THOMSON SURVEY LIMITED

SURVEYORS AND RESOURCE PLANNERS

Our Reference: 10879 (FNDC)

22 July 2026

Resource Consents Department
Far North District Council
JB Centre
KERIKERI

Dear Sir/Madam

RE: Proposed Subdivision and Land use for L Waller at 63 Hone Heke Road, Kerikeri

I am pleased to lodge on behalf of L Waller, application for a three lot (two additional) subdivision at 63 Hone Heke Road, on land zoned Residential under the Operative District Plan and General Residential under the Proposed District Plan – Decisions Version. The application also seeks consent for breaches of Stormwater Management (existing impermeable surfaces within one of the lots) and Access rules. The application is overall a discretionary activity.

The fee has been paid separately.

Regards

Lynley Newport
Senior Planner
THOMSON SURVEY LTD

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 Consent representative to discuss this application prior to lodgement?

◯ **Yes** ☑ **No**

2. Type of consent being applied for

(more than one circle can be ticked):

☑ **Land Use**

◯ **Fast Track Land Use***

◯ **Change of Consent Notice (s.221(3))**

◯ **Certificate of Compliance (s.139)**

◯ **Extension of time (s.125)**

◯ **Discharge:** Total voume = ____ m³
Note; volumes >3m³ requires NRC Consent.

☑ **Subdivision**

◯ **Existing Use Certicicate (s.139A)**

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

◯ **Other (please specify)** ____

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

3. Would you like to opt out of the fast track process?

☑ **Yes** ◯ **No**

4. Consultation

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

If yes, which groups have you consulted with?

Who else have you consulted with?

For any questions or information regarding iwi/hapū consultation, please contact:
The Resource Consents Planning Technicians, **planning_technicians@fndc.govt.nz**

5. Applicant details

Name/s: Lindsay Waller

Email:

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: Lynley Newport at Thomson Survey Ltd

Email:

Phone number:

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

Postcode 0245

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: as per item 5

Property address/
location:

8. Application site details

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

Name/s:	see item 5
Site address/ location:	63 Hone Heke Road KERIKERI Postcode 0230
Legal description:	Lot 1 DP 106009 & Flat 2 **Val Number:**
Certificate of title:	NA102C/373

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

Site visit requirements:

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

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

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

9. Description of the proposal

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

Subdivision of land zoned Residential in the Operative District Plan and General Residential in the Proposed District Plan (DV), to create two additional lots; and breaches of the zones' Stormwater Management thresholds; and access standards. The application is a discretionary activity.

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.

The proposal has been prepared in accordance with the following version of the FNDC Engineering Standards:

◯ **2009** ⊘ **2023**

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

13. Natural hazards (National Policy Statement for Natural Hazards 2025)

Is the site subject to known or potential natural hazards (for example, flooding, coastal inundation, erosion, or unstable land), as contemplated by the National Policy Statement for Natural Hazards 2025? ◯ **Yes** ☑ **No**

If yes, please identify the relevant natural hazard(s) by ticking the applicable box(es) below:

◯ **Flooding**
◯ **Active Faults**
◯ **Landslips**
◯ **Liquefaction**
◯ **Coastal Erosion**
◯ **Tsunami**
◯ **Coastal Inundation**

Please ensure all relevant technical reports are submitted with the application.

14. 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**

15. 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.

16. 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) Lindsay Waller

Email:

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.

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) Lindsay Waller

Signature:
(signature of bill payer)

Date 20/07/2026

MANDATORY

17. 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.

18. Declaration

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

Name (please write in full) Lindsay Waller

Signature

Date 20/07/2026

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

See overleaf for a checklist of your information...

Checklist of your information

Please tick if information is provided

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

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

Lindsay Waller

PROPOSED SUBDIVISION
Under the Operative Far North District Plan
& Proposed District Plan

63 Hone Heke Road, Kerikeri

PLANNER'S REPORT &
ASSESSMENT OF ENVIRONMENTAL EFFECTS

Thomson Survey Ltd
Kerikeri

1.0 THE PROPOSAL

The applicant owns land at 63 Hone Heke Road Kerikeri, currently as part of a cross lease ownership with 61 Hone Heke Road. Recently issued RC 2260479 gave consent for the conversion of the cross lease titles into fee simple titles. This application seeks to subdivide Lot 2 of RC 2260479 into three separate allotments (2 additional), as a discretionary activity subdivision.

Access is to be via an existing shared ownership in Access Lot 6 DP 106009. The current title's shares in that access lot are proposed to be shared equally amongst the proposed three new

allotments. The scheme plan in Appendix 1 shows proposed Amalgamation Condition wording.

Lot 1 at 726m^2 is the largest lot and contains all the existing build environment, including driveway, dwelling and ancillary structures. Lots 2 & 3 are vacant sites, at 460m^2 and 459m^2 respectively.

The site is zoned Residential/General Residential in the Operative and Proposed District Plans respectively and is a fully serviced site.

Because all the existing impermeable coverage is to be within one lot, land use consent is required for that impermeable coverage as a % of new lot area, with coverage estimated at 70%.

In addition, the first 30m of the existing access has multiple users already (more than 8), either by means of shared ownership or appurtenant right of way. Any additional lots automatically breach ODP and PDP rules limited private access to 8 HE's/titles even though this "breach" has been consented more than once by the FND in the past. The balance of the shared access lot, up to the point that the application site has entrance, will have a total of 7 HE's/titles as a result of the proposed two additional lots. Carriageway is all sealed/concrete however is not to the required carriageway width in some places.

Consent is therefore also required for legal and carriageway width breaches.

1.2 Scope of this Report

This assessment and report accompanies the Resource Consent Application made by the applicant, and is provided in accordance with Section 88 and Schedule 4 of the Resource Management Act 1991. The application seeks consent to subdivide land to create two additional serviced lots, as a discretionary activity.

The information provided in this assessment and report is considered commensurate with the scale and intensity of the activity for which consent is being sought. Applicant details are contained within the Application Form 9.

The planning report/AEE is supported by a Geotechnical Investigation Report and a Subdivision Site Suitability Report.

2.0 PROPERTY DETAILS

Location:	63 Hone Heke Road Road, Kerikeri. Location map attached in Appendix 2.
Legal description:	Lot 1 DP 106009 (Lot 2 of RC 2260479)
Record of Title:	Currently NA102C/373. Copy of title and relevant instruments attached in Appendix 3.

3.0 SITE DESCRIPTION

3.1 Physical & Mapped characteristics

The property is one of two (currently) cross lease titles accessed off Hone Heke Road, just beyond Kerikeri High School if driving north. The site supports an existing residential dwelling, serviced with connections to power, water, wastewater and stormwater.

Dwelling to be on Lot 1 of subdivision proposal at left of picture.

The house is accessed over sealed Lot 6 DP 106009 shared driveway, and then concrete driveway internal to the site, to the garage and dwelling. The front (north) of the application site is vacant land, on a sloping grassed area leading to vegetated areas on the lower and steeper slopes, some of which is well established mixed species vegetation.

The site is level across its southern extent where the existing house on Lot 1 is located. It then slopes downwards in a northerly direction, culminating in the access lot and road reserve.

Looking west across proposed Lot 3's slope towards Lot 2

The site is not mapped as being subject to any natural hazard, with residential buildings already in existence. There is no resource overlay applying to the site in either the ODP or PDP.

3.2 Legal Interests on Titles

The application site has a share in Lot 1 DP 106009. It correspondingly also had more shared ownership of the access lot. The existing title is subject to, and has appurtenant rights of way, affecting Lot 6 DP 106009 (access lot). These easement instruments form part of Appendix 3.

3.3 Consent History

The cross lease was created by RC 1950574, issued in 1995. The consent included Flat Plans (buildings already in existence).

Since then, the cross lease has been consented to convert to fee simple titles, one of which is the application site – RC 2260479 refers. A copy of this recently issued RC is attached in Appendix 4.

The property file lists the following building consents:

BP6070601, 1988 – dwelling and garage;
BP2625, 1988 – garage;
BP6007569, 1992 – swimming pool;
BC-2003-1339, 2003 – carport;
BC-2005-1018, 2005, install septic tank;
EXM-2020-1023-, 2020 Notice of Exemption for building work – decommissioning of septic system (with property instead connecting up to Council's system).

4.0 SCHEDULE 4 – INFORMATION REQUIRED IN AN APPLICATION

Clauses 2 & 3: Information required in all applications

(1) An application for a resource consent for an activity must include the following:	
(a) a description of the activity: .	Refer Sections 1 and 5 of this Planning Report.
(b) an assessment of the actual or potential effect on the environment of the activity:	Refer to Section 6 of this Planning Report.
(b) a description of the site at which the activity is to occur:	Refer to Section 3 of this Planning Report.
(c) the full name and address of each owner or occupier of the site:	This information is contained in the Form 9 attached to the application.

(d) a description of any other activities that are part of the proposal to which the application relates:	Refer to Sections 3 and 5 of this Planning Report for existing activities within the site. The application is for subdivision and land use (breach of stormwater management (impermeable surface coverage) for existing coverage to be within a new lot); and access breaches, pursuant to the Operative District Plan and Proposed District Plan – Decisions Version.
(e) a description of any other resource consents required for the proposal to which the application relates:	No other resource consents are required.
(f) an assessment of the activity against the matters set out in Part 2:	Refer to Section 7 of this Planning Report.
(g) an assessment of the activity against any relevant provisions of a document referred to in section 104(1)(b), including matters in Clause (2): *(a) any relevant objectives, policies, or rules in a document; and* *(b) any relevant requirements, conditions, or permissions in any rules in a document; and* *(c) any other relevant requirements in a document (for example, in a national environmental standard or other regulations).*	Refer to Sections 5 & 7 of this Planning Report.
(3) An application must also include any of the following that apply:	
(a) if any permitted activity is part of the proposal to which the application relates, a description of the permitted activity that demonstrates that it complies with the requirements, conditions, and permissions for the permitted activity (so that a resource consent is not required for that activity under section 87A(1)):	Refer sections 3 and 5.
(b) if the application is affected by section 124 or 165ZH(1)(c) (which relate to existing resource consents), an assessment of the value of the investment of the existing consent holder (for the purposes of section 104(2A)):	There is no existing resource consent. Not applicable.
(c) if the activity is to occur in an area within the scope of a planning document prepared by a customary marine title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011, an assessment of the activity against any resource management matters set out in that	The site is not within an area subject to a customary marine title group. Not applicable.

planning document (for the purposes of section 104(2B)).	

Clause 4: Additional information required in application for subdivision consent

(4) An application for a subdivision consent must also include information that adequately defines the following:	
(a) the position of all new boundaries: *(b) the areas of all new allotments, unless the subdivision involves a cross lease, company lease, or unit plan:* *(c) the locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips:* *(d) the locations and areas of any existing esplanade reserves, esplanade strips, and access strips:* *(e) the locations and areas of any part of the bed of a river or lake to be vested in a territorial authority under section 237A:* *(f) the locations and areas of any land within the coastal marine area (which is to become part of the common marine and coastal area under section 237A):* *(g) the locations and areas of land to be set aside as new roads.*	Refer to Scheme Plans in Appendix 1.

Clause 5: Additional information required for application for reclamation – not applicable.

Clause 6: Information required in assessment of environmental effects

(1) An assessment of the activity's effects on the environment must include the following information:	
(a) if it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:	Refer to Section 6 of this planning report. The activity will not result in any significant adverse effect on the environment.
(b) an assessment of the actual or potential effect on the environment of the activity:	Refer to Section 6 of this planning report.
(c) if the activity includes the use of hazardous installations, an assessment of any risks to the environment that are likely to arise from such use:	Not applicable as the application does not involve hazardous installations.
(d) if the activity includes the discharge of any contaminant, a description of— *(i) the nature of the discharge and the sensitivity of the receiving*	The subdivision does not involve any discharge of contaminant.

environment to adverse effects; and *(ii) any possible alternative methods of discharge, including discharge into any other receiving environment:*	
(e) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect:	Refer to Section 6 of this planning report.
(f) identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:	Refer to Section 8 of this planning report.
g) if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:	No monitoring is required as the scale and significance of effects does not warrant any.
(h) if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).	No protected customary right is affected.

Clause 7: Matters that must be addressed by assessment of environmental effects (RMA)

(1) An assessment of the activity's effects on the environment must address the following matters:	
(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:	Refer to Sections 6 and 8 of this planning report and also to the assessment of objectives and policies in Section 7.
(b) any physical effect on the locality, including any landscape and visual effects:	Refer to Section 6. The proposed activity will have less than minor adverse effects on the physical environment and landscape and visual amenity values.
(c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:	Refer to Section 6. The proposal will result in no adverse effects in regard to habitat and ecosystems.
(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other	Refer to Section 6, and above comments

special value, for present or future generations:	
(e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:	The proposal will not result in the discharge of contaminants, nor any unreasonable emission of noise.
(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations.	The application site is not subject to natural hazards and does not involve hazardous installations.

5.0 COMPLIANCE ASSESSMENT

5.1 Weighting assessment

The Operative District Plan (ODP) is the only "Operative" plan. However, with decisions on submissions now publicly notified, the Proposed District Plan (PDP) also has legal effect for the purposes of lodging and assessing applications for resource consent.

In regard to this serviced urban site, the ODP zones it Residential and the PDP zones it General Residential. There is not a lot of difference in provisions applying to the two zones, nor objectives and policies relating to the residential zone. As such, a weighting assessment is something of a moot point in terms of subdivision, where both plans consider the lot sizes to meet the discretionary activity threshold.

The breach of the permitted and controlled activity stormwater management (impermeable surface) thresholds in the ODP defaults to discretionary activity status, whilst in the PDP the breach defaults to restricted discretionary activity status.

The breaches of access standards both default to discretionary activity status. In short, the activity status doesn't alter whichever plan the application is assessed under.

Until such time as provisions in the PDP's General Residential zone reach a point of being beyond challenge, I am of the view that the two plans should have equal weighting.

5.2 Operative Far North District Plan

The site is zoned Residential, is a sewered site, and has no resource features.

Subdivision Minimum Lot Sizes:

Table 13.7.2.1: Minimum Lot Sizes

(v) RESIDENTIAL ZONE

Controlled Activity Status (Refer also to 13.7.3)	**Restricted Discretionary Activity Status (Refer also to 13.8)**	**Discretionary Activity Status (Refer also to 13.9)**

The minimum lot sizes are 3,000m² (unsewered) and 600m² (sewered).		The minimum lot sizes are 2,000m² (unsewered) and 300m² (sewered)

Whilst one lot is greater than 600m^2 and is a 'sewered' sites, two are less than 600m^2 in area. They are greater than 300m^2. The subdivision is a **discretionary** subdivision activity.

Land Use – Zone Rules:

I have not identified any breaches of zone rules other than the Stormwater Management (impermeable surface coverage). The estimated % coverage of Lot 1 due to all the existing coverage being within that lot, is 70%, breaching both the ODP's permitted and controlled activity thresholds.

Setbacks from boundaries can be achieved on new boundaries (1.2m). Buildings are existing and therefore not subject to Height rules – albeit they comply in any event.

Existing building coverage is estimated at 35% of Lot 1 area – permitted. The boundary around the house to be in Lot 1 has been established so as to avoid a breach of the Sunlight rule as it affects the lots to the north, and down slope of the existing dwelling.

District Wide Rules:

Excavation/Filling:
Very little excavation/filling will be required to give effect to the subdivision, i.e. site works. Such works will likely be restricted to any earthworks required for the formation of the driveway extension proposed on easement B on the scheme plan. Volumes should not breach the zone's permitted threshold of 200m^3 per site,

Access:
The property currently owns shares of access Lot 6 DP 106009. So too do five other titles. The addition of two additional titles would bring the total number of titles with shares in the access lot to 8. The access lot is also subject to rights of way (in part) which sees more than 8 lots / HE's already utilising the first 30m of access. The legal width of the access is less than the required width. The carriageway width is less than the required width in some places. The proposal therefore requires consent for breaches of rules in 15.1.6C of the ODP.

5.3 Proposed Far North District Plan (Decisions Version)

The site is zoned General Residential and is a sewered site. The controlled minimum lot size is the same as for the ODP, being 600m^2. The subdivision is a discretionary activity under the PDP.

The impermeable surface coverage permitted threshold is 50%, with any breach of that defaulting to restricted discretionary activity status. Lot 1's impermeable coverage will be approximately 70%.

The PDP's sunlight rule for a building to the south of a new boundary is less restrictive than under the ODP, because the PDP adopts different thresholds, depending on sun angle in relation to boundaries. I have not identified any breach in regard to the existing building.

The PDP's Transportation section is a little different to the ODP's in that some breaches default to discretionary activity status, whilst others default to restricted discretionary activity status. The PDP, like the ODP, provides for private access for up to 8 lots. The first section of the access lot (approximately 30m) serves more than that. It will remain private. This breaches TRAN-R2 PER-1and PER-X, and defaults to discretionary activity status.

In serving more than 8 lots, the first section of access also breaches PER-5 because it cannot comply with TRAN-Table 9. This breach defaults to restricted discretionary activity status. Any part of the access that serves less than 8 also breaches parts of TRAN-Table 9 in terms of carriageway width.

In summary, the overall activity status under the PDP for this proposal, is discretionary.

6.0 ASSESSMENT OF ENVIRONMENTAL EFFECTS

6.1 Allotment Sizes and Dimensions

The property is zoned for residential use and is a sewered site. Two of the lots are less than the controlled activity minimum lot size. The setback from boundary requirement in the zone is 1.2m from all boundaries except road boundary. Only Lot 2 has a road boundary. Both the ODP and PDP require a 14m x 14m square building envelope for each proposed lot. The buildings on Lot 1 are existing. The shape of Lots 2 & 3 preclude perfect square shaped building envelope from being achievable. However, they can both provide building sites in excess of 200m^2. This is more than the 196m^2 provided by a 14m x 14m square. The inability to provide for the perfect square building envelope does not alter the overall category of consent being sought.

The application is supported by both a geotechnical investigation report and a subdivision site suitability report – refer to Appendices 5 & 6. Both these supporting documents show the vacant Lots 2 & 3 can support residential living.

6.2 Natural and Other Hazards

In regard to ground conditions (geotechnical considerations), the assessment in Appendix 5 recommended that further site stability analysis be undertaken at building consent stage. The assessment contains geotechnical recommendations in its section 5.1 (Concept Foundations); 5.2 (Concept Earthworks); 5.3 (Concept Retaining Walls); and 5.4 (Concept Driveways).

In regard to other natural hazards, the Subdivision Site Suitability Report in Appendix 6 addresses natural hazards in its section 8 and in the report's Table 9.

The National Policy Statement for Natural Hazards 2025 (NPS-NH) requires that the proposed subdivision must plan for and manage the risk from natural hazards to reduce the potential

adverse effects to less than minor. Table 9 in the Site Suitability Report referred above provides a summary of the proposed activities against defined natural hazards.

In summary the risk from any natural hazard is low with only minor or negligible consequence.

6.3 Water Supply

The application site is within a public water supply area and the existing dwelling already has a connection. The site is located near to a public 50 mm uPVC water supply pipeline outside the northwestern boundary. The existing metered connection to the existing house (Lot 1) is located at the northern site corner and will be reused with the water supply line re-routed through Easement A.

New connections will be required for proposed Lots 2 & 3. New water meters for proposed Lots 2 and 3 will be applied for to be installed within the berm area of Hone Heke Road and the local accessway. FNDC has confirmed that the is network capacity for additional connections.

There are two nearby fire hydrants, the closest one is in Hone Heke Road northwest of the site. The other hydrant is to the northeast of the site along a local accessway. The closest hydrant is approximately 135m and the second 202m from the site entrance. FNDC has confirmed that there is sufficient water supply to provide firefighting.

6.4 Energy Supply & Telecommunications

Proposed Lot 1 utility services are currently provided by overhead lines within Hone Heke Road that become underground connections near the site's northern corner boundary. The power, and telecommunication networks will be extended to the proposed Lots 2 and 3 boundaries, in accordance with appropriate standards (and subject to network operator approval). Existing power and telecommunications are proposed to be re-routed to the existing dwelling via easement A.

6.5 Stormwater Disposal

Refer to the Subdivision Site Suitability Report attached in Appendix 6. With a reduced lot area around existing development to be within Lot 1, a breach of the zone's Stormwater Management permitted threshold of 50% occurs. The estimated % coverage is 70%. The Subdivision Site Suitability Report's Section 3 provides detailed assessment and concept design for stormwater management on each lot.

In summary, stormwater discharge from each lot will generally be as follows:

- Lot 1: Attenuation to permitted activity level in tank, with connection made to the existing stormwater network via 100 dia. lateral connection through easement A.
- Lot 2: Attenuate roof rainwater in tank; discharge to the existing stormwater network via 100 dia. lateral connection.
- Lot 3: Attenuate roof rainwater in tank; new standard catchpit (460 x 675mm) to manage RoW runoff; discharge to the existing stormwater network via 150 dia. lateral connection.

6.6 Sanitary Sewage Disposal

The site is within the Area of Benefit with the existing dwelling having an existing connection. New connections will be required for Lots 2 & 3. Wastewater from the existing dwelling is currently serviced by a pressure sewer wastewater collection system located north of the existing dwelling. The pump chamber system appeared to be in good working order and is contained within easement A. The existing private Wastewater pump line currently runs through proposed Lot 2 and will be diverted through easement A. A wastewater boundary kit is indicated in Hone Heke Road.

Section 2 of the Subdivision Site Suitability Report (Appendix 6) supporting this application contains more detailed information on both the existing connection and proposed connections.

FNDC has confirmed that the is network capacity for additional wastewater connections.

6.7 Easements for any purpose

Easements are proposed as shown on the Scheme Plan – for access and services.

6.8 Property Access

Access is existing to the application site and that same access will be utilised by the two additional lots – with concrete driveway coming off the current shared access lot in the same location it does now. The existing private driveway and vehicle crossing will remain as is and become RoW in favour of Lots 2 & 3. A new RoW (extension to existing driveway) will be formed along Lot 3's southwest boundary (easement B) to provide access to proposed Lot 2. This is proposed to be formed to 3m width.

Existing house driveway. Proposed to extend off to the right this side of the carport accommodating the vehicle in the picture above.

The existing access concrete width is 3m with no additional widening proposed. Lots 2 and 3 will require new vehicle crossings from the RoW, to FNDC/S/2 standard. The Subdivision Site Suitability Report in Appendix 6 recommends that these are only finalised and constructed at lot development stage, not subdivision formation to give flexibility in future driveway alignment.

The crossing off Hone Heke Road is well formed and fit for purpose for multiple users. It is a wide splayed crossing, already sealed to meet the Hone Heke Road seal edge.

The shared access once on private property is sealed/concrete surface but is not the required carriageway width uniformally throughout its length to the site's existing crossing. I believe it is still of sufficient width for the proposed number of users, however if the council considers widening is required, then I believe a passing bay would be sufficient rather than uniform widening throughout.

Existing shared access lot looking south upslope to the existing driveway into the site leading off to the right.

The use of existing vehicle crossings will increase by virtue of two additional allotments. The existing crossings relevant to the proposal are the access off Hone Heke Road, already serving several properties; and the crossing into the application site, which already has splayed concrete crossing and can be widened if necessary.

The Council has historically accepted multiple users at the Hone Heke Road crossing, which is wide and expansive, preferring (I believe) to have a single wide (sealed and splayed) crossing rather than the three separate road frontage crossings that could have been established noting there are in fact three adjacent frontages.

The arrangement that currently exists is the most practical and easiest to maintain to a high standard. The application site has no alternative access available to it and in any event *owns* a share of the access lot as part of its title.

The standard of the existing crossing is high and there is no need to upgrade or improve it. Hone Heke Road, in this location, is a low speed urban street, given that the schools are in the vicinity and traffic is subject to speed restrictions associated with those schools. The proposal does not adversely affect the safe, efficient, and effective operation of the Council's transport network.

Site distances have been regarded sufficient by the Council when granting previous subdivision consents for properties utilising this crossing.

There are no nearby intersections, nor adjacent crossings in close proximity. There are established crossings on the opposite side of Hone Heke Road. This is an existing situation that the Council has considered acceptable in regard to relatively recent subdivisions it has granted for properties utilising the access in question.

As stated earlier, this portion Hone Heke Road is a low speed environment given the proximity of the schools. The existing crossing is expansive and splayed, with sealed finish right up to the edge of road seal.

The shared accessway also serves the Hone Heke Lodge property, advertised as a hostel. All other user properties are residential in nature, with typical residential traffic. Historically, the Council has been satisfied that the access is suitable for the lodge property and a number of residential properties.

It is only the first 30m of shared access that already has more than 8 lots/titles utilising it. The carriageway is 6m at road end, narrowing to 5m over the first 30m. Most traffic then veers left, with six sites (including the application site) continuing straight ahead. The first 30m remains private access, primarily because there is insufficient legal width able to be achieved for public road. It is sufficient width for two way traffic with expansive splays at intersection with Hone Heke Road intersection to enable safe vehicle access/egress and queuing.

The lesser used private access, of which the application owns a portion, is less than 5m width. Should the Council consider it necessary, localised widening could be carried out to better accommodate additional traffic resulting from the subdivision, e.g. widening at site crossing to dimensions of a passing bay.

In summary, although I have identified a number of access breaches, this is the case now, prior to any subdivision. In other words, the Council has previously consented intensification of use of the access beyond 8 users allowed on private access, one consent as recent as 2022.

6.9 Building Locations

Lot 1 contains an existing house, garage/carport and swimming pool. Lots 2 and 3 are vacant. The application is supported by a Geotechnical Assessment which did not identify any restraints that would preclude building on either of those lots, albeit made recommendations in terms of building foundation design; earthworks and retaining structures. The sites are not subject to any flooding, with no minimum floor levels required to be specified.

There will likely be a requirement to remove some mature vegetation to make way for future buildings.

6.10 Preservation and enhancement of heritage resources (including cultural), vegetation, fauna and landscape, and land set aside for conservation purposes

The site is zoned Residential in the ODP and General Residential in the PDP, both zones encouraging and providing for residential living. The site has no resource feature overlays. It contains no high or outstanding landscape or natural values, and no areas of significant indigenous vegetation or habitat. There is no land set aside for conservation purposes within the application site.

There are no listed or mapped Sites of Significance to Maori on the application site, nor any historic buildings, sites, notable trees or archaeological sites as mapped and/or listed in the District Plan or Far North Maps.

Notwithstanding the above, the future development of the vacant lots 2 & 3 will likely require the removal of mature vegetation such as that shown in the picture below. The vegetation is a mixture of exotics and indigenous. Clearance will only be necessary on the gentler slopes more suitable for building platforms. Wherever possible, vegetation cover will be maintained, particularly on the steeper (northern) slopes on Lot 2 and along the eastern boundary of Lot 3. I do not believe future development will adversely affect indigenous biodiversity in a minor or more than minor way.

6.11 Soil

The site is residential with existing development. The proposal does not adversely impact on the life supporting capacity of soils.

6.12 Access to, and protection of, waterbodies

There are no qualifying water bodies with which the property has a boundary, to which access is required to be provided.

