



**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\*
- Subdivision
- Discharge
- Extension of time (s.125)
- Change of conditions (s.127)
- Change of Consent Notice (s.221(3))
- Consent under National Environmental Standard (e.g. Assessing and Managing Contaminants in Soil)
- Other (please specify) Cancellation of easements under s243e RMA 1991.

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

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

**Yes / No**

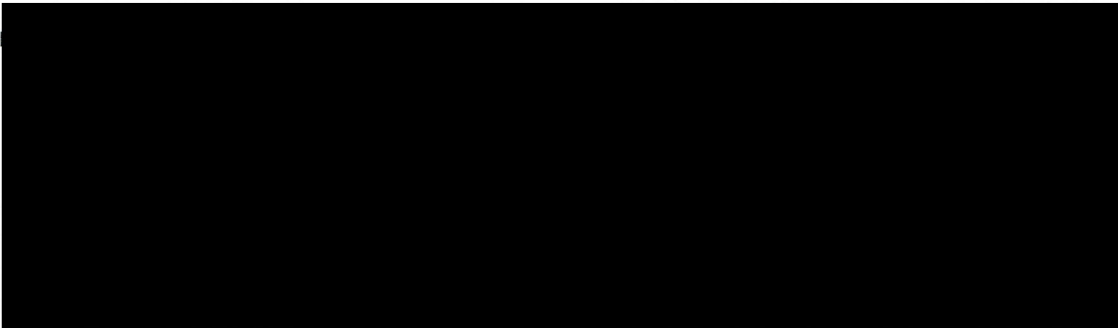
**4. Applicant Details:**

Name/s: Susan Nicole Wiltshire

Electronic Address for Service (E-mail):

Phone Numbers:

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



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

Name/s: Wendy Wickens

Electronic Address for Service (E-mail):

Phone Numbers:

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



Post Code:

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

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

Name/s: Susan Nicole Wiltshire  
\_\_\_\_\_  
\_\_\_\_\_  
Property Address/: 79 Newton Road  
Location: Omapare  
\_\_\_\_\_  
\_\_\_\_\_

**7. Application Site Details:**

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

Site Address/ Location: See 6 above  
\_\_\_\_\_  
\_\_\_\_\_

Legal Description: Lot 2 DP 100455 Val Number: 000619-42506  
Certificate of Title: NA137D/1

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?

Is there a dog on the property?

Yes /  No  
 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.**

All farm gates have coded locks.

Dogs are domestic and contained in house on Lot 4.

**8. Description of the Proposal:**

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

See Separate Report  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

**9. Would you like to request Public Notification**

Yes/No

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

- Building Consent (BC ref # if known)                       Regional Council Consent (ref # if known)
- National Environmental Standard consent                       Other (please specify)

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

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

Is the piece of land currently being used or has it historically ever been used for an activity or industry on the Hazardous Industries and Activities List (HAIL)  yes  no  don't know

Is the proposed activity an activity covered by the NES? (If the activity is any of the activities listed below, then you need to tick the 'yes' circle).  yes  no  don't know

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

**12. Assessment of Environmental Effects:**

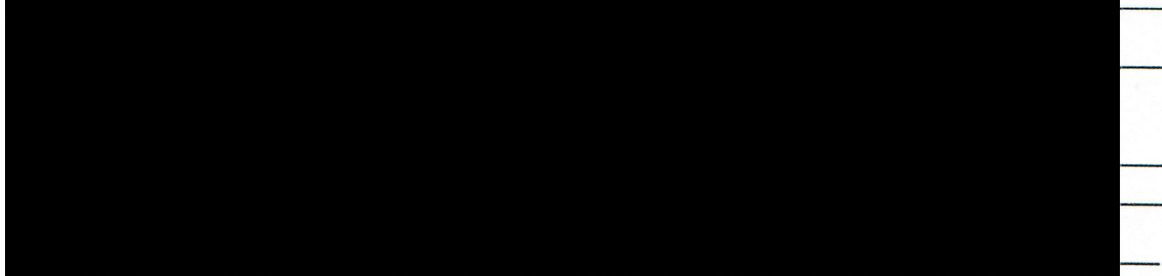
*Every application for resource consent must be accompanied by an Assessment of Environmental Effects (AEE). This is a requirement of Schedule 4 of the Resource Management Act 1991 and an application can be rejected if an adequate AEE is not provided. The information in an AEE must be specified in sufficient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

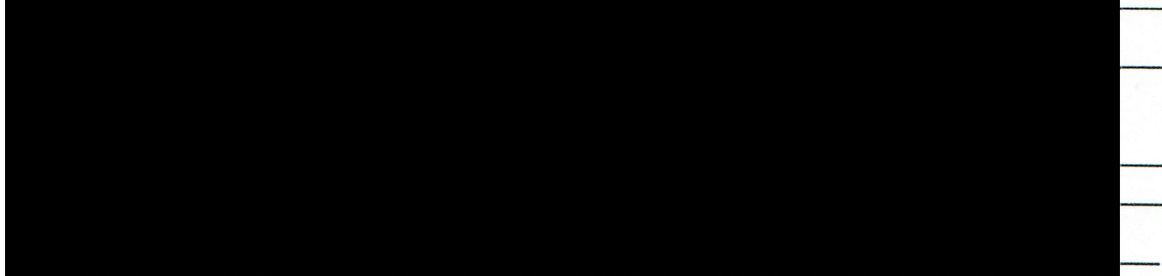
**Please attach your AEE to this application.**

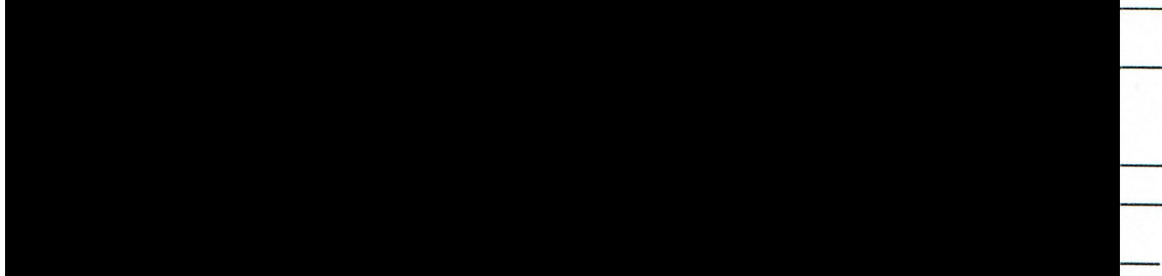
**13. Billing Details:**

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

Name/s: (please write all names in full)                      Susan Nicole Wiltshire

Email: 


Postal Address: 

Phone Numbers: 

**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 20<sup>th</sup> 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: Susan Nicole Wiltshire (please print)

Signature:  (signature of bill payer – mandatory)                      Date: 4/10/2024

## 14. Important Information:

### Note to applicant

You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.

You may apply for 2 or more resource consents that are needed for the same activity on the same form.

You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

### Fast-track application

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

### Privacy Information:

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

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

Name: Wendy Wickens (please print)

Signature: \_\_\_\_\_ (signature)

Date: 3/10/2024

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

### Checklist (please tick if information is provided)

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

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

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

**UNBOUND**

**SINGLE SIDED**

**NO LARGER THAN A3 in SIZE**

**PROPOSED SUBDIVISION  
& S243e Cancellation of Easement**

**Susan Wiltshire**

**79 Newton Road, Omapere**

**PLANNING REPORT &  
ASSESSMENT OF ENVIRONMENTAL EFFECTS  
to Far North District Council**



**Sapphire Surveyors Ltd**  
Surveyors and Land Development Specialists  
PO Box 318, Mangonui 0442  
Phone (09) 406-0001  
Email: [wendy@sapphiresurveyors.co.nz](mailto:wendy@sapphiresurveyors.co.nz)



# 1. Summary

Applicant:	Susan Nicole Wiltshire
Location:	79 Newton Road, Omapere
Consent for:	Subdivision and Section 243e Cancellation of Easement
Legal Description:	RT NA137D/1– Lot 2 DP 100455
Zone:	Rural Production (ODP) Rural Production (PDP)
Resources/Overlays:	None (ODP) Coastal Environment, High Natural Character (Ref 625) (PDP)
Activity Status:	Restricted Discretionary activity (ODP) Controlled activity (PDP)
Consultation:	Chorus NZ Top Energy NZTA
Supporting Reports:	Archaeological Assessment Site Suitability Report
Pre-lodgment Discussions:	None
Other Resource Consents:	None required
Address for Service:	Wendy Wickens Sapphire Surveyors Ltd PO Box 318 Mangonui 0442 Ph. 09-406-0001 wendy@sapphiresurveyors.co.nz

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*This assessment accompanies the Resource Consent Application made by our clients, and is provided in accordance with Section 88 of the Resource Management Act 1991.*

*It is intended to provide the necessary information for an understanding of the proposal and any actual or potential effects the proposed activity may have on the environment.*

## 2. Overview of Proposal

### 2.1 Purpose of the Proposal

The purpose of the proposal is to subdivide off three 2ha blocks off the Newton Road side of the property to provide titles for family members to build on. The remaining land (some 44 ha) will be retained by the owners who will continue to reside on it and use it for farming.

See Scheme Plan in **Appendix 1**. All areas and dimensions are subject to final survey.

### 2.2 Activity Status

#### **FNDC Operative District Plan**

Subdivision:

Restricted Discretionary Activity in accordance with Rule 13.8.1(c) as the title exists as of 28 April 2000 and meets the specified number and minimum area of allotments.

#### **FNDC Proposed District Plan**

Whilst the relevant rules of the Proposed District Plan (“PDP”) do not yet have legal effect, we note for completeness, the application for subdivision constitutes a Controlled activity under the PDP.

**Overall**, the proposal is classified as a restricted discretionary activity.

The main issues of application are related to engineering and archaeology, which have been addressed in attached reports.

### 2.3 Encumbrances on Titles

The existing title includes:

- A. an encumbrance to the Hokianga County Council which includes an engineering report addressing engineering issues on the site.
- B. Easements for ROW and water supply which will be retained by Lot 4 but relinquished by Lots 1-3 (hence s243e application).
- C. Gazette Notice and s91 TNZ Act notice due to the adjacent State Highway.

# 3. Site Description

## 3.1 Location & Site History

The application site is located on the northern side of Newton Road, some 400 metres from the intersection with State Highway 12. See Figure 1 (below).

The site has road frontage to Newton Road (metalled) and State Highway 12 (to the northwest) via a Right of Way easement over adjacent land.

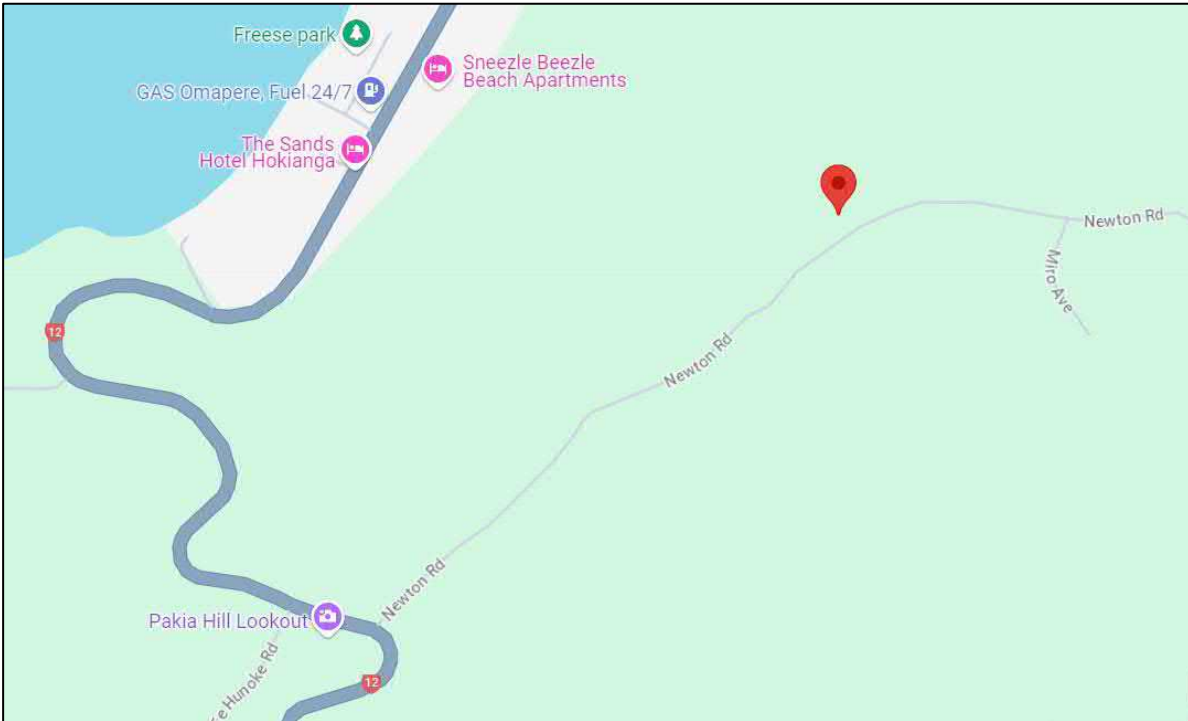


Figure 1: Location Map

The subject site has building consents issued by the FNDC for the existing dwellings.

## 3.2 Legal Description

<b>Title 1:</b>	Lot 2 DP 100455 RT NA137D/1 Issued 21 September 2001 Limited as to Parcels  <i>Please note that in relation to activity status under the ODP this title can be considered as issued in 1984. The prior title (NA54C/1406) is attached and shows that the current title was only issued due to the loss of the previous title.</i>
<b>Easements:</b>	B108447.2 provides for a right of way easement over the neighbouring Lot 1 DP 95527 to State Highway 12.



**Encumbrance:** B273257.7 requires a nominal rent to be paid to the Council and includes an engineering report relating to geotechnical issues on the site to be taken into consideration.

**State Highways:** The title is subject to the Transit NZ Act 1989 due to the adjoining State Highway (limited access road).

*There are no other relevant encumbrances. See **Appendix 2** for Records of Title (RTs) and relevant encumbrances.*

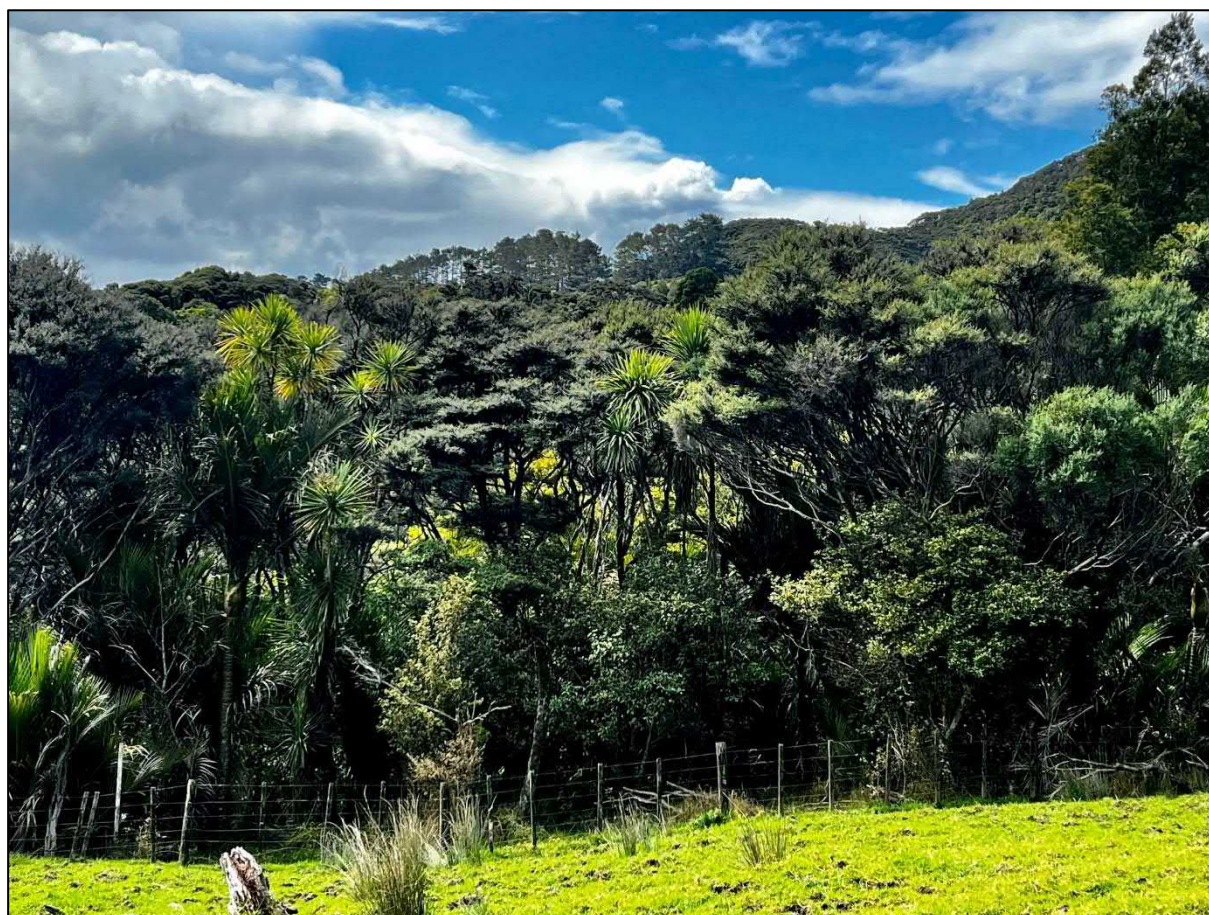
### 3.3 Existing Uses, Structures & Topography

**Dwellings:** Existing dwelling and associated buildings close to Newton Road.

**Other Buildings:** None.

**Topography** Steep in mainly pasture but with an area of bush near the stream that goes along the northern boundary and other various areas of trees, as outlined below.

There is a significant and dense stand of bush that is already fenced off to exclude stock, as shown in *Figure 2 below*. The area is labelled “Z” on the *Scheme Plan*.



**Figure 2: Covenanted Bush area**

There are three other areas of trees on the property:

- A. An area of trees south of Area Z that is contained in both the SNA and area of High Natural Character (PDP). It is separated from Area Z by a farm track.
- B. An area of trees that is not contained in the SNA but is in the area of High Natural Character (PDP).
- C. An area of trees that is not in either the SNA or area of High Natural Character (PDP).

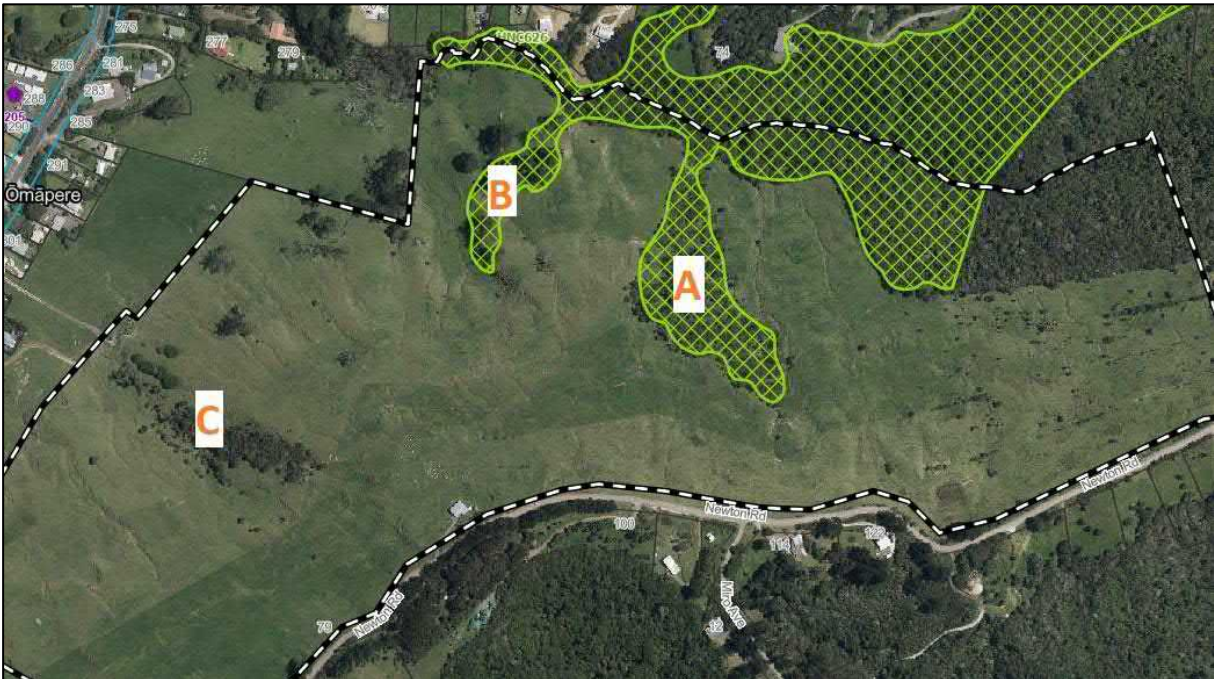


Figure 3: Areas of trees on the application site.

**Area A** does not constitute significant bush or high natural character being significantly different from Area Z which is lush, as you can see from *Figures 4 & 5* on the next page.

The area is exceptionally steep and slippery with a central area of approximately 1,000m<sup>2</sup> of trumpet lily, which needs spraying. Largely the area has fallen trees from storms past and is very scrub like. The area is sparse, steep, full of dead wood and weeds. It is impractical to fence, which is why it has never been done. Also, at the southern end the ground is too soft for the placement of fence posts.

Despite this area being contained in both the SNA and area of High Natural Character (PDP) overlays, it differs significantly from the main native bush area, provides shade for stock, consists mainly of manuka trees and weeds, and is completely impractical to fence. For these reasons it has been excluded from the proposed covenant area.



Figure 4: Middle of Area A looking from the east.



Figure 5: Southern end of Area A looking from the east.

**Area B** consist of some large wilding pines, as shown in *Figure 6 below*. The designation as “High Natural Character” seem to be incorrect and therefore this area has not been included in the covenant area. Again, the trees provide shade for stock and it would be pointless to fence them off.



**Figure 6:** Area B looking from the north.

**Area C** consists of flame trees and gum trees, as shown in *Figure 7 below*.



**Figure 7:** Area C looking west, with stockyards shown to the right.

### 3.4 Access

Roading:	Newton Road is metalled and in good condition. State Highway 12 is sealed.
Vehicle Crossings (VC):	The existing house has access off Newton Road via a metalled vehicle crossing. The ROW access to SH12 is metalled and used infrequently for stock trucks and will not be used by the proposed new lots for house access.

### 3.5 Services

Reticulated Water	No – water supply is from roof catchment and water tanks on the site. Farm water is sourced from further up Newton Road, via the water supply easements
Reticulated Wastewater:	No
Reticulated Stormwater:	No
Electricity:	Yes
Telecommunications:	Yes

### 3.6 Natural & Recorded Features

#### NATURAL RESOURCES:

Natural Resource Features (ODP):	None.
Protected Natural Areas <sup>1</sup> :	On the property: Waiotemarama Gorge Forest O06/013 <i>Area Z on Scheme Plan.</i> In the vicinity (500m): Waiwhatawhata Bush O0/014 Hokianga Harbour O05/152
Natural Environments Overlays (PDP)	High Natural Character.
Significant Natural Areas (PDP):	On the property: none. In the vicinity (500m): none.
Kiwi:	Present.

#### CULTURAL RESOURCES:

Cultural Resource Features (ODP):	None.
NZAA Registered Sites:	On the property: various.

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<sup>1</sup> Miller, N. & Holland, W. (2008): Natural areas of Tutamoe Ecological District Reconnaissance Survey Report for the Protected Natural Areas Programme. Department of Conservation Northland Conservancy, Whangarei, New Zealand.

	In the vicinity: various.
Historical & Cultural Values Overlays (PDP):	None.
<b>HAZARDS:</b>	
Coastal Hazards & Flooding (ODP):	None
NRC Natural Hazards:	River Flood Hazard Zone (10 Year extent) River Flood Hazard Zone (50 Year extent)
NRC Proposed Regional Plan:	No Erosion Prone Land
Natural Hazards and Risks Overlays (PDP):	River Flood Hazard Zone (100 Year ARI Event) River Flood Hazard Zone (10 Year ARI Event)
<b>OTHER:</b>	
Versatile soils:	No – soils classes are 4e6 and 6e8.
Other Overlays/Designations (PDP):	Coastal Environment
Energy Infrastructure and Transport Overlays (PDP):	None
Coastal Environment (ODP/NRC RPS):	Yes

## 4. Details of Proposal & AEE

### 4.1 New Titles, Allotments & Boundaries

The subdivision creates three additional titles. The new boundary does not follow any topographical features, but existing services for Lot 4 are contained within the proposed new lot boundaries.

### 4.2 Wastewater Disposal

Lots 1-3:	Can accommodate compliant on-site wastewater disposal systems.
Lot 4:	Wastewater from the existing building is currently disposed of via a functioning wastewater disposal system contained within the new lot boundaries and meets the required offsets.

Refer to Section 5 of the *Site Suitability Report* prepared by Geologix Consulting Engineers Ltd in **Appendix 5**.

Overall, it is considered that the effects of the proposal resulting from the disposal of wastewater will be less than minor, and will not result in any significant off-site environmental effects or effects on water quality.

### 4.3 Stormwater Disposal

Stormwater can be attenuated and dispersed in accordance with Section 6 of the *Site Suitability Report*.

This involves the use of standard water tanks with dispersion devices for stormwater detention. These tanks will also allow Consent Notices to be placed on the titles of Lots 1-3 relating to firefighting supply requirements for future buildings.

Overall, it is considered that the effect of the proposal resulting from the disposal of stormwater will be less than minor, and will not result in any significant off-site environmental effects or effects on water quality.

### 4.4 Earthworks

Minimal earthworks are required to form/upgrade vehicle crossings.

Recommendations for subdivision works and future earthworks are in Section 8 of the *Site Suitability Report*.

The effect of this work will be less than minor.

### 4.5 Water Supply

Rainwater tanks can be used on both lots to collect and store water from roof surfaces.

As already stated, standard Consent Notices may be placed on the titles of Lots 1-3 relating to firefighting supply requirements for future buildings. See Section 7 of the *Site Suitability Report*.

## 4.6 Hazards

The site is not known to be affected by any flooding or natural hazards, and there are no evident issues with slippage or erosion.

Section 9 of the *Site Suitability Report* provides an assessment of hazards present onsite (erosion, overland flow paths, flooding and inundation) which have been mitigated within the report.

No natural or other hazards will adversely affect any future development of either lot, and nor will the development exacerbate any natural hazards in the vicinity.

## 4.7 Traffic & Property Access

Additional Traffic Movements:	30
Lot 1-3 Access:	Individual vehicle crossings off Newton Road, with Lots 2 & 3 utilising a double entrance.
Lot 4 Access:	Existing vehicle crossing to be upgraded.
Existing Right of Way:	The existing ROW from SH12 is currently metalled. Given that there is no change of use, NZTA are satisfied that the vehicle crossing be sealed as part of the subdivision, to minimise stones transferring onto the sealed highway formation. See <b>Appendix 4</b> for NZTA comments.

While Newton Road is not up to Council standards, it would seem unreasonable to require any upgrades to the formation due to the number and quantity of recent subdivisions on Newton Road that have not required upgrades. Vegetation clearance is proposed around vehicle crossings to increase sight distances such that they will be compatible with the anticipated local speed environment.

*Refer to Section 10 of the Site Suitability Report.*

It is considered that the proposed subdivision provides safe and efficient vehicle access to each lot, and that the effects on the environment will be less than minor.

## 4.8 Power & Telecommunications

Lot 1-3:	Requires new power and telecommunications connections
Lot 4:	Connected to power and telecommunications.

As the subdivision is in the Rural Production zone in the ODP, power supply & telecommunications are not required to carry out the subdivision. However, Chorus and Top Energy have been consulted in the preparation of this consent application (*see Appendix 3*).

## 4.9 Heritage

Although the *Archaeological Assessment* in **Appendix 6** identifies the presence of recorded sites on the property, these are all clear of the proposed building platforms and any anticipated future works. As a consequence, the archaeological assessment recommends the standard Accidental Discovery Protocol Advice Note is applied to the resource consent decision, outlining the procedures to be followed should there be any archaeological find, or suspected find.



## 4.10 Ecology

Vegetation Clearance:	None required.
Kiwi:	As kiwi are present, an informative consent notice on the new titles may be appropriate to inform future owners of the need for responsible management of animals on the property that may present a danger to Kiwi. <i>There is no justification for any restrictions on cats and dogs.</i>
Protection of Areas of National Significance (Biodiversity):	It is proposed that the area of bush (shown as Area Z on the <i>Scheme Plan</i> ) within the SNA and part of the High Natural Character overlay (as shown in the PDP), be protected via a bush protection covenant by consent notice. <i>Please note that this area is already fenced to exclude stock.</i>

With the proposed consent notices, we consider the adverse effect on ecological values as less than minor.

## 4.11 Easements

Existing Easements:	There are no existing easements over the application site.
New Private Easements:	Right to supply water over Lots 2 & 3 hereon (Areas A & B) in favour of Lot 4 hereon for irrigation/stock supply.
New Easements in Gross:	No new easements in gross are required to carry out the subdivision.
Cancellation of Easements:	The existing ROW easement to SH12 is only required and practical for the Lot 4 farm. Therefore, we are requesting that Council consent to a cancellation of this ROW as it related to Lot 1-3 under section 243e of the RMA 1991.

## 4.12 Building Locations

Building platforms have been located clear of archaeological features and to accommodate a stable building area as well as stormwater dispersal and wastewater disposal.

## 4.13 Land Use Compatibility

The surrounding environment mainly consists of rural and rural residential allotments, some of which have been developed and others that are vacant. It is considered that the lots created by the proposal, and their anticipated rural residential use will be consistent with the existing pattern of subdivision and land uses present in the area. No incompatibility or reverse sensitivity issues are anticipated.

## **4.14 Visual Landscape, Character and Amenity**

The application site is located within a rural environment that contains a number of lifestyle / rural residential sites, with associated development including houses, accessory buildings, fencing, driveways and other infrastructure. The new lots can be developed in a way that is complementary to the existing landscape and settlement pattern in this area.

The site is in the Coastal area. Because the house sites are located close to Newton Road, they will be visually grouped with the other development along this road, providing less than minor effects on Coastal Character. Suitable paints, surfaces and planting can be required at the time of building consent to minimise the visual effects. These are well set out in the PDP so no consent notice would be required.

The site is subject to a High Natural Character overlay in the area of the SNA. Covenanting by consent notice of this area will retain the character of this area.

Overall, it is considered that the visual effects of the proposal, including effects on landscape, natural character, coastal character and amenity values, will be less than minor.

## **4.15 Positive Effects**

The proposal allows for people to provide for their economic and social wellbeing. The primary purpose of the subdivision is to provide house lots for family, including a daughter who requires medical care by family.

The proposal allows the applicants' property to continue to be utilised for small scale livestock grazing.

## **4.16 Summary of Environmental Effects**

As discussed in Sections 4.1 – 4.15 above, the actual and potential adverse effects of the proposal have been minimised by the use of consent notices and covenants and through good engineering design clear of archaeological features.

Overall, the adverse effects of the proposal are less than minor.

# 5. Activity Status

## 5.1 FNDC Operative District Plan (ODP)

### 5.1.1 Zone & Resources

The application site is zoned **Rural Production** and is not subject to any Resource Features in the Operative District Plan.

### 5.1.2 Subdivision

**Table 13.7.2.1** sets out minimum area requirements for subdivisions in the Rural Production Zone. As the original title for the site was issued in 1984, the application is a **restricted discretionary** activity according to this table, as shown here:

#### **RESTRICTED DISCRETIONARY ACTIVITY**

*4. A maximum of 5 lots in a subdivision (including the parent lot) where the minimum size of the lots is 2ha, and where the subdivision is created from a site that existed at or prior to 28 April 2000.*

Rule	Comment
13.6.2 Relevant Sections of Act	Sections of the RMA relevant to this proposal are discussed in Sections 6.6-10 of this report.
13.6.3 Relevant Sections of the District Plan	Other relevant chapters of the District Plan are discussed below in Sections 5.1.3-5.
13.6.4 Other Legislation	Other relevant legislation is discussed in Section 6.4&5.
13.6.5 Legal Road Frontage	All new allotments will be provided with frontage to a legal road.
13.6.7 Consent Notices	In addition to the standard consent notices, we propose the addition of consent notices in relation to engineering matters and bush protection.
13.6.8 Subdivision Consent before Work Commences	Earthworks and Vegetation clearance required as part of the subdivision is well below permitted levels.
13.7.2.2 Allotment Dimensions	A shape factor of 30m by 30m that does not encroach into the permitted activity setbacks for the Rural Production Zone (10 metres) can be accommodated by each proposed allotment (see Scheme Plan), notwithstanding the location of the existing buildings.
13.7.2.8 Proximity to Top Energy Transmission Lines & 13.7.2.9 Proximity to the National Grid	N/A – there are no Top Energy Transmission lines (of 110kV or more) or National Grid transmission lines in the vicinity.
13.7.3.1 to 13.7.3.12	The application must make provision (where relevant) for these matters, and these matters are applicable to Council's consideration of this proposal. Where relevant, have been addressed in Section 4 of this report.

The following criteria (from **Rule 13.8.1**) are applicable to Council’s consideration of this proposal:

*In considering whether or not to grant consent on applications for restricted discretionary subdivision activities, the Council will restrict the exercise of its discretion to the following matters:*

*(ii) for applications under 13.8.1(b) or (c):*

- *effects on the natural character of the coastal environment for proposed lots which are in the coastal environment;*
- *effects of the subdivision under (b) and (c) above within 500m of land administered by the Department of Conservation upon the ability of the Department to manage and administer its land;*
- *effects on areas of significant indigenous flora and significant habitats of indigenous fauna;*
- *the mitigation of fire hazards for health and safety of residents.*

*In considering whether or not to impose conditions on applications for restricted discretionary subdivision activities the Council will restrict the exercise of its discretion to the following matters:*

*(1) the matters listed in 13.7.3;*

*(2) the matters listed in (i) and (ii) above.*

These matters, where relevant, are addressed in Section 4 of this report. The site is not within 500m of any DOC land, but it is coastal.

### 5.1.3 Rural Production Zone

Lots 4 is are already developed in a manner generally consistent with the permitted standards of the zone.

All proposed lots are currently vacant and can be developed consistent with the permitted standards of the zone.

### 5.1.4 Natural and physical resources

Relevant sections of Chapter 12 [Natural and Physical Resources] have been considered.

Section	Comment
12.1 Landscapes & Natural Features	N/A – The site does not contain an outstanding landscape feature.
12.2 Indigenous Flora and Fauna	N/A – No indigenous vegetation clearance is required.
12.3 Soils and Minerals	Can be complied with, as the volume and depth of any earthworks required to upgrade entrances will be within the permitted activity limits.
12.4 Natural Hazards	N/A – The site is not identified as a Coastal Hazard.
12.5 Heritage	N/A – The site contains no heritage features.
12.7 Lakes, Rivers, Wetlands and the Coastline	Omapere Stream is under 1m wide adjacent to the property. Any required offsets will be achieved by the bush covenant area, and no development is proposed in the vicinity.

Therefore, the proposal complies with the permitted rules of Chapter 12.

### 5.1.5 Transportation

An assessment of the proposed vehicle crossings is in *Section 10.3 of the Site Suitability Report*.

Rule	Performance
15.1.6A Traffic	All lots will contain standard residential units and will theoretically generate 10 daily one-way vehicle movements, which will comply with the permitted activity standards.
15.1.6B Parking	The lots are of sufficient size and proportions to accommodate the required parking and maneuvering at building consent stage.
15.1.6C.1.1 Private Accessway in All Zones	N/A – no private accessways.
15.1.6C.1.3 Passing Bays on Private Accessways in All Zones	N/A – no private accessways.
15.1.6C.1.4 Access over Footpaths	N/A – there is no vehicle access over footpaths.
15.1.6C.1.5 Vehicle Crossing Standards in Rural & Coastal Zones	<p>a) Vehicle crossings (VCs) can be constructed in accordance with the Council <i>Engineering Standards &amp; Guidelines</i>.</p> <p>b) Access for Lots 1-4 is not off a sealed road. The VC for the easement access to SH12 is to be sealed as part of the subdivision.</p> <p>c) The combined VC for Lots 2 &amp; 3 can be constructed 6m wide and at least 6m from the edge of the carriageway on Newton Rd.</p>
15.1.6C.1.7 General Access Standards	<p>a) Vehicle maneuvering within Lots 1 - 3 will be addressed at the time if the sites are developed with a residential dwelling and there is adequate area within the sites for this.</p> <p>b) N/A – no private accessways.</p> <p>c) N/A – no private accessways.</p> <p>d) Stormwater will be managed on site.</p>
15.1.6C.1.8 Frontage to Existing Roads	<p>a) Newton Road is already of the required legal width, so no widening is required.</p> <p>b) See <i>Section 10.2 of the Site Suitability Report</i>.</p> <p>c) The site does have alternate access to SH12 but this is unsuitable for access to building sites and new lots due to it's distance from the new lots and steep topography.</p> <p>d) Given inherent distortions in aerial photography (due to sloping land) and probable inaccuracies in spatial data from LINZ due to the age of the underlying survey work, it is impossible to determine (without survey) whether the existing road carriageway encroaches or comes close to the application site.</p>
15.1.6C.1.9 New Roads	N/A – No new roads are to be laid out, constructed or vested.

### 5.1.6 Overall Activity Status

Under the ODP, the proposal is a **restricted discretionary activity** in accordance with Rule 13.8.1(c).

## 5.2 FNDC Proposed District Plan (PDP)

The Proposed District Plan is not yet fully operative. Within the Proposed District Plan, the site is zoned Rural Production. Under s86B of the Resource Management Act 1991 a rule in a Proposed District Plan has legal effect only once a decision on submissions have been made, unless the criteria under s.86B(3)(a) to (e) apply. An assessment of the relevant matters relating to the Proposed District Plan that have immediate legal effect has been undertaken below: There are no zone rules in the PDP with immediate legal effect that affect the proposal's activity status.

Rules/Standards	Performance
<b>Natural Hazards</b>	
<i>No rules have legal effect.</i>	
<b>Heritage Area Overlays</b>	
<i>All rules have immediate legal effect (HA-R1 to HA-R14). All standards have immediate legal effect (HA-S1 to HA-S3).</i>	N/A as the site is not located within a Heritage Area Overlay.
<b>Historic Heritage</b>	
<i>All rules have immediate legal effect (HH-R1 to HH-R10). Schedule 2 has immediate legal effect.</i>	N/A as the site does not contain any areas of historic heritage.
<b>Notable Trees</b>	
<i>All rules have immediate legal effect (NT-R1 to NT-R9). All standards have legal effect (NT-S1 to NT-S2). Schedule 1 has immediate legal effect.</i>	N/A as the site does not contain any notable trees.
<b>Sites and Areas of Significance to Maori</b>	
<i>All rules have immediate legal effect (SASM-R1 to SASM-R7). Schedule 3 has immediate legal effect.</i>	N/A as the site does not contain any sites or areas of significance to Maori.
<b>Ecosystems and Indigenous Biodiversity</b>	
<i>All rules have immediate legal effect (IB-R1 to IB-R5).</i>	The site does contain an area of SNA (previously recorded, but not scheduled in the PDP). No vegetation pruning, trimming, clearance or land disturbance within the area of PNA is proposed. As mentioned, these areas will be protected by a proposed bush protection land covenant. No plantation forestry activities are proposed. Therefore, the proposal is not in breach of rules IB-R1 to IB-R5.
<b>Natural Character</b>	
<i>No rules have legal effect.</i>	
<b>Natural Features &amp; Landscapes</b>	
<i>No rules have legal effect.</i>	

<b>Public Access</b>	
<i>No rules have legal effect.</i>	
<b>Subdivision</b>	
<i>The following rules have immediate legal effect: SUB-R6, SUB-R13, SUB-R14, SUB-R15, SUB-R17.</i>	N/A as the subdivision is not an Environmental Benefit Subdivision (SUB-R6), Subdivision of a site with heritage area overlay (SUB-R13), Subdivision of site that contains a scheduled heritage resource (SUB-R14), Subdivision of a site containing a scheduled site and area of significance to Maori (SUB-R15) or Subdivision of a site containing a scheduled SNA (SUB-R17).
<b>Coastal Environment</b>	
<i>No rules have legal effect.</i>	
<b>Earthworks</b>	
<i>The following rules have immediate legal effect: EW-R12, EW-R13.</i> <i>The following standards have immediate legal effect: EW-S3, EW-S5.</i>	Permitted. Earthworks as part of this proposal will be minor and will only involve the upgrade/construction of vehicle crossings. Any earthworks will proceed under the guidance of an ADP and will be in accordance with the Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016, in accordance with Rules EW-12, EW-R13, EW-S3 and EW-S5.
<b>Treaty Settlement Land</b>	
<i>No rules have legal effect.</i>	
<b>Mineral Extraction</b>	
<i>No rules have legal effect.</i>	

## 5.3 Other Consents Required

No other consents are required for this proposal.

