Donaldson's Surveyors Limited

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DONALDSONS
REGISTERED LAND SURVEYORS

8541
27 March 2025

Planning Division
Far North District Council
Private Bag 752
Kaikohe

Dear Sir/Madam

PROPOSED SUBDIVISION
C. LEWIS, 166 KERIKERI INLET ROAD, KERIKERI

We submit herewith a Resource Consent application together with the following:

- Application form & deposit $5013
- Planning report
- Scheme plan
- Record of Title
- Top Energy Ltd & Chorus NZ comments
- Preliminary Site Investigation
- Stormwater Management Assessment
- Wastewater Assessment

Yours faithfully,

Micah Donaldson
MNZIS - Assoc.NZPI
DONALDSONS
Registered Land / Engineering Surveyors and Development Planners

NZIS REGISTERED PROFESSIONAL SURVEYOR

CSNZ THE CONSULTING SURVEYORS OF NEW ZEALAND
A DIVISION OF THE NEW ZEALAND INSTITUTE OF SURVEYORS

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: Conway Lewis

Email: [redacted]

Phone number:

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

6. Address for Correspondence

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

Name/s: Donaldsons Surveyors

Email: [redacted]

Phone number:

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.***

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: Conway & johanna Lewis

Property Address/ Location: 166 Kerikeri Inlet Road
Kerikeri
Postcode

8. Application Site Details

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

Name/s:

Site Address/ Location:

166 Kerikeri Inlet Road

Kerikeri

Postcode

Legal Description: Lot 3 DP 354175 **Val Number:**

Certificate of title: RT 221337

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.

Proposed subdivision in the Rural Living zone to create one addition lot as a non complying activity, and an affiliated land use consent for breach to the stormwater management standard.

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

10. Would you like to request Public Notification?

◯ **Yes** ✔ **No**

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

(more than one circle can be ticked):

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

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

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

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

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

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

13. Assessment of Environmental Effects:

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

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

13. Draft Conditions:

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

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

14. Billing Details:

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

Name/s: (please write in full) Donaldsons Surveyors Ltd

Email: [redacted]

Phone number: [redacted]

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

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

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

Name: (please write in full) Micah Donaldson

Signature: [redacted]
(signature of bill payer)

Date 25-Jan-2025

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) Micah Donaldson

Signature: [redacted] Date 25-Jan-2025

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

Checklist (please tick if information is provided)

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

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DONALDSONS
REGISTERED LAND SURVEYORS

PLANNING REPORT

PROPOSED SUBDIVISION

C. LEWIS, 166 KERIKERI INLET ROAD KERIKERI

Date: 27 March 2025 Reference: 8541

CONTENTS

INTRODUCTION

The owners of Lot 3 DP-354175, seek Resource Consent to subdivide creating 1 additional lot.

The property is located at 166 Kerikeri Inlet Road, Kerikeri.

Proposed Lot 1 = 2150m^2

Proposed Lot 2 = 1840m^2

Additionally, land use consent is requested for Stormwater Management exceeding 12.5% impermeable surface area, and for Building Coverage exceeding 10% of the site on proposed Lot 1.

The proposed allotment sizes are consistent with the wider rural environment however under the Rural Living zone standards of the Far North District Plan the activity is non-complying.

SITE DESCRIPTION

The properties legal reference:

Appellation:	**Lot 3 DP-354175**
Registered Owners:	C. & J. Lewis
Computer Freehold Register:	221337
Total Area:	4002m^2

The site has an existing residence located near the southeastern boundary including dwelling and garage serviced by a metalled driveway. This was consented under BC 2010/1362/1.

There are mature hedges and landscape planting along all boundaries buffering the site from neighbouring properties and the roadside.

The property has been identified as a HAIL site with past orchard activity, furthermore the parent title and existing residence were created before the NES 2011 regulation came into force, consequently the subdivision activity requires a soil assessment accordingly.

The natural character of the immediate vicinity is intermixed with horticulture and residential activity with the dominate allotment size between 4000m² - 2000m². Of particular interest and similarity include existing allotments Lots 1 & 2 DP 171037, Lots 1 & 2 DP 168089, Lot 1 DP 363097, Lots 1 & 2 DP 447500, and Lots 1 & 2 DP 586380, all of which have areas at about 2000m² and form the subject environment as highlighted in the map below with yellow arrows.

RESOURCE MANAGEMENT ACT 1991

The subdivision of land falls under the Resource Management Act 1991 and is required to demonstrate compliance with provisions applicable to the activity and its status under the District Plan.

SCHEDULE 4

An application for Resource Consent for an activity must include the following, outlining aspects of relevance to the proposed activity and zone expectations:
ASSESSMENT OF THE ACTIVITY AGAINST THE MATTERS UNDER PART 2 RMA
Part 2 Purpose and Principles

5 Purpose

(1)
The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2)
In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

The application site is well removed from its natural state having been subdivided in 2002 from a larger rural production site on RC 2030414. The historic aerial photo shows the site being part of an orchard dating back around 1950's. For the most part although the site has quality soils suited to orchard activity, the available area no longer warrants such use, instead lending itself to further utilization for residential purposes and home produce.

The site is absent of any natural ecosystems and is not located within close proximity to any known ones.

Overall, there are no specific natural and physical resources of concern. The site is well established with excess land better utilised for further development, possible without being contrary to the Rural Living zones objectives and policies, or cause to the depletion of any bush or waterways.
The subdivision requires minimal earthworks forming an entrance, and future development can readily occur over an easy contour.

Stormwater management devices are proposed to control outflow from the existing roof surfaces on Lot 1 and proposed impermeable surfaces on Lot 2. Roof water is to be controlled in attenuation tanks located alongside the dwelling. Overall, stormwater from the site would be managed to mitigate effects on the environment via consent notice requirements.

The applicant engaged the services of a soil investigation (Detailed Site Investigation) to assess whether or not there may be soil contamination from past orchard activity. The outcome confirms there is no risk to human health.

The applicant engaged the services of wastewater investigation to confirm the proposed lots are compliant with TP-58 guidelines. The outcome confirms the proposed Lots are suitable.

The applicant engaged the services of a stormwater management assessment and this confirms that positive outcomes are possible though improved stormwater management using detention devices.

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

The site is not averse to subdivision effects particularly impacts on wetlands, lakes or rivers. The impact on the coast is nil.

(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:

There are no known outstanding natural features or landscapes.

(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:

There are no areas of significant vegetation or habitats of indigenous fauna within the subject boundaries.

(d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:

Not applicable.

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

The Ngāti Rehia Hapu Management Plan identifies key concerns related to water quality and the fragmentation of indigenous vegetation, issues they are committed to protecting and improving. The subdivision proposal does not directly conflict with these concerns, as it requires no vegetation clearance or significant earthworks. Effluent disposal will meet higher standards through secondary treatment, and the site's soil quality ensures effective soakage, minimizing disposal concerns. Additionally, there will be no impact on fisheries.
Ngāti Rehia acknowledges that they are not inherently opposed to development, but emphasize that such development must not harm their heritage, culture, or the environment. Much of Kerikeri Inlet Road is zoned for residential use, and the subdivision maximizes the potential of an undersized property no longer suited for horticultural activity.
Overall, the proposal is considered to have a minimal environmental impact, aligning with the goal of preserving the existing environment.

(f) the protection of historic heritage from inappropriate subdivision, use, and development:

There are no known historic heritage sites.

(g) the protection of protected customary rights.

There are no known customary rights to consider.

Other matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

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

The proposal is considered to adequately uphold all aspects without causing any unreasonable adverse effects.

The proposed development of the land not only supports the efficient use of a site zoned for residential purposes, but also brings economic benefits. The subdivision will increase the availability of residential land, meeting growing demand in the area and stimulating local construction and related industries. This can create jobs, promote investment, and contribute to the economic vitality of the region. Additionally, the development may enhance local infrastructure and services, benefiting the wider community.
The site's orientation to the north also optimises renewable energy use, supporting sustainable living while minimising long-term energy costs for future residents. The applicant's commitment to effective stormwater management and climate change adaptation further reinforces the sustainability and resilience of the development.
There are no direct onsite habitats of concern.
While the subdivision may not directly enhance amenity values, it is in line with the objectives and policies of the Rural Living zone. The site is located in an environment that is transitioning, and the increased density of sites reflects this broader shift. From a social wellbeing perspective, the development provides much-needed housing options, potentially improving accessibility for a range of residents and fostering a sense of community. Overall, the proposal aligns with the region's growth needs while balancing environmental and social considerations.

Treaty of Waitangi
In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi

The proposal is not considered to contradict the Treaty of Waitangi's interpretations.

ASSESSMENT OF THE ACTIVITY AGAINST SECTION 104(1)(B)

Section 104(1)(b)
any relevant provisions of—

(i) a national environmental standard:
(ii) other regulations:
(iii) a national policy statement:
(iv) a New Zealand coastal policy statement:
(v) a regional policy statement or proposed regional policy statement:
(vi) a plan or proposed plan;

Under various headings, the application covers all relevant provisions including, the Far North District Plan, National Environmental Standards, and Regional Policy Statement. There are no other relevant provisions.

An application must also include an assessment of the activity's effects on the environment that –

(a) *includes the information required by clause 6*
(b) *address the matters specified in clause 7; and*
(c) *includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.*

CLAUSE 6

(1) An assessment of the activity's effects on the environment must include the following information:

(a) *if it is likely that the activity will result in any significant adverse effects on the environment, a description of any possible alternative locations or methods for undertaking the activity:*

The impact of subdividing the property presents no unreasonable adverse effects on flora or fauna.

The proposal presents no significant adversity to the environment. The effects are considered less than minor compared to the permitted baseline described following.

(b) *an assessment of the actual or potential effects on the environment of the activity.*

There are no apparent adverse environmental effects resulting from the subdivision activity itself. However, like any residential development, cumulative effects typically include impacts from effluent discharge, increased stormwater runoff, traffic movements, noise, and the visual effects of new structures.
These potential effects are well-understood and considered fully compatible with the surrounding properties. Based on the scale and nature of the proposed development, there are no concerns that would warrant further investigation. Additionally, the development is governed by the guidelines of the Rural Living zone, which provide a framework to mitigate and manage these effects effectively.

The level of effects are considered adequately understood and less than minor.

(c) *if the activity includes the use of hazardous substances and installations, an assessment of any risk to the environment that are likely to arise from such use.*

Not applicable.

(d) *if the activity includes the discharge of any contaminants, a description of –*
- *(i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
- *(ii) any possible alternative methods of discharge, including discharge into any other receiving environment:*

Effluent disposal would uphold high standards in accordance with TP-58 to ensure compliance with the Northland Regional Water and Soil Plan.
Effluent disposal standards would also be registered on a consent notice to inform future landowners of their responsibility to install secondary treatment for any new habitable building.

(e) *a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effects:*

There are no issues to address.

(f) *identification of the persons affected by the activity and consultation undertaken, and any response to the views of any person consulted:*

The proposal although being non-complying is considered to present effects less than minor not to require neighbour's consultation.

To fully understand the potential effects of the subdivision and identify who may be affected, it is important to consider that the development, in its proposed configuration, mirrors a scenario where two buildings are a permitted activity. Under the Rural Living zone, a parent title area of 4000m² is sufficient to accommodate a residential unit and a secondary building, such as a home office or similar use.
The Rural Living zone encourages alternative accommodation and business activities, as outlined in the relevant objectives. As such, the provision for a secondary building is an established right, and its inclusion could result in a visual appearance of multiple buildings on the site. This is a key consideration in assessing the potential visual and amenity impacts, as the overall development may reflect the presence of more structures than typically expected in a single residential setting.
However, these effects are anticipated to be manageable within the context of the zone's objectives and the existing character of the area.

> *8.7.4.4 That no limits be placed on the types of housing and forms of accommodation in the Rural Living Zone, in recognition of the diverse needs of the community.*
>
> *8.7.4.5 That non-residential activities can be established within the Rural Living Zone subject to compatibility with the existing character of the environment.*
>
> *8.7.4.6 That home-based employment opportunities be allowed in the Rural Living Zone.*

The concept of the permitted baseline further clarifies what the site is capable of accommodating without requiring resource consent. Prior to subdivision, the parent title allows for the construction of a residential unit and secondary building, such as a home office, without triggering additional regulatory scrutiny. However, through subdivision, the resulting 2000m² lots are subject to more stringent land use rules, particularly concerning impermeable surface area and building site coverage, which may limit the range of permitted activities.

In this context, it is clear that the proposed subdivision does not result in a greater level of environmental or amenity effects than what is already permitted under the current zoning. In fact, the subdivision imposes additional constraints on land use, as it reduces the available area for development and introduces greater oversight by the local authority regarding what is acceptable on each lot.

Therefore, while the subdivision creates new lots, it also limits the scope for future development compared to the broader allowances that would apply to the parent title, thereby reducing the potential for adverse effects.

(g) *if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:*

No monitoring appears necessary.

(h) *if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).*

No concern.

(2)
A requirement to include information in the assessment of environmental effects is subject to the provisions of any policy statement or plan.

This is covered under the heading 'Northland Regional Policy Statement' below.

CLAUSE 7

7 Matters that must be addressed by assessment of environmental effects

(1) An assessment of an activity's effects on the environment must address the following matters:

(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:

The proposal is considered to align with and promote the objectives of the Rural Living zone, while being compatible with surrounding land uses. It is anticipated to have no unreasonable adverse effects on the wider community, including social, economic, or cultural aspects.
Regarding the neighbouring horticultural activity, any potential incompatibilities were addressed as part of Resource Consent application RC 2030414 which established mitigation measures such as water filtration for potable supplies collected from roof surfaces. These same mitigation measures would carry forward onto proposed Lot 2, ensuring that potential impacts on water quality and surrounding activities are appropriately managed.

The applicant furthermore undertook soil investigations to determine the potential impact from past orchard activity with favourable results.

Overall, the subdivision is designed to integrate smoothly with the existing environment, maintaining the rural character and minimizing any potential conflicts with neighbouring land uses.

(b) any physical effects on the locality, including any landscape, and visual effects.

No concern.

(c) Any effects on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity.

The subdivision does not result in any habitat disturbance. The future building activity is within areas of easy contour, cleared, and with services already at the road boundary.

(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural values, or other special value, for present and future generations:

Key values outlined are not depleted.
There is no influence on Fisheries.

(e) any discharge of contaminants in to the environment, including any unreasonable emissions of noise, and options for the treatment and disposal of contaminants:

Stormwater and sewage are the main discharges and these both present a standard level of effects through use of best practice as described under their respective headings 'Chapter 13 assessment',

(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.

To the best of our knowledge there are no concerns.

In summary, the proposal is seen as an activity that supports both the personal and broader community economic wellbeing, while promoting the efficient use of land near the urban periphery of Kerikeri. The development aligns with the region's growth objectives and contributes to the ongoing economic vitality of the retail and construction sectors. By maximising the use of available land, the proposal helps meet local housing demand, stimulates economic activity, and supports sustainable growth in the area.

PERMITTED BASELINE

To gather an understanding of development potential on a parcel of land of size 4000m^2 the following provides a description of some generic land use scenarios that are not fanciful.

The assessment describes how an environment may look as of right, and compares those effects against those proposed. The aim is to explore actual or permissible effects on the environment and where effects are more than minor initiate affected party's consultation.
The permitted baseline demonstrates permitted activities a site can incur, and provides the council with discretion to remove those effects from consideration when assessing resource consents.

Additionally, the receiving environment (beyond the subject site) is the environment upon which a proposed activity might have effects. The Environment Court in *Eyres Eco Park v Rodney District Council* (A147/04) suggested that existing use rights are part of the environment.

When assessing the environmental impact it is permissible and often desirable or necessary to consider the future state of the environment upon which effects will occur, including:

- The future state of the environment as it might be modified by permitted activities.
- The environment as it might be modified by implementing resource consents that have already been granted at the time a particular application is being considered.

The most common land use scenarios relate to home office / business activity, where a 4000m² allotment has sufficient area to provide for a residential unit plus a secondary building without exceeding the two primary rules, impermeable surface (imp) percentage and building coverage.

An approximate indication includes:
Permitted scenario could see a 200m² house with a 100m² secondary building for business use easily comply with the permitted 12.5% imp, similarly the building cover allows up to 10%, ((200 + 100) / 4000 x 100 = 7.5%))

The next rule is scale of activities, which reads; the total number of people engaged at any one period of time in activities on a site.

This allows for up to 1 persons per 1000m², a total of 4 persons at any one period of time.

Traffic movements are limited to 20 one-way movements per day, but does not restrict foot traffic.

From these parameters a reasonable land use scenario and business venture could entail:

1) bed and breakfast accommodation
2) professionals office
3) small scale dairy / take away coffee
4) plumbing or electrician base client show room

Although the various land use scenarios for the site are relatively restrictive, they remain feasible through effective control mechanisms.
The most common land use under the proposal would likely be a "bed and breakfast" operation, where a 50m² secondary building could be used for accommodation purposes. This aligns with the objectives of the Rural Living zone, which supports such land use.
Overall, while a range of land use activities are technically possible, with limited statutory assessments or development control mechanisms. The proposal does not introduce land use that deviates substantially from what is already anticipated under the current zoning.

The subdivision results in two smaller lots, which, due to their reduced size, inherently limit the scope of land use activities and any adverse effects deemed to be less than minor.

NORTHLAND REGIONAL POLICY STATEMENT

The Northland Regional Policy Statement presents guidelines for the northland region but has limited relevance to this designated development zone and its absence of any vulnerable ecology.

3.4 Indigenous ecosystems and biodiversity
Safeguard Northland's ecological integrity by:
a) Protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna;
b) Maintaining the extent and diversity of indigenous ecosystems and habitats in the region; and

c) Where practicable, enhancing indigenous ecosystems and habitats, particularly where this contributes to the reduction in the overall threat status of regionally and nationally threatened species.

There is no immediate risk to or impact on ecosystems. The site already has the base infrastructure in place.

4.6.1 Policy – Protecting the integrity of natural character, natural features and landscapes

b) By avoiding significant adverse effects and avoiding, remedying or mitigating other adverse effects of subdivision, use and development on natural character, natural features and natural landscapes in the following way;

(i) Ensuring the location, intensity, scale and form of subdivision and built development maintains, and is subservient to, predominantly natural elements, landforms and processes, including vegetation patterns, ridgelines, headlands, peninsulas, dune systems, reefs and freshwater bodies and their margins; and

(iii) Encouraging new subdivision and built development to consolidate within and around existing settlements or where natural character and landscape has already been significantly compromised

The proposal is in keeping with the policy intent being a site capable of further intensification without causing any significant adversity to natural character.
The size of the proposed lots is of scale and form that maintains, and is subservient to, the nature of the predominantly natural elements. There is no impact on high natural character or wetlands.

6.1.1 Policy – Regional and district plans
Regional and district plans shall:
(a) Only contain regulation if it is the most effective and efficient way of achieving resource management objective(s), taking into account the costs, benefits and risks;
(b) Be as consistent as possible;
(c) Be as simple as possible;
(d) Use or support good management practices;
(e) Minimise compliance costs and enable audited self-management where it is efficient and effective;
(f) Enable subdivision, use and development that accords with the Regional Policy Statement; and
(g) Focus on effects and where suitable use performance standards.

The subdivision activity is small-scale absent of any unreasonable adverse effects on the environment. The vicinity at large has been tagged for residential living purposes and a precedent exists with allotment many established allotments averaging 2000m^2, accordingly the activity is considered to promote the subject environment.

The allotments capture land that is not worthy of production based activity, and supports the aim to avoid versatile soils capable of horticultural and agricultural use.

Part B) Regional urban design guidelines
Context
Quality urban design sees buildings, places and spaces not as isolated elements but as part of the whole town or city. In this regard, quality urban design:
(a) Takes a long-term view; and
(b) Recognises and builds on landscape context and character; and

Character
Quality urban design reflects and enhances the distinctive character and culture of our urban environments, and recognises that character is dynamic and evolving, not static. In this regard, quality urban design:

(a) Reflects the unique identity of each town, city and neighbourhood and strengthens the positive characteristics that make each place distinctive;

***5.1.3 Policy** – Avoiding the adverse effects of new use(s) and development*

Avoid the adverse effects, including reverse sensitivity effects of new subdivision, use and development, particularly residential development on the following:

(a) Primary production activities in primary production zones (including within the coastal marine area);

(b) Commercial and industrial activities in commercial and industrial zones;

The proposal does not conflict with the Regional Policy Statement, and the location is not vulnerable to the effects of development, being nothing more than infill development.

The proposal is not seen to clash with the Regional Policy Statement and therefore should be assessed under Resource Consent on an enabling basis.

NATIONAL ENVIRONMENTAL STANDARDS

The property is a known HAIL site from former horticultural activity and accordingly a Preliminary site Investigation Report for potential soil contamination has been included.

No concerns were raised and therefore does not require any further assessment.

There are no other national environmental standards applicable to the application site and subdivision activity.

NATIONAL POLICY STATEMENT

FOR FRESHWATER MANAGEMENT 2020

Part 1

1.3 Fundamental concept – Te Mana o te Wai

(1) Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.

Objectives and Policies

2.1

The objective of this National Policy Statement is to ensure that natural and physical resources are managed in a way that priorities:

(a) first, the health and wellbeing of water bodies and freshwater ecosystems

(b) second, the health needs of people (such as drinking water)

(c) third, the ability of people and communities to provide for their social, economic and cultural wellbeing, now and in the future.

2.2

Policy 3

Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.

Policy 4

Freshwater is managed as part of New Zealand's integrated response to climate change.

Policy 6

There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration promoted.

Policy 9

The habitats of indigenous freshwater species are protected.

3.5 Integrated management

(1) Adopting an integrated approach ki uta ki tai, as required by Te Mana o te Wai, requires that local authorities must:

(a) recognise the interconnectedness of the whole environment, from the mountains and lakes, down the rivers to lagoons, estuaries and to the sea.

(b) recognise interactions between freshwater, land, water bodies, ecosystems, and receiving environments.

(c) manage freshwater, and land use and development, in catchments in an integrated and sustainable way to avoid, remedy, or mitigate adverse effects, including cumulative effect on the health and well-being of water bodies, freshwater ecosystems, and receiving environments.

(d) Encourage the co-ordination and sequencing of regional or urban growth.

The National Policy Statement (NPS) emphasises development must avoid adverse effects that could compromise wetlands or the natural components linked to waterways. As such, subdivision designs and land use activities must take these factors into account. This proposal is unique in that any earthworks required for site establishment will be minimal in scale, and there are no known wetlands within 100 meters of the site.

Rural residential land use typically presents low risk to water quality, with no significant sources of water contaminants. For example, vehicle access and parking areas for Lot 2 are situated at a considerable distance

from any waterway, allowing natural sheetflow processes to absorb and treat stormwater runoff at the onset of a storm. Additionally, stormwater attenuation measures are incorporated to further manage flow rates and facilitate subsurface soakage, enhancing stormwater control.
In contrast, common rural activities that contribute to water degradation—such as fertilizer application, crop spraying, stock effluent, intensive grazing, and ploughing near waterways—pose a much greater risk to water quality. These practices can have more severe negative effects on water-based ecosystems. Considering this, the proposal offers a balanced approach, with minimal impact on water quality or surrounding environmental components. Smaller lots often promote a more centralised approach to land management, where landowners are more likely to engage in stewardship practices such as planting and pest control, leading to improved environmental outcomes.
This proposal satisfactorily aligns with the intent of freshwater management and upholds the principles outlined in the National Policy Statement for Freshwater Management.

DISTRICT PLAN

The property is located in the Rural Living zone and is not listed as having any Outstanding Landscape.

Rural Living Zone Context
The Rural Living Zone is an area of transition between town and country. The transition is expressed in terms mainly of residential intensity and lot sizes. The potential for the adverse effects of farming to be of concern for residential zones and vice versa, is reduced by the presence of the Rural Living Zone, where both rural and residential activities co-exist and form an area with a distinctive and separate character.

Environmental Outcomes Expected
8.7.2.1
A Rural Living Zone where residential living on small rural lots is compatible with those other rural activities that have an emphasis on production rather than lifestyle.

8.7.2.2
A Rural Living Zone where the controls on the activities ensure a high standard of privacy and amenity for residential activities.

The proposal proves compatible with the evident rural living trend along Kerikeri Inlet Road.

OBJECTIVES AND POLICIES

8.7.3.1 To achieve a style of development on the urban periphery where the effects of the different types of development are compatible.

8.7.3.2 To provide for low density residential development on the urban periphery, where more intense development would result in adverse effects on the rural and natural environment.

8.7.4.2 That the Rural Living Zone be applied to areas where existing subdivision patterns have led to a semi-urban character but where more intensive subdivision would result in adverse effects on the rural and natural environment.

8.7.4.3 That residential activities have sufficient land associated with each household unit to provide for outdoor space, and where a reticulated sewerage system is not provided, sufficient land for on-site effluent disposal.

8.7.4.4 That no limits be placed on the types of housing and forms of accommodation in the Rural Living Zone, in recognition of the diverse needs of the community.

8.7.4.5 That non-residential activities can be established within the Rural Living Zone subject to compatibility with the existing character of the environment.

8.7.4.6 That home-based employment opportunities be allowed in the Rural Living Zone.

he objectives and, in particular, the policies of the Rural Living zone clearly indicate that the area is intended for diversification, with no specific limits on housing types or accommodation forms. The zone also allows for the establishment of non-residential activities.
The proposed subdivision aligns well with both the growth expectations for the area and the current development trends, which show a pattern of smaller lots, often below 2000m^2, in the immediate vicinity. As such, the proposal is consistent with the existing environment and will not create any significant disconnect. Instead, it complements the surrounding land uses, resulting in minimal adverse effects.

OBJECTIVES AND POLICIES (*Subdivision*)

13.3.1 To provide for the subdivision of land in such a way as will be consistent with the purpose of the various zones in the Plan, and will promote the sustainable management of the natural and physical resources of the District, including airports and roads and the social, economic and cultural wellbeing of people and communities.

13.3.2 To ensure that subdivision of land is appropriate and is carried out in a manner that does not compromise the life-supporting capacity of air, water, soil or ecosystems, and that any actual or potential adverse effects on the environment which result directly or indirectly from subdivision, including reverse sensitivity effects, are avoided, remedied or mitigated.
13.3.3 To ensure that the subdivision of land does not jeopardise the protection of outstanding landscapes or natural features in the coastal environment.

13.3.4 To ensure that subdivision does not adversely affect scheduled heritage resources through alienation of the resource from its immediate setting/context.

The proposal is consistent with, and supports, the objectives and policies for subdivision in the area. There is no disconnect with the existing environment, nor does the proposal result in any adverse environmental impacts.

ALLOTMENT SIZES 13.7.2

(Table 7)

Status	Rural Living Zone (Far North District Plan)
Discretionary Activity	*The minimum lot size is 3,000m^2 (with provision for stormwater and wastewater disposal as a necessary part of the application).*

Lot 1 = 2150m² **Lot 2 = 1840m²**

The proposed allotment sizes do not comply with the controlled or discretionary minimum area requirements. However, the immediate environment establishes a strong precedent, with many existing lots around 2000m², which supports the appropriateness of the proposed allotment sizes in this context. Additionally, effluent disposal and stormwater aspects have been addressed as outlined under assessment criteria below.

