beyond the impact of residential human habitation, no further detriment to soil life is expected c. The proposed development will enhance the current situation by alleviating neighbouring flooding, and stormwater from the proposed development is being managed via two stormwater ponds d. Beyond the impact of residential human habitation, no further detriment to water quality is expected e. Not applicable (N/A) f. N/A g. N/A

	(f) effects on Outstanding Landscape Features and Outstanding Natural Features (refer to Appendices 1A and 1B in Part 4, and Resource Maps); (g) the extent to which the activity may adversely affect areas of significant indigenous vegetation or significant habitats of indigenous fauna; (h) the extent to which the activity may adversely affect heritage resources, especially archaeological sites; (i) the extent to which the activity may adversely affect the cultural and spiritual values of Maori, especially Sites of Cultural Significance to Maori and waahi tapu (as listed in Appendix 1F in Part 4, and shown on the Resource Maps); (j) any cumulative adverse effects on the environment arising from the activity; (k) the effectiveness of any proposals to avoid, remedy or mitigate any adverse effects arising from the activity; (l) the ability to monitor the activity and to take remedial action if necessary; (m) the criteria in Section 11.20 Development Plans in Part 2. (n) the criteria (p) in Section 17.2.7 National Grid Yard.	h. N/A i. See AEE by other j. Beyond the impact of residential human habitation, no further detriment to the environment is expected k. The nature of the activity has informed the site layout and is considered the best practical outcome to minimise any adverse effects that may arise l. Due to the nature of the activity being proposed, infrastructure operation and maintenance is required, and in doing so remedial action can be taken where needed m. N/A n. N/A

Address	23 Kohuhu Street, Kaitaia
Subject	24 additional dwellings at site address
Rules being assessed	C.6.4.2, C.8.3.2

Rule/ Parameter	Performance Standard	Engineering Comment
C.6.4.2 Other stormwater discharges – permitted activity	The diversion and discharge of stormwater into water or onto or into land where it may enter water from an impervious area or by way of a stormwater collection system, is a permitted activity, provided: 1) the discharge or diversion is not from: a) a public stormwater network, or b) a high-risk industrial or trade premises, and 2) the diversion and discharge does not cause or increase flooding of land on another property in a storm event of up to and including a 10 percent annual exceedance probability, or flooding of buildings on another property in a storm event of up to and including a one percent annual exceedance probability, and 3) where the diversion or discharge is from a hazardous substance storage or handling area: a) the stormwater collection system is designed and operated to prevent hazardous substances stored or used on the site from entering the stormwater system, or b) there is a secondary containment system in place to intercept any spillage of hazardous substances and either discharges that spillage to a trade waste system or stores it for removal and treatment, or c) if the stormwater contains oil contaminants, the stormwater is passed through a stormwater treatment system designed in accordance with the Environmental Guidelines for Water Discharges from Petroleum Industry Sites in New Zealand (Ministry for the Environment, 1998) prior to discharge, and 4) where the diversion or discharge is from an industrial or trade premises: a) the stormwater collection system is designed and operated to prevent any contaminants stored or used on the site, other than those already controlled by condition 3) above, from entering stormwater unless the stormwater is discharged through a stormwater treatment system, and	Total impervious site coverage is less than 20% 1. Stormwater discharge is not from public stormwater network or high-risk industrial premise. 2. Peak flow mitigation is proposed for the 2yr, 10yr and 100yr design storms. 3. Not applicable 4. Not applicable 5. Not our knowledge 6. Riprap is proposed at the outlet for erosion protection. 7. Not applicable 8. Given the nature of the proposed activity and the BPO stormwater mitigation and management provision proposed we are of the opinion that the discharge will not cause any of these affects.

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Level 1, Chester Building, 28 The Warehouse Way, Northcote, Auckland 0627
PO Box 34405, Auckland 0746

	b) any process water or liquid waste stream on the site is bunded, or otherwise contained, within an area of sufficient capacity to provide secondary containment equivalent to 100 percent of the quantity of any process water or liquid waste that has the potential to spill into a stormwater collection system, in order to prevent trade waste entering the stormwater collection system, and 5) the diversion or discharge is not into potentially contaminated land, or onto potentially contaminated land that is not covered by an impervious area, and 6) the diversion and discharge does not cause permanent scouring or erosion of the bed of a water body at the point of discharge, and 7) the discharge does not contain more than 15 milligrams per litre of total petroleum hydrocarbons, and 8) the discharge does not cause any of the following effects in the receiving waters beyond the zone of reasonable mixing: a) the production of conspicuous oil or grease films, scums or foams, of floatable or suspended materials, or b) a conspicuous change in the colour or visual clarity, or c) an emission of objectionable odour, or d) the rendering of fresh water unsuitable for consumption by farm animals. For the avoidance of doubt this rule covers the following RMA activities: • Diversion of stormwater (s14(2)). • Discharge of stormwater into water or onto or into land where it may enter water from an impervious area or by way of a stormwater collection system (s15(1)).	
C.8.3.2 Earthworks – controlled activity	Earthworks outside the bed of a river or lake, wetland and the coastal marine area that exceed 5000 square metres of exposed earth at any time at a particular location or associated with a project area, and any associated damming and diversion of stormwater and discharge of stormwater onto or into land where it may enter water, are controlled activities, provided the earthworks are not located: 1) within 10 metres of a natural wetland, the bed of a continually or intermittently flowing river or lake, or 2) in a catchment of an outstanding lake, or 3) on erosion-prone land, or	1. Earthworks are not proposed within 10m of a classified natural wetland or bed of a continually or intermittently flowing river or lake. 2. The site is not within the catchment of an outstanding lake. 3. The site is not on erosion-prone land. 4. The proposed activity proposes more than 1000m^3 of earthworks within a flood hazard therefore the activity is considered **discretionary**. The proposed earthworks will not reduce the flood

	4) in a flood hazard or high-risk flood hazard area, or 5) in the coastal riparian and foredune management area. Matters of control: 1) The design and adequacy of erosion and sediment control measures with reference to good management practice guidelines, equivalent to those set out in the Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016 (Auckland Council Guideline Document GD2016/005). 2) The location, extent, timing, and duration of earthworks. 3) The adequacy of site rehabilitation and revegetation measures to control erosion and sediment discharges. 4) Adverse effects on water bodies and coastal water. 5) Management of flooding effects and avoiding increased natural hazard risks on other property. 6) Adverse effects on regionally significant infrastructure. 7) Adverse effects on the following, where present in adjacent fresh waterbodies or the coastal marine area: a) wāhi tapu, and b) the identified values of mapped Sites and Areas of Significance to tangata whenua (refer I Maps |Ngā mahere matawhenua). For the avoidance of doubt this rule covers the following RMA activities: • Earthworks (s9(2)). • Damming and diversion of stormwater associated with earthworks (s14(2)). • Discharge of stormwater associated with earthworks into water or onto or into land where it may enter water (s15(1)).	storage volume of the site and drainage channels are proposed such to manage and improve localised flooding issues. 5. The site is not located within the coastal and foredune management area. Matters of Control 1. Erosion and sediment control measures are proposed in accordance with Auckland Council Guideline Document GD2016/005. 2. Earthworks will be confined to the site and are anticipated to be completed during the 2020 2021 earthworks season. 3. Topsoil will be reinstated, and grass seeded with lawn. Some other areas will be landscaped. 4. Best practice erosion and sediment control measures are proposed and the works are to be completed during the earthworks season. In or opinion there will be no adverse effects on water body's or coastal water. 5. Localised frequent flooding will be manged by drainage channels and improved by the development. Wider flooding effects from the Awanui river and its natural hazard risk will not be increased because the proposed earthworks does not reduce the storage volume of the site. 6. No regionally significant infrastructure will be affected by the works. 7. In our opinion the development will not have adverse effects on wāhi tapu or mapped Sites and Areas of Significance to tangata whenua.

DRAWING SCHEDULE - 23 KOHUHU STREET, KAITAIA

CIVIL ENGINEERING DRAWINGS

	REVISION DATE	21.09.2020									
SHEET	TITLE	REVISION									
001	DRAWING SCHEDULE	0									
100	EXISTING SITE PLAN	0									
101	PROPOSED SITE PLAN	0									
200	EARTHWORKS PLAN	0									
201	CUT FILL PLAN	0									
210	EROSION AND SEDIMENT CONTROL PLAN	0									
220	EARTHWORKS PROFILE VIEWS - C-C. F-F. I-I	0									
221	EARTHWORKS PROFILE VIEWS - 3-3, 6-6, 10-10	0									
300	RETAINING WALL PLAN	0									
400	STORMWATER LAYOUT PLAN - 1 OF 2	0									
401	STORMWATER LAYOUT PLAN - 2 OF 2	0									
402	STORMWATER MITIGATION PLAN	0									
420	STORMWATER DETAILS - POND DETAIL	0									
430	STORMWATER CATCHMENT PLAN	0									
500	WASTEWATER LAYOUT PLAN	0									
520	WASTEWATER DETAILS - STORAGE TANK DETAIL	0									
600	WATER SUPPLY LAYOUT PLAN	0									
700	ROADING PLAN OVERVIEW	0									
701	ROADING PLAN 1 OF 4	0									
702	ROADING PLAN 2 OF 4	0									
703	ROADING PLAN 3 OF 4	0									
704	ROADING PLAN 4 OF 4	0									
710	LOOP ROAD ALIGNMENT	0									
711	LOOP ROAD PROFILE VIEW	0									
720	ROADING TYPICAL DETAILS	0									
730	VEHICLE TRACKING - B85 VEHICLE	0									
731	VEHICLE TRACKING - LARGE RIGID TRUCK	0									

CIVIL DESIGN - WHARE ORA STAGE 3
HE KOROWAI TRUST
23 KOHUHU STREET, KAITAIA

REV	DATE	AMENDMENTS

Design: M BUHR
Date: 21.09.2020
Check: N JULL
Job No: 14235

Job Title: CIVIL DESIGN - WHARE ORA STAGE 3
Client: HE KOROWAI TRUST
Address: 23 KOHUHU STREET, KAITAIA
Drawing Title: DRAWING SCHEDULE

Drawing No: 001
Revision No: 0
Scale: N/A
Issued for: RC

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THREE WATERS LEGEND	
EX. SW PIPE	
EX. WW PIPE	
EX. SWMH	
EX. WWMH	
CONNECTION DIRECTION	N,NE,E,SE,S,SW,W,NW
EX. WS PIPE	
ALL MEASUREMENTS IN METRES	

GENERAL NOTES:

1. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED AGAINST THE SITE DRAWINGS PRIOR TO COMMENCING WORK
2. ANY VARIATIONS OR DISCREPANCIES ARE TO BE REFERRED TO CHESTER CONSULTANTS LTD FOR RESOLUTION
3. ALL SERVICES ARE TO BE LOCATED AND FLAGGED PRIOR TO COMMENCING WORK ON SITE
4. WORKS TO BE IN ACCORDANCE WITH TERRITORIAL AUTHORITY STANDARDS, AND THE NEW ZEALAND BUILDING CODE.
5. THE CONTRACTOR IS TO OBTAIN ALL NECESSARY CONSENTS AND PERMITS FOR WORKS ON, IN, AND AROUND EXISTING SERVICES, ASSETS, AND THE ROAD AND ROAD RESERVE.

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	EXISTING SITE PLAN
Drawing No:	100
Revision No:	0
Scale:	1:500 @ A1
Issued for:	RC

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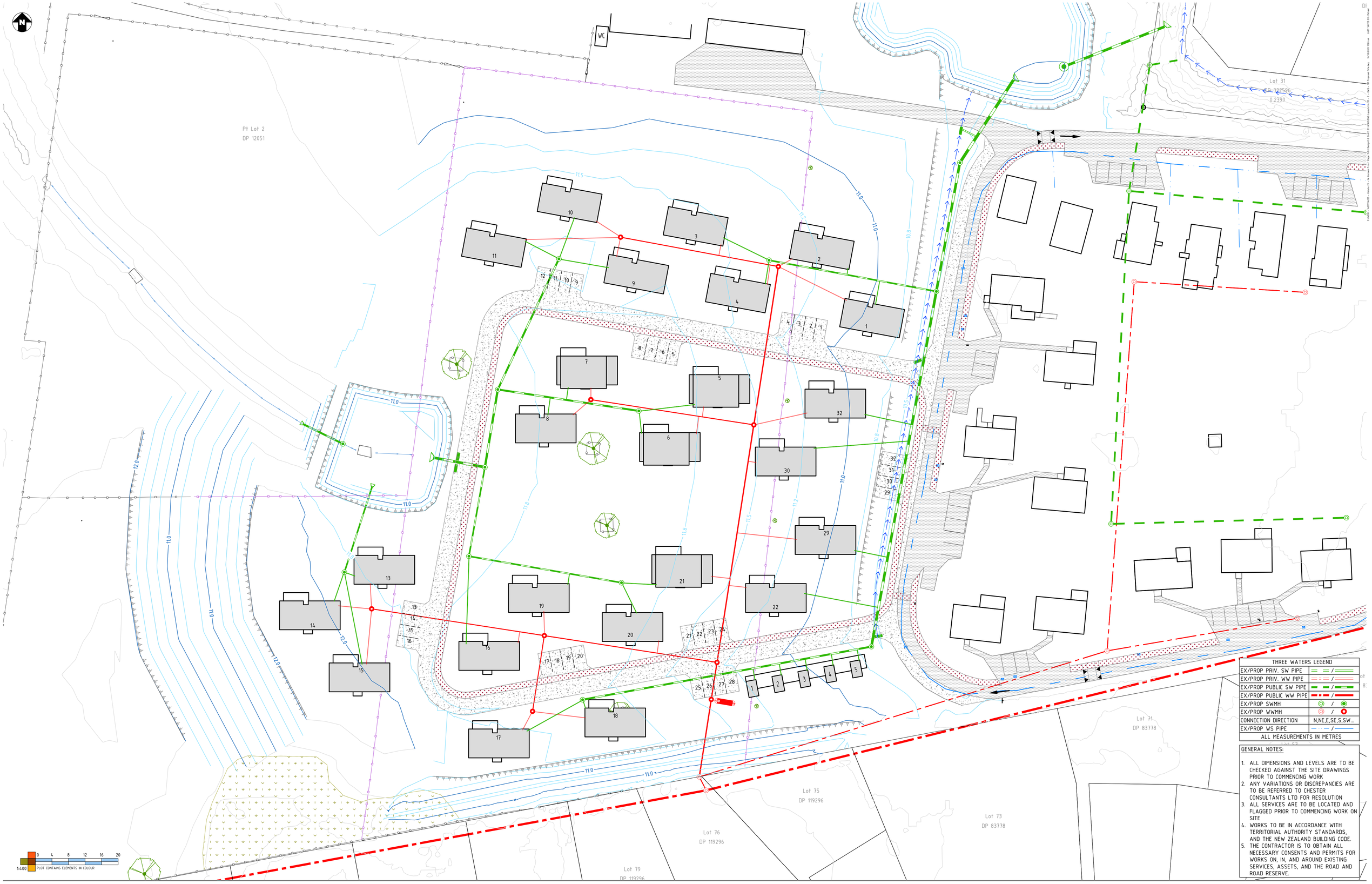

THREE WATERS LEGEND	
EX/PROP PRIV. SW PIPE	/
EX/PROP PRIV. WW PIPE	/
EX/PROP PUBLIC SW PIPE	/
EX/PROP PUBLIC WW PIPE	/
EX/PROP SWMH	/
EX/PROP WWMH	/
CONNECTION DIRECTION	N,NE,E,SE,S,SW...
EX/PROP WS PIPE	/
ALL MEASUREMENTS IN METRES	

GENERAL NOTES:

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5. THE CONTRACTOR IS TO OBTAIN ALL NECESSARY CONSENTS AND PERMITS FOR WORKS ON, IN, AND AROUND EXISTING SERVICES, ASSETS, AND THE ROAD AND ROAD RESERVE.

