Far North District Council

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Website: www.fndc.govt.nz

Office Use Only
Application Number:

APPLICATION FOR RESOURCE CONSENT OR FAST-TRACK RESOURCE CONSENT

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

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

1. Pre-Lodgement Meeting

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

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

O Land Use O Fast Track Land Use* O Subdivision ☑ Discharge

O Extension of time (s.125) O Change of conditions (s.127) O Change of Consent Notice (s.221(3))

O Consent under National Environmental Standard (e.g. Assessing and Managing Contaminants in Soil)

O Other (please specify) _____

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

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

Yes / NO

4. Applicant Details:

Name/s: John Wood

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

Phone Numbers:

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

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

Name/s: Martin OBrien

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

Phone Numbers:

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

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

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

Name/s: John Wood

Property Address/: Location: 36 Paretu Drive, Kerikeri

7. Application Site Details:

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

Site Address/ Location: 36 Paretu Drive, Kerikeri

Legal Description: Lot 6 DP 91245 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.

There is a locked gate, please contact the owner so they you can access the property

8. Description of the Proposal:

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

Due to insufficient area to dispose of wastewater on this property a deep bore soakage is required breaching rul C.6.1.3 part 3 of the Regional Plan for Northland. This application is a discretionary application as per section C.6.1.5 of the Regional Plan for Northland. Haigh Workman have provided the onsite wastewater report as attached.

If this is an application for an Extension of Time (s.125); Change of Consent Conditions (s.127) or Change or Cancellation of Consent Notice conditions (s.221(3)), please quote relevant existing Resource Consents and Consent Notice identifiers and provide details of the change(s) or extension being sought, with reasons for requesting them.

9. Would you like to request Public Notification

Yes/No

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

☑ Building Consent (BC ref # if known)

○ Regional Council Consent (ref # if known)

○ National Environmental Standard consent

○ Other (please specify)

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

The site and proposal may be subject to the above NES. In order to determine whether regard needs to be had to the NES please answer the following (further information in regard to this NES is available on the Council's planning web pages):

Is the piece of land currently being used or has it historically ever been used for an activity or industry on the Hazardous Industries and Activities List (HAIL)

○ yes ☑ no ○ don't know

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

○ 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

12. Assessment of Environmental Effects:

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

Please attach your AEE to this application.

13. Billing Details:

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

Name/s: (please write all names in full) John Wood

Email: [redacted]

Postal Address: [redacted]

Phone Numbers: [redacted]

Fees Information: An instal[redacted] 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: John Wood [redacted] (please print)

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

14. Important Information:

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

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

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

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

Name: John W [redacted] (please print)

Signature: [redacted] (signature) Date: _____

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

Checklist (please tick if information is provided)

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

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

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

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

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **NA48B/893**

Land Registration District **North Auckland**

Date Issued 15 December 1980

Prior References
NA19A/355

Estate Fee Simple
Area 2557 square metres more or less
Legal Description Lot 6 Deposited Plan 91245
Registered Owners
Edward John Wood, Josephene Mary Wood and PM Trustee (2012) Limited

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Estate Fee Simple - 1/5 share
Area 1145 square metres more or less
Legal Description Lot 13 Deposited Plan 91245
Registered Owners
Edward John Wood, Josephene Mary Wood and PM Trustee (2012) Limited

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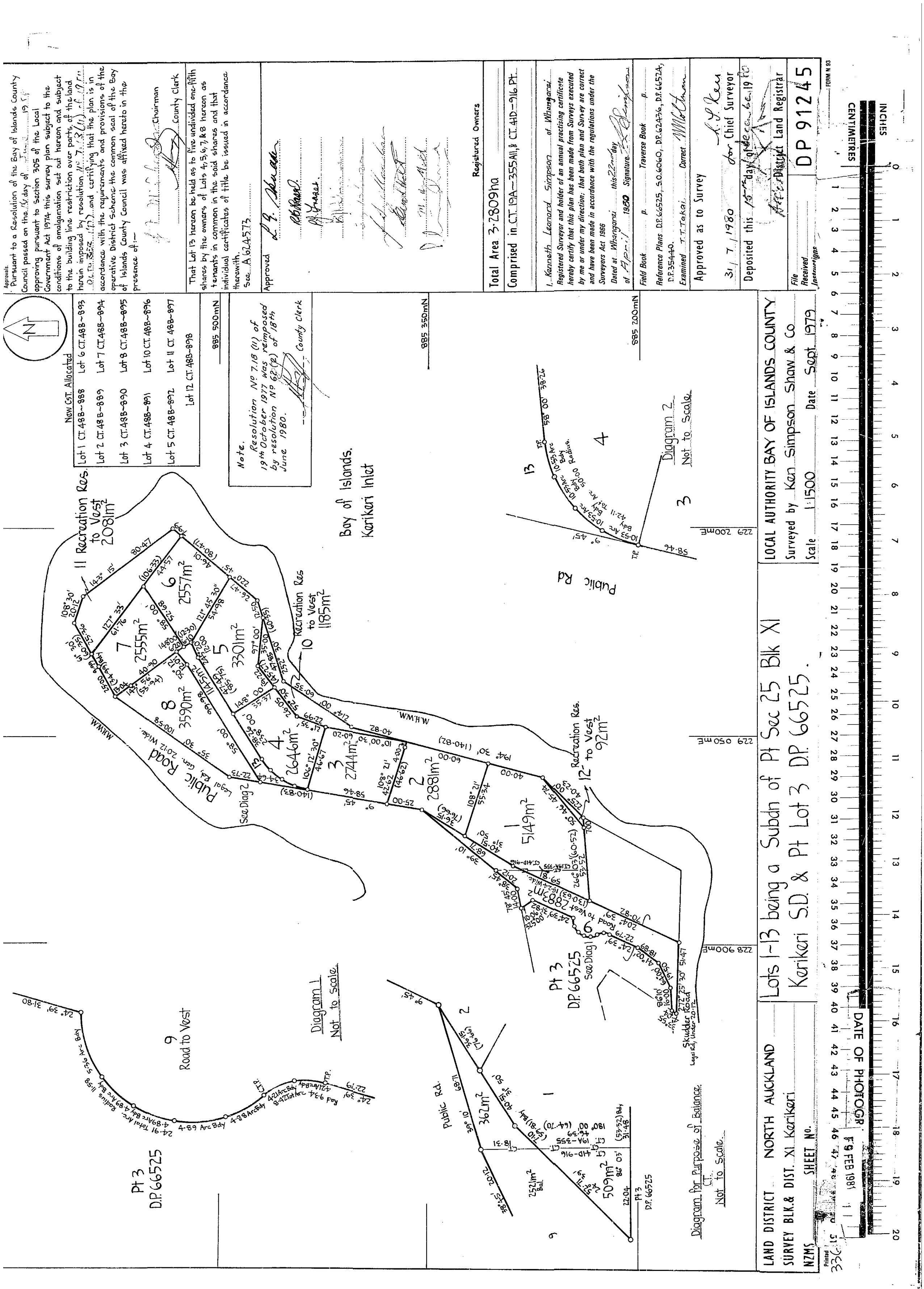
Interests

Subject to Section 308 (4) (5) (6) Local Government Act 1974

870815.6 Resolution imposing Building Line Restriction - 15.12.1980 at 2.56 pm

Subject to a right (in gross) to convey water over Lot 13 DP 91245 in favour of Far North District Council created by Easement Instrument 7883742.1 - 22.7.2008 at 9:00 am

11045653.2 Mortgage to Kiwibank Limited - 9.3.2018 at 4:14 pm


LAND DISTRICT NORTH AUCKLAND
LOCAL AUTHORITY BAY OF ISLANDS COUNTY
Lots 1-13 being a Subdn of Pt Sec 25 Blk XI Karikari S.D. & Pt Lot 3 D.P. 66525.
Surveyed by Ken Simpson Shaw & Co
Scale 1:1500
Date Sept 1979
DP 91245
Total Area 3.2809ha
Bay of Islands Karikari Inlet
Public Road
Diagram 1 Not to Scale
Diagram 2 Not to Scale

25 089

25 June 2025

EJ and JM Wood
36 Paretu Drive, Kerikeri

36 PARETU DRIVE, KERIKERI - ONSITE WASTEWATER ASSESSMENT REPORT

Haigh Workman Limited have been engaged to design a replacement on-site wastewater system to service an existing dwelling at the above mentioned address. This design has been carried out in general accordance with AS/NZS1547:2012 and Technical Publication No. 58 (TP58).

SITE DESCRIPTION

The site is legally described as Lot 6 DP 91245 and has a roughly square shape, covering an area of 2,550 m². It contains an existing single-level, five-bedroom dwelling, which is accessed via a concrete driveway at the end of Paretu Drive.

To the north of the dwelling is a swimming pool with associated decking, while grassed areas are located to the north, east, and south. Beyond these grassed areas, the site transitions into a moderate to steep coastal riparian margin, with slopes ranging from 25 to 50 degrees to the north and east. Adjacent properties to the west and south consist of residential dwellings with similar configurations.

The site is serviced by an existing septic tank, located to the east of the dwelling, with effluent disposed of via a soakage trenches within the adjacent lawn.

The owner reported that the existing system had backed up a number of times which is likely caused by failure of the soakage trenches.

There is inadequate area for a conventional soakage or drip irrigation system compliant with Northland Regional Council (NRC) rules at the Site. Our site investigation and design is for deep bore soakage in order to take advantage of the moderately well drained residual soils and elevated position of the Site.

