ECOLOGICAL ASSESSMENT PROPOSED PRIVATE PLAN CHANGE – MANGAWHAI EAST

Southern Area - Lot 2 DP 29903, Lot 1 DP 392239 & LOT 2 DP 392239 Mangawhai

November 2024

RURAL DESIGN SINCE 1984

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1.0 INTRODUCTION

1.1 Background & Proposed Private Plan Change

Mangawhai East Plan Change (MEPC) ('the Proposal') is proposed for land at Black Swamp and Raymond Bull Roads - ('the subject site').

The Proposal seeks to enable a mixture of urban development including a range of residential zones, Mixed Use and Neighbourhood Centre, as well as a portion of Rural Residential zoned land (Figure 1).

The Proposal is supported by a Structure Plan and Development Area provisions that aim to deliver a range of allotment sizes with opportunities for ecological enhancement, open space and connectivity corridors.

Rural Design 1984 Limited (RDL) has been engaged by Proland Matters ('the Client') to undertake an ecological assessment to identify existing ecological values of the southern portion of the subject site at Black Swamp Road, Mangawhai (Lot 2 DP 29903, Lot 1 DP 392239 & LOT 2 DP 392239), and assess the effects of the proposed urbanisation of land on the identified ecological values. In addition, the assessment will outline ecological opportunities, constraints and identify potential mitigation strategies.

The site is zoned 'Rural' with the 'Mangawhai Harbour' overlay under the Kaipara District Council District Plan (Operative). The subject site contains existing structures with farm sheds. It is mostly pastoral in nature and generally sloping in a northerly direction towards the Mangawhai Harbour

The subject site is situated approximately 1.5 km southwest of Mangawhai Village and is approximately 31 hectares in size (Figure 2). It is accessed from Black Swamp Road on its northern boundary.

The site is abounded by a significant Level 1 Protected Natural Area (PNA) of the Rodney Ecological District (ED) on its northern boundary known as the Mangawhai Harbour, Sandspit and Surrounds (ROD014).

This assessment should be read in conjunction with the ecological assessment prepared by Viridis for the northern portion of the plan change land to the north of Black Swamp Road and bounded by Raymond Bull Road.

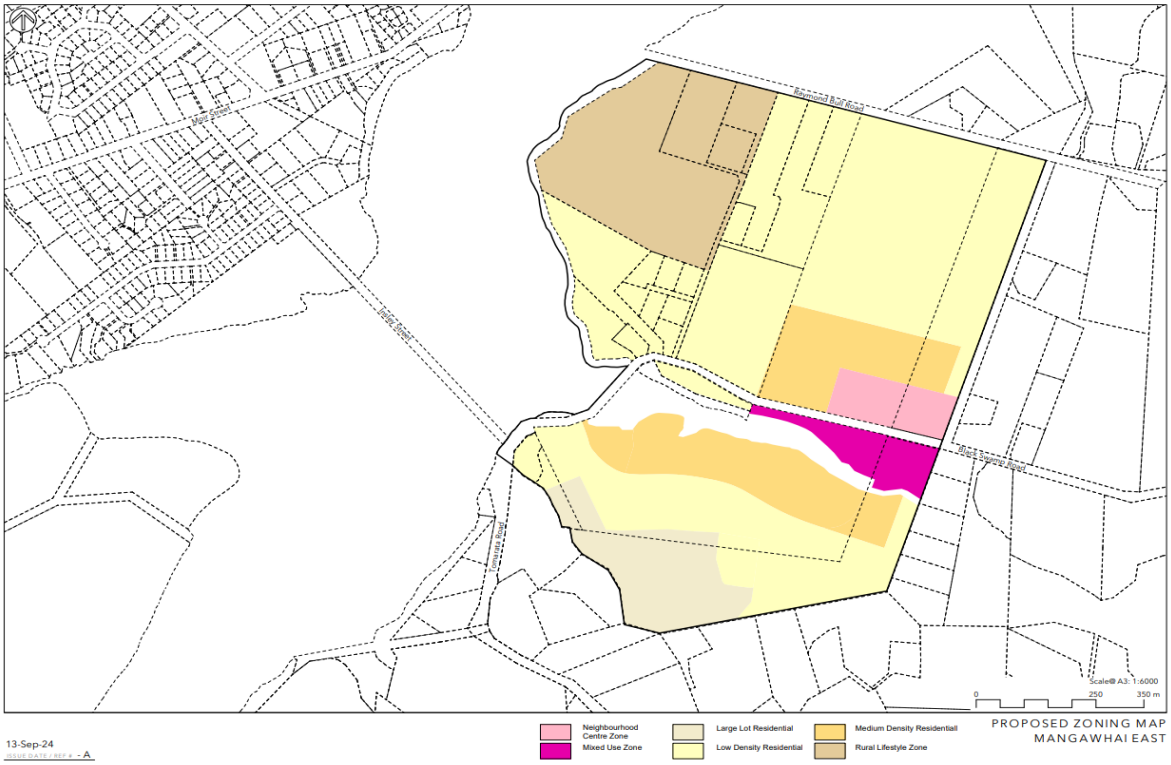

Figure 1: Showing Mangawhai East Plan Change Area

Figure 2: Subject site in proximity to Mangawhai Village

2.0 METHODOLOGY

2.1 Site survey methodology

The subject site was visited on the 25th of May and 21st of July 2022 and 10th February 2023 for the purposes of providing a comprehensive Ecological Assessment of the ecological values for a proposed subdivision. The application was lodged as a non-complying activity under Rule 12.12.1. This consent has now been approved by the Kaipara District Council (RM230111).

Further site visits were undertaken in July 2024 with Viridis in relation to the proposed plan change. It is considered that the findings of the ***Ecological Assessment Pertaining to a Proposed Subdivision at Lot 2 DP 29903, 18A Blackswamp Rd, Mangawhai dated November 2023*** are relevant and provides information over and above what is generally required to address the ecological considerations of a plan change. The entire contents of that report will not be repeated herein but the main findings are summarised below in Section 3 with an Assessment of potential ecological effects relating to the proposed MEPC provided in Section 4 of this report.

2.2 Assessment of Effects Methodology

2.2.1 EIANZ Assessment

As a part of our ecological assessment, we briefly assessed the potential effects of the proposed PPC and subsequent site development on both terrestrial and aquatic values on site. We generally followed the process as described within Ecological Impact Assessment (EcIA) guidelines (EIANZ 2018). The guidelines provide a process for identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components; and providing a scientifically defensible approach to ecosystem management.

2.2.2 Values Assessment

Four criteria were used to determine the ecological value of the ecological features present on-site, these being 'Representativeness, Rarity/distinctiveness, Diversity and Pattern, and Ecological Context' as prescribed under the EIANZ (2018) criteria. The method involves assigning ecological values under each of these four matters, an explanation on each matter and a series of attributes as outlined within Table 4 of the EIANZ guidelines (2018). A scoring system provided in Table 6 of the EIANZ guidelines requires the combination of these assessment values to provide an overall assignment of ecological value to each feature.

2.2.3 Magnitude of Effects Assessment

An assessment of the potential magnitude of effects was evaluated in general accordance with Roper-Lindsay et al. 2018) with the consideration of potential effects associated with the plan change on the identified ecological values. The method involves assessing the magnitude of effects based on the criteria outlined in Table 1 and the overall level of effect using the matrix in

Table 2. This assessment framework allows for effects to be ranked on a scale from 'Net gain' to 'Very High' and provided justification for avoidance, mitigation and offsetting requirements as appropriate.