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	PROPOSED SITE PLAN
Drawing No:	101
Revision No:	0
Scale:	1:400 @ A1
Issued for:	RC

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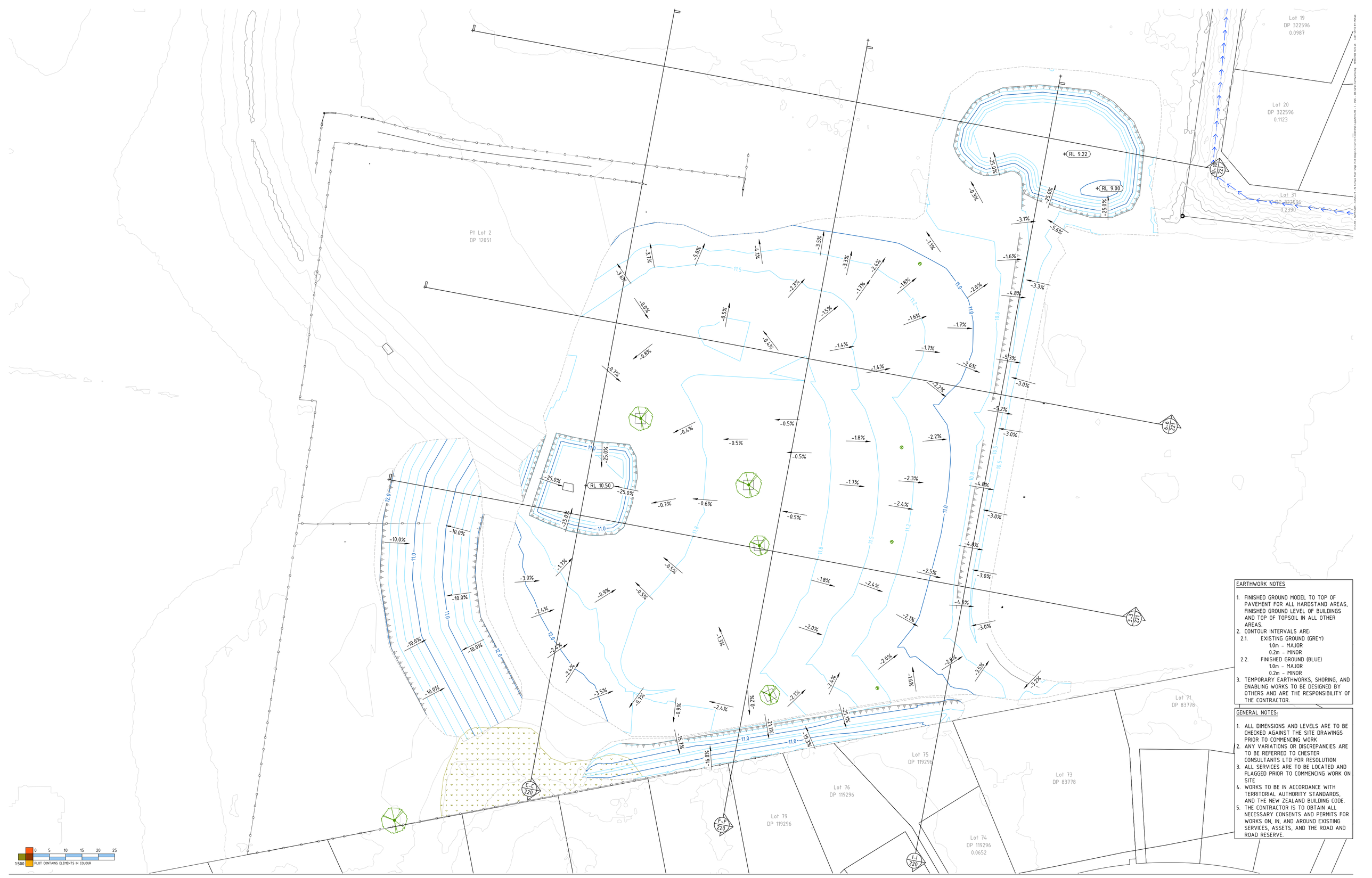

EARTHWORK NOTES

1. FINISHED GROUND MODEL TO TOP OF PAVEMENT FOR ALL HARDSTAND AREAS, FINISHED GROUND LEVEL OF BUILDINGS AND TOP OF TOPSOIL IN ALL OTHER AREAS.
2. CONTOUR INTERVALS ARE:
   - 2.1. EXISTING GROUND (GREY)
     - 1.0m - MAJOR
     - 0.2m - MINOR
   - 2.2. FINISHED GROUND (BLUE)
     - 1.0m - MAJOR
     - 0.2m - MINOR
3. TEMPORARY EARTHWORKS, SHORING, AND ENABLING WORKS TO BE DESIGNED BY OTHERS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

GENERAL NOTES:

1. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED AGAINST THE SITE DRAWINGS PRIOR TO COMMENCING WORK
2. ANY VARIATIONS OR DISCREPANCIES ARE TO BE REFERRED TO CHESTER CONSULTANTS LTD FOR RESOLUTION
3. ALL SERVICES ARE TO BE LOCATED AND FLAGGED PRIOR TO COMMENCING WORK ON SITE
4. WORKS TO BE IN ACCORDANCE WITH TERRITORIAL AUTHORITY STANDARDS, AND THE NEW ZEALAND BUILDING CODE.
5. THE CONTRACTOR IS TO OBTAIN ALL NECESSARY CONSENTS AND PERMITS FOR WORKS ON, IN, AND AROUND EXISTING SERVICES, ASSETS, AND THE ROAD AND ROAD RESERVE.

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	EARTHWORKS PLAN
Drawing No:	200
Revision No:	0
Scale:	1:500 @ A1
Issued for:	RC

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CUT/FILL DEPTHS TABLE			
NUMBER	LOWER RANGE (m)	UPPER RANGE (m)	COLOUR
1	-2.00	-1.50	
2	-1.50	-1.00	
3	-1.00	-0.50	
4	-0.50	0.00	
5	0.00	0.50	
6	0.50	1.00	
7	1.00	1.50	

CUT / FILL NOTES

1. CUT TO FILL VOLUMES ARE FROM EXISTING GROUND INCLUDING TOP SOIL TO FINAL GROUND INCLUDING TOPSOIL PAVEMENT AND TO FINISHED FLOOR LEVEL.
2. NO BULKING FACTORS HAVE BEEN USED IN THE VOLUME ESTIMATION.

GENERAL NOTES:

1. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED AGAINST THE SITE DRAWINGS PRIOR TO COMMENCING WORK
2. ANY VARIATIONS OR DISCREPANCIES ARE TO BE REFERRED TO CHESTER CONSULTANTS LTD FOR RESOLUTION
3. ALL SERVICES ARE TO BE LOCATED AND FLAGGED PRIOR TO COMMENCING WORK ON SITE
4. WORKS TO BE IN ACCORDANCE WITH TERRITORIAL AUTHORITY STANDARDS, AND THE NEW ZEALAND BUILDING CODE.
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Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
EXISTING GROUND TO FINISHED GROUND	1.000	1.000	31939sq.m	6311 Cu. M.	3640 Cu. M.	2671 Cu. M.<Cut>
Totals				6311 Cu. M.	3640 Cu. M.	2671 Cu. M.<Cut>

ACTUAL VOLUME OF STRIPPED TOPSOIL MAY VARY BASED ON GEOTECHNICAL INVESTIGATIONS AND ACTUAL SITE CONDITIONS. EXCESS CUT TO BE PLACED ELSEWHERE ON SITE AND ACCOUNTS FOR POTENTIAL OF STRIKING UNSUITABLE MATERIAL. EARTHWORKS TO BALANCE AS MUCH AS IS PRACTICAL TO MINIMISE FLOOD RISK IMPACT FROM GREATER AWANUI CATCHMENT

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	CUT FILL PLAN
Drawing No:	201
Revision No:	0
Scale:	1:500 @ A1
Issued for:	RC

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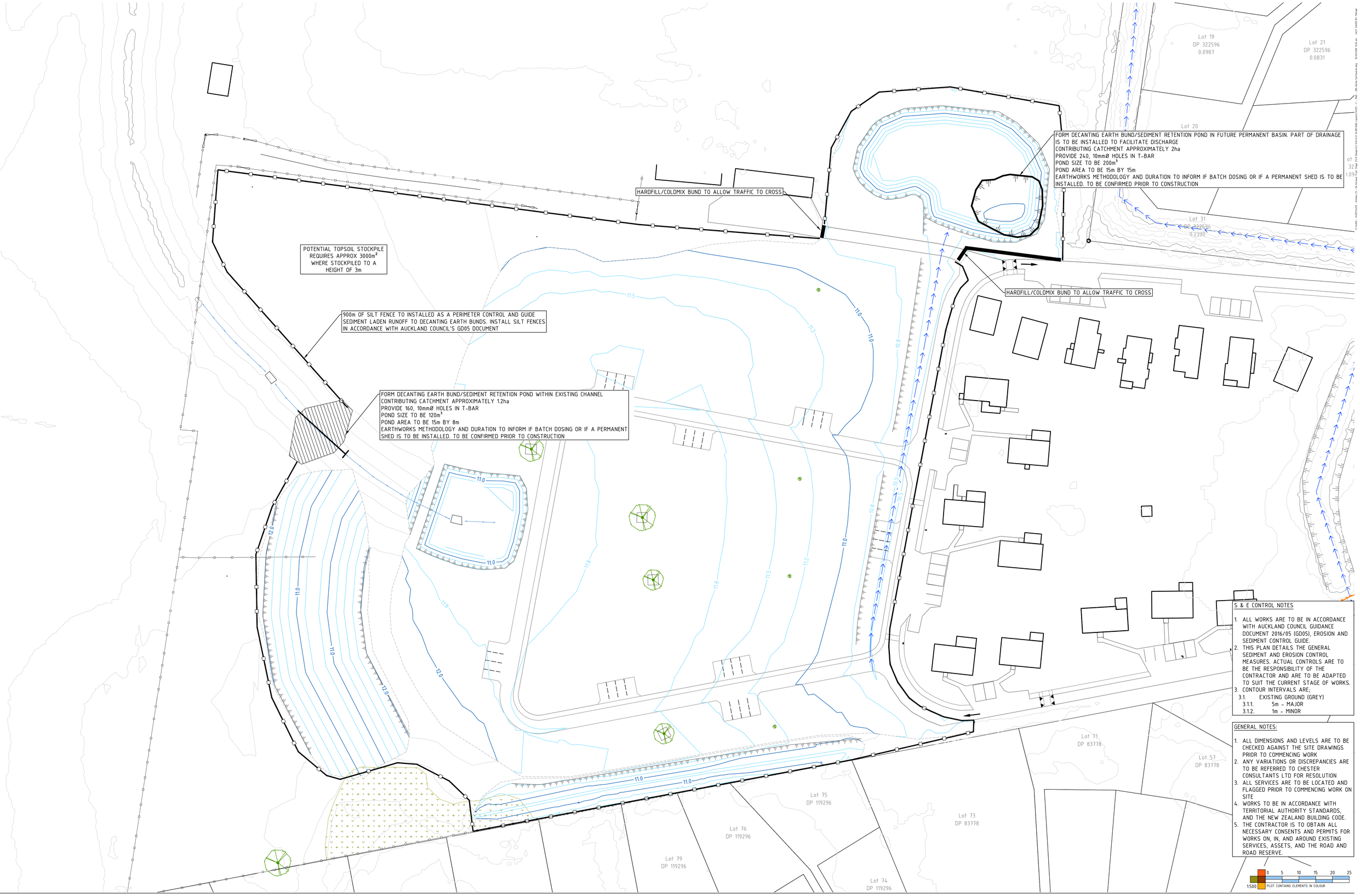

S & E CONTROL NOTES

1. ALL WORKS ARE TO BE IN ACCORDANCE WITH AUCKLAND COUNCIL GUIDANCE DOCUMENT 2016/05 (GD05), EROSION AND SEDIMENT CONTROL GUIDE.
2. THIS PLAN DETAILS THE GENERAL SEDIMENT AND EROSION CONTROL MEASURES. ACTUAL CONTROLS ARE TO BE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE TO BE ADAPTED TO SUIT THE CURRENT STAGE OF WORKS.
3. CONTOUR INTERVALS ARE;
   - 3.1. EXISTING GROUND (GREY)
     - 3.1.1. 5m - MAJOR
     - 3.1.2. 1m - MINOR

GENERAL NOTES:

1. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED AGAINST THE SITE DRAWINGS PRIOR TO COMMENCING WORK
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3. ALL SERVICES ARE TO BE LOCATED AND FLAGGED PRIOR TO COMMENCING WORK ON SITE
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1:500 0 5 10 15 20 25 PLOT CONTAINS ELEMENTS IN COLOUR

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	EROSION AND SEDIMENT CONTROL PLAN
Drawing No:	210
Revision No:	0
Scale:	1:500 @ A1
Issued for:	RC

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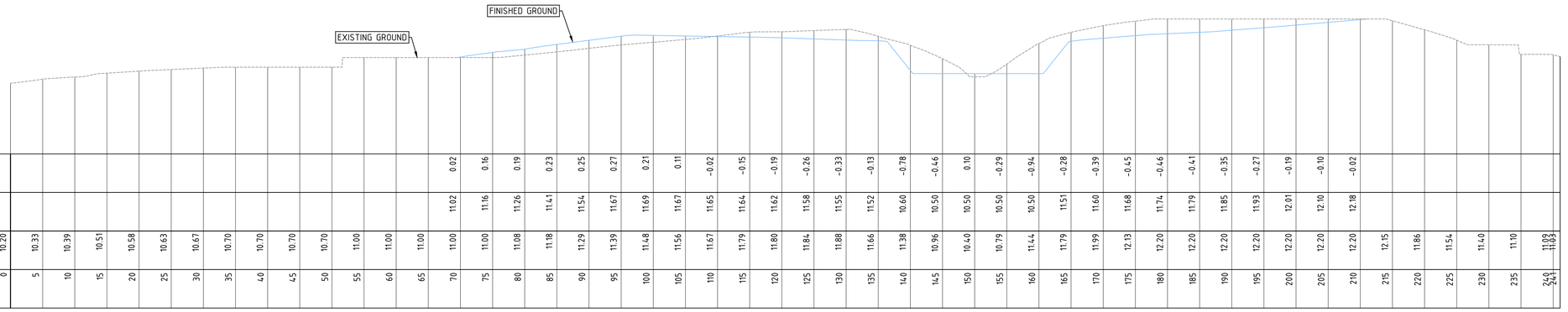

EW SECTION C-C
VE: 5x
DATUM: 8.00
CH: 0-241

CUT/FILL DEPTHS															0.02	0.16	0.19	0.23	0.25	0.27	0.21	0.11	-0.02	-0.15
DESIGN LEVELS															11.02	11.16	11.26	11.41	11.54	11.67	11.69	11.67	11.65	11.64
EXISTING LEVELS	10.20	10.33	10.39	10.51	10.58	10.63	10.67	10.70	10.70	10.70	10.70	11.00	11.00	11.00	11.00	11.00	11.08	11.18	11.29	11.39	11.48	11.56	11.67	11.79
CHAINAGE	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115

CUT/FILL DEPTHS	-0.19	-0.26	-0.33	-0.13	-0.78	-0.46	0.10	-0.29	-0.94	-0.28	-0.39	-0.45	-0.46	-0.41	-0.35	-0.27	-0.19	-0.10	-0.02							
DESIGN LEVELS	11.62	11.58	11.55	11.52	10.60	10.50	10.50	10.50	10.50	11.51	11.60	11.68	11.74	11.79	11.85	11.93	12.01	12.10	12.18							
EXISTING LEVELS	11.80	11.84	11.88	11.66	11.38	10.96	10.40	10.79	11.44	11.79	11.99	12.13	12.20	12.20	12.20	12.20	12.20	12.20	12.20	12.15	11.86	11.54	11.40	11.10	11.09	11.03
CHAINAGE	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	241

EW SECTION F-F
VE: 5x
DATUM: 8.00
CH: 0-241

CUT/FILL DEPTHS													0.12	0.28	0.42	0.50	0.56	0.60	0.55	0.52	0.53	0.50	0.49	0.46
DESIGN LEVELS													11.01	11.18	11.33	11.43	11.54	11.62	11.65	11.69	11.75	11.78	11.83	11.89
EXISTING LEVELS	10.80	10.85	10.87	10.82	10.86	10.51	10.65	10.98	10.62	10.60	10.60	10.91	10.89	10.90	10.91	10.94	10.98	11.02	11.09	11.17	11.21	11.27	11.33	11.43
CHAINAGE	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115

CUT/FILL DEPTHS	0.38	0.29	0.21	0.14	0.08	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.10	0.08	0.04	0.04	0.03	0.01	-0.14	-0.99	-0.08				
DESIGN LEVELS	11.89	11.89	11.88	11.88	11.88	11.87	11.87	11.87	11.87	11.88	11.88	11.88	11.89	11.90	11.88	11.84	11.84	11.83	11.81	11.66	10.73	11.51				
EXISTING LEVELS	11.51	11.59	11.67	11.74	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.73	11.59	11.49	11.52	12.10	12.15
CHAINAGE	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	241

EW SECTION I-I
VE: 5x
DATUM: 6.00
CH: 0-241

CUT/FILL DEPTHS	-0.02	-0.47	-1.44	-1.49	-1.53	-1.46	-1.35	-1.09	-0.20	-0.37	-0.24	0.03	0.12	0.07	0.08	0.05	0.06	0.08	0.10	0.07	0.04	0.08	0.08	-0.01
DESIGN LEVELS	10.65	10.14	9.24	9.21	9.21	9.23	9.25	9.51	10.40	10.43	10.48	10.50	10.51	10.51	10.52	10.52	10.54	10.56	10.56	10.57	10.57	10.58	10.57	10.56
EXISTING LEVELS	10.68	10.60	10.68	10.70	10.74	10.69	10.60	10.60	10.60	10.80	10.72	10.47	10.39	10.44	10.43	10.47	10.48	10.48	10.46	10.50	10.54	10.50	10.49	10.57
CHAINAGE	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115

CUT/FILL DEPTHS	0.02	-0.03	-0.07	-0.16	-0.24	-0.23	-0.21	-0.22	-0.26	-0.30	-0.25	-0.19	-0.26	-0.22	-0.10	-0.10	0.21									
DESIGN LEVELS	10.56	10.56	10.57	10.57	10.57	10.57	10.57	10.58	10.59	10.62	10.68	10.73	10.82	10.92	11.02	10.98	10.83									
EXISTING LEVELS	10.54	10.59	10.63	10.73	10.82	10.80	10.78	10.79	10.85	10.92	10.93	10.93	11.08	11.14	11.12	11.08	10.61	10.97	11.12	11.26	11.36	11.52	11.60	11.60	11.60	11.60
CHAINAGE	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	241

GENERAL NOTES:

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REV	DATE	AMENDMENTS

Design: M BUHR
Date: 21.09.2020
Check: N JULL
Job No: 14235

Job Title: CIVIL DESIGN - WHARE ORA STAGE 3
Client: HE KOROWAI TRUST
Address: 23 KOHUHU STREET, KAITAIA
Drawing Title: EARTHWORKS PROFILE VIEWS - C-C. F-F. I-I

Drawing No: 220
Revision No: 0
Scale: 1:400 @ A1
Issued for: RC

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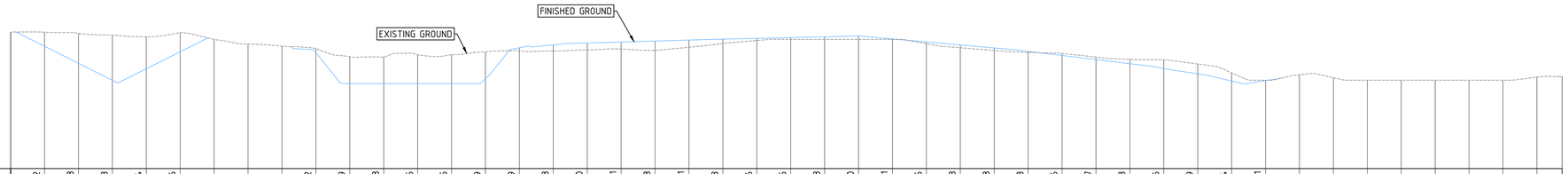
E:\14200 - 14299\14235 - Kohuhu 23 - He Korowai Trust Stage 3\3.0 Design\3.2 Civil\3.2.1 ACAD\DWG Layouts\14235 - C - DWG - 200-Series Earthworks.dwg 10/30/2020 12:26 am LAST SAVED BY: Michael