6.13 Land use compatibility (reverse sensitivity)

The site is zoned Residential and contains residential development, in an area dominated by that same land use. No land use incompatibility issues will arise.

6.14 Proximity to Airports

The site is outside of any identified buffer area associated with the Bay of Islands Airport.

6.15 Natural Character of the Coastal Environment

The site is not within the Coastal Environment.

6.16 Energy Efficiency and renewable Energy Development/Use

Individual future lot owners may take the opportunity to install energy efficiency devices when they build.

6.17 National Grid Corridor

The National Grid does not run through the application site.

7.0 STATUTORY ASSESSMENT

7.1 Far North District Plan Objectives and Policies

Objectives and policies relevant to this proposal are considered to be primarily those listed in Chapters 7.6 (Residential Zone); 13 (Subdivision); and 15.1 (Traffic, parking and access), of the ODP.

Subdivision Objectives & Policies

Objective 13.3.1 is an enabling objective, seeking to provide for subdivision of land in such a way as will be consistent with the purpose of the zone. That purpose is providing for "*the development of residential areas where the effects of activities permitted in the zone are compatible with sustainable development and with the existing character and amenity which is typically medium density residential living*". I consider the proposal to be consistent with the purpose of the zone and one that will promote sustainable development consistent with the existing character and amenity. In addition, the site is in a location within easy walking distance of schools and amenities.

The proposal is appropriate for the site and does not adversely affect any of the matters listed in Objective 13.3.2.

Objectives 13.3.3 and 13.3.4 refer to outstanding landscapes or natural features; and scheduled heritage resources; and to land in the coastal environment. By proposing development on residential zoned land that is none of these things, the proposal is consistent with these objectives as it will not create any adverse effects on the values and character outlined in the two objectives.

Development is existing and the site is connected to the Council's reticulated water supply (Objective 13.3.5 and Policy 13.4.8).

The site is not known to contain any sites of cultural significance to Maori, or wahi tapu (Objective 13.3.7 and Policy 13.4.11).

The sites will have power connections (13.3.8).

The proposal will make efficient use of existing services (13.3.10).

The proposal has had regard to the matters listed in Policy 13.4.1, where relevant.

Access to the site is off existing public road via existing driveway (13.4.2 and 13.4.5).

The site is not subject to any significant hazard (13.4.3).

The site is not known to contain any heritage resources and is not in the coastal environment. It does not contain any outstanding landscape of natural features (13.4.6).

S6 matters (National Importance) have been adequately considered. The proposal is an appropriate use of the site (13.4.13).

The subdivision has had regard to the underlying zone's objectives and policies, where relevant (13.4.14).

In summary, I believe the proposal to be consistent with the above Objectives and Policies.

Residential Zone Objectives and Policies

Objective 7.6.3.1 is not overly relevant as the proposed subdivision is within an established residential area. The proposed development is of a type, scale and intensity in keeping with the character and amenity of the area (7.6.3.2).

Policies 7.6.4.5 and 7.6.4.6 are relevant to land uses other than residential and are not relevant in this instance.

Policy 7.6.4.7 requires sufficient land to be available for a household unit and that unit's outdoor space, planting, parking and manoeuvring. This proposed development achieves this.

Policy 7.6.4.8 requires that building and other impermeable surfaces only take up a limited portion of the site so as to provide for open space around buildings, and to provide for planting and to reduce adverse hydrological, ecological and amenity effects. This is all achievable.

Policy 7.6.4.9 requires adequate access to sunlight and daylight. This can be achieved noting that the site slopes down to the north, i.e. future dwellings will be to the north and down slope of the existing dwelling.

Policy 7.6.4.10 requires that provision be made to ensure a reasonable level of privacy for inhabitants of buildings. The proposed layout achieves a reasonable level of privacy.

Relevant objectives and policies in the Traffic, Parking and Access chapter of the ODP include 15.1.3.1 which seeks to minimise the adverse effects of traffic on the natural and physical environment. The existing 'site' is permitted 20 daily one way traffic movements where the first residential unit is exempt. Two additional residential units therefore remain within the permitted threshold. Whilst there are other users of the same access, I believe it can continue to operate efficiently.

Objective 15.1.3.5 promotes the safe and efficient movement and circulation of vehicular, cycle and pedestrian traffic, including for those with disabilities. This objective appears to be directed to large public or commercial sites/spaces rather than individual sites. There is footpath access up to but not beyond the application site entrance off Hone Heke Road.

Policy 15.1.4.1 requires that the traffic effects of activities be evaluated in making decisions on resource consent applications. The Council in issuing relatively recent subdivisions of properties utilising the application site's access, has clearly evaluated the traffic effects in doing so.

Policy 15.1.4.6 requires that the number, size, gradient and placement of vehicle access points be regulated to assist traffic safety and control. As stated earlier the entrance to the site, and several others, of Hone Heke Road is existing and approved by Council.

Policy 15.1.4.7 seeks that the needs and effects of cycle and pedestrian traffic be taken into account in assessing development proposals. Note earlier comment about footpath.

7.2 Proposed District Plan (PDP-DV)

An assessment follows, utilising the PDP-DV.

SUB-O1
Subdivision results in the efficient use of land, which:
a. achieves the objectives of each relevant zone, precinct, development area, overlays and the district wide provisions;
b. contributes to the existing and planned 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.

The subdivision results in the efficient use of land, and is consistent with the zone's objectives. The development will be consistent with the planned character of the area. No reverse sensitivity issues will arise. The proposed land use will not prevent the land from achieving the objectives of the zone. There is no increased risk from natural hazards and less than minor 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, wetland, lake and river margins, areas of significant indigenous vegetation and significant habitats of indigenous fauna, Sites and Areas of Significance to Māori, and Historic Heritage.

N/A. The site is urban and none of the features listed in a. and b. above apply.

SUB-O3
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 is planned connections made with the wider infrastructure network.

The application site is within an area of benefit for Council's existing infrastructure services.

SUB-O4
Subdivision is accessible, connected, and integrated with the surrounding environment including by providing for:
a. Safe transport connections including active modes of public transport where practicable;
b. new, and connection to existing public open spaces;
c. esplanade where land adjoins the coastal marine area; and
d. esplanade where land adjoins other qualifying water bodies.

The application site has existing access to existing Council urban street and is close to amenities, including schools and reserves. There are no esplanade requirements.

SUB-O5
Subdivision protects the long-term availability and productive capacity of highly productive land by avoiding inappropriate subdivision that would compromise its use for farming and forestry activities.

N/A noting the urban zoning and residential use.

SUB-O6
Subdivision occurs in a sequenced and coherent manner in locations and at a rate that enables growth and development to be supported by additional infrastructure.

The proposed development is of a level provided for in the PDP as a discretionary activity and which can readily be serviced.

SUB-P1
Enable boundary adjustments that: ….

Not relevant – application is not a boundary adjustment.

SUB-P2
Enable subdivision for the purpose of public works, infrastructure, reserves or access.

Not relevant – application does not involve public works, infrastructure, reserves or access lots.

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

The lots are consistent with the planned environment of the zone. Whilst they do not comply with the controlled activity minimum lot sizes, they do meet the discretionary lot sizes applying to the zone. Each lot can accommodate a building platform and have legal and physical access.

SUB-P4
Manage subdivision design and layout in the General Residential, Mixed Use, Medium Density Residential, Town Centre 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, (including for emergency response)
connectivity by creating walkways, cycleways and an interconnected transport network; and
f. providing additional infrastructure where required.

The proposal does not increase the number of crossings off public road, and utilises an existing crossing. No cul-de-sac forms part of the application. The site is centrally located and close to amenities.

SUB-P5
Require infrastructure to be provided in an integrated and comprehensive manner by:
a. demonstrating that the subdivision will be appropriately serviced (including telecommunications) and integrated with existing and planned infrastructure if available; and
b. ensuring that the infrastructure is provided is in accordance with the planned environment of the zone.

The lots have or will have connections to Council services.

SUB- P6
Require the vesting of esplanade reserves or esplanade strips when subdividing to specific allotment sizes land adjoining the coast or other qualifying water bodies.

The site does not adjoin any waterbody boundary.

SUB-P7
Avoid rural lifestyle subdivision in the Rural Production zone unless the subdivision: ....

Site is not zoned Rural Production.

SUB-P8
Avoid subdivision that:
a. Within the Horticulture Precinct, is not provided for in PREC1-P5:
b. In all other parts of the Rural Production Zone:…..

Site is not zoned Rural Production, nor in the proposed Horticulture Precinct.

SUB-P9
Restrict rural residential
subdivision inthe Rural Lifestyle zone unless the development
….

The site is not zoned Rural Lifestyle.

SUB-P10
To protect amenity and character by avoiding the subdivision of minor residential units from principalresidential units where resultant allotments do not comply with minimum allotment size and residential density.

Not applicable. There are no minor residential units.

SUB-P11
Consider the following matters where relevant when assessing and managing the effects of subdivision:
a. The potential for reverse sensitivity effects that would prevent or adversely affect activities already established on land from continuing to operate;
b. consistency with the scale, density, design and character of the environment and purpose of the zone;
c. the location, scale and design of buildings and structures;
d.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;
e. managing natural hazards;
f. Any adverse effects on areas with historic heritage and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and
g. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.

Reverse sensitivity is not considered an issue given the zoning and predominant use of the properties within the zone. The sites will be developed in a manner that is consistent with the planned character of the area. The site is not subject to natural hazards. The site contains no historic heritage or cultural values, nor any natural features or landscapes, nor natural character or indigenous biodiversity values.

The site is zoned General Residential in the Proposed District Plan.

GRZ-O1
The General Residential zone provides a variety of densities, housing types and lot sizes that respond to:
a. housing needs and demand;
b. the adequacy and capacity of available or programmed development infrastructure;
c. the amenity and character of the receiving residential environment; and
d. historic heritage.

GRZ-O2
The General Residential zone consolidates urban residential development around available or programmed development infrastructure to improve the function and resilience of the receiving residential environment while creating well-functioning urban environments.

GRZ-O3
Non-residential activities contribute to the well-being of the community while complementing the scale, character and amenity of the General Residential zone.

GRZ-O4

Land use and subdivision in the General Residential zone is supported where there is adequacy and capacity of available or programmed development infrastructure.

GRZ-O5
Land use and subdivision in the General Residential zone provides communities with functional and high amenity living environments.

GRZ-O6
Residential communities are resilient to changes in climate and are responsive to changes in sustainable development techniques

The proposal does present a level of density slightly higher than the permitted intensity for General Residential. However, the site is well located in terms of being within walking distance of schools and other amenities. In-fill housing is a good use of the land and will help meet a demand for housing close to amenities. The site does not have any historic heritage values. The sites will be fully serviced. The sites will maintain amenity values.

GRZ-P1
Enable land use and subdivision in the General Residential zone where:
a. there is adequacy and capacity of available or programmed development infrastructure to support it; and
b. it is consistent with the scale, character and amenity anticipated in the planned residential environment.

The site is within an area serviced by Council infrastructure and the proposal will result in development consistent with the scale, character and amenity anticipated in the residential environment.

GRZ-P2
Enable a range of residential developments within the General Residential zone, including terraced housing and apartments, where there is adequacy and capacity of available or programmed development infrastructure.

The policy is aimed at land use (buildings), not subdivision. The proposed additional lots are suitable for modestly sized residential development, close to amenities.

GRZ-P3
Enable non-residential activities that:
a. do not detract from the vitality and viability of the Mixed Use or Town Centre zone;
b. support the social and economic well-being of the community;
c. are of a residential scale; and
d. are consistent with the scale, character and amenity of the General Residential zone.

N/A – no non residential activity proposed as part of this application.

GRZ-P4
Provide for a diverse range of housing and care options that are suitable for the particular needs and characteristics of older persons such as retirement villages where they:

a. complement the character and amenity values of the surrounding area, whilst recognising that delivering a range of housing and care options may mean different densities provided within a retirement village development;
b. do not adversely affect road safety or the efficiency of the transport network; and
c. can be serviced by adequate development infrastructure.

N/A – no specific designed house or care facility for older persons is being considered.

GRZ-P5
Encourage and support the use of on-site water storage to enable sustainable and efficient use of water resources.

Lots will be connected to Council reticulated supply.

GRZ-P6
Encourage energy efficient design and the use of small-scale renewable electricity generation in the construction of residential development.

Not a relevant consideration at this point in time.

GRZ-P7
Consider the following matters where relevant when assessing and managing the effects of land use and subdivision in the General Residential Zone:
a. consistency with the scale, design, amenity and character of the planned residential environment;
b. the location, scale and design of buildings or structures, potential for shadowing and visual dominance;
c. opportunities for connectivity, within and between developments, public open space, services and facilities;
d. for residential activities:
i. provision for outdoor living space;
ii. privacy for adjoining sites;
iii. access to sunlight;
e. for non-residential activities:
i. scale and compatibility with residential activities
ii. hours of operation
f. at zone interfaces, any setbacks, fencing, screening or landscaping required to address potential conflicts;
g. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity, including:
i. opportunities for water sensitive design ~~low impact design~~ methods;
ii. ability of the site to address stormwater and soakage;
h. managing natural hazards; and
i. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.

The application has taken the relevant matters above into account in its design.

In summary, the proposal is consistent with the proposed PDP-DV's General Residential Zone objectives and policies.

The various breaches of the PDP's Transportation rules and standards results in the objectives and policies relating to transportation, and relevant to the application, needing to be assessed.

TRAN-O1

The transport network, including State Highways, transport networks and cycleways of strategic significance, is recognised and managed as regionally significant infrastructure to support the economic, cultural, environmental and social wellbeing of current and future generations.

TRAN-O4
Parking, loading and access provisions support the needs of land use and subdivision activities, and ensure safe and efficient operation for users.

TRAN-O5
The transport network provides for the safe and efficient movement of vehicular, cycle and pedestrian traffic and that also meets the needs of persons with a disability or limited mobility

The application does not propose any addition to that infrastructure. Providing for additional lots for affordable housing close to amenities, utilising existing infrastructure, meets the social well being needs of the community. The proposal does not, in my opinion, adversely affect the safe and efficient movement of vehicles and pedestrians.

TRAN-P1
Recognise the transport network as regionally significant infrastructure by having particular regard to the significant social, economic, and cultural benefits of transport projects when determining resource consent applications or making recommendations on notices of requirement

This policy appears to be aimed at major resource consent applications for transport projects as opposed to property specific applications.

TRAN-P3
Ensure the safe, efficient and well connected operation of the transport network through the management of:
a. the subdivision layout, and location of buildings, structures and other potential visual obstructions that may impact on sightlines and the integrity of the road carriageway and the railway corridor;
b. well connected roads, including discouraging the design and construction of cul-de-sacs;
c. the design of access (including emergency response access) and parking;
d. vehicular access to and from sites;
e. the volume of traffic from land use activities;
f. vehicular, pedestrian, and cyclist needs, including persons with a disability or limited mobility;
g. the adverse cumulative effects of land use and subdivision on the transport network; and
h. reverse sensitivity effects that may impact regionally significant infrastructure.

These matters have been addressed earlier in this planning report/AEE. The proposal does not result in any visual obstructions that may impact on sightlines, nor the integrity of the road carriageway. The proposal does not include any new access, only existing. The access can accommodate emergency response vehicles. Access to new lots is to be via sealed/

concreted driveway right of way, linking with an existing seal/concrete shared accessway, before accessing Hone Heke Road. Whilst not to standard, this existing access is well established and the Council has previously consented additional use. I believe the existing access can accommodate two additional allotments.

7.3 Part 2 Matters

5 Purpose

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

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

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and

(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

The proposal provides for peoples' social and economic well being, and for their health and safety, while sustaining the potential of natural and physical resources, safeguarding the life-supporting capacity of air, water, soil and the ecosystems; and avoiding, remedying or mitigating adverse effects on the environment.

6 Matters of national importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

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

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

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

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

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

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

(g) the protection of protected customary rights:

(h) the management of significant risks from natural hazards.

The site does not exhibit any s6 Matters of National Importance.

7 Other matters

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

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

Relevant matters within s7 have been had regard to.

8 Treaty of Waitangi

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

The principles of the Treaty of Waitangi have been considered and it is believed that this proposed subdivision does not offend any of those principles.

In summary, it is considered that all matters under s5-8 inclusive have been adequately taken into account.

7.4 National and Regional Policy Statements & Environmental Standards

Providing for residential development in appropriate locations is consistent with national policy direction in regard to urban development. I have not identified any other national policy statements or environmental standards of relevance.

The Regional Policy Statement for Northland contains objectives and policies related to infrastructure and regional form and economic development. These are enabling in promoting sustainable management in a way that is attractive for business and investment. The proposal is consistent with these objectives and policies.

8.0 CONSULTATION & S95 ASSESSMENT

8.1 S95A Public Notification Assessment

A consent authority must follow the steps set out in s95A to determine whether to publicly notify an application for a resource consent. Step 1 specifies when public notification is mandatory in certain circumstances. None of these circumstances exist. Step 2 of s95A specifies the circumstances that preclude public notification. No such circumstance exists. Step 3 of s95A must therefore be considered. The application is not subject to a rule or national environmental standard that requires public notification. This report and AEE concludes that the activity will not have, nor is it likely to have, adverse effects on the environment that are more than minor. In summary public notification is not required pursuant to Step 3 of s95A.

8.2 S95B Limited Notification Assessment

A consent authority must follow the steps set out in s95B to determine whether to give limited notification of an application for a resource consent, if the application is not publicly notified pursuant to s95A. Step 1 identifies certain affected groups and affected persons that must be notified. No affected group of persons as listed in s95B exist in this instance. Step 2 of s95B specifies the circumstances that preclude limited notification. Neither circumstance exists and Step 3 of s95B must be considered. The application is not for a boundary activity. The s95E assessment below concludes that there are no affected persons to be notified.

8.3 S95D Level of Adverse Effects

The AEE in this report assesses effects on the environment and concludes that these will be no more than minor.

8.4 S95E Affected Persons

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 are not less than minor). A person is not an affected person if they have provided written approval for the proposed activity. No Written Approvals have been sought.

The lot size and level of density being proposed is provided for in the ODP and PDP, as discretionary activity subdivision. Whilst the proposal results in access standard breaches, these are already breached by the existing level of development, and that level of development has been consented historically by the Council to utilise the access arrangements as they currently stand.

The boundary against which the new lots are located is with the jointly owned access lot, with no residential dwellings in proximity.

In summary I have not identified any affected persons.

9.0 CONCLUSION

The site is considered suitable for the proposed subdivision and residential development. Effects on the wider environment are, I believe, capable of remedy and mitigation through conditions of consent, such that they will be no more than minor. The proposal is considered consistent with the relevant objectives and policies of the Operative and Proposed District Plans, and relevant objectives and policies of the Regional Policy Statement, and consistent with Part 2 of the Resource Management. There is no District Plan rule or national environmental standard that requires the proposal to be publicly notified. I have not identified any affected persons.

It is requested that the Council give favourable consideration to this application and grant consent.

Signed Dated 22nd July 2026

Lynley Newport,
Senior Planner
Thomson Survey Ltd

10.0 LIST OF APPENDICES

Appendix 1 Scheme Plan(s)

Appendix 2 Location Plan

Appendix 3 Record of Title & Relevant Instruments

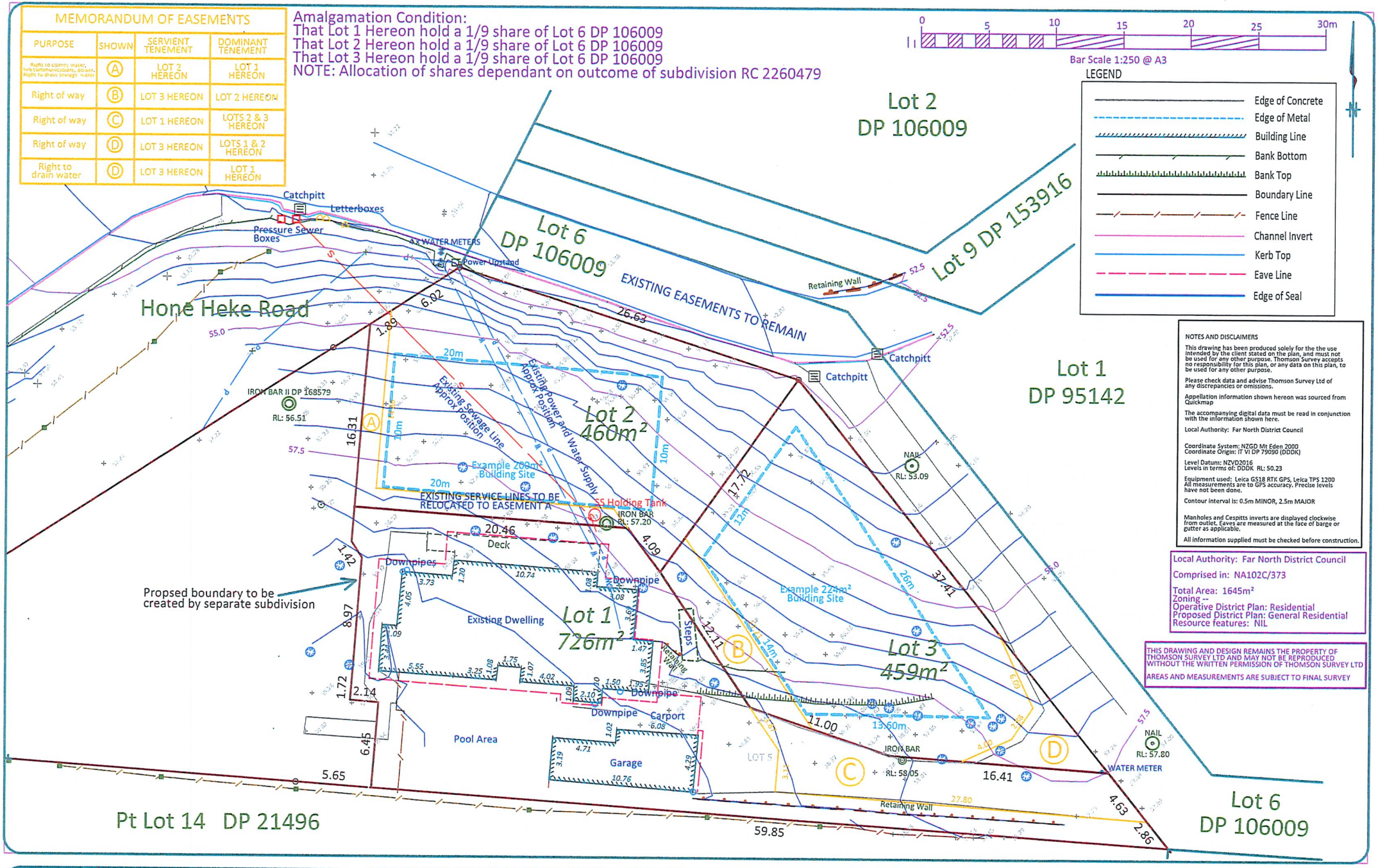
Appendix 4 RC 2260479-RMASUB

Appendix 5 Geotechnical Assessment

Appendix 6 Subdivision Site Suitability Report

Appendix 1

Scheme Plan(s)



THOMSON SURVEY LIMITED
315 Kerikeri Rd
P.O. Box 372 Kerikeri
Email: kerikeri@tsurvey.co.nz
Ph: (09) 4077360
www.tsurvey.co.nz
Registered Land Surveyors, Planners & Land Development Consultants

Topographical Survey & Scheme Plan of Proposed Subdivision on Lot 1 DP 106009

63 Hone Heke Road, Kerikeri

PREPARED FOR: Waller

	Name	Date
Survey	MD	03/26
Survey		
Design	MD	02/04/26
Drawn	MD	02/04/26
Rev A	MD	27/05/26

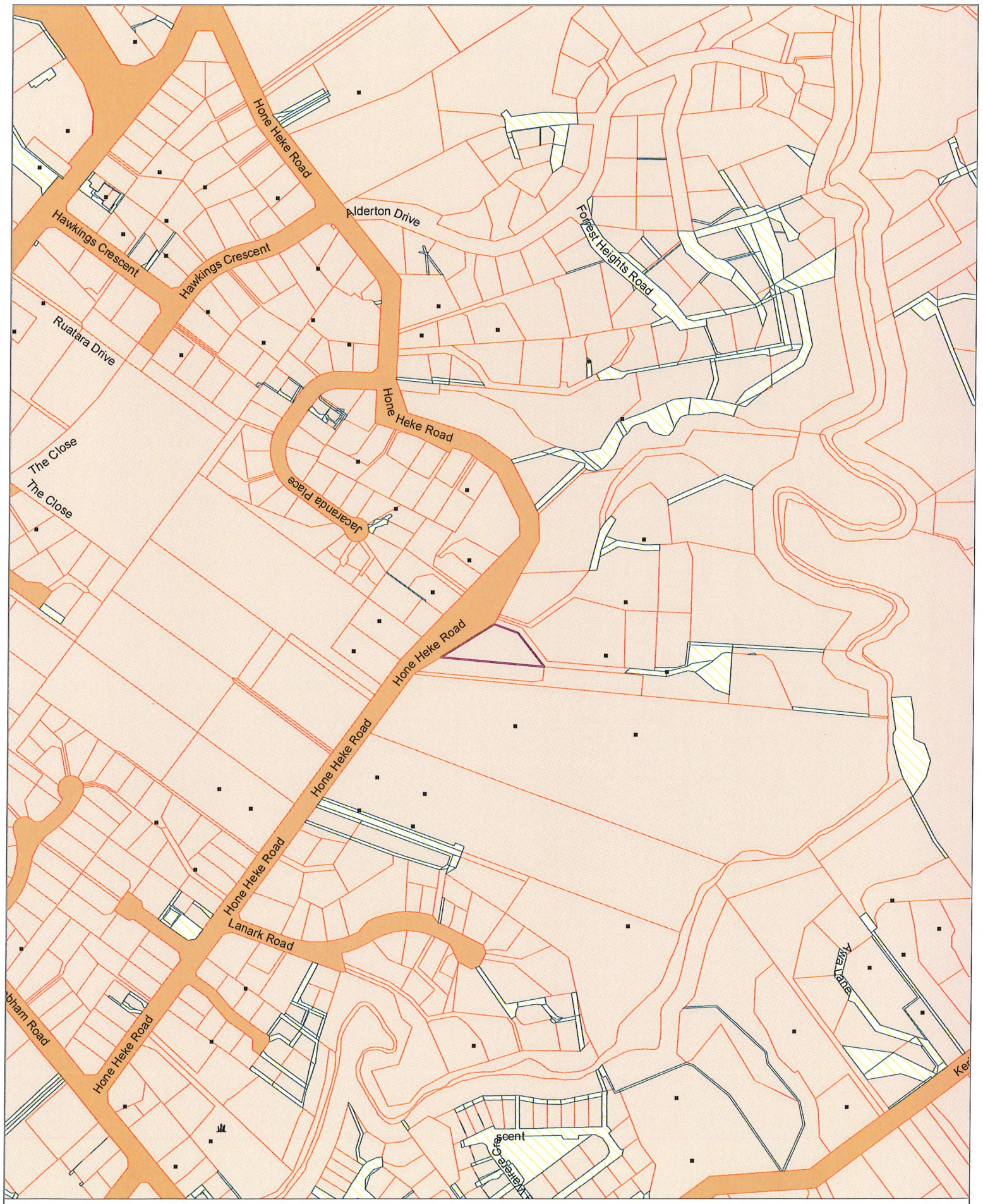
10490 10879 Topo.LCD

ORIGINAL
SCALE 1:250
SHEET SIZE A3

Surveyors Ref. No: 10879
Series
Sheet 1 of 1

Appendix 2

Location Plan



QuickMap
Custom Software Ltd

0 50 100 150 200 250 300 350 400 450 500 550 600m

Any person wishing to rely on the information shown on this map must independently verify the information

Scale 1:5000 Topographical and Cadastral map derived from LINZ data. Printed: 22-Jul-2026 02:24.