Table 1: Criteria for describing magnitude of effect (Roper-Lindsay et al. 2018)

Magnitude	Description
Very high	Total loss or very major alteration to key elements/ features of the baseline conditions such that the post development character/ composition/ attributes will be fundamentally changed and may be lost from the site altogether; AND/OR Loss of a very high proportion of the known population or range of the element/feature.
High	Major loss or major alteration to key elements/ features of the baseline (pre-development) conditions such that post development character/ composition/ attributes will be fundamentally changed; AND/OR Loss of a high proportion of the known population or range of the element/feature.
Moderate	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of baseline will be partially changed; AND/OR Loss of a moderate proportion of the known population or range of the element/feature.
Low	Minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible but underlying character/composition/attributes of baseline condition will be similar to pre-development circumstances/patterns; AND/OR Having a minor effect on the known population or range of the element/feature.
Negligible	Very slight change from baseline condition. Change barely distinguishable, approximating to the "no change" situation; AND/OR Having negligible effect on the known population or range of the element/feature.

Table 2: Criteria for describing level of effects (Roper-Lindsay et al. 2018)

Magnitude	Level of effects				
	Very high	High	Moderate	Low	Negligible
Very high	Very high	Very high	High	Moderate	Low
High	Very high	Very high	Moderate	Low	Very low
Moderate	High	High	Moderate	Low	Very low
Low	Moderate	Low	Low	Very low	Very low
Negligible	Low	Very low	Very low	Very low	Very low
Positive	Net gain	Net gain	Net gain	Net gain	Net gain

3.0 ECOLOGICAL VALUES - SURVEY RESULTS

3.1 Summary of Values

Table 3 below outlines the ecological values assigned to the identified ecological features of aquatic and terrestrial habitat/vegetation, ichtyotaunafa (fish), chiropfauna (bats), avifauna (birds), and herpetofauna (lizards).

We consider that the overall existing ecological values of the sites ecological features are generally moderate and associated with the long history of modification associated with land uses in keeping with the site's general rural zoning, agricultural use and associated effects on natural habitats and species through continuous application of fertiliser, resowing and presence of stock.

Furthermore, consideration was given to Manawhenua values. "*An ecologist cannot assign or assess manawhenua value to an ecological feature – this can only be done by manawhenua or the iwi and hapū of the particular location. Indigenous species or areas of indigenous vegetation or habitat valued by manawhenua can also have recreational, landscape, education, spiritual or other values. Ecological information may feed into these values, but it is important that they remain distinct in the overall decision-making process.*" (EIANZ 2018).

RDL have reviewed both the Cultural Effects Assessment (CEA) prepared by Te Uri o Hau Environs Holdings Ltd and the Archaeological Assessment (AA) prepared by Geometria Limited. Of note it is confirmed the site contains cultural features of both Maori and European origin. Considering Manawhena values from an ecological perspective all comments are relevant, but I draw attention to page 32 of the (CEA) which note: -

- *I.The protection and enhancement of the natural features constitute a significant net ecological benefits to the values of Wai (water), Ngahere (native bush), Manu (birdlife), flora and fauna.*
- *II.The PPC ecological features are protected and enhanced as much as possible.*
- *III.The selection and use of native plants in the PPC area is encouraged and supported by Environs.*

It is considered that the proposed MEPC and associated proposed development has sufficiently considered the manawhenua values in relation to ecological values. Please refer to the CEA and AA reports for the associated values and evaluation of effects.

Table 3: Terrestrial and aquatic ecological values at the subject site

Feature	Representativeness, Rarity/distinctiveness, Diversity and Pattern, Ecological Context:	Value
Terrestrial habitat/vegetation	The current terrestrial ecosystem types identified onsite include 'exotic grassland' (EG) and 'mixed native/exotic treeland' (TL) (Singers *et al.*, 2017).	Low
Aquatic habitat/vegetation	The subject site contains a network of modified watercourses including artificial drainage channels, ephemeral, intermittent and permanent streams. The current aquatic ecosystem types identified onsite include 'mangrove forest and scrub' (SA1 & associated variants) and highly modified 'manuka Fen' (WL12) (Singers *et al.*, 2017). The ecological significance of the site's saltmarsh and wetland remnants is moderate to high due to the presence of 'Regionally Significant' and 'Threatened' plant species such as coastal tree daisy (*Olearia solandri*), triglochin (*Triglochin striata*) and *Netrostylis capillaris* although the ecological condition is considered low to moderate due to the overall small size, historical modification and the presence of pest plants. Some aquatic habitats were deemed to meet the definition of a 'natural inland' wetland as defined under NPSFM (2020), however these are dominated by a mixture of common exotic species. These wetland extents are indicative and subject to seasonal variation and change overtime. According to the EIANZ criteria, exotic dominated wetlands overall ecological value is deemed as low, however we recognise the intent of NPSFM policies to avoid adverse effects on any 'natural inland wetland' areas.	Moderate

Avifauna	Species including but not limited to North Island fernbird (*Poodytes punctatus vealeae*) 'At Risk- Naturally uncommon', royal spoonbill (*Platalea regia*) Native & Naturally Uncommon', Black shag (*Phalacrocorax carbo*) - 'Relict' and kereru (*Hemiphaga novaeseelandiae*) 'Regionally Significant' have been recorded at the site. Furthermore the 'Nationally Critical' Australasian bittern (*Botaurus poiciloptilus*) is known to utilise the wider wetland network in the wider landscape. Generally, the avifauna that were observed on site are in relatively low abundance but contain a diverse range of native species typical of the estuarine environment. The site contains habitat in the form of feeding, roosting and nesting habitat for the listed species.	Moderate
Herpetofauna	A consultation of the Rodney ED report indicated that there are 6 herpetofauna species within the greater Ecological District, with the moko skink being recorded on the sandspit within the ROD014 PNA in 2003 (Goldwater et al., 2012). There are also historical records (1949, 1965) of forest gecko (*Mokopirirakau granulatus*) being present in this PNA. Exploring available DOC data revealed 4 accounts of native herpetofauna within a 5 km radius of the subject site including shore skink (*Oligosoma smithi*) and elegant gecko (*Naultinus elegans*). The current ecological habitat value for native herpetofauna is therefore considered to be low. This is likely associated with a long history of disturbance, land clearance, predation by common pest animals and habitat fragmentation	Low
Bats	Given the lack of known bat populations within a 5 km radius of the site, and the presence of exotic mammalian predators, it is unlikely that long-tailed bats use the property for roosting or foraging. It is considered that the current ecological value for chiroptera on site is low	Low
Ichthyofauna	'At Risk' and 'Regionally Significant' indigenous fish species have been recorded at the site. Overall, it was deemed that the freshwater habitats on the property currently fulfil habitat requirements for several indigenous fish species such as long fin eel (*Anguilla dieffenbachia*), banded koukupu (*Galaxias fasciatus*), langa (*Galaxias maculatus*) and giant bully (*Gobiomorphus gobioides*). This is predominantly because of the subject site's proximity to the Mangawhai estuary and lack of impediments to movement from the estuary to the inland stream networks.	Moderate
Overall		**Moderate**

4.0 ASSESSMENT OF POTENTIAL ECOLOGICAL EFFECTS

4.1 Assessment of potential ecological effects and mitigation options

As this application is for a plan change, to change the zoning from rural to a range of predominantly urban zones. Physical site development associated with the PPC is unlikely to happen in the immediately foreseeable future because the zoning needs to first be in place and then resource consents for development will need to be obtained.

Furthermore, at this stage it is not known exactly how any future subdivision/lot layout, infrastructure provision would occur and hence the potential ecological effects cannot be accurately assessed at this stage. The client has provided RDL with a potential yield study and provisions which indicates that all identified natural inland wetlands (including saltmarshes), intermittent and permanent streams features will be protected with minimum 10m setback. It is considered that in relation to the saltmarsh areas the intent is that much of it will be vested to Kaipara District Council as Esplanade Reserve if the council agrees. These areas are identified on the natural features map below (Figure 3) and (Appendix 1) with areas of Ecological values and associated buffers depicted in (Figure 4) and (Appendix 2).

