Far North District Council

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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: BDO Pakihi Taitokerau 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:

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): steve@sansons.co.nz

Phone Numbers: Work: 0211606035 Home:

Postal Address: (*or* alternative method of service under section 352 of the Act) Po Box 318, Paihia, 0247

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 1400 Horeke Road, Horeke

7. Application Site Details:

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

Site Address/ Location: 1400 Horeke Road, Horeke

Legal Description: Utakura 6A Block Val Number:

Certificate of Title: 476413

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.

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.

5 x cabins on Puketawa Marae in the Rural Production Zone

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 Ø 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 Ø 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) [redacted]

Email:

Postal Address:

Post Code:

Phone Numbers: Work: [redacted] 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: [redacted] (please print)

Signat[redacted] (signature of bill payer – **mandatory**) Date: 16 November 2023

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**

SANSON & ASSOCIATES LTD

Planners & Resource Consent Specialists

Assessment of Environmental Effects

Application for Resource Consent:

Five cabins to be placed on the existing Marae site.

Prepared for: Puketawa Marae Trustees

Prepared by Steven Sanson | Consultant Planner

November 2023

1.0 APPLICANT & PROPERTY DETAILS

Applicant	Puketawa Marae Trustees
Address for Service	Sanson & Associates Limited PO Box 318 PAIHIA 0247 C/O - Steven Sanson steve@sansons.co.nz 021-160-6035
Legal Description	Utakura 6A Block
Record Of Title	476413
Physical Address	1400 Horeke Road, Horeke
Site Area	2.023ha
Owner of the Site	Various – Refer CT in Appendix 1.
District Plan Zone	Rural Production (ODP) Maori Purpose Zone – Rural (PDP)
District Plan Features	Kiwi 'present'
Archaeology	Nil known
NRC Overlays	Flooding
Soils	4w1
Protected Natural Area	Nil
HAIL	No

Schedule 1

2.0 SUMMARY OF PROPOSAL

Proposal	The proposal seeks to add five cabins to the existing Marae site. Each cabin has a floor area of approximately 37.6m2. Wastewater upgrades are also sought, new crossing and access, and 2 x 25,000l tanks are provided.
Reason for Application	The proposal breaches: • 8.6.5.2.1 – Residential Intensity; • 15.1.6A.2.1 – Traffic Intensity; • 12.4.6.1.2 – Fire Risk to Residential Units Overall, the proposal is a *Discretionary Activity* under the ODP. No consents are required under the PDP.
Appendices	Appendix 1 – Record of Title & Instruments Appendix 2 – Architectural Drawings [Advance Build] Appendix 3 – Wastewater Report [Water Flow] Appendix 4 – Northland Regional Council Consent Application. Appendix 5 – FENZ Approval
Consultation	Nil
Pre Application Consultation	Nil
Relevant Applications	Nil

3.0 INTRODUCTION & PROPOSAL

3.1 Report Requirements

This report has been prepared for Puketawa Marae in support of a land use consent application at 1400 Horeke Road, Horeke.

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

The report also includes an analysis of the relevant provisions of the Far North District Plan, relevant National Policy Statements and Environmental Standards, as well as Part 2 of the Resource Management Act 1991.

3.2 Proposal & Background

Application Site: A range of details regarding the site are outlined in Schedule 1 of this report.

These details are supplemented by the Record of Title and relevant instruments located in Appendix 1. The Record of Title confirms that the site is Maori Freehold Land.

A broader description of the site is provided in Section 4 of this Report.

Land Use Consent: The proposal seeks to add five cabins 'residential units' to the existing Puketawa Marae site. This includes a mixture of 1 & 2bdr cabins with associated infrastructure such as 2 x 25,000l water tanks, connections to existing marae wastewater system and a new vehicle crossing and associated driveway from Horeke Road.

These proposal items are shown on the architectural drawings provided in Appendix 2.

Details on the wastewater system for both uses are provided in Appendix 3. As outlined in the Wastewater Report, consent from the Northland Regional Council is also required. The consent from NRC is being applied for concurrently and is provided in Appendix 4.

Given the proximity of the cabins to vegetation, the approval of FENZ has been sought and this is found in Appendix 5.

Background: An Order in Council – Severe Weather Emergency Recovery (Temporary Accommodation) Order 2023 was made effective from June 1 2023. This approach allows exemptions from the Resource Management Act 1991 for temporary accommodation until August 9 2026 or until such a time that resource consent was granted for the activity.

Whilst the provisions of the Order in Council are enabling (to a certain extent) all Marae to be situated within the Far North District that are part of the HUD Cabins Project are seeking permanent residence of these cabins, as opposed to the temporary accommodation relief that the provisions provide. This, alongside breaches to District Wide Rules of the Operative District Plan, requires a resource consent to be sought.

Therefore, a full consent for permanent occupancy of the cabins is sought under this consent. Rural areas such as Horeke very rarely receive opportunities such as this and as such this consent seeks to make use of available government funding to support accommodation in rural areas.

Activity Status: The proposal is a Discretionary Activity.

4.0 SITE & SURROUNDING ENVIRONMENT

4.1 Zoning & Resource Features

The proposed activity is located in the Rural Production Zone under the Operative District Plan. The site is located in the Māori Purpose Zone – Rural under the Proposed District Plan. The zoning is outlined in Figure 1 & Figure 2. There are no resource features of relevance.

Figure 1 – Operative Plan - Zone Maps (Source: Far North Maps)

Figure 2 – Proposed Plan - Zone Maps (Source: Far North Maps)

The site has areas covered by flooding hazards, but the proposed cabin sites are outside those areas. The site is not implicated by HAIL, or any known wetlands (Refer Figures 3 & 4).

Figure 3 – Hazard Maps (Source: NRC Local Maps)

Figure 4 – Biodiversity Wetlands Map (Source: NRC Local Maps)

4.3 Topography & Natural Features

The site is relatively flat, outside of built development is grassed pasture with some scattered vegetation. This is outlined in Figure 5 below.

Figure 5 – Aerial Map (Source: Prover Maps)

4.4 Built Form & Access

The site plan, within the architectural drawings (see Appendix 2), outlines the existing built development on the site, this includes the water tanks, septic tank, driveway and septic field.

The site gains access from Horeke Road, via a single crossing. This is located along the southern boundary of the site. An additional crossing is proposed along the southern boundary to provide access for the proposed cabins. The existing marae complex makes up the predominant built features of the site.

4.5 Surrounding Environment

The site is predominantly rural in nature. There are dispersed residential units located in the surrounds. The Utakura River is located on the northern boundary of the site. Otherwise, the surrounds are largely in pasture/ vegetation.

5.0 ASSESSMENT OF RELEVANT RULES

5.1 Assessment Summary

An assessment of the relevant rules of the Far North District Plan has been undertaken and this is provided in Table 1-3 below. Those rules breached are highlighted for ease of reference.

Table 1 - Rural Production Zone Rules

Rural Production Zone Standards		
Rule	Standards	Performance/Comments
Residential Intensity	Permitted – One unit per 12ha of land Restricted Discretionary - One unit per 4ha of land Discretionary – One unit per 2ha of land • In all cases the land shall be developed in such a way that each unit shall have at least 2,000m² for its exclusive use surrounding the unit plus a minimum of 1.8ha elsewhere on the property.	The proposal is for 5 x cabins on a ~2ha site. This level of density would be a Non-Complying Activity under the Operative Far North District Plan. Discretionary Activity (Under the Integrated Management Rule)
Sunlight	Permitted - No part of any building shall project beyond a 45 degree recession plane as measured inwards from any point 2m vertically above ground level on any site boundary Restricted Discretionary – if permitted standard breached	The proposal does not breach sunlight rules. Complies
Stormwater Management	Permitted - The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 15%. Controlled - The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 20%.	Total impervious surfaces for the site are 1,540.87m^2 (7.62%). Complies
Setback from Boundaries	Permitted - No building shall be erected within 10m of any site boundary;	The proposed buildings will not be located within the 10m setback from any of the site boundaries.

	Restricted Discretionary – if permitted standard breached	Complies
Keeping of Animals		N/A. Complies
Noise		Not relevant Complies
Building Height	Permitted - The maximum height of any building shall be 12m. Restricted Discretionary - The maximum height of any building shall be 15m.	The proposal cabins are all less than 12m in height. Complies
Helicopter Landing Area		N/A. Complies
Building Coverage	Permitted - Any new building or alteration/addition to an existing building is a permitted activity if the total Building Coverage of a site does not exceed 12.5% of the gross site area. Controlled - Any new building or alteration/addition to an existing building is a controlled activity if the total Building Coverage of a site does not exceed 15% of the gross site area.	Total building coverage for the site is 965.87m^2 (4.77%). Complies
Scale of Activities		Marae and residential activities are exempt from the requirements of this rule. Complies
Temporary Events		N/A Complies

Table 2 - District Wide Standards

District Wide Standards		
Rule	Standard	Performance/Comments
Natural and Physical Resources		

District Wide Standards		
Rule	Standard	Performance/Comments
12.1 Landscape & Natural Features	12.1.6.1.1 Protection of Outstanding Landscape Features 12.1.6.1.2 Indigenous Vegetation Clearance in Outstanding landscapes 12.1.6.1.3 Tree Planting in Outstanding Landscapes 12.1.6.1.4 Excavation and/or filling within an outstanding landscape 12.1.6.1.5 Buildings within outstanding landscapes 12.1.6.1.6 Utility Services in Outstanding Landscapes	N/A – None of these features apply to the site.
12.2 Indigenous Flora and Fauna	12.2.6.1.1 Indigenous Vegetation Clearance Permitted Throughout the District 12.2.6.1.2 Indigenous Vegetation Clearance in the rural Production and Minerals Zones 12.2.6.1.3 Indigenous Vegetation Clearance in the General Coastal Zone 12.2.6.1.4 Indigenous Vegetation Clearance in Other Zones	N\A – No vegetation clearance is required.
12.3 Earthworks	12.3.6.1.1 Excavation and/or filling, excluding mining and quarrying, in the Rural Production Zone or Kauri Cliffs Zone Permitted – Maximum of 5,000m3 within a 12-month period and cannot be higher than 1.5m cut or fill.	Total earthworks associated with the proposal include a cut and fill volume of 105m2. No retaining walls are required. Complies
12.4 Natural Hazards	12.4.6.1.1 Coastal Hazard 2 Area 12.4.6.1.2 Fire Risk to Residential Units	The proposed cabins are within 20m of vegetation. Discretionary Activity

District Wide Standards		
Rule	Standard	Performance/Comments
12.5 Heritage	12.5.6.1.1 Notable Trees 12.5.6.1.2 Alterations to/and maintenance of historic sites, buildings and objects 12.5.6.1.3 Registered Archaeological Sites 12.5.6.2.2 Activities which could affect sites of cultural significance to maori	The site is not implicated by these features. Complies
12.5A Heritage Precincts	There are no Heritage Precincts that apply to the site.	N/A - None of these features apply to the site. Complies
12.6 Air	Not applicable	N/A
12.7 Lakes, Rivers, Wetlands and the Coastline	12.7.6.1.1 Setback from lakes, rivers and the coastal marine area 12.7.6.1.2 Setback from smaller lakes, rivers and wetlands Permitted = for rivers minimum setback of 10 x the average width of the river where it passes through or past the site provided that the minimum setback is 10m and the maximum is no more than minimum required by Rule 12.7.6.1.1 12.7.6.1.4 Land Use Activities involving the Discharges of Human Sewage Effluent 12.7.6.1.5 Motorised Craft 12.7.6.1.6 Noise	N/A – None of these rules except 12.7.6.1.4 are implicated by the proposal. The proposed wastewater disposal field is located 23.6m from an overland flowpath. Complies
12.8 Hazardous Substances		N/A Complies
12.9 Renewable Energy and Energy Efficiency		N/A Complies
13 Subdivision		N/A – No subdivision proposed.

District Wide Standards		
Rule	Standard	Performance/Comments
14 Financial Contributions		N/A – No financial contributions required.
15 Traffic, Parking and Access	Traffic Movements Other Buildings used for Social, Cultural or Recreational purposes (including Grandstands) = 2 traffic movement per every person the facility is designed for. House on Papakinga = 5 traffic movements per unit	Existing Marae sleeps 60 persons @ max capacity. 60 x 2 = 120 (place of assembly) Five cabins proposed. 5 x 5 = 25 (house on Papakainga) Traffic movements associated with one residential unit can be excluded = 5 Total Traffic Movements = 140 <u>Restricted Discretionary</u> Parking is existing for the marae. The proposed cabins can accommodate 2 carparks each. One existing access is existing to the si and no changes are proposed as this is th marae entrance. An additional access proposed to access the cabins. This will b constructed in accordance with Counc standards. Complies.
16 Signs & Lighting		N/A – No signage is proposed.

Table 3 - PDP Rules

Proposed District Plan				
Matter	Rule/Std Ref	Relevance	Compliance	Evidence
Hazardous Substances	Rule HS-R2 has immediate legal effect but only for a	N/A	Yes	Not proposed.

Majority of rules relates to development within a site that has heritage or cultural items scheduled and mapped however Rule HS-R6 applies to any development within an SNA – which is not mapped	new significant hazardous facility located within a scheduled site and area of significance to Māori, significant natural area or a scheduled heritage resource HS-R5, HS-R6, HS-R9			
Heritage Area Overlays (Property specific) This chapter applies only to properties within identified heritage area overlays (e.g. in the operative plan they are called precincts for example)	All rules have immediate legal effect (HA-R1 to HA-R14) All standards have immediate legal effect (HA-S1 to HA-S3)	N/A	Yes	Not indicated on Far North Proposed District Plan
Historic Heritage (Property specific and applies to adjoining sites (if the boundary is within 20m of an identified	All rules have immediate legal effect (HH-R1 to HH-R10) Schedule 2 has immediate legal effect	N/A	Yes	Not indicated on Far North Proposed District Plan

heritage item)). Rule HH-R5 Earthworks within 20m of a scheduled heritage resource. Heritage resources are shown as a historic item on the maps) This chapter applies to scheduled heritage resources – which are called heritage items in the map legend				
Notable Trees (Property specific) Applied when a property is showing a scheduled notable tree in the map	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	N/A	Yes	Not indicated on Far North Proposed District Plan
Sites and Areas of Significance to Māori (Property specific) Applied when a property is showing a site / area of significance	All rules have immediate legal effect (SASM-R1 to SASM-R7) Schedule 3 has immediate legal effect	Yes	Yes	Not relevant.

to Maori in the map or within the Te Oneroa-a Tohe Beach Management Area (in the operative plan they are called site of cultural significance to Maori)				
Ecosystems and Indigenous Biodiversity SNA are not mapped – will need to determine if indigenous vegetation on the site for example	All rules have immediate legal effect (IB-R1 to IB-R5)	N/A	Yes	Not indicated on Far North Proposed District Plan
Activities on the Surface of Water	All rules have immediate legal effect (ASW-R1 to ASW-R4)	N/A	Yes	Not indicated on Far North Proposed District Plan
Earthworks all earthworks (refer to new definition) need to comply with this	The following rules have immediate legal effect: EW-R12, EW-R13 The following standards have immediate legal effect: EW-S3, EW-S5	Yes	Yes	With respect of EW-R12, this requires that the proposed earthworks comply with EW-S3. In effect, EW-S3 triggers the need for an ADP to be applied. It is confirmed that the proposed earthworks will comply with an ADP, and this is volunteered as a condition of consent.

				EW-R13 links to EW-S5. EW-S5 requires earthworks to be controlled in accordance with GD-05. It is confirmed here that the earthworks will be undertaken in accordance with GD-05.
Signs (Property specific) as rules only relate to situations where a sign is on a scheduled heritage resource (heritage item), or within the Kororareka Russell or Kerikeri Heritage Areas	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	N/A	Yes	Not indicated on Far North Proposed District Plan
Orongo Bay Zone (Property specific as rule relates to a zone only)	Rule OBZ-R14 has partial immediate legal effect because RD-1(5) relates to water	N/A	Yes	Not indicated on Far North Proposed District Plan
Comments:				
No consents are required under the PDP.				

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.

As outlined in the report prepared by Water Flow (Refer Appendix 3) a discharge consent is also required from the Northland Regional Council.

A separate application for consent has been prepared for these matters and forms part of Appendix 4. Consents are being sought from both authorities concurrently.

Section 9.4 provides a more considered assessment of relevant NPS's and NES's and in summary, no consents are required under these higher order documents.

6.0 NOTIFICATION ASSESSMENT

6.1 Public Notification

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

Table 4 – Notification Process

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; (iii) 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 the proposals effects on the environment is required to ascertain the effects of the development and whether public notification is required. The section below provides this assessment.

7.0 EFFECTS ON THE ENVIRONMENT

7.1 Effects that May 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 adjoining properties are shown below in Figure 4.

Address	Suburb	Town	Capital Value	Owners	Last Sale Date	Last Sale Price	Land Area	Floor Area
1174 Horeke Road	Horeke	Far North	1300000	Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited, Portcullis Farm Limited	22 Dec 2022	1300000	118.7779 ha	190 m²
1433 Horeke Road	Horeke	Far North	1355000	John Stirling,Robert Stirling	29 Apr 2015	800000	146.6405 ha	143 m²

Figure 5 – Adjoining Persons (Source: Prover Maps)

The permitted baseline may be taken into account should the Council deem it relevant. Except for the proposal items, the majority of the site has consented and legally established items.

The proposal includes145 traffic movements, this breaches the permitted number of traffic movements which is limited to 60. The difference of 85 traffic movements should be assessed in relation to the effects generated by the proposal.

In terms of the fire risk to residential unit's rule breach, the proposed cabins are within the 20m setback from vegetation. Whilst the cabins are within the setbacks, approval has been received from FENZ for this matter.

Earthworks (if any) for the proposal will be permitted as there will not be a need for 5,000m^3 of works or any retaining walls. The site is not subject to flooding, so no NRC rules are of concern.

In terms of parking, additional carparks will be provided for the proposed cabins. For access, the existing will be maintained for the Marae and additional access is proposed for the cabins in accordance with FNDC standards.

7.2 Written Approvals

FENZ have provided their written approval for the development.

7.3 Effects Assessment

The following assessment 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.

In terms of localised effects or Effects to People, this assessment is undertaken in Section 8 of this Report. Therefore, assessment criteria which refer to adjacent sites or properties, are addressed appropriately under that section of the report.

Table 5 – Effects Assessment

Item & Assessment Criteria	Comments
Positive Effects	• The proposal will provide for additional accommodation and upgraded facilities for tangata whenua and other users of the Marae. • The proposal, from application through to development, employs a number of service providers and sellers of goods. • The proposal seeks to minimise the effects from earthworks and wastewater by considered design and mitigation measures.
Fire Risk to Residential Units (Derived from 12.4.7)	• The proposal is supplemented by FENZ Approval found in Appendix 5. The primary mitigation measures for fire risk is a dedicated firefighting water supply that will be provided for the proposed cabins as approved by FENZ. • No other mitigation measures are considered necessary.
Traffic Intensity (Derived from 15.1.6A.4.1)	• The site incorporates existing Marae buildings and activities. The use of the marae is rather infrequent and in those accommodated by the cabins will be present at the marae when in use. Otherwise in many respects the site generally operates within the permitted baseline of 60 traffic movements. • Adjoining properties are utilized for rural activities, indicating that they are not likely to be impacted by the proposed additional traffic movements. Horeke Road is of reasonable standard and accommodates the Cycle Trail which promotes reduced speeds.

	• Horeke Road is an unsealed rural road with a low volume of traffic. As such, it is expected to easily accommodate the proposed traffic intensity. • The current access is capable of handling the traffic movements associated with the existing Marae activity. An additional access is proposed for the cabins in accordance with FNDC standards. The proposed additional traffic movements associated with the cabins are considerably less significant in comparison to the Marae and these two access points are not anticipated to conflict. No further upgrades are deemed necessary. • The internal driveways on the site is deemed appropriate and will provide safe access for pedestrians moving within the site. The additional crossing and access is to remove any internal conflicts when the marae is in use.
Integrated Development (Derived from 8.6.5.4.2)	• A plan showing the location of all matters is found in Appendix 2. • A description of the proposal and rule breaches are found above. No staging is proposed. • There are no heritage features on the property. • Sewage disposal is as per the Wastewater Report in Appendix 3. Geotechnical matters will be confirmed at time of building consent. No natural hazards affect the development area. • The site is used for a marae complex and open space is plentiful for the site. Energy efficiency is advanced by the location of the dwellings.
Effects Conclusion	Considering the assessment above and the mitigation measures proposed it is considered that the proposal results in effects which are less than minor.

8.0 EFFECTS TO PEOPLE

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

Table 6 – Limited Notification Process

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

8.1 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 effects of the proposal on adjacent landowners have been undertaken below.

8.2 Localised Effects Assessment (Effects to Persons)

Section 7 of this report provides a graphic and table of the relevant adjacent properties that this assessment relates. The relevant persons associated with the assessment are found in Figure 5 in Section 7.0 of this report.

For the following reasons, those parties and persons above not considered to be adversely affected by the proposal to a minor or more than minor level:

- All proposed works are situated within the confines of the site. All effects can be managed on site.
- The assessment found in Section 7 of this report details that there are no effects to localized person in terms of the identified breaches.
- The proposed works are essentially to provide accommodation on this existing Marae site largely marae which have been impacted by accommodation shortages in rural areas which are not usually funded to provide accommodation. The cabins are small in scale and nature and situated far from the road frontage.

8.3 Effect to Persons Conclusion

Having considered the effects above, there are no adversely affected persons resulting from the proposal.

9.0 STATUTORY CONTEXT

9.1 Operative Far North District Plan

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

This application is subject to the provisions of the Operative Far North District Plan. The site is zoned Rural Production and is to be assessed in terms of the objectives and policies for the zone and the district-wide subdivision and environment provisions.

The proposal would achieve the purpose of the Rural Production zone which is to ensure its' ongoing rural productive purpose that encompasses a wide-range of compatible land use activities, including limited rural lifestyle and residential opportunities in a manner that avoids, remedies or mitigates adverse effects.

It is anticipated that the size and form of the proposal (which is in general accordance with Council standards) would:

- Promote the sustainable management of natural and physical resources in the RPZ (Obj 8.6.3.1);
- Enable the efficient use and development of the RPZ in a way that enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety (Obj 8.6.3.2);
- Promote the maintenance of amenity values of the RPZ to a level that is consistent with the productive intent of the zone (Obj 8.6.3.3);
- Avoid, remedy or mitigate the actual or potential conflicts between new land use activities and existing lawfully established activities (reverse sensitivity) within the RPZ (Obj 8.6.3.6);
- Avoid, remedy or mitigate the adverse effects of incompatible use or development on natural and physical resources (Obj 8.6.3.8);

Of prime importance is that the cabins projects allows for the Marae and community of Horeke to enhance their cultural and social wellbeing by providing housing on their marae site.

Having considered these sections of the Plan, it is concluded that the proposal is not inconsistent with the relevant objectives and policies of the Far North District Plan.

9.2 Proposed Far North District Plan

The Far North District Council have released their Proposed 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 move 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 objectives and policies for the Maori Purpose – Rural Zone however this has still been provided below.

The proposed use ensures the viability of the marae for future generations along with providing additional accommodation (MPZ-01) and enables the ongoing use of the

marae for social and cultural purposes (MPZ-02). The supporting reports confirm the proposal reflects the carrying capacity of the land and surrounding environment (MPZ-03).

The land is maori freehold land and the development is also managed under Te Ture Whenua Maori Act 1993 (MPZ-P1). The proposal is considered compatible with the surrounds, doesn't compromise occupation of the land, rather reinforces it, doesn't impact adjoining sites, maintains existing character and amenity, provides for community wellbeing and safety, and is serviced by the proposed infrastructure. Overall, all effects can be mitigated appropriately (MPZ-P3).

In terms of MPZ-P4, the proposal meets many of the requirements sought, within the confines of the scale and significance of the activity which is considered as reasonably low in nature. Overall, the proposal is not considered inconsistent with the Maori Purposes Zone.

9.3 Regional Policy Statement for Northland (RPS)

An assessment of the relevant objectives and policies associated with the RPS for Northland has been undertaken and is found in Table 7 below. The RPS sets region wide objectives and policies for the environment.

Table 7 – NRC RPS Review

Objective / Policy	Comment
Integrated Catchment Management	Not relevant
Region Wide Water Quality	Not relevant
Ecological Flows and Water Quality	Not relevant
Indigenous Ecosystems & Biodiversity	There are no SNA's on the site.
Enabling Economic Wellbeing	The proposal allows for various goods/services in the land development sector in Horeke.

Economic Activities – Reverse Sensitivity And Sterilization	The proposal does not result in any reverse sensitivity or sterilization effects given the design and scale of the proposal.
Regionally Significant Infrastructure	The proposal does not impact any regionally significant infrastructure.
Efficient and Effective Infrastructure	The proposal seeks to use existing infrastructure i.e FNDC / NZTA roads. The proposal also seeks to upgrade on site infrastructure for future generations.
Security of Energy Supply	Power is provided to the site.
Use and Allocation of Common Resources	Not relevant.
Regional Form	The proposal does not result in any reverse sensitivity effects, or a change in character or sense of place. Versatile soils are not adversely affected.
Tangata Whenua Role in Decision Making	The Marae trustees are considered appropriate in this respect.
Natural Hazard Risk	Nil affecting the site.
Natural Character, Outstanding Natural Features, Outstanding Natural Landscapes And Historic Heritage	Not relevant.

Having considered the relevant components of the RPS, it is concluded that the proposal is not inconsistent with the relevant objectives and policies.

9.4 National Policy Statements and Plans

With respect to the National Environmental Standard – Soil Contamination, the property file has been reviewed which shows no known activities that are on the HAIL.

In terms of the NES – Freshwater Management, there are no wetlands located on the site. The NES is not considered relevant.

In terms of the NPS for Highly Productive Land. The proposed development is located on the part of the site that does not contain Class 1-3 soils.

