BEFORE HEARINGS COMMISISONERS APPOINTED
BY THE FAR NORTH DISCTRIT COUNCIL

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of the hearing of submissions on the Proposed Far North District Plan
SUBMITTER	Tapuaetahi Incorporation;
HEARING TOPIC:	Hearing 10 – Māori Purpose & Treaty Settlement

STATEMENT OF PLANNING EVIDENCE OF STEVEN REMANA SANSON

10 March 2025

INTRODUCTION

1. My name is Steven Remana Sanson. I am a Director / Consultant Planner at Sanson and Associates Limited and Bay of Islands Planning [2022] Limited.

2. I have been engaged by the Tapuaetahi Incorporation [**the Submitter**] to provide evidence in support of their original and further submissions to the Proposed Far North District Plan **[PDP]**.

3. I note that while the Environment Court Code of Conduct does not apply to a Council hearing, I am familiar with the principles of the code and have followed these in preparing this evidence.

QUALIFICATIONS AND EXPERIENCE

4. I hold the qualification of Bachelor of Planning [Hons] from The University of Auckland, graduating in 2013 and I am an Intermediate Member of the New Zealand Planning Institute.

5. I have over 10 years' experience and have previously held planning positions in the Far North District. In my current role I regularly advise and assist corporate and private individuals with the preparation of resource consent applications including subdivision and land use consents and relevant regional council consents. I have also processed resource consent applications for councils, prepared submissions on district plan changes, and processed plan changes.

SCOPE OF EVIDENCE

6. Hearing 10 addresses submission points relating to the PDP – Māori Purpose & Treaty Settlement. The s42A reports splits these matters into two reports in line with the structure of the PDP.

    a) Māori Purpose Zone; and

    b) Treaty Settlement Land Overlay

7. I have been asked by the Submitter to provide expert planning evidence in relation to matters arising from their submissions and further submissions on the Māori Purpose Zone & Treaty Settlement Land Overlay.

8. In preparing this evidence, I have reviewed the Section 42A reports for these topics, along with the appendices. I have adhered to the instructions of hearing Minute 1 to:

> *'take a lead from the s42A Report in terms of content of evidence, specifically that evidence highlights areas of agreement and disagreement with the s42A Report, outlines any changes in Plan wording proposed (along with the rationale for these changes) together with an assessment pursuant to S32AA of the RMA'.*

9. In preparing this evidence, I have also considered the evidence of the Tapuaetahi Incorporation provided in **Annexure 1**. This outlines the context in which they operate and provides useful detail about their future aspirations.

PDP FRAMEWORK

10. The Māori Purpose zone was notified as a part of the PDP as a 'Special Purpose Zone', which recognises the legal and governance framework for Māori land and seeks to enable a range of activities which reflect Māori customs and values, while enabling tangata whenua to exercise kaitiakitanga. Land in this zone is either Māori freehold land, Māori customary land and general land owned by Māori, as defined in the Te Ture Whenua Māori Act 1993 [**TTWMA**].

11. The Treaty Settlement Land Overlay is located in the 'General District-Wide Matters' section of the PDP and applies to land that has been returned through the settlement process either as cultural or economic redress. Land tenure is predominantly general title and is governed by a post-settlement governance entity which differs from Māori Purpose zoned land, which is administered under TTWMA. As an overlay, it applies additional controls over the provisions of the underlying zone, so any proposed activities must consider both the provisions of the underlying zone and the overlay.

THE SUBMISSIONS

12. The submissions and further submissions seek the following relief:

- To amend the Overview section for Māori Purpose Zone – Rural to add the option of 'or' for adjoining land[1];
- To amend MPZ-R4 to either exempt the landholdings owned by the Tapuaetahi Incorporation at Te Tii or restrict discretion through the criteria within the policy framework[2];
- To amend MPZ-R5 to exempt the landholdings owner by the Tapuaetahi Incorporation at Te Tii under PER-2[3];
- To amend MPZ-S4 to exempt a legally formed and maintained road, reserve or allotment between the property and the coastal marine area from the setback from MHWS[4].
- In support of the Matauri X Incorporation submission (S396.001 and 396.002) to:

[1] Submission S407.003
[2] Submission S407.004
[3] Submission S407.005
[4] Submission S407.006

- amend the Overview section associated with the delineation between Māori Purpose Zone Urban and Māori Purpose Zone Rural[5]; and

- amend MPZ-P2 to exclude the refence to 'small scale' commercial activities[6].

- In relation to the Top Energy submission [S483.023] oppose amending the 'Applications subject to multiple provisions' section[7].

CHALLENGES WITH MĀORI LAND

13. I accept that this hearing is not addressing subdivision and that it is being dealt with at a latter hearing. However, there is a direct correlation with land use and the Submitters ability to utilise the land use rules in the Māori Purpose zone chapter due to the challenges faced with Māori land. Particularly in respect of MPZ-R5 which addresses Papakainga where the rule currently permits 10 houses per site. Where a piece of Māori land is significant [large], it is a disadvantage as the permitted density defaults back to that of the Rural Production zone (1 dwelling per 40ha).

14. Māori land is often owned collectively by multiple descendants, sometimes numbering in the hundreds so any decisions regarding subdivision are difficult and requires agreement from a significant portion [if not all] of the landowners. Subdividing land often involves input from a number of specialists including surveyors, lawyers, planners and engineers. Then there are the conditions of consent to address matters such as infrastructure development (e.g., roads, water, power). Many Māori land blocks are in rural areas with limited access to essential services, making development expensive. Securing funding can also be challenging, especially if the land cannot be used as collateral for loans due to its status as Māori land. I have been experienced in dealing with these matters across numerous Papakainga and Māori housing developments in the Far North.

EVALUATION OF SECTION 42A REPORT

Overview of the Māori Purpose Zone

15. Section 5.2.1 of the s42A Report addresses Key Issue 1: Overview – Māori Purpose zone. The issue in respect of the application of Māori Purpose Zone – Rural is that it is a one size fits all approach and does not reflect the existing land use at Taupaetahi. The relief sought seeks a more rationalised understanding in the Overview section of Māori Purpose Zone to make sense of the current land use.

[5] Further submission FS449.031

[6] Further submission FS449.032

[7] Further submission FS449.006

16. It is reasonable to conclude from the land use pattern that the land on the coastal fringe is not a combination of being 'rural in character' and 'surrounded by a working rural environment' [see Figure 1].

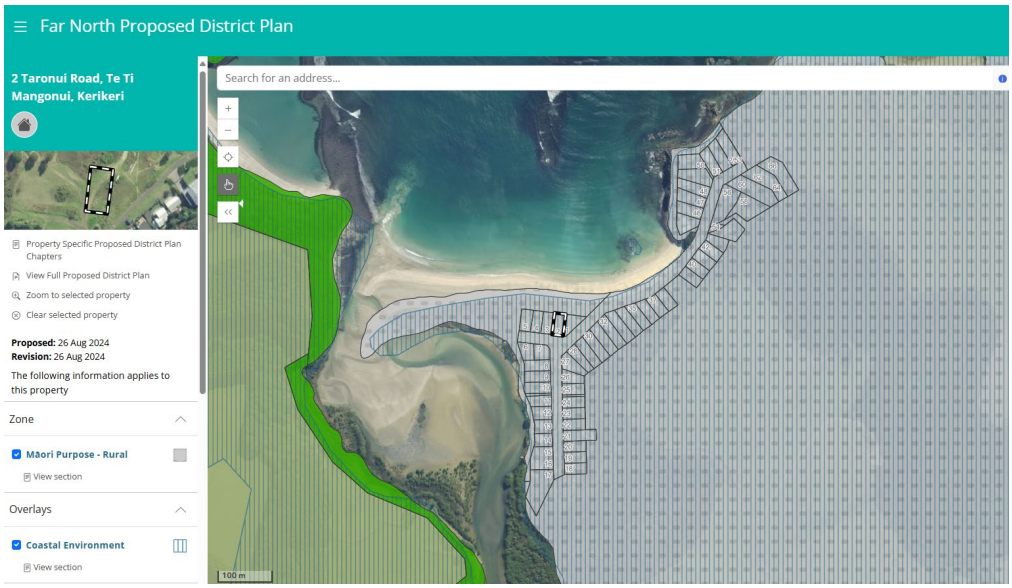

Figure 1: 813m² section in Taupaetahi

17. The Operative District Plan [**ODP**] zones the coastal fringe Coastal Residential [see figure 2]. This zone by its very nature is not 'rural in character'.

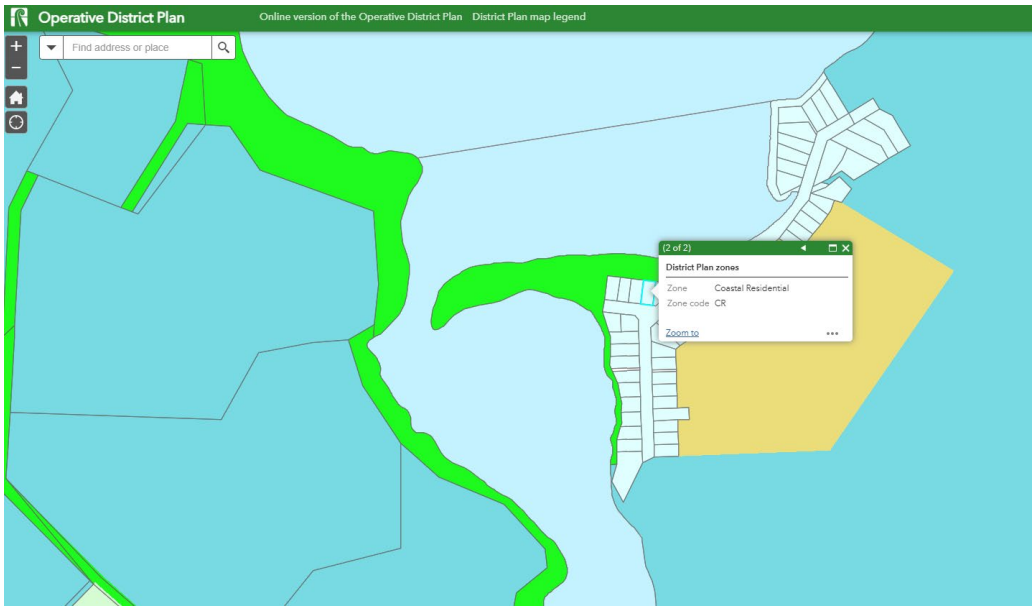

Figure 2: Coastal Residential zoning in the ODP in Tapuaetahi

18. It is reasonable to conclude however that the sites on the coastal fringe are 'surrounded by a working rural environment'. Noting that the Operative District Plan is more nuanced by ensuring that the Coastal Living Zone is promoted to ensure an adequate buffer between the dense areas and more rural working areas.

19. I consider that a decision to include 'or' in the definition within the Overview to be a pragmatic inclusion that will have no discernible effect on the ensuing provisions for the zone.