EW SECTION 3-3
VE: 5x
DATUM: 8.00
CH: 0-229

CUT/FILL DEPTHS		−0.42	−0.88	−1.33	−0.94	−0.56				−0.12	−0.79	−0.78	−0.85	−0.85	−0.79	0.09	0.18	0.20	0.21	0.28	0.21	0.13	0.06	0.05	0.08
DESIGN LEVELS		11.60	11.10	10.60	10.94	11.44				11.41	10.50	10.50	10.50	10.50	10.64	11.55	11.64	11.69	11.72	11.75	11.78	11.81	11.83	11.85	11.88
EXISTING LEVELS	12.02	12.01	11.98	11.92	11.87	12.00	11.80	11.67	11.60	11.53	11.29	11.28	11.35	11.35	11.44	11.46	11.46	11.49	11.52	11.47	11.57	11.68	11.77	11.80	11.80
CHAINAGE	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120

CUT/FILL DEPTHS	0.10	0.01	0.05	0.08	0.08	0.03	−0.06	−0.07	−0.13	−0.26	−0.29	−0.24	−0.01									
DESIGN LEVELS	11.90	11.81	11.73	11.64	11.55	11.45	11.33	11.21	11.08	10.94	10.79	10.57	10.59									
EXISTING LEVELS	11.80	11.80	11.67	11.55	11.47	11.42	11.39	11.28	11.21	11.20	11.08	10.82	10.60	10.76	10.67	10.60	10.60	10.60	10.60	10.60	10.69	10.70
CHAINAGE	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	229

EW SECTION 6-6
VE: 5x
DATUM: 8.00
CH: 0-229

CUT/FILL DEPTHS											0.05	0.19	0.22	0.24	0.30	0.35	0.40	0.48	0.56	0.58	0.52	0.51	0.49	0.50	0.53
DESIGN LEVELS											11.53	11.65	11.69	11.69	11.70	11.70	11.70	11.74	11.77	11.78	11.72	11.72	11.73	11.74	11.73
EXISTING LEVELS	12.00	12.00	11.95	11.90	11.84	11.79	11.73	11.68	11.61	11.54	11.48	11.46	11.47	11.45	11.40	11.35	11.30	11.25	11.20	11.20	11.21	11.22	11.24	11.24	11.20
CHAINAGE	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120

CUT/FILL DEPTHS	0.45	0.45	0.45	0.46	0.46	0.45	0.39	0.32	0.28	0.21	0.14	0.04	0.06									
DESIGN LEVELS	11.64	11.56	11.49	11.43	11.36	11.28	11.19	11.09	11.01	10.90	10.78	10.56	10.58									
EXISTING LEVELS	11.18	11.11	11.04	10.97	10.91	10.84	10.80	10.76	10.72	10.69	10.64	10.52	10.53	10.75	10.79	10.79	10.58	10.52	10.56	10.60	10.60	10.62
CHAINAGE	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	229

EW SECTION 10-10
VE: 5x
DATUM: 6.00
CH: 0-229

CUT/FILL DEPTHS																									
DESIGN LEVELS																									
EXISTING LEVELS	10.56	10.51	10.46	10.43	10.44	10.48	10.49	10.48	10.49	10.53	10.55	10.56	10.57	10.57	10.53	10.50	10.50	10.50	10.50	10.50	10.54	10.58	10.49	10.56	10.90
CHAINAGE	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120

CUT/FILL DEPTHS						−0.30	−0.91	−1.57	−1.65	−1.60	−1.50	−1.49	−1.49	−1.53	−1.49	−1.47	−1.26	−0.17				
DESIGN LEVELS						10.60	9.86	9.24	9.20	9.21	9.21	9.21	9.20	9.20	9.22	9.23	9.54	10.64				
EXISTING LEVELS	10.95	10.78	10.89	10.88	10.97	10.90	10.77	10.80	10.86	10.81	10.71	10.70	10.69	10.73	10.71	10.70	10.80	10.80	10.77	10.35	9.68	9.16
CHAINAGE	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	229

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REV	DATE	AMENDMENTS

Design: M BUHR
Date: 21.09.2020
Check: N JULL
Job No: 14235

Job Title: CIVIL DESIGN - WHARE ORA STAGE 3
Client: HE KOROWAI TRUST
Address: 23 KOHUHU STREET, KAITAIA
Drawing Title: EARTHWORKS PROFILE VIEWS - 3-3, 6-6, 10-10

Drawing No: 221
Revision No: 0
Scale: 1:400 @ A1
Issued for: RC

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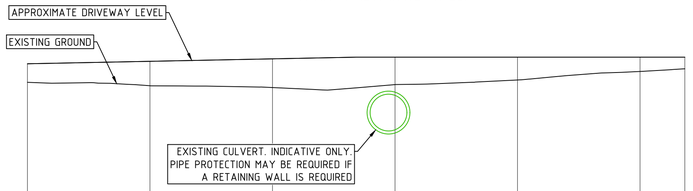
E:\14200 - 14299\14235 - Kohuhu 23 - He Korowai Trust Stage 3\3.0 Design\3.2 Civil\3.2.1 ACAD\DWG Layouts\14235 - C - DWG - 200-Series Earthworks.dwg 10/30/2020 12:26 am LAST SAVED BY: Michael

NOTE: SITE CONDITIONS MAY ALLOW FOR A BATTER SLOPE TO BE CONSTRUCTED RATHER THAN A RETAINING WALL.



RETAINING WALL-1
DATUM: 8.00

RETAINED HEIGHT	0.30	0.40	0.47	0.45	0.37	0.23	0.19
TOP OF WALL LEVELS	10.99	11.03	11.07	11.10	11.10	11.10	11.10
EXISTING LEVELS	10.69	10.63	10.60	10.65	10.73	10.87	10.91
CHAINAGE	0	2	4	6	8	10	11

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REV	DATE	AMENDMENTS

Design: M BUHR
Date: 21.09.2020
Check: N JULL
Job No: 14235

Job Title: CIVIL DESIGN - WHARE ORA STAGE 3
Client: HE KOROWAI TRUST
Address: 23 KOHUHU STREET, KAITAIA
Drawing Title: RETAINING WALL PLAN

Drawing No: 300
Revision No: 0
Scale: 1:50 @ A1
Issued for: RC

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SWMH-C1
PROP. PUBLIC SWMH
1050mmØ
LL: 11.71m
IL In: 10.83 (NE)
IL In: 10.82 (E)
IL Out: 10.75 (S)

DETENTION POND DESIGNED TO ATTENUATE EDV, 2, 10 AND 100-YEAR RAINFALL EVENTS. PLANTING IS RECOMMENDED AND TO BE SPECIFIED BY OTHERS

33.78m 0.5%
300mmØ RCRRJ

DOUBLE SWCP-B2
LL: 11.56m

10.07m 1.0%
300mmØ RCRRJ

-25.0%

SW OUTLET-B3
600-SERIES PRECAST WINGWALL
IL In: 10.50 (E)

RL 10.38

SW OUTLET-B1
300-SERIES PRECAST WINGWALL
IL In: 10.39 (SE)

18.2
420

POND 2

RL 10.50

SWMH-B2
PROP. PUBLIC SWMH
1050mmØ
LL: 10.83m
IL Out: 10.50 (NW)

11.82m 0.4%
450mmØ RCRRJ

SW OUTLET-D1
600-SERIES PRECAST WINGWALL
IL In: 10.50 (S)

DOUBLE SWCP-B1
LL: 11.56m

225mmØ RCRRJ
21.11m 1.0%

SWMH-D2
PROP. PUBLIC SWMH
1050mmØ
LL: 11.80m
IL Out: 10.72 (N)

17.98m 0.5%
375mmØ RCRRJ

SWMH-B4
PROP. PUBLIC SWMH
1050mmØ
LL: 11.67m
IL In: 10.78 (S)
IL In: 10.66 (N)
IL Out: 10.55 (W)

225mmØ RCRRJ
20.78m 0.5%

SWMH-B5
PROP. PUBLIC SWMH
1050mmØ
LL: 11.72m
IL In: 10.88 (E)
IL Out: 10.89 (N)

33.42m 0.5%
300mmØ RCRRJ

SWMH-E1
PROP. PUBLIC SWMH
1050mmØ
LL: 11.87m
IL Out: 11.00 (W)

SWMH-B6
PROP. PUBLIC SWMH
1050mmØ
LL: 11.89m
IL Out: 11.06 (W)

36.38m 0.5%
225mmØ RCRRJ

SWMH-A7
PROP. PUBLIC SWMH
1050mmØ
LL: 11.84m
IL Out: 10.58 (E)

69.93m 1.2%
300mmØ RCRRJ

SWMH-A6
PROP. PUBLIC SWMH
1050mmØ
LL: 10.60m
IL In: 9.74 (W)
IL Out: 9.58 (N)

DOUBLE SWCP-A3
LL: 10.50m

DOUBLE SWCP-A2
LL: 10.48m

SWMH-A5
PROP. PUBLIC SWMH
1050mmØ
LL: 10.49m
IL In: 9.32 (S)
IL In: 9.56 (W)
IL Out: 9.30 (N)

86.18m 0.3%
450mmØ RCRRJ

Lot 75
DP 119296

Lot 76
DP 119296

1:250 0 2.5 5 7.5 10 12.5
PLOT CONTAINS ELEMENTS IN COLOUR

THREE WATERS LEGEND	
EX/PROP PRIV. SW PIPE	
EX/PROP PRIV. WW PIPE	
EX/PROP PUBLIC SW PIPE	
EX/PROP PUBLIC WW PIPE	
EX/PROP SWMH	
EX/PROP WWMH	
CONNECTION DIRECTION	N,NE,E,SE,S,SW...
EX/PROP WS PIPE	
ALL MEASUREMENTS IN METRES	

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REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235

Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	STORMWATER LAYOUT PLAN - 1 OF 2

Drawing No:	400
Revision No:	0
Scale:	1:250 @ A1
Issued for:	RC

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DETENTION POND DESIGNED TO ATTENUATE EDV, 2, 10 AND 100-YEAR RAINFALL EVENTS. PLANTING IS RECOMMENDED AND TO BE SPECIFIED BY OTHERS

POND 1

RL 9.20

RL 9.00

18.2
420

SW OUTLET - A1
600-SERIES PRECAST WINGWALL
IL In: 8.87 (W)

SWMH-A2
PROP. PUBLIC SWMH
2050mmØ
LL: 10.38m
IL Out: 9.00 (E)

25.13m 0.5%
450mmØ RCRRJ

SW OUTLET - A3
600-SERIES PRECAST WINGWALL
IL In: 9.04 (SW)

MATHEWS OUTFALL

DOUBLE SWCP-A1
LL: 10.41m

23.28m 0.4%
525mmØ RCRRJ

SWMH-A4
PROP. PUBLIC SWMH
1050mmØ
LL: 10.45m
IL In: 9.21 (S)
IL Out: 9.14 (NE)

30.57m 0.3%
450mmØ RCRRJ

SWMH-A5
PROP. PUBLIC SWMH
1050mmØ
LL: 10.49m
IL In: 9.32 (S)
IL In: 9.56 (W)
IL Out: 9.30 (N)

N55
PROP. PUBLIC SWMH
1050mmØ
LL: 11.39m
IL Out: 9.76 (E)

SWMH-C2
PROP. PUBLIC SWMH
1050mmØ
LL: 11.76m
IL Out: 11.00 (SW)

40.06m 0.5%
225mmØ RCRRJ

33.39m 0.5%
300mmØ RCRRJ

SWMH-C1
PROP. PUBLIC SWMH
1050mmØ
LL: 11.71m
IL In: 10.83 (NE)
IL In: 10.82 (E)
IL Out: 10.75 (S)

33.42m 0.5%
300mmØ RCRRJ

DOUBLE SWCP-A2
LL: 10.48m

DOUBLE SWCP-B2
LL: 11.56m

11.98m 0.5%
375mmØ RCRRJ

SWMH-E1
PROP. PUBLIC SWMH
1050mmØ
LL: 11.87m
IL Out: 11.00 (W)

WC

Lot 2
DP 3225
0.1123

THREE WATERS LEGEND	
EX/PROP PRIV. SW PIPE	/
EX/PROP PRIV. WW PIPE	/
EX/PROP PUBLIC SW PIPE	/
EX/PROP PUBLIC WW PIPE	/
EX/PROP SWMH	/
EX/PROP WWMH	/
CONNECTION DIRECTION	N,NE,E,SE,S,SW...
EX/PROP WS PIPE	/
ALL MEASUREMENTS IN METRES	

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REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235

Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	STORMWATER LAYOUT PLAN - 2 OF 2

Drawing No:	401
Revision No:	0
Scale:	1:250 @ A1
Issued for:	RC

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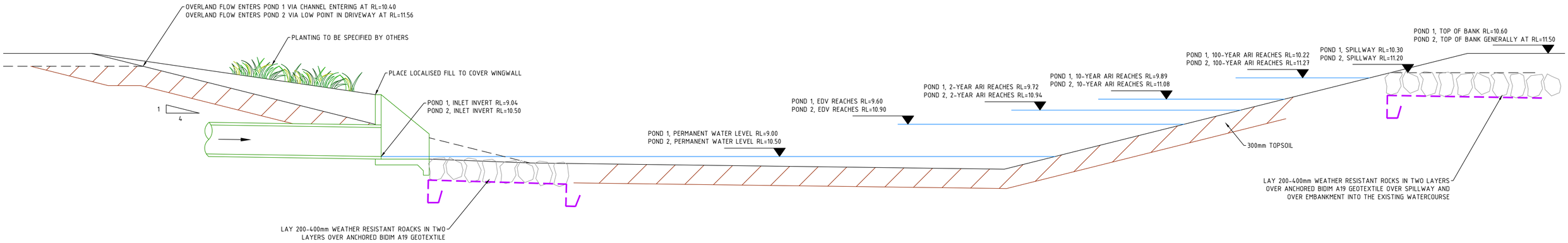
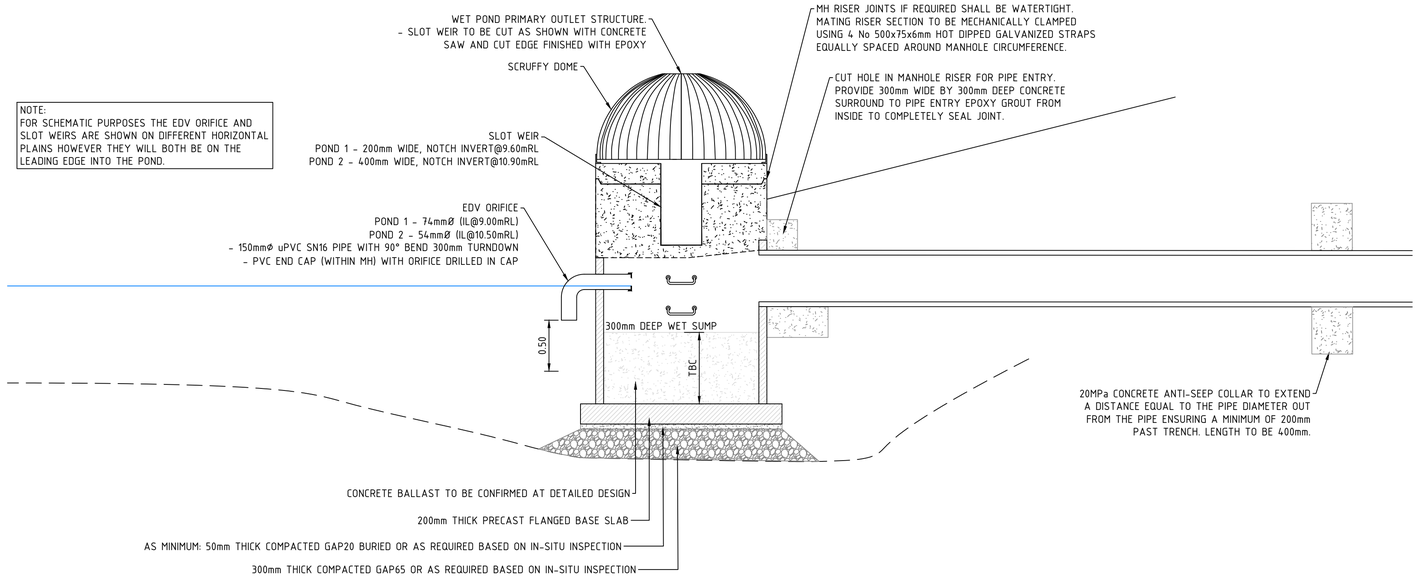


01 / 400 TYPICAL SECTION THROUGH DETENTION PONDS
NTS



02 / 400 TYPICAL OUTLET STRUCTURE DETAIL
NTS

GENERAL NOTES:

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REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	STORMWATER DETAILS - POND DETAIL
Drawing No:	420
Revision No:	0
Scale:	1:30 @ A1
Issued for:	RC