It is likely that some vegetation on site (both exotic and indigenous) will be removed as a part of the wider development of the site, and that some artificial drainage channels, ponds and ephemeral may be piped. Furthermore, crucial to the current plan change proposal is two stream crossings that will be either culverted or bridged to facilitate construction of roads to vest. We cannot assess these effects with a high degree of certainty and any potential ecological effects associated with a Resource Consent application following the successful rezoning of the site will need to be re-assessed and re-evaluated in a specific subdivision consent application.

Generally, the potential adverse effects associated with urbanisation of the land can be divided into potential adverse effects resulting from:

- Effects on water quality arising from earthworks and sedimentation and associated discharges
- Vegetation modification and habitat loss
- Establishment of stormwater and wastewater infrastructure and associated discharges
- Reclamation and/or diversion of ephemeral and artificial watercourses
- Removal and construction of new culverts and or other infrastructure structures
- Effects on indigenous fauna

Given that the overall potential subdivision or development layout following the MEPC is conceptual, we can only briefly assess the potential ecological effects below, however there are no values that have been identified that would mean the land cannot be urbanised subject to accepted best practice or conditions imposed on resource consents at subdivision and / or land development stage.

A general overview of ecological values, magnitude of effect, potential remediation, mitigation or offsetting measures and overall level of effect for each of the proposed activities that have the potential to impact the terrestrial or freshwater environment in general accordance with EIANZ (Roper-Lindsay et al. 2018) is provided under Table 4.

Terrestrial ecological values have been assessed as low and aquatic ecological values are assessed as moderate based on field survey visits and analysis of previous data from the site and immediate areas. The before-mitigation level of effect for proposed activities were assessed as ranging between 'high and low', but with the recommended provisions of the Development Area and conditions that are anticipated to be secured on future resource consents, the overall level of effect will be reduced to between 'low and very-low' (Table 4)

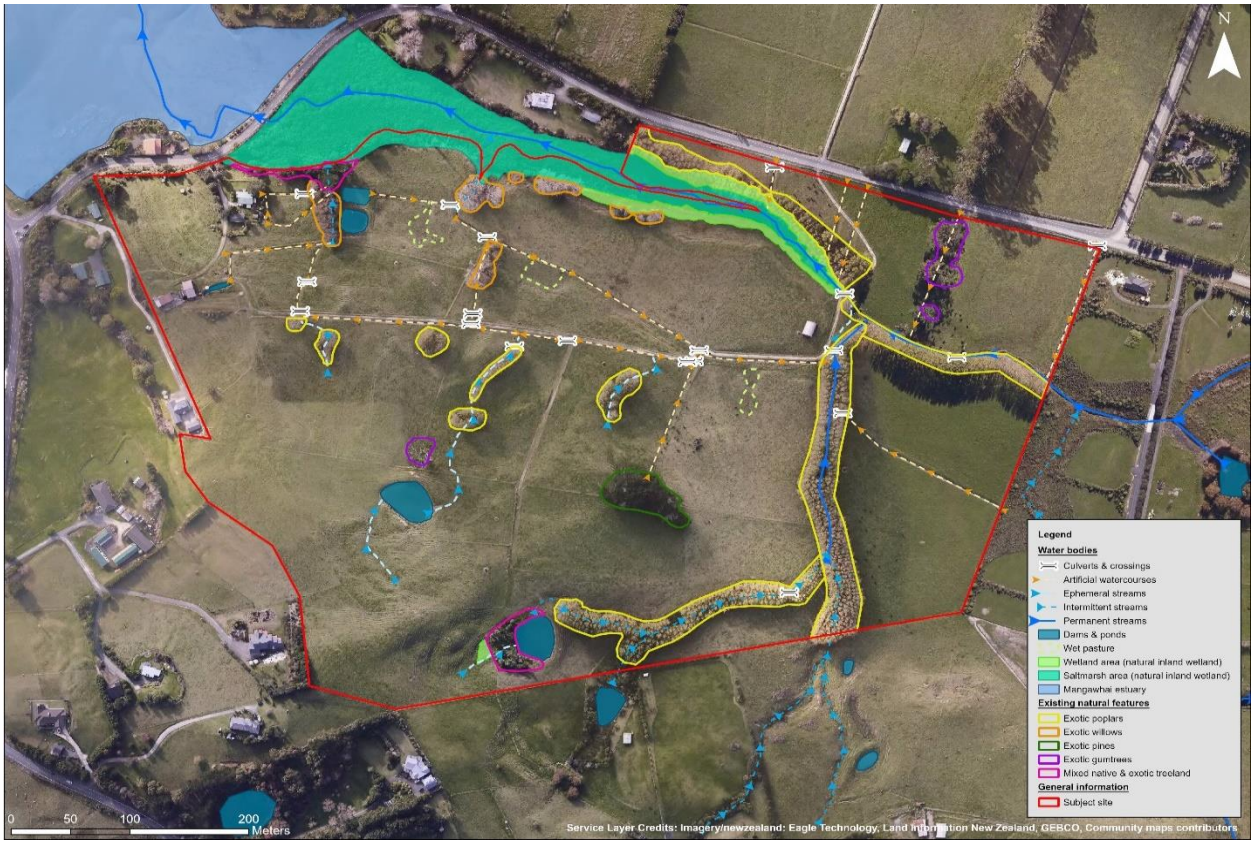

Figure 3: Showing the natural features identified onsite

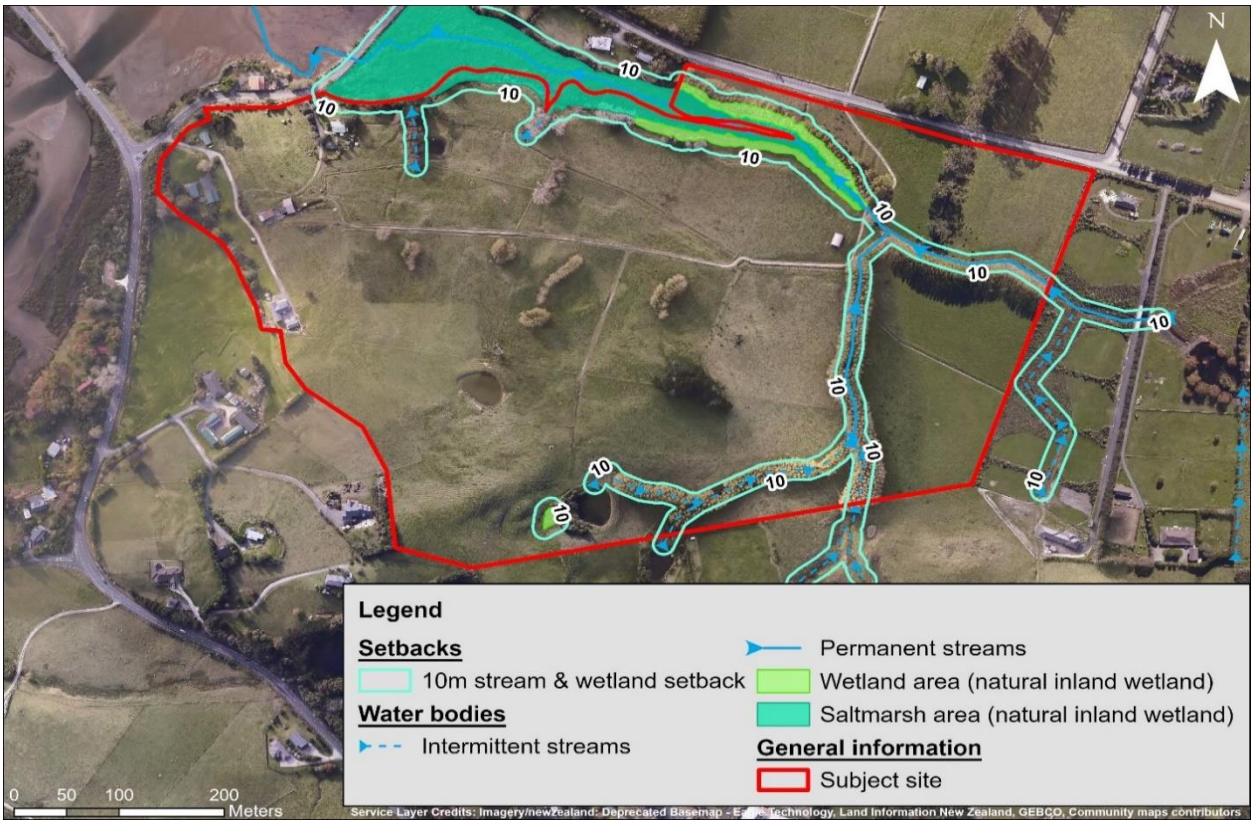

Figure 4: Showing the areas of ecological values with an ~10m buffer

Table 4: Magnitude and level of potential effects for proposed development before and after potential mitigation