# 6. Statutory Assessment

## 6.1 Weighting of District Plans

Whilst hearings on the PDP have commenced, no decisions have yet been issued by the Hearings Commissioners. The only matters of relevance that have been considered by the Hearings Commissioners are those submissions on the Coastal Environment. Under s86B of the Resource Management Act 1991 a rule in a Proposed District Plan has legal effect only once a decision on submissions have been made, unless the criteria under s.86B(3)(a) to (e) apply.

A review of the Proposed District Plan shows that there are no provisions that relate to water, air or soil, significant indigenous vegetation, significant indigenous habitats of fauna, historic heritage or aquaculture activities that are relevant to this application and / or require resource consent.

Due to the fact that no hearings have been held on the PDP, and no PDP rules are operative that would affect the activity status of this proposal, the ODP will hold the most weight in relation to this application.

## 6.2 Operative District Plan Objectives and Policies

The relevant Objectives and Policies of the Operative District Plan can be found in the Rural Environment, Rural Production zone and Subdivision Chapters. As a restricted discretionary activity, the proposal is generally consistent with the relevant Objectives and Policies. The site is already in rural production/residential use which will remain unchanged as a result of the proposal. The rural character of the site with therefore not be eroded by the proposed subdivision.

## 6.3 Proposed District Plan Objectives and Policies

As already stated, under s86B of the Resource Management Act 1991 a rule in a Proposed District Plan has legal effect only once a decision on submissions have been made, unless the criteria under s.86B(3)(a) to (e) apply. In the first instance, no decisions have yet been made on submissions under the Proposed District Plan. In the second instance, a review of both the application and Proposed District Plan shows that there are no provisions that relate to water, air or soil, significant indigenous vegetation, significant indigenous habitats of fauna, historic heritage or aquaculture activities that are relevant to this application and / or require resource consent.

Given the above, and until such time as the PDP advances further through the statutory process, the objectives and policies within the PDP have only peripheral relevance for the purposes of a s.104 assessment - and as a consequence are unlikely to be determinative. For the sake of completeness these are set out below.



### 6.3.1 Subdivision

<b>SUB-01</b>
<p><i>Subdivision results in the efficient use of land, which:</i></p> <ul style="list-style-type: none"> <li><i>a. achieves the objectives of each relevant zone, overlays and district wide provisions;</i></li> <li><i>b. contributes to the local character and sense of place;</i></li> <li><i>c. avoids reverse sensitivity issues that would prevent or adversely affect activities already established on land from continuing to operate;</i></li> <li><i>d. avoids land use patterns which would prevent land from achieving the objectives and policies of the zone in which it is located;</i></li> <li><i>e. does not increase risk from natural hazards or risks are mitigated and existing risks reduced; and</i></li> <li><i>f. manages adverse effects on the environment.</i></li> </ul>
<p><b>Comments:</b></p> <p>The subdivision achieves the objective of the rural production zone. Providing lifestyle properties for people to live in the rural areas is anticipated within the PDP and lifestyle blocks are not unusual in the area. The risk from natural hazards has been mitigated through engineering. Proposed bush protection covenants mitigate any effects on natural character features.</p>
<b>SUB-02</b>
<p><i>Subdivision provides for the:</i></p> <ul style="list-style-type: none"> <li><i>a. Protection of highly productive land; and</i></li> <li><i>b. Protection, restoration or enhancement of Outstanding Natural Features, Outstanding Natural Landscapes, Natural Character of the Coastal Environment, Areas of High Natural Character, Outstanding Natural Character, wetland, lake and river margins, Significant Natural Areas, Sites and Areas of Significance to Māori, and Historic Heritage.</i></li> </ul>
<p><b>Comments:</b></p> <p>The site is not highly productive land. The SNA and Area of Natural Character is to be covenanted.</p>
<b>SUB-03</b>
<p><i>Infrastructure is planned to service the proposed subdivision and development where:</i></p> <ul style="list-style-type: none"> <li><i>a. there is existing infrastructure connection, infrastructure should provided in an integrated, efficient, coordinated and future-proofed manner at the time of subdivision; and</i></li> <li><i>b. where no existing connection is available infrastructure should be planned and consideration be given to connections with the wider infrastructure network.</i></li> </ul>
<p><b>Comments:</b></p> <p>Power and telecommunications are available in the area and can be connected to when lots are developed.</p>
<b>SUB-P3</b>
<p><i>Provide for subdivision where it results in allotments that:</i></p> <ul style="list-style-type: none"> <li><i>a. are consistent with the purpose, characteristics and qualities of the zone;</i></li> <li><i>b. comply with the minimum allotment sizes for each zone;</i></li> <li><i>c. have an adequate size and appropriate shape to contain a building platform; and</i></li> <li><i>d. have legal and physical access.</i></li> </ul>
<p><b>Comments:</b></p> <p>The new lots are consistent with the other lifestyle blocks in the area. Minimum allotment sizes (from the ODP) have been achieved, with a shape factor provided and a compliant vehicle access point.</p>

<b>SUB-P4</b>
<i>Manage subdivision of land as detailed in the district wide, natural environment values, historical and cultural values and hazard and risks sections of the plan.</i>
<b>Comments:</b> See below.
<b>SUB-P6</b>
<i>Require infrastructure to be provided in an integrated and comprehensive manner by:</i> <i>a. demonstrating that the subdivision will be appropriately serviced and integrated with existing and planned infrastructure if available; and</i> <i>b. ensuring that the infrastructure is provided is in accordance the purpose, characteristics and qualities of the zone.</i>
<b>Comments:</b> Power and telecommunications can be provided to the new lot.
<b>SUB-P8</b>
<i>Avoid rural lifestyle subdivision in the Rural Production zone unless the subdivision:</i> <i>a. will protect a qualifying SNA in perpetuity and result in the SNA being added to the District Plan SNA schedule; and</i> <i>b. will not result in the loss of versatile soils for primary production activities.</i>
<b>Comments:</b> The site does not contain a qualifying SNA so it is not feasible for the proposed subdivision to align with this policy. The subdivision is taking place on soils that are not versatile.
<b>SUB-P9</b>
<i>Avoid subdivision rural lifestyle subdivision in the Rural Production zone and Rural residential subdivision in the Rural Lifestyle zone unless the development achieves the environmental outcomes required in the management plan subdivision rule.</i>
<b>Comments:</b> The proposed subdivision is not reliant on the management plan subdivision provisions.
<b>SUB-P10</b>
<i>To protect amenity and character by avoiding the subdivision of minor residential units from principal residential units where resultant allotments do not comply with minimum allotment size and residential density.</i>
<b>Comments:</b> The subdivision does not involve the separation of a minor household unit.
<b>SUB-P11</b>
<i>Manage subdivision to address the effects of the activity requiring resource consent including (but not limited to) consideration of the following matters where relevant to the application:</i> <i>a. consistency with the scale, density, design and character of the environment and purpose of the zone;</i> <i>b. the location, scale and design of buildings and structures;</i> <i>c. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; or the capacity of the site to cater for on-site infrastructure associated with the proposed activity;</i> <i>d. managing natural hazards;</i> <i>e. Any adverse effects on areas with historic heritage and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and</i>

<p><i>f. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.</i></p>
<p><b>Comments:</b>  Scale and design are consistent with other properties in the area.  Lot sizes are sufficient to accommodate dwellings and on-site wastewater disposal.  Natural hazards have been mitigated.  SNAs are to be covenanted and development areas are clear of heritage features.</p>

**6.3.2 Rural Production Zone**

<p><b>RPROZ-01</b></p>
<p><i>The Rural Production zone is managed to ensure its availability for primary production activities and its long-term protection for current and future generations.</i></p>
<p><b>Comments:</b>  The subdivision only reduces the area of the main farming lot (which is not a highly productive unit already) by 12% but allows the owner’s family to live on the property.</p>
<p><b>RPROZ-03</b></p>
<p><i>Land use and subdivision in the Rural Production zone:</i></p> <ul style="list-style-type: none"> <li><i>a. protects highly productive land from sterilisation and enables it to be used for more productive forms of primary production;</i></li> <li><i>b. protects primary production activities from reverse sensitivity effects that may constrain their effective and efficient operation;</i></li> <li><i>c. does not compromise the use of land for farming activities, particularly on highly productive land;</i></li> <li><i>d. does not exacerbate any natural hazards; and</i></li> <li><i>e. is able to be serviced by on-site infrastructure.</i></li> </ul>
<p><b>Comments:</b>  The land is not highly productive. No reverse sensitivity is expected. Natural hazards have been mitigated. New lots can be provided with power and telecommunications.</p>
<p><b>RPROZ-P2</b></p>
<p><i>Ensure the Rural Production zone provides for activities that require a rural location by:</i></p> <ul style="list-style-type: none"> <li><i>a. enabling primary production activities as the predominant land use;</i></li> <li><i>b. enabling a range of compatible activities that support primary production activities, including ancillary activities, rural produce manufacturing, rural produce retail, visitor accommodation and home businesses.</i></li> </ul>
<p><b>Comments:</b>  Lot 4 continues to be a productive lot.</p>
<p><b>RPROZ-P4</b></p>
<p><i>Land use and subdivision activities are undertaken in a manner that maintains or enhances the rural character and amenity of the Rural Production zone, which includes:</i></p> <ul style="list-style-type: none"> <li><i>a. a predominance of primary production activities;</i></li> <li><i>b. low density development with generally low site coverage of buildings or structures;</i></li> <li><i>c. typical adverse effects such as odour, noise and dust associated with a rural working environment; and</i></li> <li><i>d. a diverse range of rural environments, rural character and amenity values throughout the District.</i></li> </ul>

**Comments:**

The largest lot continues to be a productively sized lot.

Due to the location of building platforms near Newton Road, character and amenity will be maintained.

**RPROZ-P6**

*Avoid subdivision that:*

- a. results in the loss of highly productive land for use by farming activities;*
- b. fragments land into parcel sizes that are no longer able to support farming activities, taking into account:
  - 1. the type of farming proposed; and*
  - 2. whether smaller land parcels can support more productive forms of farming due to the presence of highly productive land.**
- c. provides for rural lifestyle living unless there is an environmental benefit.*

**Comments:**

The land is not highly productive, and the lots allow extended family to live on the farm without removing excessive area. The covenanting of the SNA provides a benefit.

**RPROZ-P7**

*Manage land use and subdivision to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:*

- a. whether the proposal will increase production potential in the zone;*
- b. whether the activity relies on the productive nature of the soil;*
- c. consistency with the scale and character of the rural environment;*
- d. location, scale and design of buildings or structures;*
- e. for subdivision or non-primary production activities:
  - i. scale and compatibility with rural activities;*
  - ii. potential reverse sensitivity effects on primary production activities and existing infrastructure;*
  - iii. the potential for loss of highly productive land, land sterilisation or fragmentation**
- f. at zone interfaces:
  - i. any setbacks, fencing, screening or landscaping required to address potential conflicts;*
  - ii. the extent to which adverse effects on adjoining or surrounding sites are mitigated and internalised within the site as far as practicable;**
- g. the capacity of the site to cater for on-site infrastructure associated with the proposed activity, including whether the site has access to a water source such as an irrigation network supply, dam or aquifer;*
- h. the adequacy of roading infrastructure to service the proposed activity;*
- i. Any adverse effects on historic heritage and cultural values, natural features and landscapes or indigenous biodiversity;*
- j. Any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.*

**Comments:**

The proposed lots are consistent with the scale and character of surrounding rural and rural residential lots.

Reverse sensitivity due to the continuing farming of Lot 4 is unlikely as it is only suitable for grazing.

Building sites are close to Newton Road where other development is already established.

Lots are capable of catering for wastewater disposal and stormwater dispersal. Lot 4 already has stock water systems, an irrigation supply and a pond.

Newton Road is well developed, so by implication is suitable to service the proposal.

Potential effects on historic heritage is mitigated by avoiding these features.

The natural character and biodiversity of the bush area is to be protected.

### 6.3.3 Natural Hazards

<b>NH-01</b>
<i>The risks from natural hazards to people, infrastructure and property are managed, including taking into account the likely long-term effects of climate change, to ensure the health, safety and resilience of communities.</i>
<b>Comments:</b> The <i>Site Suitability Report</i> addresses the mitigation of natural hazards.
<b>NH-02</b>
<i>Land use and subdivision does not increase the risk from natural hazards or risks are mitigated, and existing risks are reduced where there are practicable opportunities to do so.</i>
<b>Comments:</b> Mitigation measures (such as attenuation and dispersion of stormwater) will ensure that there is no increase in risks from hazards.
<b>NH-P2</b>
<i>Manage land use and subdivision so that natural hazard risk is not increased or is mitigated, giving consideration to the following:</i>
<ul style="list-style-type: none"> <li>a. <i>the nature, frequency and scale of the natural hazard;</i></li> <li>b. <i>not increasing natural hazard risk to other people, property, infrastructure and the environment beyond the site;</i></li> <li>c. <i>the location of building platforms and vehicle access;</i></li> <li>d. <i>the use of the site, including by vulnerable activities;</i></li> <li>e. <i>the location and types of buildings or structures, their design to mitigate the effects and risks of natural hazards, and the ability to adapt to long term changes in natural hazards;</i></li> <li>f. <i>earthworks, including excavation and fill;</i></li> <li>g. <i>location and design of infrastructure;</i></li> <li>h. <i>activities that involve the use and storage of hazardous substances;</i></li> <li>i. <i>aligning with emergency management approaches and requirements;</i></li> <li>j. <i>whether mitigation results in transference of natural hazard risk to other locations or exacerbates the natural hazard; and</i></li> <li>k. <i>reduction of risk relating to existing activities.</i></li> </ul>
<b>Comments:</b> The <i>Site Suitability Report</i> addresses the mitigation of natural hazards.
<b>NH-P3</b>
<i>Take a precautionary approach to the management of natural hazard risk associated with land use and subdivision</i>
<b>Comments:</b> The <i>Site Suitability Report</i> addresses the mitigation of natural hazards.

**NH-P5**

*Require an assessment of risk prior to land use and subdivision in areas that are subject to identified natural hazards, including consideration of the following:*

- a. the nature, frequency and scale of the natural hazard;*
- b. the temporary or permanent nature of any adverse effect;*
- c. the type of activity being undertaken and its vulnerability to an event, including the effects of climate change;*
- d. the consequences of a natural hazard event in relation to the activity;*
- e. any potential to increase existing risk or creation of a new risk to people, property, infrastructure and the environment within and beyond the site and how this will be mitigated;*
- f. the design, location and construction of buildings, structures and infrastructure to manage and mitigate the effects and risk of natural hazards including the ability to respond and adapt to changing hazards;*
- g. the subdivision/site layout and management, including ability to access and exit the site during a natural hazard event; and .*
- h. the use of natural features and natural buffers to manage adverse effects.*

**Comments:**

The Site Suitability Report addresses natural hazard risks.

**NH-P6**

*Manage land use and subdivision in river flood hazard areas to protect the subject site and its development, and other property, by requiring:*

- a. subdivision applications to identify building platforms that will not be subject to inundation and material damage (including erosion) in a 1 in 100 year flood event;*
- b. a minimum freeboard for all buildings designed to accommodate vulnerable activities of at least 500mm above the 1 in 100 year flood event and at least 300mm above the 1 in 100 year flood event for other new buildings;*
- c. commercial and industrial buildings to be constructed so they will not be subject to material damage in a 1 in 100 year flood event;*
- d. buildings within a 1 in 10 Year River Flood Hazard Area to be designed to avoid material damage in a 1 in 100 year flood event;*
- e. storage and containment of hazardous substances so that the integrity of the storage method will not be compromised in a 1 in 100 year flood event;*
- f. earthworks (other than earthworks associated with flood control works) do not divert flood flow onto surrounding properties and do not reduce flood plain storage capacity within a 1 in 10 Year River Flood Hazard area;*
- g. the capacity and function of overland flow paths to convey stormwater flows safely and without causing damage to property or the environment is retained, unless sufficient capacity is provided by an alternative method; and*
- h. the provision of safe vehicle access within the site.*

**Comments:**

The river flood hazard areas are within the covenanted bush so will not be subject to development, and building platforms are high above towards the top of the hill.

<b>NH-P8</b>
<i>Locate and design subdivision and land use to avoid land susceptible to land instability, or if this is not practicable, mitigate risks and effects to people, buildings, structures, property and the environment</i>
<b>Comments:</b> The <i>Site Suitability Report</i> addresses the mitigation any risks from land instability.
<b>NH-P12</b>
<i>Protect existing natural systems and features that buffer or protect development from the adverse effects of natural hazards by:</i> <ul style="list-style-type: none"> <li>a. <i>avoiding the modification, alteration or loss of natural systems and features that compromises their function, including as a defence against long term effects such as sea level rise and climate change; and</i></li> <li>b. <i>promoting restoration and enhancement of such natural systems and features.</i></li> </ul>
<b>Comments:</b> The covenanted bush provides a buffer from the river flood areas.

#### 6.3.4 Historic Heritage

<b>HH-P2</b>
<i>Protect scheduled Heritage Resources by:</i> <ul style="list-style-type: none"> <li>a. <i>avoiding significant adverse effects and avoiding, remedying or mitigating any other adverse effects on the recognised heritage values of scheduled Heritage Resources;</i></li> <li>b. <i>undertaking land use and subdivision in accordance with:</i> <ul style="list-style-type: none"> <li>i. <i>any recognised heritage guidelines for that resource;</i></li> <li>ii. <i>any iwi / hapū management plan lodged with Council;</i></li> </ul> </li> <li>c. <i>retaining buildings, structures or any other scheduled Heritage Resources that contribute to the values of the Heritage Resource; and</i></li> <li>d. <i>restricting activities that compromise important spiritual, heritage or cultural values held by tangata whenua and/or the wider community.</i></li> </ul>
<b>Comments:</b> No scheduled heritage resources on the site.
<b>HH-P8</b>
<i>Allow earthworks in proximity to scheduled Heritage Resources only where it can be demonstrated that its heritage values will be protected, having regard to the:</i> <ul style="list-style-type: none"> <li>a. <i>extent of the earthworks;</i></li> <li>b. <i>manner in which the earthworks will be undertaken;</i></li> <li>c. <i>monitoring of earthworks;</i></li> <li>d. <i>avoidance of archaeological sites; and</i></li> <li>e. <i>need for small-scale earthworks for burials within an existing cemetery or for landscaping within historic heritage sites and places.</i></li> </ul>
<b>Comments:</b> No scheduled heritage resources on the site.

<b>HH-P11</b>
<p><i>Protect archaeological sites where there is a reasonable cause to suspect they are present, by ensuring land and subdivision activities have regard to:</i></p> <ol style="list-style-type: none"> <li><i>a. the outcomes of any consultation undertaken with tangata whenua and the need to undertake a Cultural Impact Assessment;</i></li> <li><i>b. any assessments or advice from a suitably qualified and experienced archaeological expert; and</i></li> <li><i>c. the outcomes of any consultation undertaken with Heritage New Zealand Pouhere Taonga and the Department of Conservation</i></li> </ol>
<p><b>Comments:</b> Archaeological Report attached.</p>
<b>HH-P14</b>
<p><i>Only allow subdivision of sites that contain a scheduled Heritage Resource where it can be demonstrated that:</i></p> <ol style="list-style-type: none"> <li><i>a. the heritage values for which the Heritage Resource is scheduled are maintained and protected in the future;</i></li> <li><i>b. sufficient land is provided around the scheduled Heritage Resource to protect associated heritage values;</i></li> <li><i>c. there are measures to minimise obstruction of views of the scheduled Heritage Resource from adjoining and surrounding public spaces that may result from any future land use; and</i></li> <li><i>d. the remainder of the site associated with the scheduled Heritage Resource is of a size which continues to provide it with a suitable heritage setting to maintain the heritage values associated with the scheduled Heritage Resource.</i></li> </ol>
<p><b>Comments:</b> No scheduled heritage resources on the site.</p>
<b>HH-P15</b>
<p><i>Manage land use and subdivision involving a scheduled heritage resource to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:</i></p> <ol style="list-style-type: none"> <li><i>a. the particular heritage values of the scheduled Heritage Resource and its significance;</i></li> <li><i>b. the scheduled Heritage Resource's sensitivity to change or capacity to accommodate changes without compromising the heritage values;</i></li> <li><i>c. any heritage alterations and additions to buildings or structures, including for an ongoing use or any adaptive re-use, are compatible with the form, character and scale and materials of the scheduled Heritage Resource and maintain its heritage values;</i></li> <li><i>d. architectural features and details that contribute to the heritage values of the scheduled Heritage Resource are not lost or obscured by new materials or changes;</i></li> <li><i>e. whether any new building or structure, including its location, form, design and materials, is compatible with the original architectural style, character and scale of the Heritage Resource and the impact of the new building or structure on the heritage setting;</i></li> <li><i>f. the extent to which any adverse impacts on heritage values are necessary to enable the long term, practical, or feasible use of the scheduled Heritage Resource;</i></li> <li><i>g. the reduction or loss of any heritage values, including the ability to interpret the place and its relationship with other features/items;</i></li> <li><i>h. the extent or degree to which any changes are reversible;</i></li> <li><i>i. any opportunities to enhance the heritage values of the scheduled Heritage Resource and any surrounding historic heritage;</i></li> <li><i>j. the extent to which an activity affects or destroys any archaeological site; and</i></li> <li><i>k. effects on landforms and cultural and heritage landscapes; and</i></li> </ol>



<p><i>l. the extent to which landscaping affects the heritage values, either visually or because of disturbance of archaeological sites;</i></p> <p><i>m. any assessments or advice from a suitably qualified and experienced heritage expert or the need to require an expert report;</i></p> <p><i>n. any consultation with tangata whenua and requirement to prepare a Cultural Impact Assessment;</i></p> <p><i>o. any iwi / hapū management plan lodged with Council; and</i></p> <p><i>p. any consultation with Heritage New Zealand Pouhere Taonga, Department of Conservation.</i></p>
<p><b>Comments:</b> No scheduled heritage resources on the site.</p>

### 6.3.5 Ecosystems & Indigenous Biodiversity

<b>IB-01</b>
<i>Areas of significant indigenous vegetation and significant habitats of indigenous fauna (Significant Natural Areas) are identified and protected for current and future generations.</i>
<p><b>Comments:</b> Existing SNA is to be covenanted.</p>
<b>IB-02</b>
<i>Indigenous biodiversity is managed to maintain its extent and diversity in a way that provides for the social, economic and cultural well-being of people and communities.</i>
<p><b>Comments:</b> Existing SNA is to be covenanted.</p>
<b>IB-05</b>
<i>Restoration and enhancement of indigenous biodiversity is promoted and enabled</i>
<p><b>Comments:</b> Existing SNA is to be covenanted.</p>
<b>IB-P2</b>
<p><i>Within the coastal environment:</i></p> <ul style="list-style-type: none"> <li><i>a. avoid adverse effects of land use and subdivision on Significant Natural Areas; and</i></li> <li><i>b. avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of land use and subdivision on areas of important and vulnerable indigenous vegetation, habitats and ecosystems.</i></li> </ul>
<p><b>Comments:</b> Existing SNA is to be covenanted.</p>
<b>IB-P5</b>
<p><i>Ensure that the management of land use and subdivision to protect Significant Natural Areas and maintain indigenous biodiversity is done in a way that:</i></p> <ul style="list-style-type: none"> <li><i>a. does not impose unreasonable restrictions on existing primary production activities, particularly on highly versatile soils;</i></li> <li><i>b. recognises the operational need and functional need of some activities, including regionally significant infrastructure, to be located within Significant Natural Areas in some circumstances;</i></li> <li><i>c. allows for maintenance, use and operation of existing structures, including infrastructure; and</i></li> </ul>

<p><i>d. enables Māori land to be used and developed to support the social, economic and cultural well-being of tangata whenua, including the provision of papakāinga, marae and associated residential units and infrastructure.</i></p>
<p><b>Comments:</b> The SNA area is not farmed so the covenanting of this area is not detrimental on the productivity of the farm.</p>
<p><b>IB-P9</b></p>
<p><i>Require landowners to manage pets and pest species, including dogs, cats, possums, rats and mustelids, to avoid risks to threatened indigenous species, including avoiding the introduction of pets and pest species into kiwi present or high-density kiwi areas.</i></p>
<p><b>Comments:</b> It is proposed that an informative consent notice be placed on the new titles with regard to the presence of Kiwi.</p>
<p><b>IB-P10</b></p>
<p><i>Manage land use and subdivision to address the effects of the activity requiring resource consent for indigenous vegetation clearance and associated land disturbance, including (but not limited to) consideration of the following matters where relevant to the application:</i></p> <ul style="list-style-type: none"> <li><i>a. the temporary or permanent nature of any adverse effects;</i></li> <li><i>b. cumulative effects of activities that may result in loss or degradation of habitats, species populations and ecosystems;</i></li> <li><i>c. the extent of any vegetation removal and associated land disturbance;</i></li> <li><i>d. the effects of fragmentation;</i></li> <li><i>e. linkages between indigenous ecosystems and habitats of indigenous species;</i></li> <li><i>f. the potential for increased threats from pest plants and animals;</i></li> <li><i>g. any downstream adverse effects on waterbodies and the coastal marine area;</i></li> <li><i>h. where the area has been mapped or assessed as a Significant Natural Areas:</i> <ul style="list-style-type: none"> <li><i>i. the extent to which the proposal will adversely affect the ecological significance, values and function of that area;</i></li> <li><i>ii. whether it is appropriate or practicable to use biodiversity offsets or environmental biodiversity compensation to address more than minor residual adverse effects;</i> <ul style="list-style-type: none"> <li><i>i. the location, scale and design of any proposed development;</i></li> <li><i>j. the extent of indigenous vegetation cover on the site and whether it is practicable to avoid or reduce the extent of indigenous vegetation clearance;</i></li> <li><i>k. the functional or operational needs of regionally significant infrastructure;</i></li> <li><i>l. any positive contribution any proposed biodiversity offsets or environmental biodiversity compensation will have on indigenous biodiversity; and</i></li> <li><i>m. any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.</i></li> </ul> </li> </ul> </li> </ul>
<p><b>Comments:</b> SNAs are to be protected and are in the process of being fenced. No vegetation removal is proposed. Informative Kiwi protection consent notices encourage protection of Kiwi in the area.</p>

### 6.3.6 Natural Character

<b>NATC-01</b>
<i>The natural character of wetland, lake and river margins are managed to ensure their long-term preservation and protection for future generations.</i>
<b>Comments:</b> The area of High Natural Character is to be covenanted.
<b>NATC-02</b>
<i>Land use and subdivision is consistent with and does not compromise the characteristics and qualities of the natural character of wetland, lake and river margins.</i>
<b>Comments:</b> The area of High Natural Character is to be covenanted.
<b>NATC-P1</b>
<i>Avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of land use and subdivision on the natural character of wetland, lake and river margins.</i>
<b>Comments:</b> The area of High Natural Character is to be covenanted.
<b>NATC-P5</b>
<i>Encourage the restoration and enhancement on wetland, lake and river margins where it will achieve improvement in natural character values.</i>
<b>Comments:</b> The area of High Natural Character is to be covenanted.
<b>NATC-P6</b>
<i>Manage land use and subdivision to preserve and protect the natural character of wetland, lake and river margins, and address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:</i>
<ul style="list-style-type: none"> <li><i>a. the presence or absence of buildings, structures or infrastructure;</i></li> <li><i>b. the temporary or permanent nature of any adverse effects;</i></li> <li><i>c. the location, scale and design of any proposed development;</i></li> <li><i>d. any means of integrating the building, structure or activity;</i></li> <li><i>e. the ability of the environment to absorb change;</i></li> <li><i>f. the need for and location of earthworks or vegetation clearance;</i></li> <li><i>g. the operational or functional need of any regionally significant infrastructure to be sited in the particular location;</i></li> <li><i>h. any viable alternative locations for the activity or development;</i></li> <li><i>i. any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6;</i></li> <li><i>j. the likelihood of the activity exacerbating natural hazards;</i></li> <li><i>k. the opportunity to enhance public access and recreation;</i></li> <li><i>l. the ability to improve the overall water quality; and</i></li> <li><i>m. any positive contribution the development has on the characteristics and qualities.</i></li> </ul>
<b>Comments:</b> There is no development proposed near or in the area of High Natural Character.

### 6.3.7 Coastal Environment

<b>CE-01</b>
<i>The natural character of the coastal environment is identified and managed to ensure its long-term preservation and protection for current and future generations</i>
<p><b>Comments:</b> Omapere is already well developed and the development is in keeping with the character of the area.</p>
<b>CE-02</b>
<p><i>Land use and subdivision in the coastal environment:</i></p> <ol style="list-style-type: none"> <li><i>a. preserves the characteristics and qualities of the natural character of the coastal environment;</i></li> <li><i>b. is consistent with the surrounding land use;</i></li> <li><i>c. does not result in urban sprawl occurring outside of urban zones;</i></li> <li><i>d. promotes restoration and enhancement of the natural character of the coastal environment; and</i></li> <li><i>e. recognises tangata whenua needs for ancestral use of whenua Māori.</i></li> </ol>
<p><b>Comments:</b> The development is in keeping with the character of the area and provides for the permanent protection of the High Natural Character and associated bush area as part of this proposal.</p>
<b>CE-P4</b>
<p><i>Preserve the visual qualities, character and integrity of the coastal environment by:</i></p> <ol style="list-style-type: none"> <li><i>a. consolidating land use and subdivision around existing urban centres and rural settlements; and</i></li> <li><i>b. avoiding sprawl or sporadic patterns of development.</i></li> </ol>
<p><b>Comments:</b> The building platforms are up near Newton Road which is where the existing development is located.</p>
<b>CE-P8</b>
<i>Encourage the restoration and enhancement of the natural character of the coastal environment.</i>
<p><b>Comments:</b> The area of High Natural Character is to be covenanted.</p>
<b>CE-P9</b>
<i>Prohibit land use and subdivision that would result in any loss and/or destruction of the characteristics and qualities in outstanding natural character areas</i>
<p><b>Comments:</b> The area of High Natural Character is to be covenanted.</p>
<b>CE-P10</b>
<p><i>Manage land use and subdivision to preserve and protect the natural character of the coastal environment, and to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:</i></p> <ol style="list-style-type: none"> <li><i>a. the presence or absence of buildings, structures or infrastructure;</i></li> <li><i>b. the temporary or permanent nature of any adverse effects;</i></li> <li><i>c. the location, scale and design of any proposed development;</i></li> <li><i>d. any means of integrating the building, structure or activity;</i></li> <li><i>e. the ability of the environment to absorb change;</i></li> </ol>

<p>f. <i>the need for and location of earthworks or vegetation clearance;</i></p> <p>g. <i>the operational or functional need of any regionally significant infrastructure to be sited in the particular location;</i></p> <p>h. <i>any viable alternative locations for the activity or development;</i></p> <p>i. <i>any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6;</i></p> <p>j. <i>the likelihood of the activity exacerbating natural hazards;</i></p> <p>k. <i>the opportunity to enhance public access and recreation;</i></p> <p>l. <i>the ability to improve the overall quality of coastal waters; and</i></p> <p>m. <i>any positive contribution the development has on the characteristics and qualities.</i></p>
<p><b>Comments:</b></p> <p>The area of High Natural Character and SNA is to be covenanted. Natural hazards are to be mitigated. Building and areas of development are restricted to near Newton Road and close to other development. Archaeological features on the site have been addressed and protected via the recommendation of the Archaeological Report.</p>

### 6.3.8 Earthworks

<b>EW-01</b>
<i>Earthworks are enabled where they are required to facilitate the efficient subdivision and development of land, while managing adverse effects on waterbodies, coastal marine area, public safety, surrounding land and infrastructure.</i>
<p><b>Comments:</b></p> <p>Earthworks are minimal, being the upgrade or construction of vehicle crossings.</p>
<b>EW-02</b>
<i>Earthworks are appropriately designed, located and managed to protect historical and cultural values, natural environmental values, preserve amenity and safeguard the life-supporting capacity of soils.</i>
<p><b>Comments:</b></p> <p>Earthworks are to be located clear of archaeological features and bush areas.</p>
<b>EW-03</b>
<i>Earthworks are undertaken in a manner which does not compromise the stability of land, infrastructure and public safety.</i>
<p><b>Comments:</b></p> <p>Earthworks are to be carried out in accordance with the recommendations in the Site Suitability Report.</p>
<b>EW-P2</b>
<p><i>Ensure earthworks are managed, when it has the potential to:</i></p> <ul style="list-style-type: none"> <li>a. <i>create new or exacerbate existing natural hazards, including but not limited to flooding, instability, and coastal hazards;</i></li> <li>b. <i>result in adverse effects on the amenity, characteristics and qualities of outstanding natural landscapes, outstanding natural features, historic heritage, cultural values, indigenous biodiversity and significant natural areas and features; and</i></li> <li>c. <i>adversely affect waterbodies and the coastal marine area due to inadequate setbacks.</i></li> </ul>

<p><b>Comments:</b> Earthworks are to be carried out in accordance with the recommendations in the Site Suitability Report.</p>
<p><b>EW-P3</b></p>
<p><i>Ensure earthworks are located and designed appropriately to manage the effects of the activity by:</i></p> <ul style="list-style-type: none"> <li><i>a. controlling maximum depth and height and maximum area or volume of earthworks;</i></li> <li><i>b. requiring appropriate setbacks are maintained from adjoining property boundaries, waterbodies and the coastal environment;</i></li> <li><i>c. managing the location and design of infrastructure;</i></li> <li><i>d. managing impacts on natural drainage patterns and overland flow paths; and</i></li> <li><i>e. controlling the movement of dust and sediment beyond the area of development to avoid:</i> <ul style="list-style-type: none"> <li><i>i. nuisance effects and/or amenity effects on surrounding sites, or</i></li> <li><i>ii. silt and sediment entering stormwater systems or waterbodies and the coastal marine area.</i></li> </ul> </li> </ul>
<p><b>Comments:</b> Earthworks are to be carried out in accordance with the recommendations in the Site Suitability Report.</p>
<p><b>EW-P4</b></p>
<p><i>Require earthworks to be of a type, scale and form that is appropriate for the location having regards to the effects of the activity, and:</i></p> <ul style="list-style-type: none"> <li><i>a. existing site constraints, opportunities and specific engineering requirements;</i></li> <li><i>b. the impact on existing natural landforms, features, historic heritage and indigenous biodiversity;</i></li> <li><i>c. compatibility with the visual amenity and character values of the area;</i></li> <li><i>d. changes in the natural landform that will lead to instability, erosion and scarring;</i></li> <li><i>e. impacts on natural drainage patterns and overland flow paths;</i></li> <li><i>f. using materials for retaining structures that are compatible with the visual amenity and the characteristics and qualities of the surrounding area;</i></li> <li><i>g. minimising adverse visual effects associated with any exposed cut faces or retaining structures, including with the use of screening, landscaping and/or planting; and</i></li> <li><i>h. loss of flood storage within flood hazard areas</i></li> </ul>
<p><b>Comments:</b> Earthworks are to be carried out in accordance with the recommendations in the Site Suitability Report.</p>
<p><b>EW-P5</b></p>
<p><i>Manage effects on historic heritage and cultural values that may be discovered when undertaking earthworks by:</i></p> <ul style="list-style-type: none"> <li><i>a. requiring a protocol for the accidental discovery of archaeology, kōiwi and artefacts of Māori origin; and</i></li> <li><i>b. undertaking appropriate actions in accordance with mātauranga and tikanga Māori when managing effects on cultural values.</i></li> </ul>
<p><b>Comments:</b> The Archaeological Report has recommended an ADP be attached to the Resource Consent.</p>
<p><b>EW-P6</b></p>
<p><i>Require that all earthworks are designed and undertaken in a manner that ensures the stability and safety of surrounding land, buildings or structures</i></p>

**Comments:**

Earthworks are to be carried out in accordance with the recommendations in the Site Suitability Report.

**EW-P7**

*Ensure all earthworks associated with land development are designed and assessed in a coordinated and integrated manner at the time of subdivision, by:*

- a. controlling earthworks associated with subdivision, including for the purpose of site preparation, creating roads or access to/within the subdivision, and for the provision of infrastructure; and*
- b. considering the appropriateness of earthworks in conjunction with site design and layout of future subdivision and/or development of land, particularly for future infill or greenfield subdivision.*

**Comments:**

Earthworks are to be carried out in accordance with the recommendations in the Site Suitability Report.

**EW-P8**

*Manage earthworks to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:*

- a. the location, scale and volume;*
- b. depth and height of cut and fill;*
- c. the nature of filling material and whether it is compacted;*
- d. the extent of exposed surfaces or stockpiling of fill;*
- e. erosion, dust and sediment controls;*
- f. the risks of natural hazards, particularly flood events;*
- g. stormwater controls;*
- h. flood storage, overland flow paths and drainage patterns;*
- i. impacts on natural coastal processes;*
- j. the stability of land, buildings and infrastructure;*
- k. visual amenity, natural character and landscape values,*
- l. historic heritage values, and whether any assessment or advice from a suitably qualified and experienced heritage expert is required;*
- m. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6;*
- n. the life-supporting capacity of soils;*
- o. the extent of indigenous biodiversity clearance and its effect on biodiversity values;*
- p. outstanding natural character, outstanding natural landscapes and outstanding natural features;*
- q. riparian margins;*
- r. the location, operational and functional needs and use of infrastructure;*
- s. temporary or permanent nature of any adverse effect; and*
- t. traffic and noise effects.*

**Comments:**

Earthworks are to be carried out in accordance with the recommendations in the Site Suitability Report.

## **6.4 Regional Planning Documents**

### **6.4.1 Regional Policy Statement for Northland**

The Regional Policy Statement for Northland (“RPS”) covers the management of natural and physical resources in the Northland region. The provisions within the RPS give guidance at a higher planning level in terms of significant regional issues, therefore providing guidance to consent applications and the development of District Plans on a regional level. Its policies have been used to help form the Operative and Proposed District Plans, of which the Objectives, Policies and Rules have been discussed in this application.

Given the nature and scale of the proposed subdivision, being a restricted discretionary activity, it is considered that this level of development is compatible with the intent of the RPS.

### **6.4.2 Proposed Regional Plan (NRC)**

The property is not recorded as Erosion Prone or as being subject to any hazards by the Northland Regional Council, other than some river flooding near the stream.

### **6.4.3 Regional Water & Soil Plan**

Section 5 of the *Site Suitability Report* confirms the suitability of the existing wastewater system and the capacity for new vacant lots to accommodate compliant wastewater disposal systems.

We therefore believe that on-site wastewater disposal is sustainable in compliance with the permitted activity rules of the RWSP.

## **6.5 Other National Standards & Policy Documents**

### **6.5.1 National Environmental Standard for Contaminants in Soil**

In regard to the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011, we have been advised by the applicant that to the best of their knowledge, the application site is not currently, or has not historically been, used for an activity on the Hazardous Activities and Industries List (HAIL).

The property is not recorded as a HAIL site as on the Northland Regional Council Selected Land-use Register.

### **6.5.2 National Environmental Standard for Freshwater Management**

The National Environmental Standard for Freshwater Management (NES-FM) addresses natural wetlands. There are no wetland areas on the site, and therefore this NES does not apply.

### **6.5.3 National Policy Standard for Highly Productive Land (Sept 2022)**

The National Policy Standard for Highly Productive Land (NPS-HPL) addresses the protection of highly productive land for use in land-based primary production.