The site is not located in the Coastal Environment. The NZCPS is not considered relevant. There are no relevant policy statements or plans to assess.

10.0 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 Part 2, Section 5 of the Act.

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. Section 6(e) is directly relevant to the proposal.

10.3 Section 7 - Other Matters

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

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

energy.

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

10.4 Section 8 - Treaty of Waitangi

The Far North District Council is required to take into account the principles of the Treaty of Waitangi when processing this consent. This consent application may be sent to local iwi and hapū who may have an interest in this application. We doubt any persons would have a cultural issue with the proposal.

10.5 Part 2 Conclusion

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

11.0 CONCLUSION

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

The proposal is considered to result in less than minor effects on the environment and through assessment, there are considered to be no affected persons.

The proposal is consistent with the objectives and policies of the Far North District Plans, the Regional Policy Statement for Northland, and achieves the purpose of the Act. Relevant NPS' and NES' have been considered with the proposal finding consistency with their general aims and intent.

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

We appreciate draft conditions to be supplied to us prior to decision being made.

Regards,

Steven Sanson BPlan (Hons)

Consultant Planner

NZPI Member No 4230

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	**476414**
Land Registration District	**North Auckland**
Date Issued	06 May 2009

Prior References
476413

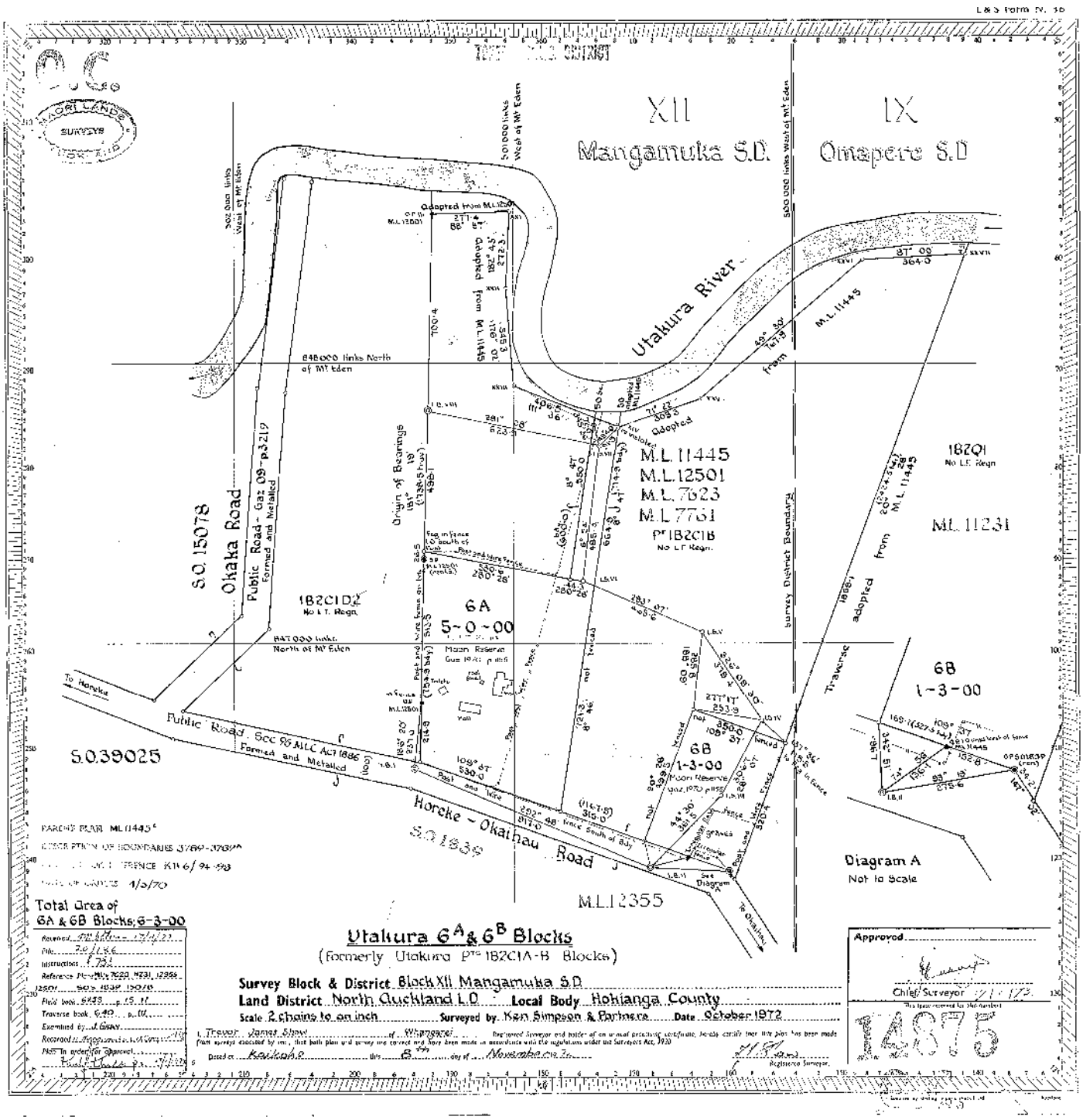
Estate	Fee Simple
Area	2.0234 hectares more or less
Legal Description	Utakura 6A Block
Purpose	Maori Reservation for the purpose of a meeting place and sports grounds for the common use and benefit of the Maori people of the Honihoni tribe

Registered Owners

Graeme Robert Leslie Prebble, Sandra Mutu, Leonard Le Noel, Steve Turner, Miriam Solomon, Dean Taumata Solomon, Katene Ericksen and Graeme Leslie Prebble (Senior) as responsible trustees jointly, no survivorship

Interests

8153792.3 Status Order determining the status of the within land to be Maori Freehold Land - 6.5.2009 at 9:00 am


L&S Form IV, 36
XII
Mangamuka S.D.
IX
Omapere S.D
Utakura River
Public Road - Gaz 09-p3219
Formed and Metalled
S.O. 15078
Okaka Road
M.L. 11445
M.L. 12501
M.L. 7623
M.L. 7761
Pt 1B2C1B
No L.T. Regn.
1B2C1D
No L.T. Regn.
6A
5-0-00
Main Reserve
Gaz 1970 p1155
6B
1-3-00
Main Reserve
Gaz 1970 p1155
1B2C1
No L.T. Regn.
M.L. 11231
Public Road Sec 98 M.L.C. Act 1886
Formed and Metalled
S.O.39025
Horeke - Okaihau Road
S.O.1839
M.L. 12355
To Horeke
To Okaihau
Traverse adopted from M.L. 11445
survey District Boundary
Origin of Bearings
Diagram A
Not to Scale
Utakura 6A & 6B Blocks
(formerly Utakura Pts 1B2C1A-B Blocks)
Survey Block & District Block XII Mangamuka S.D
Land District North Auckland L.D
Local Body Hokianga County
Scale 2 chains to an inch
Surveyed by Ken Simpson & Partners
Date October 1972
Total Area of
6A & 6B Blocks; 6-3-00
Approved
Chief Surveyor
1875

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

Record(s) of Title

476414	Identified as potentially Maori Freehold Land

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

Tel: +64 9 407 7250
Fax: +64 9 407 7129
kerikeri@bdo.co.nz
www.bdo.nz

BDO PAKIHI TAITOKERAU LIMITED
108 Kerikeri Road
P O Box 304
Kerikeri 0245
NEW ZEALAND

24 November 2023

Far North District Council
Private Bag 752,
Kaikohe 0440

Dear

Ministry of Housing and Urban Development - Cyclone Recovery Cabins

I hope this letter finds you well. I am writing to you on behalf of BDO Pakihi, in relation to the recent submission of resource consent applications for our project within the Far North District. We appreciate the role that the Far North District Council plays in ensuring responsible and sustainable development within the community.

Our project, aimed at fostering enhanced housing outcomes in Northland, operates under a constrained budget. As we navigate through the intricacies of resource management, we are proactively seeking ways to optimise our expenses to maximise the positive impact on the community. Given the financial constraints of our project, we kindly request your consideration for a reduction in the resource consent fees associated with our applications.

The allocation of resources to our housing initiative is of utmost importance, and any cost savings achieved through a fee reduction would directly contribute to the enhancement of housing outcomes for the people of Northland. We believe that by alleviating some of the financial burden associated with the consent process, we can redirect those funds towards the improvement of housing facilities and amenities, ultimately benefitting the broader community.

We understand the importance of adhering to regulatory processes and are committed to fulfilling all requirements set forth by the Far North District Council. We view this request as an opportunity for collaboration, where both parties can work together to achieve positive and sustainable outcomes for the region.

We would be grateful for the opportunity to discuss this matter further and explore potential avenues for cooperation. Your consideration of our request is highly valued, and we are open to providing any additional information or clarification that may assist in the decision-making process.

Thank you for your time and attention to this matter. We look forward to the possibility of working closely with the Far North District Council to bring about positive change in our community.

Kind regards

[redacted]

Visit our website: www.bdo.nz

Proposed New Dwelling

1400 Horeke Road, Horeke

For: Puketawa Marae

Advance build

0800 327 828
Fax 09 401 6506
PO Box 111, Kerikeri 0245
www.advancebuild.co.nz

Contents

Concept Plans

Concept 1
October 2023

Revision:	C01
Project No.	1211
Drawn By:	NMB

Final working drawings take precedence over concept plans

NB: Boundary Lines are Indicative Only

Revision	By:	Date:
Drawn	NMB	Mar 07 2023

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

Sheet Title:
Site Location Plan

Scale: NTS

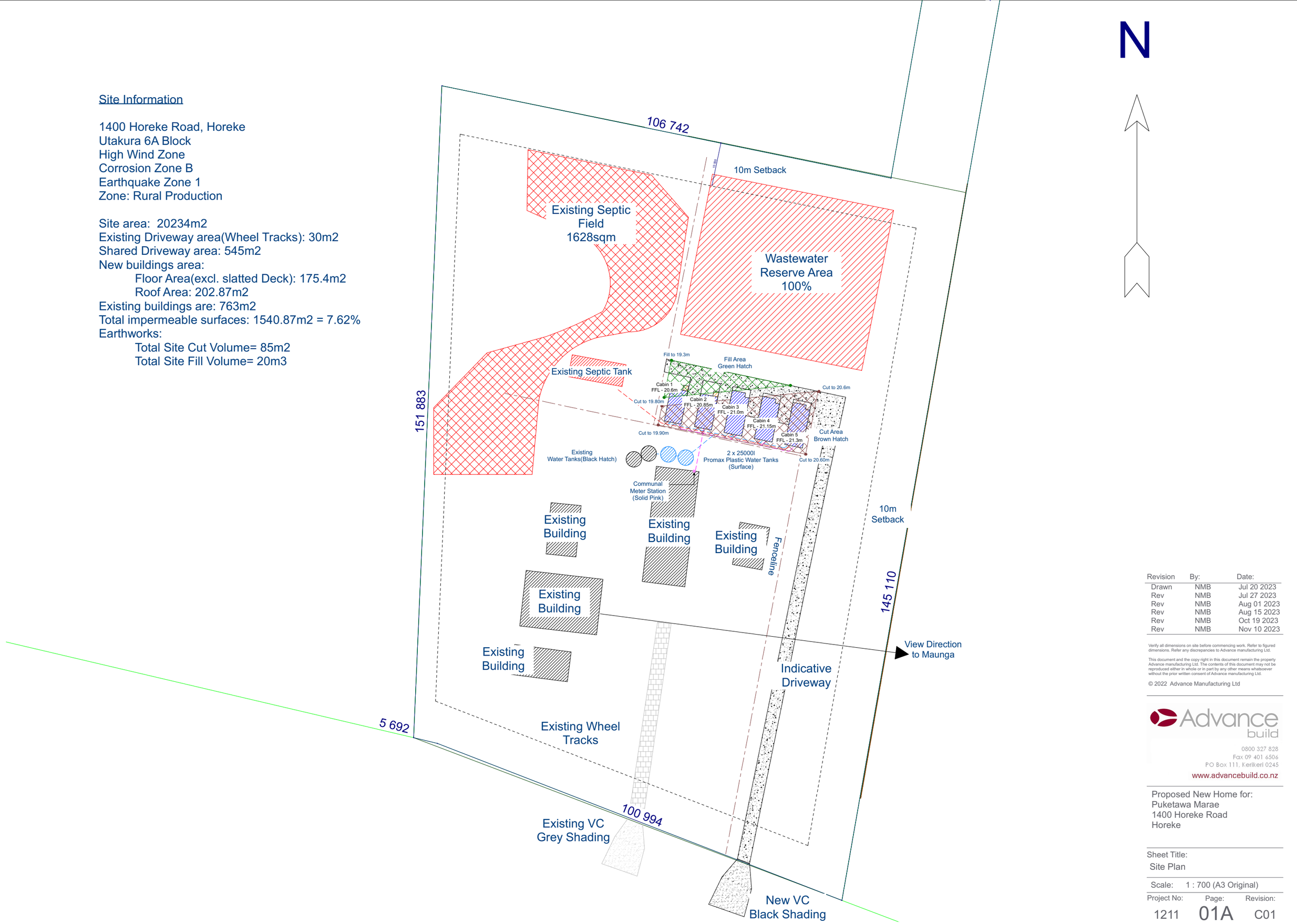
Project No:	Page:	Revision:
1211	01	C01

Site Information

1400 Horeke Road, Horeke
Utakura 6A Block
High Wind Zone
Corrosion Zone B
Earthquake Zone 1
Zone: Rural Production

Site area: 20234m2
Existing Driveway area(Wheel Tracks): 30m2
Shared Driveway area: 545m2
New buildings area:
- Floor Area(excl. slatted Deck): 175.4m2
- Roof Area: 202.87m2

Existing buildings are: 763m2
Total impermeable surfaces: 1540.87m2 = 7.62%
Earthworks:
- Total Site Cut Volume= 85m2
- Total Site Fill Volume= 20m3



Revision	By:	Date:
Drawn	NMB	Jul 20 2023
Rev	NMB	Jul 27 2023
Rev	NMB	Aug 01 2023
Rev	NMB	Aug 15 2023
Rev	NMB	Oct 19 2023
Rev	NMB	Nov 10 2023

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

Sheet Title:
Site Plan

Scale: 1 : 700 (A3 Original)

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Reserve Area
100%

Existing Septic Tank

Fill to 19.3m

Fill Area
Green Hatch

Cabin 1
FFL - 20.6m

Cut to 20.6m

Cut to 19.80m

Cabin 2
FFL - 20.85m

Cabin 3
FFL - 21.0m

Cabin 4
FFL - 21.15m

Cabin 5
FFL - 21.3m

Cut to 19.90m

Cut Area
Brown Hatch

Existing
Water Tanks(Black Hatch)

2 x 25000l
Promax Plastic Water Tanks
(Surface)

Cut to 20.60m

Communal
Meter Station
(Solid Pink)

151 883

Existing
Building

Existing
Building

Existing
Building

Fenceline

10m
Setback

145 110

Existing
Building

Existing
Building

View Direction
to Maunga

Indicative
Driveway

Revision	By:	Date:
Drawn	NMB	Jul 27 2023
Rev	NMB	Aug 01 2023
Rev	NMB	Aug 15 2023
Rev	NMB	Oct 19 2023

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

Sheet Title:
Site Plan

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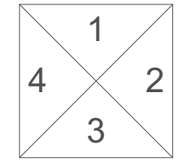
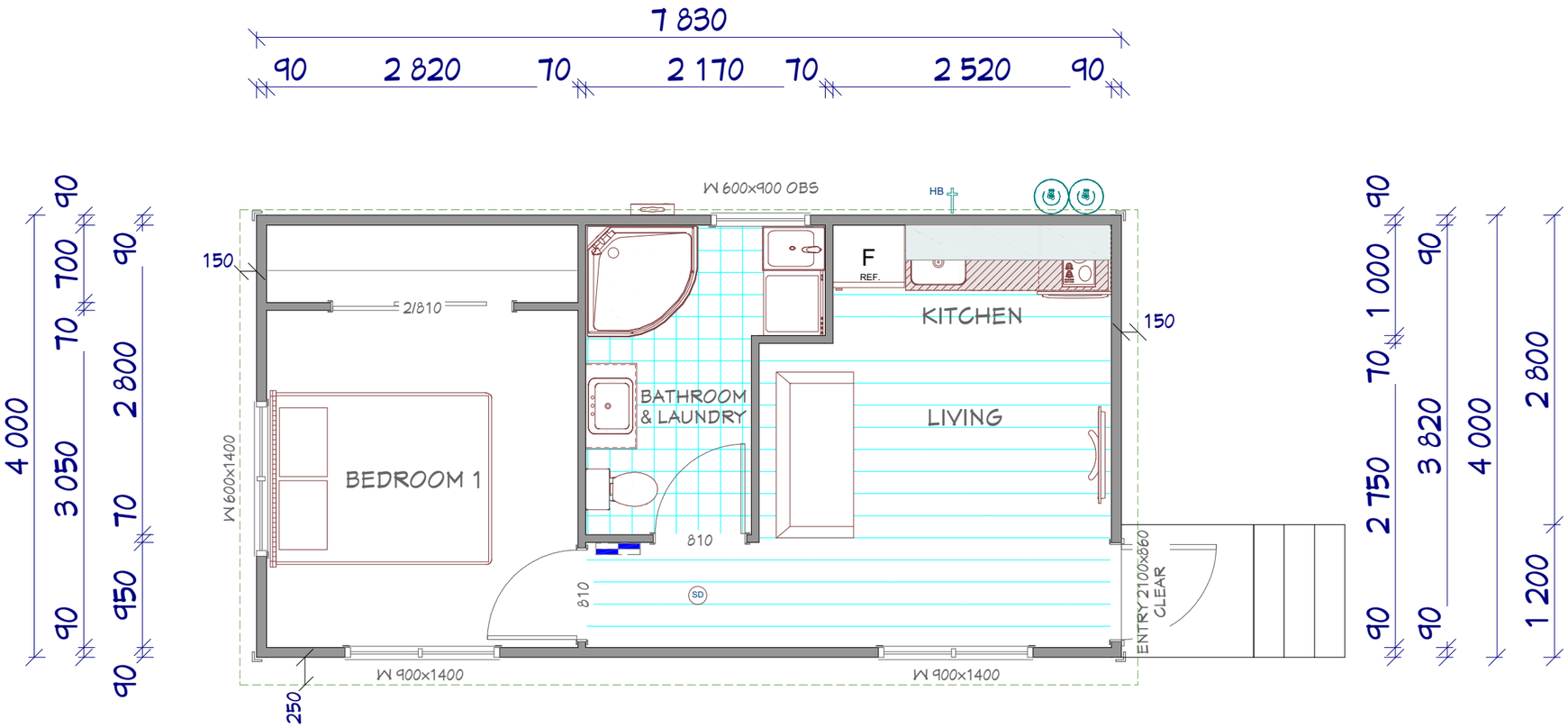


Elevations



LIVING AREA
31.3 SQ M

Revision	By:	Date:
Drawn	NMB	Mar 07 2023

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

Sheet Title:
Floor Plan - 1 Bed Cabin

Scale: 1 : 50 (A3 Original)

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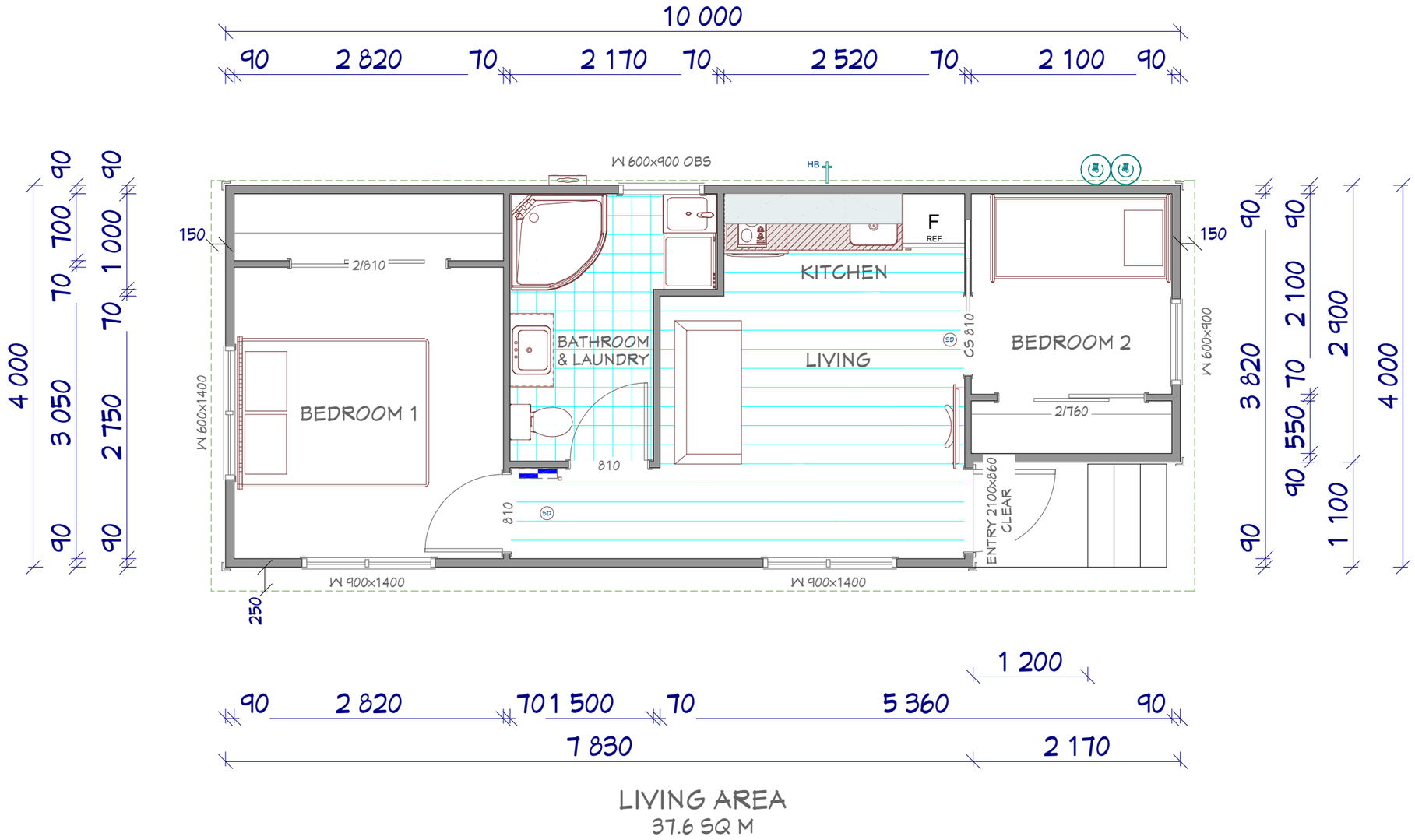

LIVING AREA
37.6 SQ M

1 2
4 3

Elevations

Revision	By:	Date:
Drawn	NMB	Mar 07 2023

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

Sheet Title:
Floor Plan - 2 Bed Cabin

Scale: 1 : 50 (A3 Original)

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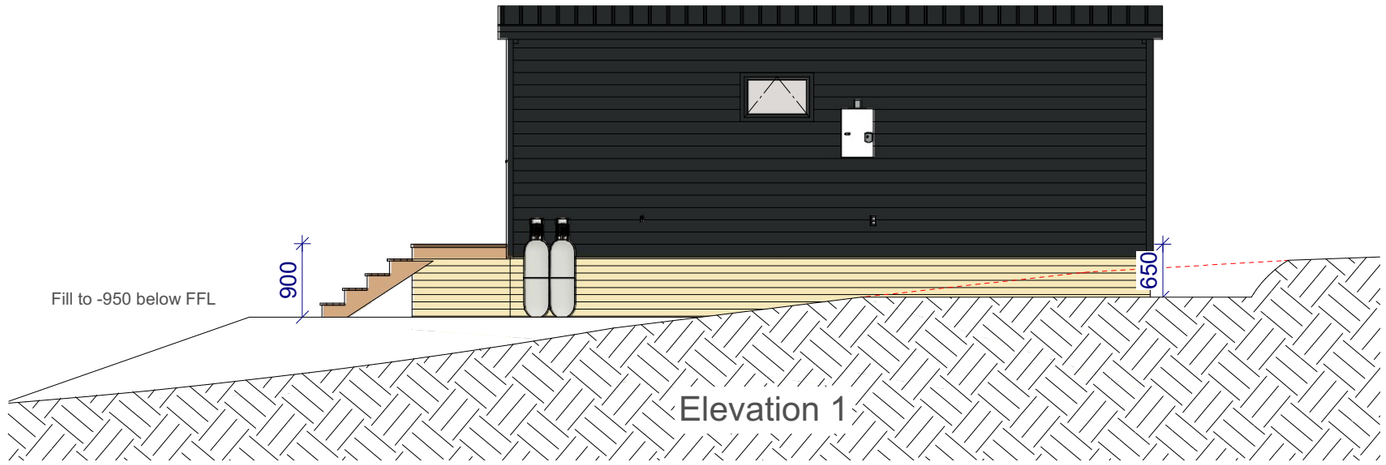
1211	02A	C01

