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

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

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

1. Pre-Lodgement Meeting

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

2. Type of Consent being applied for

(more than one circle can be ticked):

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

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

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

✔ **Yes** ◯ **No**

4. Consultation

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

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

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

5. Applicant Details

Name/s: Thomas van Vliet and Catherine van Vliet

Email: [redacted]

Phone number:

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

Postcode 0230

6. Address for Correspondence

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

Name/s: Thomas van Vliet and Catherine van Vliet

Email: [redacted]

Phone number:

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

Postcode 0230

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

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

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

Name/s: Thomas van Vliet and Catherine van Vliet

Property Address/ Location: [redacted]

Postcode 0230

8. Application Site Details

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

Name/s: Thomas van Vliet and Catherine van Vliet

Site Address/ Location: [redacted]

Postcode 0294

Legal Description: [redacted] **Val Number:**

Certificate of title:

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

Site visit requirements:

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

Is there a dog on the property? ◯ **Yes** ✔ **No**

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

9. Description of the Proposal:

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

We would like to relocate a minor dwelling (63.4m of living and 15.6m of storage/bicycle garage/laundry) to the property in addition to the existing 100 square meter main dwelling. The minor dwelling will be 34.8m away from the main one so breaching 8.6.5.2.3 clause d. being that the distance is no greater than 30m

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

10. Would you like to request Public Notification?

◯ **Yes** ✔ **No**

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

(more than one circle can be ticked):

- (✔) **Building Consent** EBC-2026-110/0ere (if known)
- ( ) **Regional Council Consent (ref # if known)** Ref # here (if known)
- ( ) **National Environmental Standard consent** Consent here (if known)
- ( ) **Other (please specify)** Specify 'other' here

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

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

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

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

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

13. Assessment of Environmental Effects:

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

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

13. Draft Conditions:

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

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

14. Billing Details:

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

Name/s: (please write in full) Thomas van Vliet

Email: [redacted]

Phone number: [redacted]

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

Postcode 0230

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

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

Name: (please write in full) Thomas Jay van Vliet and Catherine Hanneke van Vliet

Signature: [redacted] Date 23-Sep-2025
(signature of bill payer) MANDATORY

15. Important Information:

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

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

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

15. Important information continued...

Declaration

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

Name: (please write in full) Thomas Jay van Vliet and Catherine Hanneke van Vliet

Signature: [redacted] Date 23-Sep-2025

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

Checklist (please tick if information is provided)

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

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

AEE

Applicant: Thomas and Catherine van Vliet

Address: Tanekaha Lane, Kerikeri

Legal description: Lot 2 DP197024

Certificate of title: NA124C/881

Property description:

This property consists of rolling hills with generally a 5-8 degree slope and is generally made up of a top layer of rock on top of a clay sub soil. There is majority cover of weed and scrub like material with old tree debris. Some scrubby grass. An existing access has been cut in by previous land owner at time of subdivision. House locations are where there is no native fauna present.

Activity Description:

Applying for recourse consent to add a minor dwelling to our rural production zone property (listed as a controlled activity in the district plan). Minor dwelling size 63.4square meters plus attached 15.6 square meters bicycle and garden storage/garage with laundry facilities. We are applying to increase the permissible 30m distance between the buildings to 34.8m.

Rule infringed:

8.6.5.2.3 (specifically **Clause d.** the separation distance of the minor residential unit is no greater than 30m from the principal dwelling)

Type of consent required:

Land use consent for a controlled activity within the rural production zone

Plan provisions:

Considerations have been made around the placement and effects of the minor dwelling being put on the property. Chapter 11 of the district plan has been heavily considered in this assessment.

Visual impact to neighbouring properties

- Landscaping being completed to rid the weed and old sticks/trees around
- Effects of the dwellings being 34.8m apart as apposed to 30m
- Environmental effect of the dwelling being there
- Noise generated

Plan provisions:

In the design process of this project there were different considerations to make around the suitability of houses and how they would fit on the property. Obviously in order to apply for consent for relocatable dwellings, they need to be chosen prior. Considerations like aesthetics, sunlight, work required, longevity and comfortability of the home had to be taken into account. The dwelling will stay under the total 83 square meter threshold for total coverage so no significant impact in that regard. Both dwellings are from a similar time period and have some similarities so neither will look out of place.

Additional to the previous paragraph there is the environmental effect. The land area was covered in weed and debris from old felled trees. Mainly full of tobacco weed, gorse, gum sprouts, wattle and moth plant, the area around the house site will be cleared and planted with a combination of native and other planting. Hedging to increase privacy between the dwellings will be planted and mulch (which is onsite from the previous owner) will be covering the garden where grass is not present. Environment impact will be kept to a minimum and improvements made so the property will be far more appealing for bird and wildlife to thrive. Rocks from the site and dead punga logs will be used for edging and drains to retain the look of the property. Live punga and natives between the 2 dwellings will be retained and weed removed.

Placement of the minor dwelling is a major for us and both of the houses are located in area's where privacy is maximised from surrounding properties. Although there are houses across the valley, They are hidden by existing mature tree's and very little if any dwelling is in their direct view. The properties are all semi rural and away from any shading or direct impact the new houses would have on surrounding ones. The top side of the property will be planted eventually and weed removed which will only beautify the view plus increase bird life.

Consideration around the site and the distance was not taken lightly. To move the minor dwelling to 34.8m means lesser impact on existing tree's like palms and other fauna between the two houses, it also means the drive way that carries on to the rear main dwelling could be shorter reducing the area of coverage and we can retain more planting/ natural ground.

Noise generated on the property has been considered and once the build is complete there will be minimal construction noise so no long lasting impact on the neighbourhood. This minor dwelling has been chosen partly because of the minimal work required to make it livable which also will help to reduce how long there is construction noise. Construction will all happen between working hours during the day.

Services are all to be shared between the two dwellings and there are no future plans to subdivide the property. The plan is for a family member to use the minor dwelling in the future with cost of everything becoming harder to cope with.

Possible effects:

Possible effects have been reduced significantly. The existing vegetation between the dwellings are retained and the over all look of the property will be greatly improved with planting of a combination of native and other plants. The area will be much more appealing to the eye than what has been an over grown and neglected property for years.

Because there will be more impermeable surfaces with the minor dwelling, storm water control has been addressed in the report attached. Noise would be another effect but as above will be kept to a minimum and for a short time.

Summary:

We do not believe any body will be effected with our minor dwelling. There is orchard behind us and at times there are lots of vehicle movements so increase of traffic would be hard to notice. In summary we have taken the best steps to mitigate adverse effects to anything on and around our property and have put plans in place to either retain the natural environment or vastly improve it for ourselves, the neighbouring properties, birdlife and the Kerikeri district.

Thank you for your consideration,

Tom and Catherine,
021673199

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA124C/881**
Land Registration District	**North Auckland**
Date Issued	06 January 2000

Prior References
NA102A/534

Estate	Fee Simple
Area	1.0787 hectares more or less
Legal Description	Lot 2 Deposited Plan 197024
Registered Owners	

Catherine Hanneke van Vliet and Thomas Jay van Vliet

Interests

Appurtenant hereto is a water supply right specified in Easement Certificate C907091.9 - 12.10.1995 at 2.05 pm

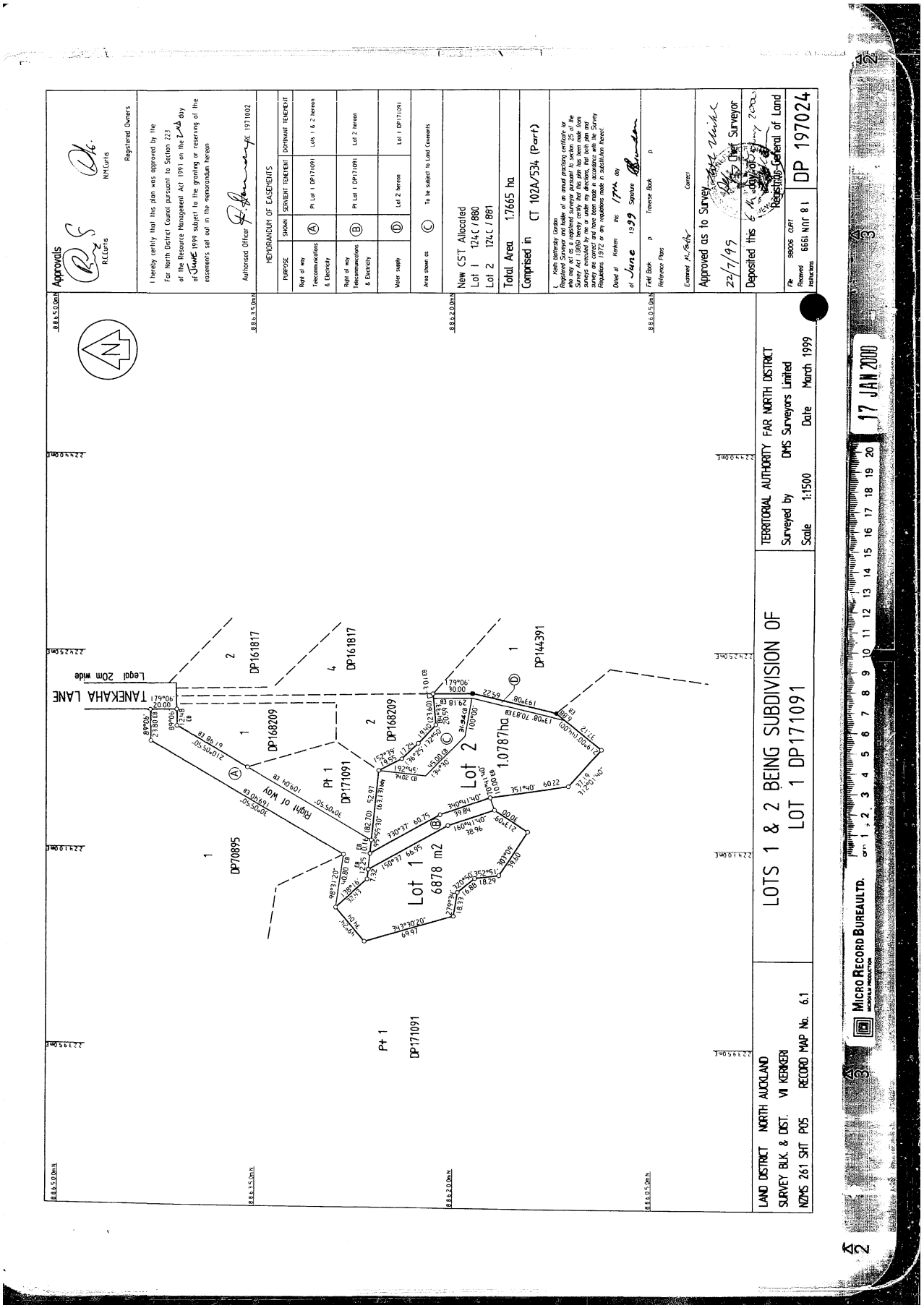
D468330.1 Consent Notice pursuant to Section 221(1)Resource Management Act 1991 by Far North District Council - 6.1.2000 at 2.04 pm

Appurtenant hereto are rights of way and telecommunications and electricity rights specified in Easement Certificate D468330.5 - 6.1.2000 at 2.04 pm

Subject to a water supply right over part marked D on DP 197024 specified in Easement Certificate D468330.5 - 6.1.2000 at 2.04 pm

The easements specified in Easement Certificate D468330.5 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 10509968.1 - 22.8.2016 at 10:46 am


LOTS 1 & 2 BEING SUBDIVISION OF
LOT 1 DP171091
LAND DISTRICT NORTH AUCKLAND
SURVEY BLK. & DIST. VI KERIKERI
NZMS 261 SHT P05 RECORD MAP No. 6.1
TERRITORIAL AUTHORITY FAR NORTH DISTRICT
Surveyed by DMS Surveyors Limited
Scale 1:1500 Date March 1999
Approvals
R.C.Curtis
N.M.Curtis
Registered Owners
I hereby certify that this plan was approved by the Far North District Council pursuant to Section 223 of the Resource Management Act 1991 on the 2nd day of June 1999 subject to the granting or reserving of the easements set out in the memorandum hereon
Authorised Officer
MEMORANDUM OF EASEMENTS
PURPOSE | SHOWN | SERVIENT TENEMENT | DOMINANT TENEMENT
Right of way Telecommunications & Electricity (A) Pt Lot 1 DP171091 Lots 1 & 2 hereon
Right of way Telecommunications & Electricity (B) Pt Lot 1 DP171091 Lot 2 hereon
Water supply (D) Lot 2 hereon Lot 1 DP171091
Area shown as (C) To be subject to Land Covenants
New CST Allocated
Lot 1 124C/880
Lot 2 124C/881
Total Area 1.7665 ha
Comprised in CT 102A/534 (Part)
Field Book p Traverse Book p
Reference Plans
Examined
Approved as to Survey
22/7/99
Deposited this 6 day of January 2000
Registrar-General of Land
File 98006 CURT
Received 6661 NOV 81
Instructions
DP 197024
17 JAN 2000
TANEKAHA LANE
Legal 20m wide
Right of Way
Lot 1 DP171091
Pt 1 DP171091
Lot 2 DP171091
Lot 1 DP70895
DP161817
DP168209
DP144391
6878 m2
1.0787ha
MICRO RECORD BUREAU LTD.

GUMBOOTS
CONSULTING ENGINEERS

' We SEEK to enable POSITIVE change through valuing PEOPLE with an invaluable SERVICE '

Onsite Wastewater Management Appraisal

26 Tanekaha Lane, Kerikeri

For

Tom & Hanneke Van Vliet

Supporting appraisal for consent application for a low impact onsite wastewater management system.
Gumboots Consulting Engineers reference 1348b

10th June 2025

◆0204486697 ◆office@gumbootsconsulting.co.nz ◆www.gumbootsconsultingengineers.co.nz
191 Onekura Road, Kerikeri, Northland 0295

Revision History

Revision N°	Prepared By	Description	Date
A	Kelly Wright	Onsite Wastewater Management Appraisal	10/06/2025
B	Kelly Wright	Onsite Wastewater Management Appraisal	21/08/2025

Reviewed/Approved

On behalf of Gumboots Consulting Engineers Ltd by:

Akira Kepu

Senior Chartered Geotechnical - Civil Engineer

CMEngNZ [1160185], Board Member of EngNZ Northland Branch.

Member of NZGS, ISSMGE, SIG EGP & The Sustainability Society.

CONTENTS

1. Introduction

This report has been prepared for Tom and Hanneke Van Vliet in support of an application to the Far North District Council for a Building Consent.

Where appropriate, it is in accordance with the recommendations of AS/NZS 1547 and ARC TP58 and related documents.

1.1 Objective and Scope

The objective of this report is to assess the general suitability of the site and design recommendations for an on-site wastewater management system and includes;

- Review of pertinent rules and policies
- Site walkover and observations and evaluation of general [sub]surface soil conditions
- Recommendations for onsite domestic effluent treatment/disposal
- Review of the proposed dwelling with due regard to the wastewater generated.

1.2 Limited Liability

This report has been prepared exclusively for Tom and Hanneke Van Vliet in accordance with the brief given to us, the agreed scope and in general accordance with current standards, codes and best practice at the time of this writing. Therefore, they shall be deemed the exclusive owner on full and final payment of the invoice.

Information, assumptions, and recommendations contained within this report can only be used for the purposes with which it was intended. Gumboots Consulting Engineers accepts no liability or responsibility whatsoever for;

1. any use or reliance on the report by any party other than the owner or parties working for or on behalf of the owner, such as local authorities, and for purposes beyond those for which it was intended.
2. any omissions or errors that may befall from inaccurate information provided by the Client or from external sources.

Outcomes given in this report are based on visual methods and subsurface investigations at discrete locations designed to the constraints of the project scope to provide the best assessment of the environment and subsurface conditions.

Therefore, it must be appreciated that the nature and continuity of the subsurface materials between these locations are inferred and that actual conditions could vary from that described herein.

We should be contacted immediately if the conditions are found to differ from those described in this report. Accordingly, further investigations/observations shall then be undertaken as appropriate.

This report should be read and reproduced in its entirety including the limitations to understand the context of the opinions and recommendations given.

2. Site Details and Description

2.1 Site Identification

Site Location:	26 Tanekaha Lane, Kerikeri
Legal Description:	Lot 2 DP 197024
Total Site Area:	1.0787 ha

2.2 Proposed Development

The proposed development is a 3 bdr relocatable dwelling and 2 bdr standalone unit, both with areas of hardstanding and gardens.

Our Client intends to plant and landscape the occupational area to encourage and upkeep the space in line with the current land use, existing natural environment and long term sustainability as the primary objective.

2.3 Site Description

The proposed effluent field site is currently occupied by pasture, is gently sloping (~ Avg 15^0) northward and located (~37m) to the south of the proposed building site. As depicted in Figure 2 below.

It is noted that the figure below is indicative only. It shall be subject to as-built plans which shall be provided by the contractor at completion of work. The plans shall account for [not limited to] all the work undertaken i.e. final application locations, setbacks and related.

During the site walkover inspection, boggy and/or saturated ground was not encountered. During intense rainfall events, it is anticipated that surface water will be absorbed in low-moderate volumes with the majority as sheetflow northwest to the swale drain bisecting the property.

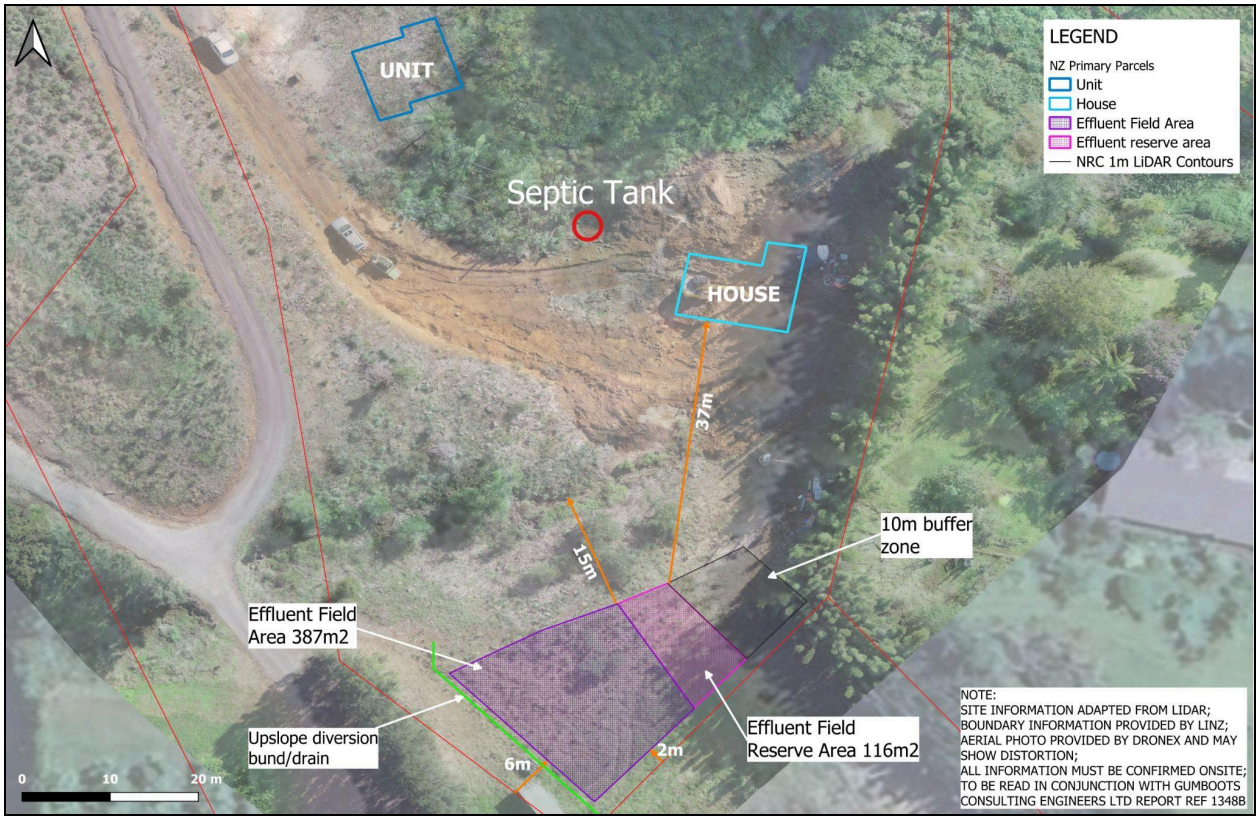


Figure 2. Effluent Field Location - (1m contour lines from NRC LiDAR 2018 - 2019. Scale = 1:250)

3. In-situ Soils

LandCare Research indicates the **soils** encountered here as Orthic Oxidic [XO]. These clayey soils result from the weathering of andesite, dolerite or basalt rock or ash over extensive periods of time. They cover 1% of New Zealand and are known only in the Auckland and Far North Region.

Oxidic soils are strongly weathered and clays have low cation exchange capacity at the natural pH of the soil. These soils have *slow permeability*. They contain appreciable amounts of iron and aluminium oxides well-developed, relatively stable structure. Clay contents are high, ranging from 50 to 90%. Soil water deficits are common in summer.