The application site does not contain any mapped highly productive land, so this NPS does not apply.



## 6.5.4 NZ Coastal Policy Statement 2010

The application site is within the “Coastal Environment”, and therefore the NZ Coastal Policy Statement is applicable to this application. Relevant Policies of the New Zealand Coastal Policy Statement 2010 are outlined below:

<b>Policy 6: Activities in the coastal environment</b>
<p><i>1. In relation to the coastal environment:</i></p> <p><i>(c) encourage the consolidation of existing coastal settlements and urban areas where this will contribute to the avoidance or mitigation of sprawling or sporadic patterns of settlement and urban growth;</i></p> <p><i>(f) consider where development that maintains the character of the existing built environment should be encouraged, and where development resulting in a change in character would be acceptable;</i></p> <p><i>(h) consider how adverse visual impacts of development can be avoided in areas sensitive to such effects, such as headlands and prominent ridgelines, and as far as practicable and reasonable apply controls or conditions to avoid those effects;</i></p> <p><i>(i) set back development from the coastal marine area and other water bodies, where practicable and reasonable, to protect the natural character, open space, public access and amenity values of the coastal environment;</i></p> <p><i>(j) where appropriate, buffer areas and sites of significant indigenous biological diversity, or historic heritage value.</i></p>
<p><b>Comments:</b></p> <p>The area is already well developed, but the building platforms are up near Newton Road near other development.</p>

<b>Policy 11 Indigenous biological diversity (biodiversity)</b>
<p><i>To protect indigenous biological diversity in the coastal environment:</i></p> <p><i>(a) avoid adverse effects of activities on:</i></p> <p><i>(i) indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;</i></p> <p><i>(ii) taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;</i></p> <p><i>(iii) indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare;</i></p> <p><i>(iv) habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare;</i></p> <p><i>(v) areas containing nationally significant examples of indigenous community types; and</i></p> <p><i>(vi) areas set aside for full or partial protection of indigenous biological diversity under other legislation; and</i></p> <p><i>(b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on:</i></p> <p><i>(i) areas of predominantly indigenous vegetation in the coastal environment;</i></p> <p><i>(ii) habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;</i></p> <p><i>(iii) indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh;</i></p> <p><i>(iv) habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes;</i></p> <p><i>(v) habitats, including areas and routes, important to migratory species; and</i></p> <p><i>(vi) ecological corridors, and areas important for linking or maintaining biological values identified under this policy.</i></p>

**Comments:**

The SNA on site is to be covenanted.

**Policy 13: Preservation of natural character**

*1. To preserve the natural character of the coastal environment and to protect it from inappropriate subdivision, use, and development:*

*(a) avoid adverse effects of activities on natural character in areas of the coastal environment with outstanding natural character; and*

*(b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects*

**Comments:**

The area of high natural character is to be protected by a bush protection covenant.

The provisions of the PDP in relation to building materials and colours suitably addresses any visual effects.

**Policy 17 Historic heritage identification and protection**

*Protect historic heritage in the coastal environment from inappropriate subdivision, use, and development by:*

*(b) providing for the integrated management of such sites in collaboration with relevant councils, heritage agencies, iwi authorities and kaitiaki;*

*(g) imposing or reviewing conditions on resource consents and designations, including for the continuation of activities;*

*(h) requiring, where practicable, conservation conditions; and*

*(i) considering provision for methods that would enhance owners' opportunities for conservation of listed heritage structures, such as relief grants or rates relief.*

**Comments:**

Building platforms and areas for development have been located away from the archaeological features on the site, and an ADP is proposed for the resource consent.

## 6.6 Part II Matters

### 6.6.1 Sustainable Management (Section 5)

The purpose of the RMA is the sustainable management of natural and physical resources by 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.

The proposal achieves this purpose by allowing the owner to continue farming the property, while still providing titles for family members to build on. The areas of high natural character will be protected.

## 6.6.2 Matters of National Importance (Section 6)

The matters of national importance relevant to this application are:

*(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*

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

These matters should be recognised and provided for in the consideration of this application.

The proposal achieves this by:

- D. proposing consent notices be placed both new titles, providing for the responsible management of animals on the property that may present a danger to Kiwi,
- E. proposing a covenant (by consent notice) be placed on Lot 4's title to protect the ecological area on the property.
- F. locating development away from archeological features and undertaking earthworks under an ADP.

## 6.6.3 Other Matters (Section 7)

Other matters relevant to this application are:

*(c) the maintenance and enhancement of amenity values*

*(d) intrinsic values of ecosystems*

*(f) maintenance and enhancement of the quality of the environment*

*(g) any finite characteristics of natural and physical resources*

*(j) the benefits to be derived from the use and development of renewable energy*

Particular regard is to be given to these matters in the consideration of this application.

The proposal achieves these aims by:

- G. proposing a covenant (by consent notice) be placed on Lot 4's title to protect the ecological area on the property.
- H. creating north facing building areas that can make the most of solar energy.

## 6.6.4 Treaty of Waitangi (Section 8)

The principles of the Treaty of Waitangi are to be taken into account in the consideration of this application. These principles are integrated into the other planning documents that have been discussed in this application in relation to the proposal, the District Plan in particular. Archaeological features on the site have been avoided and have been addressed in the *Archeological Report*.

## 6.6.5 Part II Considerations Summary

It is considered that the proposal has given due consideration to the Purpose and Principles in Part II of the RMA.

## 6.7 Section 104 – Consideration of Applications

In terms of sections 104 and 104C of the Act, we consider that:

- Sufficient information has been provided for Council to assess the application.
- The effects of the proposal are considered to be less than minor.
  - I. The matters over which Council has restricted the exercise of its discretion have been considered.

## 6.8 Section 106 – Refusal of consent

Irrespective of consent activity status, a consent authority may refuse subdivision consent in certain circumstances. These circumstances are set out in s.106 of the Act.

*(1) A consent authority may refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that—*

*(a) there is a significant risk from natural hazards; or*

*(b) [Repealed]*

*(c) sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision.*

Instability issues on site have been addressed in the *Site Suitability Report* and all lots have been provided with legal and physical access. No conflict with s.106 of the Act is anticipated.

## 6.9 Section 95 - Notification and Consultation

The only party potentially affected by this proposal is DOC, due to the presence of a significant ecological area. To mitigate any effects, we have proposed a covenant be placed on Lot 4's title by consent notice. We suggest that Council give DOC the opportunity to comment on the proposal.

No other parties require notification of this proposal.

Consent is sought on a non-notified basis as the sequential statutory tests within s.95 of the RMA are satisfied and no special circumstances are present.

## 6.10 Conditions of Consent

In addition to standard conditions of consent and advice notes, we suggest the following conditions for the subdivision consent are also included (some wording abridged):

Prior to issue of s224c certificate:

- (a) secure s221 consent notices in relation to
  - J. Bush protection covenant
  - K. Engineering requirements for BCs
- (b) SH12 vehicle crossing is sealed.
- (c) Vehicle crossings for all lots be formed to Council standards.

*It would be greatly appreciated if draft conditions of consent could be forwarded to [wendy@sapphiresurveyors.co.nz](mailto:wendy@sapphiresurveyors.co.nz) prior to confirming the final resource consent wording.*

## 7. Conclusion

The proposal is of a nature anticipated by the ODP. The proposal aligns with the relevant objectives and policies of the Operative District Plan and Proposed District Plan, and the objectives and policies of the National and Regional Policy Statements. The proposal also aligns with Part 2 of the Resource Management Act. There is no District Plan rule or National Environmental Standard that requires the proposal to be publicly notified.

In addition to subdivision consent, we request that Easement Certificate B108447.2 be cancelled (under s24e3 RMA) insofar as it affects Lots 1-3 hereon, due to the physical separation of these lots from the easement area.

It is requested that the Council give favourable consideration to this application and grant consent on a non-notified basis.

# 8. Appendices

**APPENDIX 1 SCHEME PLAN**

**APPENDIX 2 RECORDS OF TITLE**

**APPENDIX 3 CHORUS & TOP ENERGY CORRESPONDENCE**

**APPENDIX 4 NZTA CORRESPONDENCE**

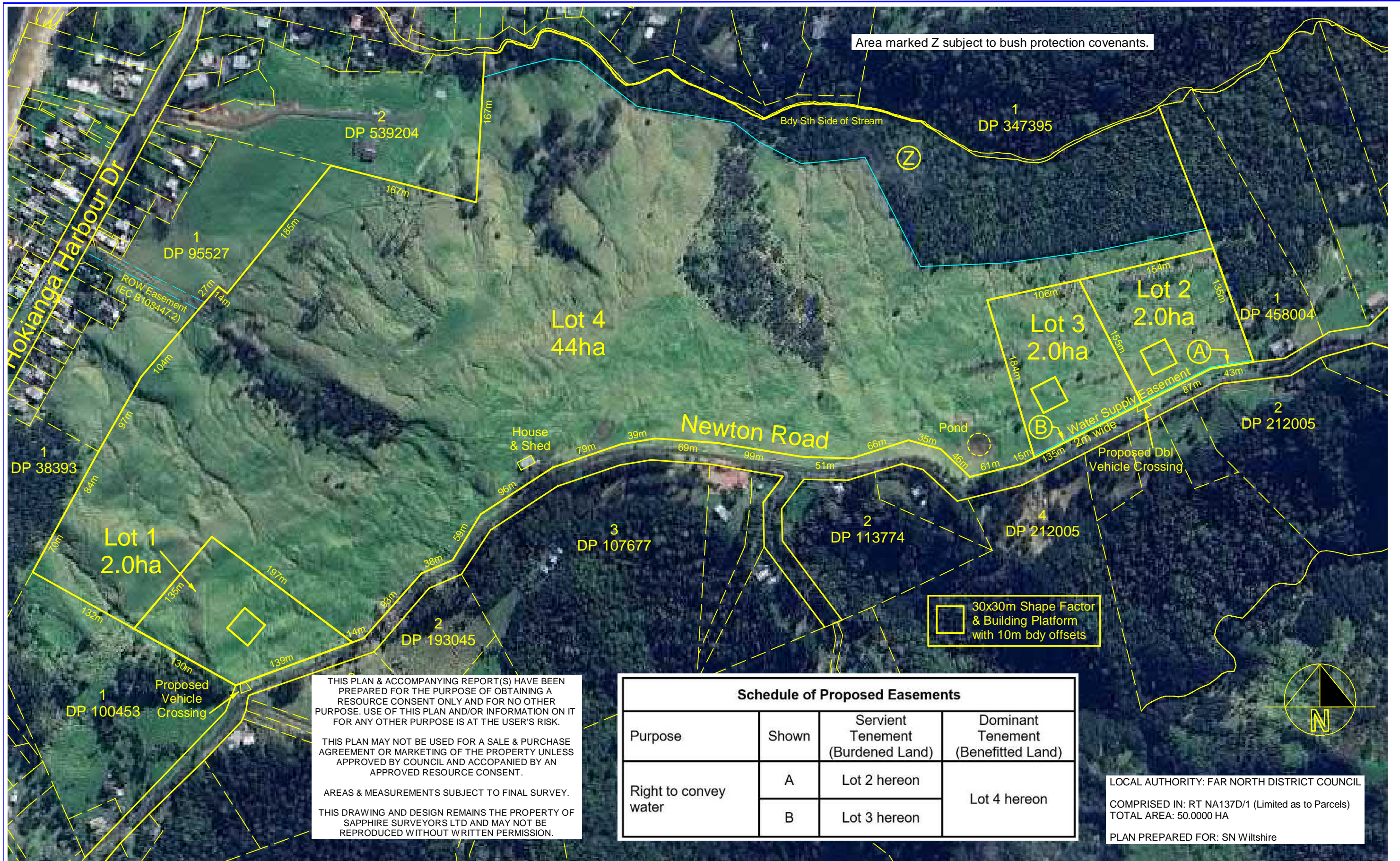
**APPENDIX 5 SITE SUITABILITY REPORT**

**APPENDIX 6 ARCHAEOLOGICAL REPORT**

# **Appendix 1**

# **Scheme Plan**





## **Appendix 2**

# **Records of Title**



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Limited as to Parcels  
Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** NA137D/1  
**Land Registration District** North Auckland  
**Date Issued** 21 September 2001

**Prior References**  
NA54C/1406

---

**Estate** Fee Simple  
**Area** 50.0000 hectares more or less  
**Legal Description** Lot 2 Deposited Plan 100455

**Registered Owners**  
Susan Nicole Wiltshire

---

**Interests**

Appurtenant hereto is a right of way specified in Easement Certificate B108447.2  
B273257.7 Encumbrance to Hokianga County Council - 21.3.1984 at 1:30 pm  
D616625.1 Gazette Notice declaring the adjoining State Highway 12 to be a limited access road - 27.6.2001 at 9.01 am  
D616703.1 Notice pursuant to Section 91 Transit New Zealand Act 1989 - 27.6.2001 at 9.01 am  
Appurtenant hereto is a right to convey water created by Transfer D643570.1 - 26.9.2001 at 2.07 pm

FOR SURVEY INFORMATION FOR THE AREA TO BE EXCLUDED FROM RESTRICTIVE COVENANT SEE SHEET 1 DP100454

THERE IS NO LOT 1 ON THIS PLAN

AREA SHOWN (B) IS TO BE SUBJECT TO A RESTRICTIVE COVENANT.

NEW CT ALLOCATED LOT 2 CT945/1406

APPROVED  
*[Signature]*  
 REGISTERED OWNERS

Total Area 50.0000 ha  
 Comprised in Pt. CT 52A/244 LTD

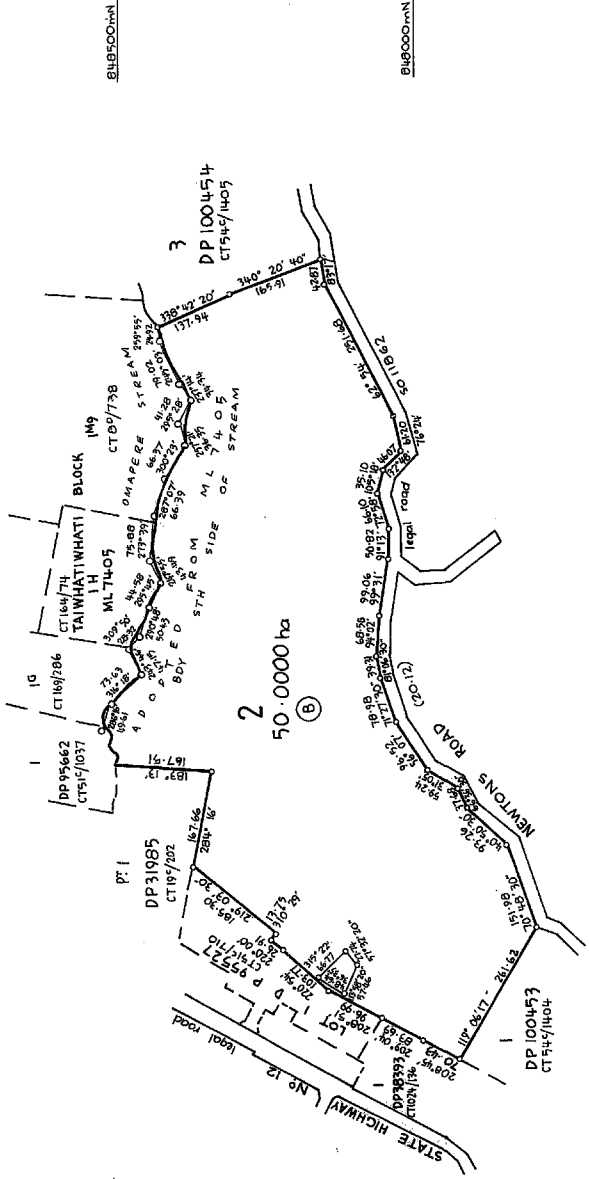
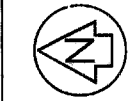
*Keith James Douglas Martin* at Takapuna  
 Registered Surveyor and holder of an issued practicing certificate  
 Number 34571 that this plan has been made from Survey executed by me or under my direction: that both plan and Survey are correct and have been made in accordance with the regulations under the Surveyors Act 1988  
 Dated at Takapuna this 25th day of JULY 1983  
 Signature *[Signature]*

Field Book  
 Reference Plans 5011862, ML 7405, ML 1353, ML 1421,  
 DP's 31083, 38393, 57652, 95501, 95927, 95945  
 Examined *[Signature]*  
 Approved as to Survey

Approved as to Survey  
 4/11/83  
 Chief Surveyor

Deposited this 1st day of MARCH 1984  
 Registrar  
 District Land Registrar

File No. 006/4-2 e Omarepa 2  
 DP100455



COMPILED PLAN LIMITED AS TO PARCELS

LOCAL AUTHORITY Hokianga County  
 Surveyed by HARRISON AND GRIERSON AND PARTNERS  
 Scale 1:5000 Date June 1983

LAND DISTRICT NORTH AUCKLAND  
 SURVEY BLK & DIST VII Hokianga  
 SHEET No. 006/4-2 e Omarepa 2

Lot 2 Being Part Lot 2 DP95945



References

Prior C/T 52A/244

Land and Deeds 69

Transfer No.

N/C. Order No. B.273257.6



REGISTER

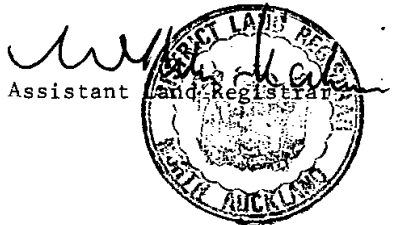
LIMITED AS TO PARCELS

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 21st day of March one thousand nine hundred and eighty four under the seal of the District Land Registrar of the Land Registration District of North Auckland

WITNESSETH that ALISTER JOHN BABBAGE of Omapere farmer and BRENDA RUTH BABBAGE his wife are

seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 50.0000 hectares more or less being Lot 2 Deposited Plan 100455 and being part of Pukanui 192N Block.



Assistant Land Registrar

Interests at Date of Issue:

Fencing covenant in Transfer B.174144.2

Appurtenant hereto is a right of way over part Lot 1 marked 'A' on Plan 95527 (51C/710) See Easement Certificate B.108447.2

B.174144.4 Mortgage to Alan Christie Stedman, Anne Gertrude Gambrell and Paul Crawford Sutcliffe A.L.R. 1983 at 10.33 o'c

B.273257.7 Memorandum of Encumbrance to The Hokianga County Council - 21.3.1984 at 1.30 o'c

Signature of Alister John Babbage A.L.R.

B.418681.1 Transfer to Alister John Babbage of Omapere, farmer - 28.5.1985 at 12.25 o'c

Signature of Alister John Babbage A.L.R.

B.386957.4 Mortgage to Anne Gertrude Gambrell and Paul Crawford Sutcliffe - produced 1.3.1985 at 2.44 o'c and entered 28.1.1985 at 12.24 o'c (see Abstract B.418681.1)

Signature of Alister John Babbage A.L.R.

B.556881.1 CAVENANT ON WAYMEET FARM LIMITED - 14.7.1986 at 4.49 o'c

Signature of Alister John Babbage A.L.R.

B.585659.4 Transfer to Waymeet Farm Limited at Omapere - 25.9.1986 at 2.32 oc.

Signature of Alister John Babbage A.L.R.

B.968971.1 Transfer to Stanley John Askew of Omapere farmer and Lorraine Patricia Askew his wife - 17.3.1989 at 12.06 oc.

Signature of Alister John Babbage A.L.R.

B.968971.2 Mortgage to Adelman Reinken - 17.3.1989 at 12.06 oc.

Signature of Alister John Babbage A.L.R.

D616625.1 Gazette Notice (NZ Gazette 9.11.2000 No 152 p 3942) declaring part of State Highway 12 in Northland commencing at its intersection with the northern end of Waiotemarama Gorge Road at Pakanae and proceeding in a Southerly direction to its intersection with the southern end of Waiotemarama Gorge Road at Waiotemarama to be limited access road

A.L.R. D616703.1 Crossing place notice under Section 91 Transit New Zealand Act 1989

Both 27.6.2001 at 9.01

Signature of Alister John Babbage A.L.R.

Signature for RGL

Measurements are Metric

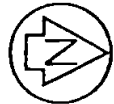
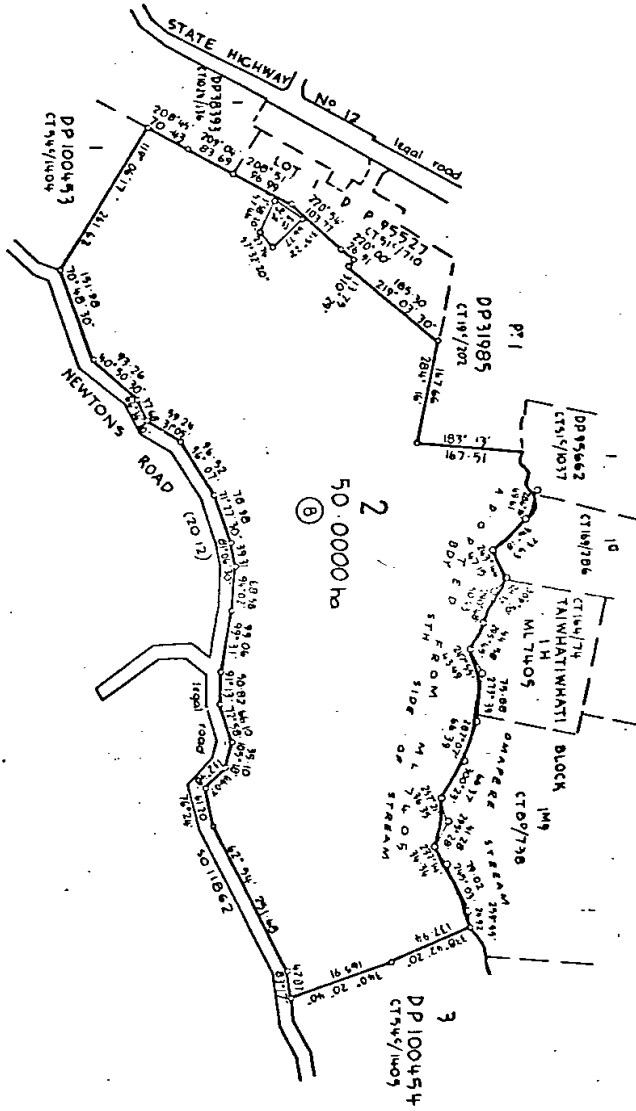
No. 52C / 1406

No. 9071/075

Signature amh

CERTIFICATE OF TITLE No.

COMPILED PLAN LIMITED AS TO PARCELS



FOR SURVEY INFORMATION FOR THE AREA TO BE EXCLUDED FROM RESTRICTIVE COVENANT SEE SHEET 1 DP100454  
 THERE IS NO LOT 1 ON THIS PLAN  
 AREA SHOWN ② IS TO BE SUBJECT TO A RESTRICTIVE COVENANT.

NEW CT ALLOCATED  
 LOT 2 CT 945/1404

APPROVED  
*[Signature]*  
 REGISTERED OWNERS

Total Area 50,000 ha  
 Comprised in Pt CT 924/244 1/3

I, Keith James Douglas Martin of Takapuna Registered Surveyor and holder of an annual practicing certificate hereby certify that this plan has been made from surveys conducted by me or under my direction, that both sites and surveys are correct and have been made in accordance with the regulations under the Survey Act 1981.  
 Dated at Takapuna this 25th day of July 1983  
*[Signature]*  
 Field Book 9  
 Reference Plan 501867, M.L. 2405, M.L. 1533, M.L. 2121  
 DP's 31985, 30393, 31782, 29500, 09427, 95545  
 Easements  
 DP100453, 31985, 30393, 31782, 29500, 09427, 95545

Field Book 9  
 Reference Plan 501867, M.L. 2405, M.L. 1533, M.L. 2121  
 DP's 31985, 30393, 31782, 29500, 09427, 95545  
 Easements  
 DP100453, 31985, 30393, 31782, 29500, 09427, 95545

Field Book 9  
 Reference Plan 501867, M.L. 2405, M.L. 1533, M.L. 2121  
 DP's 31985, 30393, 31782, 29500, 09427, 95545  
 Easements  
 DP100453, 31985, 30393, 31782, 29500, 09427, 95545

LAND DISTRICT NORTH AUCKLAND  
 SURVEY DISTRICT VII HOKIANGA  
 SHEET No. 006/4-2 & 006/4-2  
 W.M.S.

Lot 2 Being Part Lot 2 DP95945


LOCAL AUTHORITY Hokianga County  
 Surveyed by HARRISON AND GRIFFITHS AND PARTNERS  
 Scale 1:5000  
 Date June 1983

DP100455

54C/1406

D634529.1 CT 137D/1 issued to replace the duplicate  
hereof which has been declared lost.

Produced 27.8.2001 at 1.50 and entered 21.9.2001 at 9.00

  
for RGL

CANCELLED



References

Prior C/T 6C/902

Transfer No.  
N/C. Order No.B.108448



Limited as to Tenets

Land and Deeds 69

# REGISTER

No. S2A / 2444

## CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 15th day of September one thousand nine hundred and EIGHTYTWO under the seal of the District Land Registrar of the Land Registration District of NORTH AUCKLAND

WITNESSETH that VALERIE RENEE UNDERWOOD and SALLY BOYD, Both of Auckland, Married Women as tenants in common in equal shares, are

seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 63.7000

hectares more or less being Lot 2 Deposited Plan 95945 and being part of Pukanui 192N Block

PLAN 100453 (LODGE) 2.9.83.  
454  
455.



*[Signature]*

Assistant Land Registrar

Interests at Date of Issue:

B.108447.2 Easement Certificate affecting Lots on Plan 95527

Nature      Servient Land      Dominant Land

R.O.W.      pt Lot 1 marked "A" on Plan 95527      herein

- 15.9.1982 at 9.42 o'c.

*[Signature]*  
A.L.R.

B.174144.2 Transfer to Alister John Babbage of Omapete, Farmer and Brenda Ruth Babbage his wife - 12.5.1983 at 10,33 0'c

*[Signature]*  
A.L.R.

Fencing Covenant in Transfer B.174144.2

*[Signature]*  
A.L.R.

B.174144.4 Mortgage to Alan Christie Stedman, Anne Gertrude Gambrill and Paul Crawford Sutcliffe - 12.5.1983 at 10.33 0'c

*[Signature]*  
A.L.R.

B.273257.1 Discharge of Mortgage B.174144.4 as to Lot 1 Plan 100453 and Lot 3 Plan 100454- 21.3.1984 at 1.30 o'c

*[Signature]* A.L.R.

B.273257.2 Certificate of Compliance under Section 306 1(f)(i) Local Government Act 1974 (affects Plan 100453)- 21.3.1984 at 1.30 o'c

*[Signature]* A.L.R.

B.273257.3 Certificate of Compliance Under Section 306 1(f)(i) Local Government Act 1974 (affects Plan 100454)- 21.3.1984 at 1.30 o'c

*[Signature]* A.L.R.

B.273257.4 } Cancelled as to Lot 1  
O.N.C.T. } Plan 100453 and  
21.3.1984 } new CT issued  
54C/1404

*[Signature]* A.L.R.

B.273257.5 } Cancelled as to Lot 3  
O.N.C.T. } Plan 100454 and  
21.3.1984 } new CT issued  
54C/1405

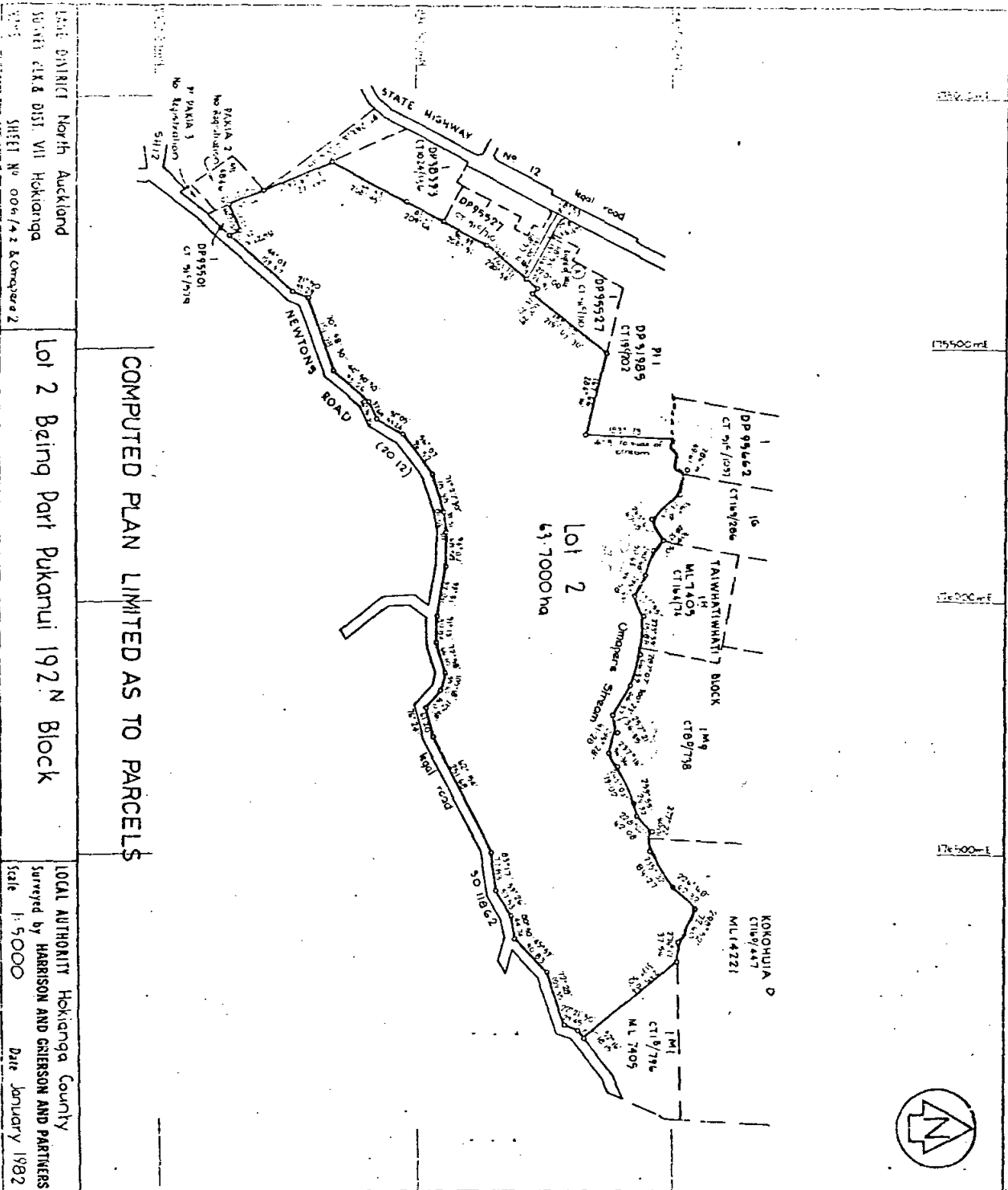
*[Signature]* A.L.R.

SEE OVER.....

Measurements are Metric

No. S2A-2444



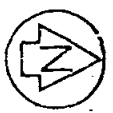


COMPUTED PLAN LIMITED AS TO PARCELS

Lot 2 Being Part Pakiamui 192 N Block

LOCAL AUTHORITY North Auckland  
 DISTRICT COUNCIL HOKIANGA  
 SHEET No 006/A2 & Cmap 2

LOCAL AUTHORITY Hokianga County  
 Surveyed by HARRISON AND GIBSON AND PARTNERS  
 Scale 1:5000 Date January 1982



NOTE: There is no lot 1 on this plan

PROPOSED EASEMENT  
 Purpose: Shovel Servicing Easement  
 Date of Map: 1982  
 Registered Owners: [Blank]

New LT Allocated: Lot 2-52N/224

Total Area: 63.7000 ha  
 Comprised in CT 67/1027 (bound a) (approx. 4.5 ha) - CT 67/1701

Berry Lindsay Shovel  
 Registered Servant and holder of an easement benefiting easement  
 hereby certify that this plan has been made from surveys conducted  
 by me or under my direction. That all the poles and stones are correct  
 and have been made in accordance with the regulations under the  
 Survey Act 1976  
 Signed at Takahanga this 23rd day of [Blank] 1982  
 of [Blank] 18 82. Signature: [Signature]  
 Field Book: [Blank]  
 Reference Plan: 50/1842, ML 1305, ML 1353A, ML 1353B,  
 DP 95945, DP 95946, DP 95947, DP 95948, DP 95949, DP 95950,  
 DP 95951, DP 95952, DP 95953, DP 95954, DP 95955, DP 95956,  
 DP 95957, DP 95958, DP 95959, DP 95960, DP 95961, DP 95962,  
 DP 95963, DP 95964, DP 95965, DP 95966, DP 95967, DP 95968,  
 DP 95969, DP 95970, DP 95971, DP 95972, DP 95973, DP 95974,  
 DP 95975, DP 95976, DP 95977, DP 95978, DP 95979, DP 95980,  
 DP 95981, DP 95982, DP 95983, DP 95984, DP 95985, DP 95986,  
 DP 95987, DP 95988, DP 95989, DP 95990, DP 95991, DP 95992,  
 DP 95993, DP 95994, DP 95995, DP 95996, DP 95997, DP 95998,  
 DP 95999, DP 96000

Approved as to Survey: [Signature]  
 3 / 2 / 82 (Field Surveyor)  
 Deposited this 15th day of [Blank] 1982  
 [Signature]  
 Registrar of Land  
 DP 95945

B.273257.6 ) Cancelled as to Lot 2  
O.N.C.T. } Plan 100455 and  
21.3.1984 } new CT issued

54C/1406/

Residue C.T. 770/242

*W. H. H. H.*

A.L.R.

-CANCELLED-  
DUPLICATE DESTROYED



B108447.2  
EC

Approved by the District Land Registrars: North Auckland 422175, South Auckland H.008116/1974, Canterbury 957768, Marlborough 75776, Gisborne 112239.9, Hawkes Bay 303051, Taranaki 217464.1, Wellington A038045, Westland 45629.

## EASEMENT CERTIFICATE

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

± WE, SALLY BOYD of Auckland, Married Woman and  
VALERIE RENEE UNDERWOOD of Auckland, Married  
Woman as tenants in common in equal shares

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 \_\_\_\_\_ day of \_\_\_\_\_ 19 \_\_\_\_\_ on the \_\_\_\_\_ under No. 95527 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. 95527  
95945

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	Lot 1 D.P.95527	Marked "A".	Lot 2 D.P. 95945	

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:

IT IS HEREBY AGREED AND DECLARED that in the event of any dispute hereunder the provisions of the Arbitration Act, 1908 will apply herein.

*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:

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

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

Dated this 20<sup>th</sup> day of

July 1982

Signed by the above-named SALLY BOYD  
and VALERIE RENEE UNDERWOOD  
by her Attorney ANNE  
GERTRUDE GAMBRILL

in the presence of

Witness John Rank

Occupation Fun to look to

Address Auckland

Boyd  
Valerie Renee  
Underwood by  
her Attorney  
Anne Gertrude Gambrell  
Anne Samuel

# 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*

*Anne Sumrell*

*(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 .....

9.42 15.SEP82 B108447.2  
PARTICULARS ENTERED IN REGISTER,  
LAND REGISTRAR AUCKLAND  
ASST. LAND REGISTRAR  
10

MACKAY & GAMBRILL,  
SOLICITORS,  
AUCKLAND.



I, ANNE GERTRUDE GAMBRILL of Auckland Solicitor do solemnly and sincerely declare as follows :-

1. THAT I have executed the annexed \_\_\_\_\_  
*Power of Attorney*  
as the attorney and in the name of the therein named and described VALERIE RENEE UNDERWOOD of Auckland Bookkeeper under and by virtue of a certain Power of Attorney bearing date the 27th day of December 1980

2. THAT I have not received any notice or information of the revocation of the said Power of Attorney by death or otherwise and I verily believe the same to be in full force and effect

AND I MAKE THIS SOLEMN DECLARATION conscientiously believing the same to be true and by virtue of the Oaths and Declarations Act 1957

*lodged B 057525.1 - Full power*

DECLARED at Auckland )

this 20<sup>th</sup> day of July )  
1982 before me:- )

*Anne Gerwill*

*C.A. Gambrell*

A Solicitor of the High Court of New Zealand

B 273257.7 ENC  
MEMORANDUM OF ENCUMBRANCE

(Approved by the District Land Registrar, Auckland, No. 4394/82)

Encumbrancer: ALISTER JOHN BABBAGE of Omapere, Farmer  
and BRENDA RUTH BABBAGE his wife  
(in this Memorandum called "the Encumbrancer")

Council: HOKIANGA COUNTY  
THE ~~MANUKAU CITY~~ COUNCIL  
(in this Memorandum called "the Council")

WHEREAS:

- 15MC84 200645 DTY \$10.00  
NEW ZEALAND STAMP DUTY AKS
- (1) The Encumbrancer is registered as proprietor of an estate in fee simple in the land described in the *Second Schedule*.
  - (2) The land is situate in the district of the Council.
  - (3) As a result of the circumstances disclosed in the *Third Schedule* the Encumbrancer has agreed: —
    - (a) to grant and make the rent charge with the Council as set out, and subject to the conditions expressed, in the *First Schedule*; and
    - (b) to enter into the covenants in the Council's favour as set out in the *Fourth Schedule*.

NOW THIS MEMORANDUM WITNESSES that the Encumbrancer ENCUMBERS the land for the benefit of the Council as set out in the *First Schedule* AND COVENANTS with the Council as set out in the *Fourth Schedule*.


IN WITNESS WHEREOF this Memorandum has been executed this  
12<sup>th</sup> day of March 1984

SIGNED by  
THE COMMON SEAL of


was affixed hereto in  
the presence of:—

SIGNED by ALISTER JOHN )  
BABBAGE and )  
BRENDA RUTH BABBAGE )  
in the presence of :

X  
Anne Lambert  
Solicitor  
Auckland

  
B R Babbage

Correct for the purposes of  
the Land Transfer Act 1952

  
Solicitor for the  
Encumbrance Council



**FIRST SCHEDULE**  
(Terms and Conditions of Encumbrance)

1. The term of this Encumbrance is 999 years commencing from the date hereof subject to earlier determination in the events provided in the *Fifth Schedule*.
2. The rent charge is ONE DOLLAR (\$1.00) to be paid to the Council by the 1st day of January in each year if demanded by that date. The first payment if so demanded is due on or before the 1st day of January next succeeding the date of this Memorandum.
3. The covenants of the *Fourth Schedule* shall be enforceable only against the owners and occupiers for the time being of the land and not otherwise against the Encumbrancer and his successors in title.
4. Section 104 of the Property Law Act 1952 applies to this Memorandum of Encumbrance but otherwise (and without prejudice to the Council's rights of action at common law as a rent-chargee):—
  - (a) The Council shall be entitled to none of the powers and remedies given to Encumbrancees by the Land Transfer Act 1952 and the Property Law Act 1952; and
  - (b) No covenants on the part of the Encumbrancer and his successors in title are implied in this Memorandum other than the covenants for further assurance implied by Section 154 of the Land Transfer Act 1952.
5. Insofar as the exercise of its discretion by the Council in the circumstances set out in the *Third Schedule* may amount to moneys worth provided by the Council within the meaning of Section 3(1)(a) of the Credit Contracts Act 1981 then the moneys worth so provided equates or exceeds the aggregate of the annual rent charge payable by the Encumbrancer during the term hereof.
6. In the event of the Encumbrancer wishing to enter into a mortgage or mortgages of the land to have priority to this Memorandum the Encumbrancer shall be entitled at his own cost in all things to a Memorandum of Priority granted by the Council in favour of any such mortgages or mortgages PROVIDED that the mortgagee thereunder consents to and acknowledges that it is bound by the covenants of this Memorandum for the purposes of Section 105 of the Land Transfer Act 1952.
7. In this Memorandum and its Schedules:—
  - (a) "the land" refers to that described in the *Second Schedule* and any part of it.
  - (b) "Schedule" refers to the several Schedules attached to this Memorandum.
  - (c) Words importing the singular number or plural number shall include the plural number and singular number respectively and words importing the masculine gender shall include the feminine or neuter gender.