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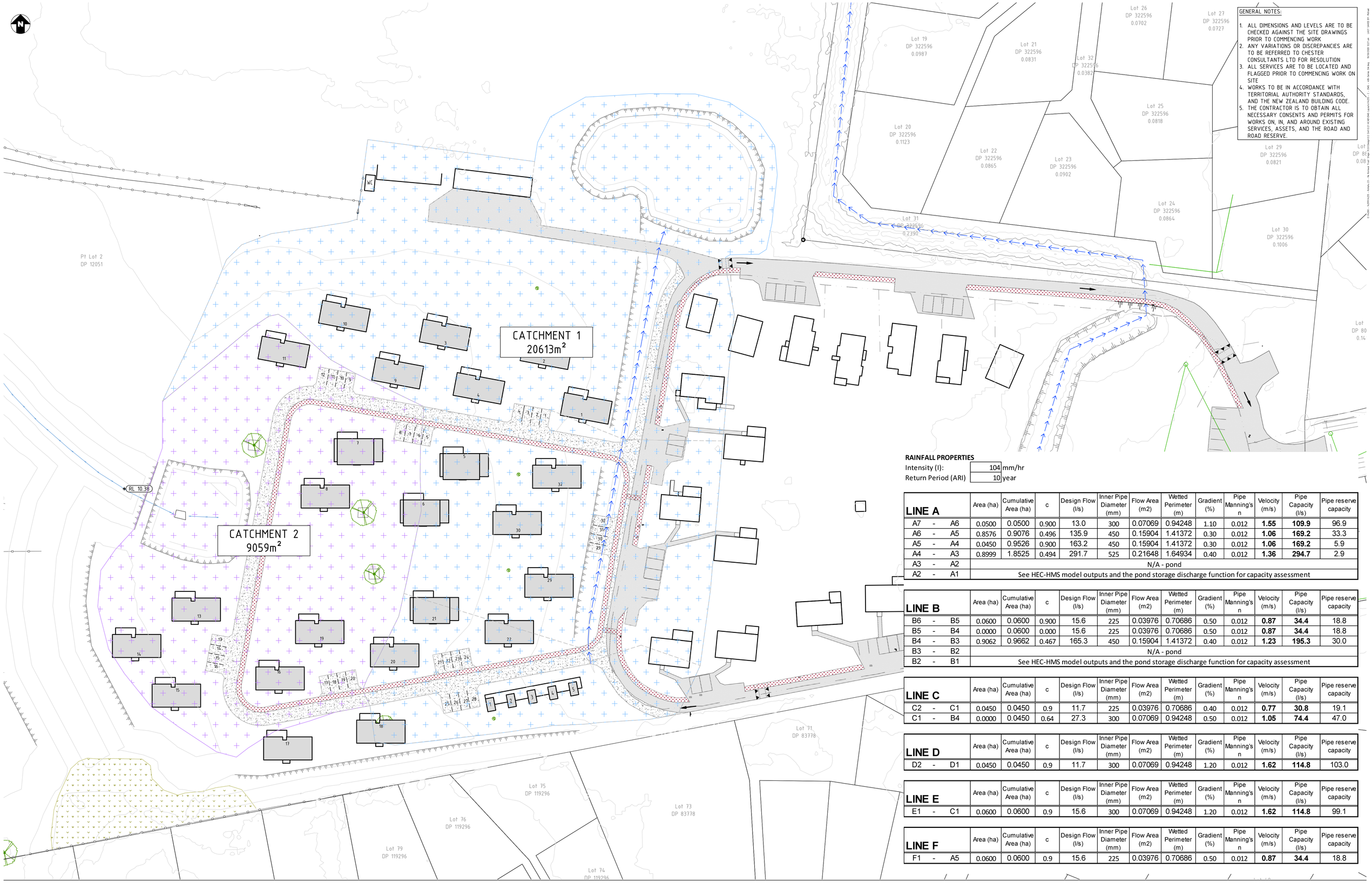

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RAINFALL PROPERTIES

Intensity (I):	104	mm/hr
Return Period (ARI)	10	year

LINE A			Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
A7	-	A6	0.0500	0.0500	0.900	13.0	300	0.07069	0.94248	1.10	0.012	**1.55**	**109.9**	96.9
A6	-	A5	0.8576	0.9076	0.496	135.9	450	0.15904	1.41372	0.30	0.012	**1.06**	**169.2**	33.3
A5	-	A4	0.0450	0.9526	0.900	163.2	450	0.15904	1.41372	0.30	0.012	**1.06**	**169.2**	5.9
A4	-	A3	0.8999	1.8525	0.494	291.7	525	0.21648	1.64934	0.40	0.012	**1.36**	**294.7**	2.9
A3	-	A2	N/A - pond											
A2	-	A1	See HEC-HMS model outputs and the pond storage discharge function for capacity assessment											

LINE B			Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
B6	-	B5	0.0600	0.0600	0.900	15.6	225	0.03976	0.70686	0.50	0.012	**0.87**	**34.4**	18.8
B5	-	B4	0.0000	0.0600	0.000	15.6	225	0.03976	0.70686	0.50	0.012	**0.87**	**34.4**	18.8
B4	-	B3	0.9062	0.9662	0.467	165.3	450	0.15904	1.41372	0.40	0.012	**1.23**	**195.3**	30.0
B3	-	B2	N/A - pond											
B2	-	B1	See HEC-HMS model outputs and the pond storage discharge function for capacity assessment											

LINE C			Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
C2	-	C1	0.0450	0.0450	0.9	11.7	225	0.03976	0.70686	0.40	0.012	**0.77**	**30.8**	19.1
C1	-	B4	0.0000	0.0450	0.64	27.3	300	0.07069	0.94248	0.50	0.012	**1.05**	**74.4**	47.0

LINE D			Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
D2	-	D1	0.0450	0.0450	0.9	11.7	300	0.07069	0.94248	1.20	0.012	**1.62**	**114.8**	103.0

LINE E			Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
E1	-	C1	0.0600	0.0600	0.9	15.6	300	0.07069	0.94248	1.20	0.012	**1.62**	**114.8**	99.1

LINE F			Area (ha)	Cumulative Area (ha)	c	Design Flow (l/s)	Inner Pipe Diameter (mm)	Flow Area (m2)	Wetted Perimeter (m)	Gradient (%)	Pipe Manning's n	Velocity (m/s)	Pipe Capacity (l/s)	Pipe reserve capacity
F1	-	A5	0.0600	0.0600	0.9	15.6	225	0.03976	0.70686	0.50	0.012	**0.87**	**34.4**	18.8

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235

Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	STORMWATER CATCHMENT PLAN

Drawing No:	430
Revision No:	0
Scale:	1:500 @ A1
Issued for:	RC

CHESTER
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WWMH-A5
PROP. PUBLIC WWMH
1050mmØ
LL: 11.71m
IL Out: 10.39 (E)

150mmØ uPVC SN16
37.74m 2.5%

WWMH-A4
PROP. PUBLIC WWMH
1050mmØ
LL: 11.36m
IL In: 9.44 (W)
IL Out: 9.37 (S)

225mmØ uPVC SN16
37.64m 0.5%

WWMH-D1
PROP. PUBLIC WWMH
1050mmØ
LL: 11.82m
IL Out: 10.39 (E)

38.81m 2.8%
150mmØ uPVC SN16

WWMH-A3
PROP. PUBLIC WWMH
1050mmØ
LL: 11.52m
IL In: 9.17 (N)
IL In: 9.27 (W)
IL Out: 9.17 (S)

57.02m 0.5%
225mmØ uPVC SN16

WWMH-B2
PROP. PUBLIC WWMH
1050mmØ
LL: 11.79m
IL Out: 10.68 (E)

150mmØ uPVC SN16
41.19m 1.0%

WWMH-B1
PROP. PUBLIC WWMH
1050mmØ
LL: 11.90m
IL In: 10.25 (W)
IL In: 10.37 (S)
IL Out: 10.25 (E)

150mmØ uPVC SN16
41.19m 2.9%

150mmØ uPVC SN16
17.45m 1.7%

WWMH-A2
PROP. PUBLIC WWMH
1050mmØ
LL: 11.30m
IL In: 8.88 (N)
IL In: 9.02 (W)
IL Out: 8.88 (S)

7.98m 0.5%
225mmØ uPVC SN16

WWMH-A1
PROP. PUBLIC WWMH
1050mmØ
LL: 11.44m
IL In: 8.83 (N)
IL Out: 8.81 (S)

01
520

8,000L HOLDING TANK
THE INTENTION OF WHICH IS TO CAPTURE AND STORE THE PEAKING FACTOR OF CONTRIBUTING FLOWS. SIGNS OF SURCHARGE WERE SITED, AND THE RECEIVING NETWORK IS ASSUMED TO BE UNDER CAPACITY AT TIMES

102.13m 0.5%
150mmØ uPVC SN16

WWMH-C1
PROP. PUBLIC WWMH
1050mmØ
LL: 11.79m
IL Out: 10.68 (N)

17.86m 0.5%
225mmØ uPVC SN16

WWMH-1
EX. PUBLIC WWMH
1050mmØ
LL: 11.60m
IL In: 8.74 (E)
IL In: 8.72 (N)
IL Out: 8.69 (SE)

450Ø RCRRJ
450Ø RCRRJ

Lot 75
DP 119296

Lot 73
DP 83778

THREE WATERS LEGEND	
EX/PROP PRIV. SW PIPE	
EX/PROP PRIV. WW PIPE	
EX/PROP PUBLIC SW PIPE	
EX/PROP PUBLIC WW PIPE	
EX/PROP SWMH	
EX/PROP WWMH	
CONNECTION DIRECTION	N,NE,E,SE,S,SW...
EX/PROP WS PIPE	
ALL MEASUREMENTS IN METRES	

GENERAL NOTES:

1. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED AGAINST THE SITE DRAWINGS PRIOR TO COMMENCING WORK
2. ANY VARIATIONS OR DISCREPANCIES ARE TO BE REFERRED TO CHESTER CONSULTANTS LTD FOR RESOLUTION
3. ALL SERVICES ARE TO BE LOCATED AND FLAGGED PRIOR TO COMMENCING WORK ON SITE
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5. THE CONTRACTOR IS TO OBTAIN ALL NECESSARY CONSENTS AND PERMITS FOR WORKS ON, IN, AND AROUND EXISTING SERVICES, ASSETS, AND THE ROAD AND ROAD RESERVE.

1:300 0 3 6 9 12 15
PLOT CONTAINS ELEMENTS IN COLOUR

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	WASTEWATER LAYOUT PLAN
Drawing No:	500
Revision No:	0
Scale:	1:300 @ A1
Issued for:	RC

CHESTER
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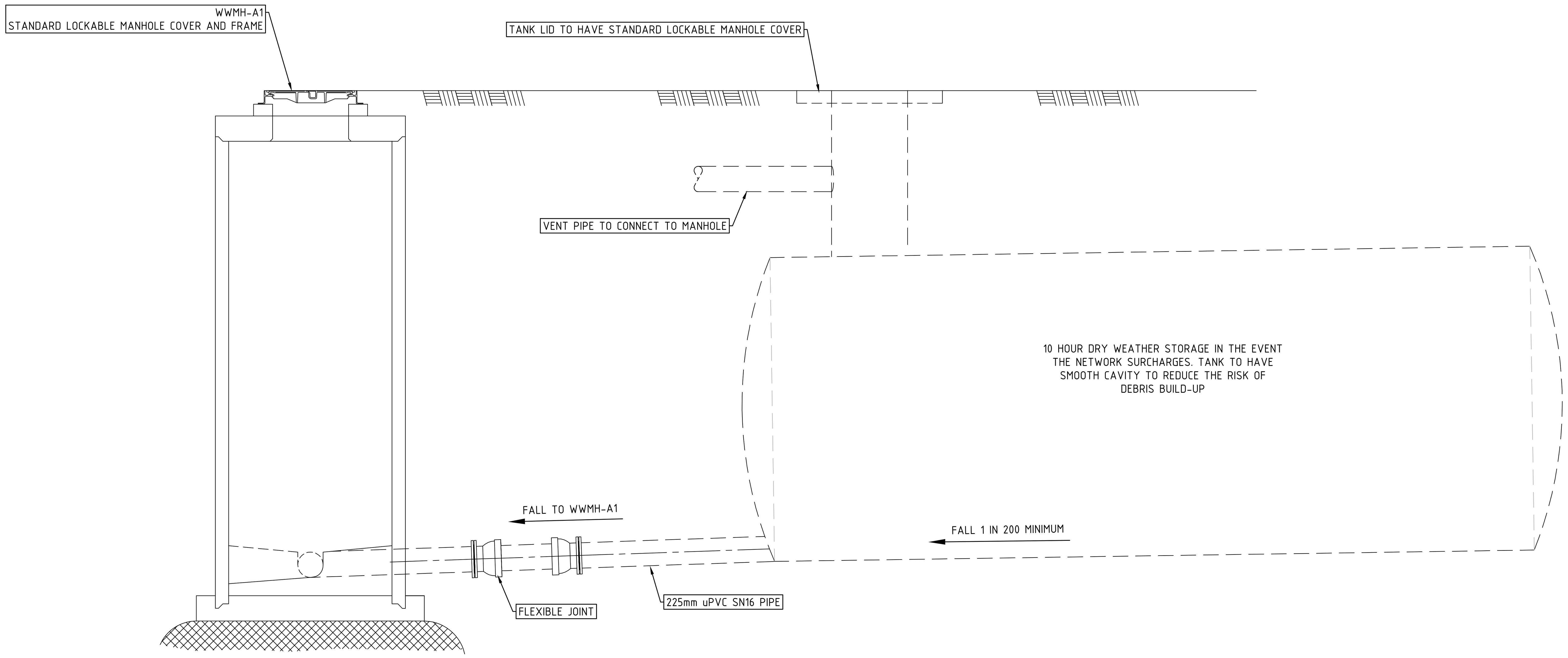

01
500
STORAGE TANK DETAIL
NTS

GENERAL NOTES:

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REV	DATE	AMENDMENTS

Design: M BUHR
Date: 21.09.2020
Check: N JULL
Job No: 14235

Job Title: CIVIL DESIGN - WHARE ORA STAGE 3
Client: HE KOROWAI TRUST
Address: 23 KOHUHU STREET, KAITAIA
Drawing Title: WASTEWATER DETAILS - STORAGE TANK DETAIL

Drawing No: 520
Revision No: 0
Scale: 1:20 @ A1
Issued for: RC

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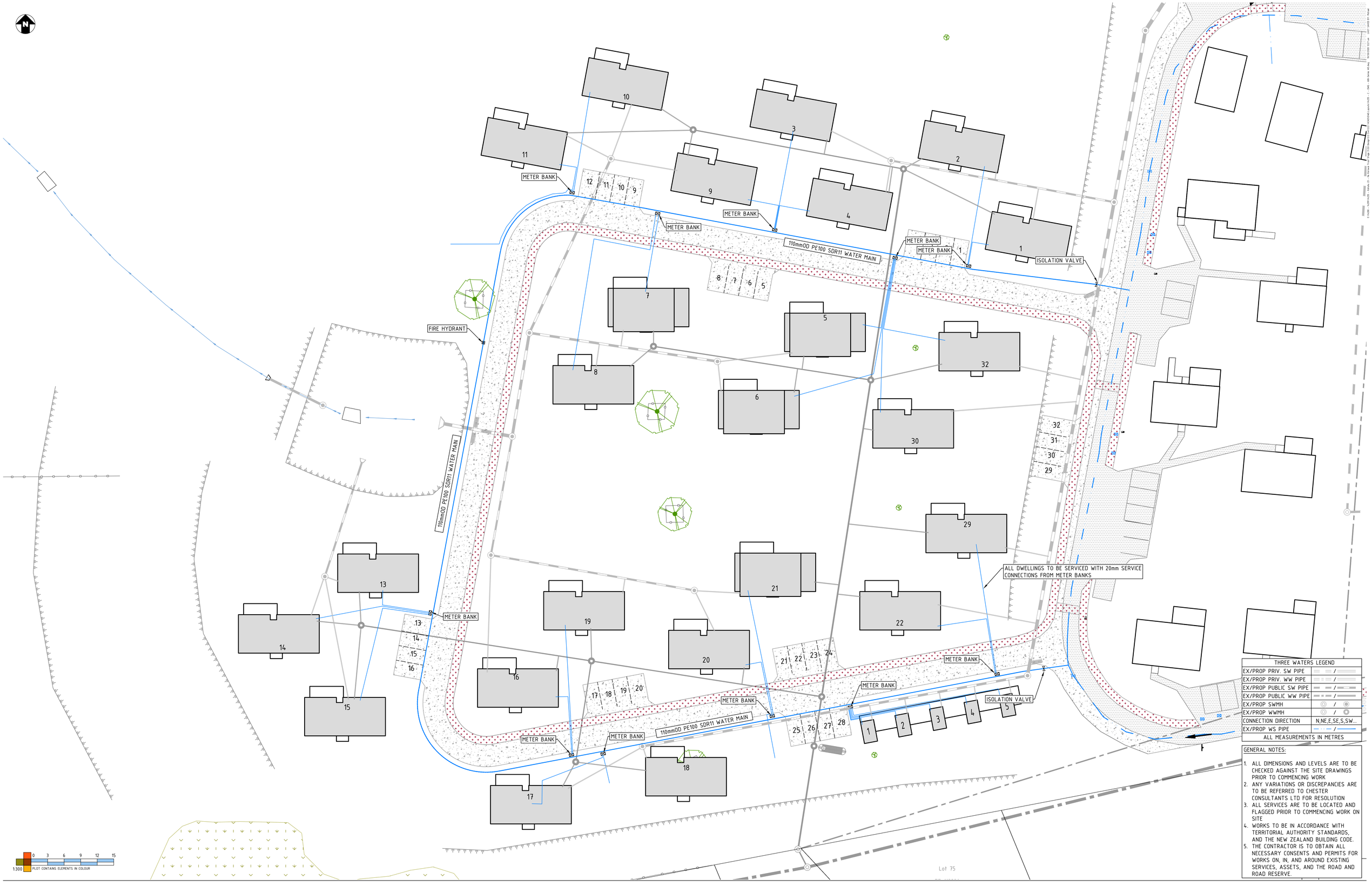

THREE WATERS LEGEND	
EX/PROP PRIV. SW PIPE	/
EX/PROP PRIV. WW PIPE	/
EX/PROP PUBLIC SW PIPE	/
EX/PROP PUBLIC WW PIPE	/
EX/PROP SWMH	/
EX/PROP WWMH	/
CONNECTION DIRECTION	N,NE,E,SE,S,SW..
EX/PROP WS PIPE	/