More reference can be noted that these are soils of the Rolling and Hill lands i.e. Pungaere gravelly friable clay (PG) - *moderately well drained*.

All in all, it can be concluded that the soils encountered here more greatly reflect the historical effects of local conditions.

The maps constitute a regional scale. Therefore, visual observations and shallow boreholes were utilised to

account for this purpose. As specific to the subject site.

Reference:
Manaaki Whenua LandCare Research: New Zealand Soil Classification (NZSC) - Soil Order.

4. Site Walkover and Observations

Our site walkover and observations for this appraisal commenced on the 02nd and 19th of May 2025 and included;

- Hand augered boreholes.
- Site mapping with due regard to the existing services and supporting stormwater applications implemented and primary flow paths onsite.
- Recommendation for the most suitable OWMS[1] and land application.

5. Summary of Ground Conditions

5.1 Current Ground Condition

The natural subsoils comprise Silty CLAY content to depths of 2.90m. The ground surface was not boggy.

5.2 Groundwater

Was not encountered however, it would be prudent to note that groundwater levels are likely to fluctuate with the seasons/peak rainfall events.

The geological features which highly influence infiltration are highly varied over an outcrop and likely so from one to another. Therefore, a uniform distribution and infiltration of rain is highly *unlikely* and the consequent rise in water-table will be greater in some places than others.

6. Onsite Wastewater Treatment-Land Application System

Table 1.1 - Onsite Wastewater Design Summary

Design Element	Specification
Development	3 bdrm home plus 2 bdrm unit
Wastewater load design	Volume 145 litres/ person/ day – 1,160 litres/ day

[1] ***O**nsite **W**astewater **M**anagement **S**ystem.*

Water saving measures	Standard water saving fixtures - defined in TP58 as '*Dual flush 6/3 litre toilet cisterns, and includes aerator faucets, shower flow restrictors, water conserving automatic washing machines and restricted, standard automatic washing machine and dishwasher, no garbage grinder.'*
Water meter required	No
Min. Treatment Quality	Secondary
Soil Drainage Category	TP58 category 5 or AS/NZS1547 category 4
Soil Loading Rate	3 mm/ day [Table M1 AS/NZS1547].
Primary disposal field area	387m^2
Reserve disposal field area	30 %. Total Footprint area of 116m^2
Disposal Field Level	No provisions required, disposal field not recorded within mapped flood hazard area nor is it within close proximity to boundaries. Raised above 5 % AEP event.
Dosing Method	Pump
Emergency storage	Minimum 24-hour emergency storage volume within septic tank.
Overland Hydraulic Control	N/A

The land in the vicinity of the proposed dwelling has been assessed for effluent suitability with respect to the Proposed Regional Plan for Northland (PRP, August 2020), ARC TP58 and AS/NZS 1547.

The soils across the site were found to be TP58 category 5 or AS/NZS1547 category 4.

Following interpretation of field data and review of published data, it is concluded and recommended that:

1. The **recommended** onsite wastewater management system shall be a s**econdary treatment system** with **drip line** land application.
2. The system shall cater for a **maximum loading** of **1,160**L/d i.e. generated wastewater from an occupancy number of **8 people** for a **3 bedroom** home and **2 bedroom** unit.[2]
3. The design effluent field consists of; a **primary field of 387 m^2** + a **reserve area of 116 m^2** = 503 m^2

[2]*based on the maximum [people] hosting capacity of the proposed space.*

4. There is sufficient land capacity within the site for discharge and reserve areas with appropriate separation distances from boundaries and surface water. Pressure Compensating Dripper Irrigation (**PCDI**) to be installed over 387m^2 within the area shown as suitable on the Wastewater Field Location Plan appended. The shape/layout of this area may be altered provided offsets are maintained and the field remains within the Effluent Disposal.

5. **Flush valves** to be installed **on each drip line** for maintenance purposes and shall adopt a **timer dose loading method**.

6. **Non-return valves** shall be installed on each of the **dripper lines**. A full clean water pump test of the dripper lines shall be carried out to ensure even distribution of wastewater within the field is evident.

7. Lines to be buried a minimum 100mm into the topsoil.

8. Best industry practices with regard to drip line runs [along the contours] for optimal efficiency shall be exercised at all times.

9. The contractor shall confirm the effluent field setbacks onsite with due regard to the indicated field location within the plans attached.

10. Moreover, recommendations within shall be understood fully by the installer and in accordance with the manufacturer's requirements, prior commencing work.

11. A maintenance agreement shall be entered into with the provider. Once commissioned the plant will operate automatically with alarms fitted to advise the house occupants in the event of emergency failure.

12. All installation of on-site wastewater management and disposal systems must be undertaken or supervised by a certified drainlayer.

13. **Certificate of Work [PS3]**, as-built plans and in accordance with AS/NZS 1547:2012 - Section 6.2.5.4 shall be provided by the drainlayer [contractor] at the completion of work.

14. **As-built plans** shall confirm final treatment & land application system location, specifications and setbacks i.e. from property boundary, water courses and natural flow paths.

FAR NORTH DISTRICT COUNCIL
Appendix E TP58
On-site Wastewater Disposal Site Evaluation
Investigation Checklist

Part A –Owners Details

1. Applicant Details:

Applicant Names	***Tom & Hanneke Van Vliet***
Company Name	
Property Owner Name(s)	***Tom & Hanneke Van Vliet***

Nature of Applicant*	***Owner***

*(*i.e. Owner, Leasee, Prospective Purchaser, Developer)*

2. Consultant / Site Evaluator Details:

Consultant Name	***Gumboots Consulting Engineers Ltd***
Site Evaluator Name	***Akira Kepu***
Postal Address	***191 Onekura Rd*** ***Kerikeri*** ***0295***
Phone Number	***0204486697***
Email Address	***office@gumbootsconsulting.co.nz***

3. Are there any previous existing discharge consents relating to this proposal or other waste discharge on this site?

Yes		**No**	✓

(Please tick one)

If Yes, give reference numbers and description;

4. List any other consent in relation to this proposal site and indicate whether or not they have been applied for or granted

If so, specify Application Details and Consent No. (eg. LandUse, Water Take, Subdivision, Earthworks Stormwater Consent)

Onsite Wastewater Management System

Part B- Property Details

1. Property for which this application relates:

Physical Address of Property	*26 Tanekaha Lane, Kerikeri*
Territorial Local Authority	*FAR NORTH DISTRICT COUNCIL*
Regional Council	*NORTHLAND REGIONAL COUNCIL*
Legal Status of Activity	**Permitted:** ✓ **Controlled:** **Discretionary:**
Relevant Regional Rule(s) (Note1)	*C6.1.3*
Total Property Area (Ha)	*1.0787 Ha*
Map Grid Reference (If known)	

2. Legal description of land (as shown on Certificate of Title)

Lots No.	DP No.	CT No.

2	*197024*	

Other (Specify):	

Please ensure copy of Certificate of Title is attached

PART C: Site Assessment - Surface Evaluation

(Refer TP58 - Sn 5.1 General Purpose of Site Evaluation and Sn 5.2.2(a) Site Surface Evaluation)
Note: Underlined terms defined in Table 1, attached

Has a relevant property history study been conducted?

Yes		**No**	✓

(Please tick one)

If yes, please specify the findings of the history study, and if not please specify why this was not considered necessary.

1. **Has a Slope Stability Assessment been carried out on the property?**

Yes		**No**	✓

(Please tick one)

If No, why not?

Ground had no instability markers encountered during observations

If Yes, please give details of report (and attach report if possible)

Author	
Company	
Date or report	

Brief Description of findings:

2. Site Characteristics (See Table 1 attached):
Provide descriptive details below;

Performance of Adjacent Systems:	***No problems known***
Estimated Rainfall and Seasonal Variation:	***1800 mm per year. 1100 mm winter, 700 mm summer***
Vegetation / Tree Cover:	***Pasture and areas of established vegetation >50% canopy cover.***
Slope Shape: (Please provide diagrams)	***Gently sloping***
Slope Angle:	***~ 15 degrees***
Surface Water Drainage	***Soakage and sheet flow.***

Characteristics:	
Flooding Potential: YES/NO ***If yes, specify relevant flood levels on appended site plan, I.e. one in 5 years and/or 20 year and/or 100 year return period flood level, relative to disposal area.***	***No***
Surface Water Separation:	***Achieved - Disposal field & Reserve area ~15m from swale drain [west].***
Site Characteristics: or any other limitation influencing factors;	***None***

3. Site Geology **Check Rock Maps**

The geological information on hand indicates that the site is underlain by Kerikeri Volcanic Group (Pvb).

Geological Map Reference Number	***NZMS 290 rock and soils maps***

4. What Aspect(s) does the proposed disposal system face? (please tick)

North	✓	**West**	
North-West		**South-West**	
North-East		**South-East**	
East		**South**	

5. Site clearances,(Indicate on site plan where relevant)

Separation Distance from	Treatment Separation Distance (m)	Disposal Field Separation Distance (m)	FNDC minimum
Boundaries	***>1.5 m***	***>1.5 m***	**1.5**
Surface water, creeks, drains	***> 15 m***	***> 15 m***	**15**
Groundwater	***> 0.9m***	***> 0.9m***	**0.6**
Stands of Trees/Shrubs	***na***	***na***	**na**
Wells, water bores	***na***	***>20***	**20 m**
Embankments/retaining walls	***na***	***na***	**3 m**
Buildings	***> 3 m***	***> 3 m***	**3 m**
Rivers, Coastal Marine area	***> 30 m***	***> 30 m***	**30 m**

PART D: Site Assessment - Subsoil Investigation

(Refer TP58 - Sn 5.1 General Purpose of Site Evaluation, and Sn 5.2.2(a) Site Surface Evaluation and Sn 5.3 Subsurface Investigations)
Note: Underlined terms defined in Table 2, attached

1. Please identify the soil profile determination method:

Test Pit		**(Depth_____*0.0*___m**	**No of Test Pits**		
Bore Hole	✓	**(Depth__*up to 2.90* m**	**No of Bore Holes**	*4*	
Other (specify):					

Soil Report attached?

Yes	✓	**No**		**Please tick**

2. Was fill material intercepted during the subsoil investigation?

Yes		**No✓**		**Please tick**

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

3. percolation testing (mandatory and site specific for trenches in soil type 4 to 7)

Please specify the method					
Test Report Attached?	**Yes**		**No**	✓	**Please tick**

4. Are surface water interception/diversion drains required?

Yes	✓	**No**	

(Please tick one)
If yes, please show on site plan.
Subject to final development plans.

4a Are subsurface drains required?

Yes		**No**	✓

(Please tick one)

If yes, please provide details	

5. Please state the depth of the seasonal water table:

Winter	**>1.2**	**Measured/Estimated**	***Measured***

Summer	**>20m**	**Measured/Estimated**	***Estimated***

6. Are there any potential storm water short circuit paths?

Yes		**No**	✓

(Please tick one)

If the answer is yes, please explain how these have been addressed;

7. Based on results of subsoil investigation above, please indicate the disposal field soil category (Refer TP58 Table 5.1)

Is Topsoil present? ***Yes***	**If so, Topsoil depth?** ***0.20(m)***

Soil Category	Description	Drainage	Tick One
1	Gravel, Coarse Sand	Rapid Draining	
2	Coarse to Medium Sand	Free Draining	
3	Medium-fine & loamy Sand	Good Drainage	
4	Sandy loam, loam & silt loam	Moderate Drainage	
5	Sandy clay-loam, clay loam & silty clay loam	Moderate to slow drainage	✓
6	Sandy clay, non-swelling clay & silty clay	Slow draining	
7	Swelling clay, grey clay, hardpan	Poorly or non-draining	

Reasons for placing in stated category;
Soil map classification, soil colour and texture investigation

PART E: Discharge Details

1. Water supply source for the property (please tick):

Rainwater (roof collection)	✓
Bore/well	
Public supply	

2. Calculate the maximum daily volume of wastewater to be discharged, unless accurate water metre readings are available
(Refer TP58 Table 6.1 and 6.2)

Number of bedrooms	**5**	
Design Occupancy	**8**	**(Number of people)**
Per Capita Wastewater production	**145✓ 160 180 200 220**	**(Litres per person per day - tick one)**
Daily Wastewater production	**1,160**	**(Litres per day)**

3. Do any special conditions apply regarding water saving devices?

Full Water Conservation Devices	**Yes**		**No**	✓
Water Recycling - what %?	**Yes**		**No**	

If you have answered yes, please state what conditions apply and include the estimated reduction in water usage;

Refer to Report

4. Is Daily Wastewater Discharge Volume more than 3000 litres:

Yes	
No	✓

(Please tick one)
Note if answer to the above is yes, an N.R.C wastewater discharge permit may be required

5. Gross Lot Area to Discharge Ratio:

Gross Lot Area	***10,787***	**m^2**

Total Daily Wastewater Production	***1,160***	**(Litres per day)(From above)**
Lot Area to discharge ratio	***9***	

7. Does this proposal comply with the Northland Regional Council Gross Lot Area to Discharge Ratio of greater than 3?

Yes	✓	**No**	

(Please tick one)
Not an NRC Requirement

8. Is a Northland Regional Council Discharge Consent Required?

Yes		**No**	✓

(Please tick one)

PART F: Primary Treatment (Refer TP58 Section 7.2)

1. Please indicate below the no. and capacity (litres) of all septic tanks including type (single/dual chamber grease traps) to be installed or currently existing: If not 4500 litre, dual chamber explain why not.

Number of Tanks	Type of Tank	Capacity of Tank (Litres)
N/A Secondary Treatment		
	Total Capacity	

2. Type of Septic Tank Outlet Filter to be installed?

PART G: Secondary and Tertiary Treatment
(Refer TP58 Section 7.3, 7.4, 7.5 and 7.6)

1. Please indicate the type of additional treatment, if any, proposed to be installed in the system:
(please tick)

Secondary Treatment	✓
Home aeration plant	
Commercial aeration plant	
Intermediate sand filter	
Recirculating sand filter	
Recirculating textile filter	
Clarification tank	
Tertiary Treatment	
Ultraviolet disinfection	
Chlorination	
Other	

If Other please specify:

PART H: Land Disposal Method
(Refer TP58 Section 8)

1. Please indicate the proposed loading method: (please tick)

Gravity	
Dosing Siphon	
Pump	✓

2. High water level alarm to be installed in pump chambers (please tick one);

Yes	✓	**No**	

If not to be installed, explain why

3. If a pump is being used, please provide the following information:

Total Design Head	***As per supplier specifications***	**m**
Pump Chamber Volume		**litres**
Emergency Storage Volume		**litres**

4. Please identify the type(s) of land disposal method proposed for this site: (please tick)
(Refer TP58 Sections 9 and 10)

Surface Dripper Irrigation	
Subsurface Dripper irrigation	✓
Standard Trench	
Deep Trench	
Mound	
Evapo-transpiration Beds	
Other	

If Other please specify:

Raised Bed

5. Please identify the loading rate you propose for the option selected in Part H, Section 4 above, stating the reasons for selecting this loading rate:

Loading Rate	**3**	**(Litres/m 2 /day)**
Disposal Area	**Design (m^2)**	**387**
	Reserve (m^2)	**116**

Explanation (Refer TP58 Sections 9 and 10)

AS/NZS1547 recommends design irrigation rate for secondary treated effluent of 3mm/day in Category 4 soils.

6. What is the available reserve wastewater disposal area (Refer TP58 Table 5.3)

Reserve Disposal Area (m²)	**116 m^2**
Percentage of Primary Disposal Area (%)	**30%**

7. Please provide a detailed description of the design and dimensions of the disposal field and attach a detailed plan of the field relative to the property site:

Description and Dimensions of Disposal Field:

- ***Lines to be laid 1.00 m apart and disposal field to be planted with evapotranspiration species.***
- ***Flush valves installed at the end of each line. Shall adopt a timer dose loading method.***
- ***Best industry practices with regard to drip line runs for optimal (site) efficiency shall be exercised at all times***

Plan attached?	**Yes**	✓	**No**	

If not, explain why;

PART I: Maintenance & Management
(Refer TP58 Section 12.2)

1. Has a maintenance agreement been made with the treatment and disposal system suppliers?

Yes		**No**	✓

Name of Suppliers:

Supplier to be determined

PART J: Assessment of Environmental Effects

1. Is an assessment of environmental effects (AEE) included with application?
(Refer TP58 section 5. Ensure all issues concerning potential effects addressed)

Yes	✓	**No**	

If Yes, list and explain possible effects:

PART K: Is Your Application Complete?

1. In order to provide a complete application you have remembered to:

Fully Complete this Assessment Form	✓
Include a Location Plan and Site Plan (with Scale Bars)	✓
Attach an Assessment of Environmental Effects (AEE)	✓

1. Declaration

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

Name	***Akira Kepu***	**Signature**	
Position	***Civil Engineer***	**Date**	**10.06.2025**

Note: Any alteration to the site plan or design after approval will result in non-compliance.

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Building Code Clause(s) G13/VM4

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance on use of Producer Statements (formerly page 2) is available at www.engineeringnz.org)

ISSUED BY: Gumboots Consulting Engineers (Design Firm) Job #: 1348b

TO: Tom & Hanneke Van Vliet (Owner/Developer)

TO BE SUPPLIED TO: Far North District Council (Building Consent Authority)

IN RESPECT OF: Onsite Wastewater Management System Report (Description of Building Work)

AT: 26 Tanekaha Lane (Address)

Town/City: Kerikeri (Address) **LOT** 2 **DP** 197024 **SO**

We have been engaged by the owner/developer referred to above to provide:

A site feasibility appraisal for an Onsite Wastewater Management System application in accordance with technical publication TP58 with due regard to the suitable level of wastewater treatment required, site conditions, proposed development and existing subsoil and land capacities to accept/manage output wastewater.

(Extent of Engagement)

services in respect of the requirements of Clause(s) G13/VM4 of the Building Code for:

☐ All or ■ Part only (as specified in the attachment to this statement), of the proposed building work.

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

■ Compliance Documents issued by the Ministry of Business, Innovation & Employment AS/NZS1547 (verification method/acceptable solution) or

☐ Alternative solution as per the attached schedule

The proposed building work covered by this producer statement is described on the drawings titled:

1348b/01 - Wastewater Field Location Plan and ~~numbered~~ in full context of our appraisal (only)

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 site verification of the soil types, effluent field size/appropriate treatment
(ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that a) 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 and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:

☐ ~~CM1~~ ☐ ~~CM2~~ ☐ ~~CM3~~ ☐ ~~CM4~~ ☐ ~~CM5 (Engineering Categories)~~ or ■ as per agreement with owner/~~developer~~ ~~(Architectural)~~

I, Akira Kepu [CMEngNZ -1160185] (Name of Design Professional) am: ☐ CPEng ..... # ☐ Reg Arch ..... #

I am a member of: ■ Engineering New Zealand ☐ NZIA and hold the following qualifications: ADEng (Civil/Struc)
The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than $200,000*.
The Design Firm is a member of ACENZ: ☐

SIGNED BY Akira Kepu [CMEngNZ -1160185] (Name of Design Professional) (Signature)

ON BEHALF OF Gumboots Consulting Engineers (Design Firm) Date 12/06/2025

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.*

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

PRODUCER STATEMENT PS1 October 2013 (reissued October 2017)

GUIDANCE ON USE OF PRODUCER STATEMENTS

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional engineers New Zealand (now Engineering New Zealand), Association of Consulting Engineers New Zealand in consultation with the Building Officials Institute of New Zealand. The original suit of producer statements has been revised at the date of this form as a result of enactment of the Building Act (2004) by these organisations to ensure standard use within the industry.

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

PS1 Design Intended for use by a suitably qualified independent design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

PS2 Design Review Intended for use by a suitably qualified independent design professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

PS3 Construction Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 2011[2]

PS4 Construction Review Intended for use by a suitably qualified independent design professional who undertakes construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.

This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACENZ, Engineering NZ and NZIA to interpret the Producer Statement.

Competence of Design Professional

This statement is made by a Design Firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its designers.

A competent design professional will have a professional qualification and proven current competence through registration on a national competence based register, either as a Chartered Professional Engineer (CPEng) or a Registered Architect.

Membership of a professional body, such as Engineering New Zealand (formerly IPENZ) or the New Zealand Institute of Architects (NZIA), provides additional assurance of the designer's standing within the profession. If the design firm is a member of the Association of Consulting Engineers New Zealand (ACENZ), this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent design professional".

***Professional Indemnity Insurance**
As part of membership requirements, ACENZ requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI Insurance minimum stated on the front of this form reflects standard, small projects. If the parties deem this inappropriate for large projects the minimum may be up to $500,000.

Professional Services during Construction Phase
There are several levels of service which a Design Firm may provide during the construction phase of a project (CM1-CM5 for Engineers[3]). The Building Consent Authority is encouraged to require that the service to be provided by the Design Firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4
Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design firm's engagement.

Attached Particulars
Attached particulars referred to in this producer statement refer to supplementary information appended to the producer statement.