Both lots have suitable width to incorporate a 30m x 30m allotment shape parameter including 3-metre setbacks.

RURAL LIVING ZONE

ASSESSMENT CRITERIA CHAPTER 13 FAR NORTH DISTRICT PLAN

Allotment Sizes and Dimensions
The proposed allotment sizes are suitable to accommodate essential infrastructure, including building footprints, parking, outdoor spaces, and the efficient management of effluent and stormwater. These lot sizes are consistent with the character of the surrounding area.

This development represents infill growth, with a series of similarly sized allotments extending along the Kerikeri Inlet Road frontage, contributing to the area's established pattern of land use.

13.10.1 ALLOTMENT SIZES AND DIMENSIONS
(a) Whether the allotment is of sufficient area and dimensions to provide for the intended purpose or land use, having regard to the relevant zone standards and any District wide rules for land uses.

Lot 1, as an existing as-built example, demonstrates how a site of this size can comfortably accommodate all necessary infrastructure, including a generously sized dwelling, without compromising outdoor living space. This area is designated as a transition zone, and the reduction in the standard minimum allotment size under the Proposed District Plan aims to better utilize existing infrastructure and meet the growing demand for residential sites.
The Strategic Directions outlined in the Proposed District Plan include:

- *Alignment with the Council's vision for the district's development and environmental quality, as set out in Far North 2100, the district's 80-year strategy;*

- *Fostering a prosperous economy by enabling a wide range of rural and urban business activities in appropriate locations;*

- *Managing urban growth through the integration of existing and future infrastructure, ensuring sufficient land and opportunities to meet housing and business growth demands.*

This proposal aligns with and supports these strategic objectives.

(b) Whether the proposed allotment sizes and dimensions are sufficient for operational and maintenance requirements.
No concern.

(c) The relationship of the proposed allotments and their compatibility with the pattern of the adjoining subdivision and land use activities, and access arrangements.
The proposal has been demonstrated to be compatible with the wider development trends.

(d) Whether the cumulative and long term implications of proposed subdivisions are sustainable in terms of preservation of the rural and coastal environments.
No concerns the site is alienated land and its further utilisation for residential purposes of this scale promotes sustainable development consistent with council strategic direction.

Hazards
There are no known natural hazards.
As a HAIL site there are no concerns as described in the accompanying Detailed Site Investigation.

Water Supply
There is an existing irrigation water supply along the road front boundary that Lot 1 would continue to use. The proposed means of potable water supply is via roof surface collection and storage in water tanks.
Both lots have an existing consent notice that requires water filtration for roof surface water collection.

Stormwater
A consent notice is proposed for any building activity on Lot 2 that exceeds permitted limits to require stormwater attenuation for 1%, 10% & 50% AEP storm events in accordance with Council Engineering Standards and Guidelines.

Lot 1 would have an impermeable surface cover of 20% and fails to comply with the permitted standards, instead defaulting to the controlled 20% standard.
Land use consent is requested for Lots 1 & 2 to allow 20% impermeable surface cover.
Lot 1 has been described as an existing use situation that would undertake stormwater attenuation to mitigate existing effects to meet permitted activity limits.

Lot 2 would likely have a near identical layout and is required to implement a similar stormwater attenuation design as Lot 1 as described in the attached Stormwater Report.

Overall, the stormwater management assessment concludes that provided Lot 2 undertakes the same or similar level of stormwater attenuation to meet permitted site coverage, the proposed subdivision does not significantly alter the impact on the environment.

Land Use consent can therefore be issued in confidence to allow both Lots 1 & 2 a 20% impermeable surface coverage.

Sewage
An effluent disposal assessment has been prepared by Kerikeri Drainage Ltd, and describes sufficient area including for 100% backup disposal field without compromise to stormwater drainage patterns.

Energy Supplies & Telecommunications
Comments from services providers Top Energy Ltd and Chorus NZ Ltd are attached.
Requirements are to provide documentation that the service providers of electricity and telecommunications are satisfied with the arrangements made for the provision of services.

Easements & Covenants
There are no existing easements.

Proposed easements outline on the scheme plan including areas 'A' & 'B'.
'A' provides for Rights of Way and Rights to convey services over Lot 2 in favour of Lot 1.
'B' provides for Rights to convey water supply over Lot 2 in favour of Lot 1.

There may be need for a proposed electricity easement over Lot 2 in favour of Lot 1, and this would be determined once the underground cable has been traced onsite. This is not a conditional or Gross easement to concern council.

Existing land covenant pursuant to Section 221 RMA (CONO 6525667.4) would not be cancelled and will automatically carry forward to proposed Lots 1 & 2.

Proposed land covenants pursuant to Section 221 shall include:
- *Stormwater management requirements for Lots 1 & 2*
- *NES HAIL site acknowledgment for Lots 1 & 2*
- *Wastewater disposal requirements for Lots 1 & 2*

Property Access
Access to Lot 1 has a well formed metalled carriageway that off Kerikeri Inlet Road. The intention is to realign the driveway so that it is within proposed easement 'A'.
Conditions of consent shall include that the existing driveway be realigned accordingly and the existing formation be reinstated in grass as required.

Access to Lot 2 is proposed directly off Kerikeri Inlet Road via the existing entrance. Conditions of consent shall include that the entrance be upgraded as a double width in accordance with council engineering standards and guidelines.

The attached entrance detail plan outlines the necessary upgrades to meet council engineering standards and guidelines.

TRANSPORTATION
The Transportation assessment attached confirms the access, entrance, parking and manoeuvring are able to meet council engineering standards and guidelines. Additionally, the road frontage along Kerikeri Inlet Road is in adequate condition not to require upgrading and does not encroach into the legal boundary to require land acquisition for road vesting.

EFFECT OF EARTHWORKS AND UTILITIES
Only minimal earthworks are involved with upgrading the entrance.

Soil
All soil is intended to remain onsite for purpose of landscaping.
The life supporting capacity of the sites soil is not compromised as it can be used for personal acts of landscaping and home produce.

Access to water bodies
Not applicable.

Land Use Incompatibility
The proposal is in keeping with the surrounding environment.
Existing mitigation measures manage standard land use incompatibilities associated with horticulture.

Proximity to Airports
No concern.

Natural Character of the coastal environment
The property does not have a coastal influence.

Energy Efficiency
The proposal is considered to adopt an acceptable level of energy efficiency being located in close walking distance to public facilities and the building site orientates with good solar gain.

RURAL LIVING ENVIRONMENT

ENVIRONMENTAL OUTCOMES EXPECTED
8.7.2.1 A Rural Living Zone where residential living on small rural lots is compatible with those other rural activities that have an emphasis on production rather than lifestyle.

8.7.2.2 A Rural Living Zone where the controls on the activities ensure a high standard of privacy and amenity for residential activities.

8.7.2.3 A Rural Living Zone where activities are self-sufficient in terms of water supply, sewerage and drainage, while not causing adverse effects on the environment.

The scale of the proposal respective to the nature of the subject environment is considered to uphold the outcomes expected.

OBJECTIVES AND POLICIES

8.7.3.1 To achieve a style of development on the urban periphery where the effects of the different types of development are compatible.

8.7.3.2 To provide for low density residential development on the urban periphery, where more intense development would result in adverse effects on the rural and natural environment.

8.7.4.2 That the Rural Living Zone be applied to areas where existing subdivision patterns have led to a semi-urban character but where more intensive subdivision would result in adverse effects on the rural and natural environment.

8.7.4.3 That residential activities have sufficient land associated with each household unit to provide for outdoor space, and where a reticulated sewerage system is not provided, sufficient land for on-site effluent disposal.

8.7.4.4 That no limits be placed on the types of housing and forms of accommodation in the Rural Living Zone, in recognition of the diverse needs of the community.

8.7.4.5 That non-residential activities can be established within the Rural Living Zone subject to compatibility with the existing character of the environment.

8.7.4.6 That home-based employment opportunities be allowed in the Rural Living Zone.

The objectives and in particular the policies provide a strong indication that the Rural Living zone is intended for absolute diversification with no limits placed on housing type or form of accommodation and that non-residential activity can also be established in this zone.

The effects of the proposed subdivision are well in line with the intended growth expectations.

The proposal is not considered to introduce any disconnect with the existing environment, and accordingly promotes the nature of the surrounding land uses with less than minor effects.

NATURAL AND PHYSICAL RESOURCES

There is no vegetation clearance and only minimal earthworks required, meaning those effects are less than minor.

PROPOSED DISTRICT PLAN

The site is located in the Rural Residential Zone (RRZ) under the Proposed District Plan and is not affected by any hazard overlays.

The proposed district plan zone rules have limited legal effect, and are shown only to distinguish uniformity with relevant objectives and policies.

The role of the Rural Residential zone is to provide an opportunity for people to enjoy a spacious, peri-urban living environment located close to a settlement. The Rural Residential zone is located on the fringe of the District's settlements and provides a transition to the surrounding Rural Production and/or Rural Lifestyle and Horticulture zones.

Objectives
RRZ-O1 *The Rural Residential zone is used predominantly for rural residential activities and small scale farming activities that are compatible with the rural character and amenity of the zone.*

RRZ-O2 *The predominant character and amenity of the Rural Residential Zone is maintained and enhanced, which includes:*
a. peri-urban scale residential activities;
b. small-scale farming activities with limited buildings and structures;
c. smaller lot sizes than anticipated in the Rural Production or Rural Lifestyle Zones; and
d. a diverse range of rural residential environments reflecting the character and amenity of the adjacent urban area.

RRZ-O3 *The Rural Residential zone helps meet the demand for growth around urban centres while ensuring the ability of the land to be rezoned for urban development in the future is not compromised.*

RRZ-O4 *Land use and subdivision in the Rural Residential zone:*
a. maintains rural residential character and amenity values;
b. supports a range of rural residential and small-scale farming activities; and
c. is managed to control any reverse sensitivity issues that may occur within the zone or at the zone interface.

Policies
RRZ-P1 *Enable activities that will not compromise the role, function and predominant character and amenity of the Rural Residential Zone, while ensuring their design, scale and intensity is appropriate, including:*
a. rural residential activities;
b. small-scale farming activities;
c. home business activities;
d. visitor accommodation; and
e. small-scale education facilities.

RRZ-P2 *Avoid activities that are incompatible with the role, function and predominant character and amenity of the Rural Residential Zone including:*
a. activities that are contrary to the density anticipated for the Rural Residential Zone;
b. primary production activities, such as intensive indoor primary production or rural industry, that generate adverse amenity effects that are incompatible with rural residential activities; and
c. commercial or industrial activities that are more appropriately located in an urban zone or a Settlement Zone.

RRZ-P3 *Avoid where possible, or otherwise mitigate, reverse sensitivity effects from sensitive and other nonproductive activities on primary production activities in adjacent Rural Production Zones and Horticulture Zones.*

RRZ-P4 *Require all subdivision in the Rural Residential zone to provide the following reticulated services to the boundary:*
a. telecommunications:
i. fibre where it is available;
ii. copper where fibre is not available;
iii. copper where the area is identified for future fibre deployment.
b. local electricity distribution network.

The subdivision proposal is consistent with the objectives and policies without being repugnant to their intent.

Existing Land Use Activity (Lot 1)

RRZ-R1 New buildings or structures, and extensions or alterations to existing buildings or structures
RRZ-S1 Maximum height

RRZ-S2 Height in relation to boundary
RRZ-S3 Setback (excluding from MHWS or wetland, lake and river margins)
RRZ-S4 Setback from MHWS; and
RRZ-S5 Building or structure coverage.

The building activity is either exempt from assessment due to existing use rights pursuant to Section 10 RMA or the proposed boundary does not cause any breach to the rules.

RRZ-R2 Impermeable surface coverage
The impermeable surface coverage of any site is no more than 12.5% or 2,500m , which ever is lesser.

The site coverage is 9.7% and therefore complies.

RRZ-R3 Residential activity
PER-1
The site area per residential unit is at least 4,000m².

Compliant.

RRZ- R4 - RRZ-R23

Not applicable.

Standards
The proposal is not subject to any of the Standards, either by default, having no legal effect or are not applicable.

District Wide Matters

Provisions under earthworks and natural hazards have immediate legal effect.
Other aspects with immediate legal effect include heritage, ecosystems and indigenous biodiversity, however are not considered applicable to the site or scale of activity at hand.

Overview

Earthworks involve the alteration or disturbance of land, including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth. Earthworks are an integral part and necessary component of the use and development of rural and urban land for living, business and recreation purposes. In addition, earthworks are a key component of the development, operation, maintenance and upgrading of infrastructure.

Objectives

EW-O1

Earthworks are enabled where they are required to facilitate the efficient subdivision and development of land, while managing adverse effects on waterbodies, coastal marine area, public safety, surrounding land and infrastructure.

EW-O2

Earthworks are appropriately designed, located and managed to protect historical and cultural values, natural environmental values, preserve amenity and safeguard the life-supporting capacity of soils.

EW-O3

Earthworks are undertaken in a manner which does not compromise the stability of land, infrastructure and public safety.

The subdivision does not require any earthworks and any future works would be addressed at the building consent stage.

Subdivision

Subdivision is the process of dividing an allotment or building into one or more additional lots or units or changing an existing boundary location. The way an allotment is subdivided, including its size and shape is important as it not only determines the quality and character of development, but it also impacts on surrounding sites and the future use of the land. Subdivision affects the natural and physical environment and introduces long-term development patterns that are unlikely to be reversed.

Objectives
SUB-O1 Subdivision results in the efficient use of land, which:
a. achieves the objectives of each relevant zone, overlays and district wide provisions;
b. contributes to the local character and sense of place;
c. avoids reverse sensitivity issues that would prevent or adversely affect activities already established on land from continuing to operate;
d. avoids land use patterns which would prevent land from achieving the objectives and policies of the zone in which it is located;
e. does not increase risk from natural hazards or risks are mitigates and existing risks reduced; and
f. manages adverse effects on the environment.

***SUB-O2** Subdivision provides for the:*
a. Protection of highly productive land; and
b. Protection, restoration or enhancement of Outstanding Natural Features, Outstanding Natural Landscapes, Natural Character of the Coastal Environment, Areas of High Natural Character, Outstanding Natural Character, wetland, lake and river margins, Significant Natural Areas, Sites and Areas of Significance to Māori, and Historic Heritage.

SUB-P3 Provide for subdivision where it results in allotments that:
a. are consistent with the purpose, characteristics and qualities of the zone;
b. comply with the minimum allotment sizes for each zone;
c. have an adequate size and appropriate shape to contain a building platform; and
d. have legal and physical access.

The proposal is considered to accord with the objectives and policies under the subdivision standards.

Rules
SUB-R3 Subdivision of land to create a new allotment
CON-1
1. The subdivision complies with standards:
SUB-S2 Requirements for building platforms for each allotment;
SUB-S3 Water supply;
SUB-S4 Stormwater management;
SUB-S5 Wastewater disposal;
SUB-S6 Telecommunications and power supply;
SUB-S7 Easements for any purpose;

CON-2
1. The subdivision complies with standards:
SUB-S1 Minimum allotment sizes
SUB-S8 Esplanades

The subdivision rules do not currently have legal effect.

Summary of Proposed District Plan

The proposed District Plan has limited legal effect, and those standards applicable all prove to have effects less than minor not to require further assessment.

The proposal is considered to accord with relevant objectives and policies under the proposed district plan.

SUMMARY

In summary, the subdivision assessment criteria align with the principles and purpose of the **Resource Management Act (RMA)**, and no unreasonable environmental effects are anticipated either during the subdivision stage or subsequent development.

Although the subdivision is classified as non-complying, it is expected to have less-than-minor effects. The vicinities context, characterised by a range of existing 2000m^2 lots, provides strong evidence that the proposal is consistent with the existing environment. This approach aligns with the objectives of the **Rural Living zone** and the broader goals of the **Rural Environment**. The proposed subdivision meets the relevant objectives and policies of both the propose and operative district plans, and therefore passes the planning **Gateway Test**.

Non-Notification Request

While the proposed activity is assessed as non-complying, it is considered appropriate for non-notified processing for the following reasons:

- Any potential adverse effects of the proposal are less than minor;
- There is no rule or national environmental standard that mandates notification;
- There are no affected parties;
- The applicant has not requested notification;
- The proposal is consistent with the guidelines of the Rural Living zone and is in harmony with the existing environment.

Given that the effects are less than minor and the proposal is in line with the relevant objectives and policies, the applicant respectfully requests that the application be processed on a non-notified basis.

CONCLUSION

The subject site does not exhibit any vulnerable environmental characteristics, and the proposed subdivision will not result in any degradation of the wider environmental context.
The subdivision aligns with the objectives and policies of the **Rural Living zone**, demonstrating that any potential effects are less than minor.

The proposal is consistent with higher-level planning documents, including the **Northland Regional Policy Statement**, the **National Environmental Standard for Freshwater (2020)**, and the **National Environmental Standard for Assessing and Managing Contaminants in Soil (HAIL) (2011)**. It has been demonstrated to adhere to the relevant policy framework.
The subdivision is also considered to be in accordance with **Part 2** of the **Resource Management Act 1991**, which outlines the purpose and principles of the Act. The application provides sufficient information to satisfy the requirements of **Clauses 6 and 7** regarding the assessment of environmental effects.

In light of the overall planning framework, the proposed subdivision is recommended for approval by the local authority, subject to the standard conditions of consent.

Micah Donaldson
MNZIS - Assoc.NZPI - RPSURV
DONALDSONS
Land / Engineering Surveyors and Development Planners

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**221337**
Land Registration District	**North Auckland**
Date Issued	08 August 2005

Prior References
NA638/197

Estate	Fee Simple
Area	4002 square metres more or less
Legal Description	Lot 3 Deposited Plan 354175

Registered Owners

Conway Gosling Lewis and Johanna Lewis as to a 1/2 share

Johanna Lewis and Conway Gosling Lewis as to a 1/2 share

Interests

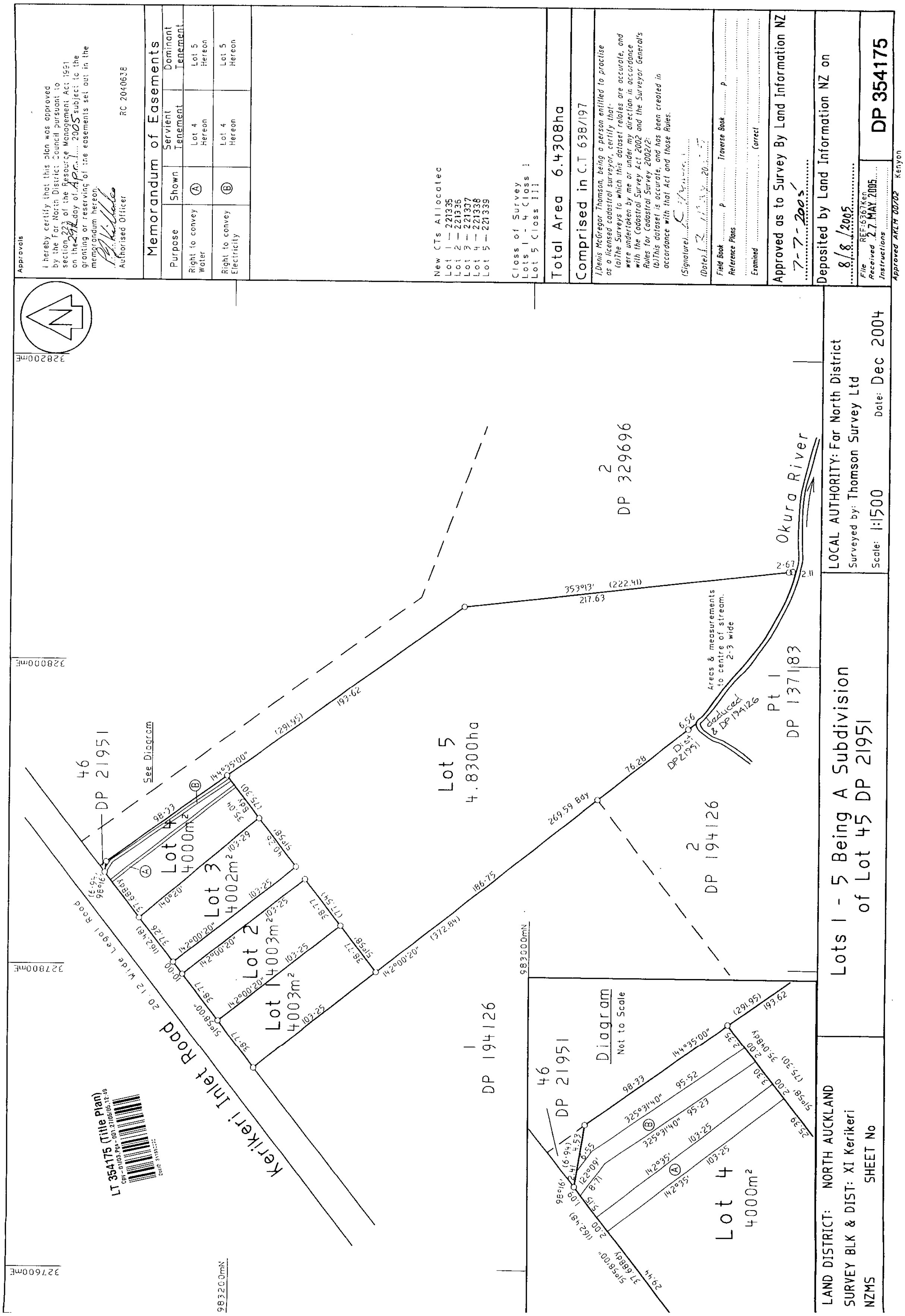
Appurtenant hereto is a right of way, right to transmit electricity, a right to transmit telecommunications and computer media, a right to convey water and a right to drain water created by Easement Instrument 6191292.5 - 22.10.2004 at 9:00 am

The easements created by Easement Instrument 6191292.5 are subject to Section 243 (a) Resource Management Act 1991

6525667.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 8.8.2005 at 9:00 am

Land Covenant in Easement Instrument 8555386.2 - 11.2.2011 at 11:23 am

9457539.3 Mortgage to ASB Bank Limited - 2.8.2013 at 2:03 pm



Approvals
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 29th day of April 2005 subject to the granting or reserving of the easements set out in the memorandum hereon.
Authorised Officer
RC 2040638
Memorandum of Easements
Purpose | Shown | Servient Tenement | Dominant Tenement
Right to convey Water | A | Lot 4 Hereon | Lot 5 Hereon
Right to convey Electricity | B | Lot 4 Hereon | Lot 5 Hereon
New CTs Allocated
Lot 1 — 221335
Lot 2 — 221336
Lot 3 — 221337
Lot 4 — 221338
Lot 5 — 221339
Class of Survey
Lots 1 - 4 Class I
Lot 5 Class III
Total Area 6.4308ha
Comprised in C.T 638/197
Approved as to Survey By Land Information NZ
7-7-2005
Deposited by Land Information NZ on
8/8/2005
DP 354175
LOCAL AUTHORITY: Far North District
Surveyed by: Thomson Survey Ltd
Scale: 1:1500
Date: Dec 2004
Lots 1 - 5 Being A Subdivision of Lot 45 DP 21951
LAND DISTRICT: NORTH AUCKLAND
SURVEY BLK & DIST: XI Kerikeri
NZMS
SHEET No
Kerikeri Inlet Road
20.12 Wide Legal Road
Lot 1 4003m²
Lot 2 4003m²
Lot 3 4002m²
Lot 4 4000m²
Lot 5 4.8300ha
46 DP 21951
2 DP 329696
2 DP 194126
1 DP 194126
Pt 1 DP 137183
Okura River
Areas & measurements to centre of stream. 2-3 wide
Diagram Not to Scale
See Diagram
LT 354175 (Title Plan)

Far North District Council

Private Bag 752, Memorial Ave
Kaikohe 0400, New Zealand
Freephone: 0800 920 029
Phone: (09) 405 2750
Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz
Website: www.fndc.govt.nz

THE RESOURCE MANAGEMENT ACT 1991

SECTION 221 : CONSENT NOTICE

REGARDING RC 2040638
the Subdivision of Lot 45 DP 21951
North Auckland Registry

PURSUANT to Section 221 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 title of Lots 1, 2, 3 & 4 DP 354175.

SCHEDULE

i. Due to horticultural activities taking place in the vicinity any dwelling to be constructed on the Lots that will utilise rainwater as a potable water supply will require a suitable water filtration system to be installed.

SIGNED: P.J. Killalea Mr Pat Killalea
By the FAR NORTH DISTRICT COUNCIL
Under delegated authority:
RESOURCE CONSENTS MANAGER

DATED at **KAIKOHE** this 15th day of July 2005

View Instrument Details

Instrument No	8555386.2
Status	Registered
Date & Time Lodged	11 February 2011 11:23
Lodged By	Prosser, Nicole Jayne
Instrument Type	Easement Instrument

Affected Computer Registers	Land District
221335	North Auckland
221336	North Auckland
221337	North Auckland
221338	North Auckland
221339	North Auckland

Annexure Schedule: Contains 6 Pages.