CONSULTING ENGINEERS  
CIVIL & STRUCTURAL BOX 795 AUCKLAND 1 NEW ZEALAND TELEPHONE 797-744  
 MAIN RD. KERIKERI NEW ZEALAND TELEPHONE 79-332

Ref:

17 November 1982.

REPORT ON PROPOSED SUBDIVISION OF LOT 2 DP 95945 AND  
PT PUKANUI 192N AT NEWTONS ROAD, OMAPERE FOR B & A BABBAGE

This subdivision involved the creation of four smaller lots of 4.2 to 8.8 hectares and one larger pastoral lot of 50.6 ha, with two of the smaller lots above Newtons Road and the remainder below.

All the land occupies the upper portion of the hills above Omapere and faces north-west with Lot 1 extending down to the State Highway 12 at the Omapere township level.

Newtons Road which divides the proposed subdivision runs along or near the ridge above Omapere and from this vantage point the typical geology of the South Hokianga Ridge can be seen with poorly drained slopes showing signs of slumping and surface movement particularly in the open, rush clad pasture of Lot 1.

The local soils consist of a conglomerate of sandstone pebbles in a matrix of clay and with less pebbles in the areas nearer the ridge. Generally, the ridges which are more weathered are more stable than the slopes which show signs of soil creep towards the lower flats where the weathered deposited material has formed a small foreshore flat.

Lots 4 and 5

These two lots are above the road at or near the ridge and consequently are better drained and more stable than the lower slopes. The soils have more yellow clay at the upper levels with firm layers of sedimentary conglomerates at depth as can be seen by the road cut below Lot 4.

Access to Lot 5, which contains an airstrip, is easily obtained from Newtons Road below the airstrip which rises at 10° and several suitable building sites can be obtained here.

Access to Lot 4 is obtained from the junction of Newtons Road with the unformed legal road and a ridge runs back parallel with Newtons Road. This ridge, which rises steeply above Newtons Road, offers a number of suitable building sites.

(Continued ...)

Lot 3

This lot near the start of Newtons Road and just below the road on a moderately sloping upper area with a watercourse crossing it, shows signs of poor soil drainage with rush-covered areas. However, as this piece of land is not steeply sloping, it is considered that with careful attention to drainage, a house site can be obtained in the region near the existing neighbouring house site.

Lot 2

This lot is at the far end of Newtons Road, and in the region occupied by the existing haybarn a ridge plateau offers an excellent house site with few problems of drainage or stability. The bulk of this 8.8 hectare block is steeply sloping bush clad slope of only scenic value, however, the upper grassed area is stable with an additional building area obtainable just below the road near the boundary of Lot 1.

Lot 1

This large pastoral lot comprises the majority of the cleared sloping pastureland of the face of the Omapere backdrop, and generally Newtons Road has been formed in a manner making access very difficult down the steep fill slope from the road edge to the Lot 1 slope.

The land shows extensive surface creep and is poorly drained, as is evidenced by the presence of rushes. The majority of the land is not stable, undergoing a change in surface slope due to removal of the original bush cover.

There is no obvious house site or point of easy access on the upper part of Lot 1 and the only house site obtainable is at the head of the R.O.W. from State Highway 12 where a small area similar to the surrounding house sites exists.

It would seem sensible to consider altering the boundary between Lots 1 and 2 to include the house site available in the top corner of Lot 2 next to Lot 1.

In general, although problems do occur particularly on Lot 1, there are house sites available on each lot, however, siteworks should be minimised and drainage carefully detailed in order not to cause any deterioration of the existing situation.

Septic drainage will be difficult on Lots 1 and 3, but they are quite large lots and suitable details could be drawn up at construction time to overcome the problems of these two sites.

W BROWN

*Walter Brown*  
*reg. engineer.*



CONSULTING ENGINEERS  
CIVIL & STRUCTURAL

BOX 795 AUCKLAND 1 NEW ZEALAND TELEPHONE 797-744  
 MAIN RD. KERIKERI NEW ZEALAND

13 DEC 1982  
K. A. M. E.  
KOKOHUIA COUNCIL

Ref:

9 December 1982

ADDENDUM TO REPORTS ON PROPOSED SUBDIVISION OF PT KOKOHUIA C  
AND PROPOSED SUBDIVISION OF LOT 2 DP 95945 OWNED BY MR A BABBAGE

B/T  
32/1

Soakage test holes were bored on Lots 2 and 3 Kokohuia Road and Lots 1 and 3 Newtons Road, which were the four sections giving most concern over future building problems associated with septic drainage. These holes were presoaked for 24 hours and then refilled to 250mm below ground level and the water drops timed.

Lot 2 Kokohuia Road

The test was taken just below the recently formed access road and showed a stoney conglomerate in a clay matrix and resulted in 70mm percolation per hour. This was the lowest figure achieved and will require a larger than normal soakage field, however, the site is quite large and it is considered that a soakage field can be obtained.

Lot 3 Kokohuia Road

This test also was taken on the upper part of the site and revealed moist black topsoil with no clay in the upper 750mm. a percolation rate of 110mm per hour was obtained here.

Lot 1 Newtons Road

This test was taken in the lower area of the site at the head of the State Highway 12 Right of Way. Medium firm damp yellow clay was found and a percolation rate of 140mm per hour obtained. As the recommended house site for this lot is down by S.H. 12, it is likely that connection to the town sewerage scheme will be obtainable.

Lot 3 Newtons Road

The test was carried out near an existing house site and fairly dry, yellow clay was found below the brown topsoil. A percolation rate of 370mm per hour which is quite high was obtained. This would indicate that a septic system similar to that existing on the neighbouring site would prove suitable.

W BROWN



# BROWN & THOMSON

CONSULTING ENGINEERS  
CIVIL & STRUCTURAL

BOX 795 AUCKLAND 1 NEW ZEALAND TELEPHONE 797-744  
 MAIN RD. KERIKERI NEW ZEALAND TELEPHONE 79-332

Ref:

8 February 1983

ADDENDUM TO REPORT ON PROPOSED SUBDIVISION OF LOT 2, DP 95945  
AND PT PUKANUI 192N AT NEWTONS ROAD, OMAPERE, SOUTH HOKIANGA

At the request of the Hokianga Council and the owner, Lots 1, 2 and 3 were re-inspected to more closely ascertain the suitable house building sites on these lots. Lots 4 and 5 it had been agreed, being ridge sites, offered several suitable positions. The accompanying plan 1989 has had the suitable areas on Lots 1, 2 and 3 marked on.

Starting from the entrance to Newtons Road, Lot 3 on the left hand side below the road has quite a large area suitable for construction on the terraced and gently sloping land in front of the existing house on Lot 1 DP 95501. There is easy access from an existing gateway and avoids crossing the watercourse which cuts diagonally across Lot 3. The land on the eastern side of the watercourse is generally poorly drained and not suitable. The land below the proposed building site is not steep sloping and offers a large area for septic drainage without the soakage causing any worsening of ground stability.

Lot 1, the next on the left consists mainly of steep rutted pasture unsuitable for housing development, however, a house site has been identified above the existing water tank to the southwest of the cowshed which is found at the the head of the State Highway 12 accessway.

This house site is on a small knoll ridge and is well protected from the stormwater courses which run across the lower parts of Lot 1. Access will have to be carefully formed following the outline of a previous old accessway and all watercourse crossings to be well culverted with at least 450mm diameter pipes.

Lot 2 is at the end of Newtons Road on the left, and the area indicated on the plan consisted of a large gently sloping plateau currently in grass, with few rushes and containing a hay barn. As with Lot 3 there is a large area below the building site area which would be suitable for septic irrigation without affecting any steeper sloping ground.

W BROWN

WAYNE BROWN BE MNZIE  
Kerikeri

W G THOMSON BE MNZIE  
Auckland

SECOND SCHEDULE

FIRSTLY 4.2104 HECTARES more or less being Lot 1 Deposited Plan 100453 being part Pukanui 192N Block being all CERTIFICATE OF TITLE 54C/1404 (North Auckland Registry) Subject to Fencing Covenant in Transfer B.174144.2

SECONDLY 50 HECTARES more or less being Lot 1 Deposited Plan 100455 being all CERTIFICATE OF TITLE VOLUME 54C/1406 (North Auckland Registry) Limited as to Parcels. Subject to Mortgage B.174144.4 having an appurtenant right of way created by B.108447.2 and subject to Fencing Covenant in Transfer 174144.2 and Mortgage B.174144.4

THIRDLY 9.137 HECTARES more or less being Lot 3 Deposited Plan 100454 being part Pukanui 192N Block being all CERTIFICATE OF TITLE 54C/1405 (North Auckland Registry) Subject to Fencing Covenant in Transfer B.174144.2

THIRD SCHEDULE

WHEREAS the Registered Proprietors have applied to the Hokianga County Council for its approval of a subdivision of the land described in the Second Schedule hereto

AND WHEREAS a condition of the approval of the subdivision has been that the owners or registered proprietors of the land will enter into a restrictive covenant not to erect any buildings on any of the aforesaid lands described in the Second Schedule without Council approval.

AND WHEREAS for the purposes of obtaining approval of the aforesaid subdivision the registered proprietors have agreed to grant an encumbrance in favour of the Hokianga County Council to be registered against the lands described in the

Second Schedule to ensure that any buildings are erected only on the lands designated as suitable for building on by the said Council and to ensure that before the registered proprietors for the time being may seek a building permit from the Hokianga County Council a foundation investigation report shall be prepared by a registered engineer as hereinafter provided and shall be furnished to the County for their approval.

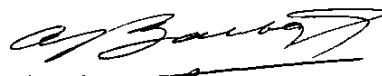
FOURTH SCHEDULE (THE COVENANTS)


1. THAT the Encumbrancer is, and shall ensure, that all those coming to have an estate or interest in the land are aware of the reports prepared by Brown & Thompson dated 17th November, 1982, 9th December, 1982 and 8th February, 1983 (of which copies are attached), and that all building permit applications are to be accompanied by a foundation investigation report prepared by a Registered Engineer either experienced in soil mechanics, or with the assistance of a Registered Engineer so experienced at the Encumbrancer's cost and to the satisfaction of the Council.
2. TO comply with the recommendations of the aforesaid reports as to any buildings on, or development of the land to the satisfaction of the Council at all times such development including site works, bores and swimming pools.
3. THAT the Encumbrancer shall pay all legal costs and disbursements directly or indirectly attributable to the preparation, execution, stamping, registration, enforcement and ultimate discharge of this Memorandum and its covenants.

FIFTH SCHEDULE (EVENTS FOR TERMINATION)

UPON the Council being satisfied that the covenants of the Fourth Schedule have become obsolete, unnecessary or no longer enforceable.

SIGNED by the said ALISTER JOHN )  
BABBAGE and BRENDA RUTH )  
BABBAGE in the presence )  
of : )

  
B.R. Babbage

  
Solicitor  
Architect

MEMORANDUM OF ENCUMBRANCE

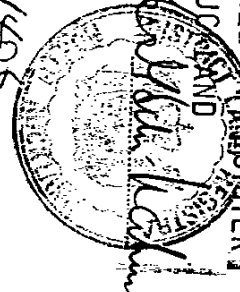
A.J. and B.R. BABBAGE

Encumbrancer

HOKIANGA COUNTY COUNCIL

MACKAY & GAMBRILL,  
SOLICITORS,  
AUCKLAND.

1.30 21.MAR84 B 27325877  
PARTICULARS ENTERED IN REGISTER  
LAND REGISTRY AUCKLAND  
ASST. LAND REGISTRAR  
*SMP/244*  
*SUC/1404 - 1406*



B2732577

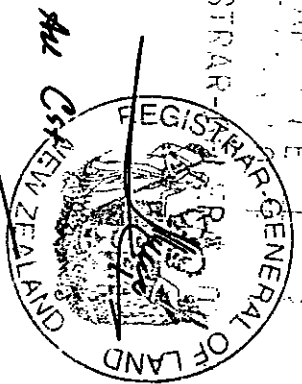


**LINZ COPY**

9.01 27 JUN 01 D 616625 /



REGISTRAR GENERAL OF LAND  
for REGISTER-



**SCHEDULE FOR LIMITED ACCESS ROAD DECLARATION**  
**STATE HIGHWAY No 12 – FROM RP 0/00 – RP 0/14.05**  
**SECTION Pakanae to Waitemarama**

**LEFT SIDE PROPERTIES**

Access Survey Date: March 2000

Page 22 of 31 Pages

DESCRIPTION AND TITLE OF LAND	CP NO.	CROSSING PLACE PARTICULARS	REGISTERED PROPRIETOR NOT FOR PUBLICATION	REMARKS
Lot 22 DP 35077 CT 1129/35	122	Access for vehicles associated with one residential dwelling. At RP 61/5.680	Viola Clarisse WATSON & Bryan Carlisle RUSSELL	Access to house. <i>- invalid title Ref</i>
Lot 21 DP 35077 CT 1065/110	123	Access for vehicles associated with one residential dwelling. At RP 61/5.713	Lynette FEARON & David Robert FEARON	Access to house.
Lot 20 DP 35077 CT 1098/237	124	Access for vehicles associated with one residential dwelling. At RP 61/5.719	Lance Mathew BRYERS & Rayma Gay BRYERS	Access to house.
Lot 1 DP 95527 CT 51C/710	125	Shared R.O.W access for vehicles associated with farm paddocks. At RP 61/5.739	Douglas James BLAIKIE & Te Kotuhi Tosie ROGERS	Access to paddocks. Servient access subject to R.O.W in favour of Lot 2 DP 100455.
Lot 2 DP 100455 CT 54C/1406	125	Shared R.O.W access for vehicles associated with farm paddocks. At RP 61/5.739	Stanley John ASKEW & Lorraine Patricia ASKEW	Access to paddocks. Dominant access via R.O.W over Lot 1 DP 95527. Access also available via Newton Road.
Lot 19 DP 35077 CT 999/244	126	Access for vehicles associated with a commercial premises (garden centre & florist). At RP 61/5.767	Timothy Alick REUBEN & Kerrie Jayne REUBEN	Access to Omapere Produce and Garden Centre.
Lot 18 DP 35077 CT 943/76	127	Access for vehicles associated with one residential dwelling and an accessory building. At RP 61/5.804	Cynthia Ivy HEDGER	Access to house and garage/workshop.
Lot 17 DP 35077 CT 1065/109	128	Access for vehicles associated with one residential dwelling. At RP 61/5.810	Yvonne Marie GODFREY	Access to house.
Lot 16 DP 35077 CT 1319/31	129	Access for vehicles associated with one residential dwelling. At RP 61/5.832	Patricia Helen LAWN	Access to house.
Lot 15 DP 35077 CT 996/56	130	Access for vehicles associated with one residential dwelling. At RP 61/5.866	Elizabeth Heather PENNELL	Access to house.
Lot 14 DP 35077 CT 1129/36	131	Access for vehicles associated with one residential dwelling. At RP 61/5.885	Frederick James BEAZLEY & Faye Lillian BEAZLEY	Access to house.

Notes : - As shown on Plan No LA 11/43/1 deposited in the office of Transit New Zealand at Auckland  
 - LAR 919

**Declaring State Highway to be Limited Access  
Road—State Highway No. 12, Pakanae to  
Waiotemarama**

It is notified that Transit New Zealand, by resolution dated 4 October 2000 and pursuant to section 88 (1) of the Transit New Zealand Act 1989, hereby declares that part of State Highway No. 12 in Northland commencing at its intersection with the northern end of Waiotemarama Gorge Road at Pakanae (Route Position 61/0.00) and proceeding in a southerly direction for a distance of 12.98 kilometres to its intersection with the southern end of Waiotemarama Gorge Road at Waiotemarama (Route Position 61/12.98); as more particularly shown on Plan LA/11/43/1 and accompanying Schedule held in the office of the Regional Manager, Transit New Zealand, Auckland, and there available for public inspection, to be a limited access road.

Dated at Wellington this 31st day of October 2000.

Signed on behalf of Transit New Zealand by:

M. K. LAUDER, State Highway Control Manager.

au8168

---

D 643570.1 TE

# **TRANSFER**

**Land Transfer Act 1952**

**This page does not form part of the Transfer.**

**TRANSFER**  
**Land Transfer Act 1952**

If there is not enough space in any of the panels below, cross-reference to and use the approved Annexure Schedule: no other format will be received.

**Land Registration District**

NORTH AUCKLAND

**Certificate of Title No.**    **All or Part?**    **Area and legal description — Insert only when part or Stratum, CT**

115B	198	All	
------	-----	-----	--

**Transferor Surnames must be underlined**

Suzanne Marie Crabb

**Transferee Surnames must be underlined**

Stanley John Askew and Lorraine Patricia Askew

**Estate or Interest or Easement to be created: Insert e.g. Fee simple; Leasehold in Lease No. ....; Right of way etc.**

Easement of right to convey water (continued on page 2 Annexure Schedule)

**Consideration**

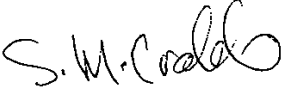

\$1.00

**Operative Clause**

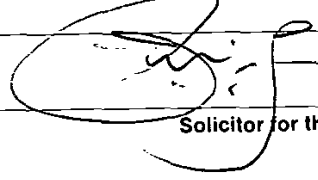
For the above consideration (receipt of which is acknowledged) the TRANSFEROR TRANSFERS to the TRANSFEEE all the transferor's estate and interest described above in the land in the above Certificate(s) of Title and if an easement is described above such is granted or created.

Dated this 20<sup>th</sup> day of November 2000

**Attestation**

	Signed in my presence by the Transferor
	Signature of Witness 
	<b>Witness to complete in BLOCK letters</b> (unless typewritten or legibly stamped)
	Witness name                      GREGORY LESLIE DAVIS Occupation                           SOLICITOR Address                                KAIKOHE
Signature, or common seal of Transferor	

**Certified correct for the purposes of the Land Transfer Act 1952**  
Certified that no conveyance duty is payable by virtue of Section 24(1) of the Stamp and Cheque Duties Act 1977  
(DELETE IF APPLICABLE CERTIFICATE)

  
Solicitor for the Transferee

Annexure Schedule

TRANSFER

Dated

20<sup>th</sup> November 2020

Page

2

of

2

Pages

Continuation of "Estate or Interest or Easement to be created"

The Transferee shall have the right to convey water over the part of the land in Certificate of Title 115B/198 marked "A" on DP 204203 being forever appurtenant to the land of the Transferee contained in Certificate of Title ~~540/1106~~, 137D/1 ✓

The waterline shall have an internal diameter not more than 25mm.

The Transferee shall not be entitled to sell any of the water.

If this Annexure Schedule is used as an expansion of an instrument, all signing parties and either their witnesses or their solicitors must put their signatures or initials here.

S.M. Coates



Approved by Registrar-General  
of Land under No. 1995/1004

# TRANSFER

Land Transfer Act 1952

Law Firm Acting
CONNELL RISHWORTH SOLICITORS WHANGAREI

Auckland District Law Society  
REF 4135

*Both MELLS*

REGISTRAR-GENERAL OF LAND  
LAND REGISTRY NO. 1

PATRICULARS ENTERED IN THE BOOK

**This page is for Land Registry Office use only.**  
(except for "Law Firm Acting")

2.07 26.SEP01 D 643570 -/

LINZ COPY ⊕

## **Appendix 3**

# **Chorus & Top Energy Correspondence**



Wendy Wickens

---

From: Chorus Property Development Do Not Reply <npdnoreply@chorus.co.nz>  
Sent: Friday, 19 July 2024 10:14 AM  
To: npdnoreply@chorus.co.nz  
Subject: Chorus 10918798 : We can service your development

Follow Up Flag: Follow up  
Flag Status: Flagged



Hi

Your reference: 0111S Wiltshire  
Development address: 79 Newton Road, Omapere, Far North  
District, 0473

This email is to confirm that Chorus can provide our fibre network to your development. An indicative cost for the work we would need to do (noting that this excludes costs for any work you may be required to do inside the site boundary) is presented in the below notes:

A high level estimate to extend our fibre network to your development is in excess of \$100,000 Incl. GST.

Please note: The communications technology available to serve customers in our rural areas is rapidly changing. Copper is no longer the only option for customers, and is in some cases, not the best option. New Zealand runs on fibre, and the UFB roll-out has gone past 87 per cent of Kiwis. We would like to extend fibre further to enable more Kiwis to receive the best technology available. We will not be investing in extending the copper network further.

If you would like this formalised into a quote, then please [log in to your account](#) and let us know. If you need to amend the connection numbers or provide updated plans, you can also do that via your account.

Chorus New Property Development Team

Please do not reply to this email as this inbox is not monitored. For any follow up queries please visit [www.chorus.co.nz/develop-with-chorus](http://www.chorus.co.nz/develop-with-chorus) or [log in to your account](#). If you do not yet have an account with us, you will need to [create an account](#) to view your job progress and documentation.



22 July 2024

*Top Energy Limited*

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

Sapphire Surveyors Ltd

Email: [wendy@sapphiresurveyors.co.nz](mailto:wendy@sapphiresurveyors.co.nz)

To Whom It May Concern:

**RE: PROPOSED SUBDIVISION  
SN Wiltshire – 79 Newton Road, Omapere. Lot 2 DP 100455.**

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

Top Energy's requirements for this subdivision are nil.

Costs to supply power to proposed Lots 1-3 could be provided after application and an on-site survey have been completed.

Link to application: [Top Energy | Top Energy](#)

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

If you have any further queries, please do not hesitate to contact the writer.

Yours sincerely

**Aaron Birt**

Planning and Design

T: 09 407 0685

E: [aaron.birt@topenergy.co.nz](mailto:aaron.birt@topenergy.co.nz)

## **Appendix 4**

# **NZTA Correspondence**

Wendy Wickens

---

From: Perri Unthank <Perri.Unthank@nzta.govt.nz>  
Sent: Monday, 22 July 2024 3:09 PM  
To: Wendy Wickens  
Subject: NZTA Comments - 79 Newton Rd, Omapere - Application-2024-0881  
CRM:0480000012

Follow Up Flag: Follow up  
Flag Status: Flagged

Kia ora Wendy,

Thank you for consulting the NZ Transport Agency Waka Kotahi (NZTA) seeking comments for the 4-lot subdivision at 79 Newton Road, Omapere and associated sealing of the vehicle crossing associated with Lot 1 DP 95527. NZTA has reviewed the proposal and determined that as the newly subdivided sites are accessed off Newton Road and the land use of the balance lot is not changing, no specific conditions are recommended. As the vehicle crossing is located within the 50km/h zone, the upgrade shall be designed in accordance with the Far North District Council design standards.

Before you undertake any physical work on the state highway, including the formation or change to any vehicle crossing, you are legally required to apply to the New Zealand Transport Agency for a Corridor Access Request (CAR) and for that request to be approved pursuant to Section 51 of the Government Rounding Powers Act 1989. A CAR is submitted online via [www.submitica.com](http://www.submitica.com) a minimum of fourteen working days prior to the commencement of any works on the state highway; longer is advised for complex works.

Please also note that any future change to the land use requires a reassessment of the accessway by NZTA in response to the specific proposal.

If you need any additional information, please feel free to contact me.

Ngā mihi

**Perri Unthank**

**Principal Planner, Environmental Planning (Auckland/Northland)**

Poutiaki Taiao| System Design

Email: [perri.unthank@nzta.govt.nz](mailto:perri.unthank@nzta.govt.nz)

Phone: 09 953 5182

Mobile: 021 236 6204

Waka Kotahi New Zealand Transport Agency

Auckland, Level 5, AON Centre, 29 Customs Street West  
Private Bag 106602, Auckland 1143, New Zealand

[Facebook](#) | [Twitter](#) | [LinkedIn](#)



[www.nzta.govt.nz](http://www.nzta.govt.nz)

Please note I work Mon-Thu

## **Appendix 5**

# **Site Suitability Report**



**geologix**  
consulting engineers

# SUBDIVISION SITE SUITABILITY ENGINEERING REPORT

79 NEWTON ROAD, LOT 2 DP 100455,  
OMAPERE


SUSAN WILTSHIRE

**C0428-S-01-R02**  
**JULY 2024**  
**REVISION 2**





## DOCUMENT MANAGEMENT

<b>Document Title</b>	Subdivision Site Suitability Engineering Report
<b>Site Reference</b>	79 Newton Road, Omapere
<b>Client</b>	Susan Wiltshire
<b>Geologix Reference</b>	C0428-S-01-R02
<b>Issue Date</b>	July 2024
<b>Revision</b>	02
<b>Prepared</b>	Sander Derks Graduate Civil Engineer, Dip. Eng 
<b>Reviewed</b>	Sebastian Hicks Principal Civil Engineer, CPEng, CMEngNZ, IntPE(NZ) /APEC Engineer
<b>Approved</b>	Edward Collings Managing Director, CEnvP Reg. 0861, CPEng Reg. 1033153, CMEngNZ
<b>File Reference</b>	Z:\Projects\C0400-C0499\79 Newton Road, Omapere - C0428\06 - Reports\FOR REVIEW\R02\C0428-S-01-R02.docx

## REVISION HISTORY

Date	Issue	Prepared	Reviewed	Approved
May 2024	First Issue	SD	SH	EC
July 2024	Second Issue	SD	SH	EC



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## 1 INTRODUCTION

This Site Suitability Engineering Report has been prepared by Geologix Consulting Engineers Ltd (Geologix) for Susan Wiltshire 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 a Resource Consent application in relation to the proposed subdivision of a rural property Lot 2 DP 100455 off Newton Road, Omapere, the 'site'. Specifically, this assessment addresses engineering elements of natural hazards, wastewater, stormwater, internal roading and associated earthwork requirements to provide safe and stable building platforms with less than minor effects on the environment as a result of the proposed activities outlined in Section 1.1.

Furthermore, the report provides an assessment of Newton Road which is the public road accessing the proposed subdivision.

### 1.1 Proposal

A proposed scheme plan was presented to Geologix at the time of writing, prepared by Sapphire Surveyors<sup>1</sup> and reproduced within Appendix A as Drawing No 500. It is understood the Client proposes to subdivide the site to create 3 new residential lots with a balance Lot 4 containing an existing development. The above is summarised in Table 1. Amendments to the referenced scheme plan may require an update to the recommendations of this report which are based on conservative, typical rural residential development concepts.

The site is located in the rural production zone as per the FNDC Operative District Plan.

*Table 1: Summary of Proposed Scheme*

Proposed Lot No.	Size	Purpose
1	2.0 ha	New residential lot
2	2.0 ha	New residential lot
3	2.0 ha	New residential lot
4	44 ha	Balance lot (Existing residential)

Site access for each lot will be provided from Newton Road at the southern boundary to each property from separate and shared new vehicle crossings. Each vehicle crossing has been considered with a safety aspect in relation to visibility of incoming and outgoing vehicle movements. A specific Traffic Impact Assessment (TIA) is not within the scope of this report.

## 2 DESKTOP APPRAISAL

The site is located along the northern edge of Newton Road which has an irregular alignment to define the southern boundary. Topographically the site area is undulating with gullies trending predominantly northward from a ridgeline extending along Newton Road. The

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<sup>1</sup> Sapphire Surveyors, Scheme Plan Ref. 011S, dated 23 November 2023.



overall slope of the terrain is moderate to steep, levelling toward sea level at the northwestern boundary. The northern boundary is intercepted by a major gully with stream conveying east to west into Hokianga Harbour.

The site setting is presented schematically as Figure 1 below.

Figure 1<sup>2</sup>



The entire site area is currently in pasture with rough grass and occasional vegetation. Existing structures on proposed lot 4 are present, however no infrastructure is present within the site boundaries. A detailed review of existing watercourses and overland flow paths is presented as Section 3. In brief, the site is intersected by multiple small ditches, draining downslope to a watercourse on the northern boundary and low-lying pasture farmland.

## 2.1 Existing Reticulated Networks

Far North District Council (FNDC) GIS mapping indicates that no existing 3 water infrastructure or reticulated networks are present within Newton Road or the site boundaries. This report has been prepared with the goal of the subdivision being self-sufficient for the purpose of wastewater, stormwater, and potable water management.

## 2.2 Geological Setting

Available geological mapping<sup>3</sup> indicates the site to be directly underlain by Hukerenui Mudstone (Mangakahia Complex) of the Northland Allochthon described as weakly to moderately indurated, alternating thin- to thick-bedded, quartzo-feldspathic sandstone and mudstone. The Northland Allochthon geology extends away from the site in all directions.

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<sup>2</sup> GRIP Mapping Platform Service

<sup>3</sup> Geological & Nuclear Science, 1:250,000 scale Geological Map, Sheet 2, Whangarei, 2009.

### 2.3 Existing Geotechnical Information

Existing subdivision and/ or Building Consent ground investigations were not made available to Geologix at the time of writing. Additionally, a review of available GIS databases, including the New Zealand Geotechnical Database<sup>4</sup> did not indicate borehole records within 500 m of the site.

## 3 SURFACE WATER FEATURES AND OVERLAND FLOWPATHS

During our site walkover and desktop appraisal of the supplied topographic data, Geologix have developed an understanding of the surface water features and overland flow paths influencing the site. The developed understanding summarised in the following sections is shown schematically on Drawing No. 500 with associated off-set requirements.

### 3.1 Surface Water Features

The site is at the upper elevations of a larger catchment that extends to the west through other adjacent properties toward an unnamed watercourse beyond the western boundary. This includes a network of overland flow paths that originate on the elevated northern boundary along Newton Road. These are drawn down through the site and into the watercourse on the northern boundary and beyond the site boundary to the northwest.

### 3.2 Overland Flow Paths

Clearly defined flow paths are evident within the site boundaries upon moderate to steep sloping land. Many minor overland flow paths source from springs which later develop into major overland flow paths at lower elevations of the site where there are some deeper gullies. The minor overland flow paths stop and start and are approximately 50 to 100 m in length before connecting to the major overland flow paths which are more robustly defined.

These discharge and terminate at the watercourse. Some overland flow paths that traverse the north-western boundary naturally flow toward a block of residential properties adjacent State Highway 12. It is not evident how this flow is intercepted or managed by any infrastructure outside of the site. We note a potential flood hazard to these properties, and this has not been directly assessed or quantified in this report. However, the effects caused by the proposed development of the site will have less than minor impact to the existing condition as a result of the attenuation of impervious area within the proposed lots.

Our walkover survey was undertaken just after a moderately dry period in January and noted no flow through the overland flow paths. The above is indicated across our drawing set, where in view and detailed with associated off-sets on Drawing No. 500.

## 4 GROUND INVESTIGATION

A site-specific walkover survey and intrusive ground investigation was undertaken by Geologix on 19 January 2024. The ground investigation was scoped to confirm the findings of

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<sup>4</sup> <https://www.nzgd.org.nz/>



the desktop appraisal and to provide parameters for geotechnical and wastewater assessment. The ground investigation comprised:

- Three hand augered boreholes designated BH01 to BH03, inclusive formed at the proposed building site with a target depth of 5.0 m below ground level (bgl).

#### 4.1 Site Walkover Survey

A visual walkover survey of the property confirmed:

- Topography data supplied is in general accordance with that outlined in Section 2 and observed site conditions. Suitable building envelopes<sup>5</sup> can be formed on gently sloping land <15 ° on proposed lots 1 and 3. Lot 2 is the steeper; therefore, a suitable building envelope will be situated on moderately sloping land <20 °.
- Newton Road defines the northern site boundary. Land in all directions includes similar rural properties with open pasture.
- Several farm tracks have been constructed for access around the properties.
- Newton Road's northern edge swale discharges into lot boundaries at some locations.
- Minor slips on steep ground extend throughout the lots.
- No structures or suitably formed roads are present within the site boundary.

#### 4.2 Ground Conditions

Arisings recovered from the exploratory boreholes were logged by a suitably qualified geotechnical engineering professional in general accordance with New Zealand Geotechnical Society guidelines<sup>6</sup>. Engineering borehole logs are presented as Appendix B to this report and approximate borehole positions recorded on Drawing No. 500 within Appendix A. It should be noted that these boreholes are located approximately 190m and 1100m distance from each other, so ground variation between boreholes should be expected and considered.

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

- **Topsoil encountered down to 0.2 m to 0.3 m bgl.** Described as grassed topsoil containing organic silt, dark blackish brown and moist with low plasticity.
- **Northland Allochthon residual soil to depths ranging between 2.2 to 3.2 m bgl and deeper.** Underlying the topsoil, we have encountered natural Northland Allochthon residual soils were typically a cohesive soil, ranging from clay to silt, with minor sand and/or gravel. The soils were found to be brown/orange to grey/ light grey. They are generally moist and generally of low plasticity. Hand auger encountered refusal between

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<sup>5</sup> Measuring 30 m x 30 m according to FNDC District Plan Rule 13.7.2.2.

<sup>6</sup> New Zealand Geotechnical Society, *Field Description of Soil and Rock*, 2005.



2.2m to 3.2m bgl.

Twenty-seven in-situ field vane tests within the Northland Allochthon residual soils enabled statistical confirmation of unit soil strength. The in-situ tests recorded vane shear strengths ranging from 59 to 195 kPa, or generally stiff to very stiff soil. Characteristic unit vane shear strength has been determined to be 119 kPa at 95% confidence.

- **Northland Allochthon completely weathered parent rock to depths >3.1 m and >3.9 m bgl.** DCP probing across all three boreholes from hand auger refusal encountered a hard layer with equal or over 20 blows per 100mm penetration depth at between 2.3m to 4.5m bgl. We infer this layer to be Completely Weathered Northland Allochthon rock layer.
- A summary of ground investigation data is presented below as Table 2.

Table 2: Summary of Ground Investigation

Hole ID	Lot	Hole Depth	Topsoil Depth	Groundwater <sup>2</sup>	Scala >20 blows/100mm	Wastewater Category <sup>4</sup>
BH01	1	3.2 m	0.2 m	NE	4.5 m	6 – slow draining
BH02	2	2.2 m	0.3 m	1.65 m	2.3 m	6 – slow draining
BH03	3	3.2 m	0.2 m	0.85 m	4.4 m	6 – slow draining

1. All depths recorded in m bgl unless stated.
2. Groundwater measurements taken on day of drilling.
3. NE – Not Encountered.
4. Wastewater category in accordance with Auckland Council TP58<sup>7</sup>.

## 5 WASTEWATER ASSESSMENT

The scope of this wastewater assessment comprised a ground investigation to ascertain a lot-specific wastewater disposal classification for concept design of suitable systems for a probable future rural residential development. Relevant design guideline documents adopted include:

- Auckland Council, Technical Publication 58, On-site Wastewater Systems: Design and Management Manual, 2004.
- NZS1547:2012, On-site Domestic Wastewater Management.

The concept rural residential developments within this report assume that the proposed new residential lots may comprise up to a five-bedroom dwelling with a peak occupancy of eight people<sup>8</sup>. This considers the uncertainty of potential future Building Consent designs. The number of usable bedrooms within a residential dwelling must consider that proposed

<sup>7</sup> Auckland Council, Technical Publication 58, On-site Wastewater Systems: Design and Management Manual, 2004, Table 5.1.

<sup>8</sup> TP58 Table 6.1.

offices, studies, gyms, or other similar spaces maybe considered a potential bedroom by the Consent Authority.

### 5.1 Existing Wastewater Systems

Proposed Lot 4 has an existing wastewater treatment and disposal system identified within the site boundaries. Furthermore, we have received a development plan in the form of a Building Consent Proposal, for proposed Lot 4 indicating a new Naturalflow NF11000S wastewater treatment system to be incorporated into future development. Refer to Appendix A, Drawing No. 500, where this shown.

This confirms that the system and associated disposal fields will be within the boundary of proposed Lot 4 and assuming the system is new will be functioning satisfactory for a projected design life of 50 years.

### 5.2 Wastewater Generation Volume

In lieu of potable water infrastructure servicing the site, roof rainwater collection within on-lot tanks has been assumed for this assessment. The design water volume for roof water tank supply is estimated at 160 litres/ person/ day<sup>9</sup>. This assumes standard water saving fixtures<sup>10</sup> being installed within the proposed future developments. This should be reviewed for each proposed lot at the Building Consent stage.

For the concept wastewater design this provides a total daily wastewater generation of 1,280litres/ day per proposed lot.

### 5.3 Treatment System

Selection of a wastewater treatment system will be provided by future developers at Building Consent stage. This will be a function of a refined design peak occupancy. It is recommended that to meet suitable minimum treated effluent output, secondary treatment systems are accounted for across the site. In Building Consent design, considering final disposal field topography and proximity to controlling site feature, a higher treated effluent output standard such as UV disinfection to tertiary quality maybe required.

No specific treatment system design restrictions and manufacturers are currently in place. However, the developer will be required to specify the treatment system proposed at Building Consent.

### 5.4 Land Disposal System

To provide even distribution, evapotranspiration assistance and to minimise effluent runoff it is recommended that treated effluent is conveyed to land disposal via Pressure

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<sup>9</sup> TP58 Table 6.2, AS/ NZS 1547:2012 Table H3.

<sup>10</sup> Low water consumption dishwashers and no garbage grinders.

Compensating Dripper Irrigation (PCDI) systems, a commonplace method of wastewater disposal.

The proposed PCDI systems may be surface laid and covered with minimum 150 mm mulch and planted with specific evapotranspiration species with a minimum of 80 % species canopy cover or subsurface laid to topsoil with minimum 200 mm thickness and planted with lawn grass. Site-won topsoil during development from building and/ or driveways footprints may be used in the area of land disposal systems to increase minimum thicknesses. Specific requirements of the land disposal system include the following which have been complied with for this report.

*Table 3: Disposal Field Design Criteria*

Design Criteria	Site Conditions
Topography at the disposal areas shall not exceed 25°. Exceedances will require a Discharge Consent.	Concept design complies
On shallower slopes >10 ° compliance with Northland Regional Plan (NRP) rule C.6.1.3(6) is required.	Concept design does not comply, disposal fields sited on slopes >10 °. Cutoff drains required.
On all terrain irrigation lines should be laid along contours.	Concept design complies
Disposal system situated no closer than 600 mm (vertically) from the winter groundwater table (secondary treated effluent).	Concept design complies
Separation from surface water features such as stormwater flow paths (including road and kerb channels), rivers, lakes, ponds, dams, and natural wetlands according to Table 9, Appendix B of the NRP.	Concept design complies. All overland flow paths separation distances to disposal areas are 15 m.
The effluent is treated and disposed of on-site such that each site has its own treatment and disposal system no part of which shall be located closer than 30m from the boundary of any river, lake, wetland, or the boundary of the coastal marine area. FNDC rule 12.7.6.1.4	Concept design complies. Separation distance complies to rule at 30m.

#### 5.4.1 Soil Loading Rate

Based on the results of the ground investigation, conservatively the shallow soils are inferred to meet the drainage characteristics of TP58 Category 6, sandy clay, non-swelling clay, and silty clay – slowly draining. This correlates to NZS1547 Category 5, poorly drained described as light clays. For a typical PCDI system, a Soil Loading Rate (SLR) of 2-3 mm/ day is recommended within NZS1547 Table 5.2 and TP58 Table 9.2.

To achieve the above SLR, technical guidance documents require the following compliance within the final design.

- 100 to 150 mm minimum depth of good quality topsoil (NZS1547 Table M1, note 1) to slow the soakage and assist with nutrient reduction.
- Minimum 50 % reserve disposal field area (TP58 Table 9.2, note 3) to adopt 3 mm/day, rather than 2 mm/day SLR.



#### 5.4.2 Disposal Areas

The sizing of wastewater system disposal areas is a function of soil drainage, the loading rate and topographic relief. For each proposed lot a primary and reserve disposal field is required as follows. The recommendations below are presented on Drawing No. 500.

- **Primary Disposal Field.** A minimum PCDI primary disposal field of 427 m<sup>2</sup> laid parallel to the natural contours.
- **Reserve Disposal Field.** A minimum reserve disposal field equivalent to 30 % of the primary disposal field is required under NRP rule C.6.1.3(9)(b) for secondary or tertiary treatment systems. As discussed above in Section 5.4.1, the proposed concept design presents a 50 % reserve disposal field area, which achieves a more conservative approach. Therefore, It is recommended each proposed lot provides a 214 m<sup>2</sup> reserve disposal area to be laid parallel to the natural contours.
- Concept disposal field locations require the provision of surface water cut-off drains to meet the provisions of NRP rule C.6.1.3.
- Disposal fields discharging secondary treated effluent are to be set at the 20-year ARI (5% AEP) flood inundation height to comply with the above NRP rule. Flood hazard potential has not been identified within the site boundaries and as such the site can provide freeboard above the 1 % AEP flood height to comply with this rule.

