

Application for resource consent or fast-track resource consent

(Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Schedule 4). Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges — [both available on the Council's web page](#).

1. Pre-Lodgement Meeting

Have you met with a council Resource Consent representative to discuss this application prior to lodgement? ☐ Yes ☒ No

2. Type of Consent being applied for

(more than one circle can be ticked):

- | | |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <input type="radio"/> Land Use | <input type="radio"/> Discharge |
| <input type="radio"/> Fast Track Land Use* | <input type="radio"/> Change of Consent Notice (s.221(3)) |
| <input checked="" type="radio"/> Subdivision | <input type="radio"/> Extension of time (s.125) |
| <input type="radio"/> Consent under National Environmental Standard
(e.g. Assessing and Managing Contaminants in Soil) | |
| <input type="radio"/> Other (please specify) _____ | |

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

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

☒ Yes ☐ No

4. Consultation

Have you consulted with Iwi/Hapū? ☐ Yes ☒ No

If yes, which groups have you consulted with?

Who else have you consulted with?

For any questions or information regarding iwi/hapū consultation, please contact Te Hono at Far North District Council tehonosupport@fndc.govt.nz

5. Applicant Details

Name/s:

Joe & Kate Carr

Email:

Phone number:

Postal address:

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

6. Address for Correspondence

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

Name/s:

Lynley Newport

Email:

Phone number:

Postal address:

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

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

7. Details of Property Owner/s and Occupier/s

Name and Address of the Owner/Occupiers of the land to which this application relates (where there are multiple owners or occupiers please list on a separate sheet if required)

Name/s:

Ian Ray Carr (Joe)

**Property Address/
Location:**

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

(more than one circle can be ticked):

☐ Building Consent

☐ Regional Council Consent (ref # if known)

☐ National Environmental Standard consent

☐ Other (please specify)

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

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

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

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

☐ Subdividing land

☐ Disturbing, removing or sampling soil

☐ Changing the use of a piece of land

☐ Removing or replacing a fuel storage system

13. Assessment of Environmental Effects:

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

Your AEE is attached to this application ☒ Yes

13. Draft Conditions:

Do you wish to see the draft conditions prior to the release of the resource consent decision? ☒ Yes ☐ No

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

8. Application Site Details

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

Name/s:

As per item 5

Site Address/
Location:

Legal Description:

Certificate of title:

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

Site visit requirements:

Is there a locked gate or security system restricting access by Council staff? ☒ Yes ☐ No

Is there a dog on the property? ☐ Yes ☒ No

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

There is a combination code to unlock the gate. Please contact the agent prior to any site visit.

9. Description of the Proposal:

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

Subdivision of land in the Rural Production Zone, to create three additional lots all in excess of 2ha in area.

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

10. Would you like to request Public Notification?

☐ Yes ☒ No

15. Important information continued...

Declaration

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

Name: (please write in full)

IAN RAY (JOE) CARR

Signature:



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)
- ☐ Details of your consultation with Iwi and hapū
- ☒ Copies of any listed encumbrances, easements and/or consent notices relevant to the application
- ☒ Applicant / Agent / Property Owner / Bill Payer details provided
- ☒ Location of property and description of proposal
- ☒ Assessment of Environmental Effects
- ☐ Written Approvals / correspondence from consulted parties
- ☒ Reports from technical experts (if required)
- ☒ Copies of other relevant consents associated with this application
- ☐ Location and Site plans (land use) AND/OR
- ☒ Location and Scheme Plan (subdivision)
- ☐ Elevations / Floor plans
- ☐ Topographical / contour plans

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

Joe & Kate Carr

Far North District Plan

PROPOSED SUBDIVISION

Lot 2 DP 601773, Motukiore Road

PLANNING REPORT AND ASSESSMENT OF ENVIRONMENTAL EFFECTS



**Thomson Survey Ltd
Kerikeri**

1.0 INTRODUCTION

1.1 The Proposal

The applicants propose to carry out a subdivision of their property on Motukiore Road, near Horeke, to create the balance number of 2ha lots they are entitled to under the restricted discretionary five lot option. The existing title consists of the balance remaining when one lot was subdivided off pursuant to RC 2061139-RMASUB. That left an additional 3 x 2ha (minimum) as a residual right.

The site is accessed off Motukiore Road, Council maintained public road, metal surface. Access is then over an existing appurtenant right of way, crossing Part Papua B Blk (also owned by the applicant), to the site's northern boundary. The right of way is of varying widths, metal surface.

Lots 1-3 are all 2ha in area, leaving remaining balance Lot 4 of 15.5ha in area. All lots are vacant land apart from some abandoned structures mainly on the balance lot. There is an existing dirt/clay access track following the site's western boundary.

The site's western boundary is with legal road (unformed, 20m width) adjacent to the Waima River (tidal).

Refer to Appendix 1 for copies of the Scheme Plans.

1.2 Scope of this Report

This assessment and report accompanies the Resource Consent Application and is provided in accordance with Section 88 and Schedule 4 of the Resource Management Act 1991. The application seeks consent under the District Plan for a subdivision as a discretionary activity overall – refer to section 5.0 Activity Status. The name and address of the owner of the property is contained in the Form 9 Application form.

2.0 PROPERTY DETAILS

Location: Motukiore Road, Horeke. Location Plan is attached in Appendix 2.

Legal description: Lot 2 DP 601773

CT: 1194301 (copy attached in Appendix 3).

3.0 SITE DESCRIPTION

3.1 Physical characteristics.

Topographically the general site area is undulating with ridges and gullies trending in all directions, however predominantly east to west. The site is considered moderately to steeply sloping (refer to Subdivision Site Suitability Engineering Report (SSSER) in Appendix 5).

Vegetative cover is extensive over the site, with the only cleared area being along the western boundary adjacent to the unformed legal road. The vegetation is mature scrubland and not mapped as being a Protected Natural Area. The site is not within a kiwi present, or high density kiwi area.

The site is mapped as River Flood hazard near the site's western proximity, near the Waima River. Coastal Flood Hazard is also mapped within the site's boundaries, to the west of the existing access track.

The site is predominantly underlain by Late Cretaceous aged Punakitere sandstone in Northland Allochthon. The soils are LUC Class 6.

For more site details, refer to the SSSER.

The property is zoned Rural Production in both the Operative and Proposed District Plans. A coastal environment overlay applies in the Proposed District Plan, as does a High Natural Character notation – described as primarily 'kanuka & manuka shrubland & forest with

emergent totara & tanekaha on hill slopes & riparian margins on the true right bank of the Waima River. The mapped extent does not include the grassed areas within which proposed future building sites are located. The site shares a short length of boundary with property zoned Maori Purposes. The property is not mapped as containing any heritage/cultural sites.

3.2 Legal Interests

The Title has appurtenant right of way, as referred to earlier. A copy of Easement Instrument 13054456.5 forms part of Appendix 3. The property is subject to a right of way over a very small portion of land at the extreme north west corner, shown B on the Scheme. A copy of the relevant instrument is also in Appendix 3. In addition, the site is subject to an easement in gross to convey electricity (in favour of Top Energy). This existing easement is shown on the scheme plan.

Finally the site is subject to a consent notice 13054456.4, imposed at time of previous subdivision. This contains the standard clauses in regard to future wastewater systems; and power and telecommunications not being a requirement of the subdivision and therefore a lot owner's responsibility. It also contains a clause requiring a lot owner to provide a weed and pest management strategy to Council at time of building any residential or accommodation activity; and a requirement to preserve the indigenous trees and bush now on the lot, albeit Council may give approval for clearance. There is also a fencing requirement that will no be relevant because it applied to the boundary between lots created in the prior subdivision. The rest of the clauses only apply to Lot 1 DP 601773 and not relevant to the application site. A copy of the consent notice forms part of Appendix 3.

3.3 Consent History

There is no building consent history. The site was one of two created via RC 2061139. Earthworks Permit 2070519-RMAEWK was issued for the construction of the right of way to provide for the legal access. The crossing to Motukiore Road was constructed pursuant to VX-2019-512 (crossing permit).

4.0 SCHEDULE 4 – INFORMATION REQUIRED IN AN APPLICATION

Clauses 2 & 3: Information required in all applications

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

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

Clause 4: Additional information required in application for subdivision consent

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

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

Clause 6: Information required in assessment of environmental effects

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

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

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

<i>(1) An assessment of the activity's effects on the environment must address the following matters:</i>	
<i>(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:</i>	Refer to Sections 6 and 8 of this planning report and also to the assessment of objectives and policies in Section 7.
<i>(b) any physical effect on the locality, including any landscape and visual effects:</i>	Refer to Section 6. The proposed activity will have no adverse, effects on the physical environment and landscape and visual amenity values.
<i>(c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:</i>	Refer to Section 6.0. The proposal will not result in adverse effects in regard to habitat and ecosystems.
<i>(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:</i>	Refer to Section 6, and above comments
<i>(e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:</i>	The subdivision will not result in the discharge of contaminants, nor any unreasonable emission of noise.
<i>(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations.</i>	The subdivision site is not subject to natural hazards and does not involve hazardous installations.

5.0 ACTIVITY STATUS

5.1 Operative District Plan Zoning

The property is zoned Rural Production. No Resource features apply. The subdivision standards applying in the zone are contained in Table 13.7.2.1 as shown below.

TABLE 13.7.2.1: MINIMUM LOT SIZES

(i) RURAL PRODUCTION ZONE

Controlled Activity Status (Refer also to 13.7.3)	Restricted Discretionary Activity Status (Refer also to 13.8)	Discretionary Activity Status (Refer also to 13.9)
The minimum lot size is 20ha.	1. Subdivision that complies with the controlled activity standard, but is within 100m of the boundary of the Minerals Zone; 2. The minimum lot size is 12ha; or 3. A maximum of 3 lots in any subdivision, provided that the minimum lot size is 4,000m ² and there is at least 1 lot in the subdivision with a minimum lot size of 4ha, and provided further that the subdivision is of sites which existed at or prior to 28 April 2000, or which are amalgamated from titles existing at or prior to 28 April 2000; or 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; 5. Rules under clauses 3 and 4 provide two alternative options for the creation of a specified number of small lots from sites existing at 28 April 2000. Where an application under one of these clauses takes up only part of the total allowance, a subsequent application to take up the remainder of that particular allowance may be considered by Council, notwithstanding that the subsequent application involves a lot which no longer meets the existing at 28 April 2000 criterion.	1. The minimum lot size is 4ha; or 2. A maximum of 3 lots in any subdivision, provided that the minimum lot size is 2,000m ² and there is at least 1 lot in the subdivision with a minimum size of 4ha, and provided further that the subdivision is of sites which existed at or prior to 28 April 2000, or which are amalgamated from titles existing at or prior to 28 April 2000; or 3. A subdivision in terms of a management plan as per Rule 13.9.2 may be approved.

The creation of five lots of greater than 2ha, where the title is older than April 2000, is a restricted discretionary subdivision activity pursuant to option 4 above. RC 2061139 was applied for under that option, but only created a total of two lots (one additional), meaning

there is a residual allowance for the balance number of lots to bring the total created from the original underlying land, to five – Lot 1 DP 601773 and Lots 1-4 of this current application. The application is consistent with option 5 above and is considered a restricted discretionary subdivision activity accordingly.

Zone Rules:

I have not identified any zone rule breaches.

District Wide Rules:

The site is not subject to chapter 12.1 (landscape). Neither is the subdivision subject to Chapter 12.2 (clearance of indigenous vegetation). In regard to Chapter 12.3, earthworks associated with subdivision site works will include access and crossings. Some localised widening is proposed for the existing appurtenant right of way, however this is unlikely to breach the zone's volume or cut/fill face height thresholds (Rural Production Zone). Internal to the site, it is proposed to utilise the alignment of the existing access track to form 3m metal surface carriageway with drainage. Again, given that there is an existing track, albeit in grass/dirt, no substantial earthworks will be required.

Chapter 12.4 (Natural Hazards) is not relevant in regard to coastal or river flood hazards given the site is not located on the coast and there are no rules in the ODP in regard to river flood hazard. Rule 12.4.6.1.2 Fire Risk to Residential units requires that residential units be located at least 20m away from the drip line of any trees in a naturally occurring or deliberately planted area of scrub or shrubland, woodlot or forest. The subdivision does not breach this rule as it does not include any residential units. Clearance required at a later date to create a buffer between dwelling and shrubland would not breach the ODP's Rural Production rules for indigenous vegetation clearance.

The title is subject to a consent notice protecting existing indigenous vegetation. This may prove an impediment to providing for the required 20m buffer setback between any future residential unit and the dripline of an area of vegetation. It raises the potential for an enforced breach of Rule 12.4.6.1.2 in order to comply with a consent notice and/or not breach any rules around indigenous vegetation clearance. The two options available to prevent this 'conflict' is to either (a) seek consent for a breach of Rule 12.4.6.1.2 for all lots so that no indigenous vegetation clearance is required; or (b) amend the existing consent notice condition to allow for the clearance of a 20m buffer area around any future residential dwelling on each lot. The latter option is preferred – refer to 5.3 below. This approach is consistent with permitted activity clearance provided for in the Proposed District Plan.

The proposal is not subject to Chapter 12.5 (Heritage) as there are no heritage or cultural resources mapped for the site. In regard to Chapter 12.7 (Waterbodies), there is a 20m legal road between the property and Waima River. All house sites can be at least another 10m from boundary, meaning no buildings within 30m of a water boundary. Any part of the existing track requiring metalling (impermeable) is also more than 30m from a water boundary. All on-site wastewater systems will be able to achieve the required setback and no works is proposed in any indigenous wetland.

An assessment of the proposal against Chapter 15.1.6C.1.1 to 11 has been carried out, with one potential breach identified.

Rule 15.1.6C.1.1(a) – private accessway on the existing appurtenant right of way over the adjacent property to the north will serve 5 or more lots and should therefore be 5m metal carriageway width throughout. It is requested that this not be the required standard but instead that the right of way be between 3-4m metal carriageway with widening at corners and any blind spots. This standard is considered reasonable for the likely traffic movements, but does meet the rule. Consent is therefore sought.

Internal access over existing easement B, within legal road, and then over ROW's C, D & E will generally follow the alignment of a formed (but unmetalled) track, and is proposed to be the required standard for the number of lots being served. It is not necessary to form shared access beyond the northern boundary of proposed Lot 3.

Rule 15.1.6C.1.1(d)– No private accessway to serve 9 or more titles. This is complied with, as is part (e).

In regard to crossings, it is proposed to improve the consented crossing off Motukiore Road by straightening out the approach and crossing intersection to be at right angles as opposed to the current angled crossing. There is good visibility in both directions.

Rule 15.1.6C.1.8(b) – requires that where a subdivision has frontage to a Council road that is not formed to the appropriate standard, then the subdivider shall upgrade that road – or seek consent not to. In terms of the roading network, this section of Motukiore Road is a low usage access road. Whilst not likely to be to the Council's Rural Type A road standard as specified in the ODP, it is nonetheless of a carriageway width consistent with more up to date engineering standards, and the allowance for lesser width for low volume roads and appears to be in good order and fit for purpose. In the interests of completeness, a breach of Rule 15.1.6C.1.8(b) is included.

No other district wide rules in the ODP are applicable.

The application is a restricted discretionary subdivision activity and because of breaches of rules in 15.1.6C, as described above, a discretionary activity overall.

5.2 Proposed District Plan (PDP) Assessment

There are certain rules that have been identified in the PDP as having immediate legal effect and that may affect the category of activity under the Act. These include:

Rules HS-R2, R5, R6 and R9 in regard to hazardous substances on scheduled sites or areas of significance to Maori, significant natural areas or a scheduled heritage resource.

There are no scheduled sites or areas of significance to Maori, significant natural areas or any scheduled heritage resource on the site, therefore these rules are not relevant to the proposal.

Heritage Area Overlays – N/A as none apply to the application site.

Historic Heritage rules and Schedule 2 – N/A as the site does not have any identified (scheduled) historic heritage values.

Notable Trees – N/A – no notable trees on the site.

Sites and Areas of Significance to Maori – N/A – the site does not contain any site or area of significance to Maori.

Ecosystems and Indigenous Biodiversity – Rules IB-R1 to R5 inclusive.

No indigenous vegetation clearance is proposed or required at time of subdivision. In regard to clearance that might be required for future residential units, PER-1 under Rule IB-R1 provides for the creation or maintenance of a 20m setback from a building used for a vulnerable activity (such as residential) to the edge of the indigenous vegetation area. This would allow for the establishment of a cleared buffer area in regard to fire risk.

Subdivision (specific parts) – only subdivision provisions relating to land containing Significant Natural Area or Heritage Resources have immediate legal effect. The site contains no scheduled or mapped Significant Natural Areas or Heritage Resources.

Activities on the surface of water – N/A as no such activities are proposed.

Earthworks – Only some rules and standards have legal effect. These are Rules EW-R12 and R13 and related standards EW-S3 and ES-S5 respectively. EW-R12 and associated EW-S3 relate to the requirement to abide by Accidental Discovery Protocol if carrying out earthworks and artefacts are discovered. EW-R13 and associated EW-S5 refer to operating under appropriate Erosion and Sediment Control measures. Earthworks will be required to give effect to the subdivision in regard to the formation and upgrading of access and crossings. Such earthworks can be carried out in compliance with the above referenced rules/standards.

Signs – N/A – signage does not form part of this application.

