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 Form 9). Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges — both available on the Council's web page.

1. Pre-Lodgement Meeting

Have you met with a council Resource Covnsent 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? Ngati Rehia

Who else have you consulted with? Chorus and Top Energy

*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: Joshua & Carna Lazet

Email: [redacted]

Phone number:

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

Have you been the subject of abatement notices, enforcement orders, infringement notices and/or convictions under the Resource Management Act 1991? ◯ **Yes** ✔ **No**

If yes, please provide details.

6. Address for correspondence

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

Name/s: Northland Planning & Development (2020) Ltd (c/- Rochelle Jacobs

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: Joshua & Carna Lazet

Property address/ location: 7 Riverview Road, Kerikeri

Postcode

8. Application site details

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

Name/s: Joshua & Carna Lazet

Site address/ location: 7 Riverview Road, Kerikeri

Postcode

Legal description: Lot 1 DP 95971 **Val Number:**

Certificate of title: NA52A/300

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

Site visit requirements:

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

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

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

Please contact applicant prior to site visit

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 two lot subdivision and land use breach to stormwater management and building coverage. Non-complying activity overall under the Operative Far North District Plan. Controlled activity consent under the NESCS.

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**

14. Draft conditions:

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

If yes, please be advised that the timeframe will be suspended for 5 working days as per s107G of the RMA to enable consideration for the draft conditions.

15. 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)	Joshua & Carna Lazet
Email:	[redacted]
Phone number:	
Postal address: (or alternative method of service under section 352 of the act)	

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.

15. Billing details continued...

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) Joshua & Carna Lazet

Signature: [redacted] Date 09-Dec-2025

(signature of bill payer)

MANDATORY

16. 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.

17. Declaration

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

Name (please write in full) Rochelle Jacobs

Signature Date

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

See overleaf for a checklist of your information...

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)
- [x] Details of your consultation with Iwi and hapū
- [ ] 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
- [ ] Written Approvals / correspondence from consulted parties
- [x] Reports from technical experts (if required)
- [ ] 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
- [ ] 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.

Subdivision Resource Consent Proposal

Joshua and Carna Lazet

7 Riverview Road, Kerikeri (Lot 1 DP 95971)

Date: 16 December 2025

Attention: Nick Williamson & Liz Searle, Team Leaders (Resource Consents)

Please find attached:

- an application form for a combined subdivision and land use resource consent proposal in the ***Rural Living Zone*** under the Operative District Plan (ODP)*;* and
- an Assessment of Environmental Effects of the proposal on the environment.

The application is for a two-lot subdivision of 7 Riverview Drive, Kerikeri (Lot 1 DP 95971). The parent lot site is 4,047m^2. There are no instruments, consent notices or encumbrances on the parent lot title that would affect subdivision of the site as proposed. The site has been identified as a potential HAIL site resulting from historic horticultural activities.

A land use consent to exceed the permitted impermeable surface (stormwater management) standard within proposed Lots 1 and 2 and building coverage within Lot 2 is also proposed. This relates to existing house building and driveway areas. The proposed subdivision activity is a ***non-complying activity*** (for lots that exceed the minimum lot size standard in the Rural Living Zone) under the ODP. The combined proposal is a ***permitted activity*** under Proposed District Plan (PDP) rules that have current legal effect.

If you require further information, please do not hesitate to contact me.

Regards,

Rochelle Jacobs

Senior Planner / Director

NORTHLAND PLANNING & DEVELOPMENT 2020 LIMITED

TABLE OF CONTENTS

Appendices

1. **Far North District Council Application Form**
2. **Certificate of Title** – *LINZ*
3. **Subdivision Plan –** *Williams and King*
4. **Subdivision Site Suitability Engineering Report –** *Geologix*
5. **Combined Preliminary and Detailed Site Investigation** – *Geologix*
6. **ODP and PDP Relevant Objectives and Policies –** *Northland Planning & Development 2020 Ltd*
7. **Email Correspondence –** *Ngati Rehia*

8. **Power Connection Letter -** *Top Energy*
9. **Telecommunications Connection Letter -** *Chorus*

Assessment of Environment Effects Report

1. Description Of the Proposed Activity

1.1. The Applicants, Josh and Carna Lazet seek resource consent to subdivide an existing rural residential property at 7 Riverview Road, Kerikeri. A land use consent for existing development within Lot 2 is required to exceed the Operative District Plan (ODP) Rural Living Zone impermeable surface (stormwater management) standard. The site is legally described as Lot 1 DP 95971. The Record of Title is attached at **Appendix 2**.

1.2. The parent lot being subdivided is 4,047m^2. The site has road frontage and vehicle access to Riverview Road. As illustrated on the subdivision plan prepared by Williams and King (refer **Appendix 3** and **Figure 1** below), the proposed subdivision would comprise 2 new rural-residential lots of which Lot 2 would contain the existing residential dwelling, separate garage and curtilage area (including an inground pool) surrounding the house.

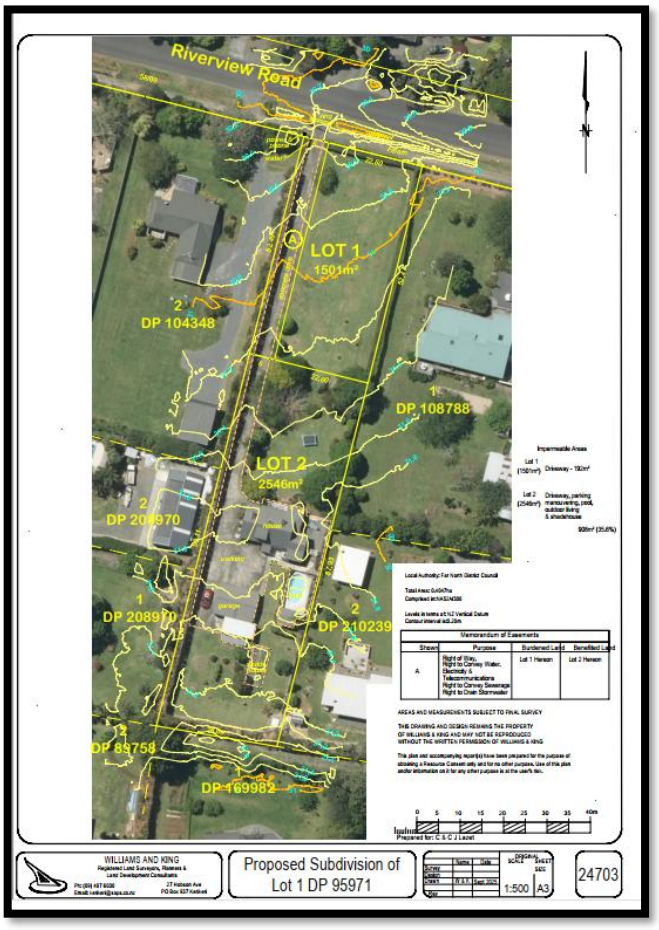


Figure 1 – Proposed Subdivision Plan – 7 Riverview Road, Kerikeri

1.3. Proposed lot sizes are as follows:

- Lot 1 (roadside) = 1,501m^2
- Lot 2 (rear lot) = 2,546m^2

1.4. Proposed boundaries are positioned relative to existing areas of mature vegetation and to maintain separation and privacy within the curtilage area that surrounds the existing dwelling on Lot 2.

Land Use - Impermeable Surfaces & Building Coverage

1.5. The creation of Lot 2 results in an infringement of the permitted stormwater management and building coverage standards for the Rural Living zone as follows:

- 705m^2 or 27.69% total impermeable site coverage
- 300m^2 or 11.7% total building coverage

1.6. For the purposes of assessing stormwater management within the proposed lots, a future allocation of impermeable surface for Lot 1 is also applied in accordance with Table 4 of the Subdivision Site Suitability Engineering Report prepared by Geologix (attached at **Appendix 4**). This allocation is as follows:

- Lot 1 – 592m^2 or 39.44% (this includes a portion of the existing ROW, new driveway area and roof area)

1.7. In accordance with FNDC Engineering Standards 2023, design engineers Geologix have recommended that for Lot 1, peak stormwater is attenuated back to 80% of pre-development flows. This would include a 10,000-litre attenuation tank location of which would be determined as part of a building consent approval.

1.8. For existing development remaining within Lot 2, the recommendation is for attenuation for existing impermeable surfaces that exceed the permitted standard for the Rural Living zone. This equates to 386.75m^2. Recommended attenuation requirements are set out in Table 5 of the Geologix Report.

Vehicle Crossing

1.9. The existing vehicle crossing off Riverview Road will remain and function in its current condition. Geologix have not recommended any modifications to this existing situation. A new crossing from the ROW into Lot 1 will be required. Geologix has recommended that this be located and designed at the lot development stage and in conjunction with a building consent proposal.

Earthworks

1.10. Minor earthworks are required to install services and to construct the vehicle crossing from the ROW into Lot 1. Earthworks will not exceed the permitted standard of 300m^3 for the Rural Living Zone.

Wastewater disposal

1.11. As indicated on Geologix Drawing #500, Geologix design engineers have assessed the site's suitability for the on-site treatment and disposal of wastewater onto the site. The existing system on Lot 2 would be fully located within the proposed boundaries. The engineering assessment noted that the system appears to be in good working order.

1.12. For proposed Lot 1, wastewater can be treated and disposed of on-site utilising a secondary treatment and pressure compensating dripper irrigation system. Design assumptions are for a 5-bedroom dwelling with a peak occupancy of 8 people.

Potable water supply and firefighting

1.13. Reticulated potable water supply is available in Riverview Road. A new water supply connection will be required for Lot 1. For fire-fighting purposes and in accordance with the NZ PAS 4509:2008 standard, there is water supply available within 135m and 270m of the site

Top Energy and Chorus

1.14. Both lots can be serviced with electrical and telecommunication services. There is existing power and telecom services to proposed Lot 2. A letter from Top Energy indicating the availability of services to proposed Lot 1 is attached at **Appendix 8.**

HAIL – land disturbance and subdivision

1.15. As described in the Geologix '*Combined Preliminary and Detailed Site Investigation Report*, dated November 2025, the site is a HAIL Category A10 site (refer **Appendix 5**)**.** Section 3 of the Geologix report describes the historical use of the site, which includes commercial horticultural activity. This is based on historical photographic records. The site is not recorded on the NRC Selected Land Use Register (SLUR).

1.16. Whilst only minor soil disturbance is required to undertake subdivision (installation of services and construction of the ROW crossing to Lot 1 at building consent stage), the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) would permit up to 202.5m^3 of soil disturbance and / or 40.47m^3 of off-site disposal per year. Proposed earthworks activities referred to above would not exceed these volumes and would be a permitted activity under Clause 8(3) of the NESCS. In respect of subdivision and future change of use, a preliminary and detailed site investigation is provided with this application. The Geologix report concludes in Section 8.1 that *'In relation to subdivision, it is highly unlikely that there will be a risk to human health if the activity is done to the site.'* As the investigation has involved a Detailed Site Investigation the proposed subdivision activity is a 'controlled' activity under the NESCS.

2. DESCRIPTION OF THE SITE AND SURROUNDING ENVIRONMENT

2.1. The property is located at 7 Riverview Road, Kerikeri and is legally described as Lot 1 DP 95971. The site is an older established rural-residential type property that was created in 1982.

Figure 2 – Site Location – 7 Riverview Road, Kerikeri

2.2. The site is flat with a rectangular shape that is approximately 30m wide. The existing house on the site is located within the rear third. The central part of the site is landscaped with established trees. There is a maturing Eugenia (Lilly Pilly) hedge that is approximately 2 metre high. A 3m high bamboo hedge screens the western and southern boundary.

Figure 3 – View of site frontage (proposed Lot 1) and existing hedges along eastern and western boundaries

2.3. The surrounding environment has a large lot (peri-urban) residential character comprised of single dwellings surrounded by established landscaped gardens. Adjacent land and dwellings include 5, 9, 19c Riverview Road, 53 and 53A Landing Road and 16B Kendall Road. 8 and 18 Riverview Road are opposite the site. The existing bamboo hedge (that is within the application site boundary) screens views of the site from 5, 53 and 53A Landing. The proposed development would not result in visible change experienced by landowners of these properties. Nor would there be any change experienced residents at 19C Riverview Road or 16B Kendall Road.

2.4. The existing lilly pilly hedge partially screens the house at 9 Riverview Road (refer ***Figure 3*** above). The front part of the application site would be visible from western side windows and an outdoor conservatory area. However, indoor and outdoor living areas appear to be primarily orientated towards the north. In time, should it be allowed to reach its full height, the existing Lilly Pilly hedge will completely screen any eastern neighbour's views into the site.

2.5. The dwelling opposite the site at 18 Riverview Road is orientated to the north with parking and a small business area that forms part of the house located on the south side. Mature trees along the southern road boundary of 18 Riverview Road and the hedge row along the site's northern boundary provide screening into the front of the site (Lot 1 area).

Figure 4 – view of dwelling opposite site at 18 Riverview Road

Figure 5 – Riverview Road – northern hedge (road boundary) screening

2.6. Adjacent and nearby site sizes and configurations along Riverview Road vary, ranging between 957m^2 – 4,007m^2. Houses tend to be located relatively close to the road frontage resulting in a peri-urban streetscape that includes a footpath on the southern side of the road. The undeveloped nature of the application site frontage is unique and has the appearance of a vacant lot amongst developed sites. Riverview Primary School is located approximately 200m to the east.

2.7. The adjacent site areas and landowners are as follows:

Table 1: Adjacent landowners

	Address	**Legal Description**	**Landowner**	**Site Area (m^2):**
Adjacent	5 Riverview Road	Lot 2 DP 104348	Katarina Kirnerova & Radovan Seplaky	3,092
	9 Riverview Road	Lot 1 DP 108788	Ian Christopher Brooks and Carolynne Elizabeth Brooks-Quan	4,007
	53 Landing Road	Lot 1 DP 208970	Linda Evans	3,005
	53A Riverview Road	Lot 2 DP 208970	Whitelaw Weber Trustee Services Ltd, Deborah Francis Goulding and Kurt John Goulding	3,484
	19C Riverview Road	Lot 2 DP 210239	Wendy Miriam Teague	2,001
	16B Kendall Road	Lot 1 DP 169982	PM Trustee (2012) Ltd and Brian Barrington Smythe	4,354
Opposite	6 Riverview Road	Lot 1 DP 57728	Robyn Winifred Kemp Ethel Winifred Kemp	1,012

	8 Riverview Road	Lot 2 DP 57728	Michelle Lois Taylor	1,012
	18 Riverview Road	Lot 1 DP 90208	Brenda May Screen Natalie Ewyln Screen	957m^2

2.8. Riverview Road is serviced with reticulated potable water supply and for fire-fighting purposes. The site is within the FNDC mapped 'Area of Benefit' for stormwater, wastewater and water supply. Although it is noted that this map has been sourced from the Proposed Development Contributions Policy which does not commence until May 2026.

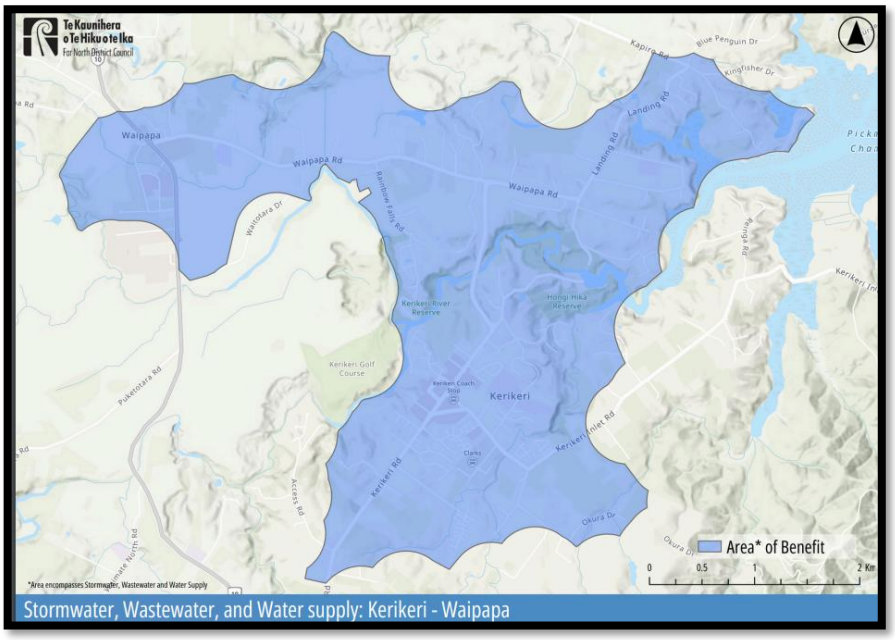


Figure 6 – Proposed Area of Benefit – FNDC Development Contributions Policy 2025

2.9. The site is not a mapped FNDC or NRC SLU HAIL site. Geologix has completed a preliminary investigation of the site and concluded that it has been used previously for commercial horticulture purposes, likely prior to 1982 when the site was subdivided (attached at **Appendix 5**). Aerial photograph records available after 2003 indicate a residential building structure on the site with some remnant orchard activity that was unlikely to be a commercial activity by that time. The report suggests that after 2009 the site was being used for residential purposes. Following a preliminary investigation, Geologix undertook a detailed site investigation to determine if there were any residual contaminants that may pose a health risk. *Figure 2* of the

Geologix DSI report shows sampling locations throughout the site. Results indicate that contaminants of interest concentrations are below human health guidelines for a residential 10% produce land use scenario.

2.10. In terms of natural hazards, the site is outside of any mapped flood plain or area at risk from coastal inundation. There is no erosion or subsidence risk. There are no identified natural hazard risks that could apply under Section 106 of the RMA.

2.11. The site is not within any mapped outstanding landscape or natural feature. The site is not within any mapped kiwi distribution area.

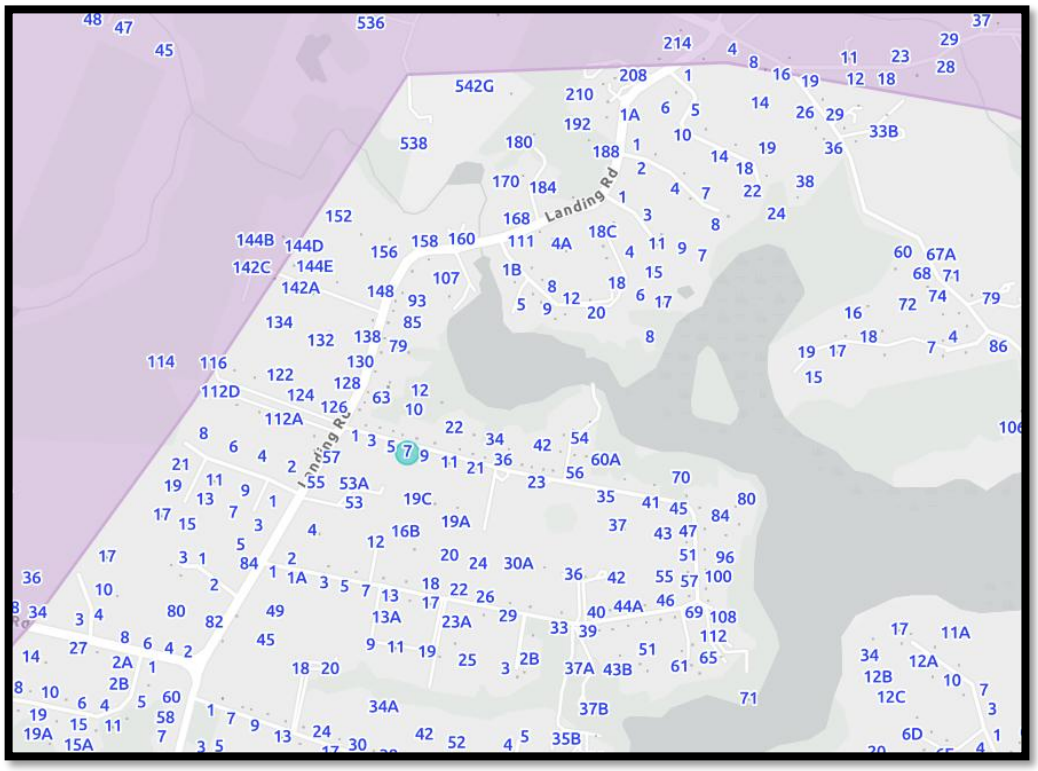


Figure 7 - FNDC mapped kiwi distribution area

3. REASONS FOR CONSENT

Operative Far North District Plan (ODP)

3.1. The site is zoned Rural Living (RLZ) under the ODP (refer **Figure 9**). There are no other ODP resource layers that apply to the site.

Figure 8 – ODP Rural Living Zone

Subdivision Assessment

3.2. An assessment of the applicable subdivision rule standards is set out in **Table 1** below:

TABLE 1 - ASSESSMENT AGAINST THE APPLICABLE DISTRICT-WIDE SUBDIVISION RULES		
PERFORMANCE STANDARDS		
Plan Reference	**Rule**	**Performance of Proposal**
13.7.1	**BOUNDARY ADJUSTMENTS**	**Not applicable.**
13.7.2.1 (ix)	**MINIMUM LOT SIZES**	**Non-complying** The proposed lot sizes are as follows: • Lot 1 – 1501m^2 • Lot 2 – 2546m^2 The minimum lot size (as a controlled activity) in the Rural Living Zone is 4,000m^2. The Discretionary Activity standard is

		3,000m^2. The proposed lot sizes do meet either of these standards and are therefore a **non-complying activity**.
13.7.2.2	**ALLOTMENT DIMENSIONS**	**Discretionary** The minimum dimension is 30m x 30m excluding the required 3m setback from boundaries. The existing lot width is approximately 30m. The allotment dimension is unable to be met.
13.7.2.3 - 13.7.2.9	Not Applicable to this application.	
13.7.3.1	**Property Access**	**Complies** The subdivision will create two rural-residential lots. All lots will have access from Riverview Road via a ROW.
13.7.3.2	**Natural and Other Hazards**	**Complies** There are no identified natural hazards that affect the site.
13.7.3.3	**Water Supply**	**Complies** Reticulated water supply is available at the site boundary.
13.7.3.4	**Stormwater Disposal**	**Complies** The proposed lots will be provided with a means for stormwater disposal that complies with FNDC Engineering Standards 2023. This includes stormwater runoff attenuation provided within each lot.
13.7.3.5	**Sanitary Sewage Disposal**	**Complies** Geologix engineering design assessment has confirmed that there is an operational wastewater treatment and disposal system on Lot 2 and that Lot 1 can be provided with a suitable wastewater treatment and disposal area.

13.7.3.6	**Energy Supply**	**Complies** Lot 2 has an existing electricity supply connection. Lot 1 will be provided with a connection to the site boundary.
13.7.3.7	**Telecommunications**	**Complies** Lot 2 has an existing telecommunications supply connection. Lot 1 will be provided with a connection to the site boundary.
13.7.3.8	**Easements**	**Complies** None required
13.7.3.9	**Preservation of Heritage Resources, Vegetation, Fauna and Landscape, and Land Set Aside for Conservation Purposes**	**Not applicable** There are no mapped resource features on the site.
13.7.3.10	**Access to Reserves and Waterways**	**Not applicable** There are no public reserves, waterways or reserves that are adjacent to the site or that could be accessed from the site.
13.7.3.10	**Land Use Compatibility**	**Complies** There are no land use compatibility conflicts present at the site. The existing environment is residential.
13.7.3.12	**Proximity to Airports**	**Not applicable**

3.3. Overall, the proposed subdivision is a **Non-Complying** activity under the ODP Rule 13.7.2.1(ix).

Land Use Assessment

3.4. In respect of existing residential activities and buildings, the proposed subdivision is assessed against the Rural Living Zone rules.

TABLE 2 - ASSESSMENT AGAINST THE APPLICABLE RURAL LIVING ZONE RULES

PERFORMANCE STANDARDS		
Plan Reference	**Rule**	**Performance of Proposal**
8.7.5.1.1	**Residential Intensity**	**Permitted** A single existing residential dwelling and accessory buildings comprising 300m^2 are located on the site.
8.7.5.1.2	**Scale of Activities**	Not applicable
8.7.5.1.3	**Building Height**	Not applicable – all buildings are existing
8.7.5.1.4	**Sunlight**	**Permitted** The existing buildings will be outside of the recession plane building envelope required for sunlight access to neighbouring properties.
8.7.5.1.5	**Stormwater Management**	**Discretionary** The existing buildings within proposed Lot 2 will exceed the maximum Permitted and Controlled Activity standards for impermeable surface comprising: • 705m^2 or 27.69% site coverage area An allocation for impermeable surfaces within proposed Lot 1 is also sought comprising: • 592m^2 or 39.44% site coverage area As required, an Engineering Assessment of the proposed breach prepared by a Chartered Professional Engineer and

		stormwater runoff mitigation design recommendations are provided in Section 3.0 of the Geologix report attached at **Appendix 4.**
8.7.5.1.6	**Setback from boundaries**	**Permitted** Existing buildings within proposed Lot 2 will comply with the minimum 3m setback from the adjacent Rural Living zone boundary.
8.7.5.1.7	**Screening for Neighbours – Non-Residential Activities**	**Not applicable**
8.7.5.1.8	**Transportation**	See Table 3 below
8.7.5.1.9	**Hours of operation**	**Not applicable**
8.7.5.1.10	**Keeping of Animals**	**Not applicable**
8.7.5.1.11	**Noise**	**Permitted** Can comply as residential use of the site.
8.7.5.1.12	**Helicopter Landing Area**	**Not applicable**
8.7.5.1.13	**Building Coverage**	**Restricted Discretionary** The existing buildings to be located within the Lot 2 boundary comprise 300m^2 or 11.7% of the proposed site area. The proposed building area exceeds the 10% permitted standard for building coverage.

3.5. In respect of existing residential activities and buildings, the proposed subdivision is assessed against relevant District Wide rules.

TABLE 3 - ASSESSMENT AGAINST THE APPLICABLE DISTRICT-WIDE LAND USE RULES		
PERFORMANCE STANDARDS		
Plan Reference	**Rule**	**Performance of Proposal**
Chapter 12 – Natural and Physical Resources		
12.1	**Landscapes & Natural Features**	**Not applicable**
12.2	**Indigenous Flora & Fauna**	**Permitted** No indigenous vegetation will be removed or fauna habitat affected.
12.3	**Soils & Minerals**	**Permitted** Minor earthworks to install services and construct the ROW into Lot 1 are required. The Applicant has requested that the construction of the ROW into Lot 1 be undertaken in conjunction with any building consent issued for a building on Lot 1.
12.4	**Natural Hazards**	**Permitted** The site is not within a Coastal Hazard 1 or 2 area. There are no residential units proposed to be within 20m of a naturally occurring or deliberately planted area of scrub, shrubland, woodlot or forest.
12.5	**Heritage**	**Permitted** There are no notable trees on the site. There are no historic sites, buildings or objects affected by the subdivision. The site is not a registered archaeological site. The site is not of cultural significance to Māori.
12.5A	**Heritage Precinct**	The site is not within a Heritage Precinct.
12.6	**Air**	**Not applicable**

12.7	**Lakes, Rivers, Wetlands and the Coastline**	**Not applicable**
12.8	**Hazardous Substances**	**Not applicable**
12.9	**Renewable Energy and Energy Efficiency**	**Not applicable**
Chapter 15 – Transportation		
15.1.6A	**Traffic**	**Permitted** The proposal is for a residential subdivision that will enable a single residential unit on each lot. The dwelling on proposed Lot 2 is existing.
15.1.6B	**Parking**	**Permitted** The subdivision will enable the required parking and manoeuvring on each lot.
15.1.6B	**Access**	**Permitted** Vehicle crossing to Lot 1 from ROW to be provided and designed in accordance with FNDC 2023 Engineering Standards. ROW to be constructed in conjunction with a building consent for Lot 1

3.6. The proposed subdivision would result in infringements of the following RLZ land use rules:

- **Rule 8.7.5.1.5 – Stormwater Management** – **Discretionary Activity -** the area of existing and future (design) proposed impermeable surface coverage is 27.69% for Lot 2 and 39.44% for Lot 1 respectively. This exceeds the permitted and controlled activity standard for stormwater management.

- **Rule 8.7.5.1.13 – Building Coverage** – **Restricted Discretionary Activity** the area of existing building coverage on Lot 2 will exceed the permitted standard as a percentage of the site area but will not exceed 15%.

3.7. All other land use rules can be complied with.

Proposed Far North District Plan (PDP)

3.8. The proposed activities are subject to the PDP provisions. The PDP was publicly notified on the 27th of July 2022. The submission and further submission periods have closed. PDP hearings on submissions have concluded.

3.9. A decision on submissions is expected by May 2026, however until such time as decisions on submissions are issued, limited weight is given to the PDP provisions. Subdivision provisions were heard in October 2025. No changes to the RRZ subdivision allotment sizes are recommended. There are however recommendations to ease the allotment dimensions from 30m x 30m to 20m x 20m which better reflects current and typical building sizes and on-site services requirements in the Far North District and the proposed allotment sizes in the range of 2,000m^2 – 4,000m^2.[1] There is also a recommendation to remove from the RRZ requirements for power supply and telecommunication connections.

3.10. The proposed site zone is 'Rural Residential'.

Figure 6 – PDP Site Zoning – Rural Residential Zone

[1] Subdivision Hearing 16 – Report Writer's Right of Reply Subdivision dated 28 November 2025 [para 595-596]

3.11. The applicable land use rules that have current legal effect are set out in **Table 2** below.

Table 2: PDP Rules that have immediate legal effect

Chapter	Rule Reference	Compliance of Proposal
Hazardous Substances	The following rules have immediate legal effect: Rule HS-R2 has immediate legal effect but only for a new significant hazardous facility. HS -R5 relates to a hazardous facility within a scheduled site and area of significance to Māori. HS-R6 relates to a hazardous facility within an SNA. HS-R9 relates to a hazardous facility within a scheduled heritage resource.	**Not applicable.** The site does not contain any hazardous substances to which these rules would apply.
Heritage Area Overlays	All rules have immediate legal effect (HA-R1 to HA-R14) All standards have immediate legal effect (HA-S1 to HA-S3)	The site is not within a Heritage Area Overlay
Historic Heritage	All rules have immediate legal effect (HH-R1 to HH-R10) Schedule 2 has immediate legal effect	**Not applicable.** The site does not contain any areas of historic heritage.
Notable Trees	All rules have immediate legal effect (NT-R1 to NT-R9) All standards have legal effect (NT-S1 to NT-S2) Schedule 1 has immediate legal effect	**Not applicable.** The site does not contain any notable trees.
Sites and Areas of	All rules have immediate legal effect (SASM-R1 to SASM-R7) Schedule 3 has immediate legal effect.	**Not applicable.**

Significance to Māori		The site does not contain any sites or areas of significance to Māori.
Ecosystems and Indigenous Biodiversity	All rules have immediate legal effect (IB-R1 to IB-R5)	**Not applicable.** The proposal does not include any indigenous vegetation pruning trimming, clearance or associated land disturbance. No plantation forestry activities are proposed. The proposal does not breach IB-R1 to IB-R5.
Subdivision	The following rules have immediate legal effect: SUB-R6, SUB-R13, SUB-R14, SUB-R15, SUB-R17	**Not applicable** The subdivision is not an Environmental Benefit Subdivision (SUB-R6). The site is not within a Heritage Area overlay. (SUB-R13) The site does not contain a scheduled heritage resource (SUB-R14) Subdivision of a site containing a scheduled site and area of significance to Māori (SUB-R15) or Subdivision of a site containing a scheduled SNA (SUB-R17).

Activities on the Surface of Water	All rules have immediate legal effect (ASW-R1 to ASW-R4)	**Not applicable.** The proposal does not involve activities on the surface of water.
Earthworks	The following rules have immediate legal effect: EW-R12, EW-R13 The following standards have immediate legal effect: EW-S3, EW-S5 As stated above the mapping system records the subject site as containing the Ratana Temple which is located on the adjoining site. Schedule 3 lists the legal description of MS07-18 as being P Ahipara A32A which is the adjoining site.	**Permitted.** Any earthworks will proceed under the guidance of an ADP and will be in accordance with the Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016, in accordance with Rules EW-12, EW-R13, EW-S3 and EW-S5.
Signs	The following rules have immediate legal effect: SIGN-R9, SIGN-R10 All standards have immediate legal effect but only for signs on or attached to a scheduled heritage resource or heritage area	**Not applicable.** No signs are proposed as part of this application.
Orongo Bay Zone	Rule OBZ-R14 has partial immediate legal effect because RD-1(5) relates to water	**Not applicable.** The site is not located in the Orongo Bay Zone.

3.12. The proposed subdivision activity is a **Permitted** activity under PDP rules that have current legal effect.

National Environmental Standards (NES)

3.13. There are two applicable NES applicable to this application. These are as follows:

National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NESCS)

3.14. The application site is not a FNDC mapped HAIL site. However, the site does have a history of horticulture which occurred sometime prior to 2009.

3.15. Geologix has undertaken a Combined Preliminary & Detailed Site Investigation (PSI & DSI) and concluded that the site does not contain soil contamination that exceeds the applicable standards under Section 7 of the NESCS. The DSI report concludes that the soil contamination found at the site does not exceed the applicable standards for residential use and that it is *'highly unlikely that there will be a risk to human health if the activity is done on the site'*. A copy of this report is provided to the Council as part of this application. No soil disturbance is proposed at the time of subdivision.

3.16. As a subdivision proposal, the application is a **Controlled Activity** under Clause 9(3) of the NESCS.

National Environmental Standards for Freshwater 2020 (Version Oct 2024)

3.17. NES-F sets out requirements for carrying out activities identified as posing a risk to the health of freshwater and freshwater ecosystems, and to ensure the objectives and policies within the National Policy Statement for Freshwater Management are met.

3.18. There are no natural inland wetlands that would be affected by the proposed subdivision.

4. STATUTORY ASSESSMENT

Section 104B of the Resource Management Act (RMA)

4.1. Section 104B of the RMA relates to applications for discretionary or non-complying activities. A consent authority may grant or refuse an application for resource consent and impose conditions under section 108.

Section 104D of the Resource Management Act (RMA)

4.2. Section 104D includes restrictions that relate to non-complying activities. A consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either-

(a) The adverse effects of the activity on the environment (other than any effect to which section 104(3)(a)(ii) applies) will be minor; or

(b) The application is for an activity that will not be contrary to the objectives and policies of-

(i) The relevant plan, if there is a plan but no proposed plan in respect of the activity; or

(ii) The relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or

(iii) Both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.