Grantor Certifications

I certify that I have the authority to act for the Grantor and that the party has the legal capacity to authorise me to lodge this instrument	☑
I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument	☑
I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply	☑
I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period	☑
Mortgage 6525667.8 does not affect the servient tenement, therefore the consent of the Mortgagee is not required	☑
I certify that the Mortgagee under Mortgage 8458492.3 has consented to this transaction and I hold that consent	☑

Signature

Signed by Nicole Jayne Prosser as Grantor Representative on 16/02/2011 11:14 AM

Grantee Certifications

I certify that I have the authority to act for the Grantee and that the party has the legal capacity to authorise me to lodge this instrument	☑
I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument	☑
I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply	☑
I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period	☑

Signature

Signed by Nicole Jayne Prosser as Grantee Representative on 16/02/2011 11:14 AM

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

Form B

Easement instrument to grant easement or *profit à prendre*, or create land covenant

(Sections 90A and 90F Land Transfer Act 1952)

Grantor

(1) BARRY WILLIAM AYERS and MAREE ANN AYERS (2) RAEWYN ELEANOR KENYON
(3) MARTIN PAUL O'BRIEN and APRIL CHRISTINA O'BRIEN (4) CLIVE JOHN KENYON

Grantee

(1) BARRY WILLIAM AYERS and MAREE ANN AYERS (2) RAEWYN ELEANOR KENYON
(3) MARTIN PAUL O'BRIEN and APRIL CHRISTINA O'BRIEN (4) CLIVE JOHN KENYON
(5) RAEWYN ELEANOR KENYON

Grant of Easement or *Profit à prendre* or Creation of Covenant

The Grantor being the registered proprietor of the servient tenement(s) set out in Schedule A **grants to the Grantee** (and, if so stated, in gross) the easement(s) or *profit(s) à prendre* set out in Schedule A, **or creates** the covenant(s) **set out** in Schedule A, with the rights and powers or provisions set out in the Annexure Schedule(s)

Schedule A *Continue in additional Annexure Schedule, if required*

Purpose (Nature and extent) of easement: *profit* or covenant	Shown (plan reference)	Servient Tenement (Computer Register)	Dominant Tenement (Computer Register) or in gross
Land Covenants	DP 354175	221335, 221336, 221337, 221338	221335, 221336, 221337, 221338, 221339

Form B - continued

Easements or *profits à prendre* rights and powers (including terms, covenants and conditions)

Delete phrases in [ ] and insert memorandum number as required; continue in additional *Annexure Schedule, if required*

~~Unless otherwise provided below, the rights and powers implied in specified classes of easement are those prescribed by the Land Transfer Regulations 2002 and/or Schedule Five of the Property Law Act 2007~~

~~The implied rights and powers are hereby~~ **~~[varied] [negatived] [added to]~~** ~~or~~ **~~[substituted]~~** ~~by:~~

~~[Memorandum number , registered under section 155A of the Land Transfer Act 1952]~~

~~[the provisions set out in Annexure Schedule]~~

Covenant provisions

Delete phrases in [ ] and insert Memorandum number as require; continue in additional *Annexure Schedule, if required*

The provisions applying to the specified covenants are those set out in:

[Memorandum number , registered under section 155A of the Land Transfer Act 1952]

[Annexure Schedule]

Form L

Annexure Schedule Page 3 of 4 Pages

Insert instrument type

EASEMENT INSTRUMENT TO CREATE LAND COVENANTS

Continue in additional Annexure Schedule, if required

Continuation of estate or interest to be transferred

The registered proprietor of the land contained in Certificate of title NA 638/197 subdivided the land into residential lots in the manner shown and defined on DP 354175 and it is the intention to create for the benefit of the land contained in the certificates of title shown in schedule A (the "Dominant Lots ") the land covenants set out in schedule B over the land in certificates of title in schedule B (the "Servient Lots") TO THE INTENT that the Servient Lots shall be bound by the stipulations and restrictions set out in Schedule B respectively and that the owners and occupiers for the time being of the Dominant Lots may enforce the observance of such stipulations against the owners for the time being of the Servient Lots

AND AS INCIDENTAL to the transfer of the fee simple so as to bind the Servient Lots and for the benefit of the respective Dominant Lots the transferee DOTH Hereby COVENANT AND AGREE in the manner set out in Schedule B hereto so that the covenants run with the Servient Lots for the respective Dominant Lots as described in Schedule A

SCHEDULE A

221335
221336
221337
221338
221339

SCHEDULE B

1. No existing planted shelter shall be removed without first replacing it with other suitable hedging.
2. Not to erect or permit to be erected or placed on the said land:
   (a) any building for which a building consent has not been issued;
   (b) any building used, or intended to be used, or capable of being used as a dwelling unit having an enclosed floor area of less than 150 square metres, including internal garaging;
   (c) any building used or intended to be used or capable of being used as a dwelling unit, the plans of which are not approved by the owner/s of Lot 5 DP 354175 for the time being provided that approval will not be unreasonably withheld where the design, materials and position on section etc are in harmony with the standard and style of the subdivision.
3. Not without the approval of the owner/s of Lot 5 DP 354175 for the time being to use or permit or suffer to be used in any buildings on the land any outer-wall sheathing of corrugated iron, flat fibrolite or plywood.
4. Not without the approval of the owner/s of Lot 5 DP 354175 for the time being to erect or permit or suffer to be erected on the land any building prior to the erection thereon of a dwelling house.

Form L

Annexure Schedule Page 4 of 4 Pages

Insert instrument type

EASEMENT INSTRUMENT TO CREATE LAND COVENANTS

Continue in additional Annexure Schedule, if required

5. Not to erect or move onto the said land any dwelling house or any other building which has been previously occupied or transportable home being a dwelling house substantially constructed elsewhere for transportation to a building site, unless they can prove to the owners of Lot 5 DP 354175 for the time being satisfaction that such a building will enhance the desirability and re-saleability of the lots in the subdivision.
6. Not to allow any iron or aluminium roof to remain unpainted for a period of more than 12 months after the roof has been erected.
7. Not to place or permit or suffer to be upon the said land any caravan unless such caravan is currently registered, has a current warrant of fitness, has wheels attached and is not occupied as a dwelling.
8. Not to allow to remain on the property any derelict vehicles (vehicles without current registration or warrant of fitness) unless suitably garaged, or screened from view to preserve the amenities of the neighbourhood.
9. To bury to a depth of not less than 60% or screen from all views all water storage tanks to preserve neighbourhood amenities and avoid visual pollution.
10. Not without prior written permission of the owner/s of Lot 5 DP 354175 for the time being to erect or allow to be erected any fence on the said land to a height greater than 1.8 metres not erect a boundary fence of corrugated iron.
11. Not to use the said land or permit or suffer it to be used for any trading or commercial purposes except farming (as defined in the Far North District Council Draft District Plan April 2000) nor exceed the scale of activities as permitted by the Far North District Council Draft District Plan April 2000 Rural Living Zone, or home-based occupation.
12. Not to keep pigs or poultry other than for the purchasers' own domestic purposes.
13. Not to allow noxious weeds to develop and proliferate.

Schedule of Lots
221335 Lot 1
221336 Lot 2
221337 Lot 3
221338 Lot 4

ANNEXURE SCHEDULE - CONSENT FORM[1]

Land Transfer Act 1952 section 238(2)

Person giving consent *Surname must be underlined*	**Capacity and Interest of Person giving consent** *(eg Mortgagee under Mortgage no.)*
ANZ National Bank Limited	**Mortgagee under Mortgage No 8458492.3**

Consent
Delete words in [ ] if inconsistent with the consent
State full details of the matter for which consent is required

[Without prejudice to the rights and powers existing under the interest of the person giving consent.]

the **Person giving consent hereby consents** to:

Registration of the Surrender of Easement Instrument 6525667.7 and registration of the varied Easement Instrument to create Land Covenants

Dated this day of 13 DEC 2010 2010

Attestation

ANIL SURESH CHANDRA [signature]	**Signed in my presence by the Person giving consent** *Signature of Witness* *Witness to complete in BLOCK letters (unless legibly printed)* **Witness name** [signature] PRABHA NATARAJAN **Occupation** BANK OFFICER **Address** AUCKLAND
Signature [Common seal] of Person giving consent	

[1] An Annexure Schedule in this form may be attached to the relevant instrument, where consent is required to enable registration under the Land Transfer Act 1952, or other enactments, under which no form is prescribed

CERTIFICATE OF NON-REVOCATION OF POWER OF ATTORNEY

I, **Anil Suresh Chandra** of **Auckland, New Zealand**, **Manager, Lending Services Centre** of ANZ National Bank Limited, certify –

1. That by deed dated **28 June 1996**, ANZ National Bank Limited of Wellington, New Zealand appointed me its attorney.

2. That I have not received notice of any event revoking the power of attorney.

Signed at **Auckland** this day of 3 December 2010

Land Information New Zealand, Dealing Numbers:

Auckland	as No.	D.016180	Hokitika	as No.	105147
Blenheim	as No.	186002	Invercargill	as No.	242542.1
Christchurch	as No.	A.256503.1	Napier	as No.	644654.1
Dunedin	as No.	911369	Nelson	as No.	359781
Gisborne	as No.	G.210991	New Plymouth	as No.	433509
Hamilton	as No.	B.355185	Wellington	as No.	B.530013.1

Approved by Registrar-General of Land under No. 2002/6055

Easement instrument to grant easement or *profit à prendre*, or create land covenant

Sections 90A and 90F, Land Transfer Act 1952

EI 6191292.5 Easemen
Cpy – 01/01, Pgs – 010, 21/10/04, 11:33
DocID: 311651840

Registrar-General of Land Approval 02/6055EF A.D.L.S.

Land registration district

NORTH AUCKLAND

Grantor

Surname(s) must be underlined or in CAPITALS.

Alan de Berri NOAKES

Grantee

Surname(s) must be underlined or in CAPITALS.

Raewyn Eleanor KENYON

Grant* of easement or *profit à prendre* or creation or covenant

The Grantor, being the registered proprietor of the servient tenement(s) set out in Schedule A, **grants to the Grantee** (and, if so stated, in gross) the easement(s) or *profit(s) à prendre* set out in Schedule A, **or creates** the covenant(s) **set out** in Schedule A, with the rights and powers or provisions set out in the Annexure Schedule(s).

Dated this 26th day of August **2004**

Attestation

A.d.B. Noakes by his attorney DENNIS JOHN McBREARTY **Signature [common seal] of Grantor**	**Signed in my presence by the Grantor** *Signature of witness* *Witness to complete in BLOCK letters (unless legibly printed)* **Witness name** **Occupation** GINA BIRCHALL LEGAL EXECUTIVE **Address** KERIKERI
R.E. Kenyon **Signature [common seal] of Grantee**	**Signed in my presence by the Grantee** *Signature of witness* *Witness to complete in BLOCK letters (unless legibly printed)* **Witness name** **Occupation** **ERICA CHRISTINE ELLIOTT SECRETARY** **Address** **KERIKERI**

Certified correct for the purposes of the Land Transfer Act 1952.

[Solicitor for] the Grantee

*If the consent of any person is required for the grant, the specified consent form must be used.

REF: 7003 – AUCKLAND DISTRICT LAW SOCIETY

Approved by Registrar-General of Land under No. 2002/6055

Annexure Schedule 1

Registrar-General of Land Approval 02/6055EF A.D.L.S.

Easement instrument Dated _____ Page 1 of 2 pages

Schedule A

(Continue in additional Annexure Schedule if required.)

Purpose (nature and extent) of easement, *profit*, or covenant	Shown (plan reference)	Servient tenement (Identifier/CT)	Dominant tenement (Identifier/CT *or* in gross)
Right of Way **Right to transmit electricity** **Right to transmit telecommunications and computer media** **Right to convey water** **Right to drain water**	**Marked A on DP 329696**	**121654**	~~121653~~ 638/197

Easements or *profits à prendre* rights and powers (including terms, covenants, and conditions)

Delete phrases in [ ] and insert memorandum number as required.
Continue in additional Annexure Schedule if required.

Unless otherwise provided below, the rights and powers implied in specific classes of easement are those prescribed by the Land Transfer Regulations 2002 and/or the Ninth Schedule of the Property Law Act 1952.

The implied rights and powers are ~~[varied]~~ ~~[negatived]~~ **[added to]** or ~~[substituted]~~ by:

~~[Memorandum number _____, registered under section 155A of the Land Transfer Act 1952].~~

~~[the provisions set out in Annexure Schedule 2].~~

Covenant provisions

Delete phrases in [ ] and insert memorandum number as required.
Continue in additional Annexure Schedule if required.

The provisions applying to the specified covenants are those set out in:

~~[Memorandum number _____, registered under section 155A of the Land Transfer Act 1952]~~

[Annexure Schedule 2].

All signing parties and either their witnesses or solicitors must sign or initial in this box

Approved by Registrar-General of Land under No. 2002/5032

Annexure Schedule

Registrar-General of Land Approval 02/5032EF A.D.L.S.

Insert type of instrument
"Mortgage", "Transfer", "Lease" etc

Easement	Dated		Page 2 of 2 Pages

(Continue in additional Annexure Schedule, if required.)

Continuation of "Rights and Powers"

Where there is a conflict between the provisions of the Fourth Schedule to the Land Transfer Regulations 2002 and the Ninth Schedule to the Property Law Act 1952, the provisions of the Ninth Schedule must prevail.

Where there is a conflict between the provisions of the Fourth Schedule and/or the Ninth Schedule and the modifications in this Easement Instrument, the modifications must prevail.

The implied rights and powers are varied as follows:

1. Any maintenance, repair or replacement of the right of way, stormwater and water drains and pipes or electricity and telecommunications services and cables on the servient or dominant land that is necessary because of any act or omission by the Grantor or Grantee (which includes agents, employees, contractors, subcontractors and invitees of that Grantor or Grantee) must be carried out promptly by that owner and at that owner's sole cost. Where the act or omission is in the partial cause of the maintenance, repair or replacement, the costs payable by that owner responsible must be in proportion to the amount attributable to that act or omission (with the balance payable in accordance with clause 11 of the Fourth Schedule).

2. The Grantor and Grantee agree that the land marked A on DP-329696 may in the future be vested in the Far North District Council as road. The Grantor and the Grantee consent to such vesting and agree that when called upon to do so they will execute the required surrender of the easements recorded herein for that purpose.

If this Annexure Schedule is used as an expansion of an instrument, all signing parties and either their witnesses or solicitors must sign or initial in this box.

CERTIFICATE OF NON REVOCATION OF POWER OF ATTORNEY

I, **DENNIS JOHN McBREARTY** of Paihia, Solicitor hereby certify:

1. THAT by Deed dated the 26th day of August 1992 **ALAN de BERRI NOAKES** appointed me his attorney on the terms and subject to the conditions set out in the said Deed and registered in the North Auckland Registry under no. C900960.1.

2. THAT at the date hereof I have not received any notice or information of the revocation of that appointment by the death of the said **ALAN de BERRI NOAKES** or otherwise.

SIGNED at Kerikeri this 26th day of August 2004.

.....

DENNIS JOHN McBREARTY

Approved by Registrar-General of Land under No. 2003/6150

Annexure Schedule - Consent Form

Land Transfer Act 1952 section 238(2)

Approval 03/6150EF

Insert type of instrument
"Caveat", "Mortgage" etc

Mortgage

Page 1 of 1 pages

Consentor *Surname must be underlined or in CAPITALS*	Capacity and Interest of Consentor *(eg. Caveator under Caveat no./Mortgagee under Mortgage no.)*
Richard Simeon Wyles INDER and James Garland HARGREAVES	Mortgagee under Mortgage No. D481986.1

Consent
Delete Land Transfer Act 1952, if inapplicable, and insert name and date of application Act.
Delete words in [ ] if inconsistent with the consent.
State full details of the matter for which consent is required.

Pursuant to [section 238(2) of the Land Transfer Act 1952]

~~[section of the Act]~~

[Without prejudice to the rights and powers existing under the interest of the Consentor]

the Consentor hereby consents to:

The creation and granting of the Easements contained within the Annexed Easement Instrument

Dated this 26th day of August 2004

Attestation

Richard Simeon Wyles INDER	Signed in my presence by the Consentor
	Signature of Witness
	Witness to complete in BLOCK letters (unless legibly printed)
	Witness name BERNARD J. McCARTIN
	Occupation JP (Qual)
	Address ASHMORE CITY. QLD 4214
Signature of Consentor	

JUSTICE OF THE PEACE (QUALIFIED) DEPT. OF JUSTICE & ATTORNEY-GENERAL Reg. No. 87198

IN AND FOR THE
STATE OF
QUEENSLAND

An Annexure Schedule in this form may be attached to the relevant instrument, where consent is required to enable registration under the Land Transfer Act 1952, or other enactments, under which no form is prescribed.

REF: 7029 – AUCKLAND DISTRICT LAW SOCIETY

Approved by Registrar-General of Land under No. 2002/5032

Annexure Schedule

Registrar-General of Land Approval 02/5032EF A.D.L.S.

Insert type of instrument
"Mortgage", "Transfer", "Lease" etc

	Dated		Page 1 of 1 Pages

(Continue in additional Annexure Schedule, if required.)

Continuation of "Attestation"

James Garland HARGREAVES J.G. Hargreaves Signature of	Signed in my presence by the Signature of Witness *Witness to complete in BLOCK LETTER (unless legibly printed)* **Witness name** MICHAEL JELINE **Occupation** RETIRED **Address** 16 HANNANS ROAD WHITTANGA.

If this Annexure Schedule is used as an expansion of an instrument, all signing parties and either their witnesses or solicitors must sign or initial in this box.

Approved by Registrar-General of Land under No. 2003/6150

Annexure Schedule - Consent Form

Land Transfer Act 1952 section 238(2)

Insert type of instrument
"Caveat", "Mortgage" etc

Caveat

Page 1 of 1 pages

Consentor *Surname must be underlined or in CAPITALS*	Capacity and Interest of Consentor *(eg. Caveator under Caveat no./Mortgagee under Mortgage no.)*
Richard Simeon Wyles INDER James Garland HARGREAVES	**Caveator under Caveat No. D648393.1**

Consent

Delete Land Transfer Act 1952, if inapplicable, and insert name and date of application Act.
Delete words in [ ] if inconsistent with the consent.
State full details of the matter for which consent is required.

Pursuant to [section 238(2) of the Land Transfer Act 1952]

~~[section of the Act]~~

[Without prejudice to the rights and powers existing under the interest of the Consentor]

the Consentor hereby consents to:

The creation and granting of the Easements contained within the Annexed Easement Instrument

Dated this 26th **day of** August **2004**

Attestation

Richard Simeon Wyles INDER	**Signed in my presence by the Consentor**
	Signature of Witness
	Witness to complete in BLOCK letters (unless legibly printed)
	Witness name BERNARD T. McCARTIN
	Occupation JP (QUAL)
	Address ASHMORE CITY. QLD 4214.
Signature of Consentor	

JUSTICE OF THE PEACE (QUALIFIED) DEPT. OF JUSTICE & ATTORNEY-GENERAL Reg No: 87198

An Annexure Schedule in this form may be attached to the relevant instrument, where consent is required to enable registration under the Land Transfer Act 1952, or other enactments, under which no form is prescribed.

REF: 7029 – AUCKLAND DISTRICT LAW SOCIETY

IN AND FOR THE STATE OF QUEENSLAND

Approved by Registrar-General of Land under No. 2002/5032

Annexure Schedule

Registrar-General of Land Approval 02/5032EF A.D.L.S.

Insert type of instrument
"Mortgage", "Transfer", "Lease" etc

	Dated		Page 1 of 1 Pages

(Continue in additional Annexure Schedule, if required.)

Continuation of "Attestation"

James Garland HARGREAVES Signature of	Signed in my presence by the Signature of Witness *Witness to complete in BLOCK LETTER (unless legibly printed)* **Witness name** MICHAEL JELINE **Occupation** RETIRED **Address** 16 HANNANS RD WHITIANGA.

If this Annexure Schedule is used as an expansion of an instrument, all signing parties and either their witnesses or solicitors must sign or initial in this box.

CERTIFICATE OF NON-REVOCATION OF POWER OF ATTORNEY

I, CAROLYN ANN OLIVER, of Hamilton in New Zealand, Bank Officer

HEREBY CERTIFY -

1. **THAT** by Deed dated the 20th October 2003 a copy of which is deposited in the Land Registry Office at Christchurch (Canterbury Registry) numbered PA 5941731.1.

   Westpac Banking Corporation ABN 33 007 457 141, incorporated in Australia (New Zealand division) under the Corporations Act 2001 and having its principal place of business in New Zealand at PWC Tower 188 Quay Street, P O Box 934, Auckland and carrying on the business of banking appointed me its attorney on the terms and subject to the conditions set out in the said Deed and the attached document is executed by me under the powers thereby conferred.

2. **THAT** at the date hereof I am a Tier Three Attorney for Westpac Banking Corporation.

3. **THAT** at the date hereof I have not received any notice or information of the revocation of that appointment by the winding up or dissolution of the said **Westpac Banking Corporation** or otherwise.

Signed at Hamilton

CAROLYN ANN OLIVER

this 31 AUGUST 2004

Approved by Registrar-General of Land under No. 2003/6150

Annexure Schedule - Consent Form

Land Transfer Act 1952 section 238(2)

Registrar-General of Land Approval 03/6150EF A.D.L.S.

Insert type of instrument
"Caveat", "Mortgage" etc

Easement Instrument

Consentor *Surname must be underlined or in CAPITALS*	**Capacity and Interest of Consentor** *(eg. Caveator under Caveat no./Mortgagee under Mortgage no.)*
Westpac Banking Corporation	**Mortgagee under Mortgage No. D422372.1**

Consent

Delete Land Transfer Act 1952, if inapplicable, and insert name and date of application Act.
Delete words in [ ] if inconsistent with the consent.
State full details of the matter for which consent is required.

Pursuant to ~~[section 238(2) of the Land Transfer Act 1952]~~

~~[section of the Act]~~

[Without prejudice to the rights and powers existing under the interest of the Consentor]

the **Consentor hereby consents** to:

registration of the annexed Easement Instrument over the land contained in Certificate of Title 121654

Dated this 31 day of August **2004**

Attestation

Carolyn Ann Oliver	**Signed in my presence by the Consentor** **Signature of Witness** *Witness to complete in BLOCK letters (unless legibly printed)* **Witness name** Ruth Margaret Dawkins **Occupation** Bank Officer **Address** Hamilton
Signature of Consentor	

An Annexure Schedule in this form may be attached to the relevant instrument, where consent is required to enable registration under the Land Transfer Act 1952, or other enactments, under which no form is prescribed.

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

20 January 2025

Micah Donaldson
Donaldsons Surveyors Limited
PO Box 211
KERIKERI

Email: micah@donaldsons.net.nz

To Whom It May Concern:

RE: PROPOSED SUBDIVISION
C & J Lewis – 166 Kerikeri Inlet Road, Kerikeri. Lot 3 DP 354175.

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

Top Energy's requirement for this subdivision is that power be made available for the additional lot. Top Energy advises that proposed Lot 1 has an existing power supply. Design and costs to provide a power supply to Lot 2 would be provided after application and an on-site survey have been completed.
Link to application: Top Energy | Top Energy

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

Yours sincerely

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

Chorus New Zealand Limited

13 December 2024

Chorus reference: 11088801

Attention: Donaldson's Surveyors Ltd

Quote: New Property Development

1 connections at 166 Kerikeri Inlet Road , Kerikeri, Far North District, 0230

Your project reference: 8541 C. Lewis

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

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

Fibre network	$0.00

The total contribution we would require from you is **$0.00 (including GST)**. This fee is a contribution towards the overall cost that Chorus incurs to link your development to our network. This quote is valid for 90 days from 13 December 2024. This quote is conditional on you accepting a New Property Development Contract with us for the above development.

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

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

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

Kind Regards

Chorus New Property Development Team

Donaldsons Surveyors Ltd

PRELIMINARY AND DETAILED SITE INVESTIGATION (PSI/DSI)

166 Kerikeri Inlet Road, Kerikeri

Project Reference: 27844
27 March 2025

DOCUMENT CONTROL

Version	Date	Comments
A	27/03/2025	Issued for Consent

Version	Issued For	Prepared By	Reviewed & Authorised By
A	Issued for Consent	Erin Gasston Environmental Scientist	**James Gladwin** Environmental Group Manager *SQEP*

EXECUTIVE SUMMARY

A contamination preliminary and detailed site investigation (PSI & DSI) has been conducted for the site located at 166 Kerikeri Inlet Road, Kerikeri.

The objectives of the assessment were to identify any potential sources of contamination from past and present land-use activities at the site and surrounding area, to determine the contamination status of soils at the site, and to subsequently assess compliance with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) for the proposed subdivision development at the site.

The investigation comprises a PSI (i.e., site history review) and DSI (i.e., intrusive soil sampling investigation). Evidence from the PSI indicate that **HAIL A10:** '*Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds'* are more likely than not to have occurred at the site.

Soil sampling was therefore carried out to provide an indication of the level of contamination in the soil (if any) from contaminants commonly associated with these activities undertaken at the site.

As per Regulation 6 (3) it is considered that it is more likely than not an activity or industry described in the HAIL has been undertaken on the piece of land (HAIL A10 / HAIL I). Although soil contamination has been confirmed at concentrations above the applicable guideline limit, the proposed soil disturbance to remediate the site is anticipated to be less than the Permitted Activity threshold under the NES (approximately 0.05 m^3 soil removal; with the permitted activity threshold being approximately 39.9 m^3). The site work is therefore considered a permitted activity under the NESCS as per Regulation 8(4).

Given the minor soil disturbance volumes anticipated to remediate the affected area, the short term risk of exposure to construction workers during remedial works is considered to be low. Good personal hygiene (hand washing prior to eating and drinking) is considered appropriate to mitigate any short term risk. Soil will require offsite disposal to a licensed landfill facility.

As per Regulation 8 (4)(d) the regulatory authority must be provided a copy of this report.

CONTENTS

1 INTRODUCTION

LDE has been engaged by Donaldsons Surveyors Ltd to undertake a soil contamination Preliminary Site and Detailed Site Investigation (PSI & DSI) for the site located at 166 Kerikeri Inlet Road, Kerikeri. LDE understands that the site is to undergo subdivision that may not meet the permitted activity conditions (Regulation 8) of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS).

The PSI stage is therefore required to identify if there are or were any current or historical land-use activities that could have caused soil contamination that is a risk to human health to determine if the NESCS applies to the land and whether further investigation, a DSI is required to accompany the consent application for the proposed development. The DSI component of the investigation includes the collection and analysis of soil samples taken at the site. It is required to establish if soil contamination exceeds the applicable standard and to determine applicability and/or status of the site under the NESCS.

This site investigation has been prepared in accordance with the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2021. It has been managed by a suitably qualified and experienced practitioner (SQEP); carried out in general accordance with the Contaminated Land Management Guidelines No.1- Reporting on Contaminated Sites in New Zealand (revised 2021) and Contaminated Land Management Guidelines No.5: Site Investigation and Analysis of Soils (revised 2021).

1.1 Investigation Objectives

The objectives of the investigation are to:

- Assess whether there has been (or is more likely than not to have been) a potentially contaminating land use.
- Assess the nature and source of potential or likely contaminants.
- Identify the possible locations of contamination.
- Identify known or potential exposure pathways by which identified receptors could be exposed to the contaminants whilst undertaking the current or proposed future land use.
- Identify known or potential human and ecological receptors that could be exposed to contaminants.
- Assess if the project is covered by the NESCS Regulations.
- Determine if further investigation in the form of a DSI is required.
- Determine if soil contamination exceeds the applicable standard and to identify if the site is restricted discretionary or controlled under the NESCS.
- Delineate the extent (vertically and horizontally) of the contamination on the site.

1.2 Site Identification

The site is located at 166 Kerikeri Inlet Road, Kerikeri, approximately 1.6 km to the east of Kerikeri town centre. The site is zoned Rural Living under the Far North District Plan (operative 2009). The site comprises approximately 3,990 m^2 of land and is legally described as LOT 3 DP 354175. Figure 1 and Table 1 show the site location and land parcel details, respectively.

Figure 1. Site Location. Source: Far North District Council (FNDC) Maps[1]

Table 1. Site Details.

Detail	Description
Site Address	166 Kerikeri Inlet Road, Kerikeri
Legal Description	Lot 3 DP 354175
Area	3,990 m^2
Owners	Conway Gosling Lewis, Johanna Lewis
Proposed Site Use	Rural residential

[1] Property and land. Accessed December 2024.