Refer Also:

1 Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2013

2 NZIA Standard Conditions of Contract SCC 2011

3 Guideline on the Briefing & Engagement for Consulting Engineering Services (ACENZ/IPENZ 2004)

4 PN Guidelines on Producer Statements

www.acenz.org.nz
www.engineeringnz.org
www.nzia.co.nz

Producer Statements PS1, PS2, & PS4 2 October 2013 (reissued October 2017)

GUMBOOTS
CONSULTING ENGINEERS

191 Onekura Road, Kerikeri, 0295
+64 204 486 697
office@gumbootsconsulting.co.nz

12th June 2025

Job #1348b

Tom & Hanneke Van Vliet

26 Tanekaha Lane, Kerikeri

Lot 2 DP 197024

Recommended Schedule of Work [SOW]

This schedule is specific to the above project and the work cited within the PS1. It shall be undertaken in full context of our OWM Appraisal, site and related engineering documents.

Installation and Construction:

1. Treatment plant system shall be implemented in accordance with the manufacturer's specifications.
2. Set out and prepping shall comply in accordance with the recommendations within the appraisal. Subject to final confirmation by Contractor onsite.
3. Construction shall comply [in accordance] with TP58; Ch12 - Sections 12.1 - 12.1.3.7 & AS/NZS 1547 : 2012 - Section 6.

Completion Certificate from qualified drainlayer (PS3) specific context [but not limited to] TP58; Sections: 12.1.3.3 - 12.1.3.6 & AS/NZS 1547:2012 - C6.2.5.4 and any outstanding QA documentation.

Limitation:

This schedule has been prepared solely for the benefit of Tom & Hanneke Van Vliet, for the onsite wastewater management system application. No responsible liability shall be assumed by Gumboots Consulting Engineers for any omissions or errors that may befall from inaccurate information provided by the Client or from external sources.

On behalf of Gumboots Consulting Engineers Ltd:

Akira Kepu

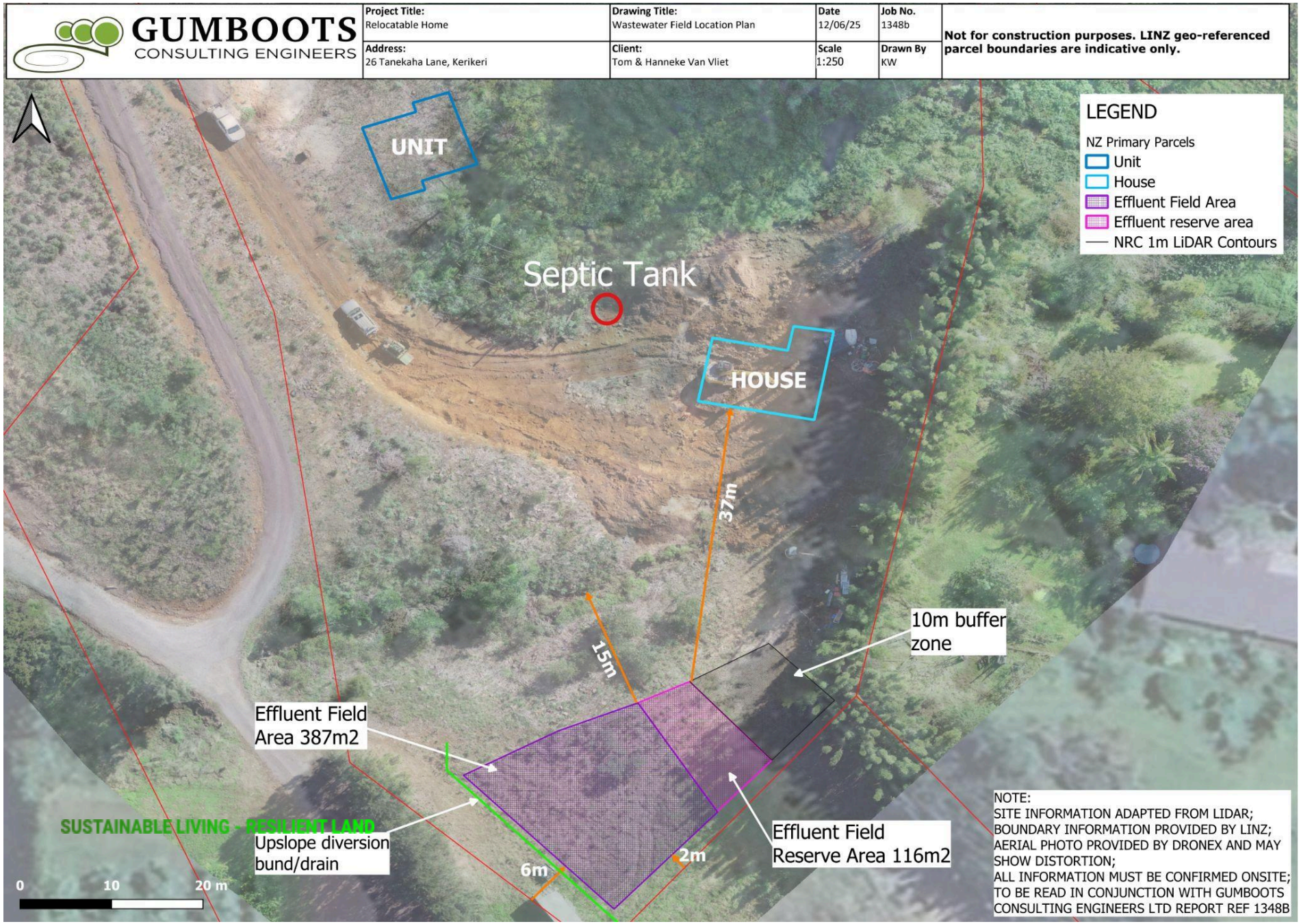
Senior Chartered Civil (Geo) Engineer,

CMEngNZ [1160185], Board Member of EngNZ Northland Branch.

Member of NZGS, ISSMGE, SIG EGP & The Sustainability Society.

Appendix A

Item	Attachments	Scale
1348b/01	Wastewater Field Location Plan	1:250
1348b/02	Geology and Lithology	-
1348b/03	Natural Hazards	-
1348b/04	Environmental Setting	-
1348b/05	Borehole Log 1	-


GUMBOOTS
CONSULTING ENGINEERS
Project Title: Relocatable Home
Drawing Title: Wastewater Field Location Plan
Date 12/06/25
Job No. 1348b
Address: 26 Tanekaha Lane, Kerikeri
Client: Tom & Hanneke Van Vliet
Scale 1:250
Drawn By KW
Not for construction purposes. LINZ geo-referenced parcel boundaries are indicative only.
LEGEND
NZ Primary Parcels
Unit
House
Effluent Field Area
Effluent reserve area
NRC 1m LiDAR Contours
UNIT
Septic Tank
HOUSE
37m
15m
10m buffer zone
Effluent Field Area 387m2
Upslope diversion bund/drain
Effluent Field Reserve Area 116m2
6m
2m
SUSTAINABLE LIVING - RESILIENT LAND
0
10
20 m
NOTE:
SITE INFORMATION ADAPTED FROM LIDAR;
BOUNDARY INFORMATION PROVIDED BY LINZ;
AERIAL PHOTO PROVIDED BY DRONEX AND MAY SHOW DISTORTION;
ALL INFORMATION MUST BE CONFIRMED ONSITE;
TO BE READ IN CONJUNCTION WITH GUMBOOTS CONSULTING ENGINEERS LTD REPORT REF 1348B

1348b/02 Geology and Lithology

Geology

The geological information on hand indicates the site **geology** as Kerikeri Volcanic Group (Pvb); comprising basalt lava, volcanic plugs and minor tuff.

Lithology

The **lithology** comprises basalt [$F6_2$] i.e. flows and cones of very fine to medium grained crystalline basalt. Surfaces form terraces and plateaus generally without rocky outcrops. Dense and moderately fractured; hard to very hard. Landscapes are generally terraces and plateaus without rocky outcrops. Weathered to soft red brown or dark grey brown clay to depths of 20m with many rounded corestones.

References:

Geology of the Whangarei Area. Institute of Geological & Nuclear Sciences; 1: 250,000 geological map 2. Lower Hutt, New Zealand.

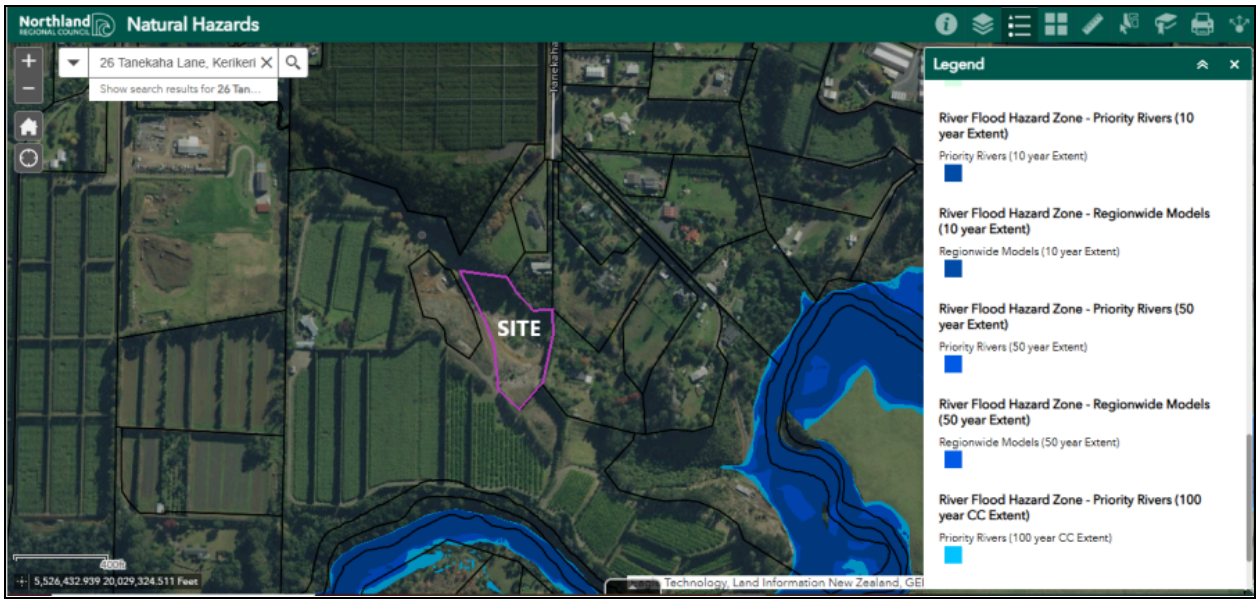
NZMS Sheet 290 P 04/05, part sheet O 03, 1:100,000 scale map, Edition 1, 1982: "*Whangaroa-Kaikohe"* (Rocks).

Manaaki Whenua LandCare Research: New Zealand Soil Classification (NZSC) - Soil Order.

1348b/03 Natural Hazards

Under Section 2 of the Resource management Act 1991, natural hazard means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.

Upon review of the Northland Regional Council Hazards maps, it indicates the subject site is not within a flood extent area. As depicted below;



Natural Hazards Map (map adapted from NRC Natural Hazard Maps)**.**

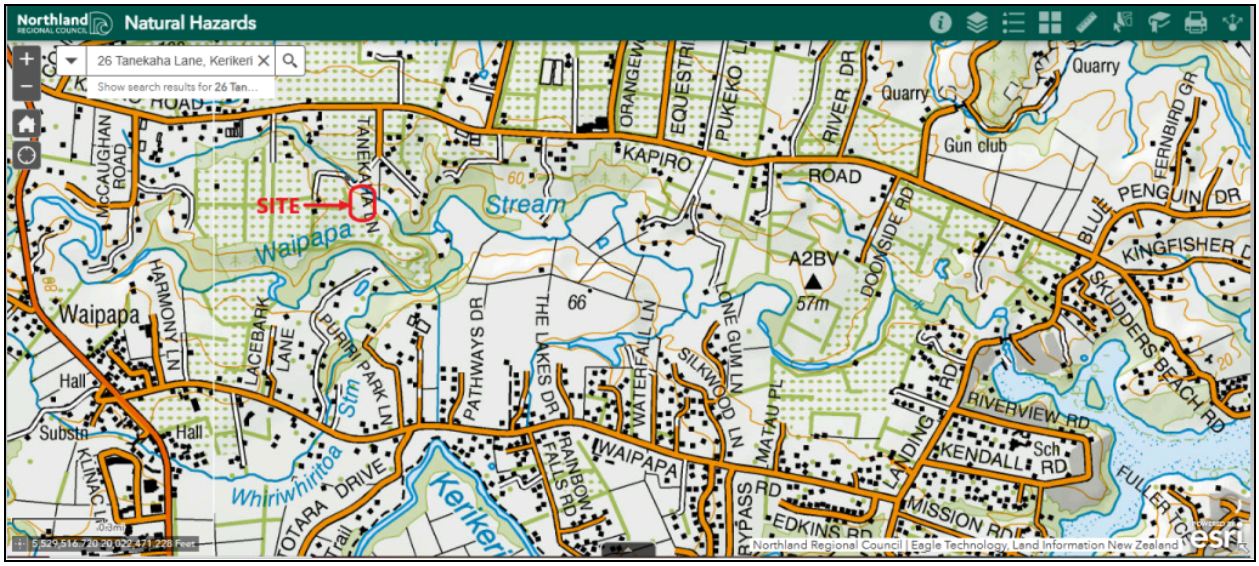
1348b/04 Environmental Setting

A summary of available information pertaining to hydrology and hydrogeology is presented in the table below. An examination of Far North District Council (FNDC) and Northland Regional Council (NRC) online GIS databases is included.

Table 1.1 – Surface Water Features & Flooding

Source	Presence/Location	Comments
Groundwater sources including springs/wells (within 500 m)	None recorded	
Surface Water Features (Ponds, Lakes etc)	None recorded	
Watercourses (within 500 m)	Waipapa Stream meanders west - east within the property boundary (north). The stream serves as a tributary to the wider Pickmere Channel (east).	The effluent field is sufficiently setback from this natural water feature which constitutes the wider northern aspect of the development site.
Flood Risk Status	None recorded	The NRC and FNDC GIS databases indicate that the subject property is not included within the

		area that has been modelled for flood hazard events.
Flood Susceptibility	Negligible	Flood susceptible land is mapped according to the presence of alluvial, fluvial deposited soils indicating historic inundation by flood waters. From available geological mapping and land relief, it is considered that the nominated area is not at risk of inundation by flooding.



Site and Surrounding Water Bodies Feature - (adapted NRC Natural Hazards map)

1348b/05 - Borehole Log 1

191 Onekura Rd
Kerikeri
Bay of Islands
New Zealand

GUMBOOTS
CONSULTING ENGINEERS

Phone 0204 GUMMYS
022 187 9451
www.gumbootsconsultingengineers.co.nz
gumbootsconsulting@gmail.com

BOREHOLE LOG No. 1 — Hole Location: Refer to Site Plan — **JOB No. 13 48**

CLIENT:	Tom van Vliet	**SITE:**	26 Tanekaha Lane, Kerikeri.		
Date Started:	02/05/2025	**DRILLING METHOD:**	Hand Auger	**LOGGED BY:**	AK
Date Completed:	02/05/2025	**HOLE DIAMETER (mm)**	50mm	**CHECKED BY:**	KW

Soil Description (Based on NZGS Logging Guidelines 2005)	Depth (m)
Silty CLAY, brown to yellowish brown, very stiff, moist and high palsticity.	
moist	0.5
moist	
brown, very stiff, damp and high plasticity.	1.0
orangish brown damp	
inclusion of fine to medium sub rounded gravels	1.5
pinkish red clayey streaks damp and very stiff	
grey speckles of silt	2.0
inclusion of fine to medium sub rounded gravels damp	
brown damp	2.5
EOBH @ 2.50m.	3.0
	3.5
	4.0
	4.5
	5.0

Graphic Log: Kerikeri Volcanic Group (Pvb).

Geology: NO Groundwater Encountered.

Water Level

Sensitivity

Corrected Shear Vane Strength (kPa): 202 202 202 202 202 202 202 202

Dynamic Cone Penetrometer (blows/100mm drop): 0 1

LEGEND

TOPSOIL | CLAY | SILT | SAND | GRAVEL | FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

UTP - Unable to Penetrate
DCP- Dynamic Cone Penetrometer
EOBH - End of Borehole
EODCP - End of DCP

Notes - AL & LS sampled @ 2.50m.

Average Scala Blows	0.0
Average Soil Sensitivity	0.0

Appendix B

Item	Attachments	Scale
1348b/06	**Onsite Domestic Wastewater Management**	**-**
1348b/07	**Suitable Plants for Evapotranspiration Systems**	**-**
1348b/08	**Typical Dripper Line Layout**	**-**

ON-SITE DOMESTIC WASTEWATER MANAGEMENT
Advice to Home Owner/Occupier

Home owner and occupiers are legally responsible to keep their on-site wastewater system in good working order. The following schedule gives advice on the use and maintenance of the system.

1. Use of the System

For the on-site wastewater system to work well there are some good habits to encourage and some bad habits to avoid:

1.1 In order to reduce sludge building up in the tank:

- **(i) Scrape all dishes to remove fats, grease etc, before washing.**
- **(ii) Keep all possible solids out of system.**
- **(iii) Don't use a garbage grinder unless the system has been specifically designed to carry the extra load.**
- **(iv) Don't put sanitary napkins, other hygiene products or disposable nappies into the system.**

1.2 In order to keep bacteria working in the tank and in the land-application area:

- **(i) Use biodegradable soaps.**
- **(ii) Use a low-phosphorus detergent.**
- **(iii) Use a low-sodium detergent in dispersive soil areas.**
- **(iv) Use detergents in the recommended quantities.**
- **(v) Don't use powerful bleaches, whiteners, nappy soakers, spot removers and disinfectants.**
- **(vi) Don't put chemicals or paint down drain.**

1.3 Conservation of water will reduce the volume of effluent disposed to the land-application area, make it last longer and improving its performance. Conservation measures could include:

- **(i) Installation of water-conservation fittings.**
- **(ii) Taking showers instead of baths.**
- **(iii) Only washing clothes when there is a full load.**
- **(iv) Only using the dishwasher when there is a full load.**

1.4 Avoid overloading the system by spacing out water use evenly. For example not doing all the washing on one day and by not running the washing machine and dishwasher at the same time.

2. Maintenance

2.1 The primary wastewater-treatment unit (septic tank) will need to:

- **(i) Be desludged regularly i.e. every 3 to 5 years, or when scrum and sludge occupy 2/3 of the volume of the tank (or first stage of a two-stage system).**
- **(ii) Be protected from vehicles.**
- **(iii) Have any grease trap cleaned out regularly.**
- **(iv) Have the vent and/or access cover of the septic tank kept exposed.**
- **(v) Have the outlet filter inspected and cleaned.**

2.2 The land-application area needs protection as follows:-

- **(i) Where surface water diversion drains are required by the design, these need to be kept clear to reduce the risk of stormwater runoff entering the effluent soakage area.**
- **(ii) No vehicles or stock should be allowed on trenches or beds.**
- **(iii) Deep rooting trees or shrubs should not be grown over absorption trenches or pipes.**
- **(iv) Irrigation areas are not play areas for children and access should be restricted.**
- **(v) Any evapo-transpiration areas should be designed to deter pedestrian traffic.**
- **(vi) The baffles or valves in the distribution system should be periodically (monthly or seasonally) changed to direct effluent into alternative trenches or beds, if required by the design.**

2.3 Evapo-transpiration and irrigation areas should have their grass mowed and plants maintained to ensure that these areas take up nutrients with maximum efficiency.

2.4 For aeration treatment systems. Check equipment and:

- **(i) Follow the manufacturer's instructions for maintaining and cleaning pumps, siphons, and septic tank filters.**
- **(ii) Clean disc filters or filters screens on irrigation-dosing equipment periodically by rinsing back into the primary wastewater-treatment unit.**
- **(iii) Flush drip irrigation lines periodically to scour out any accumulated sediment.**

SUITABLE PLANTS FOR EVAPO-TRANSPIRATION SYSTEMS

Native Shrubs and Trees

Coprosma	*Coprosma propinqua*
Hebe	*Hebe*
Manuka	*Leptospermum Scoparium*
Weeping Mapou	*Myrsine Divaricata*
Flax (fast)	*Phormium Tenax*
Pokaka (slow)	*Elaeocarpus Hookerianus*
Cabbage Tree (fast)	*Cordyline Australias*
Rangiora (fast)	*Brachyglottis Reganda*
Lacebark (fast)	*Hoheria Populnea*
Ribbonwood (fast)	*Plagianthus Regius*
Poataniwha	*Melicope Simplex*
Heketara	*Olearia Rani*
Poataniweta	*Carpodetus Serratus*
Kohuhu (fast)	*Pittosporum Tenufolium*

Grasses

Jointed Twig Sedge	*Baumea Articulata*
Longwood Tussock	*Carex Comans*
Pukio	*Carex Secta*
Toetoe (use native species- not invasive Pampas Grass)	*Cortaderia Fulvida*
Umbrella Sedge	*Cyperus Ustulatus*
Oioi	*Leptocarpus Similis*
Hooksedge	*Uncinia Unciniata*

Introduced Species

Canna Lilies, Taro, Aralia, Fuschia, Philodendrons, and Begonias

NORTHLAND REGIONAL COUNCIL

CARING FOR NORTHLAND AND ITS ENVIRONMENT

WHANGAREI: 36 Water Street, Private Bag 9021, Whangarei; Phone 09 438 4639, Fax 09 438 0012.