(2) To avoid doubt, section 104(2) applies to the determination of an application for a non-complying activity.

4.3. The subdivision proposal is a non-complying activity due to the proposed lot sizes in the ODP RLZ. The proposed lots are similar in size or residential intensity to those in the immediately surrounding area and will therefore be consistent with the character and amenity of the Riverview Road location. The PDP would enable further intensification of this residential environment under a proposed RRZ by reducing the Discretionary Activity lot sizes to 2,000m^2.

4.4. An assessment of effects on the environment is set out below in paragraphs 5.1 - 5.6. It is concluded that any potential adverse effects will be no more than minor. Potential adverse effects on character and amenity will be less than minor and consistent with what is an established peri-urban, rural-residential environment adjacent to the township of Kerikeri.

Potential adverse effects on adjacent landowners would be less than minor. This includes any potential precedent effect as the proposal is consistent with the residential development pattern that is already established along Riverview Road.

4.5. Regarding District Plan objectives and policies, these are commented on in paragraphs 6.6 - 6.29 below. The relevant plans that apply to this application include the ODP and the PDP, with greater weighting being applied to the ODP objectives and policies until such time as a decision on submissions on relevant proposed RRZ and subdivision rules has been made. There are no applicable regional plan rules.

4.6. The ODP RLZ is described as an area of transition between town and country. The RLZ that surrounds the township of Kerikeri has varying lot sizes that reflects a land use pattern that was established under previous District Plan zoning. Riverview Road is within a more intensively developed part of the RLZ where site sizes vary considerably between 900m^2 - 7,000m^2.

4.7. The PDP would rezone the site 'Rural-Residential' enabling further intensification of land within the zone (between 4,000m^2 [Controlled Activity] – 2,000m^2 [Discretionary Activity]), while remaining un-serviced rural-residential land adjacent to the Kerikeri town centre. The RRZ would adopt a more peri-urban living function for land that is adjacent to urban Kerikeri. Enabling further intensification of the RRZ supports rural environment policy objectives to protect the productive value of Rural Production Zone land.

4.8. There are no operative nor any proposed subdivision or land use objectives, policies or rules that would suggest that the proposed subdivision would be contrary to the relevant provisions.

4.9. Overall, it is concluded that both parts of the Section 104D 'gateway test' can be met.

Section 104 of the Resource Management Act (RMA)

4.10. Section 104(1) of the Act states that when considering an application for resource consent –

"the consent authority must, subject to Part II, have regard to –

(a) Any actual and potential effects on the environment for allowing the activity; and

(ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment that will or may result from allowing the activity; and

(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; and

(c) Any other matter the consent authority considers relevant and reasonable necessary to determine the application.'

4.11. Actual and potential effects arising from a development as described in 104(1)(a) can be both positive and adverse (as described in section 3 of The Act). This subdivision proposal will have positive effects that contribute to housing supply in Kerikeri and in a location that the Council has identified for further intensification. The proposal will positively contribute to the Applicant's wellbeing enabling them to remain on the site and to divest surplus land.

4.12. Section 104(1)(ab) requires that the consent authority consider *'any measure proposed or agreed to by the applicant for the purposes of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity'*. The proposed subdivision is not of a scale or nature that would require specific offsetting or environmental compensation measures to ensure positive effects on the environment. As assessed, potential adverse effects can be managed within the proposed lot boundaries and are assessed to be no more than minor. The intensity of subdivision is consistent with the established character of the surrounding residential environment.

4.13. Section 104(1)(b) requires the consent authority to consider the provisions of regulatory documents. An assessment of the relevant statutory documents that corresponds with the scale and significance of the effects that the activity may have on the environment is set out in paragraphs 5.2 - 5.6 below. It is concluded that the proposed subdivision would not be contrary

to the objectives and policies of the relevant plans or the higher order regional policy statement for Northland or national policy statements.

4.14. Section 104(1)(c) states that consideration must be given to 'any other matters that the consent authority considers relevant and reasonable, necessary to determine the application'. There are no other matters relevant to this application, including precedent effects discussed in paragraph 4.23 below.

4.15. Section 106 relates to subdivision approval. A consent authority may refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that –

(c) There is significant risk from natural hazards; or
(d) …
(e) Sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision.

4.16. Geologix has prepared a site engineering assessment that includes natural hazards. There is no identified natural hazard risk that would apply under Section 106 of the RMA.

5. ASSESSMENT OF EFFECTS

5.1. Having reviewed the relevant ODP subdivision provisions and the matters that must be addressed by an assessment of environmental effects as outlined in Clause 7 of Schedule 4 of the Act, the primary activity to be assessed for appropriateness is the size and dimensions of the proposed residential lots that are non-complying in the RLZ. Potential adverse effects arising from stormwater runoff and building coverage can be mitigated to a minor extent within the design parameters recommended by Geologix.

Permitted Baseline

5.1.1. There is no permitted subdivision in the ODP or PDP. Permitted land use thresholds are set by the RLZ provisions. Of relevance to this proposal are land use effects arising from an increase in the intensity of development that would be enabled on each lot. Primarily this includes residential intensity, impermeable surfaces and building coverage. The ODP currently permits one residential dwelling per 4,000m^2 of land (or 3,000m^2 as a Discretionary

Activity). The subdivision would enable one additional dwelling on a parent site comprising 4.047m^2. This equates to an average density of 2,023m^2.

5.1.2. Other than Lot 2, for which an additional allocation of impermeable surface is applied for to accommodate the existing built development area(s), additional areas of building would be subject to the RLZ permitted standards of 10% (or 2,400m^2) or 12.5% (or 3,000m^2) of the site area respectively.

Precedent Effect

5.1.3. A precedent effect is an effect that a decision on a non-complying application may have on decisions about similar future applications. It is not an effect on the environment to be decided under Section 104(1)(a) of the RMA. A decision on a non-complying activity must be carefully considered in terms of its potential to 'open the floodgate' to other similar applications that could undermine the integrity of a district plan, or other relevant planning document. Whilst the potential for precedent is a decision-making consideration, each application must be considered on its merits, including any unique location and environment circumstances.

5.1.4. The proposed activity is a subdivision in the RLZ that is non-complying because of the proposed lot sizes. The application seeks to efficiently utilise existing vacant land on the rural-residential outskirts of Kerikeri resulting in a density that is consistent with the established development pattern along Riverview Road. Whilst not to the extent proposed, the application is consistent with PDP policy that would enable greater intensification of this location in accordance with the proposed Rural-Residential Zone.

5.1.5. Given the extent to which Riverview Road has already been developed, it is considered that any precedent would be limited in its effect on future applications.

Assessment of Effects on the Environment - Subdivision

5.2. The site is in the ODP RLZ. Resource consent is required for proposed lot sizes that exceed the standards for Controlled, and Discretionary subdivision in the RLZ. Rule 13.11 states that the Council will use the Rule 13.10 assessment criteria when assessing non-complying subdivision activities in conjunction with the matters set out in Sections 104, 104B, 104D and 106 of the

RMA. These matters are considered to be the potential adverse effects arising from increasing intensification of land within the RLZ. These are discussed under the following assessment criteria sub-headings.

13.10.1 Allotment Sizes and Dimensions

5.2.1. The proposed subdivision would utilise existing rural residential land to create one additional allotment in the RLZ. Proposed Lot 1 is underutilised, vacant land at the front of the parent site that will enable infill housing development. The application site is located amongst other mixed size rural-residential sites along Riverview Road that range between 900m^2 and 7,000m^2. Residential dwellings are generally located toward the front of the site (within 30m of the front boundary) which creates the appearance of a suburban street environment. The undeveloped character of the application site frontage appears as an anomaly in the street. There are no other open, deep frontages located along the road. The narrower allotment dimension of 30m is also unusual when compared to wider lots either side of the site that are typical of the southern side of Riverview Road. The narrower site width would not affect the ability of the site to accommodate a single dwelling, driveway and parking area, a suitably designed on-site wastewater system and stormwater management requirements.

5.2.2. The creation of Lot 1 and development with a single dwelling would have little impact on the character and amenity of Riverview Road as it would be a continuation of the same development pattern. As viewed by the majority of adjacent neighbours, there would be no visible change due to the extensive landscape screening along the western and southern boundary of the site. In time this will include 9 Riverview Road which is the closest and most visible house as viewed from within the Lot 1 site. Given the existing boundary landscaping and orientation of dwellings and outdoor living areas toward the north and not directly into the Lot 1 site, potential adverse effects on adjoining landowners would be less than minor.

5.2.3. The nature of the wider lots either side of the application site and the central location of dwellings on those lots will ensure that the separation distance between dwellings remains consistent with the existing development pattern as viewed from the street. Potential adverse effects on the character and amenity of the wider residential environment, would be no more than minor.

13.10.2 Natural and Other Hazards

5.2.4. The Geologix engineering assessment did not identify any potential adverse natural hazard risk to the site. The site is outside of any mapped flood zones.

13.10.3 Water Supply

5.2.5. Reticulated potable water supply is available at the road boundary.

13.10.4 Stormwater Disposal

5.2.6. Geologix engineers have assessed the suitability of the site for the development of residential buildings and associated structures and paved surfaces. The assessment is based on the design requirements of the FNDC 2023 Engineering Standards that require stormwater runoff to be mitigated back to 80% of pre-development peak flows for Lot 1 and for the extent of impermeable surfaces that exceed the RLZ permitted standard for Lot 2. Attenuation mitigation will ensure that any potential adverse runoff effects are no greater than what is occurring in the existing environment. A 224c condition applying to existing development on Lot 2 requiring design and installation of a stormwater management system to attenuate impermeable surfaces that exceed the RLZ standards is accepted.

A consent notice condition is offered to be applied to the Lot 1 site:

"In conjunction with the construction of any building requiring building consent on the lot the consent holder must provide a stormwater management report prepared by a Suitably Qualified and Experienced Person detailing how stormwater will be managed in accordance with Council's Engineering Standards at building consent stage. Stormwater runoff from future new buildings and impermeable surface areas shall be restricted to that of pre-development levels for a 10% AEP storm event plus and allowance for climate change.

5.2.7. The Rule 13.10.4 assessment criteria are commented on as follows:

(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.

5.2.7.1. The proposed stormwater management complies with both the 'Operative' and Proposed (Appeals Version)' of the Regional Water and Soil Plan and the Proposed Regional Plan permitted activity rules.

(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).

5.2.7.2. The proposed stormwater management complies with Council's *"Engineering Standards and Guidelines (2023)".*

(c) Whether the application complies with the Far North District Council Strategic Plan - Drainage.

5.2.7.3. The proposed stormwater management complies with the Far North District Council Strategic Plan – Drainage rules.

(d) The degree to which Low Impact Design principles have been used to reduce site impermeability and to retain natural permeable areas.

5.2.7.4. Natural watercourses and overland flowpaths will be retained.

(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.

5.2.7.5. On-lot stormwater will be attenuated to 80% of predevelopment levels at building consent stage.

(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.

5.2.7.6. Not applicable

(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.

5.2.7.7. Natural flowpaths will be retained.

(h) Whether there is sufficient capacity available in the Council's outfall stormwater system to cater for increased run-off from the proposed allotments.

5.2.7.8. Stormwater will be attenuated for the 10% AEP storm event, resulting in no additional flow into the council stormwater system.

(i) Where an existing outfall is not capable of accepting increased run-off, the adequacy of proposals and solutions for disposing of run-off.

5.2.7.9. FNDC Engineering Standards 2023 Table 4-1 stipulate that flow attenuation controls reduce the post development peak discharge to 80% of the pre-development condition for the 50% and 20% storm event. For the 10% AEP event there is a pre-development requirement to comply with NRP Rule C6.4.2(2) and with the ODP Rule 13.10.4. Proposed attenuation will ensure that any downstream flooding is avoided.

(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.

5.2.7.10. A consent notice condition is offered for Lot 1 and 2 to ensure that stormwater discharges are limited to pre-development runoff rates.

(k) Any adverse effects of the proposed subdivision on drainage to, or from, adjoining properties and mitigation measures proposed to control any adverse effects.

5.2.7.11. No adjoining properties will be adversely affected by future stormwater discharges from the site. Runoff volume and rates will be maintained to pre-development levels.

(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.

5.2.7.12. No stormwater pumping is proposed.

(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.

5.2.7.13. No fill or change of contour is proposed.

(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.

5.2.7.14. No drainage easements are proposed or required. For Lot 2, stormwater overflow from the detention tank will be directed to a dispersion device within the rear curtilage area of the existing house as shown on the Geologix *'Potable Water & Stormwater Lot 2 Plan for Subdivision Resource Consent' Sheet #400, Rev A dated 19/11/25.* (Refer **Appendix 5**).

Stormwater from Lot 1 will include a suitably designed attenuation tank constructed at the time of site development from which overflow will discharge to the existing swale drain on Riverview Road.

(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.

5.2.7.15. Not applicable.

(p) For any stormwater outfall pipeline through a reserve, the prior consent of the Council, and the need for an appropriate easement.

5.2.7.16. Not applicable.

(q) The need for and extent of any financial contributions to achieve the above matters.

5.2.7.17. Not applicable.

(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.

5.2.7.18. Not applicable.

13.10.5 Sanitary Sewage Disposal

5.2.8. Despite being identified within the area of benefit for wastewater (refer ***Figure 7*** above), FNDC reticulated wastewater services are not currently available at the site. Expert engineers Geologix have assessed the suitability of the site for the on-site treatment and disposal of wastewater within Lot 1 and confirmed that the existing system within Lot 2 is operational and located within the proposed Lot 2 boundary. The proposal includes recommendations for an on-site wastewater treatment and disposal system.

13.10.6 Energy Supply

5.2.9. As required by Controlled Activity Rule 13.7.3.6, Lot 1 and 3 will be provided with the ability to connect to the existing Top Energy electrical system. The Applicant has consulted with Top Energy. A copy of that correspondence is attached at **Appendix 8.**

13.10.7 Top Energy Transmission Lines

5.2.10. Top Energy transmission lines are located within the road reserve parallel to the site frontage.

13.10.8 Telecommunications

5.2.11. Chorus network lines are available for connection at the Street. A copy of the correspondence with Chorus is attached within ***Appendix 9***.

13.10.9 Easements for any purpose

5.2.12. No additional easements are required.

13.10.10 Provision of access

5.2.13. Legal vehicle access can be provided to the site(s) in accordance with FNDC Engineering Standards. The existing crossing is fit for purpose and does not require upgrading. A new ROW crossing into Lot 1 will be required upon development of the site.

13.10.11 Effect of Earthworks and Utilities

5.2.14. No earthworks are required to create the subdivision.

13.10.12 Building Locations

5.2.15. Expert civil engineers Geologix have assessed the site for suitable residential building locations. This includes site stability, potential natural hazards and the ability to provide on-site wastewater services. Lot 1 is suitable for residential development and can accommodate the necessary on-site services.

13.10.13 Preservation and enhancement of heritage resources, vegetation, fauna and landscape, and land set aside for conservation purposes

5.2.16. The site is not within any existing Heritage Overlay, there is no indigenous vegetation, fauna habitat, outstanding landscape or feature that would be affected by the proposed subdivision.

13.10.14 Soil

5.2.17. The application site is zone for rural residential development. The site LUC soil type is LUC 3. Subdivision of the site will not affect future use of highly productive land as the site and surrounding area is already developed and zoned for rural-residential activity.

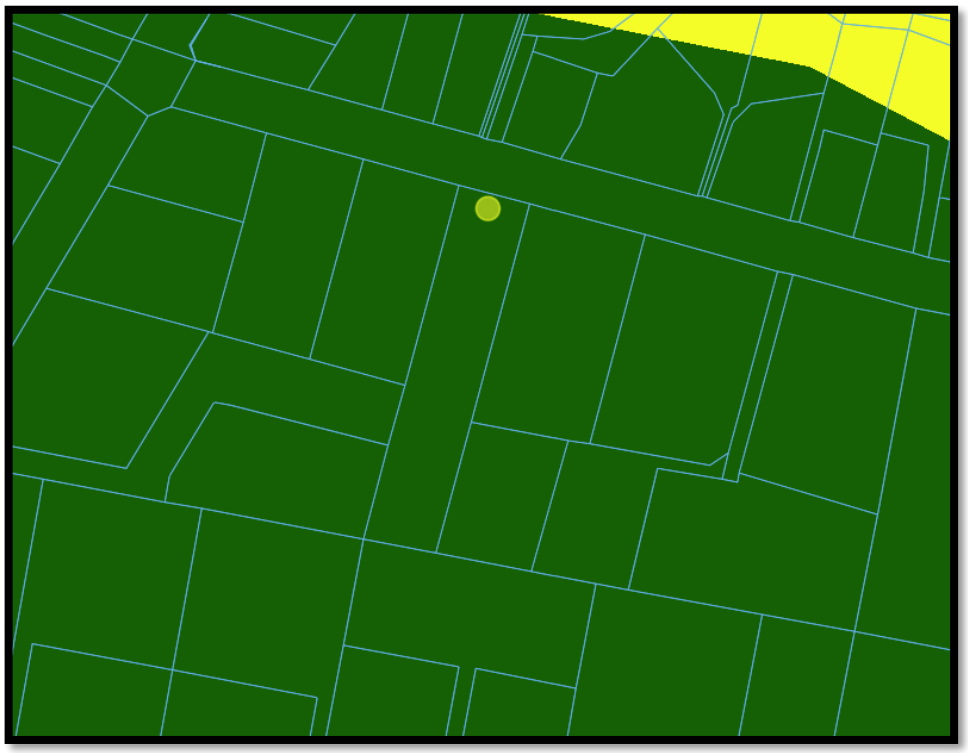


Figure 9 – LUC Soil Type – NZLRI Land Use Capability Map

13.10.15 Access to waterbodies

5.2.18. The application site is not adjacent to a waterbody or the coastal marine area where a further opportunity for public access could be created.

13.10.16 land use incompatibility

5.2.19. The proposal is for a residential subdivision. The proposed activity is compatible with the surrounding residential environment.

13.10.17 proximity to airports

5.2.20. Not applicable to this application. The site is not near the Kerikeri airport.

13.10.18 natural character of the coastal environment

5.2.21. Not applicable to this application. The site is not within the coastal environment.

13.10.19 Energy efficiency and renewable energy development/use

5.2.22. The application is a small-scale proposal to create one new lot. Subdivision of the site will enable further residential development within the peri-urban part of Kerikeri that is envisaged by the ODP and the PDP. The site is within walking and cycling distance of the town centre. The site does not rely on reticulated wastewater services. The site is flat with future options for orientating residential indoor and outdoor living areas with a northerly aspect to enable solar access.

13.10.20 national grid corridor

5.2.23. Not applicable to this application

Assessment of Effects on the Environment – Land Use

5.3. The proposal includes land use rule breaches including stormwater management and for existing building coverage within Lot 2.

Stormwater Effects

5.3.1. Existing development located within proposed Lot 2 will breach the permitted and controlled activity standards for the maximum permissible area for impermeable surfaces within a RLZ site. Expert civil engineers Geologix have assessed the potential downstream effect of the breach and recommended that the subdivision include provision for attenuation of the additional impermeable surfaces that exceed the permitted RLZ standard. For Lot 2, a 3,000-litre roof water tank and suitably sized orifice, is sufficient to mitigate stormwater peak flows back to the permitted standards. This is a requirement of the FNDC Engineering Standards 2023 and the basis on which potential adverse effects on the adjacent public stormwater system can be mitigated to ensure that effects are no more than minor.

5.3.2. For future development on Lot 1, attenuation recommendations include a 10,000-litre tank to be provided in conjunction with building development on the site to mitigate peak stormwater runoff back to 80% of pre-development levels. A consent notice requiring a

suitably designed stormwater management system in conjunction with a building consent application applying to Lot 1 is proposed.

5.3.3. Development of the parent lot site with an additional lot as proposed can include a suitably designed stormwater management system that ensures any future stormwater runoff is managed in accordance with the relevant FNDC Engineering Standards 2023.

5.3.4. ODP Rule 11.3 includes additional stormwater management land use assessment criteria for Discretionary activities. Existing built development within proposed Lot 2 would breach the permitted and controlled activity standards for impermeable surfaces. The assessment of Lot 1 is based on an allocation of impermeable surfaces that would include a future house and paved driveway areas. This allocation and the associated land use breach is included in this proposed activity.

(a) The extent to which building site coverage and impermeable surfaces result in increased stormwater runoff and contribute to total catchment impermeability and the provisions of any catchment or drainage plan for that catchment.

5.3.4.1. Additional runoff resulting from development that is enabled by this subdivision can be fully managed and attenuated back to pre-development levels.

(b) The extent to which Low Impact Design principles have been used to reduce site impermeability.

5.3.4.2. Where possible, the proposed design includes low impact design principles, including managing stormwater runoff back to pre-development levels, diffuse dispersion within the Lot 2 site, and directing attenuated stormwater runoff to the roadside swale drain. Natural overland flowpaths will be maintained.

(c) Any cumulative effects on total catchment impermeability.

5.3.4.3. Runoff will be attenuated back to predevelopment levels. There will be no adverse cumulative effect on total catchment impermeability.

(d) The extent to which building site coverage and impermeable surfaces will alter the natural contour or drainage patterns of the site or disturb the ground and alter its ability to absorb water.

5.3.4.4. There will be no change to the natural contour or drainage patterns of the site.

(e) The physical qualities of the soil type.

5.3.4.5. The soil type is described in the Geologix Engineering assessment. Proposed stormwater management and disposal has been designed accordingly.

(f) Any adverse effects on the life supporting capacity of soils.

5.3.4.6. There will be no adverse effects on the life supporting capacity of the soil. The proposed activity aligns with the rural-residential purpose of the RLZ.

(g) The availability of land for the disposal of effluent and stormwater on the site without adverse effects on the water quantity and water quality of water bodies (including groundwater and aquifers) or on adjacent sites.

5.3.4.7. As confirmed in the Geologix report, there is sufficient space within proposed Lot 1 to accommodate an appropriately sized dwelling and on-site wastewater system.

(h) The extent to which paved, impermeable surfaces are necessary for the proposed activity.

5.3.4.8. Proposed impermeable surfaces are limited to future house and accessory buildings and paved driveway areas on Lot 1 and the existing development on Lot 2. An allocation of impermeable surfaces on each lot forms part of this application. They are considered necessary for reasonable development of the site for residential purposes.

(i) The extent to which landscaping may reduce adverse effects of run-off.

5.3.4.9. Rural-residential lots in this location are typically grassed and extensively landscaped. Stormwater management has been designed to manage the effects of future runoff from the site back to pre-development levels. This includes attenuation requirements for both lots.

(j) Any recognised standards promulgated by industry groups.

5.3.4.10. Not applicable.

(k) The means and effectiveness of mitigating stormwater run-off to that expected by the permitted activity threshold.

5.3.4.11. Stormwater will be managed back to pre-development levels via an attenuation system.

(l) The extent to which the proposal has considered and provided for climate change.

5.3.4.12. Climate change considerations are included in the Geologix Engineering assessment.

(m) The extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects.

5.3.4.13. Not applicable.

Building Effects

5.4. To enable the existing built development to be accommodated within the proposed Lot 2 boundary, the proposal includes a minor land use breach to the RLZ building coverage standards. The permitted building coverage standard is a maximum 10% of the gross site area or 2,400m^2, whichever is the lesser. The existing area of buildings on the site is 300m^2 which equates to 11.7% of the Lot 2 site area (2,546m^2). A minor exceedance of 1.7% is

applied for as a restricted discretionary activity. Given the existing nature of the built development on the site, potential adverse effects are assessed to be less than minor.

5.5. Rule 8.7.5.3.4 sets out the matters over which the Council has restricted its discretion when considering a building coverage breach. These are commented on as follows:

(a) the ability to provide adequate landscaping for all activities associated with the site;

5.5.1. The site is currently well landscaped with boundary hedges that restrict views into the rear part of the site and the full extent of the western boundary. Mature trees on the site restrict views from the street to the extent that the existing house is not visible (refer Figure 4 above). These trees will be contained within the Lot 2 site. The area of built development is existing and does not require additional landscaping to mitigate building effects.

(b) the extent to which building(s) are consistent with the character and scale of the existing buildings in the surrounding environment;

5.5.2. The existing built development includes a single storey dwelling and separate garage / shed / pool shed. The character and scale of these buildings is consistent with the surrounding residential environment.

(c) the scale and bulk of the building in relation to the site;

5.5.3. The existing built development is of a residential scale and height that is located away from adjacent boundaries.

(d) the extent to which private open space can be provided for future uses;

5.5.4. The development is existing. Private open space areas are established.

(e) the extent to which the cumulative visual effects of all the buildings impact on landscapes, adjacent sites and the surrounding environment;

5.5.5. The built development is existing. It is not visible from the neighbouring properties or Riverview Road. There will be no cumulative visual effect arising from the building area breach.

(f) the extent to which the siting, setback and design of building(s) avoid visual dominance on landscapes, adjacent sites and the surrounding environment;

5.5.6. The building area is existing. It is at a residential scale that is consistent with development in the surrounding area. The creation of Lot 2 containing the existing built development will not result in any adverse visual dominance effect on adjacent sites or the surrounding environment.

(g) the extent to which landscaping and other visual mitigation measures may reduce adverse effects;

5.5.7. As stated in (a) above, the site is already well landscaped and provides complete visual screening of the existing buildings.

(h) the extent to which non-compliance affects the privacy, outlook and enjoyment of private open spaces on adjacent sites.

5.5.8. The proposal will not affect adjacent sites.

5.6. Overall, it is considered that any potential adverse effects arising from land development of each lot and their ongoing use for rural-residential activity will be no more than minor. Effects arising from the proposed building coverage breach on Lot 2 are negligible and there will be no appreciable change to views experienced by neighbours or from the public street environment. Stormwater can be managed to pre-development and permitted standards to the extent that potential adverse effects are less than minor.

Assessment of Effects on the Environment – HAIL

5.7. A combined Preliminary & Detailed Assessment has been provided in support of this application. This report has detailed that the soil on site does not exceed the SCS for a residential 10% produce activity.

5.8. The site sampling and laboratory analysis have been undertaken in accordance with the guidelines. In terms of risk assessment this remains low.

5.9. The effects of enabling the subdivision and future residential use of the site are not considered to have a risk to human health.

6. POLICY ASSESSMENT

Relevant provisions of any national standards, policies or plans

6.1. The proposed subdivision has been assessed against the following national standards, policies and plans.

National Policy Statements

6.2. There are currently 8 National Policy Statements in place. These are as follows:

- National Policy Statement on Urban Development
- National Policy Statement for Freshwater Management
- National Policy Statement for Renewable Electricity Generation
- National Policy Statement on Electricity Transmission
- New Zealand Coastal Policy Statement
- National Policy Statement for Highly Productive Land
- National Policy Statement for Indigenous Biodiversity
- National Policy Statement for Greenhouse Gas Emissions from Industrial Process Heat

6.3. There are no national policy statements or standards that are directly relevant to this proposal. The site is not within the coastal environment and is therefore not subject to the NZCPS. The site does not contain any natural inland wetlands that would be affected by the proposed subdivision. There is no indigenous vegetation on the site that would be affected. The site

contains highly productive land (LUC3) that is zoned for rural-residential activity. The National Policy Statement for Highly Productive Land (NPS-HPL) does not apply.

Regional Policy Statement for Northland (RPSN)

6.4. The role of the Regional Policy Statement for Northland is to promote the sustainable management of the region's natural and physical resources by providing an overview of the regions resource management issues, and by setting out policies and methods to achieve integrated management of Northland's natural and physical resources.

6.5. The proposed district scale subdivision and development proposal would not be contrary to the objectives and policies of the RPSN.

Far North Operative District Plan (ODP)

6.6. The site is within the RLZ and is subject to District-wide rules that include subdivision.

6.7. The relevant objectives and policies of the Plan are those within the District-wide Subdivision Chapter 13, and the Chapter 8 Rural Environment and Section 7 Rural Living Zone parts of the ODP. The proposal is assessed as having no more than minor adverse effects on the rural environment. The proposal is consistent with the existing residential character along Riverview Road and would have less than minor adverse effects on the established character and amenity value of the area. The proposal is consistent with the objectives and policies of the Plan.

Chapter 13 - Subdivision Chapter

6.8. The applicable subdivision objectives and policies contained within Sections 13.3 and 13.4 of the District Plan are attached at **Appendix 6**. Objective 13.3.1 requires that subdivision be provided for in a way that is consistent with the purpose of the zone and which promotes the sustainable management of the District's natural and physical resources, and the economic and cultural well-being of people and communities. This objective reflects the purpose of the RMA and is intended to ensure that land development outcomes give effect to the purpose of the RLZ.

6.9. The applicable land use zone is the RLZ that forms part of the District's 'Rural Environment'. The RLZ is an un-serviced, rural-residential zone that is described as an area of *'transition between town and country'*. The transition is expressed in terms of residential intensity and lot sizes.

Around the periphery of Kerikeri township, residential intensity varies considerably. Along Riverview Road, past land use zoning has enabled the development of a variety of site sizes that has resulted in a peri-urban type suburban character. The proposed lot sizes are entirely consistent with the established residential character of the area and the transitional environment that is characterised throughout the RLZ. Local amenity values will not be adversely affected (Policy 13.4.1). The proposed development is consistent with the objectives and policies of the RLZ (Policy 13.4.14).

6.10. Subdivision and development of the site will not affect the life-supporting capacity of any natural resources including air, water, soil or ecosystems and is not within an mapped area of outstanding landscape or natural features. The site is not within the coastal environment (Objective 13.3.2 and 13.3.3 / Policy 13.4.1). Development of the site would not adversely affect any of values of national importance protected by section 6 of the RMA (Policy 13.4.13).

6.11. The proposed subdivision is for a residential purpose and will result in the development of an additional dwelling that is consistent with the development pattern of the existing street environment. Adverse effects arising from breaches to applicable land use rules (stormwater management and building coverage) are less than minor and can be managed in accordance with the Council's Engineering Standards and the Geologix design recommendations.

6.12. The site is not affected by any identified natural hazard that would limit its development for the purpose proposed (Policy 13.4.3), nor will any potential hazard such as flooding be exacerbated (Policy 13.4.13(g)). The site is not serviced by reticulated wastewater and would rely on on-site services. These can be accommodated within the site boundaries. Potable and fire-fighting water supply are available at the site road boundary.

Chapter 8 – Rural Environment

6.13. The following assessment is based upon the objectives and policies contained within sections 8.3 and 8.4 of the ODP. The relevant provisions are set out in **Appendix 6**.

6.14. The site is within the Rural Environment, which applies to most of the rural land in the Far North District. The Rural Living Zone is a counterpart of the Rural Production Zone, where rural-residential scale living is enabled. The RLZ applies to land around the periphery of urban

Kerikeri where previous land use zonings enabled the creation of a variety of smaller un-serviced lots (Policy 8.7.4.2). It is a transition zone between town and country that has a 'lifestyle' rather than a 'production' focus.

6.15. The broader Rural Environment objectives and policies are high level and seek to prioritise the sustainable management of natural and physical rural resources (Objective 8.3.1). The ODP acknowledges the dynamic nature of the Rural Environment that is constantly changing and the need to promote and maintain the productive intent of the Rural Production Zone along with protecting areas of productive soil and significant indigenous vegetation and fauna habitat (Objective 8.3.2, 8.3.4 and 8.3.7). The Rural Living zone has a role in reducing potential adverse effects of rural activity on residential areas (and vice versa) by creating a land buffer between production land and the urban environment.

6.16. Compatibility of development is a priority in the RLZ (Objective 8.7.3.1 and Policy 8.7.4.1). Riverview Road is a residential street where there is little or no 'rural' activity that could be adversely affected more sensitive residential activity. Compatibility issues relate to variations in residential activity including intensity and scale and are intended to enable development commensurate with a single residential unit (Policy 8.7.4.8). Lot sizes are intended to be large enough to comfortably accommodate a dwelling and on-site services as the RLZ is a largely un-serviced land environment (Policy 8.7.4.3). Providing these standards can be met, there are no limits on the types of housing or forms of accommodation in the zone. This recognises the diverse needs of the community (Policy 8.7.4.4).

6.17. The proposed subdivision would enable one additional site to accommodate a single residential unit and the necessary on-site services as required by RLZ Policy 8.7.4.8. Subdivision as proposed would be consistent with the residential development pattern along Riverview Road, which has a semi-urban character as referred to in RLZ Policy 8.7.4.2. Potential adverse effects on adjoining neighbours in terms of any effects on privacy, dominance of built development, or access to sunlight would be less than minor.

Proposed District Plan

6.18. The site is zoned Rural Residential (RRZ) in the PDP. The relevant objectives and policies are the District-wide subdivision provisions and those pertaining to the RRZ. These provisions are attached at **Appendix 6**.

6.19. The Council is proposing a RRZ land use zone to apply to land around the periphery of Kerikeri township. The RRZ would replace the ODP Rural Living Zone. The RRZ is described as a spacious, peri-urban living environment located close to settlements that will provide a transition to the surrounding Rural Production and Rural Lifestyle zones.

6.20. Hearings on the PDP are concluded. This includes hearings on the Rural Environment (and rural zone) provisions (Hearing 9), subdivision (Hearing 16) and submissions seeking rural rezoning (Hearing 15C). The officer's right of reply to matters raised in submissions on subdivision provisions did not include any proposed changes to the RRZ subdivision minimum lot size standards. An easing of the subdivision allotment dimensions is proposed to better reflect current building size and trends. These areas would reduce from 30m x 30m to 20m x 20m, which can be accommodated within the site's required building setback area.

6.21. The officer's reply on Rural Rezoning dated 26 November 2025 elaborated on the role of the 'Rural-Residential' by proffering the following opinion in response to Hearing Panel member questions:

> *'65. As stated at the close of the hearing, I consider that the RRZ is a rural zone, not an urban zone. It forms part of the suite of rural zones that work together as a package to ensure there is sufficient opportunity for residential activity to occur in appropriate parts of the rural environment. The RRZ is not reticulated (nor is it planned to be) and it is not a future urban zone. I consider the mentions in the RRZ chapter of it being a zone in transition to urban should not be viewed as an absolute certain outcome. The relevant wording in the Overview of the RRZ as follows:*
>
> > ***may** also be in a location where an urban area **may** grown and where land **may** be re-zoned for urban development **when demand requires it**."* [my emphasis added]

66. In my view, multiple factors would have to align before any urban rezoning of RRZ land could occur such as:

a. Urban infrastructure would have to be in place (or at least planned for the short term and funded)

b. clear evidence of growth demand and the inability of existing urban zoned land to accommodate that growth to justify the upzoning of RRZ.

c. The completion of a full Schedule 1 process to change the RRZ zoning.