20. It simply provides a more accurate descriptor of land where existing land use is not currently rural in character and has been zoned Māori Purpose Zone – Rural. In lieu of this, this might be better considered at the rezoning hearing as it is clear that neither of the descriptors for the zone are accurate or appropriate for the landholding.

21. The blanket change to rural for the entire site, particularly the clearly residential land along the coastal fringe also has implications for the site from a leasing perspective.

Rule MPZ-R4 Residential activity (except for papakāinga)

22. Section 5.2.4 of the s42A Report addresses Key Issue 4: Rules - Māori Purpose zone. The submitter has requested that either their landholdings are excluded or discretion is limited to the criteria in the policy framework or an exemption to PER-2 and PER-3 of this rule, noting that MPZ-O3 seeks an outcome that use and development in the Māori Purpose zone reflects the sustainable carrying capacity of the land and surrounding environment. I consider that the carrying capacity can be determined through the application of policies MPZ-P3 and MPZ-P4.

23. The s42A report writer acknowledges that at present six residential units can be placed on the ~268ha landholding as a permitted activity. Little more consideration is given to the submission in the s42A Report, other than stating that there is not enough evidence to understand what the impact of an amendment to exempt a yet to be specified block of Tapuaetahi Inc land from the rule MPZ-R4 standards, and that Tapuaetahi Inc may wish to bring this evidence to the hearing.

24. A quantum of work has already been undertaken by the Submitter looking at further residential development of land currently zoned Coastal Living in the ODP [proposed to be zoned Māori Purpose Zone – Rural in the PDP]. The proposal looks at creating between 18 to 22 dwellings as part of a papakainga south of the existing settlement of Tapuaetahi [refer **Annexure 3** and Figure 3 below].

Figure 3: Tapuaetahi Papakainga Concept

25. The papakainga concept is supported by a high-level civil engineering assessment prepared by Vision Consulting Engineers. The assessment identifies opportunities and constraints that can inform decision-making and support the successful implementation of the proposed development. The constraints generally relate to the geotechnical conditions and the need for stormwater and wastewater management [refer **Annexure 2**].

26. The zoning in the ODP is significantly more nuanced than that in the PDP as it recognised the Submitters land as being more than just 'rural' land, with a carrying capacity in excess of what the PDP is now enabling. As can be seen in Figure 2 above, the settlement itself is zoned Coastal Residential, with 'lifestyle' land [Coastal Living] adjoining, which creates a buffer before the land is zoned General Coastal [Rural]. The framework of the Māori Purpose Zone being proposed now is a blunt tool in comparison to land use controls in the ODP in respect of residential intensity.

27. I do not consider that the rule MPZ-R4 encapsulates the outcome sought by Objective MPZ-O3 in terms of use and development reflecting the carrying capacity of the land. Instead MPZ-R4 places arbitrary figures around the level of permitted development based on the Rural Production zone. The objective and policy framework in the Rural Production zone is different to that in the Māori Purpose zone and should be treated differently.

28. While exempting the landholdings owned by the Tapuaetahi Incorporation at Te Tii may not be appropriate as it removes all consideration of the rule, scope of the submission determines that the carrying capacity can be assessed using policies MPZ-P3 and MPZ-

P4. The following changes are proposed, which aligns with MPZ-R5 where compliance with the permitted standard is not achieved.

MPZ-R4	Residential activity (except for papakāinga)	
Māori Purpose zone - Urban	**Activity status: Permitted** **Where:** **PER-1** The site area per standalone residential unit or multi-unit development is at least 600m^2. **Note:** PER-1 does not apply to: • a single residential unit located on any site less than the minimum site area; and • papakāinga provided for in Rule MPZ-R5	**Activity status where compliance not achieved with PER-1, PER-2 or PER-3: <u>Restricted</u> Discretionary** **<u>Matters of discretion are restricted to:</u>** 1. <u>the matters set out in Policy MPZ-P4</u>
Māori Purpose zone - Rural	**Activity status: Permitted** **Where:** **PER-2** The site area per standalone residential unit is at least 40ha. **PER-3** The number of residential units on any site does not exceed six. **Note:** PER-2 and PER-3 do not apply to: • a single residential unit located on any site less than the minimum site area; and • papakāinga provided for in Rule MPZ-R5	

Rule MPZ-R5 Papakāinga

29. Section 5.2.4 of the s42A Report addresses Key Issue 4: Rules - Māori Purpose zone. The s42A Report writer sites the rationale for rejecting the submission as being similar to that for MPZ-R4. The s42A Report writer goes on to reference the Section 32 Report [Page 40] explaining the rational for exempting Matauri X from MPZ-R5.

30. I have already provided commentary above regarding the objective and policy framework of the Māori Purpose zone chapter where is seeks an outcome of use and development reflecting the sustainable carrying capacity of the land and surrounding environment. I have also identified earlier in my evidence that the Tapuaetahi landholdings do not fit neatly within a categorisation of Māori Purpose zone – Rural, based on existing development at Tapuaetahi, the current zoning within the ODP and the work undertaken to further develop the site.

31. The rationale for Matauri X's exclusion from the residential unit component of MPZ-R5 has similarities with the Tapuaetahi landholdings where the ODP has zoned areas:

- Coastal Residential;
- Coastal Living; and
- General Coastal.

32. I therefore consider that the same treatment for part of the Tapuaetahi landholdings is appropriate, falling under a similar context and rationale for excluding Matauri X. The section 32 Report for Tangata Whenua states:

"Matauri X Incorporation, in relation to Māori freehold landholdings located directly adjacent to and adjoining the area well known as Matauri Bay, seeking rezoning of land at Matauri Beach Road that was formerly zoned Coastal Residential so that the same level of density that could have formerly been achieved is applied to the site. In response, we have added an exemption so that papakainga on the site in question does not need to comply with the maximum of 10 residential units. A site-specific approach is appropriate because:

- *The site is an established papakainga site, and already contains approximately 17 residential units.*
- *We are aware that Matauri X has aspirations to further develop papakainga on this land and have a Papakainga Development Plan.*
- *Although there is no connection to Council's reticulated services, on-site servicing will be managed through the on-site servicing (and minimum exclusive use area) standards, which requires compliance with Far North District Council's Engineering Standards April 2022.*

- *We acknowledge that the site is already constrained by protective overlays (e.g. coastal environment, outstanding natural landscapes, ecosystems and indigenous biodiversity). It is appropriate that the Proposed District Plan zoning enables the same or similar level of development potential that the Operative District Plan currently provides (through the Coastal Residential Zoning).*

- *It is appropriate that the Proposed District Plan zoning enables the same or similar level of development potential that the Operative District Plan currently provides (through the Coastal Residential Zoning)"*[8]

33. In this context I provide the following commentary in respect of the Submitters landholdings:

- Tapuaetahi already has a level of development akin to an 'urban' level of density along the foreshore and is in the process of preparing a resource consent application for its land currently zoned Coastal Living to a level provided for in the ODP. In other words, a level of density that could have formerly been applied to the site.

- Through this evidence Council is now aware that the submitter has aspirations to further develop papakainga on this land;

- There are no connections to Council's reticulated services, so similarly these services will be managed through the on-site servicing (and minimum exclusive use area) standards, which requires compliance with Far North District Council's Engineering Standards April 2022;

- The site is within the Coastal Environment and contains areas identified as High Natural Character and Outstanding Natural Landscape.

34. I agree with the final bullet point referenced in the Section 32 Report above that the PDP zoning should enable the same or similar level of development potential that the ODP currently provides [through the current Coastal Residential and Coastal Living zones].

35. The following change to MPZ-R5 is therefore proposed:

MPZ-R5	**Papakāinga**	
Māori Purpose zone - Urban	**Activity status: Permitted** **Where:** **PER-1**	**Activity status where compliance not achieved with PER-1, PER-2 or PER-3: Restricted Discretionary** **Matters of discretion are restricted to:**

[8] Tangata Whenua Section 32 report [page 40]

	1. The site area is at least 600m2; and 2. The number of residential units on a site does not exceed three.	a. the matters set out in Policy MPZ-P4
Māori Purpose zone - Rural	**Activity status: Permitted** **Where:** **PER-2** The number of residential units does not exceed the greater of: a. one residential unit per 40ha of site area; or b. 10 residential units per site. **PER-3** Any commercial activity associated with the papakāinga does not exceed a GBA of 250m^2. **Note**: PER-2 does not apply to the land identified by the following legal description: • Lot 186-188, 190, 193 DP 393664 being part Matauri X Residue. • <u>The landholding owned by the Tapuaetahi Incorporation at Te Tii [**insert Lot and DP as required**]</u>	

36. I note that the area currently zoned Coastal Living in the ODP does not have its own parcel and is effectively a 'split zone'. As such I have not included Lot and DP numbers in the proposed amendments to the rule above as there may be that a mechanism to identify this land as exempt should the decision maker be of a mind to accept this submission.

Rule MPZ-S4 Setback from MHWS

37. Section 5.2.5 of the s42A Report addresses Key Issue 5: Standards - Māori Purpose zone. I note the explanation in the s42A Report that the Standard is being removed as it is

addressed in the Coastal Environment chapter. Furthermore, the Coastal Environment includes an exception where there is a legally formed and maintained road between the property and MHWS.

Policy MPZ-P2 'small scale' commercial activities

38. Section 5.2.3 of the s42A Report addresses Key Issue 3: Policies - Māori Purpose zone. The proposed change suggested in the s42A Report does not reflect the change in Appendix 1 - Officers Recommended Amendments to Māori Purpose Zone Chapter. The commentary within the s42A Report accepts the submission in part by removing the words 'small scale', however wishes to replace the term 'small scale' with 'and other'.

39. I agree with the s42A Report in so far that 'small scale' be removed. No commentary is provided to explain how introducing the word 'other' will prevent perverse outcomes that are less enabling. As such I agree with the changes proposed in Appendix 1 - Officers Recommended Amendments to Māori Purpose Zone Chapter.

Policies	
MPZ-P2	Enable a range of activities on Māori land in the Māori Purpose zone including marae, papakāinga, customary use, cultural and ~~small-scale~~ commercial activities where the adverse effects can be avoided, remedied or mitigated.

Treaty Settlement Land overlay

40. Section 5.2.7 of the s42A Report addresses Key Issue 7: Notes and Applications Subject to Multiple Provisions' – Treaty Settlement Overlay. The submitter does not wish to provide any further evidence in relation to their further submission on the Treaty Settlement Land Overlay.

SECTION 32AA EVALUATION

Effectiveness and Efficiency

41. The proposed changes will appropriately identify Māori Propose Zone land where existing land use and zoning applied in the ODP preclude the ability to be defined in the current definition within the overview. This is where adjoining land may not <u>be both</u> rural in character and surrounded by a working rural environment. I note that this may be better considered by the zoning hearings upcoming.

42. The proposed changes within my evidence effectively align with the policy direction of the chapter to provide for Māori Purpose Zone – Rural land where criteria identified within the policy framework are used to demonstrate the carrying capacity of the land. This aligns with the outcome sought in the objectives. Further, it is effective to exclude the submitters land that has been subject to further work to understand the carrying capacity for papakainga, similarly to the exclusion provided for the Matauri X land.