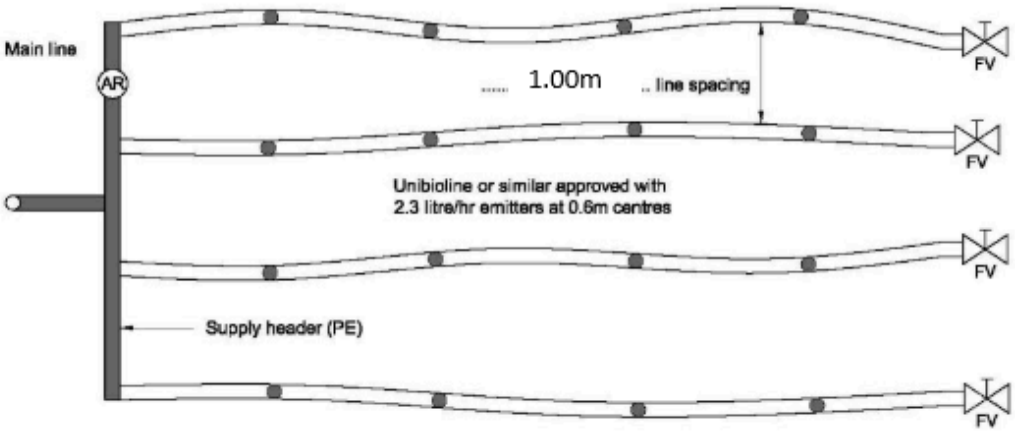
OPUA: Unit 10, Industrial Marine Park, Opua; Phone 09 402 7516, Fax 09 402 7510.

DARGAVILLE: 61B Victoria Street, Dargaville; Phone 09 439 3300, Fax 09 439 3301.

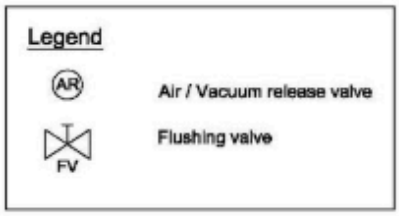
KAITAIA: 192 Commerce Street, Kaitaia; Phone 09 408 6600, Fax 09 408 6601.

Freephone: 0800 002 004 Environmental Hotline: 0800 504 639 Website: www.nrc.govt.nz

Typical Dripper Line Layout



Field Layout Without A Collection Header Pipe




IMG_1455

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA124C/881**
Land Registration District	**North Auckland**
Date Issued	06 January 2000

Prior References
NA102A/534

Estate	Fee Simple
Area	1.0787 hectares more or less
Legal Description	Lot 2 Deposited Plan 197024
Registered Owners	

Catherine Hanneke van Vliet and Thomas Jay van Vliet

Interests

Appurtenant hereto is a water supply right specified in Easement Certificate C907091.9 - 12.10.1995 at 2.05 pm

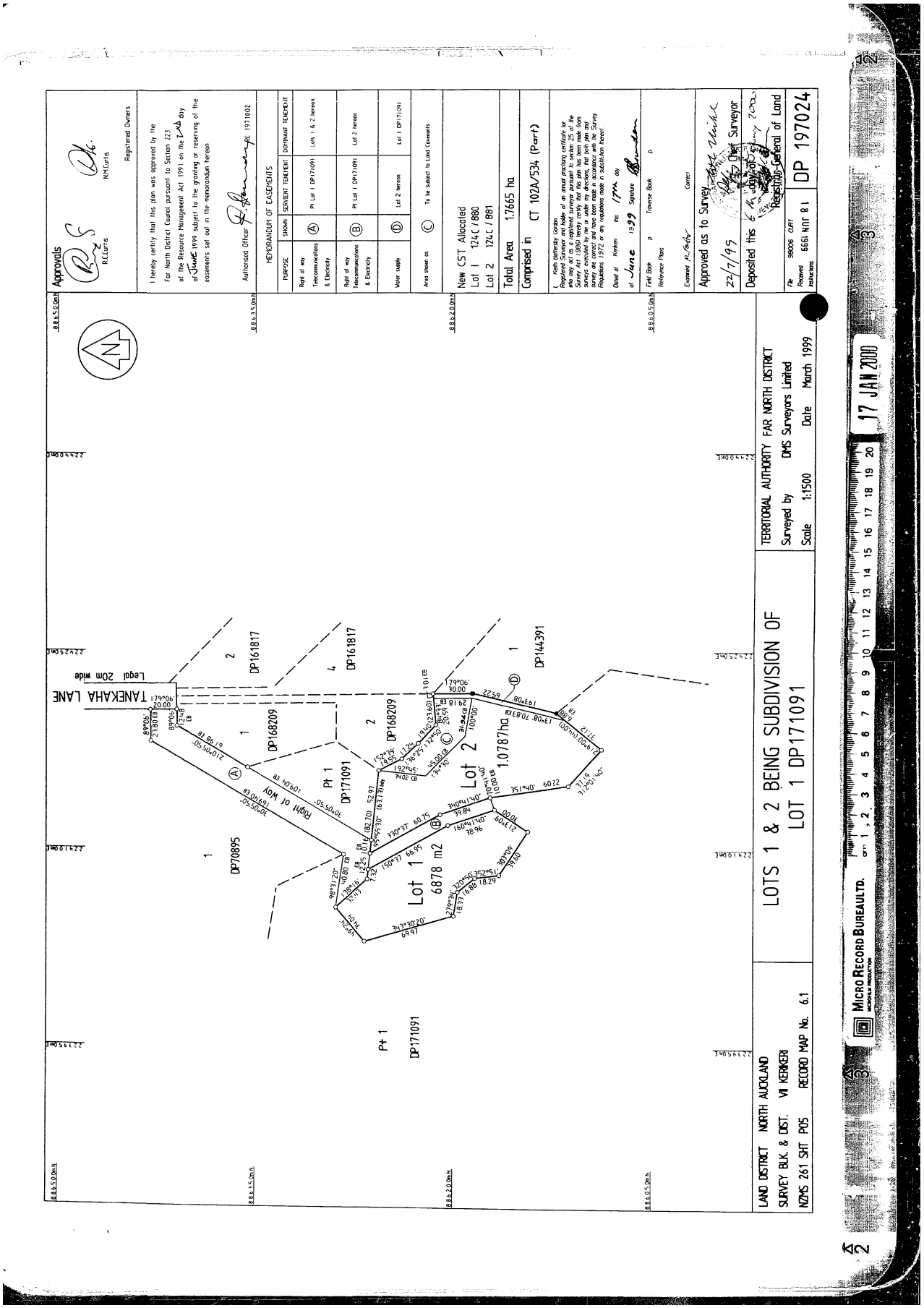
D468330.1 Consent Notice pursuant to Section 221(1)Resource Management Act 1991 by Far North District Council - 6.1.2000 at 2.04 pm

Appurtenant hereto are rights of way and telecommunications and electricity rights specified in Easement Certificate D468330.5 - 6.1.2000 at 2.04 pm

Subject to a water supply right over part marked D on DP 197024 specified in Easement Certificate D468330.5 - 6.1.2000 at 2.04 pm

The easements specified in Easement Certificate D468330.5 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 10509968.1 - 22.8.2016 at 10:46 am


LOTS 1 & 2 BEING SUBDIVISION OF
LOT 1 DP171091
LAND DISTRICT NORTH AUCKLAND
SURVEY BLK. & DIST. VI KERIKERI
NZMS 261 SHT P05 RECORD MAP No. 6.1
TERRITORIAL AUTHORITY FAR NORTH DISTRICT
Surveyed by DMS Surveyors Limited
Scale 1:1500 Date March 1999
Approvals
R.C.Curtis
N.M.Curtis
Registered Owners
I hereby certify that this plan was approved by the Far North District Council pursuant to Section 223 of the Resource Management Act 1991 on the 2nd day of June 1999 subject to the granting or reserving of the easements set out in the memorandum hereon
Authorised Officer
MEMORANDUM OF EASEMENTS
PURPOSE | SHOWN | SERVIENT TENEMENT | DOMINANT TENEMENT
Right of way Telecommunications & Electricity (A) Pt Lot 1 DP171091 Lots 1 & 2 hereon
Right of way Telecommunications & Electricity (B) Pt Lot 1 DP171091 Lot 2 hereon
Water supply (D) Lot 2 hereon Lot 1 DP171091
Area shown as (C) To be subject to Land Covenants
New CST Allocated
Lot 1 124C/880
Lot 2 124C/881
Total Area 1.7665 ha
Comprised in CT 102A/534 (Part)
Field Book p Traverse Book p
Reference Plans
Examined
Approved as to Survey
22/7/99
Deposited this 6 day of January 2000
Registrar-General of Land
File 98006 CURT
Received 6661 NOV 81
Instructions
DP 197024
17 JAN 2000
TANEKAHA LANE
Legal 20m wide
Right of Way
Lot 1 DP171091
Pt 1 DP171091
Lot 2 DP171091
Lot 1 DP70895
DP161817
DP168209
DP144391
6878 m2
1.0787ha
MICRO RECORD BUREAU LTD.

D 468330.1 CONO

THE RESOURCE MANAGEMENT ACT 1991

SECTION 221: CONSENT NOTICE

(DP197024)

REGARDING RC1971002 The subdivision of Lots 1 and 2 Deposited Plan 171091 (North Auckland Registry)

PURSUANT to Section 221 and for the purpose of Section 224 of the Resource Management Act 1991, this Consent Notice is issued by the **FAR NORTH DISTRICT COUNCIL** to the effect that conditions described in the Schedule below are to be complied with on a continuing basis by the subdividing owner and the subsequent owners after the deposit of the survey plan, and is to be registered on the appropriate new Titles.

SCHEDULE

1. The registered proprietors shall preserve the trees and bush now growing on the area marked "C" on Lot 2 Deposited Plan 197024 and shall not without the prior written consent of the Council and then only in strict compliance with any conditions imposed by the Council cut down damage or destroy any of such trees or bush or suffer or permit the cutting down damaging or destruction of any such trees or bush. The registered proprietors of the area marked "C" on Deposited Plan 197024 shall be deemed not to be in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner for which the owner is responsible.

2. That the on-site effluent and storm water disposal system for Lots 1 and 2 Deposited Plan 197024 be developed in accordance with the supplied Technical Paper 58 report supplied by the applicant.

3. That the discharge point of any effluent disposal field for Lots 1 and 2 Deposited Plan 197024 is to be sited a minimum distance of 30 metres from any surface water body, the discharge point being the outer most edge of the soakage fields.

4. The operation of agricultural and horticultural equipment including sprays and chemicals (subject to compliance with any relevant legislation) may be a permitted activity. Accordingly, where rainwater is collected from exposed surfaces for human consumption in connection with any residential development on Lots 1 and 2 on Deposited Plan 197024 the occupiers of any such dwelling shall install an approved water filtration system.

5. That the existing and any proposed shelter belts sited between Lots 1 and 2 Deposited Plan 197024, and the horticultural Lot, being part Lot 1 Deposited Plan 171091 and Lot 2 Deposited Plan 171091, is to be protected and maintained for the purpose of containing any spray drift emanating from operation on part Lot 1 Deposited Plan 171091 and Lot 2 Deposited Plan 171091.

Signed for **THE FAR NORTH DISTRICT COUNCIL** under delegated Authority

P J Killalea.

Dated at KAIKOHE this 8th day of September 1999

204 06.JAN00 D 468330.1

PARTICULARS ENTERED IN REGISTER
LAND REGISTRY NORTH AUCKLAND
for REGISTRAR-GENERAL OF LAND

REGISTRAR-GENERAL OF LAND
NEW ZEALAND

LAW NORTH PLUS
Kerikeri

1

A2 30355
JDJ
INV: 79115

C221
38

GUMBOOTS
CONSULTING ENGINEERS

Stormwater Management Appraisal

26 Tanekaha Lane, Kerikeri

For

Tom & Hanneke Van Vliet

Supporting report for building consent application to Far North District Council
Gumboots Consulting Engineers reference 1348c

16/09/25

◆0204486697 ◆office@gumbootsconsulting.co.nz ◆www.gumbootsconsultingengineers.co.nz
191 Onekura Road, Kerikeri, Northland 0295

CONTENTS

TABLES

Revision History

Revision N°	Prepared By	Description	Date
A	Kelly Wright	Stormwater Management Assessment	16/09/2025

Reviewed/Approved

On behalf of Gumboots Consulting Engineers Ltd by:

Akira Kepu

Senior Chartered Geotechnical-Civil Engineer

CMEngNZ [1160185], Board Member of EngNZ Northland Branch.

Member of NZGS, ISSMGE, SIG EGP & The Sustainability Society.

1. Executive Summary

The following table is intended to be a concise summary which must be read in conjunction with the relevant report sections as referenced herein.

Table 1.0 - Executive Summary

Legal Description	Lot 2 Deposited Plan 197024
Site Area	1.0787 ha
Development Proposal Supplied	Yes
Development Type	Proposed 3 bdr relocatable dwelling and 2 bdr standalone unit.
District Plan Zone	Rural Production
Site Impervious Proposed Post-Development	871m^2 or 8.07% of the site area
Geology Encountered	Kerikeri Volcanics (Pvb)
Attenuation Proposed	3 x 25,000L Rainwater Tank
Outlet	Piped stormwater outlet from water tank overflow shall discharge (dispersively) into the existing natural water features north and south as appropriate designated discharge points.

The residential development sustains minimal intensive human activity whilst maintaining the natural settings of the land. It is considered that;

1. No change in the natural stormwater flow paths or excessive stormwater runoff shall result from the minor development.
2. Existing flow paths and established stormwater management assets[1] shall be utilised as the primary stormwater management tools as appropriate.
3. There is less than minor risk to downstream properties due to the favourable land relief i.e. buildings are well elevated above the natural [primary] flow paths of the locale.

This report provides a Stormwater Management Plan for the subject; Lot 2 Deposited Plan 197024 with due regard to equilibrium effects of runoff from the proposed minor work and hosting environments as One.

Where appropriate, it is in accordance with the recommendations of E1/VM1 & AS1 and NZS 4404, Land Development and Subdivision Engineering and related documents.

[1] *Waipapa Stream north and drain south.*

1.1 Limited Liability

This report has been prepared exclusively for Tom & Hanneke Van Vliet in accordance with the brief given to us, the agreed scope and in general accordance with current standards, codes and best practice at the time of this writing. Therefore, they shall be deemed the exclusive owner on full and final payment of the invoice.

Information, assumptions, and recommendations contained within this report can only be used for the purposes with which it was intended. Gumboots Consulting Engineers accepts no liability or responsibility whatsoever for;

1. any use or reliance on the report by any party other than the owner or parties working for or on behalf of the owner, such as local authorities, and for purposes beyond those for which it was intended.
2. any omissions or errors that may befall from inaccurate information provided by the Client or from external sources.

Outcomes given in this report are based on visual methods and investigations at discrete locations designed to the constraints of the project scope to provide the best assessment of the environment and conditions.

Therefore, it must be appreciated that the nature and continuity of the investigations between these locations are inferred and that actual conditions could vary from that described herein. We should be contacted immediately if the conditions are found to differ from those described in this report.

Accordingly, further investigations/observations shall then be undertaken as appropriate.

This report should be read and reproduced in its entirety including the limitations to understand the context of the opinions and recommendations given.

2. Introduction

2.1 Proposed Development

The proposed development is to erect a 3 bdr relocatable dwelling and 2 bdr standalone unit with areas of hardstand. Concept plan appended.

2.2 Objective and Scope

To assess the effects of stormwater runoff in lieu of impermeable surfaces constituted by the minor development.

Specific regard to stormwater management is the primary objective in this instance.

The adopted **LIDA** includes but is not limited to;

- Review of pertinent rules and policies vs the proposed activity
- Review of the proposed development concept with respect to the site
- Observations of stormwater flow paths and management analysis
- Environmental effects assessment
- Sustainable occupation with regenerative effects to the hosting environment and LIFE

3. Site Details and Description

3.1 Site Identification

Site Location:	26 Tanekaha Lane, Kerikeri
Legal Description:	Lot 2 Deposited Plan 197024
Total Site Area:	1.0787 ha

3.2 District Plan Zoning

The property is zoned 'Rural Production'.

3.3 General Site Description

The subject property is an irregular shaped block (1.0787 ha) and is located approximately 1.6km northeast of Waipapa Township.

The property consists of moderate natural gradients and is currently occupied by pasture as it awaits consent.

3.4 Access

Access is via a shared metal driveway off Tanekaha Lane which in turn is accessed via Kapiro Rd.

3.5 Design Requirements

Design has been completed in general accordance with the recommendations and requirements contained within the Far North District Engineering Standards and the Far North District Council District Plan as well as Clause E1 of the New Zealand Building Code.

The total proposed impervious area of 871m^2 is a Permitted Activity under the FNDC District Plan 8.6.5.1.3.

Provided that the recommendations within this report are adhered to, the effects of stormwater runoff resulting from the proposal is considered to have *less than* **minor effects** on the receiving environment.

Incorporating the existing stormwater management applications and the natural landscape carefully within the proposal activity shall provide long term sustainability for land upkeep and a low impact stormwater management approach.

Presently, the natural site characteristics enforce minimal land disturbance and effective runoff control with respect to resident activities thereafter.

4. Environmental Setting

Published environmental data relating to the site has been reviewed. A summary of relevant information is provided below.

4.1 Hydrology and Flooding

A summary of available information pertaining to hydrology and hydrogeology within the subject lot is presented in the table below.

Table 1.1 – Surface Water Features & Flooding

Source	Presence/Location	Comments
Groundwater sources including springs/wells (within 500 m)	None Recorded	
Surface Water Features (Ponds, Lakes etc)	None Recorded	
Watercourses (within 500 m)	Waipapa Stream meanders west - east within the property boundary (north). The stream serves as a tributary to the wider Pickmere Channel (east).	This feature constitutes the major water body as natural conveyance features in support of this rural environment. Established/regenerative native bush and vegetation occupy this feature fully. This shall readily provide secondary protection to Land, Environment and LIFE. The chosen dwelling locations are sufficiently elevated from this natural water feature.
Flood Risk Status	None recorded	The NRC and FNDC GIS databases indicate that the site is not included within the area that has been modelled for flood hazard events.
Flood Susceptibility	Negligible	Flood susceptible land is mapped according to the presence of alluvial, fluvial deposited soils indicating historic inundation by flood waters.

4.2 Primary Flow Paths [PFP]

Established natural[2]* PFPs purposed for stormwater management servient to the property, are readily active in service. These shall greatly provide a low impact approach to stormwater management in this case.

The precedence shall NOT be altered as a result of the proposal at *post development* stage.

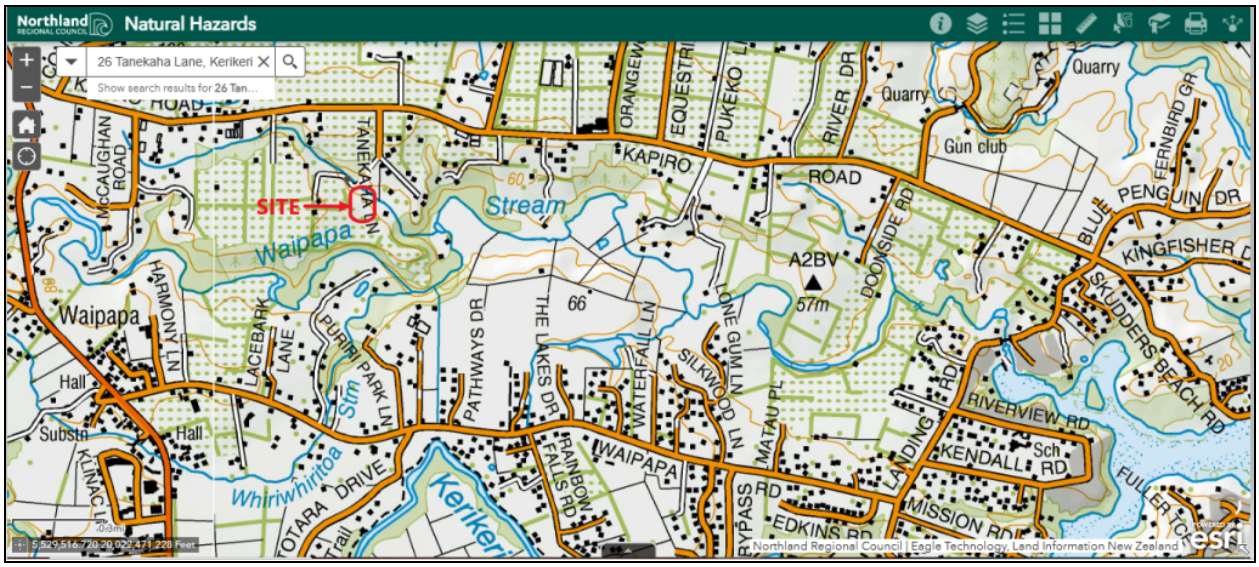


Figure 3. Site and Surrounding Water Bodies Feature - (maps adapted from NRC Hazards map).