67. The only mention of RRZ land being used for urban development at some point in the future at a policy framework level is in RRZ-O3, which states:
"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****."* [my emphasis added]

68. In my view, this objective does not indicate that the RRZ is an urban zone or that land in the RRZ will certainly transition to urban used. Rather, I consider the intent of the objective is to allow for consideration of how developments in the RRZ are designed – such as the placement of house sites, onsite services, and access – to factor in whether the design could support potential urban upzoning in the future. It is, in my view, light touch future proofing that in no way pre-empts any future zoning changes of the land.'

6.22. This planning view helpfully clarifies the role of the RRZ as a non-urban rural zone where additional rural-residential activity can be accommodated to support a policy approach to protect Rural Production Zone land and to avoid reverse sensitivity effects. The efficient use of existing RRZ land is therefore an important consideration when deciding this application. Subdivision of the site to enable a single allotment is consistent with the overarching purpose and intent of the RRZ.

Subdivision

6.23. The relevant PDP subdivision and RRZ objectives and policies are set out in **Appendix 6**. Until such time as decisions on submissions are made, little weight has been given to these provisions. Decisions on submissions are due in March 2026.

6.24. As with the ODP subdivision objectives and policies, the appropriateness of the subdivision is linked to achieving the objectives of the zone (SUB-O1(a)). Contributing to local character and sense of place, avoiding reverse sensitivity, mitigating natural hazard risks and managing adverse effects on the environment are the basis for determining the efficient use of land (SUB-O1 (b-f). Subdivision is enabled where it results in allotments that are consistent with the purpose, characteristics and qualities of the zone, comply with the minimum allotment sizes, have an adequate size and shape to contain a building platform and have legal and physical access (SUB-P3). The proposed subdivision satisfies all of these policy criteria except for minimum lot sizes. A lot size of 1,506m^2 is sought for Lot 1, however it is consistent with the development pattern along Riverview Road and would not result in an adverse or unusual change to the existing streetscape. This is consistent with SUB-P11 which is to manage subdivision to ensure consistency with the scale, density, design and character of the environment (Riverview Road) and the purposed of the RRZ.

Land Use – Rural Residential Zone

6.25. The RRZ is part of a suite of rural zones. The role of the RRZ is to *'provide an opportunity for people to enjoy a spacious, peri-urban living environment located close to a settlement'.* The RRZ has been applied to areas that were formerly Rural Living zone and are contiguous with urban areas. The role and purpose of the RRZ is further elaborated on in the PDP Report Writer's reply on the rural rezoning provisions set out in paragraphs 4.53 above.

6.26. The application site is within the RRZ that is adjacent to the Kerikeri urban area. The Riverview Road area can be characterised as predominantly large lot residential. There is little potential left for residual rural activity, even at a domestic scale. The PDP RRZ Overview statement predicts that the zone will remain predominantly residential in character as the adjoining Kerikeri settlement will provide for most day-to-day services. Smaller lot sizes (between 2,000m^2 – 4,000m^2) where on-site services can be provided are enabled.

6.27. In the RRZ, the range of lots sizes provided for are between 4,000m^2 (Controlled) and 2,000m^2 (Discretionary) and where on-site services can be provided. In some parts of the RRZ, existing site sizes are considerably smaller than the specified range. As discussed previously, this reflects previous land use zonings that have enabled subdivision to much smaller lot sizes.

6.28. The proposed subdivision would achieve the main policy objectives including:

- Enabling additional rural-residential activity that is compatible with the character and amenity of the zone (RRZ-O1)
- Maintaining the existing character and amenity of this part of the RRZ that is predominantly residential at a peri-urban scale (RRZ-O2)
- Helping to meet demand for growth around the Kerikeri urban centre (RRZ-O3)
- Not detracting from the rural residential of the wider RRZ zone and will maintain the character and amenity values of the existing Riverview Road street
  Environment (RRZ-O4)
- Not interfacing with any rural activity that could result in reverse sensitivity effects (RRZ-P3)

6.29. Overall, it is considered that the subdivision proposal would not be contrary to the ODP or PDP subdivision or rural environment objectives and policies that are to be considered when assessing the merits of a non-complying activity. It is considered that this part of the 'gateway' test is met.

7. NOTIFICATION ASSESSMENT

7.1. In accordance with Section 95, a consent authority must decide whether to give public or limited notification of an application for resource consent. Section 95A-95G sets out the public and limited notification criteria for deciding whether to notify a resource consent application.

Section 95A – Public Notification Assessment

7.2. Section 95A requires a council to follow specific steps when deciding whether to publicly notify an application for resource consent. These are commented on as follows.

Step 1: Mandatory public notification in certain circumstances:

S95A(3)(a)	The applicant requests public notification
S95A(3)(b)	Public notification is required under section 95C

S95A(3)(c)	The application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.

7.3. The Applicant has not requested public notification, nor is it required under section 95C. Section 95A(3)(c) is not applicable.

Step 2: If not required by step 1, public notification in certain circumstances

S95A(5)(a)	Is the application for a resource consent for one or more activities and each activity is subject to a rule or national environmental standard that precludes public notification.
S95A(5)(b)	Is the application for a resource consent for 1 or more of the following, but not other, activities; a controlled activity; a restricted discretionary, discretionary or non-complying activity, but only if the activity is a boundary activity.

7.4. The proposed activity applied for is not precluded from notification by a rule or a national environmental standard. The activity is not a boundary activity.

Step 3: If not precluded by step 2, public notification required in certain circumstances

S95A(8)(a)	The application is for a resource consent for 1 or more activities, and any one of those activities is subject to a rule or national environmental standard that requires public notification.
S95(8)(b)	In accordance with section 95D, the activity has or is likely to have adverse effects on the environment that are more than minor.

7.5. The proposed activity is not subject to a rule or national environmental standard that requires public notification.

7.6. Section 95D specifies the criteria by which a consent authority may decide whether an activity will have or is likely to have adverse effects on the environment that are more than minor. This includes what a council may or may not have regard to:

S95D(a)(i)-(ii)	A consent authority must disregard any effects on persons who own or occupy- (i) The land in, on, or over which the activity will occur, or (ii) Any land adjacent to that land
S95D(b)	A consent authority may disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect.
S95D(c)	A consent authority must, in the case of a restricted discretionary activity, disregard an adverse effect of the activity that does not relate to a matter for which a rule or national environmental standard restricts its discretion.
S95D(d)	A consent authority must disregard trade competition and the effects of trade competition.
S95D(e)	A consent authority must disregard any effect on a person who has given written approval to the relevant application

7.7. For the purposes of deciding public notification, any effects on persons who own or occupy the application site, or adjacent land may be disregarded. The land adjacent to the application site is set out in paragraph 2.7 above. Assessment of effects matters as they potentially impact adjacent landowners and occupiers is discussed below.

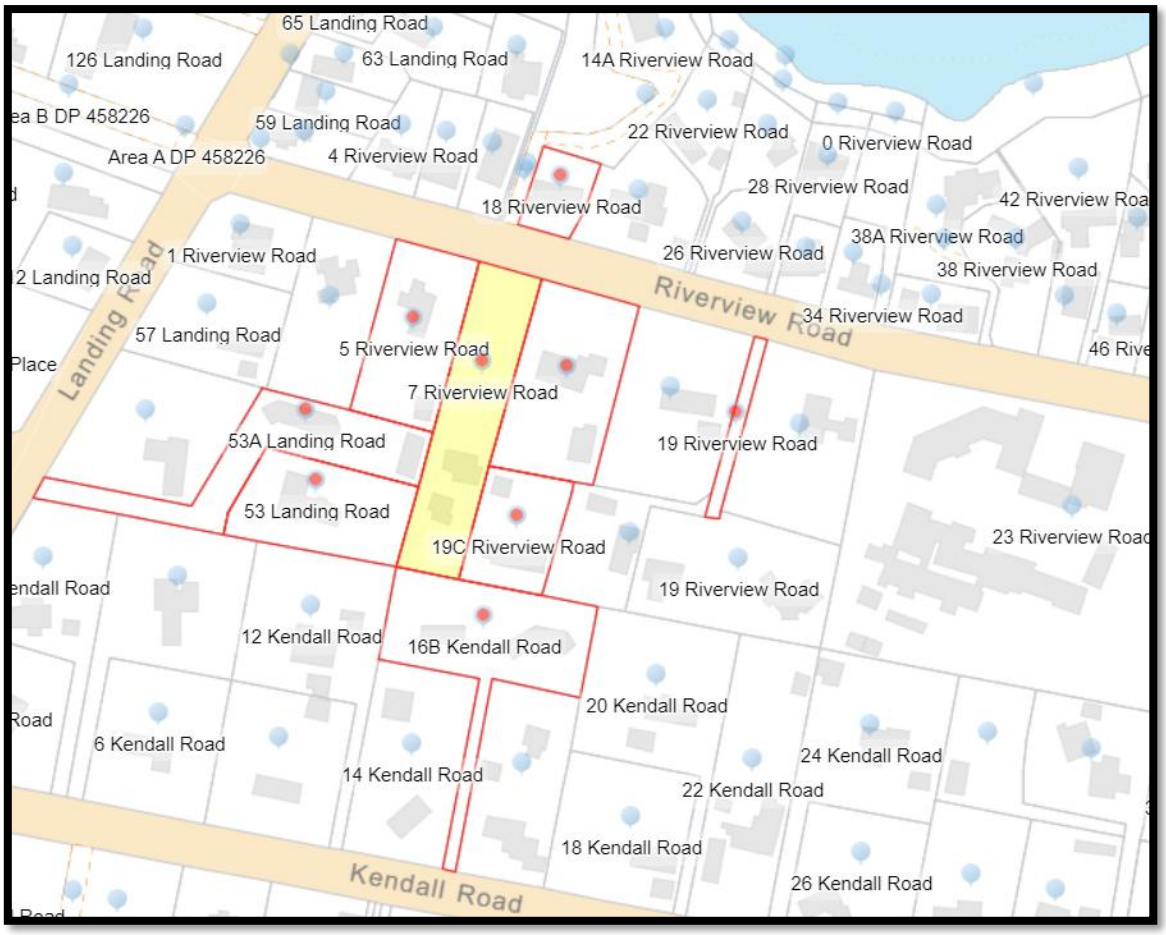


Figure 10 – Adjacent sites

7.8. In accordance with Section 95D(b), the council has discretion to disregard the effects of an activity if a rule or a national environmental standard permits an activity with that effect, referred to as the permitted baseline. None of the proposed subdivision or land use activities are permitted under any relevant plan or national environmental standard.

7.9. An assessment of potential effects on the existing environment is set out in **Section 5** above. Potential adverse effects above the permitted threshold are limited to the extent of impermeable surfaces and building coverage arising from existing buildings being contained with the proposed Lot 2 boundaries. The nature and scale of these land use effects is such that they would not have more than minor adverse effects on the wider public environment. Potential adverse effects can be mitigated to the extent that there is no discernible change beyond the site boundaries. All other effects are within the permitted standards of the ODP and PDP rules that have current legal effect.

Step 4: Public notification in special circumstances

S95(9)	Do special circumstances exist in relation to the application that warrant the application being publicly notified?

7.10. When considering public notification, current caselaw has defined 'special circumstances' as those outside the common run of things which is exceptional, abnormal or unusual, but they may be less than extraordinary or unique. The ODP RLZ has a broad objective purpose that the 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'.* A residential subdivision proposal at the scale proposed is consistent with that purpose and is not an exceptional, abnormal or unusual proposal in the zone. The PDP RRZ has a similar purpose.

Section 95B – Limited Notification Assessment

7.11. If an application is not publicly notified, a consent authority must follow the steps of section 95B to decide if limited notification is required. A Section 95B assessment requires a decision about whether there are any specified affected groups or affected persons (under section 95E).

Step 1: Certain affected groups and affected persons must be notified

S95B(2)(a)	Are there any affected protected customary rights groups
S95B(2)(b)	Are there any affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity)?
S95B(3)(a)	Is the proposed activity adjacent to, or may affect land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11?
S95B(3)(b)	Is the person to whom the statutory acknowledgement is made is an affected person under section 95E?

7.12. The proposed activity would not affect any protected customary rights groups or marine title groups. The proposed activity is not adjacent to and would not affect land (or persons) that are the subject of a statutory acknowledgement.

8. Step 2: If not required by step 1, limited notification precluded in certain circumstances

S95B(6)(a)	The application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification.
S95B(6)(b)	The application is for a controlled activity (but no other activities) that requires a resource consent under a district plan (other than a subdivision of land.

8.1. The proposed activity is not subject to a rule or national environmental standard that precludes limited notification. The application is not 'controlled' activity.

Step 3: If not precluded by step 2, certain other affected persons must be notified

S95B(7)	In the case of a boundary activity, determine in accordance with section 95E whether an owner of an allotment with an infringed boundary is an affected person.
S95B(8)	In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.

8.2. The proposed activity is not a boundary activity. The proposed activity is a Non-complying Activity because of the proposed lot sizes.

8.3. Section 95E provides the basis on which a person is deemed to be affected by a proposed activity. Section 95E(1) a person is an affected person if the consent authority decides that the activity's adverse effects on the person are minor or more than minor (but not less than minor). Section 95E(2)(a)-(c) sets out the adverse effects a consent authority can disregard or matters it must have regard to when assessing adverse effects on a person:

Affected Persons

S95E(2)(a)	A consent authority may disregard adverse effect of an activity on the person if a rule or a national environmental standard permits an activity with that effect.
S95E(2)(b)	A consent authority must disregard an adverse effect arising from a a controlled activity or a restricted discretionary activity if the effect

	of the activity does not relate to a matter for which a rule or a national environmental standard reserves control or restricts discretion.
S95E(2)(c)	A consent authority must have regard to every relevant statutory acknowledgement made in accordance with an Act specified in Schedule 11.

8.4. The subdivision proposal is a Non-complying Activity. It is not a Controlled Activity or a Restricted Discretionary Activity. An assessment of the proposal requires consideration of all potential effects on the environment. The Council may disregard the effects of an activity where they are permitted under a rule or a national environmental standard. There are no permitted activities. The application is supported by an engineering assessing that has determined that the site can be sustainably developed for additional housing and on-site services.

8.5. The adjacent sites and landowners are set out in **Table 1** in **Section 2** above. They include the shared boundary sites and the site immediately opposite. As previously discussed, the subdivision and development of the site with one additional dwelling would have little effect on adjacent land. Development on Lot 1 would not be visible to owners and occupiers of 5 and 19C Riverview Road, 53 and 53A Landing Road and 16B Kendall Road. There would be no discernible effect on these neighbours arising from existing built development being contained with the proposed Lot 2 boundary. Potential adverse effects on these adjacent landowners and / or occupiers would be negligible.

8.6. As viewed from the dwelling at 9 Riverview Road, a new house on Lot 1 would be consistent with the pattern of development along Riverview Road. Whilst this dwelling has window views from the western side of the house, indoor and outdoor living areas appear to be predominantly orientated towards the north. The existing Eugenia (Lilly Pilly) hedge partially screens the site. This hedgerow is still maturing and in time will completely screen views into the Lot 1 property. Given the residential nature of Riverview Road and that future development would be limited to a single residential dwelling, potential adverse effects on this landowner / occupier would is less than minor.

8.7. The landowner / occupier at 18 Riverview Road would experience a visible change when the Lot 1 site is developed with a house. However, this would be limited to entering and exiting the property and would not affect the outlook from dwelling's outdoor and indoor living areas that are orientated to the north. The rear (road frontage) part of this site comprises a home occupation beauty therapy business and vehicle parking and circulation areas. Potential adverse effects on this neighbouring property are assessed to be less than minor.

8.8. For the reasons stated above, the Applicant requests that the application be processed on a non-notified basis.

9. PART 2 ASSESSMENT

9.1. The application must be considered in relation to the purpose and principles of the Resource Management Act 1991 which are contained in Section 5 to 8 of the Act inclusive.

9.2. The proposal will meet Section 5 of the RMA as the proposal will sustain the potential of natural and physical resources whilst meeting the foreseeable needs of future generations. In addition, the proposal will avoid adverse effects on the environment and will maintain the residential character of the surrounding environment where similar site sizes have been created. This is consistent with the purpose of both the RLZ and RRZ.

9.3. Section 6 of the Act sets contains the matters of national importance. These matters of national importance are considered relevant to this application. The proposal is not located within the coastal environment nor is it located near any lakes, rivers or wetlands. The site does not contain any areas of Outstanding Natural Features and Landscapes. The proposal does not increase the risk of natural hazards and will not accelerate, exacerbate or worsen the effects from natural hazards. It is therefore considered that the proposal is consistent with Section 6 of the Act.

9.4. Section 7 identifies a number of "other matters" to be given particular regard by a Council in the consideration of any assessment for resource consent, including the maintenance and enhancement of amenity values. The proposal maintains amenity values in the area as the proposal is in keeping with the existing character of the surrounding environment.

9.5. Section 8 requires Council to take into account the principals of the Treaty of Waitangi. It is considered that the proposal raises no Treaty issues. The subject site is not known to be located within an area of cultural significance to Māori. The proposal takes into account the principals of the Treaty of Waitangi and is not considered to be contrary to these principals. The Applicant has corresponded with the Ngati Rehia Runanga to determine any interest the hapu may have in this application. A copy of the email to the Ngati Rehia is attached at **Appendix 7**.

9.6. Overall, the application is assessed to be consistent with the relevant provisions of Part 2 of the Act, as expressed through the objectives, policies and rules reviewed in earlier sections of this application. Given that consistency, we conclude that the proposal achieves the purposes of sustainable management set out by Sections 5-8 of the Act.

10.CONCLUSION

10.1. The Applicant is seeking a resource consent to subdivide an existing rural-residential site in Riverview Road, Kerikeri. Riverview Road is an established rural-residential area on the outskirts of urban Kerikeri. The area is not reticulated with Council wastewater infrastructure and relies on on-site services. Water supply and roadside stormwater drainage is available at the site.

10.2. The proposed subdivision is non-complying because of the proposed lot sizes that are below the ODP (and PDP) Discretionary subdivision standards. However, the variety of lot sizes along Riverview Road and the existing suburban residential character that includes single dwellings built relatively close to the road frontage will ensure that a future house on Lot 1 will be consistent with the character and amenity of the existing streetscape. Appropriately designed on-site wastewater services can be provided with the proposed Lot 1 boundaries. Lot 2 would rely on existing services. Additional stormwater runoff from the site can be managed back to pre-development levels and will have no adverse effect on downstream land or the road environment.

10.3. The proposal is consistent with ODP and PDP objectives and policies. The proposed subdivision is consistent with the purpose of the RLZ and the proposed RRZ. Subdivision of the parent lot will enable further housing opportunity close to Kerikeri and in a location that is zoned for rural-residential living.

10.4. For the reasons outlined above, potential adverse effects on adjoining landowners will be less than minor. The Section 104D gateway test in respect of potential adverse effects and the relevant Plan objectives and policies is met.

10.5. The Applicant requests that the application is processed on a non-notified basis.

11.LIMITATIONS

11.1. This report has been commissioned solely for the benefit of our client, in relation to the project as described above, and to the limits of our engagement, with the exception that the Far North District Council or Northland Regional Council may rely on it to the extent of its appropriateness, conditions and limitations, when issuing their subject consent.

11.2. Copyright of Intellectual Property remains with Northland Planning and Development 2020 Limited, and this report may NOT be used by any other entity, or for any other proposals, without our written consent. Therefore, no liability is accepted by this firm or any of its directors, servants or agents, in respect of any information contained within this report.

11.3. Where other parties may wish to rely on it, whether for the same or different proposals, this permission may be extended, subject to our satisfactory review of their interpretation of the report.

11.4. Although this report may be submitted to a local authority in connection with an application for a consent, permission, approval, or pursuant to any other requirement of law, this disclaimer shall still apply and require all other parties to use due diligence where necessary.

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **NA52A/300**

Land Registration District **North Auckland**

Date Issued 11 May 1982

Prior References
NA693/22

Estate Fee Simple

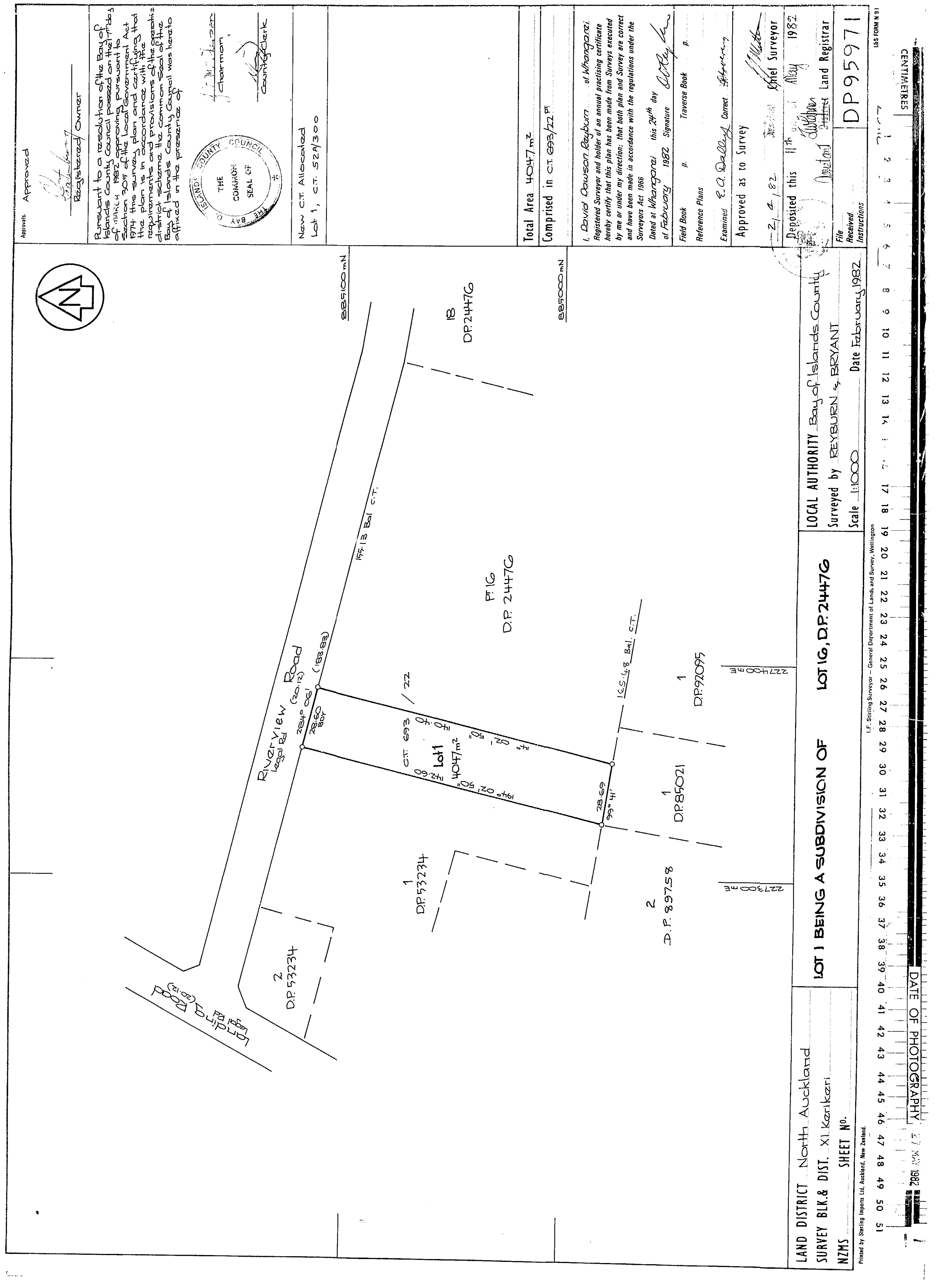
Area 4047 square metres more or less

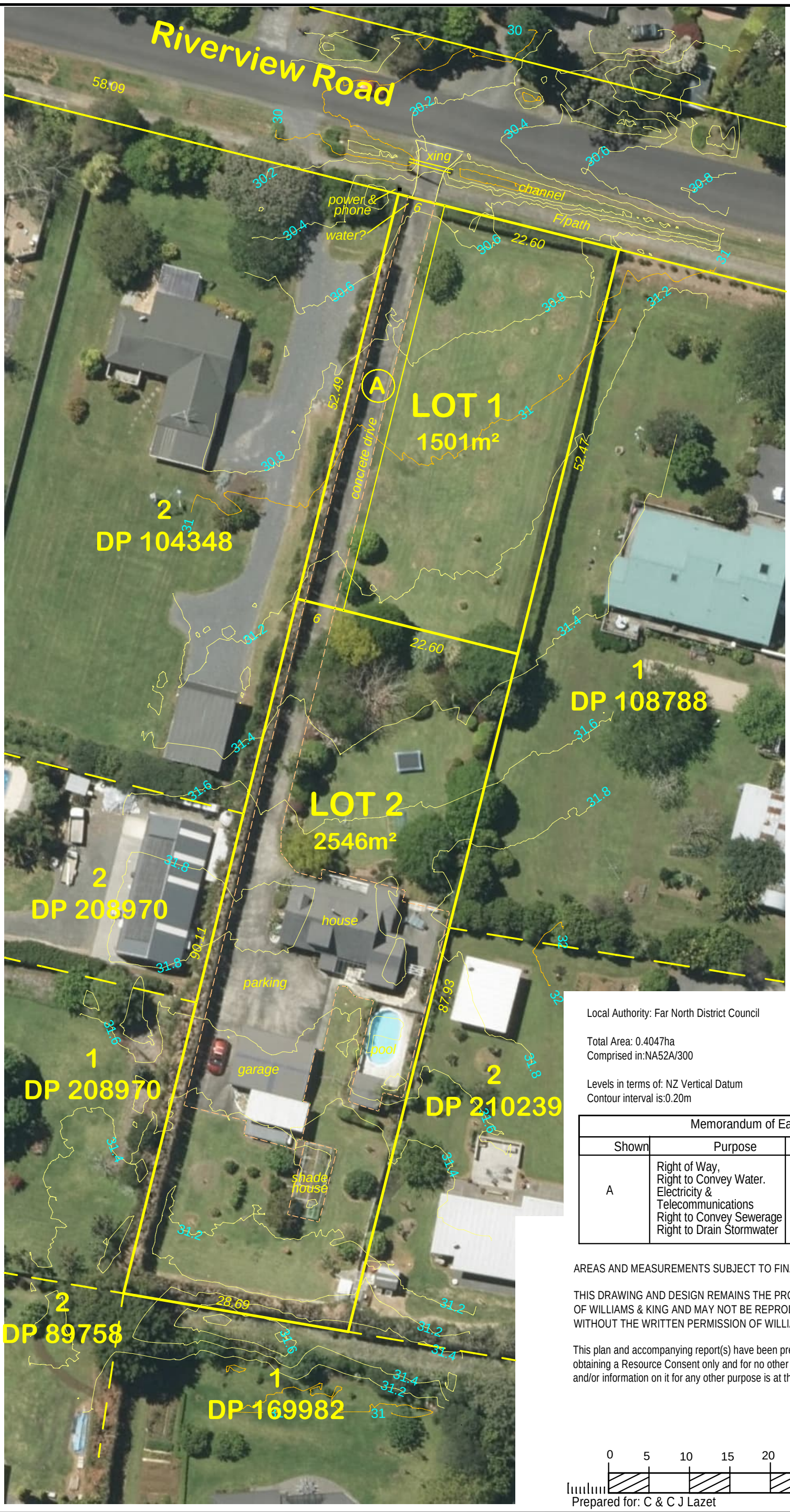
Legal Description Lot 1 Deposited Plan 95971

Registered Owners
Christian Joshua Lazet and Carna Lazet

Interests

13058731.2 Mortgage to ASB Bank Limited - 23.8.2024 at 1:24 pm


LOT 1 BEING A SUBDIVISION OF LOT 16, D.P. 24476
LAND DISTRICT North Auckland
SURVEY BLK.& DIST. XI Karikari
NZMS SHEET No.
LOCAL AUTHORITY Bay of Islands County
Surveyed by REYBURN & BRYANT
Scale 1:1000
Date February 1982
DP 95971
Total Area 4047 m²
Comprised in C.T. 693/22 Pt.
New C.T. Allocated Lot 1, C.T. 52A/300
Riverview Road
Landing Road
Lot 1
4047 m²
DATE OF PHOTOGRAPHY
CENTIMETRES



Impermeable Areas

Lot 1 (1501m²)	Driveway - 192m²
Lot 2 (2546m²)	Driveway, parking manouvering, pool, outdoor living & shadehouse
	908m² (35.6%)

Local Authority: Far North District Council

Total Area: 0.4047ha
Comprised in:NA52A/300

Levels in terms of: NZ Vertical Datum
Contour interval is:0.20m

Memorandum of Easements			
Shown	Purpose	Burdened Land	Benefited Land
A	Right of Way, Right to Convey Water. Electricity & Telecommunications Right to Convey Sewerage Right to Drain Stormwater	Lot 1 Hereon	Lot 2 Hereon

AREAS AND MEASUREMENTS SUBJECT TO FINAL SURVEY

This plan and accompanying report(s) have been prepared for the purpose of obtaining a Resource Consent only and for no other purpose. Use of this plan and/or information on it for any other purpose is at the user's risk.

0 5 10 15 20 25 30 35 40m

Prepared for: C & C J Lazet

WILLIAMS AND KING
Registered Land Surveyors, Planners & Land Development Consultants
Ph: (09) 407 6030
Email: kerikeri@saps.co.nz
27 Hobson Ave
PO Box 937 Kerikeri

Proposed Subdivision of Lot 1 DP 95971

	Name	Date
Survey		
Design		
Drawn	W & K	Sept 2025
Rev		

ORIGINAL SCALE 1:500 SHEET SIZE A3

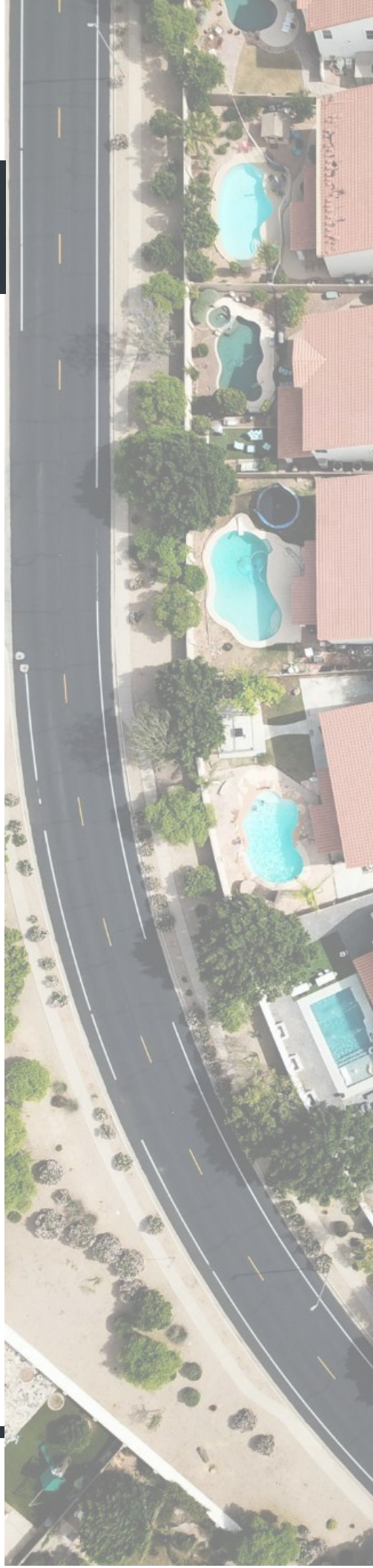
24703

geologix
consulting engineers

SUBDIVISION SITE SUITABILITY ENGINEERING REPORT

7 RIVERVIEW ROAD, KERIKERI

JOSH AND CARNA LAZET



C0719N-02-S
DECEMBER 2025
REVISION 1

geologix
consulting engineers

DOCUMENT MANAGEMENT

Document Title	Subdivision Site Suitability Engineering Report
Site Reference	7 Riverview Road, Kerikeri
Client	Josh and Carna Lazet
Geologix Reference	C0719N-02-S
Issue Date	December 2025
Revision	01
Prepared	Edward Collings Managing Director, CEnvP Reg. 0861, CPEng Reg. 1033153, CMEngNZ
Reviewed	Sebastian Hicks Principal Civil Engineer, CPEng Reg. 1168062, CMEngNZ, IntPE(NZ) /APEC Engineer
Approved	Edward Collings Managing Director, CEnvP Reg. 0861, CPEng Reg. 1033153, CMEngNZ
File Reference	*Z:\Geologix Files\Projects\C0700-C0799\C0719N - 7 Riverview Road, Kerikeri\06 - Reports\C0719N-02-S-R01.docx*

REVISION HISTORY

Date	Issue	Prepared	Reviewed	Approved
November 2025	First Issue	EC	SH	EC

geologix
consulting engineers

TABLE OF CONTENTS

1 INTRODUCTION

This Site Suitability Engineering Report has been prepared by Geologix Consulting Engineers Ltd (Geologix) for Josh and Carna Lazet as our Client in accordance with our standard short form agreement and general terms and conditions of engagement.

Our scope of works has been undertaken to assist with the Resource Consent application in relation to the proposed subdivision of 7 Riverview Road, Kerikeri, the 'site', to create one new residential lot.

This assessment addresses preliminary engineering elements of wastewater, stormwater, water supply, firefighting, access and associated earthworks requirements to provide safe and stable building platforms with less than minor effects on the environment as a result of the proposed activities outlined in Section 1.1. This report is purposed to support the Resource Consent application and guide the requirements of future detailed design and/ or engineering plan approval processes. This report should be read in conjunction with other reports and documents prepared in support of the application.

1.1 Proposal

A proposed scheme plan was presented to Geologix at the time of writing, prepared by Williams and King Ltd[1] and has been reproduced within Appendix A as Drawing No 100. It is understood from the scheme plan and typical assumptions that the new lot will comprise a maximum building coverage of 300 m^2 within a designated 30 x 30 m square building site. The existing development will remain within proposed lot 2 and the existing driveway and vehicle crossing will provide access to the new lot.