Effect/activity	Potential habitat impacted	Ecological value	Magnitude of effect)	Level of effect (no mitigation)	Comment	Potential mitigation measures	Level of effect (with potential mitigation)
Earthworks and sedimentation	**Terrestrial and aquatic**	Low - moderate	High	High	Earthworks associated with the development of the site will have the potential to result in sediment runoff into the on-site waterways onsite that eventually discharge into the Mangawhai Estuary.	• To mitigate the risk of sediment entering the onsite streams during site development works, and contaminating the downstream catchment, erosion and sediment control plans should be prepared and implemented in accordance with Northland Regional Council's and Auckland Council's (GD06) Erosion and Sediment Control Guidelines.	Low
Vegetation clearance	**Terrestrial and aquatic**	Low	Moderate	Moderate	It is possible that some of the vegetation (both indigenous and exotic) is likely to be removed to facilitate development on site and or ecological restoration. Given that only low ecological quality vegetation was observed on site outside of the sites saltmarsh habitat, we do not consider that the development of the site would result in the loss of vegetation of high botanical or ecological significance.	• Sensitive development design, guiding development away from indigenous terrestrial and aquatic habitats that have been identified. • If indigenous vegetation and/or Riparian vegetation clearance is proposed, a Vegetation Clearance Protocol should be prepared, which includes procedures for minimising the area and duration of soil exposure from vegetation clearance, minimising the volume of vegetation to be mulched, locating wood residue piles with an appropriate separation distance from any waterways, and minimising potential leachate from the machinery used. • Implementation of appropriate sediment, earthworks controls during vegetation clearance to avoid potential sedimentation.	Low

Effect/activity	Potential habitat impacted	Ecological value	Magnitude of effect)	Level of effect (no mitigation)	Comment	Potential mitigation measures	Level of effect (with potential mitigation)
					If vegetation clearance is proposed this may require additional consents. Earthworks within and nearby (20 m) stream habitats may require a separate Resource Consent.	• Vegetation clearance to take place using low impact machinery suited for site specific condition. • Vegetation removal to take place outside of the peak bird breeding season (October to February, inclusive), where practicable. • Implementation of pre-vegetation clearance ecological surveys to ensure that development footprint is clear of species with lesser mobility. • Implementation of appropriate ecological supervision (and species relocation where necessary) during vegetation clearance to ensure that no indigenous fauna is killed during the clearance process • Protect and enhance all other indigenous vegetation outside the immediate development footprint	
Stormwater and wastewater infrastructure and management	**Stream habitats**	Moderate	High	High	All stormwater and wastewater management are to follow general conditions as outlined under Mangawhai East Provisions	• To address the potential effects associated with the establishment and ongoing maintenance of stormwater and wastewater infrastructure and associated discharges, appropriate stormwater and wastewater management plans are to be prepared for the development proposal and current legislation.	Low

Effect/activity	Potential habitat impacted	Ecological value	Magnitude of effect)	Level of effect (no mitigation)	Comment	Potential mitigation measures	Level of effect (with potential mitigation)
Reclamation of aquatic habitats resulting in permanent loss	**Aquatic habitats**	Moderate	High	High	All watercourses on site are either ephemeral, intermittent, permanent or artificial in nature, and have been subject to a long history of modification and degradation. Overall ecological values are assessed as moderate. Some reclamation of artificial drains may be required to facilitate the development of the site. No 'natural inland wetland', intermittent or permanent stream habitats are to be reclaimed during site development process. It is understood that all wetland habitats identified on site shall be preserved and appropriately protected and enhanced	• Any reclamation will be assessed under the relevant Northland Regional Plan and NPSFM/NES provisions	Low

Effect/activity	Potential habitat impacted	Ecological value	Magnitude of effect)	Level of effect (no mitigation)	Comment	Potential mitigation measures	Level of effect (with potential mitigation)
					as a part of the MEPC proposal.		
Avifauna	**Terrestrial habitat**	Moderate	Moderate	Moderate	The site provides a variety of habitats for listed bird species typical of the estuarine environment. Works should be minimized to reduce disturbance.	• Vegetation removal (if any) is to take place outside of the peak bird breeding season (October to February, inclusive), as far as practicable, to avoid disturbance to active native bird nests or mortality of eggs/chicks. Where vegetation clearance cannot be achieved outside of this period, a pre-vegetation bird nesting survey should be carried out by a qualified ecologist.	Low
Herpetofauna	**Terrestrial habitat**	Low	Low	Negligible	No suitable habitat for lizards was noted within the subject site or immediate surrounds. As such, any associated site development works and vegetation clearance is unlikely to have a direct impact on indigenous herpetofauna.	• All vegetation clearance work is supervised by an appropriately qualified ecologist. • Conduct vegetation clearance activities during warmer months, when lizards are active (October – April).	Low
Fish	**Aquatic habitat**	Moderate	Moderate	Moderate	Site contains moderate quality habitat for indigenous fish with	• Generally, all intermittent and permanent streams are proposed to be protected via provisions for setbacks from development and enhancement.	Low

Effect/activity	Potential habitat impacted	Ecological value	Magnitude of effect)	Level of effect (no mitigation)	Comment	Potential mitigation measures	Level of effect (with potential mitigation)
					several listed species utilizing the onsite streams	• Prepare freshwater fish recovery protocol that outlines how fish capture and relocation will be undertaken prior to any instream disturbance.	
Bats	**Terrestrial**	Negligible	Low	Negligible	No bat presence recorded on site and no suitable habitat present on site.	• Not required as no suitable habitat on site or immediate surrounds.	Very low
Overall assessment		Moderate	High				Low

5.0 MANGAWHAI EAST DEVELOPMENT AREA PROVISIONS

As a part of the Proposal, The Planning Collective has prepared 'Mangawhai East Development Area Provisions', which outline the proposed objectives, policies and rules relating to development within the plan change area.

RDL have worked with the client, Viridis and The Planning Collective (TPC) to establish relevant provisions relating to the protection of ecological features noted on site to ensure that these are protected and enhanced as part of any subsequent land development or subdivision proposal within the Mangawhai East Development Area.

From an ecological perspective, RDL considers that the site contains some terrestrial and aquatic habitats of generally low to moderate existing ecological values, however some features, in particular the aquatic habitats noted on site, form connections to the wider landscape, Mangawhai Estuary and therefore should be protected and enhanced as a part of the overall development of the site. Natural features assessed as containing ecological value, where necessary should be protected and enhanced as a part of any site development proposal. Therefore, RDL recommended provisions for inclusion in the Development Area for the southern portion of the subject site to :

> Maintain an interconnected network between all existing natural features on site (including natural wetland features, intermittent and permanent streams, and indigenous vegetation).
- Ensure that all areas of ecological value on site are not adversely affected by land development/subdivision.
- Any land development/subdivision proposal for the site demonstrates how these features will be enhanced and permanently protected.
- 10m setbacks to be applied between proposed features to be protected and the overall development footprint.
- Any requirement for public access is balanced against protecting and enhancing ecological values.