### 5.5 Summary of Concept Wastewater Design

Based on the above design assumptions a concept wastewater design is presented in Table 4 and presented schematically upon Drawing No. 500. It is recommended that each lot is subject to Building Consent specific review and design amendment according to final development plans.

Table 4: Concept Wastewater Design Summary

Design Element	Specification
Concept development	Five-bedroom, peak occupancy of 8 (per lot)
Design generation volume	160 litres/ person/ day
Water saving measures	Standard. Combined use of 11 litre flush cisterns, automatic washing machine & dishwasher, no garbage grinder <sup>1</sup>
Water meter required?	No
Min. Treatment Quality	Secondary
Soil Drainage Category	TP58 Category 6, NZS1547 Category 5
Soil Loading Rate	3 mm/ day
Primary disposal field	Surface/ subsurface laid PCDI, min. 427 m <sup>2</sup>
Reserve disposal field	Surface/ subsurface laid PCDI, min. 50 % or 214 m <sup>2</sup>
Dosing Method	Pump with high water level visual and audible alarm. Minimum 24-hour emergency storage volume.
Stormwater Control	Divert surface/ stormwater drains away from disposal fields. Cut off drains required. Stormwater management discharges downslope.

1. Unless further water saving measures are included.

## 5.6 Assessment of Environmental Effects

An Assessment of Environmental Effects (AEE) is required to address two aspects of wastewater disposal. These include the effect of treated wastewater disposal for an individual lot and the cumulative or combined effect of multiple lots discharging treated wastewater to land as a result of subdivision.

The scale of final development is unknown at the time of writing and building areas, impervious areas including driveways, ancillary buildings, landscaped gardens, and swimming pools may reduce the overall area for on-site wastewater disposal. For the purpose of this report the above features are likely to be included within a designated 30 x 30 m square building site area as required by FNDC District Plan Rule 13.7.2.2.

It is recommended that the AEE is reviewed at the time of Building Consent once specific development plans, final disposal field locations and treatment systems are established. The TP58 guideline document provides a detailed AEE for Building Consent application. Based on the proposed scheme, ground investigation, walkover inspection and Drawing No. 500, a site-specific AEE is presented as Appendix C to demonstrate the proposed wastewater disposal concept will have a less than minor effect on the environment.

## 6 STORMWATER ASSESSMENT

Considering the nature of rural subdivision and residential development, increased storm water runoff occurs as pervious surfaces such as pasture are converted to impervious features such as roads or future on-lot buildings and driveways.

### 6.1 Regulatory Requirements

Stormwater management for the proposed activity is controlled by the FNDC Operative District Plan<sup>11</sup> and NRC Proposed Regional Plan<sup>12</sup>. The requirement for subdivision and probable future development under these legislations is summarised below.

#### 6.1.1 Regional Provisions

The Proposed Regional Plan states the diversion and discharge of stormwater into water or onto or into land where it may enter water from an impervious area or by way of a stormwater collection system, is a permitted activity, provided the criteria of Rule C.6.4.2(1) to (8) are met. The proposed activity is considered to meet the requirements of a Permitted Activity. Assessment of the consent status is summarised in Section 6.7 and in full within Appendix C.

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<sup>11</sup> <https://www.fndc.govt.nz/Your-Council/District-Plan/Operative-plan>

<sup>12</sup> Proposed Regional Plan for Northland July 2021 – Appeals Version

### 6.1.2 District Wide Provisions

Subdivision activity and provisions for probable future development within both urban and rural environments is controlled by District Plan Rule 13.7.3.4. In relation to rural subdivision the following apply which this concept design provisions for:

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

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

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

*(d) Where flow rate control is required to protect downstream properties and/or the receiving environment then the stormwater disposal system shall be designed in accordance with the onsite control practices as contained in "Technical Publication 10, Stormwater Management Devices – Design Guidelines Manual" Auckland Regional Council (2003).*

### 6.1.3 Environmental Zone Provisions

Permitted activity status for proposed impervious surface areas within the rural production zone is determined by Rule 8.6.5.1.3 which is presented below.

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

Anticipated future residential activities are considered to meet this criterion which permits for 6,000 m<sup>2</sup> of impermeable surfaces according to the proposed smallest lot size of 40,000m<sup>2</sup>. This considers conservative typical rural residential roof areas with associated driveways and car parking.

## 6.2 Stormwater Management Concept

The stormwater management concept considered in this report has been prepared to meet the requirements of the local and regional consent authorities considering the design storm event as follows:



- **Probable Future Development.** The proposed application includes subdivision formation only and not lot-specific residential development at this stage. As such, a conservative model of probable future on-lot development has been developed for this assessment considering the scale of a typical rural residential development. The probable future on-lot development concept includes up to 300 m<sup>2</sup> potential roof area and up to 200 m<sup>2</sup> potential driveway or parking areas. The latter has been modelled as an offset within lot specific attenuation devices.

*Table 5: Summary of Probable Future Development Concept*

Item	Pre-development Impervious Area	Post-development Impervious Area	Proposed Concept Attenuation Method
<b>Future Concept Developments</b>			
Potential buildings	0 m <sup>2</sup>	300 m <sup>2</sup>	Detention within roof water tanks
Potential driveways	0 m <sup>2</sup>	200 m <sup>2</sup>	Off-set detention in roof water tanks
<b>Total</b>	<b>0 m<sup>2</sup></b>	<b>500 m<sup>2</sup></b>	

- **Subdivision Development.** Access to each proposed lot will be established by individual vehicle crossings to the boundary. No additional impervious surfaces are anticipated to increase runoff from the subdivision development and so specific attenuation is not proposed (other than that included for future lot development).

### 6.3 Design Storm Event

Relevant design rainfall intensity and depths have been ascertained for the site location from the NIWA HIRDS meteorological model. The NIWA HIRDS rainfall data is presented in full within Appendix D. Provision for climate change has been adopted by means of applying a factor of 20% to rainfall intensities, in accordance with FNDC Engineering Standard 2023.

It has been identified that development of the site poses an increase to flooding hazard on downstream property. Therefore, in order to provide flood control in compliance with FNDC Engineering Standard Table 4-1, the concept design attenuates the post-development stormwater runoff peak discharge to 80 % of the pre-development condition for the 1 % AEP storm event with provision for climate change. This provision also complies with NRP Rule C6.4.2(2).

Furthermore, the 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.

To be compliant with the above rules, the attenuation modelling within this report has been undertaken for all of the above storm events. The results are summarised in Table 6 and provided in full in Appendix D.

Correctly sized discharge devices have adopted the 1 % AEP event to reduce scour and erosion at discharge locations which may otherwise result in concentrated discharge. These are detailed further in Section 6.4.1 of this report.

## 6.4 Concept Attenuation Model

Based on the design storm events indicated above and the corresponding modelling results (in Appendix D) an attenuation concept to suit the maximum storage requirement has been provided. In this case the concept limits the post-development peak discharge to 80 % of the pre-development condition for the 1% AEP storm event. This is achievable by installing specifically sized low-flow orifices into the roof runoff attenuation tanks which provide sufficient detention volume. The rational method has been adopted by Geologix with run-off coefficients as published by FNDC Engineering Standards<sup>14</sup>. Calculations to support the concept design are presented as Appendix D to this report. A typical schematic retention/detention tank arrangement detail is presented as Drawing No. 401 within Appendix A.

The concept design presented in this report should be subject to verification and an updated design at Building Consent stage once final development plans are available. This is typically applied as a consent notice to the applicable titles. We note that the detailed design will be required to provide appropriate orifices to ensure the 50 % and 20 % AEP events, in addition to the 1 % AEP event, are specifically controlled within the tank.

A summary of the proposed on-lot stormwater attenuation design is presented as Table 6.

*Table 6: Probable Future Development Attenuation Concept*

Design Parameter	Flow Attenuation: 50 % AEP (80% of pre dev)	Flow Attenuation: 20 % AEP (80% of pre dev)	Flood Control: 10 % AEP	Flood Control: 1 % AEP (80% of pre dev)
<b>Proposed Development</b>				
Regulatory Compliance	FNDC Engineering Standards Table 4-1	FNDC Engineering Standards Table 4-1	NRC Proposed Regional Plan	FNDC Engineering Standards Table 4-1
Pre-development peak flow	5.26 l/s	6.78 l/s	7.90 l/s	11.82 l/s
80 % pre-development peak flow	4.21 l/s	5.43 l/s	NA	9.45 l/s
Post-development peak flow	8.55 l/s	11.03 l/s	12.85 l/s	19.22 l/s
Total Storage Volume Required	3,344 litres	4,335 litres	2,969 litres	7,713 litres
Concept	<ul style="list-style-type: none"> <li>- Attenuation storage calculation accounts for offset flow from driveway (not indicated explicitly in summary above. Refer Appendix D for calcs in full)</li> <li>- Attenuation to 80 % of pre-development condition for 1 % AEP storm represents maximum storage requirement and is adopted for the concept design tank storage.</li> <li>- 1 x 25,000 litre tank is sufficient for attenuation (7,713l) + potable storage (17,287l)</li> </ul>			

<sup>14</sup> FNDC Engineering Standards 2021, Version 0.6, Issued May 2023.



- 1% AEP attenuation requires a 42 mm orifice 0.80 m below overflow. However regulatory requirements are to consider an additional orifice/s to control the 50%, 20% and 1% AEP events specifically. We note this may vary the concept orifice indicated above. This should be provided with detailed design for building consent approval.

#### 6.4.1 On-Lot Discharge

The direct discharge of water tank overflow in a concentrated manner can cause scour and erosion in addition to excessive saturation of shallow soils. It is recommended that overflow from rainwater detention tanks is conveyed in sealed pipes to a designated discharge point downslope of proposed building footprints and wastewater disposal fields. A concept design accommodating this is presented within Appendix A on Drawing Nos. 401 and 402.

It is recommended that the conceptually sized dispersion devices are subject to specific assessment at the Building Consent stage to limit scour and erosion from tank overflows.

Typical rural residential developments may construct either above or below ground discharge dispersion pipes. Feeding pipes can be either buried or pinned to the surface as desired. It is recommended that all pipes are designed to accommodate the design storm event peak flows from the attenuation tank and including minimum 100 mm dia. PVC piping. A concept dispersion pipe or trench length is presented in Table 7. Calculations to derive this are presented within Appendix D, based on the NIWA HIRDS Depth-Duration data and TR2013/018 document. Typical details of these options are presented within Appendix A as Drawing No. 402.

Table 7: Summary of Concept Dispersion Devices

Concept Impervious Area to Tank	Tank Outlet Velocity (at spreader orifices)	Tank outlet pipe diameter	Spreader pipe diameter	Dispersion Pipe/ Trench Length	Spreader orifice size	Concept
<b>Proposed Lots 1, 2, 3</b>						
500 m <sup>2</sup>	0.87 m/s	0.1 m	0.20 m	8.8 m	20 mm	Above ground dispersion device or in-ground dispersion trench.

#### 6.5 Subdivision Development Management

The above stormwater concept does not provide specific attenuation of subdivision vehicle crossing impermeable surface areas due to the relatively minor catchments and effects on the downstream environment.

All stormwater conveyance devices must be suitably sized to accommodate peak run-off flows from the design storm event. Stormwater conveyance of the subdivision development is proposed to include:

- RC pipe culverts formed at each intersection between the proposed lot vehicle crossings and Newton Road, to provide conveyance of drainage beneath the lot accessway.



## 6.6 Stormwater Quality

The proposed application is for a rural residential subdivision and future development. The key contaminant risks in this setting include:

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

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

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

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

## 6.7 Assessment Criteria and Consent Status

Assessment criteria are presented in full within Appendix C. A summary of the assessment is presented below:

### 6.7.1 District Plan

The proposed activity has been assessed as a **Restricted Discretionary Activity** according to FNDC Operative Plan Rule 13.7.2, with a maximum of 5 lots in a subdivision (including the parent lot) where the minimum size of the lots is 2ha, and where the subdivision is created from a site that existed at or prior to 28 April 2000.

### 6.7.2 Regional Plan

The proposed activity is determined to meet the requirements of a **Permitted Activity** according to the provisions of Proposed Regional Plan Rule C.6.4.2, on the basis that sufficient attenuation measures have been provided as presented in this report.

## 7 POTABLE WATER & FIRE FIGHTING

In the absence of potable water infrastructure within Newton Road or within the site it is recommended that the roof runoff water tanks are adopted for potable water supply with appropriate filtration and UV disinfection at point of use. The volume of potable water

supply on each lot should consider the required stormwater detention volume identified within Table 6.

Furthermore, the absence of potable water infrastructure and fire hydrants within Newton Road require provision of the on-lot roof water supply tanks to be used for firefighting purposes, if required. Specific analysis and calculation 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.

## 8 EARTHWORKS

As part of the subdivision application, earthworks are required as follows:

- **New vehicle crossings.** Cut/ fill earthworks for construction of the vehicle crossings to current Council Engineering Standards.

Proposed earthwork volumes are well within a 5,000 m<sup>3</sup> Permitted Activity volume limit outlined by FNDC District Plan Rule 12.3.6.1.1(a) and the maximum cut and fill height is <3 m to comply with 12.3.6.1.1(b).

Rule C.8.3.1, Table 13 of the Proposed Regional Plan outlines a Permitted Activity as 5,000 m<sup>2</sup> of exposed earth at any time for 'other areas'. Proposed earthwork areas to form the subdivision, are anticipated to comply with the Permitted Activity standard for other areas.

### 8.1 General Recommendations

Bulk fill with site-won earth can be moderately sensitive to disturbance when exposed to rain or runoff which may cause saturation or vehicle movements and trafficking during earthworks. Accordingly, care should be taken during construction, including probable future developments, to minimise degradation of any earth fill due to construction traffic and to minimise machinery on site.

Any areas of proposed bulk fill which are required to meet specific subgrade requirements within should be subject to a specific earthwork specification prepared by a professional Engineer such as Geologix.

Due to the topography of the site, significant excavations are not anticipated. However, to reduce the risk of instability of excavations during construction, it is recommended that **temporary** unsupported excavations have a maximum vertical height of 0.5 m. Excavations >0.5 m should be battered at 1V:1H or 45°. Permanent batter slopes may require a shallower angle to maintain long term stability and if proposed these should be assessed at the Building Consent stage within a specific geotechnical investigation report.

Temporary batters should be covered with polythene sheets secured to the surface with pins or batons to prevent saturation. All works within close proximity to excavations should be undertaken in accordance with Occupational Safety and Health regulations.



All earthworks should be carried out in periods of fine weather within the typical October to April earthwork season. Consent conditions commonly prescribe working restrictions.

## 8.2 Erosion and Sediment Control

Specific erosion and sediment control measures are required to control sediment runoff from areas of proposed earthworks within the scope of this application. It is recommended that specific on-lot development is assessed at the time of Building Consent by the future developer. To form the subdivision the following erosion and sediment control measures are recommended:

- Silt fence around the downslope face of the proposed vehicle crossing at each lot.

## 9 NATURAL HAZARD ASSESSMENT

To satisfy the Resource Management Act, 1991 the proposed subdivision must plan for and manage the risk from natural hazards to reduce the potential adverse effects to less than minor. Regulatory assessment of natural hazards at the site location are managed under the jurisdiction of the FNDC District Plan<sup>15</sup>, Northland Regional Council (NRC) Proposed Regional Plan for Northland<sup>16</sup> and Regional Water and Soil Plan for Northland. 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 8.

*Table 8: Summary of Natural Hazards*

Natural Hazard	Applicability	Mitigation & Effect on Environment
Erosion	Yes	Mitigation provided; resultant effects are less than minor.
Overland flow paths, flooding, inundation	Yes	Mitigation provided; resultant effects are less than minor.
Landslip	NA	Subject to geotechnical assessment at building consent stage.
Rockfall	NA	No anticipated effects, less than minor.
Alluvion	NA	No anticipated effects, less than minor.
Avulsion	NA	No anticipated effects, less than minor.
Unconsolidated fill	NA	No anticipated effects, less than minor.
Soil contamination	NA	No anticipated effects, less than minor.
Subsidence	NA	No anticipated effects, less than minor.
Fire hazard	NA	No anticipated effects, less than minor.
Sea level rise	NA	No anticipated effects, less than minor.

*NA – Not Applicable.*

## 10 INTERNAL ROADING AND VEHICLE CROSSINGS

This chapter provides a review of Newton Road and the proposed new accessways that will intersect with Newton Road.

<sup>15</sup> Operative District Plan Rule 13.7.3.2.

<sup>16</sup> Proposed Regional Plan for Northland, Appeals Version, July 2021, Chapter D.6.



It is noted that we are not traffic engineers, and no specific Traffic Impact Assessment is included within the scope of these works. If required, it is recommended that advice is sought from a chartered traffic engineer.

## 10.1 Traffic Intensity Factor and Household Equivalents

According to Appendix 3A of the Operative District Plan, providing for one standard residential unit per lot, each accounting for up to 10 traffic movements per unit per day the following Traffic Intensity Factor (TIF) and Household Equivalents have been calculated for Newton Road from its end intersecting with SH12:

- **Existing Condition (all lots – developed or vacant):** TIF of 420 from 42 H.E.
- **Proposed Condition (all lots – developed or vacant):** TIF of 450 from 45 H.E.
- **Existing Condition (developed lots only):** TIF of 200 from 20 H.E.
- **Proposed Condition (developed lots only):** TIF of 230 from 23 H.E.

Further to this, information extracted from the Mobileroad.org application, with reference to current Northern Transport Alliance (NTA) Regional Road data, indicates an approximate Average Daily Traffic (ADT) of 256 vehicles/day.

We will adopt 256 v/day as the existing condition ADT or TIF, and suggest an additional 30 v/day for the proposed condition (286 v/day).

## 10.2 Newton Road Suitability

A desktop assessment and site inspection of Newton Road has been undertaken.

### 10.2.1 Findings

- Road carriageway width = 4-5 m, variable to approximately 1m, measured on site at limited positions and with desktop assessment using GRIP cadastral mapping.
- There are occasional passing bays along the length of the road
- Road legal width = 16 – 20m width, variable, measured with GRIP cadastral mapping.
- Road surface = unsealed, metal / gravel wearing course
- Road speed limit = 100km/h (default speed zone). Realistic speeds are anticipated to be considerably less than 100km/h given the narrow width of road, surface type and limited sight distance.
- Sight distance is generally significantly limited on approach to horizontal curvature by road-side vegetation and by the prominent bank sloping steeply upward from the eastern edge of the road.

Based on above information the existing Newton Road falls short of the standards for a Rural Type A collector road standard as per specifications in Appendix 3B-2 of the Operative District Plan. The dimensions of Newton Road and the FNDC rural road standards are summarised within Table 9.

According to the above-mentioned specifications, a Rural Type A road has an ultimate development capacity of up to 15 H.E. This is less than the existing and proposed conditions for Newton Road as described in Section 10.1. A Rural Type B road caters for all collector roads, with > 15 H.E. This would appropriate to Newton Road in accordance with FNDC standards.

*Table 9: Summary of Newton Road & Rural Type Standards as per FNDC Operative Plan*

Condition/ Standard	Carriageway Width	Formation Width	Legal Width
Newton Road	4.0 – 5.0 m	5.0 – 6.0 m	16.0 - 20.0 m
Rural Type A	6.0 m (min.)	8.5 m (min.)	16.0 m (min.)
Rural Type B	6.5 m (min.)	8.5 m (min.)	20.0 m (min.)

#### 10.2.2 Recommendations:

We suggest that although Newton Road does not meet the minimum FNDC standards for a Rural Type A road (or Type B road), it would not be practical to increase the carriageway and legal widths of Newton Road to Rural Type A or B if its ultimate development potential is limited to only 45 H.E. Rather the implementation of safety and mitigative measures may be more appropriate to the case of making improvements to Newton Road.

We note the presence of existing passing bays are a positive mitigative measure.

Further mitigative measures may include traffic calming signage to cause caution to drivers e.g. signs indicating narrow road widths, upcoming accessway intersections and speed suggestions.

Improvements to sight distances by way of cutback of obstructing vegetation near curves in the road are also recommended.

### 10.3 Vehicle Crossings

Vehicle crossings will be formed at subdivision stage. A summary of proposed vehicle crossings is presented as .

*Table 10: Summary of Proposed Vehicle Crossings*

Location	Type	Detail	Sight Distance	Formation
Newton Road/ Lot 4 Existing Entrance	FNDC Type 1A, Light Vehicles	Upgraded to typical detail with 375 mm dia. RCP culvert and 3.0 m width at boundary.	Left: 63m Right: 75m	At subdivision
Newton Road/ Lot 1 Entrance	FNDC Type 1A, Light Vehicles	Construct to typical detail with 375 mm dia. RCP	Left: 105m Right: 80m	At subdivision



		culvert and 3.0 m width at boundary.		
Newton Road/ Lot 2 & 3 Entrance	FNDC Type 1A, Light Vehicles	Construct to typical detail with 375 mm dia. RCP culvert and 3.0 m width at boundary.	Left: 125m Right: 125m	At subdivision
<i>RCP – Reinforced Concrete Pipe</i>				

Sight distance to each of the proposed lots has been assessed by means of GIS mapping and relative to FNDC Engineering Standards Sheet 4. As discussed in Section 10.2.1, although the default speed for Newton Road is 100km/h, it is suggested that a realistic and practically safe speed for the road is considerably less. We would suggest for purposes of sight distance assessment that 50km/h be a more appropriate consideration particularly through curved sections of road where sight distances are reasonably less. In the case of 50km/h, the required sight distance is 60m and all of the proposed vehicle crossings meet this requirement.

## 11 LIMITATIONS

This report has been prepared for Susan Wiltshire 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

# GENERAL NOTES

- DRAWING REPRODUCED FROM SAPHIRE SURVEYORS LTD DRAFT PROPOSED SCHEME PLAN REF. 01115, DATED 23/11/23.
- HORIZONTAL CO ORDINATE SYSTEM = NZTM.
- VERTICAL DATUM = NZVD.
- MAJOR INTERVALS 25.0 m.
- MINOR INTERVALS 5.0 m.
- FOR INDICATION ONLY, NOT FOR CONSTRUCTION.
- DO NOT SCALE FROM THIS DRAWING.

## CONCEPT WASTEWATER DESIGN












CONCEPT DEVELOPMENT 5 BEDROOM  
 CONCEPT NO. OF OCCUPANTS 8 PERSONS  
 DAILY WASTEWATER GEN. 160 LITRES/PERSON/ DAY  
 TOTAL WASTEWATER GEN. 1,280 LITRES/ DAY

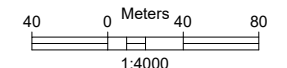
SOIL CATEGORY (TP58) CATEGORY 6  
 SOIL CATEGORY (NZS1547) CATEGORY 5  
 SOIL LOADING RATE 3.0 mm/ DAY

TREATMENT SYSTEM NO - SUBJECT TO BUILDING CONSENT DESIGN

PRIMARY DISPOSAL AREA 427 m<sup>2</sup>  
 RESERVE DISPOSAL AREA 214 m<sup>2</sup> (50 %)  
 FINAL DESIGN? NO - SUBJECT TO BUILDING CONSENT DESIGN

CUT OFF DRAINS? YES  
 DISCHARGE CONSENT? NO

-  PROPOSED BUILDING PLATFORM
-  GEOLOGIX HAND AUGER LOCATION - JANUARY 2024
-  WATERCOURSE
-  OVERLAND FLOWPATH
-  EDGE OF BUSH PROTECTION COVENANTS
-  EXISTING ROADSIDE GRASSED SWALE DRAIN
-  PROPOSED GRASSED SWALE DRAIN
-  PRIMARY DISPOSAL FIELD
-  RESERVE DISPOSAL FIELD
-  WASTEWATER FIELD CUTOFF DRAIN
-  CONCEPT 25,000 LITRE WATER TANK ATTENUATING TO DISPERSION DEVICE TO CONTROL 500 m<sup>2</sup> AREA



2	CONSENT	19/07/2024
Revision	Issue	Date



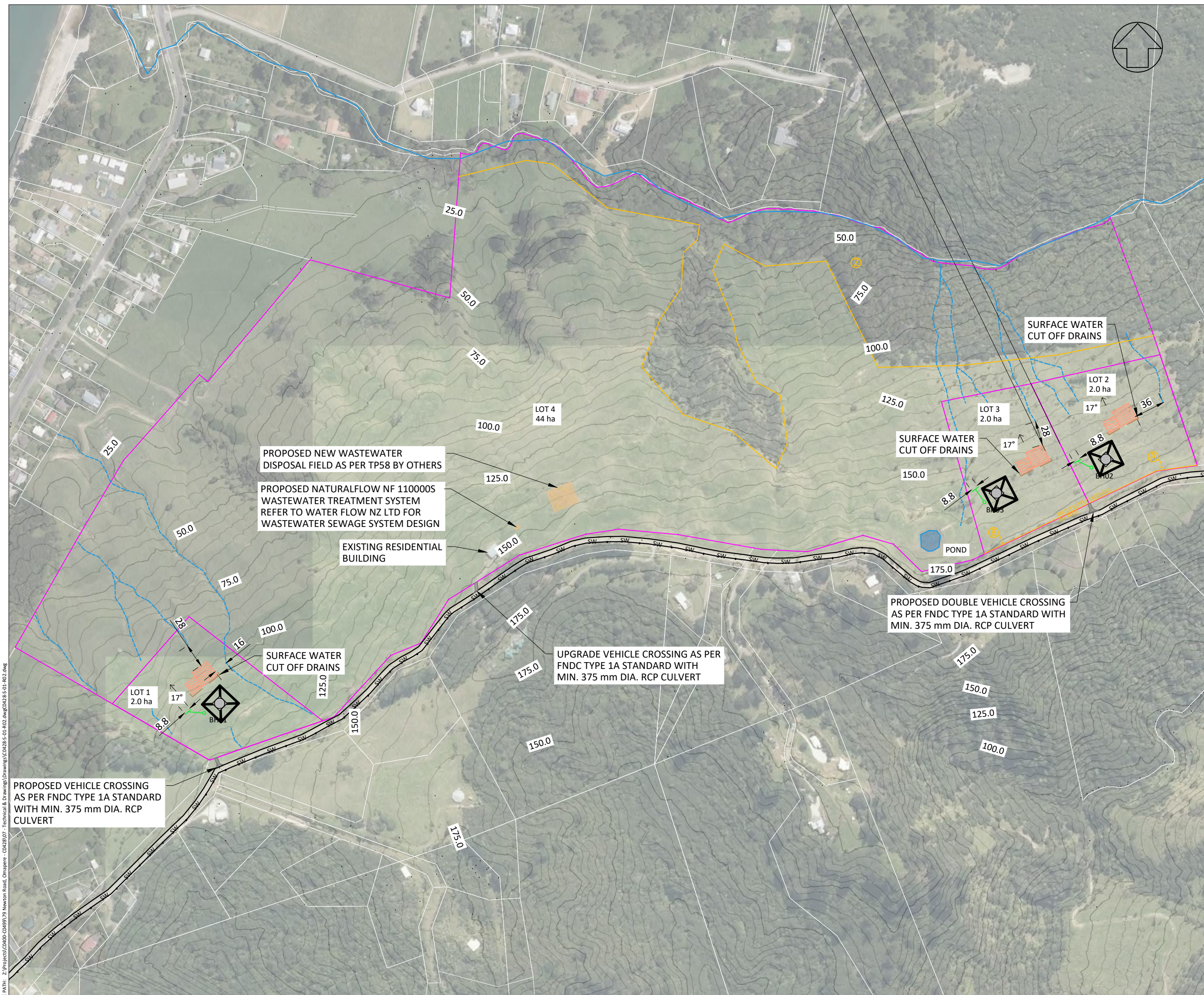
Project Name and Address  
**79 NEWTON ROAD**  
**OMAPERE, FAR NORTH**  
**LOTS 1-4 OF LOT 2 DP 100455**

Project **C0428** Drawn By **SD**

Client  
**SUSAN WILTSHIRE**

Sheet Title  
**ENGINEERING PLAN**

Sheet  
500



PROPOSED NEW WASTEWATER DISPOSAL FIELD AS PER TP58 BY OTHERS

PROPOSED NATURALFLOW NF 110000S WASTEWATER TREATMENT SYSTEM REFER TO WATER FLOW NZ LTD FOR WASTEWATER SEWAGE SYSTEM DESIGN

EXISTING RESIDENTIAL BUILDING

SURFACE WATER CUT OFF DRAINS

PROPOSED DOUBLE VEHICLE CROSSING AS PER FNDC TYPE 1A STANDARD WITH MIN. 375 mm DIA. RCP CULVERT

UPGRADE VEHICLE CROSSING AS PER FNDC TYPE 1A STANDARD WITH MIN. 375 mm DIA. RCP CULVERT

PROPOSED VEHICLE CROSSING AS PER FNDC TYPE 1A STANDARD WITH MIN. 375 mm DIA. RCP CULVERT

SURFACE WATER CUT OFF DRAINS

FILE PATH: Z:\Projects\C0428-0428\79 Newton Road, Omapere - C0428\07 - Technical & Drawings\Drawings\C0428-01.RCP.dwg\0428-01.RCP.dwg

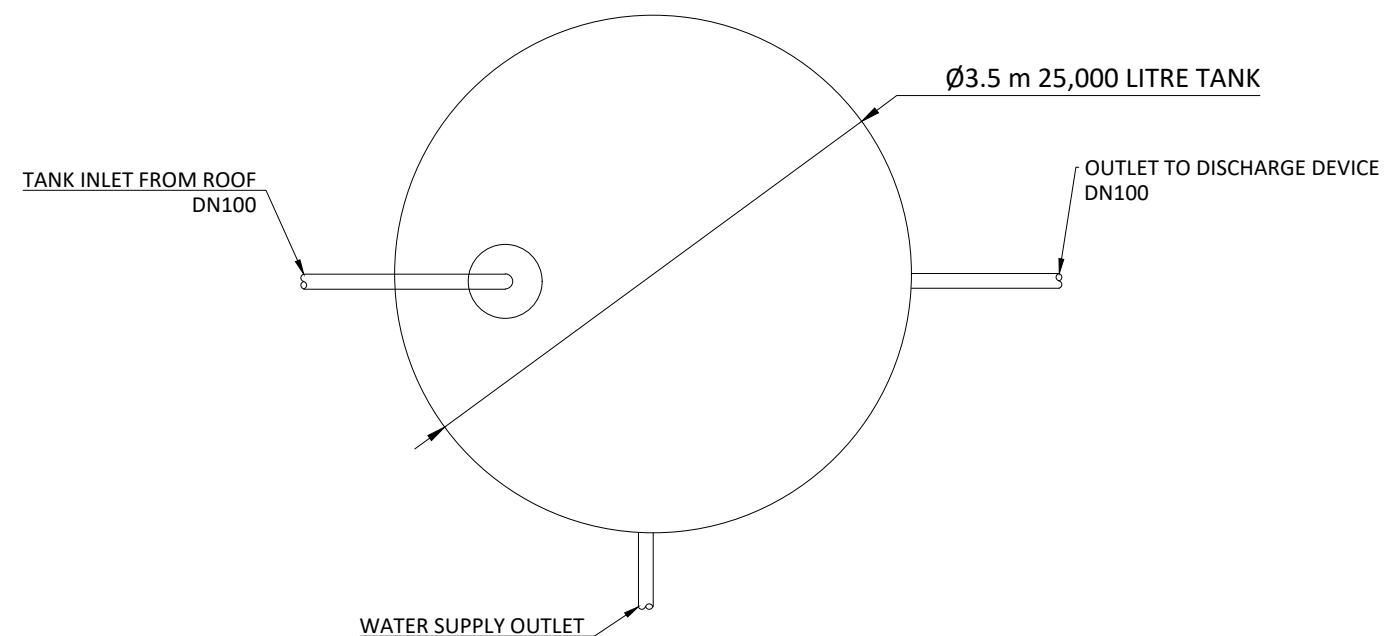
PLOTED: 08/04/2024

## GENERAL NOTES

1. TANK, PIPING AND FITTINGS TO BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH NZBC E1, UNLESS SPECIFICALLY STATED OTHERWISE.
2. ALL WORK TO BE UNDERTAKEN IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 ACCEPTABLE SOLUTIONS, RELEVANT STANDARDS AND GUIDELINES.
3. DO NOT SCALE FROM THIS DRAWING.
4. CONTRACTOR IS TO ORGANISE ALL SET OUT, INSPECTIONS AND MONITORING AS REQUIRED TO MEET CONSENT CONDITIONS.

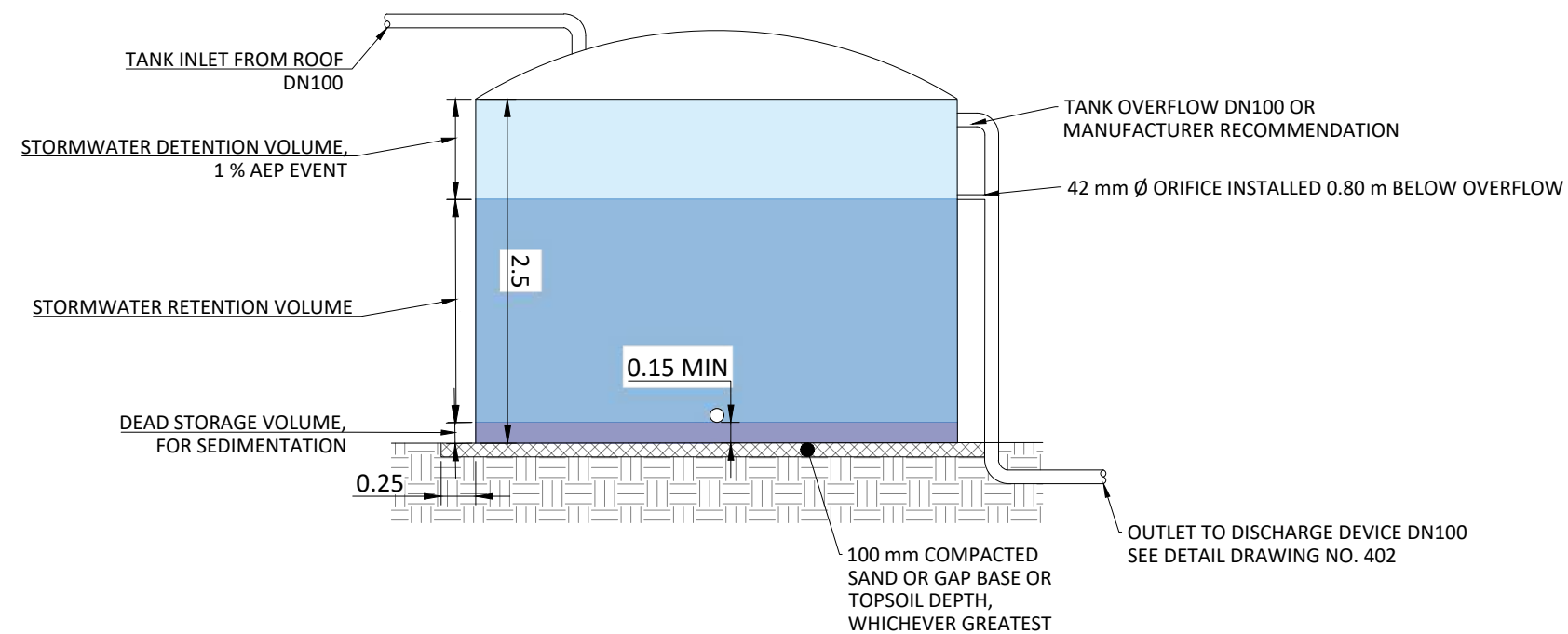
## PROPOSED TANK PLAN VIEW

NTS



## PROPOSED TANK SIDE VIEW

NTS



Revision	Issue	Date
2	CONSENT	19/07/2024
1	CONSENT	22/03/2024



AUCKLAND | NORTHLAND

Project Name and Address

79 NEWTON ROAD  
OMAPERE, FAR NORTH  
LOTS 1-4 OF LOT 2 DP 100455

Project  
C0428

Drawn By  
SD

Client  
SUSAN WILTSHIRE

Sheet Title  
TYPICAL TANK DETAIL

Sheet

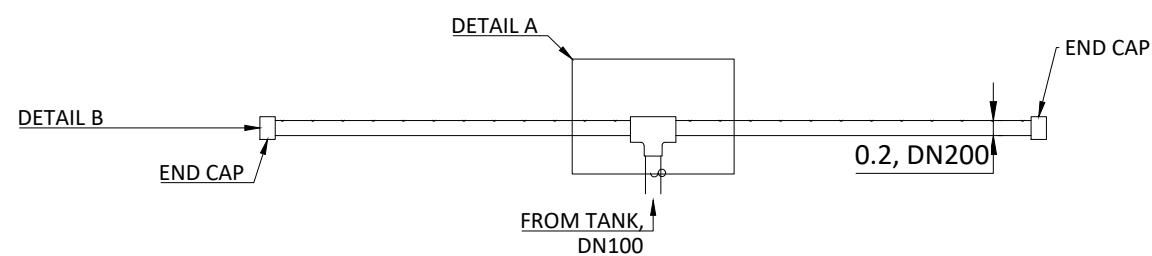
401

# GENERAL NOTES

1. ALL WORK TO BE UNDERTAKEN IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 ACCEPTABLE SOLUTIONS, RELEVANT STANDARDS AND GUIDELINES INCLUDING AUCKLAND COUNCIL GD01, WHERE APPLICABLE.
2. DO NOT SCALE FROM THIS DRAWING.
3. CONTRACTOR IS TO ORGANISE ALL SET OUT, INSPECTIONS AND MONITORING AS REQUIRED TO MEET CONSENT CONDITIONS.