The subdivision is proposed to be serviced for water supply and utility services with new connections provided to the existing public networks. Wastewater and stormwater will be serviced on site. The above is summarised in Table 1 and detailed further within this report, with reference to the Preliminary Engineering Design Plans enclosed within Appendix A. Any amendments to the referenced scheme plan may require an update to the recommendations of this report.

Table 1: Summary of Proposed Subdivision

Proposed Lot No.	Size	Purpose
1	0.1501 ha	New residential
2	0.2546 ha	Existing residential

1.2 Site Description and Existing Infrastructure

[1] *Williams and King Ltd, Scheme Plan Ref. Proposed Subdivision of Lot 1 DP 95971, September 2025, Ref. 24703.*

The site is legally described as Lot 1 DP 95971 with a total site area of 0.4047 ha and designated by the FNDC Operative District Plan as within the Rural Living zone. The current title comprises an existing dwelling with associated garage, pool, shade house and concreted driveway and parking. The balance of the site forms maintained and landscaped private gardens. Available LiDAR data does not indicate any obvious overland flow paths through the site and the property is outside of a mapped flood hazard area. There is no downstream flooding hazard or known downstream restrictions that may cause flooding identified.

The property is surrounded by similar, single-dwelling residential sites. Existing infrastructure within this area includes roads, footpaths, grassed swale drains, public water supply, fire hydrants and utility networks. The site slopes gently from the existing dwelling to the north and south over a range of 31.2 to 31.8 m RL.

No existing public networks are located within the site boundaries. The public networks are located within the Riverview Road corridor to the north. Wastewater from the existing dwelling is currently serviced by an on-site wastewater treatment system and disposal field to the south of the existing dwelling between the garage and the pool. The system appeared to be in good working order and contained within the proposed lot 2 boundaries. The existing stormwater discharge is by soakage trench immediately north of the dwelling within the proposed lot 2 boundary. There is a water meter recorded as in service at the vehicle crossing from a 40 mm diameter uPVC rider main along the southern face of Riverview Road. There are multiple fire hydrants close by the site, the closest is recorded directly opposite the site along the northern face of Riverview Road.

The site includes underground power supply along the proposed RoW from an overhead power pole adjacent to the vehicle crossing within the road corridor and the Ultra-Fast Broadband (UFB) fibre network is established in place according to the UFB NZ Maps. Existing features are marked on Drawing No. 100 within Appendix A.

2 WASTEWATER ASSESSMENT

As detailed above, wastewater from the existing dwelling is currently serviced by an on-site wastewater treatment system and disposal field to the south of the existing dwelling between the garage and the pool. The system appeared to be in good working order and contained within the proposed lot 2 boundaries. The system is identified on Drawing No. 100 and 500 within Appendix A and photographs enclosed within Appendix B.

2.1 Wastewater Volume and Treatment

It is proposed that the new lot is also serviced by an on-site wastewater treatment system and disposal field. A preliminary design is presented in this section and on Drawing No. 500 to demonstrate the proposed new lot can support on-site wastewater management. In lieu

of specific development plans, the preliminary design assumes that the proposed new lot may support up to a five-bedroom dwelling with a peak occupancy of eight people[5].

The design water volume for reticulated water supply is estimated at 180 litres/ person/ day[6] based upon standard water saving fixtures[7] being installed within the future development. This results in a total daily wastewater generation of 1,440 litres/ day per proposed lot.

No specific treatment system design restrictions and manufacturers are currently in place. Future developers will be required to elect a treatment system and provide system specifications at Building Consent. It is recommended that secondary treatment systems are accounted for within future developments. However, primary treatment systems may be suitable, provided the developer can demonstrate suitable treatment quality, disposal area and compliance with the NRC Proposed Regional Plan.

2.2 Wastewater Discharge

To provide even distribution, evapotranspiration assistance and to minimise effluent runoff it is recommended that suitably treated effluent is conveyed to land disposal via Pressure Compensating Dripper Irrigation (PCDI) systems.

Available geological mapping[8] indicates the site to be directly underlain by Kerikeri Volcanic Group Late Miocene basalt of Kaikohe - Bay of Islands Volcanic Field. These Neogene igneous rocks (basalt) can be expected to contain Basalt lava material, volcanic plugs and minor tuff material.

A site walkover survey and intrusive ground investigation was undertaken by Geologix on 10 November 2025. Two hand auger boreholes were formed to depths of 1.2 m bgl, in the locations recorded on Drawing No. 500 and engineering logs presented as Appendix C. A qualified engineering geologist recorded the recovered arisings as brown clayey silt with trace gravel with depth, moist and of low plasticity. Groundwater was not encountered during the ground investigation.

The shallow soils are generally inferred to meet the drainage characteristics of TP58 Category 5/ NZS1547 Category 4. For a typical PCDI discharge system, a Soil Loading Rate (SLR) of 3.5mm/ day has been adopted from NZS1547 Table 5.2.

The proposed PCDI system may be surface laid, covered with minimum 150 mm mulch and planted with specific evapotranspiration species to provide a minimum of 80 % species canopy cover. Alternatively, lines could be subsurface laid to topsoil with minimum 200 mm thickness and planted with lawn grass. Clean, inert site-won topsoil sourced during

---

[5] TP58 Table 6.1.
[6] TP58 Table 6.2, AS/ NZS 1547:2012 Table H3.
[7] Low water consumption dishwashers and no garbage grinders.
[8] Geological & Nuclear Science, 1:250,000 scale Geological Map, Sheet 2, Whangarei, 2009.

development from building and/ or driveways footprints may be used in the land disposal system to increase minimum thicknesses.

To satisfy the preliminary design, primary and reserve disposal fields are required as follows, as presented on Drawing No. 500.

- **Preliminary Primary Disposal Field.** A minimum PCDI primary disposal field of 412 m^2 laid parallel to the natural contours.
- **Preliminary Reserve Disposal Field.** A minimum reserve disposal field equivalent to 30% of the primary disposal field is required under NRP rule C.6.1.3(9)(b) for secondary or tertiary treatment systems. It is recommended each proposed lot provides a 124 m^2 reserve disposal area.

2.3 Summary and Assessment of Environmental Effects

Based on the above concept design assumptions a summary of the concept wastewater design is presented as . It is recommended that each lot is subject to Building Consent specific review and design amendment according to final development plans by a suitably qualified professional. This is typically applied as a condition of consent.

Table 2: Concept Wastewater Design Summary

Design Element	Specification
Concept development	Five-bedroom, peak occupancy of 8 (per lot)
Concept design generation volume	180 litres/ person/ day – 1,440 litres/ day/ lot
Water saving measures	Standard. Combined use of 11 litre flush cisterns, automatic washing machine & dishwasher, no garbage grinder[1]
Water meter required?	No
Recommended treatment quality	Secondary
Soil drainage category	TP58 Category 5, NZS1547 Category 4
Soil loading rate	3.5 mm/ day
Concept primary disposal field size	Surface/ subsurface laid PCDI. Min. 412 m^2
Concept reserve disposal field size	Surface/ subsurface laid PCDI. Min. 30 %, or 124 m^2
Concept disposal field level	Sited above 5 % AEP event. No specific site requirements.
Dosing method	Pump with high water level visual and audible alarm. Minimum 24-hour emergency storage volume.
Stormwater Control	Divert surface/ stormwater drains away from disposal fields. Contour drains not required. Stormwater management discharges downslope of all disposal fields.
NRC Proposed Regional Plan Activity Status	Permitted.

A preliminary site-specific Assessment of Environmental Effects (AEE) is presented as Appendix D to demonstrate the proposed wastewater disposal concept will have a less than minor effect on the environment. It is recommended that the AEE is reviewed at the time of Building Consent once specific development plans, final disposal field locations and treatment systems are established.

3 STORMWATER ASSESSMENT

To comply with permitted acidity standards for the Rural Living zone, the maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 12.5 % or 3,000 m^2, whichever the lesser. Controlled activity standards raise these areas to 20 % or 3,300m^2, whichever the lesser. Furthermore, any new impervious area shall be managed such that its effective runoff is mitigated in accordance with the Operative Plan and FNDC Engineering Standards 2023 for Flood and Flow Control.

3.1 Impervious Surfaces and Management Concept

Existing impervious surface covering at the time of writing is summarised below within Table 3.

Table 3: Summary of Existing Surface Covering

Parameter	Area	
Roof (including dwelling, garage, pool house & shade house)	m^2	271
	%	*6.70*
Driveway/ Parking/ Future RoW (Concrete)	m^2	789
	%	*19.50*
RoW	m^2	0
	%	*0.00*
Pervious	m^2	2987
	%	73.80
Total Impervious	m^2	**1060**
(as a percentage of total existing lot area 4047m^2)	%	***26.19***
Threshold	12.5 %	505.88 m^2
Meets Permitted Activity Pre Activity		No

The proposed activity will increase impervious surfaces across the site. The preliminary design accounts for the following impervious surfaces.

Table 4: Summary of Proposed (Preliminary) Surface Covering

Parameter		Lot 1	Lot 2
Roof	m^2	300	271
	%	*19.98*	*10.64*
Driveway/ Parking	m^2	100	597
	%	*6.67*	*23.45*
RoW	m^2	192	0
	%	*12.790.00*	*0.00*
Pervious	m^2	*909*	1678
	%	*60.56*	*65.91*
Total Impervious	m^2	592	868
	%	*39.44 (of 1501m^2)*	*34.09 (of 2546m^2)*
Threshold	12.5 %	187.63 m^2	318.25 m^2
Permitted		No – Discretionary	No - Discretionary

It is proposed for lot 1 that additional/ future impervious surfaces will be mitigated by attenuation within roof water tanks to 80 % of pre-development peak flows in accordance with FNDC Engineering Standards 2023 Table 4-1 and Operative Plan Section 12.7.3.4(a). The preliminary design has been prepared to account for a typical residential development scale to demonstrate the proposed lot can support the intended use. However, the preliminary design must be advanced at Building Consent stage by a future developer.

Although impervious surfaces of the existing development are not anticipated to increase, as the parent title becomes smaller due to the subdivision the proportion of impervious surfaces to gross lot area increases. It is proposed that attenuation is to be adopted for existing impervious surfaces to be held within proposed lot 2 that exceed the Permitted Activity threshold. Therefore, attenuation has been accounted for 549.75 m^2 *(34.09% - 12.5% = 21.59% of Lot 2 area*). It is recommended that these measures are finalised within detailed design submitted as part of 223 Conditions.

Access to the newly proposed lot will be established by a new vehicle crossing from RoW A, close to the site entrance. The new crossing will produce an insignificant increase in runoff, with less than minor adverse effect on environment, requiring no attenuation. Additionally, due to the concrete driveway proposed to become RoW is existing and in place, no additional mitigation is proposed.

3.2 Design Storm Event

FNDC Engineering Standards 2023 Table 4-1 stipulates that flow attenuation controls reduce the post-development peak discharge to 80% of the pre-development condition for the 50% and 20% AEP storm event. Furthermore, the concept design has also considered the 10 % AEP pre-development requirement to comply with NRP Rule C6.4.2(2) and with the Operative District Plan 13.10.4. Attenuation modelling under this scenario avoids exacerbating downstream flooding and provides for sufficient flood control.

Outlet dispersion devices have been designed to manage the 10% AEP event to reduce scour and erosion at discharge locations.

Relevant design rainfall intensity and depths have been ascertained for the site location from the NIWA HIRDS meteorological model[10]. Provision for climate change has been adopted by means of applying a factor of 20 % to rainfall intensities, in accordance with FNDC Engineering Standards 2023.

[10] *NIWA High Intensity Rainfall Data System, https://hirds.niwa.co.nz.*

3.3 Preliminary Stormwater Attenuation

The rational method has been adopted by Geologix with run-off coefficients as published by FNDC Engineering Standards[11] to provide a suitable preliminary attenuation design by installing specifically sized low-flow orifices into the attenuation devices. Estimated driveway areas (internal to proposed lot 1) and the balance of impervious surfaces within proposed lot 2 between the roof area and 386.75 m^2 have been account for as offset attenuation.

Calculations to support the preliminary design are presented as Appendix E to this report. A summary of the probable future development attenuation concept design is presented as Table 5 and a typical schematic retention/ detention tank arrangement detail is presented as Drawing No. 401 within Appendix A. As above, it is recommended that this concept design is refined at the Building Consent/ 223 stage as required by conditions of consent.

Table 5: Probable Future Development Attenuation Concept

Design Parameter	Flow Attenuation: 50 % AEP (80% of pre-dev)	Flow Attenuation: 20 % AEP (80% of pre-dev)	Flood Control: 10 % AEP
Lot 1 Preliminary Design (300 m^2 roof, 100 m^2 driveway offset)			
Regulatory Compliance	FNDC Engineering Standards Table 4-1	FNDC Engineering Standards Table 4-1	NRC Proposed Regional Plan
Pre-development peak flow	4.33 l/s	5.60 l/s	6.54 l/s
80 % pre-development peak flow	3.46 l/s	4.48 l/s	*N/A*
Post-development peak flow	8.45 l/s	10.93 l/s	12.76 l/s
Total Storage Volume Req.	4785 litres	6260 litres	4280 litres
Concept Summary:	- Attenuation storage calculation accounts for offset flow from 100 m^2 driveway. Refer Appendix E for calcs in full. - Attenuation for % AEP storm represents maximum storage requirement and is adopted for the concept design tank storage. - 1 x 10,000 litre tank is sufficient for attenuation. - 20 % AEP attenuation (in isolation) requires a 28 mm orifice 1.3 m below overflow and bottom 150mm reserved for sediment retention. However regulatory requirements are to consider an additional orifice/s to control the 50 % AEP event specifically. We note this may vary the concept orifice indicated above. Generally this results in slightly larger volume requirements, therefore we have allowed for 10000l tank in the concept. This should be considered with detailed design for building consent approval.		
Lot 2 Preliminary Design (Permitted Activity threshold, house, garage and pool house roofs to tank)			
Regulatory Compliance	FNDC Engineering Standards Table 4-1	FNDC Engineering Standards Table 4-1	NRC Proposed Regional Plan
Permitted Activity peak flow	6.72 l/s	8.70 l/s	10.15 l/s

[11] *FNDC Engineering Standards 2023, Version 0.6, Issued May 2023.*

Permitted Activity Exceedance peak flow	11.61 l/s	15.02 l/s	17.54 l/s
Total Storage Volume Req.	6231 litres	8150 litres	9596 litres
Concept Summary:	- Attenuation storage calculation considers the difference between the Permitted Activity impervious surface area (318.25m^2) and the existing development area (868 m2). It considers that the roof area of the dwelling, garage and pool house will be routed to the proposed new tank and accounts for offset flow from 278.75 m2 of driveway. Refer Appendix E for calcs in full. - Attenuation for 10 % AEP storm represents maximum storage requirement and is adopted for the concept design tank storage. - 1 x 10,000 litre tank is sufficient for attenuation. Promax tank adopted for prelim. - 10 % AEP attenuation (in isolation) requires a 23 mm orifice 2.62m below overflow and (bottom 150mm reserved for sediment retention). However regulatory requirements are to consider an additional orifice/s to control the 50 %, 20 % AEP events specifically. We note this may vary the concept orifice indicated above. Generally this results in slightly larger volume requirements, We have allowed for a 10000l tank in the concept, however this may increase when considering the 50 %, 20 % AEP events. This should be considered with detailed design for S223 approval.		

3.4 Stormwater Quality

The key contaminant risks of the site setting include:

- Sediments and minor contaminants washed from impervious surfaces.
- Leaf matter, grass, and other organic debris.

Stormwater treatment requirements are minor to maintain good quality stormwater discharge. Stormwater quality will be provided by:

- Leaf guards on roof guttering/ first flush devices on roof guttering and downpipes.
- Rainwater tank for potable use onsite only to be filled by roof runoff.
- Room for sedimentation (minimum 150 mm recommended as per Auckland Council GD01) within the base of the stormwater attenuation roof runoff tanks as dead storage volume.
- Stormwater discharges directed towards roading swale drains where possible.
- Grassed swale drains from rainwater inception (road surfaces) to discharge points, where required.

The risk of other contaminants being discharged out of the site boundaries (hydrocarbons, metals etc.,) because of the proposed activities once stormwater has been processed through the above measures that will affect the downstream water quality is considered low.

4 POTABLE WATER & FIRE FIGHTING

The site is located within a well-established public water supply area and is currently located adjacent to a public 40 mm uPVC water supply pipeline outside the northern boundary. The existing metered connection to the existing house will be reused for serving proposed lot 2. A new water meter for proposed lot 1 will be applied for to be installed within the berm area of Riverview Road, as presented on Drawing Sheet 400 in Appendix A. Lot 2 has an existing connection to the dwelling from its boundary with Riverview Road. The location of the pipeline should be located and surveyed to confirm it is within the RoW as a condition.

The fire-fighting requirements for the proposed development are determined to be FW2 in accordance with the SNZ PAS 4509:2008, New Zealand Fire Service Firefighting Water Supplies Code of Practice. The standard requires a minimum of two fire hydrants – one within 135 m, and the second within 270m to the entrance of the furthest property. There are two fire hydrants within Riverview Road north of the site. The closest hydrant is approximately 18 m and the second 153 m from the site entrance.

The proposed developments comply with the SNZ PAS 4509:2008, New Zealand Fire Service Firefighting Water Supply Code of Practice. Specific analysis and calculations for firefighting is outside the scope of this report and may require specialist input. Supply for firefighting should be made in accordance with SNZ PAS4509:2008.

5 POWER AND TELECOM

Proposed lot 2 utility services are currently provided by overhead within Riverview Road becoming underground connections at the site boundary. Existing services are demonstrated by BeforeUDig plans within Appendix F. The attached BeforeUDig plans show the approximate location of the existing services, mainly in the road berm. These services will need to be located before finalising the EPA design to confirm the exact location and depth, all lines should be treated as live until proven otherwise. The power, and telecommunication networks will be extended to the proposed lot 1 boundary from the in-road networks, and in accordance with appropriate standards (and subject to network operator approval).

6 EARTHWORKS

The following earthworks provisions are anticipated to form the subdivision:

- **Service trenching**. Water, power, telecom pipeline trenching and connections to existing public services.
- **Vehicle crossing to lot 1**. By a minor concrete apron 3.0 m wide.

Proposed earthwork volumes are within the 300m³ Permitted Activity volume limit outlined by FNDC District Plan Rule 12.3.6.1.2(a) and the maximum cut and fill height of <3.0 m combined cut and fill to comply with 12.3.6.1.2(b). Earthworks are detailed on Drawing No. 600 within Appendix A.

7 INTERNAL ACCESS

The existing vehicle crossing off Riverview Road will provide access to proposed lots 1 and 2 and the existing private accessway which will be designated as a Right of Way. The existing access concrete width was measured at 2.7 m. Beyond the proposed lot 1 vehicle crossing, no additional widening is proposed to the formed concrete access. The vehicle crossing has an existing stormwater culvert that will remain as-is. The existing consented vehicle crossing will remain and function in its current condition. No modifications are recommended.

Lot 1 will require a new vehicle crossing from the RoW. These are recommended to match the FNDC/S/2 standard. It is recommended that they are only finalised and constructed at lot development stage, not subdivision formation to give flexibility in future driveway alignment. The above is detailed on Drawing No. 700 within Appendix A.

8 LIMITATIONS

This report has been prepared for Josh and Carna Lazet as our Client. It may be relied upon by our Client and their appointed Consultants, Contractors and for the purpose of Consent as outlined by the specific objectives in this report. This report and associated recommendations, conclusions or intellectual property is not to be relied upon by any other party for any purpose unless agreed in writing by Geologix Consulting Engineers Ltd and our Client. In any case the reliance by any other party for any other purpose shall be at such parties' sole risk and no reliability is provided by Geologix Consulting Engineers Ltd.

The opinions and recommendations of this report are based on plans, specifications and reports provided to us at the time of writing, as referenced. Any changes, additions or amendments to the project scope and referenced documents may require an amendment to this report and Geologix Consulting Engineers should be consulted. Geologix Consulting Engineers Ltd reserve the right to review this report and accompanying plans.

The recommendations and opinions in this report are based on arisings extracted from exploratory boreholes at discrete locations and any available existing borehole records. The nature and continuity of subsurface conditions, interpretation of ground condition and models away from these specific ground investigation locations are inferred. It must be appreciated that the actual conditions may vary from the assumed ground model. Differences from the encountered ground conditions during subdivision construction may require an amendment to the recommendations of this report.

geologix
consulting engineers

APPENDIX A

Drawings

NOTES:
- CONTOUR INTERVAL IS 0.5 m MAJOR, 0.1 m MINOR.
- BOUNDARIES, AERIAL PHOTOGRAPH, LiDAR CONTOURS EXTRACTED FROM LINZ DATA SERVICE.
- PROPOSED SCHEME PLAN REPRODUCED FROM WILLIAMS & KING DRAWING REF. 24703, DATED SEPTEMBER 2025.

EXISTING WATER FIRE HYDRANT (FROM FNDC MAPS)

EXISTING CULVERT

EXISTING POWER POLE

EXISTING WATER METER (FROM FNDC MAPS)

EXISTING WATER FIRE HYDRANT (FROM FNDC MAPS)

OUTLINE OF EXISTING DRIVEWAY

LOT 1
0.1501 ha

LOT 2
0.2546 ha

EXISTING DWELLING

OUTLINE OF EXISTING IMPERVIOUS SURFACES

EXISTING POOL & POOL HOUSE

EXISTING GARAGE

OUTLINE OF EXISTING SHADE HOUSE

30.50
30.50
30.50
31.00
31.50
31.50
31.50
31.50
31.00

geologix
consulting engineers

DRAWN	SIGNED	DATE
EC	EC	19/11/25
VERIFIED	SIGNED	DATE
SH	SH	19/11/25
APPROVED	SIGNED	DATE
EC	EC	19/11/25

REV.	DATE	REVISION DETAILS	BY	APP.
A	19/11/25	FIRST ISSUE	EC	EC

CLIENT.
JOSH & CARNA LAZET

PROJECT.
7 RIVERVIEW ROAD
KERIKERI
FAR NORTH
LOT 1 DP 95971

DRAWING TITLE.
PROPOSED SCHEME PLAN
FOR
SUBDIVISION RESOURCE CONSENT

STATUS. FINAL
NOT FOR CONSTRUCTION

SCALE	SHEET SIZE.
1:750	A3

PROJECT NO.	TYPE.	CLASS.	SHEET NO.	REV.
C0719N	RC		100	A

NOTES:
- CONTOUR INTERVAL IS 0.5 m MAJOR, 0.1 m MINOR.
- BOUNDARIES, AERIAL PHOTOGRAPH, LiDAR CONTOURS EXTRACTED FROM LINZ DATA SERVICE.
- PROPOSED SCHEME PLAN REPRODUCED FROM WILLIAMS & KING DRAWING REF. 24703, DATED SEPTEMBER 2025..

EXISTING CULVERT, NO UPGRADE REQUIRED

30.50

DISTANCE TO CLOSEST HYDRANT

14.21

EXISTING WATER METER TO BE RE-USED FOR LOT 2.
PIPELINE POSITION TO BE VERIFIED AS BEING WITHIN ROW EASEMENT

30.50

30.50

FUTURE 10,000 LITRE ATTENUATION TANK
FINAL LOCATION AND SIZE SUBJECT TO BUILDING CONSENT DESIGN. CONNECT TANK OUTLET TO NEW STORMWATER CONNECTION

31.00

FORM NEW WATER CONNECTION AND WATER METER

NEW STORMWATER CONNECTION TO OPEN SWALE DRAIN. FORMED AT SUBDIVISION STAGE, SUBJECT TO EDA DESIGN

PIPELINE POSITION TO BE VERIFIED AS BEING WITHIN ROW EASEMENT

31.50

geologix
consulting engineers

DRAWN	SIGNED	DATE					
EC	EC	19/11/25					
VERIFIED	SIGNED	DATE					
SH	SH	19/11/25					
APPROVED	SIGNED	DATE					
EC	EC	19/11/25	A	19/11/25	FIRST ISSUE	EC	EC
			REV.	DATE	REVISION DETAILS	BY	APP.

CLIENT.
JOSH & CARNA LAZET

PROJECT.
7 RIVERVIEW ROAD
KERIKERI
FAR NORTH
LOT 1 DP 95971

DRAWING TITLE.
POTABLE WATER & STORMWATER
LOT 1 PLAN FOR
SUBDIVISION RESOURCE CONSENT

STATUS. FINAL
NOT FOR CONSTRUCTION

SCALE	SHEET SIZE.				
1:750	A3				
PROJECT NO.	TYPE.	CLASS.	SHEET NO.	REV.	
C0719N	RC		400	A	

NOTES:
- CONTOUR INTERVAL IS 0.5 m MAJOR, 0.1 m MINOR.
- BOUNDARIES, AERIAL PHOTOGRAPH, LiDAR CONTOURS EXTRACTED FROM LINZ DATA SERVICE.
- PROPOSED SCHEME PLAN REPRODUCED FROM WILLIAMS & KING DRAWING REF. 24703, DATED SEPTEMBER 2025.

PIPELINE POSITION TO BE VERIFIED AS BEING WITHIN ROW EASEMENT

31.50

31.50

INSTALL ABOVE OR BELOW GROUND DISPERSION DEVICE SUBJECT TO DETAILED DESIGN. FINAL LOCATION TBC

CONNECT EXISTING DWELLING, POOL HOUSE & GARAGE ROOF TO NEW 3,000 LITRE PROMAX SLIMLINE TANK OR SIMILAR. SUBJECT TO DESIGN DETAILING PRIOR TO INSTALL. PROVIDES MITIGATION FOR EXISTING IMPERVIOUS SURFACES ABOVE PERMITTED ACTIVITY STANDARD

31.50

31.50

31.00

geologix
consulting engineers

DRAWN	SIGNED	DATE					
EC	EC	19/11/25					
VERIFIED	SIGNED	DATE					
SH	SH	19/11/25					
APPROVED	SIGNED	DATE					
EC	EC	19/11/25	A	19/11/25	FIRST ISSUE	EC	EC
			REV.	DATE	REVISION DETAILS	BY	APP.

CLIENT.
JOSH & CARNA LAZET

PROJECT.
7 RIVERVIEW ROAD
KERIKERI
FAR NORTH
LOT 1 DP 95971

DRAWING TITLE.
POTABLE WATER & STORMWATER
LOT 2 PLAN FOR
SUBDIVISION RESOURCE CONSENT

STATUS. FINAL NOT FOR CONSTRUCTION				
SCALE 1:750			SHEET SIZE. A3	
PROJECT NO. C0719N	TYPE. RC	CLASS.	SHEET NO. 401	REV. A

NOTES:
- CONTOUR INTERVAL IS 0.5 m MAJOR, 0.1 m MINOR.
- BOUNDARIES, AERIAL PHOTOGRAPH, LiDAR CONTOURS EXTRACTED FROM LINZ DATA SERVICE.
- PROPOSED SCHEME PLAN REPRODUCED FROM WILLIAMS & KING DRAWING REF. 24703, DATED SEPTEMBER 2025.

PRELIMINARY WASTEWATER PRIMARY FIELD

PRELIMINARY RESERVE WASTEWATER FIELD

30.50
30.50
30.50
31.00
31.50
31.50
31.50
31.00
HA01
HA02
PP
H
H
N

DRAWN EC	SIGNED EC	DATE 19/11/25						
VERIFIED SH	SIGNED SH	DATE 19/11/25						
APPROVED EC	SIGNED EC	DATE 19/11/25	A	19/11/25	FIRST ISSUE	EC	EC	
			REV.	DATE	REVISION DETAILS	BY	APP.	

geologix consulting engineers

CLIENT: JOSH & CARNA LAZET

PROJECT: 7 RIVERVIEW ROAD KERIKERI FAR NORTH LOT 1 DP 95971

DRAWING TITLE: WASTEWATER SITE PLAN FOR SUBDIVISION RESOURCE CONSENT

STATUS: FINAL
NOT FOR CONSTRUCTION

SCALE: 1:750

SHEET SIZE: A3

PROJECT NO.	TYPE.	CLASS.	SHEET NO.	REV.
C0719N	RC		500	A

NOTES:
- CONTOUR INTERVAL IS 0.5 m MAJOR, 0.1 m MINOR.
- BOUNDARIES, AERIAL PHOTOGRAPH, LiDAR CONTOURS EXTRACTED FROM LINZ DATA SERVICE.
- PROPOSED SCHEME PLAN REPRODUCED FROM WILLIAMS & KING DRAWING REF. 24703, DATED SEPTEMBER 2025.

Surface Analysis: Elevation Ranges

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	2D Area (m²)	Volume (m³)
1		-0.249	-0.194	2.8	0.0
2		-0.194	-0.172	1.7	0.1

PROPOSED EARTHWORKS TO FORM NEW VEHICLE CROSSING VOLUMES REPRESENT CUT TO SUBGRADE

3.00

30.50

30.50

30.50

31.00

DRAWN	SIGNED	DATE						CLIENT.
EC	EC	19/11/25						JOSH & CARNA LAZET
VERIFIED	SIGNED	DATE						PROJECT.
SH	SH	19/11/25						7 RIVERVIEW ROAD KERIKERI FAR NORTH LOT 1 DP 95971
APPROVED	SIGNED	DATE						DRAWING TITLE.
EC	EC	19/11/25	A	19/11/25	FIRST ISSUE	EC	EC	PROPOSED EARTHWORKS PLAN FOR SUBDIVISION RESOURCE CONSENT
			REV.	DATE	REVISION DETAILS	BY	APP.	

geologix consulting engineers

STATUS. FINAL
NOT FOR CONSTRUCTION

SCALE	SHEET SIZE.			
1:750	A3			
PROJECT NO.	TYPE.	CLASS.	SHEET NO.	REV.
C0719N	RC		600	A

NOTES:
- CONTOUR INTERVAL IS 0.5 m MAJOR, 0.1 m MINOR.
- BOUNDARIES, AERIAL PHOTOGRAPH, LiDAR CONTOURS EXTRACTED FROM LINZ DATA SERVICE.
- PROPOSED SCHEME PLAN REPRODUCED FROM WILLIAMS & KING DRAWING REF. 24703, DATED SEPTEMBER 2025.

geologix consulting engineers

DRAWN EC	SIGNED EC	DATE 19/11/25					
VERIFIED SH	SIGNED SH	DATE 19/11/25					
APPROVED EC	SIGNED EC	DATE 19/11/25	A	19/11/25	FIRST ISSUE	EC	EC
			REV.	DATE	REVISION DETAILS	BY	APP.

CLIENT.
JOSH & CARNA LAZET

PROJECT.
7 RIVERVIEW ROAD
KERIKERI
FAR NORTH
LOT 1 DP 95971

DRAWING TITLE.
PROPOSED ACCESS PLAN
FOR
SUBDIVISION RESOURCE CONSENT

STATUS. FINAL
NOT FOR CONSTRUCTION

SCALE	SHEET SIZE.				
1:750	A3				
PROJECT NO.	TYPE.	CLASS.	SHEET NO.	REV.	
C0719N	RC		700	A	

geologix
consulting engineers

APPENDIX B

Site Photographs

Site Notes

Figure 3: Driveway (Concrete)

Figure 4: Soaked trench (Information from the client – Rochelle)

Figure 5: Front House slotted deck.

Site Notes

Figure 6: Back of the main house.

Figure 7: Front of Garage.

Figure 8: Garage at back – Rainwater tank

Site Notes

Figure 9: Septic tank system at the back of main house opposite of pool.

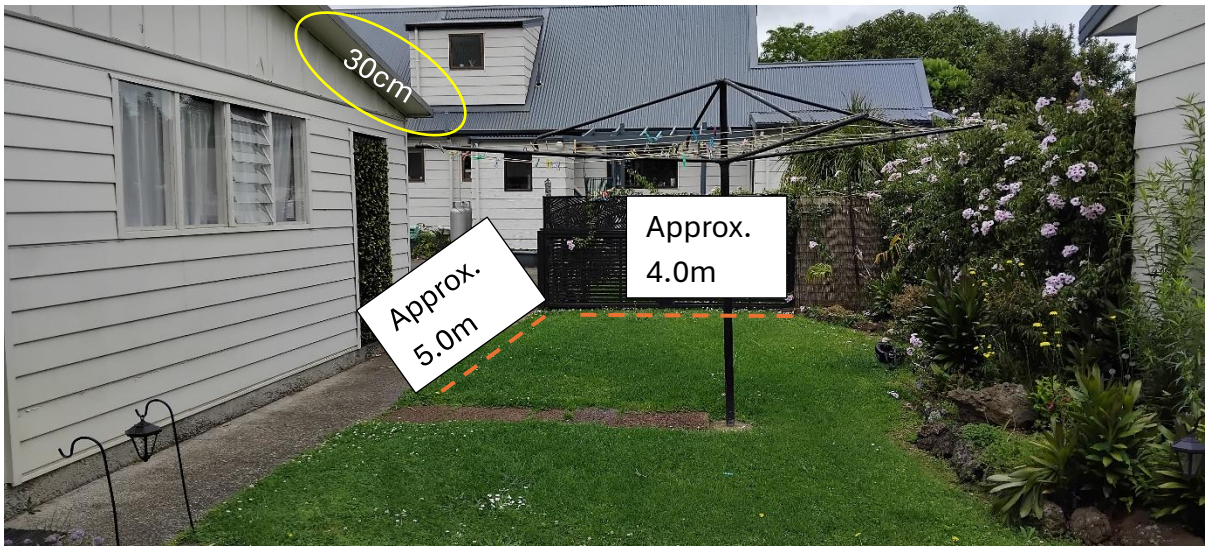


Figure 10: Discharge trench of Septic tank system between Garage and Pool house. (This marked measurements are approx. even the house owner is not sure how big is the trench.

Site Notes

Figure 11: Garden area.