43. I consider that my recommended amendments will be more effective and efficient in achieving the recommended changes to the provisions within the s42A Report and are appropriate in terms of section 32AA.

Costs/Benefits

44. The costs are limited to accepting the wording [or similar] and including them in the relevant part of the PDP.

45. Applying appropriate controls for activities within the chapter will add further certainty to land owners, reduce constraints on development and consenting costs. This is within the context of providing for the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, in accordance with section 6(e) of the RMA.

Risk of Acting or not Acting

46. The risk of not acting is that the Māori Purpose zone chapter does not accurately reflect existing land use and development within the proposed zone. Residential development, including papakainga, is cumbersome and does not reflect the framework implementing the rule and does not reflect the known carrying capacity of the land.

CONCLUSION

47. In conclusion, I am of the opinion that the amendments sought by the Submitter are appropriate and will assist in improving the consistency, usability and interpretation of the PDP.

APPENDICES

1. Annexure 1 – Tapuaetahi Incorporation.
2. Annexure 2 – High-Level Civil Engineering Assessment prepared by Vision Consulting Engineers.
3. Annexure 3 – Draft Site Plan prepared by Littoralis Landscape Architecture

Annexure 1 - Tapuaetahi Incorporation

Tapuaetahi Incorporation
PO Box 76
Kerikeri 0230
admin@tapuaetahi.com
0274 776 414
09 4076525

17 July 2024

For: Opening address to the presiding commissioners of the proposed district plan hearings.

Introduction

Ko Tokerau te tūtei	Tokerau is the sentinel mountain that stands at the
Ki te hauraro o te pūaha	northern aspect of the harbour mouth
Ko Rākaumangamanga ki te Rāwhiti	Rākaumangamanga stands to the east
E rere atū nei Te Kerei Mangonui	Both Te Kerei Mangonui and Te Awa o ngā Rangatira
Te Awa o ngā Rangatira	flow there-ward
Titiro whakararo ki Orongo ki Tākou	Gazing northward to Mount Orongo and Takou river
Awa Te wahi i mataaraaratia ai e Puhi	The territory causiously gaurded by our ancestor Puhi
Te waka tūpuna a Mataatua moe mai rā	The ancestral canoe Mātaatua there gently sleeps
Whiti whaka te uru	Before crossing westward
Ki te ngāherehere nui o te Puketi	To join Puketi forest
Pohutu noa atu ki te moana o Omapere	Sweep past and onward to Lake Omapere
Āwhiowhio ki te rangi	We turn rising skyward
Kei runga Whakataha maunga	To Whakataha mountain
Kei raro ko te awa o Waitangi	The fountain head of Waitangi river below
Ka hirere ki Pokākā	Gushing eastward to Mount Pokākā
Tōtika te whatumanawa o Īpipiri	Inexorably to the heart of the Bay of Islands
Ko Ngāti Rēhia te hapū	Ngāti Rēhia the Tribe
Ko Ngāpuhi nui tonu te Iwi	Ngāpuhi the Nation
Ko Whitiora, ko Hiruharama Hou, Ko	Whose marae are Whitiora, Hiruharama Hou and
Whetu Mārama ōnā marae	Whetu Mārama
Tihewa mauri ora, ki te Wheiao	This breath drawn life animates the emergent World
Ki te Ao Mārama.	Into broad daylight.

Ko te mea tuatahi e mihi kau ana ki ngā tini mate. Ngā mate o te tau, ngā mate o ngā marama, ngā mate o ngā wiki, ngā mate o ngā rā tata ake nei, taenoa ki tēnei haora. Kotahai anō te kōrero haere. Haere rā I runga I te mohio, e kore rawa koutou e warewaretia ia mātou ngā waihotanga.

Ka hoki mai kia tātou ngā kanohi ora, ngā morehu o rātou mā, tēnā koutou, tēnā koutou, tēnā rā tātou katoa

This address is made on behalf of the owners of Tapuaetahi Incorporation and the community of Te Tii, and is intended to contextualise the reasons for our submissions to the commissioners presiding over the Proposed District Plan hearings. It aims to share who we are and what we have been striving to achieve.

By way of an opening comment, we are of the view, and feel, that some of the proposed policies are very broad and have no regard for what we have been striving for, for so long. We are very mindful of our environment and believe we are very balanced in our approach in that we try to ensure that our activities do not adversely impact the environment.

Over the last five years we have invested significant funds, time and resources into our environment including active and ongoing engagement with various groups, including with Northland Regional Council by way of initiatives for coastal care, planting, water care and pest eradication (both fauna and flora).

Some of the proposed District Plan changes could have significant impacts on our interests, hinder future plans and reduce the benefits we provide back to our people and communities.

About Tapuaetahi Incorporation

Tapuaetahi is located on the north side of Peiwhairangi (Bay of Islands) and comprises approximately 315 hectares across multiple blocks. As the economic arm for the neighbouring kainga of Te Tii, it's purposes are beachfront leases, farming, mining and forestry. While Tapuaetahi represents 480 shareholders, the descendants of these shareholders number in the thousands[1].

Tapuaetahi was founded in March 1965, to ensure that the whenua was never lost to the Local Government rating scheme. At its inception, the vision was determined as "Kia kaua te whenua e riro ai"; that the land is never loss.

Recently, and as a result of benefits coming from the decades of effort, our kaupapa (purpose) has evolved. It has taken such a long time for us to reach this position, because the whenua, our primary asset is not available to be used for security, and so with very little other assets, access to capital has been difficult.

Our kaupapa is:

> "*To ensure the protection of our whenua, re-acquire our whenua tuturu and to build the means to enhance the Social, Cultural and Economic wellbeing of whanau into the future. We will achieve our kaupapa by developing a reputable brand name in both the beach front property and Wagyu beef farming industries*"

[1] Several of thirty-odd whanau Trusts that are recorded as a single shareholder have well over a hundred beneficiaries. Shareholders are typically the senior members of their families and have several descendants who receive benefits and, in time, will inherit the interest (some very large families). There is also a significant number of shareholders with over a hundred descendants.

We are a value led organisation, and have five guiding principles (our tikanga) that inform all our governance and management decisions. They are:

1. *Kaitiakitanga – As Tangata Whenua we will strive to protect and improve the Te Taiao, our natural environment.*
2. *Maramatanga – By being transparent and accountable to our whanau we will ensure that their trust, integrity and confidence in us is sustained.*
3. *Rangatiratanga – Leadership and direction will be evident in all parts of our business, and in the way in which we conduct ourselves.*
4. *Wairuatanga – We will observe the tikanga and kawa of our Tupuna to ensure we develop within the spiritual and cultural context laid down by them.*
5. *Whanaungatanga – Relationships are fundamental to kaupapa and we will ensure that we put energy into developing relationships and supporting good communications with whanau and key stakeholders.*

Our Farm Manager is employed full-time and Executive Manager four days per week. Five board members make up the Committee of Management and meet bi-monthly.

Farming

Our farm (of 130 effective hectares) has for a long time been uneconomic due to the high rating value assigned to it being located on the Purerua peninsular. We receive an old farming concession which postpones a good portion of our immediately payable rates, from well over half to around 25% of the gross farming income.

The current postponed rates bill, amounts to over half a million dollars and is the cost to stop farming the land, notwithstanding, the significant increase in rates we would incur going forward, if we were to stop farming. The high rateable land value is immaterial for any other purpose, other than rates. Despite these challenges we have managed to purchase another block in Oromahoe, and that has allowed us to attain a 'break even' position overall (EBIT). This is a vast improvement on the farming losses over prior years, which were covered by the leasing revenue received from Tapuaetahi beach front properties.

Leasing

Tapuaetahi holds 51 beach front leases, each with a twenty one year term. 39 of these leases have a perpetual right of renewal at the end of the twenty one year term, and 12 have one twenty one year right of renewal before the lease terminates. This business finally began to return benefits to the owners, beyond that of administering the land and covering farming losses, following the 2008 rent reviews.

Since 2008 we have been able to capitalise the farming operation, purchase a new farm and reinvest in the infrastructure for the leasing business. The construction of a seawall and near two kilometres of road sealing are examples of this reinvestment.

Distribution policy

Where there are surplus funds, these are apportioned annually in three parts; new Investment, reinvestment and shareholder benefits. New Investment and reinvestment portions have been reinvested into the farming and leasing portfolios to grow our organisation capacity and potential to deliver benefits back to our communities.

Shareholder benefits
Shareholder benefits are assigned annually, by shareholders at their AGM. In the last decade we have distributed over $2,000,000, which has gone towards:

- Over 100 educational grants;
- Over 50 sponsorship grants;
- Funding of Ngāti Rēhia research (Waitangi Tribunal Overview Report);
- Maintenance of sites of importance in Te Tii such as urupa;
- Contributions to Takou Marae; and Tauwhara Marae for their projects;
- Annual contributions to the operation and development of Whitiora Marae and Hiruharama Hou Marae which are also enjoyed by the community of Kerikeri (especially all of our schools);
- Small annual dividends to shareholders of around $5 per share on average.

Future aspirations
Looking to the future, we have great aspirations for diversification on our lands, particularly with industries that demand human resources - as these form opportunities for the development of our people.

As a supplier of cross bred wagyu beef for Firstlight, , we endeavour to continue to learn and develop products that we hope to one day share locally with our community, beyond the supermarkets.

In addition to a new papakainga development, we also want to create a new subdivision which will include a multipurpose conference meeting space that will be able to accommodate people, and develop opportunities for local tourism products.

The continued development of our leasing portfolio will support these plans and initiatives.

No reira, thank you for this opportunity to address you.

Nga mihi mahana,

Kipa Munro
Chairperson

Annexure 2 - High-Level Civil Engineering Assessment prepared by Vision Consulting Engineers

VISION CONSULTING ENGINEERS

HIGH LEVEL CIVIL ENGINEERING ASSESSMENT

Tapuaetahi Development

Prepared for

Tapuaetahi Incorporation

10/12/2024

Report Information Summary

Job no.	J15724
Report Author	Dan Simmonds
Report Reviewer	Ben Perry
Version No.	1
Status	Final
Date	10/12/2024

Version No.	Date	Description
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Document Acceptance

Action	Name	Signed	Date
Author	Dan Simmonds	 Senior Geotechnical Engineer, MIEAust CPEng, CMEngNZ	10/12/2024
Reviewer	Ben Perry	 Managing Director, FEngNZ CPEng	10/12/2024

Limitations

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It should be appreciated that this assessment was based on a visual assessment only.

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1 Introduction

Vision Consulting Engineers Limited (VISION) has been engaged by the Tapuaetahi Incorporation to assess the suitability of their land for a proposed subdivision at Tapuaetahi. The Incorporation plans to create 18 to 22 proposed allotments on Lot 1 DP184896, each with a dwelling, services and associated amenities. The remaining land will include accessways and a storage building with a boat yard.