SITE INVESTIGATIONS

Two representatives of Haigh Workman visited the site on 8 May 2025 and then again on 13 May 2025 to investigate site features and ground conditions. New Zealand land inventory maps (Whangaroa - Kaikohe) indicate the site is underlain by 'soils of the rolling and hilly land; Kerikeri friable clay with large boulders (KEb). Refer map extract appended.

One borehole was advanced near the southern boundary of the site to a depth of depth of 5.0m. The topsoil thickness was 0.4m, the underlying soil consisted of silty clay becoming increasing silty and logged as clayey silt and silt below 1.5m depth. Groundwater was not encountered but the soils became moist to wet after 4.0m depth.

Based on our site investigations the natural soils were categorised as AS/NZS1547:2012 Category 4: Clay Loams.

PROPERTY FILE

A review of the Far North District Council (FNDC) property file provided limited information on the plumbing and drainage. It would appear the house was built in 1988. The location of the septic tank matches that found on site as indicated on a plan extract provided below

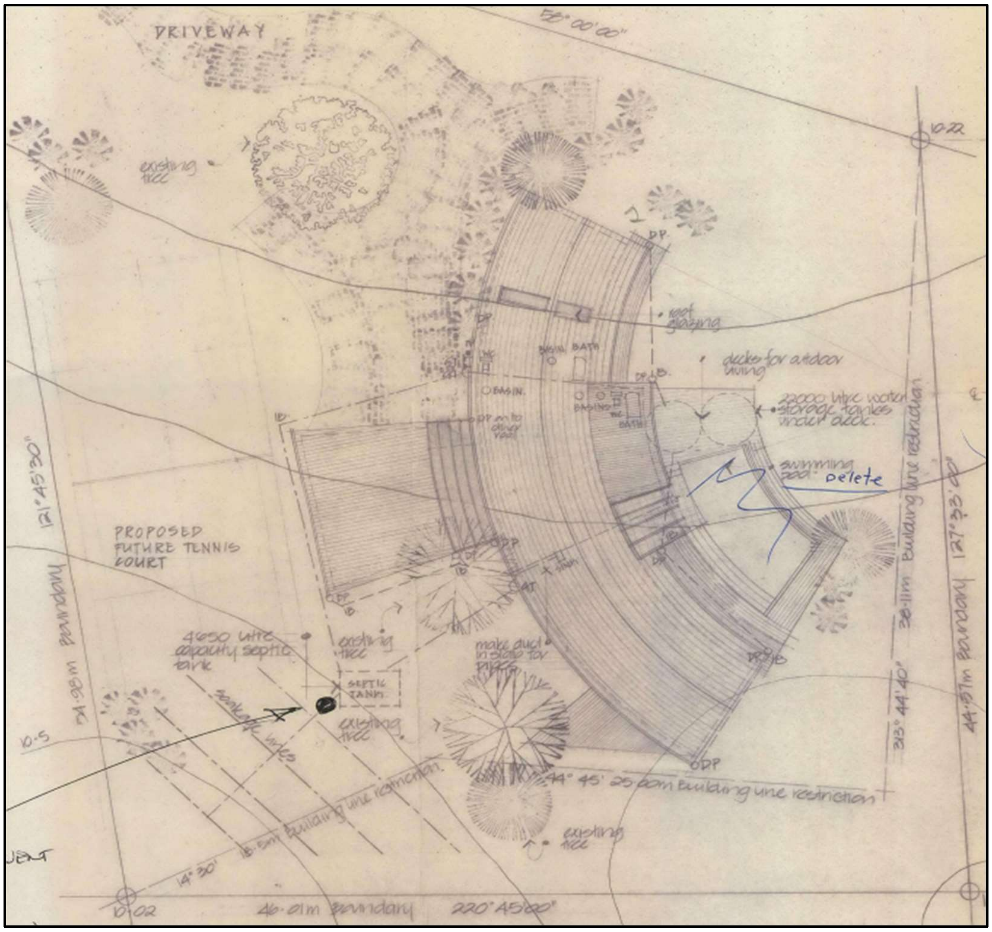


Figure 1 – Extract from Building Consent BP6023593

WASTEWATER GENERATION

Water supply is from reticulated supply. Design wastewater flows can be calculated using the guidelines in Auckland Council Technical Publication 58 (TP58) and AS/NZS1547:2012.

The dwelling is a 5-bedroom residence, for which we adopt a design occupancy of 8-persons taken from TP58 Table 6.1. AS/NZS1547:2012 Table H3 indicates daily wastewater flows of 200 litres/person/day for households connected with reticulated supply with standard fixtures. The average daily loading rate is therefore 8 x 200 = 1,600 litres/day.

TREATMENT SYSTEM

A secondary treatment system is to be utilised. The treatment plant is to meet the quality output of AS/NZS 1546.3:2003 and be capable of producing effluent having less than 20 g/m³ of Biochemical Oxygen Demand 5 day (BOD_5) and 30 g/m³ Total Suspended Solids (TSS).

The proposed new treatment plant has been located near the southeast corner of the property, the proposed location is provided in **Appendix A**. The treatment system shall be accessible for regular maintenance and servicing and be set back more than 3 m from buildings and 1.5m from boundaries.

In regard to Operative FNDC District Plan (2009) Rule 12.7.6.1.4 (b) the treatment plant is located within the 30m setback from the boundary of the coastal marine area to allow for gravity flow from the house to the treatment plant. A summary of regulatory requirements is included in **Appendix C**.

DISPOSAL SYSTEM

At the request of the client for a trafficable disposal area and the requirement for access to the council reserve at to the north of the site, deep bore soakage that occupy less space is recommended as a viable option.

A suitable location for the deep bores is along the southwest boundary of the site. Deep bore design has been carried out in accordance with the recommendations found in TP58. The bores are to be 600mm diameter, back filled with 30-50mm drainage aggregate and complete with vent (which also acts as an inspection cap). The bores will extend to 6.0m below ground level. Due to the topography of the site, we consider the winter groundwater table to be greater than 8m below ground level. Our design will therefore comply with the TP58 recommendation of a minimum groundwater separation of 1.2m.

The bores are to be dose-loaded with effluent via a standard pump from the treatment plant. Bores are to be dosed in pairs via an indexing / sequencing valve.

The nearest surface water body is the coastal margin, which is approximately 45m southeast of the disposal area (at the closest point by plan measurement). According to Northland Regional Council Lidar mapping, the disposal field is approximately 14m above sea level.

The number of bores required will be verified by in-situ testing at the time of construction. For design we have assumed a clean water soakage rate of 200 mm/hr, which results in a total of 8 bores, as per the site plan enclosed.

The soakage rate will be measured in the first 3 boreholes which will determine the final number of boreholes required. Soakage testing is to be undertaken in accordance with the recommended procedure from TP58. The water level in the bores is to be maintained in the middle third of the hole (i.e. 2-4 m below ground level for a 6 m deep borehole). Based on soakage rates recorded on a site in the same geological formation we estimate that no more than 8 deep bores are required. Calculations are enclosed. Sufficient void volume is to exist within bores to hold the daily design flow.

The chosen location of the bores will achieve a minimum setback of 5m from any identified stormwater flow path, 1.5m from the property boundary and achieves the minimum setback of 30m from the boundary of the coastal marine area as per Operative District Plan Rule 12.7.6.1.4. (b). A summary of regulatory requirements in included in **Appendix C**.

RESOURCE CONSENT

Under the Operative FNDC District Plan Rule 12.7.6.1.4 (b) the treatment system is closer than 30m from the boundary of the coastal marine area hence resource consent is required.

Deep bores are a Discretionary Activity under Rule C.6.1.5 of the Proposed Regional Water Plan for Northland (2024) hence resource consent is required.

DESIGN SUMMARY

ITEM	DESCRIPTION
Design Occupancy	*8 persons*
Water fixtures	*Standard water fixtures*

Wastewater generation	*1,600 L/d*
Treatment system	*Secondary treatment plant*
Location of effluent disposal	*As per drawings*
Effluent disposal system	*Deep bores*
Irrigation pump	*Davey 42A/B or equivalent*
Soil type	*AS / NZS1547 Category 4*
Clean water soakage rate	*200 mm/hr (to be tested in construction)*
Land application area	*Approx. 32 m^2*
Reserve area (30%)	*Approx. 10 m^2*
Total area required	*42 m^2*
Slope of land application area	*< 1˚*

RECOMMENDATIONS

To provide long term satisfactory treatment and disposal of domestic wastewater it is recommended that:

- The secondary treatment system be capable of producing effluent with less than 20 g/m^3 of BOD_5 and 30 g/m^3 TSS for average flows of 1,600 L/day,
- Wastewater disposal directed to deep bores near the southern boundary of the site, as indicated in the attached site plan,
- A sequencing valve be used to dose load bores as pairs,
- Soakage testing to be undertaken at time of construction to verify the number of bores specified,
- The system be constructed to the best professional and trade practices,
- The secondary treatment plant be maintained to the manufacturer's specifications,
- The treatment and disposal system be sited in accordance with the attached site plan, and
- An application should be made for a resource consent before implementing the recommended solution.

DISCLAIMER

This report has been prepared for the sole use of EJ and JM Wood (the client) with respect to the particular brief outlined to us. It may not be used or relied on (in whole or part) by anyone else, or for any other purpose or in any other contexts, without our prior written agreement. This report may not be read or reproduced except in its entirety.