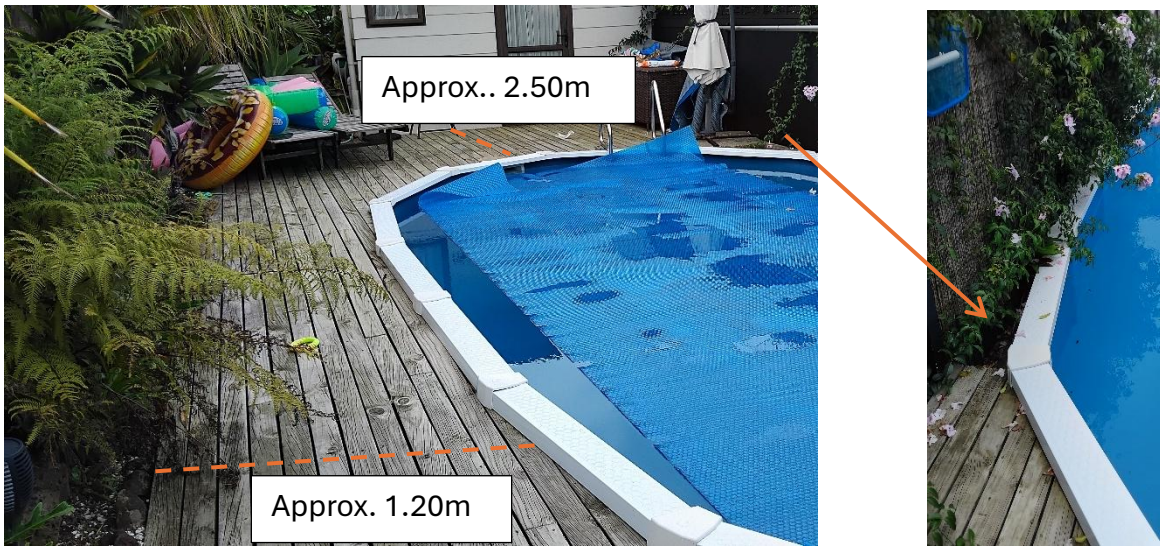


Figure 12: Pool measurement (Slotted deck on the poolside.

geologix
consulting engineers

APPENDIX C

Engineering Borehole Records

INVESTIGATION LOG: HA01

Project: 7 Riverview Road, Kerikeri
Project No.: C0719N
Site Address: 7 Riverview Road, Kerikeri
Client: Josh Lazet
Easting:
Northing:
Elevation:
Logged By: Christian Apondar
Reviewed By:
Investigation Date: 2025-11-10

LITHOLOGIC DESCRIPTION	DEPTH (M)	SYMBOL	VANE SHEAR STRENGTH (KPA) 90 130 170 210	SCALA PENETROMETER (BLOWS / 0MM) 5 10 15 20	WATER	DEPTH (M)
Ground Surface at						
SILT with trace rootlets; dark grey. Very stiff; moist; friable; [TOPSOIL]. 0.2 m	0		177, +200, +200, +200			0
Clayey SILT; brown. Very stiff; moist; low plasticity; [KERIKERI VOLCANIC GROUP]. 0.9 m	1					1
Clayey SILT with trace gravel; reddish brown. Very stiff; moist; low plasticity. [KERIKERI VOLCANIC GROUP]. 1.2 m	2					2
Terminated at 1.2 m	3					3
	4					4
	5					5

geologix consulting engineers

Notes:
1. Hand Auger terminated at target depth 1.20m bgl.
2. Groundwater not encountered during drilling.

INVESTIGATION LOG: HA02

Project: 7 Riverview Road, Kerikeri | Project No.: C0719N

Site Address: 7 Riverview Road, Kerikeri | Client: Josh Lazet

Easting: | Northing: | Elevation:

Logged By: Christian Apondar | Reviewed By: | Investigation Date: 2025-11-10

LITHOLOGIC DESCRIPTION	DEPTH (M)	SYMBOL	VANE SHEAR STRENGTH (KPA) 90 130 170 210	SCALA PENETROMETER (BLOWS / 0MM) 5 10 15 20	WATER	DEPTH (M)
SILT with trace rootlets; dark grey. Very stiff; moist; friable; [TOPSOIL]. 0.25 m	0		131			0
Clayey SILT; brown. Very stiff; moist; low plasticity. [KERIKERI VOLCANIC GROUP]. 0.9 m	1		+200			1
Clayey SILT with trace gravel; reddish brown. Very stiff; moist; low plasticity. Gravel is fine to medium, sub-rounded; [KERIKERI VOLCANIC GROUP]. 1.2 m	2		+200			2
Terminated at 1.2 m	3		+200			3
	4					4
	5					5

Notes:
1. Hand Auger terminated at target depth at 1.20m bgl.
2. Groundwater not encountered during drilling.

geologix
consulting engineers

APPENDIX D

Wastewater Assessment of Effects

Table 6: Wastewater Assessment of Environmental Effects

Item	NRC Separation Requirement[2]	FNDC Separation Requirement	Site Assessment[3]
Individual System Effects			
Flood plains	Above 5 % AEP	NR	Complies. Disposal field well above mapped flood hazard.
Stormwater flowpath[4]	5 m	NR	Complies, see annotations on Drawing No. 500.
Surface water feature[5]	15 m	15 – 30 m	Complies.
Coastal Marine Area	15 m	30 m	Complies.
Existing water supply bore.	20 m	NR	Complies.
Property boundary	1.5 m	1.5	Complies. Including proposed subdivision boundaries.
Winter groundwater table	0.6 m	0.6 m	Complies.
Topography			Complies, <10 °.
Cut off drain required?			No.
Discharge Consent Required?			No.
	TP58	**NZS1547**	
Cumulative Effects			
Biological Oxygen Demand	≤20 g/m^3		Complies – secondary treatment.
Total Suspended Solids	≤30 g/m^3		Complies – secondary treatment.
Total Nitrogen	10 – 30 g/m^3	15 – 75 g/m^3	Complies – secondary treatment.
Phosphorous	NR	4 – 10 g/m^3	Complies – secondary treatment.
Ammonia	NR	Negligible	Complies – secondary treatment.
Nitrites/ Nitrates	NR	15 – 45 g/m^3	Complies – secondary treatment.
Conclusion: Effects are less than minor on the environment.			

1. *AEE based on proposed secondary treated effluent.*
2. *Northland Regional Plan Table 9.*
3. *Based on the recommendations of this report and Drawing No. 500.*
4. *Including any formed road with kerb and channel, and water-table drain that is down-slope of the disposal area.*
5. *River, lake, stream, pond, dam, or natural wetland.*

AEP Annual Exceedance Probability.
NR No Requirement.

geologix
consulting engineers

APPENDIX E

Stormwater Calculations

Project Ref:	C0719N	**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	7 Riverview Road, Kerikeri		
Design Case:	LOT 1 - FUTURE DEVELOPMENT	**50 % AEP STORM EVENT, TO 80 % OF PRE DEVELOPMENT**	
Date:	18 November 2025 REV 1		

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF CLIMATE CHANGE (20% FACTOR AS PER FNDC ENGINEERING STANDARDS).
PRE-DEVELOPMENT RUNOFF IS FACTORED BY 80% TO SUIT FNDC STANDARDS
RUNOFF COEFFIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

PRE DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
IMPERVIOUS A			
IMPERVIOUS B	0	0	
IMPERVIOUS C	0	0	
EX. PERVIOUS	400	0.59	GRASS
TOTAL	**400**	TYPE C	

POST DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
TO TANK	300	0.96	ROOF
OFFSET	100	0.96	DRIVEWAY
PERVIOUS	0	0	
EX. CONSENTED	0	0	
TOTAL	**400**	TYPE C	

RAINFALL INTENSITY, 50% AEP, 10MIN DURATION

50 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	66.0	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
50 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	79.20	mm/hr

* CLIMATE CHANGE FACTOR OF 20% APPLIED IN ACCORDANCE WITH FNDC ENGINEERING STANDARDS 4.3.9.1. NIWA HISTORIC RAINFALL INTENSITY DATA, 10MIN, IS MULTIPLIED BY CLIMATE CHANGE FACTOR.

PRE AND POST-DEVELOPMENT RUNOFF, 50%AEP WITH CC, VARIOUS DURATIONS

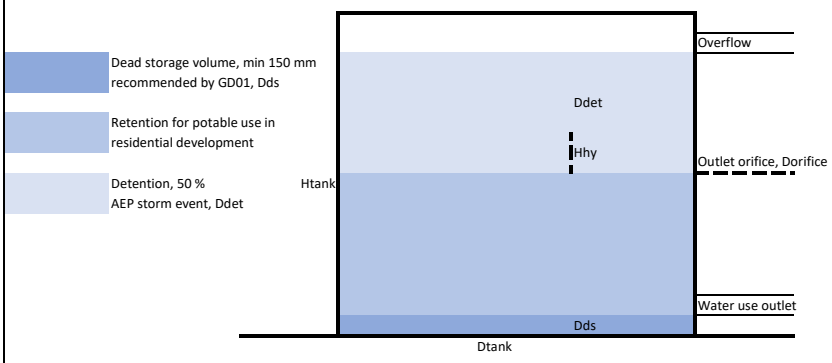
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PRE DEV RUNOFF, Qpre, l/s	80% of PRE DEV RUNOFF, Qpre(80%), l/s	COMMENTS
10	66.00	1.2	79.20	8.45	4.33	3.46	*Critical duration (time of concentration) for the catchments is 10min*
20	47.50	1.2	57.00	6.08	3.11	2.49	
30	39.10	1.2	46.92	5.00	2.56	2.05	
60	27.90	1.2	33.48	3.57	1.83	1.46	
120	19.60	1.2	23.52	2.51	1.28	1.03	*Pre-dev calculated on Intensity without CC factor*
360	10.70	1.2	12.84	1.37	0.70	0.56	
720	6.98	1.2	8.38	0.89	0.46	0.37	
1440	4.38	1.2	5.26	0.56	0.29	0.23	
2880	2.62	1.2	3.14	0.34	0.17	0.14	
4320	1.90	1.2	2.28	0.24	0.12	0.10	

ATTENUATION ANALYSIS, VARIOUS DURATIONS

DURATION, min	OFFSET FLOW, Qoff, l/s	TANK INFLOW , Qin, l/s	ALLOWABLE TANK OUTFLOW, Qpre(80%) - Qoff, l/s	SELECTED TANK OUTFLOW, Qout, l/s	DIFFERENCE (Qin - Qout), l/s	Required Storage, litres	
10	2.11	6.34	1.35	1.35	4.99	2992	*select largest required storage , regardless of duration, to avoid overflow*
20	1.52	4.56	0.97	1.35	3.21	3853	
30	1.25	3.75	0.80	1.35	2.40	4328	
60	0.89	2.68	0.57	1.35	1.33	4785	
120	0.63	1.88	0.40	1.35	0.53	3832	
360	0.34	1.03	0.22	1.35	No Att. Req.	0	
720	0.22	0.67	0.14	1.35	No Att. Req.	0	
1440	0.14	0.42	0.09	1.35	No Att. Req.	0	
2880	0.08	0.25	0.05	1.35	No Att. Req.	0	
4320	0.06	0.18	0.04	1.35	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 10,000 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	4.785	m3	Select largest storage as per analysis
TANK HEIGHT, Htank	2.9	m	Concept sizing for 10,000 litre tank
TANK DIAMETER, Dtank	2.165	m	No. of Tanks 1
TANK AREA, Atank	3.68	m2	Area of TWO tanks
TANK MAX STORAGE VOLUME, Vtank	10676	litres	
REQUIRED STORAGE HEIGHT, Ddet	1.30	m	Below overflow
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum
TOTAL WATER DEPTH REQUIRED	1.45	m	
SELECTED TANK OUTFLOW, Qout, l/s	0.00135	m3/s	Selected tank outflow
AVERAGE HYDRAULIC HEAD, Hhy	0.65	m	
AREA OF ORIFICE, Aorifice	6.09E-04	m2	
ORIFICE DIAMETER, Dorifice	28	mm	
VELOCITY AT ORIFICE	5.05	m/s	At max. head level

Project Ref:	C0719N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	7 Riverview Road, Kerikeri			
Design Case:	LOT 1 - FUTURE DEVELOPMENT		**20 % AEP STORM EVENT, TO 80 % OF PRE DEVELOPMENT**	
Date:	18 November 2025	REV 1		

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF CLIMATE CHANGE (20% FACTOR AS PER FNDC ENGINEERING STANDARDS).
PRE-DEVELOPMENT RUNOFF IS FACTORED BY 80% TO SUIT FNDC STANDARDS
RUNOFF COEFFIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

PRE DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
IMPERVIOUS A	0	0	
IMPERVIOUS B	0	0	
IMPERVIOUS C	0	0	
EX. PERVIOUS	400	0.59	GRASS
TOTAL	**400**	TYPE C	

POST DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
TO TANK	300	0.96	ROOF
OFFSET	100	0.96	DRIVEWAY
PERVIOUS	0	0	
EX. CONSENTED	0	0	
0	0	0	
TOTAL	**400**	TYPE C	

RAINFALL INTENSITY, 20% AEP, 10MIN DURATION

20 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	85.4	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
20 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	102.5	mm/hr

* CLIMATE CHANGE FACTOR OF 20% APPLIED IN ACCORDANCE WITH FNDC ENGINEERING STANDARDS 4.3.9.1. NIWA HISTORIC RAINFALL INTENSITY DATA, 10MIN, IS MULTIPLIED BY CLIMATE CHANGE FACTOR.

PRE AND POST-DEVELOPMENT RUNOFF, 20%AEP WITH CC, VARIOUS DURATIONS

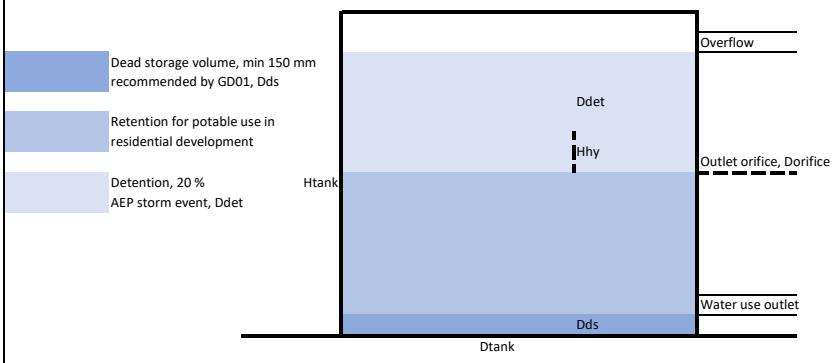
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PRE DEV RUNOFF, Qpre, l/s	80% of PRE DEV RUNOFF, Qpre(80%), l/s	COMMENTS
10	85.40	1.2	102.48	10.93	5.60	4.48	*Critical duration (time of concentration) for the catchments is 10min*
20	61.60	1.2	73.92	7.88	4.04	3.23	
30	50.80	1.2	60.96	6.50	3.33	2.66	
60	36.30	1.2	43.56	4.65	2.38	1.90	
120	25.50	1.2	30.60	3.26	1.67	1.34	*Pre-dev calculated on Intensity without CC factor*
360	13.90	1.2	16.68	1.78	0.91	0.73	
720	9.14	1.2	10.97	1.17	0.60	0.48	
1440	5.75	1.2	6.90	0.74	0.38	0.30	
2880	3.45	1.2	4.14	0.44	0.23	0.18	
4320	2.49	1.2	2.99	0.32	0.16	0.13	

ATTENUATION ANALYSIS, VARIOUS DURATIONS

DURATION, min	OFFSET FLOW, Qoff, l/s	TANK INFLOW , Qin, l/s	ALLOWABLE TANK OUTFLOW, Qpre(80%) - Qoff, l/s	SELECTED TANK OUTFLOW, Qout, l/s	DIFFERENCE (Qin - Qout), l/s	Required Storage, litres	
10	2.73	8.20	1.75	1.75	6.45	3871	*select largest required storage , regardless of duration, to avoid overflow*
20	1.97	5.91	2.07	1.75	4.17	5001	
30	1.63	4.88	1.70	1.75	3.13	5636	
60	1.16	3.48	1.22	1.75	1.74	6260	
120	0.82	2.45	0.86	1.75	0.70	5055	
360	0.44	1.33	0.47	1.75	No Att. Req.	0	
720	0.29	0.88	0.31	1.75	No Att. Req.	0	
1440	0.18	0.55	0.19	1.75	No Att. Req.	0	
2880	0.11	0.33	0.12	1.75	No Att. Req.	0	
4320	0.08	0.24	0.08	1.75	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 10,000 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	6.260	m3	Select largest storage as per analysis
TANK HEIGHT, Htank	2.9	m	Concept sizing for 10,000 litre tank
TANK DIAMETER, Dtank	2.165	m	No. of Tanks 1
TANK AREA, Atank	3.68	m2	Area of TWO tanks
TANK MAX STORAGE VOLUME, Vtank	10676	litres	
REQUIRED STORAGE HEIGHT, Ddet	1.70	m	Below overflow
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum
TOTAL WATER DEPTH REQUIRED	1.85	m	
SELECTED TANK OUTFLOW, Qout, l/s	0.00175	m3/s	Selected tank outflow
AVERAGE HYDRAULIC HEAD, Hhy	0.85	m	
AREA OF ORIFICE, Aorifice	6.89E-04	m2	
ORIFICE DIAMETER, Dorifice	30	mm	
VELOCITY AT ORIFICE	5.78	m/s	At max. head level

Project Ref:	C0719N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	7 Riverview Road, Kerikeri			
Design Case:	LOT 1 - FUTURE DEVELOPMENT		**10 % AEP STORM EVENT, TO PRE-DEVELOPMENT FLOW**	
Date:	18 November 2025	REV 1		

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF CLIMATE CHANGE (20% FACTOR AS PER FNDC ENGINEERING STANDARDS).
THE 10% AEP SCENARIO IS PROVIDED TO SATISFY FNDC DISTRICT PLAN RULE 13.7.3.4. PRE-DEVELOPMENT RUNOFF REMAINS UNFACTORED IN THIS SCENARIO.
RUNOFF COEFFIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

PRE DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
IMPERVIOUS A	0	0	
IMPERVIOUS B	0	0	
IMPERVIOUS C	0	0	
EX. PERVIOUS	400	0.59	GRASS
0	0	0	
TOTAL	**400**	TYPE C	

POST DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
TO TANK	300	0.96	ROOF
OFFSET	100	0.96	DRIVEWAY
PERVIOUS	0	0	
EX. CONSENTED	0	0	
0	0	0	
TOTAL	**400**	TYPE C	

RAINFALL INTENSITY, 10% AEP, 10MIN DURATION

10 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	99.7	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
10 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	119.6	mm/hr

* CLIMATE CHANGE FACTOR OF 20% APPLIED IN ACCORDANCE WITH FNDC ENGINEERING STANDARDS 4.3.9.1. NIWA HISTORIC RAINFALL INTENSITY DATA, 10MIN, IS MULTIPLIED BY CLIMATE CHANGE FACTOR.

PRE AND POST-DEVELOPMENT RUNOFF, 10%AEP WITH CC, VARIOUS DURATIONS

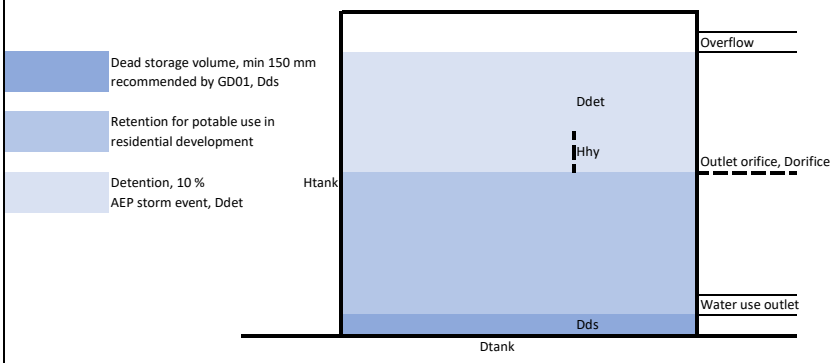
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PRE DEV RUNOFF, Qpre, l/s		COMMENTS
10	99.70	1.2	119.64	12.76	6.54		*Critical duration (time of concentration) for the catchments is 10min*
20	72.00	1.2	86.40	9.22	5.66		
30	59.40	1.2	71.28	7.60	4.67		
60	42.50	1.2	51.00	5.44	3.34		
120	29.90	1.2	35.88	3.83	2.35		*Pre-dev calculated on Intensity without CC factor*
360	16.40	1.2	19.68	2.10	1.29		
720	10.70	1.2	12.84	1.37	0.84		
1440	6.77	1.2	8.12	0.87	0.53		
2880	4.06	1.2	4.87	0.52	0.32		
4320	2.94	1.2	3.53	0.38	0.23		

ATTENUATION ANALYSIS, VARIOUS DURATIONS

DURATION, min	OFFSET FLOW, Qoff, l/s	TANK INFLOW , Qin, l/s	ALLOWABLE TANK OUTFLOW, Qpre - Qoff, l/s	SELECTED TANK OUTFLOW, Qout, l/s	DIFFERENCE (Qin - Qout), l/s	Required Storage, litres	
10	3.19	9.57	3.35	3.35	6.23	3735	*select largest required storage , regardless of duration, to avoid overflow*
20	2.30	6.91	3.36	3.35	3.57	4280	
30	1.90	5.70	2.77	3.35	2.36	4242	
60	1.36	4.08	1.98	3.35	0.73	2644	
120	0.96	2.87	1.40	3.35	No Att. Req.	0	
360	0.52	1.57	0.77	3.35	No Att. Req.	0	
720	0.34	1.03	0.50	3.35	No Att. Req.	0	
1440	0.22	0.65	0.32	3.35	No Att. Req.	0	
2880	0.13	0.39	0.19	3.35	No Att. Req.	0	
4320	0.09	0.28	0.14	3.35	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 10,000 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	4.280	m3	Select largest storage as per analysis
TANK HEIGHT, Htank	2.9	m	Concept sizing for 10,000 litre tank
TANK DIAMETER, Dtank	2.165	m	No. of Tanks 1
TANK AREA, Atank	3.68	m2	Area of TWO tanks
TANK MAX STORAGE VOLUME, Vtank	10676	litres	
REQUIRED STORAGE HEIGHT, Ddet	1.16	m	Below overflow
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum
TOTAL WATER DEPTH REQUIRED	1.31	m	
SELECTED TANK OUTFLOW, Qout, l/s	0.00335	m3/s	Selected tank outflow
AVERAGE HYDRAULIC HEAD, Hhy	0.58	m	
AREA OF ORIFICE, Aorifice	1.60E-03	m2	
ORIFICE DIAMETER, Dorifice	45	mm	
VELOCITY AT ORIFICE	4.78	m/s	At max. head level

Project Ref:	C0719N	STORMWATER DISPERSION PIPE/ TRENCH	geologix consulting engineers
Project Address:	7 Riverview Road, Kerikeri		
Design Case:	LOT 1 - FUTURE DEVELOPMENT	DISCHARGE DEVICE - LEVEL SPREADER OR TRENCH	
Date:	18 November 2025 REV 1		

DESIGN BASED ON REFERENCED DEVELOPMENT PLANS TO PROVIDE A MINIMUM LENGTH OF ABOVE OR BELOW GROUND STORMWATER TANK OVERFLOW DISCHARGE DISPERSION DEVICE. IN GENERAL ACCORDANCE WITH MODIFIED RATIONAL METHOD AND AUCKLAND COUNCIL TR2013/018.

DESIGN STORM EVENT **1%** AEP EVENT

SLOPE BETWEEN SOURCE & DISPERSION DEVICE

ELEVATION	h	CHAINAGE, x	Δ x	h bar	Δ A
m	m	m	m	m	m2
0	0	0	0	0	0
0	0.01	1	1	0.005	0.005
	TOTALS	1	1		0.005
	SLOPE, Sc	0.010	m/m		

MANNINGS PIPE FLOW - INCOMING PIPE

Dia, m	d/D	α, rad	P, m	A, m^2	R	1:S	n	V, m/s	Q, m^3/s	Q, l/s	
0.125	0.000	6.283	0.0000	0.0000	0.000	100	0.009	0.000	0.0000	0.000	**0 % full**
0.125	0.050	5.381	0.0564	0.0002	0.004	100	0.0090	0.283	0.0001	0.065	
0.125	0.100	4.996	0.0804	0.0006	0.008	100	0.0090	0.442	0.0003	0.282	
0.125	0.150	4.692	0.0994	0.0012	0.012	100	0.0090	0.570	0.0007	0.658	
0.125	0.200	4.429	0.1159	0.0017	0.015	100	0.0090	0.678	0.0012	1.185	
0.125	0.250	4.189	0.1309	0.0024	0.018	100	0.0090	0.772	0.0019	1.853	
0.125	0.300	3.965	0.1449	0.0031	0.021	100	0.0090	0.856	0.0026	2.649	
0.125	0.350	3.751	0.1583	0.0038	0.024	100	0.0090	0.929	0.0036	3.557	
0.125	0.400	3.544	0.1712	0.0046	0.027	100	0.0090	0.995	0.0046	4.559	
0.125	0.450	3.342	0.1838	0.0054	0.029	100	0.0090	1.052	0.0056	5.635	
0.125	0.500	3.142	0.1963	0.0061	0.031	100	0.0090	1.102	0.0068	6.764	**50 % full**
0.125	0.550	2.941	0.2089	0.0069	0.033	100	0.0090	1.146	0.0079	7.924	
0.125	0.600	2.739	0.2215	0.0077	0.035	100	0.0090	1.182	0.0091	9.089	
0.125	0.650	2.532	0.2344	0.0084	0.036	100	0.0090	1.212	0.0102	10.233	
0.125	0.700	2.319	0.2478	0.0092	0.037	100	0.0090	1.234	0.0113	11.326	
0.125	0.750	2.094	0.2618	0.0099	0.038	100	0.0090	1.249	0.0123	12.336	
0.125	0.800	1.855	0.2768	0.0105	0.038	100	0.0090	1.256	0.0132	13.223	
0.125	0.850	1.591	0.2933	0.0111	0.038	100	0.0090	1.254	0.0139	13.940	
0.125	0.900	1.287	0.3123	0.0116	0.037	100	0.0090	1.239	0.0144	14.418	
0.125	0.950	0.902	0.3363	0.0120	0.036	100	0.0090	1.207	0.0145	14.536	
0.125	1.000	0.000	0.3927	0.0123	0.031	100	0.0090	1.102	0.0135	13.528	**Flowing full**

DISPERSION SPECIFICATION

INCOMING PIPE PROPERTIES:

TANK OUTFLOW, 1 % AEP	14.21	l/s		
MAXIMUM PIPE FLOW	14.54	l/s		
SUFFICIENT CAPACITY IN PIPE	YES			
LONGITUDINAL SLOPE	0.010	m/m		
DESIGN VELOCITY, Dv	1.256	m/s		

LEVEL SPREADER SPECIFICATIONS:

PIPE DIAMETER, m	0.15	m		
MANNINGS PIPE ROUGHNESS	0.009			
NUMBER OF ORIFICES	53	No.		
DIA. OF ORIFICE, D	20	mm		
ORIFICE INTERVALS, C/C	150	mm		
DISPERSION PIPE LENGTH, L	**7.8**	**m**		

ORIFICE DESIGN FLOW CHECK:

AREA OF SINGLE ORIFICE, A	0.00031	m2		
FLOW OUT OF 1 ORIFICE	0.000272829	m3/s	0.27 l/s	
FLOW OUT OF ALL ORIFICES	0.01445995	m3/s	14.46 l/s	**DESIGN OK**
VELOCITY FROM SINGLE ORIFICE	0.87	m/s		

BROAD CRESTED WEIR DESIGN FLOW CHECK:

FLOW DEPTH, h	0.1	m		
BASE WIDTH = L	7.8	m		
FLOW AREA	0.78	m2		
WEIR FLOW	0.01455	m3/s	14.55 l/s	**DESIGN OK**
WEIR VELOCITY	0.019	m/s		

INCOMING PIPE & SPREADER SUMARY:

INCOMING PIPE DIAMETER, m	0.125	m
SPREADER PIPE DIAMETER, m	0.150	m
MANNINGS PIPE ROUGHNESS	0.009	
NUMBER OF ORIFICES	53	No.
DIA. OF ORIFICE, D	20	mm
ORIFICE INTERVALS, C/C	150	mm
DISPERSION PIPE LENGTH, L	**7.8**	**m**

Project Ref:	0719N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	7 Riverview Road, Kerikeri			
Design Case:	LOT 2 - EXISTING DEVELOPMENT		**50 % AEP STORM EVENT, TO PERMITTED ACTIVITY THRESHOLD**	
Date:	18 November 2025	REV1		

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF CLIMATE CHANGE (20% FACTOR AS PER FNDC ENGINEERING STANDARDS).
PERMITTED ACTIVITY (PRE-DEVELOPMENT) RUNOFF IS NOT FACTORED.
RUNOFF COEFFIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

PERMITTED ACTIVITY CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
IMPERVIOUS A			
IMPERVIOUS B	0	0	
IMPERVIOUS C	0	0	
EX. PERVIOUS	318.25	0.96	PA Standard (Sealed)
TOTAL	**318.25**	TYPE C	

POST DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
TO TANK	271	0.96	HOUSE, GARAGE, POOL HOUSE ROOF
OFFSET	278.75	0.96	OFFSET (SHADE HOUSE & PART DRIVE)
PERVIOUS	0	0	
EX. CONSENTED	0	0	
TOTAL	**549.75**	TYPE C	

RAINFALL INTENSITY, 50% AEP, 10MIN DURATION

50 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	66.0	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
50 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	79.20	mm/hr

* CLIMATE CHANGE FACTOR OF 20% APPLIED IN ACCORDANCE WITH FNDC ENGINEERING STANDARDS 4.3.9.1. NIWA HISTORIC RAINFALL INTENSITY DATA, 10MIN, IS MULTIPLIED BY CLIMATE CHANGE FACTOR.

PRE AND POST-DEVELOPMENT RUNOFF, 50%AEP WITH CC, VARIOUS DURATIONS

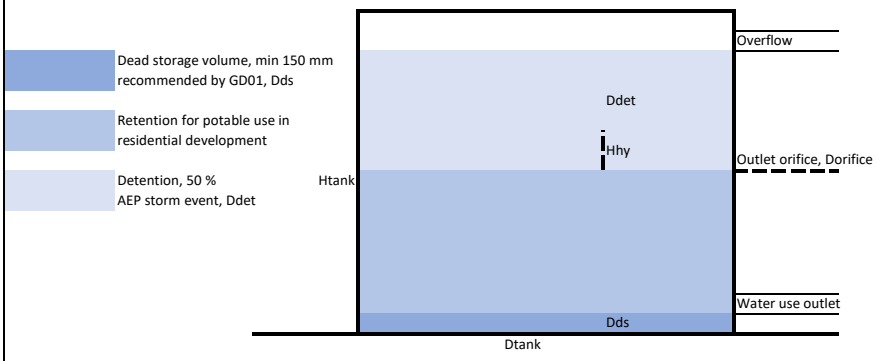
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PERMIITED ACTIVITY RUNOFF, Qpa, l/s		COMMENTS
10	66.00	1.2	79.20	11.61	6.72		*Critical duration (time of concentration) for the catchments is 10min*
20	47.50	1.2	57.00	8.36	4.84		
30	39.10	1.2	46.92	6.88	3.98		
60	27.90	1.2	33.48	4.91	2.84		
120	19.60	1.2	23.52	3.45	2.00		
360	10.70	1.2	12.84	1.88	1.09		
720	6.98	1.2	8.38	1.23	0.71		
1440	4.38	1.2	5.26	0.77	0.45		
2880	2.62	1.2	3.14	0.46	0.27		
4320	1.90	1.2	2.28	0.33	0.19		

ATTENUATION ANALYSIS, VARIOUS DURATIONS

DURATION, min	OFFSET FLOW, Qoff, l/s	TANK INFLOW , Qin, l/s	ALLOWABLE TANK OUTFLOW, Qpa - Qoff, l/s	SELECTED TANK OUTFLOW, Qout, l/s	DIFFERENCE (Qin - Qout), l/s	Required Storage, litres	
10	5.89	5.72	0.83	0.83	4.89	2934	*select largest required storage , regardless of duration, to avoid overflow*
20	4.24	4.12	0.60	0.83	3.28	3942	
30	3.49	3.39	0.49	0.83	2.56	4602	
60	2.49	2.42	0.35	0.83	1.59	5707	
120	1.75	1.70	0.25	0.83	0.87	6231	
360	0.95	0.93	0.14	0.83	0.09	2023	
720	0.62	0.61	0.09	0.83	No Att. Req.	0	
1440	0.39	0.38	0.06	0.83	No Att. Req.	0	
2880	0.23	0.23	0.03	0.83	No Att. Req.	0	
4320	0.17	0.16	0.02	0.83	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 10,000 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	6.231	m3	Select largest storage as per analysis	
TANK HEIGHT, Htank	2.905	m	Concept sizing for 10,000 litre tank	
TANK DIAMETER, Dtank	2.19	m	No. of Tanks	1
TANK AREA, Atank	3.66	m2	Area of one tank	
TANK MAX STORAGE VOLUME, Vtank	10632	litres		
REQUIRED STORAGE HEIGHT, Ddet	1.70	m	Below overflow	
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum	
TOTAL WATER DEPTH REQUIRED	1.85	m		
SELECTED TANK OUTFLOW, Qout, l/s	0.00083	m3/s	Selected tank outflow	
AVERAGE HYDRAULIC HEAD, Hhy	0.85	m		
AREA OF ORIFICE, Aorifice	3.29E-04	m2		
ORIFICE DIAMETER, Dorifice	20	mm		
VELOCITY AT ORIFICE	5.78	m/s	At max. head level	

Project Ref:	C0719N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	7 Riverview Road, Kerikeri			
Design Case:	LOT 2 - EXISTING DEVELOPMENT		**20 % AEP STORM EVENT, TO PERMITTED ACTIVITY THRESHOLD**	
Date:	18 November 2025	REV1		

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF CLIMATE CHANGE (20% FACTOR AS PER FNDC ENGINEERING STANDARDS).
PERMITTED ACTIVITY (PRE-DEVELOPMENT) RUNOFF IS NOT FACTORED.
RUNOFF COEFFIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

PERMITTED ACTIVITY CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
IMPERVIOUS A	0	0	
IMPERVIOUS B	0	0	
IMPERVIOUS C	0	0	
EX. PERVIOUS	318.25	0.96	PA Standard (Sealed)
TOTAL	**318.25**	TYPE C	

POST DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
TO TANK	271	0.96	HOUSE, GARAGE, POOL HOUSE ROOF
OFFSET	278.75	0.96	OFFSET (SHADE HOUSE & PART DRIVE)
PERVIOUS	0	0	
EX. CONSENTED	0	0	
0	0	0	
TOTAL	**549.75**	TYPE C	

RAINFALL INTENSITY, 20% AEP, 10MIN DURATION

20 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	85.4	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
20 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	102.5	mm/hr

* CLIMATE CHANGE FACTOR OF 20% APPLIED IN ACCORDANCE WITH FNDC ENGINEERING STANDARDS 4.3.9.1. NIWA HISTORIC RAINFALL INTENSITY DATA, 10MIN, IS MULTIPLIED BY CLIMATE CHANGE FACTOR.