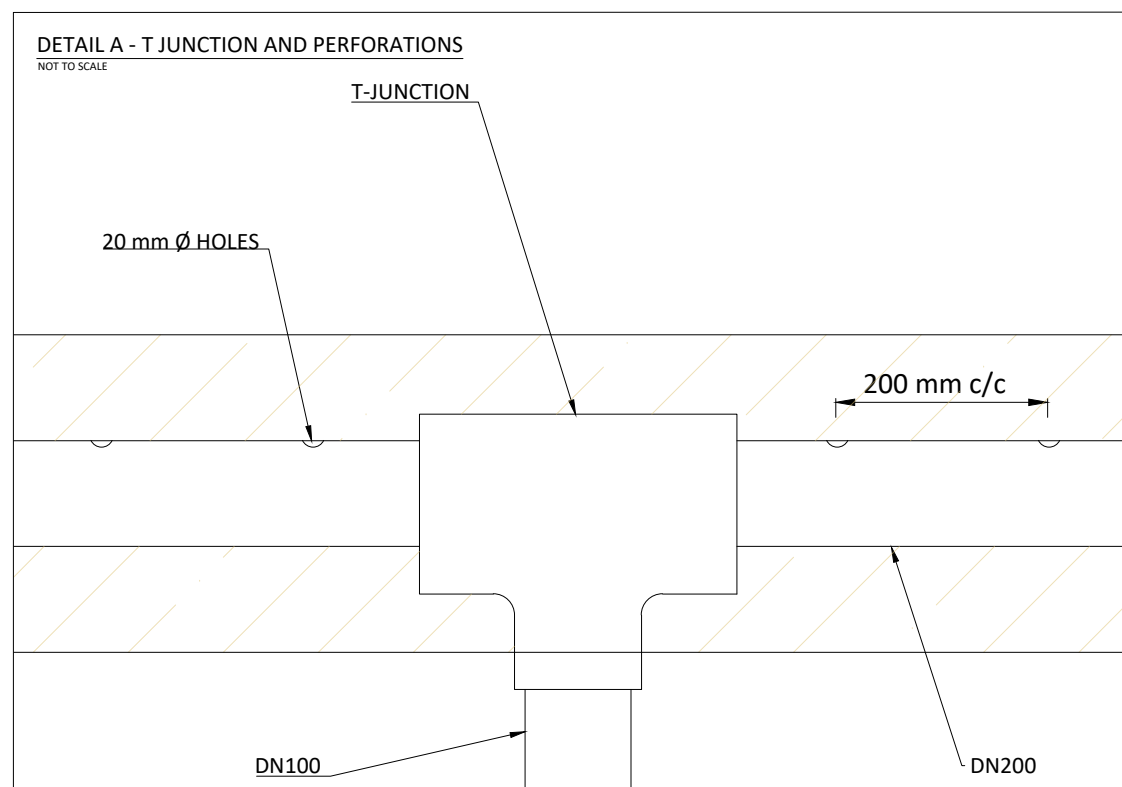
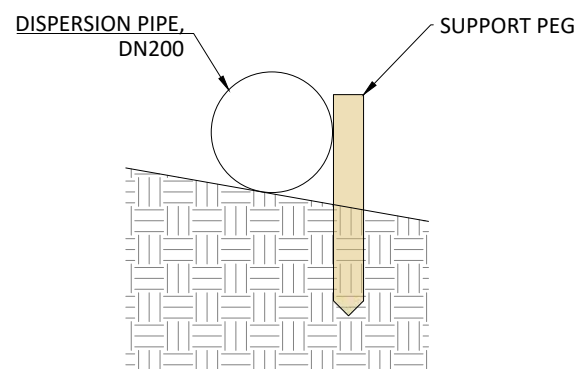
## OPTION 1: DISPERSION VIA ABOVE GROUND PIPE

NOT TO SCALE



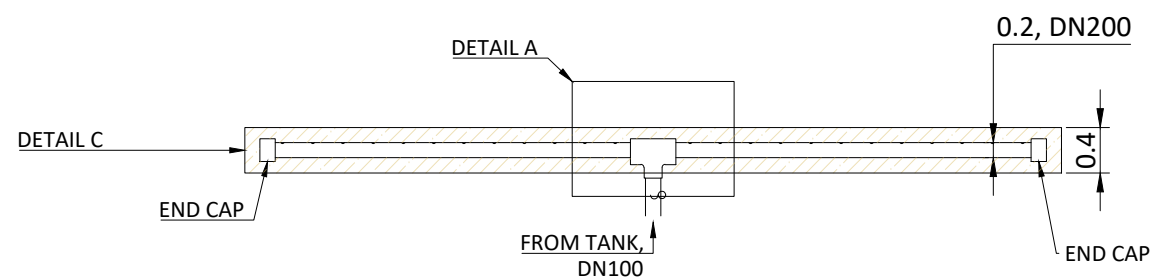
### DETAIL B - SIDE VIEW

NOT TO SCALE



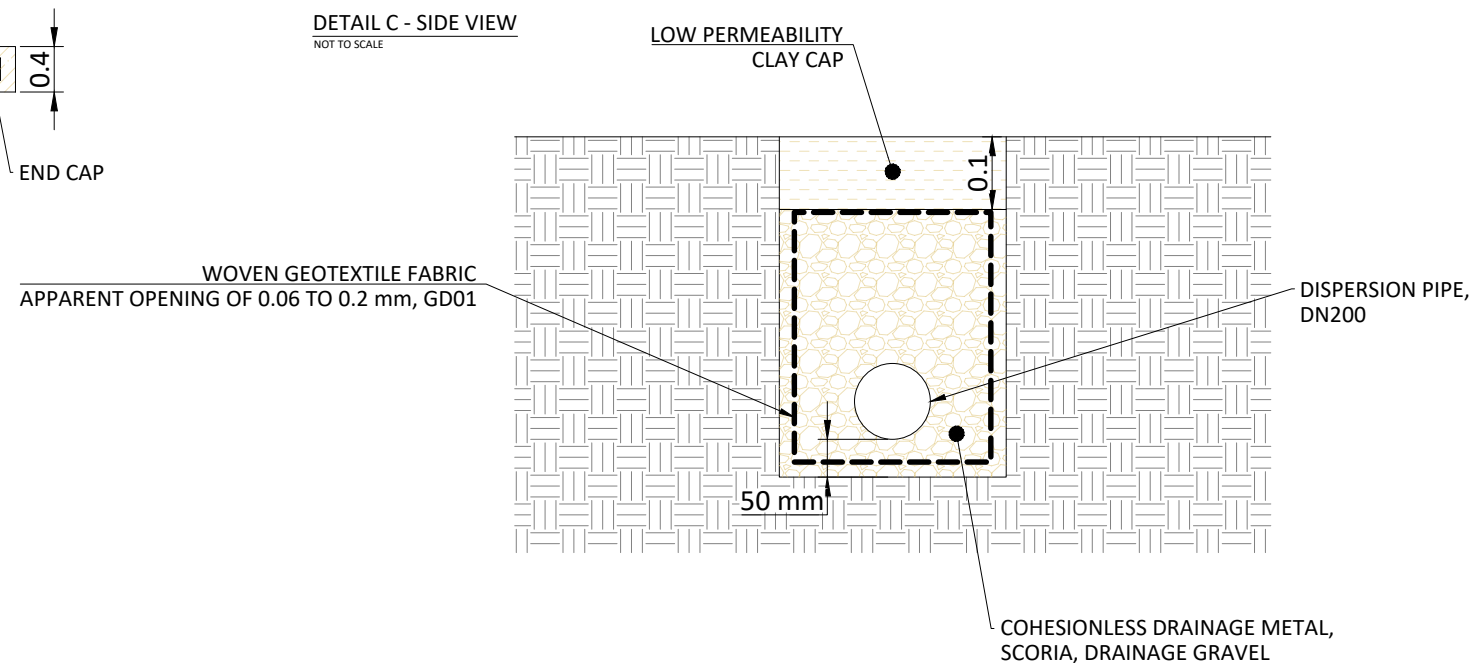
## OPTION 2: DISPERSION VIA BELOW GROUND TRENCH

NOT TO SCALE



### DETAIL C - SIDE VIEW

NOT TO SCALE



Revision	Issue	Date
2	CONSENT	19/07/2024
1	CONSENT	22/03/2024



AUCKLAND | NORTHLAND

Project Name and Address  
**79 NEWTON ROAD**  
**OMAPERE, FAR NORTH**  
**LOTS 1-4 OF LOT 2 DP 100455**

Project  
**C0428**

Drawn By  
**SD**

Client  
**SUSAN WILTSHIRE**

Sheet Title  
**TYPICAL DISPERSION PIPE DETAIL**

Sheet  
**402**





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## APPENDIX B

### Engineering Borehole Records



# INVESTIGATION LOG

HOLE NO.:  
**BH01**

CLIENT: Susie Wiltshire  
PROJECT: 79 Newton Road, Omapere

JOB NO.:  
**C0428**

SITE LOCATION: North of Newton Road  
CO-ORDINATES: 1635423.42mE, 6067284.02mN (NZTM)

START DATE: 19/01/2024  
END DATE: 19/01/2024

CONTRACTOR: Internal RIG: Hand

ELEVATION: Ground  
DRILLER: SD

LOGGED BY: SD

MATERIAL DESCRIPTION <small>(See Classification &amp; Symbology sheet for details)</small>	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER <small>(Blows / 100mm)</small>		VANE SHEAR STRENGTH <small>(kPa)</small> Vane: 3282		WATER
				2	4	50	100	
Grassed TOPSOIL comprising organic SILT; dark blackish brown, moist, low plasticity.		0.2	TS					91
SILT; with some clay, brown, some organics, minor mottled orange, moist, low plasticity.		0.4	TS					42
		0.6	TS					128
		0.8	TS					56
Clayey SILT; grey mottled orange, moist, low plasticity.		1.0	TS					117
		1.2	TS					56
		1.4	TS					162
SILT with trace clay and trace gravel; brown, large mottled orange pockets, moist, low plasticity.		1.6	TS					67
		1.8	TS					155
		2.0	TS					70
		2.2	TS					195+
		2.4	TS					-
		2.6	TS					110
		2.8	TS					63
		3.0	TS					195+
		3.2	TS	2				-
End Of Hole: 3.20m		3.4	TS	3				-
		3.6	TS	6				-
		3.8	TS	6				-
		4.0	TS	8				-
		4.2	TS	10				-
		4.4	TS	10				-
		4.6	TS	15				-
		4.8	TS	23 >>				-
		5.0	TS	25 >>				-

Groundwater Not Encountered

**PHOTO(S)**



**REMARKS**

- Hand auger terminated at 3.2m bgl due to hard strata.
- Continued with DCP from 3.2m bgl until refusal at 4.7m bgl.
- No groundwater encountered at time of drilling.
- No groundwater measured at EOD.

**WATER**

- Standing Water Level
- Out flow
- In flow

**INVESTIGATION TYPE**

- Hand Auger
- Test Pit







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## APPENDIX C

### Assessment of Environmental Effects and Assessment Criteria



Table 11: Wastewater Assessment of Environmental Effects

Item	NRC Separation Requirement <sup>2</sup>	FNDC Separation Requirement	Site Assessment <sup>3</sup>
<b>Individual System Effects</b>			
Flood Plains	Above 5 % AEP	NR	Complies according to available GIS data and visual assessment.
Stormwater Flowpath <sup>4</sup>	5 m	NR	Complies, see annotations on Drawing No. 500.
Surface water feature <sup>5</sup>	15 m	15 m	Complies.
Coastal Marine Area	15 m	30 m	Complies, site is inland.
Existing water supply bore.	20 m	NR	Complies. None recorded within or within 20 m of the site boundaries.
Property boundary	1.5 m	1.5	Complies. Including proposed subdivision boundaries.
Winter groundwater table	0.6 m	0.6 m	Complies.
Topography			Ok – chosen disposal areas are moderately sloping to <17 °.
Cut off drain required?			Yes.
Discharge Consent Required?			No.
	<b>TP58</b>	<b>NZS1547</b>	
<b>Cumulative Effects</b>			
Biological Oxygen Demand		≤20 g/m <sup>3</sup>	Complies – secondary treatment.
Total Suspended Solids		≤30 g/m <sup>3</sup>	Complies – secondary treatment.
Total Nitrogen	10 – 30 g/m <sup>3</sup>	15 – 75 g/m <sup>3</sup>	Complies – secondary treatment.
Phosphorous	NR	4 – 10 g/m <sup>3</sup>	Complies – secondary treatment.
Ammonia	NR	Negligible	Complies – secondary treatment.
Nitrites/ Nitrates	NR	15 – 45 g/m <sup>3</sup>	Complies – secondary treatment.
<b>Conclusion: Effects are less than minor on the environment.</b>			
<ol style="list-style-type: none"> <li>1. AEE based on proposed secondary treated effluent.</li> <li>2. Northland Regional Plan Table 9.</li> <li>3. Based on the recommendations of this report and Drawing No. 500.</li> <li>4. Including any formed road with kerb and channel, and water-table drain that is down-slope of the disposal area.</li> <li>5. River, lake, stream, pond, dam, or natural wetland.</li> </ol>			
AEP Annual Exceedance Probability.			
NR No Requirement.			

Table 12: Proposed Northland Regional Plan Stormwater Assessment Criteria, to rule C.6.4.2

Assessment Criteria	Comments
1) the discharge or diversion is not from: a) a public stormwater network, or b) a high-risk industrial or trade premises	Complies.
2) the diversion and discharge does not cause or increase flooding of land on another property in a storm event of up to and including a 10 percent annual exceedance probability, or flooding of buildings on another property in a storm event of up to and including a one percent annual exceedance probability	Complies, all discharges attenuated to 1 % AEP.
3) where the diversion or discharge is from a hazardous substance storage or handling area: a) the stormwater collection system is designed and operated to prevent hazardous substances stored or used on the site from entering the stormwater system, or b) there is a secondary containment system in place to intercept any spillage of hazardous substances and either discharges that spillage to a trade waste system or stores it for removal and treatment, or c) if the stormwater contains oil contaminants, the stormwater is passed through a stormwater treatment system designed in accordance with the Environmental Guidelines for Water Discharges from Petroleum Industry Sites in New Zealand (Ministry for the Environment, 1998) prior to discharge	Complies. Site is residential.
4) where the diversion or discharge is from an industrial or trade premises: a) the stormwater collection system is designed and operated to prevent any contaminants stored or used on the site, other than those already controlled by condition 3) above, from entering stormwater unless the stormwater is discharged through a stormwater treatment system, and b) any process water or liquid waste stream on the site is bunded, or otherwise contained, within an area of sufficient capacity to provide secondary containment equivalent to 100 percent of the quantity of any process water or liquid waste that has the potential to spill into a stormwater collection system, in order to prevent trade waste entering the stormwater collection system	Complies. Site is residential.
5) the diversion or discharge is not into potentially contaminated land, or onto potentially contaminated land that is not covered by an impervious area	Complies.
6) the diversion and discharge does not cause permanent scouring or erosion of the bed of a water body at the point of discharge	Complies, specifically sized discharge devices are provided from all on-lot devices.
7) the discharge does not contain more than 15 milligrams per litre of total petroleum hydrocarbons	Complies. Site is residential.
8) the discharge does not cause any of the following effects in the receiving waters beyond the zone of reasonable mixing: a) the production of conspicuous oil or grease films, scums or foams, of floatable or suspended materials, or b) a conspicuous change in the colour or visual clarity, or c) an emission of objectionable odour, or d) the rendering of fresh water unsuitable for consumption by farm animals, or e) the rendering of fresh water taken from a mapped priority drinking water abstraction point (refer I Maps   Ngā mahere matawhenua) unsuitable for human consumption after existing treatment.	Complies.

Table 13: Proposed Northland Regional Plan Earthworks Assessment Criteria, to rule C.8.3.1

Assessment Criteria	Comments
1) the area and volume of earthworks at a particular location or associated with a project complies with the thresholds in Table 15.	Complies – classed as ‘other areas’.
2) the discharge is not within 20 metres of a geothermal surface feature.	Complies.
3) except for coastal dune restoration activities, good management practice erosion and sediment control measures equivalent to those set out in the Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016 (Auckland Council Guideline Document GD2016/005), are implemented for the duration of the activity	Complies. See specific erosion and sediment control details, concept plan and typical details.
4) batters and side castings are stabilised to prevent slumping	Complies.
5) exposed earth is stabilised upon completion of the earthworks to minimise erosion and avoid slope failure	Complies. Earthworks form road area to be stabilised with a gravelled surface.
6) earth and debris are not deposited into, or in a position where they can enter, a natural wetland, a continually or intermittently flowing river, a lake, an artificial watercourse, or the coastal marine	Complies. Additional erosion and sediment control measures have been implemented to control this. Refer erosion and sediment control measures, concept plan.
7) the earthworks activity does not: a) reduce the height of a dune crest in a coastal riparian and foredune management area, except where dunes are recontoured to remove introduced materials or to remediate dune blow-outs as part of coastal dune restoration work, or b) exacerbate flood or coastal hazard risk on any other property, or c) create or contribute to the instability or subsidence of land on other property, or d) divert flood flow onto other property, and 216	Complies provided recommendations in this report and any accompanying detailed design is adhered to.
8) any associated damming, diversion and discharge of stormwater does not give rise to any of the following effects in the receiving waters beyond the zone of reasonable mixing: a) any conspicuous change in colour or visual clarity, or b) the rendering of fresh water unsuitable for consumption by farm animals, or c) contamination which may render freshwater taken from a mapped priority drinking water abstraction point (refer I Maps   Ngā mahere matawhenua) unsuitable for human consumption after existing treatment	Complies provided recommendations in this report and any accompanying detailed design is adhered to.
9) information on the source and composition of any clean fill material and its location within the disposal site are recorded and provided to the Regional Council on request	Can comply. Materials are anticipated to be either site won or imported from a registered quarry facility. Details TBC according to an earthworks specification completed during a detailed design phase.
10) the Regional Council’s Compliance Manager is given at least five working days’ notice (in writing or by email) of any earthworks activity being undertaken within a high-risk flood hazard area, flood hazard area, where contaminated land will be exposed, or in sand dunes within a coastal riparian and foredune management area.	Can comply, if required.






**geologix**  
consulting engineers

## APPENDIX D

### Stormwater Calculations

Project Ref:	CD428	<b>STORMWATER ATTENUATION TANK DESIGN</b>	
Project Address:	79 NEWTON ROAD, OMAPERÈ		
Design Case:	CONCEPT FUTURE DEVELOPMENT		
Date:	19 March 2024 REV 1		
<b>50 % AEP STORM EVENT, 80 % OF PRE DEVELOPMENT</b>			

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF PREDICTED 2.1 DEGREE CLIMATE CHANGE. RESIDENTIAL DEVELOPMENT AREAS ARE BASED ON EXISTING SURVEY DATA.

RUNOFF COEFFICIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

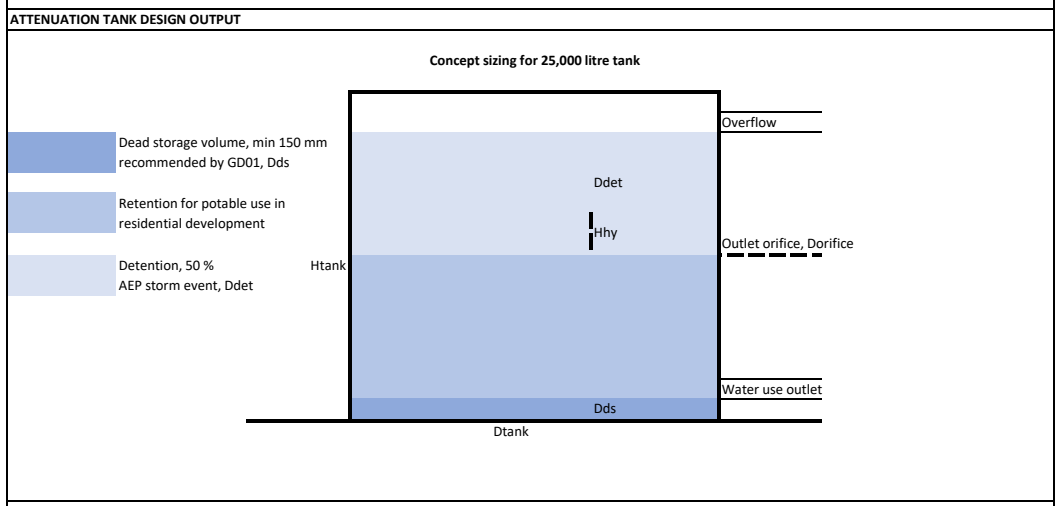
PRE DEVELOPMENT CATCHMENT PARAMETERS				POST DEVELOPMENT CATCHMENT PARAMETERS			
ITEM	AREA, A, m <sup>2</sup>	COEFFICIENT, C	DESCRIPTION	ITEM	AREA, A, m <sup>2</sup>	COEFFICIENT, C	DESCRIPTION
IMPERVIOUS A	0	0		TO TANK	300	0.96	ROOF
IMPERVIOUS B	0	0		OFFSET	200	0.83	DRIVEWAY - METAL
IMPERVIOUS C	0	0		PERVIOUS	0	0	
EX. PERVIOUS	500	0.67	PASTURE	EX. CONSENTED	0	0	
<b>TOTAL</b>	<b>500</b>	<b>TYPE D</b>		<b>TOTAL</b>	<b>500</b>	<b>TYPE D</b>	

RAINFALL INTENSITY, 50% AEP, 10MIN DURATION			
50 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	56.5	mm/hr	* CLIMATE CHANGE FACTOR OF 20% APPLIED IN ACCORDANCE WITH FNDC ENGINEERING STANDARDS 4.3.9.1. NIWA HISTORIC RAINFALL INTENSITY DATA, 10MIN, IS MULTIPLIED BY CLIMATE CHANGE FACTOR.
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%	
50 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	67.80	mm/hr	


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, Q, l/s	COMMENTS
10	56.50	1.2	67.80	8.55	5.26	4.21	Critical duration (time of concentration) for the catchments is 10min
20	38.40	1.2	46.08	5.81	3.57	2.86	
30	30.60	1.2	36.72	4.63	2.85	2.28	
60	20.80	1.2	24.96	3.15	1.94	1.55	Pre-dev calculated on Intensity without CC factor
120	14.00	1.2	16.80	2.12	1.30	1.04	
360	7.36	1.2	8.83	1.11	0.68	0.55	
720	4.80	1.2	5.76	0.73	0.45	0.36	
1440	3.06	1.2	3.67	0.46	0.28	0.23	
2880	1.90	1.2	2.28	0.29	0.18	0.14	
4320	1.42	1.2	1.70	0.21	0.13	0.11	

ATTENUATION ANALYSIS, VARIOUS DURATIONS							
DURATION, min	OFFSET FLOW, Q <sub>off</sub> , l/s	TANK INFLOW, Q <sub>in</sub> , l/s	ALLOWABLE TANK OUTFLOW, Q <sub>pre</sub> - Q <sub>off</sub> , l/s	SELECTED TANK OUTFLOW, Q <sub>out</sub> , l/s	DIFFERENCE (Q <sub>in</sub> - Q <sub>out</sub> ), l/s	Required Storage, litres	
10	3.13	5.42	1.08	1.08	4.34	2607	select largest required storage, regardless of duration, to avoid overflow
20	2.12	3.69	0.73	1.08	2.61	3128	
30	1.69	2.94	0.58	1.08	1.86	3344	
60	1.15	2.00	0.40	1.08	0.92	3301	
120	0.77	1.34	0.27	1.08	0.26	1902	
360	0.41	0.71	0.14	1.08	No Att. Req.	0	
720	0.27	0.46	0.09	1.08	No Att. Req.	0	
1440	0.17	0.29	0.06	1.08	No Att. Req.	0	
2880	0.11	0.18	0.04	1.08	No Att. Req.	0	
4320	0.08	0.14	0.03	1.08	No Att. Req.	0	

NOTE: ALLOWABLE FLOW PROVIDES FOR ANY OFFSET ARISING FROM FLOWS NOT DIRECTLY DISCHARGING TO TANK



SPECIFICATION		
TOTAL STORAGE REQUIRED	3.344 m <sup>3</sup>	Select largest storage as per analysis
TANK HEIGHT, H <sub>tank</sub>	2.6 m	Concept sizing for 25,000 litre tank
TANK DIAMETER, D <sub>tank</sub>	3.5 m	No. of Tanks 1
TANK AREA, A <sub>tank</sub>	9.62 m <sup>2</sup>	Area of one tanks hydraulically linked
TANK MAX STORAGE VOLUME, V <sub>tank</sub>	25015 litres	
REQUIRED STORAGE HEIGHT, D <sub>det</sub>	0.35 m	Below overflow
DEAD STORAGE VOLUME, D <sub>ds</sub>	0.15 m	GD01 recommended minimum
TOTAL WATER DEPTH REQUIRED	0.50 m	
SELECTED TANK OUTFLOW, Q <sub>out</sub> , l/s	0.00108 m <sup>3</sup> /s	Selected tank outflow
AVERAGE HYDRAULIC HEAD, H <sub>hy</sub>	0.17 m	
AREA OF ORIFICE, A <sub>orifice</sub>	9.43E-04 m <sup>2</sup>	
ORIFICE DIAMETER, D <sub>orifice</sub>	35 mm	
VELOCITY AT ORIFICE	2.61 m/s	At max. head level

Project Ref:	CD428	<b>STORMWATER ATTENUATION TANK DESIGN</b>	
Project Address:	79 NEWTON ROAD, OMAPERE		
Design Case:	CONCEPT FUTURE DEVELOPMENT		
Date:	19 March 2024 REV 1	<b>20 % AEP STORM EVENT, 80 % OF PRE DEVELOPMENT</b>	

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF PREDICTED 2.1 DEGREE CLIMATE CHANGE. RESIDENTIAL DEVELOPMENT AREAS ARE BASED ON EXISTING SURVEY DATA.

RUNOFF COEFFICIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

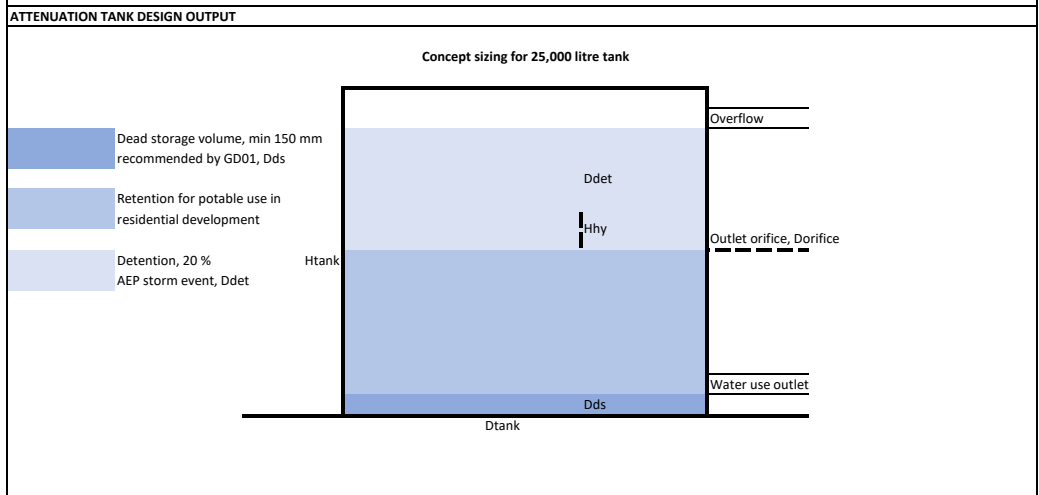
PRE DEVELOPMENT CATCHMENT PARAMETERS				POST DEVELOPMENT CATCHMENT PARAMETERS			
ITEM	AREA, A, m <sup>2</sup>	COEFFICIENT, C	DESCRIPTION	ITEM	AREA, A, m <sup>2</sup>	COEFFICIENT, C	DESCRIPTION
IMPERVIOUS A	0	0		TO TANK	300	0.96	ROOF
IMPERVIOUS B	0	0		OFFSET	200	0.83	DRIVEWAY - METAL
IMPERVIOUS C	0	0		PERVIOUS	0	0	
EX. PERVIOUS	500	0.67	PASTURE	EX. CONSENTED	0	0	
<b>TOTAL</b>	<b>500</b>	<b>TYPE D</b>		<b>TOTAL</b>	<b>500</b>	<b>TYPE D</b>	

RAINFALL INTENSITY, 20% AEP, 10MIN DURATION			
20 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	72.9	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.
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%	
20 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	87.5	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	PRE DEV RUNOFF, Qpre, l/s	80% of PRE DEV RUNOFF, Q, l/s	COMMENTS
10	72.90	1.2	87.48	11.03	6.78	5.43	Critical duration (time of concentration) for the catchments is 10min
20	49.60	1.2	59.52	7.51	4.62	3.69	
30	39.60	1.2	47.52	5.99	3.69	2.95	
60	27.00	1.2	32.40	4.09	2.51	2.01	Pre-dev calculated on Intensity without CC factor
120	18.20	1.2	21.84	2.75	1.69	1.35	
360	9.60	1.2	11.52	1.45	0.89	0.71	
720	6.27	1.2	7.52	0.95	0.58	0.47	
1440	4.01	1.2	4.81	0.61	0.37	0.30	
2880	2.50	1.2	3.00	0.38	0.23	0.19	
4320	1.87	1.2	2.24	0.28	0.17	0.14	


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	COMMENTS
10	4.03	7.00	1.39	1.39	5.61	3363	select largest required storage, regardless of duration, to avoid overflow
20	2.74	4.76	0.95	1.39	3.37	4042	
30	2.19	3.80	0.76	1.39	2.41	4335	
60	1.49	2.59	0.52	1.39	1.20	4316	
120	1.01	1.75	0.35	1.39	0.35	2549	
360	0.53	0.92	0.18	1.39	No Att. Req.	0	
720	0.35	0.60	0.12	1.39	No Att. Req.	0	
1440	0.22	0.38	0.08	1.39	No Att. Req.	0	
2880	0.14	0.24	0.05	1.39	No Att. Req.	0	
4320	0.10	0.18	0.04	1.39	No Att. Req.	0	

NOTE: ALLOWABLE FLOW PROVIDES FOR ANY OFFSET ARISING FROM FLOWS NOT DIRECTLY DISCHARGING TO TANK



SPECIFICATION		
TOTAL STORAGE REQUIRED	4.335 m <sup>3</sup>	Select largest storage as per analysis
TANK HEIGHT, Htank	2.6 m	Concept sizing for 25,000 litre tank
TANK DIAMETER, Dtank	3.5 m	No. of Tanks 1
TANK AREA, Atank	9.62 m <sup>2</sup>	Area of one tanks hydraulically linked
TANK MAX STORAGE VOLUME, Vtank	25015 litres	
REQUIRED STORAGE HEIGHT, Ddet	0.45 m	Below overflow
DEAD STORAGE VOLUME, Dds	0.15 m	GD01 recommended minimum
TOTAL WATER DEPTH REQUIRED	0.60 m	
SELECTED TANK OUTFLOW, Qout, l/s	0.00139 m <sup>3</sup> /s	Selected tank outflow
AVERAGE HYDRAULIC HEAD, Hhy	0.23 m	
AREA OF ORIFICE, Aorifice	1.07E-03 m <sup>2</sup>	
ORIFICE DIAMETER, Dorifice	37 mm	
VELOCITY AT ORIFICE	2.97 m/s	At max. head level



Project Ref:	CD428	<b>STORMWATER ATTENUATION TANK DESIGN</b>	
Project Address:	79 NEWTON ROAD, OMAPERE		
Design Case:	CONCEPT FUTURE DEVELOPMENT		
Date:	19 March 2024	REV 1	<b>1 % AEP STORM EVENT, 80 % OF PRE DEVELOPMENT</b>

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF PREDICTED 2.1 DEGREE CLIMATE CHANGE. RESIDENTIAL DEVELOPMENT AREAS ARE BASED ON EXISTING SURVEY DATA.

RUNOFF COEFFICIENTS DETERMINED FROM FNDC ENGINEERING STANDARDS 2023 TABLE 4-3.

PRE DEVELOPMENT CATCHMENT PARAMETERS				POST DEVELOPMENT CATCHMENT PARAMETERS			
ITEM	AREA, A, m <sup>2</sup>	COEFFICIENT, C	DESCRIPTION	ITEM	AREA, A, m <sup>2</sup>	COEFFICIENT, C	DESCRIPTION
IMPERVIOUS A	0	0		TO TANK	300	0.96	ROOF
IMPERVIOUS B	0	0		OFFSET	200	0.83	DRIVEWAY - METAL
IMPERVIOUS C	0	0		PERVIOUS	0	0	
EX. PERVIOUS	500	0.67	PASTURE	EX. CONSENTED	0	0	
<b>TOTAL</b>	<b>500</b>	<b>TYPE D</b>		<b>TOTAL</b>	<b>500</b>	<b>TYPE D</b>	

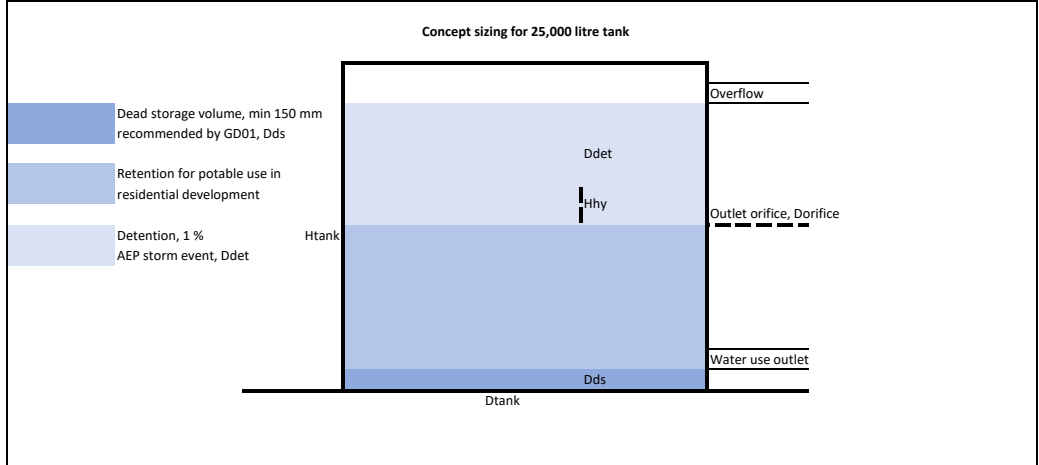
RAINFALL INTENSITY, 1% AEP, 10MIN DURATION			
1 % AEP RAINFALL INTENSITY, 10 MIN, I, mm/hr	127.0	mm/hr	* CLIMATE CHANGE FACTOR OF 20% APPLIED IN ACCORDANCE WITH FNDC ENGINEERING STANDARDS 4.3.9.1. NIWA HISTORIC RAINFALL INTENSITY DATA, 10MIN, IS MULTIPLIED BY CLIMATE CHANGE FACTOR.
CLIMATE CHANGE FACTOR, 2.1 DEG, 10 MIN*	20	%	
1 % AEP RAINFALL INTENSITY, 10 MIN WITH CC	152.4	mm/hr	

PRE AND POST-DEVELOPMENT RUNOFF, 1%AEP WITH CC, VARIOUS DURATIONS							
DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Q <sub>post</sub> , l/s	PRE DEV RUNOFF, Q <sub>pre</sub> , l/s	80% of PRE DEV RUNOFF, Q, l/s	COMMENTS
10	127.00	1.2	152.40	19.22	11.82	9.45	Critical duration (time of concentration) for the catchments is 10min
20	86.80	1.2	104.16	13.14	8.08	6.46	
30	69.60	1.2	83.52	10.53	6.48	5.18	
60	47.60	1.2	57.12	7.20	4.43	3.54	Pre-dev calculated on Intensity without CC factor
120	32.40	1.2	38.88	4.90	3.02	2.41	
360	17.20	1.2	20.64	2.60	1.60	1.28	
720	11.30	1.2	13.56	1.71	1.05	0.84	
1440	7.29	1.2	8.75	1.10	0.68	0.54	
2880	4.57	1.2	5.48	0.69	0.43	0.34	
4320	3.43	1.2	4.12	0.52	0.32	0.26	

ATTENUATION ANALYSIS, VARIOUS DURATIONS							
DURATION, min	OFFSET FLOW, Q <sub>off</sub> , l/s	TANK INFLOW, Q <sub>in</sub> , l/s	ALLOWABLE TANK OUTFLOW, Q <sub>pre-Qoff</sub> , l/s	SELECTED TANK OUTFLOW, Q <sub>out</sub> , l/s	DIFFERENCE (Q <sub>in</sub> - Q <sub>out</sub> ), l/s	Required Storage, litres	COMMENTS
10	7.03	12.19	2.43	2.43	9.76	5859	select largest required storage, regardless of duration, to avoid overflow
20	4.80	8.33	1.66	2.43	5.91	7087	
30	3.85	6.68	1.33	2.43	4.25	7658	
60	2.63	4.57	0.91	2.43	2.14	7713	
120	1.79	3.11	0.62	2.43	0.68	4920	
360	0.95	1.65	0.33	2.43	No Att. Req.	0	
720	0.63	1.08	0.22	2.43	No Att. Req.	0	
1440	0.40	0.70	0.14	2.43	No Att. Req.	0	
2880	0.25	0.44	0.09	2.43	No Att. Req.	0	
4320	0.19	0.33	0.07	2.43	No Att. Req.	0	

NOTE: ALLOWABLE FLOW PROVIDES FOR ANY OFFSET ARISING FROM FLOWS NOT DIRECTLY DISCHARGING TO TANK

**ATTENUATION TANK DESIGN OUTPUT**



**SPECIFICATION**

TOTAL STORAGE REQUIRED	7.713 m <sup>3</sup>	Select largest storage as per analysis
TANK HEIGHT, H <sub>tank</sub>	2.6 m	Concept sizing for 25,000 litre tank
TANK DIAMETER, D <sub>tank</sub>	3.5 m	No. of Tanks 1
TANK AREA, A <sub>tank</sub>	9.62 m <sup>2</sup>	Area of one tanks hydraulically linked
TANK MAX STORAGE VOLUME, V <sub>tank</sub>	25015 litres	
REQUIRED STORAGE HEIGHT, D <sub>det</sub>	0.80 m	Below overflow
DEAD STORAGE VOLUME, D <sub>ds</sub>	0.15 m	GD01 recommended minimum
TOTAL WATER DEPTH REQUIRED	0.95 m	
SELECTED TANK OUTFLOW, Q <sub>out</sub> , l/s	0.00243 m <sup>3</sup> /s	Selected tank outflow
AVERAGE HYDRAULIC HEAD, H <sub>hy</sub>	0.40 m	
AREA OF ORIFICE, A <sub>orifice</sub>	1.40E-03 m <sup>2</sup>	
ORIFICE DIAMETER, D <sub>orifice</sub>	42 mm	
VELOCITY AT ORIFICE	3.97 m/s	At max. head level

HIRDS V4 Intensity-Duration-Frequency Results

Site name: Custom Location  
 Coordinate system: WGS84  
 Longitude: 173.3926  
 Latitude: -35.5371

DDF Mode Parameters: c d e f g h i  
 Values: 0.00291503 0.4367574 -0.0061001 -0.00213688 0.24939773 -0.0108155 2.945116  
 Example: Duration (hrs) ARI (yrs) x y Rainfall Rate (mm/hr)  
 24 100 3.17805383 4.60014923 7.265680022

Rainfall Intensities (mm/hr) - Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	51.8	35.1	28	19	12.8	6.71	4.37	2.8	1.7	1.3	1	0.88
2	0.5	56.8	38.4	30.6	20.8	14	7.36	4.8	3.1	1.9	1.4	1.2	0.97
5	0.2	72.9	49.6	39.6	27	18.2	9.6	6.27	4	2.5	1.9	1.5	1.28
10	0.1	84.9	57.9	46.3	31.6	21.4	11.3	7.37	4.7	3	2.2	1.8	1.51
20	0.05	97.2	66.4	53.1	36.3	24.6	13	8.52	5.5	3.4	2.6	2.1	1.75
30	0.033	105	71.4	57.2	39.1	26.5	14	9.2	5.9	3.7	2.8	2.3	1.9
40	0.025	110	75.1	60.1	41.1	27.9	14.8	9.7	6.2	3.9	2.9	2.4	2.01
50	0.02	114	77.9	62.4	42.7	29	15.4	10.1	6.5	4.1	3.1	2.5	2.09
60	0.017	117	80.2	64.3	44	29.9	15.9	10.4	6.7	4.2	3.2	2.6	2.16
80	0.013	123	83.9	67.3	46	31.3	16.6	10.9	7	4.4	3.3	2.7	2.27
100	0.01	127	86.8	69.6	47.6	32.4	17.2	11.3	7.3	4.6	3.4	2.8	2.36
250	0.004	141	98.4	79	54.2	36.9	19.7	13	8.4	5.3	4	3.2	2.71

Intensity standard error (mm/hr) - Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	5.2	3.3	2.6	1.7	1.2	0.71	0.48	0.4	0.2	0.2	0.1	0.12
2	0.5	5.6	3.6	2.8	1.9	1.3	0.78	0.53	0.4	0.3	0.2	0.2	0.13
5	0.2	8.2	5.2	4.2	2.8	1.8	1	0.74	0.6	0.4	0.3	0.2	0.18
10	0.1	11	7.1	5.7	3.4	2.3	1.3	0.93	0.7	0.4	0.3	0.3	0.22
20	0.05	14	9.5	7.8	4.5	3.1	1.7	1.2	0.9	0.5	0.4	0.3	0.27
30	0.033	17	11	9.3	5.2	3.6	2	1.4	1	0.6	0.4	0.3	0.29
40	0.025	19	13	11	5.8	4.1	2.2	1.5	1.1	0.6	0.5	0.4	0.32
50	0.02	20	14	12	6.4	4.5	2.4	1.5	1.0	0.7	0.5	0.4	0.34
60	0.017	22	15	12	6.8	4.8	2.6	1.8	1.2	0.7	0.5	0.4	0.35
80	0.013	24	17	14	7.6	5.4	2.8	2	1.3	0.7	0.6	0.4	0.38
100	0.01	26	18	15	8.3	5.9	3.1	2.1	1.4	0.8	0.6	0.5	0.4
250	0.004	37	25	22	12	8.3	4.4	3	1.7	1	0.7	0.6	0.51