Appendix 3

Record of Title & Relevant Instruments

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
CROSS LEASE

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA102C/373**
Land Registration District	**North Auckland**
Date Issued	30 August 1995

Prior References
NA59A/1018

Estate	Fee Simple - 2/3 share
Area	2468 square metres more or less
Legal Description	Lot 1 Deposited Plan 106009
Registered Owners	

Lindsay John Waller and Bernadette Therese Waller

Estate	Leasehold	**Instrument**	L C887942.2
		Term	999 years commencing on the 5th August 1995
Legal Description	Flat 2 Deposited Plan 168579 and Garage 2 Deposited Plan 168579		

Registered Owners

Lindsay John Waller and Bernadette Therese Waller

Estate	Fee Simple - 2/9 share
Area	942 square metres more or less
Legal Description	Lot 6 Deposited Plan 106009
Registered Owners	

Lindsay John Waller and Bernadette Therese Waller

Interests

Subject to Section 308 (4) Local Government Act 1974 (Affects Fee Simple)

Subject to a right of way over part marked E on DP 106009 specified in Easement Certificate 441969.3 (Affects Lot 6 DP 106009) (Affects Fee Simple)

The easements specified in Easement Certificate 441969.3 are subject to Section 37 (1) (a) Counties Amendment Act 1961

Appurtenant hereto is a right of way specified in Easement Certificate B061336.2 (Affects Fee Simple)

Subject to a right of way over part marked E on DP 106009 specified in Easement Certificate B061336.2 (Affects Lot 6 DP 106009) (Affects Fee Simple)

The easements specified in Easement Certificate B061336.2 are subject to Section 309 (1) (a) Local Government Act 1974

B083565.1 Variation of the conditions of the easement specified in Easement Certificate 441969.3 (Affects Fee Simple)

B426544.2 Certificate pursuant to Section 321(3)(c) Local Government Act 1974 - 20.6.1985 at 9.07 am (Affects Fee Simple)

Subject to a right of way over part marked E on DP 106009 specified in Easement Certificate B426544.4 (Affects Lot 6 DP 106009) (Affects Fee Simple)

The easements specified in Easement Certificate B426544.4 are subject to Section 309 (1) (a) Local Government Act 1974

C887942.1 Lease of Flat 1 Composite CT NA102C/372 issued - 30.8.1995 (Affects Fee Simple)

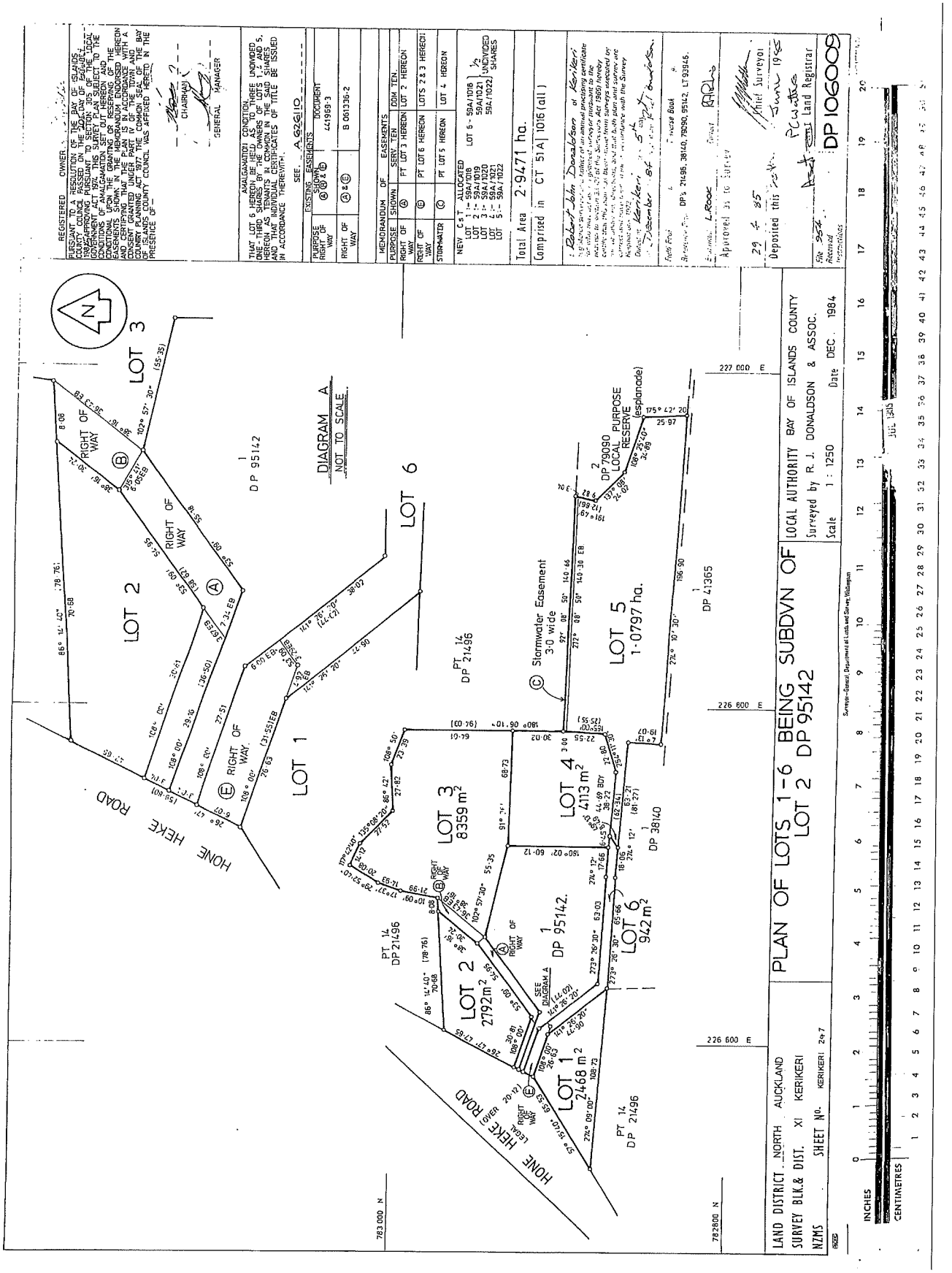
Land Covenant in Lease C887942.1 - 30.8.1995 (Affects Fee Simple)

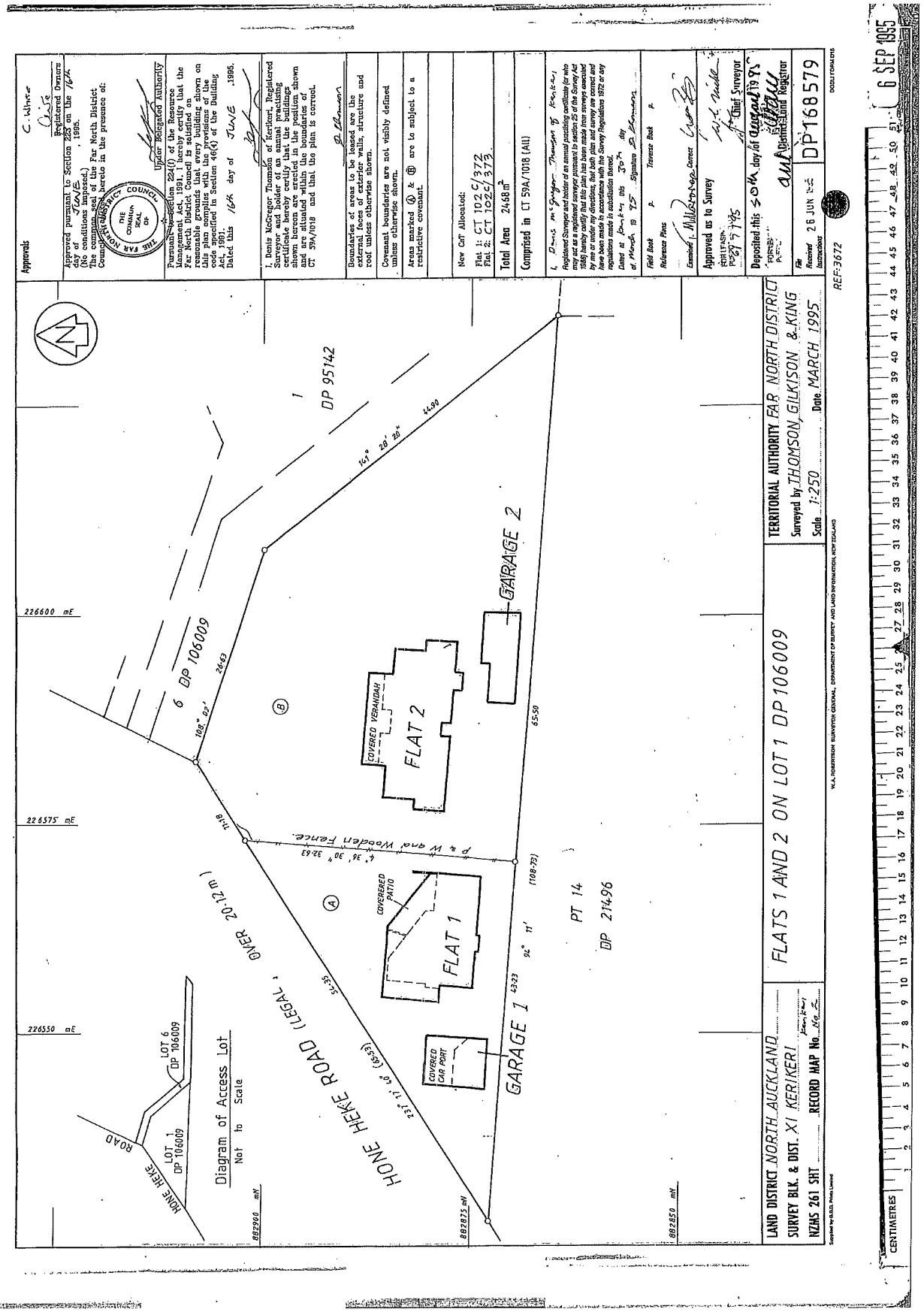
Land Covenant in Lease C887942.2 - 30.8.1995 (Affects Fee Simple)

C887942.2 Lease of Flat 2 and Garage 2 DP 168579 Term 999 years commencing on the 5th August 1995 Composite CT NA102C/373 issued - 30.8.1995 (Affects Fee Simple)

10048394.1 Mortgage to Westpac New Zealand Limited - 5.5.2015 at 9:52 am

10925617.5 Variation of Mortgage 10048394.1 - 9.10.2017 at 2:52 pm


PLAN OF LOTS 1-6 BEING SUBDVN OF LOT 2 DP 95142
LOCAL AUTHORITY BAY OF ISLANDS COUNTY
Surveyed by R. J. DONALDSON & ASSOC.
Scale 1 : 1250 Date DEC. 1984
LAND DISTRICT NORTH AUCKLAND
SURVEY BLK.& DIST. XI KERIKERI
NZMS SHEET No. KERIKERI 24-7
DP 106009
DIAGRAM A
NOT TO SCALE
LOT 1 2792m²
LOT 2 2792m²
LOT 3 8359 m²
LOT 4 4113 m²
LOT 5 1-0797 ha.
LOT 6 942 m²
LOT 1 2468 m²
LOT 2 DP 79090 LOCAL PURPOSE RESERVE (esplanade)
Stormwater Easement 3·0 wide
RIGHT OF WAY
HONE HEKE ROAD
HONE HEKE (LOWER) ROAD
PT 14 DP 21496
DP 95142
DP 38140
DP 41365
783 000 N
783 800 N
226 800 E
227 000 E


Approvals
Approved pursuant to Section 223 of the Act on the 16th day of June 1995.
(Any conditions imposed.)
The common seal of the Far North District Council was hereto affixed in the presence of:
THE FAR NORTH DISTRICT COUNCIL THE COMMON SEAL OF
Pursuant to section 224(f) of the Resource Management Act 1991 I hereby certify that the Far North District Council is satisfied on reasonable grounds that every building shown on this plan complies with the provisions of the code specified in Section 46(4) of the Building Act 1991.
Dated this 16th day of JUNE 1995.
Boundaries of areas to be leased are the external faces of exterior walls, structure and roof unless otherwise shown.
Covenant boundaries are not visibly defined unless otherwise shown.
Areas marked A & B are to subject to a restrictive covenant.
New Cert Allocated:
Flat 1: CT 102C/372
Flat 2: CT 102C/373
Total Area 2468 m²
Comprised in CT 59A/1018 (All)
Field Book P. Traverse Book P.
Reference Plans:
Examined
Approved as to Survey
Deposited this 26th day of August 1995
Chief Surveyor
Assistant Land Registrar
File Reference 26 JUN 95
DP 168579
DOUBLE FORMATS
REF:3672
6 SEP 1995
TERRITORIAL AUTHORITY FAR NORTH DISTRICT
Surveyed by THOMSON, GILKISON & KING
Scale 1:250 Date MARCH 1995
LAND DISTRICT NORTH AUCKLAND
SURVEY BLK. & DIST. XI KERIKERI
NZMS 261 SHT RECORD MAP No.
FLATS 1 AND 2 ON LOT 1 DP 106009
Diagram of Access Lot
Not to Scale
HONE HEKE ROAD
LOT 1 DP 106009
LOT 6 DP 106009
DP 95142
6 DP 106009
PT 14 DP 21496
HONE HEKE ROAD (LEGAL)
OVER 20.12 m
FLAT 1
FLAT 2
GARAGE 1
GARAGE 2
COVERED CAR PORT
COVERED PATIO
COVERED VERANDAH
P & W ana Wooden Fence
226600 mE
226575 mE
226550 mE
882900 mN
882875 mN
882850 mN
CENTIMETRES

B061336.2 EC

Approved by the District Land Registrars: North Auckland 4221/75, South Auckland H.008116/1974, Canterbury 957768, Marlborough 75776, Gisborne 112239.9, Hawkes Bay 303051, Taranaki 217464.1, Wellington A038045, Westland 45629.

n/c

EASEMENT CERTIFICATE

(IMPORTANT: Registration of this certificate does not of itself create any of the easements specified herein).

I, WE, DONALD CLIFFORD FASHER of Kerikeri Builder and JOYCE IDA FASHER his wife

NEW ZEALAND STAMP DUTY AKS $0.00

being the registered proprietor of the land described in the Schedule hereto hereby certify that the easements specified in that Schedule, the servient tenements in relation to which are shown on a plan of survey deposited in the Land Registry Office at Auckland on the day of 19 under No. 95142 are the easements which it is intended shall be created by the operation of section 90A of the Land Transfer Act 1952.

SCHEDULE

DEPOSITED PLAN NO.

Nature of Easement (e.g., Right of Way, etc.)	Servient Tenement: Lot No.(s) or other Legal Description	Servient Tenement: Colour, or Other Means of Identification, of Part Subject to Easement	Dominant Tenement Lot No.(s) or other Legal Description	Title Reference
Right of Way	Lot 2 DP 95142 C/T 51A/1016	Marked A	Lot 1 DP 95142	51A/1015
Right of Way	Lot 1 DP 95142 C/T 51A/1015	Marked C	Lot 2 DP 95142	51A/1016
Right of Way	Lot 1 DP 95142 C/T 51A/1015	Marked D	Lot 2 DP 95142	51A/1016
Right of Way	Lot 2 DP 95142 C/T 51A/1016	Marked E	Lot 1 DP 95142	51A/1015

LOTS 1 AND 2 DP 95142 BEING HERETOFORE ALL CERTIFICATE OF TITLE VOLUME 35A FOLIO 146

N.B. On no account should this margin be used

N.B. On no account should this margin be used

State whether any rights or powers set out here are in addition to or in substitution for those set out in the Seventh Schedule to the Land Transfer Act 1952.

1. Rights and powers:

N.B. On no account should this margin be used

N.B. On no account should this margin be used

2. Terms, conditions, covenants, or restrictions in respect of any of the above easements:

(i) The exercise of the rights of way set forth herein by the registered proprietors of the dominant tenements for the time being shall be conditional upon the cost of maintaining and repairing the carriage way marked A, C, D, and E on Deposited Plan 95142 being borne by the said registered proprietors in such sharss as shall be reasonable having regard to the usage by the respective registered proprietors their tenants servants agents and visitors
AND
Any dispute as to the liability of the parties under this covenant shall be determined by arbitration under the provisions of the Arbitration Act 1908 or any statutory modification thereof for the time being in force

(ii) no power is implied in respect of the easements herein mentioned for the registered proprietors of the servient tenements to determine those easements for any breach of covenant or condition (whether expressed or implied) or for any other cause whatsoever it being the intention of the parties that the easements shall subsist unless surrendered with the prior consent of the Bay of Islands County Council in terms of the Local Government Act 1974

N.B. On no account should this margin be used

N.B. On no account should this margin be used

Dated this 14th day of April 19 82

Signed by the above-named
DONALD CLIFFORD FASHER
and JOYCE IDA FASHER
in the presence of

D. C. Fasher
J. I. Fasher

Witness ..... , J.P.

Occupation ..... manager

Address 223 TAUPETI RD.
TURANGI.

LT31

EASEMENT CERTIFICATE

IMPORTANT: Registration of this certificate does not of itself create any of the easements specified herein.

Correct for purposes of the Land Transfer Act

(Solicitor for) the registered proprietor

N.B. On no account should this margin be used

N.B. On no account should this margin be used

Particulars entered in the Register as shown in the schedule of land herein on the date and at the time stamped below

.....

District Land Registrar

Assistant

of the District of .....

DISTRICT LAND REGISTRAR AUCKLAND N.Z.

11.02 04.MAY 82 B 061336.2

PARTICULARS ENTERED IN REGISTER

LAND REGISTRY AUCKLAND

DISTRICT LAND REGISTRAR

SIP/10/6/82

LT31 Avon Publishing Ltd., P.O. Box 736, Auckland 4

B426544.4 EC

Approved by the District Land Registrar, South Auckland No. 351560
Approved by the District Land Registrar, North Auckland, No. 4380/81
Approved by the Registrar-General of Land, Wellington, No. 436748.1/81

EASEMENT CERTIFICATE

(IMPORTANT: Registration of this certificate does not of itself create any of the easements specified herein).

MXWe DONALD CLIFFORD FASHER of Kerikeri, Builder and

JOYCE IDA FASHER his wife

being the registered proprietor(s) of the land described in the Schedule hereto hereby certify that the easements specified in that Schedule, the servient tenements in relation to which are shown on a plan of survey deposited in the Land Registry Office at North Auckland on the day of 19 85 under No. 106009 are the easements which it is intended shall be created by the operation of section 90A of the Land Transfer Act 1952.

SCHEDULE

DEPOSITED PLAN NO.

Nature of Easement (e.g., Right of Way, etc.)	Servient Tenement		Dominant Tenement Lot No.(s) or other Legal Description	Title Reference
	Lot No.(s) or other Legal Description	Colour, or Other Means of Identification, of Part Subject to Easement		
Right of Way	Part Lot 3 Plan 106009	"A"	Lot 2 Plan 106009	59A/1019
Right of Way	Part Lot 6 Plan 106009	"E"	Lots 2 and 3 Plan 106009	59A/1019 59A/1020
Right to Drain Later	Part Lot 5 Plan 106009	"G"	Lot 4 Plan 106009	59A/1021

State whether any rights or powers set out here are in addition to or in substitution for those set out in the Seventh Schedule to the Land Transfer Act 1952.

1. Rights and powers:

Nil

2. Terms, conditions, covenants, or restrictions in respect of any of the above easements:

Nil

Dated this 31st day of May 1985

Signed by the above-named
DONALD CLIFFORD FASHER and
JOYCE IDA FASHER

in the presence of

Witness .....

Occupation .....

Address .....

EASEMENT CERTIFICATE

(IMPORTANT): Registration of this certificate does not of itself create any of the easements specified herein.

Correct for the purposes of the Land Transfer Act

Solicitor for the registered proprietor

The within easements will when created, ~~not~~ be subject to Section 309(1)(a) Local Government Act 1974

PMcA
NZR
20/6/1985

9.07 20 JUN 85 B426544.4

PARTICULARS ENTERED IN REGISTER
LAND REGISTRY AUCKLAND
ASST. LAND REGISTRAR

594/1018-1022

LTO copy

HIBBITT ELLIOTT,
SOLICITORS, TAUPO.

441969.3 EC

L. & D. 82 (T)

New Zealand

EASEMENT CERTIFICATE

(IMPORTANT—Registration of this certificate does not of itself create any of the easements specified herein.)

I We, DONALD CLIFFORD FASHER of Auckland, Builder and JOYCE IDA FASHER his wife

being the registered proprietor of the land described in the Schedule hereto hereby certify that the easements specified in that Schedule, the servient tenements in relation to which are shown on a plan of survey deposited in the Land Registry Office at Auckland on the day of 19 under No. 79090 are the easements which it is intended shall be created by the operation of *section 90A* of the Land Transfer Act 1952.

SCHEDULE

DEPOSITED PLAN NO.

Nature of Easement (e.g., Right of Way, etc.)	SERVIENT TENEMENT		Dominant Tenement Allotment No(s).	Title Reference
	Allotment No.	Colour, or Other Means of Identification, of Part Subject to Easement		
Right of way	pt lot 1 DP 79090 C.T. 36A/ 146	shown A	pt lot 14 DP 21496	1079/40

1. Rights and powers:

State whether any rights or powers set out here are in addition to or in substitution for those set out in the Seventh Schedule to the Land Transfer Act 1952.

2. Terms, conditions, covenants, or restrictions in respect of any of the above easements:

Dated this 2nd day of November 19 76.

Signed by the above-named **DONALD CLIFFORD FASHER** and **JOYCE IDA FASHER** in the presence of

D. C. Fasher.
J. I. Fasher.

Witness: Noel W. Fowler-Davis Justice of the Peace

Occupation: Retired

Address: Hone Heke Road Kerikeri

EASEMENT CERTIFICATE

RIGHTS AND POWERS OF GRANTEES IMPLIED IN CERTAIN EASEMENTS BY SECTION 90D OF THE LAND TRANSFER ACT 1952

"1. RIGHT OF WAY

The full, free, uninterrupted, and unrestricted right, liberty, and privilege for the grantee, his servants, tenants, agents, workmen, licensees, and invitees (in common with the grantor, his tenants, and any other person lawfully entitled so to do) from time to time and at all times by day and by night to go pass and repass, with or without horses and domestic animals of any kind and with or without carriages, vehicles, motor vehicles, machinery, and implements of any kind, over and along the land over which the right of way is granted or created.

"2. RIGHT TO CONVEY WATER

The full, free, uninterrupted, and unrestricted right, liberty, and privilege for the grantee and his tenants (in common with the grantor, his tenants, and any other person lawfully entitled so to do) from time to time and at all times to take, convey, and lead water in a free and unimpeded flow (except when the flow is halted for any reasonable period necessary for essential repairs) and in any quantity, consistent with the rights of other persons having the same or similar rights, from the source of supply or point of entry, as the case may be, and following the stipulated course (where a course is stipulated) across the land over which the easement is granted or created, together with the additional rights incidental thereto set out in clause 5 of this Schedule.

"3. RIGHT TO DRAIN WATER

The full, free, uninterrupted, and unrestricted right, liberty, and privilege for the grantee and his tenants (in common with the grantor, his tenants, and any other person lawfully entitled so to do) from time to time and at all times to drain and discharge water (whether rain, tempest, spring, soakage, or seepage water) in any quantities along the stipulated course (where a course is stipulated) across the land over which the easement is granted or created, together with the additional rights incidental thereto set out in clause 5 of this Schedule (or, where open drains are provided for, similar rights in regard to those drains, with the necessary modifications as are provided for in respect of pipe lines in the additional rights so set out).

"4. RIGHT TO DRAIN SEWAGE

The full, free, uninterrupted, and unrestricted right, liberty, and privilege for the grantee and his tenants (in common with the grantor, his tenants, and any other person lawfully entitled so to do) from time to time and at all times to drain, discharge, or convey sewage and other waste material and fluid in any quantities along the stipulated course (where a course is stipulated) across the land over which the easement is granted or created, together with the additional rights incidental thereto set out in clause 5 of this Schedule.

"5. ADDITIONAL RIGHTS ATTACHING TO EASEMENTS OF RIGHT TO CONVEY WATER AND OF RIGHT TO DRAIN WATER AND OF RIGHT TO DRAIN SEWAGE

The full, free, uninterrupted, and unrestricted right, liberty, and privilege for the grantee and his tenants (in common with the grantor, his tenants, and any other person lawfully entitled so to do) for the purposes of the easement concerned—

(a) To use any line of pipes already laid on the stipulated course or any pipe or pipes in replacement or in substitution for all or any of those pipes:

(b) Where no such line of pipes exists, to lay, place, and maintain, or to have laid, placed, and maintained, a line of pipes of a sufficient internal diameter and of suitable material for the purpose under or over the surface (as the parties decide) of the land over which the easement is granted or created and along the line defined for the purpose where such a line has been so defined:

(c) In order to construct or maintain the efficiency of any such pipe line, the full, free, uninterrupted, and unrestricted right, liberty, and privilege for the grantee, his tenants, servants, agents, and workmen, with any tools, implements, machinery, vehicles, or equipment of whatsoever nature necessary for the purpose to enter upon the land over which the easement is granted or created (or, where only the position of the pipe line is defined in the easement, upon such part of the land of the grantor and by such route as is reasonable in the circumstances) and to remain there for any reasonable time for the purpose of laying, inspecting, cleansing, repairing, maintaining, and renewing the pipe line or any part thereof and of opening up the soil of that land to such extent as may be necessary and reasonable in that regard, subject to the condition that as little disturbance as possible is caused to the surface of the land of the grantor and that the surface is restored as nearly as possible to its original condition and any other damage done by reason of the aforesaid operations is repaired."

Correct for the purposes of the Land Transfer Act.

.....

Solicitor for the Registered Proprietor.

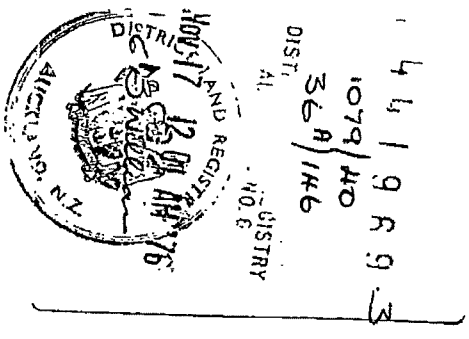
25675

Particulars entered in the Register as shown herein on the date and at the time stamped below.