PRE AND POST-DEVELOPMENT RUNOFF, 20%AEP WITH CC, VARIOUS DURATIONS

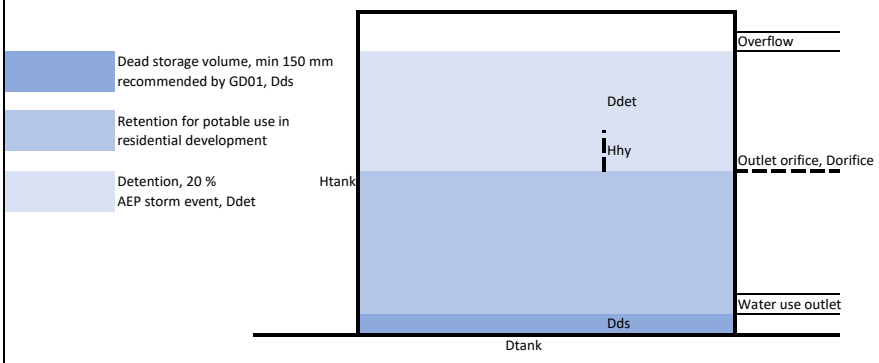
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PERMIITED ACTIVITY RUNOFF, Qpa, l/s		COMMENTS
10	85.40	1.2	102.48	15.02	8.70		*Critical duration (time of concentration) for the catchments is 10min*
20	61.60	1.2	73.92	10.84	6.27		
30	50.80	1.2	60.96	8.94	5.17		
60	36.30	1.2	43.56	6.39	3.70		
120	25.50	1.2	30.60	4.49	2.60		
360	13.90	1.2	16.68	2.45	1.42		
720	9.14	1.2	10.97	1.61	0.93		
1440	5.75	1.2	6.90	1.01	0.59		
2880	3.45	1.2	4.14	0.61	0.35		
4320	2.49	1.2	2.99	0.44	0.25		

ATTENUATION ANALYSIS, VARIOUS DURATIONS

DURATION, min	OFFSET FLOW, Qoff, l/s	TANK INFLOW , Qin, l/s	ALLOWABLE TANK OUTFLOW, Qpa - Qoff, l/s	SELECTED TANK OUTFLOW, Qout, l/s	DIFFERENCE (Qin - Qout), l/s	Required Storage, litres	
10	7.62	7.41	1.08	1.08	6.33	3796	*select largest required storage , regardless of duration, to avoid overflow*
20	5.49	5.34	0.78	1.08	4.26	5115	
30	4.53	4.41	0.64	1.08	3.33	5987	
60	3.24	3.15	0.46	1.08	2.07	7447	
120	2.27	2.21	0.32	1.08	1.13	8150	
360	1.24	1.21	0.18	1.08	0.13	2721	
720	0.82	0.79	0.12	1.08	No Att. Req.	0	
1440	0.51	0.50	0.07	1.08	No Att. Req.	0	
2880	0.31	0.30	0.04	1.08	No Att. Req.	0	
4320	0.22	0.22	0.03	1.08	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 10,000 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	8.150	m3	Select largest storage as per analysis
TANK HEIGHT, Htank	2.905	m	Concept sizing for 10,000 litre tank
TANK DIAMETER, Dtank	2.19	m	No. of Tanks 1
TANK AREA, Atank	3.66	m2	Area of one tank
TANK MAX STORAGE VOLUME, Vtank	10632	litres	
REQUIRED STORAGE HEIGHT, Ddet	2.23	m	Below overflow
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum
TOTAL WATER DEPTH REQUIRED	2.38	m	
SELECTED TANK OUTFLOW, Qout, l/s	0.00108	m3/s	Selected tank outflow
AVERAGE HYDRAULIC HEAD, Hhy	1.11	m	
AREA OF ORIFICE, Aorifice	3.73E-04	m2	
ORIFICE DIAMETER, Dorifice	22	mm	
VELOCITY AT ORIFICE	6.61	m/s	At max. head level

Project Ref:	C0719N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	7 Riverview Road, Kerikeri			
Design Case:	LOT 2 - EXISTING DEVELOPMENT		**10 % AEP STORM EVENT, TO PERMITTED ACTIVITY THRESHOLD**	
Date:	18 November 2025	REV1		

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF CLIMATE CHANGE (20% FACTOR AS PER FNDC ENGINEERING STANDARDS).
THE 10% AEP SCENARIO IS PROVIDED TO SATISFY FNDC DISTRICT PLAN RULE 13.7.3.4. PRE-DEVELOPMENT/ PA RUNOFF REMAINS UNFACTORED IN THIS SCENARIO.
RUNOFF COEFFIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

PERMITTED ACTIVITY CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
IMPERVIOUS A	0	0	
IMPERVIOUS B	0	0	
IMPERVIOUS C	0	0	
EX. PERVIOUS	318.25	0.96	PA Standard (Sealed)
0	0	0	
TOTAL	**318.25**	TYPE C	

POST DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
TO TANK	271	0.96	HOUSE, GARAGE, POOL HOUSE ROOF
OFFSET	278.75	0.96	OFFSET (SHADE HOUSE & PART DRIVE)
PERVIOUS	0	0	
EX. CONSENTED	0	0	
0	0	0	
TOTAL	**549.75**	TYPE C	

RAINFALL INTENSITY, 10% AEP, 10MIN DURATION

10 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	99.7	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
10 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	119.6	mm/hr

* CLIMATE CHANGE FACTOR OF 20% APPLIED IN ACCORDANCE WITH FNDC ENGINEERING STANDARDS 4.3.9.1. NIWA HISTORIC RAINFALL INTENSITY DATA, 10MIN, IS MULTIPLIED BY CLIMATE CHANGE FACTOR.

PRE AND POST-DEVELOPMENT RUNOFF, 10%AEP WITH CC, VARIOUS DURATIONS

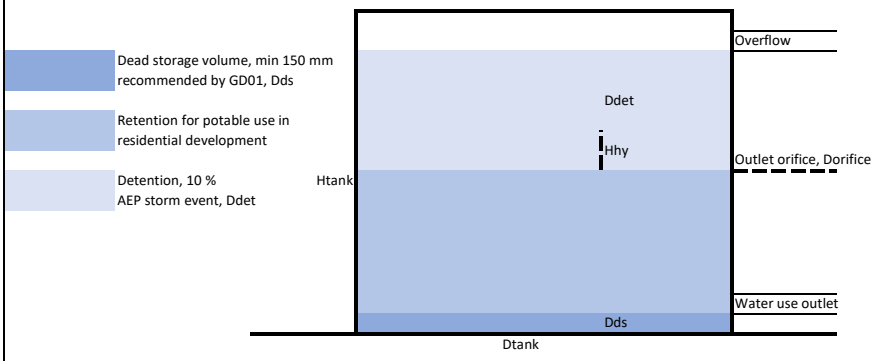
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PERMIITED ACTIVITY RUNOFF, Qpa, l/s		COMMENTS
10	99.70	1.2	119.64	17.54	10.15		*Critical duration (time of concentration) for the catchments is 10min*
20	72.00	1.2	86.40	12.67	7.33		
30	59.40	1.2	71.28	10.45	6.05		
60	42.50	1.2	51.00	7.48	4.33		
120	29.90	1.2	35.88	5.26	3.05		
360	16.40	1.2	19.68	2.89	1.67		
720	10.70	1.2	12.84	1.88	1.09		
1440	6.77	1.2	8.12	1.19	0.69		
2880	4.06	1.2	4.87	0.71	0.41		
4320	2.94	1.2	3.53	0.52	0.30		

ATTENUATION ANALYSIS, VARIOUS DURATIONS

DURATION, min	OFFSET FLOW, Qoff, l/s	TANK INFLOW , Qin, l/s	ALLOWABLE TANK OUTFLOW, Qpa - Qoff, l/s	SELECTED TANK OUTFLOW, Qout, l/s	DIFFERENCE (Qin - Qout), l/s	Required Storage, litres	
10	8.89	8.65	1.26	1.26	7.39	4431	*select largest required storage , regardless of duration, to avoid overflow*
20	6.42	6.24	0.91	1.26	4.98	5980	
30	5.30	5.15	0.75	1.26	3.89	7004	
60	3.79	3.69	0.54	1.26	2.43	8731	
120	2.67	2.59	0.38	1.26	1.33	9596	
360	1.46	1.42	0.21	1.26	0.16	3499	
720	0.95	0.93	0.14	1.26	No Att. Req.	0	
1440	0.60	0.59	0.09	1.26	No Att. Req.	0	
2880	0.36	0.35	0.05	1.26	No Att. Req.	0	
4320	0.26	0.25	0.04	1.26	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 10,000 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	9.596	m3	Select largest storage as per analysis	
TANK HEIGHT, Htank	2.905	m	Concept sizing for 10,000 litre tank	
TANK DIAMETER, Dtank	2.19	m	No. of Tanks	1
TANK AREA, Atank	3.66	m2	Area of one tank	
TANK MAX STORAGE VOLUME, Vtank	10632	litres		
REQUIRED STORAGE HEIGHT, Ddet	2.62	m	Below overflow	
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum	
TOTAL WATER DEPTH REQUIRED	2.77	m		
SELECTED TANK OUTFLOW, Qout, l/s	0.00126	m3/s	Selected tank outflow	
AVERAGE HYDRAULIC HEAD, Hhy	1.31	m		
AREA OF ORIFICE, Aorifice	4.01E-04	m2		
ORIFICE DIAMETER, Dorifice	23	mm		
VELOCITY AT ORIFICE	7.17	m/s	At max. head level	

Project Ref:	C0719N	**STORMWATER DISPERSION PIPE/ TRENCH**	geologix consulting engineers
Project Address:	7 Riverview Road, Kerikeri		
Design Case:	LOT 2 - EXISTING DEVELOPMENT	**DISCHARGE DEVICE - LEVEL SPREADER OR TRENCH**	
Date:	18 November 2025 REV1		

DESIGN BASED ON REFERENCED DEVELOPMENT PLANS TO PROVIDE A MINIMUM LENGTH OF ABOVE OR BELOW GROUND STORMWATER TANK OVERFLOW DISCHARGE DISPERSION DEVICE. IN GENERAL ACCORDANCE WITH MODIFIED RATIONAL METHOD AND AUCKLAND COUNCIL TR2013/018.

DESIGN STORM EVENT **1%** AEP EVENT

SLOPE BETWEEN SOURCE & DISPERSION DEVICE

278.75

ELEVATION	h	CHAINAGE, x	Δ x	h bar	Δ A
m	m	m	m	m	m2
0	0	0	0	0	0
0	0.01	1	1	0.005	0.005
	TOTALS	1	1		0.005
	SLOPE, Sc	0.010	m/m		

MANNINGS PIPE FLOW - INCOMING PIPE

Dia, m	d/D	α, rad	P, m	A, m^2	R	1:S	n	V, m/s	Q, m^3/s	Q, l/s	
0.125	0.000	6.283	0.0000	0.0000	0.000	100	0.009	0.000	0.0000	0.000	**0 % full**
0.125	0.050	5.381	0.0564	0.0002	0.004	100	0.0090	0.283	0.0001	0.065	
0.125	0.100	4.996	0.0804	0.0006	0.008	100	0.0090	0.442	0.0003	0.282	
0.125	0.150	4.692	0.0994	0.0012	0.012	100	0.0090	0.570	0.0007	0.658	
0.125	0.200	4.429	0.1159	0.0017	0.015	100	0.0090	0.678	0.0012	1.185	
0.125	0.250	4.189	0.1309	0.0024	0.018	100	0.0090	0.772	0.0019	1.853	
0.125	0.300	3.965	0.1449	0.0031	0.021	100	0.0090	0.856	0.0026	2.649	
0.125	0.350	3.751	0.1583	0.0038	0.024	100	0.0090	0.929	0.0036	3.557	
0.125	0.400	3.544	0.1712	0.0046	0.027	100	0.0090	0.995	0.0046	4.559	
0.125	0.450	3.342	0.1838	0.0054	0.029	100	0.0090	1.052	0.0056	5.635	
0.125	0.500	3.142	0.1963	0.0061	0.031	100	0.0090	1.102	0.0068	6.764	**50 % full**
0.125	0.550	2.941	0.2089	0.0069	0.033	100	0.0090	1.146	0.0079	7.924	
0.125	0.600	2.739	0.2215	0.0077	0.035	100	0.0090	1.182	0.0091	9.089	
0.125	0.650	2.532	0.2344	0.0084	0.036	100	0.0090	1.212	0.0102	10.233	
0.125	0.700	2.319	0.2478	0.0092	0.037	100	0.0090	1.234	0.0113	11.326	
0.125	0.750	2.094	0.2618	0.0099	0.038	100	0.0090	1.249	0.0123	12.336	
0.125	0.800	1.855	0.2768	0.0105	0.038	100	0.0090	1.256	0.0132	13.223	
0.125	0.850	1.591	0.2933	0.0111	0.038	100	0.0090	1.254	0.0139	13.940	
0.125	0.900	1.287	0.3123	0.0116	0.037	100	0.0090	1.239	0.0144	14.418	
0.125	0.950	0.902	0.3363	0.0120	0.036	100	0.0090	1.207	0.0145	14.536	
0.125	1.000	0.000	0.3927	0.0123	0.031	100	0.0090	1.102	0.0135	13.528	**Flowing full**

DISPERSION SPECIFICATION

INCOMING PIPE PROPERTIES:

TANK OUTFLOW, 1 % AEP	12.83	l/s		
MAXIMUM PIPE FLOW	14.54	l/s		
SUFFICIENT CAPACITY IN PIPE	YES			
LONGITUDINAL SLOPE	0.010	m/m		
DESIGN VELOCITY, Dv	1.256	m/s		

LEVEL SPREADER SPECIFICATIONS:

PIPE DIAMETER, m	0.15	m
MANNINGS PIPE ROUGHNESS	0.009	
NUMBER OF ORIFICES	48	No.
DIA. OF ORIFICE, D	20	mm
ORIFICE INTERVALS, C/C	150	mm
DISPERSION PIPE LENGTH, L	**7.05**	**m**

ORIFICE DESIGN FLOW CHECK:

AREA OF SINGLE ORIFICE, A	0.00031	m2		
FLOW OUT OF 1 ORIFICE	0.000272829	m3/s	0.27 l/s	
FLOW OUT OF ALL ORIFICES	0.01309581	m3/s	13.10 l/s	**DESIGN OK**
VELOCITY FROM SINGLE ORIFICE	0.87	m/s		

BROAD CRESTED WEIR DESIGN FLOW CHECK:

FLOW DEPTH, h	0.1	m		
BASE WIDTH = L	7.05	m		
FLOW AREA	0.71	m2		
WEIR FLOW	0.01316	m3/s	13.16 l/s	**DESIGN OK**
WEIR VELOCITY	0.019	m/s		

INCOMING PIPE & SPREADER SUMARY:

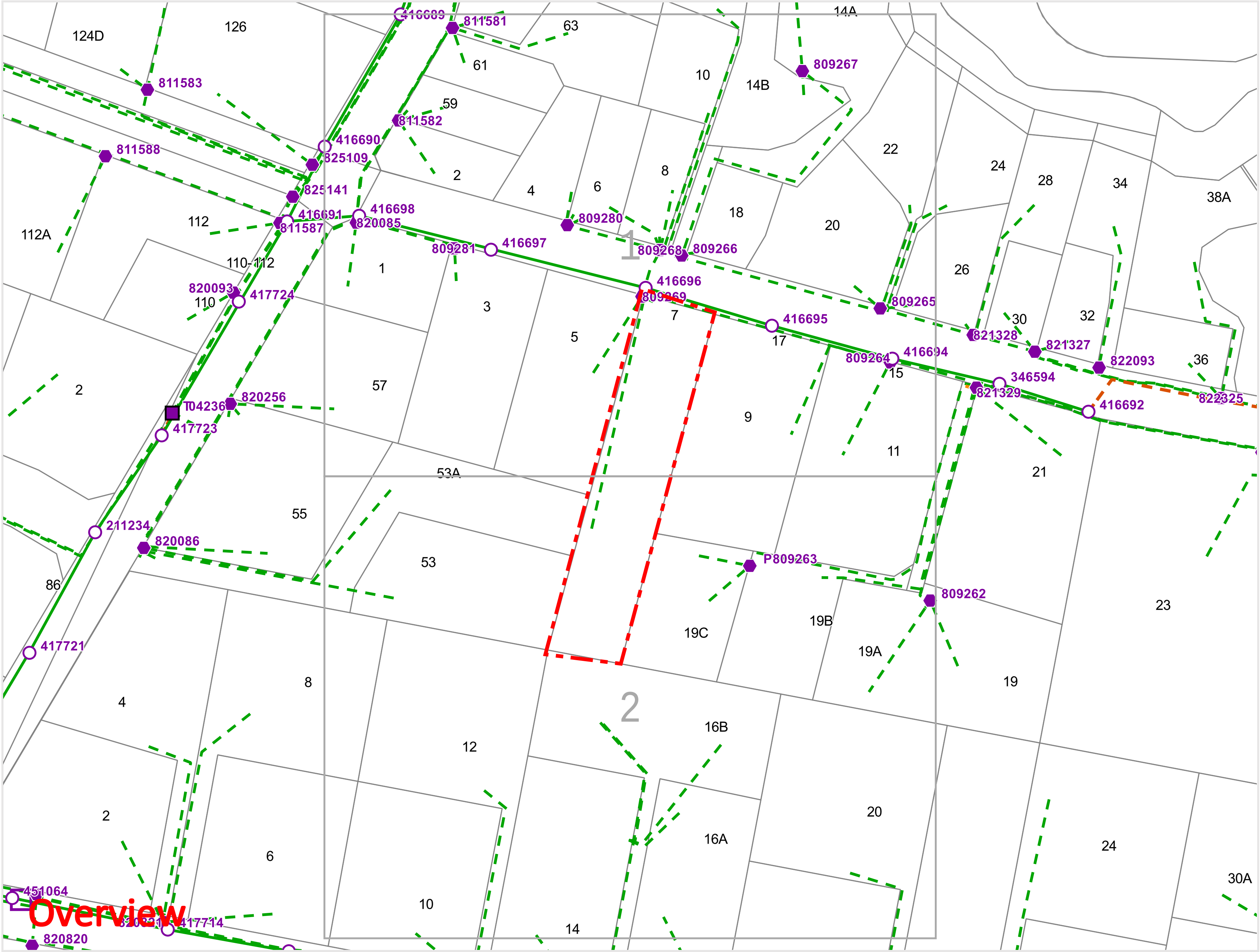
INCOMING PIPE DIAMETER, m	0.125	m
SPREADER PIPE DIAMETER, m	0.150	m
MANNINGS PIPE ROUGHNESS	0.009	
NUMBER OF ORIFICES	48	No.
DIA. OF ORIFICE, D	20	mm
ORIFICE INTERVALS, C/C	150	mm
DISPERSION PIPE LENGTH, L	**7.05**	**m**

geologix
consulting engineers

APPENDIX F

Beforeudig Plans

Sequence No: 16459871
Job No: 2680345
Location: 7 Riverview Rd, Kerikeri, Northland 0230



Legend

- Arrestor
- Sectionaliser
- Pole
- Pillar
- RMU
- Stay
- Regulator
- Recloser
- Transformer
- Switch
- Capacitor
- OH Fibre
- OH Conductor
- UG Fibre
- UG Conduit (Future Cable)
- UG Cable MV
- UG Cable LV

N

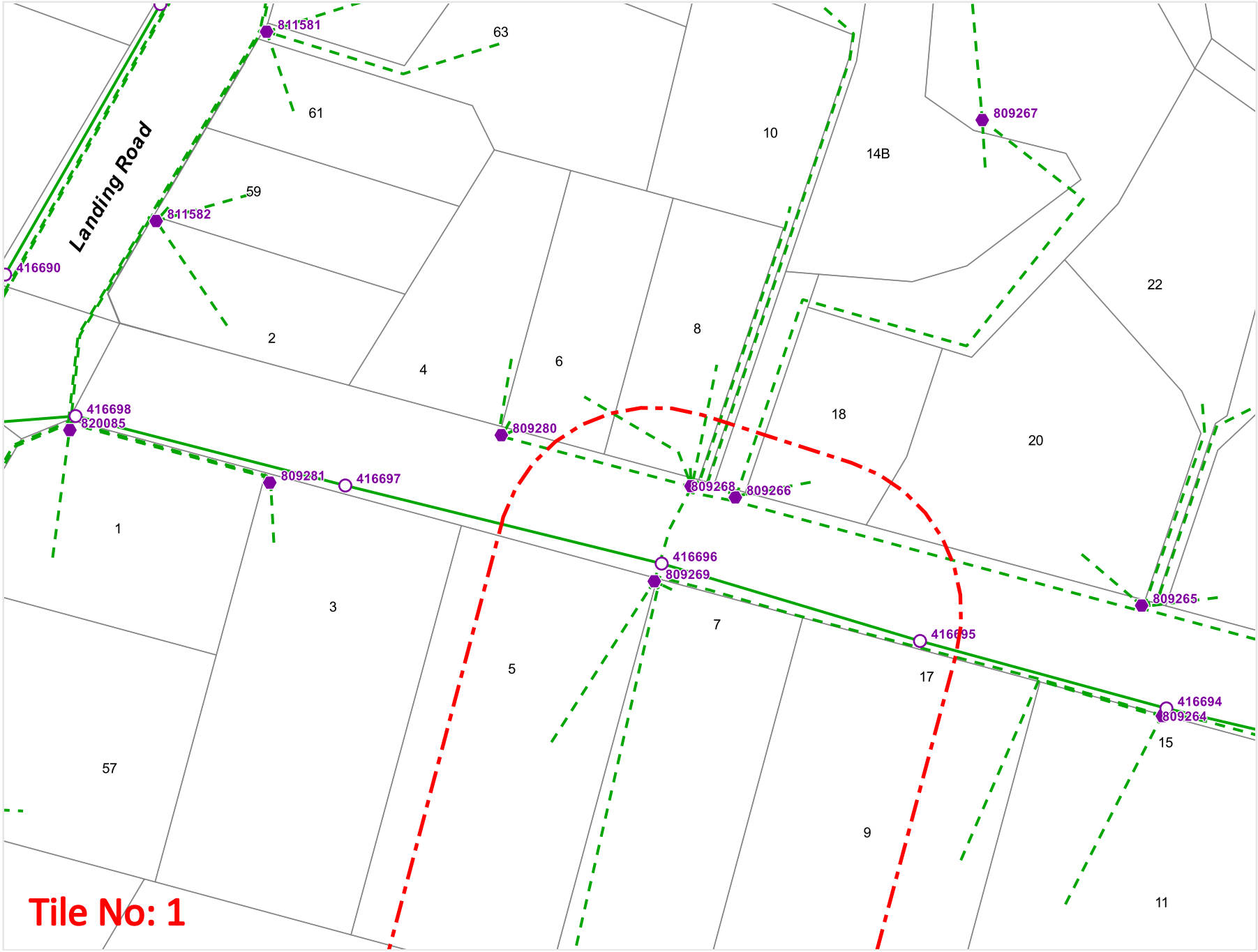
Scale: 1:2050
Expires: 04 Dec 2025

DISCLAIMER: The information in these plans is for design purposes only. They accurately reflect our records at the time of printing but may become inaccurate over time as network changes occur frequently. While Top Energy Ltd. endeavours to keep our information up to date and correct, we can make no representations or warranties of any kind, express or implied, about the completeness or accuracy of the supplied plans or data. Any reliance on such information is, therefore, strictly at your own risk.

Before you undertake any works, an underground cable location is required. You can initiate a cable location request via our website; www.topenergy.co.nz/cablelocate. When undertaking works, beware that you may encounter underground cables at ANY depth.

In no event will Top Energy Ltd. be liable for any loss or damage, including, without limitation, indirect or consequential loss or damage, or loss or damage whatsoever arising from the accuracy of these plans.

Sequence No: 16459871
Job No: 2680345
Location: 7 Riverview Rd, Kerikeri, Northland 0230



Legend

- Arrestor
- Sectionaliser
- Pole
- Pillar
- RMU
- Stay
- Regulator
- Recloser
- Transformer
- Switch
- Capacitor
- OH Fibre
- OH Conductor
- UG Fibre
- UG Conduit (Future Cable)
- UG Cable MV
- UG Cable LV

N

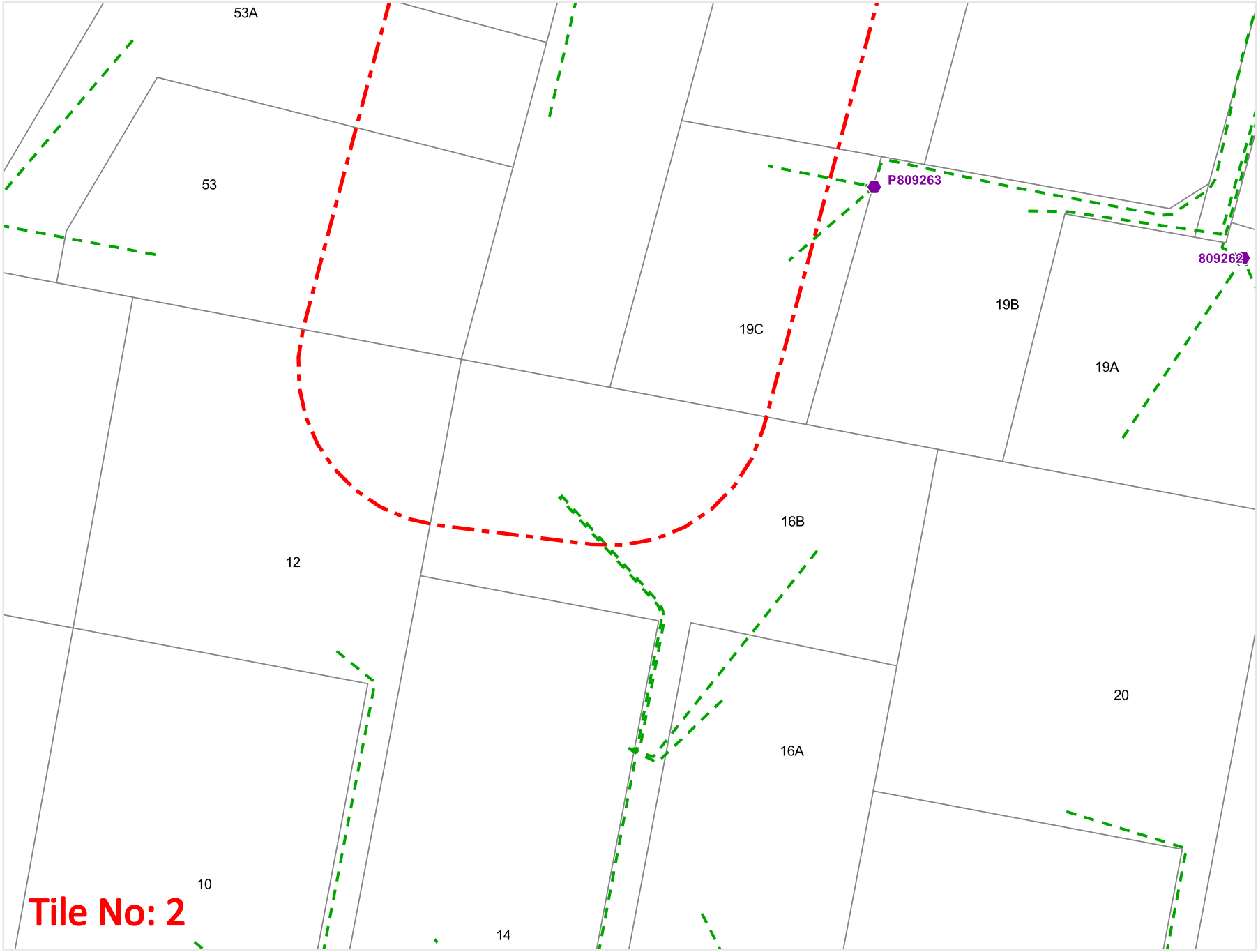
Scale: 1:1000
Expires: 04 Dec 2025

DISCLAIMER: The information in these plans is for design purposes only. They accurately reflect our records at the time of printing but may become inaccurate over time as network changes occur frequently. While Top Energy Ltd. endeavours to keep our information up to date and correct, we can make no representations or warranties of any kind, express or implied, about the completeness or accuracy of the supplied plans or data. Any reliance on such information is, therefore, strictly at your own risk.

Before you undertake any works, an underground cable location is required. You can initiate a cable location request via our website; www.topenergy.co.nz/cablelocate. When undertaking works, beware that you may encounter underground cables at ANY depth.

In no event will Top Energy Ltd. be liable for any loss or damage, including, without limitation, indirect or consequential loss or damage, or loss or damage whatsoever arising from the accuracy of these plans.

Sequence No: 16459871
Job No: 2680345
Location: 7 Riverview Rd, Kerikeri, Northland 0230



Legend

- Arrestor
- Sectionaliser
- Pole
- Pillar
- RMU
- Stay
- Regulator
- Recloser
- Transformer
- Switch
- Capacitor
- OH Fibre
- OH Conductor
- UG Fibre
- UG Conduit (Future Cable)
- UG Cable MV
- UG Cable LV

N

Scale: 1:1000
Expires: 04 Dec 2025

DISCLAIMER: The information in these plans is for design purposes only. They accurately reflect our records at the time of printing but may become inaccurate over time as network changes occur frequently. While Top Energy Ltd. endeavours to keep our information up to date and correct, we can make no representations or warranties of any kind, express or implied, about the completeness or accuracy of the supplied plans or data. Any reliance on such information is, therefore, strictly at your own risk.

Before you undertake any works, an underground cable location is required. You can initiate a cable location request via our website; www.topenergy.co.nz/cablelocate. When undertaking works, beware that you may encounter underground cables at ANY depth.

In no event will Top Energy Ltd. be liable for any loss or damage, including, without limitation, indirect or consequential loss or damage, or loss or damage whatsoever arising from the accuracy of these plans.

geologix
consulting engineers

COMBINED PRELIMINARY AND DETAILED SITE INVESTIGATION

7 RIVERVIEW ROAD, KERIKERI

JOSH & CARNA LAZET

C0719N-E-01
NOVEMBER 2025
REVISION 1

geologix
consulting engineers

DOCUMENT MANAGEMENT

Document Title	Combined Preliminary and Detailed Site Investigation
Site Reference	7 Riverview Road, Kerikeri
Client	Josh & Carna Lazet
Geologix Reference	C0719N-E-01
Issue Date	20 November 2025
Revision	01
Reviewed by	Ray Mayor Senior Environmental Consultant, BEng (Env) 
Approved by	Edward Collings Managing Director, CEnvP Reg. 0861, CPEng Reg. 1033153, CMEngNZ 
File Reference	*Z:\Projects\C0700-C0799\C0719N - 7 Riverview Road, Kerikeri\06 - Reports\Environmental\C0719N-E-01.docx*

REVISION HISTORY

Date	Issue	Prepared by	Approved
November 2025	First Issue	RM	EC

geologix
consulting engineers

TABLE OF CONTENTS

FIGURES

TABLES

1 INTRODUCTION

This combined Preliminary and Detailed Site Investigation (PSI/ DSI) report has been prepared by Geologix Consulting Engineers Ltd (Geologix) for Northland Planning & Development on behalf of Josh & Carna Lazet as our Client in accordance with our standard short form agreement and general terms and conditions of engagement.

This investigation was to assist with the Resource Consent application in relation to the proposed residential subdivision and potential soil disturbance (if any) on a property located at 7 Riverview Road, Kerikeri (herein, referred to as the 'site', Figure 1, Section 2.1).

1.1 Background and Objectives

At the time of writing this report, the site is proposed for a new two lot residential subdivision. The proposed subdivision plan by Williams and King dated September 2025 is provided in Appendix A.

The Ministry for Environment's (MfE's) Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES:CS) (MfE, 2011a) applies to all site activities that trigger the NES:CS which are defined by Regulation 5 Subclauses (2) to (6). When one or more of these activities occur within a piece of land for which an activity or industry described by the Hazardous Activities and Industries List (HAIL) is either being undertaken, has previously been undertaken or is more likely than not to have occurred on it the NES:CS is enacted.

Therefore, the objective of this investigation was to:

- Determine the applicability of the NES:CS to the site.
- Assess the likelihood of human health risk associated with the proposed soil disturbance activities.
- Characterise site soils within the site (refer to Section 4), to assess the potential risks to human health and the environment; and
- Assess the requirements for potential consents in relation to the NES:CS.

1.2 Scope of Works

The following scope of works was undertaken in accordance with the staged process defined by the MfE Contaminated Land Management Guidelines (CLMG) No. 1 - *Reporting on Contaminated Site in New Zealand*. Ministry for the Environment, Wellington, New Zealand, Revised in 2021 (MfE 2011b).

- Desktop review of:
    - Provided council property information.

- The Northland Regional Council's (NRC's) Selected Land Use Register (SLUR).
- Historical aerial photography available on the Local Government Geospatial Alliance's (LGGA's) Retrolens webpage as well as Google Earth Pro service.

- Soil sampling comprising the collection of 12 shallow soil samples from 12 locations within the site.
- As required by the NES:CS, duplicate samples were collected to confirm the consistency of the analysis.
- Soil samples were sent to RJ Hill Laboratories (Hills) for analysis (with Chain of Custody documentation).
- Preparation of this report in general accordance with current contaminated land guideline documents by a Suitably Qualified and Experienced Practitioner (SQEP) as defined by the NES:CS.

2 SITE INFORMATION/ DESCRIPTION

2.1 Site Identification

The site is located at 7 Riverview Road, Kerikeri, approximately 125 m south-east of the Landing Road and Riverview Road intersection. The site setting is presented in Figure 1 below with the centre of the site approximately at geographical position NZGD: 1687995, 6103504.