Rainfall intensities (mm/hr) - RCP2.6 for the period 2031-2050

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	55.4	37.6	30	20.3	13.7	7.08	4.58	2.9	1.8	1.3	1.1	0.91
2	0.5	60.6	41.2	32.9	22.3	15	7.78	5.04	3.2	2	1.5	1.2	1
5	0.2	78.4	53.4	42.6	29	19.6	10.2	6.61	4.2	2.6	1.9	1.6	1.32
10	0.1	91.5	62.4	49.9	34	23	12	7.79	5	3.1	2.3	1.9	1.56
20	0.05	105	71.6	57.3	39.1	26.4	13.9	9	5.7	3.6	2.7	2.2	1.81
30	0.033	113	77.1	61.7	42.2	28.5	15	9.74	6.2	3.9	2.9	2.3	1.97
40	0.025	118	81	64.9	44.3	30	15.8	10.3	6.5	4.1	3	2.5	2.08
50	0.02	123	84.1	67.4	46.1	31.2	16.4	10.7	6.8	4.2	3.2	2.6	2.16
60	0.017	127	86.6	69.4	47.5	32.2	16.9	11	7	4.4	3.3	2.7	2.24
80	0.013	132	90.6	72.7	49.7	33.7	17.7	11.6	7.4	4.6	3.4	2.8	2.35
100	0.01	137	93.7	75.2	51.5	34.9	18.4	12	7.7	4.8	3.6	2.9	2.44
250	0.004	155	106	85.3	58.5	39.8	21	13.7	8.8	5.5	4.1	3.3	2.81

Rainfall intensities (mm/hr) - RCP2.6 for the period 2081-2100

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	55.4	37.6	30	20.3	13.7	7.08	4.58	2.9	1.8	1.3	1.1	0.91
2	0.5	60.6	41.2	32.9	22.3	15	7.78	5.04	3.2	2	1.5	1.2	1
5	0.2	78.4	53.4	42.6	29	19.6	10.2	6.61	4.2	2.6	1.9	1.6	1.32
10	0.1	91.5	62.4	49.9	34	23	12	7.79	5	3.1	2.3	1.9	1.56
20	0.05	105	71.6	57.3	39.1	26.4	13.9	9	5.7	3.6	2.7	2.2	1.81
30	0.033	113	77.1	61.7	42.2	28.5	15	9.74	6.2	3.9	2.9	2.3	1.97
40	0.025	118	81	64.9	44.3	30	15.8	10.3	6.5	4.1	3	2.5	2.08
50	0.02	123	84.1	67.4	46.1	31.2	16.4	10.7	6.8	4.2	3.2	2.6	2.16
60	0.017	127	86.6	69.4	47.5	32.2	16.9	11	7	4.4	3.3	2.7	2.24
80	0.013	132	90.6	72.7	49.7	33.7	17.7	11.6	7.4	4.6	3.4	2.8	2.35
100	0.01	137	93.7	75.2	51.5	34.9	18.4	12	7.7	4.8	3.6	2.9	2.44
250	0.004	155	106	85.3	58.5	39.8	21	13.7	8.8	5.5	4.1	3.3	2.81

Rainfall intensities (mm/hr) - RCP4.5 for the period 2031-2050

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	56.3	38.2	30.5	20.7	13.9	7.18	4.63	2.9	1.8	1.3	1.1	0.91
2	0.5	61.7	41.9	33.4	22.7	15.3	7.89	5.1	3.2	2	1.5	1.2	1
5	0.2	79.8	54.3	43.4	29.5	19.9	10.3	6.7	4.2	2.6	2	1.6	1.33
10	0.1	93.2	63.5	50.8	34.6	23.4	12.2	7.89	5	3.1	2.3	1.9	1.57
20	0.05	107	72.9	58.4	39.8	26.9	14.1	9.13	5.8	3.7	2.7	2.2	1.83
30	0.033	115	78.5	62.9	42.9	29.1	15.2	9.87	6.3	3.9	2.9	2.4	1.98
40	0.025	121	82.5	66.1	45.2	30.6	16	10.4	6.6	4.1	3.1	2.5	2.1
50	0.02	125	85.7	68.7	46.9	31.8	16.7	10.8	6.9	4.3	3.2	2.6	2.18
60	0.017	129	88.2	70.7	48.4	32.8	17.2	11.2	7.1	4.4	3.3	2.7	2.26
80	0.013	133	91.3	74	50.7	34.4	18	11.7	7.5	4.7	3.5	2.8	2.37
100	0.01	139	95.5	76.6	52.4	35.6	18.7	12.2	7.8	4.8	3.6	2.9	2.46
250	0.004	158	108	86.9	59.6	40.5	21.4	13.9	8.9	5.5	4.2	3.4	2.84

Rainfall intensities (mm/hr) - RCP4.5 for the period 2081-2100

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	59	40.2	32	21.7	14.6	7.47	4.79	3	1.9	1.4	1.1	0.93
2	0.5	64.9	44.1	35.2	23.9	16	8.23	5.29	3.3	2	1.5	1.2	1.03
5	0.2	84.2	57.3	45.8	31.2	21	10.8	6.97	4.4	2.7	2	1.6	1.36
10	0.1	98.4	67.1	53.6	36.6	24.6	12.7	8.22	5.2	3.2	2.4	1.9	1.61
20	0.05	113	77	61.7	42.1	28.4	14.7	9.52	6	3.7	2.8	2.2	1.88
30	0.033	121	83	66.5	45.4	30.7	15.9	10.3	6.5	4.1	3.1	2.4	2.04
40	0.025	128	87.2	69.9	47.8	32.3	16.8	10.9	6.9	4.3	3.2	2.6	2.15
50	0.02	132	90.6	72.6	49.6	33.6	17.5	11.3	7.1	4.4	3.3	2.7	2.24
60	0.017	136	93.3	74.8	51.2	34.6	18	11.7	7.4	4.6	3.4	2.8	2.32
80	0.013	143	97.7	78.3	53.6	36.3	18.9	12.2	7.8	4.8	3.6	2.9	2.44
100	0.01	147	101	81	55.5	37.6	19.6	12.7	8	5	3.7	3	2.53
250	0.004	167	115	92	63.1	42.8	22.4	14.5	9.2	5.7	4.3	3.5	2.91

Rainfall intensities (mm/hr) - RCP6.0 for the period 2031-2050

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	55.9	38	30.3	20.5	13.8	7.14	4.61	2.9	1.8	1.3	1.1	0.91
2	0.5	61.2	41.6	33.2	22.5	15.2	7.85	5.07	3.2	2	1.5	1.2	1
5	0.2	79.2	53.9	43.1	29.3	19.8	10.3	6.66	4.2	2.6	2	1.6	1.32
10	0.1	92.5	63.1	50.4	34.4	23.2	12.1	7.85	5	3.1	2.3	1.9	1.57
20	0.05	106	72.4	57.9	39.5	26.7	14	9.08	5.8	3.6	2.7	2.2	1.82
30	0.033	114	77.9	62.4	42.6	28.9	15.1	9.82	6.2	3.9	2.9	2.3	1.98
40	0.025	120	81.9	65.6	44.8	30.4	15.9	10.4	6.6	4.1	3.1	2.5	2.06
50	0.02	124	85	68.2	46.6	31.6	16.6	10.8	6.9	4.3	3.2	2.6	2.18
60	0.017	128	87.6	70.2	48	32.5	17.1	11.1	7.1	4.4	3.3	2.7	2.25
80	0.013	134	91.7	73.5	50.3	34.1	17.9	11.7	7.4	4.6	3.5	2.8	2.36
100	0.01	138	94.8	76	52	35.3	18.6	12.1	7.7	4.8	3.6	2.9	2.45
250	0.004	157	107	86.3	59.2	40.2	21.2	13.9	8.9	5.5	4.1	3.4	2.85

Rainfall intensities (mm/hr) - RCP6.0 for the period 2081-2100

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h
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HIRDS V4 Depth-Duration-Frequency Results  
 Sitename: Custom Location  
 Coordinate system: WGS84  
 Longitude: 173.3926  
 Latitude: -35.5371  
 DDF Model

Parameters: c d e f g h i  
 Values: 0.00291503 0.4367574 -0.0061001 -0.00213688 0.24939773 -0.0108155 2.94512  
 Example: Duration (hrs) ARI (yrs) x y Rainfall Depth (mm)  
 24 100 3.17805383 4.60014923 174.8563205

Rainfall depths (mm) :: Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	8.63	11.7	14	19	25.6	40.3	52.4	67	83	93	100	106
2	0.5	9.42	12.8	15.3	20.8	28.1	44.2	57.5	73	91	102	110	116
5	0.2	12.1	16.5	19.8	27	36.5	57.6	75.2	96	120	135	145	153
10	0.1	14.2	19.3	23.2	31.6	42.7	67.6	88.5	113	142	159	172	181
20	0.05	16.2	22.1	26.6	36.3	49.2	78	102	131	164	184	199	210
30	0.033	17.4	23.8	28.6	39.1	53	84.2	110	142	177	200	216	228
40	0.025	18.3	25	30.1	41.1	55.8	88.7	116	150	187	218	236	247
50	0.02	19	26	31.2	42.7	58	92.3	121	156	195	220	237	251
60	0.017	19.5	26.7	32.1	44	59.8	95.2	125	161	201	227	245	259
80	0.013	20.4	28	33.6	46	62.6	99.8	131	169	211	238	257	272
100	0.01	21.1	28.9	34.8	47.6	64.8	103	136	175	219	247	267	283
250	0.004	23.9	32.8	39.5	54.2	73.9	118	156	201	252	284	308	326

Depth standard error (mm) :: Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	0.86	1.2	1.3	1.8	2.3	4.2	5.6	9.1	11	12	13	14
2	0.5	0.93	1.2	1.4	1.9	2.5	4.6	6.1	10	12	14	14	15
5	0.2	1.3	1.8	2	2.7	3.5	6.3	8.4	14	17	19	20	21
10	0.1	1.7	2.4	2.7	3.6	4.5	8	11	17	21	23	24	25
20	0.05	2.2	3.2	3.7	4.7	5.9	10	14	20	25	28	29	30
30	0.033	2.6	3.7	4.4	5.4	7	12	16	23	28	31	32	34
40	0.025	2.9	4.2	4.9	6.1	7.8	14	18	25	30	33	35	37
50	0.02	3.1	4.6	5.4	6.6	8.6	15	19	26	32	36	39	41
60	0.017	3.4	4.9	5.8	7.1	9.2	16	21	27	34	37	39	41
80	0.013	3.7	5.5	6.5	7.9	10	18	23	30	36	41	42	44
100	0.01	4.1	6	7	8.7	11	20	25	32	39	43	44	47
250	0.004	5.7	8.4	9.9	12	16	28	35	41	50	56	57	59

Rainfall depths (mm) :: RCP2.6 for the period 2031-2050

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	9.23	12.5	15	20.3	27.3	42.5	54.9	70	86	96	103	109
2	0.5	10.1	13.7	16.4	22.3	30	46.7	60.4	77	95	106	114	120
5	0.2	13.1	17.8	21.3	29	39.1	61.2	79.3	101	125	140	150	158
10	0.1	15.2	20.8	24.9	34	45.9	71.9	93.4	119	147	165	176	187
20	0.05	17.5	23.9	28.6	39.1	52.9	83.1	108	137	171	191	206	218
30	0.033	18.8	25.7	30.9	42.2	57.1	89.8	117	149	185	208	224	236
40	0.025	19.7	27	32.4	44.3	60.1	94.7	123	157	195	219	236	249
50	0.02	20.5	28	33.7	46.1	62.5	98.4	128	163	204	228	246	260
60	0.017	21.1	28.9	34.7	47.5	64.4	102	132	169	210	236	254	268
80	0.013	22.1	30.2	36.3	49.7	67.5	106	139	177	221	248	267	282
100	0.01	22.8	31.2	37.6	51.5	69.8	110	144	184	229	257	277	293
250	0.004	25.8	35.4	42.7	58.5	79.6	126	165	211	263	296	319	337

Rainfall depths (mm) :: RCP2.6 for the period 2081-2100

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	9.23	12.5	15	20.3	27.3	42.5	54.9	70	86	96	103	109
2	0.5	10.1	13.7	16.4	22.3	30	46.7	60.4	77	95	106	114	120
5	0.2	13.1	17.8	21.3	29	39.1	61.2	79.3	101	125	140	150	158
10	0.1	15.2	20.8	24.9	34	45.9	71.9	93.4	119	147	165	176	187
20	0.05	17.5	23.9	28.6	39.1	52.9	83.1	108	137	171	191	206	218
30	0.033	18.8	25.7	30.9	42.2	57.1	89.8	117	149	185	208	224	236
40	0.025	19.7	27	32.4	44.3	60.1	94.7	123	157	195	219	236	249
50	0.02	20.5	28	33.7	46.1	62.5	98.4	128	163	204	228	246	260
60	0.017	21.1	28.9	34.7	47.5	64.4	102	132	169	210	236	254	268
80	0.013	22.1	30.2	36.3	49.7	67.5	106	139	177	221	248	267	282
100	0.01	22.8	31.2	37.6	51.5	69.8	110	144	184	229	257	277	293
250	0.004	25.8	35.4	42.7	58.5	79.6	126	165	211	263	296	319	337

Rainfall depths (mm) :: RCP4.5 for the period 2031-2050

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	9.39	12.7	15.2	20.7	27.8	43.1	55.5	70	87	97	104	109
2	0.5	10.3	14	16.7	22.7	30.5	47.4	61.2	77	96	107	114	121
5	0.2	13.3	18.1	21.7	29.5	39.8	62.1	80.4	102	126	141	151	159
10	0.1	15.5	21.2	25.4	34.6	46.7	73	94.7	120	149	167	179	189
20	0.05	17.8	24.3	28.8	39.8	53.8	84.4	110	139	173	193	208	219
30	0.033	19.1	26.2	31.4	42.9	58.1	91.2	118	151	187	210	226	238
40	0.025	20.1	27.5	33	45.2	61.2	96.2	125	159	197	221	238	251
50	0.02	20.9	28.6	34.3	46.9	63.6	100	130	165	206	231	248	262
60	0.017	21.5	29.4	35.4	48.4	65.5	103	134	171	212	238	257	271
80	0.013	22.5	30.8	37	50.7	68.7	108	141	179	222	250	270	285
100	0.01	23.2	31.8	38.3	52.4	71.1	112	146	186	232	260	280	295
250	0.004	26.3	36.1	43.5	59.6	81	128	167	213	266	299	322	340

Rainfall depths (mm) :: RCP4.5 for the period 2081-2100


ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	9.87	13.4	16	21.7	29.1	44.8	57.5	73	89	99	106	112
2	0.5	10.8	14.7	17.6	23.9	32.1	49.4	63.5	80	98	109	117	123
5	0.2	14	19.1	22.9	31.2	41.9	64.9	83.6	105	130	145	155	163
10	0.1	16.4	22.4	26.8	36.6	49.3	76.5	98.6	124	153	171	184	194
20	0.05	18.8	25.7	30.8	42.1	56.8	88.5	114	144	178	199	214	225
30	0.033	20.2	27.7	33.2	45.4	61.3	95.7	124	156	193	216	232	244
40	0.025	21.3	29.1	34.9	47.8	64.5	101	130	165	204	228	245	258
50	0.02	22.1	30.2	36.3	49.6	67.1	105	136	171	212	238	256	269
60	0.017	22.7	31.1	37.4	51.2	69.2	108	140	177	219	246	264	278
80	0.013	23.8	32.6	39.2	53.6	72.6	114	147	186	231	258	277	292
100	0.01	24.6	33.7	40.5	55.5	75.1	118	152	193	234	262	281	304
250	0.004	27.8	38.2	46	63.1	85.6	135	175	221	275	308	332	350

Rainfall depths (mm) :: RCP6.0 for the period 2031-2050

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	9.32	12.7	15.1	20.5	27.6	42.8	55.3	70	86	96	103	109
2	0.5	10.2	13.9	16.6	22.5	30.3	47.1	60.9	77	95	106	114	120
5	0.2	13.2	18	21.5	29.3	39.5	61.7	79.9	101	125	140	151	159
10	0.1	15.4	21	25.2	34.4	46.4	72.6	94.2	120	148	166	179	188
20	0.05	17.7	24.1	29	39.5	53.5	83.9	109	138	172	193	207	219
30	0.033	19	26	31.2	42.6	57.7	90.7	118	150	186	209	225	237
40	0.025	20	27.3	32.8	44.8	60.7	95.6	124	158	193	216	232	244
50	0.02	20.7	28.3	34.1	46.6	63.1	99.4	129	165	205	230	247	261
60	0.017	21.3	29.2	35.1	48	65.1	103	133	170	211	237	256	270
80	0.013	22.3	30.6	36.7	50.3	68.2	108	140	178	222	249	269	284
100	0.01	23.1	31.6	38	52	70.6	111	145	185	231	259	279	294
250	0.004	26.1	35.8	43.1	59.2	80.5	127	166	212	265	298	321	339

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

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	10.3	14	16.7	22.7	30.3	46.4	59.3	75				

Project Ref:	C0428	<b>STORMWATER DISPERSION PIPE/ TRENCH</b>	
Project Address:	779 Newton Road, Otaharepe		
Design Case:	Dispersion Device Sizing		
Date:	19 July 2024	REV 2	<b>DISCHARGE DEVICE - LEVEL SPREADER OR TRENCH</b>

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

DESIGN STORM EVENT **1%** AEP EVENT

**SLOPE BETWEEN SOURCE & DISPERSION DEVICE**

ELEVATION	h	CHAINAGE, x	Δx	h bar	ΔA
m	m	m	m	m	m <sup>2</sup>
110	0	0	0	0	0
107	3	17	17	1.5	25.5
TOTALS			17	17	25.5
SLOPE, Sc			0.176	m/m	

**MANNINGS PIPE FLOW - INCOMING PIPE**

Dia. m	d/D	α. rad	P. m	A. m <sup>2</sup>	R	1:S	n	V. m/s	Q. m <sup>3</sup> /s	Q. l/s
0.1	0.000	6.283	0.0000	0.0000	0.000	5.666666667	0.009	0.000	0.0000	0.000
0.100	0.050	5.381	0.0451	0.0001	0.003	5.666666667	0.0090	1.025	0.0002	0.151
0.100	0.100	4.996	0.0644	0.0004	0.006	5.666666667	0.0090	1.601	0.0007	0.654
0.100	0.150	4.692	0.0795	0.0007	0.009	5.666666667	0.0090	2.062	0.0015	1.524
0.100	0.200	4.429	0.0927	0.0011	0.012	5.666666667	0.0090	2.455	0.0027	2.745
0.100	0.250	4.189	0.1047	0.0015	0.015	5.666666667	0.0090	2.796	0.0043	4.293
0.100	0.300	3.965	0.1159	0.0020	0.017	5.666666667	0.0090	3.097	0.0061	6.138
0.100	0.350	3.751	0.1266	0.0024	0.019	5.666666667	0.0090	3.364	0.0082	8.241
0.100	0.400	3.544	0.1369	0.0029	0.021	5.666666667	0.0090	3.600	0.0106	10.562
0.100	0.450	3.342	0.1471	0.0034	0.023	5.666666667	0.0090	3.809	0.0131	13.055
0.100	0.500	3.142	0.1571	0.0039	0.025	5.666666667	0.0090	3.991	0.0157	15.672
0.100	0.550	2.941	0.1671	0.0044	0.026	5.666666667	0.0090	4.148	0.0184	18.358
0.100	0.600	2.739	0.1772	0.0049	0.028	5.666666667	0.0090	4.280	0.0211	21.058
0.100	0.650	2.532	0.1875	0.0054	0.029	5.666666667	0.0090	4.387	0.0237	23.708
0.100	0.700	2.319	0.1982	0.0059	0.030	5.666666667	0.0090	4.469	0.0262	26.242
0.100	0.750	2.094	0.2094	0.0063	0.030	5.666666667	0.0090	4.523	0.0286	28.581
0.100	0.800	1.855	0.2214	0.0067	0.030	5.666666667	0.0090	4.548	0.0306	30.637
0.100	0.850	1.591	0.2346	0.0071	0.030	5.666666667	0.0090	4.539	0.0323	32.297
0.100	0.900	1.287	0.2498	0.0074	0.030	5.666666667	0.0090	4.487	0.0334	33.406
0.100	0.950	0.902	0.2691	0.0077	0.029	5.666666667	0.0090	4.370	0.0337	33.679
0.100	1.000	0.000	0.3142	0.0079	0.025	5.666666667	0.0090	3.991	0.0313	31.343

0 % full

50 % full

Flowing full

**DISPERSION SPECIFICATION**

**INCOMING PIPE PROPERTIES:**

TANK OUTFLOW, 1% AEP	12.19 l/s
MAXIMUM PIPE FLOW	33.68 l/s
SUFFICIENT CAPACITY IN PIPE	YES
LONGITUDINAL SLOPE	0.176 m/m
DESIGN VELOCITY, Dv	4.548 m/s

**LEVEL SPREADER SPECIFICATIONS:**

PIPE DIAMETER, m	0.20 m
MANNINGS PIPE ROUGHNESS	0.009
NUMBER OF ORIFICES	45 No.
DIA. OF ORIFICE, D	20 mm
ORIFICE INTERVALS, C/C	200 mm
DISPERSION PIPE LENGTH, L	8.8 m

**ORIFICE DESIGN FLOW CHECK:**

AREA OF SINGLE ORIFICE, A	0.00031 m <sup>2</sup>		
FLOW OUT OF 1 ORIFICE	0.000272829 m <sup>3</sup> /s	0.27 l/s	
FLOW OUT OF ALL ORIFICES	0.01227732 m <sup>3</sup> /s	12.28 l/s	DESIGN OK
VELOCITY FROM SINGLE ORIFICE	0.87 m/s		

**BROAD CRESTED WEIR DESIGN FLOW CHECK:**

FLOW DEPTH, h	0.1 m		
BASE WIDTH = L	8.8 m		
FLOW AREA	0.88 m <sup>2</sup>		
WEIR FLOW	0.01642 m <sup>3</sup> /s	16.42 l/s	DESIGN OK
WEIR VELOCITY	0.019 m/s		

**INCOMING PIPE & SPREADER SUMMARY:**

	LOT 1	LOT 2	LOT 3
INCOMING PIPE DIAMETER, m	0.100 m	0.100 m	0.100 m
SPREADER PIPE DIAMETER, m	0.200 m	0.200 m	0.200 m
MANNINGS PIPE ROUGHNESS	0.009	0.009	0.009
NUMBER OF ORIFICES	45 No.	45 No.	45 No.
DIA. OF ORIFICE, D	20 mm	20 mm	20 mm
ORIFICE INTERVALS, C/C	200 mm	200 mm	200 mm
DISPERSION PIPE LENGTH, L	8.8 m	8.8 m	8.8 m



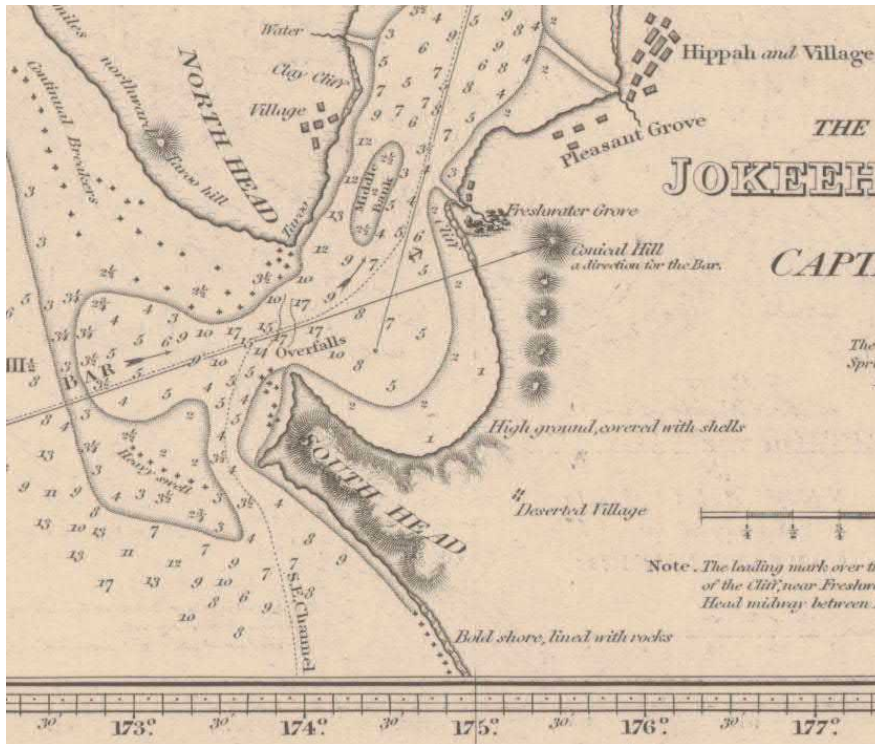
## **Appendix 6**

# **Archaeological Report**

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# ARCHAEOLOGICAL SURVEY AND ASSESSMENT OF LOT 2 DP 100455, OMAPERE, HOKIANGA

PREPARED FOR SUSAN N. WILTSHIRE



**JUSTIN MAXWELL AND JENNIFER HUEBERT**  
**SUNRISE ARCHAEOLOGY REPORT NO. 2023-30**



**OCTOBER 2024**

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Sunrise Archaeology

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*Cover image: Portion of Captain J. Herd map of entrance to Jokeehangar [Hokianga] River, 1827. Source: Turnbull Library.*

# 1 Introduction

---

Susan N. Wiltshire commissioned this archaeological survey and assessment of her property at 79 Newton Road, Omapere, Hokianga (Figure 1). The legal description of the property is Lot 2 DP 100455.

The owner wishes to subdivide the property into four lots, as indicated in Figure 2.

This purpose of this work was to record archaeological sites or remains, and to identify potential house sites on the property that would not affect these remains. It was also done to advise the landowner as to their obligations under the *Heritage New Zealand Pouhere Taonga Act 2014*, in respect to any affected archaeological sites. The survey was undertaken by Justin Maxwell. This report outlines the results.

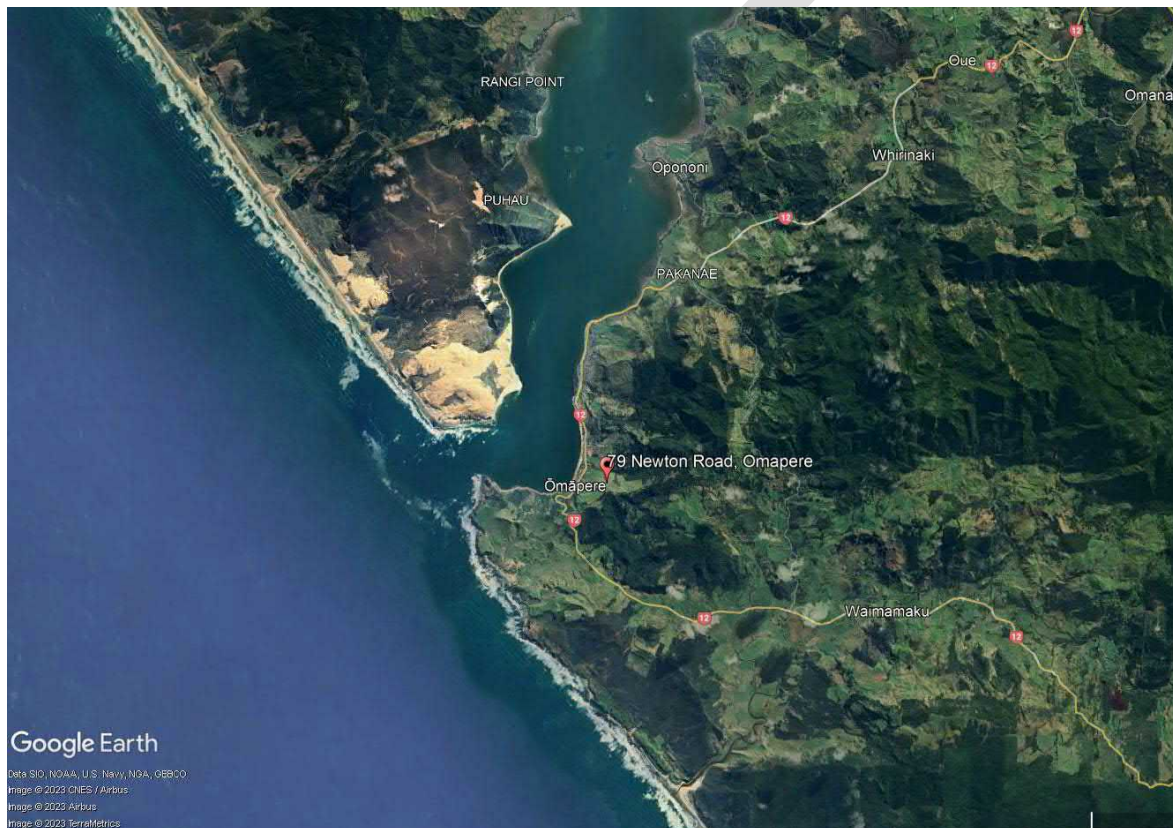


Figure 1. Location of subject property. Source: Google Earth, 2023.

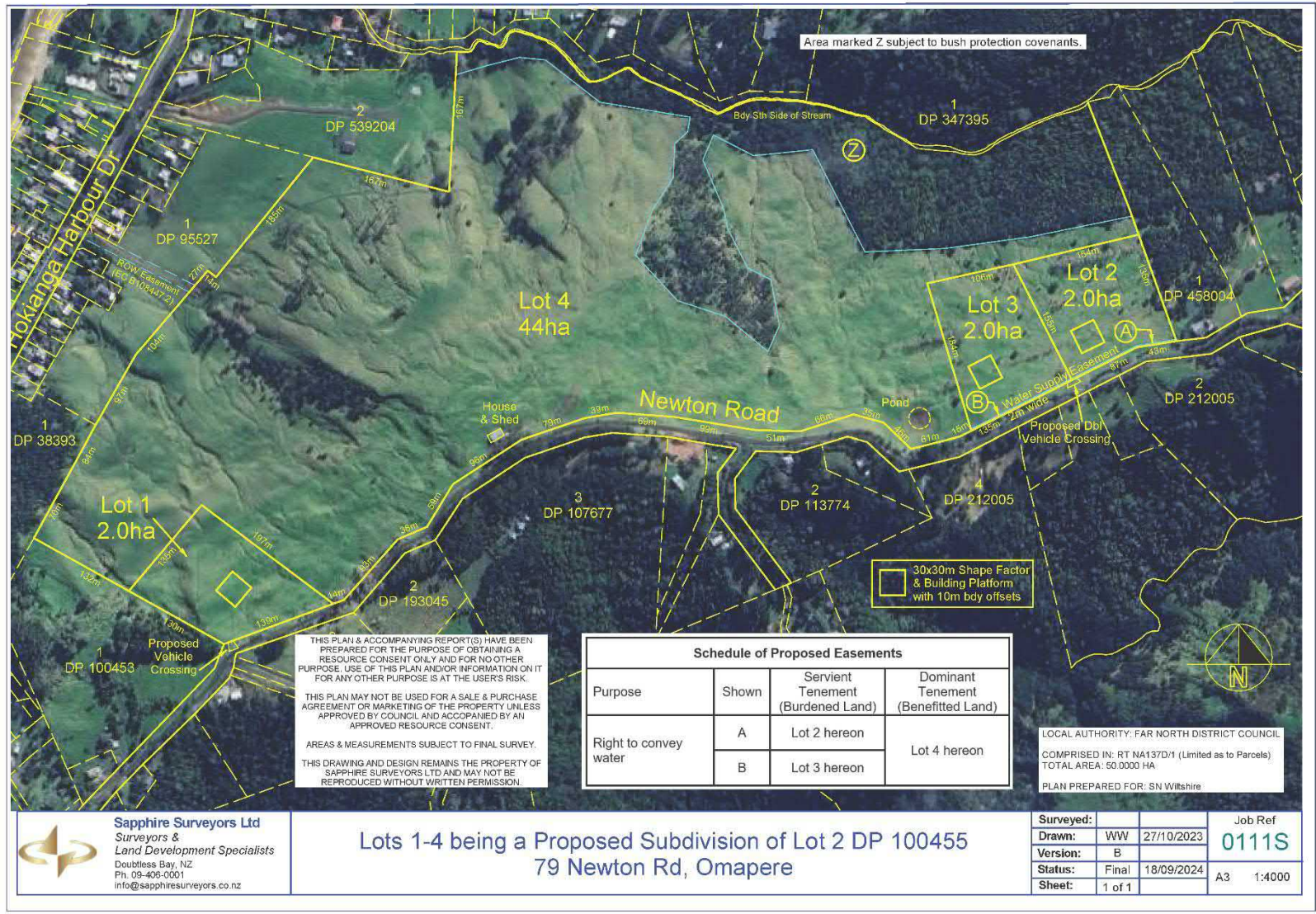


Figure 2. Overview of subdivision plan. Final version, dated 27/10/2024. Supplied by client.

## 2 Statutory Requirements

---

There are two main pieces of legislation in New Zealand that control work affecting archaeological sites. These are the *Heritage New Zealand Pouhere Taonga Act, 2014* (HNZPTA), and the *Resource Management Act, 1991* (RMA).

### **Heritage New Zealand Pouhere Taonga Act 2014 - Archaeological Provisions**

Heritage New Zealand Pouhere Taonga (HNZPT) administers the *Heritage New Zealand Pouhere Taonga Act* (HNZPTA). All archaeological sites in New Zealand are protected under this act and may only be modified with the written authority of the HNZPT. The act contains a consent (commonly referred to as an “Authority”) process for work of any nature affecting archaeological sites, which are defined as:

*Any place in New Zealand, including any building or structure (or part of a building or structure), that:*

- (i) Was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and*
- (ii) Provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and*

*(b) Includes a site for which a declaration is made under section 43(1)*

Any person who intends carrying out work that may damage, modify, or destroy an archaeological site must first obtain an authority from the HNZPT (Part 3 Section 44). The process applies to archaeological sites on all land in New Zealand irrespective of the type of tenure. The maximum penalty in the HNZPTA for un-authorised damage of an archaeological site is \$120,000. The maximum penalty for un-authorised site destruction is \$300,000.

The archaeological authority process applies to all sites that fit the Heritage New Zealand definition, regardless of whether:

- The site is recorded in the New Zealand Archaeological Association (NZAA) Site Recording Scheme or registered/declared by the Heritage New Zealand Pouhere Taonga,
- The site only becomes known about as a result of ground disturbance and /or,
- The activity is permitted under a district or regional plan, or resource or building consent has been granted.

HNZPT also maintains a Register of Historic Places, Historic Areas, Wahi Tapu and Wahi Tapu Areas. The register can include some archaeological sites (though the main database for archaeological sites is maintained independently by the NZAA). The purpose of the register is to inform members of the public about such places and to assist with their protection under the *Resource Management Act, 1991*.

### **The Resource Management Act 1991 - Archaeological Provisions**

The RMA requires City, District and Regional Councils to manage the use, development, and protection of natural and physical resources in a way that provided for the well-being of today’s communities while safeguarding the options for future generations. The protection of



historic heritage from inappropriate subdivision, use, and development is identified as a matter of national importance (section 6f).

Historic Heritage is defined as those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, derived from archaeological, architectural, cultural, historic, scientific, or technological qualities.

Historic heritage includes:

- historic sites, structures, places, and areas;
- archaeological sites;
- sites of significance to Māori, including wāhi tapu;
- surroundings associated with the natural and physical resources (RMA section 2).

These categories are not mutually exclusive, and some archaeological sites may include above ground structures or may also be places that are of significance to Māori.

Where resource consent is required for any activity, the assessment of effects is required to address cultural and historic heritage matters (RMA 4th Schedule and the District Plan assessment criteria (if appropriate)).

### **3 Methodology**

---

Sunrise Archaeology consulted local histories and other relevant archaeological literature in preparation of this assessment. The New Zealand Archaeological Association (NZAA) site recording scheme ArchSite ([www.archsite.org.nz](http://www.archsite.org.nz)) was consulted to determine whether any previously known sites were present on or near the property. Historical land ownership records from LINZ, Archives New Zealand, and Turton's Index were consulted. Historic photograph and newspaper searches were also conducted, and other historic records and reference texts were also reviewed.

Prior to the site visit, aerial photos, Lidar imagery, and cartographic records were researched to indicate potential areas of interest. Old survey plans of the area were also examined for information relating to early structures and infrastructure in the area.

A foot survey was conducted. Soil probing and shovel tests were done in select areas. The location of archaeological features were recorded with a GPS unit (Garmin 64st). Some areas were recorded using Drone imagery. See Site Visit section for details of the survey.

This survey was conducted to locate and record archaeological remains. The survey and report do not aim to locate or identify wāhi tapu or other places of cultural or spiritual significance to Māori. Those assessments are to be made by Tangata Whenua, who may be approached independently for any information or concerns they may have.

## 4 Physical Setting

---

The property is at 79 Newton Road, Omapere, Hokianga. It is 50 ha, more or less. The property is near the Hokianga Harbour, just east of the Omapere settlement, and stretches to approximately 1.5 km inland along the northern side of Newton Road. The entrance to the property is off Newton Road. Most of the property is currently open pasture, but a portion to the north and east is a Significant Natural Area (SNA) in scrub and trees (see Figure 2).

Newton Road runs along a ridgeline, and land drops off steeply to either side. The subject property is largely steep slopes, which descend north to the Omapere River. The only structure presently on the property is a farmhouse off Newton Road. The ruins of several old structures are near the western boundary at the end of an unsealed road that connects west to SH12 in Omapere. There is a ponded area approximately 1 km from the western boundary of the property near Newton Road.

The soils of the property are largely (>90%) Whirinaki clay loam (WNH). This is a young sandstone soil which is moderately drained, winter wet, prone to pugging; it supports steep slopes but is prone to tunnel gullyng, extensive slumping, and erosion. The remaining soils along the north-western fringes are Omanaia clay loam with coarse-structured subsoil (ONe), also a young sandstone soil, but one with poor drainage properties (Northland Regional Council, 2023).

## 5 Background

Māori traditions trace some of the earliest settlers to the Hokianga, and some of the first Europeans to arrive also visited and/or settled there. Early written accounts of Māori life come from missionaries and other Europeans who visited the Hokianga in the early nineteenth century. For more details regarding the region's history, refer to Waitangi Tribunal reports (e.g., Wai-1040 2014), Lee (1987), and others.

The southern Hokianga Harbour was, according to oral traditions, a landing point of the ancestor Kupe, and later his descendant Nukutawhiti settled on the southern shore of the harbour. By the 1700s, the Ngapuhi had formed and dominated much of the Hokianga (Wai-1040 2014). The Te Ramaroa ridge, which runs from Waima east toward the project area, is an important wahi tapu for Ngapuhi as many of their important chiefs are interred in the hills behind Pakanae. This large area is denoted on the current District Plan (FNDC Operative District Plan 2009).

By the late eighteenth century, there are indications the district had become well populated, according to a 1793 map (Figure 4) drawn by two young Māori chiefs from the Far North, which shows the Hokianga area had “100,000 inhabitants”.