Orongo Bay Zone – N/A as the site is not in Oronga Bay Zone.

There are no zone rules in the PDP with immediate legal effect that affect the proposal's activity status.

5.3 Compliance Assessment against Consent Notice 13054456.4

The clauses that relate to the application site, and that will apply to all lots created by this subdivision, unless varied, are copied below, with commentary.

(i) In conjunction with the construction of any building which includes a wastewater treatment & effluent disposal system the applicant shall submit for Council's approval a TP58 Report prepared by a Chartered Professional Engineer or an approved TP58 Report Writer. The report shall identify a suitable method of wastewater treatment for the proposed development along with an identified effluent disposal area plus a 100% reserve disposal

area. The report shall confirm that all of the treatment & disposal system can be fully contained within the lot boundary and comply with the Regional Water & Soil Plan Permitted Activity Standards.

Note: A long drop is not considered to be suitable in this environment.

[Lots 1 & 2]

This will carry over and applies at time of building consent. The application is supported by a Subdivision Site Suitability Engineering Report – refer Appendix 4 – that assesses the site, including potential house sites, for suitability for future on-site wastewater treatment and disposal. This proves feasibility for on-site wastewater treatment and disposal for all lots. I do not believe it necessary to amend the above consent notice clause.

(ii) Reticulated power supply or telecommunication services are not a requirement of this subdivision consent. The responsibility for providing both power supply and telecommunication services will remain the responsibility of the property owner.

[Lots 1 & 2]

This is noted and will carry down to all new lots.

(iii) In conjunction with any building consent for a residential dwelling or a building for accommodation purposes a weed and pest management strategy shall be provided to the satisfaction of Councils Resource Consents Monitoring Officer or other duly delegated officer. The management strategy shall apply to all of the land included in the allotment and shall be adhered to for the duration of the residential and/or accommodation activity.

[Lot 1 & 2]

This is noted and is a requirement at building consent stage for a residential dwelling or a building for accommodation purposes.

(iv) The owner shall preserve the indigenous trees and bush now on the allotment and shall not without the prior written consent of the Council and then only in strict compliance with any conditions imposed by the Council, cut down, damage or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

[Lot 1 & 2]

Also noted. However, in order to ensure a 20m separate distance between any future residential dwelling and the drip line of an area of vegetation, it is **requested that the wording of this clause, as it applies to lots created from the subdivision of Lot 2, be amended to allow for such clearance.** Suggested wording could be along the lines of:

(iv) The owner shall preserve the indigenous trees and bush now on the allotment and shall not without the prior written consent of the Council and then only in strict compliance with any conditions imposed by the Council, cut down, damage or destroy any of such trees or bush; except that in conjunction with any building consent for a residential unit, the lot owner may clear sufficient indigenous vegetation to achieve a 20m separation distance between any residential unit and the dripline of any area of vegetation. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes

not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.

[Lot 1 & 2]

(v) Fencing of the new boundary between Lots 1 & 2 shall be constructed away from archaeological features and sites. Any fencing around 005/354 being the terraced site shall be located below the last visible feature with a buffer gap of 10-20m. In the event any fencing work is unable to avoid an archaeological site an Archaeological Authority to modify or destroy shall be obtained from Heritage New Zealand prior to any works being undertaken.

[Lots 1 & 2]

This clause is not relevant to the application site as the archaeological feature referred to is located on Lot 1 of the previous subdivision, not on the application site. The boundary in question is well to the south of the proposed lots and house sites and access.

6.0 ASSESSMENT OF ENVIRONMENTAL EFFECTS

6.1 Allotment Sizes and Dimensions

Proposed Lots are all in excess of 2ha and able to accommodate the required 30m x 30m square building envelope in compliance with permitted activity boundary setbacks.

6.2 Natural and Other Hazards

Refer to the Site Suitability Subdivision Engineering Report (SSSER) in Appendix 4. This contains a description and assessment of mapped flood hazards as they might affect potential building sites and access. The River Flood Hazard extent is marginal in terms of impact. The mapping indicates a broad flood plain between the site and adjacent Papua block, about 500m from the site's northern boundary. The 10%, 2% and 1% AEP hazards do not encroach the site boundary, although the 1% AEP hazard is mapped as reaching into the 20m wide road reserve that borders the western boundary (but not beyond). The maximum river flood level is around 2m above mean sea level. All proposed wastewater fields are at least 1m above the 1% AEP flood.

The Coastal Flood Hazard extent area is generally bound to the west of the existing internal access track. The current coastal flood extent does not overlap the wastewater fields or any other notable site features. Proposed building envelopes can be established outside of the mapped coastal flood zone extents.

The SSSER notes that the proposed wastewater field for Lot 4 (balance lot) is completely overlapped by the Zone 2 and 3 hazard extent (i.e. >50 years event). Given the size of this lot, however, there is potential to shift the fields higher in elevation if need be. This is a decision that can be made at building consent stage. Proposed wastewater fields for the smaller lots 1-3 can likely avoid coastal flood hazard extent.

The SSSER contains a summary assessment of natural hazard risk in its Section 8. This identifies three hazards of potential relevance, albeit risk of tsunami is exceedingly low. Risk of erosion can be mitigated such that effects are less than minor. Coastal flood hazard risk is assessed above.

The property is not listed as a HAIL site by Northland Regional Council [source: NRC online maps], or on Far North Maps.

6.3 Water Supply

There is no Council reticulated water supply available to the property and the Council can impose its standard requirement in regard to potable and fire fighting water supply for the lots. Refer also to Section 7 of the SSSER Report in Appendix 4.

6.4 Energy Supply & Telecommunications

Energy supply and telecommunications are not a requirement of rural subdivisions. There is an existing consent notice to this effect.

6.5 Stormwater Disposal

Refer to the SSSER in Appendix 4, specifically Section 6 of that report. All lots can be developed within permitted activity stormwater management thresholds – unlikely to exceed 3% of total site coverage. The report concludes there is no need to attenuate stormwater runoff for flow control or flood control within the proposed lots, as stormwater runoff will discharge directly to the river, with no effect on downstream property. It is proposed that stormwater runoff from roof areas be collected into rainwater tanks to provide water supply to the dwellings.

Formation of any new access will require appropriate stormwater drainage.

6.6 Sanitary Sewage Disposal

Refer to Section 5 of the Report in Appendix 4. Whilst it is extremely unlikely there will be 5 bedroom dwellings constructed on the lots, the SSSER uses this number of bedrooms, and peak occupancy of eight people, for the purposes of assessing site suitability for on site wastewater treatment and disposal. The existing consent notice attached to the title already requires a site suitability report (TP58) be provided at time of building consent.

Whilst the report recommends secondary treatment it also states that primary treatment may also be considered, provided that the system complies with the permitted activity standards of the Regional Plan.

An assessment of effects of on-site wastewater treatment and design is contained in Appendix C of the SSSER.

6.7 Easements for any purpose

Existing easements are shown in the Schedule on the face of the scheme plan(s) attached in Appendix 1. So too is the existing appurtenant right of way. Internal to the site, a proposed right of way alignment is depicted, through the lots as far as the northern boundary of proposed Lot 3. This allows for access to all lots, over its various sections.

6.8 Property Access

There is an existing lengthy appurtenant right of way over Papua B Blk, in favour of the application site and one property to the south. The right of way formation required earthworks, consented by way of an earthworks permit – refer to Consent History. The crossing off Motukioire Road was formed at about the same time, in accordance with a Vehicle Crossing Permit. It intersects at Motukioire Road verge at a reasonably acute angle and it is proposed to straighten that angle to be right angle. There is physical scope to do the necessary works to achieve this. The right of way tracks its way down slope through Papua B, crosses the estuarine flat area at the base of the slope, and continues to the application site's boundary. It is proposed to provide for a 3m wide metal carriageway throughout, with drainage, but with widening at strategic locations to readily enable two way passing if required.



Looking north from application site along existing appurtenant easement alignment, where the uphill portion follows the boundary within the cleared area to west of pine trees.

Internal to the site, right of way will generally follow the existing alignment of a previously formed farm track. This is proposed to be formed to 3m metal carriageway, with drainage, and with passing bays as required.



View looking north. Existing farm access track at left of picture, with likely driveway alignment leading to house site within Lot 2, in centre picture.

The site is remote and unlikely to attract large scale residential development, especially given indigenous vegetation protection mechanisms already registered on the title. Traffic volumes will therefore remain low. I believe adequate access can be created for the level of development proposed.

6.9 Earthworks

Subdivision works will include earthworks for the upgrade vehicle crossing at Motukioire Road. As stated earlier, there is physical scope to straighten out the crossing angle, within road reserve. Throughout the length of the existing appurtenant right of way there will be areas of minor earthworks to accommodate localised widening and drainage. This works would be on a separate "site" to the application site and to road reserve. Within the site itself, the alignment of access is already there, and it is therefore the surfacing and upgrading along that alignment that will necessitate earthworks. This should not exceed the zone's 5,000m³ per site per year permitted threshold. Appropriate erosion and sediment control measures will be put in place and ADP followed.

6.10 Building Locations

All lots are capable of providing physically suitable building sites – refer to commentary in the SSSRE Report in Appendix 5. All lots can accommodate buildings clear of overland flow paths. The report concludes each lot has a feasible building site. Photos of potential house sites on all four lots are shown below:



Potential Lot 1 house site



Potential Lot 2 house site



Potential Lot 3 building site, abandoned/ disused structures to be removed



Potential house site on Lot 4, northern most. Abandoned/ disused structure to be removed

The report in Appendix 4 did not go so far as to specify minimum floor levels because the potential building sites are already a sufficient height above sea level.

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

Heritage Resources, including cultural values

The site contains no historic sites or sites of cultural significance to Māori as recorded on/in the District Plan's Resource Maps or Schedules. There are no NZAA archaeological sites mapped on the site. The archaeological site referred to in the consent notice on the title, is not on the application site, but to the south, within Lot 1 DP 601773.

Vegetation, Fauna and Landscape

The subdivision itself will not require the clearance of any indigenous vegetation on the application site. However, when seeking building consent for future residential dwellings, there will be a requirement to clear sufficient vegetation to ensure a 20m buffer between

any residential dwelling and the treeline. There is an existing consent notice protecting indigenous vegetation within the site and this application includes a variation to that clause to enable that small amount of clearance to mitigate against fire hazard.

The Proposed District Plan's Indigenous Biodiversity rules provide for such clearance as a permitted activity. As a proportion of the overall vegetative cover on the site, the amount of clearance being suggested is insignificant. The site is not in a high density or kiwi present area.

The site is mapped as containing an area of High Natural Character, with the mapped extent excluding the western strip of the site, largely cleared and in grass. As nearly all of the development and future buildings will be within that cleared area, it is unlikely the proposed subdivision will adversely affect the vegetated areas. As well as a restriction on clearance, there is a requirement for lot owners to implement ongoing weed and pest control.

Whilst there are rules in the Proposed District Plan in regard to Natural Character areas, these do not yet have legal effect.

6.12 Soil

The property contains poorer quality soils – primarily Class 6 LUC soils. The proposal is low density and will have very little, if any, impact on the life supporting capacity of soils.

6.13 Access to, and protection of, waterbodies

None of the lots have a boundary with a water boundary because there is an intervening legal road, 20m width. As such there is no requirement for esplanade or any other additional form of public access. The presence of the legal road also assists in mitigating any adverse effects on the waterbody. It ensure appropriate setback. The SSSER in Appendix 4 confirms that lots can be developed with on-site wastewater and stormwater management without causing off-site adverse effects, including on waterbodies.

6.14 Land use compatibility (reverse sensitivity)

The property is vacant and currently utilised for low density cattle grazing. The balance Lot 4 may continue with that use, albeit 15.5ha is hardly likely to be a sustainable, economically viable dry stock operation. The introduction of modestly scaled residential living on the site will not unduly increase the risk of reverse sensitivity given (a) the site's remoteness and separation from adjacent sites; and (b) existing land use on surrounding land.

6.15 Energy Efficiency and renewable Energy Development/Use

The proposal has not considered energy efficiency. This is an option for future lot owners, albeit the intention is that the lots be self sufficient in regard to power supply.

6.16 Effects on Rural Character and Amenity

All proposed lots are rural in nature/character. The proposal is low density, the size of the lots means that rural amenity will be maintained. In my opinion, the proposal will have no adverse effects on rural character.

6.17 Cumulative and Precedent Effects

The proposal will create three additional lots, where all are large enough to maintain rural character and amenity and the density level does not create an adverse cumulative effect in terms of built development.

Determining whether there is an adverse precedent effect is generally reserved for non complying activities, which this is not. In any event, the proposed subdivision does not set an adverse precedent effect and does not threaten the integrity of the ODP or those parts of the PDP with legal effect.

7.0 STATUTORY ASSESSMENT

7.1 District Plan Objectives and Policies

I consider the subdivision to be consistent with the subdivision objectives and policies in Chapter 13. In particular I consider the proposal to be consistent with Objective 13.3.1 which provides for (enables) subdivision in a way that promotes sustainable management of natural and physical resources; and Objective 13.3.2 and associated Policy 13.4.1, which seek to ensure that the subdivision of land is appropriate and carried out in a manner that does not compromise air, water, soil or ecosystems, and that avoids, remedies or mitigates any adverse effects.

The Rural Production zone is an enabling zone, providing for a variety of activities subject to avoiding, remedying or mitigating adverse effects and compatibility with the amenity values of rural areas and rural production activities. I consider the proposed subdivision to be consistent with the zone's objectives and policies.

OBJECTIVES

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

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

The subdivision is consistent with both the above objectives. It promotes sustainable management of the natural and physical resources of the District and provides for the applicants' social and economic well being. It is an appropriate subdivision that does not compromise the life-supporting capacity of air, water, soil or ecosystems, and adverse effects are minimal.

13.3.3 To ensure that the subdivision of land does not jeopardise the protection of outstanding landscapes or natural features in the coastal environment.

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

The property has no outstanding landscape values. It is not zoned coastal in the ODP, however, is within the coastal environment as mapped in the higher order Regional Policy Statement for Northland (and now in the PDP). It is intended to focus built development on already cleared grassland adjacent to legal road reserve along the water boundary. The proposal will have minimal impact on natural character values. There are no 'scheduled heritage resources' identified on the property.

13.3.5 To ensure that all new subdivisions provide a reticulated water supply and/or on-site water storage and include storm water management sufficient to meet the needs of the activities that will establish all year round.

On-site water supply and on-site stormwater management can be achieved.

13.3.7 To ensure the relationship between Māori and their ancestral lands, water, sites, waahi tapu and other taonga is recognised and provided for and associated

Policy 13.4.11 That subdivision recognises and provides for the relationship of Māori and their culture and traditions, with their ancestral lands, water, sites, waahi tapu and other taonga and shall take into account the principles of the Treaty of Waitangi.

There are no 'scheduled' sites of significance to Māori affecting the property. The proposal is low density. The site is not known to have any special habitat values. Development will be well back from any water boundary.

13.3.8 To ensure that all new subdivision provides an electricity supply sufficient to meet the needs of the activities that will establish on the new lots created.

13.3.9 To ensure, to the greatest extent possible, that all new subdivision supports energy efficient design through appropriate site layout and orientation in order to maximise the ability to provide light, heating, ventilation and cooling through passive design strategies for any buildings developed on the site(s).

13.3.10 To ensure that the design of all new subdivision promotes efficient provision of infrastructure, including access to alternative transport options, communications and local services.

Power supply is not a requirement of rural subdivision. The expectation is that the lots will be self sufficient in regard to power (and 3 waters). House sites on future lots can be orientated to maximise access to sunlight, and existing vegetation can be cleared to enhance that exposure (noting our request to provide for clearance to provide a buffer for mitigation against fire hazard).

POLICIES

13.4.1 That the sizes, dimensions and distribution of allotments created through the subdivision process be determined with regard to the potential effects including cumulative effects, of the use of those allotments on: (a) natural character, particularly of the coastal environment; (b) ecological values; (c) landscape values; (d) amenity values; (e) cultural values; (f) heritage values; and (g) existing land uses.

I believe the subdivision has less than minor impact on the relevant matters listed in the above policy.

13.4.2 That standards be imposed upon the subdivision of land to require safe and effective vehicular and pedestrian access to new properties.

13.4.3 That natural and other hazards be taken into account in the design and location of any subdivision.

13.4.4 That in any subdivision where provision is made for connection to utility services, the potential adverse visual impacts of these services are avoided.

13.4.5 That access to, and servicing of, the new allotments be provided for in such a way as will avoid, remedy or mitigate any adverse effects on neighbouring property, public roads (including State Highways), and the natural and physical resources of the site caused by silt runoff, traffic, excavation and filling and removal of vegetation.

Whilst not fully to the standard dictated in the District Plan, I believe that access to the site can be provided to a reasonable level, adequate for serving the subdivision. The site is not subject to hazards to the extent that development is precluded.

13.4.6 That any subdivision proposal provides for the protection, restoration and enhancement of heritage resources, areas of significant indigenous vegetation and significant habitats of indigenous fauna, threatened species, the natural character of the coastal environment and riparian margins, and outstanding landscapes and natural features where appropriate.

There is indigenous bush on the property, already protected. The site is not located within a kiwi present or high density kiwi zone. The property is within the coastal environment but I do not believe that natural character associated with the coastal environment is compromised by the development. The property is adjacent to the tidal Waima River, a considerable distance from any open coast line. No known heritage resources exist on the application site. The site does not contain any outstanding natural landscape or features.