Roof Pitch 3 deg
Stud height 2.4m

Coloursteel Endura T-Rib
roofing or similar



Weathertex 200mm weatherboard
cladding - direct fix

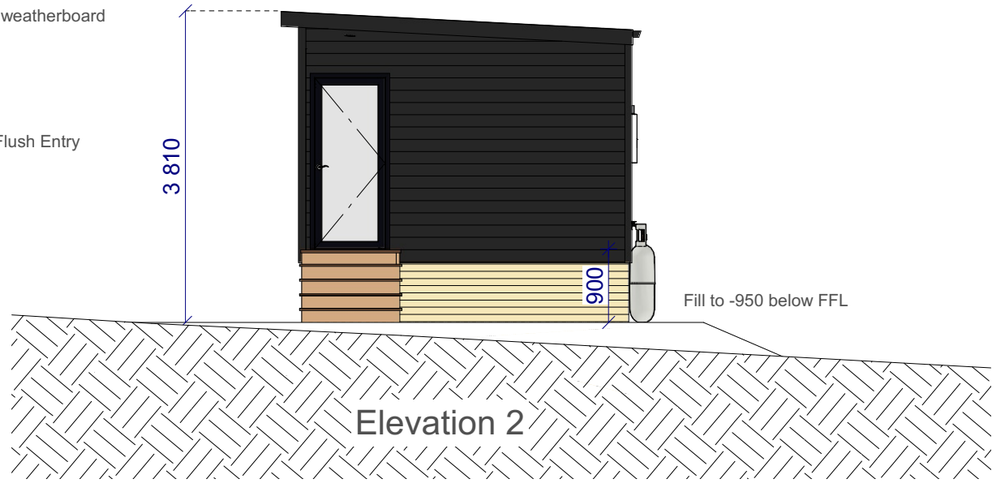
Timber Box Corners & Scribers

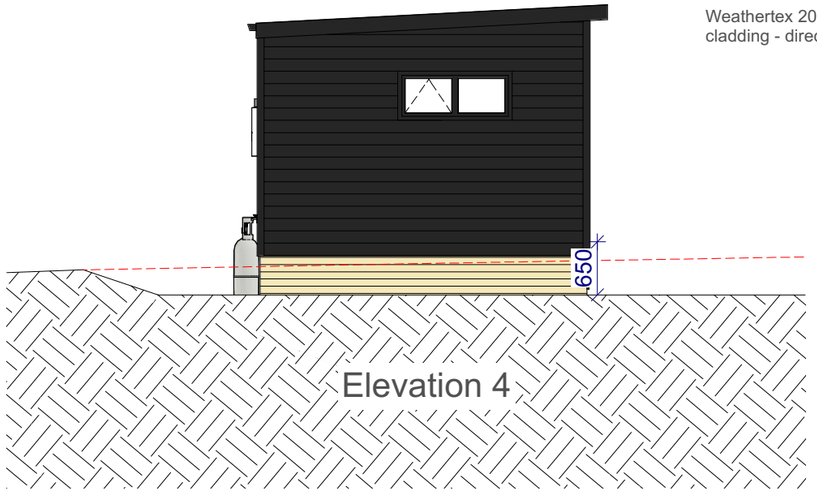
FFL - 20.60m

Excavate to -650 below FFL

Weathertex 200mm weatherboard
cladding - direct fix

Rebated Door for Flush Entry

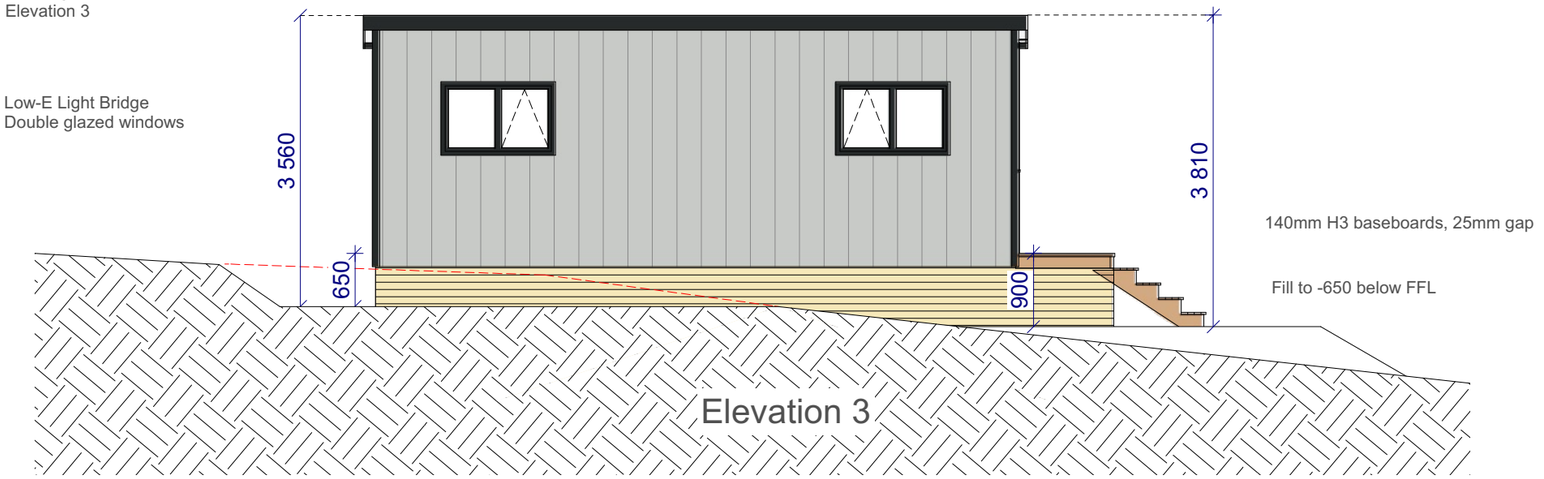




Weathertex 200mm weatherboard
cladding - direct fix

Weathergroove Smooth 300mm
cladding - direct fix
Elevation 3

Low-E Light Bridge
Double glazed windows



140mm H3 baseboards, 25mm gap

Fill to -650 below FFL

Revision	By:	Date:
Drawn	NMB	Oct 2 2023
Rev	NMB	Oct 19 2023

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

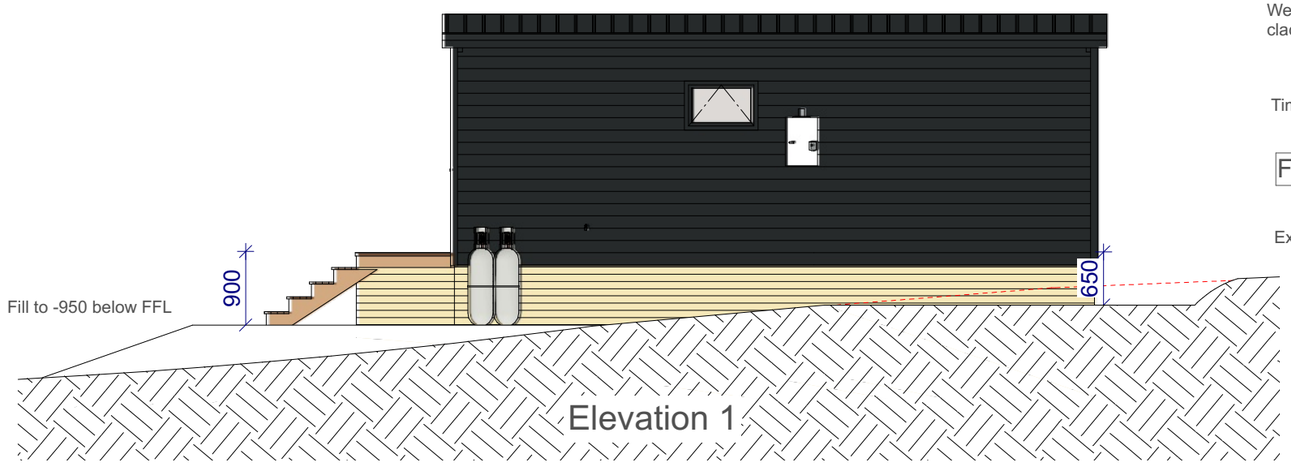
Sheet Title:
Elevations - Cabin 1

Scale: 1 : 100 (A3 Original)

Project No:	Page:	Revision:
1211	03	C01

Roof Pitch 3 deg
Stud height 2.4m

Colourtsteel Endura T-Rib
roofing or similar



Elevation 1

Weathertex 200mm weatherboard
cladding - direct fix

Timber Box Corners & Scribers

FFL - 20.85m

Excavate to -650 below FFL

Weathertex 200mm weatherboard
cladding - direct fix

Rebated Door for Flush Entry

Elevation 2

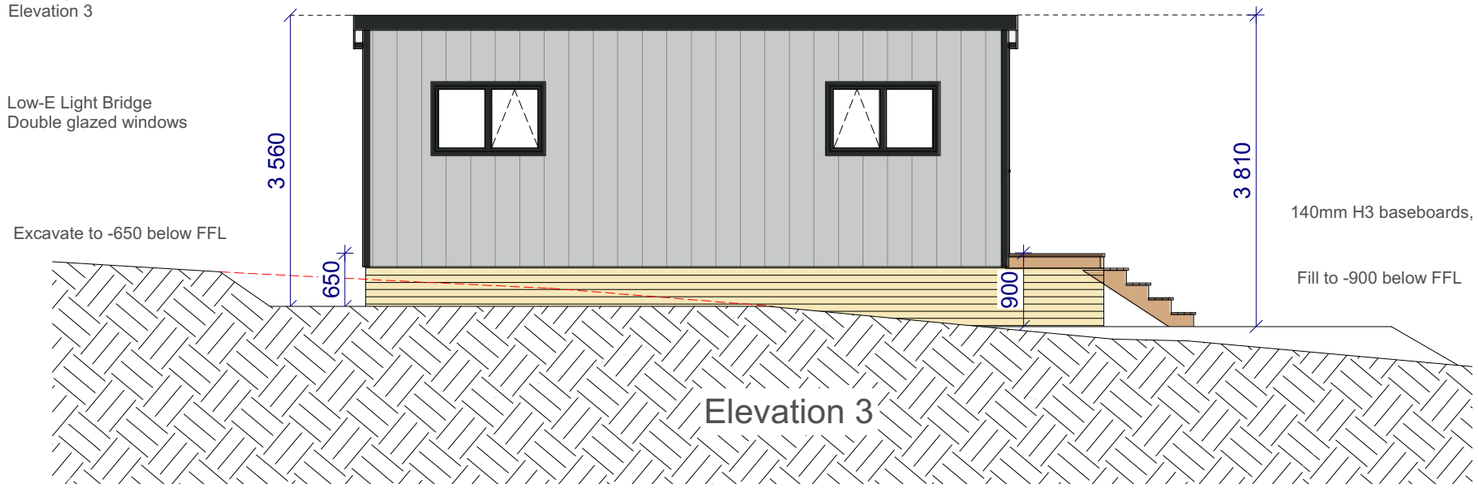
Elevation 4

Weathertex 200mm weatherboard
cladding - direct fix

Excavate to -650 below FFL

Weathergroove Smooth 300mm
cladding - direct fix
Elevation 3

Low-E Light Bridge
Double glazed windows



Elevation 3

Revision	By:	Date:
Drawn	NMB	Oct 2 2023
Rev	NMB	Oct 19 2023

Advance build

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

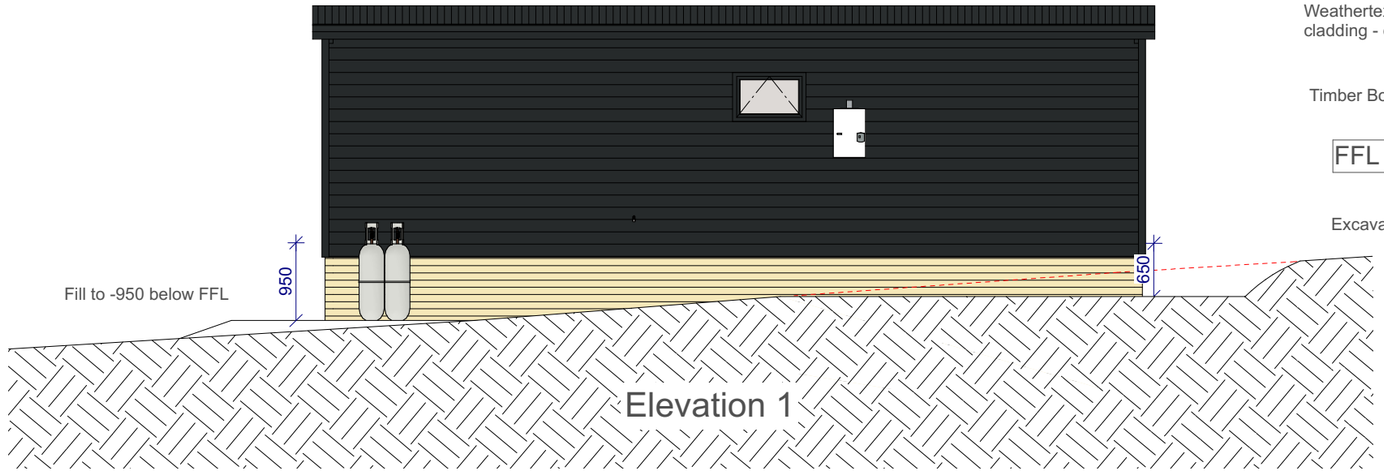
Sheet Title:
Elevations - Cabin 2

Scale: 1 : 100 (A3 Original)

Project No:	Page:	Revision:
1211	03A	C01

Roof Pitch 3 deg
Stud height 2.4m

Colorsteel Endura T-Rib
roofing or similar



Weathertex 200mm weatherboard
cladding - direct fix

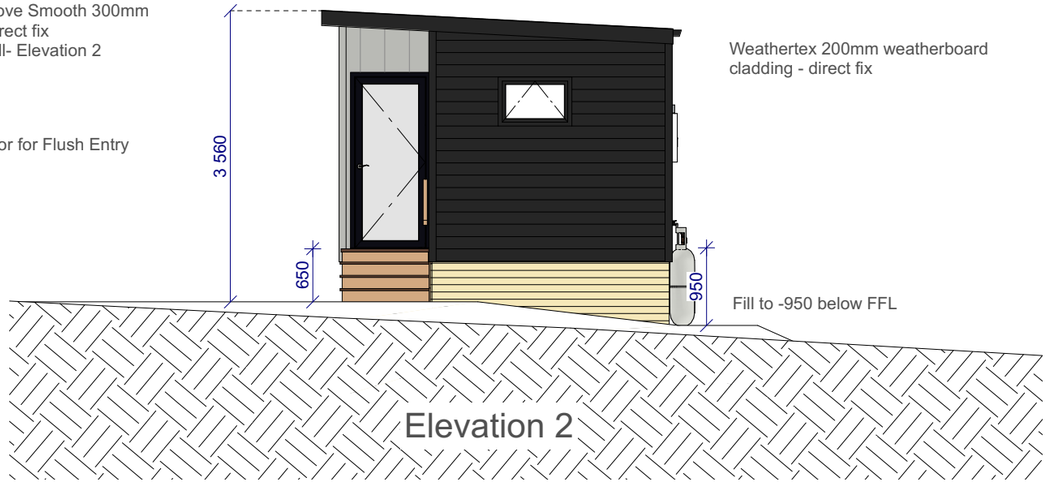
Timber Box Corners & Scribers

FFL - 21.0m

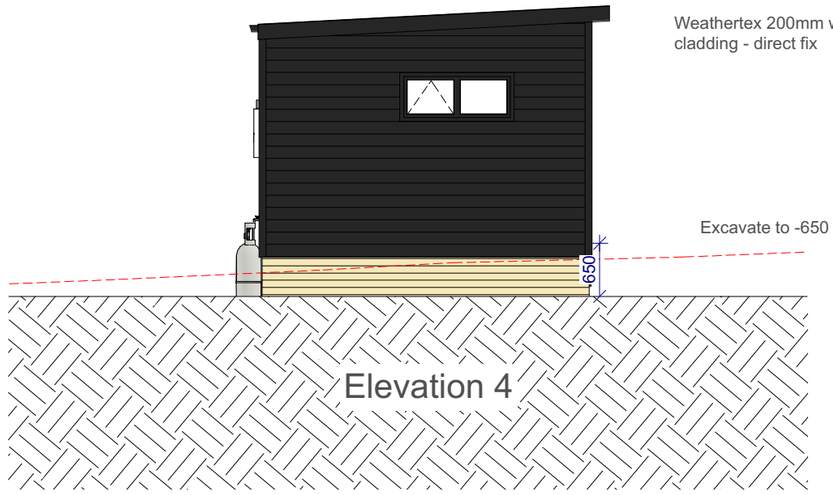
Excavate to -650 below FFL

Weathergroove Smooth 300mm
cladding - direct fix
To Entry Wall- Elevation 2

Rebated Door for Flush Entry



Weathertex 200mm weatherboard
cladding - direct fix

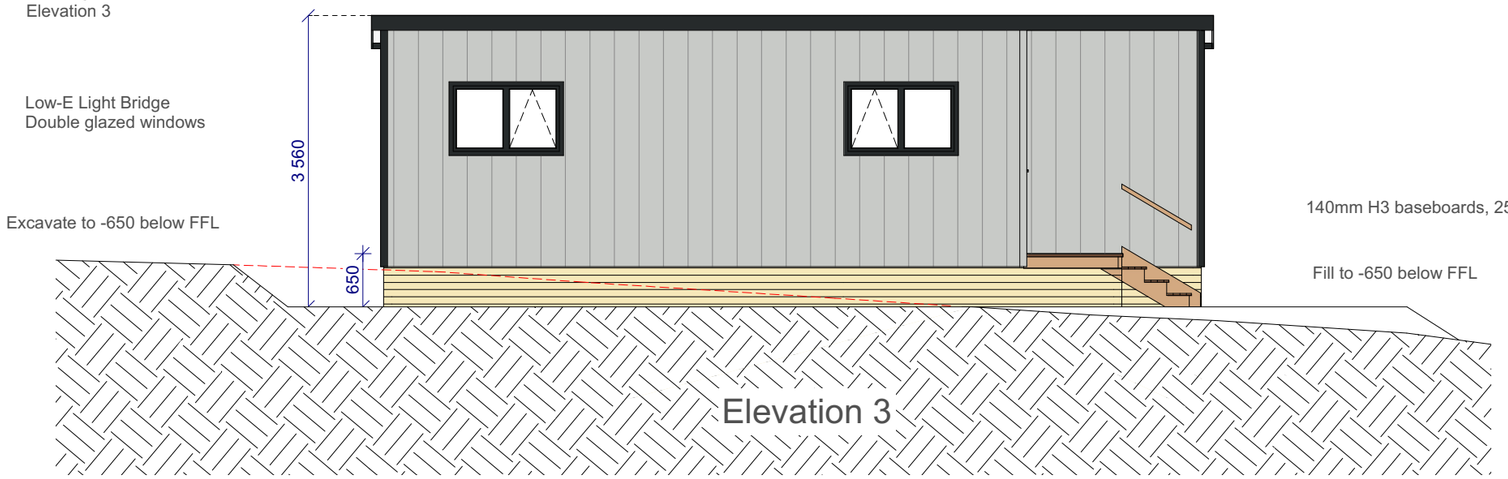


Weathertex 200mm weatherboard
cladding - direct fix

Weathergroove Smooth 300mm
cladding - direct fix
Elevation 3

Low-E Light Bridge
Double glazed windows

Excavate to -650 below FFL



Revision	By:	Date:
Drawn	NMB	Oct 02 2023

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

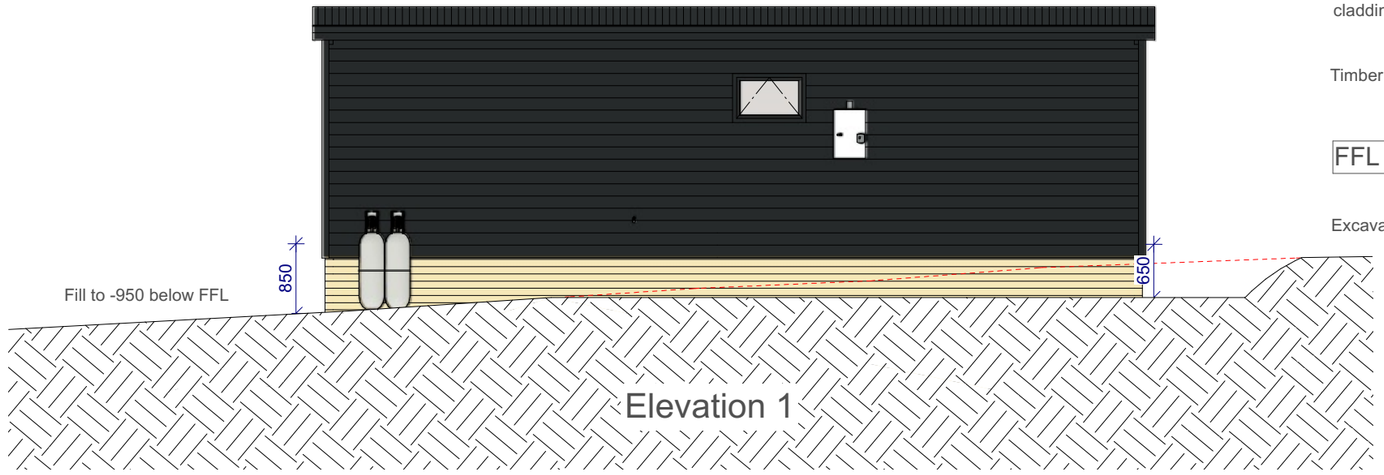
Sheet Title:
Elevations - Cabin 3

Scale: 1 : 100 (A3 Original)

Project No:	Page:	Revision:
1211	03B	C01

Roof Pitch 3 deg
Stud height 2.4m

Colorsteel Endura T-Rib roofing or similar



Elevation 1

Weathertex 200mm weatherboard cladding - direct fix

Timber Box Corners & Scribers

FFL - 21.15m

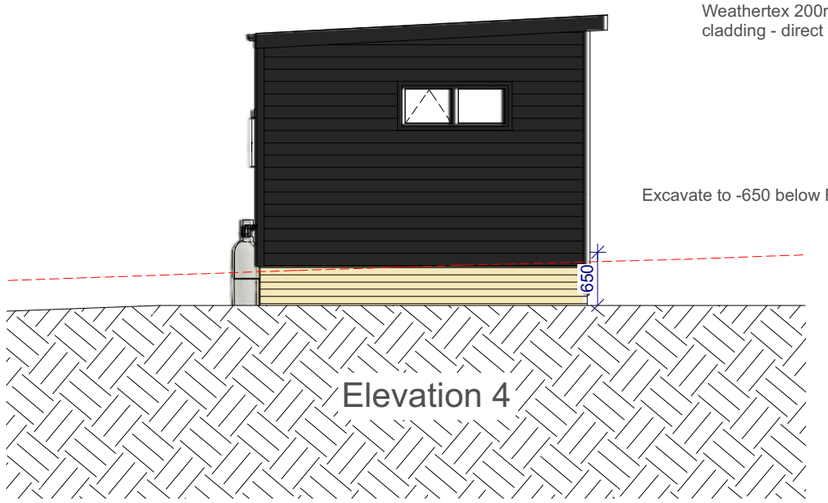
Excavate to -650 below FFL

Weathergroove Smooth 300mm cladding - direct fix
To Entry Wall- Elevation 2

Rebated Door for Flush Entry

Elevation 2

Weathertex 200mm weatherboard cladding - direct fix



Elevation 4

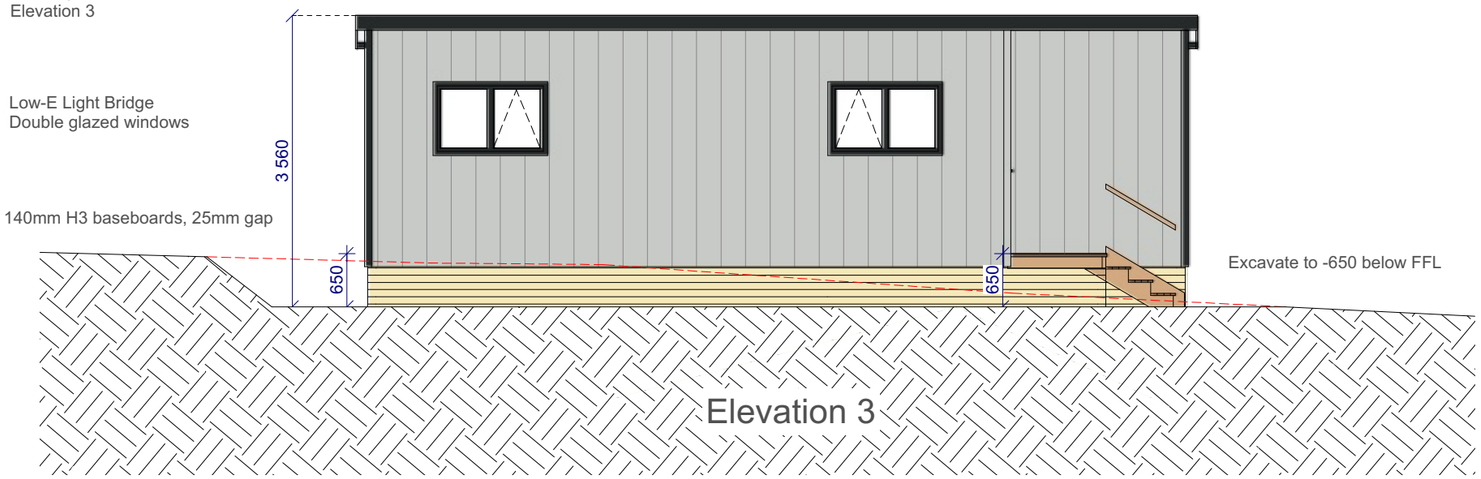
Weathertex 200mm weatherboard cladding - direct fix