5. Stormwater Management

5.1 General Suitability

The residential development shall maintain very minimal human activity footprint whilst maintaining the natural settings in cohesion with the community settlement therein.

5.2 Imposed Environmental Effects

Peak stormwater runoff in effect of impermeable surfaces at post development stage are considered minimal.

The established and proposed micro and macro stormwater management support system (prominent PFP network) is considered adequate here.

All in all, it enhances protection of contact recreation in our rivers and harbours. Likewise, water quality through low impact stormwater treatment practices.

Consequently, any adverse effects as a result of the home development and associated relevant areas are considered less than minor at this time.

[2]**Existing flow paths.*

Reference

The countryside living TOOLBOX, Stormwater management Device Design Details, April 2010.

5.3 Existing Primary Stormwater Management

Which comprises;

- Metal driveway (neighbouring).
- Complementary drain and culvert.
- Natural primary [land] flow paths [PFP].
- Native bush and scrub supporting Waipapa Stream within the northern area of the property.
- Positive relief and favourable land grades.

The cumulative infrastructure seems to readily equilibrate the stormwater and designate runoff into the natural PFPs within the nucleus environment. All in all, the land is in an *equilibrium state* in this respect.

5.4 Total Site Impermeable and Building Coverage Areas

Based on table 1.2 below, the total impermeables at post development stage as a result of the proposal.

Table 1.2 – Impermeable and Building Coverage Area

Impermeable Surfaces	Area (m^2)
Proposed house roof	180
Driveway [gravel] area	691
Total Impermeable Surfaces[3]	871
Total Site Area	10,787
Total Impermeable Coverage (%)	8.07%

5.5 District Plan Rules

The site is zoned Rural Production. The following rules apply under the FNDC District Plan:

8.6.5.1.3 STORMWATER MANAGEMENT The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 15%.

[3] *total building coverage.*

5.6 Proposed Regional Plan

FNDC's Engineering Standards and Guidelines 2009, and NZS4404 on which they are based, contain standards for stormwater reticulation and overland flow paths, but no guidelines for managing downstream effects. The Regional Water and Soil Plan for Northland specifies hydraulic neutrality for the 1 in 5 year return period storm event.

Auckland Council TP10/GD01 is referred to in the Regional Water and Soil Plan and is commonly accepted as an appropriate technical guideline for Northland. Section 4.2 includes the following guidelines:

4.2.1 Water quantity control

Water quantity control comprises those practices that detain stormwater runoff to regulate its rate of release to receiving waters or to infiltrate runoff into the ground so it does not become surface flow. Water quantity control can be further subdivided into three categories.

***>** Flood control*

***>** Stream channel protection*

***>** Infiltration or low streamflow augmentation*

4.2.2 Water quality control

Water quality control applies to those practices that remove contaminants having the potential to be in or that are already in stormwater runoff.

Flood protection

Historical efforts to prevent increases in downstream flood levels involved construction of stormwater management ponds to temporarily hold large volumes of stormwater during extreme events and releasing them over a longer time period than would have occurred normally. Current ARC requirements for downstream flood protection are generally that site post-development peak discharges for the 2 and 10 year storm events shall not exceed pre-development peak discharges for those events. If there are existing flooding problems downstream, management may include control and release of the 100 year post-development peak discharge at the pre-development peak discharge release rate.

Water quantity control in this proposed development is **NOT** critical here. There are no properties downstream that are at risk of flooding or erosion. Moreover, the accepting environment is constituted by the Waipapa Stream and the wider Peremere Channel.

5.7 Micro Stormwater Management System

Stormwater system proposed for the development comprises:

- Stormwater from the roof collected into three 3.5m diameter, 25,000 litre water storage tanks.
- Piped stormwater outlet from water tank overflows[4] to a level dispersive system and into Waipapa Stream (north) and/or drain (south). A typical example is appended to this report.
- Certificate of works [PS3] and as built plans shall be supplied by a certified drainlayer at completion of construction stage.

[4] *controlled manner*

References
Appendix D - typical schematic.

5.8 Gravel Driveway

The [proposed] gravel driveway to be used to access the proposed dwellings shall be shaped to shed runoff to the supporting primary flow paths onsite, discharging to Waipapa Stream north.

6. Analysis

6.1 Rational Method

Run-off for catchments up to 500 hectares may be calculated using the Rational Method:

$$Q = C\ I\ A/3600$$

Where: Q = run-off in litres per second (l/s)
C = run-off coefficient (unit less)
I = rainfall intensity in millimetres per hour (mm/hr)
A = area of catchment in square metres (m^2)

6.2 Run-off Coefficient C

The run-off coefficient C is the variable in the rational formula least able to be precisely determined and has a direct result on the estimation of the discharge. The coefficient represents the integrated effects of infiltration, storage, evaporation, natural retention, interception etc, which all affect the time distribution and peak rate of run-off. The factors required to determine a value for 'C' are surface type characteristics, topography and land use. Table 1.3 below presents the factors adopted for the run-off coefficient;

Table 1.3 – Runoff Coefficient 'C'

Surface Type	C
Roof	0.9
Pasture and scrub cover	0.45*
Unsealed Driveway	0.5

**corrected to the slope of the land.*

6.3 Rainfall Intensities

The design rainfall intensity is that for a storm having duration equal to the time of concentration and a probability of occurrence as appropriate. The time of concentration and hence the critical storm duration of a catchment is the time taken for surface water run-off to reach the design point from the furthest point (in time) of the catchment, so that the whole catchment is contributing to the maximum discharge at the design point for any given probability of occurrence.

The minimum time of concentration for surface runoff will be 10 minutes, given the relatively small footprint of the site.

Design rainfall intensity curves for Northland for use with the "Rational Method" are provided by The National Institute of Water and Atmospheric Research (NIWA) High Intensity Rainfall Design System (HIRDS). HIRDS is a web-based programme that can estimate rainfall frequency at any point in New Zealand. It can be used to estimate rainfall depths for hydrological design purposes and to assess the rarity of observed storm events. The outputs of this site are as follows;

Rainfall depths (mm) :: RCP6.0 for the period 2081-2100

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	11.4	16.7	20.9	30.3	43.0	70.4	91.5	115	136	146	152	155
2	0.500	12.5	18.4	23.0	33.4	47.5	77.7	101	126	150	161	168	172
5	0.200	16.4	24.0	30.0	43.8	62.4	103	134	167	199	214	223	228
10	0.100	19.2	28.2	35.3	51.5	73.4	121	158	197	235	254	264	270
20	0.050	22.0	32.4	40.6	59.3	84.7	140	183	228	273	294	307	314
30	0.033	23.7	34.9	43.8	63.9	91.4	151	198	247	295	319	332	340
40	0.025	24.9	36.7	46.0	67.2	96.1	159	209	261	311	336	350	359
50	0.020	25.8	38.1	47.8	69.9	100	166	217	271	324	350	365	373
60	0.017	26.6	39.2	49.2	72.0	103	171	224	280	334	362	377	385
80	0.013	27.8	41.0	51.5	75.4	108	179	234	293	351	379	395	405
100	0.010	28.7	42.4	53.2	77.9	112	185	243	304	364	393	410	420
250	0.004	32.4	47.9	60.2	88.2	127	211	277	347	415	449	469	480

Template 1. adapted from *NIWA[5] site*.

The total stormwater runoff during the 10% AEP + CC i.e. 10 minute duration rainfall depths of *117.6 mm/hr,* was adopted. The modelled rainfall event from the developed site is estimated as follows;

Table 1.4 – Post Development Runoff [Q]

Surfaces	Area (m^2)	C	I_{10} (mm/hr)	Q (L/s)
Roof	180	0.9	117.6	5.29
Unsealed driveway	691	0.5	117.6	11.29
Grass	9,916	0.45	117.6	145.77
ΣArea	10,787		**ΣQ_{post}**	162.34

[5]*all reasonable skill and care was exercised using best available data & methods. Nevertheless, NIWA does not accept any liability, whether direct, indirect or consequential, arising out of the use of HIRDSV4. 2.2.3 ©2017 NIWA and New Zealand Regional Councils.*

Table 1.5 – Pre Development Runoff [Q)

Surfaces	Area (m^2)	C	I_{10} (mm/hr)	Q (L/s)
Roof	0	0.9	117.6	0
Unsealed Driveway	0	0.5	117.6	0
Grass	10,787	0.45	117.6	158.57
ΣArea	10,787		**ΣQ_{pre}**	158.57

All in all, runoff from the site is considered less than minor. The use of water tanks to capture roof runoff shall be a sustainable option long term.

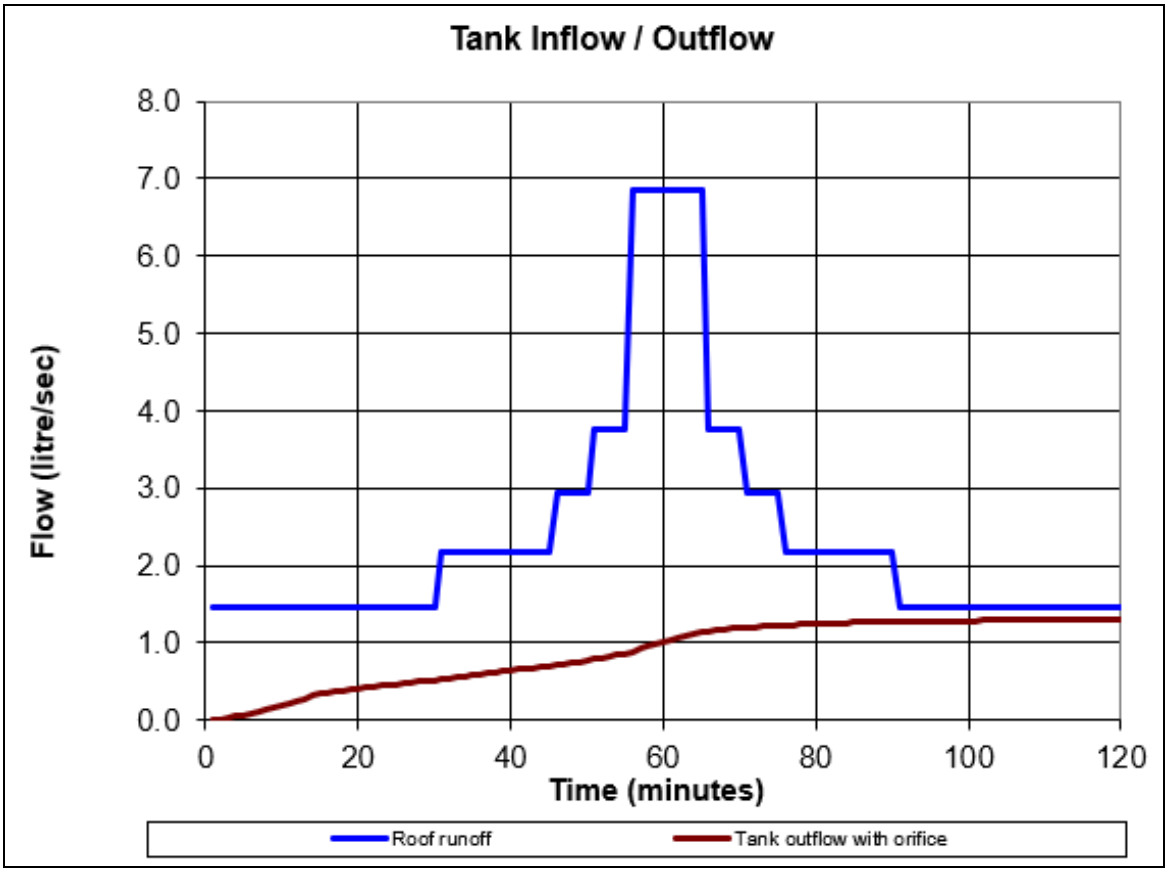
6.4 Stormwater Detention Tank

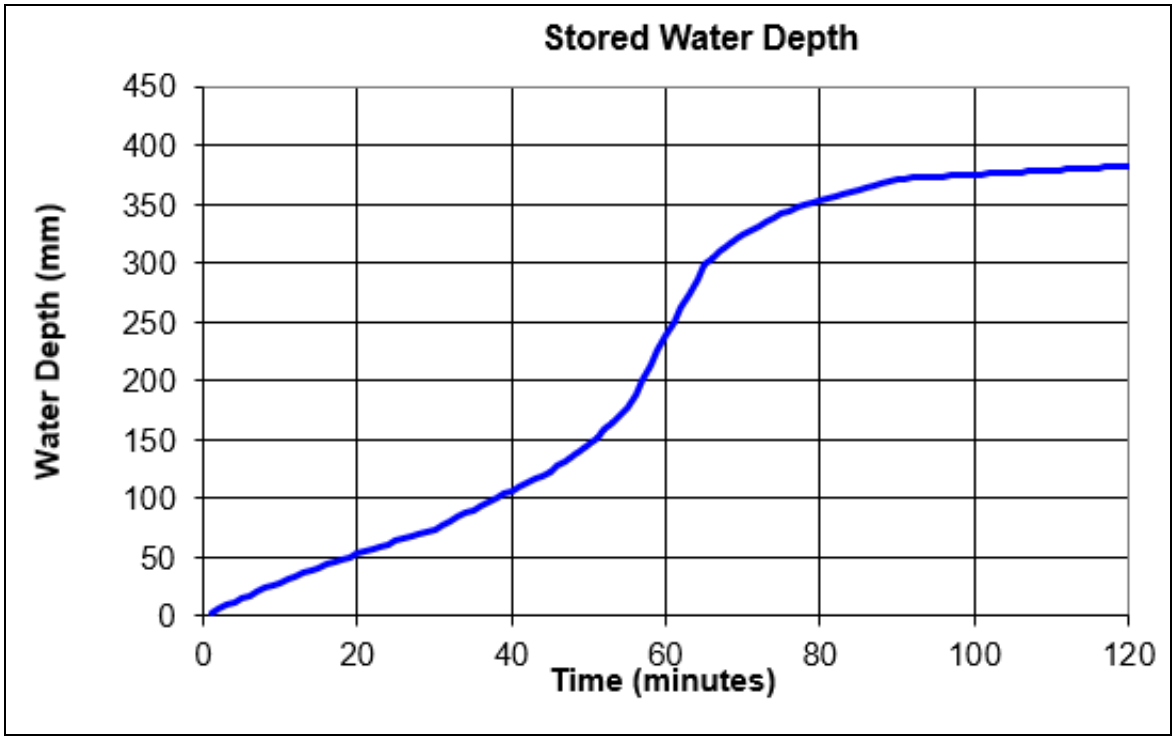
It is proposed to reduce peak post-development stormwater run-off from the site to pre-development flows by detaining runoff from the roof areas in a stormwater detention tank. We have developed a hyetograph which incorporates the 10, 20, 30, 60 and 120-minute duration storms for the 1 in 10-year (10% AEP) event to calculate the detention requirement. Runoff coefficients are based on NZ Building Code Verification Method E1. The following table below presents the modelled parameters and results:

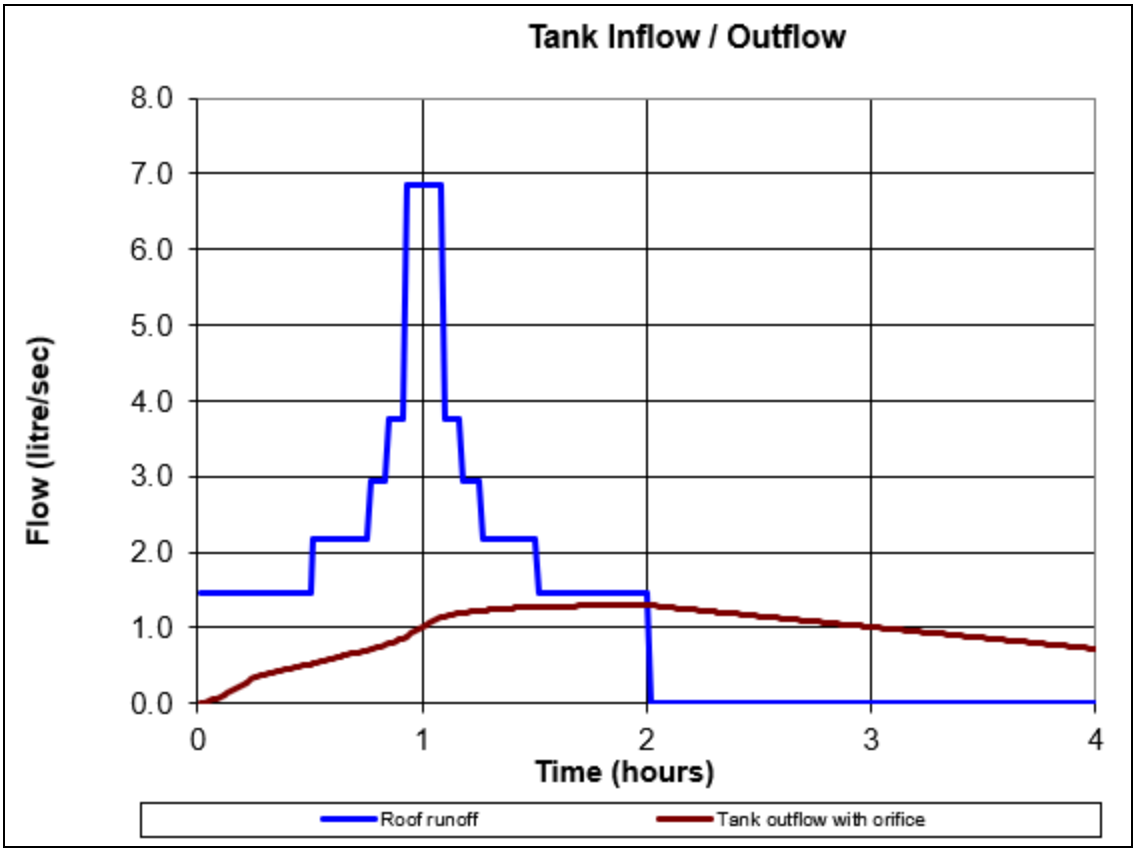
Table 1.6 – Stormwater Modelled Results

Parameters	Value
Roof Area - Proposed* (C = 0.90)	180 m^2
Peak post-development runoff	162.34 L/s
Peak pre-development runoff [allowable runoff]	158.57 L/s
Maximum Attenuation Provided	5.6 L/s
Peak post-development runoff with attenuation	158.19 L/s
Water tank diameter	3 x 3.50 m
Orifice diameter	32 mm
Maximum water depth detained	383 mm
Maximum water storage volume	11.047 m^3

Roof runoff into the stormwater detention tank and outflow from the tank is illustrated below:


Tank Inflow / Outflow
Flow (litre/sec)
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0
20
40
60
80
100
120
Time (minutes)
Roof runoff
Tank outflow with orifice


Stored Water Depth
Water Depth (mm)
450
400
350
300
250
200
150
100
50
0
0
20
40
60
80
100
120
Time (minutes)



7. District Plan Assessment Criteria

Stormwater management has been assessed against the Stormwater Management - Assessment Criteria in Section 11.3:

Table 1.7 - Far North District Plan Section 11.3 - Stormwater Management

Criterion	Comment
(a) The extent to which building site coverage and impermeable surfaces result in increased stormwater runoff and contribute to total catchment impermeability and the provisions of any catchment or drainage plan for that catchment.	The building site coverage will not change the natural stormwater flow paths or cause excessive stormwater runoff.
(b) The extent to which Low Impact Design principles have been used to reduce site impermeability	In addition to using water tanks to collect roof water runoff, the area is well served with PFPs complementing the primary flow paths for stormwater management purposes.
(c) Any cumulative effects on total catchment impermeability	There are no cumulative effects.
(d) The extent to which building site coverage and impermeable surfaces will alter the natural contour or	Site disturbance is minimal and will not alter the natural flow paths onsite.

drainage patterns of the site or disturb the ground and alter its ability to absorb water	
(e) The physical qualities of the soil type	The soils encountered are well maintained by grass and vegetation predominantly throughout the nucleus settlement.
(f) Any adverse effects on the life supporting capacity of soils	Life supporting capacity of the soils (within this context) shall be sustained and regenerated by planting during the occupation.
(g) The availability of land for the disposal of effluent and stormwater on the site without adverse effects on the water quantity and water quality of water bodies (including groundwater and aquifers) or on adjacent sites	Land availability for these purposes are sufficient and in the greater scheme, adverse effects are less than minor.
(h) The extent to which paved, impermeable surfaces are necessary for the proposed activity.	N/A
(i) The extent to which landscaping may reduce adverse effects of run-off	Significant vegetation exists onsite, increasing site permeability. The low impact approach of water tank management poses less than minimal risk of runoff.
(j) Any recognised standards promulgated by industry groups	There are no recognised standards promulgated by industry groups.
(k) The means and effectiveness of mitigating stormwater run-off to that expected by the permitted activity threshold	It is considered that stormwater runoff is adequately mitigated through the systems proposed. Hydraulic neutrality will be achieved across the site, and stormwater runoff will effectively be mitigated.
(l) The extent to which the proposal has considered and provided for climate change	RCP 6.0 2081-2100 rainfall values from HIRDS have been utilised in the design of stormwater management devices, accounting for climate change. Climate change is allowed for with a rise of 1.63 degrees and 20% increase in rainfall
(m) The extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects	Runoff (where applicable) is to be released at the specified discharge points into the macro stormwater management system, disposing of post-development runoff in a controlled manner.