ALL MEASUREMENTS IN METRES

GENERAL NOTES:

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REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	WATER SUPPLY LAYOUT PLAN
Drawing No:	600
Revision No:	0
Scale:	1:300 @ A1
Issued for:	RC

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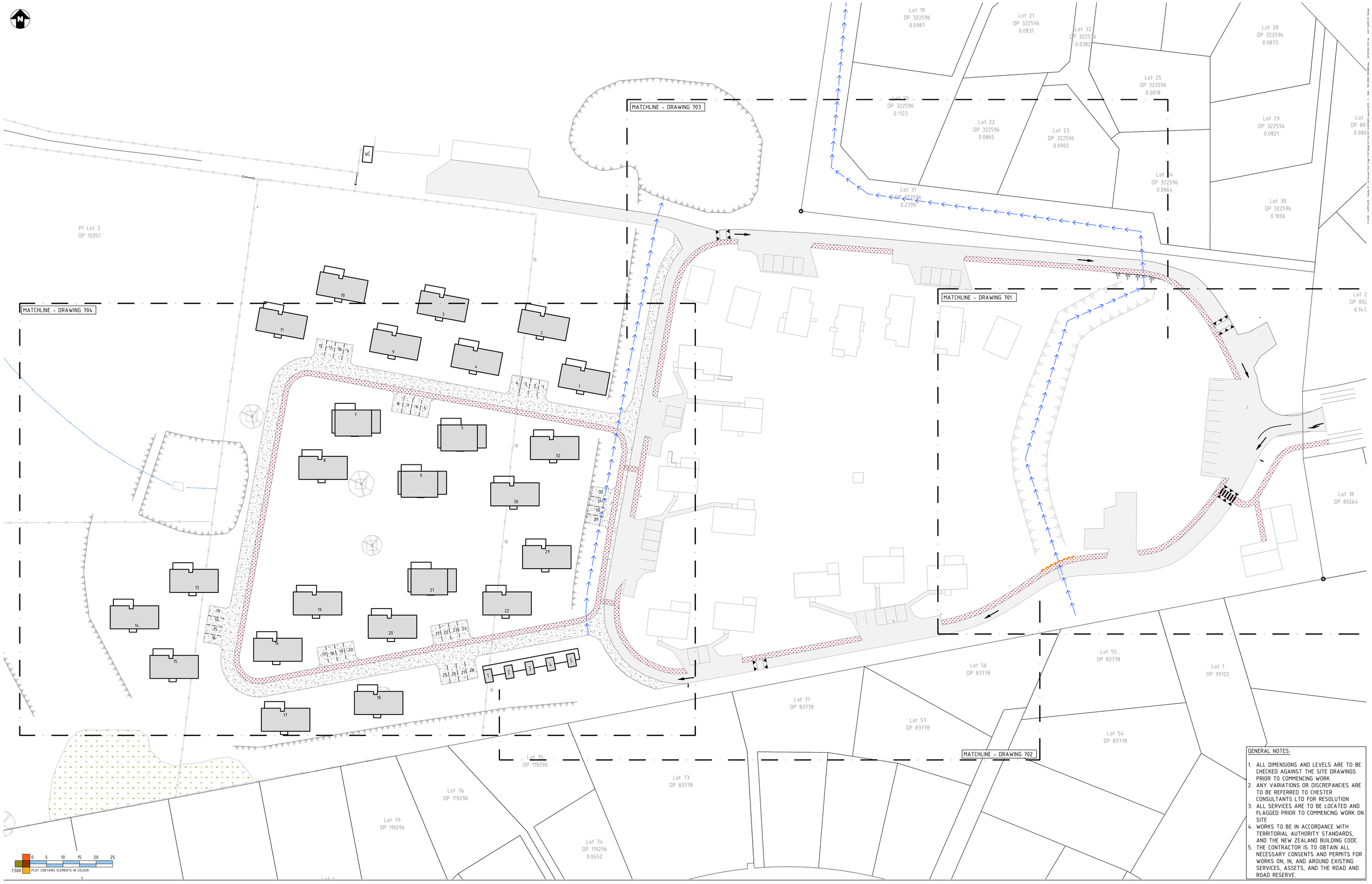

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REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235

Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	ROADING PLAN OVERVIEW

Drawing No:	700
Revision No:	0
Scale:	1:500 @ A1
Issued for:	RC

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EXISTING DWELLINGS

EXISTING DWELLINGS

EXISTING BUILDINGS

KOHUHU STREET

Lot 29
DP 80264
0.1414

Lot 16
DP 80264

Lot 17
DP 80264

Lot 18
DP 80264

SPEED TABLE TO BE EXTENDED OVER PEDESTRIAN FOOTPATH TO REDUCE RISK OF VEHICLES MAKING MANOEUVRES TO AVOID SPEED TABLE

DRAGON TOOTH MARKINGS ON BOTH SIDES OF SPEED TABLE. SPEED TABLE TO BE FORMED AS SHOWN ON DWG 720

ARROW MARKINGS AS PER MOTSAM PART 2, FIGURE 3.5

WIDEN ACCESS TO 6m. TO AVOID PAVEMENT CRACKING OR FAILURE ACUTE CORNERS IN NEW CONCRETE ARE TO BE AVOIDED

100mm WIDE SOLID LINE TO INDICATE DIRECTION OF TRAFFIC

ARROW MARKINGS AS PER MOTSAM PART 2, FIGURE 3.5

PW-39 SPEED TABLE SIGN

PEDESTRIAN CROSSING. LINE MARKINGS TO BE 0.3m WIDE WITH 0.6m GAP

TIE INTO EXISTING FOOTPATH ON KOHUHU STREET. LOCATION OF TIE IN APPROXIMATED

EXISTING FOOTPATH TO TIE IN WITH NEW FOOTPATH

SPEED TABLE TO BE EXTENDED OVER PEDESTRIAN FOOTPATH TO REDUCE RISK OF VEHICLES MAKING MANOEUVRES TO AVOID SPEED TABLE

DRAGON TOOTH MARKINGS ON BOTH SIDES OF SPEED TABLE. SPEED TABLE TO BE FORMED AS SHOWN ON DWG 720

NEW 1.5m WIDE FOOTPATH ADJACENT AND FLUSH WITH EXISTING DRIVEWAY. OXIDE TREATMENT REQUIRED (COLOUR PREFERENCE TO BE DEFINED BY OTHERS) TO DISTINGUISH PEDESTRIAN AND VEHICLE LANES. PEDESTRIAN AREA IS ABLE TO BE USED BY LARGER VEHICLES AND EMERGENCY SERVICES

NEW RETAINING WALL OR ELSE BATTER SLOPE TO BE FORMED TO SUPPORT NEW FOOTPATH

ARROW MARKINGS AS PER MOTSAM PART 2, FIGURE 3.5

02 / 720

01 / 720

4.99
1.50
2.00
1.00
1.50
5.07
1.50
4.94
1.50
3.25
1.50
3.04
1.50
3.00

1:200 0 2 4 6 8 10 PLOT CONTAINS ELEMENTS IN COLOUR

MANOEUVRING NOTES

1. VEHICLE MANEUVERING CURVES HAVE BEEN GENERATED USING AUTODESK VEHICLE TRACKING SOFTWARE SIMULATING HEAVY VEHICLES AS PER NZTA RTS 18.

ROADING NOTES

1. REFER TO DWG 710 FOR PROFILE VIEWS
2. REFER TO DWG 720 FOR SECTION VIEWS.
3. REFER TO 00-SERIES DWGS FOR STORMWATER DETAILS.
4. ALL VEHICLE CROSSINGS TO BE CONSTRUCTED AS PER GD017A.
5. FOR STREET TREE LOCATIONS REFER TO THE LANDSCAPE DESIGN COMPLETED BY OTHERS.
6. FOR STREET LIGHT LOCATIONS REFER TO THE STREET LIGHTING PLAN COMPLETED BY OTHERS.

THREE WATERS LEGEND	
EX/PROP SWMH	/
EX/PROP WWMH	/
ALL MEASUREMENTS IN METRES	

GENERAL NOTES:

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5. THE CONTRACTOR IS TO OBTAIN ALL NECESSARY CONSENTS AND PERMITS FOR WORKS ON, IN, AND AROUND EXISTING SERVICES, ASSETS, AND THE ROAD AND ROAD RESERVE.

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	ROADING PLAN 1 OF 4
Drawing No:	701
Revision No:	0
Scale:	1:200 @ A1
Issued for:	RC

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LOOP ROAD

RL 10.58 | R6.00 | -4.8% | -3.1% | RL 10.55 | -3.0% | PEDESTRIAN CROSSING

1.30 | 3.03 | 1.50 | 1.50

RL 10.67 | RL 10.55 | -4.8% | -3.0%

MOVE VALVE HOUSING INTO GRASS WHERE POSSIBLE OR ELSE
REPLACE WITH CAST IRON HOUSING AND CAST INTO FOOTPATH

RL 10.68 | RL 10.56 | -3.0%

1.02 | 3.07 | 1.50 | 1.50

RL 10.57 | RL 10.52 | RL 10.63 | -5.0% | -3.0% | -2.7%

MOVE VALVE HOUSING INTO GRASS WHERE POSSIBLE OR ELSE
REPLACE WITH CAST IRON HOUSING AND CAST INTO FOOTPATH

PEDESTRIAN CROSSING

RL 10.60 | RL 10.49 | RL 10.60

1.50 | 4.00

REMOVE EXISTING PARKING FROM AREA

NEW DRIVEWAY TO BE FLUSH WITH
EXISTING CONCRETE. ADD LESA
DIAMOND OR SIMILAR APPROVED
DOWEL AT 0.6m C/C ALONG
CONSTRUCTION JOINT

1.50 | 2.92 | 2.80

03 / 720

NEW CONCRETE DRIVEWAY
150mm 20MPa CONCRETE
665 MESH OR EQUIVALENT CENTRALLY PLACED
150mm COMPACTED GAP65
SAW CUTS TO MATCH EXISTING

ARROW MARKINGS AS PER MOTSAM PART 2, FIGURE 3.5

PROPOSED NO ENTRY SIGN

NEW 1.5m WIDE FOOTPATH ADJACENT AND FLUSH WITH EXISTING DRIVEWAY. OXIDE TREATMENT REQUIRED (COLOUR PREFERENCE TO BE DEFINED BY OTHERS) TO DISTINGUISH PEDESTRIAN AND VEHICLE LANES. PEDESTRIAN AREA IS ABLE TO BE USED BY LARGER VEHICLES AND EMERGENCY SERVICES

MOVE VALVE HOUSING INTO GRASS WHERE POSSIBLE OR ELSE
REPLACE WITH CAST IRON HOUSING AND CAST INTO FOOTPATH

2.00 | 1.00 | 1.50 | 2.99 | 1.60 | 2.97

01 / 720

02 / 720

PROPOSED SPEED TABLE

1.50 | 3.04 | 1.50 | 3.00

ARROW MARKINGS AS PER
MOTSAM PART 2, FIGURE 3.5

32 | 30 | 29 | 22 | 2 | 3 | 4 | 5

PROPOSED DWELLINGS

EXISTING DWELLINGS

EXISTING DWELLINGS

Lot 56 DP 83778

Lot 71 DP 83778

Lot 57 DP 83778

10.50 | 10.50 | 10.75 | 11.00 | 11.25

0 2 4 6 8 10
1:200 PLOT CONTAINS ELEMENTS IN COLOUR

MANOEUVRING NOTES

1. VEHICLE MANEUVERING CURVES HAVE BEEN GENERATED USING AUTODESK VEHICLE TRACKING SOFTWARE SIMULATING HEAVY VEHICLES AS PER NZTA RTS 18.

ROADING NOTES

1. REFER TO DWG 710 FOR PROFILE VIEWS
2. REFER TO DWG 720 FOR SECTION VIEWS.
3. REFER TO 00-SERIES DWGS FOR STORMWATER DETAILS.
4. ALL VEHICLE CROSSINGS TO BE CONSTRUCTED AS PER GD017A.
5. FOR STREET TREE LOCATIONS REFER TO THE LANDSCAPE DESIGN COMPLETED BY OTHERS.
6. FOR STREET LIGHT LOCATIONS REFER TO THE STREET LIGHTING PLAN COMPLETED BY OTHERS.

GENERAL NOTES:

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3. ALL SERVICES ARE TO BE LOCATED AND FLAGGED PRIOR TO COMMENCING WORK ON SITE
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5. THE CONTRACTOR IS TO OBTAIN ALL NECESSARY CONSENTS AND PERMITS FOR WORKS ON, IN, AND AROUND EXISTING SERVICES, ASSETS, AND THE ROAD AND ROAD RESERVE.

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235

Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	ROADING PLAN 2 OF 4

Drawing No:	702
Revision No:	0
Scale:	1:200 @ A1
Issued for:	RC

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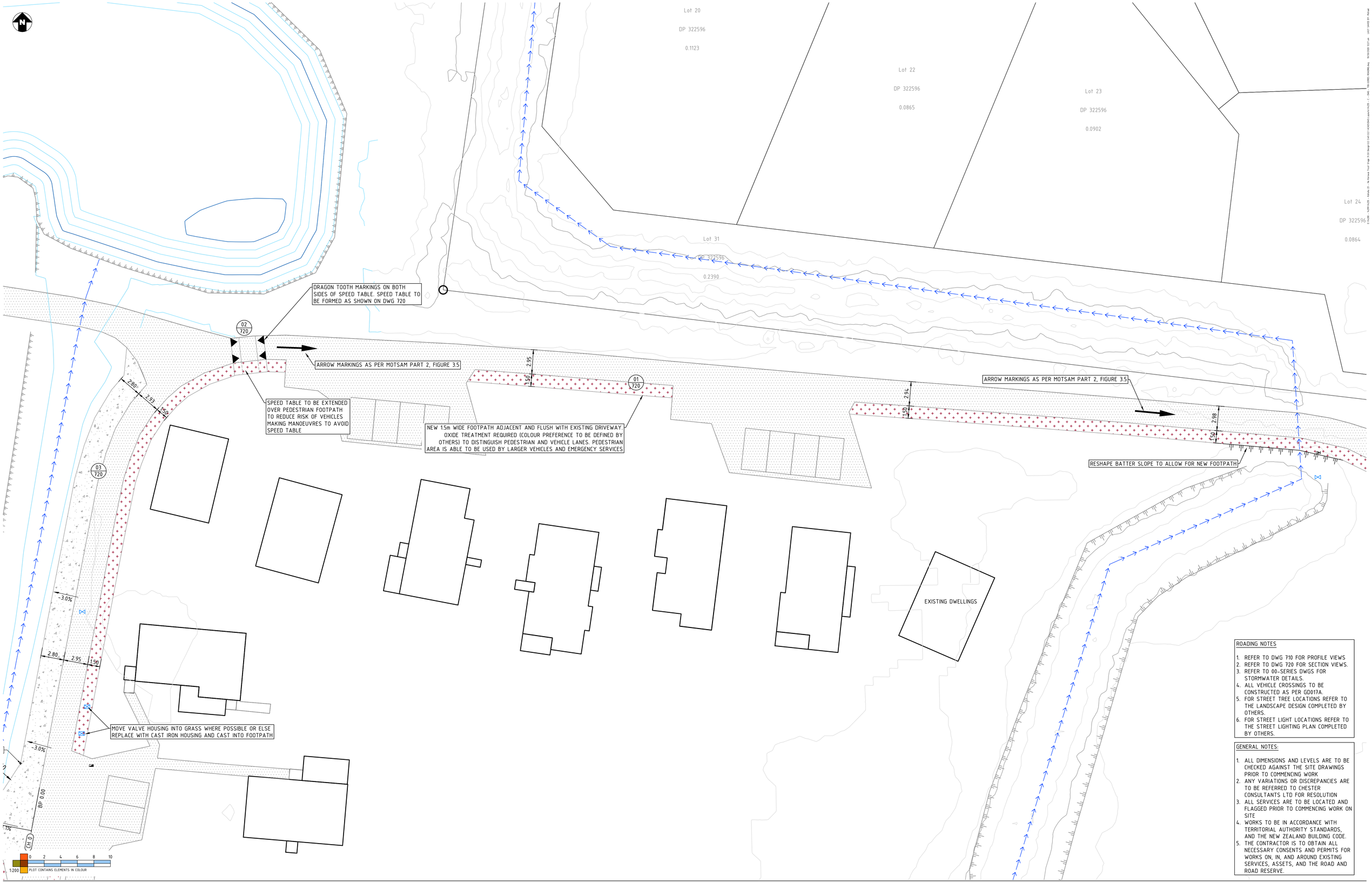

ROADING NOTES

1. REFER TO DWG 710 FOR PROFILE VIEWS.
2. REFER TO DWG 720 FOR SECTION VIEWS.
3. REFER TO 00-SERIES DWGS FOR STORMWATER DETAILS.
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REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235

Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	ROADING PLAN 3 OF 4

Drawing No:	703
Revision No:	0
Scale:	1:200 @ A1
Issued for:	RC

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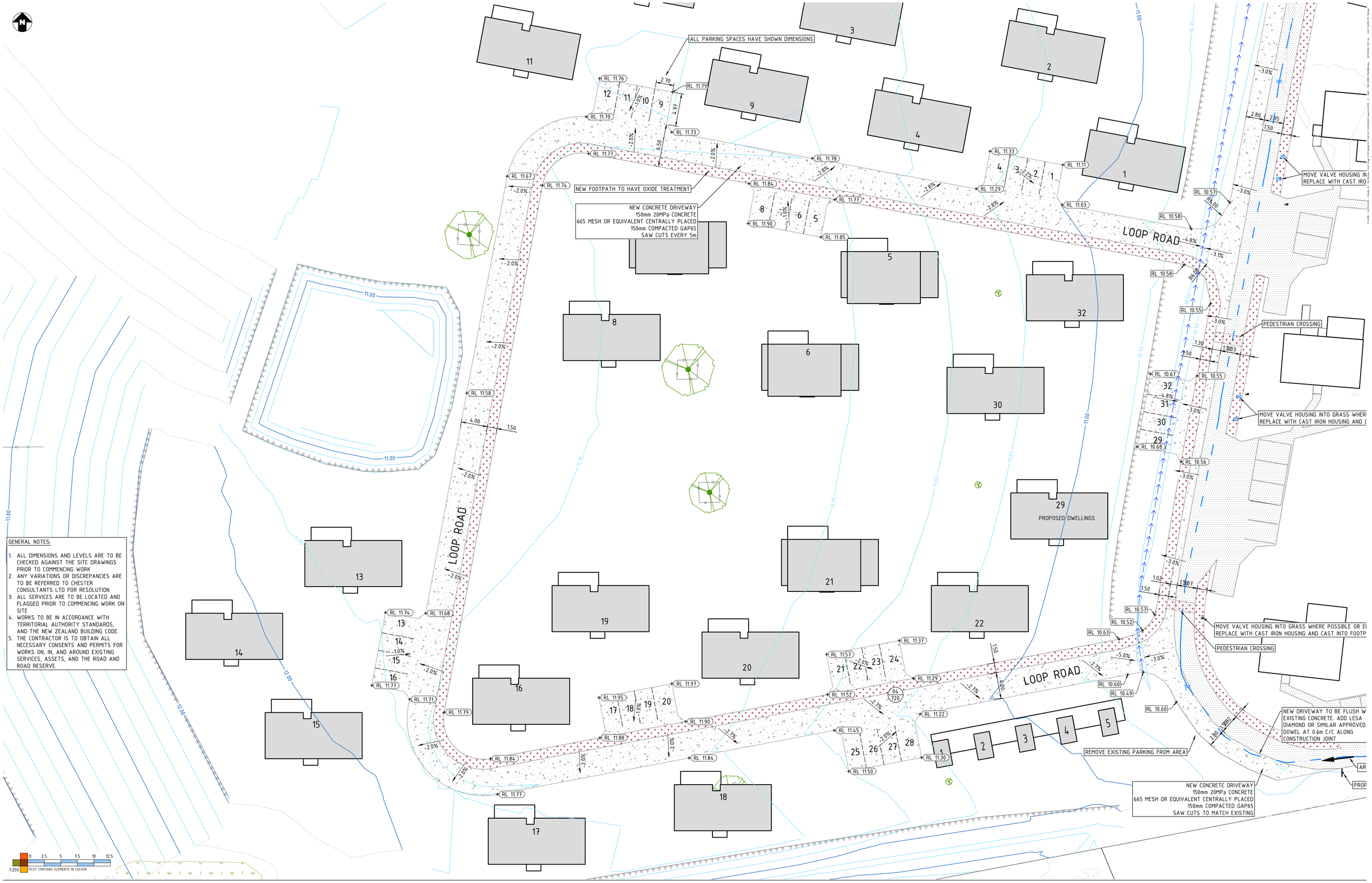

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1:250 0 2.5 5 7.5 10 12.5 PLOT CONTAINS ELEMENTS IN COLOUR

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	ROADING PLAN
Drawing No:	700
Revision No:	0
Scale:	1:250 @ A1
Issued for:	RC

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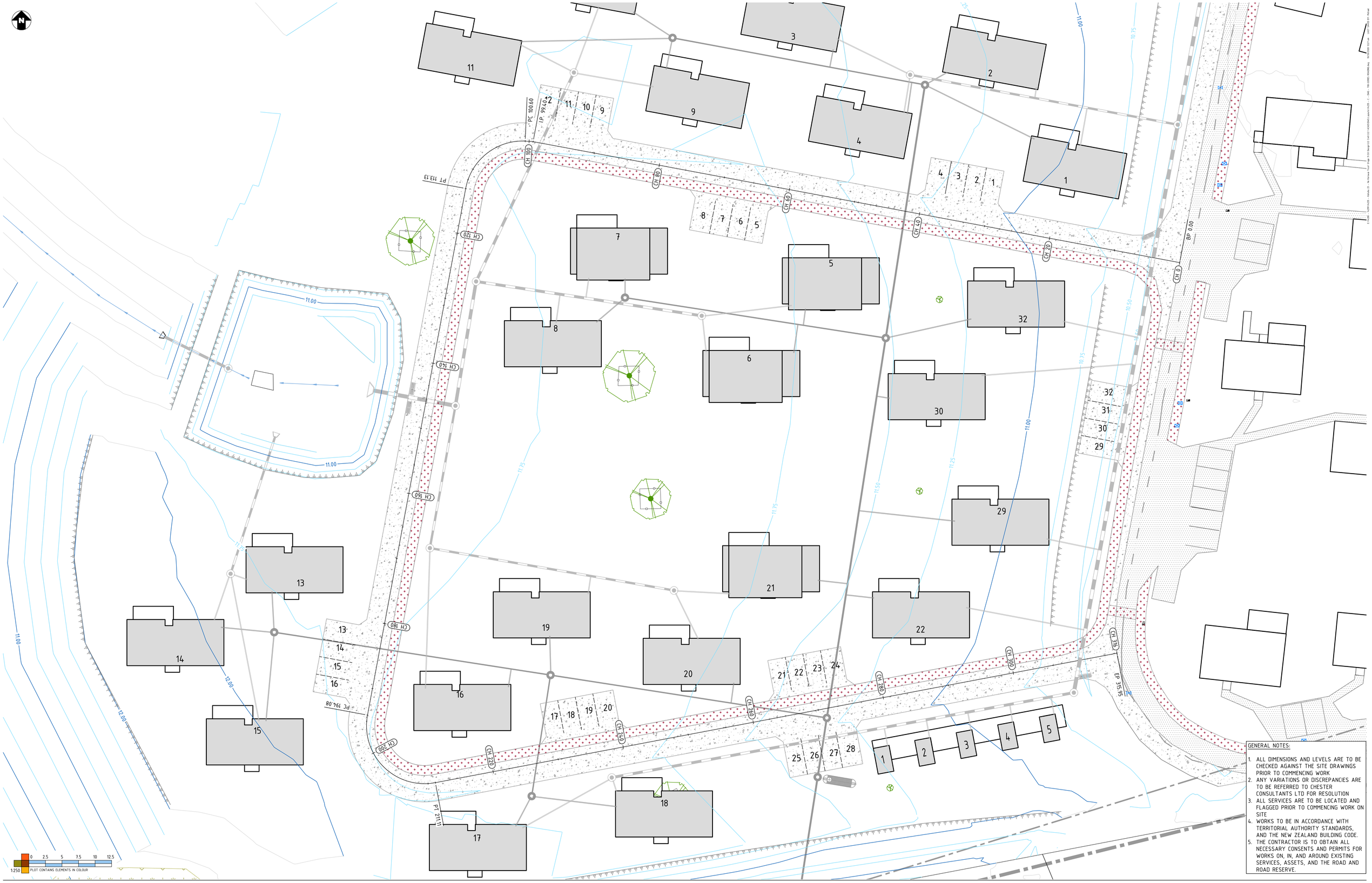

0 2.5 5 7.5 10 12.5

1:250 PLOT CONTAINS ELEMENTS IN COLOUR

GENERAL NOTES:

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REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235

Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	LOOP ROAD ALIGNMENT

Drawing No:	710
Revision No:	0
Scale:	1:250 @ A1
Issued for:	RC

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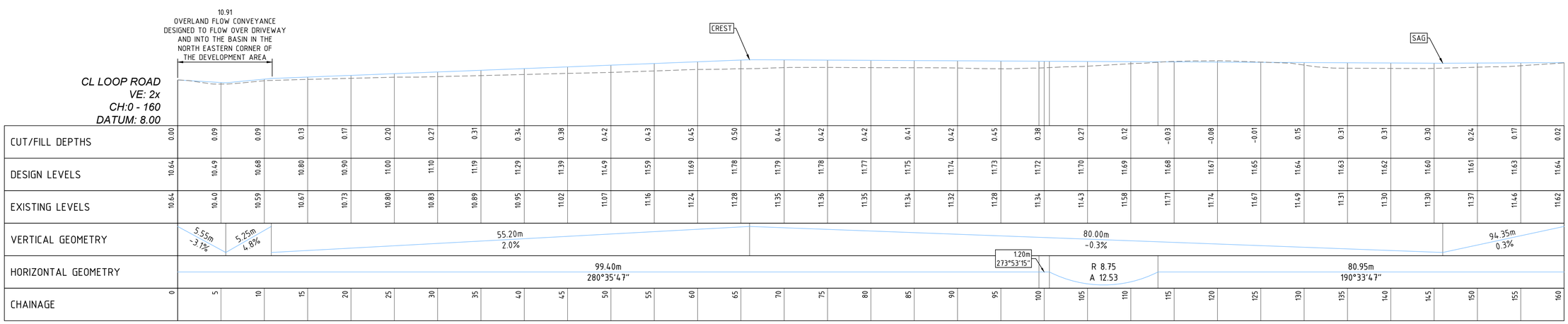
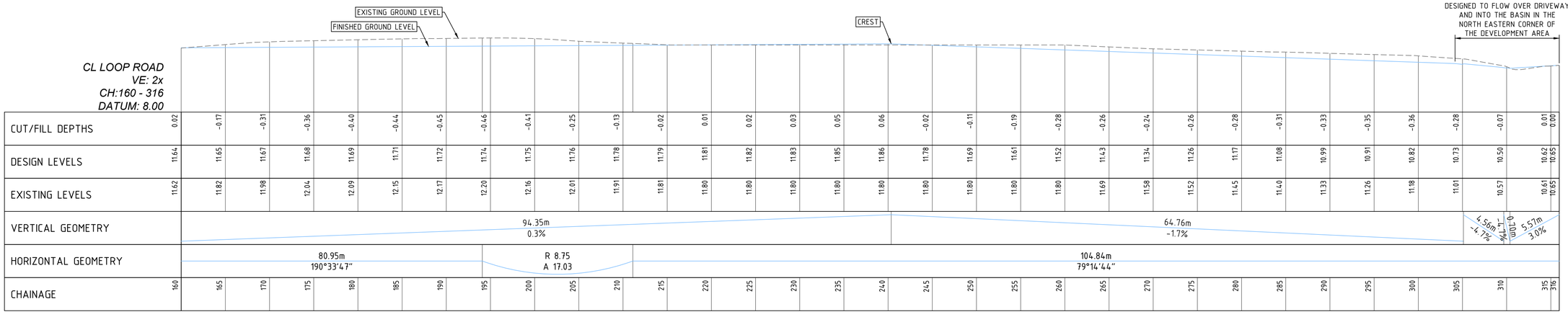


11.79
OVERLAND FLOW CONVEYANCE



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5. THE CONTRACTOR IS TO OBTAIN ALL NECESSARY CONSENTS AND PERMITS FOR WORKS ON, IN, AND AROUND EXISTING SERVICES, ASSETS, AND THE ROAD AND ROAD RESERVE.

REV	DATE	AMENDMENTS

Design:	M BUHR
Date:	21.09.2020
Check:	N JULL
Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	LOOP ROAD PROFILE VIEW
Drawing No:	711
Revision No:	0
Scale:	1:250 @ A1
Issued for:	RC

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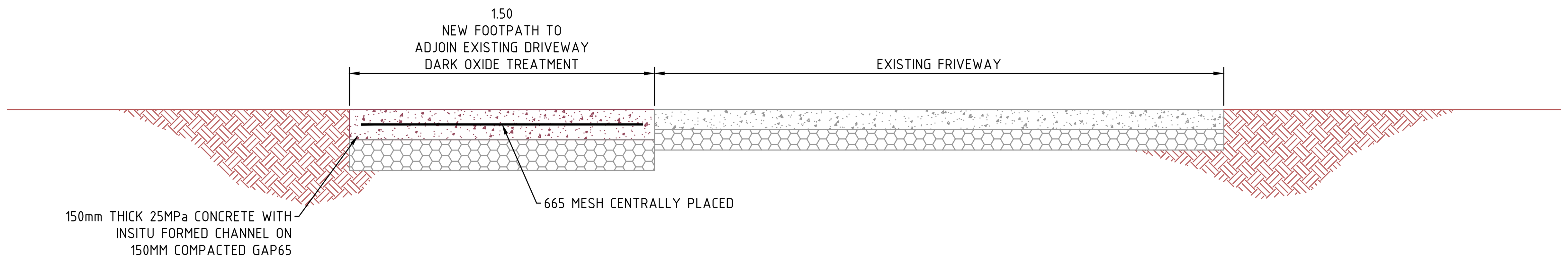

01 / – TYPICAL DETAIL WHERE NEW FOOTPATH ADJOINS EXISTING DRIVEWAY
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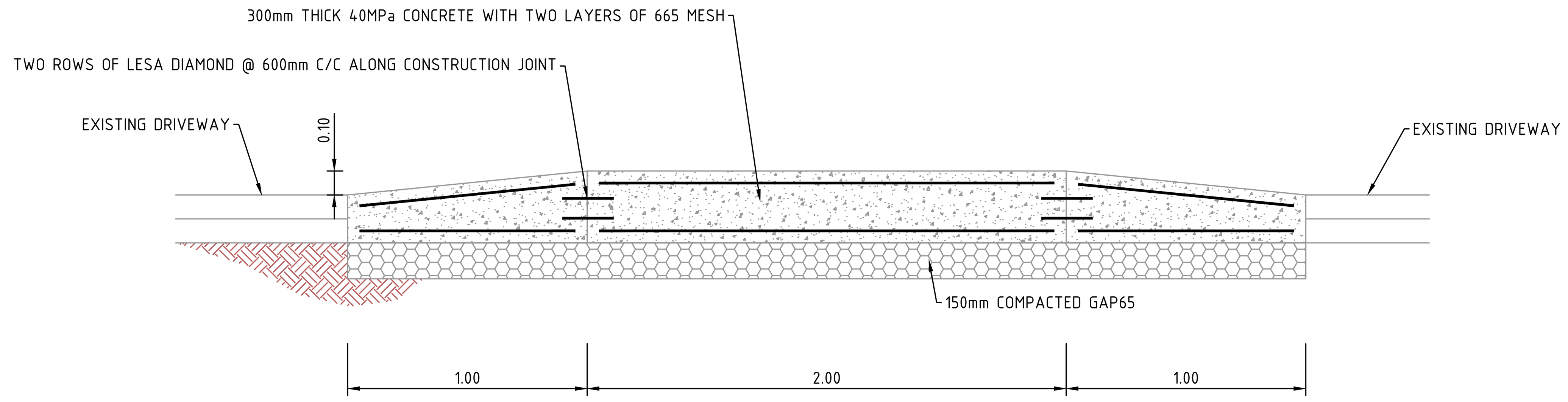

02 / – TYPICAL SPEED TABLE SECTION
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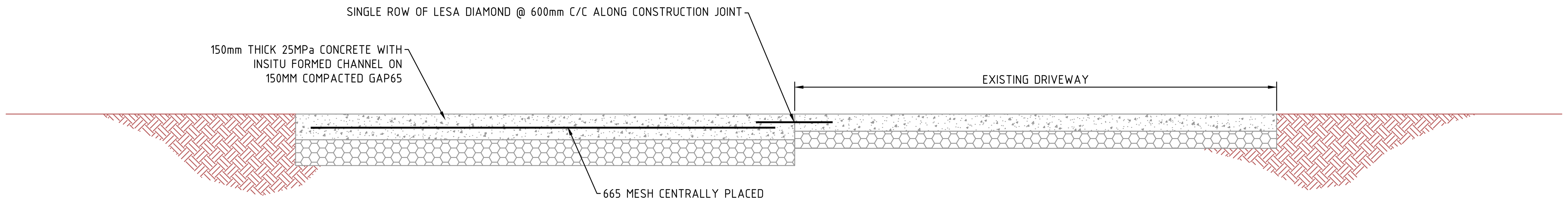

03 / – TYPICAL DETAIL WHERE NEW DRIVEWAY JOINS TO EXISTING
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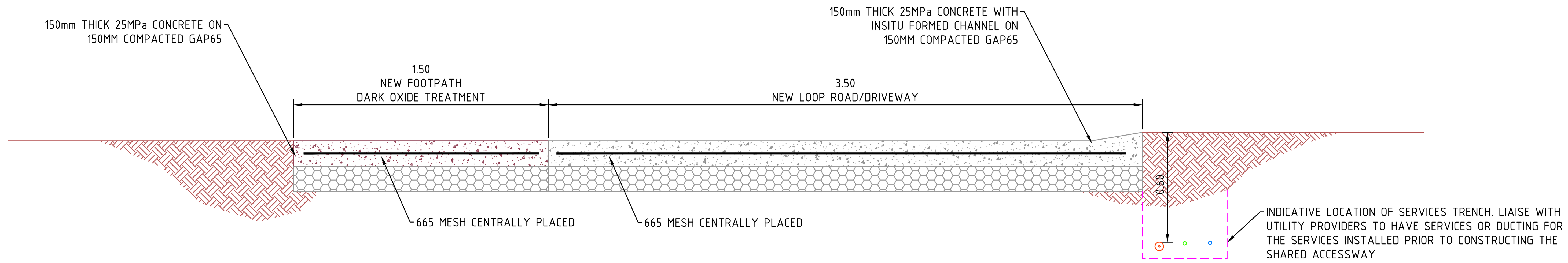

04 / – TYPICAL DETAIL OF NEW LOOP ROAD
NTS

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Design:	M BUHR	Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3	Drawing No:	720
Date:	21.09.2020	Client:	HE KOROWAI TRUST	Revision No:	0
Check:	N JULL	Address:	23 KOHUHU STREET, KAITAIA	Scale:	1:20 @ A1
Job No:	14235	Drawing Title:	ROADING TYPICAL DETAILS	Issued for:	RC

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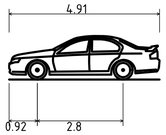
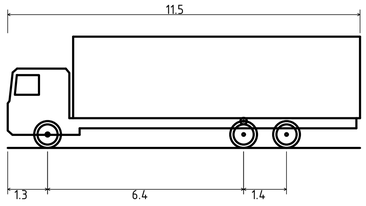