Excavate to -650 below FFL

Weathergroove Smooth 300mm cladding - direct fix
Elevation 3

Low-E Light Bridge
Double glazed windows

140mm H3 baseboards, 25mm gap



Elevation 3

Excavate to -650 below FFL

Revision	By:	Date:
Drawn	NMB	Oct 02 2023

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

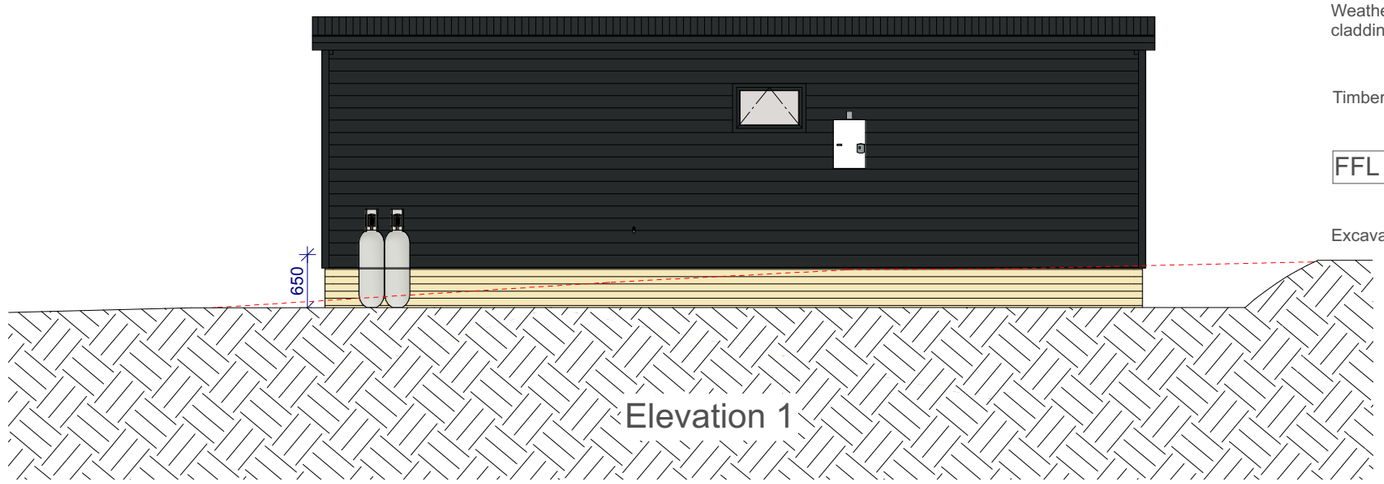
Sheet Title:
Elevations - Cabin 4

Scale: 1 : 100 (A3 Original)

Project No:	Page:	Revision:
1211	03C	C01

Roof Pitch 3 deg
Stud height 2.4m

Colourtsteel Endura T-Rib
roofing or similar



Elevation 1

Weathertex 200mm weatherboard
cladding - direct fix

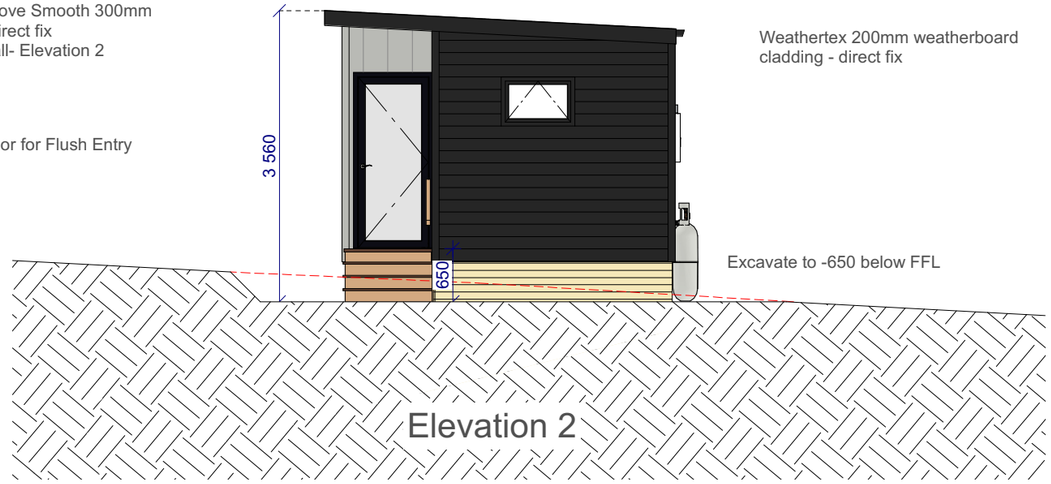
Timber Box Corners & Scribers

FFL - 21.30m

Excavate to -650 below FFL

Weathergroove Smooth 300mm
cladding - direct fix
To Entry Wall- Elevation 2

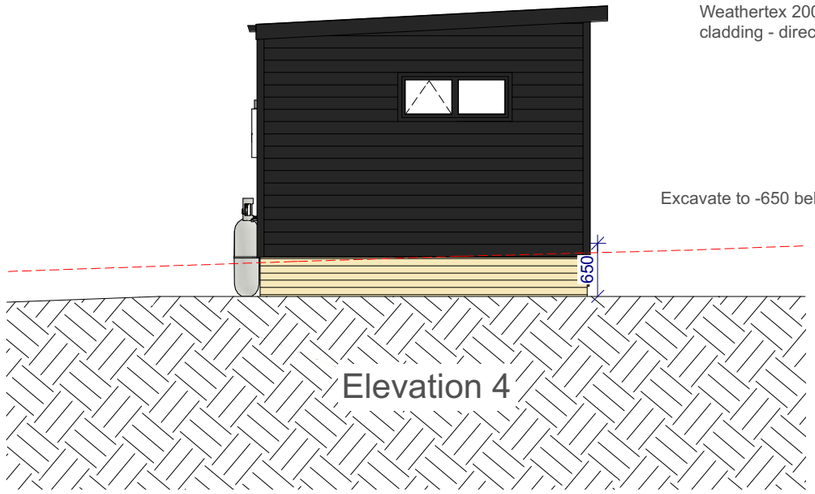
Rebated Door for Flush Entry



Elevation 2

Weathertex 200mm weatherboard
cladding - direct fix

Excavate to -650 below FFL



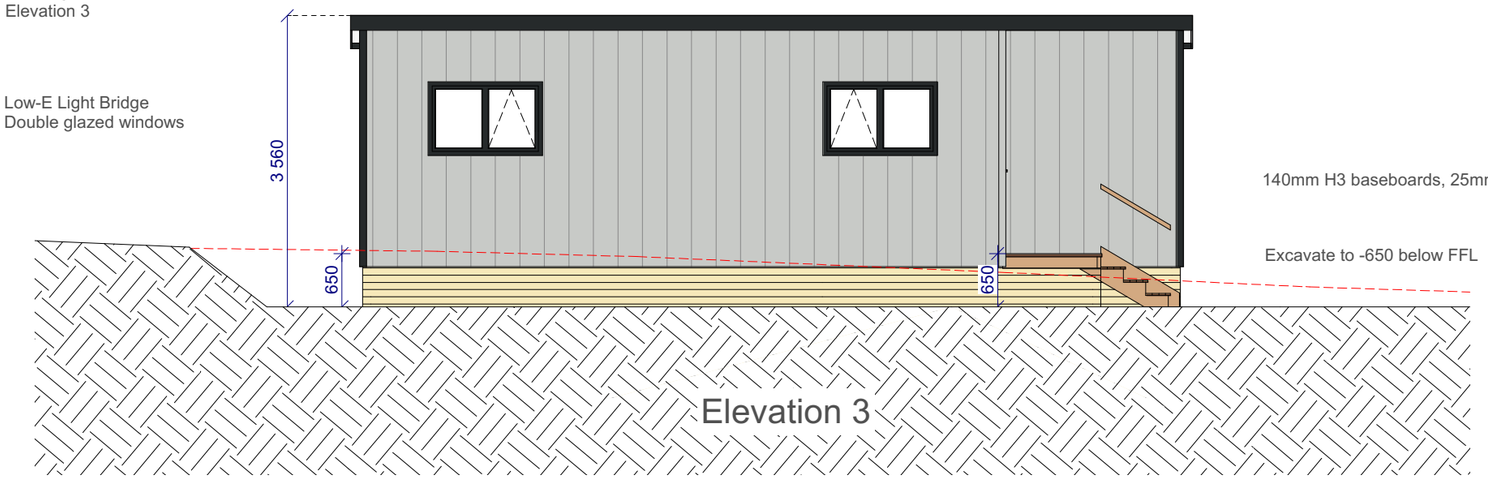
Elevation 4

Weathertex 200mm weatherboard
cladding - direct fix

Excavate to -650 below FFL

Weathergroove Smooth 300mm
cladding - direct fix
Elevation 3

Low-E Light Bridge
Double glazed windows



Elevation 3

140mm H3 baseboards, 25mm gap

Excavate to -650 below FFL

Revision	By:	Date:
Drawn	NMB	Oct 02 2023

Advance build

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Proposed New Home for:
Puketawa Marae
1400 Horeke Road
Horeke

Sheet Title:
Elevations - Cabin 5

Scale: 1 : 100 (A3 Original)

Project No:	Page:	Revision:
1211	03D	C01

STATEMENT OF DESIGN - PS1

Issued by: Dean Hoyle
To: Puketawa Marae
Copy to be supplied to: Far North District Council
In Respect of: Econotreat Domestic Onsite Wastewater and Sewage System Design
At: 1400 Horeke Road, Urakura Valley
Legal Description: Utakura 6A Block

Waterflow NZ Ltd has been engaged by Puketawa Marae to provide the technical design services and details in respect of the requirements of G13/VM4 and B2 Durability of the Building Code 2004, for an Onsite Wastewater and Sewage System for their building at the above location.

The Design has been carried out in accordance with Auckland Council TP-58 Guidelines and Clause B2, G13 and G14 of the Building Regulations 2004.

The proposed building work covered by this producer statement is described on the drawings titled: Puketawa Marae Onsite Wastewater Design Report, and numbered 1-42 together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions: correct installation of the system and drainage fields
(ii) All proprietary products meeting their performance specification requirements;

As an independent design professional covered by a current policy for Professional Indemnity Insurance, no less than $200,000*, I **believe on reasonable grounds** the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code.

Signed by: Dean Hoyle – PS Author '3037' Auckland Council, NZQA Onsite Wastewater Training/Opus, BOINZ OWM, HBRC & FNDC Approved Designer

Date: 26/10/2023

Signature: 

Waterflow NZ Ltd
1160 State Highway 12
Maungaturoto 0520

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of $200,000.*

Project location

Puketawa Marae and Housing project, 1400 Horeke Road, Urakura Valley

Outline:

As requested by the Puketawa Marae (Owners) we (Waterflow NZ Ltd), are engaged to assess the stability and the soil condition for a suitable Onsite Wastewater Treatment System and Land Application System for the Marae Facilities and Papakainga Housing project, 1400 Horeke Road, Urakura Valley.

We understand it is proposed to service the Marae facilities and 5 x 2-Bedroom Dwellings to be located towards the Western side of the property The site is supplied by rainwater and tank supply.

Is the site suitable for an on-site effluent treatment and disposal system?

Yes, the site is suitable for the discharge of the wastewater production as per Northland Regional Council Regional Plan and AC TP-58 Guidelines

Discharge calculations are based on the below;

- Tangihanga 1 event per month with a total of 100 Day Visitors @ 40L/p/d and 60 Overnight Visitors @ 150L/p/d.
  Flow of 100 x 40L = 4000L/p/d + Flow of 60 x 150L = 9000L/p/d =
  Total Daily Flow of 13,000L/p/d

- Hui every fortnight 15 Day Visitors @ 40L/p/d and 10 Overnight Visitors @ 150L/p/d
  Flow of 15 x 40L = 600L/p/d + Flow of 10 x 150L = 1500L/p/d
  Total Daily Flow of 2100L/p/d

- Hui Daily, 5 Day Visitors x 40L/p/d.
  Total Daily Flow of 5 x 40 = 200L

- 5 x 2-bedroom dwellings totalling 15 Permanent Residents @ 145L/p/d
  Total Daily Flow of 15 x 145 = 2175L/p/d

- Max Total Wastewater production on a given day is 15,175L.
  This is to be buffered using a buffer tank system (2 x 22,500L) to a discharge of 4071L/p/d over the successive days as required, to empty buffer system.

What are the system and disposal field requirements?

We recommend the EconoTreat System Series VBB-C-2200 Twin Treatment System; an advanced secondary Treatment System with de-nitrification. We suggest discharge to be via PCDI at a recommended loading rate of 2.5l/m2/day for silty clay loam soils. And a minimum reserve field of 30% is recommended.

Is Discharge Consent required?

Yes, due to proposed activities onsite the Wastewater volume exceeds the Northland Regional Council On-site Effluent Treatment Regional Plan allowance of 2000L.

Waterflow NZ Ltd
PO Box 24, 1160 State Highway 12, Maungaturoto 0547
P. 0800 628 356 F. 09 431 8845 E. sales@waterflow.co.nz www.naturalflow.co.nz

Other requirements
Council will require a Producer Statement – Construction Review (PS4) to satisfy Council requirements therefore the system / disposal field will need to be inspected by the Wastewater Designer to ensure compliance with Wastewater Design

Recommendation:
A meeting on site before installation with the installer and owner to confirm exact positioning of the system and disposal field in accordance with the design.

Waterflow NZ Ltd
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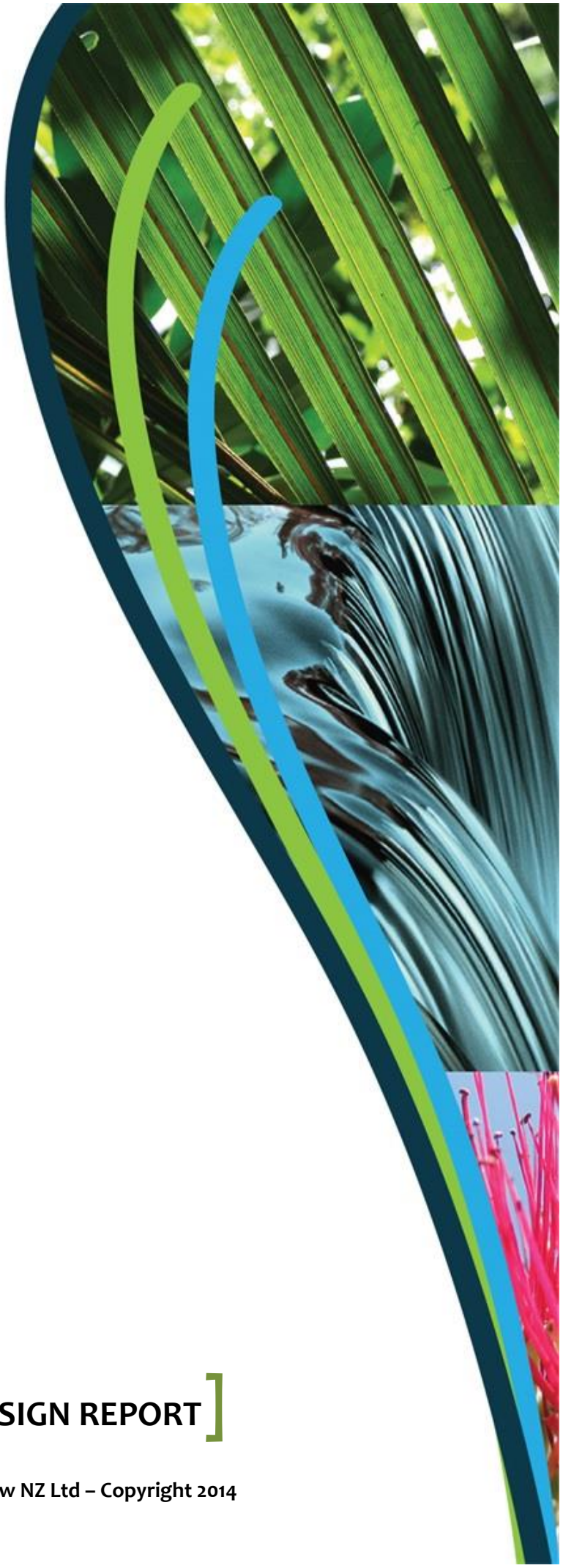
2023

Waterflow NZ Ltd
Certified Designer



Puketawa Marae
1400 Horeke Road
Urakura Valley
Utakura 6A Block

Reference Number: WF7908
Issued 26/10/2023

[ONSITE WASTEWATER DESIGN REPORT]

TABLE OF CONTENTS

Attachments

- PS1
- Land Application System Schematics
- Pump Specification
- Electrical Diagram
- Assessment of Environmental Effects
- System & Installation Specifications
- System & Installation Specifications
- Home Owners Care Guide

PART A: CONTACT AND PROPERTY DETAILS

A 1. Consultant / Evaluator

Name:	Dean Hoyle
Company/Agency:	Waterflow New Zealand Ltd
Address:	1160 SH 12 Maungaturoto
Phone:	09 431 0042
Fax:	09 431 8845
Email Address:	dean@waterflow.co.nz

A 2: Applicant Details

Applicant Name:	[redacted]
Company Name:	
Property Owner:	
Owner Address:	
Phone:	
Mobile:	
Email Address:	

A 3: Site Information

Sited Visited by:	Ken Hoyle		**Date:**	14.06.21			
Physical Address:	1400 Horeke Road, Urakura Valley						
Territorial Authority:	Far North District Council						
Regional Council:	Northland Regional Council						
Regional Rule	C.6.1.5						
Legal Status of Activity:	**Permitted:**		**Controlled:**		**Discretionary:**	x	
Total Property Area (m²):	20234m ^{2}						
Map Grid Reference:							
Legal Description of Land (as on Certificate of Title):							
Lot No:	Utakura 6A Block						
DP No:	0						
CT No:							

A 4: Are there any previous existing discharge consents relating to this proposal or other waste discharge/disposal on the site?

Yes:		**No:**	**x**

If yes, give reference No's and description:

A 5: Dwelling(s) for which on-site wastewater service is to be provided

Status of dwelling(s) to be serviced:		**New**	**x**	**Existing**		**Multiple**	
How many dwellings on the property?		Puketawa Marae					
Capacity of dwellings:	**Dwelling 1**	Multiple groups using the Facilities - see FlowCalculation attached					
(or number of bedrooms)	**Dwelling 2**						
	Dwelling 3						
	Other:						
Notes:							

PART B: SITE ASSESSMENT - SURFACE EVALUATION

B 1: Site Characteristics

Performance of adjacent systems:	**(Unknown)**			
Estimated annual rainfall (mm):	1250 - 1500 **(as per NIWA statistics)**			
Seasonal variation (mm):	300-400mm			
Vegetation cover:	Scrub			
Slope shape:	Waning Divergent			
Slope angle:	6-20 °			
Surface water drainage characteristics:	Broad overland to western boundary			
Flooding potential?	**Yes:**		**No:**	**x**
If Yes, specify relevant flood levels relative to disposal area:				
Site characteristics:	**a communal rural property. Property is generally covered with pasture grass and trees. Property boundaries are on Horeke Road to the North and farmland on all other boundaries.**			

B 2: Slope Stability

Has a slope stability assessment been carried out on the site?

Yes:		**No:**	**x**

If no, why not?

Low slope:	**x**	**No signs of instability:**	**x**	**Other:**

If yes, give brief details of report:

Details:	
Author:	
Company/Agency:	
Date of report:	

B 3: Site Geology

B 4: Slope Direction

What aspect does the proposed disposal system face?

North		West	x
North-West		South-West	
North-East		South-East	
East		South	

B 5: Site Clearances if applicable (also on site plan)

	Treatment Separation Distance (m)	Disposal Field Separation Distance (m)
Boundaries:	>1.5	>1.5
Surface Water:	>15	>15
Ground Water:	>1.2	>1.2
Stands of Trees / Shrubs:	n/a	n/a
Wells/Water Bores:	>20	>20
Embankments / Retaining Walls:	>3	>3
Buildings:	>3	>3
Other:		

B 6: Please identify any site constraints applicable for this property, and indicate how the design process is to deal with these.

Constraints	Explain how constraints are being dealt with
1 Site constraints: (a) (b)	n/a

PART C: SITE ASSESSMENT - SOIL INVESTIGATION

C 1: Soil Profile Determination Method

Test pit:		Depth (mm):		No. of Test pits:	
Bore hole:	x	Depth (mm):	1200	No. of Bore holes	2
Other:					

C 2: Fill Material

Was fill material intercepted during the subsoil investigation?

Yes:		No:	x

If yes, please specify the effect of the fill on wastewater disposal:

C 3: Permeability Testing

Has constant head Permeability Testing (Ksat) been carried out?

Yes:		No:	x

If yes, please indicate the details (test procedure, number of tests):

Test report attached?

Yes:		No:	x

C 4: SURFACE WATER CUT OFF DRAINS

Are surface water interception/diversion drains required?

Yes:		No:	x

C 5: DEPTH OF SEASONAL WATER TABLE:

Winter (m):	>1.2
Summer (m):	>1.2

Was this:

Measured:	✓ no sign of ground water or mottling in bore holes
Estimated:	

C 6: SHORT CIRCUITS

Are there any potential short circuit paths?

Yes:		No:	x

If yes, how have these been addressed?

C 7: SOIL CATEGORY

Is topsoil present?

Yes:	x	No:	

If yes, what is the topsoil depth & soil description?

150mm topsoil over clay-loam

Indicate the disposal field soil category (as per AC TP-58, Table 5.1)

Category	Description	Drainage	(x)
1	Gravel, coarse sand	Rapid draining	
2	Coarse to medium sand	Free draining	
3	Medium-fine & loamy sand	Good draining	
4	Sandy loam, loam & silt loam	Moderate draining	
5	Sandy clay-loam, clay loam & silty clay-loam	Moderate to slow draining	x
6	Sandy clay, non-swelling clay & silty clay	Slow draining	
7	Swelling clay, grey clay & hardpan	Poorly or non-draining	

Reason for placing in stated category:

Result of bore hole/test pit sample	x
Profile from excavation	
Geotech report	
Other:	

C 8: SOIL STRUCTURE

Based on results of the in-situ soil profile investigation above (C7) please indicate the disposal (land application) field soil structure:

Massive	
Single grained	
Weak	
Moderate	x
Strong	

C 9: As necessary, provide qualifying notes on the relationship of Soil Category (C7) to Soil Structure (C8) and the effect this relationship will have on design loading rate selection:

PART D: DISCHARGE DETAILS

D 1: Water supply source for the property:

Rain water (roof collection)	x
Bore/well	
Public supply	

D 2: Are water reduction fixtures being used?

Yes:		No:	x	(according to our knowledge at time of design report)

If 'yes' Please state:

Standard Fixtures include dual flush 11/5.5 or 6.3 litre toilet cisterns, and includes standard automatic washing machine, but a low water use dishwasher, no garbage grinder.

D 3: Daily volume of wastewater to be discharged:

No. of bedrooms/people:	1: 2: 3:	(As per Calculations attached)
Design occupance (people): (as per AC TP-58, Table 6.1)	1: 2: 3:	(As per Calculations attached)
		Black / Grey water
Per capita wastewater production (litres/person/day): (as per ARC TP-58, Table 6.2)	1: 2: 3:	(As per Calculations attached)
Total daily wastewater production (litres per day):		15175L/day (Buffered to 4071L/Day)

D 4: Is daily wastewater discharge volume more than 2000 litres?

Yes:	x	No:	

D 5: Gross lot area to discharge ratio:

Gross lot area:	20234 m^2
Total daily wastewater production (litres/day):	4071 L
Lot area to discharge ratio:	4.97

D 6: Net Lot Area

Area of lot available for installation of the disposal (land application) field and reserve area:

Net lot area (m^2):	19234 m^2
Reserve area (m^2):	30%

PART E: LAND DISPOSAL METHOD

E 1: Indicate the proposed loading method:

	Black / Grey Water
Gravity Dose:	
Dosing Siphon:	
Pump:	Davy B42A-B

E 2: If a pump is being used please provide following information:

Total Design Head (m):	#N/A
Pump Chamber Volume (litres):	1600
Emergency Storage Volume (litres):	2120

Is a high water level alarm being installed in pump chambers?

Yes:	x	No:	

E 3: Identify the type(s) of Land Disposal method proposed for this site:

	Black / Grey Water
P.C.D.I. Dripper Irrigation:	PCDI surface laid and mulched
L.P.E.D. System:	
Evapo-Transpiration Beds:	
Other:	
	(as per Schematics attached)

E 4: Identify the Loading Rate proposed for option selected in E3:

as per ARC TP-58, Table 9.2 & Table 10.3	Black / Grey Water
Loading Rate (litres/m²/day):	2.5
Disposal Area Basal (m²):	
Areal (m²):	1628

E 6: Details and dimensions of the disposal (land application) field:

Length (m):	162.8	No. Lines:	10	Hole Size:	N/A
Width (m):	10.0	Spacing (m):	1.0	Hole Spacing:	N/A
Notes:	1628sqm of Surface laid PCDI dripline pinned at 1m centers and covered with a minimum covering of 100mm mulch. See schematic drawing attached.				

PART F: PROPOSED WASTEWATER TREATMENT SYSTEM

A Econotreat 2x 22,500L Buffer tank + EconoTreat VBB-C-2200- Twin System, fed through surface laid PCDI dripline is suitable for this site. The 2x 22,500L Buffer tank + EconoTreat VBB-C-2200- Twin System has enough capacity to accommodate 2200ltr per day, so will be well within its capacity. The land application system is designed to discharge a maximum volume of 4071ltrs per day and if this is exceeded it could cause failure resulting in environmental and public harm.

PART G: OPERATION AND MAINTENANCE OF SYSTEM

The operation of this complete system will be explained verbally to the owner by the Installer or Agent on Completion of Installation; also provided with Waterflow's Home Owner's Manual.

Waterflow NZ Ltd encourages the Home Owner to monitor and care for your Econotreat system yourself, with our backing and support, and by doing so you will learn how your system works and operates and how to keep it in top working order.

It is also recommended that a Maintenance Program contract is in place at all times to ensure this system is maintained at top performance at all times.

All on site wastewater systems require regular maintenance; in this case once annually is suffice and may be specified within the consent process by the Building Department of Far North District Council. This Maintenance will be recorded on hard copy and supplied to both the Owner and Far North District Council Compliance Officer if requested.

NOTE TO OWNER: All written records pertaining to the wastewater system should be retained in a safe place. When a change of ownership occurs, a full and complete history is able to be passed to the new owners.

Animals are to be physically excluded from the installed effluent field to avoid damage, and to reduce the risk of soil compaction in the vicinity of the bed.