.....

District Land Registrar
Assistant

of the District of.....



48956E—8,000/7/7

B083565.1 VE

ANZ BANKING GROUP (NEW ZEALAND) LIMITED

CERTIFICATE OF NON-REVOCATION OF POWER OF ATTORNEY

I, DEREK ROBERT ENGLAND of AUCKLAND in New Zealand, AREA MANAGER for ANZ Banking Group (New Zealand) Limited, hereby certify:—

1. THAT by deed dated the 13th day of November, 1979 copies of which are deposited in the Land Transfer Offices at:—

AUCKLAND	AS No.	696757	HOKITIKA	AS No.	057010
BLENHEIM		96972	INVERCARGILL		052479.1
CHRISTCHURCH		251971.1	NAPIER		372018.1
DUNEDIN		526566	NELSON		200451
GISBORNE		133407.1	NEW PLYMOUTH		263122
HAMILTON		H262523	WELLINGTON		293856.1

I was appointed Area Attorney of ANZ Banking Group (New Zealand) Limited incorporated in New Zealand and having its head office at Wellington, Bankers, on the terms and subject to the conditions set out in the said deed.

2. THAT at the date hereof I have not received any notice or information of the revocation of that appointment by the winding up or dissolution of the said ANZ Banking Group (New Zealand) Limited or otherwise.

SIGNED at AUCKLAND this

day of 18 JUN 1982

AREA MANAGER

19

6007—5/81

MEMORANDUM OF VARIATION OF EASEMENT

The terms, covenants and conditions contained or implied in the easement created by Memorandum of Transfer No. 362184.1 are hereby varied as follows:

i) The exercise of the right of way set forth herein by the registered proprietors of the dominant tenement for the time being shall be conditional upon the cost of maintaining and repairing the carriageway marked A on Lot 1 D.P. 79090 being borne by the said registered proprietors in a share as shall be reasonable having regard to the usage by the registered proprietors their tenants servants agents and visitors

AND

any dispute as to the liability of the registered proprietors of the dominant and servient tenements under this easement shall be determined by arbitration under the provisions of the Arbitration Act 1908 or any statutory modification thereof for the time being in force.

SIGNED by)
WILLIAM OSWALD HAIGH and)
DENISE WINIFRED HAIGH)
as registered proprietors)
of the dominant tenement)
in the presence of)

D.W. Haigh
W.O. Haigh
J.P.
Access Road Kerikeri
dated 25/5/82

SIGNED by)
DONALD CLIFFORD FASHER)
and JOYCE IDA FASHER)
as registered proprietors)
of the servient tenemnt)
in the presence of)
on the 27th day of May 1982

D.C. Fasher
J.I. Fasher
J.P.
P.O.A. 6. Taumarere

I, ELAINE CECELIA HAIGH the mortgagee under and by virtue of memorandum of Mortgage No. 927507.3 (North Auckland Registry) do hereby consent to the within Variation of Easement but without prejudice to my rights and remedies under the said mortgage

SIGNED by ELAINE CECELIA HAIGH)
as Mortgagee in the presence of:)

E.C. Haigh
on the 21st day of May 1982

11.13 09.JUL 82 B083565
PARTICULARS ENTERED IN REGISTER
LAND REGISTRY AUCKLAND
ASST. LAND REGISTRAR.....

WE, IVAN BERTRAM JURISS and SONIA ELIZABETH JURISS the mortgagees under and by virtue of memorandum of Mortgage No. 927507.2 (North Auckland Registry) do hereby consent to the within Variation of Easement but without prejudice to my rights and remedies under the said mortgage

SIGNED by IVAN BERTRAM JURISS)
and SONIA ELIZABETH JURISS)
as Mortgagees in the presence of:)

I.B. Juriss
Sonia Elizabeth Juriss.
S.E. Juriss.

Postmaster
Remuera Post Office
Dated 8th June, 1982.

SUPERVISOR, POST OFFICE, REMUERA.
(AN OFFICER AUTHORISED TO TAKE AND RECEIVE STATUTORY DECLARATIONS).

SIGNED by PETER JAMES PEDLEY GEORGETTI)
and JENNIFER ACTON GEORGETTI as)
registered proprietors of the servient)
tenement in the presence of:)

P. Georgetti
J.A. Georgetti

Postmaster
26 Neville St
Warkworth

POSTMASTER
11 JUN 1982
WARKWORTH

ANZ Banking Group (New Zealand) Limited the Mortgagee under and by virtue of Memorandum of Mortgage No. B061336/F (North Auckland Registry) do hereby consent to the within Variation of Easement but without prejudice to its rights and remedies under the said Mortgage.

Signed by
ANZ BANKING GROUP (NEW ZEALAND) LIMITED
by its Attorney **DEREK ROBERT ENGLAND** on the 18th day of June 1982
in the presence of

Documentary
Bank Officer
Auckland

ANZ Banking Group (New Zealand) Limited
By its Attorney

AREA MANAGER

11:13
9 July 82
Ass.t LAND REGISTRAR
B083565.1F

Appendix 4

RC 2260479-RMASUB

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

DECISION ON SUBDIVISION CONSENT APPLICATION UNDER THE RESOURCE MANAGEMENT ACT 1991

Decision

Pursuant to section 34A(1) and sections 104, 104A, 106, 108, 220 and Part 2 of the Resource Management Act 1991 (the Act), the Far North District Council **grants** subdivision resource consent for a Controlled activity, subject to the conditions listed below, to:

Applicant:	Michael Dyson (Estate of Susan Dyson)
Council Reference:	2260479-RMASUB
Property Address:	61 Hone Heke Road, Kerikeri, 63 Hone Heke Road, Kerikeri
Legal Description:	Flat 1 DP 168579 and Garage 1 DP 168579 of Lot 1 DP 106009 ; Flat 2 DP 168579 and Garage 2 DP 168579 of Lot 1 DP 106009

The activity to which this consent relates is:

To subdivide Lot 1 DP 106009 to convert an existing cross-lease arrangement to two fee simple allotments in the Residential Zone as a controlled activity.

Conditions

Pursuant to sections 108 and 220 of the Act, this consent is granted subject to the following conditions:

1. The subdivision must be carried out in general accordance with the approved plan of subdivision prepared by Thomson Survey Limited, referenced Proposed Leasehold to Freehold Title Subdivision of Lot 1 DP 106009, dated 10/04/2026, and attached to this consent with the Council's "Approved Stamp" affixed to it.

Survey plan approval (s223) conditions

2. The survey plan, submitted for approval pursuant to Section 223 of the Act must show:

    a. Any easements required for services, including any Council infrastructure within the site (if any), to be included in a Memorandum of Easements on the survey plan.

    b. The endorsement of the following amalgamation conditions:
        - Pursuant to section 220 (1)(b) (iv) of the Resource Management Act 1991 Lot 6 DP 106009 Common Access Lot be held as to one undivided 2/9 share by the owners of Lot 2 Hereon as tenants in common in the said share and that individual Record of Title be issued in accordance therewith. (LINZ REF 1982696)

- Pursuant to section 220 (1)(b) (iv) of the Resource Management Act 1991 Lot 6 DP 106009 Common Access Lot be held as to one undivided 1/9 share by the owners of Lot 1 Hereon as tenants in common in the said share and that individual Record of Title be issued in accordance therewith. (LINZ REF 1982696)

Section 224(c) compliance conditions

3. There are no s224 conditions.

Further Resolutions:

Pursuant to section 241(3) of the Resource Management Act, Far North District Council hereby cancels the amalgamations condition requiring Lot 6 DP 106009 be held as to an undivided 1/9 share by the owners of Flat 1 DP 168579 and Garage 1 DP 168579 of Lot 1 DP 106009.

Pursuant to section 241(3) of the Resource Management Act, Far North District Council hereby cancels the amalgamations condition requiring Lot 6 DP 106009 be held as to an undivided 2/9 share by the owners of Flat 2 DP 168579 and Garage 2 DP 168579 of Lot 1 DP 106009.

The above cancellations shall only be cancelled in conjunction with obtaining titles to the subdivision approved under this consent (2260479-RMASUB).

Advice Notes

Lapsing of Consent

1. *Pursuant to section 125 of the Act, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;*
   a) *A survey plan is submitted to Council for approval under section 223 of the RMA before the lapse date, and that plan is deposited within three years of the date of approval of the survey plan in accordance with section 224(h) of the RMA; or*
   b) *An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Act.*

Right of Objection

2. *If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Act) to object to the decision. The objection must be in writing, stating reasons for the objection and must be received by Council within 15 working days of the receipt of this decision.*

Archaeological Sites

3. *Archaeological sites are protected pursuant to the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence, pursuant to the Act, to modify, damage or destroy an archaeological site without an archaeological authority issued pursuant to that Act. Should any site be inadvertently uncovered, the procedure is that work should cease, with the Trust and local iwi consulted immediately. The New Zealand Police should also be consulted if the discovery includes koiwi (human remains). A copy of Heritage New*

Zealand's Archaeological Discovery Protocol (ADP) is attached for your information. This should be made available to all person(s) working on site.

Section 224 Certification

4. *A Section 224 Certificate will not be issued until all Council invoices, including engineering fees and any other costs associated with the Resource Consent have been paid in full.*

General Advice Notes

5. *This consent has been granted on the basis of all the documents and information provided by the consent holder, demonstrating that the new lot(s) can be appropriately serviced (infrastructure and access).*

Reasons for the Decision

1. By way of an earlier report that is contained within the electronic file of this consent, it was determined that pursuant to sections 95A and 95B of the Act the proposed activity will not have, and is not likely to have, adverse effects on the environment that are more than minor, there are also no affected persons and no special circumstances exist. Therefore, under delegated authority, it was determined that the application be processed without notification.

2. The application is for a Controlled resource consent as such under section 104A the Council must grant this application and may only impose conditions in relation to those matters over which control is reserved, these matters are found in section 13.7.3 of the Operative District Plan.

3. In regard to section 104(1)(a) of the Act the actual and potential effects of the proposal will be acceptable as:

    a. There will be no change to the built or natural environment and no adverse effects generated outside of the property boundaries. Any adverse effects of the subdivision upon adjacent land is considered to be less than minor as the allotments are regarded as suitable for future development. Overall, there are no persons that are deemed to be an affected person as all activities are deemed to have less than minor adverse effects within the matters of discretion within the district plan.

4. In regard to section 104(1)(ab) of the Act there are no offsetting or environmental compensation measures proposed or agreed to by the applicant for the activity.

5. In regard to section 104(1)(b) of the Act the following statutory documents are considered to be relevant to the application:
    a. Operative Far North District Plan 2009,
    b. Proposed Far North District Plan 2022

    The activity is consistent with these documents for the following reasons:

    As the proposal is a controlled activity within the Residential zone, it is reasonable to conclude that the subdivision is consistent with the relevant objectives and policies of the Operative District Plan. The controlled activity framework anticipates small-scale

residential subdivision in this zone, provided that allotments are appropriately serviced, and the residential character and amenity values are maintained. The proposed subdivision aligns with these outcomes by ensuring adequate access, infrastructure, and stormwater management, and by maintaining the existing residential scale and character of the surrounding area.

As the outcomes sought under the Operative and Proposed District Plans are similar, the development is also regarded as consistent with the objectives and policies of the Proposed District Plan.

6. In regard to section 104(1)(c) of the Act there are no other matters relevant and reasonably necessary to determine the application.

7. In terms of s106 of the RMA the proposal is not considered to give rise to a significant risk from natural hazards, and sufficient provision has been made for legal and physical access to the proposed allotments. Accordingly, Council is able to grant this subdivision consent subject to the conditions above.

8. Based on the assessment above the activity will be consistent with Part 2 of the Act.

   The activity will avoid, remedy or mitigate any potential adverse effects on the environment while providing for the sustainable management of natural and physical resources and is therefore in keeping with the Purpose and Principles of the Act. There are no matters under section 6 that are relevant to the application. The proposal is an efficient use and development of the site that will maintain existing amenity values without compromising the quality of the environment. The site is within the Ngāpuhi Area of Interest. Iwi were notified as interested parties on 17 April 2026 and no response was received within the consultation period. The proposal does not involve any physical change to the land and is not considered to raise issues in regard to Te Tiriti o Waitangi.

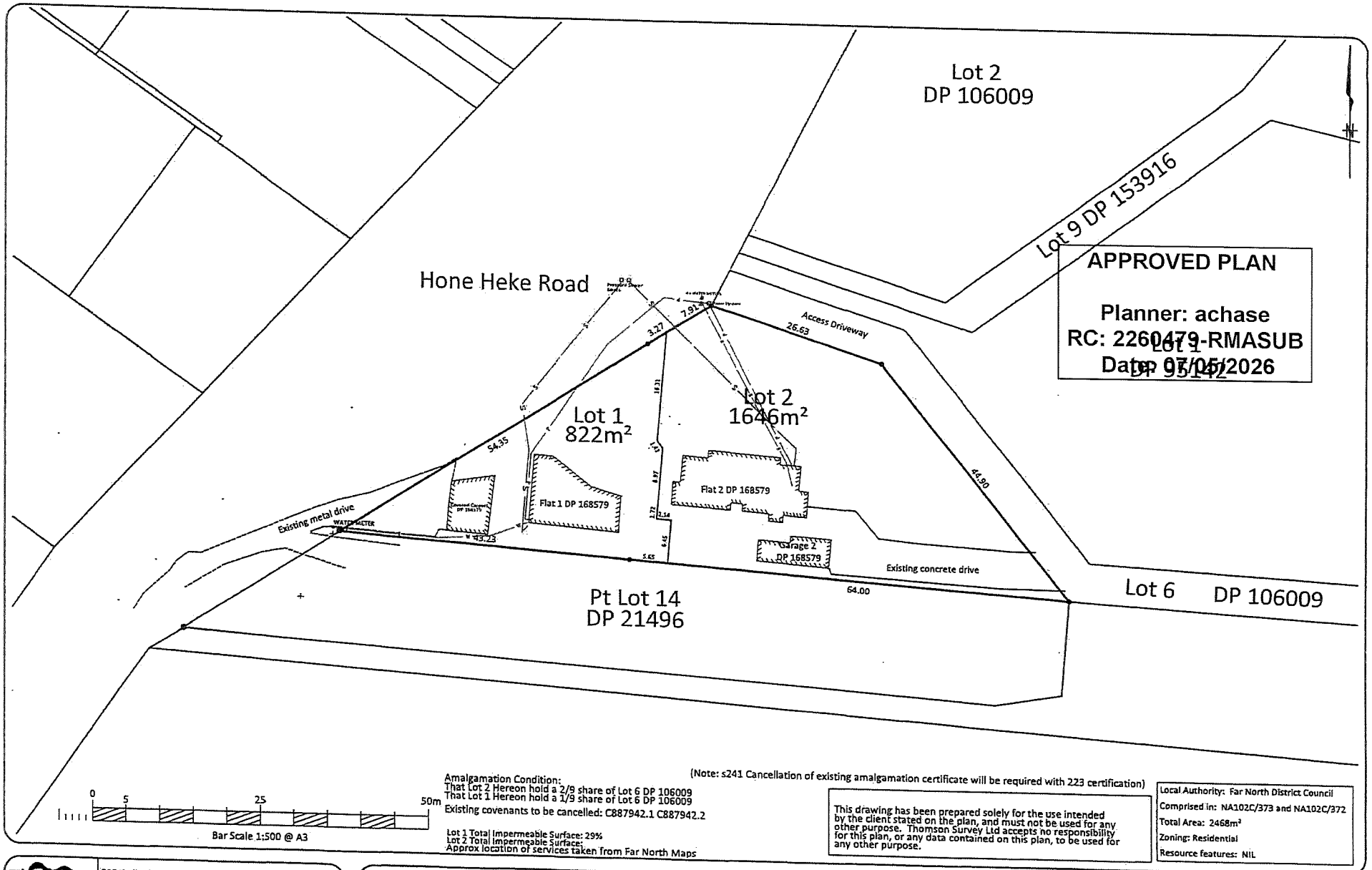
9. Overall, for the reasons above it is appropriate for consent to be granted subject to the imposed conditions.

Approval

This resource consent has been prepared by Aroha Chase, Intermediate Resource Planner. I have reviewed this and the associated information (including the application and electronic file material) and for the reasons and subject to the conditions above, and under delegated authority, grant this resource consent.

Nick Williamson Date: 07/05/2026

Acting Senior Resource Planner



0 5 25 50m

Bar Scale 1:500 @ A3

Amalgamation Condition:
That Lot 2 Hereon hold a 2/9 share of Lot 6 DP 106009
That Lot 1 Hereon hold a 1/9 share of Lot 6 DP 106009

(Note: s241 Cancellation of existing amalgamation certificate will be required with 223 certification)

Existing covenants to be cancelled: C887942.1 C887942.2

Lot 1 Total Impermeable Surface: 29%
Lot 2 Total Impermeable Surface:
Approx location of services taken from Far North Maps

Local Authority: Far North District Council
Comprised in: NA102C/373 and NA102C/372
Total Area: 2468m²
Zoning: Residential
Resource features: NIL

THOMSON SURVEY
315 Kerikeri Rd
P.O. Box 372 Kerikeri
Email: kerikeri@tsurvey.co.nz
Ph: (09) 4077360 Fax (09) 4077322
Registered Land Surveyors, Planners & Land Development Consultants

PROPOSED LEASEHOLD TO FREEHOLD TITLE SUBDIVISION OF LOT 1 DP 106009

PREPARED FOR: DYSON

	Name	Date
Survey		
Design		
Drawn	MD	27/11/25
Approved		
Rev A	MD	10/04/26

10490 Scheme 10042026

ORIGINAL
SCALE 1:500
SHEET SIZE A3

Surveyors Ref. No: 10490
Series
Sheet of

Appendix 5

Geotechnical Assessment

geologix
consulting engineers

GEOTECHNICAL INVESTIGATION REPORT

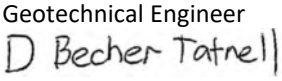
63 HONE HEKE ROAD, KERIKERI

LINDSAY WALLER

C0809N-G-01
MAY 2026
REVISION 2

geologix
consulting engineers

DOCUMENT MANAGEMENT

Document Title	Geotechnical Investigation Report
Site Reference	63 Hone Heke Road, Kerikeri
Client	Lindsay Waller
Geologix Reference	C0809N-G-01
Issue Date	14 May 2026
Revision	02
Prepared	Dominic Becher-Tatnell Geotechnical Engineer 
Reviewed	Andre Whyte Principal Geotechnical Engineer, CPEng, CMEngNZ 
File Reference	*Z:\Projects\C0800-C0899\C0809N - 63 Hone Heke Road, Kerikeri\06 - Reports\C0809N-G-01.docx*

REVISION HISTORY

Date	Issue	Prepared	Reviewed	Approved
May 2026	First Issue – For Consent	DBT	AW	AW

geologix
consulting engineers

TABLE OF CONTENTS

FIGURES

TABLES

1 INTRODUCTION

This Geotechnical Investigation Report has been prepared by Geologix Consulting Engineers Ltd (Geologix) for Lindsay Waller as our Client in accordance with our standard short form agreement and general terms and conditions of engagement.

The purpose of this report is to assist with Resource Consent application in relation to the creation of three new lots and will consider the two new building sites lots 2 & 3 at 63 Hone Heke Road, Kerikeri, the 'site'.

Specifically, this report provides interpretation of a site-specific ground investigation and geotechnical assessment to provide recommendations and a concept geotechnical assessment for the development of the designated house sites.

1.1 Proposed Subdivision

It is understood that the Client proposes to develop the site to create two new residential lots. These lots are comprised of the subdivision of Lot 1 DP 106009 and lots 2 & 3 are the proposed designated house sites.

Table 1: Summary of Proposed Subdivision

Proposed Lot No.	Size	Purpose
1	726 m^2	Existing residential
2	460 m^2	New residential
3	459 m^2	New residential

Specific development plans were not provided to Geologix at the time of writing, and as such, we have considered a conservative assessment of potential future residential development earthworks.

The understanding has been established from a scheme plan[1] supplied to Geologix at the time of writing. It is recommended that this report is subject to review and a site-specific geotechnical investigation is undertaken as part of future residential development at the Building Consent stage.

2 SITE DESCRIPTION

The site is presented to the south of Hone Heke Road in Kerikeri. The site is a 2/3 share of Lot 1 DP 106009 and is irregular in shape with a gross site area of approximately 1,645m^2. The site is accessed from the northern boundary.

Topographically the site is slightly sloping downwards to the northeast with a slope of approximately 15°.

[1] *Thomson Survey, Topographical Survey on Lot 1 DP 106009 & Proposed Subdivision.*

The site setting is presented schematically as Figure 1 below.

Figure 1: Site Setting

3 DESKTOP APPRAISAL

To assist with our geotechnical appraisal, we have undertaken a detailed desktop review of available information with a specific focus upon geotechnical influences.

3.1 Infrastructure Review

Available infrastructure information is provided by Far North District Council GIS system. According to the available data, existing water and sewage lines go through the subject site as shown on the topographical plan.

Localised piling and bridging design are necessary to meet the requirements of the Auckland Council design manual for building over or near existing pipes

3.2 Overland Flow Path and Flood Plains

Available GIS information indicates no indicated flood potential under the 1 % AEP event to influence the likely building platform.

The risk of encountering low-strength alluvial deposits over the building footprint is considered low.

3.3 Geology and Geomorphology

Available geological mapping[2] indicates the site to be directly underlain by Late Miocene basalt of Kaikohe - Bay of Islands Volcanic Field of the Kerikeri Volcanic Group described as Basalt lava, volcanic plugs and minor tuff.

3.4 Existing Geotechnical Information

3.4.1 Geotechnical Databases

Existing geotechnical investigation reports were not made available to Geologix at the time of writing. A review of available GIS databases, including the New Zealand Geotechnical Database[3] identified borehole records 160 m south of the site. A summary is provided as Table 2 and relevant records are included within Appendix B. To improve the NZGD, exploratory records from our ground investigation were uploaded to the system.

Table 2: Summary of NZGD Available Records within 250 m

Record ID	Location to site	Depth of Borehole	Depth to groundwater	Depth of topsoil/fill	Depth of Residual Soils
221709 HA01	~160 m S	1.0 m	NE	0.4 m	0.4->3.0 m
221710 HA02	~160 m S	0.4 m	NE	0.2 m	0.2->0.4 m
221711 HA03	~160 m S	0.4 m	NE	0.2 m	0.2->0.6 m
221714 HA04	~160 m S	0.6 m	NE	0.3 m	0.3->1.9 m

All depths in m below ground level unless stated otherwise.

NE – Not Encountered.

3.5 Ground Investigation

A site-specific walkover survey and intrusive ground investigation was undertaken by Geologix on 14th April 2026 in locations indicated on Drawing No. 200 within Appendix A. The ground investigation was scoped to confirm the findings of the above information and to provide site-specific parameters for this geotechnical assessment and ground model. The ground investigation comprised:

- Four hand augered boreholes designated HA01 to HA04, inclusive, formed across available soft landscaped areas of the site within proposed structural footprints to a target depth of 5.0 m below ground level (bgl).
- Monitoring of groundwater levels with a groundwater dip meter on the day of drilling. Groundwater measurements were taken at the time of drilling.

[2] *Geological & Nuclear Science, 1:250,000 scale Geological Map, Sheet 2, Whangarei, 2009.*

[3] https://www.nzgd.org.nz/

3.6 Site Walkover Survey

A visual walkover survey of the property confirmed:

- Topography is in general accordance with that outlined in Section 2 and the available GIS/ topographic contours.
- There were no signs of instability within the vicinity of the development footprint at the time of our site investigation.
- No existing retaining walls or supporting structures were noted during our walkover survey.
- Land in all directions includes similar rural properties.

3.7 Ground Conditions

Arisings recovered from the exploratory boreholes were logged by a qualified geotechnical engineering professional in accordance with New Zealand Geotechnical Society guidelines[4]. Engineering borehole logs are presented as Appendix B in this report and approximate borehole positions recorded on Drawing No. 200 within Appendix A.

Strata identified during the ground investigation can be summarised as follows:

- **Topsoil encountered within all boreholes to depths of 0.3-0.4 m bgl.** Topsoil was locally encountered as a shallow surface veneer of organic silt with trace rootlets. The unit was dark brown, moist or moist to wet and low plasticity.
- **Kerikeri Volcanic Residual Soil to depths of 3.8m to 5.0m within HA01 & HA04.** The residual soils were described as brown and grey with varying amounts of gravel. The unit was detailed as moist to saturated and low to high plasticity.

  The Kerikeri Volcanic residual soil was found to be variable in strength. In total, twenty-eight in-situ field vane tests recorded vane shear strengths ranging from 117 to 200 kPa, indicative of variable very stiff to hard soils and a characteristic unit vane shear strength of 187 kPa was determined at 95 % confidence.

  Generally, the shear strength of the Kerikeri Volcanic soils was lowest near the surface and near the water table.

  Colluvium to depths of >2.7m to >3.5m within HA02 & HA03. The colluvium was described as dark grey, brown and yellow. The vane shear strength of this colluvium was measured to be very stiff to hard with a value of 188-200kPa. The soil was found to be more disorderly at deeper depths between 1.8 m to 3.5 m bgl and similar looking to residual soil near the surface. This indicates a relic slip at these deeper depths.

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[4] *New Zealand Geotechnical Society, Field Description of Soil and Rock, 2005.*

- **Dense Kerikeri Volcanic Group to depths 4.1 m to 4.3 m bgl.** Hard / Dense Kerikeri Volcanic Group was conservatively inferred within HA01 & HA04 where DCP blow counts consistently returned values above 10 per 100 mm penetration.

- **Very Dense Kerikeri Volcanic Group from depths >4.1 m to >4.3 m bgl.** Very Dense Kerikeri Volcanic Group was inferred within all boreholes where Scala penetrometer values exceeded 20 blows per 100mm.

A summary of the above information is presented as Table 3.

Table 3: Summary of Ground Investigation

Hole ID	Hole Depth	Topsoil Depth	Colluvium Depth Range	Kerikeri Volcanic Residual Soil Depth Range	Groundwater[2]	Refusal
HA01	4.3 m	0.4 m	NE	0.4 – 4.3 m	NE	4.3 m
HA02	5.0 m	0.3 m	0.3 – 3.5 m	NE	2.7 m	NE
HA03	5.0 m	0.3 m	0.3 - 2.7 m	NE	NE	NE
HA04	4.1 m	0.3 m	NE	0.3 – 4.1 m	2.1 m	4.1 m

3.7.1 Groundwater

The ground investigation was undertaken during autumn and formed exploratory boreholes to maximum depths that can be achieved with hand tools. Groundwater levels were monitored utilising a groundwater dip meter on the day of drilling.