2 SITE DESCRIPTION

2.1 Environmental Setting

The site is generally flat and level, sitting at approximately 54 m RL. The site and surrounding area is dominated by rural lifestyle properties.

2.1.1 Geology

The New Zealand Geology Web Map by GNS[2] Science identifies the site as being underlain by '*Kerikeri Volcanic Group Late Miocene basalt of Kaikohe – Bay of Islands Volcanic Field'* described as *'Basalt.'*

2.1.2 Hydrology

The Okura River is the nearest body of water from the property and is located approximately 350 m south of the property at its closest point. The Pickmere Channel is also located approximately 580 m north of the site.

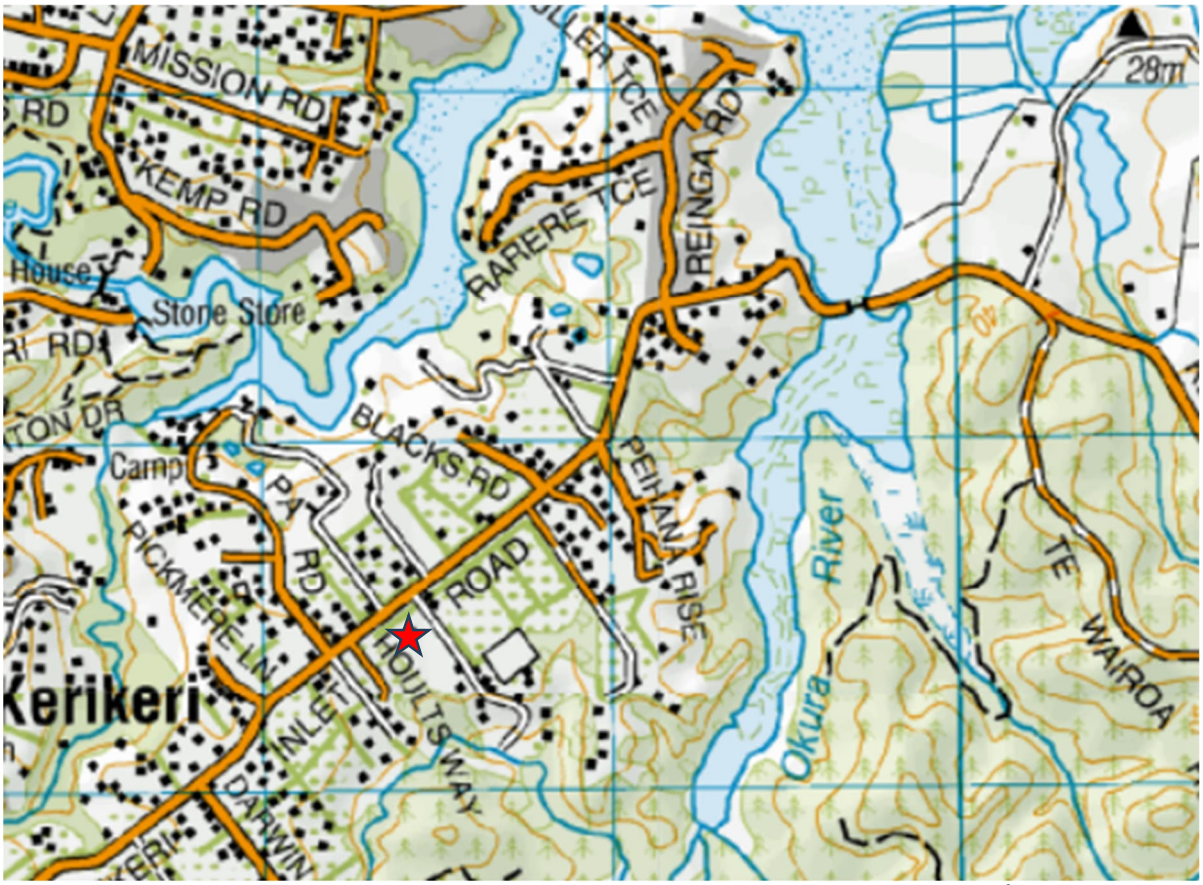


Figure 2. Topo map showing nearby waterbodies. Site indicated in red. Source: NZ Topo Maps[3].

[2] http://data.gns.cri.nz/geology/. Accessed December 2024.
[3] New Zealand Topographic Map - NZ Topo Map. Accessed December 2024.

2.2 Site Layout and Current Site Uses

The southern portion of the site has an existing residential dwelling. The proposed subdivision plan indicates the division of the site into two separate lots for residential use, with the existing dwelling remaining as part of proposed Lot 1.

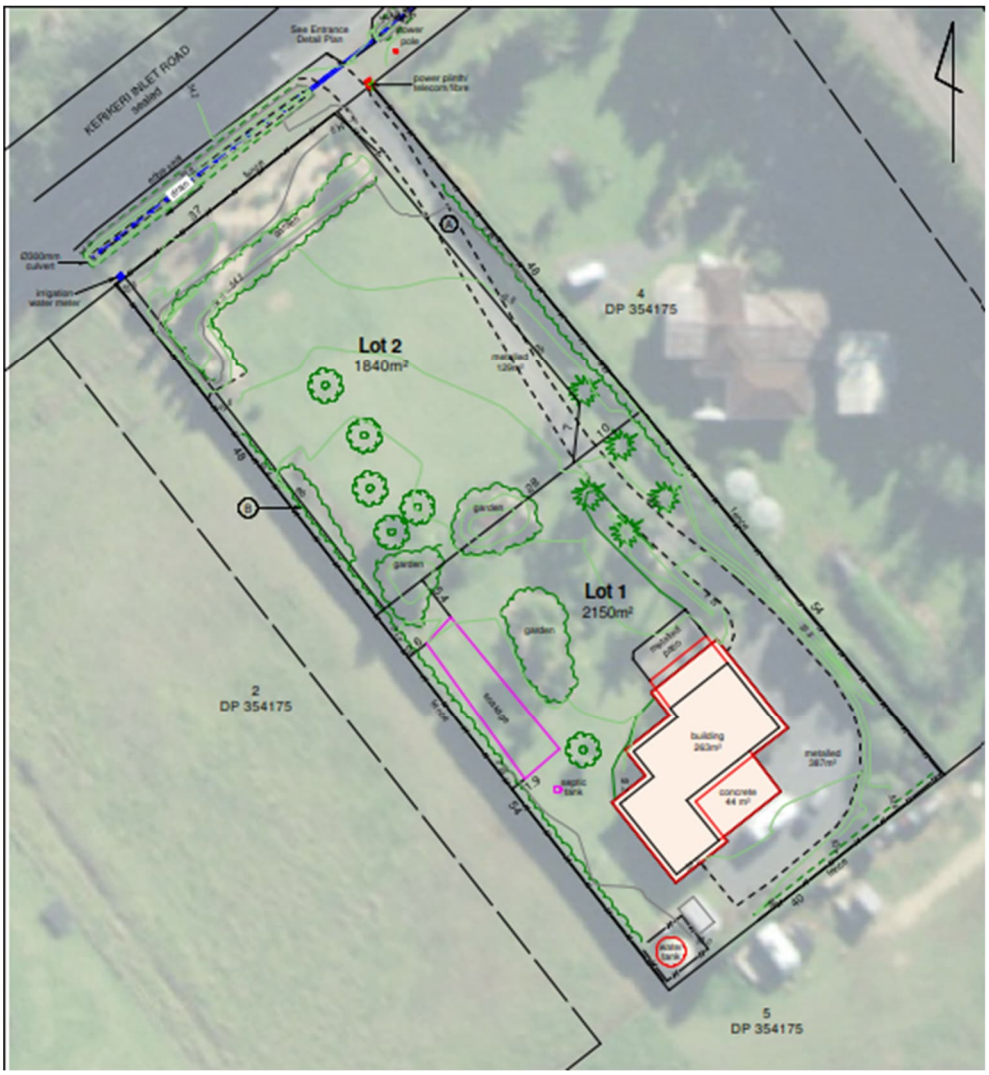


Figure 3. Proposed subdivision plan. Source: supplied by Client.

2.3 Site Inspection

A walkover assessment was undertaken at the site on 11 March 2025. The site is generally flat and grassed, with landscaping along the northern site boundary. A small vegetable garden and burn drum is present along the western site boundary.

Figure 4. Site overview, looking north.

Figure 5. Site overview, looking south, showing existing residential dwelling.

Figure 6. Site overview, looking west, showing location of small vegetable garden and burn drum.

Figure 7. Burn drum, sitting on concrete pavers. Location of soil sample S10 adjacent to concrete base.

3 HISTORIC SITE USE

The following information was reviewed to establish the history of the site:

- Council Records
- Historical aerial photographs
- Site walkover/visual assessment
- Interview with current site owner / past site owner

3.1 Council Information

The following sections provide a summary of information held by the local councils.

3.1.1 Northland Regional Council (NRC)

The NRC Selected Land Use Register (SLUR) was reviewed as part of this assessment. The site is not listed on the SLUR.

3.1.2 Far North District Council (FNDC)

A search of the site property file was completed on 17 December 2024. A summary of the pertinent points are as follows:

2003	Approved subdivision of Lot 3
2010	Building consent for a residential dwelling
2011	Confirmation of residential dwelling constructed on site

3.2 Historical Aerial Imagery

Aerial images from 1951 to 2024 have been analysed as part of this investigation. A summary of our review of these images is as follows.

1951: The site is used for horticultural production, with rows of trees and crops evident both onsite and on all surrounding sites.

Figure 8. Aerial imagery 1951. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

1968: The image resolution is poor however the site appears to be covered in vegetation.

Figure 9. Aerial imagery 1968. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

1972: The site has been cleared of vegetation and crop rows are visible. The surrounding area is horticultural production land.

Figure 10. Aerial imagery 1972. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

1981: The site is generally unchanged and utilised for smaller ground crops.

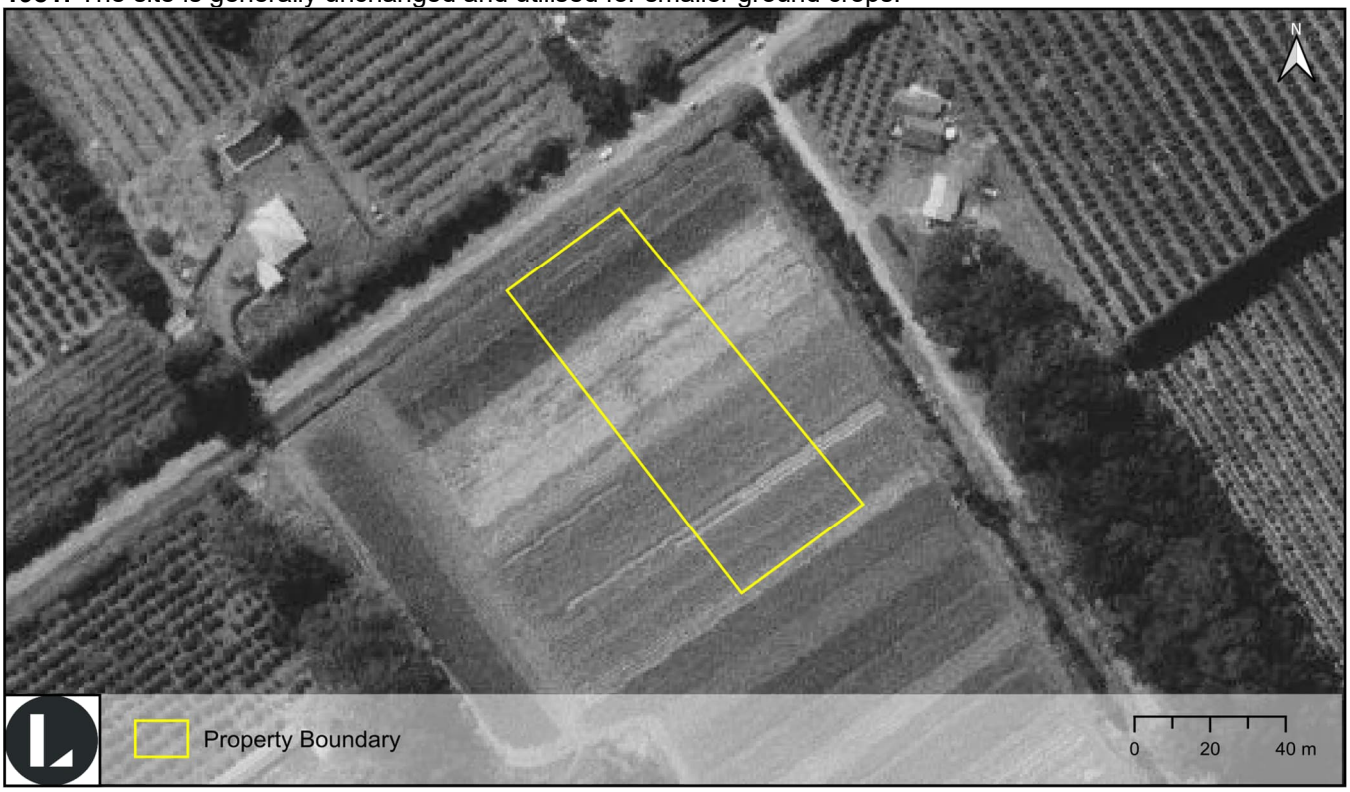


Figure 11. Aerial imagery 1981. Sourced from Retrolenz.nz and licensed by LINZ (annotated image). Approximate site boundary shown in yellow.

2003: The site is vacant and grassed, as is the immediately adjacent properties. The wider area is predominantly horticultural.

Figure 12. Aerial imagery 2003. Sourced from LINZ (annotated image). Approximate site boundary shown in yellow.

2011: The site remains unchanged.

Figure 13. Aerial imagery 2011. Sourced from Google Earth (annotated image). Approximate site boundary shown in yellow.

2015: A residential dwelling is present within the southern portion of the site. The northern portion is grassed.

Figure 14. Aerial imagery 2015. Sourced from LINZ (annotated image). Approximate site boundary shown in yellow.

2024: The site remains unchanged. The properties to the east and west have also been developed as rural residential.

Figure 15. Aerial imagery 2024. Sourced from Google Earth (annotated image). Approximate site boundary shown in yellow.

4 PSI RISK ASSESSMENT

This section uses a Conceptual Site Model (CSM) to assess the currently available information presented in this report to determine:

- whether there has been (or is more likely than not to have been) a potentially contaminating land use.
- the nature and source of potential or likely contaminants.
- the possible locations of contamination.
- known or potential exposure pathways by which identified receptors could be exposed to the contaminants whilst undertaking the current or proposed future land use.
- known or potential human and ecological receptors that could be exposed to contaminants.
- if the project is covered by the NESCS Regulations.
- if further investigation in the form of a DSI is required

4.1 Conceptual Site Model

The preliminary site CSM is provided in Table 2. A human health risk can only occur where there is a complete pathway between contaminant source and a receptor. Building floors and paved or sealed areas will largely or completely prevent contact with underlying soils and therefore, direct exposure pathways are or will be incomplete for such areas.

Table 2. Conceptual Site Model at the PSI stage.

HAIL, Potential Contaminants and Location	Receptors	Potential Pathways
HAIL A10 – Persistent pesticide bulk storage and use including sports turf, market gardens, orchards, glass houses or spray sheds. Heavy metals (including copper, arsenic), organochlorine pesticides (OCPs, including DDT, aldrin, dieldrin) and acid herbicides. Whole site has been utilized for horticultural production since at least 1951 (earliest available historic aerial imagery), until at least 1981.	Construction workers	Exposure via inhalation of contaminated dust or ingestion and skin contact (dermal).
	Future site users	Ingestion or skin contact with exposed soil
	Workers at off-site soil disposal sites	Inhalation of contaminated dust during placement at offsite disposal site.
	Ecological receptors	Sediment runoff, surface water flows. No sensitive ecological receptors identified within 100 m of the site.
HAIL I – Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment. Heavy metals. Burn drum identified during site walkover.	Construction workers	Exposure via inhalation of contaminated dust or ingestion and skin contact (dermal).
	Future site users	Ingestion or skin contact with exposed soil
	Workers at off-site soil disposal sites	Inhalation of contaminated dust during placement at offsite disposal site.
	Ecological receptors	Sediment runoff, surface water flows. No sensitive ecological receptors identified within 100 m of the site.

4.1.1 NESCS application

As per Regulation 6 (3) it is considered that it is more likely than not an activity or industry described in the HAIL has been undertaken on the piece of land. The likelihood that the soil is contaminated and is a risk to human health because of the activity or industry occurring is considered likely.

As per Regulation 8(4)(b), LDE considers that it is not highly unlikely that there will be a risk to human health if the activity is done to the piece of land. As a result, LDE considers that the site is covered by the NESCS Regulations.

5 PSI CONCLUSION

Evidence from the PSI and site history review, indicates **HAIL A10:** '*Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds'* and **HAIL I:** '*Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment'* are more likely than not to have occurred at the site.

Based on the currently available information presented in this report LDE considers that the NESCS applies. This is because subdivision is covered by Regulations 5(5) and is in exceedance of the permitted activity conditions outlined in Regulation 8. The land is also covered by the NESCS because of HAIL activities that are more than likely to have been carried out at the site. A detailed site investigation is therefore required to establish if soil contamination exceeds the applicable standard and to determine if the site is restricted discretionary or controlled under the NESCS.

6 DETAILED SITE INVESTIGATION

Based on the findings of the PSI, further investigation was required to establish if soil contamination exceeds the applicable standard and to determine if the site is restricted discretionary or controlled under the NESCS.

The sampling objectives are to quantify the human health risk from potentially contaminated soil associated with the HAIL Activities identified in the PSI in relation to the end use of the site.

Based on the conceptual site model and taking into consideration the methodology for deriving soil contaminant standards (SCS) and the proposed development at the site, our investigation was designed to establish if site soils exhibit contaminant concentrations exceeding the soils contaminant standards applicable to the *'Rural Residential/Lifestyle Block 25% Produce'* land-use scenario.

As the existing residential dwelling within proposed Lot 1 is to remain as residential land use, there is no trigger under the NESCS for detailed investigations within this portion of the site. The intrusive investigation is focused on the proposed Lot 2.

6.1 Sampling and analysis plan

The field investigation was undertaken on 11 March 2025 by an LDE contaminated land scientist. Each one of the sample locations was selected based on the proposed development, site history, and site characteristics. Discrete samples from locations S1 to S10 at selective depths between ground level and 350 mm below ground level (bgl) were collected across the site. All samples were tested for heavy metals, and two composite surface samples were analysed for OCPs and acid herbicides. The sample locations and details are shown in Figure 16 and Table 3.

Figure 16. Soil sampling site plan. The approximate soil sampling locations are shown in blue and composite sample groups are shown in green. Source: Google Earth (annotated image).

Table 3. Sample Details.

Test Pit / Borehole	Depth (m)	Description	Sample(s)	Analysis	Rational
S1-S9	0-150	Topsoil	S1-S9 0-150	Heavy metals	Checking for surficial contamination as a result of past horticultural land use.
	150-300	Topsoil	S1 150-300 S5 150-300 S9 150-300	Hold cold	Hold pending surficial sample results.
S10	0-150	Topsoil and charcoal	S10 0-150	Heavy metals	Identified burn drum on site.
Comp 1 Comp 2	0-150	Topsoil	Comp 1 0-150 (composite of S1-S5) Comp 2 0-150 (composite of S6-S9)	OCPs, acid herbicides	Check for surficial contamination as a result of past horticultural land use.

6.2 Quality Assurance and Quality Control

6.2.1 Field QA/QC

The following procedures were adopted during soil investigation works:

- All fieldwork was carried out in compliance with a project specific Health and Safety Plan prepared for the site works.
- All works were conducted by trained LDE staff with precautions including implementation of procedures for the appropriate handling of potentially contaminated material.
- Prior to sampling, and between sample locations, equipment used to retrieve samples was cleaned by washing with potable water to minimise the chance of cross contamination.
- Soil samples were collected using a hand trowel / hand auger.
- A clean pair of nitrile gloves was also used for each sample location. All samples were placed into labelled laboratory supplied sample containers.
- Additional laboratory containers were taken to the site as a contingency for grab samples (one-off samples of material or soil that are of interest and observed by the sampler during a site inspection or sampling event) including soil stains, burn patches or pits, filled areas, and treated timber stockpiles.
- Following collection, all samples were transported, under standard chain of custody procedures, to an IANZ accredited laboratory (Hills) for analysis. The chain of custody documentation is attached in Appendix B.

6.2.2 Laboratory QA/QC

Laboratory reports from Hills have been included in Appendix B. These include the analytical methods and detection limits used by the laboratory and the laboratory accreditation for analytical methods used.

All Laboratory Analysis was completed through Hills. Hills are accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised.

6.3 Background Concentrations, Soil Contaminant Standards (SCSs) and Guideline Values (SGVs)

6.3.1 Human Health

The NESCS references the Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health (MfE, 2011). This is a national risk-based methodology for deriving soil contaminant concentrations protective of human health. Soil Contaminant Standards (SCS) and Soil Guideline Values (SGVs) have been selected in accordance with regulation 7.

Regulation 7 states that if the contaminant of concern is a priority contaminant[4] and the land use fits within an exposure scenario adopted in the Methodology[5], the applicable standard is the soil contaminant standard for the priority contaminant. If the contaminant of concern is a priority contaminant and the land use does not fit within an exposure scenario adopted in the Methodology, the applicable standard is whichever of the following is more appropriate in the circumstances:

a) the guideline value derived in accordance with the methods and guidance on site-specific risk assessment provided in the Methodology:

b) the soil contaminant standard for the priority contaminant of the exposure scenario adopted in the Methodology with greater assumed exposure than the actual exposure.

If the contaminant of concern is not a priority contaminant, the applicable standard is whichever of the following is more appropriate in the circumstances:

a) the guideline value derived in accordance with the methods and guidance on site-specific risk assessment provided in the Methodology:

b) a guideline value for the protection of human health that is chosen in accordance with the current edition of Contaminated Land Management Guidelines No. 2–Hierarchy and Application in New Zealand of Environmental Guideline.

Following the guidance, the Soil Contaminant Standards (SCS) for selected priority contaminants and for non-priority contaminants guidelines values were selected following Regulation 7 and the Contaminated Land Management Guidelines No. 2: Hierarchy and Application in New Zealand of Environmental Guideline Values (Revised 2021) as screening criteria for the risk to humans at the site and to inform on-site management actions. If exceeded, further investigation and a Tier 2 assessment would be considered.

No applicable New Zealand guideline criteria exist for some of the tested metals (i.e., nickel and zinc) and therefore Health Investigation Level (HIL) values from the Australian Guideline on the Investigation Levels for Soil and Groundwater have been used under the residential land-use scenario as outlined in the MfE document.

The soil samples were tested at the laboratory for total chromium. However, the methodology document distinguishes between the stable chromium III and the potentially toxic and less stable chromium VI. For the purposes of this analysis all total chromium results have been conservatively compared to the chromium VI.

6.3.2 Environmental

All results are compared against the Predicted Background Soil Concentrations (Landcare Research Limited)[6] to determine if soil concentrations are anthropologically affected and the applicability of the NESCS.

[4] a contaminant for which the Methodology derives a soil contaminant standard.
[5] The current edition of the Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health.
[6] https://lris.scinfo.org.nz/layer/48470-pbc-predicted-background-soil-concentrations-new-zealand/

6.3.3 Landfill Acceptance

The landfill acceptance criteria from the Technical Guidelines for Disposal to Land (WasteMINZ, 2018) have been used to determine appropriate disposal methods for contaminated material. Where results have exceeded the screening criteria then a TCLP analysis may be required by the receiving landfill prior to disposal.

6.4 Results

6.4.1 Heavy Metals

Table 4 summarises the laboratory results of soil samples tested for heavy metals.

- Samples S1-S9:
    - All metal concentrations were below the respective SCS for a '*Rural Residential/Lifestyle Block 25% Produce*' land-use scenario.
    - Sample S1 0-150 reported arsenic concentrations above the predicted background ranges, however the 95% UCL for samples S1-S9 indicates the 95% UCL of arsenic is 7.07 mg/kg, therefore below the predicted background concentration.
- Sample S10 (burn drum):
    - Concentrations of arsenic and cadmium exceed the respective SCS for a '*Rural Residential/Lifestyle Block 25% Produce*' land-use scenario.
    - Concentrations of arsenic, cadmium, copper, lead and zinc are also above the predicted background concentrations.

The full lab results are included in Appendix B.

Table 4. Laboratory tests (heavy metal) compared against the soil contaminant standard (SCS) for a 'Rural Residential/Lifestyle Block 25% Produce' land-use.

Sample ID	Depth (mm)	Sample Description	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc
S1 0-150	0-150	Topsoil	**16**	0.25	40	42	13.9	6	48
S1 150-300	150-300	Topsoil	7	0.25	39	36	14.1	6	49
S2 0-150	0-150	Topsoil	4	0.23	35	29	13.8	5	37
S3 0-150	0-150	Topsoil	4	0.26	36	34	14	7	54
S4 0-15	0-15	Topsoil	5	0.26	38	33	16.3	9	56
S5 0-150	0-150	Topsoil	4	0.29	37	37	15.1	7	44
S5 150-300	150-300	Topsoil	4	0.3	38	36	15.2	7	37
S6 0-150	0-150	Topsoil	3	0.26	35	31	14.3	6	38
S7 0-15	0-15	Topsoil	4	0.25	33	31	14.6	7	39
S8 0-150	0-150	Topsoil	4	0.2	37	30	14.8	6	39
S9 0-150	0-150	Topsoil	4	0.3	40	43	16.5	7	38
S9 150-300	150-300	Topsoil	4	0.3	37	40	15.4	7	36
S10 0-100	0-100	Topsoil and minor charcoal	**22**	**0.88**	68	**113**	**82**	11	**550**
Rural residential / lifestyle block 25% produce[1]			**17**	**0.8**	**290**	**10000**	**160**	**400**	**7400**
Background soil concentrations[2]			**8.87**	**0.51**	**128.5**	**108.3**	**56.34**	**77.43**	**295.8**
Screening Criteria Class 1 Landfills[3]			100	20	100	100	100	200	200
Screening Criteria Class 2 C&D Landfills[4]			20	4	20	10	20	20	20
Screening Criteria Class 3 Managed Fill[4]			140	10	150	280	460	320	1200
Screening Criteria Class 4 Controlled Fill[4]			17	0.8	150	220	160	35	190
Screening Criteria Class 5 Clean Fill[2]			8.87	0.51	128.5	108.3	56.34	77.43	295.8

Notes: All results and standard values are presented in mg/kg (dry weight). All metals tested for 'Total Recoverable' at screen level. Depths are mm below ground level.

1 Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Ministry for the Environment, 2011.

2 Predicted Background Soil Concentrations, New Zealand, Landcare Research Limited.

3 Module 2: Hazardous Waste Guidelines, Landfill Waste Acceptance Criteria and Landfill Classification. Ministry for the Environment, 2004.