Planting within this area is encouraged to assist with evapotranspiration by plants.

PART H: SOIL LOG PROFILE

150mm topsoil over clay-loam
Class 5, (as per AC TP-58, Table 5.1)

PART I: SITE IMAGES

DECLARATION

I, hereby certify that, to the best of my knowledge and belief, the information given in this application is true and complete.

Prepared By:	
Name:	**Alexandra Sabath - Wastewater Design Technician**
Signature:	[redacted]
Date:	26/10/2023

Reviewed By:	
Name:	**Dean Hoyle – PS Author '3037' Auckland Council, NZQA Onsite Wastewater Training/Opus, BOINZ OWM, HBRC Approved Designer**
Signature:	[redacted]
Date:	26/10/2023

NOTE: The Waterflow Systems are to be installed by a registered drainlayer to the designs supplied by Waterflow NZ Ltd. All work to comply with Regional Council Water and Soil Plans.

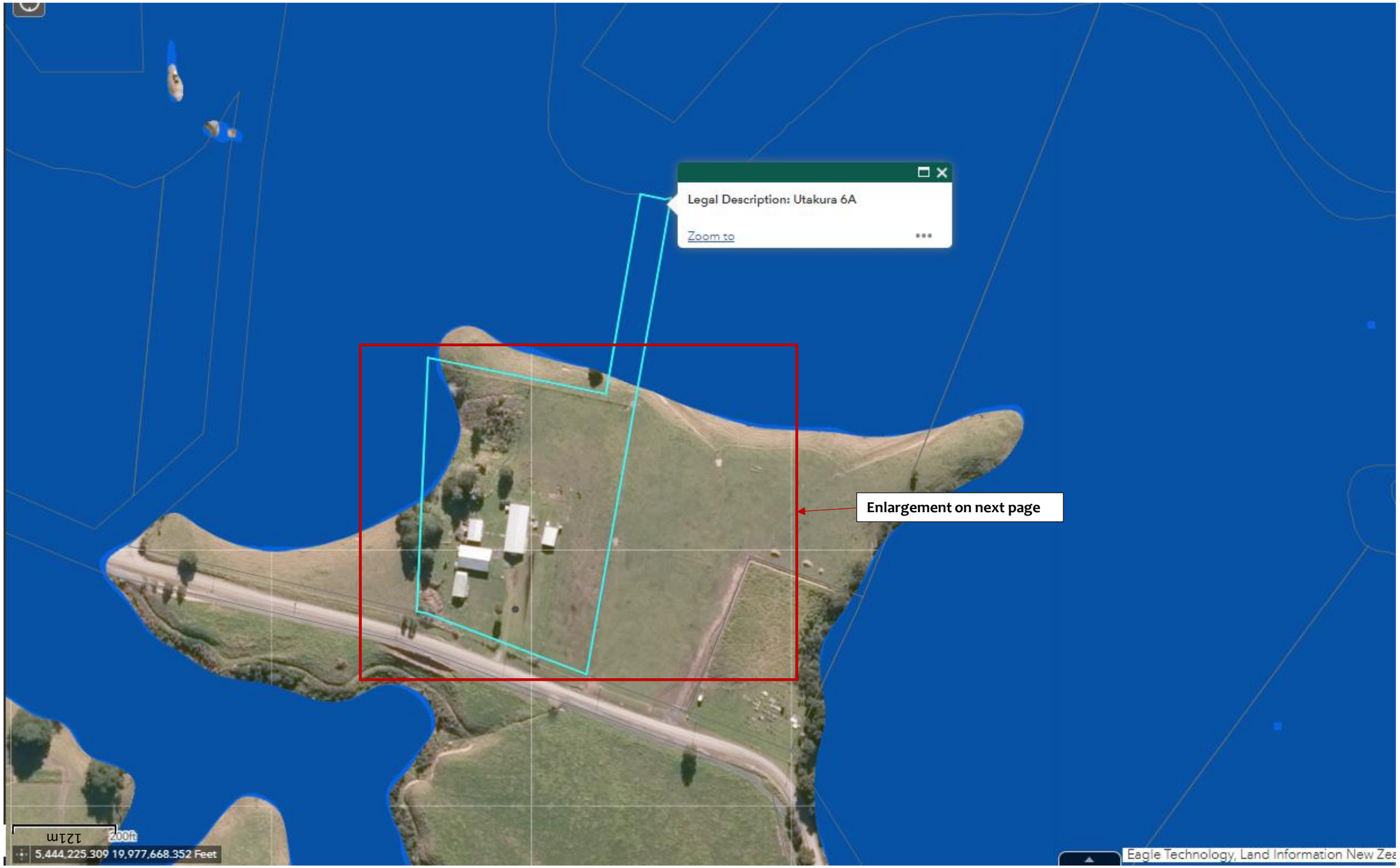
Comments/Summary:

The disposal field will need to be protected from traffic and animal grazing. Planting this area is recommended to increase Evapotranspiration.

Suitable plants for the disposal field can be found on our website www.naturalflow.co.nz

Waterflow Treatment systems to be installed by accredited installer unless other arrangements have been made by Waterflow NZ Ltd

For more information do not hesitate to contact the team at Waterflow NZ Ltd on 0800 628 356



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SITE LOCATION PLAN:

Puketawa Marae
1400 Horeke Road
Urakura Valley
Utakura 6A Block

SCALE:

1 : 468

	2.0234HA	@ A3

N

Water Flow NZ LTD
'Trusted wastewater management solutions'

DATE DRAW:	26/10/2023
PREPARED BY:	Alexandra Sabath
REVISED:	Dean Hoyle

SITE LAYOUT PLAN:

Puketawa Marae
1400 Horeke Road
Urakura Valley
Utakura 6A Block
2.0234HA

SCALE:

1 : 86

@ A3

Monthly Wastewater Flow Breakdown

Facilities:

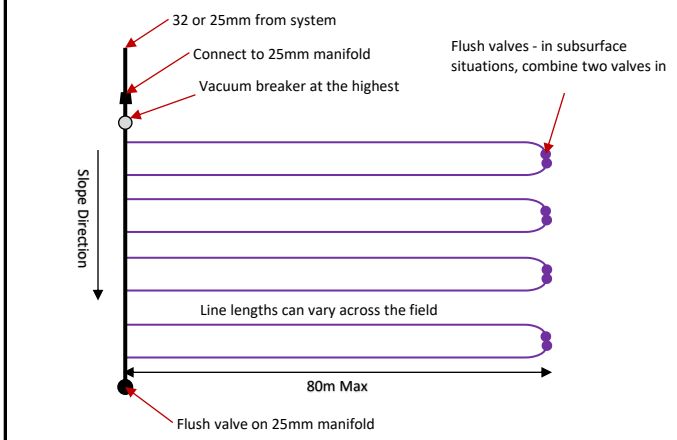
Proposal is to design a treatment system that will catar for a maximum loading scenerio over a fortnight/month period,

Occupancy/Flow Calculations											
Day	**Tangi Day**	**Tangi Night**	**Fortnightly Day**	**Fortnightly Night**	**Weekly Meetings**	**Dwellings**	**0**	**0**	**Total Flow**	**Discharge L/day**	**Buffer L/day**
Sunday	-	-	-	-	-	2,175	-	-	2,175	4,071	-
Monday	-	-	-	-	200	2,175	-	-	2,375	4,071	-
Tuesday	-	-	-	-	200	2,175	-	-	2,375	4,071	-
Wednesday	-	-	-	-	200	2,175	-	-	2,375	4,071	-
Thursday	-	-	-	-	200	2,175	-	-	2,375	4,071	-
Friday	4,000	9,000	-	-		2,175	-	-	15,175	4,071	11,104
Saturday	4,000	9,000	-	-	-	2,175	-	-	15,175	4,071	22,208
Sunday	4,000	9,000	-	-	-	2,175	-	-	15,175	4,071	33,312
Monday	-	-	-	-	200	2,175	-	-	2,375	4,071	31,616
Tuesday	-	-	-	-	200	2,175	-	-	2,375	4,071	29,920
Wednesday	-	-	-	-	200	2,175	-	-	2,375	4,071	28,224
Thursday	-	-	-	-	200	2,175	-	-	2,375	4,071	26,528
Friday	-	-	600	1,500		2,175	-	-	4,275	4,071	26,732
Saturday	-	-	-	-	-	2,175	-	-	2,175	4,071	24,836
Sunday	-	-	-	-	-	2,175	-	-	2,175	4,071	22,940
Monday	-	-	-	-	200	2,175	-	-	2,375	4,071	21,244
Tuesday	-	-	-	-	200	2,175	-	-	2,375	4,071	19,548
Wednesday	-	-	-	-	200	2,175	-	-	2,375	4,071	17,852
Thursday	-	-	-	-	200	2,175	-	-	2,375	4,071	16,156
Friday	-	-	-	-	200	2,175	-	-	2,375	4,071	14,460
Saturday	-	-	-	-	-	2,175	-	-	2,175	4,071	12,564
Sunday	-	-	-	-	-	2,175	-	-	2,175	4,071	10,668
Monday	-	-	-	-	200	2,175	-	-	2,375	4,071	8,972
Tuesday	-	-	-	-	200	2,175	-	-	2,375	4,071	7,276
Wednesday	-	-	-	-	200	2,175	-	-	2,375	4,071	5,580
Thursday	-	-	-	-	200	2,175	-	-	2,375	4,071	3,884
Friday	-	-	600	1,500		2,175	-	-	4,275	4,071	4,088
Saturday	-	-	-	-	-	2,175	-	-	2,175	4,071	2,192
Sunday	-	-	-	-	-	2,175	-	-	2,175	4,071	296
Monday	-	-	-	-	-	2,175	-	-	2,175	4,071	-
Tuesday	-	-	-	-	-	2,175	-	-	2,175	4,071	-

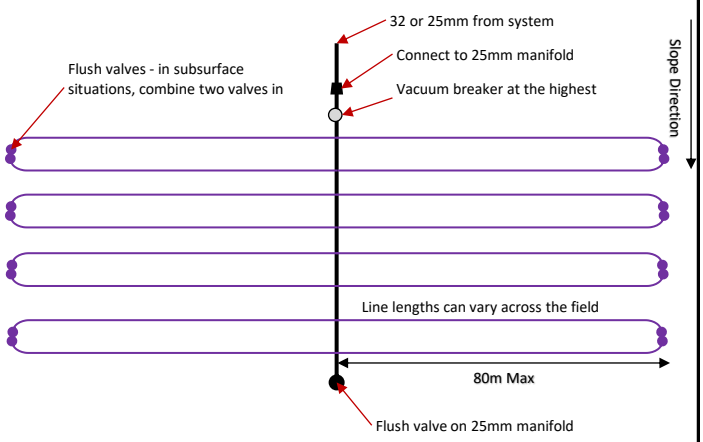
Buffer Required: 33,312L

Common PCDI Layouts

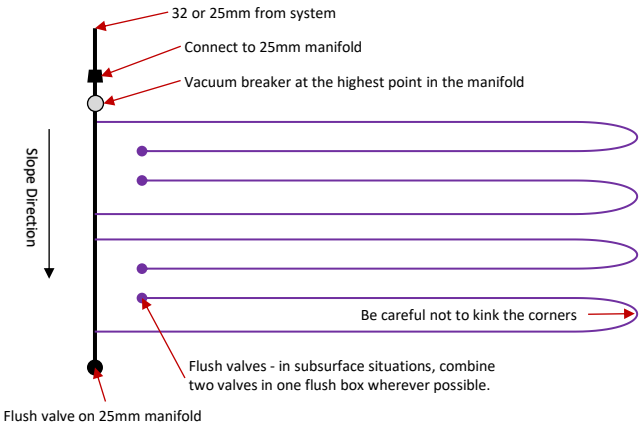
Single Side Manifold - straight



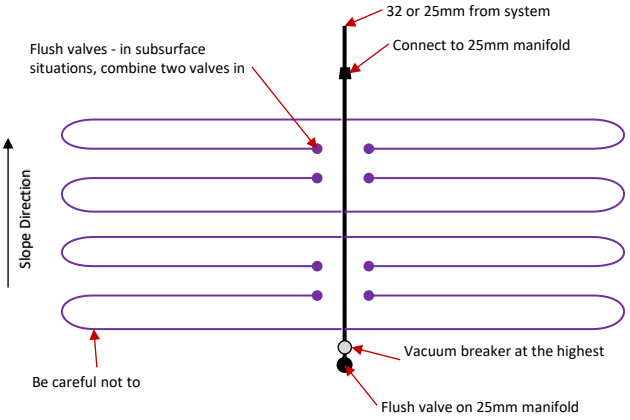
Single Center Manifold - straight



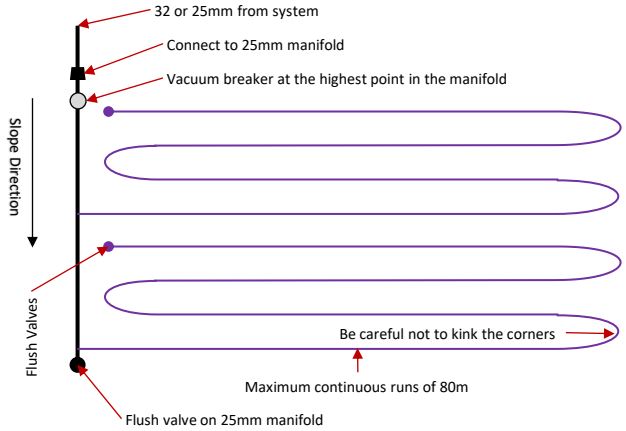
Single Side Manifold - curled



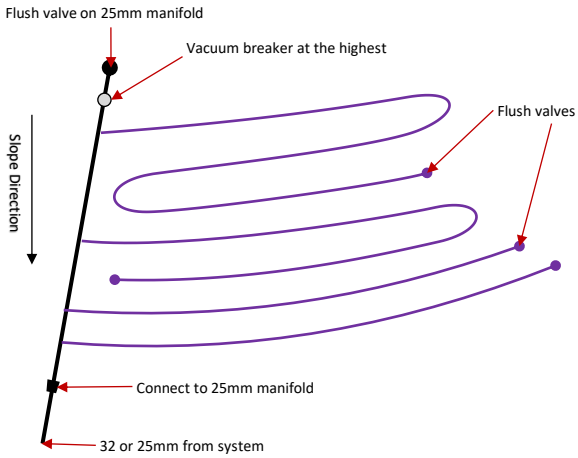
Single Center Manifold - curled



Long Single Runs



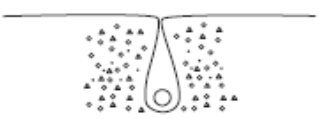
Custom Layout



Cross Sections of PCDi installation

150mm Mulch or Leaf Litter

Subsoil Buried @ 100-150mm

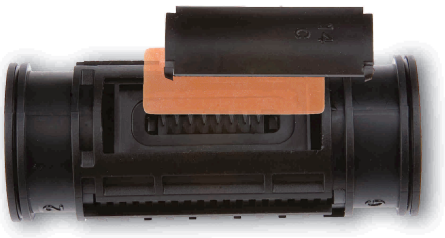


METZERPLAS

ADI

Cylindrical PC (Pressure Compensated) dripper.

- Cylindrical PC dripper, with unique regulating labyrinth with self-flushing operation at the beginning and the end of each irrigation cycle.
- Triple inlet filter with filtering area 10 times larger than any other dripper.
- High clog resistance.
- Suitable for poor quality and effluent water.
- Large pressure compensation range up to 4.3 bars.
- Dripline diameter: 16, 18 and 20 mm.
- Dripper flow rate: 1.6, 2.2 and 3.5 l/h.
- *Rootguard*® configuration available for extra root protection in SDI (Subsurface Drip Irrigation).



ADI Dripline Technical Data:

Model	Inside Diameter (mm)	Wall Thickness (mm)	Min. Working Pressure (bars)	Max. Working Pressure (bars)	KD
ADI 16	13.8	0.9	0.8	3.5	1.12
		1.15	0.8	4.3	0.95
ADI 18	15.8	1.2	0.8	4.3	0.95
ADI 20	17.4	1.0	0.8	3.5	0.85
		1.25	0.8	4.3	0.6

METZERPLAS IRRIGATION SYSTEMS

Kibbutz Metzer M.P. Heffer 38820 ISRAEL Tel: 972-4-6387001 Fax: 972-4-6385385
info@metzerplas.com • www.metzerplas.com

METZERPLAS

ADI

Cylindrical PC (Pressure Compensated) dripper.

ADI 16 mm. Maximum lateral length (I.D. 13.8 mm, W.T 0.9 mm, Inlet pressure 2.5 bars):

Nom. Flow Rate (l/h)	Spacing Between Drippers (m)						
	0.20	0.30	0.40	0.50	0.60	0.75	1.00
1.6	86	122	156	188	218	260	324
2.2	72	103	131	157	182	216	269
3.5	51	73	94	113	131	156	195

ADI 18 mm. Maximum lateral length (I.D. 15.8 mm, W.T 1.2 mm, Inlet pressure 2.5 bars):

Nom. Flow Rate (l/h)	Spacing Between Drippers (m)						
	0.20	0.30	0.40	0.50	0.60	0.75	1.00
2.0	93	134	171	205	238	284	355
3.5	65	92	118	142	166	198	247

ADI 20 mm. Maximum Lateral length (I.D. 17.4 mm, W.T 1.0 mm, Inlet pressure 2.5 bars):

Nom. Flow Rate (l/h)	Spacing Between Drippers (m)						
	0.20	0.30	0.40	0.50	0.60	0.75	1.00
1.6	128	182	234	281	325	388	484
2.2	113	159	202	242	279	331	409
3.5	76	109	140	168	196	233	291

For additional tables and data please contact Metzerplas Technical Department or visit our website: www.metzerplas.com

Packaging Data

Model	Roll Length (m)	Quantity Per Container (Rolls)		
		20	40	40 h
ADI 16	400	150	300	350
ADI 18	300	150	300	333
ADI 20	300	133	266	300

METZERPLAS IRRIGATION SYSTEMS

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Assessment of Environmental Effects

Puketawa Marae of 1400 Horeke Road, Urakura Valley
Utakura 6A Block

1.1 Description of Proposal

The owners of this site propose the construction of a Existing Marae and new 5x2 bedroom dwellings.

1.2 Site Description

This site, located at 1400 Horeke Road, is a a communal rural property. Property is generally covered with pasture grass and trees. Property boundaries are on Horeke Road to the North and farmland on all other boundaries.

1.3 Wastewater Volume

In calculating the wastewater flows we have allowed for a maximum occupancy of 2 persons, based on the proposed 1 bedroom dwelling (as per AC TP-58, Table 6.1). Total wastewater production is based on an allowance of 160 litres per person per day (as per ARC TP-58, Table 6.2), which is conservative given that water supply is roof collected rain water and standard water fixtures will be used throughout the house.

1.4 Wastewater Volume

The 2x 22,500L Buffer tank + EconoTreat VBB-C-2200- Twin system that is proposed will treat the wastewater to a high standard prior to dispersal using a PCDI drip line, into a purpose-designed disposal field, where the removal of nutrient will continue, both in the receiving soils and by plant uptake.

The system will be capable of producing reductions in Biochemical Oxygen Demand, Total Suspended Solids, Nitrogen, and Coliforms to a standard that meets the requirements (see details below). The system will cater for the wastewater requirements of the private dwellings (domestic wastewater) and will not service any commercial or trade waste sources. Risk Minor to Nil.

1.5 Proposed Treatment System

The objective of the treatment system is to reduce and remove much of the contaminants from the wastewater prior to discharge into the receiving soil. This will improve the long-term performance of the disposal field as well as reducing the risk to the receiving environment. The system will consist of:

- Septic Tank Module

- 2x 22,500L Buffer tank + EconoTreat VBB-C-2200- Twin
- Land Application System

The system is constructed using concrete tanks. The system produces treated effluent with BOD <20mg/l, Suspended solids <20mg/l.

1.6 Land Application System

The proposed irrigation system uses pressure-compensating dripper lines ensuring an even delivery of moisture over the entire irrigation field and a conservative DLR of 2.5mm. We propose the use of Metzerplas unibioline ADI16/2.2 @ 0.6m/c with the Dripline laid out at 1m centres. This Dripline will then be covered by 100mm landscape mulch. Densely planting this area will greatly enhance evapo-transpiration and be very beneficial especially in the wetter months of the year. This irrigation can be installed in conjunction with existing or proposed landscaping.

1.7 Surface & Ground Water

It is proposed to treat the water to a high standard prior to discharge and the proposed irrigation system will introduce the water into the topsoil horizon using PCDI irrigation. A low application rate of treated effluent into the topsoil will significantly reduce the likelihood of, any breakout or runoff or any risk of surface water contamination. With the ground water levels being >1.2m this conservative DLR also means the risk of ground water contamination is virtually nil. A majority of the undeveloped areas of this site are suitable for a PCDI disposal field when the necessary setbacks are observed. Risk Minor to Nil.

1.8 Air Quality

The proposed 2x 22,500L Buffer tank + EconoTreat VBB-C-2200- Twin system will produce no noticeable odour when functioning correctly. Any odour will be contained within the tanks. The PCDI irrigation system will load the soil at a rate that should not cause ponding, spraying or aerosol of the effluent that could potentially cause odours. Risk Minor to Nil.

1.9 Visual Impact

The tanks are installed wholly below ground level with only the lids being visible. The lids will protrude approximately 100mm to prevent egress of storm water into the system. The disposal field will be located in a purpose designed mulched and intensively planted disposal area. Warning signs may be installed to indicate the presence of the disposal area, although probably not necessary in a domestic situation, also the area may be fenced to restrict access.

1.10 Environmental Risks

Risks are associated with this proposal are minor. The treatment system will be automated, and the Home Owner will be given a 'Home Owners Care Guide' which explains the necessary visual checks to ensure no issues arise with the system, specifically – solids build-up - high water level – discharge failure – filter blockage.

Peak flow into the system are not expected to be significant and the system includes a large emergency storage volume.

1.11 Maintenance Requirements

The maintenance requirement of this system is minimal, with the system fully automated. The system requires little input from the operator apart from the regular cleaning of the outlet filter between the treatment system and the Dripline field. All other maintenance interventions must be carried out by service persons familiar with the operation of the system and approved by the manufacturer. Maintenance may include checking of the dissolved oxygen levels, cleaning of effluent outlet filter, removal of excess sludge volume, checking of control panel function, etc.…

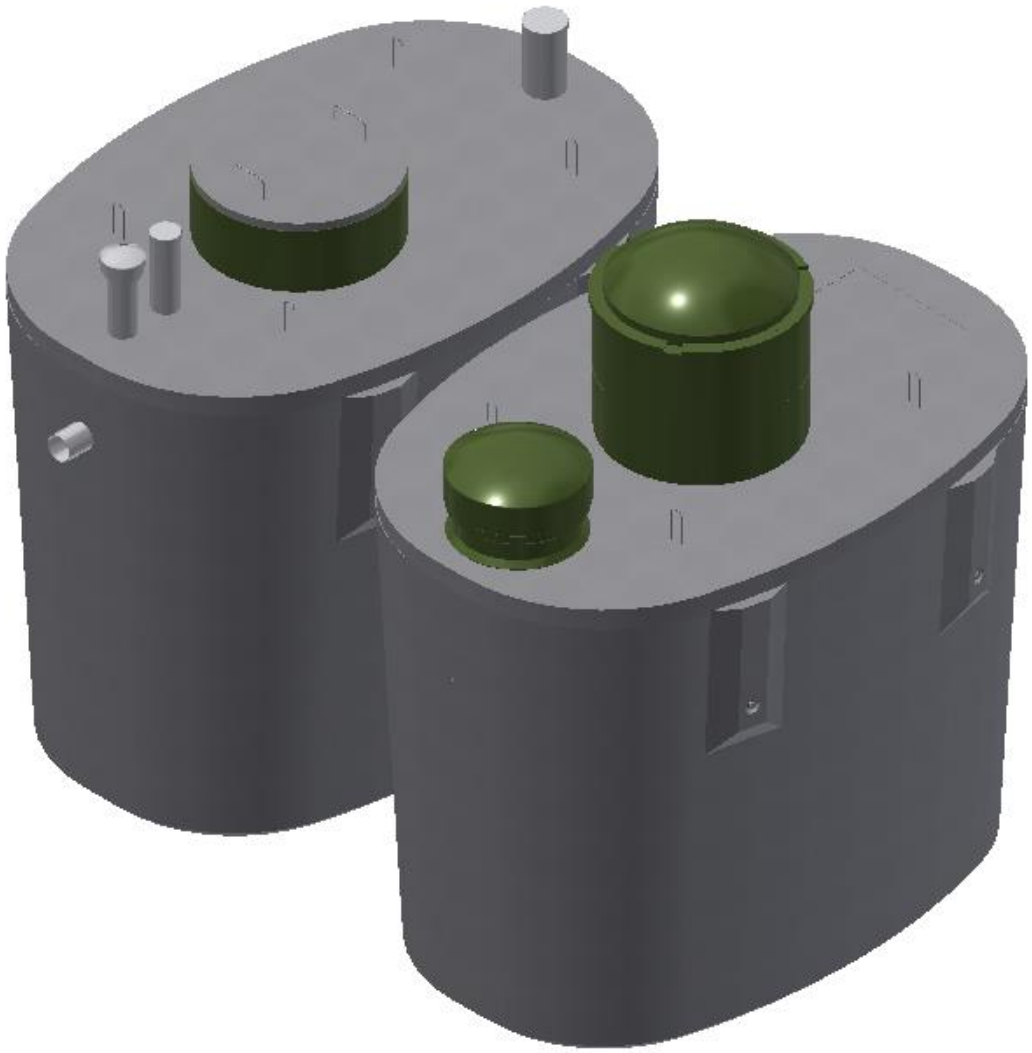
The disposal field is quite possibly the most important and sensitive part of the treatment system and requires a reasonable amount of maintenance to keep it functioning well. Any leaking or damaged Dripline must be fixed quickly using the appropriate materials, the planting must be maintained, weeds removed and grass kept cut. The Dripline should be kept covered with a suitable bark, mulch, or topsoil.