This project is being completed in two stages. This Stage 1 report focuses on a high-level engineering assessment to identify potential challenges and opportunities for the subdivision layout. Stage 2 will involve a detailed site suitability report and feasibility geotechnical assessment to support a resource consent application.

This report presents the findings of the Stage 1 assessment, which includes:

- **Desk Study**: Review of provided information and existing data, including a geomorphological assessment using historical aerial images and LiDAR data.
- **High-Level Engineering Assessment**: Evaluation of natural hazards, internal access, stormwater management, wastewater disposal, water supply, and geotechnical considerations.
- **Reporting**: Clear and concise summary of findings, including preliminary recommendations on feasibility and potential constraints.
- **Client Meeting**: A meeting to discuss the findings and address any questions.

This assessment aims to provide Tapuaetahi Inc. with the necessary information to make informed decisions about the proposed subdivision and aid in its successful implementation.

2 Property Description

The property is legally described as Lot 2-3 Deposited Plan 176907, Lot 5 Deposited Plan 177923 and Lot 1 Deposited Plan 184896 and is 3,296,124 m^2 in area.

The property is located on the Purerua Peninsula and extends from the Te Puna Inlet to the south-east and Tapuaetahi Beach to the north-west, with Tapuatahi Creek located along part of the western property boundary. Purerua Road passes through the property and it also contains Taronui Road that provides access to the existing dwellings that are located to the north-west of the subject property. The property contains the Kopupu Stream, Waiotaia Stream and the Kuririki Stream. The location of the property is presented in Figure 1.

The property is currently undeveloped and is generally covered in pasture with bush present within gully features associated with the streams. The topography of the property varies from flat to gently sloping land to areas that are moderately to steeply sloping.

For the purpose of this assessment, the site is limited to the north-western portion of the property as shown in Figure 1.

Basic details of the property are provided in Table 1.

Table 1. Property Details

Data relating to this site

Item	Details
Territorial Authority	Far North District
Site Address	-
Legal Description	Lot 2-3 Deposited Plan 176907, Lot 5 Deposited Plan 177923 and Lot 1 Deposited Plan 184896
Area	3,296,124 m2
Operative DP Zoning	Coastal Living and General Coastal
Proposed DP Zoning	Māori Purpose - Rural

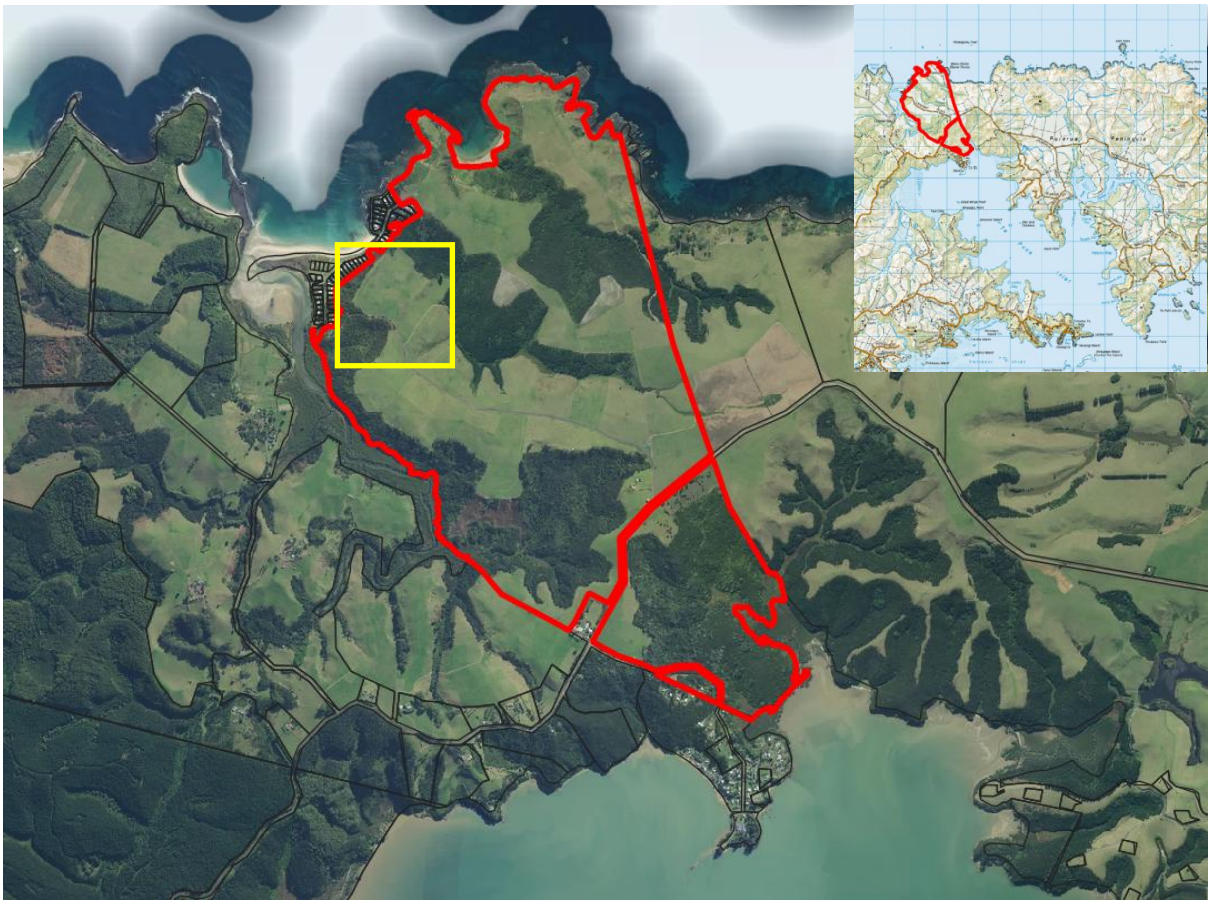

Figure 1. Property and site location

The property is highlighted red, the 'site' is outlined in yellow, north to top of page, boundary approximate only, image from LINZ.

3 Geology

The 1:250,000 geological map, Geology of the Whangarei Area (Ebrooke and Brook et al 2009) indicates that the property is underlain by the Waipapa Group comprising massive to thin bedded, lithic volcaniclastic metasandstone and argillite, with tectonically enclosed basalt, chert and siliceous argillite and the Kerikeri Volcanic Group comprising basalt lava, volcanic plugs and minor tuff.

Based on the geomorphology, the site is anticipated to be underlain by the Kerikeri Volcanic Group, which is in turn underlain by the Waipapa Group.

Landcare Research (Harmsworth, 1996) have mapped the property as being underlain by Okaihau gravelly friable clay being soils of the rolling and hilly land, well to moderately well drained, Otaha clay being soils of the rolling and hilly land, imperfectly to very poorly drained, Otaha gravelly clay loam being soils of the rolling and hilly land, imperfectly to very poorly drained, Rangiora clay, clay loam and silty clay loam being soils of the rolling and hilly land, imperfectly to very poorly drained, and Pungaere gravelly friable clay being soils of the rolling and hilly land, well to moderately well drained.

4 Proposed Development

It is understood that the client wishes to subdivide the property to create 20 to 22 lots, with each lot to contain a dwelling, amenities, and onsite wastewater system. The balance lot is to contain the right of way access to the new lots and a storage building and boat yard is also proposed.

We understand that the option to have a de-centralised on-site wastewater management system is being explored by the Incorporation at the time of preparing this report. This option is briefly discussed further in the Wastewater Section of this report.

5 Geomorphology

The site is generally located on a flat to gently sloping plateau that is present on a north-west trending spur ridge.

To the north and east of the plateau, the land slopes gently to moderately to the north-east, before becoming moderately to steeply sloping down to the Waiotaia Stream. To the north-west of the plateau, the land slopes moderately to steeply down towards the Tapuaetahi Beach. To the south and west of the plateau, the land slopes moderately to steeply down to a gully feature that extends to the Tauaetahi Creek.

The geomorphology of the area is shown in Figure 2 below using a digital elevation model derived from the 2018 Northland Regional Council (NRC) Light Detection and Ranging (LiDAR) dataset and 1m contours.

The moderate to steep slopes that extend down from the plateau show signs of historic land instability that extends to the base of the hillside. Several more recent slips can be observed in the larger features. Some areas of the moderately sloping land appear to show signs of shallow surface creep.

Earthworks associated with Taronui Road appear to include fill material pushed out downslope to form the road.

Figure 2. Site Geomorphology

Site boundaries indicative only, contours are shown at 1m intervals with blue shading lower elevations and green shading higher elevations, north is up the page. DEM courtesy of NRC

6 Historic Aerial Images

Historic aerial images of the property from 1950 and 1980 were obtained from Retrolens, and the 1950 images were reviewed as stereopairs.

The historic aerial image from 1950 is presented in Figure 3. In the image, the area surrounding the site is undeveloped, with some loosely formed access tracks present.

A historic aerial image from 1980 is presented in Figure 4. In the image, Taronui Road has been constructed, along with dwellings that are located to the north-west of the subject property. Trees/vegetation are also present on part of the property.

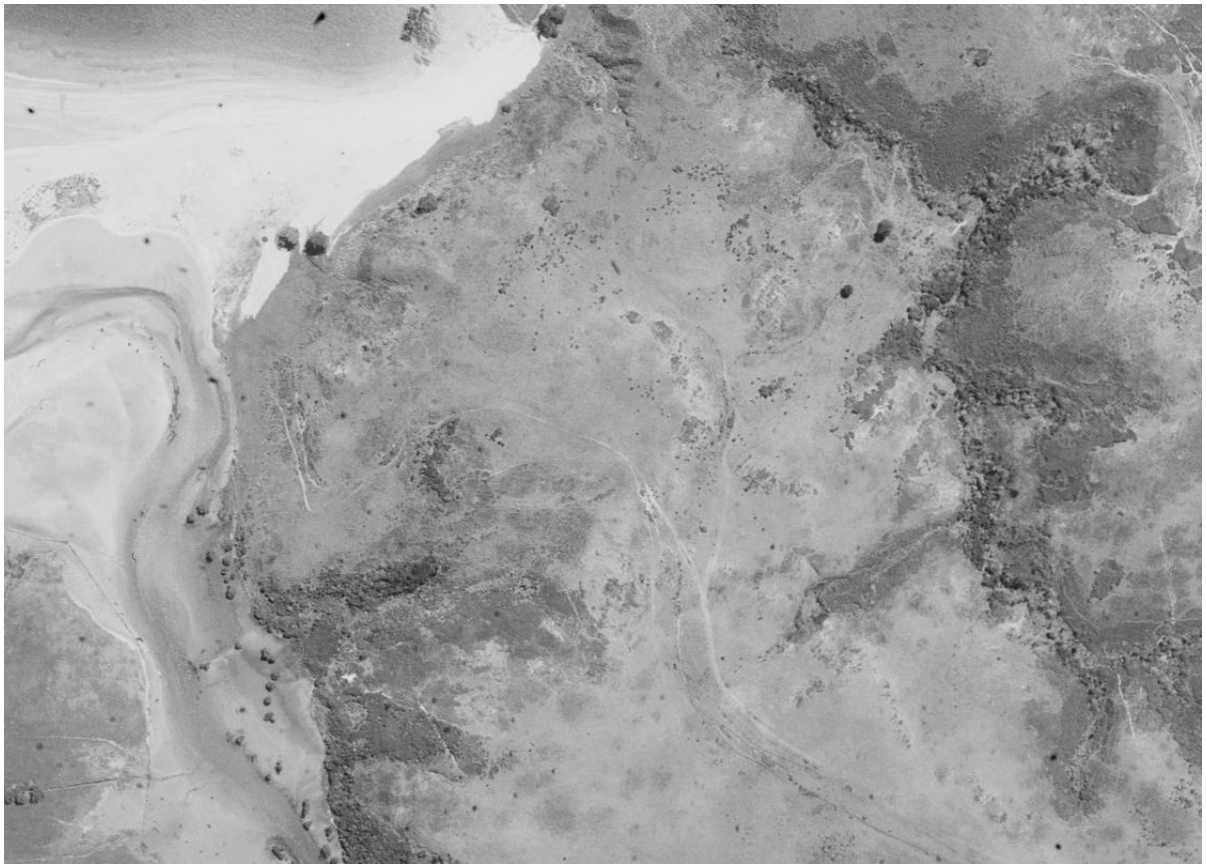

Figure 3. Retrolens 1950 Aerial Image

North at top of page, historic aerial image from Retrolens, approximate property boundary shown in red.