13.4.8 That the provision of water storage be taken into account in the design of any subdivision.

Future lots will be responsible for their own on-site water storage.

13.4.13 Subdivision, use and development shall preserve and where possible enhance, restore and rehabilitate the character of the applicable zone in regards to s6 matters.....

s6 matters are discussed elsewhere in this report. The subdivision does not adversely affect the character of the Rural Production Zone in regard to s6 matters, or any of those matters listed in 13.4.13.

13.4.14 That the objectives and policies of the applicable environment and zone and relevant parts of Part 3 of the Plan will be taken into account when considering the intensity, design and layout of any subdivision.

The Objectives and Policies of the Rural Production Zone have been considered in the design and layout of the subdivision and I consider the subdivision to be consistent with those objectives and policies. See below.

8.6.3.1 To promote the sustainable management of natural and physical resources in the Rural Production Zone.

The proposal creates three 2ha lots in the Rural Production Zone, plus a balance. This is a scenario provided for in the District Plan. It leaves a large balance lot of 15.5ha. There are

areas of indigenous flora on the property, already protected. I believe that this proposal represents sustainable management for the zone.

8.6.3.2 To enable the efficient use and development of the Rural Production Zone in a way that enables people and communities to provide for their social, economic, and cultural well being and for their health and safety.

The proposal provides for an alternative lifestyle – residential use in a picturesque and relatively remote part of the district, with opportunity for on site sustainable living; and habitat protection and enhancement. Whilst it may not be your standard run-of-the-mill lifestyle subdivision given the site's remoteness and features, I believe the zone is intended to provide for variety of lifestyle and activities such that people can make choices about their lifestyle.

8.6.3.3 To promote the maintenance and enhancement of the amenity values of the Rural Production Zone to a level that is consistent with the productive intent of the zone.

The proposal does not adversely affect amenity values of the zone. The site contains no highly productive land.

8.6.3.4 To promote the protection of significant natural values of the Rural Production Zone.

The property does not contain any mapped PNA, but does contain areas of indigenous biodiversity, already protected.

8.6.3.6 To avoid, remedy or mitigate the actual and potential conflicts between new land use activities and existing lawfully established activities (reverse sensitivity) within the Rural Production Zone and on land use activities in neighbouring zones.

8.6.3.7 To avoid remedy or mitigate the adverse effects of incompatible use or development on natural and physical resources.

The proposal is not a land use activity. I have not identified any likely conflicting land uses that cannot be mitigated.

8.6.3.8 To enable the efficient establishment and operation of activities and services that have a functional need to be located in rural environments.

This policy relates to land use activities, not subdivisions. N/A.

8.6.3.9 To enable rural production activities to be undertaken in the zone.

Rural production activities can continue to be undertaken following the subdivision.

8.6.4.1 That the Rural Production Zone enables farming and rural production activities, as well as a wide range of activities, subject to the need to ensure that any adverse effects on the environment, including any reverse sensitivity effects, resulting from these activities are avoided, remedied or mitigated and are not to the detriment of rural productivity.

The site is predominantly in bush. A small number of cattle are grazed. I do not believe the proposal adversely impacts on the site's productive capability.

8.6.4.2 That standards be imposed to ensure that the offsite effects of activities in the Rural Production Zone are avoided, remedied or mitigated.

Again, this policy is directed at land uses, not subdivisions.

8.6.4.4 That the type, scale and intensity of development allowed shall have regard to the maintenance and enhancement of the amenity values of the Rural Production Zone to a level that is consistent with the productive intent of the zone.

The proposed subdivision scale and intensity meets restricted discretionary subdivision standards and is consistent with the requirements and expectations of the District Plan.

8.6.4.5 That the efficient use and development of physical and natural resources be taken into account in the implementation of the Plan.

I believe the proposal represents efficient use and development of the physical and natural resources.

8.6.4.7 That although a wide range of activities that promote rural productivity are appropriate in the Rural Production Zone, an underlying goal is to avoid the actual and potential adverse effects of conflicting land use activities.

8.6.4.8 That activities whose adverse effects, including reverse sensitivity effects, cannot be avoided remedied or mitigated are given separation from other activities.

8.6.4.9 That activities be discouraged from locating where they are sensitive to the effects of or may compromise the continued operation of lawfully established existing activities in the Rural Production zone and in neighbouring zones.

Refer to earlier comments in regard to reverse sensitivity. I believe any potential adverse effects can be readily avoided, remedied or mitigated. The proposal is not increasing the risk of reverse sensitivity issues to the local area. The proposal will not prevent existing lawfully established activities from continuing to operate.

15.1.3.1 To minimise the adverse effects of traffic on the natural and physical environment.

The proposal is low density, creating the number of lots provided for as a restricted discretionary activity. Motukiore Road is a low usage, low speed road, with a very low density settlement pattern. I believe any adverse effects from additional traffic will be less than minor.

15.1.4.6 That the number, size, gradient and placement of vehicle access points be regulated to assist traffic safety and control, taking into consideration the requirements of both the New Zealand Transport Agency and the Far North District Council.

Access to the site is existing off Motukiore Road. Entranceways into the lots can be, formed to Council standard.

7.2 Proposed District Plan Objectives and Policies

The PDP's Objectives and Policies relating to subdivision are relevant:

SUB-O1

Subdivision results in the efficient use of land, which:

- a. achieves the objectives of each relevant zone, overlays and district wide provisions;
- b. contributes to the local character and sense of place;
- c. avoids reverse sensitivity issues that would prevent or adversely affect activities already established on land from continuing to operate;
- d. avoids land use patterns which would prevent land from achieving the objectives and policies of the zone in which it is located;

- e. *does not increase risk from natural hazards or risks are mitigated and existing risks reduced; and*
- f. *manages adverse effects on the environment.*

I believe that the proposed subdivision is more consistent than not with the zone's objectives and policies, and any relevant district wide objectives and policies. I believe it will result in the efficient use of land.

SUB-O2

Subdivision provides for the:

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

The site contains no highly productive land. It has no outstanding features, but is mapped as containing an area of High Natural Character, largely matching the shrubland coverage within the site. The site is near a river margin, but does not immediately adjoin the river. The subdivision, and future on lot development, will not adversely affect high natural character values, or river margins. In summary the subdivision is consistent with this objective.

SUB-O3

Infrastructure is planned to service the proposed subdivision and development where:

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

There is no planned infrastructure for the wider area. On-site infrastructure can be utilised for wastewater, stormwater and potable water supply.

SUB-O4

Subdivision is accessible, connected, and integrated with the surrounding environment and provides for:

- a. *public open spaces;*
- b. *esplanade where land adjoins the coastal marine area; and*
- c. *esplanade where land adjoins other qualifying waterbodies.*

The site is rural and is not immediately adjoining the coastal marine area of any other qualifying water body. The legal road, on the site's western boundary, is technically 'public' land, but is not affected by this proposal. Whilst a small part of the access network may be within the legal road boundary, this is provided for, given that it is for access purposes.

SUB-P1

Enable boundary adjustments that:...

Not applicable.

SUB-P2

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

Not applicable.

SUB-P3

Provide for subdivision where it results in allotments that:

- a. are consistent with the purpose, characteristics and qualities of the zone;*
- b. comply with the minimum allotment sizes for each zone;*
- c. have an adequate size and appropriate shape to contain a building platform; and*
- d. have legal and physical access.*

The subdivision is more consistent than not, with the purpose and qualities of the zone, largely because it is low density, maintains character, and the site contains no highly productive land, with poorer soils predominating. Whilst the proposed lots do not 'comply' with the PDP's minimum lot sizes for the zone, the lots are nonetheless able to provide for building platforms. They have / can have legal and physical access. In addition, the PDP's proposed minimum lot sizes have no legal effect as yet.

SUB-P4

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

The subdivision does not adversely impact on natural environmental values, nor historical and cultural values. The site is not subject to hazards to the extent that development cannot occur.

SUB-P5

Manage subdivision design and layout in the General Residential, Mixed Use and Settlement zone to

Not applicable.

SUB-P6

Require infrastructure to be provided in an integrated and comprehensive manner by:

- a. demonstrating that the subdivision will be appropriately serviced and integrated with existing and planned infrastructure if available; and*
- b. ensuring that the infrastructure is provided is in accordance the purpose, characteristics and qualities of the zone.*

This is a rural area with no planned infrastructure improvements on the part of the Council. Future lot owners will be responsible for on-site infrastructure of wastewater, stormwater and potable water. I believe the subdivision can be appropriately serviced.

SUB- P7

Require the vesting of esplanade reserves when subdividing land adjoining the coast or other qualifying waterbodies.

Not applicable. There are no waterbodies with which the subdivision lots have a shared boundary.

SUB-P8

Avoid rural lifestyle subdivision in the Rural Production zone unless the subdivision:

- a. will protect a qualifying SNA in perpetuity and result in the SNA being added to the District Plan SNA schedule; and*
- b. will not result in the loss of versatile soils for primary production activities.*

There are no 'qualifying SNA's', albeit the indigenous vegetation within the site is subject to permanent protection by way of a consent notice. There are no versatile soils.

SUB-P9

Avoid subdivision rural lifestyle subdivision in the Rural Production zone and Rural residential subdivision in the Rural Lifestyle zone unless the development achieves the environmental outcomes required in the management plan subdivision rule.

The subdivision is not a management plan subdivision.

SUB-P10

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.

Not applicable.

SUB-P11

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

- a. consistency with the scale, density, design and character of the environment and purpose of the zone;*
- b. the location, scale and design of buildings and structures;*
- c. the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; or the capacity of the site to cater for on-site infrastructure associated with the proposed activity;*
- d. managing natural hazards;*
- e. Any adverse effects on areas with historic heritage and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and*
- f. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.*

The subdivision does not require consent under the PDP so the above policy is of limited relevance. Notwithstanding this, relevant matters in SUB-P11 have been considered.

The property is zoned Rural Production under the PDP. An assessment of the proposal against the zone's Objectives and Policies follows:

RPROZ-O1

The Rural Production zone is managed to ensure its availability for primary production activities and its long-term protection for current and future generations.

The proposal does not impact unduly on the availability of land for primary production.

RPROZ-O2

The Rural Production zone is used for primary production activities, ancillary activities that support primary production and other compatible activities that have a functional need to be in a rural environment.

This objective is in a zone chapter, not subdivision, and is aimed at 'activities'. The application is for a subdivision that does not pre-determine the activities to take place within each lot.

RPROZ-O3

Land use and subdivision in the Rural Production zone:

- a. protects highly productive land from sterilisation and enables it to be used for more productive forms of primary production;
- b. protects primary production activities from reverse sensitivity effects that may constrain their effective and efficient operation;
- c. does not compromise the use of land for farming activities, particularly on highly productive land;
- d. does not exacerbate any natural hazards; and
- e. is able to be serviced by on-site infrastructure.

There is no highly productive land within the site. Any primary production activity within the site on adjacent sites will not be constrained as a result of the proposal. The site is not subject to hazards to the extent that development is precluded. Sites will be serviced on-site.

RPROZ-O4

The rural character and amenity associated with a rural working environment is maintained.

The subdivision will not adversely impact on rural character and amenity.

RPROZ-P1

Enable primary production activities, provided they internalise adverse effects onsite where practicable, while recognising that typical adverse effects associated with primary production should be anticipated and accepted within the Rural Production zone.

The proposal is not for a primary production activity. It is a subdivision.

RPROZ-P2

Ensure the Rural Production zone provides for activities that require a rural location by:

- a. enabling primary production activities as the predominant land use;
- 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.

Refer to earlier comments in regard to Objectives.

RPROZ-P3

Manage the establishment, design and location of new sensitive activities and other non-productive activities in the Rural Production Zone to avoid where possible, or otherwise mitigate, reverse sensitivity effects on primary production activities.

Refer to earlier comments in regard to reverse sensitivity.

RPROZ-P4

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:

- a. a predominance of primary production activities;
- b. low density development with generally low site coverage of buildings or structures;
- c. typical adverse effects such as odour, noise and dust associated with a rural working environment; and
- d. a diverse range of rural environments, rural character and amenity values throughout the District.

The subdivision is a low-density development, consistent with the level of density provided for by the ODP, noting that the PDP subdivision provisions are yet to have legal effect. The area is not dominated by high intensity agriculture or horticultural use – which are the type of uses that can generate reverse sensitivity issues if not managed. I believe the proposal will maintain the rural character and amenity of the area.

RPROZ-P5

Avoid land use that:....

N/A. Activity is not a land use.

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.

The subdivision will not result in the loss of highly productive land. The land is not currently under active farming practices, with only a small number of cattle present on the site. The site does not possess any special habitat or landscape values. Areas mapped as having high natural character contain indigenous vegetation, which is subject to protection (part (c) of the above policy).

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.

The subdivision does not require consent under the PDP so the policy is of limited relevance. Whilst the proposal will not increase productive potential, this is limited in any event. The proposal does not rely on the productive nature of the soil and the site contains no highly

productive land. The proposal is low density and built environment will not dominate. Rural amenity will be maintained. There is no zone interface. The sites can cater for their on-site servicing. The site has no historic heritage or cultural values, there are no natural features or landscapes, and there are no areas of indigenous vegetation.

The property has a coastal environment and partial high natural character overlay.

Coastal Environment Objectives and Policies:

CE-O1 *The natural character of the coastal environment is identified and managed to ensure its long-term preservation and protection for current and future generations.*

CE-O2 *Land use and subdivision in the coastal environment:*

- a. *preserves the characteristics and qualities of the natural character of the coastal environment;*
- b. *is consistent with the surrounding land use;*
- c. *does not result in urban sprawl occurring outside of urban zones;*
- d. *promotes restoration and enhancement of the natural character of the coastal environment;*
and
- e. *recognises tangata whenua needs for ancestral use of whenua Māori.*

Whilst the site is mapped as being within the coastal environment, it is within an extensive inner harbour network, adjacent to the Waima River as opposed to being on the open coastline. The river is tidal and its natural character values lie mainly in the mangrove and mudflats habitat alongside which legal road reserve runs. There are no expansive views into the proposed new lots. Terrestrial shrubland vegetation is protected. In summary, I believe the proposal does not adversely affect the natural character of the coastal environment, is consistent with surrounding land use, and does not result in urban sprawl. Habitat values are protected through existing and ongoing consent notice requirements. Ongoing pest and weed management is an existing requirement on lot owners. The application site does not share any boundary with land zoned Maori Purposes, albeit only legal road reserves separates Part Papua C from the northern most part of the application site. The proposal does not interfere with, or adversely affect, the use of that adjacent land.

Only some policies applying to the coastal environment have relevance to the application site and proposal. Policy CE-P1 is not relevant to a specific development within a specific site by a land owner, but rather at territorial authorities. Policies CE-P2 and P3 refer to outstanding natural character and outstanding landscape areas, and the area proposed for development is not mapped as either. Policy CE-P5 applies to urban zones, which the application site is not. Policy CE-P6 relates to enabling farming activities and for the reasons outlined earlier, is not considered a relevant policy to this development. Policy CE-P7 refers to Maori Purpose and Treaty Settlement land only and is not relevant to this proposed development. Policy CE-P9 refers to areas of outstanding natural character value of which there are none in the area proposed for development.

CE-P4 *Preserve the visual qualities, character and integrity of the coastal environment by:*

- a. *consolidating land use and subdivision around existing urban centres and rural settlements;*
and
- b. *avoiding sprawl or sporadic patterns of development.*

Strictly speaking the proposal cannot be consistent with this policy because there is no existing urban settlement to 'consolidate' with or sprawl away from. At the same time,

however, the proposed subdivision does not adversely affect the visual qualities, character or integrity of the coastal environment.

CE-P8 *Encourage the restoration and enhancement of the natural character of the coastal environment.*

The ongoing maintenance and enhancement of natural character is achieved through existing and ongoing consent notice conditions.

CE-P10 *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:*

- a. *the presence or absence of buildings, structures or infrastructure;*
- b. *the temporary or permanent nature of any adverse effects;*
- c. *the location, scale and design of any proposed development;*
- d. *any means of integrating the building, structure or activity;*
- e. *the ability of the environment to absorb change;*
- f. *the need for and location of earthworks or vegetation clearance;*
- g. *the operational or functional need of any regionally significant infrastructure to be sited in the particular location;*
- h. *any viable alternative locations for the activity or development;*
- i. *any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6;*
- j. *the likelihood of the activity exacerbating natural hazards;*
- k. *the opportunity to enhance public access and recreation;*
- l. *the ability to improve the overall quality of coastal waters; and*
- m. *any positive contribution the development has on the characteristics and qualities.*

The proposal does not require consent under the PDP. Notwithstanding this, the proposal has taken into account the matters outlined above, to the extent considered necessary.

In summary I believe the proposed development to be consistent with the PDP's coastal environment objectives and policies where these are relevant.

Natural Character Objectives & Policies

The site has a partial high natural character map notation. This does not include the cleared land nearest the river margin, which confuses the applicability of the objectives and policies in the PDP regarding natural character, because they are all about land within 30m of a river margin – the very land NOT mapped as having any natural character values.

NATC-O1

The natural character of wetland, lake and river margins are managed to ensure their long-term preservation and protection for future generations.

NATC-O2

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.