Prepared by:	Reviewed by:	Approved by:
Aaron Thorburn	**Tom Adcock**	**John Papesch**
Senior Environmental Advisor BAppSc, CEnvP	Senior Civil Engineer BEng Civil, MEngNZ	Director / Senior Civil Engineer BE (Civil), CPEng, CMEngNZ

APPENDICES:

Appendix A – Site Drawings

Appendix B – Onsite Wastewater Disposal Investigation (FNDC Engineering Standards 2023)

Appendix C – Summary of Regulatory Requirements

Appendix D – Soil Type and Drainage Northland Regional Council Maps

Appendix E – Location of Northland Aquifers

Appendix F – Operation and Maintenance Guidelines

Appendix G – Borehole Logs

Appendix H – Borehole Calculations

Appendix I – Producer Statement – Design (PS1)

HAIGH WORKMAN LTD
Civil & Structural Engineers

Appendix A - Site Drawings

Drawing No.	Title
25 089 / 1	Site Location Plan
25 089 / 2	Site Features & Investigation Plan
25 089 / 3	Deep Bore Detail with Overflow Trench

25 089 / 1 – Site Location Plan

NOTES:

1. LOT BOUNDARIES AND AERIAL PHOTO INFORMATION TAKEN FROM LAND INFORMATION NEW ZEALAND (LINZ).
2. CONTOUR LINES AT 1m INTERVALS SOURCED FROM NRC.
3. LOCATIONS HAVE NOT BEEN SURVEYED AND ARE INDICATIVE ONLY.
4. NUMBER OF DEEP BORES TO BE CONFIRMED BASED ON SOAKAGE TESTING AT TIME OF CONSTRUCTION.
5. (REFER TO DEEP BORE DETAIL).
6. ALL GRAVITY DRAINAGE TO COMPLY WITH AS/NZS3500 & NZBC G13/AS1. ALL DRAINAGE IS DIAGRAMMATICAL.
7. MINIMUM EFFLUENT DISPOSAL SETBACKS:
   - 1.5m FROM PROPERTY BOUNDARIES
   - 3.0m FROM BUILDINGS AND RETAINING WALLS
   - 0.5m FROM SURFACE WATER (SECONDARY TREATMENT)
   - 15m FROM COASTAL MARINE AREA (NRC)
   - 30m FROM COASTAL MARINE AREA (FNDC)
8. LAND APPLICATION AREA FOR EIGHT BORES - 54m^2 (2.6 x 2.6m EACH BORE). RESERVE AREA (30%) I.E. THREE BORES - 20m^2.
9. 7. DEEP BORES TO BE DOSED IN SEQUENCE USING INDEXING VALVE IN PAIRS (20mm ID FEED PIPE SPLIT INTO 2 X 10mm ID PIPES FEEDING EACH BORE

30m SETBACK FROM COASTAL MARINE AREA

PORTICO

DECK

POOL

EXISTING 5-BEDROOM DWELLING

20m SETBACK FROM FRESHWATER BORE LOCATED AT 31 PARETU DRIVE (LOCATED IN SHED VISIBLE FROM ROAD)

RESERVE AREA / ADDITIONAL DEEP BORES IF REQUIRED

≈3.00

2.80

≈2.60

20.80

PROPOSED LOCATION OF DEEP BORES
(0.6m Ø AND APPROX 6m DEEP)
2.8m BOUNDARY SETBACK FROM BORE CENTER

BH01

15m SETBACK FROM COASTAL MARINE AREA

EXISTING PRIMARY TREATMENT SYSTEM
(TO BE DECOMMISSIONED)

GRAVITY SEWER LINE
(100mm ID)
(GRADIENT 1:60)

EFFLUENT DELIVERY LINE (25mm OD)
ALKATHENE LDPE MIN. 8 BAR

PROPOSED SECONDARY TREATMENT SYSTEM

1.50m

HIGH TIDE CONTOUR

Rev	Date	Description	By	Checked
A	18/06/25	FIRST ISSUE	PL	
			AT	

DWG WASTEWATER SITE PLAN

A3 Scale 1: 250 (0 5 12)

Date 18.06.2025

Drawn PL | Checked AT | Approved AT

File T:\CLIENTS\EJ AND JM WOOD\25 089 - 36 PARETU DRIVE, KERIKERI\ENGINEERING\DRAWING\25_089_PLAN_PL_23.06.2025.DWG

HAIGH WORKMAN Ltd
Civil & Structural Engineers
6 Fairway Drive
Kerikeri, BOI
T: 09 407 8327
F: 09 407 8378
E: info@haighworkman.co.nz

Project PROPOSED SITE PLAN
36 PARETU DRIVE, SKUDDERS BEACH

Client EJ AND JM WOOD

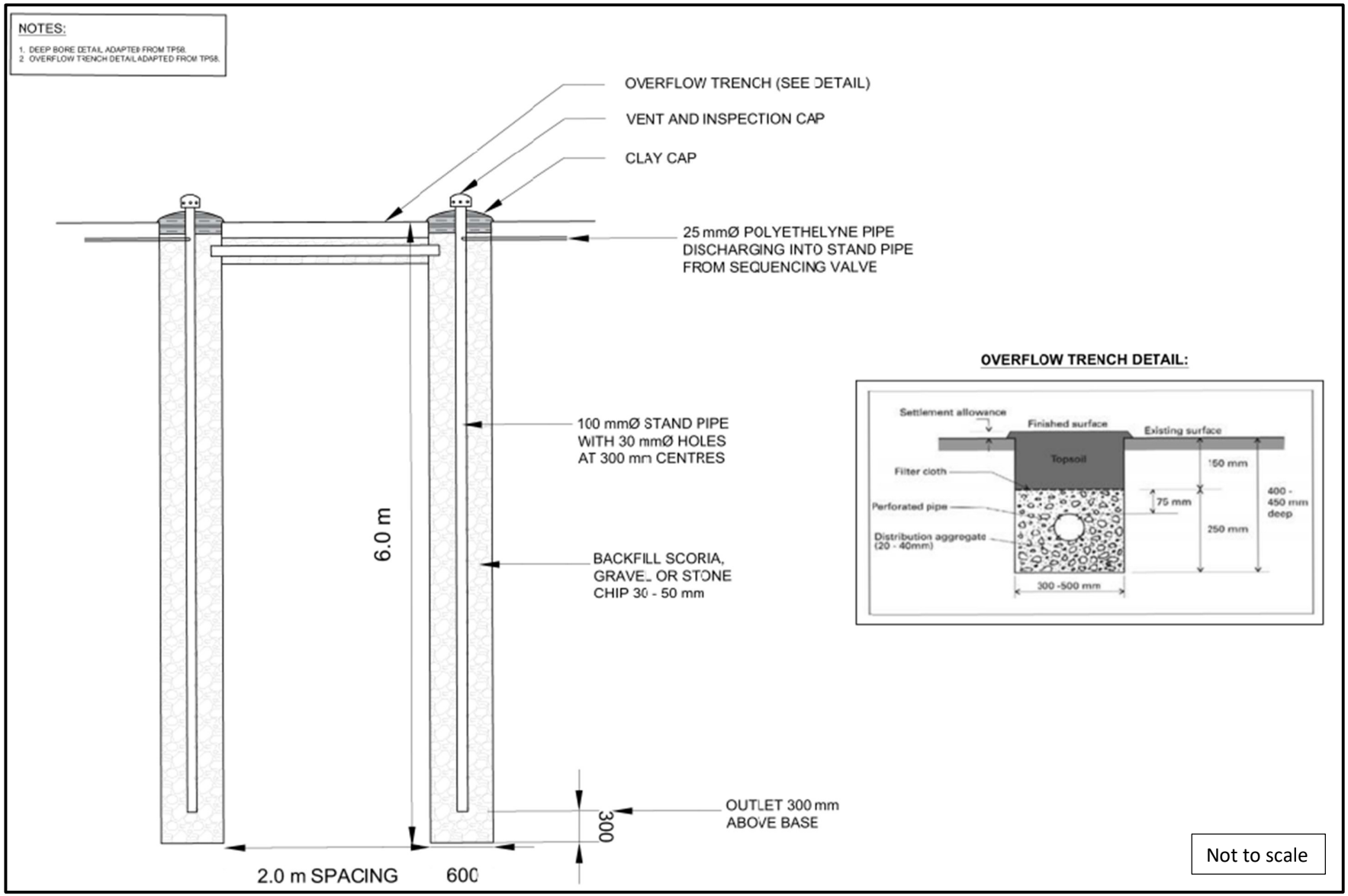
Project No. 25 089

RC no.

Stage

Dwg No. WW-01

Sheet No. 1 OF 1



25 089 / 3 - Deep bore detail with overflow trench

Appendix B - Onsite Wastewater Disposal Investigation (FNDC Engineering Standards 2023)

This form is to be read in conjunction with AS/NZS 1547:2012 (or any amendments as applicable), and, in particular with Part 4: Means of Compliance

Part A – Contact Details

1 - Applicant

Name: *EJ and JM Wood*

Property Address: *36 Paretu Drive, Kerikeri*

Lot/DP Number: *Lot 6 DP 91245*

2 – Consultant / Site Evaluator

Site Evaluator Name: *Aaron Thorburn*

Company Name: *Haigh Workman Limited*

Postal Address: *PO Box 89, Kerikeri*

Business Phone: *09 407 8327* Mobile:

Email: *info@haighworkman.co.nz*

SQEP Registered[1]: ☑ Yes ❑ No If no, details of suitably registered SQEP who will countersign the report are to be supplied below.