B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m



Large Rigid Truck

Overall Length	11.500m
Overall Width	2.500m
Overall Body Height	3.632m
Min Body Ground Clearance	0.427m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	12.000m

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PLOT CONTAINS ELEMENTS IN COLOUR

REV	DATE	AMENDMENTS

Design:	M BUHR
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Job No:	14235
Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	VEHICLE TRACKING - B85 VEHICLE
Drawing No:	730
Revision No:	0
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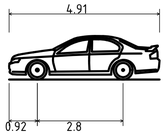

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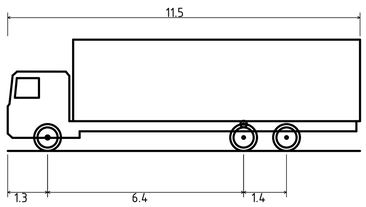

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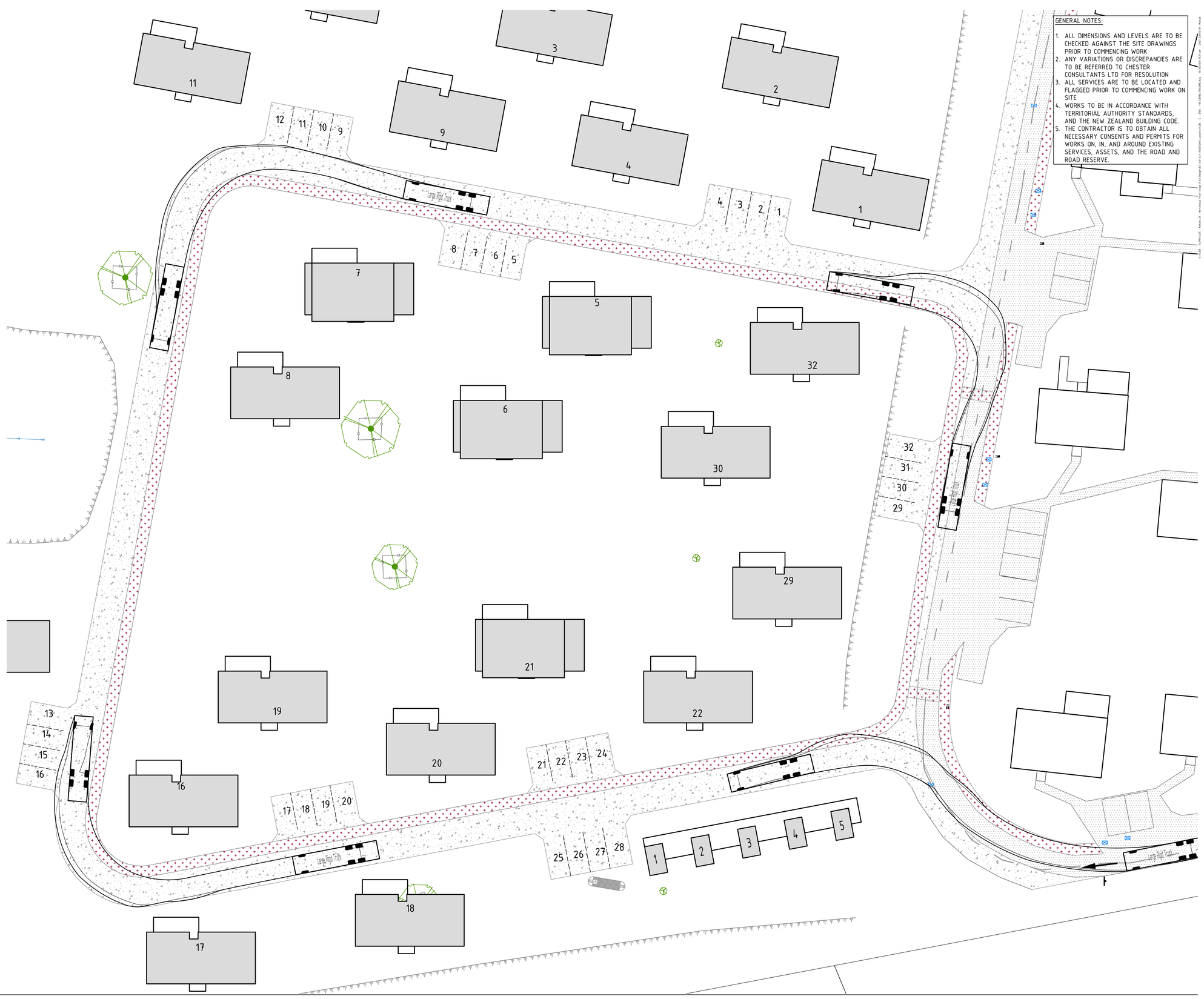

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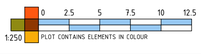

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Job Title:	CIVIL DESIGN - WHARE ORA STAGE 3
Client:	HE KOROWAI TRUST
Address:	23 KOHUHU STREET, KAITAIA
Drawing Title:	VEHICLE TRACKING - LARGE RIGID TRUCK
Drawing No:	731
Revision No:	0
Scale:	1:250 @ A1
Issued for:	RC

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PROPOSED RESIDENTIAL DEVELOPMENT

23 KOHUHU STREET, KAITAIA

TRAFFIC IMPACT ASSESSMENT

Prepared for He Korowai Trust
28 September 2020
Reference 20236

TRAFFIC ENGINEERING & MANAGEMENT LTD
Level 2, 1b Buscomb Avenue, Henderson, Auckland | PO Box 21-803, Henderson, Auckland
Phone 09-836 3888 | **Email** info@teamtraffic.co.nz

Address	23 KOHUHU STREET, KAITAIA
Project:	PROPOSED RESIDENTIAL DEVELOPMENT
File Path:	Z:\2020_PROJECTS\20236 - 23 KOHUHU ST KAITAIA\6 REPORTS\200928 20236 23 KOHUHU STREET TIA.DOCX
Prepared By:	A. Hunter
Reviewed by:	S.P. Goodwin

Revisions:

Date	Revision Number	Reviewed By	Initials
31/08/2020	Draft	Andrew Hunter	
25/09/2020	Draft V2	Simon Goodwin	
28/09/2020	Final	Andrew Hunter	

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1 INTRODUCTION

Team Traffic has been engaged by the He Korowai Trust to undertake a Traffic Impact Assessment (TIA) of the proposal for the relocation of 24 dwellings onto the site at 23 Kohuhu Street in Kaitaia.

The property is currently zoned under both Residential and Rural Production however the proposed activities will be occurring on the Rural Production portion of the site.

This project is being undertaken in stages; Stage 1, which included the relocation of 16 houses onto the site, has been completed. The current portion of the project is stage 2 and this proposal seeks to relocate an additional 24 houses onto the site.

This TIA addresses the following matters:

- Assessment of the parking provisions and parking manoeuvring space against the rules of the Far North District Council (FNDC) Plan.
- Assessment of the road safety, efficiency, and traffic patterns of the existing local road network.
- The traffic likely to be generated by the proposed development and the ability of the road network to accommodate the generated vehicle trips.
- The ability of the proposed development to satisfy the design standards and layout requirements of the FNDC Plan.

These and other matters are addressed in the detail of this report.

The findings of the report are that the proposed facility can be established without adversely impacting on the function, capacity, or safety of the surrounding road network. Traffic effects are considered to be less than minor.

2 THE EXISTING SITUATION

Kohuhu Street is located off the western side of North Road, which generally runs in a north - south direction. Kohuhu Street runs in an east-west direction and is a relatively short cul–de-sac road. The site is currently used for rural production however the eastern portion of the site already has a number of residential dwellings erected with an internal one-way roading system.

The location of the site in relation to the surrounding properties and road network is shown in Figures 1 and 2 below.

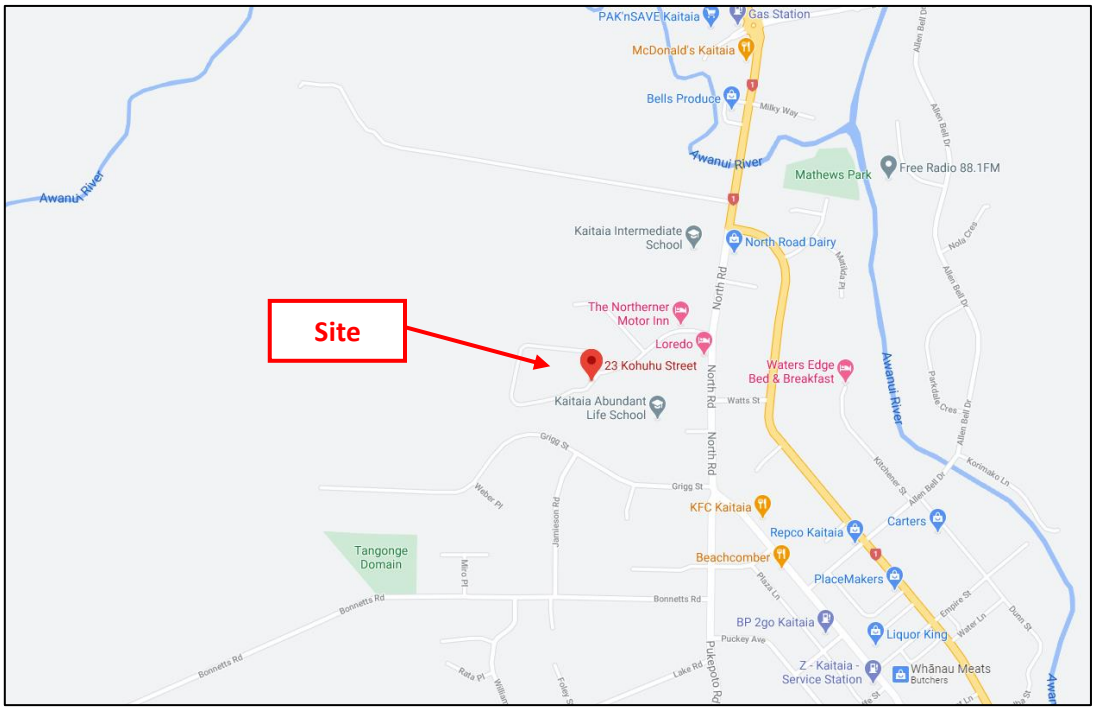


Figure 1: Site in relation to road network.

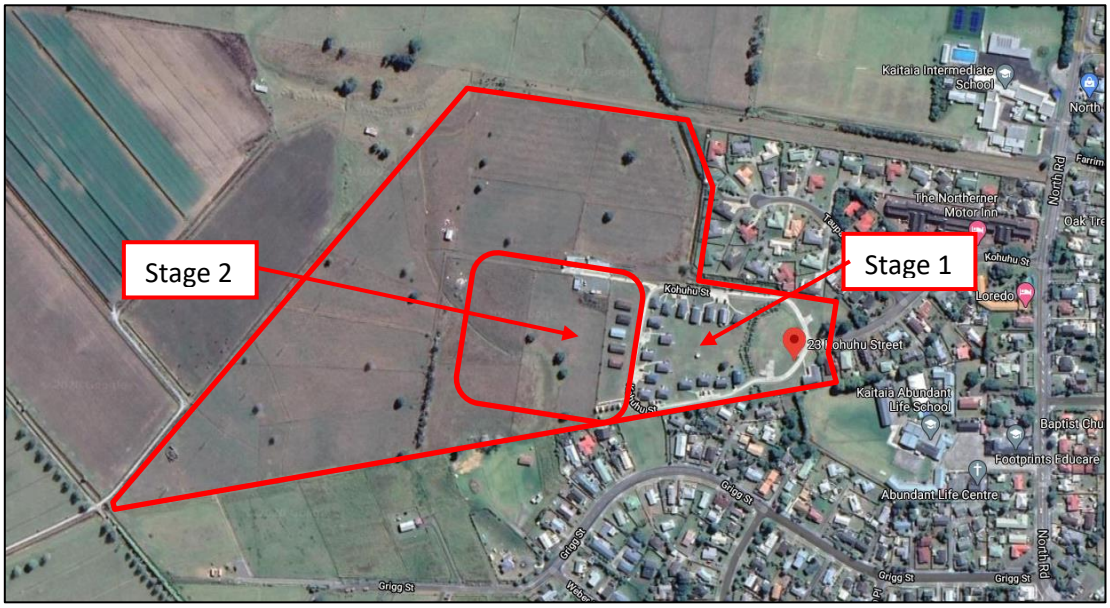


Figure 2: Subject site in relation to surrounding properties.

2.1 Traffic & Roading Characteristics

Kohuhu Street generally runs in an east - west direction with the subject site located at the western end of the road. The area for the development of this residential element is designated as a Rural Production Zone under the FNDC Plan.

Kohuhu Street is classified in the District Plan as a Local Road and its primary function is to provide access to local properties.

Kohuhu Street in the vicinity of site is characterised as a two-way, one lane road with no line markings. The typical cross section of the road reserve is approximately comprised of 3.0 metre wide berms and a 9.6 metre wide carriageway between the kerbs. In addition, there are concrete footpaths on both sides of the road that are positioned towards the middle of the berm. Furthermore, there is a Give Way control on the Kohuhu Street approach to North Road.

North Road is classified as an Arterial Road that has a typical cross section that is comprised of a carriageway with one lane in each direction plus edge lines that are approximately 2.0 metres from the kerb. The carriageway is approximately 12.0 metres wide and there are narrow berms on both sides of the carriageway with footpaths located directly behind the kerbs.

The site is located within a 50 km/h posted speed zone.

2.2 Existing Access Arrangements

23 Kohuhu Street currently has one vehicle crossing that is located directly at the end of Kohuhu Street. This vehicle crossing is currently circa 5.0 metres wide at the boundary and flares towards the carriageway. The current vehicle crossing services the whole site and is used by the current 16 dwellings plus the Early Childhood Education Centre at the front of the site.

Google maps shows the internal road as a part of Kohuhu Street and it is unclear if this access is to be formalised as legal road at some time in the future. For this exercise it is assumed that the internal road is a private road.

2.3 Traffic Counts

The Far North District Council has traffic count data for many of the roads around the far north. Council kindly provided a copy of the traffic survey data for both Kohuhu Street and North Road.

The survey on Kohuhu Street was undertaken in 2016 and the 5 day ADT was 158 vehicles per day whilst the 7 day ADT was measured at 138 vehicles per day. The survey was undertaken towards the eastern end of the road.

The busiest peak periods included 27 vehicles per hour during the morning peak that occurred between 9.00am and 10.00am. The period between 8.00am and 9.00am was slightly less at 23

vehicles per hour, however the numbers were relatively consistent during the day between 8.00am and 5.00pm.

These numbers are quite low considering that there are currently approximately 46 residential dwellings plus the Northerner Motor Inn gaining direct access onto Kohuhu Street or Taupata Place.

Kohuhu Street is a Local Road and the volume of vehicles is considered to be well within the capacity of the carriageway.

A traffic survey was also undertaken on North Road in 2019. The 5 day ADT was measured at 10,693 vehicles per day and the 7 day ADT was measured at 9,705 vehicles per day. The peak periods were noted as occurring from 8.00am to 9.00am and from 4.00pm to 5.00pm.

Between the hours of 7.00am and 6.00pm the two-way hourly flows ranged between 1,000 vph and 1,600 vph. A two lane arterial route is expected to carry volumes up to approximately 20,000 vpd and therefore the road has ample spare capacity.

2.4 Speed Environment

The site is located within a 50 km/h speed zone. Where speed measurements are not available, the 'Guidelines for Visibility at Driveways RTS 6' recommends that the posted speed limit plus 15 percent should be adopted for the 85th percentile vehicle speed.

On this basis, it is estimated that the 85th percentile speed on Kohuhu Street would be in the order of 57.5 km/h. However, as the access is located at the head of a cul-de-sac, enters into a one-way circulating road, and services a small local community, the 85th percentile speed is expected to be between 40 and 50 km/h.

For the purposes of visibility calculations, a 50 km/h vehicle speed will be used as this is considered appropriate.

North Road near Kohuhu Street also has a 50km/h speed limit and as this road is an Arterial Road leading to the State Highway it is expected that the 85th percentile speed will be closer to 60km/h.

2.5 Crash History

A study has been made of the crash record maintained by NZTA for the five-year period 2015 to 2019 inclusive. Crashes that have occurred so far in 2020 were also included.

The searched area covered all of Kohuhu Street plus a portion of North Road for approximately 100 metres each side of the intersection of North Road and Kohuhu Street. Copies of the collision diagram and crash listing obtained from this search are attached as Appendix A.

There were two non-injury crashes reported as occurring within the searched area and time period.

One crash occurred at the intersection of North Road and Kohuhu Street and involved a driver travelling eastbound on Kohuhu Street losing control when turning right. No other vehicle was involved and alcohol was suspected.

The second crash involved a southbound driver travelling along North Road who failed to notice another vehicle slowing to turn right into a private driveway and that vehicle rear ended the turning car.

The crash factor record shows that both the crashes were the result of human error. The crashes that have been reported as occurring on or near Kohuhu Street are considered to be random in nature and do not indicate that there are any deficiencies with the configuration of the road.

On this basis it is considered that the existing crash record does not indicate the presence of any inherent safety issues that could affect this application from a traffic engineering perspective.

3 THE PROPOSAL

This report discusses the traffic-related aspects of the stage 2 application to relocate 24 residential dwellings onto the site at 23 Kohuhu Street. Furthermore it is proposed to construct a new one-way road network and provide 32 parking spaces on-site.

There are presently 16 residential dwellings plus a childcare facility on the site, which is serviced by an existing one-way internal circulating road. There are also 18 car parking spaces provided for the residential dwellings plus there is adequate room for a further five car parks to be installed next to the current spaces. In addition to those spaces there are nine car parks, including two disabled spaces, adjacent to the child care facility.