Figure 4. Retrolens 1980 Aerial Image

North at top of page, historic aerial image from Retrolens, approximate property boundary shown in red.

The geomorphology of the site observed in the historic aerial image from 1950 is considered to be relatively consistent with the geomorphology presented in Figure 2, with historic landslips seen extending down from relatively flat plateau down towards the Waiotaia Stream, Tapauetahi Beach and a gully feature that extends down to the Tapuaetahi Creek. Several more recent slips can be observed in the larger features.

To the north/north-east of the site, the landform of the Tapauetahi Beach is observed to have altered significantly from 1950 to 1980.

7 Council Hazard Mapping

The Northland Regional Council (NRC) and Far North District Council (FNDC) hazard layers have been reviewed. According to the NRC and FNDC hazard layers the site is not located in an area susceptible to:

- Landslide
- Erosion
- Coastal Erosion

7.1 FNDC Flooding

The property is not mapped by the FNDC as being affected by flooding.

7.2 NRC Coastal Flooding

The site is mapped by the NRC as being affected by the predicted current, 50-year and 100-year coastal flooding events as shown in Figure 5. The predicted extent of flooding is limited an area adjacent to the Tapuaetahi Creek near the base of a gully feature.

Figure 5. NRC Coastal Flood Extent
North at top of page, extract from NRC Maps

7.3 NRC River Flooding

The site is not mapped as being affected by flooding based on the NRC River Flood model, however the property is mapped as being affected by flooding on the NRC Region Wide Flood model for the 10-year, 50-year and 100-year flooding events as shown in Figure 6. The predicted extent of flooding is limited an area adjacent to the Waiotia Stream and a gully feature that leads to the stream.

Figure 6. NRC Region Wide Flood Model, Flood Extent
North at top of page, extract from NRC Maps

8 High Level Civil Engineering Assessment

The following high-level civil engineering assessment is provided based on our desktop study.

8.1 Geotechnical

8.1.1 Ground Conditions

Based on the desktop assessment, including a geomorphic analysis of historic aerial images, LiDAR-derived contours, and our experience in the local area, the ground conditions at the site are generally expected to comprise residual soil and weathered rock of the Kerikeri Volcanic Group, overlying the Waipapa Group. Colluvium (landslip debris) is anticipated to be present on the steep slopes that extend down from the flat to gently sloping plataeu. Site-won fill is also anticipated in areas adjacent to Taronui Road, placed to form the road.

8.1.2 Stability Assessment

Based on the observed topography, evidence of shallow soil movement and historical ground movement, the site is categorised as having a Low to High Stability Hazard.

- **Low Hazard**: The relatively flat to gently sloping areas of the site are considered to have a low risk of instability.
- **Medium Hazard**: The moderately sloping areas that exhibit signs of shallow surface creep movement are categorised as having a medium hazard risk.
- **High Hazard**: The moderately to steeply sloping areas, particularly those showing signs of past ground movement, are categorised as having a high hazard risk.

To manage the risk on the steeper slopes, a geotechnical setback line has been established 10m from the crest of the moderately to steeply sloping land, as shown in Figure 7. This setback line helps define zones with different stability levels (low to high) and guides appropriate development within those zones. In addition to the geotechnical setback, areas of the site have been identified that show signs of shallow surface creep movement. The areas identified as being susceptible to shallow soil movement are considered to be a medium hazard and are shown in Figure 7.

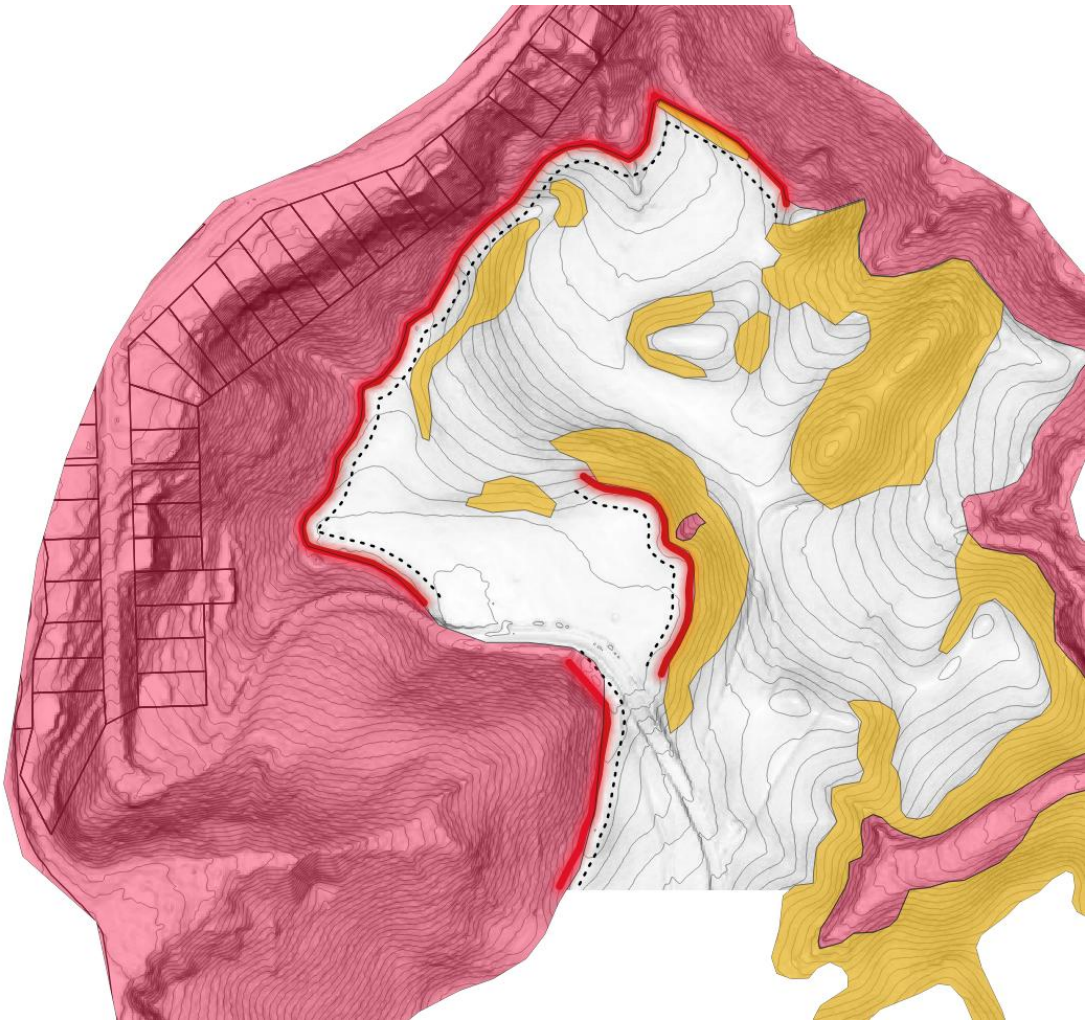

Figure 7. Stability Assessment

Contours are shown at 1m intervals with orange shading of 'Medium Hazard' area and red as 'High Hazard' area. The black dotted line is a 10m setback from the top-of-slope crest. The bold red lines are assessed as an indicative top-of-slope crest with the dashed-black line being a 10m geotechnical setback from the crest. The remaining area is considered low risk. North is up the page.

8.2 Key Geotechnical Considerations

The following geotechnical considerations are relevant to the proposed development:

- **Expansive Soils**:
  - **Observation**: The site is underlain by clay-rich soils derived from the Kerikeri Volcanic Group. These soils are known to have the potential to expand and shrink with changes in moisture content.
  - **Risk**: Expansive soil movement can exert significant pressure on foundations, leading to cracking, distortion, and potential instability of structures.
  - **Mitigation Recommendation**:
    - An assessment of the soil's expansivity is to be conducted at the building consent stage. This assessment will determine the degree of potential movement and inform appropriate foundation design.
    - Foundation design accounts for the expansive nature of the soil by using appropriate foundation types, depths, and construction techniques. This may include deepened foundations, stiffened raft foundations, or other suitable foundation types.

- **Slope Stability**:
  - **Observation**: The site has varying topography, with the majority of the site being relatively flat and the remainder sloping moderately to steeply down from the plateau. There are also signs of past ground movement on the steeper slopes. In addition, some areas of moderately sloping land have been identified that show signs of shallow surface creep movement.
  - **Risk**: Steeper slopes are inherently less stable and more susceptible to landslides or slippage, especially when there is evidence of previous ground movement; building on or near such slopes increases the risk of structural damage or instability.
  - **Mitigation Recommendation**:
    - Any filling or construction of structures within the medium and high stability hazard extents shown as orange and red shading or within the 10m geotechnical setback area in Figure 7 are to be assessed by a Chartered Professional Engineer experienced in geotechnical engineering.
    - This assessment will determine if specific measures are needed to ensure stability, such as deepened foundations, leading-edge piles, or in-ground retaining structures.
- **Earthworks in Areas with Cobbles/Boulders**:
  - **Observation**: The site's geology suggests that basalt cobbles and boulders may be present within the soil.
  - **Risk**: These cobbles/boulders can pose challenges during excavation and construction, potentially hindering excavation, damaging equipment, and complicating foundation and service installation.
  - **Mitigation Recommendation**:
    - Anticipate the presence of cobbles/boulders during earthworks and foundation construction.
    - Consider the use of specialised equipment, such as rock breakers or excavators with specialised buckets, to handle these conditions.

This assessment highlights the key geotechnical considerations that need to be addressed during the detailed design and construction phases of future development at the site.