The separation of the site from the river margin by way of legal road reserve assists in maintaining the natural character values associated with that river margin. The proposed subdivision does not compromise the natural character values of the river margin.

NATC-P1

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.

The proposal will not have any adverse effects on natural character values associated with the river margin.

NATC-P2

Identify or assess the natural character of wetland, lake and river margins in accordance with the natural character assessment criteria in APP1- Mapping methods and criteria.

Given that the extent of the area of high natural character has been defined through a comprehensive mapping exercise undertaken by the regional council, I do not consider that there is any need to further assess natural character.

NATC-P3

Enable indigenous vegetation removal and/or earthworks within wetland, lake and river margins where:

- a. it is for the repair or maintenance of lawfully established activities;*
- b. it is for safe and reasonable clearance for existing overhead powerlines;*
- c. it is for health and safety of the public;*
- d. it is for biosecurity reasons; and*
- e. it is for the sustainable non-commercial harvest for rongoā Māori.*

There will not be any indigenous vegetation removal within the river margin. There may be earthworks associated with access upgrade, a very small amount of which maybe within 30m of the riverbank. But most works will be beyond 30m.

NATC-P4

Provide for buildings or structures, and extensions to existing buildings or structures on wetland, lake and river margins where:

- a. there is a functional or operational need for a building or structures location;*
- b. public access, customary access and recreational use can be protected or enhanced;*
- c. the protection of natural character is preserved; and*
- d. natural hazard risk will not be increased, taking into account the likely long term effects of climate change.*

No buildings or structures are proposed within the river margin.

NATC-P5

Encourage the restoration and enhancement of wetland, lake and river margins where it will achieve improvement in natural character values.

Restoration and enhancement of the river margin is not considered necessary.

NATC-P6

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:

- a. the presence or absence of buildings, structures or infrastructure;*
- b. the temporary or permanent nature of any adverse effects;*
- c. the location, scale and design of any proposed development;*
- d. any means of integrating the building, structure or activity;*

-
- e. the ability of the environment to absorb change;
 - f. the need for and location of earthworks or vegetation clearance;
 - g. the operational or functional need of any regionally significant infrastructure to be sited in the particular location;
 - h. any viable alternative locations for the activity or development;
 - i. any historical, spiritual or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6;
 - j. the likelihood of the activity exacerbating natural hazards;
 - k. the opportunity to enhance public access and recreation;
 - l. the ability to improve the overall water quality; and
 - m. any positive contribution the development has on the characteristics and qualities

No consent is required under the PDP.

7.3 Part 2 Matters

5 Purpose

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

The proposal is considered to have had adequate regard to Part 2 matters. I believe the proposal fulfils the Purpose in s5.

6 Matters of national importance

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

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

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

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

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

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

(g) the protection of protected customary rights;

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

The site is within the coastal environment, but the area to be developed has no outstanding natural character or outstanding landscape values. There are no known wetlands or lakes. The site is adjacent to a tidal river, but separated by 20m legal road reserve. Subdivision works, and future development on the lots can therefore avoid and/or mitigate any adverse effects on the tidal river because of the setback that can be achieved. It also should be noted, however, that legal road reserve is expected to be able to have access constructed within it. There is indigenous bush on the property but this is not mapped as having any 'significance' as such. It is mapped in the PDP as an area of high natural character. This bush is already subject to protection. No public access is required to any lake or river. There are no culturally significant areas on or near the area of development within the application site, and no identified heritage values. There are no significant risks from natural hazards that would preclude development.

7 Other matters

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

In regard to "other matters" (s7), I see (c) the maintenance and enhancement of amenity values; (d) intrinsic values of ecosystems; and (f) maintenance and enhancement of the quality of the environment as having relevance. All lots are large enough to provide for house sites and on-site services. The proposal represents the efficient use and development of resources. It has minimal, if any, adverse effect on amenity values or the intrinsic values of ecosystems.

8 Treaty of Waitangi

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

I have not identified anything in the proposal that gives offence to, or is contrary to, s8.

7.4 National Coastal Policy Statement

The NZ Coastal Policy Statement (NZCPS) has relevance to this proposal due to the property being mapped as being within the coastal environment. The following objectives and policies are considered relevant to the proposal.

Objective 2: *To preserve the natural character of the coastal environment and protect natural features and landscape values through.....*

The site is not on the open coast line, but instead within a large estuarine inner harbour network. Visual impact of future development will be minor, if any, due to a limited public viewing audience. Natural character values are largely associated with the margins along the Waima River, separated from the application site by 20m wide legal road reserve. The site is not mapped as having any outstanding natural character or landscape values.

Objective 6: *To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development, recognising that:*

- *the protection of the values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits;*

I consider the development to be an appropriate use of the site that provides for people's social and economic wellbeing.

Policy 6: Activities in the coastal environment

(1) In relation to the coastal environment:

.....(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) 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; and.....

I believe that the proposed development will have very little visual impact. Development will not be on a headland or prominent ridgeline. Development is not on the coast. Whilst the Waima River is tidal, it is not coastal marine area, being a substantial distance 'up river' from the river mouth (7kms away). Even then, the Waima River mouth is a further 16kms up river from Opononi. Future development can be set well back from the river boundary.

Policy 11: Indigenous biological diversity (biodiversity)

To protect indigenous biological diversity in the coastal environment:

(a) avoid adverse effects of activities on:

(i) indigenous taxa⁴ that are listed as threatened⁵ or at risk in the New Zealand Threat Classification System lists;

(ii) taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;

(iii) indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare;

(iv) habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare;

(v) areas containing nationally significant examples of indigenous community types; and

(vi) areas set aside for full or partial protection of indigenous biological diversity under other legislation; and

(b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on:

(i) areas of predominantly indigenous vegetation in the coastal environment;

(ii) habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;

(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;

(iv) habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes; (v) habitats, including areas and routes, important to migratory species; and (vi) ecological corridors, and areas important for linking or maintaining biological values identified under this policy

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 of activities on natural character in all other areas of the coastal environment;

Policy 14 Restoration of natural character

Promote restoration or rehabilitation of the natural character of the coastal environment, including by :

....

And

Policy 15 Natural features and natural landscapes

To protect the natural features and natural landscapes (including seascapes) of the coastal environment from inappropriate subdivision, use, and development:

- (a) avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment; and
- (b) avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of activities on other natural features and natural landscapes in the coastal environment;

The indigenous vegetation over a large part of the application site is already subject to protection. The proposal is low density and an appropriate use of the site that will have less than minor impact on natural character values. The site does not have outstanding natural character or landscape values. The proposal will not create significant adverse effects.

I believe the proposal gives effects to the relevant objectives and policies in the NZ Coastal Policy Statement.

7.5 Other National Policy Statements and/or National Environmental Standards

The National Policy Statement for Highly Productive Land is not relevant as there is no highly productive land within the application site. The National Policy Statement Freshwater Management and associated National Environmental Standard Freshwater have been considered, with no subdivision works required in the vicinity of any natural inland wetland, nor immediately adjacent, or within/over a waterbody.

The National Environment Standard for assessing and managing contaminated soils is not considered relevant given that the site is not a HAIL site.

7.6 Regional Policy Statement for Northland (RPS)

I do not consider the proposal to be inconsistent with any relevant objectives and policies in the RPS for Northland. The proposed lots will result in additional built development, but the proposal does not result in any material loss in productivity and does not result in reverse sensitivity effects.

The site is not subject to hazard to the extent that development would be precluded. A precautionary approach has been taken in identifying suitably elevated house sites. The site, whilst in the coastal environment, is not on the coast and has no outstanding natural character or landscape values, and no heritage/cultural values. I believe development can occur without creating significant adverse effects and any other effects can be appropriately avoided, remedied or mitigated.

The proposal does not, in my opinion, create any undue reverse sensitivity effects.

7.7 Regional Plan (Appeals Version)

The subdivision does not result in any breaches of rules in the Regional Plan.

8.0 NOTIFICATION ASSESSMENT & CONSULTATION

8.1 S95A Public Notification Assessment

A consent authority must follow the steps set out in s95A to determine whether to publicly notify an application for a resource consent. Step 1 specifies when public notification is mandatory in certain circumstances. None of these circumstances apply. Step 2 of s95A specifies the circumstances that preclude public notification. Neither circumstance exists therefore public notification is not precluded and Step 3 of s95A must be considered. This specifies that public notification is required in certain circumstances. The application is not subject to a rule or national environmental standard that requires public notification. This report and AEE concludes that the activity will not have, nor is it likely to have, adverse effects on the environment that are more than minor. In summary public notification is not required pursuant to Step 3 of s95A.

8.2 S95B Limited Notification Assessment

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

8.3 S95D Level of Adverse Effects

The AEE in this report assesses effects on the environment and concludes that these will be no more than minor, therefore no public notification is required.

8.4 S95E Affected Persons

A person is an 'affected person' if the consent authority decides that the activity's adverse effects on the person are minor or more than minor (but are not less than minor). A person is not an affected person if they have provided written approval for the proposed activity.

The size and layout of the proposed lots is consistent with the zone's restricted discretionary activity threshold. Future house sites are well internalised within the application site's boundaries. I do not consider any adjacent properties to be affected by the creation of built development on three additional lots.

Notwithstanding this, the applicant has discussed his proposal with representatives of the owners of the adjacent Papua C Block which has a common boundary with the ROW on Papua B. They have no problems. The applicant has also discussed the ROW upgrades in the past with those parties. They have spoken and consulted with the adjoining neighbours Peter

and Kylie Miller (property to the southeast) and with Mike Vryer (property to the south and dominant tenement), who are supportive.

The existing appurtenant easement is over land owned by the applicant. There is one other dominant tenement property (Vryer) that will retain rights over the existing right of way, as far as the legal road reserve adjacent to the application site. These rights remain. Any improvements to the existing easement will benefit the other dominant tenement.

I have not identified any affected persons in regard to adjacent properties.

There are no identified Sites of Significance to Māori within or in the vicinity of the property, and no archaeological sites within the application site itself. With less than minor effects on any habitat, including water bodies, and no impact on DOC's ability to manage its resources, it has not been considered necessary to consult with DOC.

9.0 CONCLUSION

The effects of the subdivision on the wider environment are no more than minor, and no special circumstances exist that would suggest public notification is required. No affected persons have been identified and limited notification is not required.

Part 2 matters have been had regard to and the proposal is considered consistent with the objectives and policies of relevant planning provisions in the Operative and Proposed District Plans, relevant National Policy Statements and the Regional Policy Statement.

It is requested that the Council give favourable consideration to the application and grant approval, subject to appropriate conditions, under delegated authority.



Lynley Newport
Senior Planner
THOMSON SURVEY LTD

Dated 18th August 2025

10.0 LIST OF APPENDICES

Appendix 1	Scheme Plan(s)
Appendix 2	Locality Plan
Appendix 3	Record of Title & Relevant Instruments
Appendix 4	Subdivision Site Suitability Engineering Report

Joe & Kate Carr

Far North District Plan

PROPOSED SUBDIVISION

Lot 2 DP 601773, Motukiore Road

PLANNING REPORT AND ASSESSMENT OF ENVIRONMENTAL EFFECTS



**Thomson Survey Ltd
Kerikeri**

1.0 INTRODUCTION

1.1 The Proposal

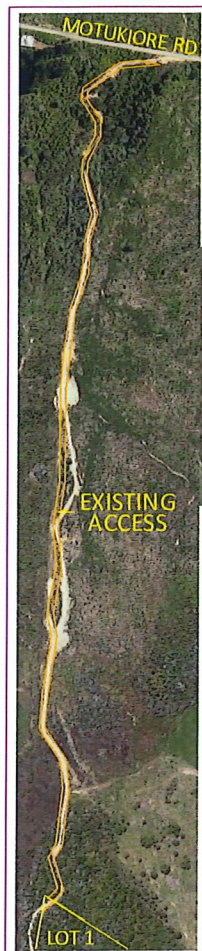
The applicants propose to carry out a subdivision of their property on Motukiore Road, near Horeke, to create the balance number of 2ha lots they are entitled to under the restricted discretionary five lot option. The existing title consists of the balance remaining when one lot was subdivided off pursuant to RC 2061139-RMASUB. That left an additional 3 x 2ha (minimum) as a residual right.

The site is accessed off Motukiore Road, Council maintained public road, metal surface. Access is then over an existing appurtenant right of way, crossing Part Papua B Blk (also owned by the applicant), to the site's northern boundary. The right of way is of varying widths, metal surface.

Appendix 1

Scheme Plan(s)

DIAGRAM A
Not to Scale



PART PAPUA C

EXISTING ACCESS
TO MOTUKIORE RD
SEE DIAG A

PART PAPUA B

PART PAPUA A

LOT 1
2.0047 Ha

LOT 2
2.0055 Ha

LOT 4
15.534 Ha

LOT 3
2.0046 Ha

WAIMA RIVER
(TIDAL)

LEGAL ROAD 20m WIDE

LOT 1 DP 80361

LOT 1 LT 601773

MEMORANDUM OF EASEMENTS

PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
Right of way	(B)(C)	LOT 1	LOTS 2 - 4
Right to Convey Electricity, Telecom & Water	(D)	LOT 2	LOTS 3 & 4
	(E)	LOT 4	LOT 3

PROPOSED EASEMENTS IN GROSS

PURPOSE	SHOWN	SERVIENT TENEMENT	GRANTEE
RIGHT TO CONVEY ELECTRICITY	(F)	LOT 1	TOP ENERGY LIMITED
	(G)	LOT 2	
	(H)	LOT 4	
	(I)	LOT 3	
	(J)	LOT 4	

EXISTING EASEMENTS

PURPOSE	SHOWN	SERVIENT TENEMENT	CREATING DOCUMENT
RIGHT OF WAY	(B)	LOT 1	TO BE CREATED

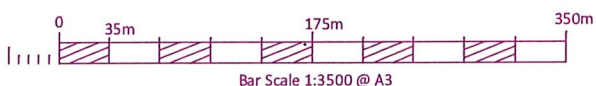
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AREAS AND MEASUREMENTS ARE SUBJECT TO FINAL SURVEY

LEGEND

BOUNDARY LINES	
INDICATIVE 30m x 30m	

Local Authority: Far North District Council
Comprised in: RT NA81C/580
Total Area: 21.57245Ha
Zoning: Rural Production

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



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PROPOSED SUBDIVISION OF LOT 2 LT 601773

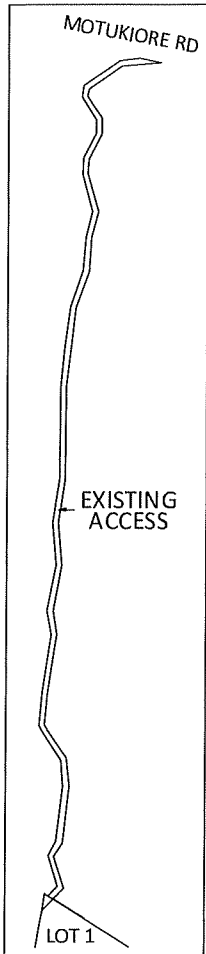
MOTUKIORE RD, HOREKE

PREPARED FOR: JOE CARR

Name	Date	ORIGINAL
Survey		SCALE
Design		SHEET SIZE
Drawn	TH 12/12/24	
Approved		1:3500 A3
Rev	KY 05/08/25	
10619 Scheme 20250805		

Surveyors
Ref. No:
10619
Series
Sheet 1 of 1

DIAGRAM A
Not to Scale



PART PAPUA C

MAIMAI RIVER
(TIDAL)

EXISTING ACCESS
TO MOTUKIORE RD
SEE DIAG A

PART PAPUA B

PART PAPUA A

LOT 1
2.0047 Ha

LOT 2
2.0035 Ha

LOT 4
15.534 Ha

LOT 3
2.0046 Ha

LOT 1 DP 80361

LOT 1 LT 601773

MEMORANDUM OF EASEMENTS

PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
Right of way	(B) (C)	LOT 1	LOTS 2 - 4
Right to Convey Electricity, Telecom & Water	(D) (E)	LOT 2 LOT 4	LOTS 3 & 4 LOT 3

PROPOSED EASEMENTS IN GROSS

PURPOSE	SHOWN	SERVIENT TENEMENT	GRANTEE
RIGHT TO CONVEY ELECTRICITY	(F)	LOT 1	TOP ENERGY LIMITED
	(G)	LOT 2	
	(H)	LOT 4	
	(I)	LOT 3	
	(J)	LOT 4	

EXISTING EASEMENTS

PURPOSE	SHOWN	SERVIENT TENEMENT	CREATING DOCUMENT
RIGHT OF WAY	(B)	LOT 1	TO BE CREATED

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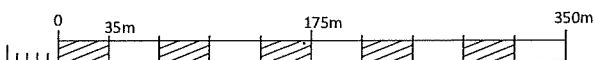
AREAS AND MEASUREMENTS ARE SUBJECT TO FINAL SURVEY

LEGEND

BOUNDARY LINES	
INDICATIVE 30m x 30m	

Local Authority: Far North District Council
Comprised in: RT NAB1C/580
Total Area: 21.57245Ha
Zoning: Rural Production