During our ground investigation, groundwater was encountered in hand augers HA02 & HA04 ranging from 2.1 to 2.7 m bgl. However, groundwater levels commonly fluctuate according to the season and rainfall events. As such, groundwater levels may vary and be identified at higher levels than monitored during this ground investigation.

It is recommended that during earthworks should water ingress be noted that further advice is sought from Geologix which may require amendments to the recommendations of this report.

4 PRELIMINARY GEOTECHNICAL ASSESSMENT

Based on the results of the desktop appraisal, a site walkover survey, and the ground investigation, Geologix have undertaken a site-specific geotechnical assessment relevant to the proposed development concept.

4.1 Preliminary Geotechnical Design Parameters

Geotechnical design parameters are presented in Table 4 below. They have been developed based on our ground investigation, the results of in-situ testing, laboratory analysis and experience with similar materials.

Table 4: Geotechnical Effective Stress Parameters

Geological Unit	Unit Weight, kN/m³	Effective Friction Angle, °	Effective Cohesion, kPa	Undrained shear strength, kPa
Kerikeri Volcanic Residual Soil	18	29	4	130 *
Colluvium	18	28	3	120 *
Dense Kerikeri Volcanic Soil	19	32	7	200+
Very Dense Kerikeri Volcanic Soil	19	34	9	200+

** Adopting Bjerrum correction factor of 0.7 from characteristic vane shear strength.*

4.2 Preliminary Site Subsoil Class

The site has been designated as Site Subsoil Class III according to the provisions of NZS1170:2025[5].

4.3 Preliminary Seismic Hazard

New Zealand Standard NZS1170.5:2004 Clause 2.1.4 specifies that to meet the requirements of the New Zealand Building Code, design of structures is to allow for two earthquake scenarios:

1. *Ultimate Limit State (ULS) shall provide for… "avoidance of collapse of the structural system…or loss of support to parts… damage to non-structural systems necessary for emergency building evacuation that renders them inoperable."*

2. *Serviceability Limit State (SLS) are to avoid damage to… "the structure and non-structural components that would prevent the structure from being used as originally intended without repair after the SLS earthquake…."*

The seismic hazard in terms of Peak Ground Acceleration (PGA) has been assessed based on the NZGS Module 1[6]. Table 2 presents the return periods for earthquakes with ULS and SLS 'unweighted' PGAs and design earthquake loads for the corresponding magnitude. The PGAs were determined using building Importance Level (IL) 2, defined by NZS1170.5:2004. Reference should be made to the structural designer's assessment for the final determination of building importance level.

[5] *NZS1170.5:2025, Structural Design Actions Part 5: Earthquake Actions Clause 3.1.3.*

[6] *New Zealand Geotechnical Society, Earthquake Geotechnical Engineering Practice, Module 1, November 2021, Appendix A, Table A1.*

Table 5: Summary of Seismic Hazard Parameters

Limit State	Effective Magnitude	Return Period (years)	Unweighted PGA
ULS	6.5	500	0.19 g
SLS	5.8	25	0.03 g

4.4 Preliminary Site Stability

At the time of writing, hand augers HA02 & HA03 show the site is underlain by colluvium due to a relic slip in the area. We recommend site stability analysis for the site in the building consent stage. It is likely that stability control measures will be required for the proposed development.

4.5 Soil Expansivity

Clay soil may undergo appreciable volume change in response to changes in moisture content and be classed as expansive. The reactivity and the typical range of movement that can be expected from potentially expansive soils underlying any given building site depends on the amount of clay present, the clay mineral type, and the proportion, depth, and distribution of clay throughout the soil profile. Clay soils typically have a high porosity and low permeability causing moisture changes to occur slowly and produce swelling upon wetting and shrinkage upon drying. Apart from seasonal moisture changes (wet winters and dry summers) other factors that can influence soil moisture content include:

- Influence of garden watering and site drainage.
- The presence of mature vegetation.
- Initial soil moisture conditions at the time of construction.

Based on our experience and lab results of similar soils, for design of residential dwelling foundation, site subsoil shall design for minimum Highly Expansive, or Expansive Soil Class H, as per New Zealand Building Code. In accordance with New Zealand Building Code[7], Class H or Highly Expansive soils typically have a soil stability index (I_{ss}) range of 3.8 to 6.5% and a 500-year design characteristic surface movement return (y_s) of 78 mm. A quantification of the expansive soil class assumptions can be made by geotechnical laboratory analysis.

4.6 Liquefaction Potential

Liquefaction occurs when excess pore pressures are generated within loose, saturated, and generally cohesionless soils (typically sands and silty sands with <30 % fines content) during

[7] *New Zealand Building Code, Structure B1/AS1 (Amendment 20, November 2021), Clause 7.5.13.1.2*

earthquake shaking. The resulting high pore pressures can cause the soils to undergo a partial to complete loss of strength. This can result in settlement and/ or horizontal movement (lateral spread) of the soil mass.

The Geologix ground investigation indicates the site to be predominantly underlain by fine-grained Kerikeri Volcanic soils. Based on the materials strength and consistency, and our experience with these materials, there is no liquefaction potential / risk in a design level earthquake event.

5 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

The following preliminary geotechnical recommendations have been developed based on a typical, conceptual rural residential development formed within the designated development area outlined by the scheme plan. The preliminary recommendations have been developed to satisfy the requirements of Resource Consent to confirm the new residential lots can be formed with a less than minor effect on the environment.

It is recommended these conceptual recommendations are reviewed at the Building Consent stage once final development plans are available and advanced by development specific geotechnical investigation.

5.1 Concept Foundations

The development platform is understood to be formed by a minor topsoil strip to expose natural Kerikeri Volcanic soils. It is recommended that any non-engineered fill, underlying soft spots (S_u <60 kPa) and any other unsuitable or deleterious materials (such as relic foundations, driveway hardstanding etc.) are sub-excavated and replaced with suitably selected and compacted materials such as GAP65 hard fill.

Based on the natural formation having an average undrained shear strength of 120kPa then it is expected that either shallow standard raft or strip footing foundations can be adopted for the proposed dwellings. Alternatively, the extension may be founded on shallow pile foundations. Such foundations may be designed by a professional structural engineer adopting an Ultimate Bearing Capacity of 300 kPa for a highly expansive soil type and a geotechnical reduction factor of 0.5. The use of widespread deep piled foundations is not considered necessary subject to the stability of the site being assessed in sections 4.4 & 5.3.

Construction monitoring requirements of the above recommendations are detailed in Section 5.5 of this report.

5.1.1 Pipe Bridging

Pipelines should not be structurally loaded, and a suitable bridging design adopting deep bored and cast piles supporting a suspended floor slab with a locally bridged design prepared by a professional structural engineer is required over the pipe's zones of influence. Alternatively, screw piles may offer an economic alternative to conventional piling techniques.

Watercare Guideline for Building close to or over Transmission (Trunk) Sewer, detail Drawing No. WW60 requirements include:

- Zone of influence determined as a line drawn up at 45° from a point 0.5 m below the pipes invert level to proposed Finished Ground Level (FGL).
- Bored and cast piles required to transfer building loads within the pipeline zones of influence.
- No piling within 1.0 m horizontally from the outer diameter of the pipeline.
- Piles extended a minimum of 1.0 m below the zones of influence.

Table 6: Deep Piled Foundation Geotechnical Parameters

Strata	Geotechnical Design Parameters	
Kerikeri Volcanic soils	Ultimate end-bearing capacity[1]	540 kPa
	ULS design end-bearing capacity[2]	270 kPa
	SLS design end-bearing capacity	180 kPa
	Ultimate skin friction[1,3]	30 kPa
	ULS design skin friction[2]	15 kPa
	SLS design skin friction	10 kPa

1. *Based on S_u = 60 kPa.*
2. *Adopting a geotechnical strength reduction factor of 0.5.*
3. *Adopting S_u * α. With α determined from Figure 5 of NZBC B1/ VM4.*

5.2 Concept Earthworks and Methodology

No earthwork concepts were provided to us at the time of writing. If additional earthworks are required, it is recommended that all excavations are formed at a permanent batter slope of 1V:3H up to a maximum height of 0.5 m. Above this height, it is recommended that cut batters are supported by specifically engineered retaining walls.

5.2.1 Temporary Works

To reduce the risk of temporary excavation instability, it is recommended that unsupported excavations have a maximum vertical height of 1.0 m. Temporary unsupported excavations above this height shall be battered at 1V:1H or 45 °. It is expected that the above temporary works can be undertaken within the property boundaries.

All works within proximity to excavations should be undertaken in accordance with Occupational Health and Safety regulations. In addition, it is recommended that all earthworks are carried out in periods of fine weather within the typical October to April earthwork season. Consent conditions commonly prescribe working restrictions.

5.3 Concept Retaining Walls

In general, it is expected that retaining walls or an alternative method of stability control such as leading-edge piles may be required. It is recommended that all proposed retaining

walls are subject to specific engineering design.

It is recommended that all proposed retaining walls are designed by a professional engineer familiar with the findings and geotechnical parameters of this report. In addition, any retaining upon sloping ground at the site shall be subject to specific geotechnical stability analysis at the Building Consent stage. Timber pole cantilever retaining walls or soldier pile retaining walls are considered the most feasible solution for the site.

Based on the results of the ground investigation and for a backslope of 0 ° above the retaining structure, preliminary earth pressure parameters for design are presented within Table 7 below.

Table 7: Earth Pressure Parameters.

Strata	At Rest Pressure Coefficient, K_O	Active Pressure Coefficient, K_A	Passive Pressure Coefficient, K_P
Kerikeri Volcanic Residual Soils	0.515	0.309	5.622
Colluvium	0.531	0.321	5.172
Dense Kerikeri Volcanic Soil	0.47	0.275	7.371
Very Dense Kerikeri Volcanic Soil	0.441	0.254	9.007

1. *Adopts soil/ wall friction coefficient of 0.67 for timber according to NZBC B1/VM4 Table 2. Refinement required for alternative materials.*
2. *Considers 0 ° backslope only. Parameters to be modified by design engineer.*

It is recommended that a 100 mm diameter perforated drain coil and cohesionless backfill (minimum 300 mm wide) is installed behind all retaining walls to control any temporary hydrostatic pressures.

5.4 Concept Driveways

For any proposed future driveway and car parking, It is recommended that all unsuitable and deleterious materials such as topsoil, vegetation, shallow fill, and any existing foundations/ concrete hardstanding is removed from the driveway area prior to filling. By doing so, it is expected that the shallow natural Kerikeri Volcanic soils will achieve a typical subgrade CBR value of 4 % or greater according to Austroads Standards.

For driveway and parking areas it is recommended that carriageways include a minimum total thickness of 250 mm, comprising a minimum 150 mm sub-basecourse, typically AP65 or approved similar and minimum 100 mm basecourse, typically finer AP40 or approved similar.

5.5 Concept Construction Monitoring

During site development works it is recommended that specific construction monitoring is undertaken by a professional engineer in accordance with the recommendations of this report and consent conditions. It is anticipated that a professional Geotechnical Engineer will be required to provide inspection of:

- Subgrade at the base of excavations within the footprint of buildings, driveways, and any other areas of structural or vehicle loading.

- Inspection of retaining wall construction, primarily of formed pile holes and select material properties.

- Inspection of hard fill compaction where placed >300 mm in thickness and/ or within the footprint of imposed surcharges such as buildings and/ or driveways.

The above items are considered to be capable under CM2 level construction monitoring accompanied by appropriate Producer Statements. Monitoring should be undertaken or supervised by a chartered professional engineer.

6 LIMITATIONS

This report has been prepared for Lindsay Waller 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 ground investigation locations are inferred. It must be appreciated that the actual conditions may vary from the assumed ground model. Difference from the encountered ground conditions during construction may require an amendment to the recommendations of this report.

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APPENDIX A

Drawings

MEMORANDUM OF EASEMENTS

PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
Right to convey water, telecommunications, power. Right to drain sewage, water	A	LOT 2 HEREON	LOT 1 HEREON
Right of way	B	LOT 3 HEREON	LOT 2 HEREON
Right of way	C	LOT 1 HEREON	LOTS 2 & 3 HEREON

Amalgamation Condition:
That Lot 1 Hereon hold a 2/27 share of Lot 6 DP 106009
That Lot 2 Hereon hold a 2/27 share of Lot 6 DP 106009
That Lot 3 Hereon hold a 2/27 share of Lot 6 DP 106009

0 5 10 15 20 25 30m
Bar Scale 1:250 @ A3

LEGEND
- Edge of Concrete
- Edge of Metal
- Building Line
- Bank Bottom
- Bank Top
- Boundary Line
- Fence Line
- Channel Invert
- Kerb Top
- Eave Line
- Edge of Seal

N

Lot 2
DP 106009

Lot 9 DP 153916

Lot 1
DP 95142

Lot 6
DP 106009

Pt Lot 14 DP 21496

Hone Heke Road

Catchpitt
Letterboxes
Pressure Sewer Boxes
4 x WATER METERS
ET Power Upstand
Retaining Wall
Catchpitt
Catchpitt
IRON BAR II DP 168579
RL: 56.51
Existing Sewage Line Approx Position
Existing Power and Water Supply Approx Position
Example 10m x16m Building Site
Lot 2
460m²
NAIL
RL: 53.09
IRON BAR
RL: 57.20
Example 10mx12m Building Site
Propsed boundary to be created by separate subdivision
Downpipes
Deck
Downpipe
Existing Dwelling
Lot 1
726m²
Steps
Retaining Wall
Lot 3
459m²
Downpipe
Downpipe
Carport
Pool Area
Garage
LOT 5
IRON BAR
RL: 58.05
NAIL
RL: 57.80
WATER METER
Retaining Wall

1.89 6.02 26.63 16.31 14.86 17.72 1.50 18.96 4.09 37.41 1.42 8.97 1.72 2.14 6.45 5.65 59.85 12.11 11.00 16.41 4.63 2.86 27.80

NOTES AND DISCLAIMERS

This drawing has been produced solely for the the use intended by the client stated on the plan, and must not be used for any other purpose. Thomson Survey accepts no responsibility for this plan, or any data on this plan, to be used for any other purpose.

Please check data and advise Thomson Survey Ltd of any discrepancies or omissions.

Appellation information shown hereon was sourced from Quickmap

The accompanying digital data must be read in conjunction with the information shown here.

Local Authority: Far North District Council

Coordinate System: NZGD Mt Eden 2000
Coordinate Origin: IT VI DP 79090 (DDDK)

Level Datum: NZVD2016
Levels in terms of: DDDK RL: 50.23

Equipment used: Leica GS18 RTK GPS, Leica TPS 1200
All measurements are to GPS accuracy. Precise levels have not been done.

Contour interval is: 0.5m MINOR, 2.5m MAJOR

Manholes and Cespitts inverts are displayed clockwise from outlet. Eaves are measured at the face of barge or gutter as applicable.

All information supplied must be checked before construction.

Local Authority: Far North District Council
Comprised in: NA102C/373 and NA102C/372
Total Area: 1645m²
Zoning: Residential
Resource features: NIL

THOMSON SURVEY LIMITED
315 Kerikeri Rd
P.O. Box 372 Kerikeri
Email: kerikeri@tsurvey.co.nz
Ph: (09) 4077360
www.tsurvey.co.nz
Registered Land Surveyors, Planners & Land Development Consultants

Topographial Survey on Lot 1 DP 106009 & Proposed Subdivision

63 Hone Heke Road, Kerikeri

PREPARED FOR: Waller

	Name	Date
Survey	MD	03/26
Survey		
Design	MD	02/04/26
Drawn	MD	02/04/26
Rev		

ORIGINAL
SCALE 1:250
SHEET SIZE A3

10490 10879 Topo.LCD

Surveyors Ref. No: 10879
Series
Sheet 1 of 1

Legend

- Preliminary Building Site 1
- Preliminary Building Site 2
- Geologix Hand Auger + Dynamic Cone Penetrometer (April 2026)
- Site Boundary

0 5 m 10 m

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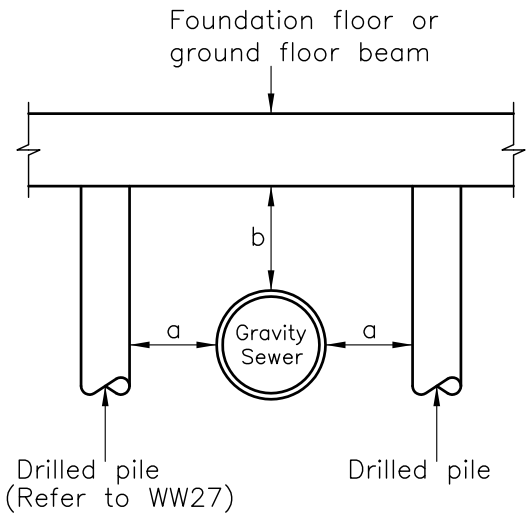
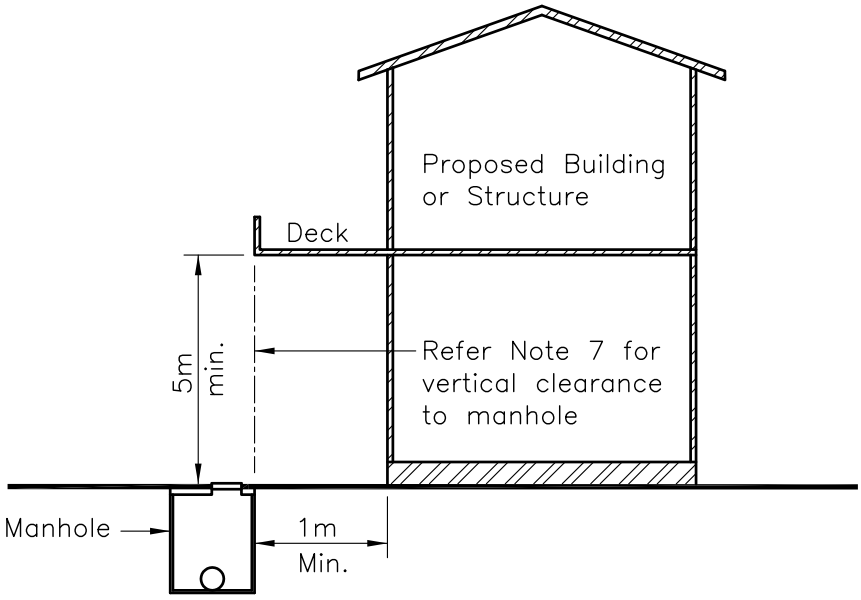
Produced by **Datanest.earth**

Title: Geotechnical Site Plan		
Client: Lindsay Walker		Size: A3
Project: 63 Hone Heke Road, Kerikeri	Drawn: DBT	Drawing No.: 200
Date: 16-04-2026	Checked: AW	
Proj No: C0809N	Scale: 1:500	Version: Final



Minimum Pile Clearances						
Type of Sewer	Sewer Depth < 3m		Sewer Depth 3m–5m		Sewer Depth >5m	
	a	b	a	b	a	b
Local Wastewater Network	1m	0.6m	1m	0.6m	1.5m	0.6m
Transmission (Trunk) Sewer	1m	1m	2m	1m	3m	1.5m

PIPE CONSTRUCTION CLEARANCE FOR BRIDGING OPTIONS



MANHOLE CONSTRUCTION CLEARANCE

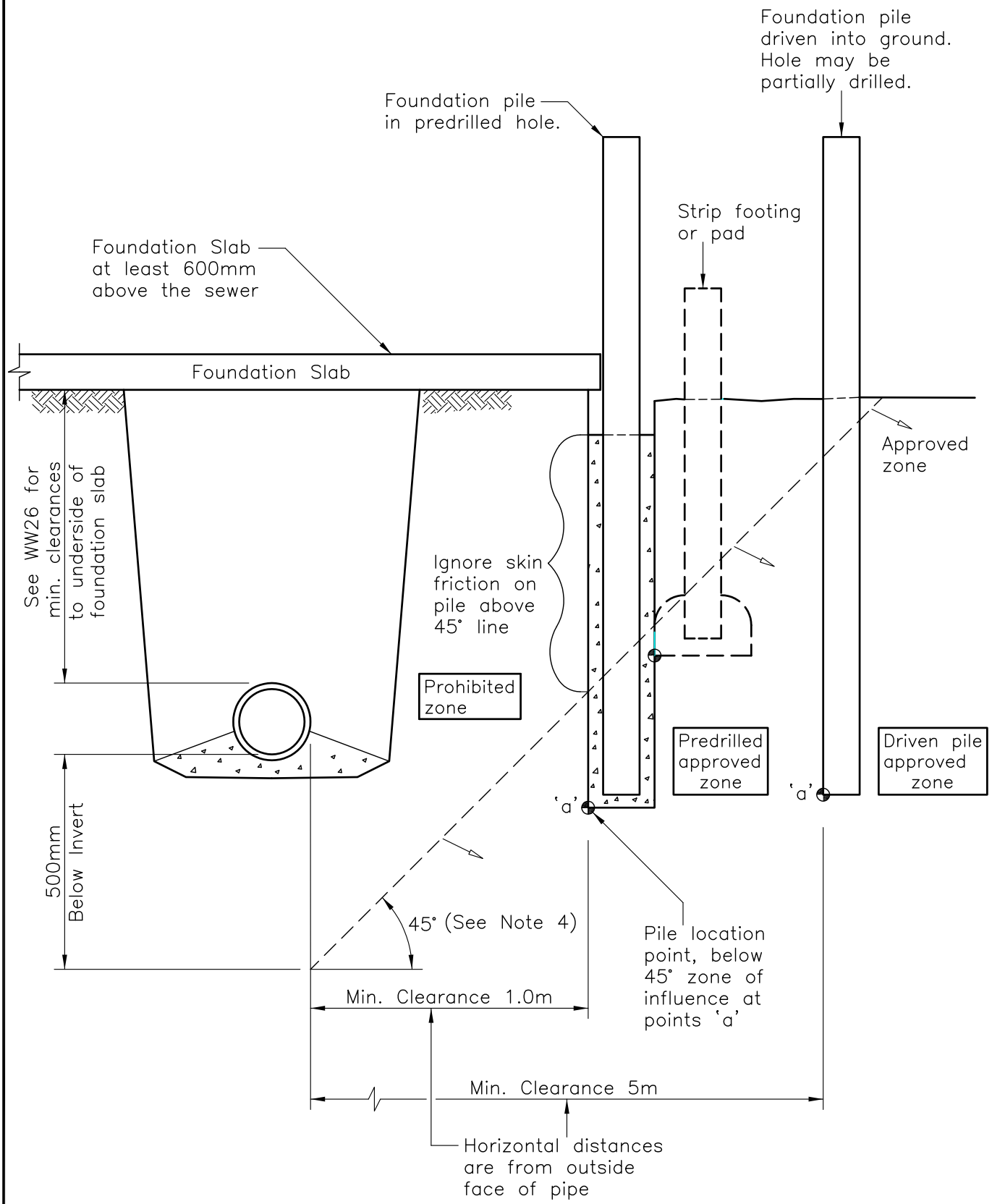
NOTES:

1. Locate sewer to survey accuracy or by hand piloting.
2. No driven piles within 5m of a sewer or 10m of brick sewer.
3. All manholes shall have 24 hrs unobstructed access.
4. No construction shall occur above a manhole or within tolerances 'a' or 'b' in table above.
5. Pressure mains shall not be built over.
6. Brick or poor condition wastewater pipe shall not be built over. Bridging options must be approved.
7. Vertical clearance from the top of the chamber shall be 5m Min. over the full width of the chamber.

O:\---\ EGCADFI \ 2017 \ WATER & WASTEWATER NETWORK STD DWGS \ 2010070.044D .DWG

PIPE AND MANHOLE CONSTRUCTION CLEARANCE

SCALE:	N.T.S.
ISSUE DATE:	04–12–2017
DWG No.	2010070.044D
REFERENCE No.	WW 26



NOTES:

1. No driven piles are permitted within 10m of brick Sewers, or within 5m of all other sewers.
2. Piles that are required to resist horizontal forces will require specific design.
3. Pile/Footing location point must be below 45° zone of influence.
4. Zone of influence typically 45° or angle determined by a structural engineer.

O:\---\ EGCADFI \ 2017 \ WATER & WASTEWATER NETWORK STD DWGS \ 2010070.045B .DWG

Watercare

BUILDING CLOSE TO OR OVER LOCAL NETWORK WASTEWATER

SCALE:	N.T.S.
ISSUE DATE:	04–12–2017
DWG No.	2010070.045B
REFERENCE No.	WW 27

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APPENDIX B

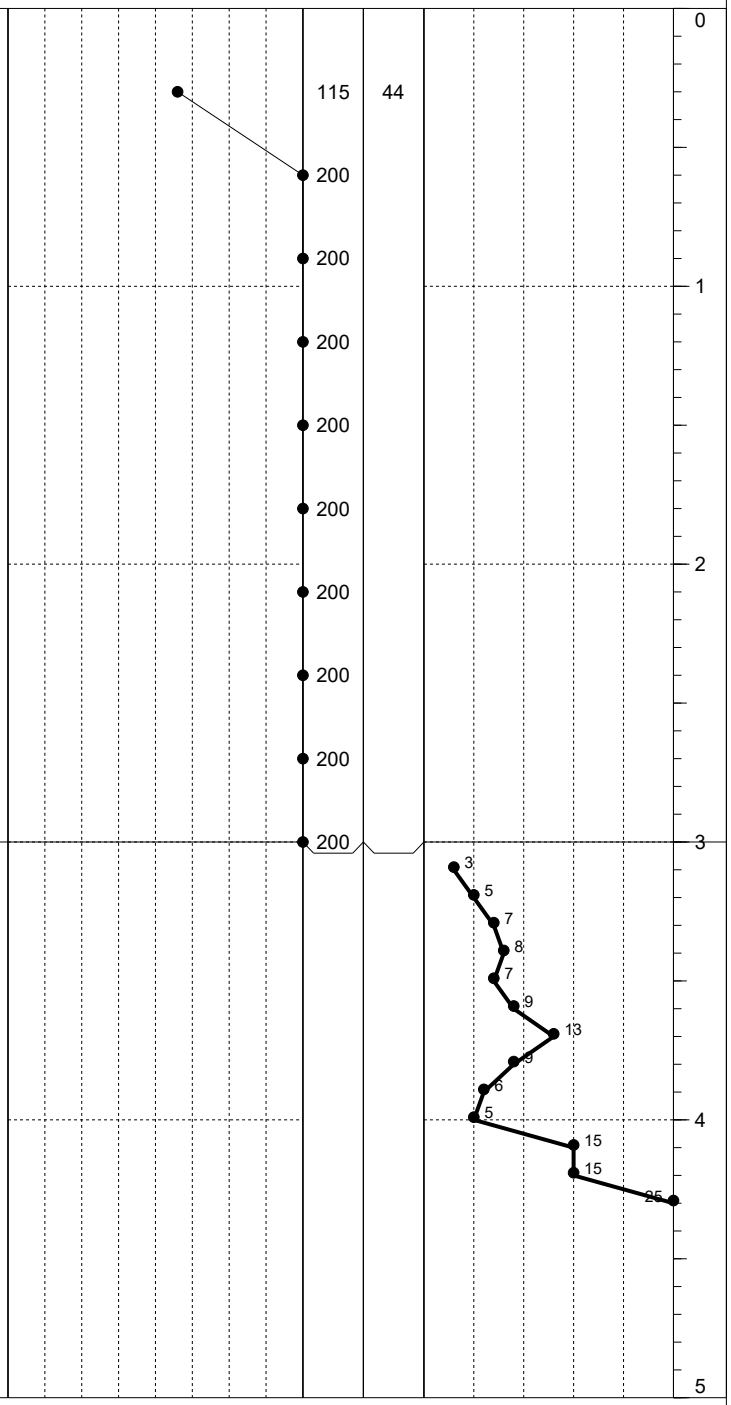
Exploratory Hole Records

HAND AUGER & DCP LOG

Project Ref:	C0809N
Client:	Lindsay Waller
Project Name:	63 Hone Heke Road, Kerikeri
Hole ID:	**HA01**
Project Location:	63 Hone Heke Road, Kerikeri
Date:	2026-04-14
Hole Position:	1687172.01 mE 6101367.93 mN 59.16 m
Logged By:	CA
Approved:	AW

Ground Surface EL 59.16 m

DEPTH (M)	MATERIAL DESCRIPTION (SEE CLASSIFICATION AND SYMBOLOGY SHEET FOR DETAILS)	LEGEND	SAMPLE
0	Clayey SILT, with trace rootlets; dark brown. Very stiff; moist to wet; low plasticity; [TOPSOIL].		
0.4 m	EL 58.76 m		
	Clayey SILT, with trace gravel; brown. Very stiff; moist to wet; low plasticity. Gravel is fine to medium, sub-rounded to sub-angular. [RESIDUAL SOIL].		
0.8 m	EL 58.36 m		
1	Silty CLAY, with trace gravel; brown. Very stiff; moist to wet; high plasticity. Gravel is fine, sub-angular to sub-rounded; [KERIKERI VOLCANICS GROUP].		
1.3 m	EL 57.86 m		
	Clayey SILT, with trace gravel; light brown mottled light grey. Very stiff; moist to wet; low plasticity. Gravel is fine to medium, sub-angular to sub-rounded; [KERIKERI VOLCANICS GROUP].		
2			
2.2 m	EL 56.96 m		
	SILT; brown. Very stiff; wet to saturated; low plasticity; [KERIKERI VOLCANICS GROUP].		
3 m	EL 56.16 m		
3	Terminated at 3 m		
4			
5			



Remarks:

1. Hand Auger terminated at 3.0m bgl due to hard strata.
2. Continue with DCP at 3.0m bgl to 4.30m bgl.
3. Groundwater not encountered during drilling.