Name of SQEP:J *John Papesch*

Company Name: *Haigh Workman Ltd*

Postal Address: *PO Box 89, Kerikeri*

Business Phone: *09 407 8327* Mobile:

Email: *johnp@haighworkman.co.nz*

[1] It is a requirement that the Evaluator be SQEP registered to carry out on-site effluent investigations/designs. If not, then evaluation/design will need to be counter-signed by a suitably registered SQEP

HAIGH WORKMAN LTD
Civil & Structural Engineers

Part B - Site and Soil Evaluation

1: Desk Study

Requirements (✓ appropriate box) Please complete **all** options. (*If more than one option applies to land under consideration, please clarify with supporting information)*

☐	*FNDC REQUIREMENT*	*APPLIES TO LOT(S)*	*COMMENTS*
1	**Hazard maps/GIS Hazard layer - stability**		
✓	Low instability risk		*Proposed investigation site near level (<1°)*
	Medium instability risk		
	High instability risk		
2	**GIS Hazard layer - effluent on slope stability**		
✓	Low disposal potential		*Gentle / flat ground (disposal field area)*
	Moderate disposal potential		
	High disposal potential		
3	**GIS Hazard Layer - effluent suitability**		
✓	Medium unsuitability		*Cat 3 soils, groundwater table > 5m bgl.*
	High unsuitability		
4	**GIS Hazard Layer - Flood susceptibility**		
	Is flood susceptible		
	Is partially flood susceptible		
✓	Is not flood susceptible		*The site is not located in either coastal or river flood hazard zone areas.*
5	**GIS land resources layer - Streams**		
Are there streams on or adjacent to land under investigation?			
	Yes		
✓	No		
6	**GIS land resources layer – aquifers at risk**		

Is land situated over or adjacent to aquifer?		Yes		
	✓	No		
7	**Annual Rainfall (HIRDS)**		*~1500 mm*	

Note: It is to be noted that all information obtained off FNDC GIS/Hazard Maps is to be taken as a guide only.

Note: All information obtained from the above sites is to be confirmed by a specific site investigation as localised conditions could vary substantially. However, should the above data checks indicate the potential for a hazard/non-complying activity etc., this must be further investigated to confirm/deny the indicated situation.

2: On-Site Evaluation

a. Determination of Soil Category *(refer table 4.1.1* AS/NZS 1547:2012*)* (✓ appropriate box)

Soil Category	Structure		Applies to lot(s)	Comments
1 Gravels & Sands		Structureless (massive)		
2 Sandy loams		Weakly Structured		
		Massive		
3 Loams		High/Moderate structured		
		Weakly structured or Massive		
4 Clay loams	✓	High/moderate structured		*In accordance with Appendix C & based on site observations*
		Weakly structured		
		Massive		
5 Light clays		Strongly structured		
		Moderately structured		
		Weakly structured or massive		
6 Medium to heavy clays		Strongly structured		
		Moderately structured		

		Weakly table 9 or massive		

Note: Refer 4.1 A4 – Soil Assessment AS/NZS 1547:2012 for assessment criteria.

Note: Details of the method used to determine soil type etc. are to be clearly stated, along with positions of boreholes/test pits etc. clearly marked on a site plan. Bore logs are to be provided. Photos should be included.

Note: The site plan should also clearly show the intended area for effluent disposal, along with any site features such as drains, water bores, overland flows etc., along with separation distance achieved.

On-Site Evaluation (continued)

b. Site Characteristics for Proposed Disposal Area: (if there is a marked difference between sites, please fill in a separate form for each site and clearly note which site the assessment applies to) (ü appropriate box)

☐	***DETAILS***	***APPLIES TO SITE(S)***
1	**Flooding potential to proposed field and reserve field (refer note 1 below)**	
✓	Fields will not flood, or	*Fields have been located outside of any mapped flood extent*
	Fields will flood in	
	20% AEP event	
	5% AEP event	
	1% AEP event	
2	**Surface water separation to proposed field and reserve field (refer note 2 below)**	
✓	*Main/reserve disposal field comply with NRC rules*	*Main / reserve disposal fields are outside 20% AEP event areas in compliance with NRC offset requirements*
	Main/reserve disposal field do not comply with NRC rules	
3	**Surface water separation to proposed field and reserve field (refer note 2 below)**	
	Main/reserve disposal field comply with NRC rules	*As above*
	Main/reserve disposal field do not comply with NRC rules	
4	**Winter ground water separation to proposed field and reserve field (refer note 3 below)**	
✓	*Main and reserve disposal field comply with NRC rules*	
	Main and reserve disposal field do NOT comply with NRC rules	
5	**Slope of ground of proposed field and reserve field (refer note 4)**	
Description	*Near level, slopes likely to be < 1°*	
6	**Shape of ground of proposed field and reserve field (Refer note 5 below)**	

	Waxing divergent		*Linear divergent*		*Waning divergent*
	Waxing planar	✓	*Linear planar*		*Waning planar*
	Waxing convergent		*Linear convergent*		*Waning convergent*

Comments	*Near level*

	DETAILS	***APPLIES TO SITE(S)***
7	**Intended water supply source**	
✓	*Public supply*	
	Rainwater	
	Bore	
8	**Proposed method of disposal and recommended Daily Loading rate (DLR) (refer note 6 below)**	
Description	Deep bores	
600mm Ø deep bores. DLR to be confirmed based on live soakage testing.		

Peak loading factored in (refer note 6 below)		Yes	✓ No
Comments	*Standard residential dwelling*		

9	**Site exposure (refer note 7 below)**	***Description***	***Applies to Site(s)***
Site(s) aspect		*North facing*	
Pre-dominant wind direction		*South-west*	
Presence of shelter belts		*n/a*	
Presence of topographical features or structures		*some mature trees dotted around site*	

10	**Proximity of water bores (include adjacent to properties) (refer note 9 below)**
There is a permitted bore located immediately west of the site (31 Paretu Drive) utilised for domestic use. The bore and the associated 20m setback distance from the bore does not impact the proposed wastewater deep bores and treatment plant.	
11	**Visible evidence of slips / instability (refer not 8 below)**
Nil	

12	**Total suitable area available for type of effluent disposal proposed (including reserve area)**
32 m^2 for disposal area and 10 m^2 (30%) for reserve area.	
13	**Setback areas proposed (if any) (refer note 10 below)**
Exclusion areas and setback distances are provided in Table 9 of the Regional Plan and presented herein	

Notes

1. *If the FNDC hazard maps/GIS indicate a flooding susceptibility on the site being evaluated, an on -site evaluation is to be carried out to determine the effects from 20%, 5% and 1% AEP storm events. This evaluation is to include all calculations to substantiate conclusions drawn. If necessary, include a detailed contour plan and photos.*
2. *NRC Water & Soil plan defines surface water as 'All water, flowing or not, above the ground. It includes water in continually or intermittently flowing rivers, artificial watercourses, lakes and wetlands, and water impounded by structures such as dams or weirs but does not include water while in pipes, tanks, cisterns, nor water within the Coastal Marine Area'. By this definition, separation (complying with NRC rules) is to be maintained by both the proposed disposal and reserve areas from any overland flowpaths and/or swale drains etc. or R/C will be required from NRC. Surface water is to be clearly marked on each site plan, showing the extent of a 1% AEP storm event, and detailing separation distances to main/reserve disposal areas.*
3. *Positions of test borehole/s to be shown and bore logs to be provided. Separation (complying with NRC rules) is to be maintained by both the proposed disposal and reserve areas from winter ground water level or R/C will be required from NRC. If the investigation is done outside of the winter period, allowance is to be made in determining the likely winter level.*
4. *Slopes of ground are to be compared with those recommended maximums for type of system proposed (refer Appendix 4.2B AS/NZS 1547:2012). Designs exceeding those maximums will require specific design to justify the proposal and may also need Resource Consent from NRC.*
5. *Shape of ground is important as it will determine whether there is potential for concentrated overland flows from the upper slopes and also if effluent might be concentrated at base of slope if leeching occurs. Refer Figure 4.1B2 AS/NZS 1547:2012.*
6. *The proposed system (for residential developments) should be sized to accommodate an average 3-bedroom house with 5 people. Sites in holiday areas need to take peak loading into effect in determining daily volumes. The design must state what DLR was used to determine area necessary (including reserve area). If ground conditions are marginal for type of disposal proposed, then a soil permeability test utilising the constant head method is to be carried out across the proposed disposal area. Refer Appendix 4.1F AS/NZS 1547:2012.*
7. *The site aspect is important as a north-facing site that is not sheltered from wind and sun by shelterbelts or other topographical features or structures will perform far better than a south-facing site on the lee of a hill that is shaded from wind and sun etc.*
8. *If any effluent disposal area (including any reserve area) proposed has or is adjacent to areas that show signs of instability, then a full report from a CPEng (Geotech) will be required to justify the viability of the area for effluent disposal.*
9. *If there are any water bores on the subject property or adjacent properties then a site plan will be required showing bore positions in relation to any proposed effluent field(s).*
10. *If setback areas are proposed to mitigate effects, the extent and position/s need to be shown on a site plan.*

Appendix C - Summary of Regulatory Requirements

Proposed Regional Plan (2024)

C.6.1.3 Other on-site treated domestic wastewater discharge – permitted activity

The discharge of domestic type wastewater into or onto land from an on-site system and the associated discharge of odour into air from the on-site system are permitted activities, provided:

Criterion	Comment
1) The on-site system is designed and constructed in accordance with the Australian/New Zealand Standard. On-site Domestic Wastewater Management (AS/NZS 1547:2012), and	*Non-compliant.* *The standard does not provide for deep bores soakage*
2) The volume of wastewater discharged does not exceed two cubic metres per day, and	Complies.
3) The discharge is not via a spray irrigation system or deep soakage system, and	*Non-compliant.* *(deep bores soakage proposed).* *Resource consent required.*
4) The slope of the disposal area is not greater than 25 degrees, and	Complies.
5) For wastewater that has received secondary treatment or tertiary treatment, it is discharged via: a) a trench or bed system in soil categories 3 to 5 that is designed in accordance with Appendix L of Australian/New Zealand Standard On-Site Domestic Wastewater Management (AS/NZS 1547:2012); or b) an irrigation line system that is dose loaded and covered by a minimum of 50 millimetres of topsoil, mulch, or bark, and	*Non-compliant.* *(deep bores soakage proposed).* *Resource consent required.*

6) for the discharge of wastewater **<u>onto the surface of slopes greater than 10 degrees:</u>** a) the wastewater, excluding greywater, has received at least secondary treatment, and b) the irrigation lines are firmly attached to the disposal area, and c) where there is an up-slope catchment that generates stormwater runoff, a diversion system is installed and maintained to divert surface water runoff from the up-slope catchment away from the disposal area, and d) a minimum 10 metre buffer area down-slope of the lowest irrigation line is included as part of the disposal area, and e) the disposal area is located within existing established vegetation that has at least 80 percent canopy cover, or f) the irrigation lines are covered by a minimum of 100 millimetres of topsoil, mulch, or bark, and	Slopes are less than 10 degrees and wastewater will be subject to secondary treatment. Deep bore soakage proposed.
7) the disposal area and reserve disposal area are situated outside the relevant exclusion areas and setbacks in Table 9: Exclusion areas and setback distances for on-site domestic wastewater systems, and	Complies.
8) for septic tank treatment systems, a filter that retains solids greater than 3.5 millimetres in size is fitted on the outlet, and	N/A.
9) the following reserve disposal areas are available at all times: a) one hundred percent of the existing effluent disposal area where the wastewater has received primary treatment or is only comprised of greywater, or b) thirty percent of the existing effluent disposal area where the wastewater has received secondary treatment or tertiary treatment.	30% Reserve area provided.
10) the on-site system is maintained so that it operates effectively at all times and maintenance is undertaken in accordance with the manufacturer's specifications, and	Proposed per maintenance recommendations.
11) the discharge does not contaminate any groundwater water supply or surface water, and	Will comply given design parameters.
12) there is no surface runoff or ponding of wastewater, and	Will comply given design parameters.
13) there is no offensive or objectionable odour beyond the property boundary.	Will comply given design parameters.

Table 9: Exclusion areas and setback distances for on-site domestic wastewater systems

Feature	Primary treated domestic type wastewater	Secondary and tertiary treated domestic type wastewater	Greywater
Exclusion areas			
Floodplain	5% annual exceedance probability	5% annual exceedance probability	5% annual exceedance probability
Horizontal setback distances			
Identified stormwater flow path (including a formed road with kerb and channel, and water-table drain) that is down-slope of the disposal area	5 metres	5 metres	5 metres
River, lake, stream, pond, dam or natural wetland	20 metres	15 metres	15 metres
Coastal marine area	20 metres	15 metres	15 metres
Existing water supply bore	20 metres	20 metres	20 metres
Property boundary	1.5 metres	1.5 metres	1.5 metres
Vertical setback distances			
Winter groundwater table	1.2 metres	0.6 metres	0.6 metres

Far North District Plan (Operative) 2009

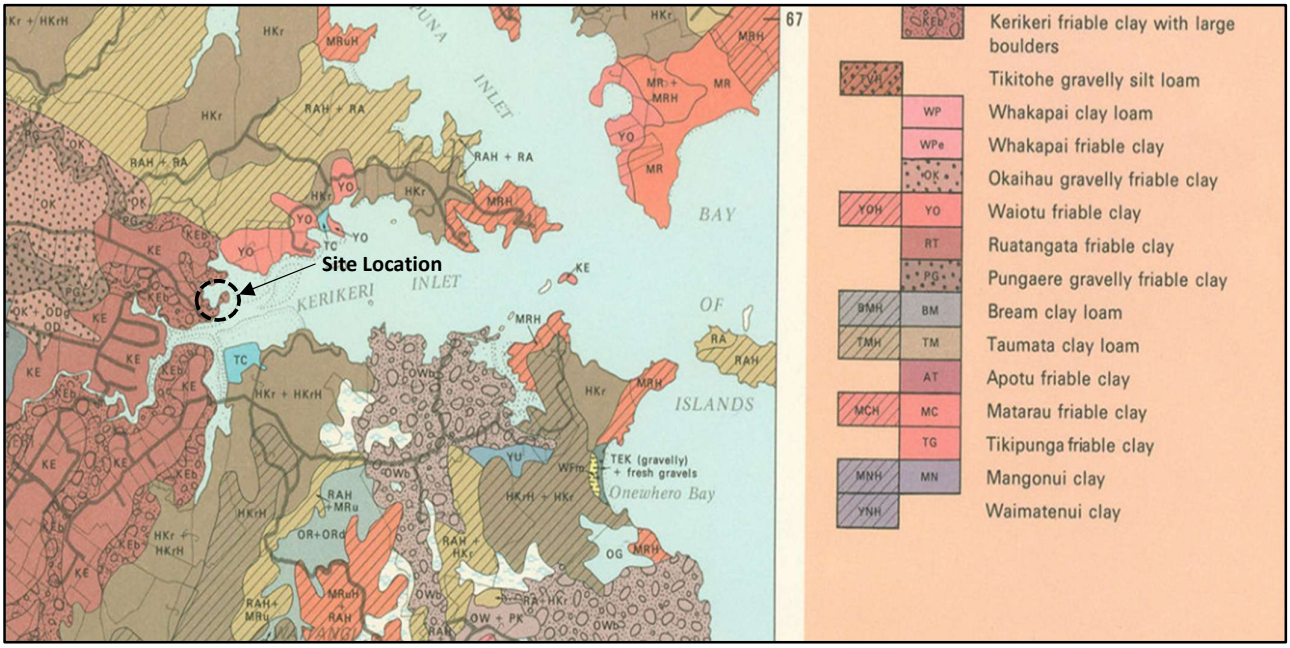
12.7.6.1.4 Land Use Activities Involving Discharges of Human Sewage Effluent

Land use activities which produce human sewage effluent (including grey water) are permitted provided that:

Criterion	Comment
The effluent discharges to a lawfully established reticulated sewerage system; or	
The effluent is treated and disposed of on-site such that each site has its own treatment and disposal system no part of which shall be located closer than **30m** from the boundary of any river, lake, wetland or the boundary of the coastal marine area.	*Non-compliant.* *Resource consent required.* *Not a Regional Plan requirement and does not appear in the proposed FNDC District Plan.*

Note: The discharge may also require consent under the Regional Water and Soil Plan.

Appendix D - Soil Type and Drainage Northland Regional Council Maps



Drainage classes

Soil symbol	Full name	Drainage class
KIRIPAKA SUITE Basement rock: volcanic basalt lava flows		
MCb	Matarau friable clay with large boulders	5⇌4 - Somewhat excessively to well drained
TG	Tikipunga friable clay	5⇌1 - Somewhat excessively to poorly drained
YOb	Waiotu friable clay with large boulders	4 - Well drained
MC, MCH	Matarau friable clay	4 - Well drained
KE	Kerikeri friable clay	4 - Well drained
KEb	Kerikeri friable clay with large boulders	4 - Well drained
YO, YOH	Waiotu friable clay	4⇌3 - Well to moderately drained
RT	Ruatangata friable clay	4⇌3 - Well to moderately drained
RTb	Ruatangata friable clay with large boulders	4⇌3 - Well to moderately drained