Warning signs such as ponding, odours, and signs of excessive growth act as an indicator to possible problems. A disk filter s fitted to help prevent blockage of the drippers and to protect the Dripline. This filter will require cleaning during servicing of the system.The owners will be verbally informed at the commissioning of this system of all maintenance requirements and strongly advised to have a service contract in place prior to final sign off of the system installation.

econo-treat

Econotreat VBB-C-2200 Treatment System

System Specifications & Installation Instructions



The Treatment Process

Primary Chamber / Tank

Influent enters the chamber via the source whereby scum and solids capable of settling are separated from the raw influent. Primary treated effluent flows through a transfer port to the aeration tank. This primary tank will also act as a storage chamber for sludge returned from the Clarification Chamber.

After primary settling, the sewage passes through a Reln outlet filter.

Aeration Chamber

Water enters from the Primary Chamber. Air is introduced into this chamber via an air blower to create an environment for aerobic bacteria and other helpful organisms to consume the organic matter present. The aeration tank is designed in a manner to help prevent short circuiting of the wastewater to ensure extended aeration. Media is present in the tank to support the growth of bacteria.

Clarification Chamber

The Clarification chamber is essentially a quiescent zone where suspended particles/solids are settled out of the water. These particles are returned to the Primary chambers via a sludge return which aids in further biological reduction, denitrification and providing a constant food supply rich in microbes supporting the system through periods of limited flows.

System Performance

The Econotreat VBB-C-2200 system is capable of treating up to 2200L per day peak flow to an advanced secondary standard. The effluent is suitable for UV disinfection where required.

Benchmark Ratings
The **Waipapa Tanks Econo-Treat® VBB C-2200-2** system **achieved** the following effluent quality ratings:

Indicator Parameters	Median	Std Dev.	Rating	Rating System				
				A+	A	B	C	D
BOD (g/m^3)	*3.4*	*1.5*	A+	*<5*	*<10*	*<20*	*<30*	*≥30*
TSS (g/m^3)	*4.98*	*3.49*	A+	*<5*	*<10*	*<20*	*<30*	*≥30*
Total nitrogen TN (g/m^3)	*13.6*	*1.3*	A	*<5*	*<15*	*<25*	*<30*	*≥30*
Ammonia Nitrogen NH4-N (g/m^3)	*1.1*	*1.8*	A	*<1*	*<5*	*<10*	*<20*	*≥20*
Total phosphorus TP (g/m^3)	*4.2*	*0.5*	B	*<1*	*<2*	*<5*	*<7*	*≥7*
Faecal Coliforms FC (cfu/100mL)	*11,200*	*50,196*	B-	*<10*	*<200*	*<10,000*	*<100,000*	*≥100,000*
Energy (kWh/d) (mean)	*1.8*	-	B	*0*	*<1*	*<2*	*<5*	*≥5*

ECONOTREAT VBB-C-2200

System Specification & Installation Instructions

New Zealand's Leaders in Advanced Secondary Treatment Systems

Compliance Requirements

All Econotreat Treatment Systems meet the requirements of the NZ Building Code G13-VM4.

Section 9 of AS/NZS 1546.1:2008 state that tanks constructed to these Standards will meet the requirements of the Code for Clauses B1 and B2, structure and durability.

Compliance with Section 9 of AS/NZS 1546.1:2008 and also Clauses G13.3.4 relating to on-site treatment and disposal systems and G14.3.1 and 14.3.2 relating to the control of foul water as an industrial waste.

Tank Specifications

Tanks are made of 50mpa Fiber Reinforced Concrete, which is suitable material for wastewater treatment containment meeting all the requirements of Section 4.3.3 of AS/NZS 1547:2012. These tanks have an expected lifespan of 50 years.

Dual Chamber Septic Tank
5200L Nominal Capacity
2500mm Long
1700mm Wide
1975mm High
- 3100kg

Aeration Tank
5200L Nominal Capacity
2500mm Long
1700mm Wide
1975mm High
- 2900kg

System Information
500L Pump Chamber
2120L Emergency Storage

Installation Location and Certification

These tanks are not designed for vehicle loads and shall be located no closer than 2m to a driveway, road frontage or a building. If for any reason the tank is located where vehicle traffic may drive over the tank or approach closer than 2m, or where it may be trampled on by farm stock then the tank should be protected by a concrete slab designed to support these loads. Surface water must also be diverted from flowing into the installation.

Installation must be certified to AS/NZS 1547:2012, the certificate to be issued and held by the regulatory authority.

High Water Table Installations

All tanks have been engineered and designed for maximum strength, in accordance with the NZC 3604. Clauses B1 and B2 for structure and durability, to withstand any hydraulic pressures, both lateral and uplift, created by high water table conditions.

In high water table installations, it is important to fill the tanks with water. This removes the hydraulic uplift and simplifies the installation. In extremely high-water tables, a concrete foot can be added to the tank during manufacture. Waterflow must be made aware of this early on in vies of supplying a tank that is fit for purpose.

Plumbing Pipes and Fittings

All internal plumbing is done with PVC pipes with appropriate connections according to AS/NZS 1260 and AS/NZS 4130.

Backfill and Bedding

Place and bed to NZBC G13/AS2, using compacted granular metal, in layers not exceeding 100mm.

Electrical

Where a pump is required on a flat site electrical connection must be installed according to AS/NZS 3000 and the control and alarm system must be in a weatherproof housing located in a readily visible position.

Warranty

WATERFLOW NZ LTD warrants that the Econotreat System will be free from defects in material and workmanship for the following periods of time from the date of installation as set out in the following conditions:

1. Concrete Tank 15yrs
2. Roto-Molded Tanks 15yrs
3. Nitto Blower 3yrs
4. Irrigation Pumps 2yrs
5. Warranty of Operation covers the performance of the Econotreat System as connected to the effluent inflow for which they are designed, and has been installed to the criteria as set out in the relative installation instructions and procedures, and has an assigned Service/Maintenance contract in place with Waterflow NZ Ltd or it's appointed agent/s.

Warranty excludes defects due to:

A) Failure to use the system in accordance with owner's manual.

B) A force majeure event outside the reasonable control of WATERFLOW NZ LTD such as (but not limited to) earthquake, fire, flood, soil subsidence, ground water table variations or plumbing fault.

C) Modifications to surrounding landscape contour after installation

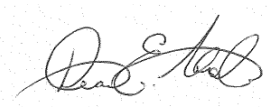
D) The actions of a third party

E) The system required to bear loads (either hydraulic or biological) greater than that for which it was designed

F) Any modifications or repairs undertaken without the consent of WATERFLOW NZ LTD

G) Failure, where applicable, to fence and plant disposal field.

1st June 2014
Dean Hoyle
Managing Director



ECONOTREAT VBB-C-2200

System Specification & Installation Instructions

Econotreat VBB-C-2200 Installation Instructions

The Econotreat system is to be installed or signed off by a registered Drain layer to the design specified by Waterflow NZ Ltd.

The following installation instructions and procedures followed correctly will ensure System performance is not compromised in any way.

1. Excavate two 3m x 2m level platforms at an appropriate depth to ensure adequate fall for inlet pipe from the source. This has to be installed on virgin ground. The two platforms are ideally on the same level and next to each other, either side-by-side or end-on-end.
2. Lay 100mm of bedding metal on platform and place the Septic and Aeration tanks next to each other. As close as practically possible to minimize the connection distance between the tanks.
3. Connect the two tanks with 100mm PVC. If the tanks are side-by-side the connection will need supporting. This is done by tying it back to the wire on the lids with a length of rope supplied. The rope can be found in the top of the treatment tank.

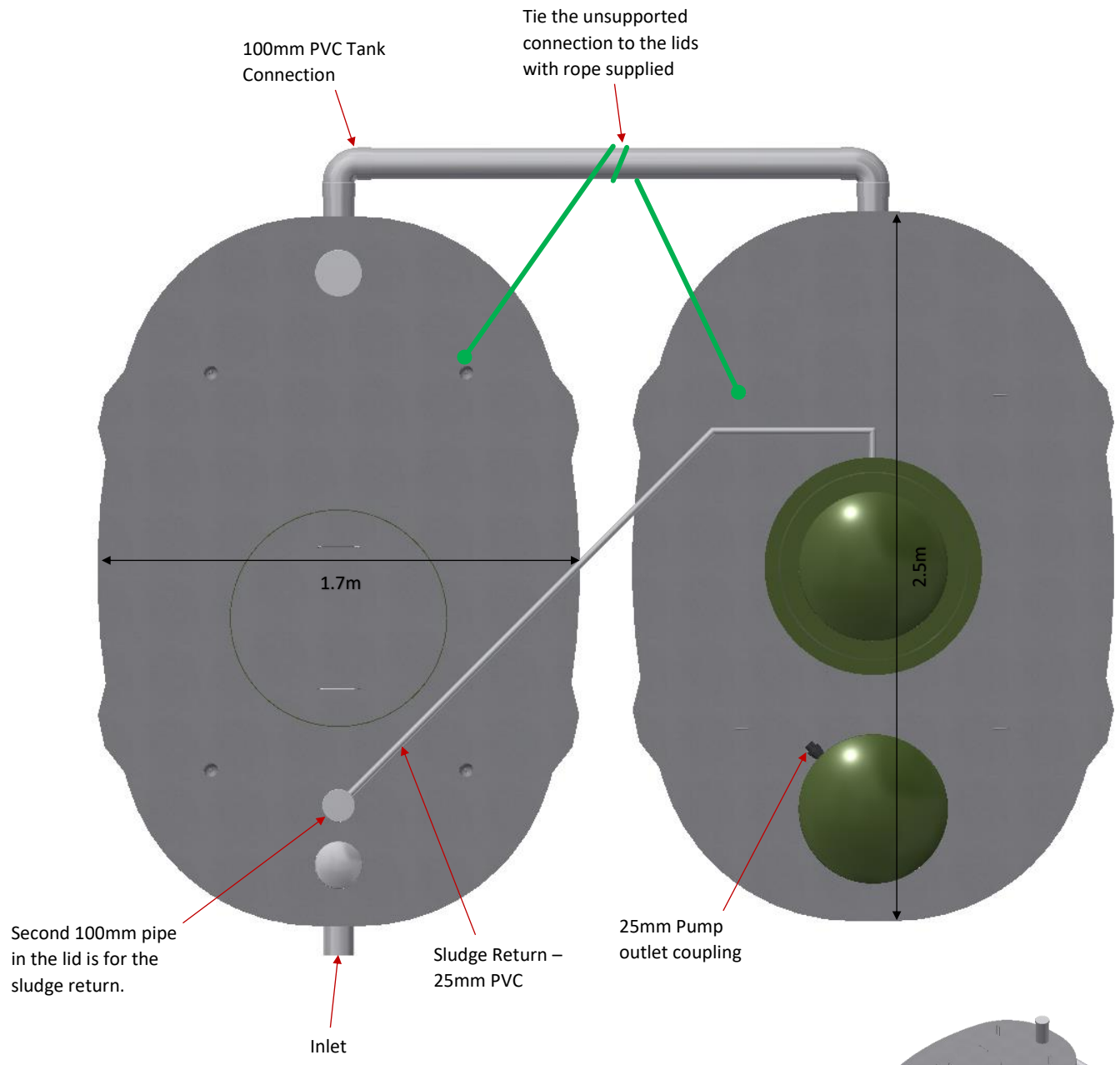
4. Next connect the sludge return. This is a 25mm PVC pipe that come out of the central riser on the treatment tank. This must be plumbed back to the second 100mm PVC at the start of the septic tank. It is important that this pipe is falling slightly or at minimum flat.
5. Trench from Dose Chamber outlet to disposal field and lay the 25mm alkathene feed line.
6. Take a minimum of 3 photos at this point to showing connections and back fill, to ensure correct installation for sign off.
7. Back fill around tanks. Using spoil from the excavation is fine, be aware that this will settle over time though.

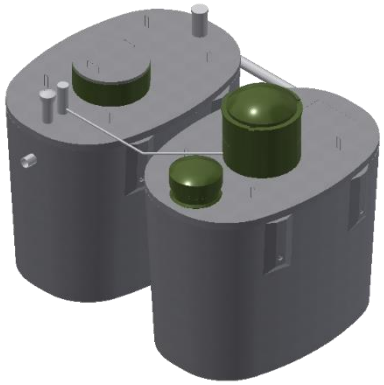
Caution: System must be protected from excessive super imposed loads both lateral and top loads. E.g. loads from vehicular traffic. There needs to be at least 2m of clearance maintained around system.

Econotreat VBB-C-2200 Schematic Drawings

Econotreat VBB-C-2200 Schematic Drawings

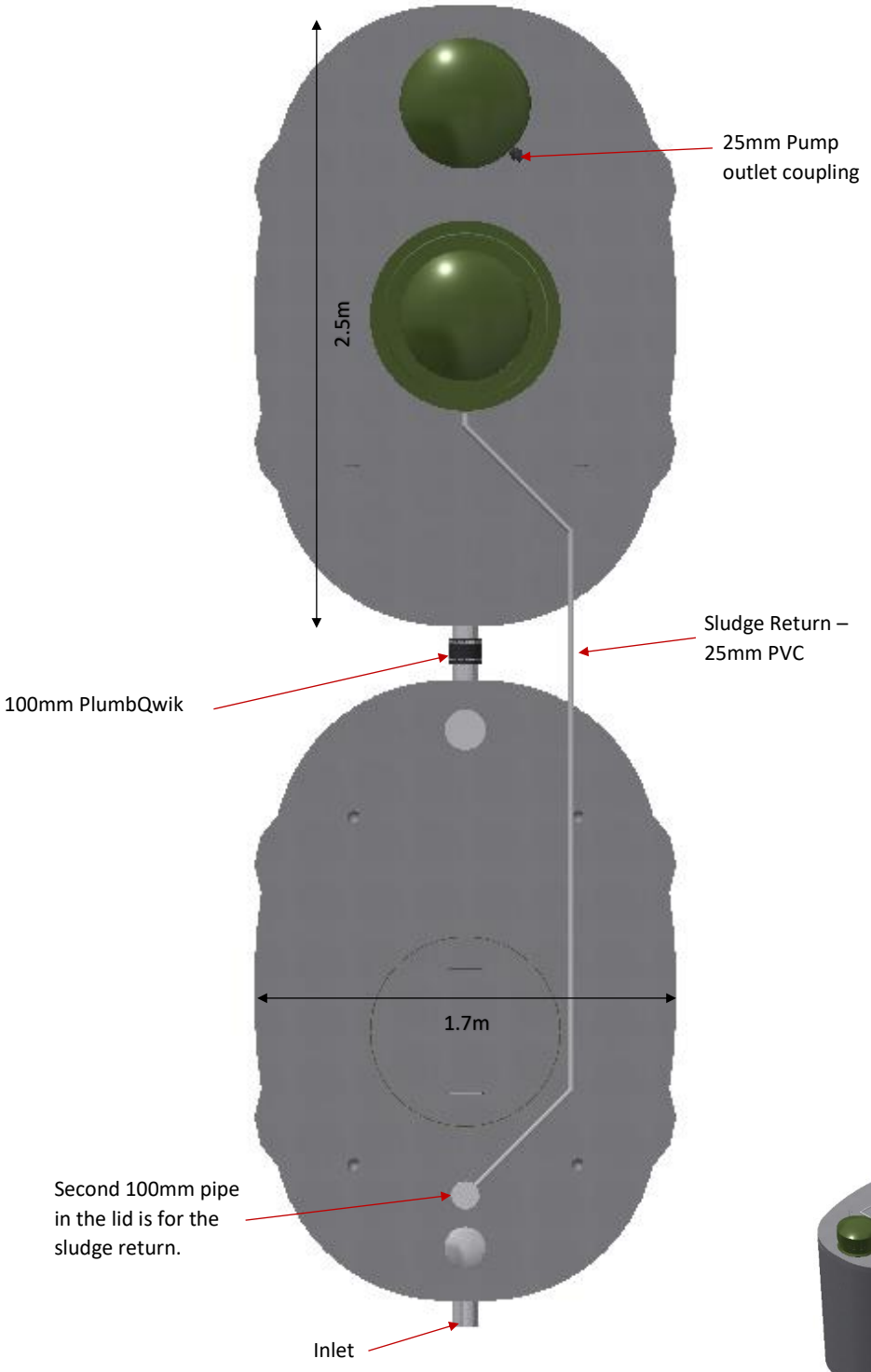
Side by Side Installation





Econotreat VBB-C-2200 Schematic Drawings

End on End Installation



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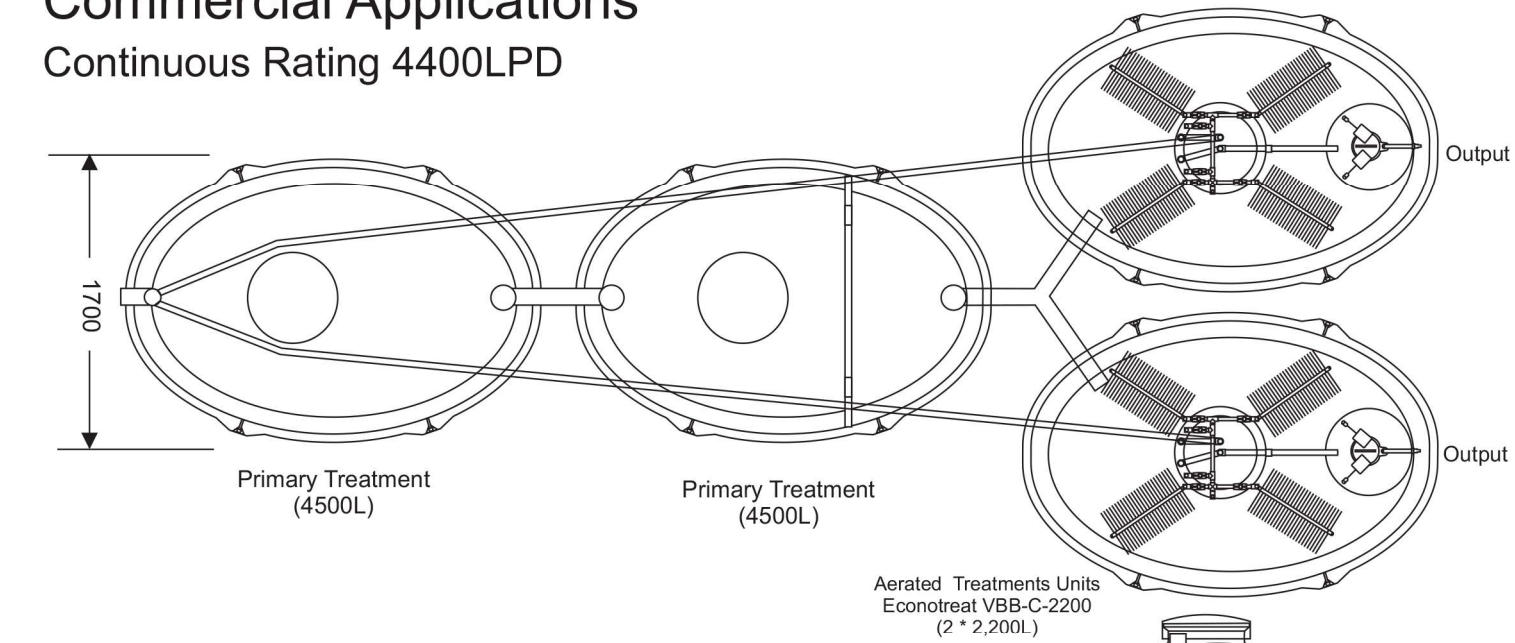
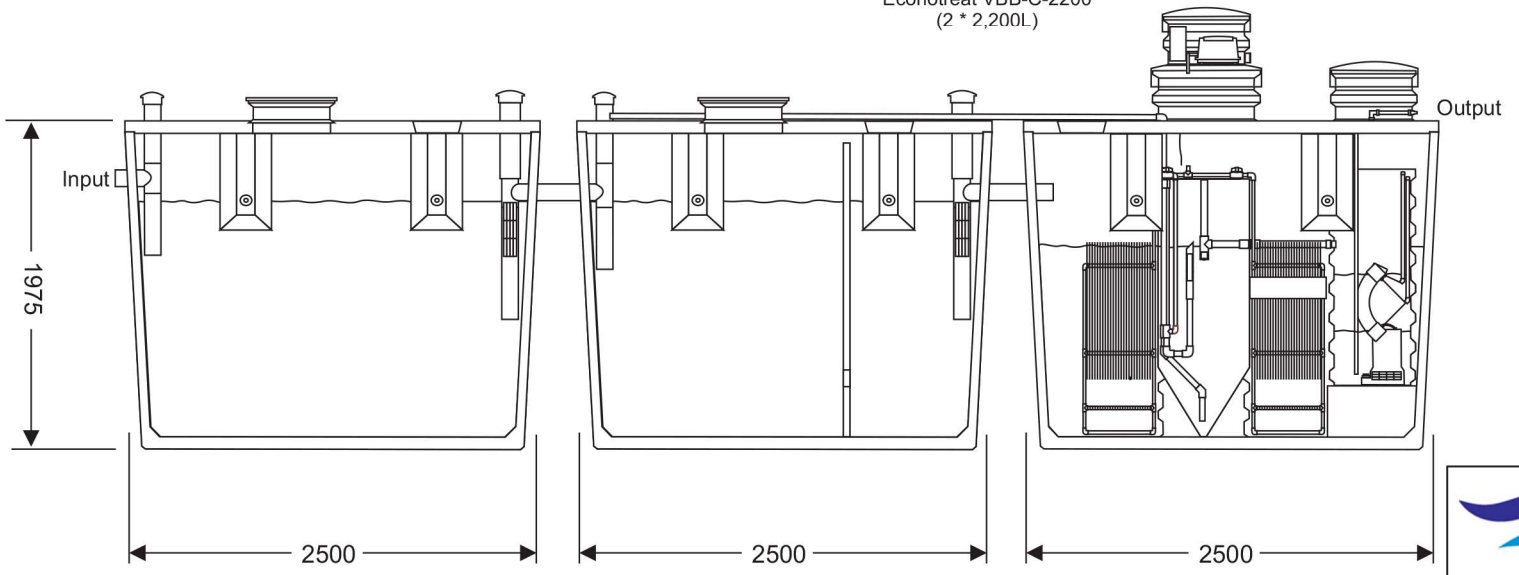
Model: Twin VBB-C-2200

Waste Treatment System for:
Commercial Applications
Continuous Rating 4400LPD

econo-treat
Advanced Secondary Treatment



Aerated Treatments Units
Econotreat VBB-C-2200
(2 * 2,200L)



Manufacturer rated flow per day	4400LPD
Description of system process	Aerated submerged fixed film media (open and closed type). Intermittent operation (fine and very large bubble combo)
Air Blower * 2 Make/model Power	Nitto LA80 (80W-80LPM) or Nitto LA120 (120W-120LPM)
Irrigation Pump * 2	Davey D42A/B 0.94KW 32M Head
Electrical controls & alarms	Air & high water alarms (Audible & visual) 10A circuit breaker Aeration controlled by time clock
Other components	Automatic sludge return to primary Air lift skimmer in clarifier
Irrigation system	Twin Internal Pumpout Drums fitted inside the Aeration Tank

Twin_VBB-C-2200.cdr

Drawn 14/5/2011
Revised 23/10/2013

Water Flow NZ LTD
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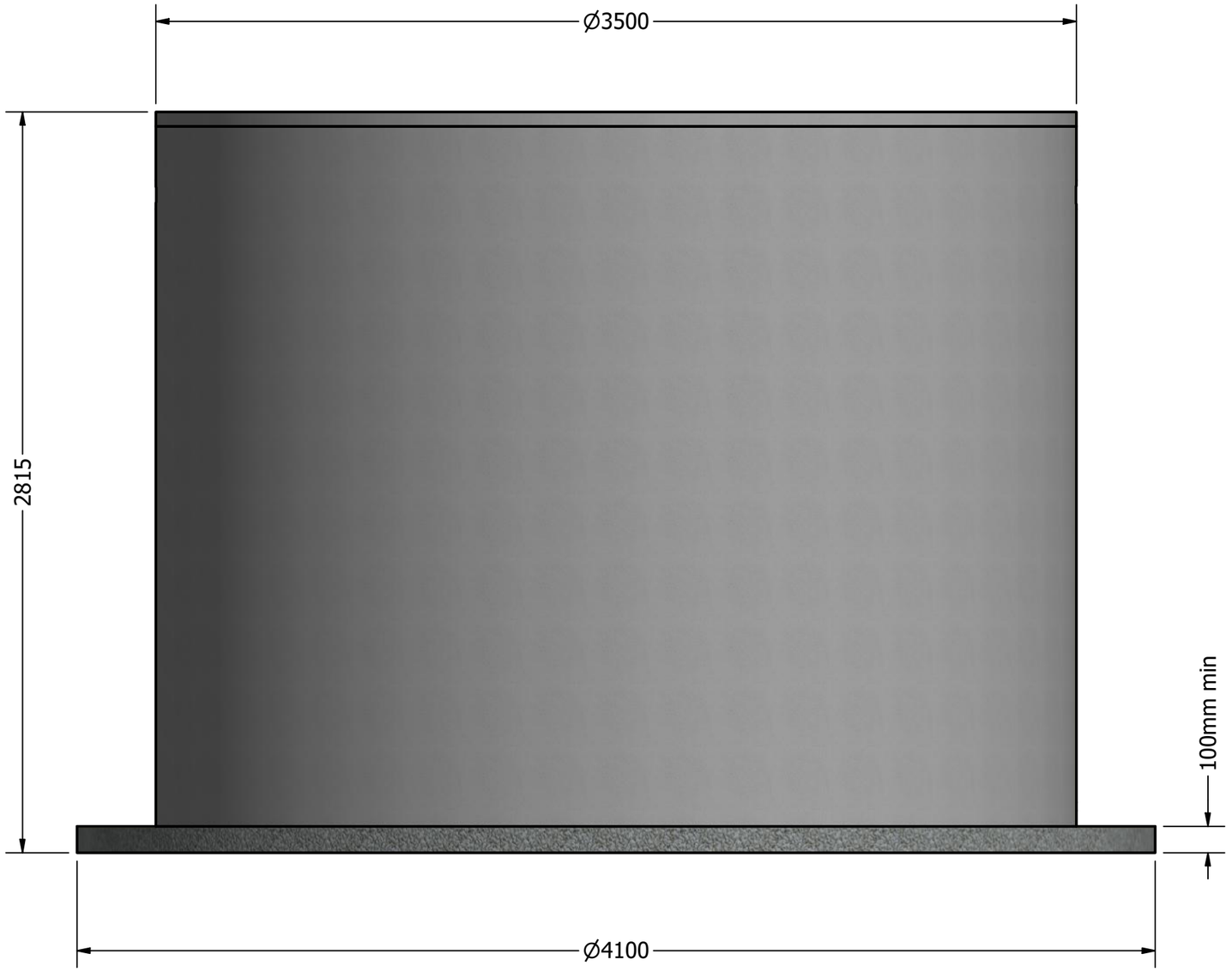
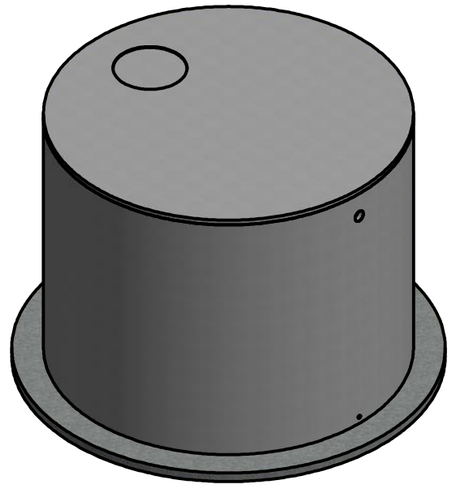
0800 SEWAGE - sales@waterflow.co.nz - www.waterflow.co.nz





Water Flow NZ LTD
1160 SH12
MAUNGATUROTO 0548
PH: 0800 628 356
E: sales@waterflow.co.nz

22,500L Buffer Tank with uplift restraint

-, -

PREPARED FOR:

DRAWN: Gerald Dowle

DATE: 17/04/2019

REVISION

SCALE: 1 / 20

REF:

Sheet 1 of 1

econo-treat

Advanced Secondary Treatment

Econotreat Aerated Wastewater Systems

Home Owners Guide

Contents

To the Home Owner

Thank you for choosing an Econotreat System to treat and care for your on-site sewage and wastewater.