8. Conclusion

With the proposed stormwater management system, it is considered that NO change in stormwater disposal/runoff shall result from the proposed minor development. Roof tank overflow, together with yard and driveway runoff, shall be directed to the existing primary flow paths..

Output effects from the proposed dwellings at post development can be considered at equilibrium state and adverse effects can be appraised less than minor.

All in all, the proposed minor development shall sustain regenerative effects to Land, Environment and LIFE.

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List of Appendices	Description
Appendix A	**Geology and Subsoils**
Appendix B	**Site Plan**
Appendix C	**Typical Schematic Arrangement of Retention Tanks**
Appendix D	**Typical Level Spreader**
Appendix E	**NRC Hazards Map**

Appendix A - Geology and Subsoils

Geology

The geological information on hand indicates the site **geology** as Kerikeri Volcanic Group (Pvb); comprising basalt lava, volcanic plugs and minor tuff.

Lithology

The **lithology** comprises basalt [$F6_2$] i.e. flows and cones of very fine to medium grained crystalline basalt. Surfaces form terraces and plateaus generally without rocky outcrops. Dense and moderately fractured; hard to very hard. Landscapes are generally terraces and plateaus without rocky outcrops. Weathered to soft red brown or dark grey brown clay to depths of 20m with many rounded corestones.

Subsoils

LandCare Research indicates the **soils** encountered here as Orthic Oxidic [XO]. These clayey soils result from the weathering of andesite, dolerite or basalt rock or ash over extensive periods of time. They cover 1% of New Zealand and are known only in the Auckland and Far North Region.

Oxidic Soils [X]

Contain appreciable amounts of iron and aluminium oxides well-developed, relatively stable structure. Clay contents are high, ranging from 50 to 90%. Soil water deficits are common in summer.

Oxidic soils are strongly weathered and clays have low cation exchange capacity at the natural pH of the soil. These soils have *slow permeability*.

More reference can be noted that these are soils of the Rolling and Hill lands i.e. Pungaere gravelly friable clay (PG) - *moderately well drained*.

All in all it can be concluded that the soils encountered here more greatly reflect the historical effects of local conditions.

The maps constitute a regional scale. Therefore, visual observations and shallow boreholes were utilised to account for this purpose. As specific to the subject site.

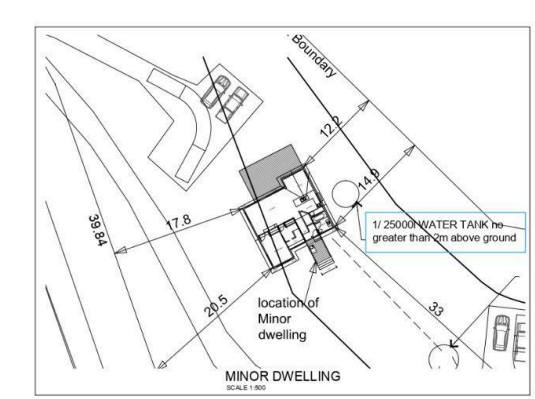
References:

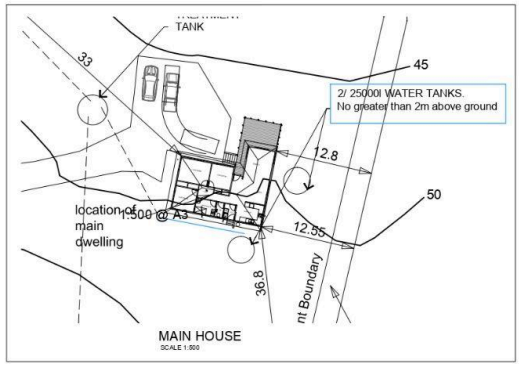
Geology of the Whangarei Area. Institute of Geological & Nuclear Sciences; 1: 250,000 geological map 2. Lower Hutt, New Zealand.

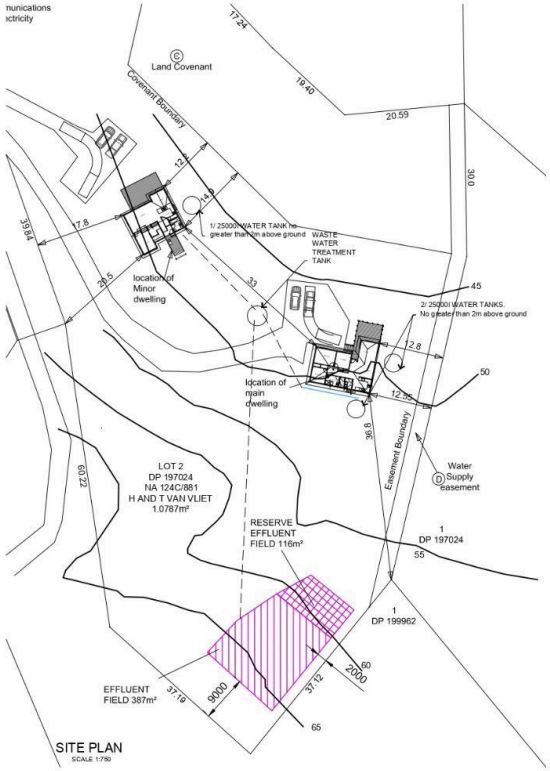
NZMS Sheet 290 P 04/05, part sheet O 03, 1:100,000 scale map, Edition 1, 1982: "*Whangaroa-Kaikohe"* (Rocks).

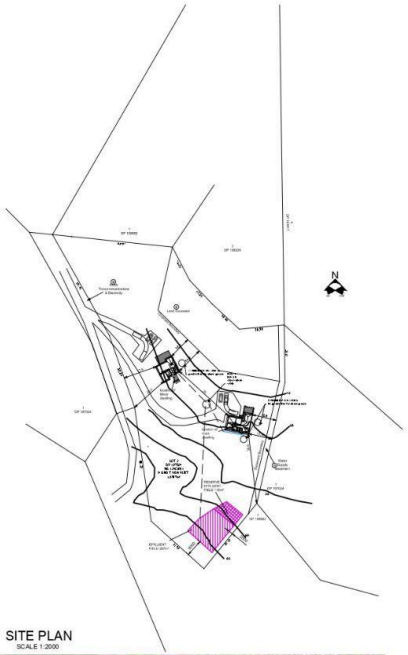
Manaaki Whenua LandCare Research: New Zealand Soil Classification (NZSC) - Soil Order.

Appendix B - Site Plan









SITE PLAN
SCALE 1:2000

DRONE PHOTO

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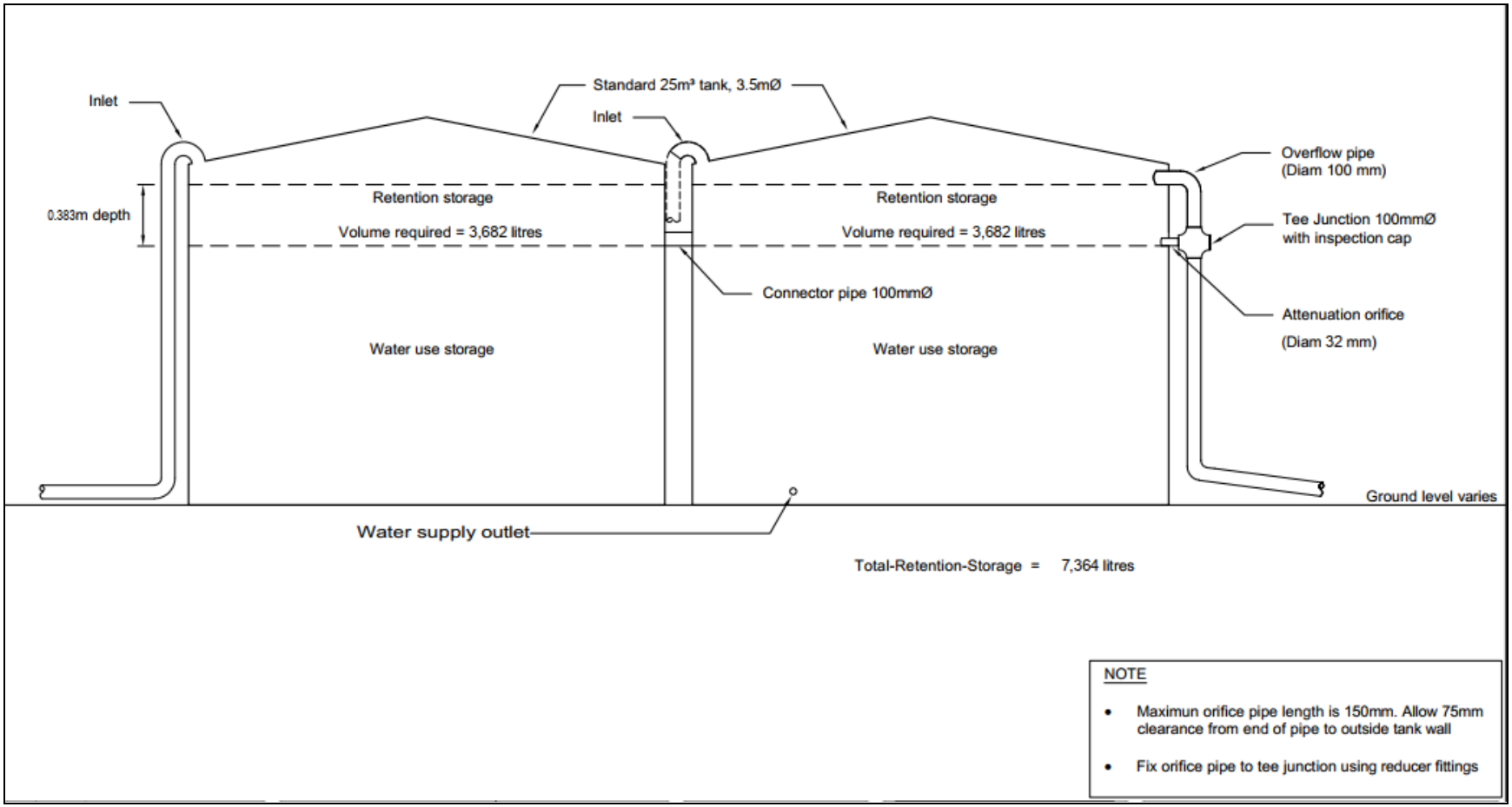
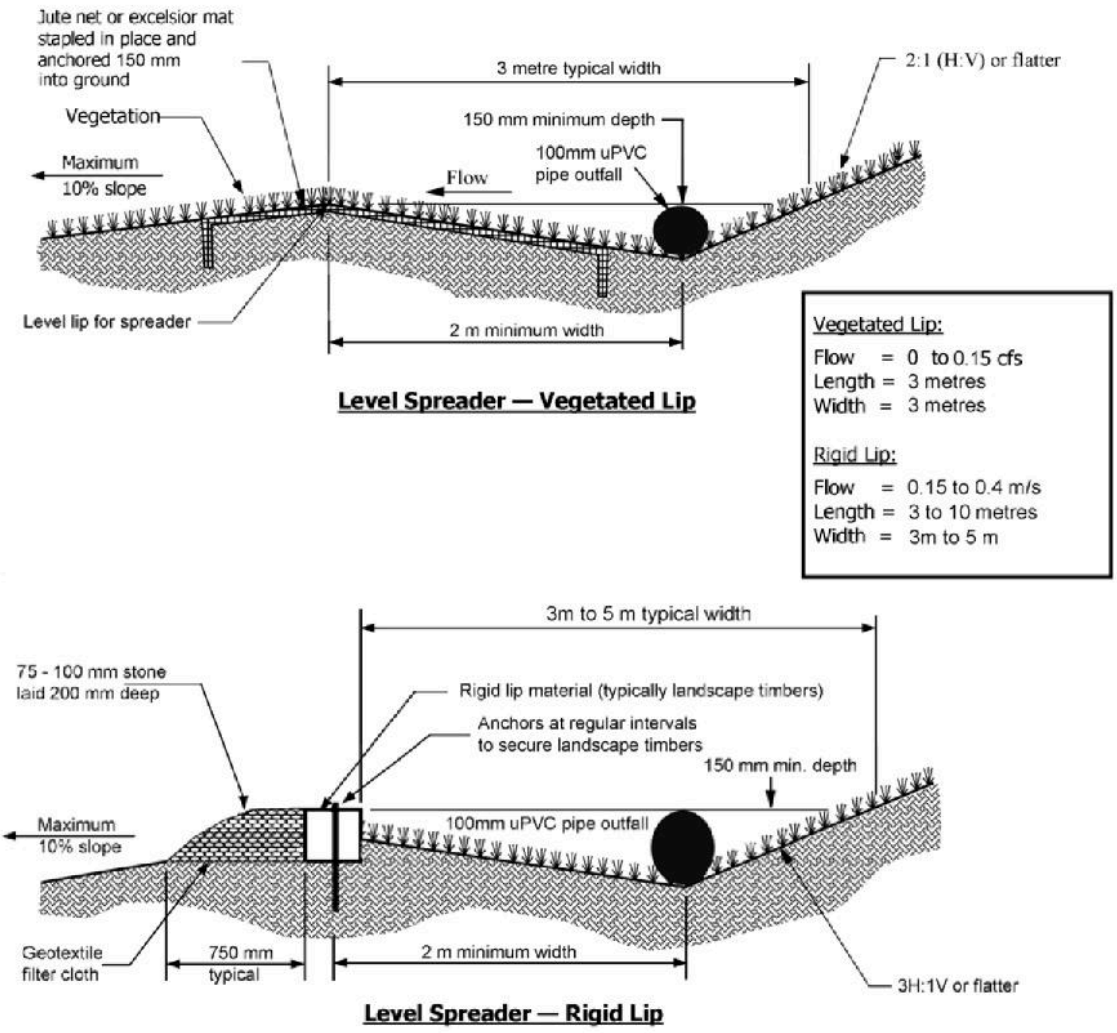
Appendix C - Typical Schematic Arrangement of Retention Tank;



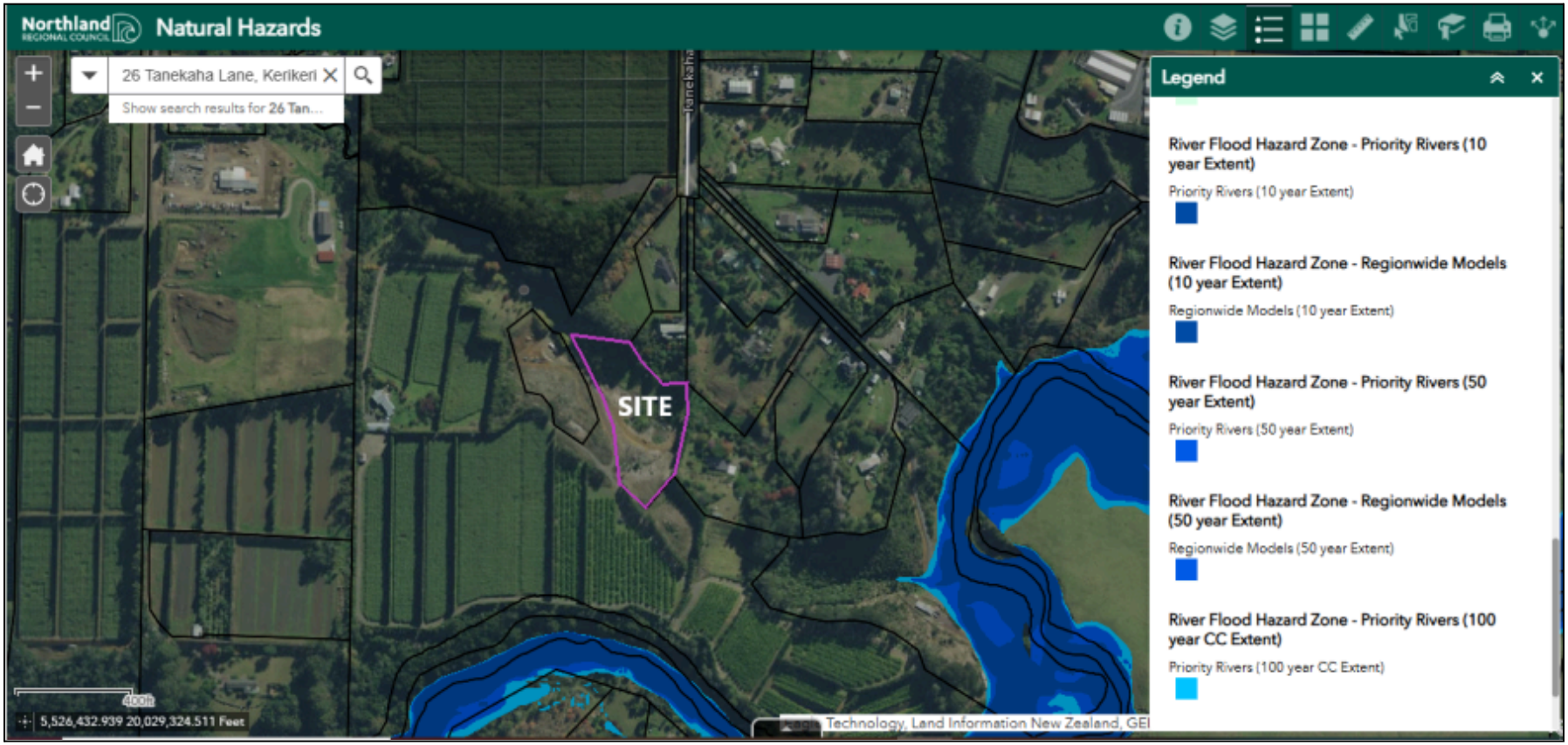
Appendix D - Typical Level Spreader

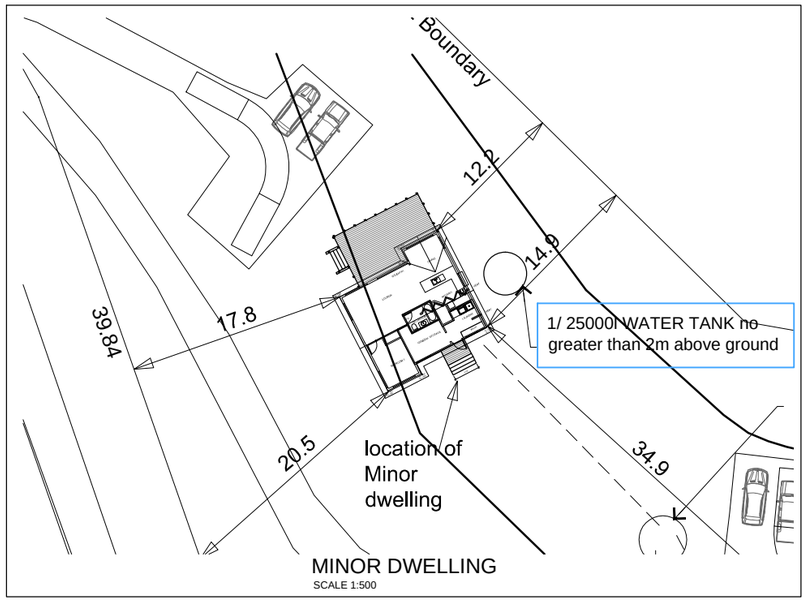
Figure C23
Rigid Boundary Flow Dispersal



Appendix E - NRC Hazards Map

https://www.arcgis.com/apps/webappviewer/index.html?id=81b958563a2c40ec89f2f60efc99b13b accessed 11/09/25