4 Technical Guidelines for Disposal to Land - Revision 3. WasteMINZ, 2022.

6.5 Organochlorine Pesticide (OCP) and Acid Herbicide Results

Composite samples (comp 1 and comp 2) taken from surface samples were analysed for OCPs and acid herbicides. Both samples reported concentrations of OCPs and acid herbicides below the laboratory limit of reporting. The laboratory transcripts are appended in Appendix B.

7 DSI RISK ASSESSMENT

This section uses a Conceptual Site Model (CSM) to assess the currently available information presented in this report to determine:

- if the project is covered by the NESCS Regulations.
- if soil contamination exceeds the applicable standard and to identify if the site is restricted discretionary or controlled under the NESCS.

7.1 Conceptual Site Model

The preliminary site CSM is provided in Table 5 and Figure 17. A human health risk can only occur where there is a complete pathway between contaminant source and a receptor. Building floors and paved or sealed areas will largely or completely prevent contact with underlying soils and therefore, direct exposure pathways are or will be incomplete for such areas.

Table 5. Conceptual Site Model at the DSI stage.

HAIL, Potential Contaminants and Location	Receptors	Pathways (Complete / Incomplete)
HAIL A10 – Persistent pesticide bulk storage and use including sports turf, market gardens, orchards, glass houses or spray sheds. Heavy metals (including copper, arsenic), organochlorine pesticides (OCPs, including DDT, aldrin, dieldrin) and acid herbicides. Whole site has been utilized for horticultural production since at least 1951 (earliest available historic aerial imagery), until at least 1981.	Construction workers	Incomplete - Exposure via inhalation of contaminated dust or ingestion and skin contact (dermal). Contamination was not detected above the SCS.
	Future site users	
	Workers at off-site soil disposal sites	
	Ecological receptors	Incomplete - Dust sediment or surface water runoff during earthworks Contamination was not detected above the SCS or SGVs.
HAIL I - Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment. Heavy metals. Burn drum identified on site.	Construction workers	**Complete** - Exposure via inhalation of contaminated dust or ingestion and skin contact (dermal). Contamination (arsenic, cadmium) was detected above the SCS.
	Future site users	Remedial works should be undertaken to remove soils surrounding the burn drum, to a depth of approximately 0.1 m bgl. Anticipated remedial

HAIL, Potential Contaminants and Location	Receptors	Pathways (Complete / Incomplete)
	Workers at off-site soil disposal sites	volumes are 0.05 m^3. Soil will require offsite disposal to a licensed landfill facility.
	Ecological receptors	Incomplete - Dust sediment or surface water runoff during earthworks. Contamination was detected above the SCS however the small area and minor remedial works required are unlikely to result in any sediment or surface water runoff.

Figure 17. CSM plan showing areas of contamination. The approximate soil sampling locations are shown in blue and the samples with exceedances above the adopted NESCS SCS are shown in red.

7.1.1 NESCS Application

As per Regulation 6 (3) it is considered that it is more likely than not an activity or industry described in the HAIL has been undertaken on the piece of land (HAIL A10 / HAIL I). Although soil contamination has been confirmed at concentrations above the applicable guideline limit, the proposed soil disturbance to remediate the site is anticipated

to be less than the Permitted Activity threshold under the NES (approximately 0.05 m^3 soil removal; with the permitted activity threshold being approximately 39.9 m^3). The site work is therefore considered a permitted activity under the NESCS as per Regulation 8(4).

Given the minor soil disturbance volumes anticipated to remediate the affected area, the short term risk of exposure to construction workers during remedial works is considered to be low. Good personal hygiene (hand washing prior to eating and drinking) is considered appropriate to mitigate any short term risk. Soil will require offsite disposal to a licensed landfill facility.

8 CONCLUSIONS AND RECOMMENDATIONS

Activities on the MfE HAIL were identified at the site. These included **HAIL A10:** '*Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds'* and **HAIL I:** '*Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.'* Soil sampling and analysis was therefore undertaken to identify if these activities have contributed to soil contamination that would be unacceptable for the proposed subdivision at the site.

Although soil contamination has been confirmed at concentrations above the applicable guideline limit, the proposed soil disturbance to remediate the site is anticipated to be less than the Permitted Activity threshold under the NES (approximately 0.05 m^3 soil removal; with the permitted activity threshold being approximately 39.9 m^3). The site work is therefore considered a permitted activity under the NESCS as per Regulation 8(4).

As per Regulation 8 (4)(d) the regulatory authority must be provided a copy of this report.

8.1 Site Investigation Certifying Statement

The document signatories of LDE certify that:

1. this preliminary and detailed site investigation meets the requirements of the Resource Management (National Environmental Standard for assessing and managing contaminants in soil to protect human health) Regulations 2011 because it has been:
    a. done by a suitably qualified and experienced practitioner, and
    b. done in accordance with the current edition of Contaminated land management guidelines No 5 – Site investigation and analysis of soils, and
    c. reported on in accordance with the current edition of Contaminated land management guidelines No 1 – Reporting on contaminated sites in New Zealand, and
    d. the report is certified by a suitably qualified and experienced practitioner.

This detailed site investigation concludes that:

a. [For activities under Regulation 10 of the NESCS] does exceed the applicable standard in Regulation 7 of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations.

Evidence of the qualifications and experience of the suitably qualified and experienced practitioner(s) (SQEPs) who have done this investigation and have certified this report is included in Appendix A.

9 LIMITATIONS

This investigation presents a preliminary and detailed site investigations of the potential for ground contamination, prepared exclusively for Donaldsons Surveyors Ltd and Far North District Council with respect to the brief given to us.

Information, opinions, and recommendations contained in it cannot be used for any other purpose or by any other entity without our review and written consent. LDE Ltd accepts no liability or responsibility whatsoever for or in respect of any use or reliance upon this report by any third party.

Opinions given in this report are based on a review of existing data, evidence gathered during a site walkover, anecdotal information, and specific soil sampling at discrete locations. There is still some possibility that contaminating activities have taken place or contamination at the site is more than that described in this report and LDE should be contacted immediately if the conditions are suspected to differ from that described.

10 REFERENCES

MfE. (2004). *Landfill Waste Acceptance Criteria and Landfill Classification .* Wellington: Minitry for the Environment.

MfE. (2011). *Users' guide: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.* Wellington: Ministry for the Environment.

MfE. (2021). *Contaminated Land Management Guidelines No 1.* Wellington: Minitstry for the Environment.

MfE. (2021). *Contaminated Land Management Guidelines No 5.* Wellington: Ministry of the Environment.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure.* Canberra: National Environmental Protection Council.

Parliamentary Counsel Office. (2015). *Health and Safety at Work Act 2015.* Wellington: Parliamentary Counsel Office.

WasteMinz. (2018). *Technical Guidelines for Disposal to Land.* Auckland: Waste Management Institute New Zealand.

APPENDIX A

LABORATORY TEST RESULTS AND CHAIN OF CUSTODY RECORDS

R J Hill Laboratories Limited
28 Duke Street Frankton 3204
Private Bag 3205
Hamilton 3240 New Zealand

0508 HILL LAB (44 555 22)
+64 7 858 2000
mail@hill-labs.co.nz
www.hill-labs.co.nz

Certificate of Analysis

Client:	Land Development & Engineering Limited	**Lab No:**	3807249	SPv1
Contact:	Erin Gasston	**Date Received:**	12-Mar-2025	
	C/- Land Development & Engineering Limited	**Date Reported:**	19-Mar-2025	
	27 Hobson Avenue	**Quote No:**	115238	
	Kerikeri 0230	**Order No:**		
		Client Reference:	27844	
		Submitted By:	Erin Gasston	

Sample Type: Soil

	Sample Name:	S1 0-150 11-Mar-2025	S1 150-300 11-Mar-2025	S2 0-150 11-Mar-2025	S3 0-150 11-Mar-2025	S4 0-150 11-Mar-2025
	Lab Number:	3807249.1	3807249.2	3807249.3	3807249.4	3807249.5
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	16	7	4	4	5
Total Recoverable Cadmium	mg/kg dry wt	0.25	0.25	0.23	0.26	0.26
Total Recoverable Chromium	mg/kg dry wt	40	39	35	36	38
Total Recoverable Copper	mg/kg dry wt	42	36	29	34	33
Total Recoverable Lead	mg/kg dry wt	13.9	14.1	13.8	14.0	16.3
Total Recoverable Nickel	mg/kg dry wt	6	6	5	7	9
Total Recoverable Zinc	mg/kg dry wt	48	49	37	54	56

	Sample Name:	S5 0-150 11-Mar-2025	S5 150-300 11-Mar-2025	S6 0-150 11-Mar-2025	S7 0-150 11-Mar-2025	S8 0-150 11-Mar-2025
	Lab Number:	3807249.6	3807249.7	3807249.8	3807249.9	3807249.10
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	4	4	3	4	4
Total Recoverable Cadmium	mg/kg dry wt	0.29	0.30	0.26	0.25	0.20
Total Recoverable Chromium	mg/kg dry wt	37	38	35	33	37
Total Recoverable Copper	mg/kg dry wt	37	36	31	31	30
Total Recoverable Lead	mg/kg dry wt	15.1	15.2	14.3	14.6	14.8
Total Recoverable Nickel	mg/kg dry wt	7	7	6	7	6
Total Recoverable Zinc	mg/kg dry wt	44	37	38	39	39

	Sample Name:	S9 0-150 11-Mar-2025	S9 150-300 11-Mar-2025	Comp 1 11-Mar-2025	Comp 2 11-Mar-2025	S10 0-100 11-Mar-2025
	Lab Number:	3807249.11	3807249.12	3807249.13	3807249.14	3807249.15
Individual Tests						
Dry Matter	g/100g as rcvd	-	-	75	77	-
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	4	4	-	-	22
Total Recoverable Cadmium	mg/kg dry wt	0.30	0.30	-	-	0.88
Total Recoverable Chromium	mg/kg dry wt	40	37	-	-	68
Total Recoverable Copper	mg/kg dry wt	43	40	-	-	113
Total Recoverable Lead	mg/kg dry wt	16.5	15.4	-	-	82
Total Recoverable Nickel	mg/kg dry wt	7	7	-	-	11
Total Recoverable Zinc	mg/kg dry wt	38	36	-	-	550
Acid Herbicides Screen in Soil by LCMSMS						
Acifluorfen	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Bentazone	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Bromoxynil	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Clopyralid	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Dicamba	mg/kg dry wt	-	-	< 0.2	< 0.2	-

Sample Type: Soil						
Sample Name:		S9 0-150 11-Mar-2025	S9 150-300 11-Mar-2025	Comp 1 11-Mar-2025	Comp 2 11-Mar-2025	S10 0-100 11-Mar-2025
Lab Number:		3807249.11	3807249.12	3807249.13	3807249.14	3807249.15
Acid Herbicides Screen in Soil by LCMSMS						
2,4-Dichlorophenoxyacetic acid (24D)	mg/kg dry wt	-	-	< 0.2	< 0.2	-
2,4-Dichlorophenoxybutyric acid (24DB)	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Dichlorprop	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Fluazifop	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Fluroxypyr	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Haloxyfop	mg/kg dry wt	-	-	< 0.2	< 0.2	-
2-methyl-4-chlorophenoxyacetic acid (MCPA)	mg/kg dry wt	-	-	< 0.2	< 0.2	-
2-methyl-4-chlorophenoxybutanoic acid (MCPB)	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Mecoprop (MCPP; 2-methyl-4-chlorophenoxypropionic acid)	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Oryzalin	mg/kg dry wt	-	-	< 0.4	< 0.4	-
Pentachlorophenol (PCP)	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Picloram	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Quizalofop	mg/kg dry wt	-	-	< 0.2	< 0.2	-
2,3,4,6-Tetrachlorophenol (TCP)	mg/kg dry wt	-	-	< 0.2	< 0.2	-
2,4,5-trichlorophenoxypropionic acid (245TP,Fenoprop, Silvex)	mg/kg dry wt	-	-	< 0.2	< 0.2	-
2,4,5-Trichlorophenoxyacetic acid (245T)	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Triclopyr	mg/kg dry wt	-	-	< 0.2	< 0.2	-
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	-	-	< 0.013	< 0.013	-
alpha-BHC	mg/kg dry wt	-	-	< 0.013	< 0.013	-
beta-BHC	mg/kg dry wt	-	-	< 0.013	< 0.013	-
delta-BHC	mg/kg dry wt	-	-	< 0.013	< 0.013	-
gamma-BHC (Lindane)	mg/kg dry wt	-	-	< 0.013	< 0.013	-
cis-Chlordane	mg/kg dry wt	-	-	< 0.013	< 0.013	-
trans-Chlordane	mg/kg dry wt	-	-	< 0.013	< 0.013	-
2,4'-DDD	mg/kg dry wt	-	-	< 0.013	< 0.013	-
4,4'-DDD	mg/kg dry wt	-	-	< 0.013	< 0.013	-
2,4'-DDE	mg/kg dry wt	-	-	< 0.013	< 0.013	-
4,4'-DDE	mg/kg dry wt	-	-	< 0.013	< 0.013	-
2,4'-DDT	mg/kg dry wt	-	-	< 0.013	< 0.013	-
4,4'-DDT	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Total DDT Isomers	mg/kg dry wt	-	-	< 0.08	< 0.08	-
Dieldrin	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Endosulfan I	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Endosulfan II	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Endosulfan sulphate	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Endrin	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Endrin aldehyde	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Endrin ketone	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Heptachlor	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Heptachlor epoxide	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Hexachlorobenzene	mg/kg dry wt	-	-	< 0.013	< 0.013	-
Methoxychlor	mg/kg dry wt	-	-	< 0.013	< 0.013	-

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request.
Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil

Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1-12, 15
Soil Prep Dry for Organics,Trace*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%.	-	13-14
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion US EPA 200.2. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required.	0.10 - 4 mg/kg dry wt	1-12, 15
Acid Herbicides Screen in Soil by LCMSMS	Solvent extraction, LC-MS/MS analysis. Tested on dried sample. In-house.	0.2 - 0.4 mg/kg dry wt	13-14
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	13-14
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	13-14

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 12-Mar-2025 and 19-Mar-2025. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

Ara Heron BSc (Tech)
Client Services Manager - Environmental

APPENDIX B

QUALIFICATIONS AND EXPERIENCE OF THE SQEP(S)

James Gladwin - BSc (Hons) Environmental Science, PgDip in Soil Science, CEnvP.

James is a Suitably Qualified and Experience Practitioner (SQEP). With 15+ years of experience in contaminated land covering a wide range of sites and contamination types, James has an excellent understanding of the investigation and remediation of contaminated land in accordance with the National Environmental Standards for Contaminated Land (NESCS) and the Contaminated Land Management Guidelines (CLMG).

James is a certified environmental practitioner (CEnvP) and has provided a wide range of contaminated land services to an array of clients. Key clients include the District and City Councils of the Bay of Plenty, the Bay of Plenty Regional Council, Christchurch City Council, Gisborne City Council, New Plymouth District Council, and the NZ Transport Agency. He has been a panel member that provided technical review and guidance for the development of contaminated sites. He has also provided technical reviews for contaminated land investigations completed by third parties. James currently sits on the Bay of Plenty Regional Council Environmental Panel and is a permanent member of ALGA.

James worked on the Kopeopeo Canal Remediation Project, providing independent technical analysis for dioxin contamination in soils, sediment, water, and air. He monitored and reported on the effectiveness of the dredge trial within resource consent requirements. This provided proof that the remediation methods were effective and practical so that the full-scale remediation of the canal could be completed. James continued to provide technical input through the remediation stage of the project.

PROPOSED EASEMENTS

Purpose	Shown	Burdened	Benefited
Right of Way Right to convey electricity & telecommunications	(A)	Lot 2	Lot 1
Right to convey water Right to drain water	(B)		

IMPERMEBLE SURFACES

Lot 1
Metalled 387m²
Concrete 44m²
Building 263m² (Permitted 10%)
Building Coverage breach 12.3%
Total Imp 694m² (Permitted 12.5%)
Stormwater Management breach 32%

Lot 2
Metalled 129m²

Total 129m² (7%) (Permitted 12.5%)

Applicant : C. & J. Lewis
Title : 221337
Total Area : 4002m²
Zone : Rural Living (OPD)
Rural Residential (PDP)

Notes:
Areas and measurements are subject to survey
For resource consent purposes only.

DONALDSONS
REGISTERED LAND SURVEYORS

PROPOSED SUBDIVISION OF LOT 3 DP 354175

Land Use Activities: Stormwater Management & Building Coverage

Contour interval : 0.2m
Scale @ A3 : 1:400

Date : Dec. 2024 REF : 8541

STORMWATER MANAGEMENT PLAN

PROPOSED SUBDIVISION OF LOT 3 DP 354175

No.	Revision	Date Approved

DONALDSONS
REGISTERED LAND SURVEYORS

Do not scale drawing
Nominal scale shown are @ A3
Check all dimensions on site before construction

		Checked	Date
Surveyed			
Designed			Dec 2024
Drawn			
Approved			

Applicant : C. & J. Lewis
Title : 221337
Total Area : 4002m²
Zone : Rural Living (OPD)
Contour interval : 0.2m
Scale @ A3 :1:500
Job No. 8541

Cadastral / engineering surveyors, development planners, resource consent managers - ANZ bank building, 90 Kerikeri Road, Kerikeri, Northland, New Zealand - www.donaldsons.net.nz - email: info@donaldsons.net.nz - phone:09 4079182

NORTHLAND WIDE

KERIKERI DRAINAGE LTD

51C ORANGEWOOD LANE
KERIKERI
NORTHLAND
PHONE 094078062 A/HRS
MOBILE 0274931597
FAX 094078062
E mail wood123@xtra.co.nz

SITE SUITABILITY WASTE WATER REPORT

CLIENT

CONWAY LEWIS

SITE LOCATION

166 KERIKERI INLET RD,
KERIKERI

NORTHLAND WIDE

KERIKERI DRAINAGE LTD

51C ORANGEWOOD LANE
KERIKERI
NORTHLAND
PHONE 094078062 A/HRS
MOBILE 0274931597
FAX 094078062
E mail wood123@xtra.co.nz

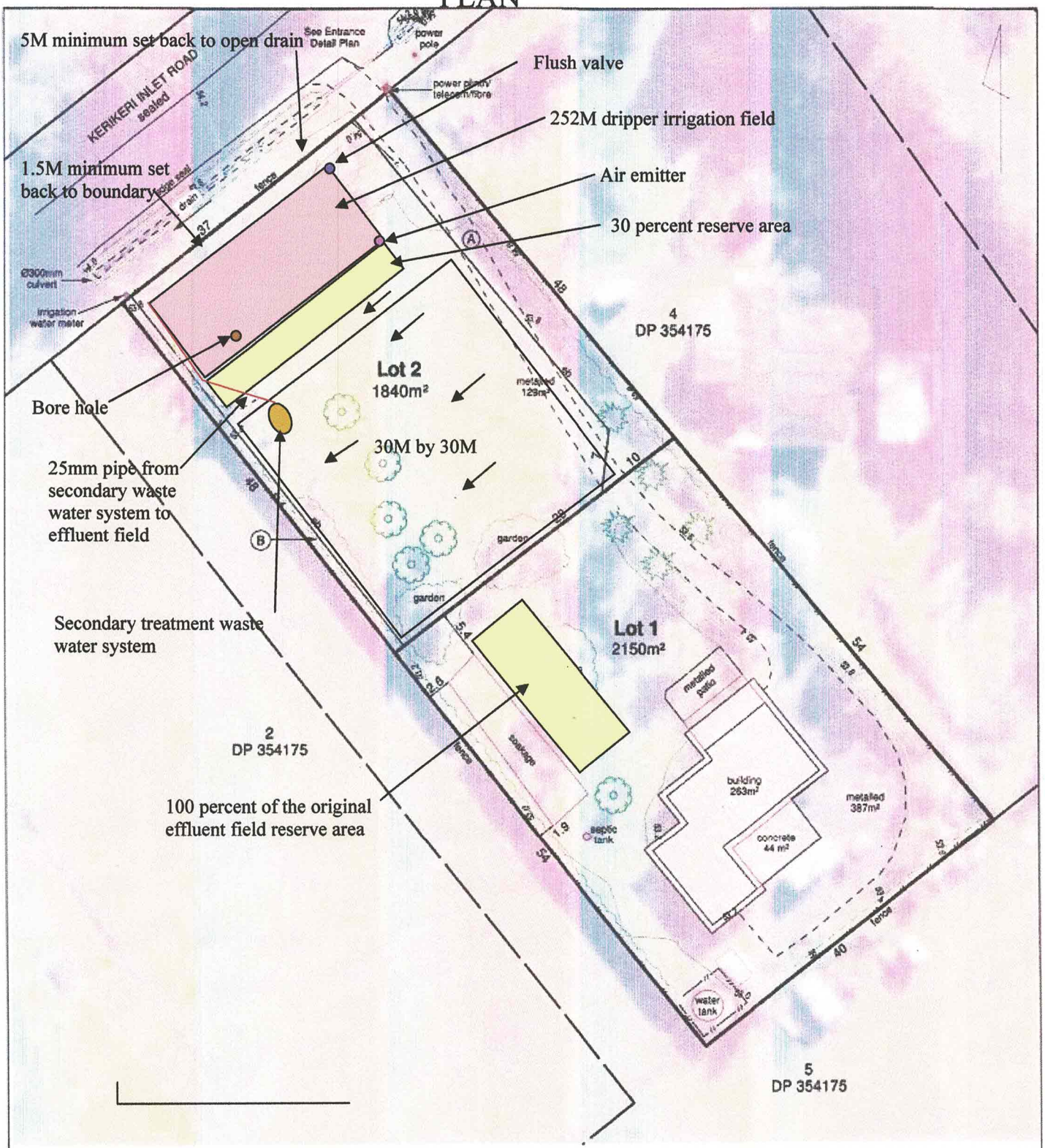
13/01/25
Resource Consents Department
Far North District Council
Private Bag 752
Kaikohe

RE : SITE SUITABILITY REPORT FOR WASTE WATER FOR A PROPOSED SUBDIVISION OF LOT 3, DP 354175 BEING 166 KERIKERI INLET RD.

On the 9th of January a site inspection was carried out to assess the soil types and soakage of proposed lot 2 for effluent treatment and waste water disposal and the condition and position of the waste water system on lot 1.
The soil type for the proposed lot 2 is Kerikeri Friable Clay that is well drained.
Because of the ground contour and available areas a secondary waste water treatment system with disposal by pressure compensating dripperlines effluent field would be the best option.
An example for a three bedroom house with a secondary waste water treatment system is attached and a plan as a layout example.
I class this site soil as Cat 4 with a loading rate of 3.57mm per sq M per day.
The dripperlines can be laid out, pinned and mulched over or buried in the topsoil to a depth of 100mm to 150mm.
There must be a minimum set back of 5M from the effluent field to the road side drain and 1.5M minimum set back to the boundaries. All the required council set backs to boundaries and drains must be adhered to.
The existing house on proposed lot 1 has a primary waste water treatment system that is working well and inside the proposed new boundaries.
There is reserve area for the existing house as shown on the plan.

Yours Faithfully Steve Wood.

PLAN



PROPOSED EASEMENTS

Purpose	Shown	Burdened	Benefited
Right of Way Right to convey electricity & telecommunications	(A)	Lot 2	Lot 1
Right to convey water Right to drain water	(B)		

IMPERMEBLE SURFACES

Lot 1
Metalled 387m²
Concrete 44m²
Building 263m² (Permitted 10%)
Building Coverage breach 12.3%
Total Imp 694m² (Permitted 12.5%)
Stormwater Management breach 32%

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Metalled 129m²

Total 129m² (7%) (Permitted 12.5%)

Applicant : C. & J. Lewis
Title : 221337
Total Area : 4002m²
Zone : Rural Living (OPD)
Rural Residential (PDP)

Notes:
Areas and measurements are subject to survey
For resource consent purposes only.

DONALDSONS
REGISTERED LAND SURVEYORS

PROPOSED SUBDIVISION OF LOT 3 DP 354175
Land Use Activities: Stormwater Management & Building Coverage

Contour interval : 0.2m
Scale @ A3 : 1:400
Date : Dec. 2024 REF : 8541

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

Yes		No	tick	Please tick

If No, why not?

Almost flat section

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

Author	
Company/Agency	
Date of Report	
Brief Description of Report Findings:-	

2. **Site Characteristics (See Table 1 attached):**

Provide descriptive details below:
Performance of Adjacent Systems:
No known problems
Estimated Rainfall and Seasonal Variation:
Information available from **N.I.W.A MET RESEARCH**
1700mm per year / 1000mm winter / 700mm summer
Vegetation / Tree Cover:
Grass and gardens
Slope Shape: (Please provide diagrams)
Very gently sloping to the west
Slope Angle:
1-3 degrees
Surface Water Drainage Characteristics:
Sheet flow
Flooding Potential: YES/NO
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.
Surface Water Separation:
Greater than 5M
Site Characteristics: or any other limitation influencing factors

3. Site Geology **Check Rock Maps**

Kerikeri friable Clay that is well drained

Geological Map Reference Number	NZMS 290 SHEET P06/07

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

North		**West**	tick
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)
Boundaries	Greater than 1.5 M	Check Council requirements
Surface water, rivers Creeks drains etc	Greater than 5 M	Greater than 5 M
Groundwater	Greater than 0.6 M	Greater than 0.6 M
Stands of Trees/Shrubs	NA	
Wells, water bores	NA	NA
Embankments/retaining walls		
Buildings	Greater than 3M	Greater than 3M
Other (specify):		

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_____m	No of Test Pits	
Bore Hole		(Depth 1.2 m	No of Bore Holes	1
Other (specify):				

Soil Report attached?