Your Econotreat System is fully automatic in operation and requires little owner intervention to ensure years of service. It is useful that the owner/operator of the system understand some of the broad concepts of the system operation. This manual has been written to provide this simple explanation and to serve as a future reference so that you can ensure that the system is operating effectively at all times.

We would encourage you to monitor and care for your Econotreat system with our backing and support and by doing so you will learn how your system works and operates and how to keep it in top working order. Waterflow promises consistent results year after year.

Kind regards,
The Waterflow Team

Warranty

WATERFLOW NZ LTD warrants that the Econotreat System will be free from defects in material and workmanship for the following periods of time from the date of installation as set out in the following conditions:

1. Concrete Tank 15yrs
2. Roto-Molded Tanks 15yrs
3. Nitto Blower 2yrs
4. Irrigation Pumps 2yrs
5. Warranty of Operation covers the performance of the NaturalFlow System as connected to the effluent inflow for which they are designed, and has been installed to the criteria as set out in the relative installation instructions and procedures, and has an assigned Service/Maintenance contract in place with Waterflow NZ Ltd or it's appointed agent/s.

Warranty excludes defects due to:

A) Failure to use the system in accordance with owner's manual.

B) A force majeure event outside the reasonable control of WATERFLOW NZ LTD such as (but not limited to) earthquake, fire, flood, soil subsidence, ground water table variations or plumbing fault.

C) Modifications to surrounding landscape contour after installation

D) The actions of a third party

E) The system required to bear loads (either hydraulic or biological) greater than that for which it was designed

F) Any modifications or repairs undertaken without the consent of WATERFLOW NZ LTD

G) Failure, where applicable, to fence and plant disposal field.

How it Works

Primary Chamber / Tank

Influent enters the chamber via the source whereby scum and solids capable of settling are separated from the raw influent. Primary treated effluent flows through a transfer port to the aeration tank. This tank will also act as a storage chamber for sludge returned via the Clarification Chamber.

Aeration Chamber

Water enters via the Primary Chamber. Air is introduced into this chamber via an air blower to create an environment for aerobic bacteria and other helpful organisms to consume the organic matter present. The aeration tank is designed in a manner to help prevent short circuiting of the wastewater to ensure extended aeration. Media is also present in the tank to support the growth of bacteria.

Clarification Chamber

The Clarification chamber is essentially a quiescent zone where suspended particles/solids are settled out of the water. These particles are returned to the Primary chambers via a sludge return which aids in further biological reduction, denitrification and providing a constant food supply rich in microbes supporting the system through periods of limited flows.

Servicing

Your Econotreat System requires annual service and maintenance inspections (this can vary depending on local council regulations). This will need to be done by our trained technicians. We will phone to arrange a suitable time to attend to your servicing needs.

A record sheet (in triplicate) will be completed by our technician at the time of service. One copy is for you the customer and available upon payment, another is sent off to Council and the third copy will be retained for our records.

Please call our office on the number listed at the back of this manual for the cost of servicing after the initial 12-month period.

1. A general inspection of tank area, irrigation and drainage.

2. Inspection of electrical equipment including timer, Low powered Blower, irrigation pump, warning lights and connections.

3. Inspection of Pump-out Chamber and septic tank, checking air lines, adjusting air supply (if necessary), operating de-sludging unit, resetting air control, operating submersible switch, checking bio-mass growth, checking sludge level.

4. Inspection of irrigation including lines, jets and outlets. Between 4 - 9 years the tank will need to be de-sludged (pumped out) as with any septic tank. We will notify you of this requirement, as the service technicians will be monitoring sludge depth annually.

Holiday Precautions

There are no precautions to take. Your Econotreat can be left to function automatically for 6 to 12 months. However, if you are likely to be away from home for more than six months you may like to contact our office, so we can make a routine check.

Responsibility

As the owner of the system, you are responsible for the correct operation and maintenance and to conform to Council's requirements.

Slowly remove irrigation cap (unscrew anti- clockwise). It is important to unscrew slowly to allow any built-up pressure to be relieved. Watch out for the O-ring inside the cap, be careful not to drop this in the tank.

Problem Solving

To ensure the most effective operation of your Econotreat System you should familiarize yourself with the contents of this manual. The Econotreat has been designed to include additional safety margins and minor mishaps and normal household usage will not usually affect the operation of the system.

However, if the alarm sounds or strong odors persist Please call your service agent.

Area of Concern	Potential Cause	Remedial Action
Alarm sounds	Irrigation pump not working Air supply not working No power at the tank	Check water levels Listen for the air compressor Check power supply source
Water around tank	Irrigation pump not working Irrigation lines blocked or kinked	Check water levels Check irrigation lines and clear sprinklers
Excessive foaming	Too much laundry detergent Too many washes	Use recommended quantities Spread wash loads over different days
Persistent odors	Too much water usage Excessive chemicals in use	Add biologic starter pack Install water saving devices System will recover
Irrigation system not working	Pump failure Irrigation lines blocked	Check water level Clear irrigation lines
Water ponding on irrigation field	Irrigation line blocked Excessive water use Broken irrigation pipe	Installation should comply with original approval Install water saving devices Repair irrigation pipe

Do not flush baby wipes down toilets

Caring for Your Wastewater System

Components of Your Complete Wastewater Septic System

A typical wastewater septic system has two main components: a Wastewater Treatment System and a Land Application System (or disposal field). This is simply treatment then discharge.

Efficient Water Use – 'it does make a difference'

Average indoor water use in the typical single-family home is approximately 180ltrs per person per day. The more water a household conserves, the less water enters the septic system. Efficient water use can improve the operation of the wastewater system and reduce any risk of disposal field overload.

High-efficiency toilets

Toilet use accounts for 25 to 30 percent of household water use.

Do you know how many liters of water your toilet uses to flush? Most older homes have toilets with 11+ liter reservoirs, while newer high-efficiency dual flush toilets use 6.3/5.5ltrs or down to 4.5/3ltrs of water per flush. N.B. Did you know leaky toilets can waste as much as 700ltrs each day.

Consider reducing the volume of water in the toilet tank with a volume displacer (fancy name for a brick, stone etc!) if you don't have a high-efficiency model or replacing your existing toilets with high efficiency models.

Check to make sure your toilet's reservoir isn't leaking into the bowl. Add five drops of liquid food coloring to the reservoir before bed. If the dye is in the bowl the next morning, the reservoir is leaking, and repairs are needed.

Water fixtures

A small drip from a faucet may add many liters of unnecessary water to your system every day. To see how much a leak adds to your water usage, place a cup under the drip for 10 minutes. Multiply the amount of water in the cup by 144 (the number of minutes in 24 hours, divided by 10). This is the total amount of clean water travelling to your septic system each day from that little leak.

Faucet aerators and high efficiency showerheads

Faucet aerators help reduce water use and the volume of water entering your septic system. High-efficiency showerheads also reduce water use.

Washing machines

By selecting the proper load size, you'll reduce wastewater. Washing small loads of laundry on the large-load cycle wastes precious water and energy. If you can't select load size, run only full loads of laundry. N.B. A new Energy Star washing machine uses 35 percent less energy and 50 percent less water than a standard model.

Watch your drains!

What goes down the drain can have a major impact on how well your wastewater system works.

What shouldn't you flush down your toilet?

Dental floss, feminine hygiene products, diapers, cotton swabs, cigarette butts, cat litter, and other kitchen and bathroom items that can clog and potentially damage septic system components if they become trapped. Flushing household chemicals, gasoline, oil, pesticides, antifreeze, and paint can also stress or destroy the biological treatment taking place in the system or might contaminate surface or ground waters.

Care for your Land Application System

Your land application system is an important part of your wastewater system. Here are a few things you should do to maintain it:

- Flush driplines regularly – every 3 months recommended
- Plant only recommended wetland plants over and near your wastewater system. Roots from nearby trees or shrubs might clog and damage the drain field
- Don't drive or park vehicles on any part of your wastewater system. Doing so can compact the soil
- in your drain field or damage the pipes, tank, or other septic system components
- Do not build any structures over it or seal it with concrete, asphalt etc.
- Keep roof drains, basement sump pump drains, and other rainwater or surface water drainage systems away from the drain field. Flooding the drain field with excessive water slows down or stops treatment processes and can cause plumbing fixtures to back up
- Trees with very aggressive roots, such as willows, should be kept well away from the disposal system, see page 11 for list of recommended planting
- A soggy drain field won't absorb and neutralize liquid waste. Plan landscaping, roof gutters and foundation drains so that excess water is diverted away from the Land Application System

Household Cleaning Chemicals

Effects on Wastewater and Disposal System Receiving Environments

Use of many cleaning chemicals in facilities served by on-site disposal systems, can result in high concentrations of the constituents in those cleaning agents being discharged into the receiving soils. These chemicals and constituents can have a massive impact on the quality and condition of the receiving soils over time.

Many of the chemicals can disrupt soil structure and decrease hydraulic conductivity while others can act as bactericides, destroying the essential micro-organisms required to achieve the high level of biodegradation in the treatment and disposal systems.

The following matters need to be considered when using cleaning agents in a domestic situation:

- Laundry powders are often extremely high in sodium which will destroy the salt balance in the soils. Check the labels for low sodium and phosphorous contents.

- Wastewater flow from dishwashing machines can have an impact on wastewater treatment systems, in terms of the strong cleaning chemicals used, so check labels for low sodium products

- Highly corrosive cleaners (such as toilet and drain cleaners) that have precautionary labels warning users to minimize direct contact, are an indication that they can adversely affect the wastewater treatment system. Up to 1 cup of bactericides such as bleach can be sufficient to impact on all the microorganisms/bugs in a septic system.

Recommended Cleaning Brands:

eco STORE

earthwise
caring for your world

Cleaning Substitutes

Substitutes for Household Cleaning Chemicals (Ref TP58)

Use of the following readily biodegradable substitutes for common potentially harmful household cleaning chemicals will reduce the stress on any wastewater system, significantly enhance the performance of the whole system and increase the life of the land application system, while reducing the potential effects of the receiving soils.

General Cleaners

Use soft soap cleaners and bio-degradable cleaners and those low in chlorine levels.

Ammonia-Based Cleaners

Instead sprinkle baking soda on a damp sponge.

Disinfectants

In preference use Borax (sold in most Bin Inn stores): ½ cup in 4-litres of water.

Drain De-Cloggers

Avoid using de-clogging chemicals. Instead use a plunger or metal snake or remove and clean trap.

Scouring Cleaners and Powders

Instead sprinkle baking soda on a damp sponge or add 4-Tbs baking soda to 1-Litre warm water. It's cheaper and won't scratch.

Toilet Cleaners

Sprinkle on baking soda, then scrub with toilet brush.

Laundry Detergent

Choose one with a zero-phosphate content and low in alkaline salts (in particular, a low sodium level) and no chlorine.

Oven Cleaners

Sprinkle salt on drips, then scrub. Use baking soda and scouring pads on older spills.

In a Nutshell

Because your system is fully automatic there is no need for the owner to be concerned. However, there are some simple precautions to observe:

DO

- Avoid using strong acids, alkalis, oils and chemicals in your toilet, bathroom, laundry and kitchen (too much can kill off the working “bugs”).
- Limit the use of water in the dwelling.
- Try to spread wash loads over different days.
- Try to avoid using the washing machine and shower at the same time.
- Front loader washing machines reduce water usage.
- If your system requires power supply make sure this remains on continuously, unless system is being serviced.
- Check faucets and toilets for leaks; make repairs if necessary.
- Use low flush toilets where possible.
- Use a ‘displacer’ to reduce the amount of water needed to flush older toilets.
- Use aerators on faucets and flow reducer nozzles on showers to help lower water consumption.
- Reduce water levels for small loads of laundry.
- Wait until the dishwasher is full to run it.
- Densely plant your field to maximize transpiration.
- Perform regular monthly visual checks of your system and field.
- Grass should be mowed or trimmed regularly to optimize growth and prevent the grass from becoming rank.
- Use signs, fences and/or plantings to prevent any vehicle or stock access.
- Keep records of all maintenance undertaken on the wastewater systems.
- Monitor and care for your Wastewater System as per instructions in the home owner’s manual.

DON’T

- Switch off power unless servicing
- Use chlorine-based disinfectant & cleaning products in the toilets or kitchen sink (Cleaners high in chlorine, phosphorous or ammonia must not be used)
- Over use heavy cleaners that kill beneficial bacteria in the septic system
- Pour any toxic/strong chemicals (paint, oil, grease, paint thinners or pesticides) down any drains
- Flush down your toilet – Dental floss, feminine hygiene products, diapers, cotton swabs, cigarette butts, cat litter, and other kitchen and bathroom items
- Discard any drugs down the sink or toilet
- Alter or add any part of your system without Waterflow NZ LTD’s approval
- Never turn the system off, even when away on holidays.

Plants Suitable for Onsite Wastewater Disposal Systems

Plantings that will soon have your field looking magnificent!

Below are some of the most common of native and other plant species that are tolerant or fond of moist conditions, such as those associated with wastewater disposal fields.

Cordyline australis

Apodasia similis

Alocasis nigrescens

Carexx secta

- Alocasia nigrescens (Black Taro)
- Apodasmia similis (Oioi)
- Arthropodium Matapouri Bay
- (Rengarenga Lily)
- Carex dispacea
- Carex dissita
- Carex maorica
- Carex secta
- Carex tenuiculmis
- Carex virgata
- Cordyline australis (Cabbage Tree)
- Cordyline Midnight Star
- Leptospermum Burgundy Queen
- (Flowering Ti Tree)
- Lomandra Tanika
- Phomium Surfer

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econo-treat

Econotreat Treatment Systems

System Specifications & Installation Instructions

Water Flow NZ LTD

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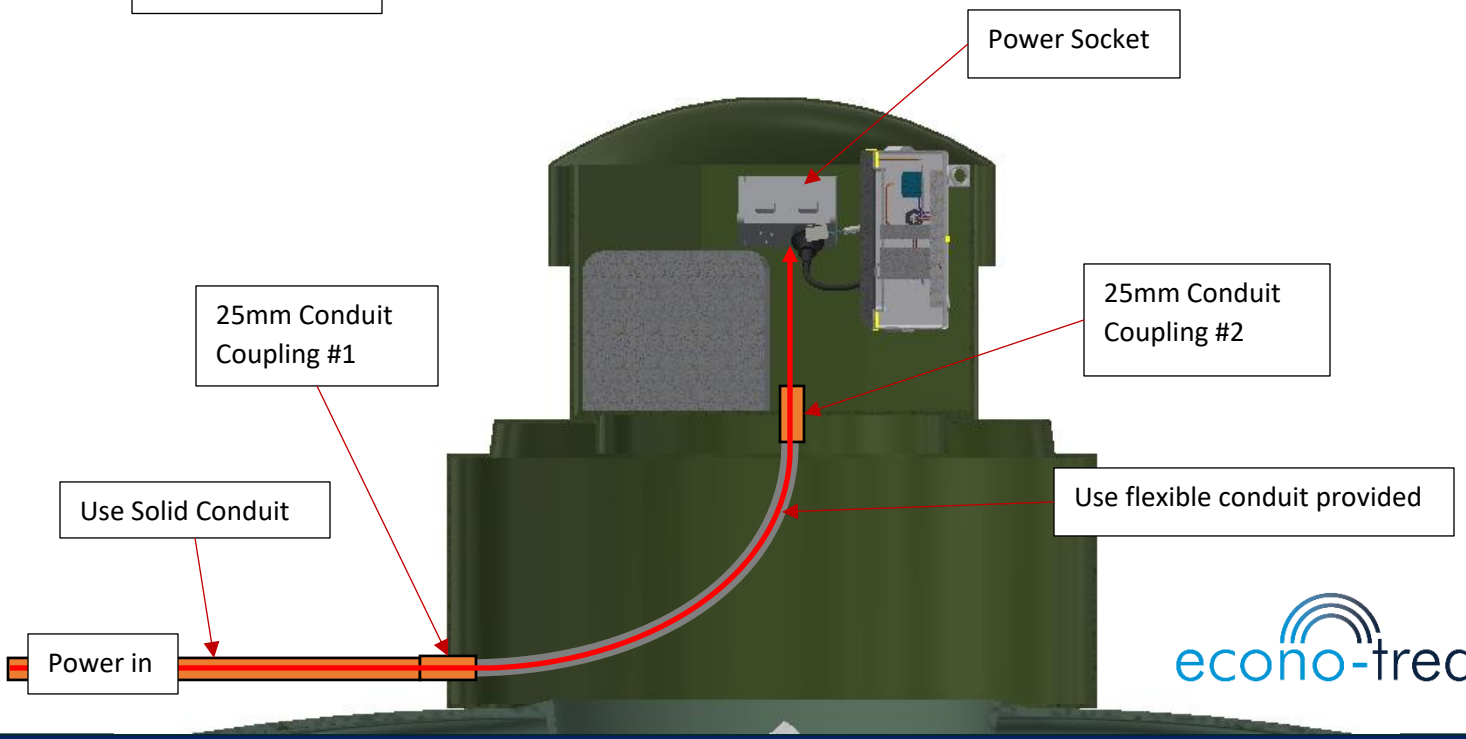
Power Supply **(see Pg 4 also for plastic systems)**

Use a 2.5mm2 T&E cable for the mains feeder cable. This cable should be protected at the feed end by an MCB rated at 16 Amps and should be installed on its own dedicated circuit.

Mains power supply is terminated in a waterproof outdoor socket, this provides power to the controller. It is found in the control box as pictured below. The power in comes through the side of the tank through a 25mm conduit coupling and will need to be run up through the bottom of the control box, where there is another conduit coupling; ensure these couplings are sealed off well when connecting the system up.



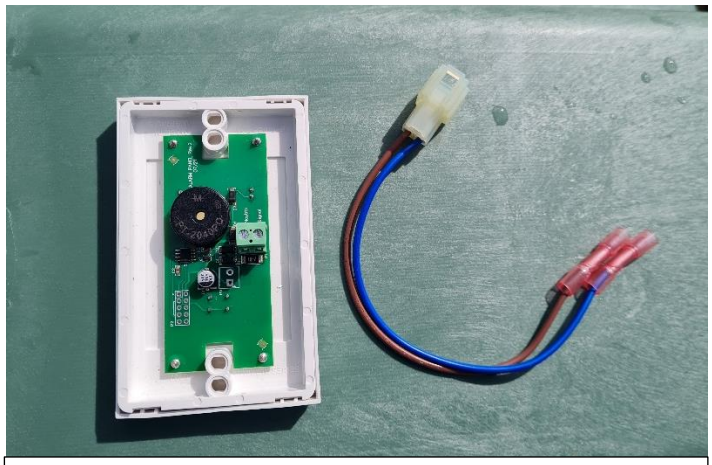
Alarm Wiring

Use a 1.0mm2 Twin or T&E cable to carry the two-wire alarm signal from the Treatment unit controller to the Alarm panel which is to be installed inside the building.

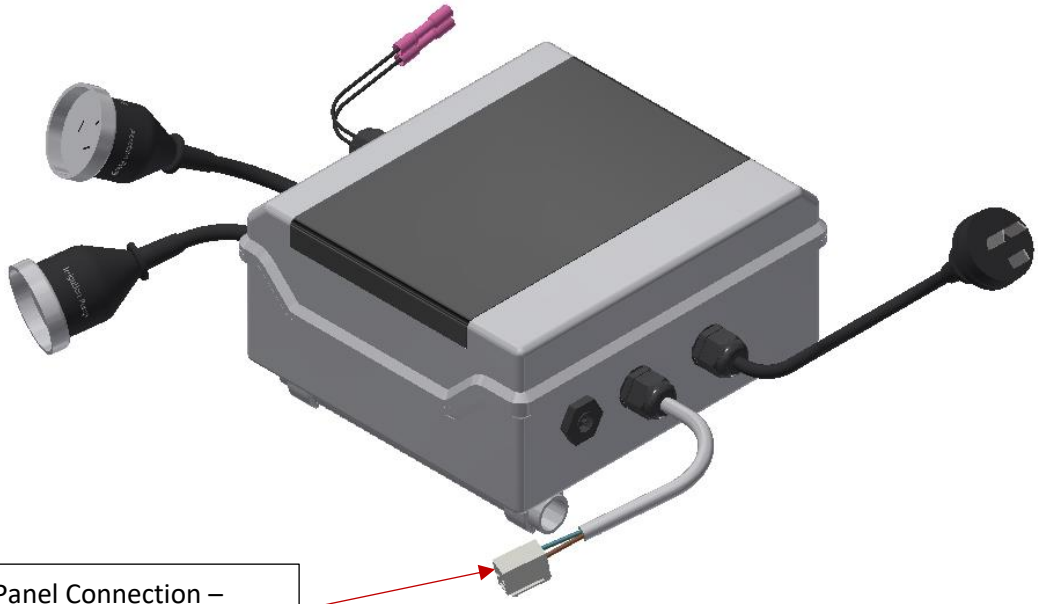
Note that this Alarm panel circuit is an ELV circuit. (24V AC)

There is a connection on the side of the controller that the alarm panel connects to. The signal is the brown wire, and the neutral is the blue wire.

The Alarm Panel can be found in a bag in the controller box.



In the bag is also a connector that plugs into a plug on the controller. This panel should be installed in the house, typically the garage or laundry.