Figure 1: Site Setting.

The site is relatively flat, rectangular in shape and is bound by Riverview Road to the north-east and residential properties to the south-east, south-west and north-west. Details of the site are listed in Table 1.

Table 1: Site Details.

Address	Zone	Legal Description	Area (m^2)
7 Riverview Road, Kerikeri	Rural Living	Lot 1 DP 95971	4,047

2.2 Current Land Use

The site is currently in use for residential purposes. The site is zoned Rural Living under the FNDC Operative District Plan.

The future use is not anticipated to change following the proposed activities.

A summary of the proposed subdivision plan is outlined in Table 2 below.

Table 2: Summary of Proposed Subdivision

Proposed Subdivision of Lot 1 DP 95971		
Proposed Lots	**Size Range (m^2)**	**Purpose**
1	1,501	New Residential (empty lot)
2	2,546	Existing Residential

2.3 Surrounding Land Uses

The site is surrounded by residential properties. The nearest commercial property is the Riverview School, located approximately 160m to the south-east of the site.

2.4 Environmental Setting/ Ecological Receptors

To provide protection for natural resources, ecological receptors on or near a site should be considered. The nearest ecological receptor is the mouth of the Waipapa Stream (i.e., tributary of the Kerikeri Inlet) located approximately 150 m to the north-east of the site.

In relation to this consent application, the tributary of the Kerikeri Inlet is not located within an influencing distance (i.e., less than 100 m), therefore, is not considered an environmental receptor.

2.5 Geology

Published geological records indicates that to be directly underlain by Kerikeri Volcanic Group Late Miocene basalt of Kaikohe - Bay of Islands Volcanic Field. These Neogene igneous rocks (basalt) can be expected to contain Basalt lava material, volcanic plugs and minor tuff material. (GNS Science, 2022).

2.6 Site Inspection

A site walkover in conjunction with onsite investigation works was undertaken in November 2025 and the following observations were made (selected site photographs are provided in Appendix B):

- All existing structures are present as outlined by the most recent available 2023 aerial photograph.
- Site is relatively flat.
- No evidence of contamination (i.e., staining, odorous material, burn piles etc.) observed.
- Potential remnant horticultural species (i.e., citrus) were observed within the site.

3 HISTORICAL SITE USE

A review of selected publicly available information was undertaken to gain an understanding of the history of the site, particularly the nature and location of potentially contaminating activities that may have occurred within the site. This included reviews of:

- Publicly available historical aerial photographs from the Local Government Geospatial Alliance's (LGGAs) Retrolens and Google Earth.
- Provided council property information, and
- NRC's SLUR.

3.1 Historical Aerial Photographs

Historical aerial photographs of the site and the surrounding area taken between 1951 and 2023 were sourced from the LGGAs Retrolens and Google Earth Pro. A summary of observations made from the review of these photographs is provided below. Historical aerial photographs are provided in Appendix C.

Our review comprises visually evident land-use activities within the site boundaries of the site which may pose a risk to human or environmental receptor health. Land-use history activities relevant to the site are summarised as follows:

LGGAs Retrolens

- **1951-1982**: The earliest available historical arial photographs indicates that the site was used for commercial horticultural purposes. A small structure (most likely associated with horticultural activities) is present in the 1982 historical arial photograph, within the south-western portion of the site. No other significant changes are observed within the property over this period.

There are no available historical aerial photographs between 1982 and 2003.

Google Earth Pro

- **2003-Present:** The 2003 aerial photograph shows a residential structure and associate outbuildings etc., (e.g., shed, pool) are now present on the southern portion of the site. Horticulture still appears to be present within the front portion of the site and a few remnant trees in the rear portion, although most likely not utilised on a commercial scale (i.e., spraying). Driveway/ site access is located along the north-western boundary. No other significant changes are observed over this period.

  By 2009, the site appears to be in use specifically for residential purposes.

  The 2013 aerial photograph shows majority of horticultural activities have been removed. Only a few trees remain on the front portion of the site, which are no longer visible by 2016.

  No changes appear to occur to the existing residential structure and associated outbuildings etc., over this period.

In summary, the site was in use for commercial horticultural purposes prior to 1951 until circa 2003, where a portion of the site (southern half) was used for residential purposes. By circa 2009, the site appears to be in use specifically for residential purposes.

3.2 Property Information

A summary of the relevant property information reviewed is provided below and selected property information is provided in Appendix D.

3.2.1 Property Files

The review of the site property information provided by the client contained consenting information, building applications, plans, compliance information etc.,. With the exception of a subdivision plan dated 1981 indicating a citrus orchard onsite, no other information regarding contamination or contaminating activities were noted within the provided property files. The plan has been attached as Appendix D.

To note, the plan also indicates that the sheds/ pack houses etc., associated with horticultural activities where concentrated contaminants are likely to occur are located east of the site.

3.2.2 Selected Land Use Register

A review of the NRC's SLUR was undertaken in November 2025. The SLUR indicates that no HAIL activities have been identified within the property or adjacent properties in close proximity to the site.

3.3 Actual/ Potential HAIL Activities

Based on the historical review of the site, it is considered that the site has potentially been

impacted by HAIL category A10 (persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds). Due to the above HAIL activity identified; the entire site (4,047 m^2) can be determined as a 'piece of land' according to the definitions of the NES:CS.

4 SAMPLING AND ANALYSIS PLAN

4.1 Potential Contaminants of Concern

Based on the potential HAIL activity identified and from our experience, it is expected that contaminants of concern (CoC) (if any) associated with horticultural activities would typically be contained within the topsoil/ shallow site soils and may include heavy metals and organochlorine pesticides (OCPs) and to a lesser extent polycyclic aromatic hydrocarbons (PAHs).

4.2 Sampling Methodology

The activities involving the above contaminants are anticipated to include surface spraying which may have been worked into shallow soils during site activities. Based on this, the sampling investigation has targeted the surface horizon from within the site area comprising topsoil/ shallow site soils from up to 0.15 m below ground level (bgl) to target the CoCs and to quantify the nature and dispersion of any residual contamination in relation to the proposed subdivision and potential soil disturbance activities.

Soil sampling was undertaken in general accordance with the MfE CLMG No.5 - *Site Investigation and Analysis of Soils* (revised 2021) (MfE, 2011c). The MfE sampling guidelines for a site of this size (approximately 4,000 m^2) recommend up to 11 sampling points. From our experience, the following sampling programme was undertaken:

- From within the site area, using a grid approach, from 12 sample locations (designated C01a, C01b, C01c to C04a, C04b, C04c), 12 shallow soil samples were collected from the surface horizon comprising topsoil from 0.0 - 0.15 m bgl and composited into four samples (three primary subsamples per one composite sample).
    - Samples were composited within the laboratory environment.
- As required by the NES:CS, two duplicate composite soil samples from two composite locations (i.e., C2 and C3) were collected and labelled under a unique identification QC1 and QC2 respectively.
- Sampling was undertaken in accordance with Geologix Standard Operating Procedures including:
    - Each soil sample was collected using a clean pair of nitrile gloves for each sample, then placed into laboratory supplied sample containers. Prior to sampling at each location, the sampling equipment was decontaminated by washing with potable water, followed by a decontamination solution and rinsing with deionised water.

- The soil samples were placed in new laboratory supplied sample containers and dropped off at RJ Hill Laboratories (Hills) in Auckland alongside Chain of Custody documentation.

- On the basis of the site history and associated potential contaminating activities that were identified at the site, all composite samples were analysed for metals (arsenic, cadmium, chromium, copper, lead, nickel and zinc) and OCPs, selected composite samples were also analysed for PAHs.

- The duplicate composite samples were analysed for metals only.

Figure 2: Sample Locations.

4.3 Quality Assurance and Quality Control

The quality assurance/ quality control (QA / QC) procedures employed during the works included:

- Collection of soil samples by suitably qualified staff in accordance with Geologix standard operating procedures.

- Submission of all samples to the analytical laboratory within the acceptable holding times for the contaminants of concern.

- Submission of two duplicate composite soil samples from composite location C2 and C3. The duplicate samples were submitted under the unique identification QC1 and QC2 respectively and were analysed for metals only.

- Sample analysis by Hill Laboratories who are accredited by International Accreditation New Zealand (IANZ) for the analyses performed.

4.4 Soil Guideline Values

The following environmental guidelines were used to screen the sample results. Relevant guidelines values are provided in the data analysis table attached as Appendix E.

4.4.1 Background Concentrations

According to Regulation 5(9) of the NES:CS, if a DSI can demonstrate that any contaminants on a HAIL site are at, or below, background concentrations, then the NES:CS regulations do not apply. However, there are no natural background concentration available for Northland region at the time of this investigation. Therefore Regulation 5(9) of the NES:CS is not applicable.

4.4.2 Soil Contaminant Standards (NES:CS)

The NES:CS (MfE, 2011) details soil contaminant standards (SCSs) for seven inorganic substances. SCSs are available for these substances and compounds when present in land used for five land use scenarios. The contaminants analysed at this site for which SCSs are available are arsenic, cadmium, chromium, copper and lead. For this site, a residential 10% produce land use scenario was adopted, which includes the following source-pathway-receptor assumptions:

- The selected residential SCSs assume that intended future land use will be a residential lot, for single dwelling sites with gardens, including some minor home-grown produce consumption.
- Potential receptors include site workers during the redevelopment works and residents following the redevelopment.
- The NES:CS adopted standards for residential land-use have been used to assess risks to both site workers and end users of the site.
- It has been assumed that the soil pH is 5, and that all lead is present in inorganic form.

4.4.3 Other Applicable Human Health Standards

For contaminants of potential concern that are not priority contaminants, the NESCS references the hierarchy defined in the MfE CLMG No.2 – *Hierarchy and Application in New Zealand of Environmental Guideline Values* (MfE, 2011d).

In accordance with this hierarchy, the Australian National Environment Protection Council (NEPC) (1999 rev: 2013) National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM) has been used for two metals (nickel and zinc). Health-based investigation levels for 'Residential A' land use have been selected in accordance with

the proposed end use of the site and to protect site workers during the development work. 'Residential A' investigation levels are described in the ASC NEPM to include "*Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake (no poultry), also includes childcare centres, preschools and primary schools*" (NEPC 2013).

5 SAMPLING RESULTS

Laboratory analytical results of the samples collected are summarised in Section 5.1 below and the soil analytical results table attached as Appendix E. The full laboratory analytical reports are provided in Appendix F.

5.1 Analytical Results

As previously mentioned, all composite samples were analysed for metals (arsenic, cadmium, chromium, copper, lead, nickel, and zinc) and OCPs, and selected composite samples (C1-C3) for PAHs. The results of the laboratory analysis indicated the following:

- No heavy metals were detected above human health criteria.
- No OCPs or PAHs were detected above the laboratory limit of reporting (LoR) in any of the samples analysed for OCPs and/ or PAHs.
- In addition, no visual or olfactory evidence of contamination was observed in any of the soil samples collected.

5.2.1 Confidence in Results

The analytical laboratory is required to conduct cross checking and routine duplicate sample analysis to maintain an IANZ accreditation. Discrete project specific duplicate analysis was undertaken to confirm the reliability of laboratory analysis. In accordance with CLMG, primary to secondary sample acceptable relative difference (RPD) is 50 % for soil samples.

Two duplicate composite samples (QC1 and QC2) were analysed for metals to replicate the analysis of composite samples C2 and C3 respectively. The relative percentage difference (RPD) between the primary and duplicate samples ranged between 0% and 40%. As such, it is considered that the precision of the sampling and analysis is well within acceptable limits. The results are presented in the data analysis table attached as Appendix E.

5.2 Summary of Results

The result of analytical testing indicates that contaminants concentrations of the CoCs are below human health guidelines for a residential 10% produce land use scenario.

6 DISPOSAL DOCUMENTATION

A disposal criteria analysis for metals has been made in accordance with the MfE Hazardous Waste Acceptance Criteria (WAC) screening criteria for Class A and B landfill facilities and summarised as follows:

- Site wide exceedance of Class A landfill screening criteria for chromium (all composite sample locations, C1-C4).
- Localised exceedance of Class A landfill screening criteria for copper in one composite sample location (C2).
- Site wide exceedance of Class B landfill screening criteria for:
    - Total chromium from all composite sample locations (C1-C4),
    - Copper from all composite sample locations (C1-C4),
    - Nickel from composite sample locations (C1, C2 and C4), and
    - Zinc from all composite sample locations (C1-C4).

Based on the above, soils do not meet the requirement and definition of clean fill and any soil proposed for removal from site shall be disposed of to an appropriate managed fill facility. Sample results should be provided to a managed fill facility to determine if they can accept.

7 RISK ASSESSMENT

Although all laboratory results were below the human health criteria and no natural background concentrations for northland region are available. Based on the information presented in this report, a quantitative risk assessment of contamination potential to cause an effect upon human and/ or ecological receptors was still undertaken. This is further developed into a regulatory assessment for consent.

The available information summarised above (Sections 2 – 6) indicates the site has been for commercial horticultural purposes prior to 1951 until circa 2003, where a portion of the site (southern half) was used for residential purposes. By circa 2009, the site appears to be in use specifically for residential purposes. HAIL activity (category A10) was identified, particularly associated with contaminants associated with historical horticultural land-use.

The following Conceptual Site Model (CSM) has been developed for the potentially complete contaminant pathways at the site:

Table 3: Conceptual Site Model.

Source	Pathway	Receptor	Risk Score
Metals, OCPs and PAHs	• Incidental soil ingestion. • Inhalation of dusts. • Dermal absorption.	• Site users/ workers of the site. • Future site users.	• Low – as results below human health limits

Metals, OCPs and PAHs in soil remaining on site.	• Migration	• Groundwater • Surface water	• Low.
Metals, OCPs and PAHs in soil taken away from site.	• Migration	• Groundwater • Surface water	• Low – provided taken to a suitable managed fill facility

For an exposure pathway to be complete and subsequently cause a risk, there must be a contamination source, a contaminant transport mechanism (pathway) and a receptor, typically human or ecological.

7.1 Quantification of Risk and Discussion

The actual and potential HAIL activities undertaken (refer to Section 3.3) on site identifies very low/ negligible potential risk to human health across the entire site for the proposed site use.

As such, and due to concentrations below human health criteria, a very low risk is applied to long-term human health exposure to the continued use for residential purposes if these soils are to remain on site.

8 REGULATORY CONSIDERATIONS (CONTAMINATED LAND)

Based on the findings of this investigation, the NES:CS regulations apply to the entire site area. Proposed subdivision plans are provided in Appendix A. This section provides clarification of consent conditions against national, regional and local standards and regulations in regard to subdivision and soil disturbance only.

8.1 National Environmental Standards

The NES:CS regulation applies to activities of subdivision and soil disturbance where HAIL activity is being / has been / more likely than not to have been undertaken. The results of the historical review indicated that, under subclause (7) the NES:CS applies to the site due to HAIL Category A10 (Persistent pesticide bulk storage or use including sport turfs, market garden green house or spray sheds).

No soil disturbance is proposed at this time, however, if soil disturbance is to be undertaken, the NES:CS allows (per year) a soil disturbance volume of 25 m^3 per 500 m^2 of `piece of land` area and soil disposal volume of 5 m^3 per 500 m^2 of piece of land area. Calculated on a 'piece of land' basis (entire site area of 4,047 m^2), allowable soil disturbance volumes are 202.35 m^3 for soil disturbance and/ or 40.47 m^3 for off-site disposal per year to be able to comply with this activity status.

Therefore, where any potential future soil disturbance volume remains below or at the allowable limits, the activity of soil disturbance would be considered to be a permitted activity. In addition, should any soil disturbance volumes exceed the above allowable thresholds, the activity would be considered as a controlled activity.

In relation to the proposed subdivision, it is highly unlikely that there will be a risk to human health if the activity is done to the site. Therefore, activities of subdivision and proposed soil disturbance is considered to be a controlled activity.

8.2 Proposed Regional Plan

Potentially contaminated land refers to land where a HAIL activity is / has been undertaken. Due to the identified HAIL activity within the site, the piece of land (i.e., the entire site) is considered to be potentially contaminated land. However, based on our investigation, contaminants do not pose a human health risk or environmental risk. Therefore, the proposed activity (subdivision, and potential future soil disturbance) complies with rule C.6.8.2 (discharges from contaminated land), which is considered a permitted activity under the proposed regional plan.

In addition, and to be noted; Northland Regional Plan Rule C.6.8.1 (Investigating potentially contaminated land – permitted activity), the disturbance of land for a site investigation to assess the concentration of hazardous substances in soil, water or air is a permitted activity, provided:

1) The site investigation is certified by a suitably qualified and experienced practitioner, and

2) The person or organisation initiating the site investigation provides a copy of the site investigation report to the Regional Council within three months of the completion of the investigation, and

3) Site investigations undertaken to assess the concentrations of contaminants in soil are undertaken in accordance with Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils (Ministry for the Environment, 2011).

This report complies with items 1 and 3 above, therefore, to fully comply with rule C.6.8.1, this report must be submitted to the Regional Council within three months of the completion of the investigation.

9 SUMMARY AND RECOMMENDATIONS

This combined PSI/ DSI has been prepared by Geologix for for Northland Planning & Development on behalf of Josh & Carna Lazet (the ‘Client’). This investigation was to assist with the Resource Consent application in relation to the proposed residential, subdivision and potential soil disturbance on a property located at 7 Riverview Road, Kerikeri (the ‘site’). The following summarises the findings of the investigation:

The site was fully utilised for commercial horticultural purposes (HAIL category A10) prior to 1951 until circa 2003, where a portion of the site (southern half) was then used for residential purposes. By circa 2009, the site appears to be in use specifically for residential purposes only.

Based on the HAIL activity above, the NES:CS applies.

HAIL category A10 was identified (as indicated in Section 3.3), however, soil results confirm that:

- No heavy metals, OCPs or PAHs were detected over human health criteria guidelines.
- No OCPs or PAHs were detected above the laboratory level of reporting in any of the samples analysed for OCPs and PAHs.

Based on the findings of the investigation, Geologix considers that there is very low risk to long-term human health exposure in the proposed subdivision and soil disturbance activities (if undertaken) if these soils are to remain on site. Site soils, while suitable for onsite use (subject to geotechnical suitability), any soils proposed for removal from site (if any) shall be disposed of to an appropriate managed fill facility .

For subdivision and soil disturbance activities (if undertaken) under Regulation 9 of the NES:CS the soil contamination does not exceed the applicable standard in Regulation 7. Therefore, subdivision and/ or any soil disturbance activities (if required) associated with the proposed subdivision regarding contaminated land will be required as a controlled activity under the NES:CS and in addition permitted activity under the proposed Northland Regional Plan.

As previously mentioned, to comply with rule C.6.8.1, this report must be submitted to the Regional Council within three months of the completion of the investigation.

10 LIMITATIONS

This report has been prepared for Josh & Carna Lazet as our Client. It may be relied upon by our Client and their appointed Consultants, Contractors and for the purpose of Consent as outlined by the specific objectives in this report. This report and associated recommendations, conclusions or intellectual property is not to be relied upon by any other party for any purpose unless agreed in writing by Geologix Consulting Engineers Ltd and our Client. In any case the reliance by any other party for any other purpose shall be at such parties' sole risk and no reliability is provide by Geologix Consulting Engineers Ltd.

The opinions and recommendations of this report are based on plans, specifications and reports provided to us at the time of writing, as referenced. Any changes, additions or amendments to the project scope and referenced documents may require an amendment to this report and Geologix Consulting Engineers should be consulted. Geologix Consulting Engineers Ltd reserve the right to review this plan.

The recommendations and opinions in this report are based on arisings extracted from sample points at discrete locations. The nature and continuity of subsurface conditions, interpretation of ground condition and models away from these specific sampling investigation locations are inferred. It must be appreciated that the actual conditions may vary from the assumed conceptual site model. Differences from the encountered ground conditions during subdivision construction may require an amendment to the recommendations of this report.

11 REFERENCES

Far North District Council Maps, https://www.fndc.govt.nz/Our-services/Far-North-Maps. Accessed November 2025.

GNS Science, 2022. New Zealand Geology Webmap, Scale 1:250,000, http://data.gns.cri.nz/geology/. Accessed November 2025.

Ministry for the Environment, 2011a. Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.

Ministry for the Environment, 2011b. Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand (revised 2021). Wellington, New Zealand.

Ministry for the Environment, 2011c. Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils (revised 2021). Wellington, New Zealand.

Ministry for the Environment, 2011d. Contaminated Land Management Guidelines No. 2: Hierarchy and Application in New Zealand of Environmental Guideline Values (revised 2011). Wellington, New Zealand.

Northland Regional Council Online Maps, https://www.nrc.govt.nz/your-council/online-services/online-maps. Accessed November 2025.

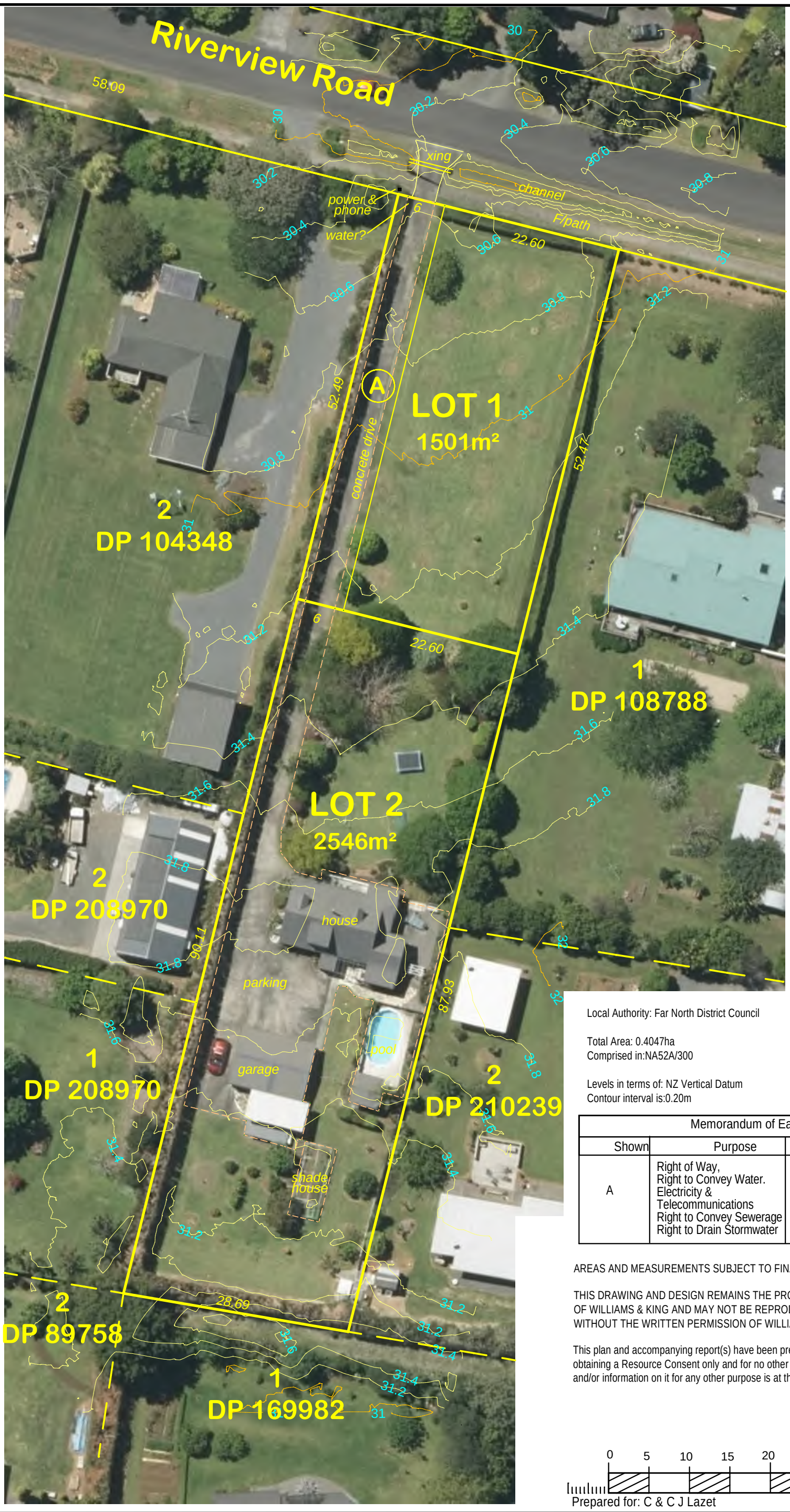
Retrolens Historical Image Resource. https://retrolens.co.nz/. Accessed November 2025.

Users' guide, 2012: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health. April 2012.

geologix
consulting engineers

APPENDIX A

Proposed Subdivision Plan



Impermeable Areas

Lot 1 (1501m²)	Driveway - 192m²
Lot 2 (2546m²)	Driveway, parking manouvering, pool, outdoor living & shadehouse
	908m² (35.6%)

Local Authority: Far North District Council

Total Area: 0.4047ha
Comprised in:NA52A/300

Levels in terms of: NZ Vertical Datum
Contour interval is:0.20m

Memorandum of Easements			
Shown	Purpose	Burdened Land	Benefited Land
A	Right of Way, Right to Convey Water. Electricity & Telecommunications Right to Convey Sewerage Right to Drain Stormwater	Lot 1 Hereon	Lot 2 Hereon

AREAS AND MEASUREMENTS SUBJECT TO FINAL SURVEY

This plan and accompanying report(s) have been prepared for the purpose of obtaining a Resource Consent only and for no other purpose. Use of this plan and/or information on it for any other purpose is at the user's risk.

0 5 10 15 20 25 30 35 40m

Prepared for: C & C J Lazet

WILLIAMS AND KING
Registered Land Surveyors, Planners & Land Development Consultants
Ph: (09) 407 6030
Email: kerikeri@saps.co.nz
27 Hobson Ave
PO Box 937 Kerikeri

Proposed Subdivision of Lot 1 DP 95971

	Name	Date
Survey		
Design		
Drawn	W & K	Sept 2025
Rev		

ORIGINAL SCALE 1:500 SHEET SIZE A3

24703

geologix
consulting engineers

APPENDIX B

Selected Site Photographs

geologix consulting engineers	SITE PHOTOGRAPHS	Project: 7 Riverview Road, Kerikeri Project no.: C0719N Figure no.: 1 of 2

Photograph 1: Front yard area, looking south.

Photograph 2: Existing house, looking south.

Photograph 3: View of western side of house and associated shed, looking south.

Photograph 4: Rear of the property/ existing house and associated sheds, looking north-east.

Photograph 5: Western side of back yard area, looking north-east.

Photograph 6: Eastern side of back yard area, looking north-east.

geologix
consulting engineers

APPENDIX C

Historical aerial photographs

geologix consulting engineers	**Historical Aerial Photographs**	**Project: 7 Riverview Road, Kerikeri** **Project no.: C0719N** **Figure no.: 1 of 6**

1951 - Retrolens

1953 - Retrolens

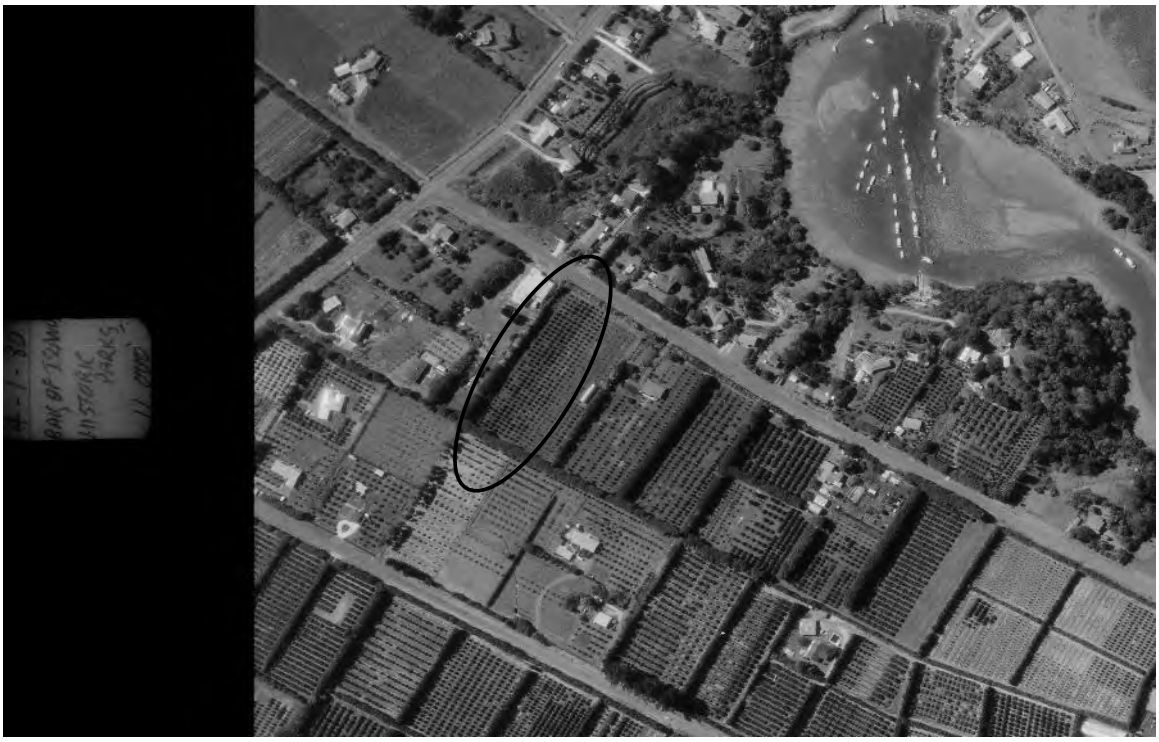
geologix consulting engineers	Historical Aerial Photographs	Project: 7 Riverview Road, Kerikeri Project no.: C0719N Figure no.: 2 of 6

1968 - Retrolens

1978 - Retrolens

geologix consulting engineers	Historical Aerial Photographs	Project: 7 Riverview Road, Kerikeri Project no.: C0719N Figure no.: 3 of 6

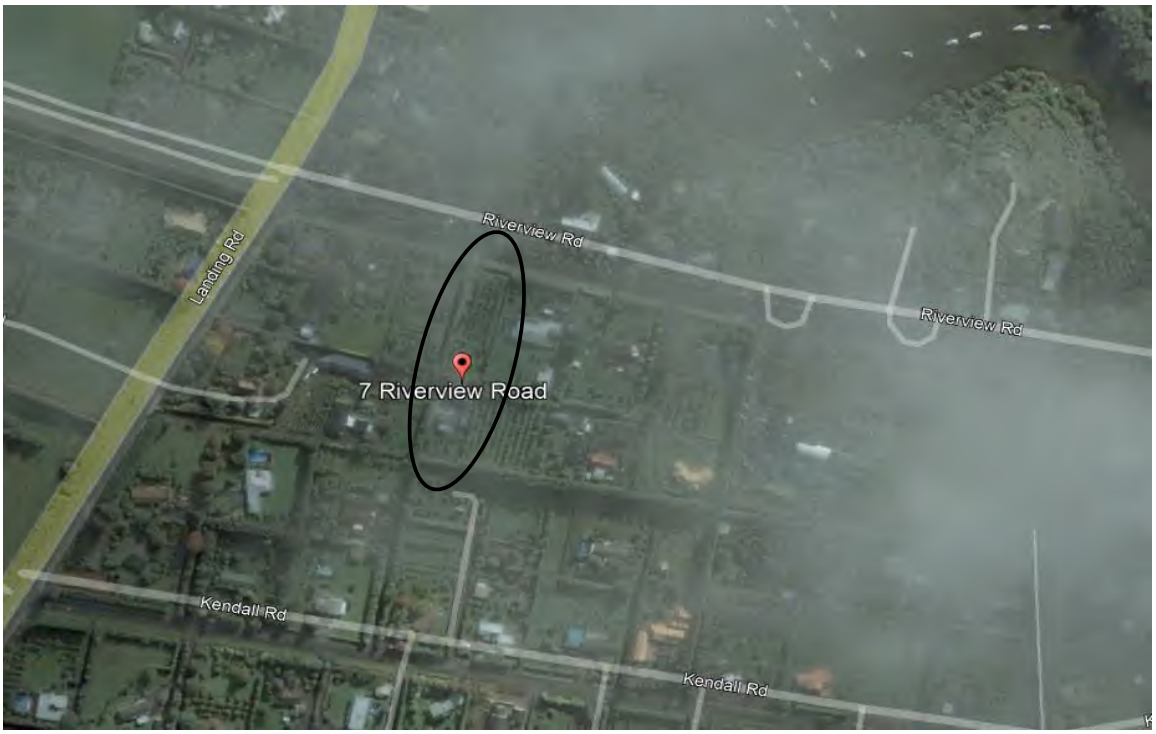
1980 - Retrolens



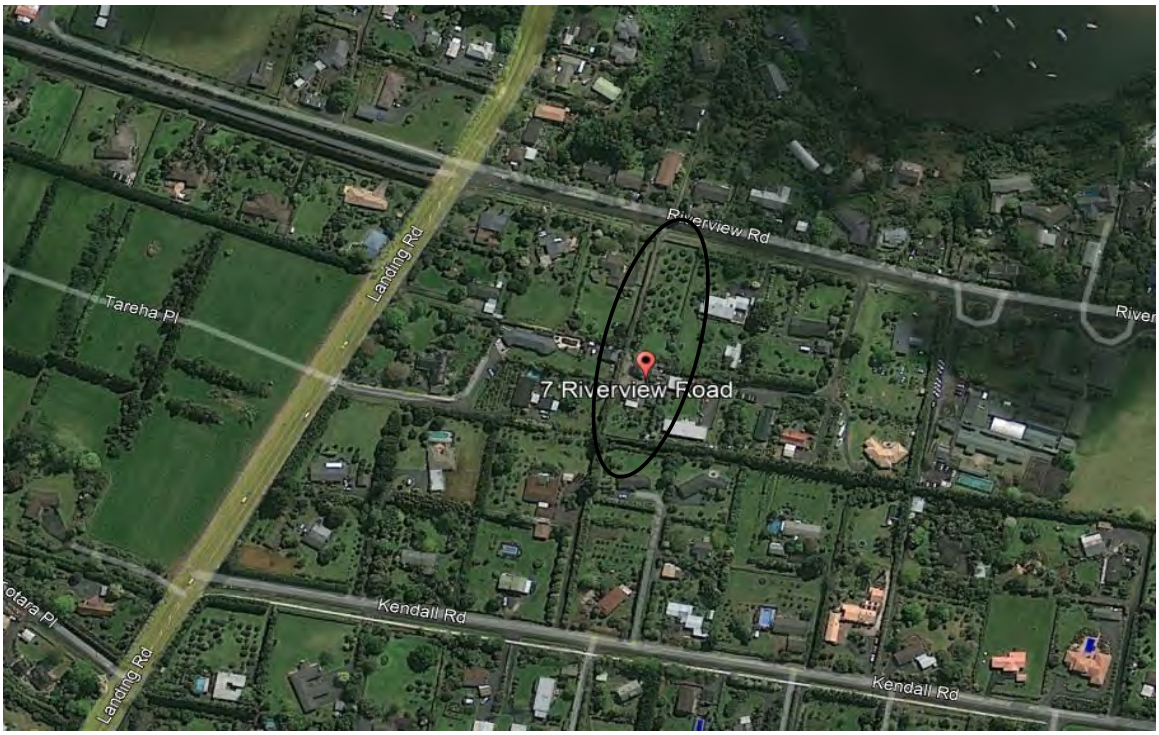
1982 - Retrolens

geologix consulting engineers	Historical Aerial Photographs	Project: 7 Riverview Road, Kerikeri Project no.: C0719N Figure no.: 4 of 6