The intensity of development achievable on the site will be influenced by the need to effectively mitigate the identified geotechnical constraints. A collaborative approach between the developer, landscape architect and geotechnical engineers will be essential to achieve a balance between development goals and site stability.

Figure 8. Oblique Areial of Site

Courtesy Northland Regional Landscape Assessment Worksheet dated February 2014.

8.2.1 High level Geotechnical Recommendations

This high-level geotechnical assessment has identified several key geotechnical constraints and potential risks associated with the proposed subdivision. These include:

- **Expansive Soils**: The presence of clay-rich soils with the potential to expand and shrink with changes in moisture content. This can lead to foundation movement and damage to structures if not properly addressed.
- **Slope Stability**: The moderately to steeply sloping areas of the site, particularly those with evidence of past ground movement, pose a potential risk of instability.
- **Cobbles/Boulders**: The presence of basalt cobbles and boulders within the soil can complicate earthworks and foundation construction.

To mitigate these risks at the site, the following recommendations are made:

- **Further Geotechnical Investigation**: undertake a site-specific geotechnical investigation and assessment at the time of building consent. This investigation should include (but not be limited to):
  - Low Hazard Area:
    - Subsurface testing (e.g., test pits, boreholes) to assess soil profiles, identify fill material, and evaluate ground conditions.
    - Assessment of soil samples to determine expansivity, bearing capacity, and other relevant properties.
    - Assessment of the presence of cobbles/boulders to inform earthworks and foundation design.
  - Medium Hazard Area:
    - All investigations listed for Low Hazard Areas, plus
    - Stability analysis of slopes to assess the risk of slippage and recommend appropriate mitigation measures (if required).
  - High Hazard Area:
    - Subsurface testing (expected to comprise all investigations listed for a Low Hazard Area, plus machine boreholes and/or Cone Penetration Tests) to assess soil profiles, identify fill material and evaluate ground conditions.
    - Stability analysis of slopes to assess the risk of slippage and recommend appropriate mitigation measures (if required).
- **Foundation Design**:
  - Foundation design is to be informed by the geotechnical investigation and account for the expansive nature of the soil and the potential presence of cobbles/boulders.
  - Appropriate foundation types and depths should be considered given the specific site constraints and soil conditions.
- **Earthworks**:
  - Earthworks should be carefully planned and managed, with consideration for the site's topography and soil conditions.
  - Appropriate retaining structures should be employed on sloping areas to maintain stability and prevent erosion.
  - Fill and cut slopes should adhere to the recommended limitations (1.0m maximum height and 1V:2.5H maximum slope) unless otherwise specified by the geotechnical engineer.

- **Slope Stabilisation**:
    - Any development Any filling or construction of structures within the medium and high stability hazard extents will need to be subject to specific geotechnical assessment undertaken by a Chartered Professional Engineer experienced in geotechnical engineering.
  - Appropriate stabilisation measures, such as retaining walls, ground anchors, or other engineering solutions, may be required in areas with higher instability risk.

These geotechnical considerations and recommendations have practical implications for the development. The presence of expansive soils and potential slope instability may influence the placement of dwellings and the design of accessways. The identification of areas with cobbles/boulders may affect the location of building platforms and the design of foundations. By addressing these geotechnical constraints early in the design process, the Incorporation can ensure the long-term safety and stability of the development while also optimising land use and minimising potential construction challenges.

8.3 Internal Access

The proposed development requires new internal accessways to provide vehicular and pedestrian access to the individual house sites. Access to the development will be provided from Taronui Road.

Given the terrain, only minor earthworks are anticipated to form suitable accessways and cut and fill batter slopes are expected, provided that they are located away from the moderately to steeply sloping land.

8.3.1 Key Internal Accessway Considerations

Key design considerations for the internal accessways will include:

- Compliance: Accessways designed in accordance with the FNDC Engineering Standards and the District Plan.
- Geometry: Appropriate carriageway widths, gradients, and turning radii provided to ensure safe and efficient vehicle movement.
- Pavement: Sealed accessways are anticipated for the site.
- Drainage: Open drains are anticipated to manage stormwater runoff from the accessways. Open drains can be used to convey collected stormwater and improve the quality of the collected runoff. Discharge points will be carefully selected to prevent erosion or adverse impacts on the downstream environment.
- Serviceability: Accessways will be designed to accommodate the installation of underground services, including telecom and power.
- Safety: Adequate sight distances, pedestrian access, and other safety features will be incorporated into the design.

Construction and Supervision:

- Construction of the accessways will need to be undertaken by experienced contractors and supervised by a qualified engineer to ensure compliance with the approved design and relevant standards.

8.3.2 Additional Considerations

In addition to the items outlined above, the Incorporation could consider incorporating the following into the development:

- Including pedestrian/shared use paths within the development to provide safe access for tamariki.
- Include traffic calming measures to promote a low speed environment
- Providing parking adjacent to accessways for visitors

8.4 Stormwater Assessment

To manage stormwater runoff from the proposed development, we recommend adopting a Low Impact Design (LID) approach. This approach emphasises natural processes and minimises the impact on the surrounding environment. It is anticipated that the accessways will include open drains to collect and convey stormwater to an appropriately designed outfall/s. The use of open drains will improve the quality of the collected stormwater prior to discharging to the downstream environment.

Due to the size of the proposed lots and accessways being within the balance lot, it is anticipated stormwater attenuation should not be required provided that impermeable surface areas are within the permitted activity criteria (defined in the Operative District Plan as 10% or 600m^2 in the Coastal Living Zone, 10% in the General Coastal Zone and in the Proposed District Plan as 25% in the Maori Purpose – Rural.

8.4.1 Key Stormwater Considerations

All stormwater management devices are to be carefully designed considering the following:

- Geotechnical Constraints: The design will need to carefully consider the geotechnical constraints identified in the geotechnical assessment to ensure the stability of the system and minimise potential erosion.
- Erosion and Sediment Control: Erosion and sediment control measures, including sediment basins and silt fences, will need to be carefully implemented during and after construction to minimise sediment runoff and protect the estuary.
- Natural overland flow paths: To protect proposed new lots from sheet flows and natural overland flow paths, careful consideration needs to be given for development being carried out within areas where concentrated flow paths are present. Concentrated flow paths based on the geomorphology of the site are shown in Figure 10.
- Outfalls: Stormwater will be discharged via appropriately designed outfalls, considering the potential impacts on the coastal environment. Outfall locations should be selected to minimise erosion and prevent adverse effects on water quality.

Figure 9. Example of a Swale Drain

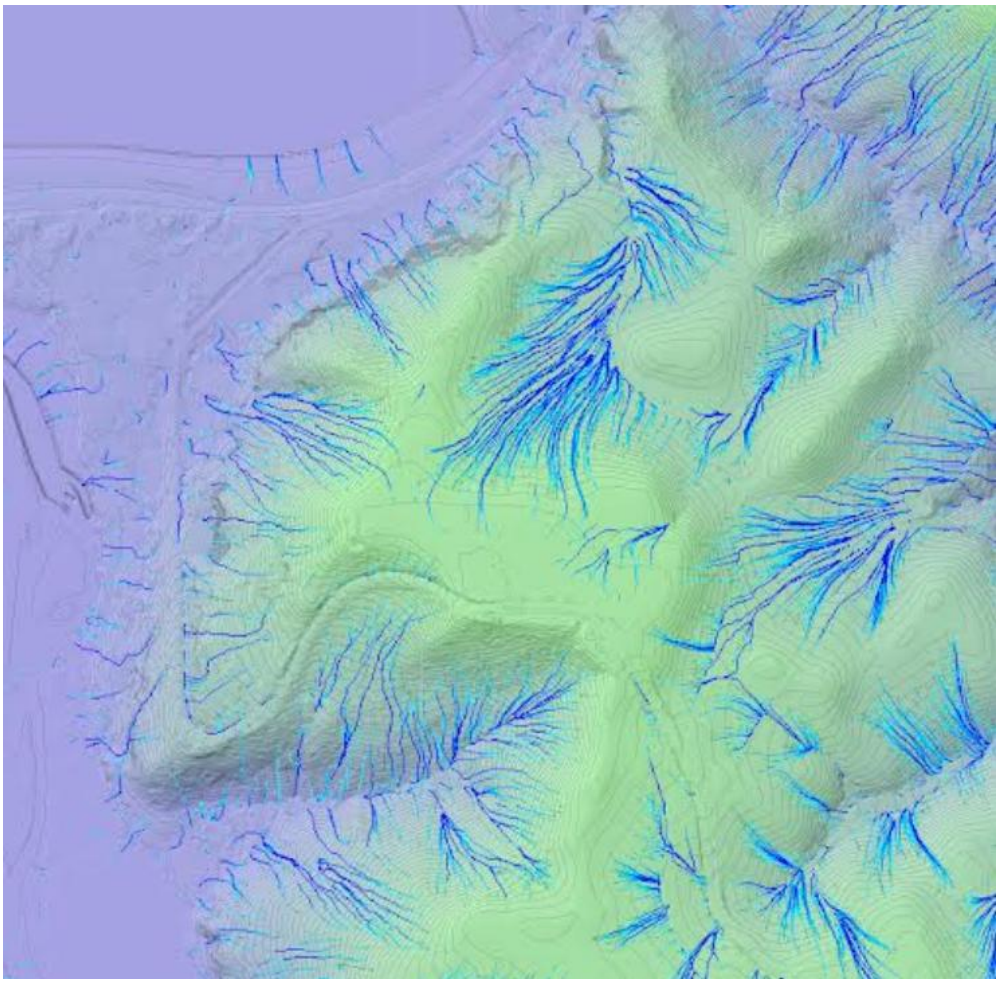

Figure 10. Concentrated flow paths

Flow accumulation lines indicating surface water flows and accumulation patterns

8.4.2 Additional Considerations

To further enhance the sustainability and environmental performance of the development, the Incorporation could consider incorporating the following Low Impact Design (LID) principles and practices:

- **Source Control**: Minimise impervious surfaces to reduce runoff volumes. Utilise permeable paving materials where possible.
- **Natural Drainage**: Maintain natural drainage patterns and overland flow paths where feasible.
- **Open Drains and Swales**: Utilise open drains, particularly swales, to convey stormwater, enhancing infiltration and filtering pollutants. Swales could be vegetated with native plants to further improve water quality.
- **Rain Gardens and Bioretention Areas**: Incorporate rain gardens and bioretention areas to capture and treat stormwater runoff.

By incorporating these LID principles, the development can achieve the following benefits:

- **Environmental Protection**: Protect the mauri of the surrounding environment.
- **Enhanced Aesthetics**: Create a visually appealing development that integrates with the natural landscape.
- **Sustainability**: Promote sustainable stormwater management practices.

The Incorporation could also consider:

- **Constructed Wetlands**: Create constructed wetlands to provide additional treatment and enhance biodiversity.
- **Educational Signage**: Install educational signage to inform residents and visitors about the LID features.

This approach can help create a more sustainable and environmentally friendly development.