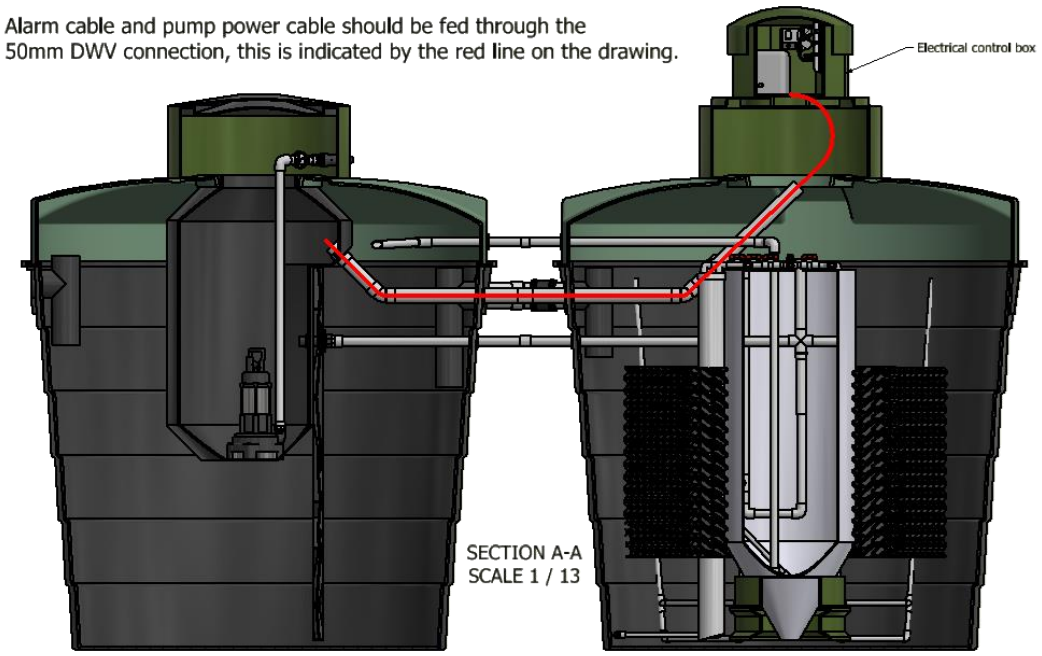


Alarm Panel Connection – signal is brown, neutral is blue

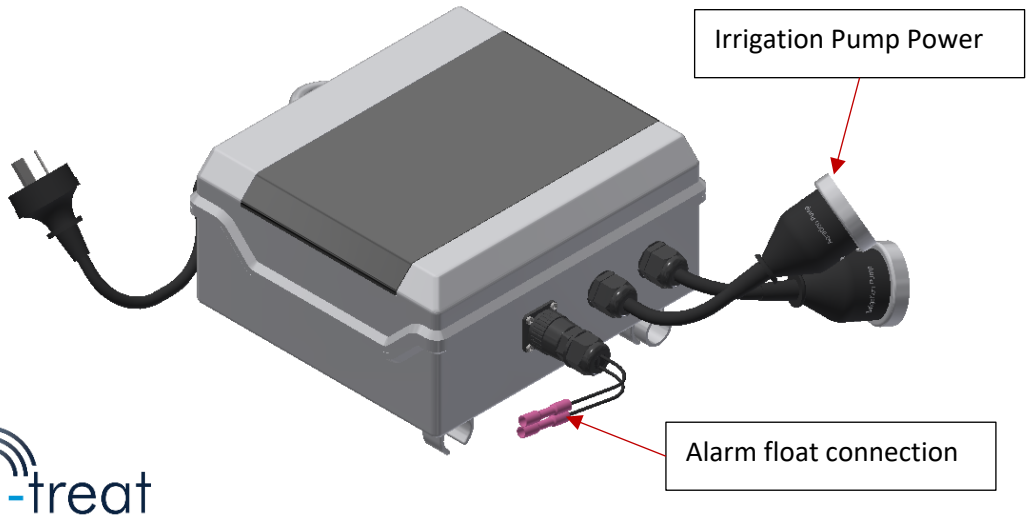
Plastic Systems

Plastic Econotreat systems have the pump and high-level float in a separate tank to the one holding the power box. Therefore, the pump and float cords need to be connected to the controller, they should have been fed through to the treatment tank by the installer at the time of install.

Note: There is a draw wire provided to pull the pump plug & alarm wire through to the Control Box; please do not cut any wires, the plug will fit through the conduit.

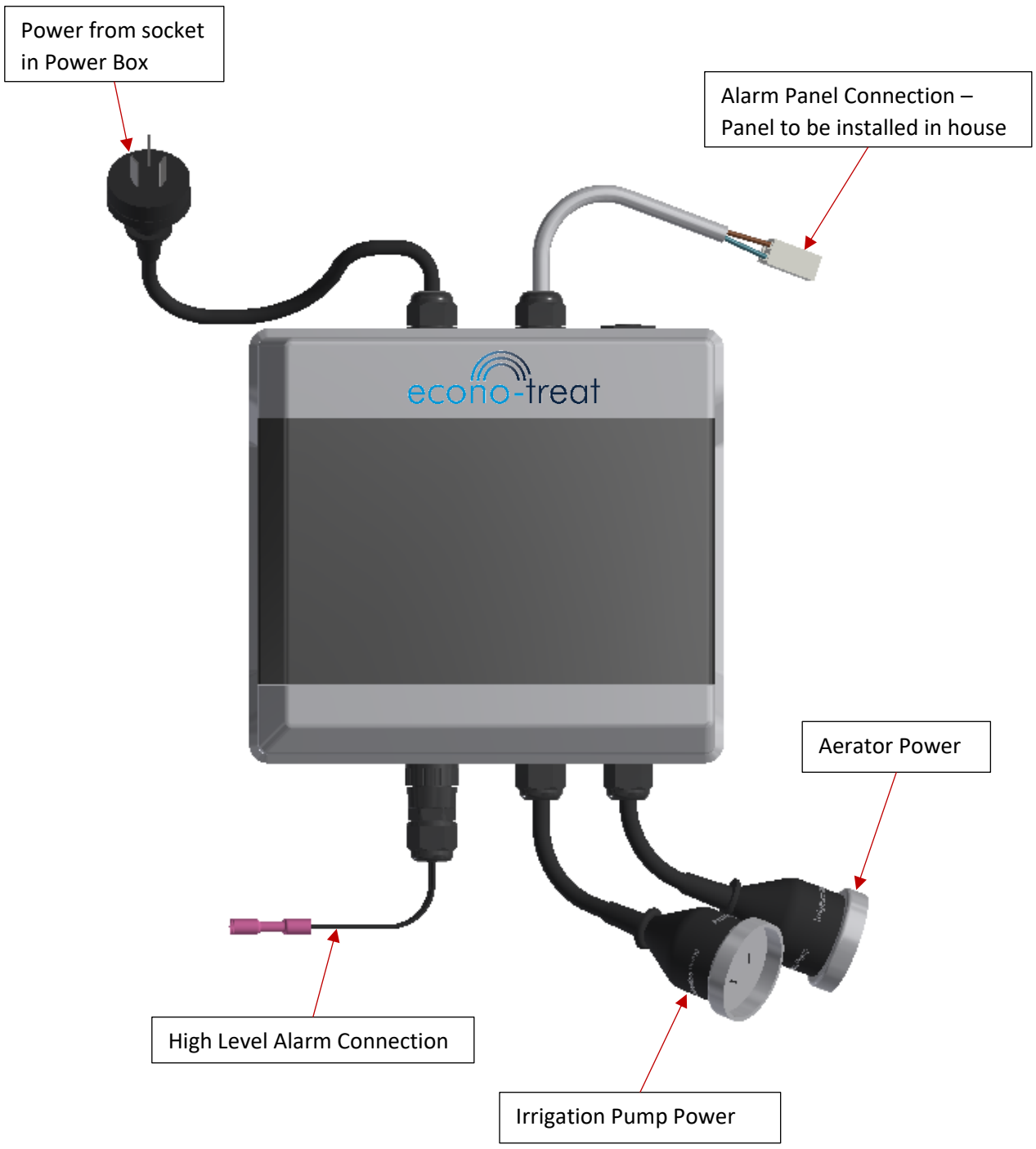


The high-level float plug on the controller is setup with crimps, so you will only need to crimp the float cable to the wires on the controller. The pump is simply plugged in the socket labelled "Irrigation Pump".



econo-treat

Controller Schematic



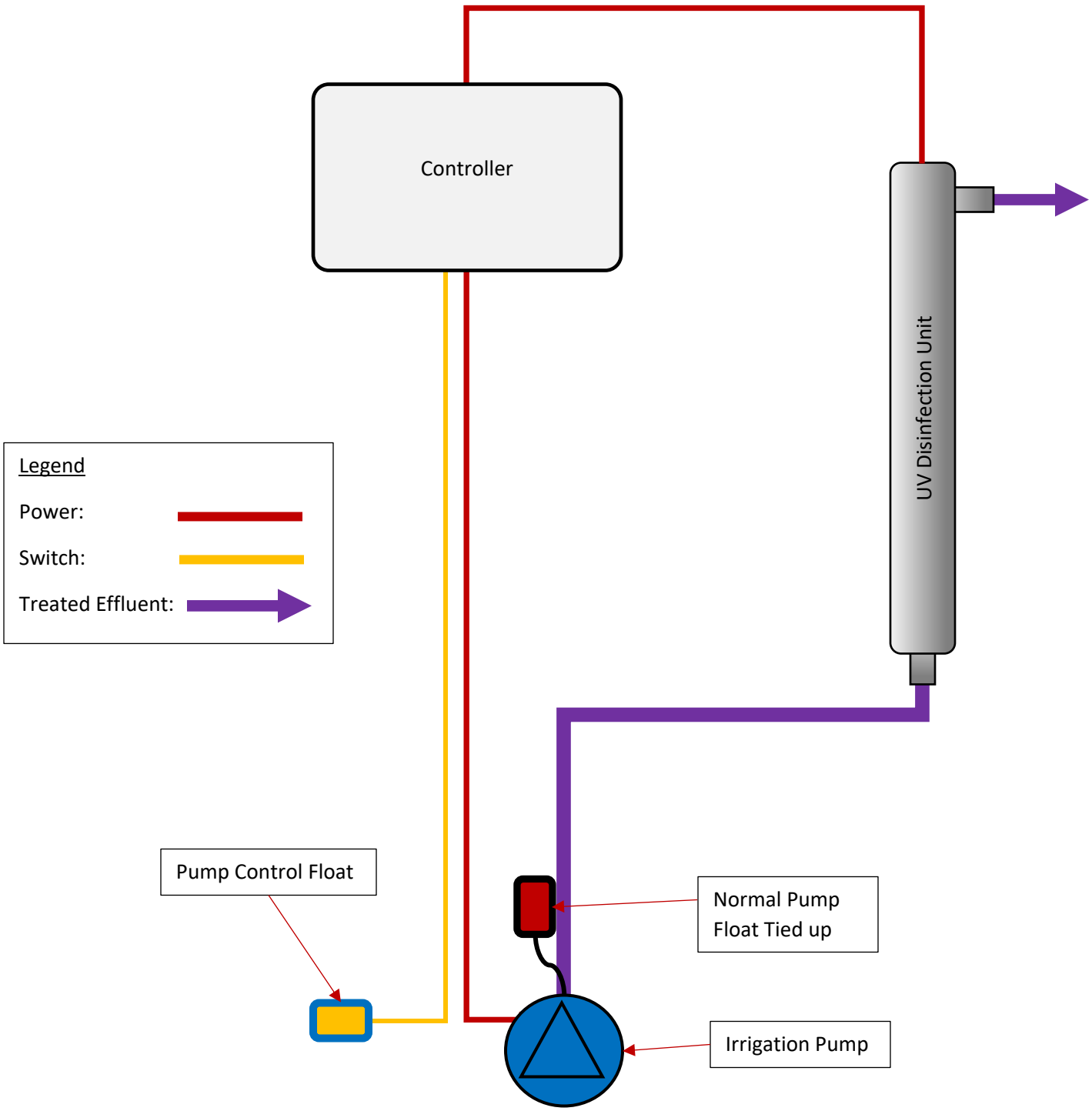
UV Controller

Systems with further UV disinfection have a different controller, with extra plugs for the UV control.

In a system with UV, the pump is run off a separate control float rather than the inbuilt float on the pump; the inbuilt float will be tied up in a permanently on position. So, there will be two extra plugs on the controller: a small on to take the pump control float and a 3-pin socket to power the UV.

When the pump control float turns on, the control provides power to the UV unit; after a delay of 5min the pump will start, this gives the UV lamp time to heat up before water passes through it.

UV Controller Schematic



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Non-Reticulated Firefighting Water Supplies, Vehicular Access & Vegetation Risk Reduction Application for New and Existing Residential Dwellings and Sub-Divisions

Contents

Section A - Firefighting Water Supplies and Vegetation Risk Reduction Waiver

"Fire and Emergency New Zealand strongly recommends the installation of automatic fire detection system devices such as smoke alarms for early warning of a fire and fire suppression systems such as sprinklers in buildings (irrespective of the water supply) to provide maximum protection to life and property".

Waiver Explanation Intent

Fire and Emergency New Zealand [FENZ] use the New Zealand Fire Service [NZFS] Code of Practice for firefighting water supplies (SNZ PAS 5409:2008) (The Code) as a tool to establish the quantity of water required for firefighting purposes in relation to a specific hazard (Dwelling, Building) based on its fire hazard classification regardless if they are located within urban fire districts with a reticulated water supply or a non-reticulated water supply in rural areas. The code has been adopted by the Territorial Authorities and Water Supply Authorities. The code can be used by developers and property owners to assess the adequacy of the firefighting water supply for new or existing buildings.

The Area Manager under the delegated authority of the Fire Region Manager is responsible for approving applications in relation to firefighting water supplies. The Area Manager may accept a variation or reduction in the amount of water required for firefighting for example; a single level dwelling measuring 200^{m2} requires 45,000L of firefighter water under the code, however the Area Managers in Northland have excepted a reduction to 10,000L.

This application form is used for the assessment of proposed water supplies for firefighting in non-reticulated areas only and is referenced from (Appendix B – Alternative Firefighting Water Sources) of the code. This application also provides fire risk reduction guidance in relation to vegetation and the 20-metre dripline rule under the Territorial Authority's District Plan. Fire and Emergency New Zealand are not a consenting authority and the final determination rests with the Territorial Authority.

For more information in relation to the code of practice for Firefighting Water supplies, Emergency Vehicle Access requirements, Home Fire Safety advice and Vegetation Risk Reduction Strategies visit www.fireandemergency.nz

Section B – Applicant Information

Applicants Information	
Name:	Puketawa Marae Trustees
Address:	1400 Horeke Road, Horeke
Contact Details:	c/- Bay of Islands Planning Limited
Return Email Address:	kenton@bayplan.co.nz

Section C – Property Details

Property Details	
Address of Property:	1400 Horeke Road, Horeke
Lot Number/s:	Utakura 6A Block
Dwelling Size: (Area = Length & Width)	Five cabins with a floor area of approximately 38m2 each
Number of levels: (Single / Multiple)	1

1. Fire Appliance Access to alternative firefighting water sources - Expected Parking Place & Turning circle

Fire and Emergency have specific requirements for fire appliance access to buildings and the firefighting water supply. This area is termed the hard stand. The roading gradient should not exceed 16%. The roading surface should be sealed, able to take the weight of a 14 to 20-tonne truck and trafficable at all times. The minimum roading width should not be less than 4 m and the property entrance no less 3.5 metres wide. The height clearance along access ways must exceed 4 metres with no obstructions for example; trees, hanging cables, and overhanging eaves.

1 (a) Fire Appliance Access / Right of Way	
Is there at least 4 metres clearance overhead free from obstructions?	☒YES ☐NO
Is the access at least 4 metres wide?	☒YES ☐NO
Is the surface designed to support a 20-tonne truck?	☒YES ☐NO
Are the gradients less than 16%	☒YES ☐NO
Fire Appliance parking distance from the proposed water supply is approximately 20 metres	

If access to the proposed firefighting water supply is not achievable using a fire appliance, firefighters will need to use portable fire pumps. Firefighters will require at least a one-metre wide clear path / walkway to carry equipment to the water supply, and a working area of two metres by two metres for firefighting equipment to be set up and operated.

1 (b) Restricted access to firefighting water supply, portable pumps required
Has suitable access been provided? ☒YES ☐ NO
Comments:

Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

2. Firefighting Water Supplies (FFWS)

What are you proposing to use as your firefighting water supply?

2 (a) Water Supply Single Dwelling	
Tank	☐ Concrete Tank ☒ Plastic Tank ☒ Above Ground (Fire Service coupling is required - 100mm screw thread suction coupling) ☐ Part Buried (max exposed 1.500 mm above ground) ☐ Fully Buried (access through filler spout) Volume of dedicated firefighting water 10,000 litres

2 (b) Water Supply Multi-Title Subdivision Lots / Communal Supply	
Tank Farm	☐ Concrete Tank ☐ Plastic Tank ☐ Above Ground (Fire Service coupling is required - 100mm screw thread suction coupling) ☐ Part Buried (max exposed 1.500mm above ground) ☐ Fully Buried (access through filler spout) Number of tanks provided Click or tap here to enter text. Number of Tank Farms provided Click or tap here to enter text. Water volume at each Tank Farm Click or tap here to enter text. Litres Volume of dedicated firefighting water Click or tap here to enter text. litres

2 (c) Alternative Water Supply	
Pond:	Volume of water: Click or tap here to enter text.
Pool:	Volume of water: l
Other:	Specify: Click or tap here to enter text.
	Volume of water: Click or tap here to enter text.

Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

3. Water Supply Location

The code requires the available water supply to be at least 6 metres from a building for firefighter safety, with a maximum distance of 90 metres from any building. This is the same for a single dwelling or a Multi-Lot residential subdivision. Is the proposed water supply within these requirements?

3 (a) Water Supply Location	
Minimum Distance:	*Is your water supply at least 6 metres from the building?* ☒YES ☐ NO
Maximum Distance	*Is your water supply no more than 90 metres from the building?* ☒YES ☐ NO

3 (b) Visibility
How will the water supply be readily identifiable to responding firefighters? E.g.: tank is visible to arriving firefighters or, there are signs / markers posts visible from the parking place directing them to the tank etc.
Comments: Tanks will be visible from driveway parking area

3 (c) Security
How will the FFWS be reasonably protected from tampering? E.g.: light chain and padlock or, cable tie on the valve etc.
Explain how this will be achieved: Tanks located behind buildings situated away from road.

Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

4. Adequacy of Supply

The volume of storage that is reserved for firefighting purposes must not be used for normal operational requirements. Additional storage must be provided to balance diurnal peak demand, seasonal peak demand and normal system failures, for instance power outages. The intent is that there should always be sufficient volumes of water available for firefighting, except during Civil Défense emergencies or by prior arrangement with the Fire Region Manager.

4 (a) Adequacy of Water supply
Note: *The owner must maintain the firefighting water supply all year round. How will the usable capacity proposed be reliably maintained? E.g. automatically keep the tank topped up, drip feed, rain water, ballcock system, or manual refilling after use etc.*
Comments: Roof water supply with top up when necessary.

Internal FENZ Risk Reduction comments only:
Click or tap here to enter text.

5. Alternative Method using Appendix's H & J

If Table 1 + 2 from the Code of Practice is not being used for the calculation of the Firefighting Water Supply, a competent person using appendix H and J from the Code of Practice can propose an alternative method to determine firefighting water supply adequacy.

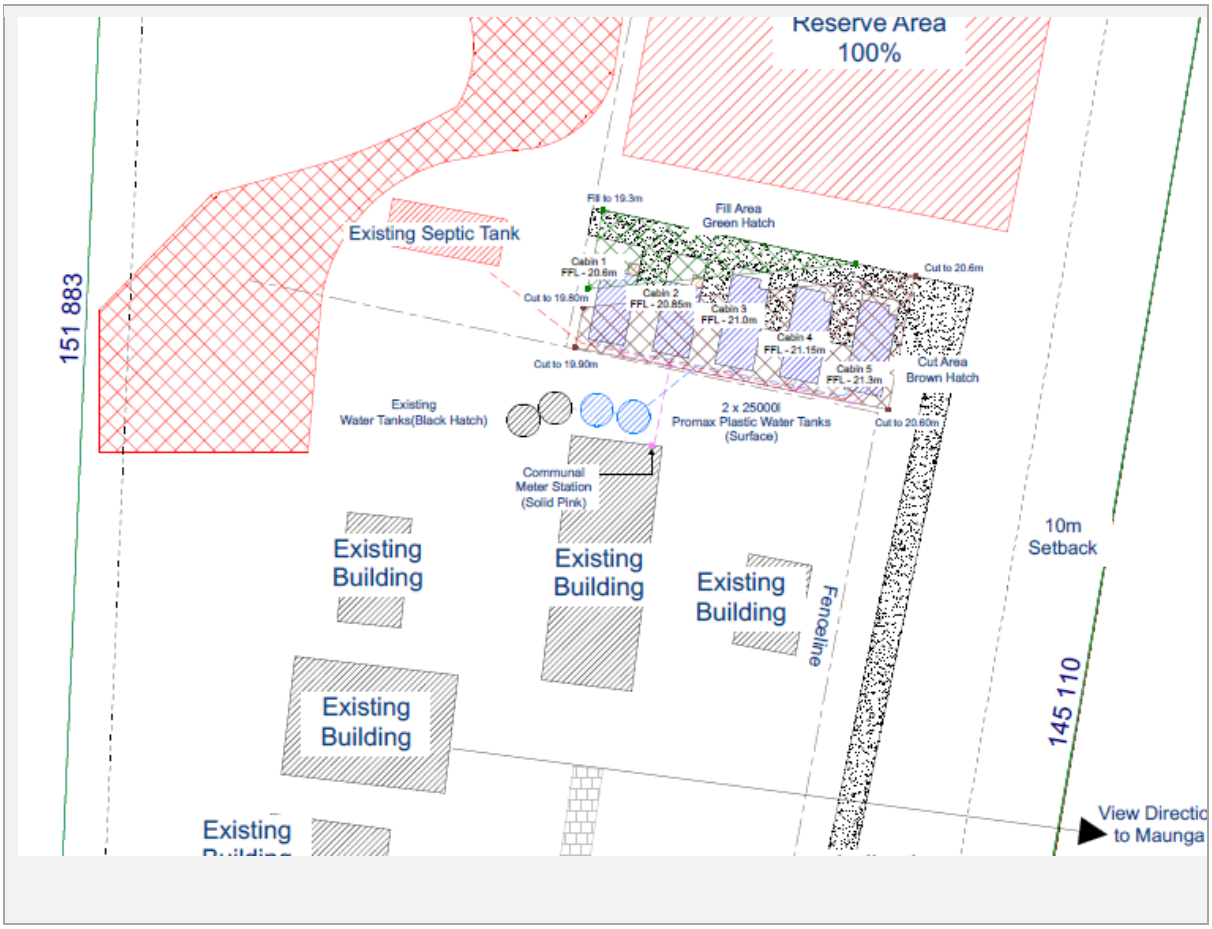
Appendix H describes a method for determining the maximum fire size in a structure. Appendix J describes a method for assessing the adequacy of the firefighting water supply to the premises.

5 (a) Alternative Method Appendix H & J	
If an alternative method of determining the FFWS has been proposed, who proposed it? Name: Click or tap here to enter text.	
Contact Details: Click or tap here to enter text.	
Proposed volume of storage?	Litres: Click or tap here to enter text.
Comments: Click or tap here to enter text. ** Please provide a copy of the calculations for consideration.*	

Internal FENZ Risk Reduction comments only: Click or tap here to enter text.

6. Diagram

Please provide a diagram identifying the location of the dwelling/s, the proposed firefighting water supply and the attendance point of the fire appliance to support your application.



Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

7. Vegetation Risk Reduction - Fire + Fuel = Why Homes Burn

Properties that are residential, industrial or agricultural, are on the urban–rural interface if they are next to vegetation, whether it is forest, scrubland, or in a rural setting. Properties in these areas are at greater risk of wildfire due to the increased presence of nearby vegetation.

In order to mitigate the risk of fire spread from surrounding vegetation to the proposed building and vice-versa, Fire Emergency New Zealand recommends the following;

I. *Fire safe construction*

Spouting and gutters – Clear regularly and consider screening with metal mesh. Embers can easily ignite dry material that collects in gutters.

Roof – Use fire resistant material such as steel or tile. Avoid butanol and rubber compounds.

Cladding – Stucco, metal sidings, brick, concrete, and fibre cement cladding are more fire resistant than wood or vinyl cladding.

II. *Establish Safety Zones around your home.*

Safety Zone 1 is your most import line of defence and requires the most consideration. Safety Zone 1 extends to 10 metres from your home, you should;

a) *Mow lawn and plant low-growing fire-resistant plants; and*
b) *Thin and prune trees and shrubs; and*
c) *Avoid tall trees close to the house; and*
d) *Use gravel or decorative crushed rock instead of bark or wood chip mulch; and*
e) *Remove flammable debris like twigs, pine needles and dead leaves from the roof and around and under the house and decks; and*
f) *Remove dead plant material along the fence lines and keep the grass short; and*
g) *Remove over hanging branches near powerlines in both Zone 1 and 2.*

III. *Safety Zone 2 extends from 10 – 30 metres of your home.*

a) *Remove scrub and dead or dying plants and trees; and*
b) *Thin excess trees; and*
c) *Evenly space remaining trees so the crowns are separated by 3-6 metres; and*
d) *Avoid planting clusters of highly flammable trees and shrubs*
e) *Prune tree branches to a height of 2 metres from the ground.*

IV. *Choose Fire Resistant Plants*

Fire resistant plants aren't fire proof, but they do not readily ignite. Most deciduous trees and shrubs are fire resistant. Some of these include: poplar, maple, ash, birch and willow. Install domestic sprinklers on the exterior of the sides of the building that are less 20 metres from the vegetation. Examples of highly flammable plants are: pine, cypress, cedar, fir, larch, redwood, spruce, kanuka, manuka.

For more information please go to https://www.fireandemergency.nz/at-home/the-threat-of-rural-fire/

If your building or dwelling is next to vegetation, whether it is forest, scrubland, or in a rural setting, please detail below what Risk Reduction measures you will take to mitigate the risk of fire development and spread involving vegetation?

7 (a) Vegetation Risk Reduction Strategy
Proposed vegetation around cabins will predominantly be lawn grass.

Internal FENZ Risk Reduction comments only:

Click or tap here to enter text.

8. Applicant

Checklist	
☒	Site plan (scale drawing) – including; where to park a fire appliance, water supply, any other relevant information.
☒	Any other supporting documentation (diagrams, consent).

I submit this proposal for assessment.

Name: Kenton Baxter Dated: 15/11/2023

Contact No.: 09 407 5253

Email: kenton@bayplan.co.nz

Signature: Kenton Baxter

9. Approval

In reviewing the information that you have provided in relation to your application being approximately a Click or tap here to enter text. *square metre,* Choose an item. *dwelling/sub division, and non-sprinkler protected.*

The Area Manager of Fire and Emergency New Zealand under delegated authority from the Fire Region Manager, Te Hiku, has assessed the proposal in relation to firefighting water supplies and the vegetation risk strategy. The Manager Choose an item. *agree with the proposed alternate method of Fire Fighting Water Supplies. Furthermore; the Manager agrees with the Vegetation Risk Reduction strategies proposed by the applicant.*

Name: Click or tap here to enter text.

Signature: Click or tap here to enter text. Dated: Click or tap to enter a date.

P.P on behalf of the Area Manager

Fire and Emergency New Zealand
Te Tai Tokerau / Northland District

APPROVED
By GoffinJ at 8:08 am, Nov 16, 2023

Jason Goffin- Advisor Risk Reduction