HAND AUGER & DCP LOG

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Project Name: 63 Hone Heke Road, Kerikeri

Project Ref:	C0809N
Client:	Lindsay Waller
Hole ID:	**HA02**
Project Location:	63 Hone Heke Road, Kerikeri
Date:	2026-04-14
Hole Position:	1687193.23 mE 6101370.12 mN 58.75 m
Logged By:	CA
Approved:	AW

Ground Surface EL 58.75 m

DEPTH (M)	MATERIAL DESCRIPTION (SEE CLASSIFICATION AND SYMBOLOGY SHEET FOR DETAILS)	LEGEND	SAMPLE	VANE SHEAR STRENGTH (KPA) PEAK	VANE SHEAR STRENGTH (KPA) RESIDUAL	SCALA PENETROMETER (Blows/100mm)
0	Clayey SILT, with trace rootlets; dark brown. Very stiff; moist; low plasticity; [TOPSOIL].					
0.3 m	EL 58.45 m					
	Clayey SILT; brown. Very stiff; moist; low plasticity; [COLLUVIUM].			117	44	
0.8 m	EL 57.95 m			200		
1	SILT; dark brown. Very stiff; moist to wet; low plasticity [COLLUVIUM].			200		
1.8 m	EL 56.95 m			200		
	Clayey SILT; dark brown mottled dark grey. Very stiff; moist to wet; low plasticity; [COLLUVIUM]			200		
2				182	97	
2.5 m	EL 56.25 m			143	54	
	Silty CLAY; dark grey mottled yellowish brown. Very stiff; wet to saturated; high plasticity; [COLLUVIUM].			188	46	
3				200		
3.5 m	EL 55.25 m			200		
	Terminated at 3.5 m			200		
4						
5						

GROUND WATER

Remarks:

1. Hand Auger terminated at 3.50m bgl due to hard strata.
2. Continue with DCP at 3.5m bgl to 5.0m bgl.
3. Groundwater is encountered at 2.70m bgl during drilling.

HAND AUGER & DCP LOG

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Project Ref:	C0809N
Client:	Lindsay Waller
Project Name:	63 Hone Heke Road, Kerikeri
Hole ID:	**HA03**
Project Location:	63 Hone Heke Road, Kerikeri
Date:	2026-04-14
Hole Position:	1687199.18 mE 6101353.85 mN 59.2 m
Logged By:	CA
Approved:	AW

Ground Surface EL 59.2 m

0 – 0.3 m (EL 58.9 m): SILT, with trace rootlets; dark brown. Very stiff; moist to wet; low plasticity; [TOPSOIL].

0.3 – 0.7 m (EL 58.9 m – EL 58.5 m): Clayey SILT; brown. Very stiff; moist to wet; low plasticity; [COLLUVIUM].

0.7 – 1.9 m (EL 58.5 m – EL 57.3 m): Silty CLAY; brown. Very stiff; moist to wet; high plasticity; [COLLUVIUM].

1.9 – 2.7 m (EL 57.3 m – EL 56.5 m): Clayey SILT; dark grey mottled brown. Very stiff; moist to wet; high plasticity; [COLLUVIUM].

2.7 m (EL 56.5 m): Terminated at 2.7 m

DEPTH (M)	PEAK (VANE SHEAR STRENGTH, KPA)	RESIDUAL (VANE SHEAR STRENGTH, KPA)	SCALA PENETROMETER (Blows/100mm)
0			
0.3	131	37	
0.7	200		
1.0	200		
1.3	200		
1.6	200		
1.9	200		
2.2	188	29	
2.5	200		
2.7	200		
3.0			4
3.1			4
3.2			8
3.3			4
3.4			4
3.5			5
3.6			4
3.7			2
3.8			3
3.9			4
4.0			3
4.1			5
4.2			8
4.3			9
4.4			8
4.5			7
4.6			6
4.7			8
4.8			7
4.9			8
5.0			8
5.1			9
5.2			10

Remarks:

1. Hand Auger terminated at 2.70m bgl to hard strata.
2. Continue DCP from 2.70m bgl to 5.0m bgl.
3. Groundwater not encountered during drilling.

HAND AUGER & DCP LOG

Project Ref:	C0809N
Client:	Lindsay Waller
Project Name:	63 Hone Heke Road, Kerikeri
Hole ID:	**HA04**
Project Location:	63 Hone Heke Road, Kerikeri
Date:	2026-04-14
Hole Position:	1687207.41 mE 6101357.64 mN 59.26 m
Logged By:	CA
Approved:	AW

Ground Surface EL 59.26 m

DEPTH (M)	MATERIAL DESCRIPTION (SEE CLASSIFICATION AND SYMBOLOGY SHEET FOR DETAILS)	LEGEND	SAMPLE
0	SILT, with trace rootlets; dark brown. Very stiff; moist to wet; low plasticity; [TOPSOIL].		
0.3 m	EL 58.96 m		
	Clayey SILT; brown. Very stiff; moist to wet; low plasticity; [RESIDUAL SOIL].		
0.8 m	EL 58.46 m		
1	SILT; brown. Very stiff; moist to wet; low plasticity; [RESIDUAL SOIL].		
1.8 m	EL 57.46 m		
2	Clayey SILT; with trace gravel; light grey mottled light brown. Very stiff; moist to wet; low plasticity. Gravel is fine, sub-angular to sub-rounded; [KERIKERI VOLCANICS GROUP].		
2.4 m	EL 56.86 m		
3	Terminated at 2.4 m		
4			
5			

VANE SHEAR STRENGTH (KPA): 25 50 75 100 125 150 175

PEAK: 171, 200, 200, 200, 200, 200, 200

RESIDUAL: 43

SCALA PENETROMETER (Blows/100mm): 5 10 15 20

2 4 4 3 5 5 5 6 4 5 7 8 8 8 12 15 25

GROUND WATER

Remarks:

1. Hand Auger terminated at 2.40m bgl due to hard strata.
2. Continue with DCP from 2.40m bgl to 4.10m bgl.
3. Groundwater encountered at 2.10m bgl,

Appendix 6

Subdivision Site Suitability Report

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SUBDIVISION SITE SUITABILITY ENGINEERING REPORT

63 HONE HEKE ROAD, KERIKERI

LINDSAY WALLER

C0809N-S-01
JULY 2026
REVISION 1

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DOCUMENT MANAGEMENT

Document Title	Subdivision Site Suitability Engineering Report
Site Reference	63 Hone Heke Road, Kerikeri
Client	Lindsay Waller
Geologix Reference	C0809N-S-01
Issue Date	July 2026
Revision	01
Prepared	Emily Collings Senior Environmental Engineer, BSc (hons), MSc, MEngNZ
Reviewed	Sebastian Hicks Principal Civil Engineer, CPEng Reg. 1168062, IntPE(NZ) /APEC Engineer, CMEngNZ
Approved	Edward Collings Managing Director, CEnvP Reg. 0861, CPEng Reg. 1033153, CMEngNZ
File Reference	*Z:\Projects\C0800-C0899\C0809N - 63 Hone Heke Road, Kerikeri\06 - Reports\Civil\C0809N-S-01.docx*

REVISION HISTORY

Date	Issue	Prepared	Reviewed	Approved
July 2026	First Issue	EJC	SH	EC

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TABLE OF CONTENTS

1 INTRODUCTION

This Site Suitability Engineering Report has been prepared by Geologix Consulting Engineers Ltd (Geologix) for Lindsay Waller 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 three-lot subdivision of 63 Hone Heke Road, Kerikeri, the 'site', to create two new residential lots and one containing existing residential development.

This assessment addresses preliminary engineering elements of wastewater, stormwater, water supply, firefighting, access and associated earthworks requirements to suitably service proposed building envelopes 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 Thomson Survey[1] and has been reproduced within Appendix A as Drawing No 100. It is understood from the scheme plan that the new lots will comprise example building sites of 160m^2 (Lot 2) and 120m^2 (Lot 3). Lot 1 contains an existing dwelling, garage, carport, pool and driveway. The existing driveway and vehicle crossing will service the new lots (easement C and D) with an additional right of way (ROW) to be formed within easement B.

The subdivision is proposed to be serviced for stormwater, wastewater, water supply and utility services with new connections provided to the existing public networks.

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.

[1] *Thomson Survey Limited, Plan Ref. Topographical Survey on Lot 1 DP 106009 & Proposed Subdivision, April 2026, Ref. 10879.*

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	Easement ownership
1	726m^2	Existing residential	Easement C - ROW
2	460m^2	New residential	Easement A - services
3	459m^2	New residential	Easement B - ROW Easement D - ROW

1.2 Site Description and Existing Infrastructure

The site is currently contained within a larger cross-lease title which is understood to be undergoing conversion to freehold titles. The larger lot is legally described as Lot 1 DP 106009 (61-63 Hone Heke Road), comprising 3,409m^2. Following the cross-lease conversion the site will comprise 1,645m^2 land. The site is designated by the FNDC Operative District Plan as within the Residential zone.

The site comprises an existing dwelling with associated garage, carport, pool 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 downstream flooding hazard identified immediately downstream of the site within the Hone Heke road reserve.

Geology at the site is understood to be Kerikeri Volcanic Group Late Miocene basalt of Kaikohe - Bay of Islands Volcanic Field.

The site is located near similar, single-dwelling residential sites, Kerikeri Primary and High Schools to the west and Hone Heke Lodge (hostel) to the east. Existing infrastructure within this area includes roads, footpaths, kerb and channel, public water supply, fire hydrants and utility networks. The site slopes gently from the existing dwelling to the northeast over a range of approx. 60m to 52m RL at the boundary with ROW which serves the site.

No existing public networks are located within the site boundaries. The public networks are located within the Hone Heke Road corridor to the north.

Wastewater from the existing dwelling is currently serviced by a pressure sewer wastewater collection system located north of the existing dwelling. The pump chamber system appeared to be in good working order and is contained within

easement A. The existing private Wastewater pump line currently runs through proposed Lot 2 and will be diverted through easement A. A wastewater boundary kit is indicated in Hone Heke Road.

The existing roof stormwater discharge, via downpipes, is currently to ground. It is proposed that a stormwater network connection is provided for the existing dwelling.

There is a water meter recorded as in service near the northern corner of the site. There are two fire hydrants close by the site, the closest is recorded northwest the site along the northern face of Hone Heke Road.

The site includes underground power supply from an existing power pillar within a shared accessway off the Hone Heke 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

2.1 Existing Wastewater Systems, Reticulated Network

An existing private wastewater pressure sewer system has been identified within the site boundaries. The E One pump chamber is located just north of the existing dwelling within the Lot 1 boundary. FNDC GIS infrastructure data maps indicate that the existing site is serviced by the following infrastructure:

- Public WW Pipe Pressure line (Asset ID: 20180920093159 that is parallel with the site's northern boundary connecting to the western public pressure wastewater network located within the western verge of Hone Heke Road.
- Private WW pressure wastewater lateral line (Asset ID: 20180920094447)) including:
    - Low-pressure sewer (LPS) pump station (E One pump type) that services the site.
    - This connection will remain in place to service proposed Lot 1. However, the line will be relocated out of the Lot 2 example building site and into easement A.

2.2 Wastewater Proposal

FNDC has confirmed that the is network capacity for additional wastewater connections[2].

The proposed wastewater infrastructure associated to the establishment of the subdivision includes the provision of two new boundary kits to be connected onto the existing public sewer line that is positioned outside the northwest corner of the proposed Lot 2 boundary. A new length of 50mm PE pipe sewer, running in the road verge of Hone Heke Road will come off the public sewer line. This new pipe, which will be vested to FNDC, will allow for the connection of 40mm lot connections on which the boundary kits are to be installed. Refer Drawing Sheet 100 in Appendix A.

These boundary kits will provide wastewater connections for Lot 2 and 3. The lots will pump (e.g. E One pump chamber) to the pressurised public network (to be detailed at building consent stage). The installation of the boundary kits will require a connection request to FNDC. Appropriate easements over Lot 2 to service Lot 1 and Lot 3 also need to be created in the subdivision plan.

2.3 Wastewater Generation Volume

According to the FNDC Engineering Standards, Section 5.2.2.2, residential design flows have been estimated as follows (Table 2).

Table 2: Residential Wastewater Design Flows

Design Item	Criteria
Average dry weather flow	200 litres/ day/ person
No. of people per dwelling	4
Dry weather diurnal Peaking Factor	2.5
Wet weather diurnal Peaking Factor	5
Peak wet weather flow (PWWF)	1,000 litres/ day/ person

For the concept wastewater design, this provides a wastewater PWWF generation of 4,000litres/ day per proposed lot. Average flows are expected to be 800L/ day per proposed lot.

[2] *Email: 'Re: 63 Hone Heke Road, Kerikeri - RC capacity checks / methodology' from Angus Simpson, 14/05/2026. Refer Appendix B.*

2.4 Summary of Concept Wastewater Design

Based on the above design assumptions a concept wastewater design is presented in Table 3 and presented schematically upon Drawing No. 100 (Appendix A). It is recommended that each lot is subject to Building Consent specific review and design amendment according to final development plans.

Table 3: Concept Wastewater Design Summary

Design Element	Specification
Concept development	Residential units, peak occupancy of 4 (per household unit)
Design generation volume (PWWF)	4,000 litres/ day per proposed lot
Water fixtures	Standard.
Water meter required?	Yes
Conveyance	Drainage to public sewer via boundary kit
Lateral connection	40mm PE pipe

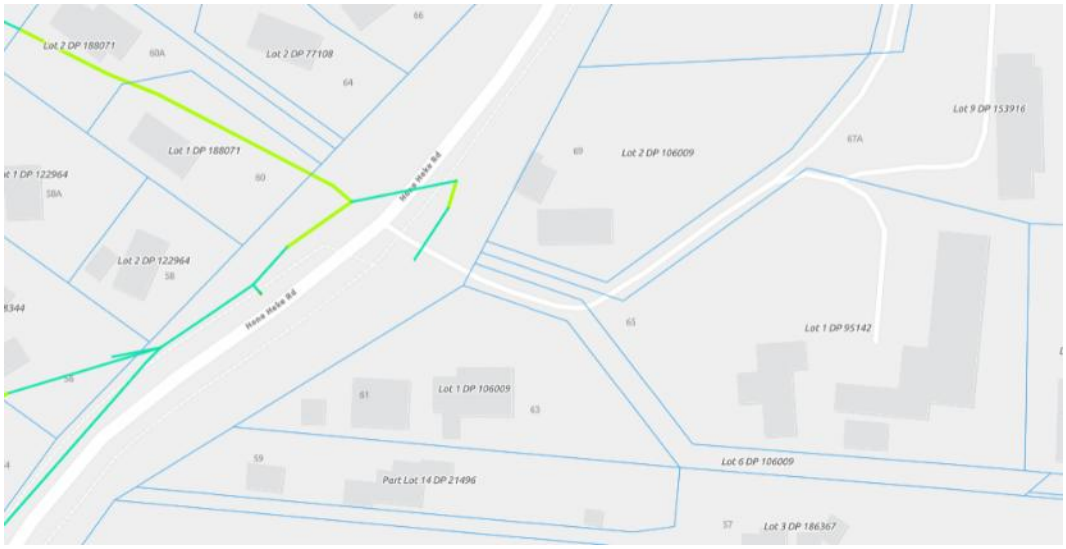
Engineering plan approval will be required to form the two new network connections for Lots 2 and 3.

3 STORMWATER ASSESSMENT

3.1 Reticulated Network

There is an existing reticulated Council stormwater network within Hone Heke Road corridor. This outlets via culvert(s) to an open drain on the eastern side of Hone Heke Road, just 26m downslope of the site (Figure 1).

Figure 1. FNDC Reticulated Stormwater Network



It is also noted that there is an existing private stormwater network present within the ROW access to the site, Lot 6 DP 106009, due to the presence of catchpits. This network is expected to connect to the FNDC network (size and location can be confirmed by CCTV and/or property file records).

3.2 Impervious Surfaces and Management Concept

To comply with permitted activity standards for the "*Residential zone*", the maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 50%. Controlled activity standards raise this to 60 % or 600m^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.

Existing impervious surface covering at the time of writing is summarised within Table 4.

Table 4: Summary of Existing Surface Covering at the site (1,645m^2).

Parameter	Units	Value
Roof (including dwelling and garage)	m^2	257
	%	*15.6*
Ex. driveway	m^2	165
	%	*10.0*
'Pool Area'	m^2	110
	%	*6.7*
Pervious	m^2	1,113
	%	*67.7*
Total Impervious	m^2	**532**
(as a percentage of total existing lot area 1,645m^2)	*%*	***32.3***
Threshold	50 %	822.50 m^2
Meets Permitted Activity Pre Activity		Yes

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

Table 5: Summary of Surface Coverings

Parameter	Units	Prop. Lot 1	Prop. Lot 2	Prop. Lot 3
Roof	m^2	257	120 (concept)	100 (concept)
	%	*35.4*	*26.1*	*21.8*
Driveway/ Paved areas	m^2	44.5	50	25
	%	*6.1*	*10.9*	*5.4*
ROW	m^2	97.4 (ROW C)	-	67 (ROW B and D)

	%	*13.4*	*0.0*	*14.6*
'Pool Area'	m^2	110	-	-
	%	*15.2*	-	-
Pervious	m^2	217.1	290	267
	%	*29.9*	*63.0*	*58.2*
Total Impervious	m^2	508.9	170	192
(as a percentage of total lot area m^2)	*%*	*70.1 (of 726 m^2)*	*37.0 (of 460 m^2)*	*41.8 (of 459 m^2)*
Threshold	*50%*	*363.00*	*230.00*	*229.50*
Activity Status		Restricted Discretionary	Permitted	Permitted

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. The proposed Lot 1 impervious surfaces exceed the Permitted Activity threshold (50%); therefore, attenuation mitigation to permitted activity levels has been proposed. As RoW C is existing and in place, no stormwater changes are proposed for this section of roading, however its area will be offset within an attenuation tank.

Lots 2 and 3 are anticipated to comply with permitted activity impermeable surface coverage (Table 5). For proposed Lots 2 and 3, additional/ future impervious surfaces will be mitigated by stormwater 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.

Access to the newly proposed lots will be from RoW B, within proposed Lot 3, which should be formed as a 3m wide private ROW.

3.3 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. Attenuation modelling under this scenario avoids exacerbating downstream flooding and provides for sufficient flood control. This design storm methodology has been confirmed by an FNDC Development Engineer[2].

Relevant design rainfall intensity and depths have been ascertained for the site location from the NIWA HIRDS meteorological model[3]. 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.

The rational method has been adopted by Geologix with run-off coefficients as published by FNDC Engineering Standards[4] to provide a suitable preliminary attenuation design by installing specifically sized low-flow orifices into the attenuation devices.

3.4 Preliminary Stormwater Attenuation – Lot 1

The driveway/ ROW areas internal to proposed Lot 1 has been account for as offset attenuation. Calculations to support the preliminary design are presented as Appendix C to this report. A summary of the preliminary attenuation design is presented as Table 6 and a schematic retention/ detention tank arrangement detail is presented as Drawing No. 401 within Appendix A. It is recommended that this preliminary design is refined at the Building Consent/ 223 stage as required by conditions of consent.

Table 6: Preliminary Attenuation – Lot 1

Design Parameter	Flow Attenuation: 50 % AEP to permitted activity threshold	Flow Attenuation: 20 % AEP to permitted activity threshold
Lot 1 Preliminary Design (257 m² roof, 251 m² driveway/ROW/'Pool Area' offset)		
Regulatory Compliance	FNDC Engineering Standards Table 4-1	FNDC Engineering Standards Table 4-1
Permitted Activity peak flow	7.78 L/s	10.06 L/s
Post-development peak flow	10.91 L/s	14.10 L/s
Max. Storage Volume Req.	1,877 litres	2,426 litres
Concept Summary:	- Attenuation storage calculation accounts for offset flow from 251 m² driveway/ROW/'Pool Area'. Refer Appendix C for preliminary calcs in full. - Attenuation for 20 % AEP storm represents maximum storage requirement and is adopted for the preliminary design tank storage. - 1 x 3,000 litre tank is sufficient for attenuation.	

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

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

	- 20 % AEP attenuation (in isolation) requires a 43 mm orifice 1.21 m below the tank overflow and bottom 150mm reserved for sediment retention (dead storage). However regulatory requirements are to consider an additional orifice/s to control the 50 % AEP event specifically. We note this may vary the preliminary orifice indicated above. We have allowed for 3,000L tank in the concept. This should be considered with detailed design at 223 stage.

3.5 Concept Stormwater Attenuation – Lot 2

Estimated driveway/ parking/ turning areas internal to proposed Lot 2 has been accounted for as offset attenuation. Calculations to support the preliminary design are presented as Appendix C to this report. A summary of the probable future development attenuation concept design is presented as Table 7.

Table 7: Probable Future Development Attenuation Concept – Lot 2

Design Parameter	Flow Attenuation: 50 % AEP (80% of pre-dev)	Flow Attenuation: 20 % AEP (80% of pre-dev)
Lot 2 Concept Design (120 m^2 roof, 50 m^2 driveway offset)		
Regulatory Compliance	FNDC Engineering Standards Table 4-1	FNDC Engineering Standards Table 4-1
Pre-development peak flow	2.12 L/s	2.74 L/s
80 % pre-development peak flow	1.70 L/s	2.19 L/s
Post-development peak flow	3.64 L/s	4.71 L/s
Max. Storage Volume Req.	1,639 litres	2,143 litres
Concept Summary:	- Attenuation storage calculation accounts for offset flow from 50 m^2 driveway. Refer Appendix C for concept calcs in full. - Attenuation for 20 % AEP storm represents maximum storage requirement and is adopted for the concept design tank storage. - 1 x 2,500 litre tank is sufficient for attenuation. - 20 % AEP attenuation (in isolation) requires a 23 mm orifice 0.61 m below the tank overflow and bottom 150mm reserved for sediment retention (dead storage). 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. We have allowed for 2,500L tank in the concept. This should be considered with detailed design for building consent approval.	

3.6 Concept Stormwater Attenuation – Lot 3

At proposed Lot 3, ROW B (44m^2) will be formed at the time of subdivision however as it is a small area, separate mitigation is not proposed. ROW B will discharge to the stormwater network via catchpit (with offset attenuation provided post future development). This is deemed appropriate as flows from ROW B equate to <1.5 L/s runoff (1.22 L/s for 20% AEP, 10 min storm).

Estimated driveway/ parking/ turning areas, plus ROW B, internal to proposed Lot 3 have been accounted for as offset attenuation using roof water tank (ROW D is considered an existing impermeable surface).

Calculations to support the preliminary design are presented as Appendix C to this report. A summary of the probable future development attenuation concept design is presented as Table 8.

Table 8: Probable Future Development Attenuation Concept – Lot 3

Design Parameter	Flow Attenuation: 50 % AEP (80% of pre-dev)	Flow Attenuation: 20 % AEP (80% of pre-dev)
Lot 3 Concept Design (100 m2 roof, 25m2 driveway offset, 44m2 ROW B offset to be provided for)		
Pre-development peak flow	2.23 L/s	2.88 L/s
80 % pre-development peak flow	1.79 L/s	2.31 L/s
Post-development peak flow	3.62 L/s	4.68 L/s
Total Storage Volume Req.	2,383 litres	3,098 litres
Concept Summary:	- Attenuation storage calculation accounts for offset flow from 69 m^2 (parking + ROW B). Refer Appendix C for concept calcs in full. - Attenuation for 20 % AEP storm represents maximum storage requirement and is adopted for the concept design tank storage. - 1 x 3,500 litre tank is sufficient for attenuation. - 20 % AEP attenuation (in isolation) requires a 16 mm orifice 1.15 m below the tank overflow, with the bottom 150mm reserved for sediment retention (dead storage). 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. We have allowed for 3,500L tank in the concept. This should be considered with detailed design for building consent approval.	

3.7 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.
- Tank to be filled by roof runoff only.
- 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.

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.

3.8 Network Connections

It is proposed to connect proposed Lots 2 and 3 to the private stormwater network present within Lot 6 DP 106009. A 100mm dia. lateral should be installed to the boundary of Lot 2. For Lot 3 a new stormwater connection (150mm dia.) is to be made to the catchpit (460 x 675mm) servicing ROW B. (size and location can be confirmed by CCTV and/or property file records).

3.9 Summary

Stormwater discharge from each lot will generally be as follows:

- Lot 1: Attenuation to permitted activity level in tank, with connection made to the existing stormwater network via 100 dia. lateral connection through easement A.