Overall, RDL considers that the proposed provisions and associated objectives, policies and rules, where they relate to protection and enhancement of ecological features on site, will ensure that the effects of the proposed urban development on ecological values will be suitably avoided, remedied or mitigated, and would in fact allow for the enhancement and permanent protection of these features.

6.0 RELEVANT PLANNING CONSIDERATIONS

The following section summarises the ecological considerations in relation to local, regional and national policy statements and regulations associated with the preservation and mitigation of effects related to potential development of the site. In respect to the proposal, we consider the following to be applicable:

- National Policy Statement for Freshwater Management 2020
- Resource Management (National Environmental Standards for Freshwater) Regulations 2020
- National Policy Statement for Indigenous Biodiversity 2023
- The Operative Kaipara District Plan 2013
- Proposed Regional Plan for Northland 2024
- Regional Policy Statement for Northland 2016
- The Kaipara Spatial Plan - Ngā Wawata 2050

Policies and regulations relating to each of the specific plans are further outlined in sections below.

6.1 National Policy Statement for Freshwater Management 2020

The NPS-FM (2020) sets out the objectives and policies for freshwater management under the Resource Management Act 1991. The NPS-FM directs Regional Councils, in consultation with their communities to set objectives for the state of freshwater bodies in their regions and to set limits on resource use to meet these objectives.

The core intent of the policies in the NPS-FM is to provide stronger protection for freshwater bodies and wetlands. It also places a statutory responsibility on territorial and consenting authorities to give effect to Te Mana o te Wai – the fundamental concept, by prioritizing the health and wellbeing of our waterways. With respect to Te Mana o te Wai, the hierarchy of obligations for consenting authorities are;

1. *first, to prioritise the health and well-being of water bodies and freshwater ecosystems;*
2. *second, the health needs of people (such as drinking water); and*
3. *third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.*

In relation to the proposed MEPC of the subject site, we consider that full effect has been given to NPSFM through the protection and enhancement of all features including intermittent and permanent streams and natural inland wetland areas identified within the boundaries of the site.

Any potential adverse effects on freshwater environments to result as part of the site development works can be appropriately avoided, remedied or mitigated. RDL does not consider that land development on this site following the MEPC would adversely affect the freshwater quantity or quality both on site or within the wider Mangawhai Estuary catchment if best practice integrated design principles, erosion and sediment control guidelines are followed. The provisions outlined under the proposed Mangawhai East Objectives and Policies are aimed at working with the natural patterns of the land and halting the degradation of aquatic habitats on the subject site, and therefore meets the policy objectives of the NPSFM.

6.2 National Environmental Standards for Freshwater Regulations 2020

Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-FW) set the standards for regulating activities that pose risks to the health of freshwater and freshwater ecosystems. Anyone seeking to undertake those activities will need to seek consent under the NES-FW, as well as under any relevant rules under the applicable regional and district plan.

Based on RDL field work and observations during the site visits, it was deemed that some of the site's freshwater habitats are representative of 'natural inland wetland' habitats as per the definition under NPSFM. Given that following the MEPC the site is likely to be developed into residential lots with associated infrastructure requirements that will potentially fall within 10 and 100 m setback from the wetland features and associated stream systems on site, any development proposal will likely trigger the requirement for consents under the National Environmental Standards for Freshwater (2020) and the Proposed Regional Plan for Northland in relation to works within 10m & 100 m setback from natural inland wetland features (Figure 5).

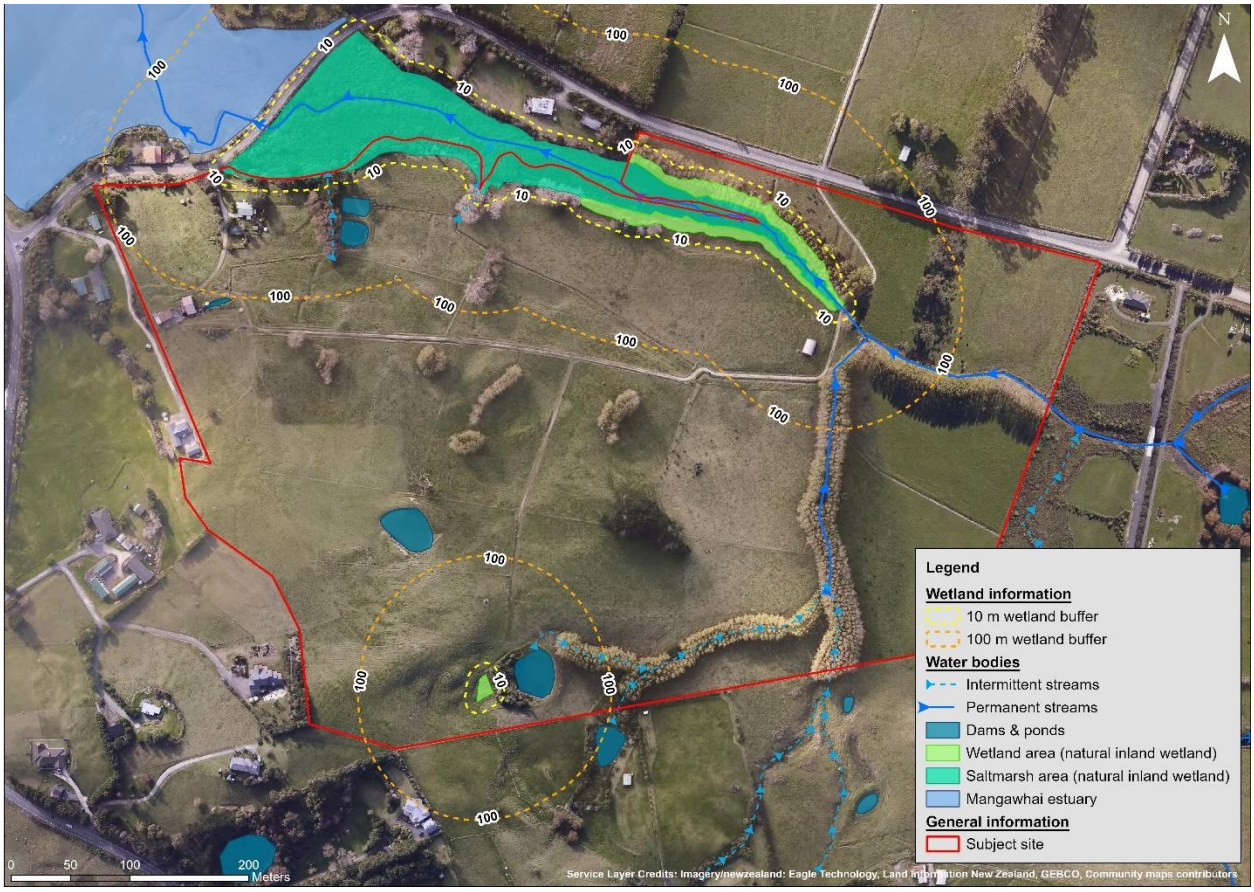

Figure 5: Showing natural inland wetland features identified on site with 10m & 100m setbacks

It is thought that sufficient controls to avoid adverse effects on the 'natural inland wetland' features noted on site have been outlined in the proposed Mangawhai East provisions noting these are in addition to the consent requirements in the NES FW., which require that an Ecological Assessment and associated Ecological Management Plan is submitted as part of any land subdivision proposal of the site and that appropriate setbacks from 'natural inland wetland' areas are to be established. This should ensure that appropriate design and enhancement strategies to avoid adverse effects on wetland features on site can be addressed at the time of a subdivision application, when detailed design of the associated proposal is available.