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PROPOSED SUBDIVISION OF LOT 2 LT 601773 MOTUKIORE RD, HOREKE

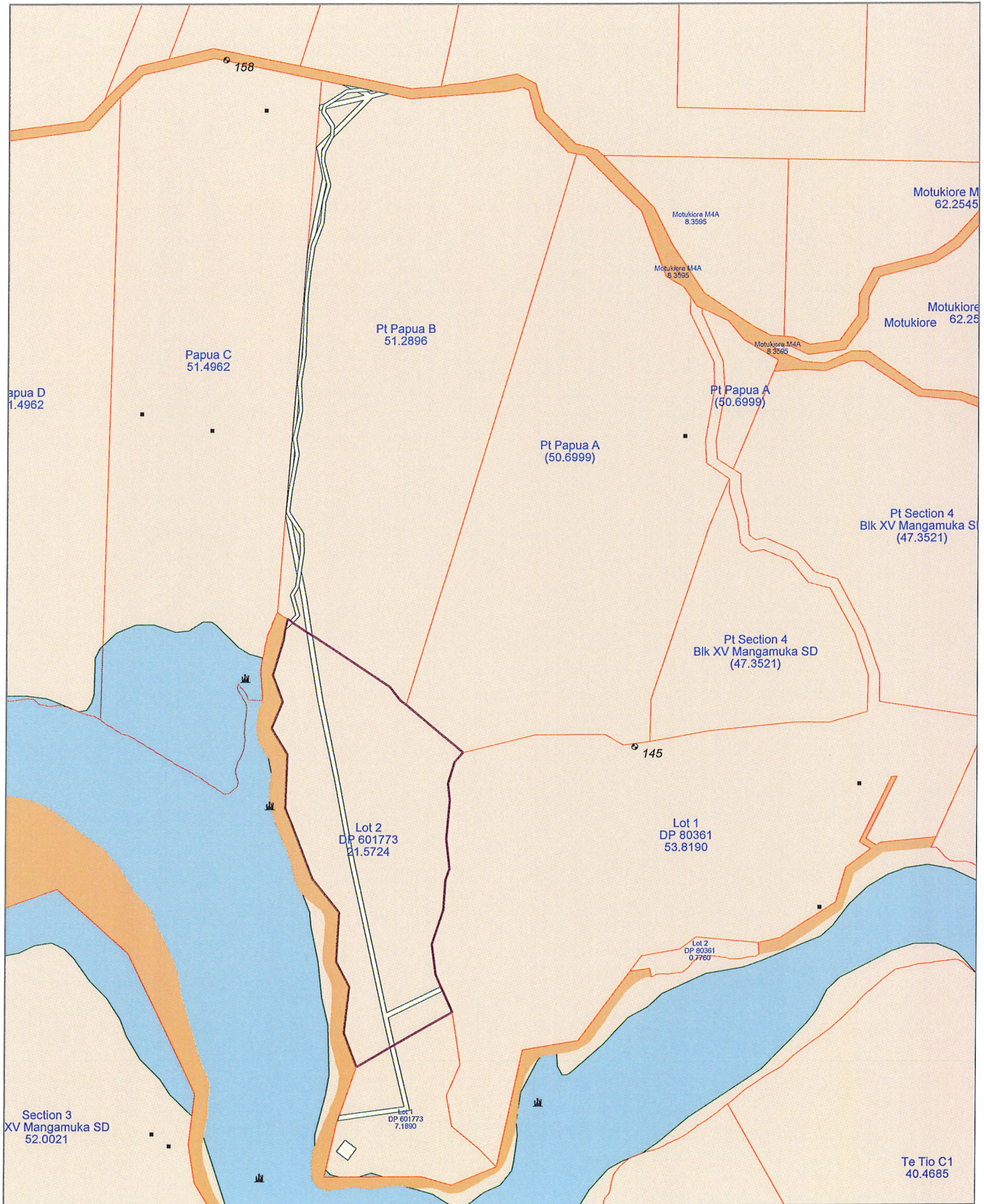
PREPARED FOR: JOE CARR

Survey	Name	Date	ORIGINAL
Design			SCALE SHEET SIZE
Drawn	TH	12/12/24	1:3500 A3
Approved			
Rev	KY	05/08/25	
10619 Scheme 20250805			

Surveyors
Ref. No:
10619
Series
Sheet 1 of 1

Appendix 2

Locality Plan



Appendix 3

Record of Title & Relevant Instruments



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy**



Identifier 1194301
Land Registration District North Auckland
Date Issued 20 December 2024

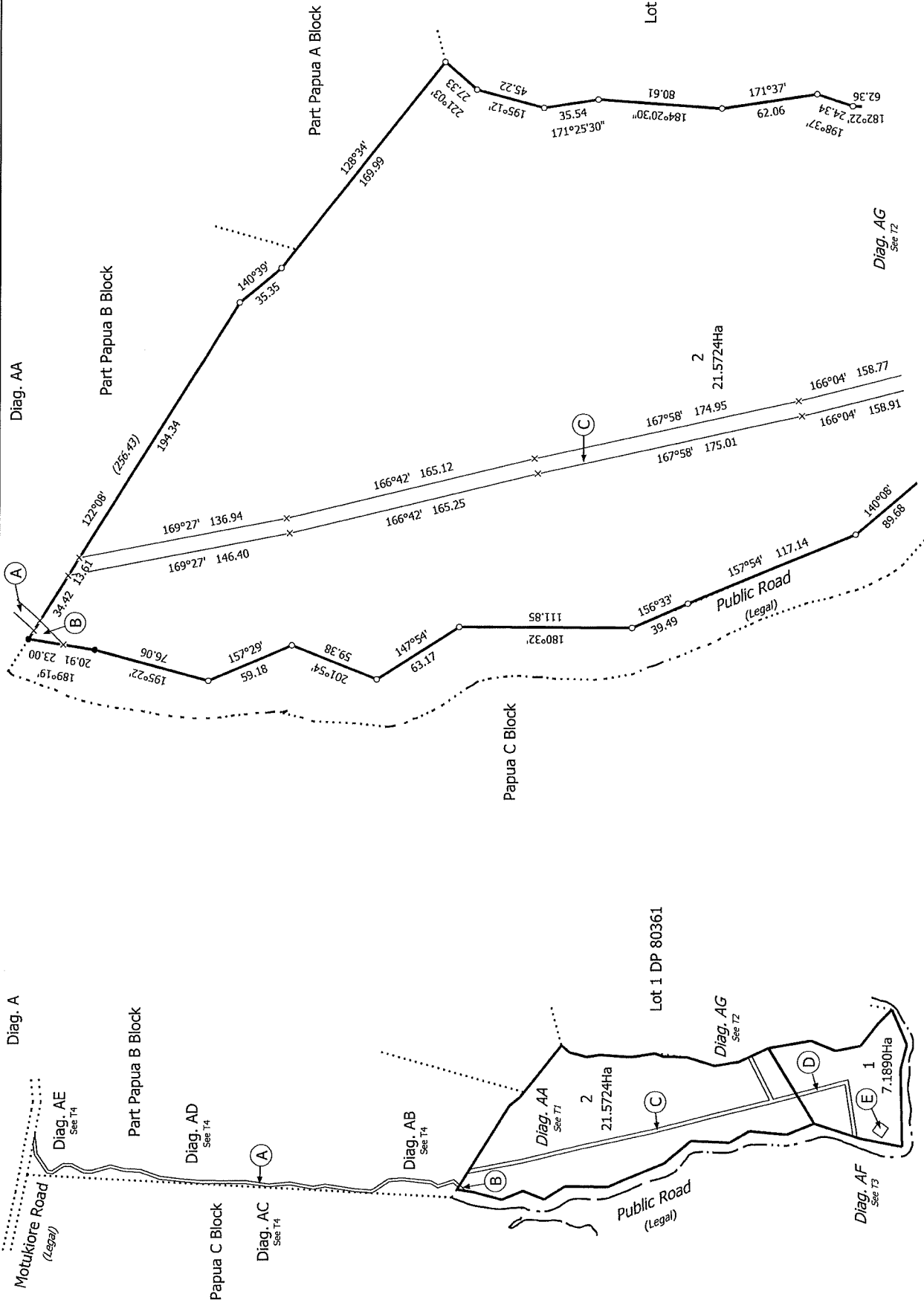
Prior References
NA81C/580

Estate	Fee Simple
Area	21.5724 hectares more or less
Legal Description	Lot 2 Deposited Plan 601773

Registered Owners
Ian Ray Carr

Interests

13054456.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 20.12.2024 at 2:30 pm
Appurtenant hereto is a right of way created by Easement Instrument 13054456.5 - 20.12.2024 at 2:30 pm
The easements created by Easement Instrument 13054456.5 are subject to Section 243 (a) Resource Management Act 1991
Subject to a right of way over part marked B on DP 601773 created by Easement Instrument 13054456.6 - 20.12.2024 at 2:30 pm
The easements created by Easement Instrument 13054456.6 are subject to Section 243 (a) Resource Management Act 1991
Subject to a right (in gross) to convey electricity over part marked C on DP 601773 in favour of Top Energy Limited created by Easement Instrument 13054456.7 - 20.12.2024 at 2:30 pm
The easements created by Easement Instrument 13054456.7 are subject to Section 243 (a) Resource Management Act 1991
Fencing Covenant in Transfer 13054456.8 - 20.12.2024 at 2:30 pm



T 1/4

Land District: North Auckland

Digitally Generated Plan

Generated on: 14/06/2024 5:47pm Page 3 of 6

Lots 1 & 2 being a subdivision of Lot 1 DP 137752 and easement over Pt Papua B

Surveyor: Nigel Hugh Ronald Ross
Firm: Nigel Ross Surveyor

Title Plan
LT 601773

Approved on: 14/06/2024



View Instrument Details

Instrument No	13054456.4
Status	Registered
Date & Time Lodged	20 Dec 2024 14:30
Lodged By	Macauley, Peter Gilmour
Instrument Type	Consent Notice under s221(4)(a) Resource Management Act 1991

Affected Records of Title	Land District
1194300	North Auckland
1194301	North Auckland

Annexure Schedule	Contains 3 Pages
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Signature

Signed by Peter Gilmour Macauley as Territorial Authority Representative on 09/01/2025 12:41 PM

*** End of Report ***



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THE RESOURCE MANAGEMENT ACT 1991

SECTION 221: CONSENT NOTICE

REGARDING RC-2061139-RMAVAR/B

Being the Subdivision of LOT 1 DP 137752 BLK XV MANGAMUKA SD
North Auckland Registry

PURSUANT to Section 221 and for the purpose of Section 224 (c) (ii) of the Resource Management Act 1991, this Consent Notice is issued by the **FAR NORTH DISTRICT COUNCIL** to the effect that conditions described in the schedule below are to be complied with on a continuing basis by the subdividing owner and the subsequent owners after the deposit of the survey plan, and these are to be registered on the titles of the allotments specified below.

SCHEDULE

Lot 1 DP 601773

- (i) All buildings must be located within the approved building envelope Area 'E' as shown on the survey plan.
- (ii) In conjunction with any building consent for a residential dwelling or a building for accommodation purposes a report on how fire risk will be mitigated on site shall be provided for the approval of Councils Resource Consents Monitoring Officer or other duly delegated officer. These reports shall detail the type of fire-retardant materials to be utilised on the dwelling, the location of the outdoor living areas and their proximity to highly flammable vegetation, areas of vegetation to be cleared and areas which will be replanted and the provision for water storage on site. The development shall be in accordance with this report and shall be adhered to for the duration of the residential and/or accommodation activity on site.
- (iii) In conjunction with any building consent for a residential dwelling or a building for accommodation purposes a detailed native revegetation and enhancement planting and maintenance plan shall be submitted for the approval of the Council's Resource Consents Monitoring Officer or other duly delegated officer. The plan shall provide details of the areas to be cleared for building indicating that no more than 20m from the dwelling will be cleared with the exception of an access way to the jetty; how much of this area will be replanted, the species of native low flammable plants to be used, their numbers, and the means of maintaining these plants for a minimum of one further planting season or one year, whichever is the longer, from the time of planting. The approved native revegetation and enhancement planting plan is to be implemented within 12 months of the plan approval date and is to be maintained for the duration of the activity. Any plants that are removed or damaged are to be replaced as soon as possible, or within the next planting season (1st May to 30th September).



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- (iv) The current fencing arrangement between Lot 1 and Lot 1 DP 80361 does not follow the site boundaries along the recorded archaeological site O05/354. The fence is located further to the east at a lower contour line to protect the terrace. The fence shall not be relocated without an Archaeological Authority to modify or destroy under section 44 of the Heritage New Zealand Pouhere Taonga Act 2014.

Lots 1 & 2 DP 601773

- (v) In conjunction with the construction of any building which includes a wastewater treatment & effluent disposal system the applicant shall submit for Council's approval a TP58 Report prepared by a Chartered Professional Engineer or an approved TP58 Report Writer. The report shall identify a suitable method of wastewater treatment for the proposed development along with an identified effluent disposal area plus a 100% reserve disposal area. The report shall confirm that all of the treatment & disposal system can be fully contained within the lot boundary and comply with the Regional Water & Soil Plan Permitted Activity Standards.

Note: A long drop is not considered to be suitable in this environment.

- (vi) Reticulated power supply or telecommunication services are not a requirement of this subdivision consent. The responsibility for providing both power supply and telecommunication services will remain the responsibility of the property owner.
- (vii) In conjunction with any building consent for a residential dwelling or a building for accommodation purposes a weed and pest management strategy shall be provided to the satisfaction of Councils Resource Consents Monitoring Officer or other duly delegated officer. The management strategy shall apply to all of the land included in the allotment and shall be adhered to for the duration of the residential and/or accommodation activity.
- (viii) The owner shall preserve the indigenous trees and bush now on the allotment and shall not without the prior written consent of the Council and then only in strict compliance with any conditions imposed by the Council, cut down, damage, or destroy any of such trees or bush. The owner shall be deemed to be not in breach of this prohibition if any of such trees or bush shall die from natural causes not attributable to any act or default by or on behalf of the owner or for which the owner is responsible.
- (ix) Fencing of the new boundary between Lots 1 & 2 shall be constructed away from archaeological features and sites. Any fencing around O05/354 being the terraced site shall be located below the last visible feature with a buffer gap of 10-20m. In the event any fencing work is unable to avoid an archaeological site an Archaeological Authority to modify or destroy shall be obtained from Heritage New Zealand prior to any works being undertaken.



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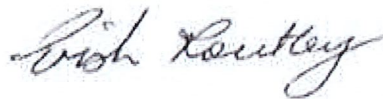
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SIGNED:



Ms Patricia (Trish) Routley - Authorised Officer
By the FAR NORTH DISTRICT COUNCIL
Under delegated authority:
MANAGER – RESOURCE CONSENTS

DATED at **KERIKERI** this 27th day of June 2024



View Instrument Details

Instrument No	13054456.5
Status	Registered
Date & Time Lodged	20 Dec 2024 14:30
Lodged By	Macauley, Peter Gilmour
Instrument Type	Easement Instrument

Affected Records of Title	Land District
NA50C/1033	North Auckland
1194300	North Auckland
1194301	North Auckland

Annexure Schedule	Contains 1 Pages
--------------------------	------------------

Grantor Certifications

I certify that I have the authority to act for the Grantor and that the party has the legal capacity to authorise me to lodge this instrument ☒

I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument ☒

I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply ☒

I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period ☒

Signature

Signed by Peter Gilmour Macauley as Grantor Representative on 18/12/2024 12:37 PM

Grantee Certifications

I certify that I have the authority to act for the Grantee and that the party has the legal capacity to authorise me to lodge this instrument ☒

I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument ☒

I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply ☒

I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period ☒

Signature

Signed by Peter Gilmour Macauley as Grantee Representative on 18/12/2024 12:37 PM

*** End of Report ***

Approved for ADLS by Registrar-General of Land under No. 2018/6266

EASEMENT INSTRUMENT TO GRANT EASEMENT OR PROFIT À PRENDRE

Sections 109 Land Transfer Act 2017



Grantor

Ian Ray CARR

Grantee

Ian Ray CARR
Michael Cyril VRYER**Grant of Easement or Profit à prendre**

The Grantor being the registered owner of the burdened land set out in Schedule A grants to the Grantee (and, if so stated, in gross) the easement(s) or profit(s) à prendre set out in Schedule A, with the rights and powers or provisions set out in the Annexure Schedule(s).