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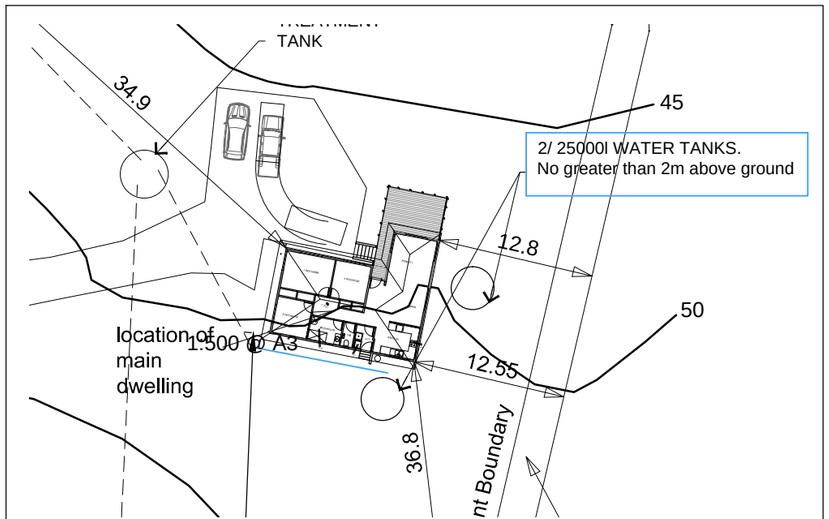
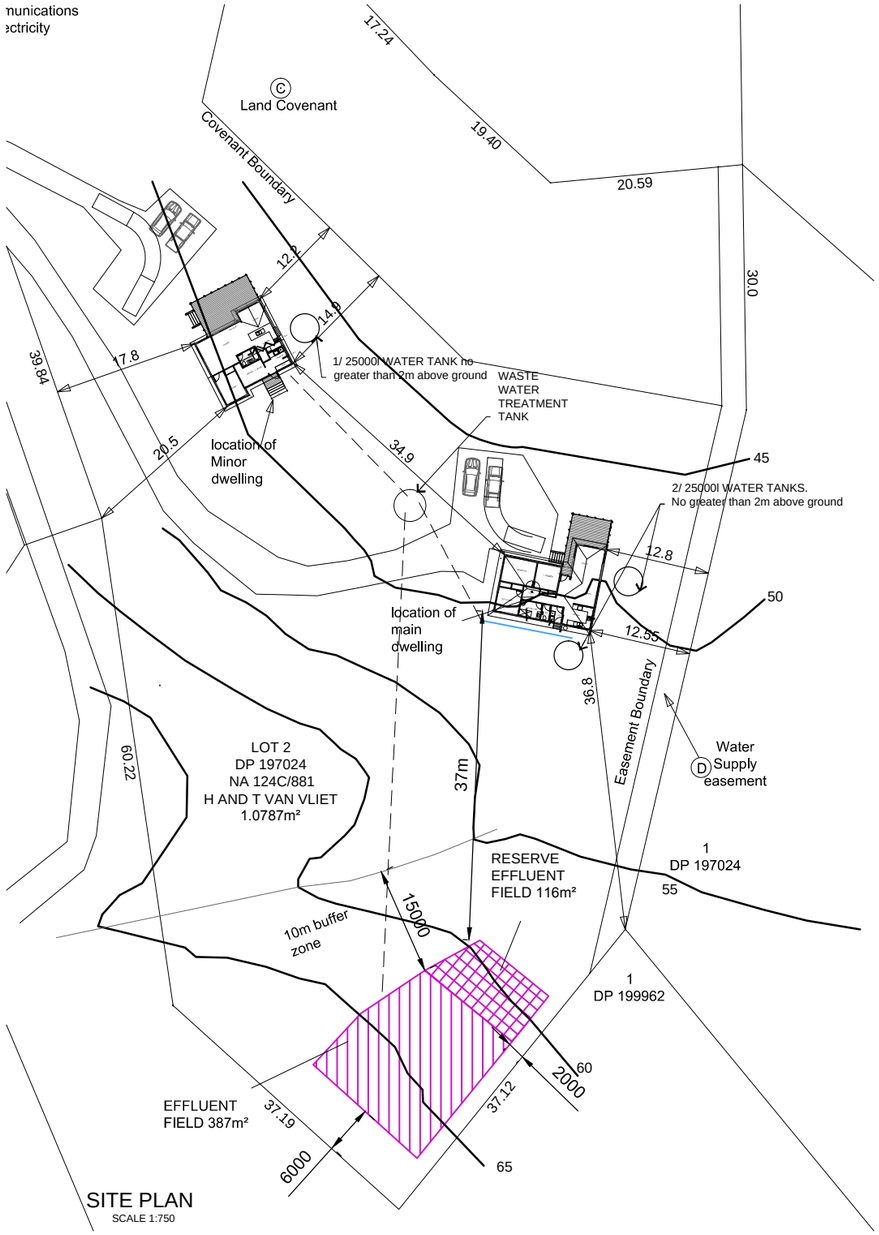
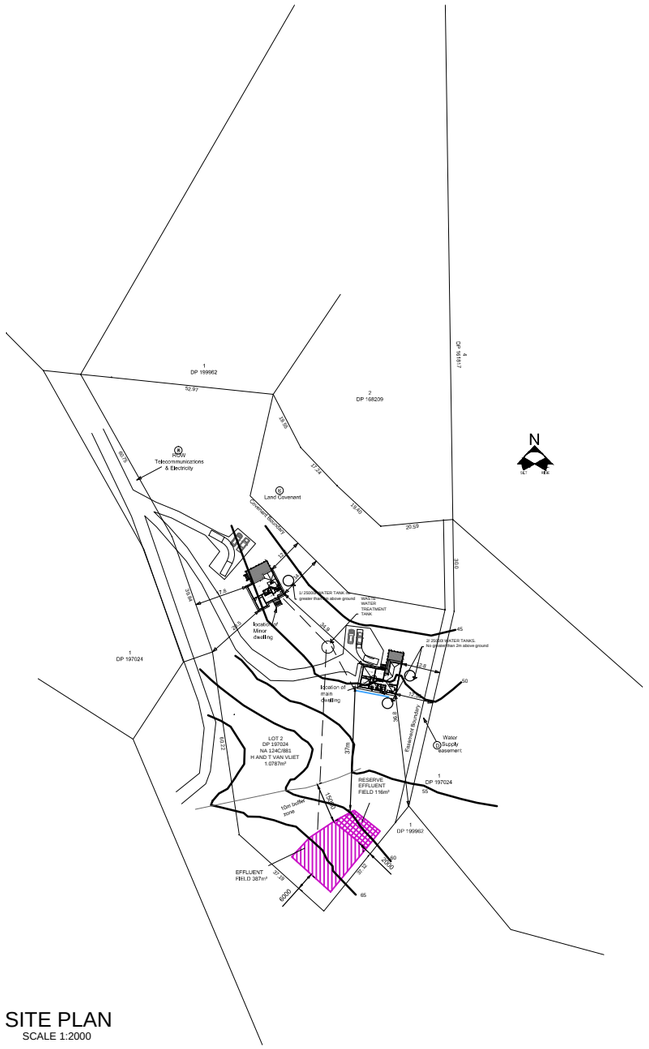
SCALE 1:500



MAIN HOUSE
SCALE 1:500



SITE PLAN
SCALE 1:750



SITE PLAN
SCALE 1:2000

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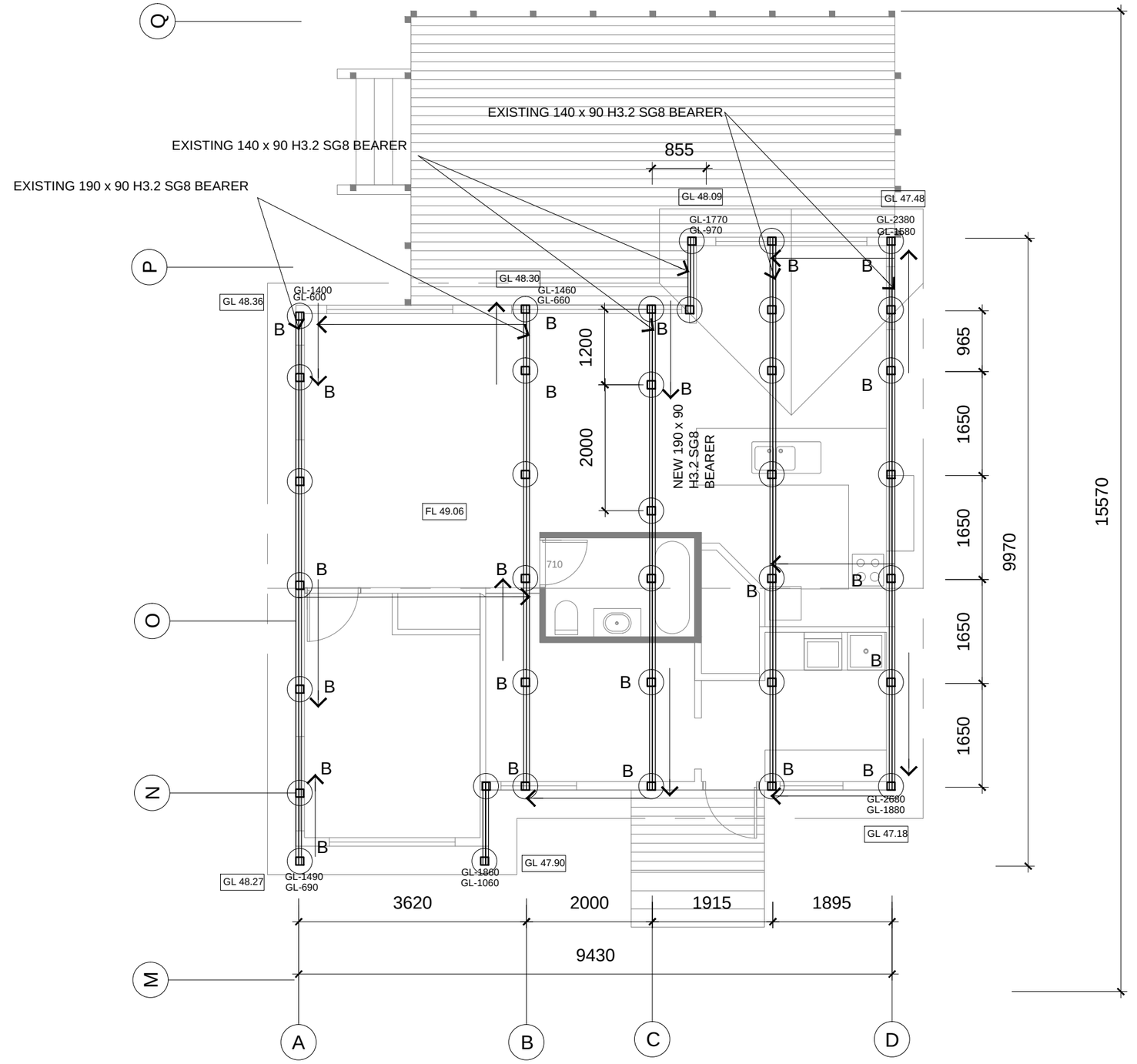

NOTE:
CONFIRM ALL PILE POSITIONS ON SITE AND ADD PILE WHERE THERE IS A JOIN IN THE BEARER

B DENOTES 125 SENTON PILE H5 IN 450Ø BORE 600 DEEP CONCRETE FILLED 20 MPa BRACED PILE

A DENOTES 125 SENTON PILE H5 IN 450Ø BORE 900 DEEP CONCRETE FILLED 20 MPa

DENOTES 125 SENTON PILE H5 IN 450Ø BORE 600 DEEP CONCRETE FILLED 20 MPa

DENOTES 100 x 75 H4 R/S BRACE FIXED TO PILES WITH S/S M12 BOLTS, 50 x 50 x 3 SQ WASHERS AND NUTS.
(ARROW HEAD = HIGHEST END OF BRACE)

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SUBFLOOR PLAN
MINOR DWELLING

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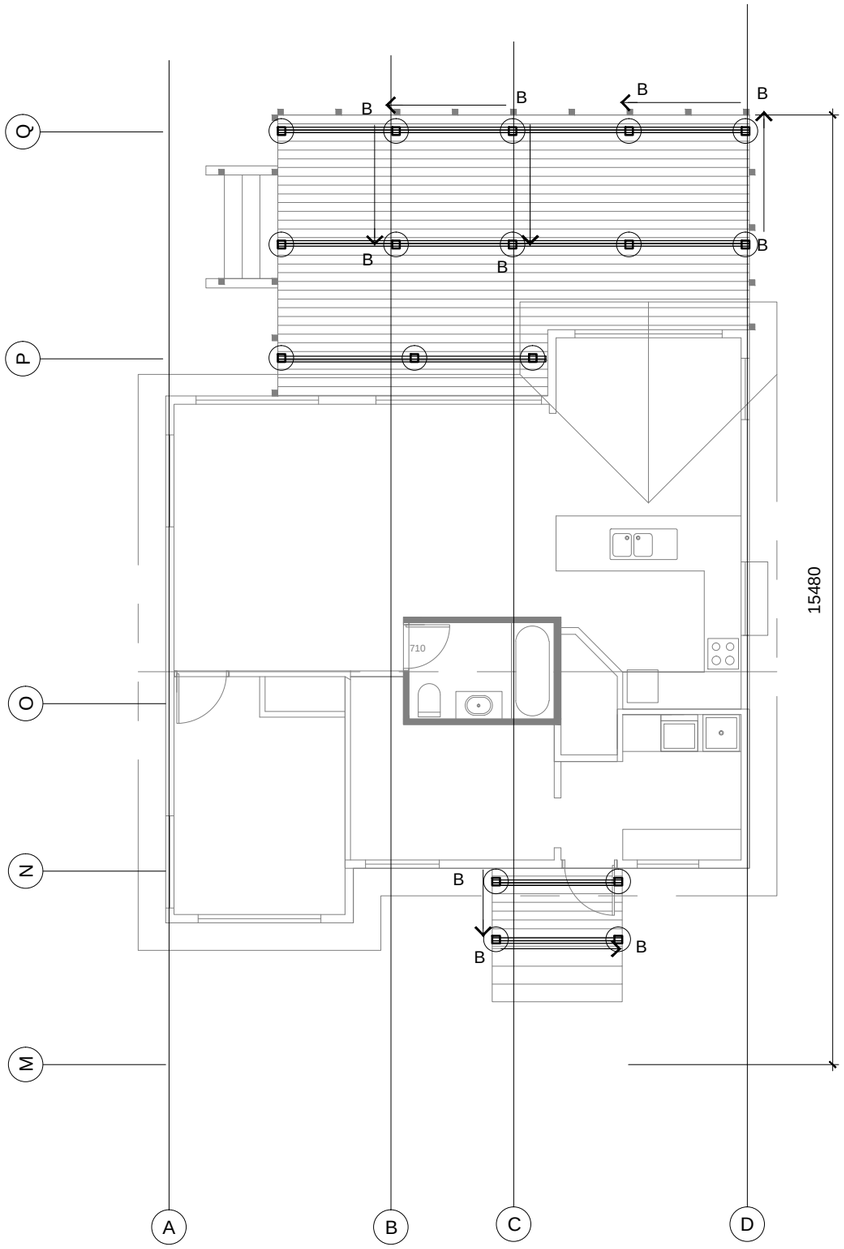

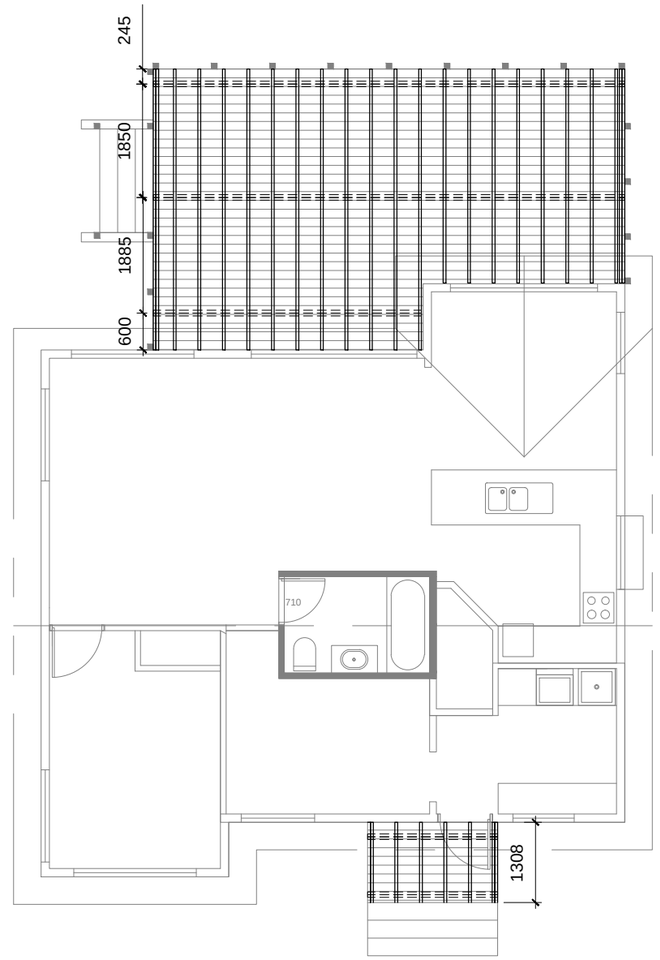

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Sheet Title
PROPOSED SUBFLOOR PLANS
MINOR DWELLING

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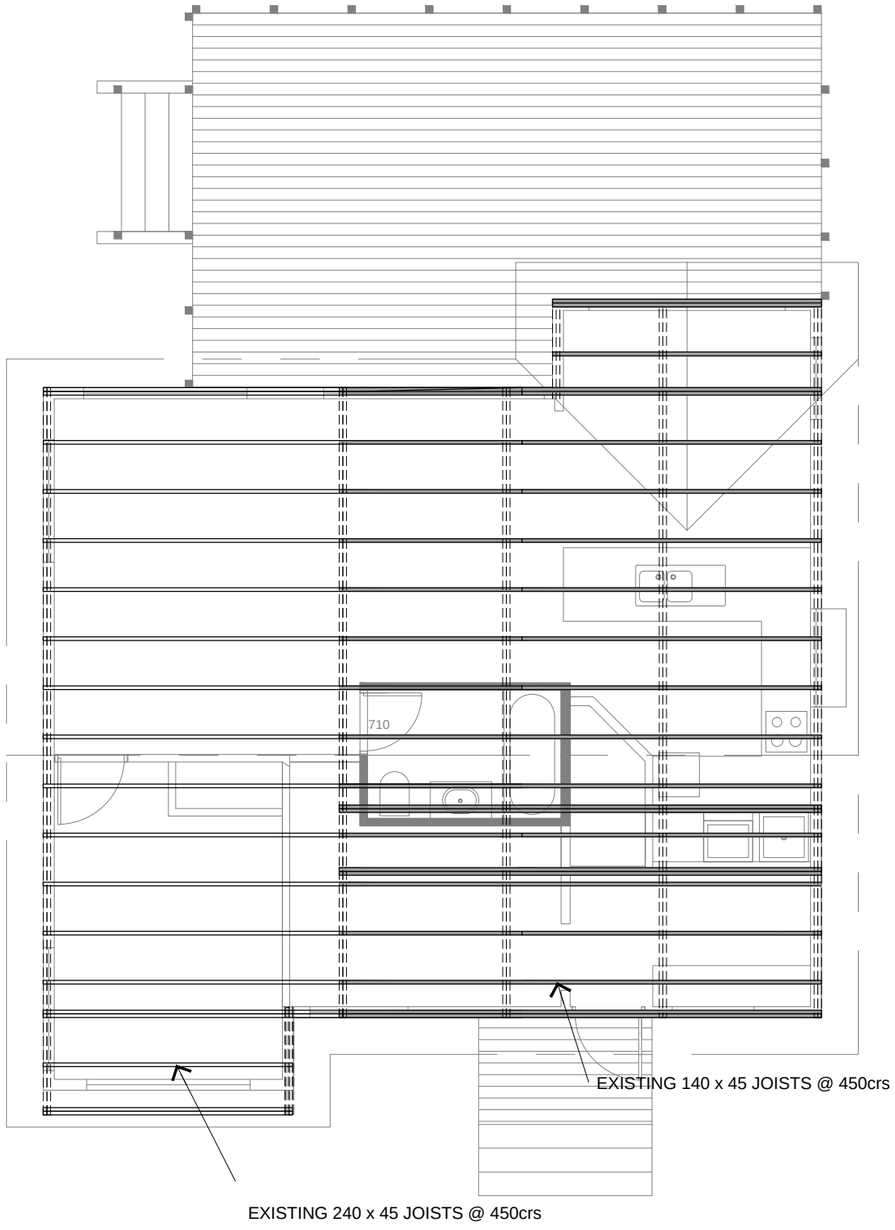