6.3 National Policy Statement for Indigenous Biodiversity 2023

The NPS-IB sets out objectives, policies and implementation requirements to manage natural and physical resources to maintain indigenous biodiversity in the terrestrial environment under the Resource Management Act 1991 (RMA). It outlines a system for the management of biodiversity outside of public conservation land.

There is no significant indigenous biodiversity in the terrestrial environment within the site and no areas that meet the definition of a Significant Natural Area as per the NPS-IB Appendix 1. The

effects management hierarchy will be applied to manage residual ecological effects. The MEPC will provide opportunities to increase indigenous vegetation cover through planting and enhancements of riparian areas, wetlands and the coastal margin.

6.4 Kaipara District Plan (Operative)

It is considered that although the following objectives and policies relating to the proposed development and any associated ecological or environmental effects under the Kaipara District Plan (Operative) are relevant they have been appropriately addressed by TPC within the proposed provisions:

- Chapter 6 – Ecological Areas
- Chapter 12 – Rural
- Chapter 13 – Residential
- Chapter 25B - Integrated Development Guide
- Chapter 25G - Assessment of Ecological Significance

6.5 Regional Policy Statement for Northland 2016

Consistent with the relevant objectives within the NRPS, the MEPC proposes/provides for the following:

- Protect and improve freshwater and coastal water quality through the enhancement and protection of streams and wetlands within the site, water sensitive design, erosion and sediment control and the retirement of land from agricultural farming (Objective 3.2 Region-wide water quality).
- Stormwater management through water sensitive design to maintain flows to freshwater features (streams and wetlands) on site (Objective 3.3 Ecological flows and water level).
- Protection of significant indigenous vegetation and habitats of indigenous fauna, as well as enhancement of the existing areas through planting and weed and pest control (Objective 3.4 Indigenous ecosystems and biodiversity; Objective 3.15 Active management).

6.6 Proposed Regional Plan for Northland February 2024

The Regional Plan for Northland (February 2024) applies to air, water and coastal resources in the whole of the Northland region. In relation to the Proposal the rules and regulations that are most applicable to the site are likely to include provisions relating to placing structures within watercourses and works nearby 'natural Inland wetland' areas. Should subsequent site

development works not meet the permitted activity standards as per the PRPN provisions consents are likely to be required.

7.0 CONCLUSION

Mangawhai East Plan Change (MEPC) is proposed to rezone the subject land for predominantly urban land uses. This report and the information referenced within identifies the ecological values associated with the southern part of the MEPC site and assesses the potential or likely effects associated with the change in land use from rural to urban.

The site is dominated by exotic pasture with only some small, scattered pockets of indigenous vegetation (primarily restricted to the tidal influence of the Mangawhai Estuary). Several watercourses (both natural and artificial in origin), and some scattered wetlands and pond areas were recorded on site. Species including 'Threatened' and 'Regionally Significant' flora and fauna were recorded on site during site survey visits or desktop analysis of previous species records within the wider area. It has been assessed the site contains and adjoins areas of ecological value. Therefore, RDL considers that the overall existing ecological values of the site are moderate.

As a part of the ecological assessment, RDL briefly considered potential ecological effects on terrestrial and aquatic values attributable to the Proposal and subsequent subdivision and development of the site, before and after the implementation of recommended mitigation and management actions. The subsequent level of ecological effects (with mitigation measures) is assessed to be low in accordance with the EINAZ (2018).

The proposed Mangawhai East Development Area provisions prepared by The Planning Collective, where they relate to protection and enhancement of ecological features on site, provide detailed guidance as to how ecological effects following the MEPC associated with future land subdivision/development can be sufficiently avoided, reduced or mitigated, and would in fact allow for the enhancement and permanent protection of these features.

The Proposal is consistent with the policies and objectives relating to ecological protection and enhancement as outlined under NPSFM, Kaipara District Plan (Operative), Proposed Regional Plan for Northland (Appeals Version).

Therefore, it is considered that there are no ecological constraints to the proposed urbanisation of the subject site, and the potential adverse effects on the environment can be avoided, remedied or mitigated through following the objectives, policies, and rules as outlined within the proposed Mangawhai East Development Area provisions; NES FW and the existing provisions of the Regional Plan for Northland.

The Proposal will provide the opportunity to protect and enhance the current moderate ecological values with a particular focus placed on the Mangawhai Estuary and maintaining the interconnected network between the existing natural features.