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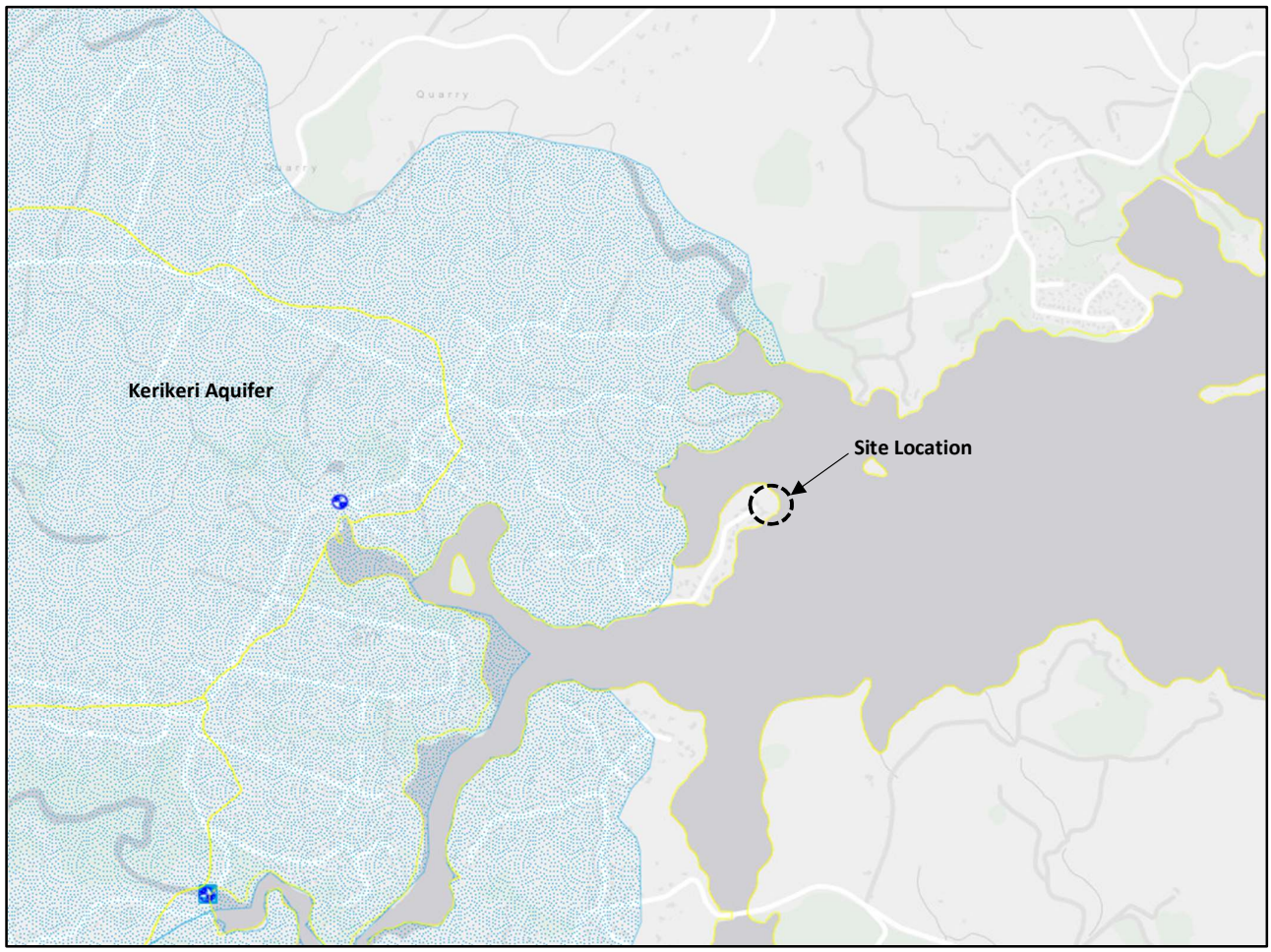
Appendix E: Location of Northland Aquifers



Appendix F - Operation and Maintenance Guidelines

ON-SITE WASTEWATER SYSTEMS

Maintenance Guidelines For Homeowners

PROTECTING YOUR HEALTH, YOUR ENVIRONMENT, YOUR INVESTMENT

PRODUCED BY: SWANS-SIG

The Small Wastewater And Natural Systems Special Interest Group of Water New Zealand

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Contact Details:

SWANS-SIG
Water NZ PO Box 1316
WELLINGTON 6140

Telephone: 64-4-472 8925
Fax: 64-4-472 8926

Web-site: www.waternz.org.nz/swans.html

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WHY MAINTENANCE OF YOUR ON-SITE WASTEWATER SYSTEM IS IMPORTANT

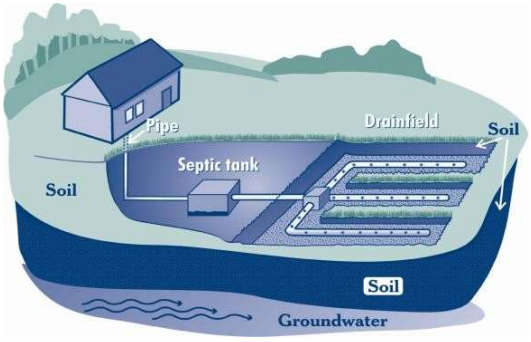
Whether you have a new “high-tech” treatment unit and drip irrigation system or an older “low-tech” septic tank and soakage trench system, regular attention to system inspection and maintenance is important. Effective regular maintenance of the wastewater servicing system on your property is essential for:

(a) protecting family health by ensuring a high level of sanitary performance;
(b) maintaining environmental values both within and beyond your property
(c) protecting the investment in your wastewater system; and
(d) enhancing amenity values in your neighbourhood through contributing to a high level of environmental performance for local on-site wastewater systems.

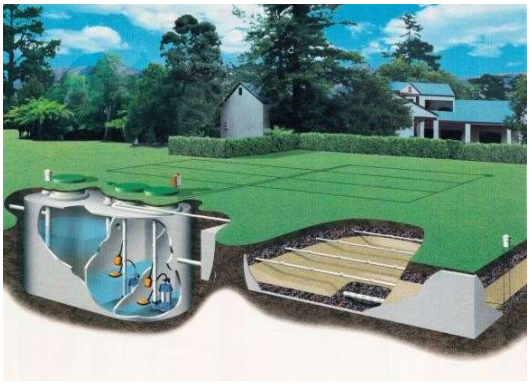
WHAT TYPE OF SYSTEM IS INSTALLED ON YOUR PROPERTY?

You are likely to have one of four types of system on your property:

- an old unknown system about which you have no information;
- an older style septic tank and soakage trench or soak hole system;
- a new modern septic tank and land application system (such as dosed trenches, or shallow planted evapo-transpiration beds, or a mound, or a low pressure dosed irrigation area);
- a new advanced treatment unit (such as an aerobic treatment plant, sand filter, or packed bed reactor) plus drip irrigation land application system.



Older style septic tank and soakage trench system



Modern septic tank, sand filter and drip irrigation field

Before you can attend to the maintenance requirements for your system you will have to establish the system type and capacity. This will require a detailed site inspection and/or a check of building records held by council. You may be able to do some of this yourself, but if a site investigation is needed, it is best to engage a drainage contractor or on-site wastewater servicing professional to investigate as follows:

(a) For an older unknown system	• Carry out a field inspection to locate and identify the treatment unit and soakage field area. • Excavate or probe as appropriate to identify system components, their size and condition. • Prepare a loading certificate based on an assessment of system capacity and its performance potential. • Identify a suitable reserve area for extending the system if need be.
(b) For an older style septic tank and soakage trench or soak hole system	• If necessary, carry out a field inspection to locate the septic tank and soakage field area. • Check the maintenance record for the tank, and/or pumpout and inspect tank condition. • Evaluate the capacity and current performance of the soakage system. • Prepare a loading certificate based on an assessment of system capacity and its performance potential. • Identify a suitable reserve area for extending the system if need be.
(c) For a new modern septic tank and land application system	• Check council building consent records. • Check designer/installer reports and as-built records. • Obtain the designer's loading certificate (see box below). • Check availability of operation and maintenance instructions as provided by the designer. • Confirm the availability of a suitable reserve area for extending the system if need be.
(d) For a new advanced treatment unit and land application system	• Check council building consent records. • Check designer/installer reports and as-built records. • Obtain the designer's loading certificate. • Check availability of operation and maintenance instructions as provided by the designer. • Check if a maintenance contract is in place, and if not investigate options for and commission such a contract. □ Ensure the maintenance contract is renewed

Checking scum and sludge levels in a septic tank

Servicing an advanced wastewater treatment unit

Whatever system is installed on your property, it is important that you understand the capabilities of the system. These are best identified and summarised in the preparation of a loading certificate. The loading certificate will enable you to understand the limitations or constraints of your system; however, the most important thing is to know your system type so that the right sort and frequency of maintenance can be carried out. This can simply be done through an inspection by a wastewater servicing specialist who will prepare the loading certificate.

LOADING CERTIFICATE

This should set out the following information:

(a) System type (obtained from the as-built details provided by the designer/installer};

(b) System capacity (number of persons and daily flow volume);

(c) Summary of design criteria;

(d) The location of and use of the 'reserve area';

It is also essential that if you have an advanced treatment and land application system subject to a maintenance contract, this contract is renewed annually.

DO YOU HAVE A SET OF USER GUIDELINES?

Your Regional, City or District Council is likely to have available a set of user guidelines for owner/occupiers of dwellings serviced by on-site wastewater systems. Such guidelines may be based

on the provisions of the joint Australia New Zealand Standard AS/NZS 1547:2012 “On-site Domestic Wastewater Management”, and will typically set out ‘dos’ and ‘don’ts’ related to household activities which generate wastewater flows (see box below).

USER ADVICE for a PROPERTY OWNER/OCCUPIER (from AS/NZS 1547:2012)

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

(a) To reduce sludge building up in the tank:

(i) Scrape all dishes to remove fats, grease, and so on before washing

(ii) Keep all possible solids out of the system
(iii) Don’t use a food waste disposal unit unless the wastewater system has been specifically designed to carry the extra load, and
(iv) Don’t put sanitary napkins and other hygiene products into the system;

(b) To keep the bacteria working in the tank and to maintain soil condition in the land application area:

(i) Use biodegradable soaps
(ii) Use a low-phosphorus detergent (less than 1 gram per wash – very good; “no phosphorus” labelled product – best)
(iii) Use a low-sodium detergent in erosive or clayey soil areas (less than 20 grams per wash – OK; less than 10 grams per wash – best)

(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 the drain, and

(vii) Check potential for effects from antibiotic and other medication use.

(c) Conservation of water will reduce the volume of effluent requiring disposal to the land application area, make it last longer and improve its performance. Conservation measures include:

(i) Installation of water conservation fittings

(ii) Taking showers instead of baths
(iii) Washing clothes only when there is a full load, and

(iv) Using the dishwasher only when there is a full load;

(d) Avoid overloading the system by spacing out water use as evenly as possible. For example:

(i) Do not do all the washing on one day, and

(ii) Do not run the washing machine and dishwasher at the same time.