Yes	tick	No		Please tick

2. Was fill material intercepted during the subsoil investigation?

Yes		No	tick	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
Constant Head Permeameter

Test Report Attached?	Yes	tick	No		Please tick

4. Are surface water interception/diversion drains required?

Yes		No	tick	Please tick

If yes, please show on site plan

4a Are subsurface drains required

If yes enter details

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

Winter	2 M	m	Measured		Estimated	tick
Summer	Greater than 2 M	m	Measured		Estimated	tick

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

Yes		No	tick	Please tick

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?	0.8	(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	Tick AS/NZS 1547/2012
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

Assessment of soil texture
Observation of soakage test
Checking of soil maps

PART E: Discharge Details

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

Rainwater (roof collection)	tick
Bore/well	
Public supply	

2. Calculate the maximum daily volume of wastewater to be discharged, unless accurate water meter readings are available

(Refer TP58 Table 6.1 and 6.2)

Number of Bedrooms	3	Three
Design Occupancy	Five	(Number of People)
Per capita Wastewater Production	180	(tick) (Litres per person per day)
Other - specify	200	
Total Daily Wastewater Production	900	(litres per day)

3. Do any special conditions apply regarding water saving devices

a) Full Water Conservation Devices?	Yes		No	Tick	(Please tick)
b) Water Recycling - what %?	%				(Please tick)

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

Standard fixtures
Dual flush toilet

4. Is Daily Wastewater Discharge Volume more than 2000 litres:

Yes		(Please tick)
No	tick	(Please tick)

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	1840	M
Total Daily Wastewater Production	900	(Litres per day)(from above)
Lot Area to Discharge Ratio	2.04	

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

Yes		No	tick	Please tick

8. Is a Northland Regional Council Discharge Consent Required?

Yes		No	tick	(Please tick)

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, duel chamber explain why not

Number of Tanks	Type of Tank	Capacity of Tank (Litres)
	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	Tick
Home aeration plant	tick
Commercial aeration plant	
Intermediate sand filter	
Recirculating sand filter	
Recirculating textile filter	
Clarification tank	
Tertiary Treatment	
Ultraviolet disinfection	
Chlorination	

Other		Specify	

PART H: Land Disposal Method

(Refer TP58 Section 8)

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

Gravity	
Dosing Siphon	
Pump	tick

2.High water level alarm to be installed in pump chambers

Yes	~~no~~

If not to be installed, explain why

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

Total Design Head	To manufacturers recommendation	(m)
Pump Chamber Volume	160	(Litres)
Emergency Storage Volume	1000	(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	Tick		
Sub-surface Dripper irrigation	tick		
Standard Trench			
Deep Trench			
Mound			
Evapo-transpiration Beds			
Other		Specify	

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	4		(Litres/m2/day)
Disposal Area	Design	252	(m2)
	reserve	76	(m2)

Explanation *(Refer TP58 Sections 9 and 10)*

Loading rate adopted for secondary treated effluent for category 4 soil.

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

Reserve Disposal Area (m²)	252 sq M
Percentage of Primary Disposal Area (%)	30 percent

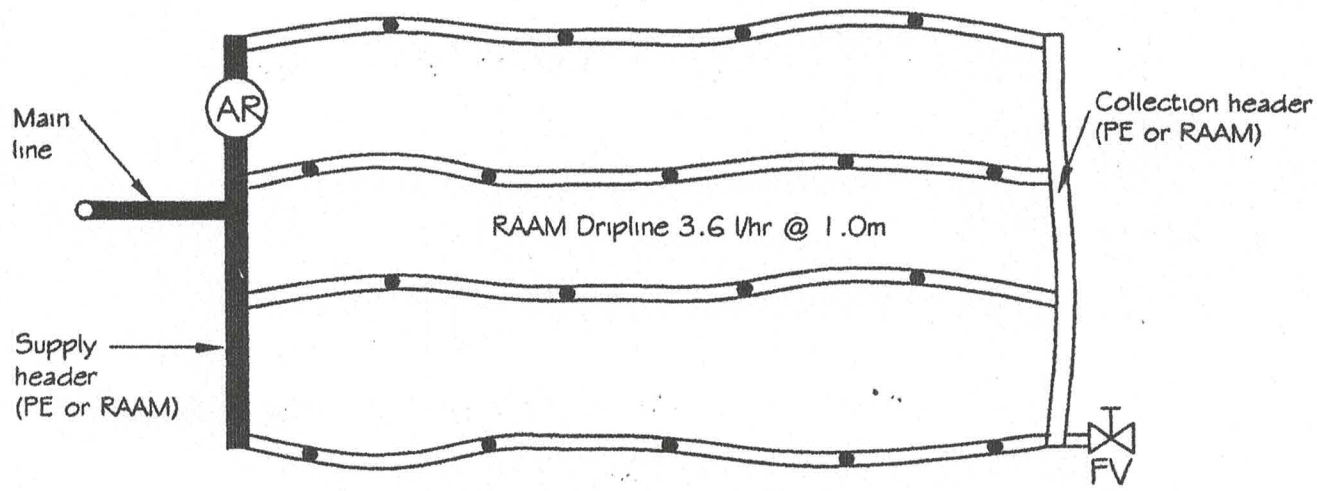
7. Please provide a detailed description of the design and dimensions of the disposal field and attach a detailed plan of the field relative to the property site:

Description and Dimensions of Disposal Field:

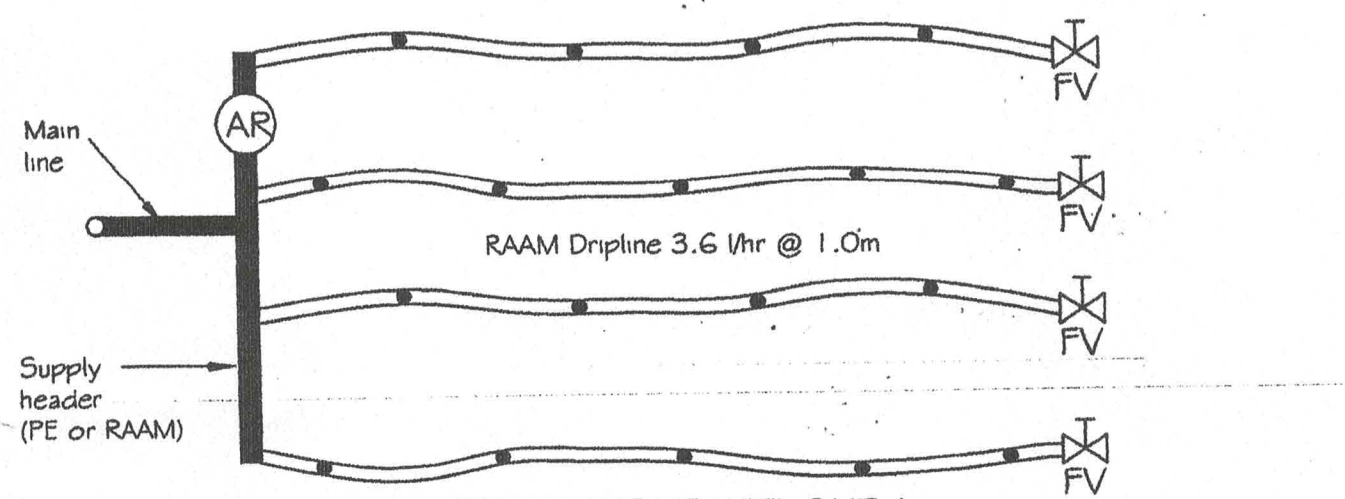
A minimum of 252 M of RAMM dripline with 3.5 L/HR emitters at 1 M spacing and 1 M line separation spacing.
Dripperline to be laid on top of ground, pinned and mulched over or buried 100 to 150 in the topsoil...

Plan Attached?	Yes	tick	No		(Please tick)

If not, explain why not



BASIC GRID LAYOUT



FIELD LAYOUT WITHOUT A COLLECTION HEADER PIPE

AR — Air / Vacuum Release Valve

FV — Flushing Valve

	ON-SITE EFFLUENT DISPOSAL TYPICAL FIELD LAYOUTS Trickle Irrigation	Ref:	Sheet:
		Scale: NTS	Draw
		Date	Check

LOT 2

Client:
Job:
Location:
Augerhole No.:
Drilling Method:

REF:
Logger:
Date:
Page:
Checked:

PERCOLATION TEST -GRAPH SHEET

Client: Conway Lewis
Job:
Location:

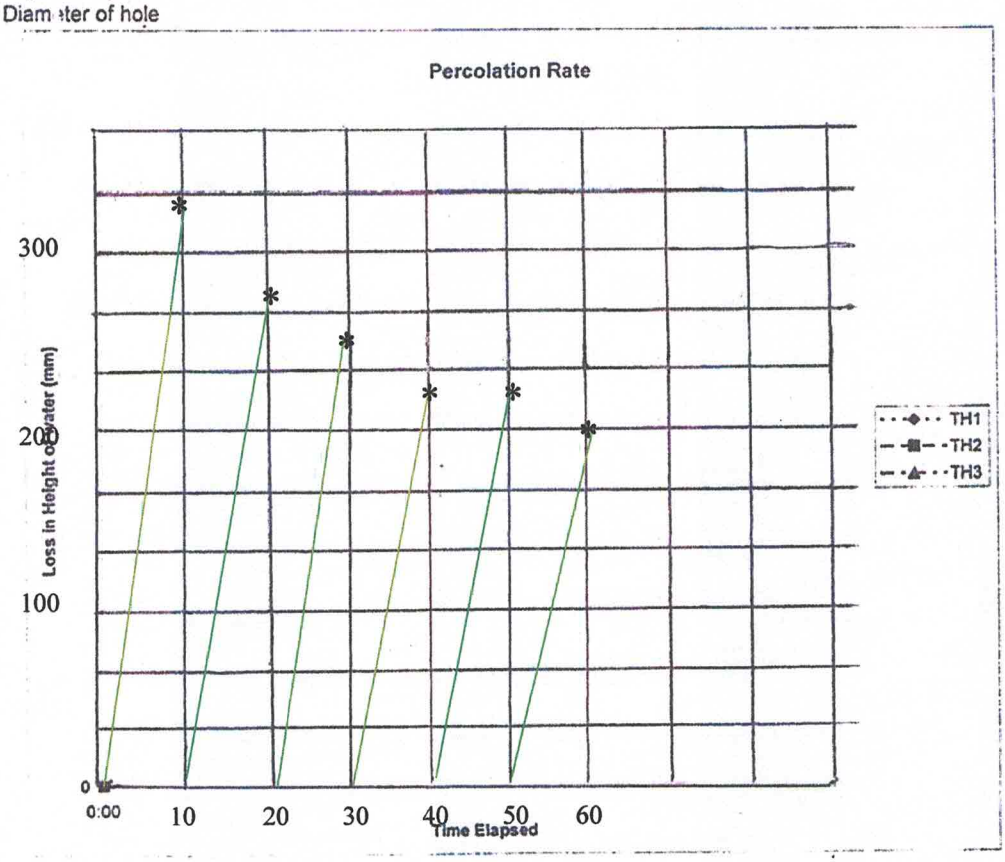
Ref.:
Report No.:
Page:

Tested by: Steve Wood
Date: 09/01/25

Presoaking conditions: 30 Min
Weather conditions prior: Dry

		Loss in height of water					Percolation Rate (mm/hr)			
Time	Time elapsed	TH1	TH2	TH3	TH4		TH1	TH2	TH3	TH4
	0	0								
	10 MIN	325					1950			
	10 MIN	275					1650			
	10 MIN	250					1500			
	10 MIN	225					1350			
	10 MIN	225					1350			
	10 MIN	200					1200			

Depth of hole
Depth of topsoil
Diameter of hole



LOT 2

Depth (m)	Legend	Soil Symbol	Soil Description	Water Level	Vane Shear Strength maximum/residual corrected kPa	Soil Sensitivity	Sample Number	Other Tests
0 - -0.2 - - -0.5 - -			TOPSOIL					
- -1 - -1.2			LIGHT BROWN FRIABLE CLAY					
- - -1.5 - - -1.8 - -2 - - - - -2.5 - - - - -3 - - -3.3								

Remarks:

Plenty of topsoil and no ground water encountered.

Topsoil		Sand	
Fill		Gravel	
Clay		Peat	
Silt		Rock	

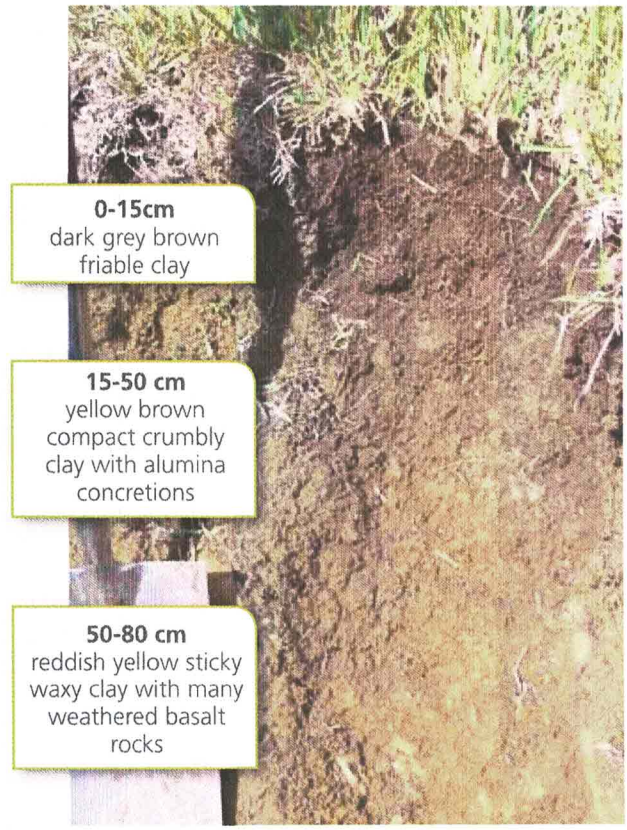
Mature basalt volcanic soils

Soil types in this group

- Kerikeri friable clay – (KE)
- Kerikeri friable clay with large boulders – (KEb)
- Matarau friable clay – (MC, MCH*)
- Matarau friable clay with large boulders - (MCb)
- Ruatangata friable clay - (RT)
- Ruatangata friable clay with large boulders – (RTb)
- Tikipunga friable clay – (TG)
- Waiotu friable clay - (YO,YOH*)
- Waiotu friable clay with large boulders – (YOb)

This fact sheet uses NZ Soil Bureau map series soil type names and abbreviations.

The H* denotes the hill variant of this soil type, which occurs on slopes over 20° and has a shallower profile.



Waiotu friable clay (YO, YOH) soil profile

Features of mature basalt volcanic soils

- These soils formed on basalt lava low in silica and rich in iron and aluminium
- They are part of the Kiripaka soil suite
- Also known as brown loams they appear around the edges of the older lava flows and on steeper slopes
- They are classic volcanic soils suitable to both orchards and market gardening
- All mature basalt volcanic soils are generally free draining, requiring few drainage structure improvements
- Some soils have boulders created as a result of long periods of erosion on the edges of old basalt flows, causing them to fracture and become rounded due to weathering processes
- These soils are moderately to strongly weathered and are moderately to strongly leached

Northland REGIONAL COUNCIL

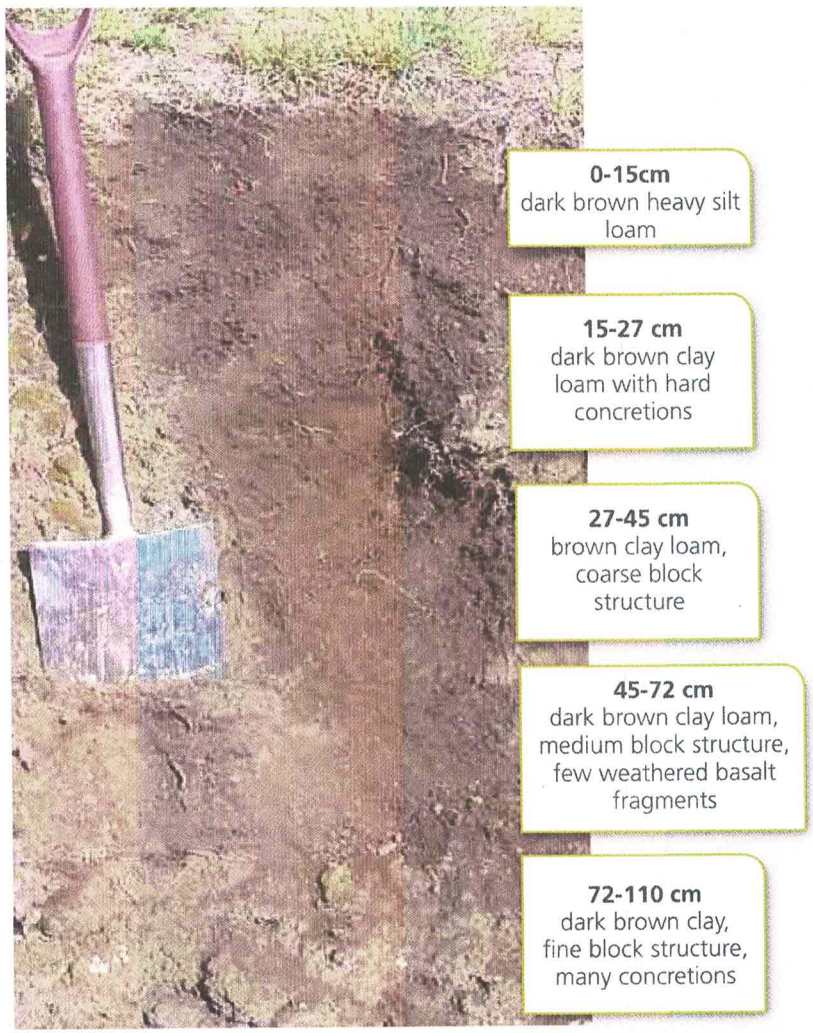
Structure and drainage management

Issues	Management tips
These soils are friable and granular (nutty) on top (horizon A) with an accumulation of clay at depth They have a clay texture, but have only low plasticity, making them 'brittle' and easily destroyed by over-cultivation or compaction when dry	Year-round cultivation is possible where soils are free draining To avoid compaction, soils should be allowed to dry after rain for a few days before running heavy equipment over them
Cultivation pans and surface compaction are common problems	Shallow ripping shatters cultivation pans/surface compaction and aerates soils, maintaining structure and reducing fungal root diseases
Topsoils can become a fine powdery surface layer known as a 'dust mulch' that seals the surface, repelling water and increasing runoff	Careful crop-pasture-crop rotations retain topsoil structure
Because they are generally free draining, they are drought prone Subsoil conditions restrict plant root depth which increases drought susceptibility However, in some places drying of the topsoils is so marked in summer that high intensity summer rainstorms can remove large amounts of sediment-bound phosphate into the waterways	Well managed grazing will protect soil surfaces from drying and consequently improve soil permeability of water Retaining good crop or pasture cover is important

Nutrient management

Soil type	Nutrient status	Management strategies
All mature basalt volcanic soils	Friable, but infertile topsoils sit over subsoils containing ironstone, aluminium and manganese nodules; at low pH, free iron and aluminium fix phosphate and other elements and create a hostile environment for plant roots	Cropping and grazing rotations should be aimed at building organic matter High concentrations of aluminium and iron can be managed with adequate applications of lime and phosphate
All mature basalt volcanic soils	Applied nitrogen, potassium and sulphur leach out of soils rapidly	Effluent and/or fertiliser should be applied little and often to reduce risk of leaching losses

Waiotu (YO) and Ruatangata (RT) soils near Ōkaihau



Kerikeri friable clay (KE) soil profile

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Erosion control

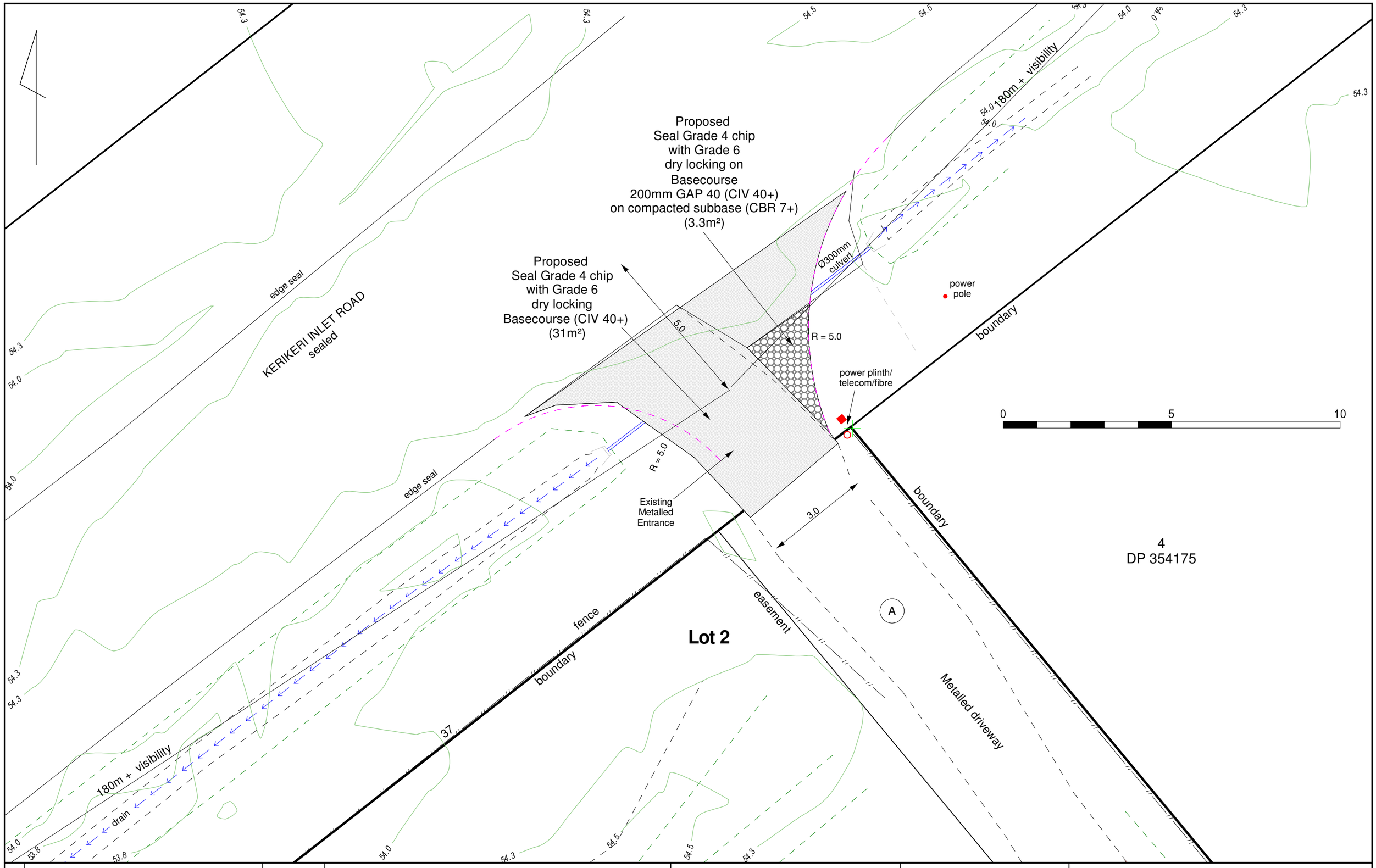
Erosion risks	Soil type	Specific problems	Possible solutions
Shallow slipping	Rolling hill country soil variants	Slipping is often associated with seepage areas at the heads of gullies Exposed subsoils are difficult to revegetate because of toxic levels of free iron, manganese and aluminium Slips occur because of more pronounced leaching and extremely friable granular topsoil	Manage water discharge and flow from higher elevations Plant and cultivate on the contour For longer slopes use shallow grassed water diversion channels at intervals down the slope
Sheet erosion	All mature basalt volcanic soils	Friable or granular topsoil can be washed away in sheets, losing organic matter and damaging crops Runoff from higher ground increases the problem, as does the formation of water-repellent 'dust mulch' surface sealing from compaction or over-cultivation	Using sediment traps in frequently or continuously cropped areas is recommended Exclusion of stock from revegetated areas is essential for recovery Open plant poplars where groundwater is surfacing to control slipping
Rill erosion	All mature basalt volcanic soils	Water runoff from compacted land above runs downslope, gouging channels or rills into topsoils Rills become deeper over time Bare, cropped soils are especially susceptible to rill erosion Exposed subsoils are very hard to revegetate and will continue to erode from rills to gullies	Fence bush enclaves in gully heads to allow ground cover to regenerate and hold soils in place Mulching exposed subsoils with organic material and applying lime prior to planting will assist revegetation where erosion has occurred

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

Northland soil factsheet series

- Northland's climate, topography, historic vegetation and mixed geology have combined to form a complex pattern of soils across the region. There are over 320 soil types in Northland. Other regions in New Zealand average only 20 soil types per region.
- The information in this fact sheet is based on a 1:50,000 mapping scale. Therefore, it is not specific to individual farms or properties. However, it may help you to understand general features and management options for recent alluvial soils.
- Knowing your soils' capabilities and limitations is the key to sustainable production in Northland. Northland Regional Council (NRC) land management advisors are available to work with landowners to provide free soil conservation advice, plans and maps specific to your property.
- Regular soil tests are recommended. If you are concerned about your soil structure or health, the Visual Soil Assessment test could be useful. Contact the land management advisors at Northland Regional Council for more information.
- Further background information about the processes that have formed these soils can be found here: **www.nrc.govt.nz/soilfactsheets**



No.	Revision	Date Approved

DONALDSONS
REGISTERED LAND SURVEYORS

Do not scale drawing
Nominal scale shown are @ A3
Check all dimensions & locate services on site before construction

	Checked	Date
Surveyed		
Designed		
Drawn		Dec. 2024
Approved		

Project: 166 Kerikeri Inlet Road - C. Lewis
Title: Entrance detail to proposed Lots 1 & 2

Scale 1 : 100 at A3 Job No. 8541

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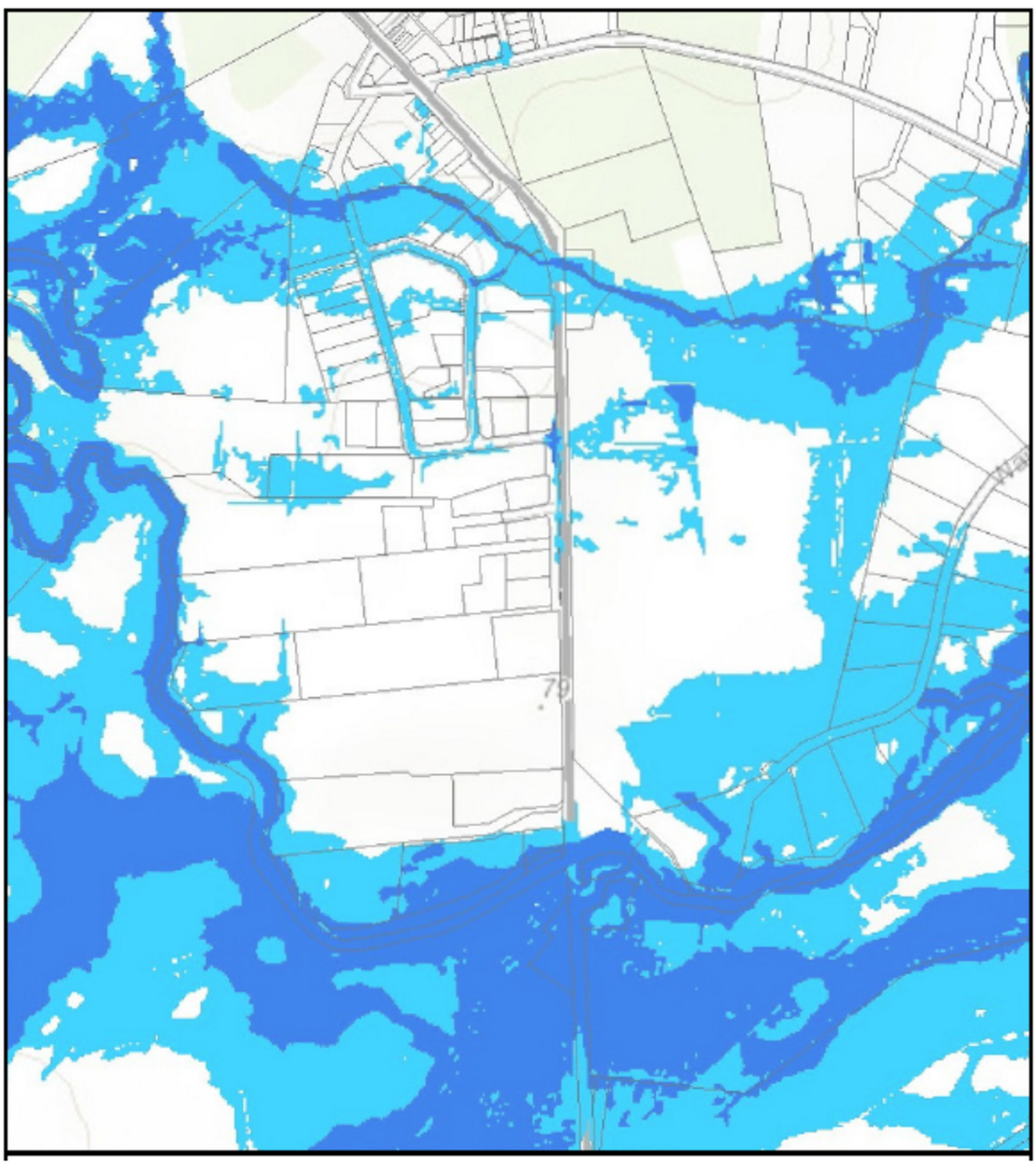
DONALDSONS
REGISTERED LAND SURVEYORS

STORMWATER MANAGEMENT ASSESSMENT

Proposed Subdivision, 166 Kerikeri Inlet Road, Kerikeri

Applicant: C. LEWIS
Reference: 8541
Date: December 2024



Limitations

Donaldson's Surveyors Ltd provides this information as a recommendation for the purpose of a Stormwater Management assessment under the Operative Far North District Plan. The information and opinions contained within this report align with council engineering standards and guidelines for stormwater attenuation and shall be for the use of our client and the Far North District Council, and shall not be used in any other context, unless agreed to by Donaldson's Surveyors Ltd.
Donaldson's Surveyors Ltd shall not be liable for any failures or damages associated with the recommendations or the physical construction or lack of maintenance.