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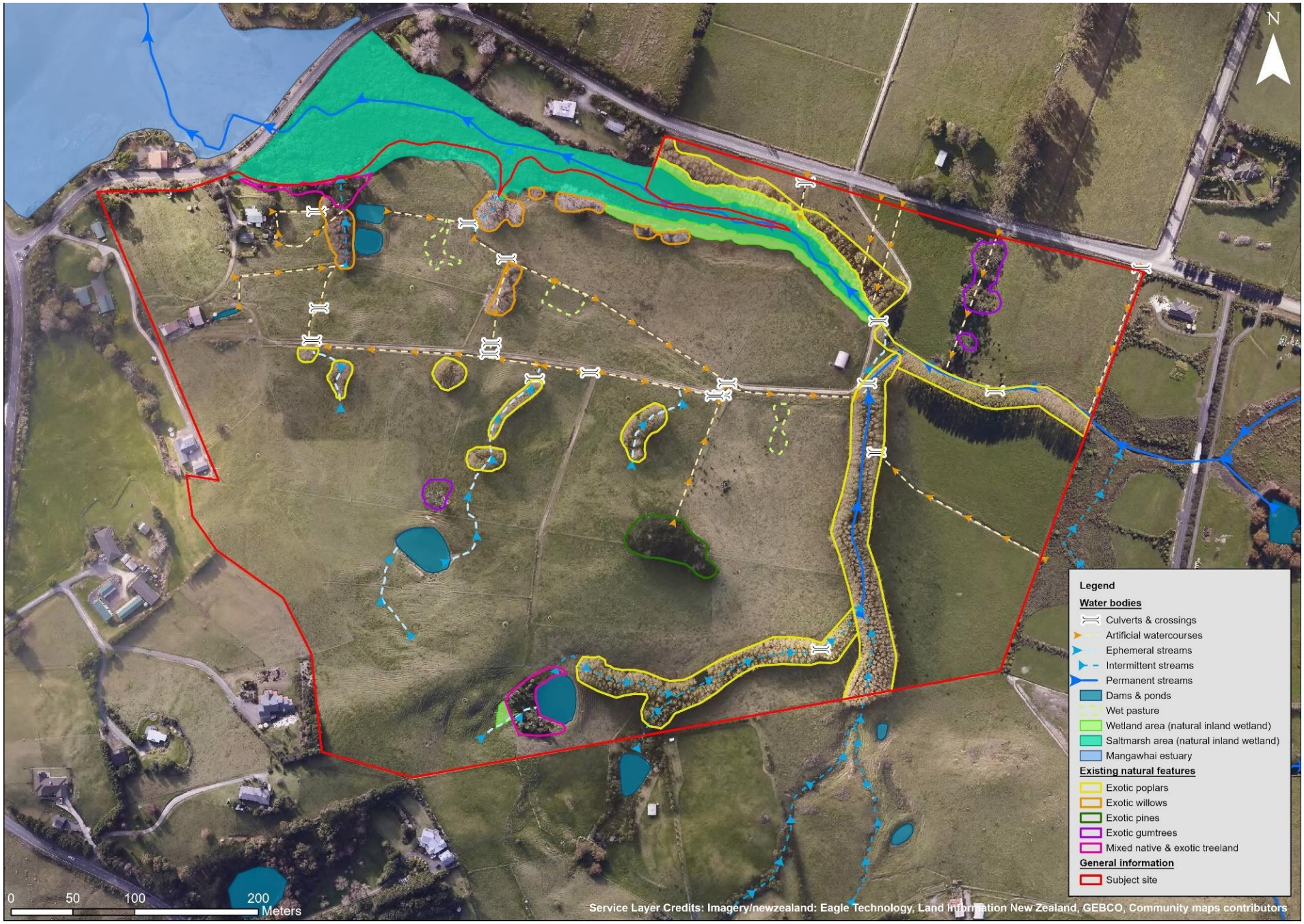
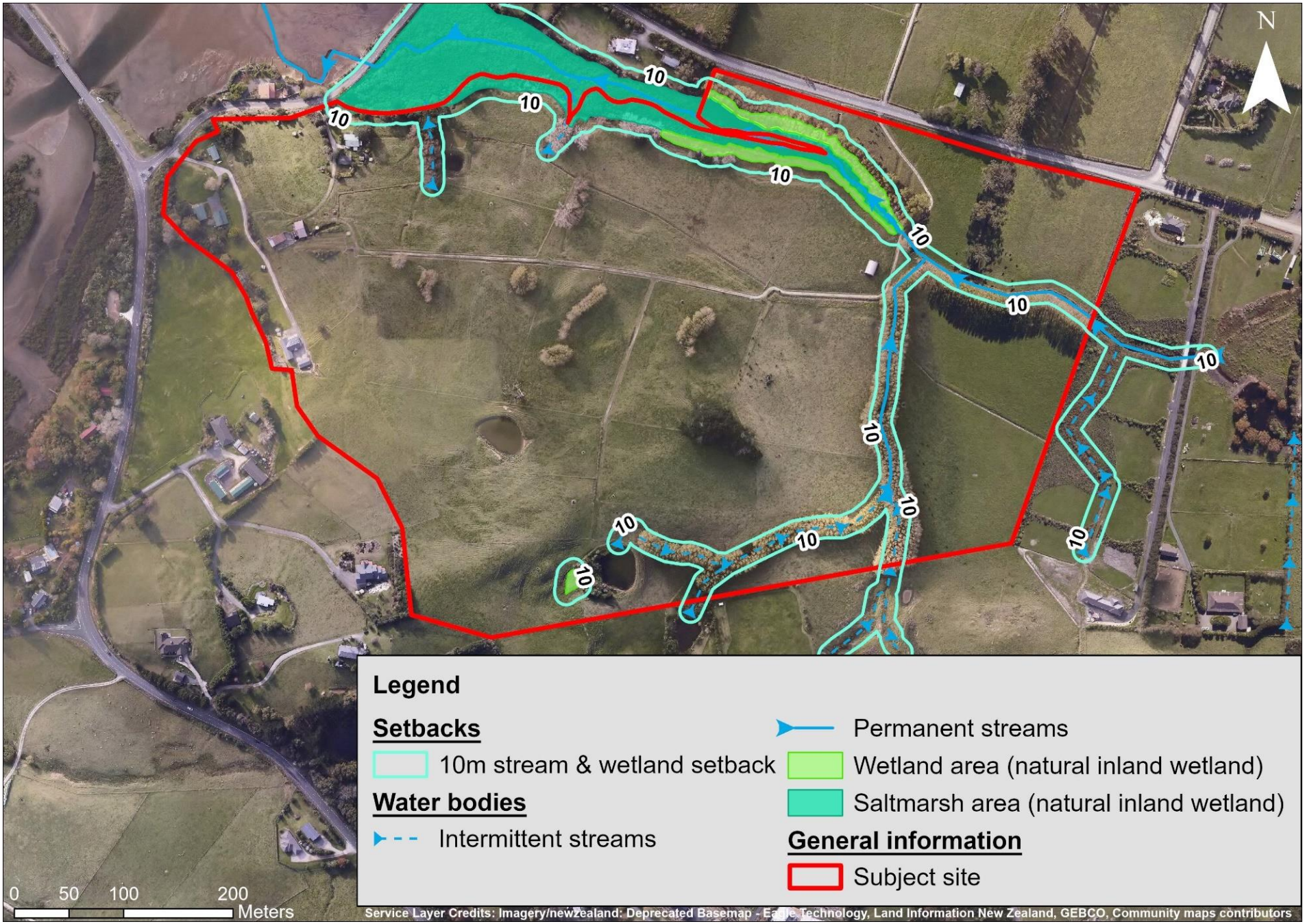
APPENDIX 1 – NATURAL FEATURES WITHIN THE SUBJECT SITE



APPENDIX 2 – AREAS OF ECOLOGICAL VALUE WITH PROPOSED BUFFERS



APPENDIX 3 – SNA MEMO

28th May 2025
Burnette O'Connor (the 'Planner')
Pro Land Matters Company Limited (the 'Client')
18a Black Swamp Road,
Mangawhai

Cc //-- Mark Delaney, Angela Tinsel (Viridis)

SNA Ecological Memo – 18a Black Swamp Road | Lot 2 DP 29903

Rural Design 1984 Ltd (RDL) was contracted by The Planning Collective Company Limited and the Client to conduct a Significant Natural Areas Assessment at 13 Black Swamp Road and 18a Black Swamp Road (the 'subject site') which represents the main component of the southern portion of the PPC area. This was undertaken to identify natural features onsite and assess whether they met the criteria to be identified as a Significant Natural Area (SNA) under the National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB).

RDL has undertaken multiple site visits for the purpose of providing a comprehensive Ecological Assessment of the ecological values for a proposed subdivision, where natural features were thoroughly identified and a robust Environmental Assessment Report was written (November 2023). This SNA Assessment relies on the findings within RDL's November 2023 report titled **"Environmental Assessment pertaining to a Proposed Subdivision at Lot 2 DP 29903 / 18A Black Swamp Road, Mangawhai / November 2023"**, where information that is relevant to conducting an SNA assessment has been included in this memo. Additional background information can be found in the November 2023 report relating to the site, which includes but is not limited to ecological survey results, managing potential adverse effects assessments and general methodologies.

Clause 3.8 of the NPS-IB requires territorial authorities to undertake a district-wide assessment to identify areas of significant indigenous vegetation or significant habitat of indigenous fauna that qualify as an SNA based on the NPS-IB Appendix 1 which reads as follows:

1. <u>What Qualifies as an SNA</u>

   An area qualifies as an SNA if it meets any one of the attributes of the following four criteria:

a) Representativeness
b) Diversity and pattern
c) Rarity and distinctiveness
d) Ecological context

If an area would qualify as an SNA solely on the grounds that it provides habitat for a single indigenous fauna species that is At Risk (declining), and that species is widespread in at least three other regions, the area does not qualify as an SNA unless:

a) The species is rare within the region or ecological district where the area is located; or
b) The protection of the species at the location is important for the persistence of the species as a whole.

If an area would qualify as an SNA solely on the grounds that it contains one or more indigenous flora species that are Threatened or At Risk (declining), and those species are widespread in at least three other regions, the area does not qualify as an SNA unless:

a) The species is rare within the region or ecological district where the area is located; or
b) The protection of the species at the location is important for the persistence of the species as a whole.

The NPS-IB came into effect in August 2023, primarily focuses on terrestrial environments. However, amendments to the Policy Statement in October 2024, have expanded its scope to include natural inland wetlands in certain contexts. Clauses 3.21 and 3.22 require local authorities to prioritise the restoration of degraded natural inland wetlands and to assess and set targets for indigenous vegetation cover that encompasses these ecosystems. Notably, Clause 1.3(2)(e) clarifies that natural inland wetlands are considered part of a Significant Natural Area (SNA) where they are contained within one—implying that a wetland must be ecologically connected to a terrestrial area of SNA quality to be recognized as part of an SNA.