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MAINTENANCE INSPECTION REQUIREMENTS

Once you know the details and operating capacity of your on-site wastewater system then you can check out the maintenance inspection and servicing requirements from the table below. Note that your system will include a distribution device to convey the treated effluent to each element of your land application system so as to provide uniform use of the soil in further treating the wastewater flow.

Treatment System Type	Inspection and Maintenance Requirements
Older style septic tank	• Pumpout at 3-year intervals • Alternatively, check scum and sludge levels and pumpout on demand (around half full of scum and sludge)
Modern septic tank with effluent outlet filter	• Check scum and sludge levels (2-yearly) and pumpout on demand (around 6 to 8 years) • Check and hose down effluent outlet filter during pumpout
Aerobic treatment unit (aerated system)	• Periodic effluent quality “sniff and look” inspection (6-months) • Check power consumption (3-months) • Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)
Septic tank/sand filter system	• Periodic effluent quality “sniff and look” inspection (6-months) • Confirm sand is draining satisfactorily and not clogging (12-months) • Replace upper sand layer if draining slowly (as required) • Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)
Packed bed reactor unit	• Periodic effluent quality “sniff and look” inspection (6-months) • Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)

Distribution System	Inspection and Maintenance Requirements
Gravity distribution box	• Check distribution evenly balanced to all outlets (12-months) • Remove any accumulated solids in base of box (12-months)
Flood load gravity dosing system	• Check distribution is evenly balanced to all outlets (12-months) • Remove any accumulated solids in base of dose chamber (12-months)

Siphon dosing system	• Check siphon operation (ensure system not dribbling following 'shut-off') (6-months) • Remove any accumulated solids in base of siphon chamber (6-months)
Pump chamber and manifold distribution to dosing lines	• Check pump start and stop level controllers (clean off grease and solids) (6-months) • Check pump power use (6-months) • Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)
Pump chamber and automatic sequencing valve distribution to dosing lines	• Check pump start and stop level controllers (clean off grease and solids) (6-months) • Check pump power use (6-months) • Check sequencing valve operation (6-months) • Carryout equipment service check at 6-months (as specified in the supplier/installer maintenance contract)

Land Application System Type	Inspection and Maintenance Requirements
Soakage trenches (or beds)	• Inspect soakage field area for signs of wetness, surface seepage and/or excess grass growth (6-months) • Check level of standing effluent in trenches using vent pipes for liquid depth observation (6-months) • Add extra trenches in reserve area if overload (wetness or flooded system) becomes apparent
ETS (evapo-transpiration seepage) beds (or trenches)	• Inspect space between ETS beds/trenches for signs of wetness, surface seepage and/or excess grass growth (12-months) • Trim grass and/or ET plantings to avoid rank overgrowth • Check level of standing effluent in beds/trenches using vent pipes for liquid depth observation (12-months) • Add extra beds/trenches in reserve area if overload (wetness or flooded system) becomes apparent
Mounds (for septic tank effluent)	• Inspect edges (toe) of mound for signs of wetness, surface seepage and/or excess grass growth (6-months) • Install and plant a 1 metre wide by 400mm deep topsoil layer around mound perimeter if toe seepage becomes apparent • Install extra mound in reserve area if toe seepage not

	managed by supplementary soil and ET plantings.
LPED (low pressure effluent distribution) irrigation field	• Inspect soakage field area for signs of wetness, surface seepage and/or excess grass growth (6-months) • Trim grass and/or ET plantings to avoid rank overgrowth • Check level of standing effluent in LPED trenches using vent pipes (6-months) • Add extra LPED trenches in reserve area if overload (wetness or flooded system) becomes apparent
Drip irrigation field	• Inspect irrigation field area for signs of wetness, surface seepage and/or excess grass growth (6-months) • Trim grass and/or ET plantings to avoid rank overgrowth • Check air release valves are operating effectively (6-months) • Operate irrigation line flush valves (6-months) • Add extra drip lines in reserve area if overload (wetness or flooded system) becomes apparent • Carryout service check at 6-months (as specified in the supplier/installer maintenance contract)
NOTE: Where your wastewater system is subject to a resource consent from your Regional Council, you should note and follow the maintenance conditions imposed by the consent.	

DIY MAINTENANCE TASKS

As homeowner (or occupier) there are several inspection and maintenance tasks which you can carry out yourself. However, you must remember at all times that you are dealing with unsanitary waste material which may potentially be infectious, and hence in handling equipment and effluent samples you must take adequate precautions to prevent contamination of yourself and your equipment.

The following simple tasks involve a common sense approach to on-site wastewater system homeowner/occupier DIY inspection and maintenance requirements (see tables above).

- Check septic tank scum and sludge levels (organise pump-out if required).
- Check drainage lines for evidence of ‘backup’ (slow draining).
- If backup due to outlet filter blockage, lift and hose down filter into septic tank.
- Check distribution box for even distribution of flow to trenches.
- Inspect land application system (trenches, beds, mounds, LPED and drip irrigation fields) for signs

of wetness, seepage, excess grass growth.

- Carry out “sniff and look” assessment of advanced treatment plant effluent quality (if a glass container full of effluent does not appear cloudy, and smells only slightly musty and not offensive, effluent quality is good).
- Check treatment unit and pumping system power consumption (if increases over time, need system check by servicing personnel).
- Check operation of irrigation line flush valves.
- If need be, call in drainage contractor, servicing specialist or maintenance contract service provider to undertake servicing and/or remedial works.

Healthy worm activity in septic tank scum layer

Septic tank pumpout

Backup to gully trap from clogged tank

Lifting and hosing down effluent outlet filter

Distribution box

Automatic sequencing valve

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SERVICING AGENT MAINTENANCE TASKS

If you as owner/occupier wish to have no role in maintaining your system, this is fine, but you will need to engage a drainage contractor, servicing specialist or maintenance contract service provider to undertake servicing and/or remedial works.

Even if you do carry out DIY maintenance tasks as outlined above engaging servicing personnel will be essential to carrying out mechanical and electrical servicing as well as specialist servicing tasks such as effluent quality sampling and testing. In addition, servicing specialists are best fitted to undertake tasks such as:

- Checking scum and sludge levels in tanks.
- Lifting and hosing down effluent outlet filters.
- Checking distribution effectiveness from distribution boxes and automatic sequencing valves.
- Checking power consumption and adjusting treatment plant controls and pumping cycles to achieve better efficiency.
- Checking distribution effectiveness and flushing drip irrigation lines.
- Undertaking remedial works and system extensions.

MAINTENANCE CERTIFICATE

Where a specialist servicing check is undertaken, including servicing under a maintenance contract, you should be provided with a maintenance certificate (see box below). This certificate should be filed away and provided as required to your District or Regional Council as proof of maintenance. This requirement may be a consent condition.

A maintenance certificate shall include (from AS/NZS 1547:2012)

(a) Certification by a qualified and experienced person that the on-site system is operating and performing effectively;

(b) A note of any specific operation and maintenance attention which is due;

(c) Identification of any operation and maintenance problems, their likely cause and recommended remedial action;

(d) Any evidence of system capacity being exceeded or likely to be exceeded (for example, by extra residents, or by holiday period occupiers);

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CONTACT DETAILS FOR ADVICE AND SERVICE

To find a wastewater servicing specialist, contact your local council, septic tank pump-out contractor, treatment plant supplier or plumbing/drainlaying company. Enter contact details/phone numbers in the boxes below of those persons whom you may need to call on at some stage to gain advice on issues related to operation, inspection and maintenance of your on-site wastewater system

System Designer	
Council On-site Wastewater Officer	
Maintenance Contract Servicing Agent	
Local Drainage Contractor	

Acknowledgements – Illustrations:

- Marlborough District Council
- US EPA Educational Materials
- Reflection Treatment Systems Ltd
- Ministry for the Environment
- Super-Treat NZ Ltd
- On-Site New Zealand
- North Dakota State University
- InspectAPedia
- Southeast Septic, USA
- Dola Transport, USA