Introduction

C. Lewis is currently in the process of subdividing an additional lot on Kerikeri Inlet Road and requires a stormwater management assessment. The goal is to maintain hydrological neutrality by effectively managing stormwater runoff from events with 1%, 10%, and 50% annual exceedance probabilities (AEP). This will ensure that the subdivision does not exacerbate existing site conditions and aims to achieve an improved outcome to the current conditions to demonstrate net environmental gains.

For Lot 1, onsite detention will be required at the subdivision stage, with these requirements to be enforced pursuant to Section 224 of the Resource Management Act (RMA), including provisions for their ongoing maintenance pursuant to Section 221 RMA.

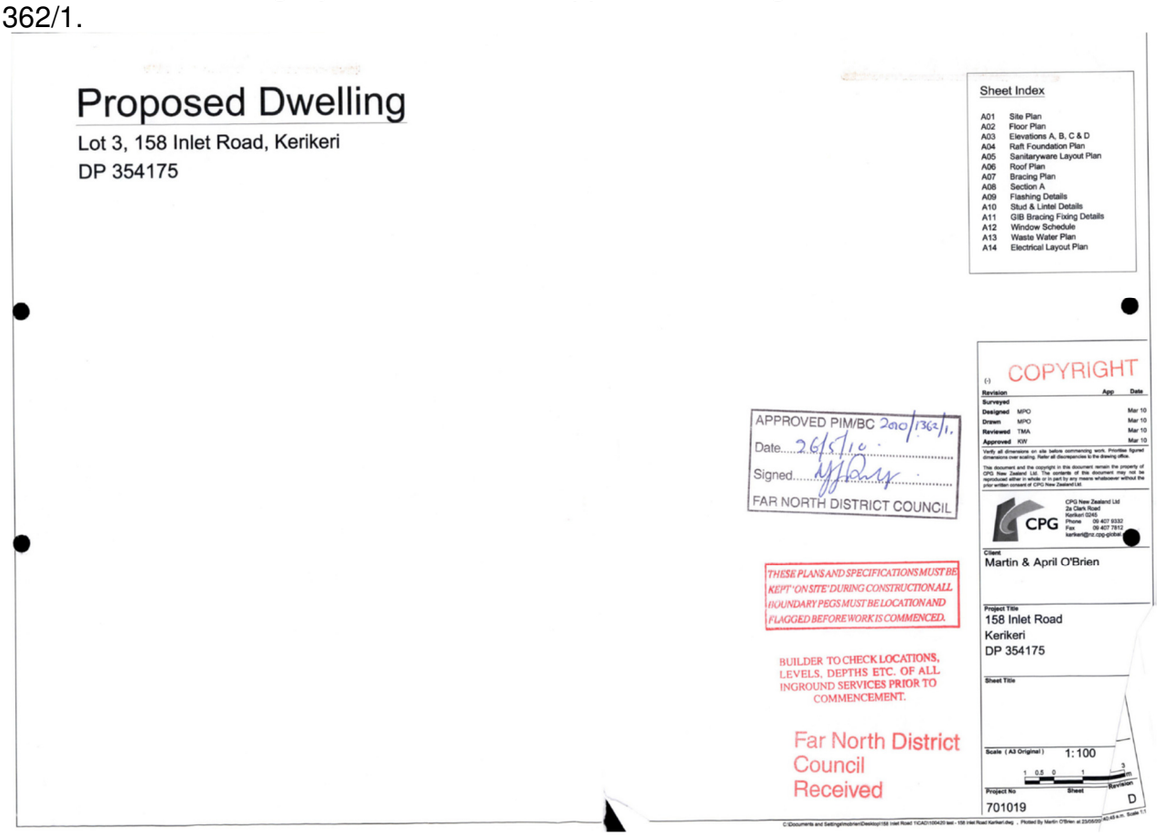
For Lot 2, onsite detention will be required at the building consent stage, with these requirements to be enforced through a consent notice under Section 221 of the Resource Management Act (RMA), including provisions for their ongoing maintenance.

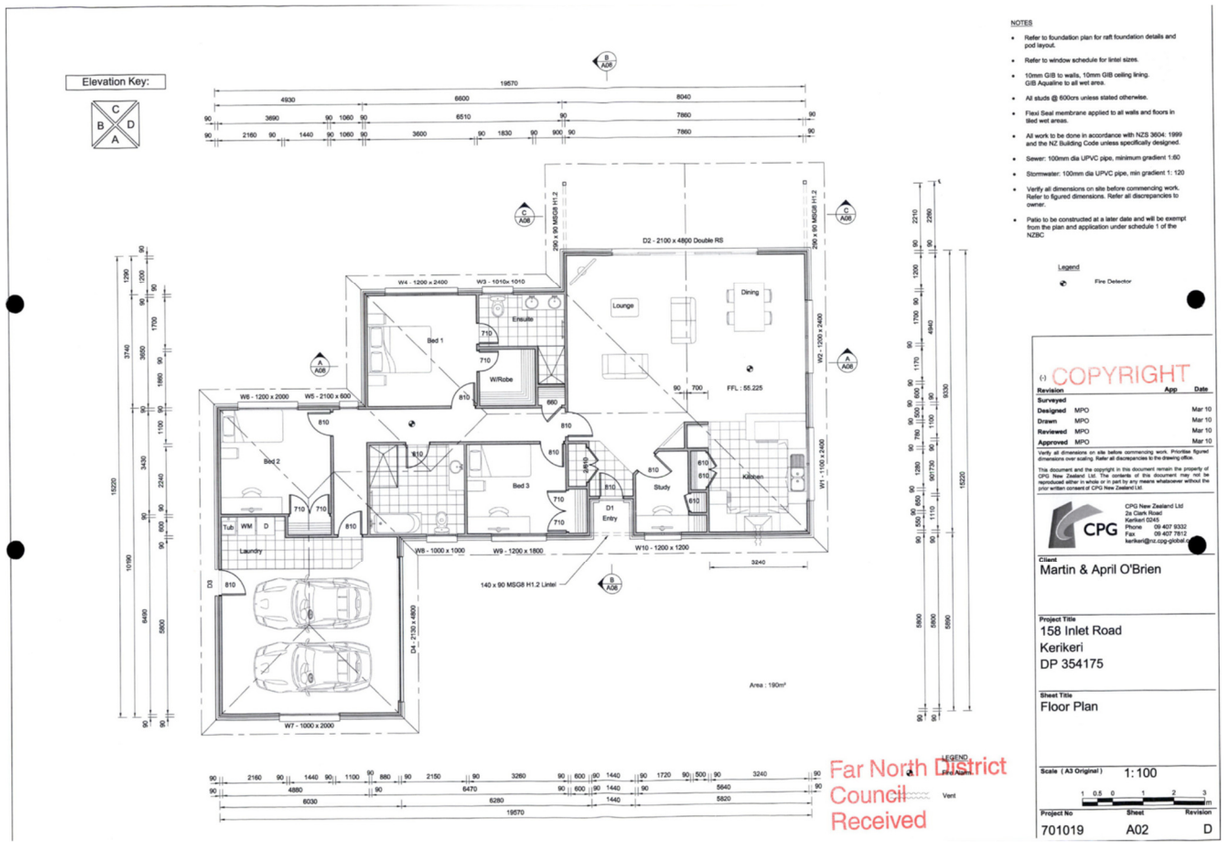
The stormwater management assessment will include detention calculations based on achieving an improved outcome for the existing building on Lot 1, and the same also demonstrates a hypothetical building scenario on Lot 2. These calculations will ensure that the stormwater runoff is effectively managed, in line with the regulatory requirements and the goal of maintaining site hydrology.

The proposed mitigation measures adhere to low-impact design principles as outlined in Guideline Document GD01. Given the susceptibility of the lower catchment area to flooding, the design includes detention for storm events up to the 1% AEP level, with considerations for climate change predictions (RCP6.0 for the period 2081-2100). This approach ensures that the subdivision will effectively manage stormwater runoff, mitigate flooding risks, and adapt to future environmental conditions.

Site and development description

Lot 1 captures a relatively flat site with an easy grade approximately 1:50 that has mature landscape plantings surrounding the established residence. The existing residence includes a 263m² dwelling with a 44m² concrete parking area linked to 387m² metalled parking area. The residence and all infrastructures have been legally established with approved building consent issued on 26/5/2010 on BC 2010/1362/1.





Lot 2 is vacant with an established driveway that extends through to Lot 1. The site is all in grass and slopes to the southwest towards a defined gully.

The soil type is mapped predominantly as KE Kerikeri friable clay being well drained, with a land use classification of 2s1. The soil was subject to past cropping and accordingly adopts an increased CN value.

Stormwater is diverted by roadside drains alongside Kerikeri Inlet Road. These are generally suited to a 1 in 10 year storm event. The open drains have a grade of approximately 0.5% extending the time of concentration. In the event the drains or culvert pipes block or reach capacity, stormwater would sheetflow through Lot 2 before entering adjoining property to the west which leads to the lower catchment gully.
Lot 2 has an elevated garden bund alongside the road boundary that serves to divert stormwater away from the Lot 2. However, stormwater sheetflow would continue to enter the site via the driveway entrance and from adjoining Lot 4 DP 354175 to the east. As an option, the future development of Lot 2 could consider mitigating those potential adverse effects by extending a bund alongside the driveway towards the southeast. This would direct sheetflow away from the building site, allowing the water to instead displace towards the boundary between Lots 1 & 2.

There are no open drains and there are no legal easements in place over adjoining Lot 5 DP 354175 to the west, where stormwater naturally discharges; instead, stormwater sheet flows across the land, functioning as a natural servitude. With no legal easement for overland flow the applicant is obligated to attenuate for a 100-year event. The lower catchment area is identified on the FNDC maps as also being susceptible to flooding, but of reduced significance being close to the tidal portion of Okura River catchment.

<u>Attenuation design parameters</u>

Attenuation storage volumes are calculated with hydrology software using the SCS method, design storm Type 1A, and duration 24hr, configured with the following parameters:

- Pre development calculations adopt Historic rainfall intensities and depth values from NIWA HIRDS.
- To account for volume control in accordance with 4.3.9.1 (FNDC Eng Stds 2023), calculation parameters increase NIWA depth values by 20% and reduce outflow rates to 80% of historic rainfall peak flows (m^3/s).
- Post development calculations adopt RCP6.0 2081-2100 climate change data.
- Calculations include compensation for ground impermeable surface areas up to 20% or $44m^2$.
- The site is ex-orchard land and accordingly the CN value adopts a value of 80 (TP 108) on category B soil.

By utilising site-specific IDF (Intensity-Duration-Frequency) values, it is possible to accurately replicate the peak storm intensity, duration, and frequency. For the SCS (Soil Conservation Service) calculations adopt a type category B (compacted free draining soil being ex-horticultural). The calculations are conducted using the weighted volume method, which integrates results from independently calculated 'permeable' and 'impermeable' surfaces through a combined junction. The hydrology software factors in the total catchment area, including permeable surfaces, and recognises that as storm intensity increases, the ground's ability to absorb water decreases, resulting in increased impermeability. Consequently, the software offers more accurate detention sizing by accounting for such effects.

The SCS or NRCS method is based on the variable source area concept for promoting runoff. The variable source concept is based on part of the catchment contributing to runoff at an increasing rate with increasing rainfall. It can be demonstrated that a unique storage function can be defined across a catchment representing the catchment type (land use, soil type etc.).

The detention design adopts the 1%, 10 % & 50% AEP events.

A consent notice schedule is necessary to register specific maintenance requirements for the detention devices and future building requirements on Lot 2, pursuant to Section 221 RMA.

Stormwater management principles & references

Stormwater management directives are outlined under the Far North District Plan's stormwater disposal subdivision provisions, as well as in the regional plan rules, the Resource Management Act 1991 (RMA), the Local Government Act 1974, the New Zealand Building Code (NZBC) Clause E1, Engineering Standards and Guidelines, GD01, TP108, and the NES Freshwater Regulations 2020.

Building Code (NZBC) Clause E1

PERFORMANCE

E1.3.1 *Except as otherwise required under the Resource Management Act 1991 for the protection of other property, surface water, resulting from an event having a 10% probability of occurring annually and which is collected or concentrated by buildings or sitework, shall be disposed of in a way that avoids the likelihood of damage or nuisance to other property.*

Stormwater Management Devices GD01

A1.2

The scope of this guideline document is confined to the management of stormwater, which is defined as: "Rainfall runoff from land, including constructed impervious areas such as roads, pavement, roofs and urban areas which may contain dissolved or entrained contaminants, and which is diverted and discharged to land and water."

A4.2 Designing to reflect mana whenua values (GD01)

Mauri is a concept recognised by mana whenua as the connection between spiritual, physical and temporal realms. Loosely translated as the life force or life essence which exists within all matter, mauri sits at the very core of sustainable design for mana whenua and Te Ao Māori – the Māori worldview.

A key concern to mana whenua is the effect on the mauri of water caused by pollution of a stream, river, estuary, catchment or harbour.

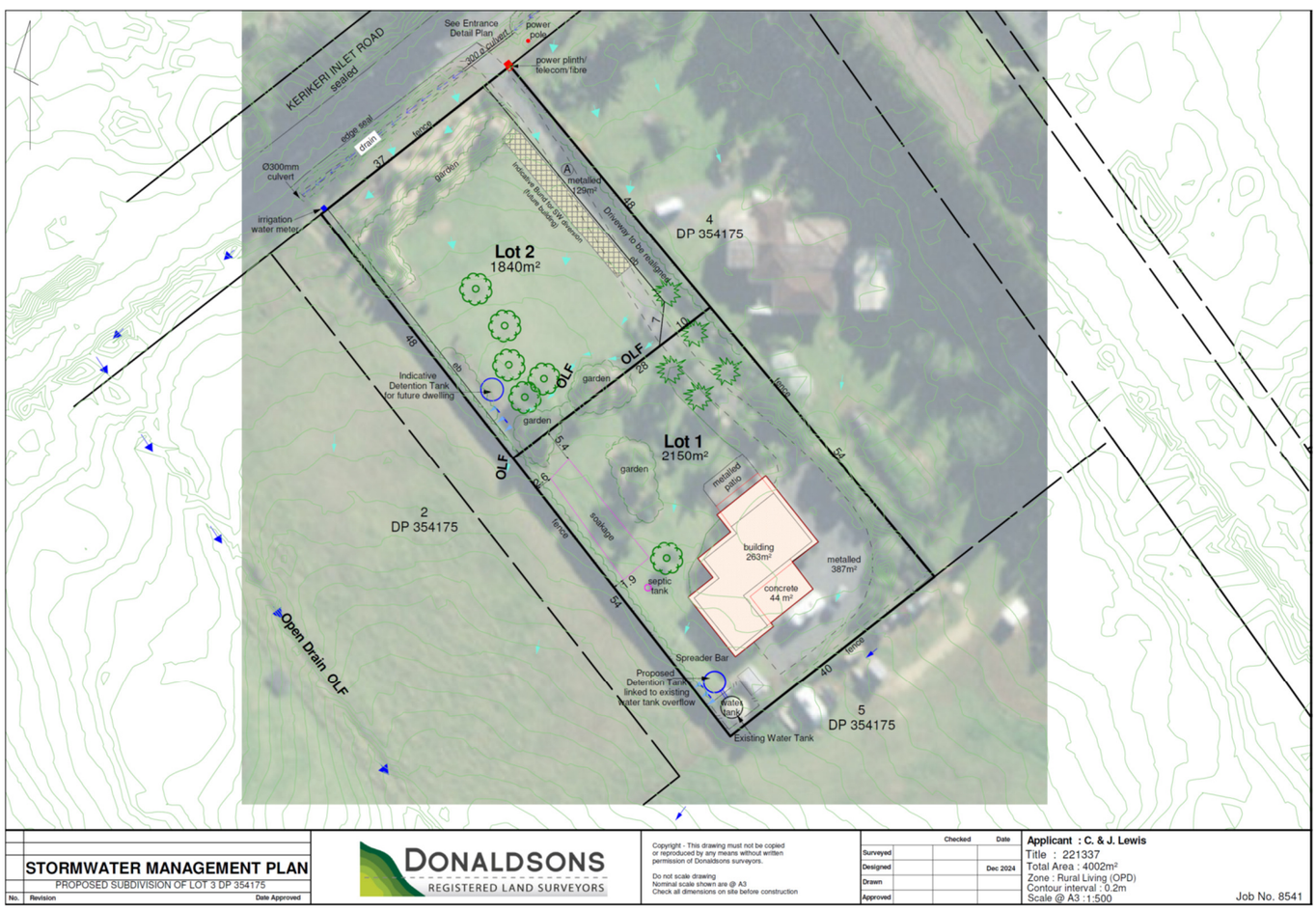
B1.0 Design process for stormwater management devices
Stormwater management must be considered early in the overall design process to ensure the site meets the hydrologic needs of the post-development catchment. It is important that a comprehensive land planning assessment is done, taking into consideration the proposed development land use and the effects on the wider catchment, both upstream and downstream. This will ensure stormwater management is designed for, alongside all other aspects of the development.

Stormwater Management Objective and design

The subdivision proposal is classified as a non-complying activity under the Far North District Plan. Stormwater discharge and its management are subject to council discretion, with an emphasis on achieving positive environmental outcomes. This includes mitigating adverse effects from increased impermeable surfaces, especially in catchments influencing lower lying land prone to flooding.

The proposed stormwater management devices are tiered for 1%, 10% & 50% AEP events, and encourage first flush stormwater to be absorbed within a soakage device, removing nonpoint source contaminants.

A secondary overland flowpath leads to the head of a gully avoiding potential compromise to future building sites. The stormwater would be discharged first to a rock spreader device to ease the effects of concentrated flow.
The detention calculations provided offer sufficient assurance that post-development effects will closely resemble pre-development conditions as stipulated in Councils Engineering Guidelines 2023.



Stormwater flow rate and storage analysis

HIRDS HISTORIC DATA AND CLIMATE CHANGE IDF VALUES (RCP6.0 2081-2100)

Current Historic

Intensity

Rainfall intensities (mm/hr) :: Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h
1.58	0.633	59.1	42.8	35.4	25.4	18.0	9.88	6.49	4.10
2	0.500	64.7	46.9	38.8	27.8	19.7	10.8	7.14	4.50
5	0.200	83.8	60.8	50.3	36.2	25.7	14.2	9.34	5.91
10	0.100	97.7	71.0	58.8	42.4	30.1	16.7	11.0	6.95
20	0.050	112	81.4	67.5	48.7	34.6	19.2	12.7	8.03
30	0.033	120	87.6	72.7	52.5	37.3	20.7	13.7	8.68
40	0.025	126	92.0	76.4	55.2	39.2	21.8	14.4	9.14
50	0.020	131	95.5	79.2	57.2	40.7	22.6	15.0	9.51
60	0.017	135	98.3	81.6	59.0	42.0	23.3	15.4	9.81
80	0.013	141	103	85.3	61.7	43.9	24.4	16.2	10.3
100	0.010	146	106	88.1	63.8	45.4	25.3	16.7	10.6

Depth

Rainfall depths (mm) :: Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h
1.58	0.633	9.85	14.3	17.7	25.4	35.9	59.3	78.0	98.4
2	0.500	10.8	15.6	19.4	27.9	39.4	65.1	85.7	108
5	0.200	14.0	20.3	25.2	36.2	51.4	85.1	112	142
10	0.100	16.3	23.7	29.4	42.4	60.2	100	132	167
20	0.050	18.7	27.1	33.8	48.7	69.3	115	152	193
30	0.033	20.1	29.2	36.3	52.5	74.6	124	164	208
40	0.025	21.1	30.7	38.2	55.2	78.5	131	173	220
50	0.020	21.8	31.8	39.6	57.3	81.5	136	180	228
60	0.017	22.5	32.8	40.8	59.0	84.0	140	185	235
80	0.013	23.5	34.2	42.6	61.7	87.9	147	194	247
100	0.010	24.2	35.4	44.1	63.8	90.9	152	201	256

RCP6.0 (2081-2100)

Intensity

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h
1.58	0.633	71.0	51.2	42.3	30.2	21.1	11.3	7.23	4.48
2	0.500	78.0	56.3	46.5	33.3	23.3	12.4	8.00	4.94
5	0.200	102	73.7	60.9	43.7	30.6	16.4	10.6	6.54
10	0.100	119	86.4	71.5	51.3	36.0	19.3	12.5	7.73
20	0.050	137	99.4	82.2	59.1	41.6	22.4	14.5	8.94
30	0.033	148	107	88.7	63.8	44.9	24.2	15.6	9.68
40	0.025	155	112	93.2	67.0	47.2	25.5	16.5	10.2
50	0.020	161	117	96.8	69.7	49.1	26.5	17.1	10.6
60	0.017	166	120	99.7	71.8	50.6	27.3	17.7	11.0
80	0.013	173	126	104	75.1	53.0	28.6	18.5	11.5
100	0.010	179	130	108	77.7	54.8	29.7	19.2	11.9

Depth

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h
1.58	0.633	11.8	17.1	21.1	30.2	42.2	67.5	86.7	108
2	0.500	13.0	18.8	23.3	33.3	46.6	74.6	96.0	119
5	0.200	17.0	24.6	30.4	43.7	61.3	98.4	127	157
10	0.100	19.9	28.8	35.7	51.3	72.1	116	150	186
20	0.050	22.8	33.1	41.1	59.1	83.1	134	173	215
30	0.033	24.6	35.7	44.3	63.8	89.7	145	188	232
40	0.025	25.8	37.5	46.6	67.0	94.4	153	198	245
50	0.020	26.8	38.9	48.4	69.7	98.1	159	206	255
60	0.017	27.6	40.1	49.8	71.8	101	164	212	263
80	0.013	28.9	42.0	52.2	75.1	106	172	222	276
100	0.010	29.8	43.4	53.9	77.7	110	178	231	286

Target pre development natural (Current climate conditions)
Pre-development conditions adopts CN value for compacted cropped soil based on the sites past orchard activity and permitted entailment to undertake such land use. Additionally, the predevelopment conditions exclude 44m² to compensate for 20% ground impermeable surface area, which is introduced back into the post development calculations (refer to drainage area).