8.5 Wastewater

The site is not in an area serviced by a wastewater reticulation system and is not expected to be reticulated in the future.

The proposed development is to include individual onsite wastewater systems for each proposed lot, designed in general accordance with Auckland Technical Publication 58 (TP58).

8.5.1 Preliminary Onsite Wastewater Design

Based on the findings of this high-level assessment, the following preliminary onsite wastewater assessment is provided.

8.5.1.1 Site Evaluation

A range of site features were assessed in terms of the degree of limitation they present for an on-site wastewater management systems. A summary of key features in relation to effluent management at the site are listed Table 2.

Table 2. Site Evaluation

Feature	Description
Climate	Northland is a sub-tropical climate zone, with warm humid summers and mild winters. Typical summer temperatures range from 22°C to 26°C (maximum daytime) but seldom exceed 30°C. In winter, high temperatures are between 14°C to 17°C. Annual sunshine hours average about 2000 in many areas. Mean annual rainfall is 1400mm for the site location.
Exposure	The proposed Lots are moderately exposed providing them with medium sun and wind exposure.
Vegetation	The site is covered in grass, with vegetation present on the moderately to steeply sloping land.
Slope	Refer to Section 5.The site is generally located on a flat to gently sloping plateau. Moderate to steep slopes extend down from the plateau. Slopes are presented in Figure 11. Areas sloping at 10 to 25 degrees are shown at orange, areas sloping at greater than 25 degrees are shown as red. Special consideration and discharge consent would be needed to mitigate the potential environmental effects when discharging on slopes great than 25 degrees.
Fill	No obvious signs of fill have been identified on the site, other than fill placed to form Taronui Road.
Erosion Potential	No obvious signs of erosion have been noted.
Surface Water	Refer to Figure 10 presenting concentrated flow paths based on the site geomorphology.
Flood Potential	Refer Figure 5 and 6.
Stormwater run-on and	The proposed systems should include surface water cut-off drains where appropriate

upslope seepage	
Groundwater	Groundwater bores are present on properties to the north-east of the site at the base of the hillside. Groundwater is recorded as being at 1.8 to 2.3m below ground surface level within the bores.
Site Drainage and Subsurface Drainage	Site drainage will need to be addressed at the time of Building Consent. At this stage, no subsurface drainage is recommended.
Recommended Buffer Distances	All buffer distances recommended in Northland Regional Council's Regional Plan, the District Plan and ARC TP58:2004 are to be complied with. Setbacks required by TP58 are presented below.

Minimum Recommended Separation Distance	Wastewater Treatment Level				
	Primary (Septic tank plus effluent outlet filter)	Secondary (AWTS)	Advanced Secondary (Packed Bed Reactor)	Tertiary (Disinfection Note 9)	Advanced Tertiary[10] (Nutrient reduction & disinfection)
Buildings/Houses[1]	3m	1.5 to 3m	1.5 to 3m	1.5 to 3m	1.5 to 3m
Property Boundary[2]	1.5m	1.5m	1.5m	1.5m	1.5m
Surface Water[3]					
Soil Category 1[4]	Note 4	10m	10m	10m	10m
Soil Category 2 - 3	20m	10m	10m	5 - 10m[11]	5m[11]
Soil Category 4 - 6	20m	15m	15m	5 - 10m[11]	5m[11]
Soil Category 7	Note 4	15m	15m	5 - 10m[11]	5m[11]
Water Supply bore[5]					
Soil Category 1	Note 4	20m	20m	10m	10m
Soil Category 2 - 3	20m	20m	20m	10m	10m
Soil Category 4 - 6	20m	20m	20m	10m	10m
Soil Category 7	Note 4	20m	20m	10m	10m
Groundwater[6&7]					
Soil Category 1	Note 4	1500mm	1200mm	1000mm	900mm
Soil Category 2 - 3	1500mm	1200mm	900mm	600mm	600mm
Soil Category 4 - 6	1200mm	900mm	600mm	600mm	600mm[9]
Soil Category 7	Note 4	600mm	600mm	600mm	600mm
Floodplain[7] *(Return Period Storm)*	One in 100 year	One in 20 year	One in 20 year	One in 20 year	One in 20 year
Embankments/ Retaining Walls[8]	3m from the drainage material/cut batter interface or 45° angle from toe of wall excavation (which ever is the greatest)				

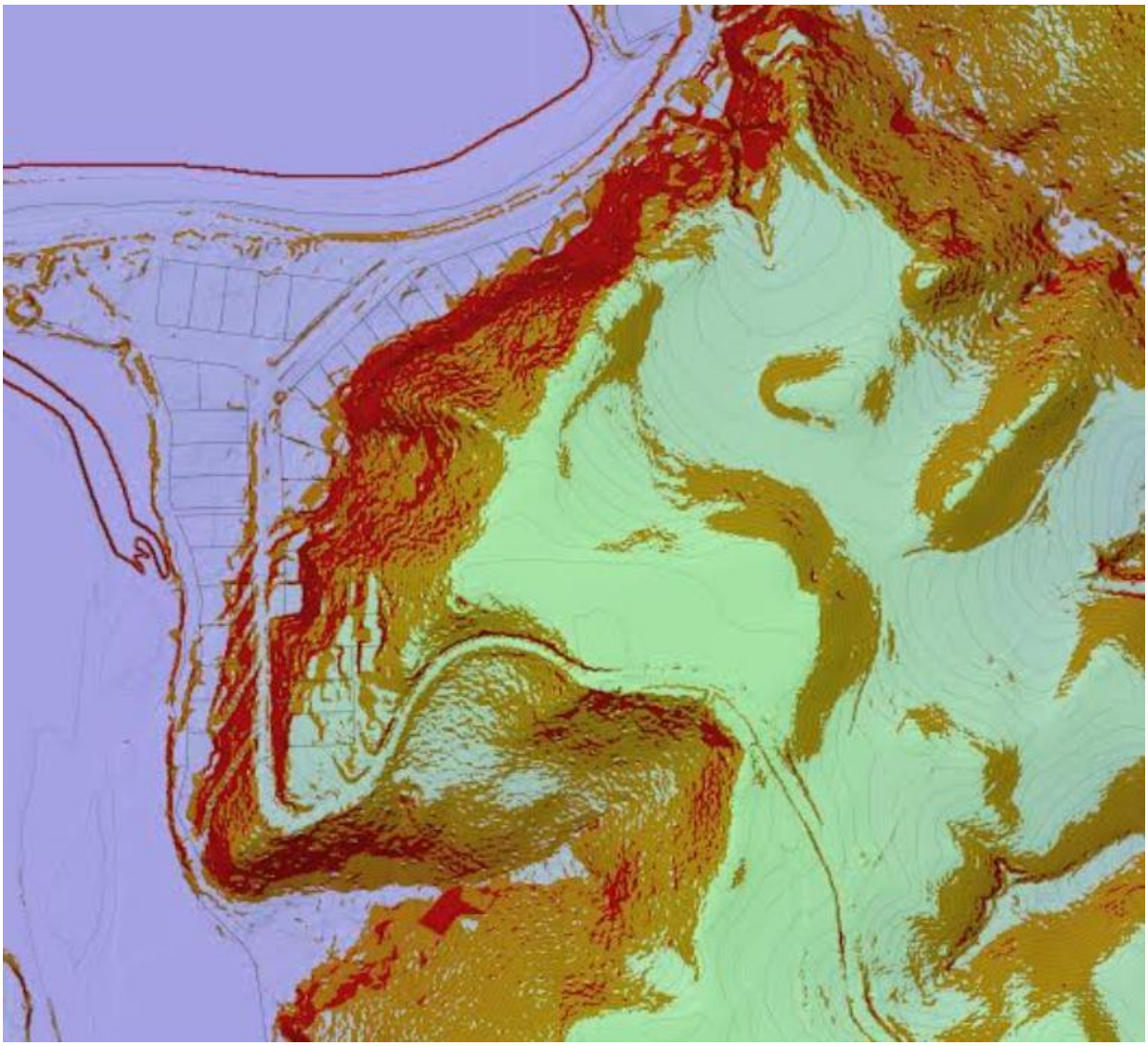

Figure 11. Slopes for Wastewater

Areas sloping at 10 to 25 degrees are shown at orange, areas sloping at greater than 25 degrees are shown as red. Special consideration and discharge consent would be needed to mitigate the potential environmental effects when discharging on slopes great than 25 degrees.

8.5.1.2 Concept Disposal Field Sizing

It is anticipated that the wastewater load from a future dwelling, assuming 4 bedroom dwelling (6 people maximum design occupancy, design flow allowance of 180 l/person/day is 1080 L/day. Due to the site being underlain by the Kerikeri Volcanic Group, it is anticipated that surface mounted pressure compensating drip lines covered with mulch will be suitable for the proposed future activities. We have assumed a soil category of 6 with a loading rate of 3 litres per square meter per day and a 100% reserve area.

Table 3. Summary of land application area

Area Required for Disposal of Effluent (using a 50% Reserve)(m^2)
$360m^2$ (active) + 180 m^2 (reserve) = 540 m^2

Therefore, it is anticipated that each lot will require approximately $540m^2$ for the disposal of secondary treated effluent via pressure compensating dripper lines.

It should be noted that following site-specific investigation, it might be found that the site is suitable for a primary treatment system with standard trenches.

8.5.2 Option for a STEP System

In addition to the options outlined above, the Incorporation could consider a Septic Tank Effluent Pump (STEP) system. This system offers several potential advantages for the development:

- **Reduced Lot Sizes**: By centralising the wastewater treatment and land application, the STEP system can enable smaller lot sizes, maximising the number of dwellings that can be accommodated on the site. This is particularly beneficial in situations where land availability is limited or where the Incorporation wishes to create more compact and communal living spaces.
- **Environmental Protection**: The STEP system can provide a higher level of wastewater treatment compared to traditional individual septic tank systems. This helps to protect the mauri of the surrounding environment, including downstream waterways and coastal kaimoana, which is a key priority for the Incorporation.
- **Centralised Management**: The centralised treatment plant allows for easier monitoring and maintenance of the wastewater system, ensuring consistent performance and compliance with environmental regulations. This reduces the burden on individual leaseholders and provides the Incorporation with greater control over the long-term operation of the system.
- **Cost-Effectiveness**: While the initial cost of the STEP system may be higher than individual septic tanks, the long-term cost savings can be significant. The centralised treatment plant can be more efficient to operate and maintain, and the reduced land requirements can offset the initial investment.
- **Flexibility**: The STEP system can be designed to accommodate future expansion or changes in demand. This provides flexibility for the development as it grows through staging.
-

8.5.2.1 Land Application Areas

Figure 12 illustrates two potential land application areas for the treated wastewater, totalling 13,570 m^2. These areas have been identified based on factors such as soil type, slope, and proximity to water bodies. The final selection of land application areas will be determined from on-site inspection in consultation with the Incorporation and relevant stakeholders, ensuring that the chosen approach aligns with the values and environmental goals.