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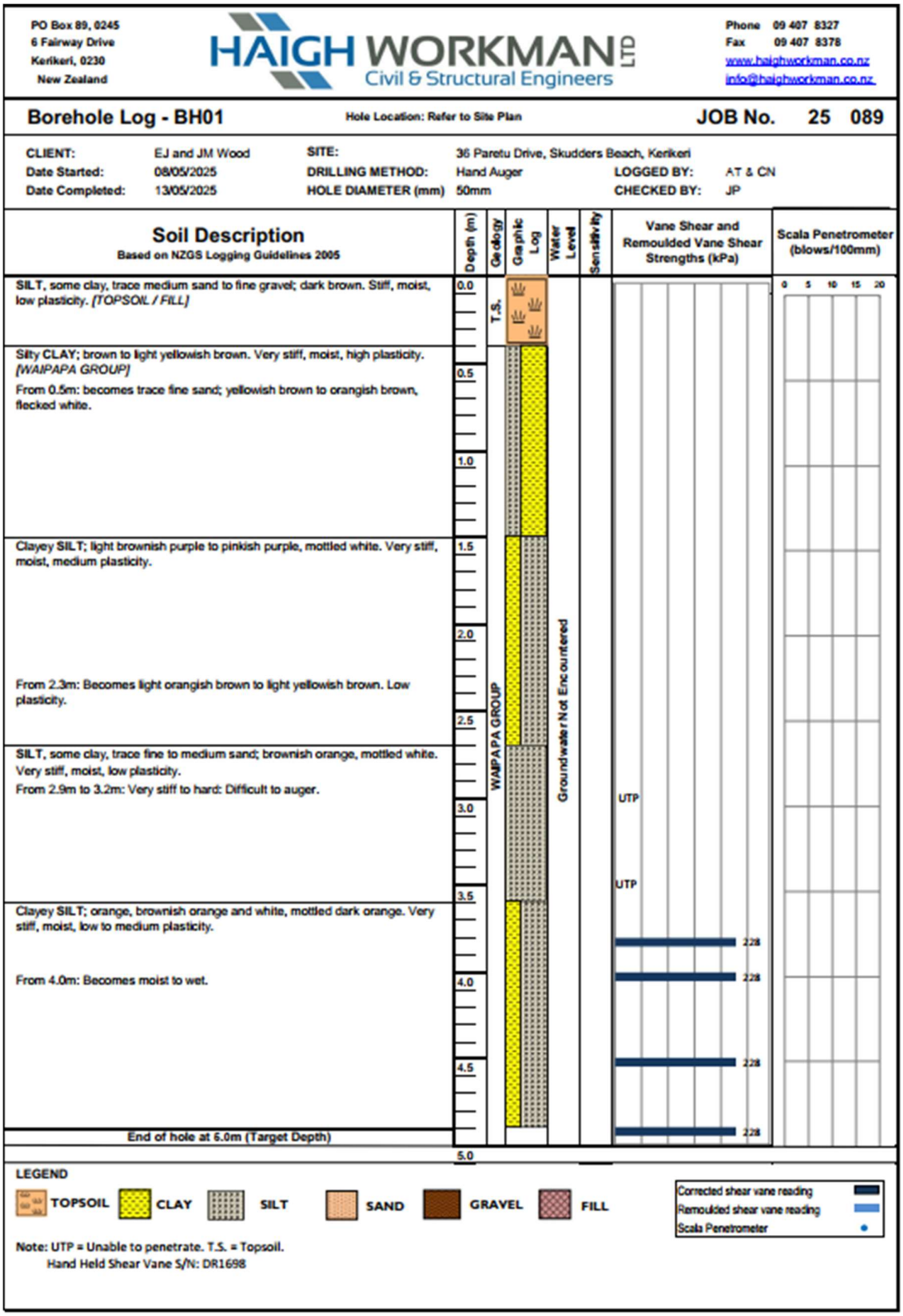
Appendix G - Borehole Logs



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Borehole Log - BH01

Hole Location: Refer to Site Plan

JOB No. 25 089

CLIENT:	EJ and JM Wood	SITE:	36 Paretu Drive, Skudders Beach, Kerikeri		
Date Started:	08/05/2025	DRILLING METHOD:	Hand Auger	LOGGED BY:	AT & CN
Date Completed:	13/05/2025	HOLE DIAMETER (mm)	50mm	CHECKED BY:	JP

Soil Description
Based on NZGS Logging Guidelines 2005

- **SILT**, some clay, trace medium sand to fine gravel; dark brown. Stiff, moist, low plasticity. *(TOPSOIL / FILL)*
- Silty **CLAY**; brown to light yellowish brown. Very stiff, moist, high plasticity. *(WAIPAPA GROUP)*
  From 0.5m: becomes trace fine sand; yellowish brown to orangish brown, flecked white.
- Clayey **SILT**; light brownish purple to pinkish purple, mottled white. Very stiff, moist, medium plasticity.
  From 2.3m: Becomes light orangish brown to light yellowish brown. Low plasticity.
- **SILT**, some clay, trace fine to medium sand; brownish orange, mottled white. Very stiff, moist, low plasticity.
  From 2.9m to 3.2m: Very stiff to hard: Difficult to auger.
- Clayey **SILT**; orange, brownish orange and white, mottled dark orange. Very stiff, moist, low to medium plasticity.
  From 4.0m: Becomes moist to wet.

End of hole at 6.0m (Target Depth)

Depth (m): 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0

Geology: T.S. (Topsoil); WAIPAPA GROUP

Graphic Log

Water Level: Groundwater Not Encountered

Sensitivity

Vane Shear and Remoulded Vane Shear Strengths (kPa): UTP, UTP, 228, 228, 228, 228

Scala Penetrometer (blows/100mm): 0, 5, 10, 15, 20

LEGEND
TOPSOIL, CLAY, SILT, SAND, GRAVEL, FILL

Corrected shear vane reading
Remoulded shear vane reading
Scala Penetrometer

Note: UTP = Unable to penetrate. T.S. = Topsoil.
Hand Held Shear Vane S/N: DR1698

HAIGH WORKMAN Ltd
Civil & Structural Engineers

Appendix H: Borehole Calculations

Number of boreholes:

For a conservative soakage rate of 200 mm/hr:

$$Borehole\ Area = \frac{\pi\ (0.6)^2}{4} = \frac{0.28\ m^2}{borehole}$$

$$Conservative\ soakage\ rate = \frac{200\ mm}{hr}$$

$$Wastewater\ generation\ rate = \frac{1{,}600\ L}{day}$$

$$Safety\ factor = 6$$

$$Conservative\ number\ of\ boreholes = 6\ x\ \left(\frac{borehole}{0.28\ m^2} x \frac{hr}{200\ mm} x \frac{1{,}600\ L}{day}\ x\ \frac{day}{24\ hr}\right)$$

$$= 7.14\ boreholes$$

$$= \mathbf{8\ boreholes}$$

Soakage rates to be confirmed at the time of construction.

HAIGH WORKMAN Ltd
Civil & Structural Engineers

Appendix I: Producer Statement PS1

PRODUCER STATEMENT – PS1
DESIGN

BUILDING CODE CLAUSE(S): G13 **JOB NUMBER:** 25 089
ISSUED BY: Haigh Workman Limited
(Engineering Design Firm)
TO: EJ and JM Wood
(Owner/Developer)
TO BE SUPPLIED TO: Far North District Council
(Building Consent Authority)
IN RESPECT OF: Onsite Wastewater System
(Description of Building Work)
AT: 36 Paretu Drive, Kerikeri
(Address, Town/City)
LEGAL DESCRIPTION: Lot 6 DP 91245 **N/A** ☐

We have been engaged by the owner/developer referred to above to provide *(Extent of Engagement)*:
the design of an on-site wastewater disposal system
in respect of the requirements of the Clause(s) of the Building Code specified above for All ☑, as specified in the Schedule, 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 *(Verification method/acceptable solution)* and/or;
- ☑ Alternative solution as per the attached Schedule.

The proposed building work covered by this producer statement is described on the drawings specified in the Schedule, together with the specification, and other documents set out in the Schedule.

On behalf of the Engineering Design Firm, and subject to:

- Site verification of the following design assumptions: Confirmation of ground conditions, soakage testing .
- All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that:

- the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the Schedule, will comply with the relevant provisions of the Building Code and that;
- the persons who have undertaken the design have the necessary competency to do so.

I recommend the CM 3 ☑ level of **construction monitoring**.

I, *(Name of Engineering Design Professional)* John Papesch , am:

- ☑ CPEng number 224301

and hold the following qualifications B.E. Civil

The Engineering Design Firm holds a current policy of Professional Indemnity Insurance no less than $200,000
The Engineering Design Firm is ☑ a member of ACE New Zealand.

SIGNED BY *(Name of Engineering Design Professional)*: John Papesch
(Signature below):

ON BEHALF OF *(Engineering Design Firm)*: Haigh Workman Limited Date: 25 June 2025

Note: This statement has been prepared solely for the Building Consent Authority named above and shall not be relied upon by any other person or entity. Any liability in relation to this statement accrues to the Engineering Design Firm only. As a condition of reliance on this statement, the Building Consent Authority accepts that the total maximum amount of liability of any kind arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in tort or otherwise, 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.

SCHEDULE to PS1

Please include an itemised list of all referenced documents, drawings, or other supporting materials in relation to this producer statement below:

* On-site wastewater assessment report (Haigh Workman), June 2025, Job # 25 089

Alternative Solution

The design carried out by Haigh Workman Limited has been carried out in accordance with:

TP58 for deep bore design.

GUIDANCE ON USE OF PRODUCER STATEMENTS

Information on the use of Producer Statements and Construction Monitoring Guidelines can be found on the Engineering New Zealand website
https://www.engineeringnz.org/engineer-tools/engineering-documents/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 (NZIA), Institution of Professional Engineers New Zealand (now Engineering New Zealand), Association of Consulting and Engineering New Zealand (ACE NZ) in consultation with the Building Officials Institute of New Zealand (BOINZ). The original suite of producer statements has been revised at the date of this form to ensure standard use within the industry.

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

PS1 DESIGN Intended for use by a suitably qualified independent engineering 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 engineering design review 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 engineering construction monitoring professional who either undertakes or supervises 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 ACE New Zealand and Engineering New Zealand to interpret the Producer Statement.

Competence of Engineering Professional
This statement is made by an engineering 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 personnel.

The person signing the Producer Statement on behalf of the engineering firm will have a professional qualification and proven current competence through registration on a national competence-based register such as a Chartered Professional Engineer (CPEng).

Membership of a professional body, such as Engineering New Zealand provides additional assurance of the designer's standing within the profession. If the engineering firm is a member of ACE New Zealand, this provides additional assurance about the standing of the firm.

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

Professional Indemnity Insurance
As part of membership requirements, ACE New Zealand 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 practice for the relationship between the BCA and the engineering firm.

Professional Services during Construction Phase
There are several levels of service that an engineering 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 engineering 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.

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 (ACE New Zealand/Engineering New Zealand 2004)
4. PN01 Guidelines on Producer Statements

www.acenz.org.nz
www.engineeringnz.org