- Lot 2: Attenuate roof rainwater in tank; discharge to the existing stormwater network via 100 dia. lateral connection.
- Lot 3: Attenuate roof rainwater in tank; new standard catchpit (460 x 675mm) to manage RoW runoff; discharge to the existing stormwater network via 150 dia. lateral connection.

4 POTABLE WATER AND FIRE FIGHTING

4.1 Water Supply

The site is located within a well-established public water supply area and is currently located near to a public 50 mm uPVC water supply pipeline (Rider Main ID: 20110706161310) outside the northwestern boundary. FNDC has confirmed that the is network capacity for additional connections[2].

The existing metered connection to the existing house (Lot 1) is located at the northern site corner and will be reused with the water supply line re-routed through Easement A. New water meters for proposed Lots 2 and 3 will be applied for to be installed within the berm area of Hone Heke Road and the local accessway, as presented on Drawing Sheet 100 in Appendix A.

4.2 Firefighting

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 nearby fire hydrants, the closest one is in Hone Heke Road northwest of the site (along WS Pipe Main: WL2216_2). The other hydrant is to the northeast of the site along a local accessway (at the end of WS Pipe Main: WL3110). The closest hydrant is approximately 135 m and the second 202 m from the site entrance.

FNDC has confirmed that there is sufficient water supply to provide firefighting[2].

The proposed development is expected to 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 1 utility services are currently provided by overhead lines within Hone Heke Road that becoming underground connections near the site's northern corner boundary (Power Pillar ID: 810347). Existing services are demonstrated by BeforeUDig plans within Appendix D. 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 Lots 2 and 3 boundaries, in accordance with appropriate standards (and subject to network operator approval). Existing power and comms are proposed to be re-routed to the existing dwelling via easement A.

6 INTERNAL ACCESS

The existing vehicle crossing off the eastern shared accessway (Lot 6 DP 106009) that comes off Hone Heke Road will continue to provide access to the site. The existing private driveway and vehicle crossing will remain as present and be designated as a RoW (easements C and D). A new RoW will be formed along Lot 3's southwest boundary (easement B) to provide access to proposed Lot 2. Easement B is to be formed as a 3m wide private access, in accordance with the Far North District Plan.

The existing access concrete width was measured at 3.0 m; no additional widening is proposed. The existing accessway vehicle crossing has an existing stormwater surface channel that will remain as-is. The existing consented vehicle crossing will remain and function in its current condition. No modifications are recommended.

Lots 2 and 3 will require new vehicle crossings 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. 100 within Appendix A.

7 EARTHWORKS

The following earthworks provisions are anticipated to form the subdivision:

- Service trenching – stormwater, wastewater, water supply, power, telecom pipeline trenching and connections to existing public services, specifically easement A.
- Easement B (ROW) to be formed as a 3m wide private accessway.
- Stormwater connection be provided to Lots 1-3 from the existing stormwater network.
    - 100mm dia. laterals to be provided to the boundary of Lots 1 and 2.
    - Lot 3 private drainage network (150mm dia.) will be provided to the proposed catchpit at ROW B.

Proposed earthwork volumes are within the 200m³ Permitted Activity volume limit outlined by FNDC District Plan Rule 12.3.6.1.3(a) and the maximum cut and fill height of <3.0 m combined cut and fill to comply with 12.3.6.1.3(b).

8 NATURAL HAZARD ASSESSMENT

To satisfy the NPS for Natural Hazards 2025 the proposed subdivision must plan for and manage the risk from natural hazards to reduce the potential adverse effects to less than minor. Following our ground investigation and considering the measures presented in this report, a summary of the proposed activities against defined natural hazards is presented as Table 9 of Appendix E of this document. Regulatory assessment of natural hazards at the site location are managed under the jurisdiction of the FNDC District Plan, Northland Regional Council (NRC) Regional Plan for Northland[5] and Regional Water and Soil Plan for Northland.

9 SUMMARY

Overall, the proposed subdivision of land at 63 Hone Heke Road is considered suitable in terms of wastewater, stormwater, potable water, firefighting, power and telecom, internal access and roading. Stormwater attenuation is proposed for future lots, with stormwater discharge managed by dispersal devices. Wastewater servicing is available via pressurised reticulation which will require appropriate boundary kits and future pump stations.

[5] *Northland Regional Council, Regional Plan for Northland, March 2026.*

Works required to form the subdivision include:

- Formation of an internal ROW (easement B) to 3m width.
- Stormwater laterals to be provided to Lots 1-3. A private stormwater network will be provided within Lot 2 to connect the proposed ROW catchpit (460 x 675mm) to the stormwater network.
- Stormwater attenuation to permitted activity level for proposed Lot 1.
- Existing services (power, comms, stormwater, wastewater and water supply) from the dwelling to be formed through easement A.
- Installation of wastewater boundary kits for proposed Lots 2 and 3.
- New water meters for proposed Lots 2 and 3.

10 LIMITATIONS

This report has been prepared for Lindsay Waller 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.

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APPENDIX A

Drawings

MEMORANDUM OF EASEMENTS

PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
Right to convey water, telecommunications, power. Right to drain sewage, water	A	LOT 2 HEREON	LOT 1 HEREON
Right of way	B	LOT 3 HEREON	LOT 2 HEREON
Right of way	C	LOT 1 HEREON	LOTS 2 & 3 HEREON
Right of way	D	LOT 3 HEREON	LOTS 1 & 2 HEREON
Right to drain water	D	LOT 3 HEREON	LOT 1 HEREON

Amalgamation Condition:
That Lot 1 Hereon hold a 2/27 share of Lot 6 DP 106009
That Lot 2 Hereon hold a 2/27 share of Lot 6 DP 106009
That Lot 3 Hereon hold a 2/27 share of Lot 6 DP 106009
NOTE: Allocation of shares dependant on outcome of subdivision RC 2260479

0 5 10 15 20 25 30m
Bar Scale 1:250 @ A3

LEGEND
- Edge of Concrete
- Edge of Metal
- Building Line
- Bank Bottom
- Bank Top
- Boundary Line
- Fence Line
- Channel Invert
- Kerb Top
- Eave Line
- Edge of Seal

Lot 2 DP 106009
Lot 9 DP 153916
Lot 1 DP 95142
Lot 6 DP 106009
Pt Lot 14 DP 21496
Hone Heke Road
Catchpitt
Letterboxes
Pressure Sewer Boxes
4 x WATER METERS
ET Power Upstand
Retaining Wall
IRON BAR II DP 168579
RL: 56.51
Example 200m² Building Site
EXISTING SERVICE LINES TO BE RELOCATED TO EASEMENT A
SS Holding Tank
IRON BAR
RL: 57.20
Propsed boundary to be created by separate subdivision
Existing Dwelling
Deck
Downpipes
Downpipe
Steps
Carport
Pool Area
Garage
Existing Sewage Line Approx Position
Existing Power and Water Supply Approx Position
Example 224m² Building Site
NAIL
RL: 53.09
IRON BAR
RL: 58.05
NAIL
RL: 57.80
WATER METER
LOT 5
Lot 1 726m²
Lot 2 460m²
Lot 3 459m²
6.02
1.89
26.63
16.31
17.72
37.41
4.09
12.11
11.00
16.41
4.63
2.86
59.85
5.65
8.97
6.45
1.72
2.14
20.46
27.80

NOTES AND DISCLAIMERS

This drawing has been produced solely for the the use intended by the client stated on the plan, and must not be used for any other purpose. Thomson Survey accepts no responsibility for this plan, or any data on this plan, to be used for any other purpose.

Please check data and advise Thomson Survey Ltd of any discrepancies or omissions.

Appellation information shown hereon was sourced from Quickmap

The accompanying digital data must be read in conjunction with the information shown here.

Local Authority: Far North District Council

Coordinate System: NZGD Mt Eden 2000
Coordinate Origin: IT VI DP 79090 (DDDK)

Level Datum: NZVD2016
Levels in terms of: DDDK RL: 50.23

Equipment used: Leica GS18 RTK GPS, Leica TPS 1200
All measurements are to GPS accuracy. Precise levels have not been done.

Contour interval is: 0.5m MINOR, 2.5m MAJOR

Manholes and Cespitts inverts are displayed clockwise from outlet. Eaves are measured at the face of barge or gutter as applicable.

All information supplied must be checked before construction.

Local Authority: Far North District Council
Comprised in: NA102C/373 and NA102C/372
Total Area: 1645m²
Zoning: Residential
Resource features: NIL

THOMSON SURVEY LIMITED
315 Kerikeri Rd
P.O. Box 372 Kerikeri
Email: kerikeri@tsurvey.co.nz
Ph: (09) 4077360
www.tsurvey.co.nz
Registered Land Surveyors, Planners & Land Development Consultants

Topographical Survey & Scheme Plan of Proposed Subdivision on Lot 1 DP 106009

63 Hone Heke Road, Kerikeri

PREPARED FOR: Waller

	Name	Date
Survey	MD	03/26
Survey		
Design	MD	02/04/26
Drawn	MD	02/04/26
Rev A	MD	27/05/26

10490 10879 Topo.LCD

ORIGINAL
SCALE 1:250
SHEET SIZE A3

Surveyors Ref. No: 10879
Series
Sheet 1 of 1

NOTES

1. DRAWING REPRODUCED FROM THOMPSON SURVEY LTD SCHEME PLAN REF. 10879, DATED 02 Apr 2026.
3. HORIZONTAL CO ORDINATE SYSTEM = NZTM.
4. VERTICAL DATUM = NZVD.
5. MAJOR INTERVALS 1.0 m.
6. MINOR INTERVALS 0.5 m.
7. FOR INDICATION ONLY, NOT FOR CONSTRUCTION.

LEGEND:

- 75.0 — MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED EASEMENTS
- PROPOSED LOTS
- EXISTING BUILDING
- CONCEPT BUILDING ENVELOPE
  LOT 2 - 16m x 10m - AREA 200m2
  LOT 3 - 12m x 10m - AREA 224m2
- HA01 — GEOLOGIX HAND AUGER
- EXISTING FENCE
- RETAINING WALL
- SW — STORMWATER PIPE (PUBLIC)
- SW — STORMWATER PIPE (PRIVATE)
- WW — WASTEWATER PIPE
- W — WATER SUPPLY
- E — POWER SUPPLY
- PIPE DECOMMISSIONED

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DRAWN	SIGNED	DATE					
GB	EC	27/05/26					
VERIFIED	SIGNED	DATE					
EJC	EJC	02/07/26					
APPROVED	SIGNED	DATE					
EC	EC	02/07/26	A	02/07/26	DRAFT	GB	EC
			REV.	DATE	REVISION DETAILS	BY	APP.

CLIENT: LINDSAY WALLER

PROJECT: 63 HONE HEKE ROAD
KERIKERI
NORTHLAND
LOT 1 DP 3106009

DRAWING TITLE: SUBDIVISION RESOURCE CONSENT
SITE SUITABILITY OVERALL LAYOUT

STATUS: NOT FOR CONSTRUCTION

SCALE	SHEET SIZE.				
1:500					
PROJECT NO.	TYPE.	CLASS.	SHEET NO.	REV.	
C0809N	RC		100	A	

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DRAWN	SIGNED	DATE					
GB	GB	27/05/26					
VERIFIED	SIGNED	DATE					
EC	EC	02/07/26					
APPROVED	SIGNED	DATE					
EC	EC	02/07/26	A	02/07/26	DRAFT	GB	EC
			REV.	DATE	REVISION DETAILS	BY	APP.

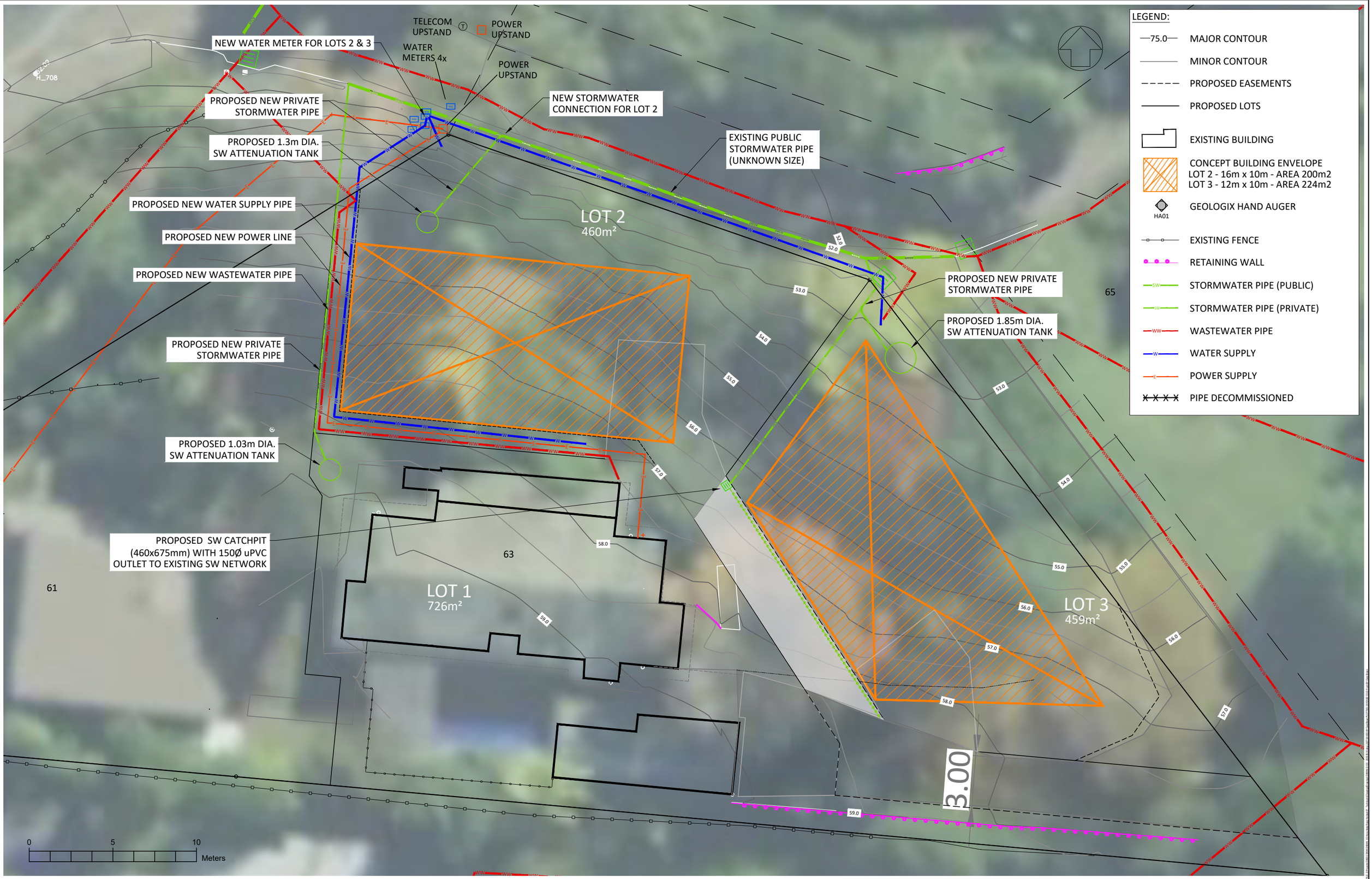
CLIENT.
LINDSAY WALLER
63 HONE HEKE ROAD, KERIKERI

PROJECT.
63 HONE HEKE ROAD
KERIKERI
NORTHLAND
LOT 1 DP 3106009

DRAWING TITLE.
INFRASTRUCTURE TO BE DECOMMISSIONED

STATUS. DRAFT
NOT FOR CONSTRUCTION

SCALE	SHEET SIZE.			
1:250				
PROJECT NO.	TYPE.	CLASS.	SHEET NO.	REV.
C0809N	RC		101	A



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DRAWN	SIGNED	DATE					
GB	GB	27/05/26					
VERIFIED	SIGNED	DATE					
EC	EC	02/07/26					
APPROVED	SIGNED	DATE					
EC	EC	02/07/26	A	02/07/26	DRAFT	GB	EC
			REV.	DATE	REVISION DETAILS	BY	APP.

CLIENT.
LINDSAY WALLER
63 HONE HEKE ROAD, KERIKERI

PROJECT.
63 HONE HEKE ROAD
KERIKERI
NORTHLAND
LOT 1 DP 3106009

DRAWING TITLE.
PROPOSED SERVICING PLAN

STATUS. DRAFT
NOT FOR CONSTRUCTION

SCALE	SHEET SIZE.				
1:200					
PROJECT NO.	TYPE.	CLASS.	SHEET NO.	REV.	
C0809N	RC		102	A	

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APPENDIX B

FNDC Comms

Outlook

Re: 63 Hone Heke Road, Kerikeri - RC capacity checks / methodology

From Development Engineers <Development.Engineers@fndc.govt.nz>
Date Thu 14/05/2026 12:55 PM
To Emily Collings <Emily@geologix.co.nz>
Cc Fred Sennoga <fred.sennoga@geologix.co.nz>

Some people who received this message don't often get email from development.engineers@fndc.govt.nz. Learn why this is important

Afternoon Emily,

Apologies for the delay on this - It would be good if you provided a rough plan of what you are wanting to build so my check is aligned. Assuming an additional lot.

- Water capacity: There is sufficient water supply to provide for fire fighting
- Wastewater capacity: Sufficient capacity
- Stormwater: Provide attenuation for 20/50% AEP to 80% pre-dev.

Angus Simpson
RC Contractor - Metis Consultants Limited - Infrastructure Engineering
Angus.Simpson@fndc.govt.nz
Te Kaunihera o Te Hiku o te Ika | Far North District Council
Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029
fndc.govt.nz

From: Emily Collings <Emily@geologix.co.nz>
Sent: Friday, April 10, 2026 2:05 PM
To: Angus Simpson <Angus.Simpson@fndc.govt.nz>
Cc: Fred Sennoga <fred.sennoga@geologix.co.nz>
Subject: 63 Hone Heke Road, Kerikeri - RC capacity checks / methodology

You don't often get email from emily@geologix.co.nz. Learn why this is important

Hello Angus,

I am new to Geologix and am managing a subdivision project at **63 Hone Heke Road, Kerikeri**.

I was hoping that you could help assist with the following:

- capacity for Stormwater, Wastewater (pressurised reticulation area) and Water Supply - is there availability for new connection(s)

- stormwater attenuation methodology:

    - Due to impermeable surfaces, we will provide attenuation as required, 20/50% AEP to 80% pre-dev.

    - Considering downstream flooding , 10/1% AEP flood control, we acknowledge that there is downstream flooding however this does not appear to affect downstream property before it enters Wairoa Stream.

Thank you,

Emily Collings
Senior Environmental Engineer

Geologix Consulting Engineers Ltd

Email: Emily@geologix.co.nz
Phone: 09 392 0007
Direct: 022 067 3923
Book a meeting with me

Auckland: 13/2181 East Coast Road, Silverdale
Northland: Shop C, 60 Kerikeri Road, Kerikeri

Call me on teams

geologix
consulting engineers

APPENDIX C

Stormwater Calculations

Project Ref:	C0809N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	63 HONE HEKE ROAD, KERIKERI			
Design Case:	EX. DEV. (PRELIMINARY) - Lot 1		**50 % AEP STORM EVENT, TO PERMITTED ACTIVITY THRESHOLD**	
Date:	28 May 2026	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).
RUNOFF COEFFIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

PERMITTED ACTIVITY (PA) CATCHMENT PARAMETERS				**POST DEVELOPMENT CATCHMENT PARAMETERS**			
ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION	ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
PA THRESHOLD	363	0.96	PA = 50% OF SITE	TO TANK	257	0.96	ROOF
PERVIOUS				OFFSET	97.4	0.96	RoW - SEALED
				OFFSET	44.5	0.96	DRIVEWAY - SEALED
				OFFSET	110	0.96	POOL AREA'
TOTAL	**363**	TYPE D		**TOTAL**	**508.9**	TYPE D	

RAINFALL INTENSITY, 50% AEP, 10MIN DURATION

50 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	67.0	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
50 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	80.40	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

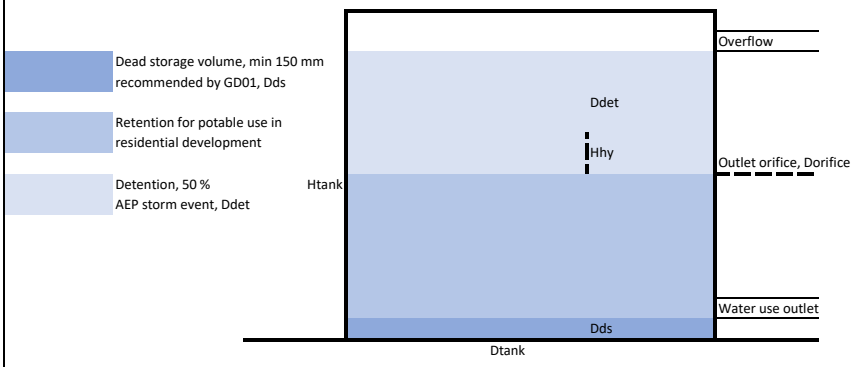
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PA RUNOFF, Qpa, l/s		COMMENTS
10	67.00	1.2	80.40	10.91	7.78		*Critical duration (time of concentration) for the catchments is 10min*
20	47.90	1.2	57.48	7.80	5.56		
30	39.40	1.2	47.28	6.42	4.58		
60	28.10	1.2	33.72	4.58	3.26		
120	19.90	1.2	23.88	3.24	2.31		
360	11.00	1.2	13.20	1.79	1.28		
720	7.27	1.2	8.72	1.18	0.84		
1440	4.62	1.2	5.54	0.75	0.54		
2880	2.80	1.2	3.36	0.46	0.33		
4320	2.04	1.2	2.45	0.33	0.24		

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	5.40	5.51	2.38	2.38	3.13	1,877	*select largest required storage , regardless of duration, to avoid overflow*
20	3.86	3.94	1.70	2.38	1.56	1,869	
30	3.18	3.24	1.40	2.38	0.86	1,545	
60	2.27	2.31	1.00	2.38	No Att. Req.	0	
120	1.60	1.64	0.71	2.38	No Att. Req.	0	
360	0.89	0.90	0.39	2.38	No Att. Req.	0	
720	0.59	0.60	0.26	2.38	No Att. Req.	0	
1440	0.37	0.38	0.16	2.38	No Att. Req.	0	
2880	0.23	0.23	0.10	2.38	No Att. Req.	0	
4320	0.16	0.17	0.07	2.38	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 3,000 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	1.877	m3	Select largest storage as per analysis		
TANK HEIGHT, Htank	1.76	m	Concept sizing for 3,000 litre tank	PROMAX	3,000L WATER TANK - ENDURO
TANK DIAMETER, Dtank	1.6	m	No. of Tanks 1		
TANK AREA, Atank	2.01	m2	Area of ONE tank		
TANK MAX STORAGE VOLUME, Vtank	3539	litres			
REQUIRED STORAGE HEIGHT, Ddet	0.93	m	Below overflow		
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum		
TOTAL WATER DEPTH REQUIRED	1.08	m			
SELECTED TANK OUTFLOW, Qout, l/s	0.00238	m3/s	Selected tank outflow		
AVERAGE HYDRAULIC HEAD, Hhy	0.47	m			
AREA OF ORIFICE, Aorifice	1.27E-03	m2			
ORIFICE DIAMETER, Dorifice	40	mm			
VELOCITY AT ORIFICE	4.28	m/s	At max. head level		

Project Ref:	C0809N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	63 HONE HEKE ROAD, KERIKERI			
Design Case:	EX. DEV. (PRELIMINARY) - Lot 1		**20 % AEP STORM EVENT, TO PERMITTED ACTIVITY THRESHOLD**	
Date:	28 May 2026	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).
RUNOFF COEFFIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

PERMITTED ACTIVITY (PA) CATCHMENT PARAMETERS				**POST DEVELOPMENT CATCHMENT PARAMETERS**			
ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION	ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
PA THRESHOLD	363	0.96	PA = 50% OF SITE	TO TANK	257	0.96	ROOF
0	0	0		0	0	0	
PERVIOUS	0	0		OFFSET	97.4	0.96	RoW - SEALED
0	0	0		OFFSET	44.5	0.96	DRIVEWAY - SEALED
				OFFSET	110	0.96	POOL AREA'
TOTAL	**363**	TYPE D		**TOTAL**	**508.9**	TYPE D	

RAINFALL INTENSITY, 20% AEP, 10MIN DURATION

20 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	86.6	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.
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%	
20 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	103.9	mm/hr	

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

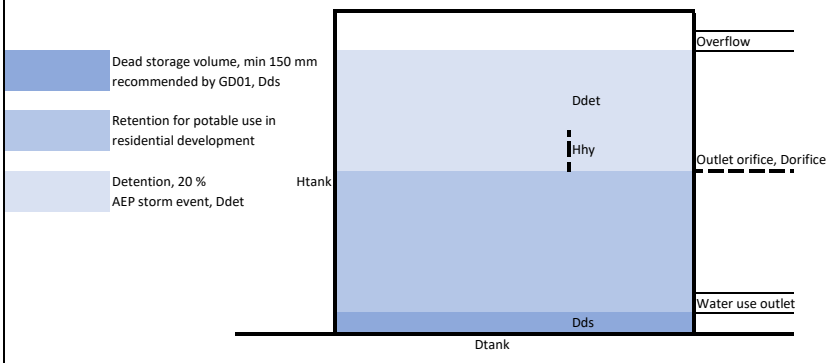
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PA RUNOFF, Qpa, l/s		COMMENTS
10	86.60	1.2	103.92	14.10	10.06		*Critical duration (time of concentration) for the catchments is 10min*
20	61.90	1.2	74.28	10.08	7.19		
30	51.00	1.2	61.20	8.31	5.92		
60	36.50	1.2	43.80	5.94	4.24		
120	25.80	1.2	30.96	4.20	3.00		
360	14.30	1.2	17.16	2.33	1.66		
720	9.51	1.2	11.41	1.55	1.10		
1440	6.06	1.2	7.27	0.99	0.70		
2880	3.68	1.2	4.42	0.60	0.43		
4320	2.68	1.2	3.22	0.44	0.31		

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	6.98	7.12	3.08	3.08	4.04	2,426	*select largest required storage , regardless of duration, to avoid overflow*
20	4.99	5.09	2.20	3.08	2.01	2,414	
30	4.11	4.19	1.81	3.08	1.12	2,008	
60	2.94	3.00	1.30	3.08	No Att. Req.	0	
120	2.08	2.12	0.92	3.08	No Att. Req.	0	
360	1.15	1.18	0.51	3.08	No Att. Req.	0	
720	0.77	0.78	0.34	3.08	No Att. Req.	0	
1440	0.49	0.50	0.22	3.08	No Att. Req.	0	
2880	0.30	0.30	0.13	3.08	No Att. Req.	0	
4320	0.22	0.22	0.10	3.08	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 3,000 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	2.426	m3	Select largest storage as per analysis	
TANK HEIGHT, Htank	1.76	m	Concept sizing for 3,000 litre tank	
TANK DIAMETER, Dtank	1.6	m	No. of Tanks	1
TANK AREA, Atank	2.01	m2	Area of ONE tank	
TANK MAX STORAGE VOLUME, Vtank	3539	litres		
REQUIRED STORAGE HEIGHT, Ddet	1.21	m	Below overflow	
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum	
TOTAL WATER DEPTH REQUIRED	1.36	m		
SELECTED TANK OUTFLOW, Qout, l/s	0.00308	m3/s	Selected tank outflow	
AVERAGE HYDRAULIC HEAD, Hhy	0.60	m		
AREA OF ORIFICE, Aorifice	1.44E-03	m2		
ORIFICE DIAMETER, Dorifice	43	mm		
VELOCITY AT ORIFICE	4.87	m/s	At max. head level	