Schedule A

Continue in additional Annexure Schedule, if required

Purpose (Nature and extent) of easement, or profit	Shown (plan reference)	Burdened Land (Record of Title)	Benefited Land (Record of Title) or in gross
Right of Way	Marked A on DP 601773	NA 50C/1033 (Part Papua B Block)	1194300 and 1194301 (Lots 1 and 2 DP 601773)

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

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

Unless otherwise provided below, the rights and powers implied in specified classes of easement are those prescribed by the Land Transfer Regulations 2018 and/or Schedule 5 of the Property Law Act 2007

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

[Memorandum number , registered under section 209 of the Land Transfer Act 2017]

[the provisions set out in Annexure Schedule]



View Instrument Details

Instrument No	13054456.6
Status	Registered
Date & Time Lodged	20 Dec 2024 14:30
Lodged By	Macauley, Peter Gilmour
Instrument Type	Easement Instrument

Affected Records of Title	Land District
1194300	North Auckland
1194301	North Auckland

Annexure Schedule	Contains 1 Pages
--------------------------	------------------

Grantor Certifications

I certify that I have the authority to act for the Grantor and that the party has the legal capacity to authorise me to lodge this instrument ☒

I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument ☒

I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply ☒

I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period ☒

Signature

Signed by Peter Gilmour Macauley as Grantor Representative on 18/12/2024 12:41 PM

Grantee Certifications

I certify that I have the authority to act for the Grantee and that the party has the legal capacity to authorise me to lodge this instrument ☒

I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument ☒

I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply ☒

I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period ☒

Signature

Signed by Peter Gilmour Macauley as Grantee Representative on 18/12/2024 12:42 PM

*** End of Report ***

Approved for ADLS by Registrar-General of Land under No. 2018/6266

EASEMENT INSTRUMENT TO GRANT EASEMENT OR PROFIT À PRENDRE

Sections 109 Land Transfer Act 2017

**Grantor**

Ian Ray CARR
Michael Cyril VRYER

Grantee

Ian Ray CARR
Michael Cyril VRYER

Grant of Easement or Profit à prendre

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

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

Purpose (Nature and extent) of easement, or <i>profit</i>	Shown (plan reference)	Burdened Land (Record of Title)	Benefited Land (Record of Title) or in gross
Right of Way	Marked B on DP 601773	1194301 (Lot 2 DP 601773)	1194300 (Lot 1 DP 610773)

Easements or profits à prendre rights and powers (including terms, covenants and conditions)*Delete phrases in [] and insert memorandum number as required; continue in additional Annexure Schedule, if required*

Unless otherwise provided below, the rights and powers implied in specified classes of easement are those prescribed by the Land Transfer Regulations 2018 and/or Schedule 5 of the Property Law Act 2007

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

[Memorandum number , registered under section 209 of the Land Transfer Act 2017]

[the provisions set out in Annexure Schedule]

Appendix 4

Subdivision Site Suitability Engineering Report



geologix
consulting engineers

SUBDIVISION SITE SUITABILITY ENGINEERING REPORT

PROPOSED SUBDIVISION OF LOT 1 DP
137752, MOTUKIORE ROAD, HOREKE


IAN RAY CARR

**C0592-S-01
JULY 2025
REVISION 1**





DOCUMENT MANAGEMENT

Document Title	Subdivision Site Suitability Engineering Report
Site Reference	Proposed subdivision of Lot 1 DP 137752, Motukiore Road, Horeke
Client	Ian Ray Carr
Geologix Reference	C0592-S-01
Issue Date	July 2025
Revision	00
Prepared by (Civil)	Fred Sennoga Intermediate Civil Engineer BSc.Eng (Honours), MBA, CMEngNZ 
Reviewed	Sebastian Hicks Principal Civil Engineer, CPEng Reg. 1168062, CMEngNZ, IntPE(NZ) /APEC Engineer
Approved by	Edward Collings Managing Director, CEnvP, CPEng. CMEngNZ
File Reference	Z: /Projects/C0500-C0599/C0592 - Lot 1 DP 137752, Motukiore Road, Horeke/06 - Reports /C0592-S-01-R01 -Draft FS.docx

REVISION HISTORY

Date	Issue	Prepared	Reviewed	Approved
July 2025	First Issue – For Consent	LW, FS	SH	EC



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1 INTRODUCTION

This Site Suitability Engineering Report has been prepared by Geologix Consulting Engineers Ltd (Geologix) for Ian Ray Carr 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 Resource Consent application in relation to the proposed subdivision of a rural property (Lot 1 DP 137752) comprising a total net area of 21.57245 Hectares (Ha) off Motukiore Road, Horeke, the 'site'.

Specifically, this assessment addresses engineering elements of natural hazards, on-site wastewater, on-site stormwater, water supply and firefighting requirements to provide suitably serviced building envelopes with less than minor effects on the environment as a result of the proposed activities outlined in Section 1.1. Specific access to proposed lots has not been assessed in the scope of this report.

1.1 Proposed Development

A proposed scheme plan was presented to Geologix at the time of writing, prepared by Thomson Survey¹ and reproduced within Appendix A. It is understood the Client proposes to subdivide the site to create three new residential lots (proposed lots 1, 2 & 3) in the western part of the site, with a remaining balance lot (proposed lot 4). The proposed Lot 4 also includes a concept proposal for a new building envelope.

The above is outlined in Table 1 below. 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.

Table 1: Summary of Proposed Scheme

Proposed Lots	Size	Purpose
1	2.0047 ha	New rural residential
2	2.0055 ha	New rural residential
3	2.0046 ha	New rural residential
4	15.534 ha	Existing rural residential

Access to the site is provided via an existing northern dirt access road off Motukiore Road. General access will remain at the site's western aspect. Specific access to proposed lots has not been assessed in the scope of this report.

A specific Traffic Impact Assessment (TIA) is outside the scope of this report. Input by a suitably qualified traffic engineer may be required as part of Resource Consent application.

¹ Thomson Survey, Scheme Plan Ref. 10619, dated December 2024.

2 DESKTOP APPRAISAL

The proposed development lots are located about 1.1km south of Motukiore Road. Access to the developments is via an existing 3m wide dirt track which has an irregular alignment that extends within the site, near to the western boundaries of all the proposed lots.

Topographically, the general site area is undulating with ridges and gullies trending in all directions through the site, however predominantly trend from east to west. A ridge line borders the northern and eastern boundaries of the sites. From this ridge line the ground generally slopes steeply in a westerly direction towards the nearby Waima river and gentle slopes along the site's western boundary.

The site is considered moderately to steeply sloping, with steep angles of up to 23° is present in proposed lot 4, with an average slope angle of 20° across the entire site. However, the location of the proposed building envelopes are generally at the lower area on the entire site, refer to Figure 1 below, at elevations between 6m and 20m above mean sea level where slopes are less than 10°.

The site is generally bound by a registered road reserve along the western boundary of the site, and other rural lots in all other directions. The site setting is presented schematically as Figure 1 and Figure 2.

Figure 1: Site Setting?





Figure 2: Site locality



The site area is currently in well-established trees/ bush that cover the majority of the ridge that rises from the west to eastern boundary. Shorter grasslands are to be found on the western portion of the site where they border the nearby river and its broad river banks. A detailed review of existing watercourses and overland flow paths is presented as Section 3.

2.1 Existing Reticulated Networks

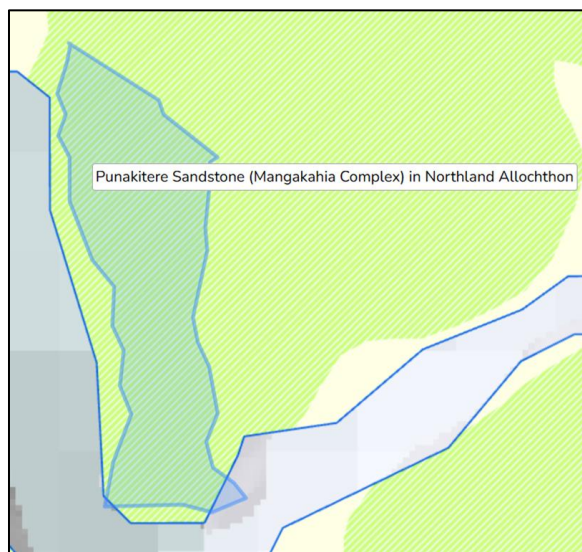
Far North District Council (FNDC) GIS mapping indicates that no existing 3 water infrastructure or reticulated networks are present the site boundaries. This report has been prepared with the goal of the subdivision being self-sufficient for the purpose of wastewater, stormwater, and potable water management.

2.2 Geological Setting

Available geological mapping³ indicates the site is predominantly underlain by Late Cretaceous aged Punakitere sandstone (Mangakahia complex) in Northland Allochthon described as “Weakly to moderately indurated, alternating thin- to thick-bedded, quartzofeldspathic sandstone and mudstone.”. Refer to Figure 3 below:

³ Source: [Geology 2.0.0 \(qns.cri.nz\)](https://qns.cri.nz/)

Figure 3: Geological Map with highlighted site boundaries



Proposed building envelopes are located in the south-western part of the site and are expected to include sandstone deposits and Northland Allochthon soils only. The risk of encountering sandstone deposits at the proposed building platforms is considered high based on the mapped geology and low elevation of the proposed lots.

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 Database⁴ 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 LINZ LiDAR elevation data, Geologix have developed an understanding of the surface water features and overland flow paths influencing the site. The developed understanding is summarised in the following sections.

3.1 Surface Water Features

The general site, comprising of sites 1, 2, 3 and 4 is located within natural forest and bordered on the west by a tidal river. The proposed platforms lots are located near the western edge of the forest and east of the existing 20m wide road reserve, that runs along the western boundary of the site.

⁴ <https://www.nzgd.org.nz/>



The northeast corner of the existing site is a local high point, around 130m, from which a ridge line extends southward along the site boundary down to about 55m. Another ridgeline extends from the afore mentioned corner in a northwest direction near the site boundary, down to about 25m.

From the northeast corner high point any rainwater runoff from the site is generally shed as sheet flow, towards the western river's bank. It is anticipated that runoff will flow from east to west across the site into natural broad gulleys that are currently densely vegetated.

Future lot development will need to consider the management of this sheet flow runoff to ensure good drainage of any development.

3.2 Overland Flow Paths

Clearly defined flow paths are not evident within the Lot 1, 2, 3 & 4 site boundaries although there are broad, shallow depressions towards the northwest, west and southwest slopes of the site. These are presented within the contouring of the site. Thick vegetation is prominent within these depressions and will currently obstruct flows toward the banks of Waima river that bounds the site.

Generally, runoff appears to flow as sheet flow across Lot 4 approximately from the north east corner of the site and radiates outwards towards the banks of the Waima river immediately west of the site. There are no visible paths indicating significantly concentrated runoff flows, although the flow may be generally concentrated to the broad, shallow flow paths mentioned above.

3.3 Mapped Flood Hazard

The Northland Regional Council GIS indicates mapped river flood hazard zones (Region-wide models) near to the site's western proximity, near the Waima river. The hazard is presented for the 10 year (10% AEP), 50 year (2% AEP) and 100 year (1% AEP) return events (see figure 4).

The coastal flood hazard zone is also mapped within the site boundary. The Coastal Flood Hazard Zones are generally bound to the west of the existing internal access track (see Figure 5 and 6).

It is noted that the Tsunami Inundation/Evacuation Zone does extend into the proposed lot boundaries and over the proposed building envelopes.

3.3.1 River Flood Hazard Extent

The extent of the river flood hazards is marginal in terms of impact to the site. The mapping indicates a broad flood plain between the site and Papua, about 500m from the site's northern boundary. It suggests the intersection of flood water at Waima River from a large overland flow path or stream emanating from the ridgeline upon which Motukiore Road runs, north east from intersection point with Waima River.



The 10% and 2% AEP hazards do not encroach into the site boundary, rather each is situated about 500m away. The 1% AEP extent doesn't encroach the site boundary but is immediately adjacent within the western road reserve. It is described further as follows:

- It reaches into the 20m wide road reserve that borders the western boundary of the site but not beyond this boundary.
- The maximum river flood level is around 2m above mean sea level.
- Lots 1,2,3 & 4 proposed wastewater fields are at least 1m above the 1% AEP flood.

3.3.2 Coastal Flood Hazard Extent

The Coastal Flood Hazard Zones are generally bound to the west of the existing internal access track or approximately 5-6m AMSL. There is some encroachment over site features, described further below.

The extent of the Coastal Flood Hazard Zone 0 (Current) is relatively limited, less than 4m AMSL, and does not overlap the wastewater fields or any other notable site feature. Refer to Figures 5 & 6.

Building Envelopes: The proposed building envelopes are all outside of the mapped coastal flood zone extents. Lot 4 is relatively close with perhaps a small portion of its north-western corner encroached upon by the Zone 3 (100 years + Rapid Sea Level Rise) extent only.

Wastewater Fields: It is noted that there is no specific rule prohibiting wastewater fields from being within the coastal flood hazard zones.

The proposed wastewater field of Lot 4 is completely overlapped by the Zone 2 and 3 hazard extent only (i.e. > 50 years event). There is potential to shift the wastewater fields higher in elevation to be further outside of these extents if desired. It is suggested this may be optimised at building consent stage.

The proposed wastewater fields of Lot 1 & 2 are only partially overlapped by the Zone 2 and 3 hazard extents.

The proposed wastewater fields of Lot 3 are relatively higher in elevation, above 15m AMSL, and hence well outside of this hazard extent.

3.3.3 Effect on Downstream Property

It is considered that the site will contribute runoff to the Waima River and not encounter any downstream property. As such the proposed development will have less than minor effect to flooding of downstream property (see Figure 4 below). Furthermore, because of the site's immediate discharge of runoff to the Waima River, which presents in this region as an extension of the CMA, there is no requirement for stormwater attenuation within the proposed subdivision.

Figure 4: NRC River Hazard Extents Relative to Site

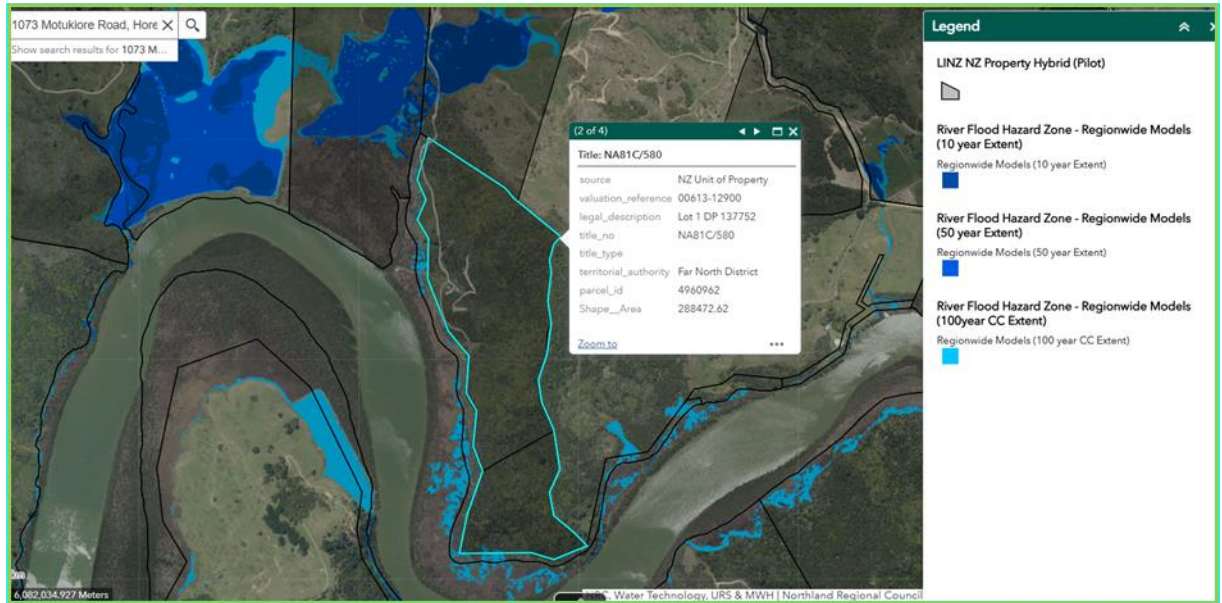


Figure 5: NRC Coastal Flood Hazard Zones Relative to Northern Portion of Site (Lots 1 & 2)