2003 - Google Earth Pro



2009 - Google Earth Pro



geologix consulting engineers	Historical Aerial Photographs	Project: 7 Riverview Road, Kerikeri Project no.: C0719N Figure no.: 5 of 6

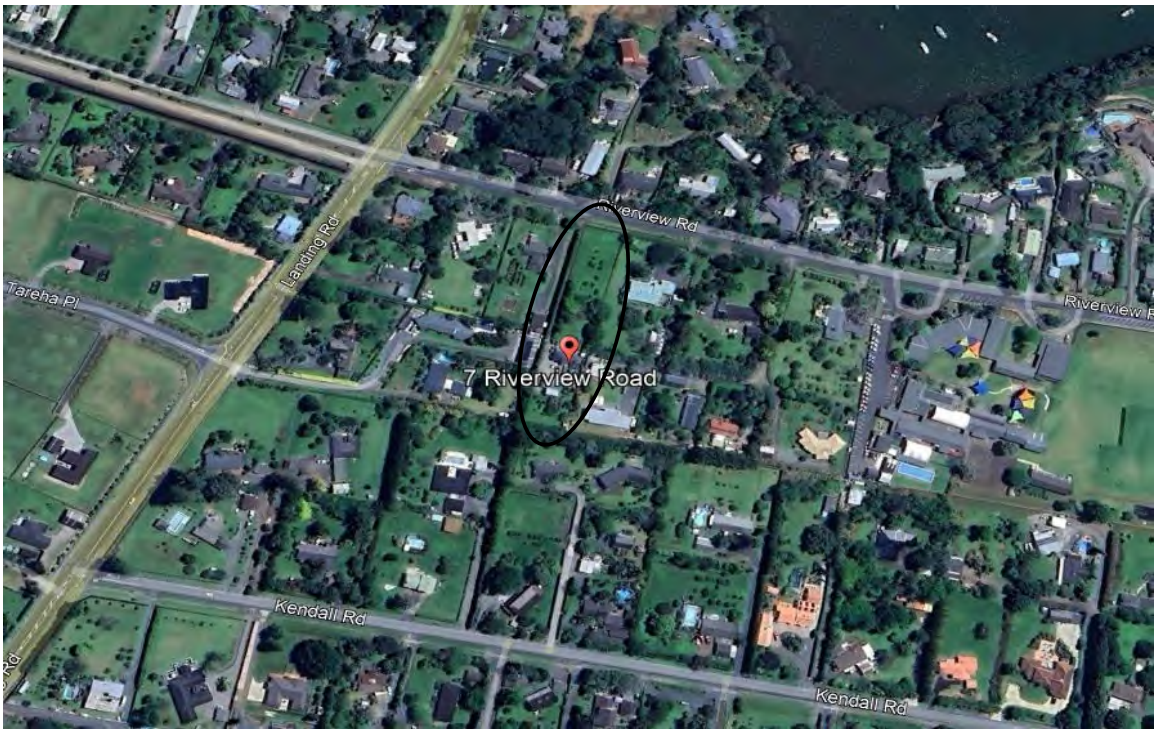
2013 - Google Earth Pro

2016 - Google Earth Pro

geologix consulting engineers	**Historical Aerial Photographs**	**Project: 7 Riverview Road, Kerikeri** **Project no.: C0719N** **Figure no.: 6 of 6**

2019 - Google Earth Pro

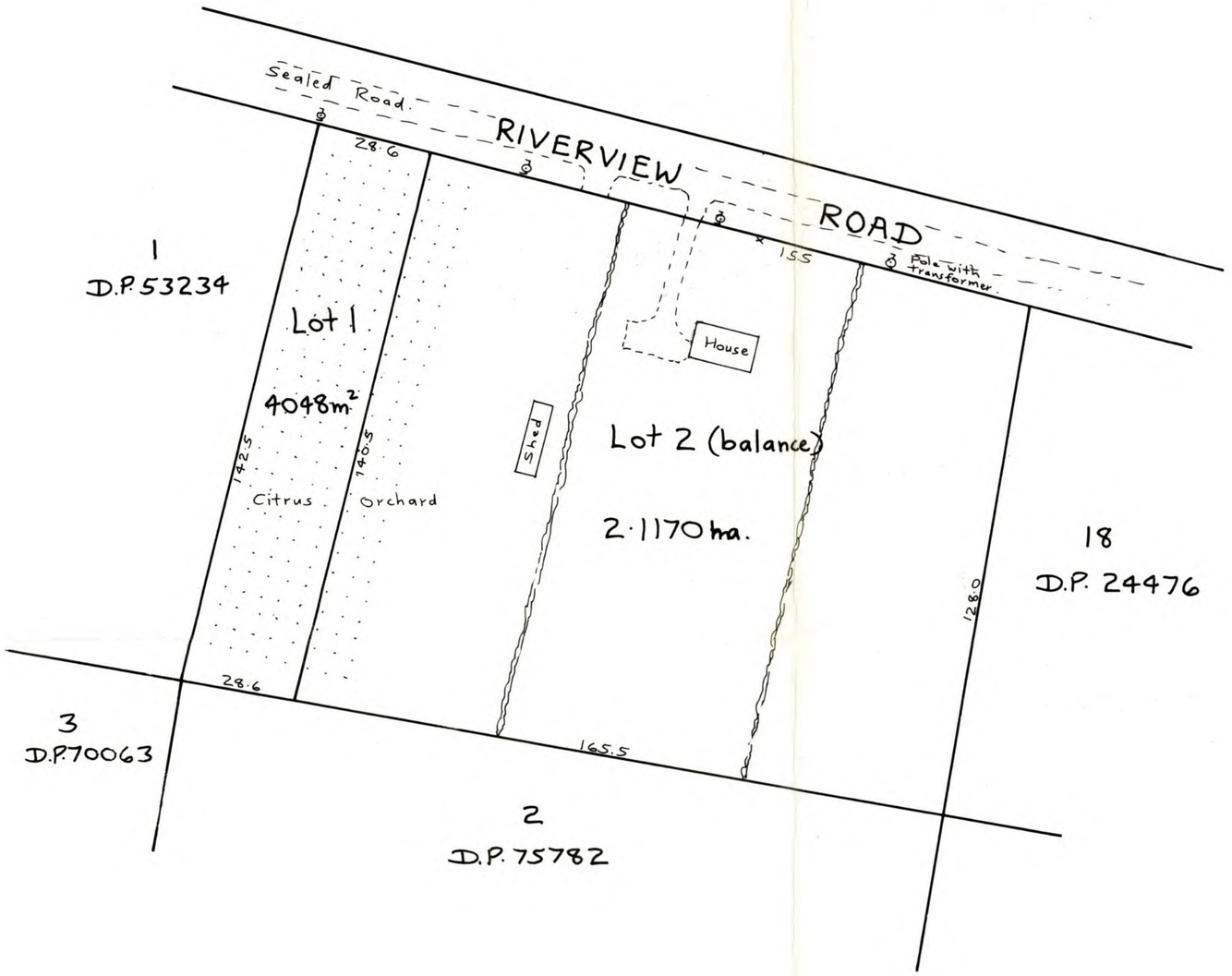
2023 - Google Earth Pro



geologix
consulting engineers

APPENDIX D

Selected Property Information



Val - 25-72500

Field Bk:	Drawn: D.D.R.	Date	Amendment	appd.	Proposed Subdivision of Lot 16 D.P. 24476 XI Kerikeri S.D. Bay of Islands County
Level Bk:	Traced: D.D.R.				
Calc. Bk:	Checked:				
Job File:	Approved:				R. & M.E. Batenburg C.T. 693/22 — SCALE: 1:1000
Tracing No. 2467	Date: Nov. 1981				

REYBURN & BRYANT
REGISTERED SURVEYORS
7 HUNT STREET WHANGAREI
P.O. BOX 191 Ph. 83563

Sheet No. 1 of 1 sheets

BIC 14357

geologix
consulting engineers

APPENDIX E

Summary of Soil Analytical Results

geologix
consulting engineers

Table 1: **Soil Analytical Results**	**Sample Name**	C1 (Composite of C1a, C1b & C1c)	C2 (Composite of C2a, C2b & C2c)			C3 (Composite of C3a, C3b & C3c)			C4 (Composite of C4a, C4b & C4c)	**NES:CS [1] Human Health Residential 10 % Produce Land Use Criteria**
			Primary	Duplicate (QC1)	RPD%	Primary	Duplicate (QC2)	RPD%		
Heavy Metals										
Arsenic		6	4	5	22	4	5	22	5	20
Cadmium		0.44	0.89	0.9	1	0.33	0.43	26	0.47	3
Chromium		260	260	260	0	220	280	24	270	460
Copper		83	131	134	2	54	65	18	98	>10,000
Lead		19.1	12.2	12.7	4	12.3	13.7	11	11.7	210
Nickel		26	22	33	40	20	28	33	25	400 [2]
Zinc		38	35	37	6	24	27	12	51	7,400 [2]
Organochlorine Pesticides (OCPs). No OCPs detected over the laboratory limit of reporting in any of the samples analysed for PAHs. Refer to full laboratory reports attached.										
Polycyclic Aromatic Hydrocarbons (PAHs). No PAHs detected over the laboratory limit of reporting in any of the samples analysed for PAHs. Refer to full laboratory reports attached.										

Highlighted, coloured cell indicates samples exceeds human health guidelines.

Notes:

All results in milligrams per kilogram (mg/kg) unless stated otherwise.

Chromium provided as Chromium VI

RPD - Relative Percent Difference

1. Ministry for the Environment National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health; residential 10 % produce land use scenario.
2. National Environmental Protection Measure (Assessment of Site Contamination) 1999, update 2013 Schedule B1, Land use Class Residential A.

geologix
consulting engineers

APPENDIX F

Laboratory Reports

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:	Geologix Consulting Engineers Limited	**Lab No:**	4028405 SPv1
Contact:	Ray Mayor C/- Geologix Consulting Engineers Limited 13/2181 East Coast Road Stanmore Bay Silverdale 0932	**Date Received:**	11-Nov-2025
		Date Reported:	19-Nov-2025
		Quote No:	113810
		Order No:	
		Client Reference:	C0719N - Riverview Road
		Submitted By:	Ray Mayor

Sample Type: Soil

Sample Name:		Composite of C1a, C1b & C1c	Composite of C2a, C2b & C2c	Composite of C3a, C3b & C3c	Composite of C4a, C4b & C4c	Composite of QC1a, QC1b & QC1c
Lab Number:		4028405.19	4028405.20	4028405.21	4028405.22	4028405.23
Individual Tests						
Dry Matter	g/100g as rcvd	69	71	75	73	-
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	6	4	4	5	5
Total Recoverable Cadmium	mg/kg dry wt	0.44	0.89	0.33	0.47	0.9
Total Recoverable Chromium	mg/kg dry wt	260	260	220	270	260
Total Recoverable Copper	mg/kg dry wt	83	131	54	98	134
Total Recoverable Lead	mg/kg dry wt	19.1	12.2	12.3	11.7	12.7
Total Recoverable Nickel	mg/kg dry wt	26	22	20	25	33
Total Recoverable Zinc	mg/kg dry wt	38	35	24	51	37
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
alpha-BHC	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
beta-BHC	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
delta-BHC	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
gamma-BHC (Lindane)	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
cis-Chlordane	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
trans-Chlordane	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
2,4'-DDD	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
4,4'-DDD	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
2,4'-DDE	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
4,4'-DDE	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
2,4'-DDT	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
4,4'-DDT	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Total DDT Isomers	mg/kg dry wt	< 0.09	< 0.09	< 0.08	< 0.08	-
Dieldrin	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Endosulfan I	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Endosulfan II	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Endosulfan sulphate	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Endrin	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Endrin aldehyde	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Endrin ketone	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Heptachlor	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Heptachlor epoxide	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Hexachlorobenzene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-
Methoxychlor	mg/kg dry wt	< 0.015	< 0.014	< 0.014	< 0.014	-

Sample Type: Soil						
Sample Name:		Composite of C1a, C1b & C1c	Composite of C2a, C2b & C2c	Composite of C3a, C3b & C3c	Composite of C4a, C4b & C4c	Composite of QC1a, QC1b & QC1c
Lab Number:		4028405.19	4028405.20	4028405.21	4028405.22	4028405.23
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	< 0.4	< 0.4	< 0.4	-	-
1-Methylnaphthalene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
2-Methylnaphthalene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Acenaphthylene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Acenaphthene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Anthracene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Benzo[a]anthracene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Benzo[a]pyrene (BAP)	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 0.035	< 0.034	< 0.032	-	-
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 0.034	< 0.033	< 0.032	-	-
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Benzo[e]pyrene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Benzo[k]fluoranthene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Chrysene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Fluoranthene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Fluorene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Naphthalene	mg/kg dry wt	< 0.08	< 0.07	< 0.07	-	-
Perylene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Phenanthrene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-
Pyrene	mg/kg dry wt	< 0.015	< 0.014	< 0.014	-	-

Sample Name:		Composite of QC2a, QC2b & QC2c
Lab Number:		4028405.24
Heavy Metals, Screen Level		
Total Recoverable Arsenic	mg/kg dry wt	5
Total Recoverable Cadmium	mg/kg dry wt	0.43
Total Recoverable Chromium	mg/kg dry wt	280
Total Recoverable Copper	mg/kg dry wt	65
Total Recoverable Lead	mg/kg dry wt	13.7
Total Recoverable Nickel	mg/kg dry wt	28
Total Recoverable Zinc	mg/kg dry wt	27

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).	-	19-24
Total of Reported PAHs in Soil	Sonication extraction, GC-MS/MS analysis. In-house based on US EPA 8270.	0.03 mg/kg dry wt	19-21
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	19-24
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	19-22

Sample Type: Soil			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Polycyclic Aromatic Hydrocarbons Screening in Soil*	Sonication extraction, GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.010 - 0.05 mg/kg dry wt	19-21
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	19-22
Composite Environmental Solid Samples*	Individual sample fractions mixed together to form a composite fraction.	-	1-18
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	BaP Potency Equivalence calculated from; Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(j)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Benzo(a)pyrene x 1.0 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Fluoranthene x 0.01 + Indeno(1,2,3-c,d)pyrene x 0.1. Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.	0.024 mg/kg dry wt	19-21
Benzo[a]pyrene Toxic Equivalence (TEF)*	Benzo[a]pyrene Toxic Equivalence (TEF) calculated from; Benzo[a]pyrene x 1.0 + Benzo(a)anthracene x 0.1 + Benzo(b) fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Indeno(1,2,3-c,d)pyrene x 0.1. Guidelines for assessing and managing contaminated gasworks sites in New Zealand (GMG) (MfE, 1997).	0.024 mg/kg dry wt	19-21

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

Testing was completed between 11-Nov-2025 and 17-Nov-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.

Kim Harrison MSc
Client Services Manager - Environmental

geologix
consulting engineers

STATEMENT OF QUALIFICATION

I Edward John Collings of Geologix Consulting Engineers Ltd certify that:

1. This combined 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 (the NES:CS) because it has been:

    a. Prepared and certified by a suitably qualified and experienced practitioner registered under the Certified Environmental Practitioner Scheme (Registration Number 0861) and Engineering New Zealand Chartered Professional Engineer (Registration Number 1033153).

    b. The SQEP has over 17 years post graduate experiencing practicing as an environmental consultant with a tertiary education qualification equivalent to a Master of Science with supporting evidence from Engineering New Zealand that the Consultant has equivalent knowledge to Washington Accord equivalence.

    c. Reported on in accordance with the current edition of Contaminated Land Management Guidelines No. 1 – Reporting on contaminated sites in New Zealand, 2021.

2. This investigation concludes that:

    a. For subdivision and soil disturbance activities (if any) under Regulation 9 of the NES:CS the soil contamination does not 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 qualifications and experience of the suitably qualified and experienced practitioner is available below.

Signed: 

Dated: 20 November 2025

Role	Name	Relevant Experience
Project Manager	**Ray Mayor** Unitec New Zealand, 2010, Bachelor of Engineering (Environmental) Unitec New Zealand, 2007, Diploma in Environmental Technology	Ray is a Senior Environmental Consultant with more than 17 years' experience on contaminated sites. His project experience includes conducting site assessments, compliance monitoring, managing environmental risk and remediation across numerous sites including residential, industrial and commercial developments as well as New Zealand Defence Force sites.
Senior Technical Reviewer	**Edward Collings** MPhys (Hons) Physical Geography Certified Environmental Practitioner Chartered Professional Engineer	Edward is a Principal Engineer and Managing Director with more than 17 years' experience on geotechnical design and contaminated land remediation on a variety of residential, commercial and critical infrastructure projects in the UK and New Zealand. Edward attained recognition as a Certified Environmental Practitioner in 2016 in Australia and New Zealand with specialist knowledge in contaminated land and groundwater remediation and wastewater design. In recent years Edward has provided professional engineering assessments for prospective candidates to the scheme.

PROPOSED FAR NORTH DISTRICT PLAN – SUBDIVISION OBJECTIVES AND POLICIES

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-03	*Infrastructure is planned to service the proposed subdivision and development where:* *a. there is existing infrastructure connection, infrastructure should provided in an integrated, efficient, coordinated and future-proofed manner at the time of subdivision; and* *b. where no existing connection is available infrastructure should be planned and consideration be given to connections with the wider infrastructure network.*

SUB-04	*Subdivision is accessible, connected, and integrated with the surrounding environment and provides for:* *a. public open spaces;* *b. esplanade where land adjoins the coastal marine area; and* *c. esplanade where land adjoins other qualifying waterbodies.*
SUB-P1	*Enable boundary adjustments that:* *a. do not alter:* *i. the degree of non compliance with District Plan rules and standards;* *ii. the number and location of any access; and* *iii. the number of certificates of title; and* *b. are in accordance with the minimum lot sizes of the zone and comply with access, infrastructure and esplanade provisions.*
SUB-P2	*Enable subdivision for the purpose of public works, infrastructure, reserves or access.*
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.*
SUB-P4	*Manage subdivision of land as detailed in the district wide, natural environment values, historical an cultural values and hazard and risks sections of the plan.*
SUB-P5	*Manage subdivision design and layout in the General Residential, Mixed Use and Settlement zone to provide for safe, connected and accessible environments by:*

	a. minimising vehicle crossings that could affect the safety and efficiency of the current and future transport network; *b. avoid cul-de-sac development unless the site or the topography prevents future public access and connections;* *c. providing for development that encourages social interaction, neighbourhood cohesion, a sense of place and is well connected to public spaces;* *d. contributing to a well connected transport network that safeguards future roading connections; and* *e. maximising accessibility, connectivity by creating walkways, cycleways and an interconnected transport network.*
SUB-P6	*Require infrastructure to be provided in an integrated and comprehensive manner by:* *a. demonstrating that the subdivision will be appropriately serviced and integrated with existing and planned infrastructure if available; and* *b. ensuring that the infrastructure is provided is in accordance the purpose, characteristics and qualities of the zone.*
SUB-P7	*Require the vesting of esplanade reserves when subdividing land adjoining the coast or other qualifying waterbodies.*
SUB-P8	*Avoid rural lifestyle subdivision in the Rural Production zone unless the subdivision:* *a. will protect a qualifying SNA in perpetuity and result in the SNA being added to the District Plan SNA schedule; and* *b. will not result in the loss of versatile soils for primary production activities.*
SUB-P9	*Avoid subdivision rural lifestyle subdivision in the Rural Production zone and Rural residential subdivision in the Rural Lifestyle zone unless the development achieves the environmental outcomes required in the management plan subdivision rule.*

SUB-P10	*Manage subdivision to address the effects of the activity requiring resource consent including (but not limited to) consideration of the following matters where relevant to the application:* *a. consistency with the scale, density, design and character of the environment and purpose of the zone;* *b. the location, scale and design of buildings and structures;* *c. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; or the capacity of the site to cater for on-site infrastructure associated with the proposed activity;* *d. managing natural hazards;* *e. Any adverse effects on areas with historic heritage and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and* *f. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.*

PROPOSED FAR NORTH DISTRICT PLAN – RURAL RESIDENTIAL ZONE OBJECTIVES AND POLICIES

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-04	*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 non-productive 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.*
	Manage land use and subdivision to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application: a. *consistency with the scale and character of the rural residential environment;* b. *location, scale and design of buildings or structures;* c. *at zone interfaces:*

	i. *any setbacks, fencing, screening or landscaping required to address potential conflicts;* ii. *the extent to which adverse effects on adjoining or surrounding sites are mitigated and internalised within the site as far as practicable;* d. *the capacity of the site to cater for on-site infrastructure associated with the proposed activity;* e. *the adequacy of roading infrastructure to service the proposed activity;* f. *managing natural hazards;* g. *any adverse effects on historic heritage and cultural values, natural features and landscapes or indigenous biodiversity; and* h. *any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.*

Outlook

Proposed two lot Subdivision - 7 Riverview Road, Kerikeri

From Deanne Rogers <Deanne@northplanner.co.nz>
Date Wed 2025-12-03 9:48 AM
To taiao@ngatirehia.co.nz <taiao@ngatirehia.co.nz>
Cc Rochelle <rochelle@northplanner.co.nz>

1 attachment (397 KB)
Scheme plan - Lazet.pdf;

Tena koe,

Our clients Josh and Carna Lazet are seeking to subdivide their Rural Living zoned residential property at 7 Riverview Road, Kerikeri. I have attached a copy of the two-lot subdivision plan prepared by Williams and King. Engineering assessments and HAIL report investigations are underway.

The subdivision proposal is a non-complying activity for reasons relating to proposed lot sizes that are below the Rural Living Zone CA, RDA and DA standards. There is an existing house and accessory buildings within the proposed lot 2 boundary. The site is to be zoned Rural-Residential under the PDP.

The site is surrounded by similar size sites as compared to those proposed. The parent lot site was created in 1982. The site has a history of horticultural use and has been assessed accordingly for contaminants and suitability for residential use.

Are you able to confirm any interest Ngati Rehia may have in this proposal.

Nga mihi,

NORTHLAND
PLANNING & DEVELOPMENT

Deanne Rogers
Consultant Planner

Offices in Kaitaia & Kerikeri
09 408 1866 | 027 449 8813
Northland Planning & Development 2020 Limited
(office days: Mon & Wed)

Operative Far North District Plan -Chapter 13 Subdivision Objectives and Policies

OBJECTIVES	
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 well-being 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 from subdivision, including reverse sensitivity effects and the creation or acceleration of natural hazards, 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.*
13.3.5	*To ensure that all new subdivisions provide a reticulated water supply and/or on-site water storage and include storm water management sufficient to meet the needs of the activities that will establish all year round.*
13.3.6	*To encourage innovative development and integrated management of effects between subdivision and land use which results in superior outcomes to more traditional forms of subdivision, use and development, for example the protection, enhancement and restoration of areas and features which have particular value or may have been compromised by past land management practices.*

13.3.7	*To ensure the relationship between Maori and their ancestral lands, water, sites, wahi tapu and other taonga is recognised and provided for.*
13.3.8	*To ensure that all new subdivision provides an electricity supply sufficient to meet the needs of the activities that will establish on the new lots created.*
13.3.9	*To ensure, to the greatest extent possible, that all new subdivision supports energy efficient design through appropriate site layout and orientation in order to maximise the ability to provide light, heating, ventilation and cooling through passive design strategies for any buildings developed on the site(s).*
13.3.10	*To ensure that the design of all new subdivision promotes efficient provision of infrastructure, including access to alternative transport options, communications and local services.*
13.3.11	*To ensure that the operation, maintenance, development and upgrading of the existing National Grid is not compromised by incompatible subdivision and land use activities.*
Policies	
13.4.1	*That the sizes, dimensions and distribution of allotments created through the subdivision process be determined with regard to the potential effects including cumulative effects, of the use of those allotments on:* • *natural character, particularly of the coastal environment;* • *ecological values;* • *landscape values;* • *amenity values;*

	• *cultural values;* • *heritage values; and* • *existing land uses*
13.4.2	*That standards be imposed upon the subdivision of land to require safe and effective vehicular and pedestrian access to new properties.*
13.4.3	*That natural and other hazards be taken into account in the design and location of any subdivision.*
13.4.4	*That in any subdivision where provision is made for connection to utility services, the potential adverse visual impacts of these services are avoided.*
13.4.5	*That access to, and servicing of, the new allotments be provided for in such a way as will avoid, remedy or mitigate any adverse effects on neighbouring property, public roads (including State Highways), and the natural and physical resources of the site caused by silt runoff, traffic, excavation and filling and removal of vegetation.*
13.4.6	*That any subdivision proposal provides for the protection, restoration and enhancement of heritage resources, areas of significant indigenous vegetation and significant habitats of indigenous fauna, threatened species, the natural character of the coastal environment and riparian margins, and outstanding landscapes and natural features where appropriate.*
13.4.7	*That the need for a financial contribution be considered only where the subdivision would:* *(a) result in increased demands on car parking associated with non-residential activities; or* *(b) result in increased demand for esplanade areas; or* *(c) involve adverse effects on riparian areas; or*

	(d) depend on the assimilative capacity of the environment external to the site.
13.4.8	*That the provision of water storage be taken into account in the design of any subdivision.*
13.4.9	*That bonus development donor and recipient areas be provided for so as to minimise the adverse effects of subdivision on Outstanding Landscapes and areas of significant indigenous flora and significant habitats of fauna.*
13.4.10	*The Council will recognise that subdivision within the Conservation Zone that results in a net conservation gain is generally appropriate.*
13.4.11	*That subdivision recognises and provides for the relationship of Maori and their culture and traditions, with their ancestral lands, water, sites, waahi tapu and other taonga and shall take into account the principles of the Treaty of Waitangi.*
13.4.12	*That more intensive, innovative development and subdivision which recognises specific site characteristics is provided for through the management plan rule where this will result in superior environmental outcomes.*
13.4.13	*Subdivision, use and development shall preserve and where possible enhance, restore and rehabilitate the character of the applicable zone in regards to s6 matters. In addition subdivision, use and development shall avoid adverse effects as far as practicable by using techniques including:* *(a) clustering or grouping development within areas where there is the least impact on natural character and its elements such as indigenous vegetation, landforms, rivers, streams and wetlands, and coherent natural patterns;*

	(b) minimising the visual impact of buildings, development, and associated vegetation clearance and earthworks, particularly as seen from public land and the coastal marine area; *(c) providing for, through siting of buildings and development and design of subdivisions, legal public right of access to and use of the foreshore and any esplanade areas;* *(d) through siting of buildings and development, design of subdivisions, and provision of access that recognise and provide for the relationship of Maori with their culture, traditions and taonga including concepts of mauri, tapu, mana, wehi and karakia and the important contribution Maori culture makes to the character of the District (refer Chapter 2 and in particular Section 2.5 and Council's "Tangata Whenua Values and Perspectives" (2004);* *(e) providing planting of indigenous vegetation in a way that links existing habitats of indigenous fauna and provides the opportunity for the extension, enhancement or creation of habitats for indigenous fauna, including mechanisms to exclude pests;* *(f) protecting historic heritage through the siting of buildings and development and design of subdivisions.* *(g) achieving hydraulic neutrality and ensuring that natural hazards will not be exacerbated or induced through the siting and design of buildings and development.*
13.3.14	*That the objectives and policies of the applicable environment and zone and relevant parts of Part 3 of the Plan will be taken into account when considering the intensity, design and layout of any subdivision.*
13.4.15	*That conditions be imposed upon the design of subdivision of land to require that the layout and orientation of all new lots and building platforms created include, as appropriate, provisions for achieving the following:*

	(a) development of energy efficient buildings and structures; *(b) reduced travel distances and private car usage;* *(c) encouragement of pedestrian and cycle use;* *(d) access to alternative transport facilities;* *(e) domestic or community renewable electricity generation and renewable energy use.*
13.4.16	*When considering proposals for subdivision and development within an existing National Grid Corridor the following will be taken into account:* *(a) the extent to which the proposal may restrict or inhibit the operation, access, maintenance, upgrading of transmission lines or support structures;* *(b) any potential cumulative effects that may restrict the operation, access, maintenance, upgrade of transmission lines or support structures; and* *(c) whether the proposal involves the establishment or intensification of a sensitive activity in the vicinity of an existing National Grid line.*

OPERATIVE DISTRICT PLAN – RURAL ENVIRONMENT OBJECTIVES AND POLICIES

OBJECTIVES	
8.3.1	*To promote the sustainable management of natural and physical resources of the rural environment.*
8.3.2	*To ensure that the life supporting capacity of soils is not compromised by inappropriate subdivision, use or development.*
8.3.3	*To avoid, remedy or mitigate the adverse and cumulative effects of activities on the rural environment.*
8.3.4	*To protect areas of significant indigenous vegetation and significant habitats of indigenous fauna*
8.3.5	*To protect outstanding natural features and landscapes.*
8.3.6	*To avoid actual and potential conflicts between land use activities in the rural environment.*
8.3.7	*To promote the maintenance and enhancement of amenity values of the rural environment to a level that is consistent with the productive intent of the zone.*
8.3.8	*To facilitate the sustainable management of natural and physical resources in an integrated way to achieve superior outcomes to more traditional forms of subdivision, use and development through management plans and integrated development.*
8.3.9	*To enable rural production activities to be undertaken in the rural environment.*

8.3.10	*To enable the activities compatible with the amenity values of rural areas and rural production activities to establish in the rural environment.*
POLICIES	
8.4.1	*That activities which will contribute to the sustainable management of the natural and physical resources of the rural environment are enabled to locate in that environment.*
8.4.2	*That activities be allowed to establish within the rural environment to the extent that any adverse effects of these activities are able to be avoided, remedied or mitigated and as a result the life supporting capacity of soils and ecosystems is safeguarded, and rural productive activities are able to continue.*
8.4.3	*That any new infrastructure for development in rural areas be designed and operated in a way that safeguards the life supporting capacity of air, water, soil and ecosystems while protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna, outstanding natural features, and landscapes.*
8.4.4	*That development which will maintain or enhance the amenity value of the rural environment and outstanding natural features and outstanding landscapes be enabled to locate in the rural environment.*
8.4.5	*That plan provisions encourage the avoidance of adverse effects from incompatible land uses, particularly new developments adversely affecting existing land-uses (including by constraining the existing land-uses on account of sensitivity by the new use to adverse affects from the existing use – i.e. reverse sensitivity).*
8.4.6	*That areas of significant indigenous vegetation and significant habitats of indigenous fauna habitat be protected as an integral part of managing the use, development and protection of the natural and physical resources of the rural environment.*

8.4.7	*That Plan provisions encourage the efficient use and development of natural and physical resources, including consideration of demands upon infrastructure.*
8.4.8	*That, when considering subdivision, use and development in the rural environment, the Council will have particular regard to ensuring that its intensity, scale and type is controlled to ensure that adverse effects on habitats (including freshwater habitats), outstanding natural features and landscapes on the amenity value of the rural environment, and where appropriate on natural character of the coastal environment, are avoided, remedied or mitigated. Consideration will further be given to the functional need for the activity to be within rural environment and the potential cumulative effects of non-farming activities.*

OPERATIVE DISTRICT PLAN – RURAL LIVING ZONE - OBJECTIVES AND POLICIES

OBJECTIVES	
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.*
8.7.3.3	*To protect the special amenity values of the frontage to Kerikeri Road between SH10 and the urban edge of Kerikeri.*

POLICIES	
8.7.4.1	*That a transition between residential and rural zones is achieved where the effects of activities in the different areas are managed to ensure compatibility.*
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 onsite 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*
8.7.4.7	*That provision be made for ensuring that sites, and the buildings and activities which may locate on those sites, have adequate access to sunlight and daylight.*
8.7.4.8	*That the scale and intensity of activities other than a single residential unit be commensurate with that which could be expected of a single residential unit.*
8.7.4.9	*That activities with effects on amenity values greater than a single residential unit could be expected to have, be controlled so as to avoid, remedy or mitigate those adverse effects on adjacent activities.*
8.7.4.10	*That provision be made to ensure a reasonable level of privacy for inhabitants of buildings on adjoining sites.*

8.7.4.11	*That the built form of development allowed on sites with frontage to Kerikeri Road between its intersection with SH10 and Cannon Drive be maintained as small in scale, set back from the road, relatively inconspicuous and in harmony with landscape plantings and shelter belts.*
8.7.4.12	*That the Council maintains discretion over new connections to a sewerage system to ensure treatment plant discharge quality standards are not compromised (refer to Rule 13.7.3.5).*

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

4 December 2025

Rochelle Jacobs
Northland Planning & Development 2020 Ltd

Email: info@northplanner.co.nz

To Whom It May Concern:

RE: PROPOSED SUBDIVISION
Joshua Lazet – 7 Riverview Road, Kerikeri. Lot 1 DP95971

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 there is an existing power supply to proposed Lot 2.
Design and costs to provide a power supply to proposed Lot 1 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
E: aaron.birt@topenergy.co.nz

Chorus New Zealand Limited

15 December 2025

Chorus reference: 11447337

Attention: Sheryl Hansford

Quote: New Property Development

1 connections at 7 Riverview Road, Kerikeri, Far North District, 0230

Your project reference: Lazet subdivision

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 15 December 2025. 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