Project Ref:	C0809N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	63 HONE HEKE ROAD, KERIKERI			
Design Case:	FUTURE DEV. - LOT 2 (CONCEPT)		**50 % AEP STORM EVENT, 80 % OF PRE DEVELOPMENT**	
Date:	5 May 2026	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
EX. PERVIOUS	170	0.67	OPEN SPACE
TOTAL	**170**	TYPE D	

POST DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
TO TANK	120	0.96	ROOF
OFFSET	50	0.96	DRIVEWAY / PARKING / TURNING
PERVIOUS			
EX. CONSENTED			
TOTAL	**170**	TYPE D	

RAINFALL INTENSITY, 50% AEP, 10MIN DURATION

50 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	67.0	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
50 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	80.40	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

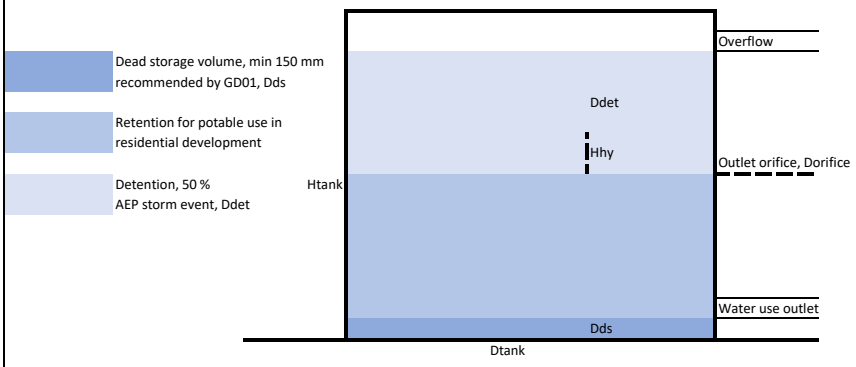
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PRE DEV RUNOFF, Qpre, l/s	80% of PRE DEV RUNOFF, Qpre(80%), l/s	COMMENTS
10	67.00	1.2	80.40	3.64	2.12	1.70	*Critical duration (time of concentration) for the catchments is 10min*
20	47.90	1.2	57.48	2.61	1.52	1.21	
30	39.40	1.2	47.28	2.14	1.25	1.00	
60	28.10	1.2	33.72	1.53	0.89	0.71	
120	19.90	1.2	23.88	1.08	0.63	0.50	*Pre-dev calculated on Intensity without CC factor*
360	11.00	1.2	13.20	0.60	0.35	0.28	
720	7.27	1.2	8.72	0.40	0.23	0.18	
1440	4.62	1.2	5.54	0.25	0.15	0.12	
2880	2.80	1.2	3.36	0.15	0.09	0.07	
4320	2.04	1.2	2.45	0.11	0.06	0.05	

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	1.07	2.57	0.62	0.62	1.95	1,169	*select largest required storage , regardless of duration, to avoid overflow*
20	0.77	1.84	0.45	0.62	1.22	1,459	
30	0.63	1.51	0.37	0.62	0.89	1,600	
60	0.45	1.08	0.26	0.62	0.46	1,639	
120	0.32	0.76	0.19	0.62	0.14	1,010	
360	0.18	0.42	0.10	0.62	No Att. Req.	0	
720	0.12	0.28	0.07	0.62	No Att. Req.	0	
1440	0.07	0.18	0.04	0.62	No Att. Req.	0	
2880	0.04	0.11	0.03	0.62	No Att. Req.	0	
4320	0.03	0.08	0.02	0.62	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 2,500 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	1.639	m3	Select largest storage as per analysis			
TANK HEIGHT, Htank	1.24	m	Concept sizing for 2,500 litre tank			
TANK DIAMETER, Dtank	1.85	m	No. of Tanks	1	PROMAX	*2,500L Water Tank - XPRESS*
TANK AREA, Atank	2.69	m2	Area of one tank			
TANK MAX STORAGE VOLUME, Vtank	3333	litres				
REQUIRED STORAGE HEIGHT, Ddet	0.61	m	Below overflow			
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum			
TOTAL WATER DEPTH REQUIRED	0.76	m				
SELECTED TANK OUTFLOW, Qout, l/s	0.00062	m3/s	Selected tank outflow			
AVERAGE HYDRAULIC HEAD, Hhy	0.30	m				
AREA OF ORIFICE, Aorifice	4.11E-04	m2				
ORIFICE DIAMETER, Dorifice	23	mm				
VELOCITY AT ORIFICE	3.46	m/s	At max. head level			

Project Ref:	C0809N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	63 HONE HEKE ROAD, KERIKERI			
Design Case:	FUTURE DEV. - LOT 2 (CONCEPT)		**20 % AEP STORM EVENT, 80 % OF PRE DEVELOPMENT**	
Date:	5 May 2026	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
0	0	0	
0	0	0	
0	0	0	OPEN SPACE
EX. PERVIOUS	170	0.67	
TOTAL	**170**	TYPE D	

POST DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
TO TANK	120	0.96	ROOF
OFFSET	50	0.96	DRIVEWAY / PARKING / TURNING
PERVIOUS	0	0	
EX. CONSENTED	0	0	
0	0	0	
TOTAL	**170**	TYPE D	

RAINFALL INTENSITY, 20% AEP, 10MIN DURATION

20 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	86.6	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
20 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	103.9	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

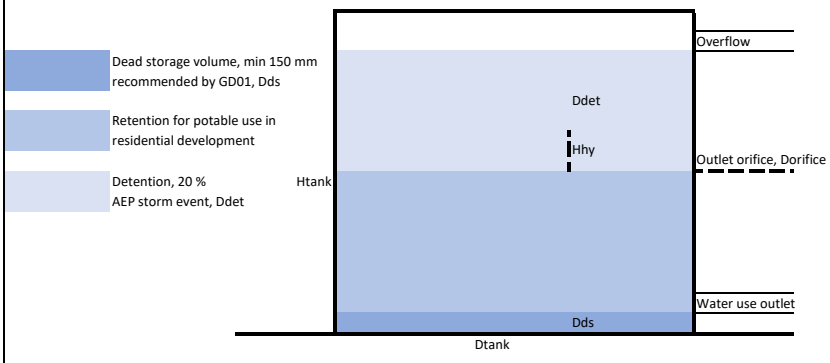
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PRE DEV RUNOFF, Qpre, l/s	80% of PRE DEV RUNOFF, Qpre(80%), l/s	COMMENTS
10	86.60	1.2	103.92	4.71	2.74	2.19	*Critical duration (time of concentration) for the catchments is 10min*
20	61.90	1.2	74.28	3.37	1.96	1.57	
30	51.00	1.2	61.20	2.77	1.61	1.29	
60	36.50	1.2	43.80	1.99	1.15	0.92	
120	25.80	1.2	30.96	1.40	0.82	0.65	
360	14.30	1.2	17.16	0.78	0.45	0.36	
720	9.51	1.2	11.41	0.52	0.30	0.24	
1440	6.06	1.2	7.27	0.33	0.19	0.15	
2880	3.68	1.2	4.42	0.20	0.12	0.09	
4320	2.68	1.2	3.22	0.15	0.08	0.07	

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	1.39	3.33	0.81	0.81	2.52	1,511	*select largest required storage , regardless of duration, to avoid overflow*
20	0.99	2.38	0.97	0.81	1.57	1,885	
30	0.82	1.96	0.80	0.81	1.15	2,074	
60	0.58	1.40	0.57	0.81	0.60	2,143	
120	0.41	0.99	0.40	0.81	0.18	1,328	
360	0.23	0.55	0.22	0.81	No Att. Req.	0	
720	0.15	0.37	0.15	0.81	No Att. Req.	0	
1440	0.10	0.23	0.09	0.81	No Att. Req.	0	
2880	0.06	0.14	0.06	0.81	No Att. Req.	0	
4320	0.04	0.10	0.04	0.81	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 2,500 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	2.143	m3	Select largest storage as per analysis	
TANK HEIGHT, Htank	1.24	m	Concept sizing for 2,500 litre tank	
TANK DIAMETER, Dtank	1.85	m	No. of Tanks	1
TANK AREA, Atank	2.69	m2	Area of one tank	
TANK MAX STORAGE VOLUME, Vtank	3333	litres		
REQUIRED STORAGE HEIGHT, Ddet	0.80	m	Below overflow	
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum	
TOTAL WATER DEPTH REQUIRED	0.95	m		
SELECTED TANK OUTFLOW, Qout, l/s	0.00081	m3/s	Selected tank outflow	
AVERAGE HYDRAULIC HEAD, Hhy	0.40	m		
AREA OF ORIFICE, Aorifice	4.65E-04	m2		
ORIFICE DIAMETER, Dorifice	24	mm		
VELOCITY AT ORIFICE	3.95	m/s	At max. head level	

Project Ref:	C0809N		**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	63 HONE HEKE ROAD, KERIKERI			
Design Case:	FUTURE DEV. - LOT 3 (CONCEPT)		**50 % AEP STORM EVENT, 80 % OF PRE DEVELOPMENT**	
Date:	5 May 2026	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
ROW D	23	0.96	EX. DRIVEWAY
EX. PERVIOUS	146	0.67	OPEN SPACE
TOTAL	**169**	TYPE D	

POST DEVELOPMENT CATCHMENT PARAMETERS

ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
TO TANK	100	0.96	ROOF
OFFSET	25	0.96	DRIVEWAY
OFFSET	44	0.96	ROW B
TOTAL	**169**	TYPE D	

RAINFALL INTENSITY, 50% AEP, 10MIN DURATION

50 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	67.0	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
50 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	80.40	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

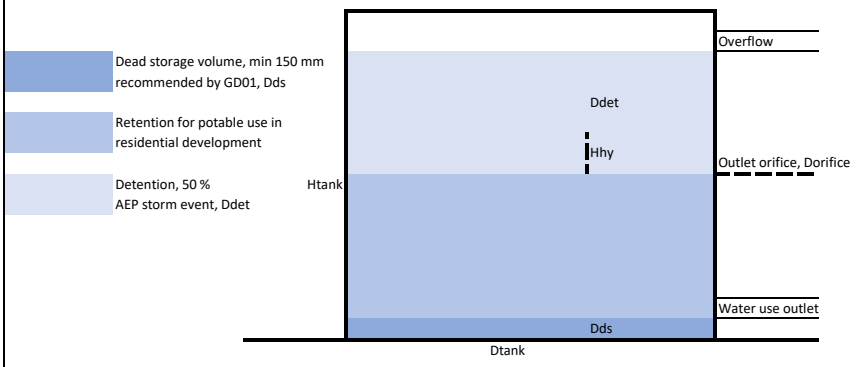
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PRE DEV RUNOFF, Qpre, l/s	80% of PRE DEV RUNOFF, Qpre(80%), l/s	COMMENTS
10	67.00	1.2	80.40	3.62	2.23	1.79	*Critical duration (time of concentration) for the catchments is 10min*
20	47.90	1.2	57.48	2.59	1.60	1.28	
30	39.40	1.2	47.28	2.13	1.31	1.05	
60	28.10	1.2	33.72	1.52	0.94	0.75	
120	19.90	1.2	23.88	1.08	0.66	0.53	*Pre-dev calculated on Intensity without CC factor*
360	11.00	1.2	13.20	0.59	0.37	0.29	
720	7.27	1.2	8.72	0.39	0.24	0.19	
1440	4.62	1.2	5.54	0.25	0.15	0.12	
2880	2.80	1.2	3.36	0.15	0.09	0.07	
4320	2.04	1.2	2.45	0.11	0.07	0.05	

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	1.48	2.14	0.31	0.31	1.84	1,103	*select largest required storage , regardless of duration, to avoid overflow*
20	1.06	1.53	0.22	0.31	1.23	1,472	
30	0.87	1.26	0.18	0.31	0.95	1,719	
60	0.62	0.90	0.13	0.31	0.59	2,136	
120	0.44	0.64	0.09	0.31	0.33	2,383	
360	0.24	0.35	0.05	0.31	0.05	998	
720	0.16	0.23	0.03	0.31	No Att. Req.	0	
1440	0.10	0.15	0.02	0.31	No Att. Req.	0	
2880	0.06	0.09	0.01	0.31	No Att. Req.	0	
4320	0.05	0.07	0.01	0.31	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 3,500 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	2.383	m3	Select largest storage as per analysis		
TANK HEIGHT, Htank	1.704	m	Concept sizing for 3,500 litre tank	PROMAX	*3,500L Water Tank - XPRESS*
TANK DIAMETER, Dtank	1.85	m	No. of Tanks 1		
TANK AREA, Atank	2.69	m2	Area of ONE tank		
TANK MAX STORAGE VOLUME, Vtank	4580	litres			
REQUIRED STORAGE HEIGHT, Ddet	0.89	m	Below overflow		
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum		
TOTAL WATER DEPTH REQUIRED	1.04	m			
SELECTED TANK OUTFLOW, Qout, l/s	0.00031	m3/s	Selected tank outflow		
AVERAGE HYDRAULIC HEAD, Hhy	0.44	m			
AREA OF ORIFICE, Aorifice	1.67E-04	m2			
ORIFICE DIAMETER, Dorifice	15	mm			
VELOCITY AT ORIFICE	4.17	m/s	At max. head level		

Project Ref:	C0809N	**STORMWATER ATTENUATION TANK DESIGN**	geologix consulting engineers
Project Address:	63 HONE HEKE ROAD, KERIKERI		
Design Case:	FUTURE DEV. - LOT 3 (CONCEPT)	**20 % AEP STORM EVENT, 80 % OF PRE DEVELOPMENT**	
Date:	5 May 2026 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				**POST DEVELOPMENT CATCHMENT PARAMETERS**			
ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION	ITEM	AREA, A, m2	COEFFICIENT, C	DESCRIPTION
ROW D	23	0.96	EX. DRIVEWAY	TO TANK	100	0.96	ROOF
0	0	0		OFFSET	25	0.96	DRIVEWAY
0	0	0	OPEN SPACE	OFFSET	44	0.96	ROW B
EX. PERVIOUS	146	0.67		0	0	0	
				0	0	0	
TOTAL	**169**	TYPE D		**TOTAL**	**169**	TYPE D	

RAINFALL INTENSITY, 20% AEP, 10MIN DURATION

20 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	86.6	mm/hr
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%
20 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	103.9	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

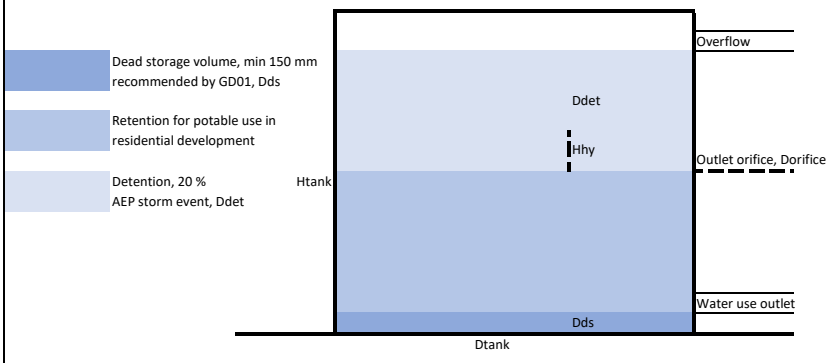
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Qpost, l/s	PRE DEV RUNOFF, Qpre, l/s	80% of PRE DEV RUNOFF, Qpre(80%), l/s	COMMENTS
10	86.60	1.2	103.92	4.68	2.88	2.31	*Critical duration (time of concentration) for the catchments is 10min*
20	61.90	1.2	74.28	3.35	2.06	1.65	
30	51.00	1.2	61.20	2.76	1.70	1.36	
60	36.50	1.2	43.80	1.97	1.22	0.97	
120	25.80	1.2	30.96	1.40	0.86	0.69	
360	14.30	1.2	17.16	0.77	0.48	0.38	
720	9.51	1.2	11.41	0.51	0.32	0.25	
1440	6.06	1.2	7.27	0.33	0.20	0.16	
2880	3.68	1.2	4.42	0.20	0.12	0.10	
4320	2.68	1.2	3.22	0.14	0.09	0.07	

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	1.91	2.77	0.40	0.40	2.38	1,426	*select largest required storage , regardless of duration, to avoid overflow*
20	1.37	1.98	0.69	0.40	1.59	1,903	
30	1.13	1.63	0.57	0.40	1.24	2,226	
60	0.81	1.17	0.41	0.40	0.77	2,782	
120	0.57	0.83	0.29	0.40	0.43	3,098	
360	0.32	0.46	0.16	0.40	0.06	1,346	
720	0.21	0.30	0.11	0.40	No Att. Req.	0	
1440	0.13	0.19	0.07	0.40	No Att. Req.	0	
2880	0.08	0.12	0.04	0.40	No Att. Req.	0	
4320	0.06	0.09	0.03	0.40	No Att. Req.	0	

ATTENUATION TANK DESIGN OUTPUT

Concept sizing for 3,500 litre tank



SPECIFICATION

TOTAL STORAGE REQUIRED	3.098	m3	Select largest storage as per analysis	
TANK HEIGHT, Htank	1.704	m	Concept sizing for 3,500 litre tank	
TANK DIAMETER, Dtank	1.85	m	No. of Tanks	1
TANK AREA, Atank	2.69	m2	Area of ONE tank	
TANK MAX STORAGE VOLUME, Vtank	4580	litres		
REQUIRED STORAGE HEIGHT, Ddet	1.15	m	Below overflow	
DEAD STORAGE VOLUME, Dds	0.15	m	GD01 recommended minimum	
TOTAL WATER DEPTH REQUIRED	1.30	m		
SELECTED TANK OUTFLOW, Qout, l/s	0.00040	m3/s	Selected tank outflow	
AVERAGE HYDRAULIC HEAD, Hhy	0.58	m		
AREA OF ORIFICE, Aorifice	1.90E-04	m2		
ORIFICE DIAMETER, Dorifice	16	mm		
VELOCITY AT ORIFICE	4.76	m/s	At max. head level	

HIRDS V4 Intensity-Duration-Frequency Results
Sitename: Kerikeri
Coordinate system: WGS84
Longitude: 173.9444
Latitude: -35.2347
DDF Model

Parameters:	c	d	e	f	g	h	i
Values:	0.00256798	0.50763937	-0.01105148	-0.00410847	0.25242082	-0.01180199	3.24530548

Example:	Duration (hrs)	ARI (yrs)	x	y	Rainfall Rate (mm/hr)
	24	100	3.17805383	4.600149227	10.87026415

Rainfall intensities (mm/hr) :: Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	61.3	43.7	35.9	25.7	18.1	10	6.62	4.21	2.55	1.85	1.46	1.2
2	0.5	67	47.9	39.4	28.1	19.9	11	7.27	4.62	2.8	2.04	1.6	1.32
5	0.2	86.6	61.9	51	36.5	25.8	14.3	9.51	6.06	3.68	2.68	2.11	1.74
10	0.1	101	72.3	59.6	42.7	30.3	16.8	11.2	7.13	4.33	3.16	2.49	2.05
20	0.05	115	82.7	68.2	49	34.8	19.4	12.9	8.22	5.01	3.65	2.88	2.38
30	0.033	124	88.9	73.4	52.7	37.4	20.9	13.9	8.88	5.41	3.94	3.11	2.57
40	0.025	130	93.4	77.1	55.4	39.3	22	14.6	9.35	5.7	4.16	3.28	2.71
50	0.02	135	96.8	79.9	57.4	40.8	22.8	15.2	9.72	5.93	4.32	3.41	2.82
60	0.017	139	99.6	82.2	59.1	42.1	23.5	15.7	10	6.11	4.46	3.52	2.91
80	0.013	145	104	85.9	61.8	44	24.6	16.4	10.5	6.41	4.68	3.69	3.05
100	0.01	149	107	88.8	63.9	45.5	25.4	17	10.9	6.64	4.85	3.83	3.16
250	0.004	168	121	100	72.2	51.5	28.9	19.3	12.4	7.57	5.53	4.37	3.62

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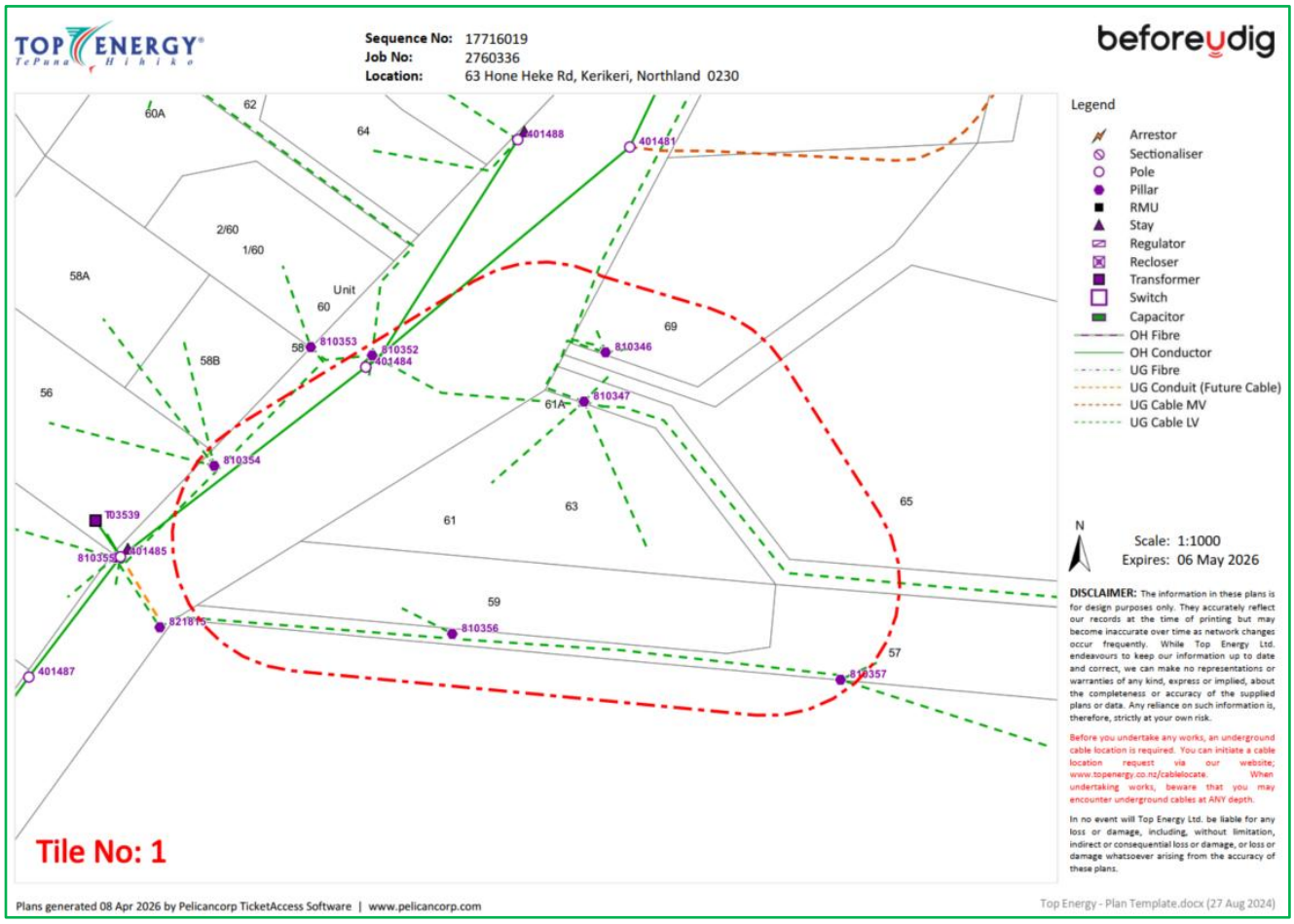
APPENDIX D

Beforeudig Plans


TOP ENERGY
Te Puna Hihiko
Sequence No: 17716019
Job No: 2760336
Location: 63 Hone Heke Rd, Kerikeri, Northland 0230
beforeudig
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: 06 May 2026
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Tile No: 1
Plans generated 08 Apr 2026 by Pelicancorp TicketAccess Software | www.pelicancorp.com
Top Energy - Plan Template.docx (27 Aug 2024)
60A
62
64
401488
401481
2/60
1/60
58A
Unit
60
58
810353
810352
401484
58B
56
69
810346
61A
810347
810354
T03539
401485
810355
61
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65
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821815
810356
57
810357
401487

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APPENDIX E

NPS for Natural Hazards Risk Assessment

To satisfy the National Policy Statement for Natural Hazards 2025 (December 2025), the proposed subdivision must plan for and manage the risk from natural hazards to reduce the potential adverse effects to less than minor.

Following our site investigation and considering the measures presented in this report, a summary of the risk-based assessment of defined natural hazards is presented as Table 9.

Table 9: Summary of Natural Hazards Risk Assessment

Natural Hazard	Likelihood	Consequence	Risk	Mitigation / Considerations
Overland flow paths	Unlikely at the site	Minor	Low	On-site mitigations: Standard drainage measures to be applied for buildings. Downstream effect mitigation: attenuation offered for Lot 1 to 50% permitted activity threshold and Lots 2 and 3 to 80% pre-development for future development.
Flooding (River), inundation	Unlikely at the site but downstream flood risk exists	Negligible	Low	On-site mitigations: None; buildings and their surrounding external use area are elevated above hazard. Downstream effect mitigation: attenuation offered for Lot 1 to 50% permitted activity threshold and Lots 2 and 3 to 80% pre-development for future development.
Coastal Inundation	Very Rare (> 200m away, unlikely to encroach onto site property)	Negligible	Low	No effect at the site. Safe egress paths are available.
Tsunami	Possible	Negligible	Low	No effect at the site. Safe egress paths are available. All lots in Green Zone – Safe Area.

		Likelihood Level						
		Almost Certain	Very Likely	Likely	Possible	Unlikely	Rare	Very Rare
	ARI (years)	up to 10	10-20	20-50	50-100	100-500	500-5000	> 5000
	AEP	10% or more	10% to 5%	5% to 2%	2% to 1%	1% to 0.2%	0.2% to 0.02%	< 0.02%
Consequence Level	Catastrophic	Very High	Very High	Very High	High	Medium	Medium	Medium
	Major	Very High	Very High	High	High	Medium	Medium	Medium
	Moderate	High	High	High	Medium	Medium	Low	Low
	Minor	Medium	Medium	Medium	Medium	Low	Low	Low
	Negligible	Low	Low	Low	Low	Low	Low	Low