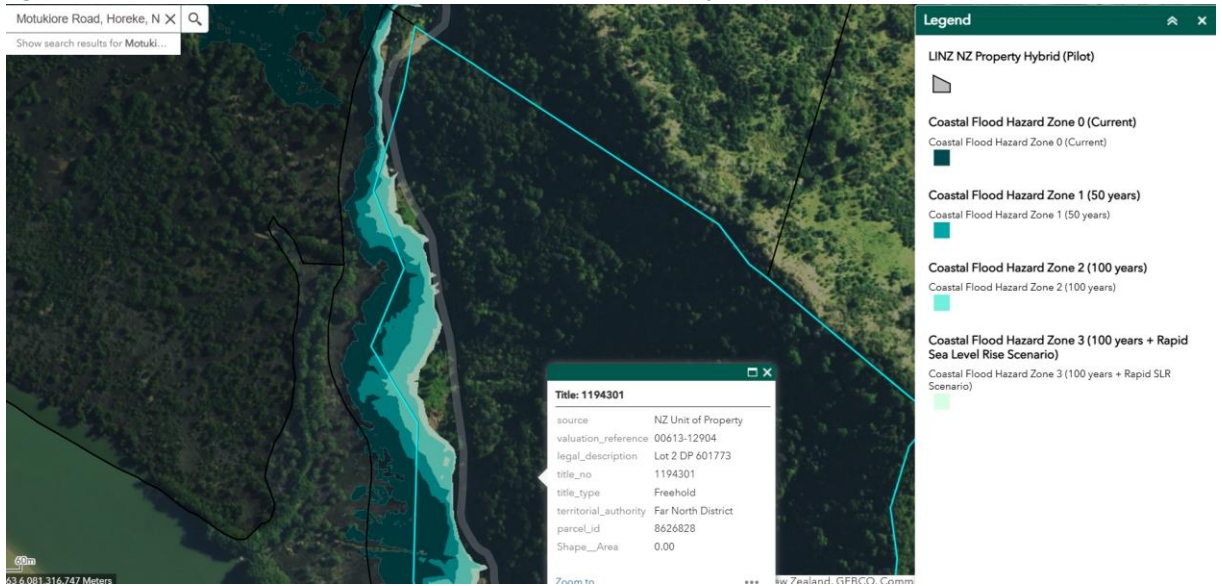
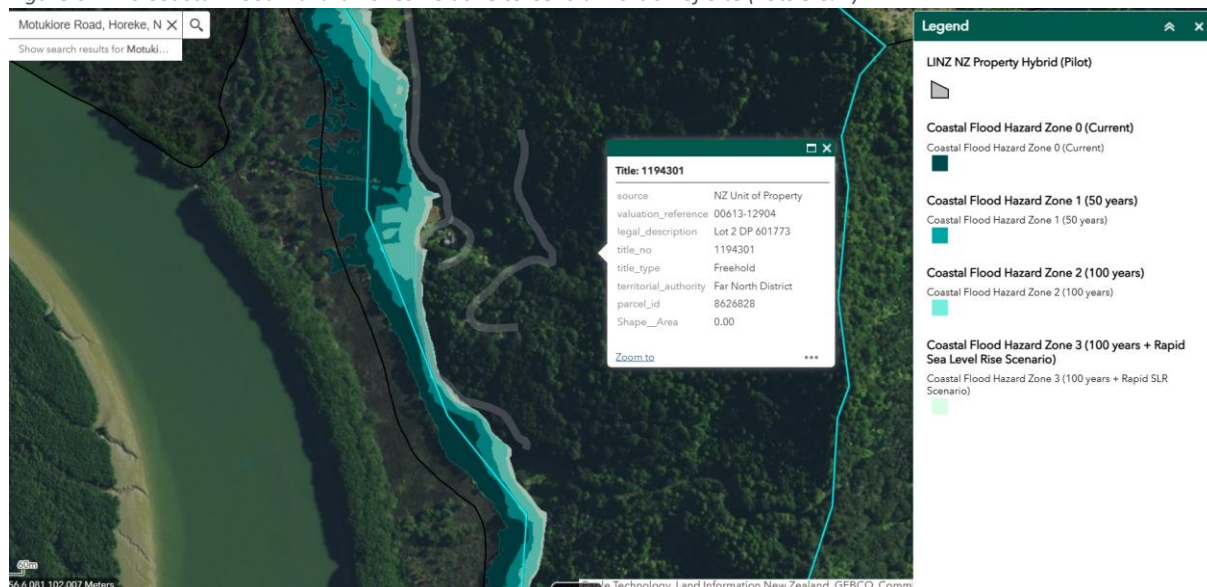


Figure 6: NRC Coastal Flood Hazard Zones Relative to Central Portion of Site (Lots 3 & 4)



4 GROUND INVESTIGATION

A site-specific walkover survey and intrusive ground investigation was undertaken by Geologix on 06 March 2025. The ground investigation was scoped to confirm the findings of the above desktop study information and to provide parameters for the geotechnical wastewater assessment for the site. The ground investigation comprised:

- Four shallow hand augured boreholes designated HA01, HA02, HA03 & HA04 inclusive formed within suitable areas of wastewater disposal fields on the proposed residential lots with a target depth of 1.2 m below ground level (bgl), see figure 5 for location of the boreholes.

Figure 7: Hand Auger locations Relative to proposed platforms



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 3 and observed site conditions.
- The proposed lots are predominantly covered in trees and bush, often dense, located near the base of non-commercial forests.



- The site is bound by the Waima River's banks and a 20m road reserve along the site's western boundary, and similar farming, forestry or rural lifestyle block properties to all other directions.
- The existing access road to the site has no formal swale drains along its edges.
- One Ø100mm novacoil pipe culvert was observed beneath the access road near Lot 4 to provide some passing of collected runoff under the road. No other drainage structures were observed.
- There were various existing dwelling related structures in various stages of disrepair, positioned within the proposed lots during our site walkover. All proposed sites were accessible for the site walkover survey except for Lot 2 due to thick overgrowth vegetation.

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 guidelines⁶. Engineering borehole logs are presented as Appendix B to this report and approximate borehole positions recorded on Drawing No. 100 within Appendix A. Strata identified during the ground investigation can be summarised as follows:

- **Surficial layer of Topsoil encountered to 0.2 m bgl.** Topsoil was encountered at test locations HA01, HA02, HA03 and HA04, at the proposed lots, described as brown silty topsoil with trace rootlets contents, firm and low plasticity.
- **Allochthon soils to depths > 0.2 - < 1.2 m bgl.** Clayey soils were encountered below the topsoil at the proposed lots' test locations. The soils were presented as a blend of grey with orange-brown colour. Soils were of medium plasticity with evidence of trace fine to medium sand content.

In-situ field vane tests enabled statistical confirmation of soils strength. Vane shear strengths within the test hole soils measured peak shear strength from 70kPa to >140kPa and residual shear strength from 28kPa to 44kPa consistency.

The recorded shear strength values are indicative of a stiff material.

A summary of the above strata horizons and wastewater properties is presented as Table 2.

⁶ New Zealand Geotechnical Society, *Field Description of Soil and Rock*, 2005.

Table 2: Summary of Ground Investigation

Hole ID	Proposed Lot	Hole Depth	Topsoil Depth	Groundwater	Refusal Depth	Wastewater Category
HA01	1	1.2 m	0.2 m	NE	NE	6 – slow draining
HA02	2	1.2 m	0.2 m	NE	NE	6 – slow draining
HA03	3	1.2 m	0.1 m	NE	NE	6 – slow draining
HA04	4	1.2 m	0.2 m	NE	NE	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 TP58⁷.

4.2.1 Groundwater

Groundwater was not encountered during our geotechnical investigation.

Groundwater levels commonly fluctuate according to the season and rainfall events. Therefore, groundwater levels may vary and be identified at higher levels than monitored during this ground investigation, particularly in wet, winter conditions. The groundwater shall also be monitored at the ground investigation conducted during the building consent stage.

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 development within this report assume that the proposed new residential lot may comprise up to a five-bedroom dwelling with a peak occupancy of eight people⁸. This considers the uncertainty of potential future Building Consent designs. The number of usable bedrooms within a residential dwelling must consider that proposed

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

⁸ 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

No existing wastewater treatment or disposal systems have been identified or surveyed within the site boundaries.

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/ day⁹. This assumes standard water saving fixtures¹⁰ 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 within the concept solution provided that to meet suitable minimum treated effluent output, secondary treatment systems are accounted for across the site. The concept solution is detailed further in the following sections.

In the Building Consent design phase, a higher treated effluent output standard such as UV disinfection to tertiary quality may be required should specifically controlled zones such as the prescribed offsets of this report are encroached upon. Moreover, a primary treatment solution may also be considered for the Lot development, provided that the system complies with the proposed Northland Regional Plan. Specifically, controlling rules include:

- Rule C.6.1.3 (6), discharge of wastewater from primary systems is to slopes less than 10°.
- Rule C.6.1.3 (9.a), 100 % reserve disposal area where the wastewater has received primary treatment.
- Table 9, exclusion areas and setback distances for primary treated domestic type wastewater.

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

¹⁰ Low water consumption dishwashers and no garbage grinders.

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 the Building Consent stage.

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 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 complies, disposal fields sited on slopes <10 °.
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. This considers the mapped boundary available on NRC GIS which is presented on the drawings in Appendix A

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 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 30 % reserve disposal field area to enact 2.0 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. 100.

- **Primary Disposal Field.** A minimum PCDI primary disposal field of 640 m² 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. It is recommended each proposed lot provides a 192 m² 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 of this frequency has not been identified within the lot boundaries and as such the site can provides freeboard well above the 20 % AEP flood height to comply with this rule. The extent of river and coastal flood hazards is described in more detail in Section 3.3.

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. 100. 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 ¹



Water meter required?	No
Min. Treatment Quality	Secondary
Soil Drainage Category	TP58 Category 6, NZS1547 Category 5
Soil Loading Rate	2.0 mm/ day
Primary disposal field	Surface/ subsurface laid PCDI, min. 640 m ²
Reserve disposal field	Surface/ subsurface laid PCDI, min. 30 % or 192 m ²
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 as needed. 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 impervious features are considered to be comprised within the conceptual 30 x 30 m square building envelope shown on Drawing 100, Appendix A. The conceptual wastewater disposal field areas are clear of this indicative building envelope area.

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. 100, 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 Impervious Surfaces and Activity Status

A summary of the impervious areas of the proposed lots is provided as below which has been developed from our observations and the provided Scheme Plan. For the proposed lots, this has been taken as conceptual maximum probable development of typical rural residential scenarios. Refer Section 6.2.

The activity status reflected in Table 9 is with respect to Operative FNDC Plan Section 8.6.5.1.3 only which states “*The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 15%*”. Furthermore, the subdivision stormwater proposal has been determined in accordance with the operative district plan’s subdivision chapter 13.

Table 5: Summary of Impervious Surfaces

Surface	Proposed Lot 4 (Balance of Ex.Lot)		Proposed Lot 1,2,3 (Future lots)	
Existing Condition	(215,724 m²)		NA	
Roof	280 m ²	0.13 %		
Driveway and other hardened area (bare earth, metal farm track)	1050 m ²	0.47 %		
Total impervious	280 m ²	0.60 %		
Proposed Condition	(155,724 m²)		(20,000 m² per lot)	
Roof	300m ²	0.19 %	300 m ²	1.5 %
Driveway and surround	200 m ²	0.13 %	200 m ²	1.0 %
Total	500 m ²	0.202 %	500 m ²	2.5 % <i>per lot</i>
Activity Status	Permitted		Permitted	

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 (Proposed Lots 1,2,3,4).** The proposed application includes subdivision formation only and not lot-specific residential development at this stage. However, a conservative proposal for probable future on-lot development has been developed for this assessment considering variation of scale in typical rural residential development.

The probable future on-lot development concept includes up to 300 m² potential roof area and up to 200 m² potential driveway or parking areas.

There is no requirement to attenuate stormwater runoff for flow control or flood control within the proposed Lots, as stormwater runoff will discharge directly to the CMA, with no effect on downstream property.

Stormwater from the roof areas is proposed to be collected into rainwater tanks to provide water supply to the dwellings. The overflow outlet from the tanks shall be suitably controlled as per Section 6.4.

- **Existing On-site Development (Proposed Lot 4).** Existing abandoned buildings including accompanying farm structure with a total roof area of 280 m² located within the

boundaries of proposed lot 4 are anticipated to be removed to make way for new building within the proposed envelope.

- **Subdivision Development.** Access to the proposed lots has not been assessed within the scope of this report. It is noted, however, that any new access roadways will require suitable drainage in accordance with FNDC Engineering Standards. Specific attenuation is determined to not be required due to the proximity of the discharge to the CMA, as mentioned above.

6.3 Design Storm Event

Relevant design rainfall intensity and depths have been ascertained for the site location from the NIWA HIRDS meteorological model¹³. 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 Standards 2023.

Primary system devices shall be designed to manage the 20 % AEP event. The roof tank overflow outlet dispersion devices have been designed in this manner to reduce scour and erosion at discharge locations which may otherwise result in concentrated discharge. These are detailed further in Section 6.4 of this report.

Secondary system provisions such as overland flow paths shall be determined for each Lot in general and be suitably sized to cater for the 1% AEP event, with further consideration for events that may exceed the 1% AEP to determine a safe and reasonable solution.

6.4 On-Lot Discharge – Roof tank outlets

The direct discharge of concentrated runoff 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.

Typical rural residential developments may construct either above ground level spreader or an equivalent in-ground dispersion trench. 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 overflows from the attenuation tank. A concept above ground level spreader is presented as Table 6. Calculations to derive this are presented within Appendix D, derived from Auckland Council TR2013/018 document.

¹³ NIWA High Intensity Rainfall Data System, <https://hirds.niwa.co.nz>.

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.

Table 6: Summary of Concept Dispersion Devices

Concept Impervious Area to Tank	Tank Outlet Velocity (m/s)	Tank outlet pipe diameter (mm)	Spreader Pipe length, diameter	Spreader orifice size, spacing	Spreader orifices outlet Velocity	Concept
Proposed Lots -typical						
300 m ²	5.2 m/s	100 Ø	6.6m long, 150 mm Ø	45No. 20mm Ø at 150mm centres	0.87m/s	Above-ground level spreader (or equivalent in-ground trench)

6.5 Subdivision Development Management

All stormwater conveyance devices must be suitably sized to accommodate peak run-off flows from the design storm event.

Stormwater infrastructure mentioned in this report is conceptual only to justify the subdivision formation and should be designed specifically and constructed at lot-development stage and subjected to building consent where applicable.

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.
- 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.

7 POTABLE WATER & FIRE FIGHTING

In the absence of potable water infrastructure 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 conceptual development proposes 2 x 25,000l tanks for suitable rainwater harvesting provisions. The storage provisions shall be finalised at Building Consent stage.

Furthermore, the absence of potable water infrastructure and fire hydrants within the site 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 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 Plan¹⁷, Northland Regional Council (NRC) Proposed Regional Plan for Northland¹⁸ 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 7.

Table 7: Summary of Natural Hazards

Natural Hazard	Applicability	Mitigation & Effect on Environment
Erosion	Yes	Mitigation provided; resultant effects are less than minor.
Tsunami	Yes	Effects are not assessed. Proposed building envelopes are positioned in the mapped tsunami evacuation zone according to NRC GIS.
Overland flow paths, flooding, inundation	Yes	River flood extents are not applicable. Coastal flood zone extents do encroach over site features, resultant effects are less than minor.
Landslip	NA	No anticipated effects, less than minor.
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.

¹⁷ Operative District Plan Rule 13.7.3.2.

¹⁸ Proposed Regional Plan for Northland, Appeals Version, July 2021, Chapter D.6.

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.
<i>NA – Not Applicable.</i>		

9 LIMITATIONS

This report has been prepared for Ian Ray Carr 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.

APPENDIX A

Drawings

NOTES:

- CONTOUR INTERVAL IS 20 m MAJOR, 5 m MINOR EXTRACTED FROM LINZ
- AERIAL PHOTOGRAPH, EXTRACTED FROM GRIP
- HORIZONTAL DATUM IN MT EDEN CIRCUIT 2000
- VERTICAL DATUM IN TERMS OF NEW ZEALAND VERTICAL DATUM 2016
- EXISTING SITE BOUNDARIES EXTRACTED FROM GRIP.CO.NZ
- PROPOSED BOUNDARIES PROVIDED BY THOMSON SURVEY PLAN 10519 DATED AUGUST 2023

LEGEND:

- 75.0 MAJOR CONTOUR
- MINOR CONTOUR
- SUBJECT LOT
- PROPOSED LOTS
- EXISTING ROAD RESERVE BOUNDARY
- EXISTING ABUTTAL LOT BOUNDARY
- PROPOSED PRIMARY WASTE DISPOSAL FIELD
- PROPOSED SECONDARY WASTE DISPOSAL FIELD
- CONCEPT BUILDING ENVELOPE (30m x 30m)
- CONCEPT 2 x 25,000 LITRE WATER TANK ATTENUATING TO DISPERSION DEVICE TO CONTROL 500m² AREA
- GEOLOGIX HAND AUGER

GENERAL NOTES

- DRAWING REPRODUCED FROM THOMSON SURVEY PROPOSED SCHEME PLAN REF. 10619, DATED DECEMBER 2024.
- HORIZONTAL CO ORDINATE SYSTEM = NZTM.
- VERTICAL DATUM = NZVD.
- MAJOR INTERVALS 20.0 m.
- MINOR INTERVALS 5.0 m.
- FOR INDICATION ONLY, NOT FOR CONSTRUCTION.

CONCEPT WASTEWATER DESIGN

CONCEPT DEVELOPMENT
CONCEPT NO. OF OCCUPANTS
DAILY WASTEWATER GEN.
TOTAL WASTEWATER GEN.

5 BEDROOM
8 PERSONS
160 LITRES/PERSON/ DAY
1,280 LITRES/ DAY

SOIL CATEGORY (TP58)
SOIL CATEGORY (NZS1547)
SOIL LOADING RATE

CATEGORY 6
CATEGORY 5
3.0 mm/ DAY

TREATMENT SYSTEM

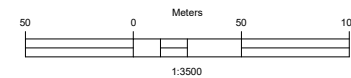
NO - SUBJECT TO BUILDING
CONSENT DESIGN

PRIMARY DISPOSAL AREA
RESERVE DISPOSAL AREA
FINAL DESIGN

427 m²
214 m² (50 %)
NO - SUBJECT TO
BUILDING CONSENT
DESIGN

CUT OFF DRAINS LOT 1 & 2
CUT OFF DRAINS LOT 3 & 4
DISCHARGE CONSENT

NO
YES
NO



A	FIRST ISSUE	03/04/25
Revision	Issue	Date



AUCKLAND | NORTHLAND

Project Name and Address
C0592
MOTUKIOR ROAD
HOREKE
LOT 2 DP 601773

Project C0592	Drawn By B.NEL
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Client
IAN RAY CARR

Sheet Title
SITE SUITABILITY OVERALL LAYOUT

Sheet
100

FILE PATH: D:\Synology Drive\Projects\C0592-C0598\C0592 - Lot 1 DP 137752, Motukior Road, Horeke\07 - Technical & Drawings\Drawings\C0592-S-100-401-A.dwg

PLOTTED: 03/04/2022

- NOTES:
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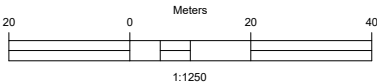
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CONSENT DESIGN

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RESERVE DISPOSAL AREA
FINAL DESIGN

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214 m² (50 %)
NO - SUBJECT TO
BUILDING CONSENT
DESIGN

CUT OFF DRAINS LOT 1 & 2
CUT OFF DRAINS LOT 3 & 4
DISCHARGE CONSENT

NO
YES
NO



A	FIRST ISSUE	03/04/25
Revision	Issue	Date



AUCKLAND | NORTHLAND

Project Name and Address

C0592
MOTUKIOR ROAD
HOREKE
LOT 2 DP 601773

Project C0592	Drawn By B.NEL
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Client

IAN RAY CARR

Sheet Title

SITE SUITABILITY ENLARGED SHEET 1

Sheet

101

FILE PATH: D:\Synology Drive\Projects\C0592-C0598\C0592 - Lot 1 DP 137752, Motukior Road, Horeke\07 - Technical & Drawings\Drawings\C0592-S-100-401-A.dwg

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CONCEPT NO. OF OCCUPANTS
DAILY WASTEWATER GEN.
TOTAL WASTEWATER GEN.