Table 3. Summary of land application area STEP System

Area Required for Disposal of Effluent (using a 50% Reserve)(m^2)
7,920m^2 (active) + 3,960 m^2 (reserve) = 11,880 m^2

8.5.2.2 Further Considerations

The Incorporation could engage with a qualified wastewater specialist to conduct a detailed feasibility assessment and cost-benefit analysis of the STEP system compared to other options.

The lease agreements for the development should clearly outline the responsibilities and costs associated with the centralised wastewater treatment system, ensuring transparency and fairness for all parties involved.

The Incorporation should develop a long-term asset management plan for the STEP system, including provisions for ongoing maintenance, monitoring, and eventual renewal of components. This will ensure the system's sustainability and protect the Incorporation's investment over time.

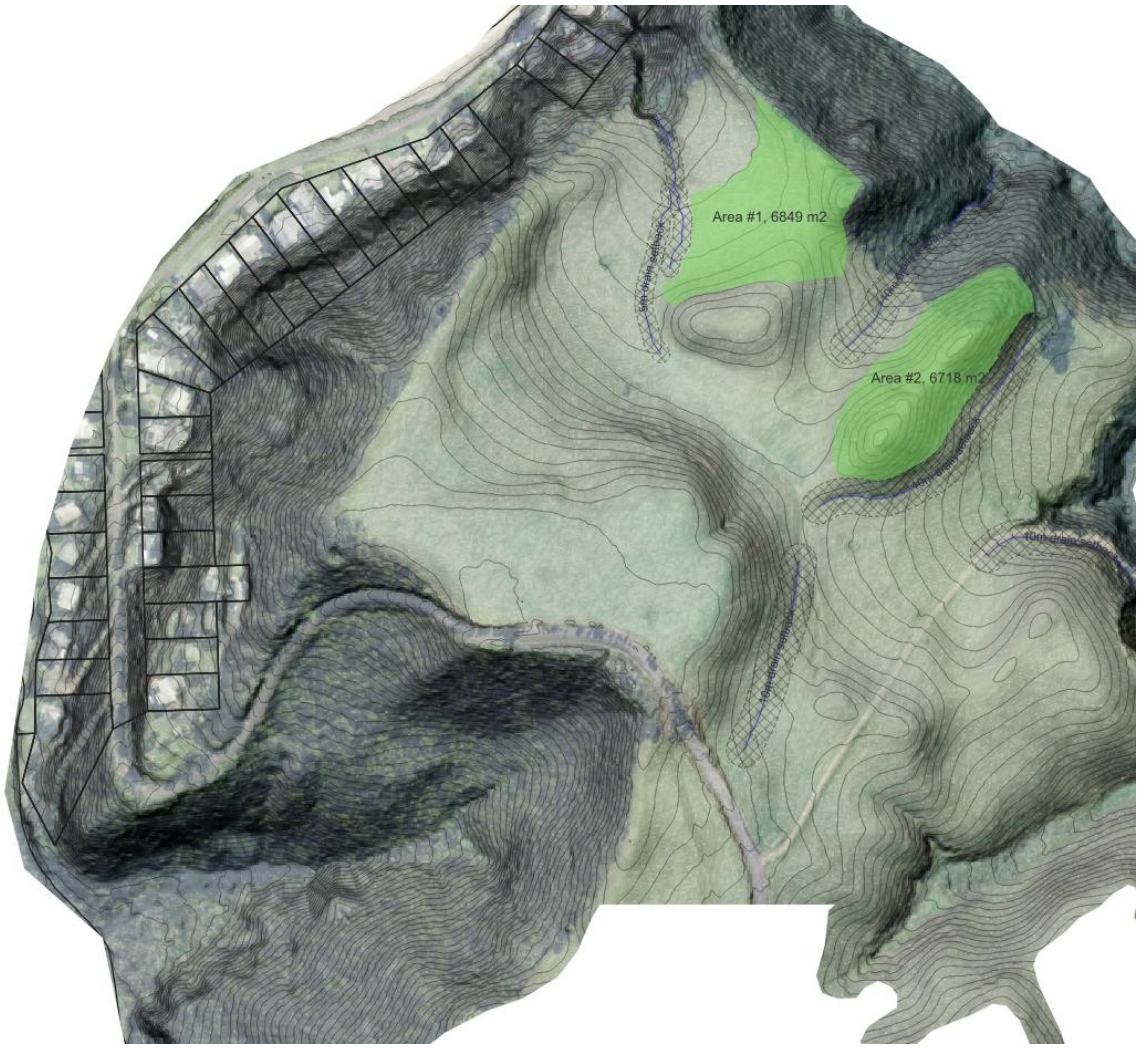

Figure 12. STEP system land application areas

Potential land application areas are shown as green highlighted areas being 6,849 m^2 and 6,718 m^2, totalling 13,570 m^2.

8.6 Water Supply

8.6.1 Potable Water

The property currently does not have a water supply connection.

Water supply will be from water collected from building roofs and stored in water tanks.

8.6.2 Firefighting Water Supply

FNDC Engineering standards require that a water supply is provided that is adequate for fire fighting purposes. The potable-water supply for the development will be via stored rainwater in individual lots. Given the location of the site, it has been assumed that the site is within a Rural Fire District. This means that the provisions of the New Zealand Fire Service Fire Fighting Water Supplies code of practise SNZ PAS 4509:2008 (PAS4509) are not applicable and are only provided as guidance.

As the only requirement is that imposed by the rules within the FNDC's Engineering Standards, it is anticipated that the FNDC is likely to accept providing 10,000L per lot of water for fire fighting water supply if approval is obtained from the Rural Fire Authority. Council will assess the provision of water storage for fire fighting purposes at the time of a new building consent on each lot.

9 Conclusion

This high-level engineering assessment has provided a preliminary overview of the key opportunities and constraints associated with the proposed development at Tapuaetahi. The assessment has considered various aspects, including geotechnical conditions, internal access, stormwater management, wastewater disposal, and water supply.

9.1 Key Findings

- **Geotechnical**: The site presents geotechnical challenges related to expansive soils, slope stability, and the presence of cobbles/boulders. By addressing these geotechnical constraints early in the design process, they can be effectively managed through appropriate design, earthworks practices, and slope stabilisation measures.
- **Internal Access**: The terrain allows for the development of suitable accessways with minor earthworks. Careful consideration should be given to the design and construction of accessways to ensure safe and efficient vehicle and pedestrian movement.
- **Stormwater Management**: A Low Impact Design (LID) approach is recommended to minimise stormwater runoff and protect the environment. Opportunities exist to incorporate LID principles and practices, such as open drains, swales, rain gardens, and erosion control measures, to create a sustainable and aesthetically pleasing development.
- **Wastewater**: Individual onsite wastewater systems or a centralised STEP system are potential solutions. The STEP system offers advantages in terms of reducing lot sizes, protecting the environment, and providing centralised management.
- **Water Supply**: Water supply will be from rainwater collected on building roofs and stored in water tanks. Firefighting water supply requirements can be met through adequate water storage on individual lots and consultation with the Rural Fire Authority.

9.2 Opportunities and Constraints

The assessment has identified both opportunities and constraints that can inform decision-making and support the successful implementation of the development. The opportunities lie in the potential to create a sustainable, environmentally friendly, and culturally sensitive development that integrates with the natural landscape. The constraints relate primarily to the geotechnical conditions and the need for careful stormwater and wastewater management.

By proactively addressing these constraints and capitalising on the opportunities, Tapuaetahi Inc. can achieve its vision for a thriving and sustainable community. The findings of this assessment provide a solid foundation for the next stages of the development process, including resource consent application, detailed design, and construction.

10 Recommendations

Based on the findings of this high-level engineering assessment, the following recommendations are made to guide the next steps in the development process:

- **Site Investigation**: Conduct a site investigation, including geotechnical walkover and testing at a feasibility level, to further assess ground conditions, soil properties, and potential hazards. This investigation will inform the engineering resource consent report as well as earthworks, pavement design, and stormwater management systems.
- **Wastewater Feasibility Assessment**: Conduct a feasibility assessment and cost-benefit analysis of the preferred wastewater treatment system (individual onsite systems or a centralised STEP system). This assessment should consider factors such as environmental impact, long-term costs, and maintenance requirements.
- **Stormwater Management Plan**: Develop principles for the design of the stormwater management at the site. This will inform the design plan that may incorporate Low Impact Design (LID) principles and practices. This plan should include sufficient designs for swale drains, rain gardens, and erosion control measures as required. Consider opportunities for constructed wetlands to further enhance the sustainability and environmental performance of the development.
- **Collaborative Design**: Foster close collaboration between the project team, including the Incorporation, engineers, landscape architects, and other specialists. This collaborative approach will ensure that the design effectively addresses the identified constraints and opportunities, resulting in a successful and sustainable development.
- **Cultural Considerations**: Integrate cultural considerations and values into the design process. This includes protecting the mauri of the surrounding environment, incorporating traditional design elements, and engaging with the design process.

By carefully considering these recommendations and continuing to engage in a collaborative approach, Tapuaetahi Inc. can achieve its vision for a thriving and sustainable community.

Figure 13. Paroramic View of Site from West-Northwest
Image courtesy of Larry Sutherland's YouTube video.

11 Next Steps

The next phase in realising the vision for your project involves delving deeper into the details. This is where we move from the broad strokes of possibility to the intricate patterns of planning and preparation.

11.1 Stage 2: Weaving Together the Threads

In Stage 2, we will weave together the various threads of engineering and environmental considerations to create a comprehensive picture of your whenua and its potential. This will involve:

- **Feasibility Geotechnical Assessment**: A site visit to investigation of the ground conditions, including soil testing, to inform the Site Suitability Report.
- **Site Suitability Report**: A detailed assessment of the land's suitability for the proposed development, considering factors such as topography, soil conditions, natural hazards, and environmental sensitivities.

11.2 Building on the Foundation

The Stage 2 assessment will build upon the foundation laid in this Stage 1 report. We will take the initial findings and recommendations and refine them through further investigation and analysis. This will ensure that the final design is robust, sustainable, and aligned with your aspirations for the project.

11.3 Continuing the Journey Together

We believe that continuing this journey together will bring significant value and benefits to your project. Our team is committed to working closely with you, listening to your needs, and incorporating your values into the design process. We are confident that our expertise and collaborative approach will help you create a development that honours the whenua and provides a thriving and sustainable community for generations to come.

Annexure 3 - Draft Site Plan prepared by Littoralis Landscape Architecture

Scale @A3	Project No.	Drawing No.	Rev
1 : 1000	1374	LLA002	A

0 25 50 m

Date
19/12/2024

Client
TAPUAETAHI INCORPORATION

Prepared in association with
VISION CONSULTING ENGINEERS AND ENGINEERING OUTCOMES

Project Title
TAPUAETAHI PAPAKAINGA

Title
RC APPLICATION 2025

Sheet Title
SITE PLAN 2025

LITTORALIS
LANDSCAPE ARCHITECTURE

CAD REF.: 1371_Tapuaetahi_20241216.vwx