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JOIST LAYOUT PLAN
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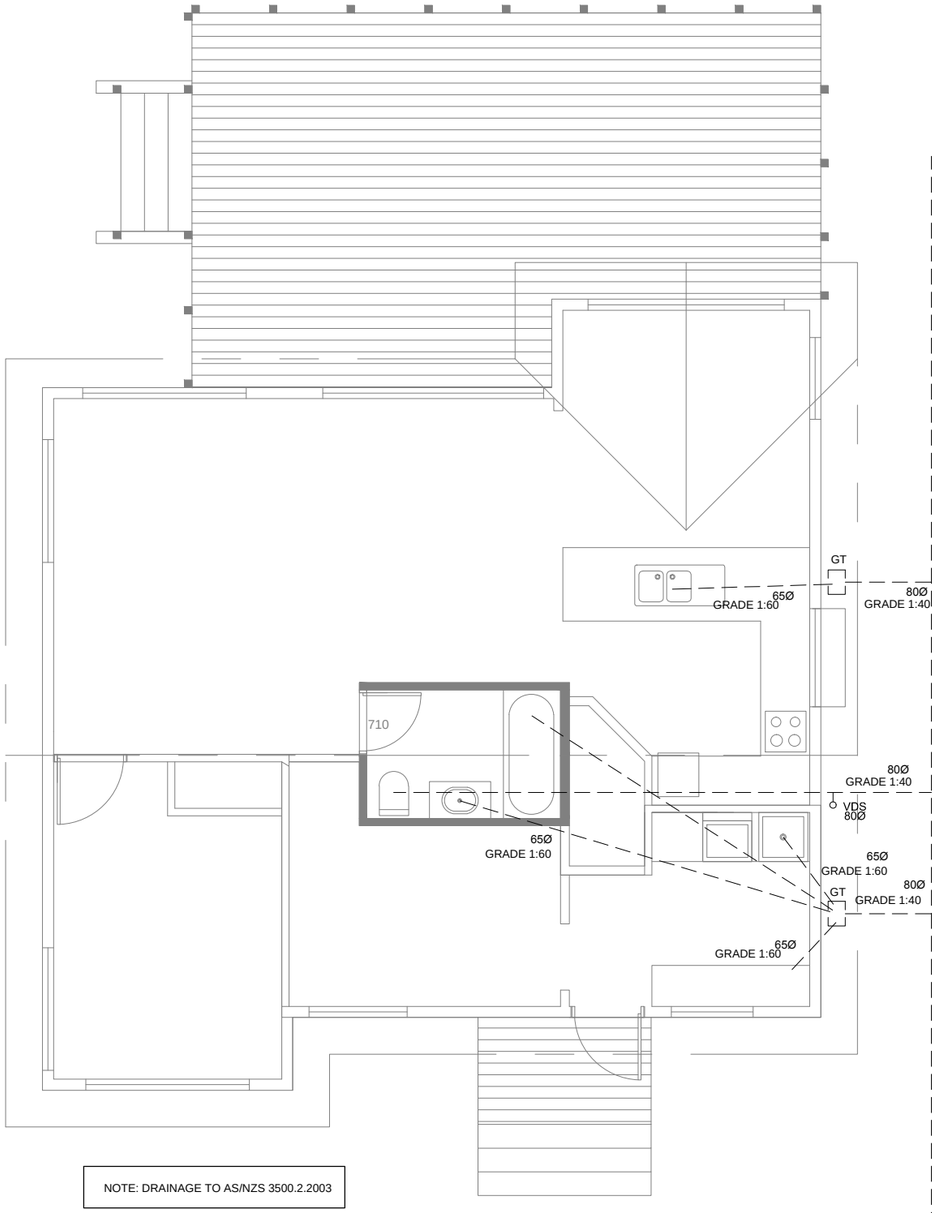

NOTE: DRAINAGE TO AS/NZS 3500.2.2003

Waste Pipe Gradients (min)		
40Ø	1:40 Minimum Gradiant	4DU
65Ø	1:40 Minimum Gradiant	21DU
100Ø	1:60 Minimum Gradiant	115DU
Waste Pipe & Discharge Units		
40Ø	Hand basin	1DU
40Ø	Kitchen Sink	3DU
40Ø	Dishwasher	3DU
40Ø	Laundry Tub	3DU
40Ø	Washing Machine	5DU
40Ø	Shower	2DU
40Ø	Bath	4DU
100Ø	WC Pan	4DU
Drainage Pipe Gradient		
65Ø	1:40 Minimum Gradiant	25DU
85Ø	1:60 Minimum Gradiant	61DU
100Ø	1:60 Minimum Gradiant	205DU
150Ø	1:60 Minimum Gradiant	1310DU

Plumbing Legend	
VDS	Vent Discharge Stack
DS	Discharge Stack
	Air Admittance Valve
I	Inspection Joint
	Drainage - Waste Pipe
	Vent Pipe
GT	Gulley Trap

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DRAINAGE PLAN
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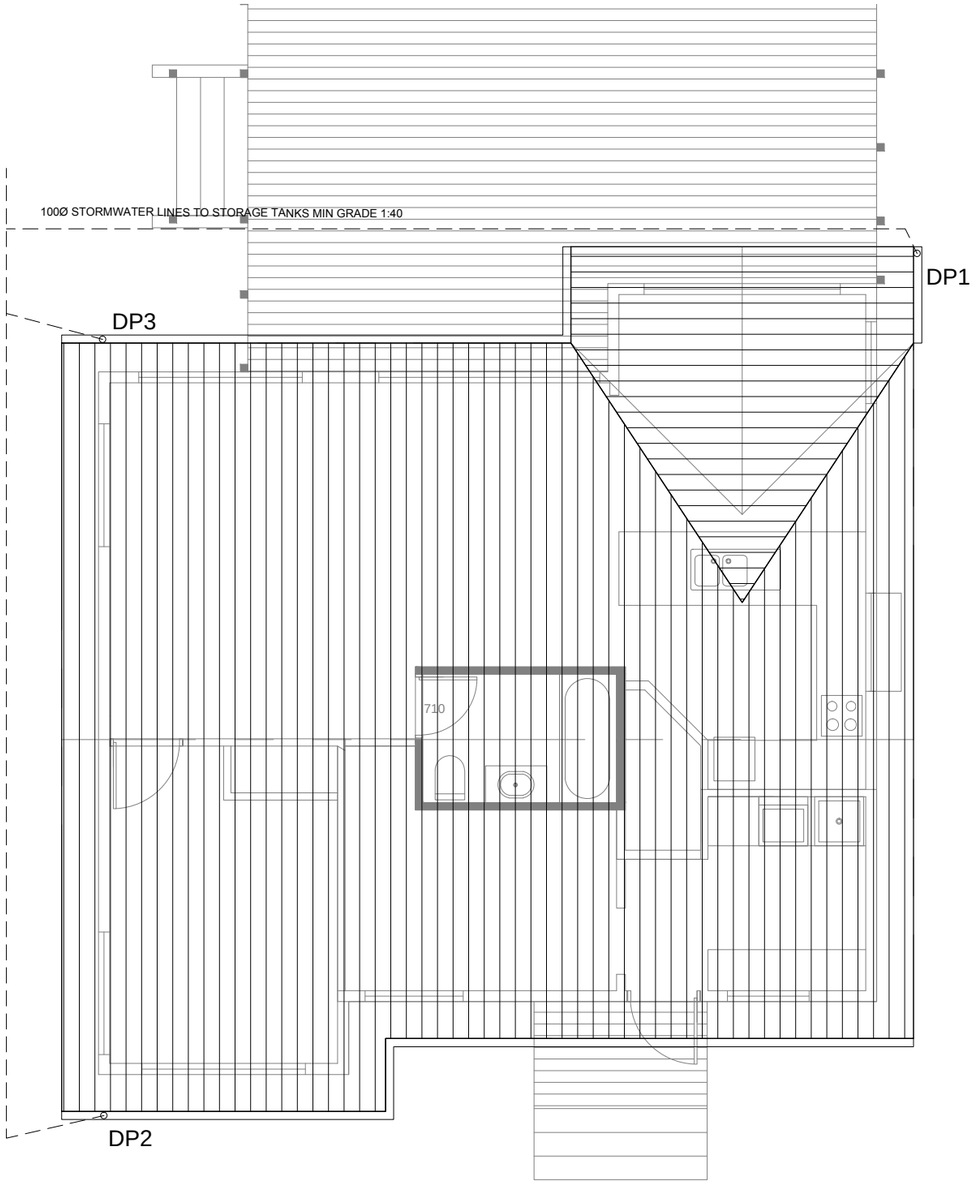
Revision: A



Roof

Fall 15°

Storm water calculations:

Roof Gutter type- 100 Customline gutter
Cross-sectional Area - 6000 mm²
Roof Area serviceable;- 50m²
Ref E1/AS1 Table 5

Roof Area A= 12 m²
Downpipe size = **1** x A1 Downpipes 80Ø
Ref E1/AS1 Table 5

Rainfall Intensity= 115mm/hr
Ref E1/AS1 Appendix A

Roof

Fall 10°

Storm water calculations:

Roof Gutter type- 100 Customline gutter
Cross-sectional Area - 6000 mm²
Roof Area serviceable;- 50m²
Ref E1/AS1 Table 5

Roof Area A= 86 m²
Downpipe size = **2** x A1 Downpipes 80Ø
Ref E1/AS1 Table 5

Rainfall Intensity= 115mm/hr
Ref E1/AS1 Appendix A

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ROOF PLAN
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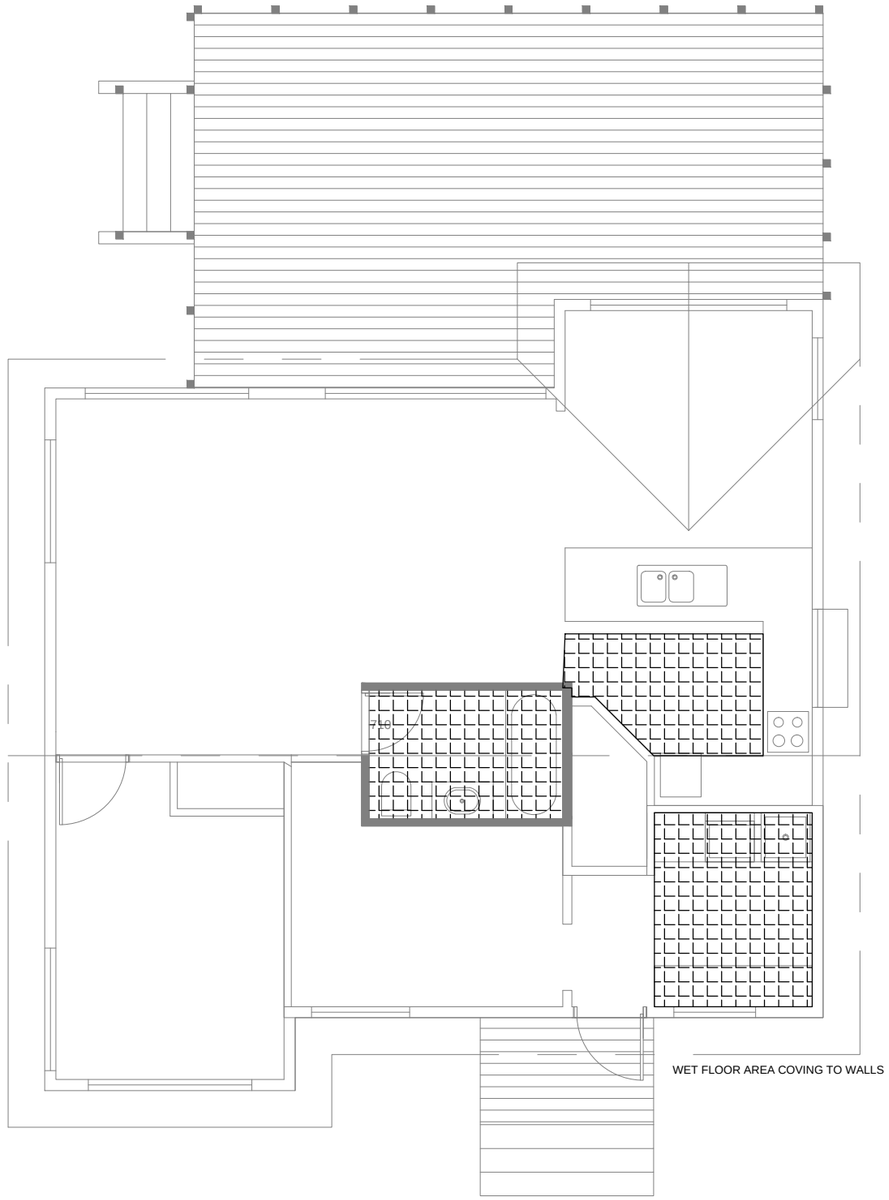

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WET FLOOR AREAS
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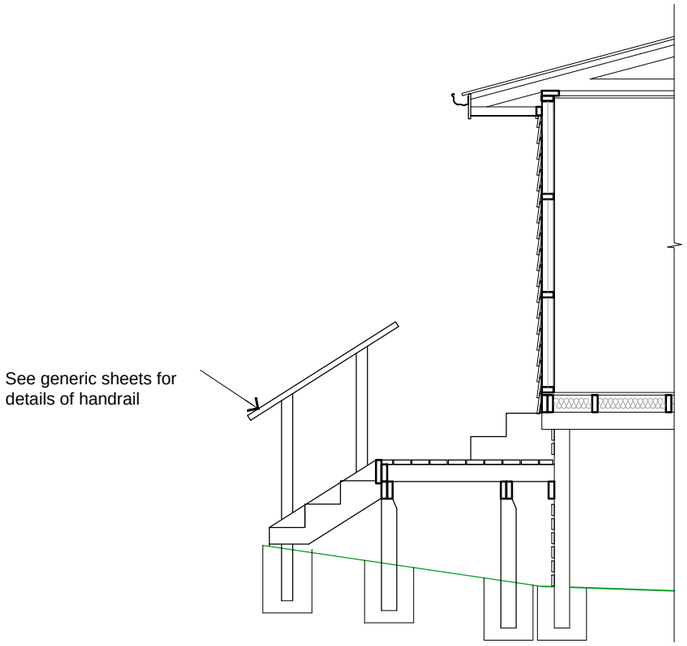
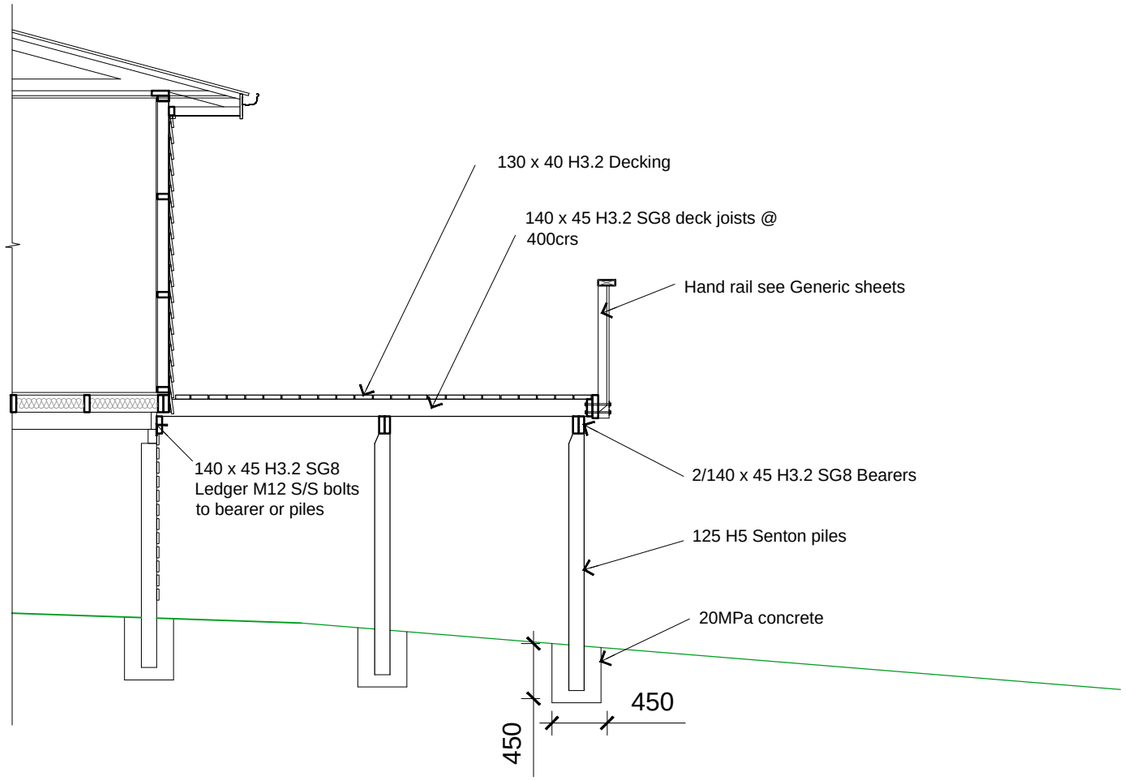
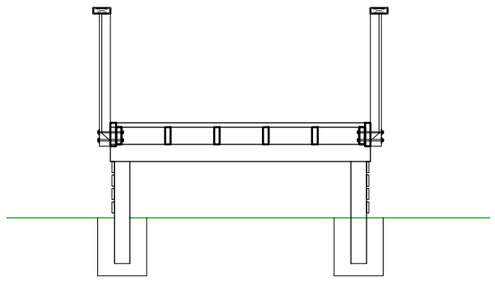


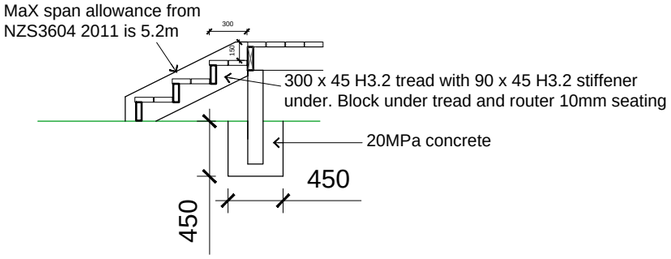
Note: Sub floor similar to detail RHS





Note: Sub floor similar to detail RHS

290 x 45 H3.2 SG8 stair ledger, 2
M12 to each post
SS connections with square
washers each side
MaX span allowance from
NZS3604 2011 is 5.2m



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Sheet Title
PROPOSED SECTION BB
MINOR DWELLING

Project Title
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RELOCATABLE HOUSE
TANEKAHA LANE
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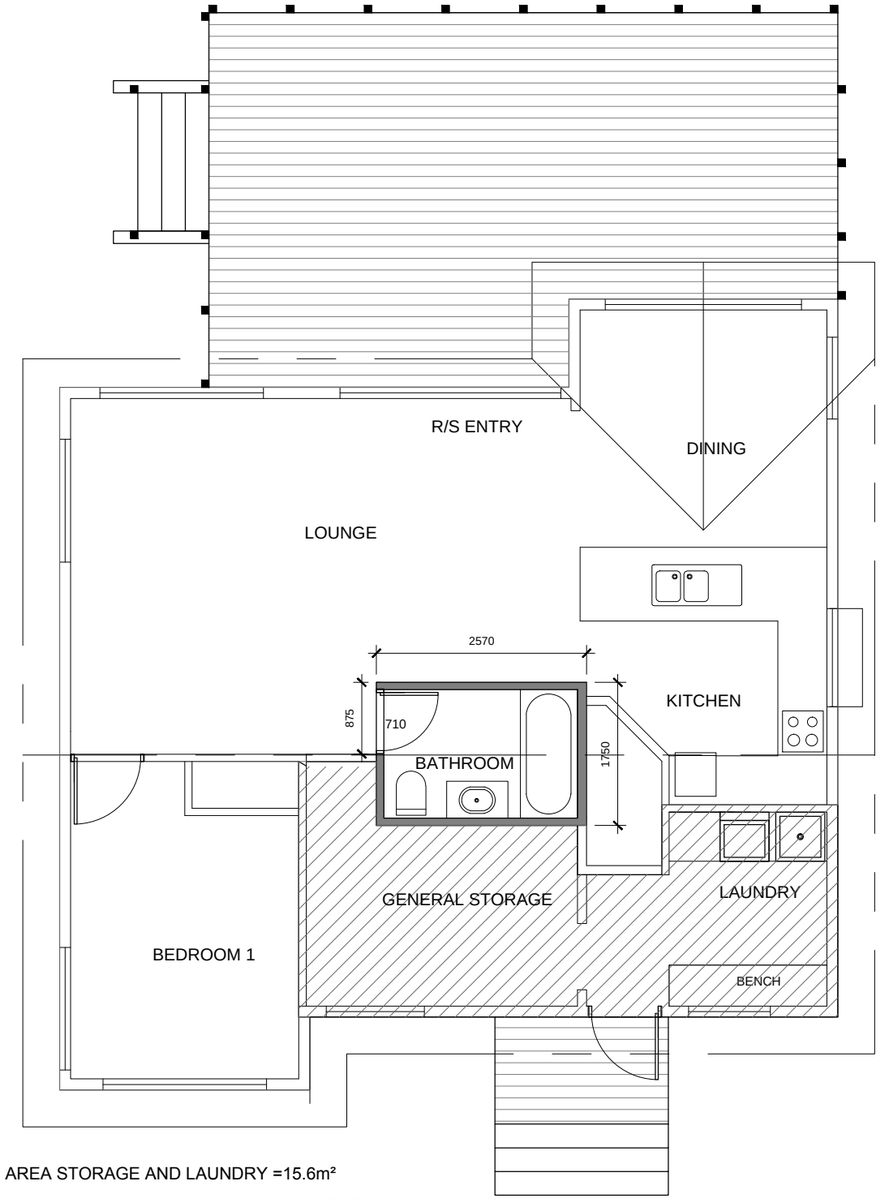
100982	A3-03 / A



AREA STORAGE AND LAUNDRY =15.6m²

AREA OF REMAINING MINOR DWELLING =63.4m²

LIVING ARCHITECTURE
P.O. Box 352, Kerikeri
Telephone 64 9 4077075
Mobile 027 285 5605
Email bert.draw@gmail.com

Sheet Title
EXISTING PLAN
MINOR DWELLING

Project Title
VAN VLIET
RELOCATABLE HOUSE
TANEKAHA LANE
WAIPAPA

Notes
Verify all dimensions on site before commencing work. Refer to figured dimensions. Refer all discrepancies to the drawing office.

Revision	By	Date
Designed	BVV	05-25
Drawn	BVV	05-25
Reviewed		
Approved		

CAD Ref	Scale (A3 Original)
100982	1:75 @ A3

Project No	Sheet	Revision
100982	OPTION FINAL	A