Target outflow rates are 80% of predevelopment levels:
Q2 (0.0010 x 0.8 = **0.0008**)
Q10 (0.002 x 0.8 = **0.0016**)
Q100 (0.0036 x 0.8 = **0.0029**)

50% AEP calculations

Pre Pre Nat Assumes Crop **Hyd. No. 1**

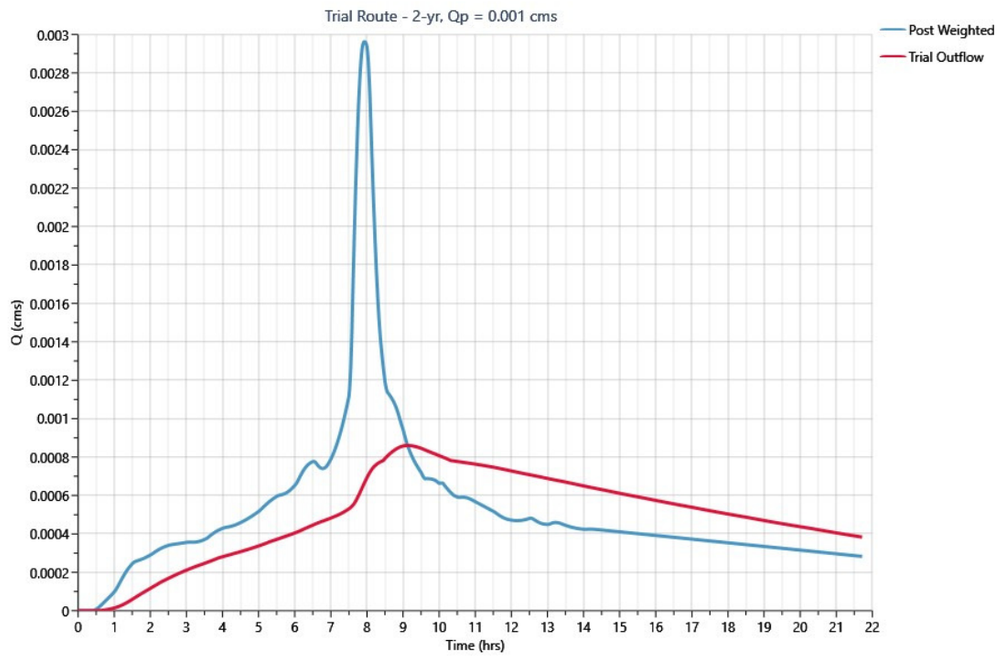
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.0010 cms
Storm Frequency	= 2-yr	Time to Peak	= 8.00 hrs
Time Interval	= 1 min	Runoff Volume	= 15.2 cum
Drainage Area	= 0.026 ha	Curve Number	= 80
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 109 mm	Design Storm	= Type IA
Storm Duration	= 24 hrs	Shape Factor	= 0.14

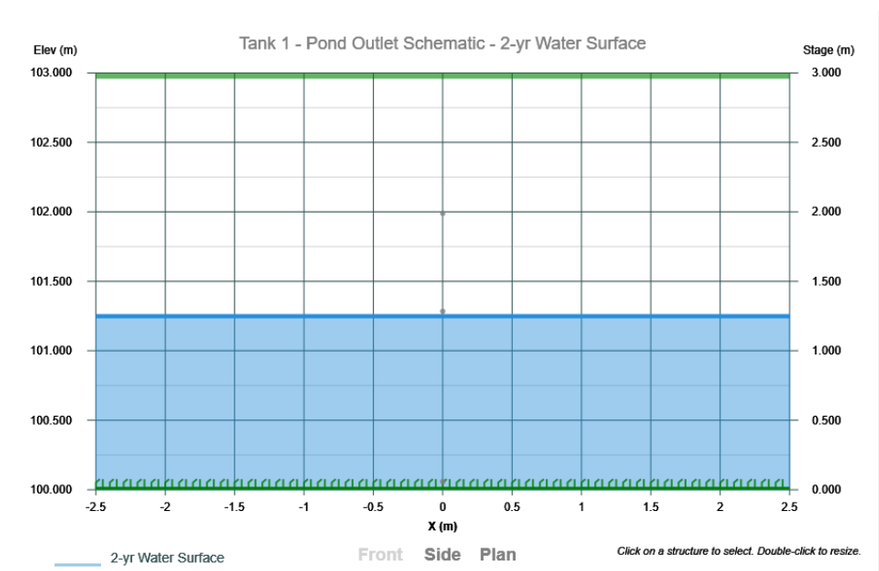
Post Impermeable — Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.0030 cms
Storm Frequency	= 2-yr	Time to Peak	= 7.93 hrs
Time Interval	= 1 min	Runoff Volume	= 43.3 cum
Drainage Area	= 0.031 ha	Curve Number	= 98
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 146 mm	Design Storm	= Type IA
Storm Duration	= 24 hrs	Shape Factor	= 0.14

Post Detention — Hyd. No. 5

Hydrograph Type	= Pond Route	Peak Flow	= 0.0009 cms
Storm Frequency	= 2-yr	Time to Peak	= 9.12 hrs
Time Interval	= 1 min	Hydrograph Volume	= 43.2 cum
Inflow Hydrograph	= 4 - Weighted	Max. Elevation	= 101.262 m
Pond Name	= Tank 1	Max. Storage	= 10.6 cum





10% AEP calculations

Pre Pre Nat Assumes Crop — Hyd. No. 1

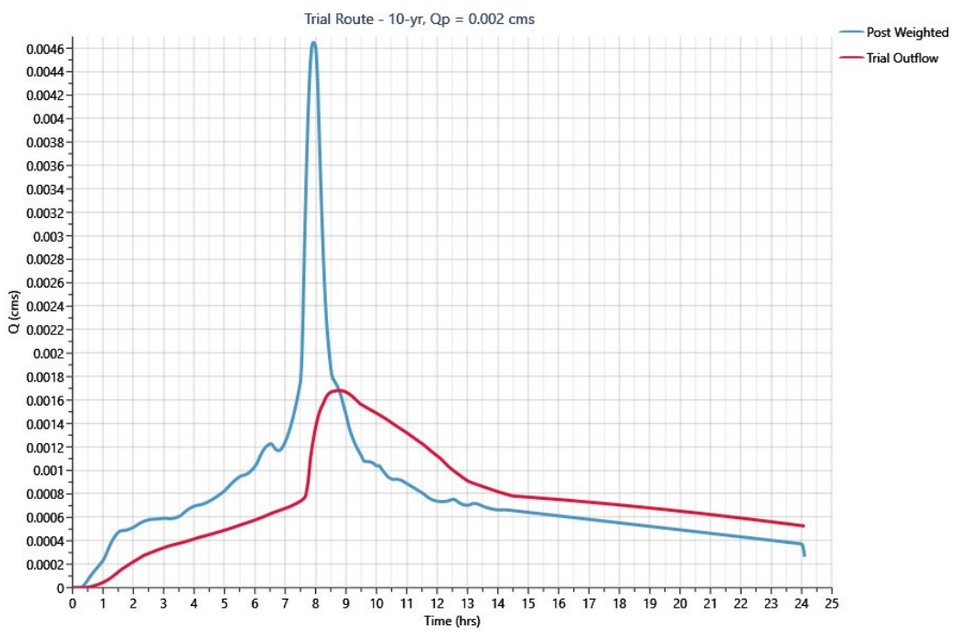
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.0020 cms
Storm Frequency	= 10-yr	Time to Peak	= 8.00 hrs
Time Interval	= 1 min	Runoff Volume	= 28.9 cum
Drainage Area	= 0.026 ha	Curve Number	= 80
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 168 mm	Design Storm	= Type IA
Storm Duration	= 24 hrs	Shape Factor	= 0.14

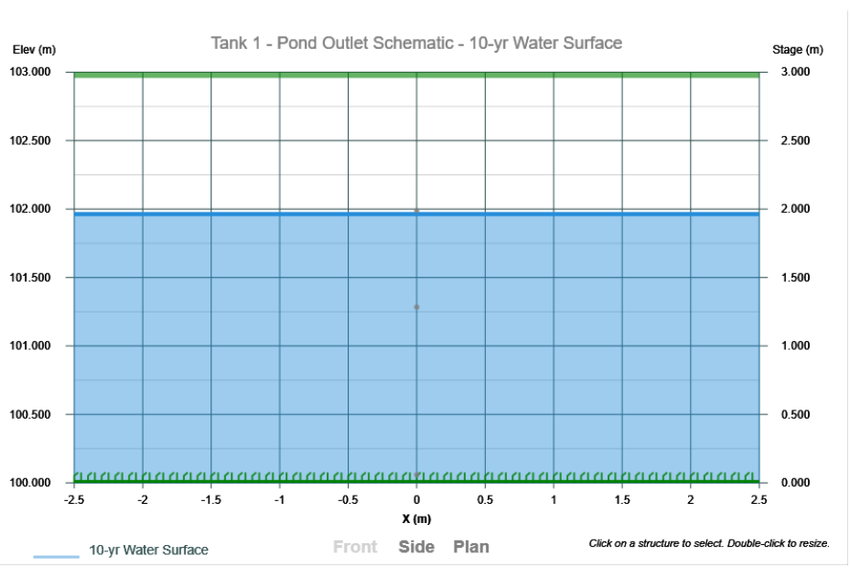
Post Impermeable — Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.0046 cms
Storm Frequency	= 10-yr	Time to Peak	= 7.93 hrs
Time Interval	= 1 min	Runoff Volume	= 68.7 cum
Drainage Area	= 0.031 ha	Curve Number	= 98
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 228 mm	Design Storm	= Type IA
Storm Duration	= 24 hrs	Shape Factor	= 0.14

Post Detention — Hyd. No. 5

Hydrograph Type	= Pond Route	Peak Flow	= 0.0017 cms
Storm Frequency	= 10-yr	Time to Peak	= 8.78 hrs
Time Interval	= 1 min	Hydrograph Volume	= 68.7 cum
Inflow Hydrograph	= 4 - Weighted	Max. Elevation	= 101.977 m
Pond Name	= Tank 1	Max. Storage	= 16.6 cum





1% AEP calculations

Pre Pre Nat Assumes Crop — Hyd. No. 1

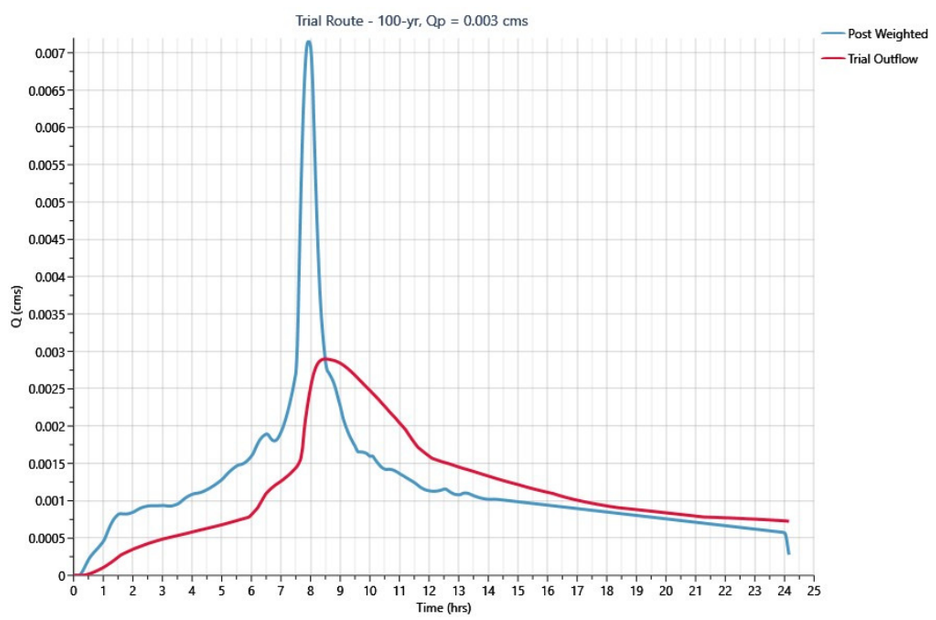
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.0036 cms
Storm Frequency	= 100-yr	Time to Peak	= 7.97 hrs
Time Interval	= 1 min	Runoff Volume	= 50.6 cum
Drainage Area	= 0.026 ha	Curve Number	= 80
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 256 mm	Design Storm	= Type IA
Storm Duration	= 24 hrs	Shape Factor	= 0.14

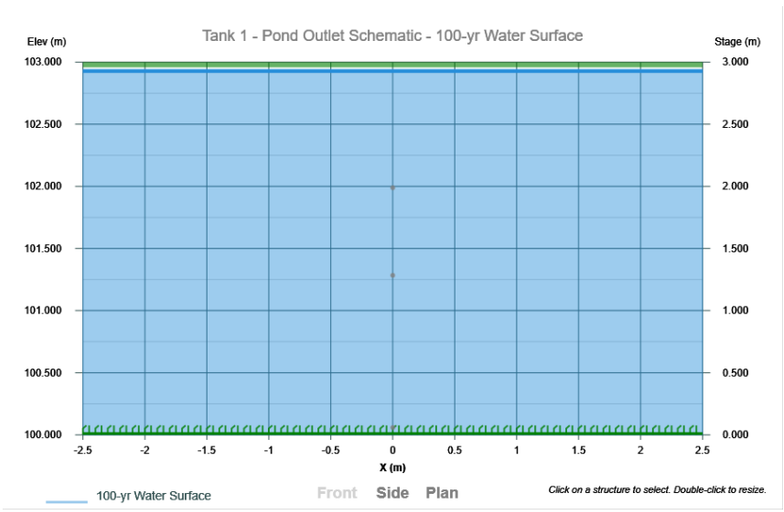
Post Impermeable — Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.0071 cms
Storm Frequency	= 100-yr	Time to Peak	= 7.93 hrs
Time Interval	= 1 min	Runoff Volume	= 106 cum
Drainage Area	= 0.031 ha	Curve Number	= 98
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 350 mm	Design Storm	= Type IA
Storm Duration	= 24 hrs	Shape Factor	= 0.14

Post Detention — Hyd. No. 5

Hydrograph Type	= Pond Route	Peak Flow	= 0.0029 cms
Storm Frequency	= 100-yr	Time to Peak	= 8.50 hrs
Time Interval	= 1 min	Hydrograph Volume	= 107 cum
Inflow Hydrograph	= 4 - Weighted	Max. Elevation	= 102.941 m
Pond Name	= Tank 1	Max. Storage	= 24.7 cum





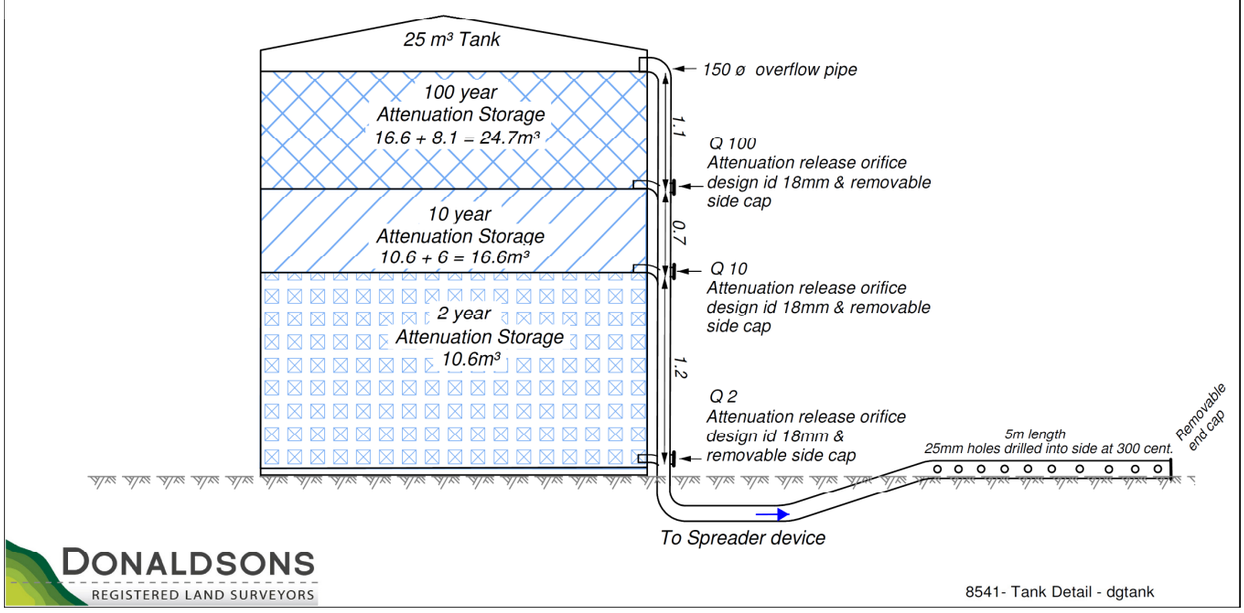
Tank 1

Culvert / Orifices	Culvert	Orifice		
		1 (i)	2 (i)	3 (i)
Rise, mm		18	18	18
Span, mm		18	18	18
No. Barrels		1	1	1
Invert Elevation, m		100.050	101.275	101.980
Orifice Coefficient, Co		0.650	0.650	0.650

Tank 1 **Stage-Storage-Discharge Summary**

Stage (m)	Elev. (m)	Storage (cum)	Culvert (cms)	Orifices, cms			Riser (cms)	Weirs, cms			Pf Riser (cms)	Exfil (cms)	User (cms)	Total (cms)
				1	2	3		1	2	3				
0.000	100.000	0.0000		0.000	0.000	0.000								0.000
1.000	101.000	8.400		0.0007	0.000	0.000								0.0007
2.000	102.000	16.8		0.0010	0.0006	0.0001								0.0017
3.000	103.000	25.2		0.0013	0.0010	0.0007								0.0030

Schematic arrangement of attenuation storage and outlet orifice
25m³ detention tank



Q2 (0.0010 x 0.8 = **0.0008 m³/s**) Post-detention Target 0.0009 m³/s
Q10 (0.002 x 0.8 = **0.0016 m³/s**) Post-detention Target 0.0017 m³/s
Q100 (0.0036 x 0.8 = **0.0029 m³/s**) Post-detention Target 0.0029 m³/s

The calculations concluded a near perfect match for the target values replicating the sites former and permitted orchard use.

The Rural Living Zone permits an impermeable surface coverage of up to 12.5%. The current lawfully established impermeable surface area on the parent site is 823 m², which represents 20% of the total site area (4002 m²).
Although this exceeds the permitted limit, the discrepancy arises from the District Plan Change of 2015, which revised the definition of impermeable surfaces to include “metalled” driveways. Previously, only sealed or concrete surfaces were considered impermeable. The existing residence on Lot 1 was approved in 2010, prior to this plan change. As such, the exceedance remains lawful and is consistent with the site's "permitted activity" status.

Given this context, the recommended detention measures for Lot 1 would result in a net positive outcome by improving the current permitted situation, thereby supporting the subdivisions non-complying status.

Proposed Lot 1

As a consequence of providing detention for an impermeable surface area of 307m² this reduces the overall coverage lower than that lawfully established on the parent site (currently at 20%).
The outcome means although proposed Lot 1 is about half the size of the parent lot, the remaining non-attenuated impermeable surface area (metalled driveway) is reduced considerably (387m² / 2150m² = 18%) or if it were compared against the parent site (387 / 4002 = 9.5%).

Proposed Lot 2

It is recommended for Lot 2 that the future impermeable surfaces that exceed the zone permitted limit are subject to similar detention methods to reduce post development flowrates to predevelopment levels.

Summary

Stormwater attenuation requirements for 307m² impermeable areas confirms that it is feasible to implement onsite stormwater controls that reduce peak flowrates within a standard 25m³ water tank.
Conditions for Resource Consent shall include that a stormwater detention tank be installed approximately in accordance with this design.

Recommendations include that the future building activity on proposed Lot 2 adopt a similar detention method.
Final design requirements for future building activity on Lot 2 are to defer until the building consent stage and be administered through consent notice.
A stormwater report shall be prepared by a SQEP and be submitted with the building consent application, demonstrating that the post development flow rates uphold Council Engineering Standards and Guidelines (80% of current climate conditions) for any impermeable surface coverage that exceeds the zone permitted standard.

The future development of Lot 2 should consider mitigating potential adverse effects in the event the roadside drains reach capacity by extending a bund alongside the driveway towards the southeast. This would direct sheetflow away from the building site, allowing the water to instead displace towards the boundary between Lots 1 & 2.

FAR NORTH DISTRICT PLAN

13.7.3.4 STORMWATER DISPOSAL

(a) All allotments shall be provided, within their net area, with a means for the disposal of collected stormwater from the roof of all potential or existing buildings and from all impervious surfaces, in such a way so as to avoid or mitigate any adverse effects of stormwater runoff on receiving environments, including downstream properties. This shall be done for a rainfall event with a 10% Annual Exceedance Probability (AEP).

The site is not connected to any reticulated network and the lay of the land does not support discharging stormwater into the roadside drains. Additionally, the former subdivision approval never established legal easements or overland flowpath covenants to facilitate discharge of stormwater over adjoining properties. Therefore, any stormwater discharge from the site falls under the principle of "natural servitude," meaning that the discharge should, to the extent practicable, replicate the natural conditions that exist prior to development for storm events up to 1% AEP.

Detention calculations adopt 1%, 10% & 50% AEP storm events with predevelopment flows calculated using current rainfall scenarios, and post development flows calculated using climate change RCP6.0 2081-2100 rainfall data.

The recommendations demonstrate positive outcomes as a consequence of the subdivision.

(b) The preferred means of disposal of collected stormwater in urban areas will be by way of piping to an approved outfall, each new allotment shall be provided with a piped connection to the outfall laid at least 600mm into the net area of the allotment. This includes land allocated on a cross lease or company lease. The connection should be at the lowest point of the site to enable water from driveways and other impervious surfaces to drain to it.

Where it is not practical to provide stormwater connections for each lot then the application for subdivision shall include a report detailing how stormwater from each lot is to be disposed of without adversely affecting downstream properties or the receiving environment.

The assessment has provided recommendations to improve the control and displacement of stormwater through reducing the outflow rate using detention, and discharging stormwater over a wider area using a spreader device. This would mitigate as far as practical, the effects of not having a piped network connection.

(c) The provision of grass swales and other water retention devices such as ponds and depressions in the land surface may be required by the Council in order to achieve adequate mitigation of the effects of stormwater runoff.

Lot 1 represents an as-built situation where stormwater naturally disperses across the ground instead of being directed into open drains. This approach is preferable as it minimises the concentration of stormwater, making it more manageable in this instance where there is no open drainage systems. Stormwater from the roof surfaces would be discharged in a more controlled and sustainable manner.

Lot 2 would benefit from incorporating a wraparound earth mound along the driveway. While this could lead to some concentration of stormwater, the natural contours of the land already direct water in a similar pattern, making this solution reasonable and aligned with existing conditions.
No ponds or ground depressions are proposed for either lot.

(d) All subdivision applications creating sites 2ha or less shall include a detailed report from a Chartered Professional Engineer or other suitably qualified person addressing stormwater disposal.

This report qualifies as a stormwater disposal assessment.

(e) Where flow rate control is required to protect downstream properties and/or the receiving environment then the stormwater disposal system shall be designed in accordance with the onsite control practices as contained in "Technical Publications".

The proposed mitigation measures are in accordance with relevant technical publications and current Far North District Engineering Standards and Guidelines May 2023.

Chapter 13.10

(a) *Whether the application complies with any regional rules relating to any water or discharge permits required under the Act, and with any resource consent issued to the District Council in relation to any urban drainage area stormwater management plan or similar plan.*	The proposal is considered under NRC authority a 'permitted' activity; where it has been demonstrated that low impact design methods are being used, and discharge from impermeable surfaces is subject to detention reducing outflow rates.
(b) *Whether the application complies with the provisions of the Council's "Engineering Standards and Guidelines" (2004) - Revised March 2009 (to be used in conjunction with NZS 4404:2004).*	The recommended stormwater management complies with relevant engineering standards and guidelines, upholding low impact design. The site's receiving environment does not have legal easements in place for stormwater discharge and consequently as required, the proposed design mitigates the effects of stormwater for up to a 100 year event plus an allowance for climate change.

(c) Whether the application complies with the Far North District Council Strategic Plan - Drainage.	The proposal is considered to comply.
(d) The degree to which Low Impact Design principles have been used to reduce site impermeability and to retain natural permeable areas.	Future driveways and buildings on Lot 2 would require independent stormwater control following standard processes through the building consent department. The attenuation methods uphold low impact design reducing the quantity of discharge during the storm peak. The subdivisions non-complying activity status requires positive environmental outcomes for stormwater discharge, and this proves achievable through implementation of the proposed stormwater management techniques.
(e) The adequacy of the proposed means of disposing of collected stormwater from the roof of all potential or existing buildings and from all impervious surfaces.	It has been demonstrated that post development effects can be adequately controlled to meet pre development levels up to permitted zone limits.
(f) The adequacy of any proposed means for screening out litter, the capture of chemical spillages, the containment of contamination from roads and paved areas, and of siltation.	The likelihood of any litter is negligible.
(g) The practicality of retaining open natural waterway systems for stormwater disposal in preference to piped or canal systems and adverse effects on existing waterways.	The detention system contains stormwater for a short period of time before releasing it back to the catchment at a flowrate that aims to minimise adverse effects on existing waterways.
(h) Whether there is sufficient capacity available in the Council's outfall stormwater system to cater for increased run-off from the proposed allotments.	The applicant offers to implement attenuation measures that ensure the development replicates predevelopment state.
(i) Where an existing outfall is not capable of accepting increased run-off, the adequacy of proposals and solutions for disposing of run-off.	The outfall is capable of accepting the runoff.
(j) The necessity to provide on-site retention basins to contain surface run-off where the capacity of the outfall is incapable of accepting flows, and where the outfall has limited capacity, any need to restrict the rate of discharge from the subdivision to the same rate of discharge that existed on the land before the subdivision takes place.	Attenuation is recommended to satisfy these aspects.

	(k) Any adverse effects of the proposed subdivision on drainage to, or from, adjoining properties and mitigation measures proposed to control any adverse effects.	The proposed mitigation measures are considered to uphold a less than minor effect, not to cause an adverse environmental impact.
	(l) In accordance with sustainable management practices, the importance of disposing of stormwater by way of gravity pipe lines. However, where topography dictates that this is not possible, the adequacy of proposed pumping stations put forward as a satisfactory alternative.	All stormwater is drained by gravity.
	(m) The extent to which it is proposed to fill contrary to the natural fall of the country to obtain gravity outfall; the practicality of obtaining easements through adjoining owners' land to other outfall systems; and whether filling or pumping may constitute a satisfactory alternative.	There is no change to natural grades. No filling or pumping required.
	(n) For stormwater pipes and open waterway systems, the provision of appropriate easements in favour of either the registered user or in the case of the Council, easements in gross, to be shown on the survey plan for the subdivision, including private connections passing over other land protected by easements in favour of the user.	Easements should have been established during the creation of the parent title. There are no stormwater connections
	(o) Where an easement is defined as a line, being the centre line of a pipe already laid, the effect of any alteration of its size and the need to create a new easement.	N/A
	(p) For any stormwater outfall pipeline through a reserve, the prior consent of the Council, and the need for an appropriate easement.	N/A
	(q) The need for and extent of any financial contributions to achieve the above matters.	N/A
	(r) The need for a local purpose reserve to be set aside and vested in the Council as a site for any public utility required to be provided.	N/A

RECOMMENDATIONS

Consent conditions prior to 224 RMA certification

1) *The existing roof area be subject to detention in general accordance with the stormwater assessment prepared by Donaldson's Surveyors Ltd dated December 2024 and referenced 8541.*

Consent Notice pursuant to Section 221 RMA

2) Impermeable surface areas formed during the building stage require stormwater management that attenuates outflow for 1%, 10% & 2% AEP events plus climate change (RCP 6.0 ~ 2081-2100), prepared by a suitable qualified practitioner.

[LOT 2]

3) Maintenance

- *Where applicable, maintenance of individual detention devices located within any site shall be the individual landowner's responsibility and cost.*
- *Maintenance includes, but is not limited to the removal of debris at pipe inlet or outlet orifices, removal of sediment build-up greater than 100mm in the base of detention device.*
- *Any damaged pipework, headwalls or any other related component shall be repaired by a certified drainlayer.*
- *Planting, weed infestation, building, or excavation onsite must not impede the functionality of overland flowpaths, swale drains or detention devices.*
- *Records of inspection, maintenance, and repairs must be kept onsite.*
- *All detention devices required to be constructed hereon, inground or tank systems are to have easily accessible inspection points for the control outlet orifices.*
- *Landowners ongoing responsibilities for detention devices includes installation and maintenance of gutter guard, removal of debris at gutter downpipes, tank inlets and outlets.*
- *Councils monitoring officer may at any time conduct audits and where detention devices are neglected or modified without council approval, enforce infringement penalties.*

[**LOTS 1 & 2**]

CONCLUSION

The stormwater management assessment finds that provided mitigation measures are implemented to reduce the peak post development flowrates occurring from the site to be equivalent to 80% predevelopment levels for 1%, 10% & 50% storm events (*including climate change predictions*), the development overall is acceptable in terms of the management of effects on the environment.

The attenuation methods achieve the intention of low impact design by encouraging onsite absorption whilst reducing discharge rates, upholding the subdivision criteria of the Far North District Plan with less than minor stormwater effects.

Micah Donaldson
DONALDSONS
Land engineering surveyors & development planners
NZIS
REGISTERED PROFESSIONAL SURVEYOR