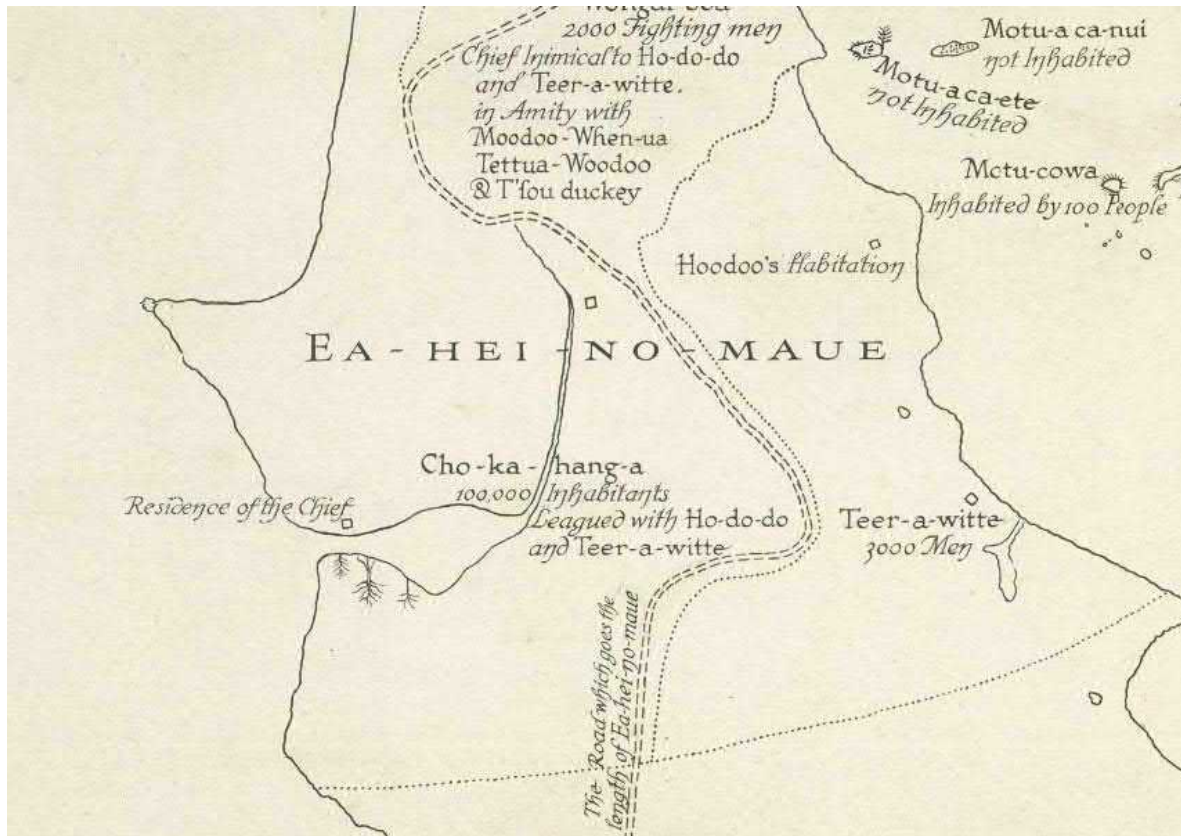


Figure 3. Portion of the Map of New Zealand by Tuki Te Terenui Whare Pirau, drawn in 1793, from *History of New South Wales, 1798*, Cadell & Davies. Source: Wikimedia commons, accessed 27/10/2021.

In 1818-19, missionaries Thomas Kendal, John King, and Samuel Marsden visited the Hokianga. Marsden commented on the large population and agricultural productivity of the area (Lee 1987:35). F. E. Maning (Calder 2001:181-3), who took up residence in the area in the 1830s, wrote that the “natives are unanimous in affirming that they were much more numerous, in former times, than they are now”. Maning goes on to recount numerous Māori hill forts, stone slab-lined hearths, abandoned fields with drainage ditches, and large kumara storage pits which could be found in the centre of great open tracts of uncultivated country, dug into the stiff clay on hill tops and retaining their shapes (Calder 2001:182).

A map from the Hokianga harbour survey by Captain J. Herd in 1827 (Figure 4) shows the project area at that time was “High ground, covered with shells”. The closest structures depicted are to the north, around the Waiarohia Stream at Opononi and the larger settlement around Pakane. By 1832, John Martin, a sailor turned settler, had purchased property in Omapere and erected a house on the site (Harris 2009), approximately 250 m west of the present project area.

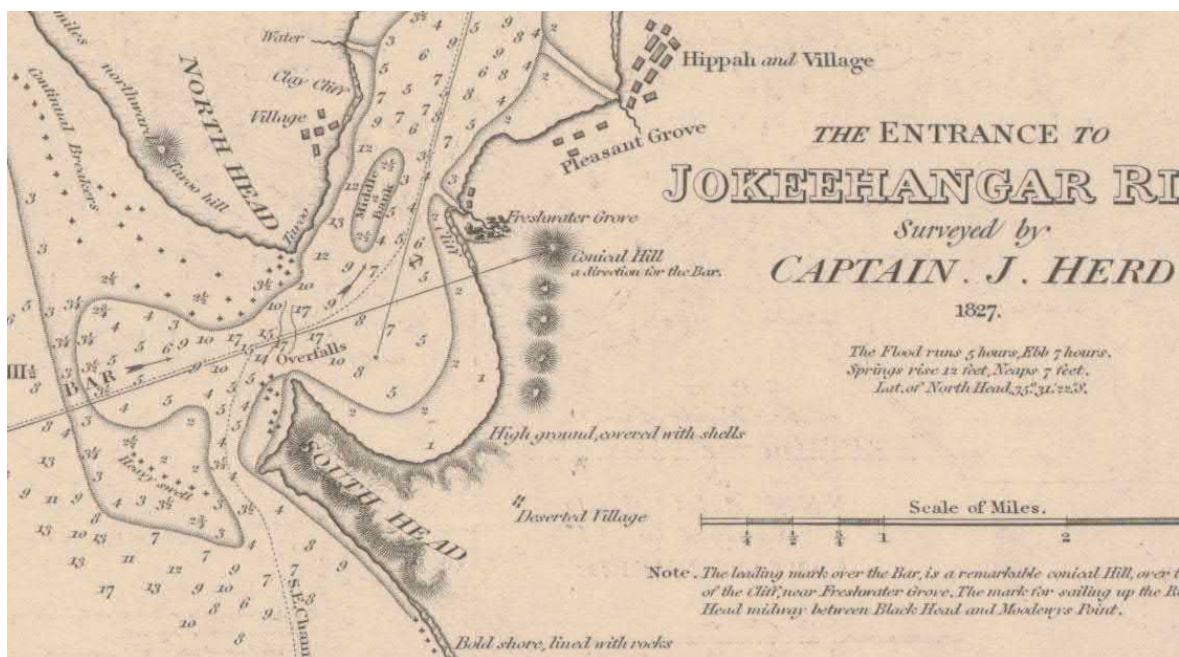


Figure 4. Portion of Captain J. Herd map of entrance to Jokeehangar [Hokianga] River, 1827. (Source: Turnbull Library). By the mid-nineteenth century, a survey map of the area made for John Byers shows a block named Pukanui encompassed most of what is the present project area (Figure 5; Thomas 2016, Appendix C). The block was bordered by a native reserve to the northwest. Roads and vegetation around the block are in a layout that appears similar to that of today. An early survey district map shows Pukanui block remained one large 263-ac section in the 1890s (Figure 6).

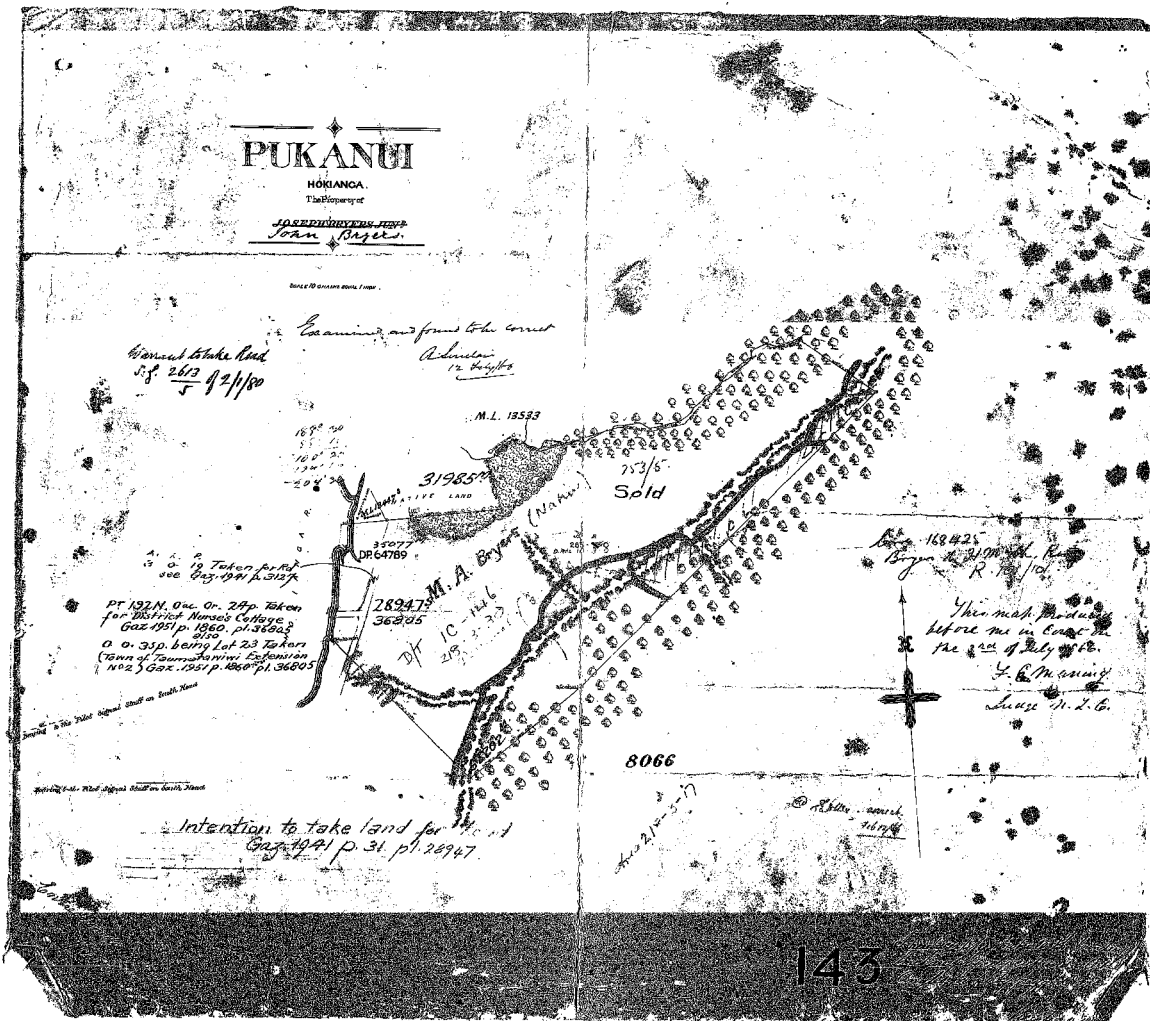


Figure 5. Survey map of Pukanui Block, 1866, ML 143. Source: LINZ.

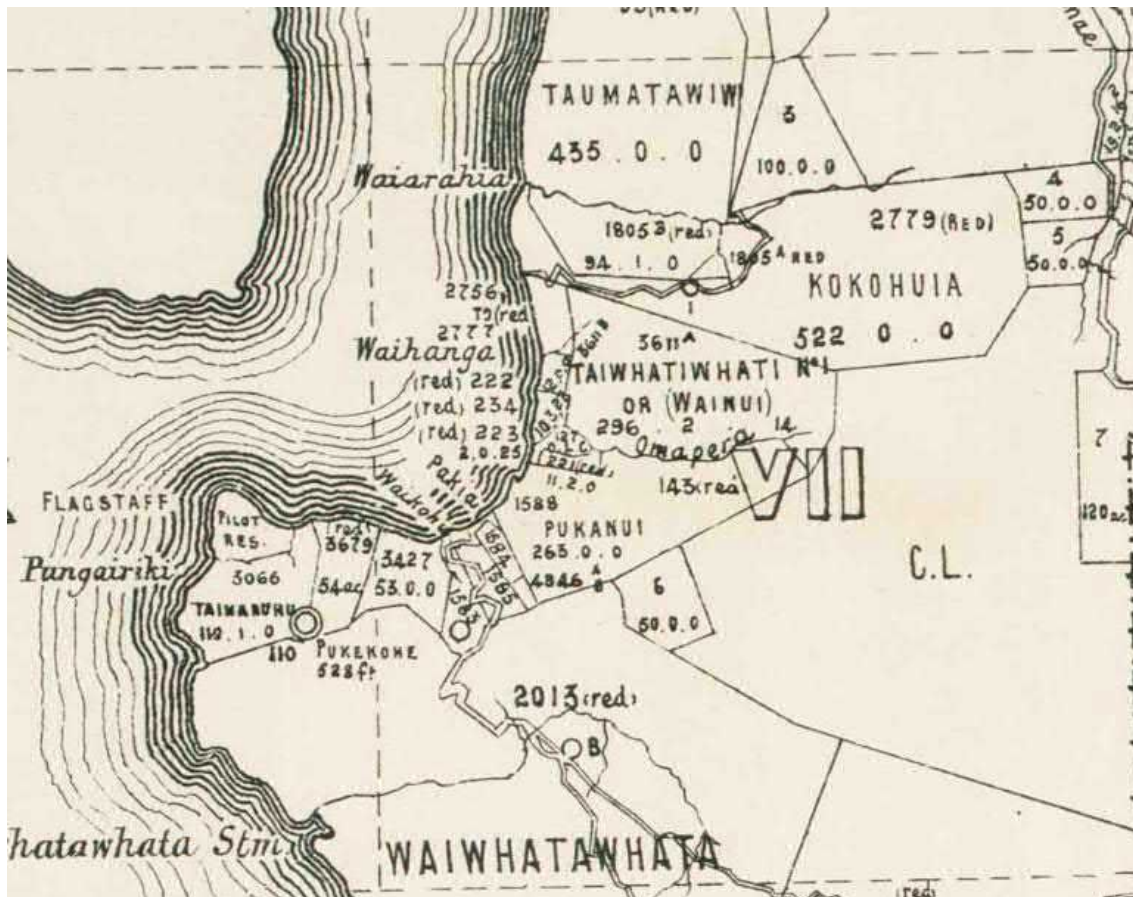


Figure 6. Index Map of the Hokianga County (lower), 1892-4. Subject property is a large portion of Pukanui Block. Source: Alexander Turnbull Library, ALMA ID 9918165659302836.

By 1900, Omapere was home to a camp (Figure 7) dominated by raupo huts and a few tents, probably housing workers in the timber industry. By 1937, the settlement at Omapere was still small, with a few buildings and an ageing timber wharf (Figure 8). This photograph was taken from a vantage point close to (or possibly on) Newton Road, and a small grazed and/or scrubby portion of the western subject property is visible.



*Figure 7. Camp at Omapere, 1900. Photographed by C. P. Dawes. Source: Auckland Libraries Kura Collection, Record ID 1572-1602.*



*Figure 8. White sands and green hillsides at Omapere, 1937. Photographed for Auckland Weekly News. Source: Auckland Libraries Kura Collection, Record ID AWNS-19371229-44-03.*



## 6 Previous Archaeology

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No reports on systematic archaeological surveys were located for this property, however several sites were recorded there in c. 1991 by B. Anderson and N. Twohill (Table 1, Figure 9). These include pits, terraces, and the findspot for a Type 2B adze.

For properties on the opposite side of Newton Road, a survey was conducted in 2001 prior to subdivision (Harlow 2001). Harlow recorded a number of pits on the property, some of which appear to be duplicates of previously recorded sites, and also discussed a prior findspot of an obsidian flake scatter and platform (O06/445). She remarked on the favourable views from the Newton Road ridgeline, and that the quantity and type of features found there indicated it had been long used by Māori.

A few hundred meters to the west of the subject property at the site of John Martin's c. 1830s house near the harbour, Harris (2009), following up on earlier work by Slocombe in the 1990s, reported on an excavation at the property and the large artefact assemblage that was found there. Harris noted that while most of the materials recovered were from the nineteenth century, features found beneath Martin's house site indicated prior pre-contact (or early post-contact) Māori occupation of the site. He noted that Māori artefacts found at the site included a paua shell lure and probable lure blanks, and small greenstone chisel, among other items.

Along the shore around the old Omapere wharf, which is approximately 200 m west of the subject property, Carpenter (2018) reported on a historic occupation layer (O06/780) that was observed eroding out of the bank at the Freese Park beach.

There are numerous other recorded sites within 1 km of the subject property, most of which are terraces or pits. Approximately 450 m southwest, near where SH12 turns south, are the remnants of the Kauri Timber Company tramway (O06/396). Further north near the Pakanae village are two important pā - Kupe Pā and Whiria Pā.

Many of the sites recorded in this area were encountered during roadworks and other developments. The absence of recorded sites therefore does not preclude them being present, especially as there have been few systematic archaeological surveys in this part of the southern Hokianga.

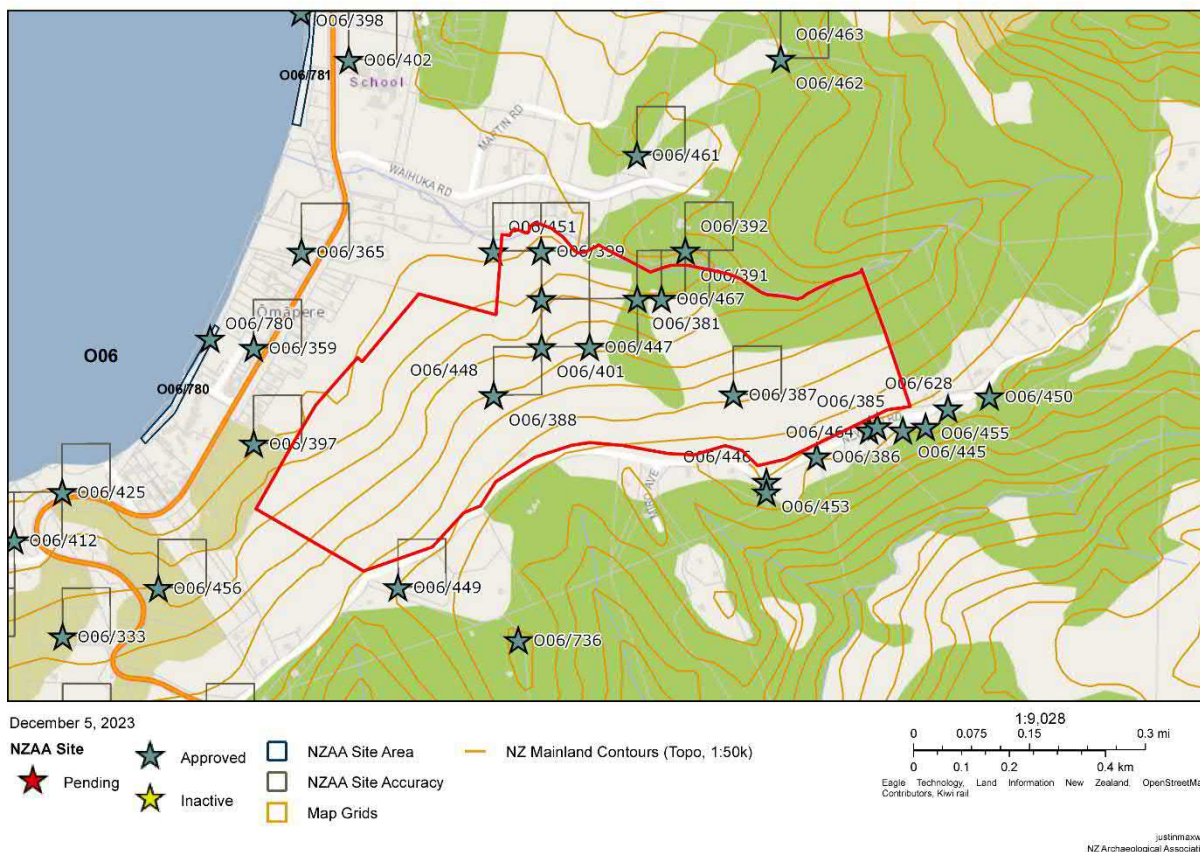


Figure 9. Recorded archaeological sites on or in the vicinity of the project area. Property outlined in red. Source: NZAA Archsite ([www.archsite.org.nz](http://www.archsite.org.nz)).

Table 1. Recorded archaeological sites on the subject property. Source: NZAA Archsite 2023.

NZAA Site No. Oo6/	Site type	Recorded, Revisited	Last known condition
<b>381</b>	2 terraces, 2 pits	1991	Good?
<b>387</b>	Pit	1991	Good
<b>388/448</b>	3 pits and terrace/terrace	1987, 1991	Fair
<b>399</b>	3 terraces	1991	Good
<b>400</b>	Findspot (Adze type 2B)	1991	-
<b>401</b>	Terrace	1991	Good
<b>447</b>	Terrace	1991	Good
<b>467</b>	2 terraces, 2 pits	1991	Good? (Likely duplicate of 381)

Table 2. Recorded archaeological sites near boundary of project area. Source: NZAA Archsite 2023.

<b>NZAA Site No. Oo6/</b>	<b>Site type</b>	<b>Recorded, Revisited</b>	<b>Last known condition</b>
<b>385</b>	Pit (probably 1 of 464)	1991	On road cutting
<b>386</b>	Obsidian flakes	1991	-
<b>392</b>	13 pits, 2 terraces, likely garden areas to N	1991	Well defined
<b>445</b>	House floor, obsidian flakes	1991, 2001	?
<b>446</b>	Possible pit	1991	?
<b>449</b>	2 terraces	1991	Good
<b>450</b>	3 pits	1991	Good
<b>453</b>	Chert flake	1991	-
<b>455</b>	2-3 pits	1991, 2001	Good?
<b>464</b>	3 pits by road (possibly includes 385)	2001	On road cutting
<b>628</b>	2 pits	2001	Good?

## **6.1 Imagery Search**

Historical aerial photographs from 1950 (Crown 209/395/6 and Crown 209/395/7, Figure 10) show little of interest on this property, which was grazed or in low scrub at the time. There do not appear to be any structures on the property, with the possible exception of a water tank near the western boundary in the same location as it is today.

Lidar imagery (Figure 11) shows few features of interest on the property, with the exception of a deep pit near the pond adjacent to Newton Road on the southeast side of the property.



*Figure 10. Historical aerial imagery of subject property, 1950. Source: Retrolens, Image # Crown 209/395/6.*

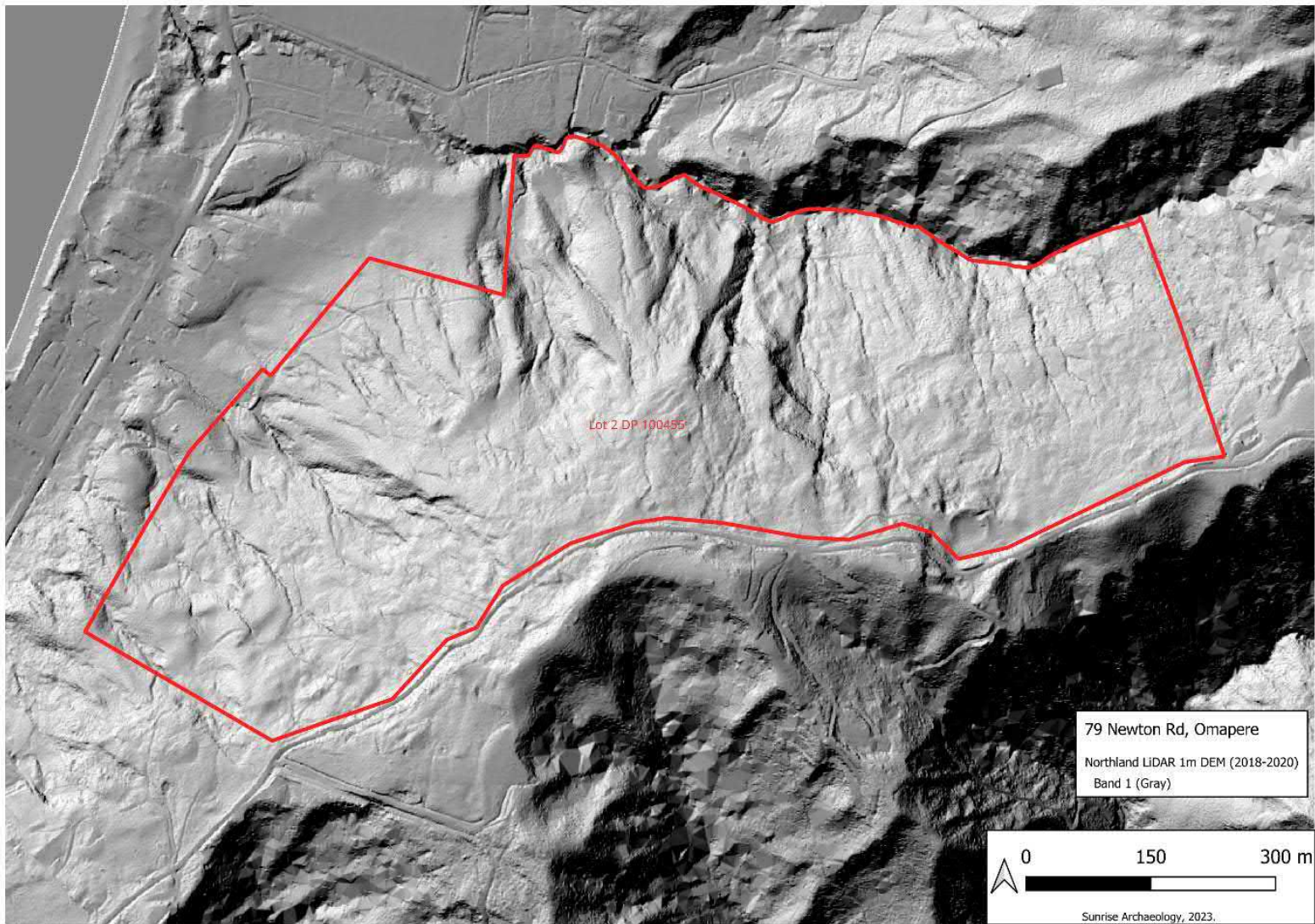


Figure 11. Lidar imagery of property (red outline) and surrounding countryside. Base imagery source: LINZ.

## 7 Site Visit

The author visited the project area 18 December 2023. Visibility of the ground surface was generally good, being grazed pasture. There were no limitations to the survey.

The survey (Figure 12) focused on areas where potential building platforms had been designated by the client, and the likely access routes to the building platforms. In addition, recorded archaeological sites on the property were relocated, or were noted as being duplicate sites or as having potentially being destroyed by slips. Where farm tracks were present, the exposed baulks were surveyed for possible subsurface material; none was noted. The majority of the property was viewed to identify whether any additional sites were present; none were located.

Also surveyed were the archaeological sites which had been recorded in the road cutting south of the project area. It was found that the multiple site records for Oo6/386, Oo6/453, Oo6/445 and Oo6/628 were most likely duplicates of the same one or two sites. Nothing was visible in any of the road cuttings when surveyed; it should be noted that road maintenance done by the Council had recently modified the area following slips earlier in 2023.

No probing was undertaken, as it was found there was shale within the natural soil matrix which made testing unproductive.

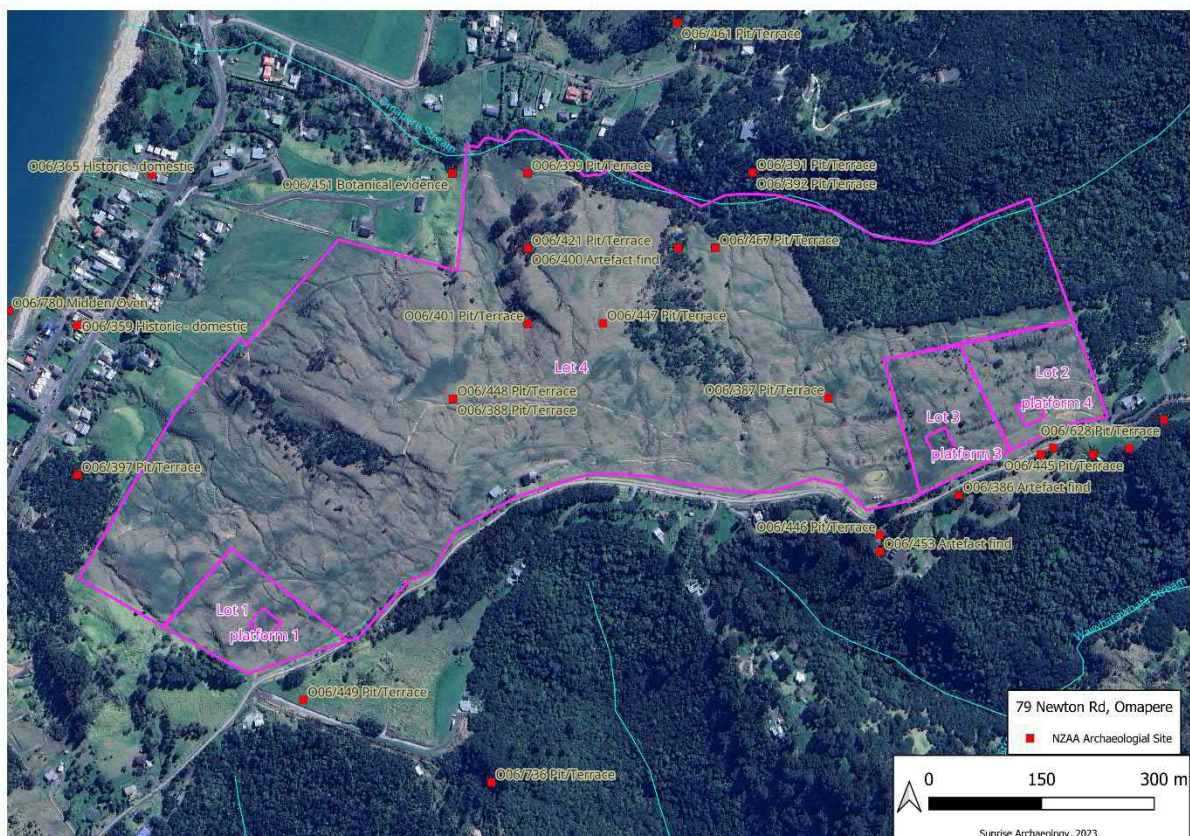


Figure 12. Site map of survey areas discussed in text and known archaeological sites. Base figure: Google Earth, 2024.

### **7.1.1 Proposed Lot 1**

There is one proposed building platform in Lot 1 on the western side of the property. This area is fairly level, and currently grazed. No above-ground archaeological features were noted within or in the proximity of the proposed building platform (Figure 13 to Figure 16). The proposed accessway would use an existing farm track.

Eleven shovel tests were dug across the area of the proposed building platform to investigate the soils and to determine whether subsurface archaeological material was present. The topsoil, a dark brown/black silty clay loam was mottled with red/brown clay. The depth of the topsoil ranged from 10-30 cm, over clay. In wetter areas, a grey silt was also present. Small quantities of charcoal were present throughout the soils. This could relate to European pastoral practices or Māori gardening practices.



*Figure 13. Drone imagery of Area 1, location of proposed building platform.*



*Figure 14. Lot 1, proposed building platform. Facing west. Scale units: 20 cm.*



*Figure 15. Lot 1, taken from proposed building platform. Facing east. Scale units: 20 cm.*





*Figure 16. Lot 1, proposed building platform. Facing east. Scale units: 20 cm.*

### **7.1.2 Proposed Lot 2**

There is one proposed building platform in Lot 2. This area is fairly level, and currently grazed. No above-ground archaeological features were noted within or in the proximity of the proposed building platform (Figure 17 to Figure 21). The proposed access for the lot would use an existing farm track.

Nine shovel tests were dug across the proposed building platform to investigate the soils and to determine whether subsurface archaeological material was present. The topsoil, a dark brown/black silty clay loam, was mottled with red/brown clay. The depth of the topsoil ranged from 20-30 cm, above the clay.



*Figure 17. Drone imagery of Lot 2 proposed building platform, area tested. Top of image is east.*



*Figure 18. View to northeast from Lot 2.*



*Figure 19. Lot 2 proposed building platform. Facing west. Scale units: 20 cm.*



*Figure 20. Lot 2 proposed building platform. Facing east. Scale units: 20 cm.*



*Figure 21. Lot 2 proposed building platform. Facing west. Scale units: 20 cm.*

### **7.1.3 Proposed Lot 3**

There is one proposed building platform in Lot 3. The area is fairly level, and currently grazed. No above-ground archaeological features were noted within or in the proximity of the proposed building platform (Figure 22 to Figure 24). The proposed access for the lot would use an existing farm track.

Seven shovel tests were dug across the proposed building platform to investigate the soils and to determine whether subsurface archaeological material was present. The topsoil, a dark brown/black silty clay loam, was mottled with red/brown clay. The depth of the topsoil ranged from 20-30 cm, above the clay.



*Figure 22. Drone imagery of Lot 3 proposed building platform. Top is north.*



*Figure 23. Lot 3 proposed building platform. Facing east. Scale units: 20 cm.*



*Figure 24. Lot 3 proposed building platform. Facing northwest.*

#### **7.1.4 Archaeological sites on the property**

All sites located on the property were either relocated, or determined to be duplicates of sites that were mistakenly re-recorded due to spatial inaccuracies.

The closest archaeological site to the proposed building platforms was 100 m to the east of proposed Lots 2 and 3: O06/387, a pit and terrace (Figure 25). This site was relocated and accurately georeferenced. Like most recorded sites on the property, it is located on a ridge. The site is in good condition but has been modified on the southern side by the construction of a farm pond.

Two sites, O06/447 and O06/467, could not be relocated. Site O06/447 has probably been modified by stock damage and slippage to the point that it could no longer be identified. Site O06/467 was within an area which is now a slip zone and if it were once there, it has most likely been destroyed. It is, however, probably a duplicate record for O06/381 as the original typed site records are identical except that the recorded coordinates are a short distance apart.

All sites have been updated in the NZAA Archsite database.



*Figure 25. Site Oo6/387, a raised rim pit and terrace. Facing north. Scale units: 20 cm.*

## 8 Archaeological Significance

Heritage New Zealand Pouhere Taonga requires certain matters to be taken into account when assessing the archaeological value or significance of an archaeological site. These are: condition; rarity, unusualness, uniqueness; the context; information potential; amenity potential; and any cultural associations (HNZPT 2014).

The land around the Hokianga Harbour was once home to a large Māori population. The sites found on this property, and their proximity to numerous other recorded sites in the area, are part of the extensive archaeological landscape of the Hokianga.

Nine archaeological sites were previously recorded on the property. Oo6/400 was an artifact find. Site Oo6/448 and 388 (three pits and terrace) is a duplicate record of the same site. Oo6/447 could not be relocated and has probably been modified by stock and slippage to the point where it is no longer recognisable. The remainder of sites are terraces and pits, all located on ridges (Sites Oo6/381, 387, 399, 401, 421). Oo6/467 is probably a duplicate of Oo6/381; however, if the former was a separate site it has most likely been destroyed by a slip. Overall, it has been determined that six intact archaeological sites remain on the property. Most are on ridges and have been evaluated as in poor to good condition mainly due to stock damage and erosion.

*Table 2. Archaeological significance assessment.*

Site/s	Criteria	Assessment
<b>Oo6/ 448, 401, 421, 399, 381, 387</b>  <b>Pits and terraces</b>	Condition	Poor/Good. All sites are on medium ridges which have been damaged by stock and erosion.
	Rarity/ Uniqueness	Pits and terraces are common components of pre-contact Māori settlement.
	Contextual Value	These sites have value as part of the extensive archaeological landscape of the south Hokianga Harbour. They provide evidence of Māori use of what was once a well-populated area.
	Information Potential	The sites have low-medium information potential due to the rareness and the age of materials found.
	Amenity Value	Being on private land, the sites have limited public amenity value.
	Cultural Associations	Pre-contact Māori.

The archaeological significance or value of sites recorded in the project area are associated with their condition, rarity, contextual value, information potential and/or amenity value. No ranking of sites is allowed or appropriate under the Act or HNZPT guidelines.



## 9 Heritage Significance

Heritage significance and values accounted for under the Resource Management Act 1991. The following matters must be taken into account when assessing Heritage significance/values include: historical, architectural, cultural, scientific, and technological qualities (RMA 1991).

Table 3. Heritage significance evaluation.

Location	Criteria	Assessment	Significance
Newton Road Area, Omapere, Southern Hokianga	Historical: the place reflects important or representative aspects of national, regional, or local history, or is associated with an important event, person, group or idea or early period of settlement within NZ, the region or locality.	This area forms part of a wider cultural/ archaeological landscape, associated with Māori occupations, and also early Māori-European interactions.	Moderate
	Architectural attributes: the place is notable or representative example of its type, design or style, method of construction, craftsmanship or use of materials or the work of a notable architect, designer, engineer or builder.	The location has no architectural significance/value.	None
	Social: the place has a strong or special association with or is held in high esteem by a particular community or cultural group for its symbolic, spiritual, commemorative, traditional or other cultural value.	Significance to Māori be determined by the affected tangata whenua.	N/A
	Cultural/Mana whenua: the place has a strong or special association with or is held in high esteem by mana whenua for its symbolic, spiritual, commemorative, traditional or other cultural value.	This to be determined by the affected tangata whenua.	N/A

<b>Location</b>	<b>Criteria</b>	<b>Assessment</b>	<b>Significance</b>
	Scientific: the place has potential to provide knowledge through scientific or scholarly study or to contribute to an understanding of the cultural or national history of NZ, the region or locality.	Pits and terrace sites have potential to provide scientific information on Māori activities.	Low-Moderate
	Technology: the place demonstrates technical accomplishment, innovation or achievement in its structure, construction, components, or use of materials.	Sites have no technological significance/value.	None
	Aesthetic: the place is notable or distinctive for its aesthetic, visual or landmark qualities.	The site has no aesthetic value.	None
	Context: the place contributes to or is associated with a wider historic or cultural context, streetscape, townscape, landscape or setting.	The sites on this property, along with the other recorded features in the area, contribute to the wider pre-1900 settlement landscape of the south Hokianga Harbour area.	Moderate

*Additional comments*

Overall, the heritage value of the location/sites/area is of low-moderate significance, at a local and regional level. No additional ranking is appropriate or required.

## **10 Assessment of Effects on Archaeological Features**

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This survey was undertaken to relocate and establish the extent of known archaeological sites on the property, and to determine whether the proposed building platforms and associated infrastructure would affect known or unidentified archaeological material or sites. The assessment was done to determine whether the sites would be damaged during the planned development, and advise as to how site damages could be mitigated.

Five recorded archaeological sites were relocated on the property during this survey. In addition, a number of nearby sites (O06/386, 445, 453, 628) had been previously recorded on what is an east-west ridge to the south of the project area adjacent to Newton Road. It was found that these sites were no longer visible but, like the sites within the project area, all were located on the ridge.

Where possible, the landowner has been advised to situate the proposed house platforms, driveways, and utilities to mitigate damage to the known sites. The locations of the proposed building platforms meet that criterion.

Overall, the proposed locations where ground disturbance might occur are assessed as having a low likelihood of encountering intact archaeological material or features. The proposed building platforms are in areas which may have been utilised by Māori for gardening. The locations are not, given the recorded sites on the property and the distance to the coast, likely to have been used intensively by Māori other than for gardening. Sites are also more likely to be encountered on the northern (lower) portion of the property, closer to the creek and the harbour. The extent of known archaeological features on this property, and the density of sites in the nearby area, indicate the project area is part of an extensive archaeological landscape.

This survey was conducted specifically to locate and record archaeological remains. The survey and report does not necessarily include the location and/or assessment of wāhi tapu or sites of cultural or spiritual significance to the local Māori community, who may be approached independently for any information or concerns they may have.

## **11 Recommendations and Conclusion**

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Sunrise Archaeology was commissioned by Susan N. Wiltshire to provide an archaeological assessment of her property at 79 Newton Road, Omapere, Hokianga. The legal description of the property is Lot 2 DP 100455.

Six previously recorded archaeological sites are present on the property; of these, five are present on the property and one was an artefact find. No additional above-ground sites were identified from either the review of historical images, Lidar imagery, or the field survey. No known archaeological sites are located within proposed Lots 1, 2, and 3, and no additional above-ground archaeological sites were found within these areas.

It is determined that there is a low likelihood of encountering intact archaeological features or material at the proposed building platforms and areas of associated infrastructure.

The following recommendations are made:

- 1) The subdivision can proceed without requirement for a Heritage New Zealand Authority to damage, modify or destroy an archaeological site.
- 2) In the event that unrecorded subsurface archaeological remains are uncovered during the proposed groundworks for the subdivision, all work affecting such remains should cease immediately and a qualified archaeologist should be contacted so that appropriate action can be taken. This is referred to as an Accidental Discovery Protocol (ADP). An ADP should be in place prior to any groundworks occurring within the proposed subdivision.
- 3) Any alterations to the proposed works need to be reviewed for comment and/or assessment by an archaeologist.

The survey of the property was conducted specifically to locate and record archaeological remains. The survey and report does not necessarily include the location and/or assessment of wāhi-tapu or sites of cultural or spiritual significance to the local Māori community, who may be approached independently for any information or concerns they may have.

## 12 References

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