5 BEDROOM
8 PERSONS
160 LITRES/PERSON/ DAY
1,280 LITRES/ DAY

SOIL CATEGORY (TP58)
SOIL CATEGORY (NZS1547)
SOIL LOADING RATE

CATEGORY 6
CATEGORY 5
3.0 mm/ DAY

TREATMENT SYSTEM

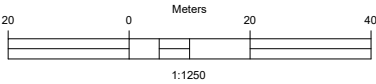
NO - SUBJECT TO BUILDING
CONSENT DESIGN

PRIMARY DISPOSAL AREA
RESERVE DISPOSAL AREA
FINAL DESIGN

427 m²
214 m² (50 %)
NO - SUBJECT TO
BUILDING CONSENT
DESIGN

CUT OFF DRAINS LOT 1 & 2
CUT OFF DRAINS LOT 3 & 4
DISCHARGE CONSENT

NO
YES
NO



A	FIRST ISSUE	03/04/25
Revision	Issue	Date



AUCKLAND | NORTHLAND

Project Name and Address

C0592
MOTUKIOR ROAD
HOREKE
LOT 2 DP 601773

Project	Drawn By
C0592	B.NEL

Client
IAN RAY CARR

Sheet Title
SITE SUITABILITY ENLARGED SHEET 2

Sheet
102

FILE PATH: D:\Synology\Drive\Projects\C0592-C0598\C0592 - Lot 1 DP 137752, Motukior Road, Horeke\07 - Technical & Drawings\Drawings\C0592-S-100-401-A.dwg

PLOTTED: 03/04/2022

APPENDIX B

Engineering Borehole Records

INVESTIGATION LOG

HOLE NO.:
HA01

CLIENT: Ian Ray Carr
PROJECT: Lot 1 - 4 DP 137752, Motukiore Road, Horeke

JOB NO.:
C0592

SITE LOCATION: Motukiore Road, Horeke
CO-ORDINATES: 1650292mE, 6081547mN

START DATE: 06/03/2025

CONTRACTOR: Internal RIG: 50 mm Auger Head

ELEVATION: Ground
DRILLER: DB

END DATE: 06/03/2025
LOGGED BY: DB

MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)												VANE SHEAR STRENGTH (kPa) Vane: 3282				WATER
				2	4	6	8	10	12	14	16	18	50	100	150	200	Values			
Grassed TOPSOIL; SILT with charcoal fragments; brown. Moist; low plasticity.		0.0	TS																	
CLAY, with trace sand; grey with orange brown. Very stiff; moist; high plasticity; sand, fine to medium; [Northland Allochthon - Residual Soils].		0.2	TS																	
		0.4																		
		0.6																		
0.6m - 1.2m: Becoming orange brown and grey.		0.8																		
		1.0																		
End Of Hole: 1.20m		1.2																		
		1.4																		
		1.6																		
		1.8																		
		2.0																		
		2.2																		
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		25.8																		

PHOTO(S)



REMARKS

- Hand auger drilled to target depth of 1.2 m bgl.
- Groundwater not encountered during drilling.

WATER

- ▼ Standing Water Level
- ▷ Out flow
- ◁ In flow

INVESTIGATION TYPE

- ☒ Hand Auger
- ☐ Test Pit

INVESTIGATION LOG

HOLE NO.:
HA02

CLIENT: Ian Ray Carr
PROJECT: Lot 1 - 4 DP 137752, Motukiore Road, Horeke

JOB NO.:
C0592

SITE LOCATION: Motukiore Road, Horeke
CO-ORDINATES: 1650320mE, 6081443mN

START DATE: 06/03/2025

END DATE: 06/03/2025

CONTRACTOR: Internal RIG: 50 mm Auger Head

ELEVATION: Ground

DRILLER: DB

LOGGED BY: DB

MATERIAL DESCRIPTION <div>(See Classification & Symbology sheet for details)</div>	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER	VANE SHEAR STRENGTH		WATER	
				(Blows / 0mm)	(kPa)			
					Vane: 3282			
				24681012141618	50100150200	Values		
Grassed TOPSOIL; SILT; brown. Moist; low plasticity.		0.1	TS					
CLAY, with trace sand; grey and orange brown. Very stiff to hard; moist; low plasticity; sand, fine to coarse; [Northland Allochthon - Residual Soils].		0.2	TS				189	Groundwater Not Encountered
		0.3					48	
		0.4						
		0.6					203+	
		0.8					-	
	1.0					203+		
	1.2					-		
End Of Hole: 1.20m		1.2					197	
		1.3					64	
		1.4						
		1.6						
		1.8						
		2.0						
		2.2						
		2.4						
		2.6						
		2.8						
		3.0						
		3.2						
		3.4						
		3.6						
		3.8						
		4.0						
		4.2						
		4.4						
		4.6						
		4.8						

PHOTO(S)



REMARKS

- Hand auger drilled to target depth of 1.2 m bgl.
- Groundwater not encountered during drilling.

WATER

- ▼ Standing Water Level
- ▷ Out flow
- ◁ In flow

INVESTIGATION TYPE

- ☒ Hand Auger
- ☐ Test Pit

INVESTIGATION LOG

HOLE NO.:
HA03

CLIENT: Ian Ray Carr
PROJECT: Lot 1 - 4 DP 137752, Motukiore Road, Horeke

JOB NO.:
C0592

SITE LOCATION: Motukiore Road, Horeke
CO-ORDINATES: 1650377mE, 6081202mN

START DATE: 06/03/2025

END DATE: 06/03/2025

CONTRACTOR: Internal RIG: 50 mm Auger Head

ELEVATION: Ground

DRILLER: DB

LOGGED BY: DB

MATERIAL DESCRIPTION <div>(See Classification & Symbology sheet for details)</div>	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER	VANE SHEAR STRENGTH		WATER
				(Blows / 0mm)	(kPa)		
					Vane: 3282		
SILT; grey. Hard; moist; low plasticity; [Northland Allochthon - Residual Soils]. CLAY; grey and orange brown. Very stiff; moist; high plasticity; [Northland Allochthon - Residual Soils]. <							

PHOTO(S)



REMARKS

- Hand auger drilled to target depth of 1.2 m bgl.
- Groundwater not encountered during drilling.

WATER

- ▼ Standing Water Level
- ▷ Out flow
- ◁ In flow

INVESTIGATION TYPE

- ☒ Hand Auger
- ☐ Test Pit

INVESTIGATION LOG

HOLE NO.:
HA04

CLIENT: Ian Ray Carr
PROJECT: Lot 1 - 4 DP 137752, Motukiore Road, Horeke

JOB NO.:
C0592

SITE LOCATION: Motukiore Road, Horeke
CO-ORDINATES: 1650335mE, 6081263mN

START DATE: 06/03/2025

END DATE: 06/03/2025

CONTRACTOR: Internal RIG: 50 mm Auger Head

ELEVATION: Ground

DRILLER: DB

LOGGED BY: DB

MATERIAL DESCRIPTION <div>(See Classification & Symbology sheet for details)</div>	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER	VANE SHEAR STRENGTH		WATER	
				(Blows / 0mm)	(kPa)			
					Vane: 3282			
				24681012141618	50100150200	Values		
Grassed TOPSOIL; SILT ; brown. Moist; low plasticity.		0.0	TS					
CLAY, with trace sand; grey and orange brown. Very stiff; moist; low plasticity; sand, fine to medium; [Northland Allochthon - Residual Soils].		0.2	TS				164	Groundwater Not Encountered
		0.3					32	
		0.4						
		0.5					195	
		0.6					58	
		0.7						
		0.8					128	
		0.9					41	
		1.0						
		1.1						
		1.2					136	
End Of Hole: 1.20m		1.3					44	
		1.4						
		1.6						
		1.8						
		2.0						
		2.2						
		2.4						
		2.6						
		2.8						
		3.0						
		3.2						
		3.4						
		3.6						
		3.8						
		4.0						
		4.2						
		4.4						
		4.6						
		4.8						

PHOTO(S)



REMARKS

- Hand auger drilled to target depth of 1.2 m bgl.
- Groundwater not encountered during drilling.

WATER

- ▼ Standing Water Level
- ▷ Out flow
- ◁ In flow

INVESTIGATION TYPE

- ☒ Hand Auger
- ☐ Test Pit

APPENDIX C

Assessment of Environmental Effects and Assessment Criteria




Table 8: Wastewater Assessment of Environmental Effects

Item	NRC Separation Requirement ²	FNDC Separation Requirement	Site Assessment ³
Individual System Effects			
Flood Plains	Above 5 % AEP	NR	Complies according to available GIS data and visual assessment.
Stormwater Flowpath ⁴	5 m	NR	Complies, see annotations on Drawing No. 100.
Surface water feature ⁵	15 m	15 m (3x feature area in ha)	Complies.
Coastal Marine Area	15 m	30 m	Complies, see annotations on Drawing No. 100.
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 gently sloping to < 10 °.
Cut off drain required?			No, in Lot 1. No, in Lot 2.
Discharge Consent Required?			No.
	TP58	NZS1547	
Cumulative Effects			
Biological Oxygen Demand		≤20 g/m ³	Complies – secondary treatment.
Total Suspended Solids		≤30 g/m ³	Complies – secondary treatment.
Total Nitrogen	10 – 30 g/m ³	15 – 75 g/m ³	Complies – secondary treatment.
Phosphorous	NR	4 – 10 g/m ³	Complies – secondary treatment.
Ammonia	NR	Negligible	Complies – secondary treatment.
Nitrites/ Nitrates	NR	15 – 45 g/m ³	Complies – secondary treatment.
Conclusion: Effects are less than minor on the environment.			
<ol style="list-style-type: none"> 1. AEE based on proposed secondary treated effluent. 2. Northland Regional Plan Table 9. 3. Based on the recommendations of this report and Drawing No. 100. 4. Including any formed road with kerb and channel, and water-table drain that is down-slope of the disposal area. 5. River, lake, stream, pond, dam, or natural wetland. 			
AEP Annual Exceedance Probability.			
NR No Requirement.			

APPENDIX D

Stormwater Calculations

Project Ref:	C0592	STORMWATER ATTENUATION TANK DESIGN	
Project Address:	Motukiore Road, Horeke		
Design Case:	CONCEPT FUTURE DEVELOPMENT		
Date:	29 April 2025		
	REV 1	20 % AEP STORM EVENT	

ATTENUATION DESIGN PROVIDED IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE E1 FOR THE RATIONALE METHOD ACCOUNTING FOR THE EFFECTS OF CLIMATE CHANGE (20% FACTOR AS PER 2023 FNDC ENGINEERING STANDARDS).

PRE-DEVELOPMENT RUNOFF IS FACTORED BY 80% TO SUIT FNDC STANDARDS

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

PRE DEVELOPMENT CATCHMENT PARAMETERS				POST DEVELOPMENT CATCHMENT PARAMETERS			
ITEM	AREA, A, m ²	COEFFICIENT, C	DESCRIPTION	ITEM	AREA, A, m ²	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	
					0	0	
TOTAL	500	TYPE D		TOTAL	500	TYPE D	

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, VARIOUS DURATIONS

DURATION, min	INTENSITY, mm/hr	CC FACTOR	INTENSITY WITH CC, mm/hr	POST DEV RUNOFF, Q _{post} , l/s	PRE DEV RUNOFF, Q _{pre} , l/s	80% of PRE DEV RUNOFF, Q _{pre} (80%), 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	51.20	1.2	61.44	7.75	4.76	3.81	
30	41.50	1.2	49.80	6.28	3.86	3.09	
60	28.80	1.2	34.56	4.36	2.68	2.14	Pre-dev calculated on Intensity without CC factor
120	19.70	1.2	23.64	2.98	1.83	1.47	
360	10.40	1.2	12.48	1.57	0.97	0.77	
720	6.73	1.2	8.08	1.02	0.63	0.50	
1440	4.24	1.2	5.09	0.64	0.39	0.32	
2880	2.59	1.2	3.11	0.39	0.24	0.19	
4320	1.91	1.2	2.29	0.29	0.18	0.14	

ATTENUATION ANALYSIS, VARIOUS DURATIONS

DURATION, min	OFFSET FLOW, Q _{off} , l/s	TANK INFLOW, Q _{in} , l/s
10	4.03	7.00
20	2.83	4.92
30	2.30	3.98
60	1.59	2.76
120	1.09	1.89
360	0.58	1.00
720	0.37	0.65
1440	0.23	0.41
2880	0.14	0.25
4320	0.11	0.18

NO ATTENUATION PROPOSED

OFFSET FLOW IS FROM 200sqm DRIVEWAY AREA RUNOFF.

TANK INFLOW IS FROM 300sqm ROOF AREA RUNOFF.

STORMWATER CONTROLS TO BE FINALISED AT BUILDING CONSENT STAGE

HIRDS V4 Intensity-Duration-Frequency Results

Sitename: Horeke

Coordinate system: WGS84

Longitude: 173.5547

Latitude: -35.4061

DDF Mode Parameters: c d e f g h i
 Values: 0.00276098 0.45828966 -0.01425177 -0.00194246 0.25201445 -0.01109912 3.00699792
 Example: Duration (hrs) ARI (yrs) x y Rainfall Rate (mm/hr)
 24 100 3.17805383 4.600149227 7.720783178

Rainfall intensities (mm/hr) :: Historical Data

ARI	AEP	10m	20m	30m	1h	2h	6h	12h	24h	48h	72h	96h	120h
1.58	0.633	51.5	36.1	29.2	20.2	13.8	7.23	4.68	2.94	1.79	1.32	1.05	0.881
2	0.5	56.4	39.5	32	22.2	15.1	7.94	5.14	3.23	1.97	1.45	1.16	0.97
5	0.2	72.9	51.2	41.5	28.8	19.7	10.4	6.73	4.24	2.59	1.91	1.53	1.28
10	0.1	85	59.8	48.6	33.7	23.1	12.2	7.92	5	3.06	2.26	1.81	1.51
20	0.05	97.4	68.7	55.8	38.8	26.6	14.1	9.15	5.79	3.55	2.62	2.1	1.76
30	0.033	105	73.9	60.1	41.8	28.7	15.2	9.9	6.26	3.84	2.84	2.27	1.9
40	0.025	110	77.7	63.2	44	30.2	16	10.4	6.61	4.05	3	2.4	2.01
50	0.02	114	80.6	65.6	45.7	31.4	16.7	10.9	6.87	4.22	3.12	2.5	2.1
60	0.017	118	83.1	67.6	47.1	32.3	17.2	11.2	7.1	4.36	3.22	2.58	2.16
80	0.013	123	86.9	70.7	49.3	33.9	18	11.7	7.45	4.58	3.39	2.71	2.27
100	0.01	127	89.8	73.1	51	35.1	18.7	12.2	7.72	4.75	3.51	2.82	2.36
250	0.004	144	102	83	58	39.9	21.3	13.9	8.85	5.45	4.04	3.24	2.72

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	6.7	4.2	3.1	2.3	1.6	0.93	0.64	0.54	0.34	0.26	0.2	0.18
2	0.5	7.4	4.6	3.4	2.5	1.7	1	0.71	0.6	0.38	0.29	0.23	0.2
5	0.2	10	6.5	4.9	3.5	2.4	1.4	0.95	0.8	0.51	0.39	0.3	0.27
10	0.1	13	8.4	6.5	4.4	3.1	1.7	1.2	0.97	0.61	0.47	0.36	0.32
20	0.05	16	11	8.5	5.6	3.9	2.1	1.5	1.1	0.72	0.55	0.42	0.38
30	0.033	19	13	10	6.5	4.5	2.5	1.7	1.3	0.79	0.61	0.46	0.42
40	0.025	20	14	11	7.2	5	2.7	1.8	1.4	0.84	0.65	0.5	0.45
50	0.02	22	15	12	7.8	5.5	2.9	2	1.4	0.88	0.69	0.52	0.47
60	0.017	23	16	13	8.3	5.9	3.1	2.1	1.5	0.92	0.72	0.54	0.49
80	0.013	26	18	14	9.3	6.5	3.5	2.3	1.6	0.98	0.76	0.58	0.52
100	0.01	28	20	16	10	7.1	3.8	2.5	1.7	1	0.8	0.61	0.55
250	0.004	38	27	22	14	9.9	5.2	3.5	2.1	1.3	0.99	0.75	0.67