In addition, a number of improvement opportunities have been identified and it is proposed to:

- the entrance will be upgraded;
- a pedestrian path will be provided all around the site;
- the pedestrian path will connect the council's footpath to the childcare facility and the rest of the existing and proposed development;
- directional markings will be installed around the road network to advise residents and visitors of the appropriate direction of travel; and,
- speeds will also be moderated by the use of speed platforms spaced at regular intervals around the internal road network.

It should be noted that although all the dwellings are shown as identical the actual dimensions will vary and the exact shape and size of each dwelling is unknown at this stage.

It can be seen on the drawings that some of the dwellings in stage 1 have concrete paths linking the entrance to those buildings with the car parking spaces. As the site is developed and more information is available it is intended to provide concrete paths to all the dwellings. These paths are not currently shown on the plans and it is recommended that the provision of paths is included as a condition of consent.

3.1 Access and Visibility

The proposal involves the upgrading of the existing vehicle crossing to a two-way vehicle crossing. The crossing will be circa 6.0 metres wide at the boundary and flare towards the kerb. The proposed crossing will be constructed to comply with FNDC design standards for a commercial vehicle crossing.

It is expected that the movement of vehicles and others using this proposed crossing will occur without any operational problems.

The visibility along Kohuhu Street has been assessed in excess of 150 metres.

The document 'Guidelines for Visibility at Driveways RTS 6' requires circa 40 metres of sight distance from a low use (under 200 movements per day) driveway on to a Local Road in an area where the 85th percentile speed is 50 km/h.

The visibility along North Road has been assessed in excess of 150 metres to the north and to the south.

The Safe Intersection Sight Distance (SISD) is 113 metres of sight distance from an intersection in an area where the 85th percentile speed is 60 km/h.

On this basis, the visibility criteria on Kohuhu Street, as well as at the intersection of Kohuhu Street and North Road, are considered to be appropriate for the speed environment.

As such, the proposed access is considered to be appropriate and fit for purpose, and unlikely to have any adverse impacts from a traffic engineering perspective.

3.2 Traffic Generation

An assessment of the traffic generated by the activities on the site, based on the FNDC plan, has been carried out on the following basis.

This residential development will consist of 24 new dwellings that will be transported to the site plus the provision of 34 car parking spaces. The FNDC requires the application of an intensity factor for different activities. In the case of residential dwellings the requirement is 10 vehicular trips per dwelling.

Table 1: Traffic generation

Land Use	Traffic Intensity Factor	Quantity	Total Trips per day
Residential	10 per unit	24	240

This number of daily trips appears to be excessive, and to gain a perspective of the number of trips actually anticipated to visit the site on a daily basis an alternative assessment has been undertaken.

Typically, in New Zealand a dwelling with two car parking spaces is expected to generate between nine and ten vehicular trips per day. A dwelling with one car parking space is expected to generate in the order of six vehicular trips per day. Therefore, it is estimated that the daily trip generation for stage 2 will be approximately 144 trips.

It is assumed that each dwelling will only have a single car parking space and it is expected that each dwelling will generate one trip during each peak hour.

Typically, the morning peak is the busiest as it is more compressed and if the maximum number of trips per peak hour (24) is generated, it is accessed that 80 percent of the trips will leave the site and 20 percent of the trips will enter the site. On this basis it is expected that approximately 20 trips will depart from the site and four trips will be made into the site, during the morning peak hour.

This number of additional trips onto Kohuhu Street, although a high percentage of the existing traffic volume, is very low and most unlikely to have a noticeable impact on the safe and efficient operation of the road network.

The intersection of Kohuhu Street and North Road will experience a minor increase in the number of trips throughput. If twenty trips are made out of Kohuhu Street it is estimated that there will be a fairly even split with 10 vehicles turning right to head towards the township and the other 10 trips turning left.

The reverse can be expected during the evening peak with ten vehicles turning left into the road and ten vehicles turning right into the road. Again, this number of trips is very low and is expected to have a negligible effect on other traffic on the network.

The afternoon period is often less congested and unlikely to be of concern from a traffic engineering perspective as the number of trips is spread over a longer time period.

The anticipated traffic generation from stage 2 of this development is unlikely to have a noticeable effect on the local road network and is of little concern from a traffic engineering perspective.

3.3 Carpark Layout

The car parking layout shows a total of 32 car parks that are spread around the site at locations that are considered appropriately close to the dwellings that they service.

The majority of the car parking spaces are a minimum of 2.7 metres wide and 5.0 metres long, with access to these car parking spaces provided via a manoeuvring area that is a minimum of 6.5 metres wide. A couple of the end spaces are the exception to this and are slightly wider at 3.0 metres.

The proposed parking layout is shown in Figure 3 below.

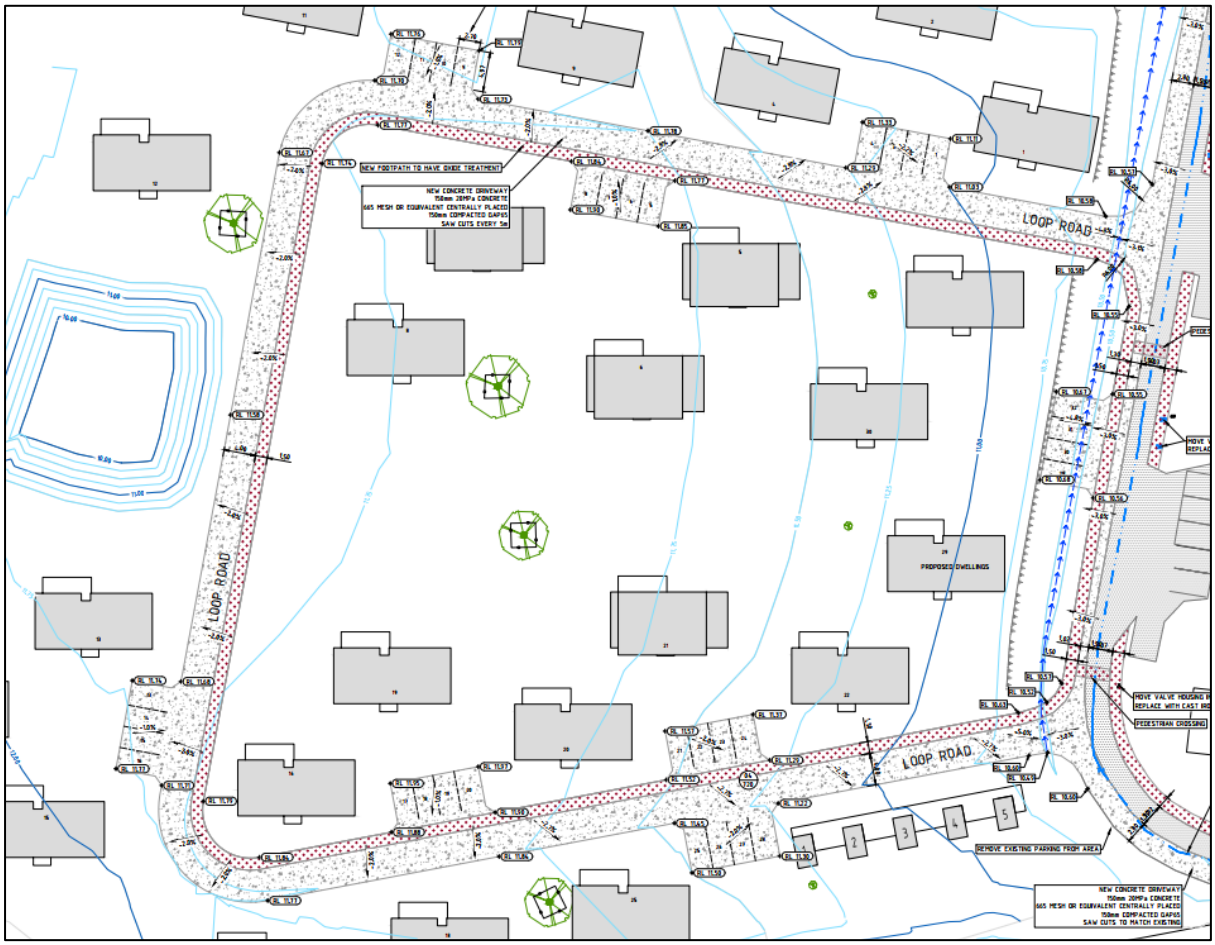


Figure 3: Parking and manoeuvring area.

The dimensional and manoeuvring characteristics of the car parks comply with the requirements of the FNDC Plan and are considered to be appropriate for the intended use.

3.4 Parking Impact Analysis

The proposed activities on the site will consist of 24 residential dwellings. The following table shows the FNDC parking requirement for the proposed activity.

Table 2: FNDP Parking requirement

Land Use	Parking rate	Quantity	Car parks required
Residential Unit	2 spaces per unit	24 units	48

On this basis, with 32 car parking spaces provided on-site, the development has a technical shortfall of 16 car parking spaces compared with the car parking requirement under the FNDC Plan.

Parking Demand

The number of car parking spaces does not technically comply with the FNDC Plan however it is expected that this residential activity will have an adequate number of car parking spaces to service

the likely demand. The lack of parking on the site will suppress the parking demand and it is expected that each dwelling will only have one vehicle and there will be some vacant spaces for visitors. If the demand exceeds the available spaces there are areas on site that could be utilised for parking if required, however there are further stages to this development and it is anticipated that changes are likely to be made in the future.

The proposed parking provision is considered to be suitable for the intended use and is expected to accommodate the practical parking demands generated by the activities from the development.

3.5 Lighting

The FNDC Plan specifies that car parking areas that could be used during the hours of darkness shall have lighting installed in the car park. This is a practical requirement to assist residents who are on site during winter months in particular, to provide a safe and convenient environment. Care is required to ensure overspill light does not impact on the neighbours.

This aspect of the design has not been considered at this time however it is anticipated that at least security lighting will be provided and this feature of the design will be considered in due course at building consent stage. It is recommended that the provision of a lighting design is a condition of consent.

3.6 Pedestrians and Passenger Transport

Pedestrians

It is expected that there will be a number of pedestrian movements to and from the site as well as around the site between properties. A 1.5 metre wide pedestrian path will be provided from the entrance to the site and around the inner perimeter of the stage 1 works, as well as around the outer perimeter of the stage 2 works.

The proposed pedestrian paths will connect the various car parking spaces to the dwellings as well as providing an internal pedestrian network to cater for pedestrians attending the child care facility and other grassed areas where people are likely to carry out recreational activities.

Bus

There are no regular bus services near the site.

Train Services

There are no train services near the site.

Cycle Facilities

There are no dedicated cycling facilities near the site however the carriageways are typically wide enough to support cyclists and the local roads around the town are generally considered appropriate for cyclists to use.

The topography of the land around Kaitaia is relatively flat and cycling is considered to be an option for residents to use. As this is a residential subdivision, cycling facilities are not required to be provided as the dwellings will normally have room to store bicycles.

3.7 Loading, Servicing, and Fire Appliance Access

This is a residential activity and technically a loading space is not required. If a delivery was required to be made by a truck the internal road is sufficiently wide to accommodate an 11.5 metre long truck.

Other smaller deliveries, such as those by courier van, will also be infrequent and will be able to use available spaces in the car parking areas for loading purposes.

It is expected that rubbish servicing will occur via the Councils rubbish collection services. Convenient rubbish collection points can be easily provided near the dwellings and it is expected that rubbish trucks will be able to utilise the internal road network. If a private rubbish collection service is used the internal road has been designed to accommodate a large ridged truck. Tracking plans have been included in the drawing set of plans.

The Building Code requires developments to provide fire appliance access to within 20 metres of the entrance to all buildings or within 20 metres to the inlets of a sprinkler system.

It is unlikely that a sprinkler system is to be provided, however fire appliances would be able to access the site from Kohuhu Street and park within 20 metres of the each of the buildings on the site.

The fire access requirements of the Building Code are therefore satisfied from a traffic engineering perspective.

Overall, the loading, servicing, and fire appliance arrangements of the proposal have been assessed and are considered to be acceptable from a traffic engineering perspective.

3.8 Construction Traffic

It is standard practice that the applicant is to submit a Construction Traffic Management Plan (CTMP) so that any potential adverse effects of construction traffic will be mitigated. The CTMP is to be approved by Council and this requirement should be included in the conditions of consent. In this case the CTMP will likely be developed by the building contractors as they will have the best information in regard to the staging of the development.

Overall, the provision of an appropriate CTMP will ensure that details of the construction traffic are carefully considered and the effects mitigated appropriately.

4 CONCLUSION

This report considers the traffic-related impacts of a proposal to relocate 24 residential dwellings onto the site at 23 Kohuhu Street in Kaitaia.

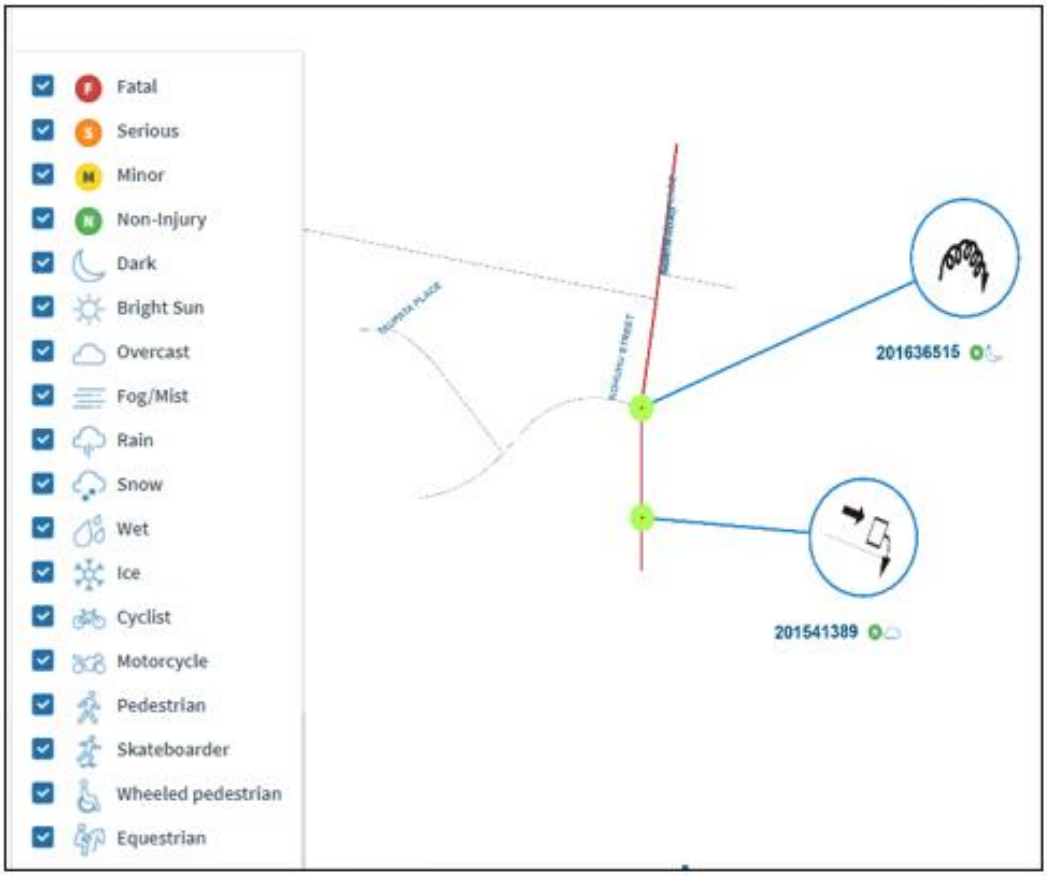
It is concluded that:

- Stage 2 is expected to generate approximately 24 trips during the morning peak. It is considered that these volumes would have few, if any, traffic effects that could be cause for concern from a traffic engineering perspective.
- The existing vehicle crossing is to be widened to 6.0 metres and it is expected that this crossing will operate safely and efficiently.
- 32 parking spaces are proposed on-site where a minimum of 48 car parks are required by the FNDC Plan. It is expected that the proposed number of parking spaces will be able to cater for the parking demand for this residential development.
- The dimensions of the parking spaces and manoeuvring areas comply with the FNDC Plan dimensional requirements. All parking spaces are considered to be appropriate for their intended use and are of no cause for concern from a traffic engineering perspective.
- No loading space is proposed for this development although heavy vehicle access is available if required.

Overall, this proposal would result in traffic effects that are less than minor from a traffic engineering perspective. There is therefore no traffic-related reason why resource consent should not be granted.

Appendix A: Crash Statistics

23·Kohuhu·Street·Collision·Diagram¶



Auckland 14-20

TLA (Territorial local authority)
Far North District

Crash severity
Fatal Crash, Serious Crash, Minor Crash, Non-Injury Crash

Crash year
2014 — 2020

Saved sites
Kohuhu St

Plain English report

2 results from your query.

1-2 of 2

Crash road	Distance	Direction	Reference station	Route position	Side road	Easting	Northing	Longitude	Latitude	ID	Date	Day of week	Time	Description of events	Crash factors	Surface condition	Natural light	Weather	Junction	Control	Crash count fatal	Crash count severe	Crash count minor	Social cost $(m)
KOHUHU ST		I			NORTH ROAD	1623570	6115216	173.258636	-35.105595	201636515	22/04/2016	Fri	02:25	Car/Wagon1 SDB on KOHUHU ST lost control turning right, Car/Wagon1 hit non specific tree	CAR/WAGON1, alcohol suspected, lost control when turning	Dry	Dark	Fine	T Junction	Give way	0	0	0	0.02
NORTH ROAD	100m	S			KOHUHU ST	1623570	6115116	173.258636	-35.106499	201541389	02/07/2015	Thu	09:30	SUV1 SDB on NORTH ROAD hit rear of Car/Wagon2 SDB on NORTH ROAD turning right from centre line	SUV1, failed to notice car slowing, stopping/stationary, other attention diverted, ENV: entering or leaving private house / farm	Dry	Overcast	Fine	Driveway	Nil	0	0	0	0.03

1-2 of 2

Appendix B: Plan of the Overall Site