While these provisions reflect a shift towards a more integrated approach to recognising the ecological significance of wetlands within the broader landscape, the NPS-IB does not explicitly state that a natural inland wetland, as a standalone feature, can be considered a SNA. Given this ambiguity, a precautionary approach is recommended when delineating and assigning SNA status to significant wetland features, such as the saltmarsh wetlands identified onsite. This is particularly warranted considering these saltmarsh areas support regionally significant indigenous flora and fauna and provide habitat for threatened and at-risk species, as

documented within this assessment and the associated environmental report prepared by RDL in 2023.

NATURAL FEATURES

Habitat Description

The site is located in the upper tidal reaches of the Mangawhai estuary and provides an interesting ecotone transitional zone between the estuarine sequence and the wider terrestrial environment. It is apparent that the site is highly modified from what was the former ecosystem.

The northern extent of the site is a modified saltmarsh habitat merging with the lower eastern contours of the site influenced by the tidal nature of the Mangawhai estuary, which merges with the wider drainage pattern of what was formerly known as Black Swamp, presently consisting of sparse wetland remnants. The wetlands and stream features on site are surrounded by a mixture of exotic and native specimen trees. The remainder of the site, moving southward, consists of exotic grassland currently grazed by dry stock.

Of note, historical imagery indicates that the far west aspect of the site (13 Black Swamp Road) used to be entirely underwater and had since been raised as a building platform. This small (>800m^2) parcel of artificially created land is nearly wholly occupied by the dwelling and associated parking, though, a small pocked of mixed native and exotic bush exists within the western fringe.

The site provides some interesting habitats including saltmarsh and wetland features merging with the terrestrial environment. Although it is rather hard to determine the exact ecosystem type due to the size of the property and the extent of historical degradation, the current ecosystem types identified onsite include 'mangrove forest and scrub' (SA1 & associated variants), highly modified 'manuka fen' (WL12), 'exotic grassland' (EG) and 'mixed native/exotic treeland' (TL) (Singers *et al.*, 2017) (Figure 1). A general description of species present within these areas is outlined below.

Please note, where a species is listed as 'Threatened' as per de Lange et al. (2017) the botanical name is followed by a +, or where they are listed as 'Regionally significant/Threatened' as per Goldwater *et al.* (2012) the botanical name is followed by a #.

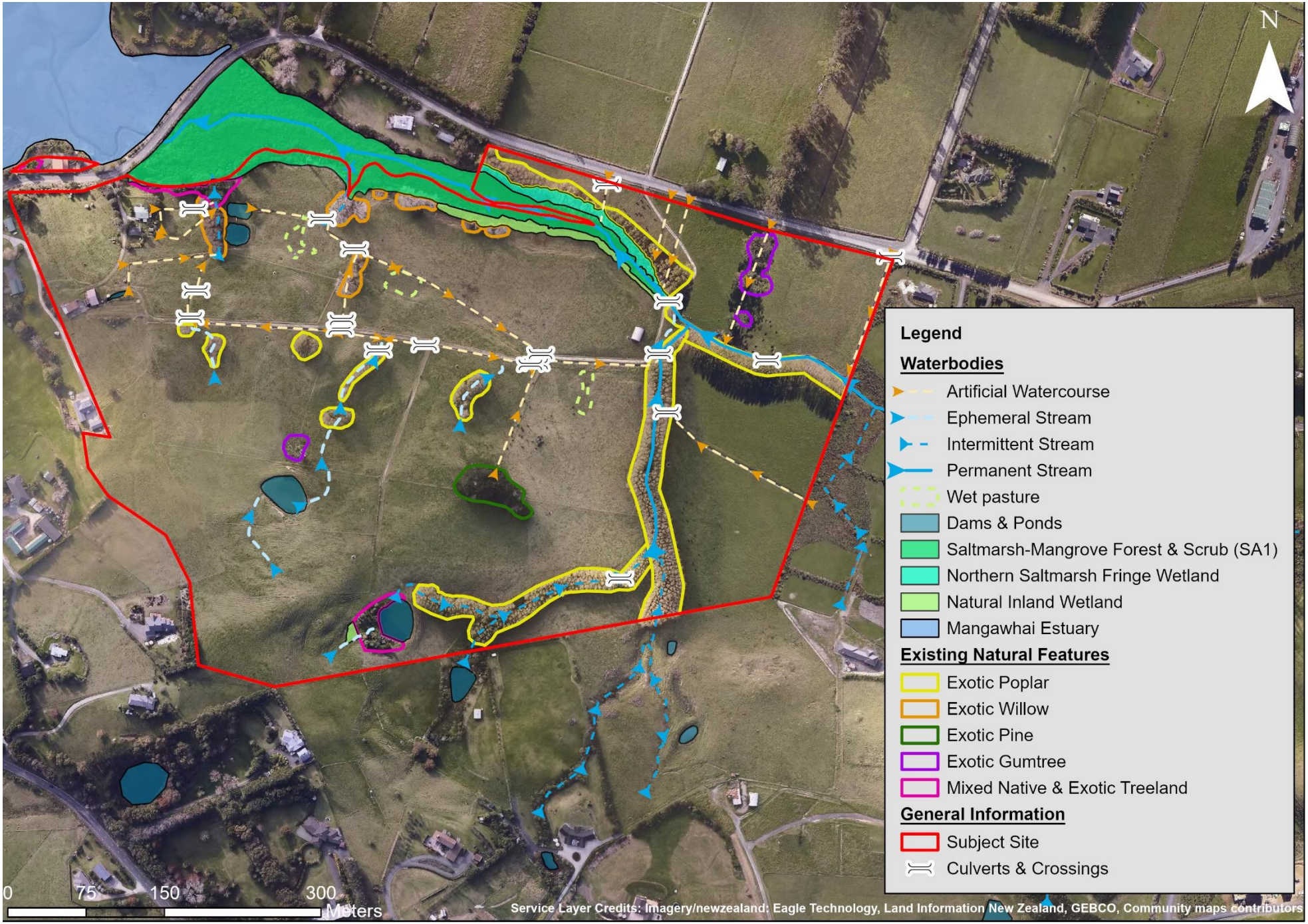


Figure 1: Showing the natural features onsite

Saltmarsh-Mangrove Forest and Scrub (SA1)

A Saltmarsh-Mangrove Forest and Scrub habitat was identified both onsite and immediately abounding the site to the north. This habitat is considered to be a natural inland wetland under the NPS-FM. The saltmarsh and associated tidal nature of the estuarine aspect of the site provides a variety of saltmarsh species and vegetation zonations. The core saltmarsh area is best described as SA1 variant 'mangrove forest and scrub' occurring around the stream mouth, is primary tidally influenced and is dominated by stands of manawa (*Avicennia marina* subsp. *australasica*) with scattered salt marsh ribbonwood (*Plagianthus divaricatus*) on the outer edges (Figure 2).

As the topography grades up, the SA1 variant 'sea rush and oioi' becomes the main feature and is dominated by sea rush (*Juncus kraussii* subsp*. australiensis*) dispersed with oioi (*Apodasmia similis*) (Figure 3). Small saltmarsh species such as bachelors' button (*Cotula coronopifolia*), glasswort (*Salicornia quinqueflora*), sea primrose (*Samolus repens* var. *repens*) dispersed with shore celery (*Apium prostratum* subsp*. prostratum var. filiforme*), slender club rush (*Isolepis cernua*) and arrow grass (*Triglochin striata*) # were recorded within the tidal areas (Figure 4). Further, it was noted that some of the outer saltmarsh edges contain exotic species such as orache (*Atriplex prostrata*), sea aster (*Symphyotrichum subulatum*), buffalo grass (*Stenotaphrum secundatum*), mercer grass (*Paspalum distichum*), tall fescue (*Lolium arundinaceum*) and watsonia (*Watsonia meriana*).

The associated Environmental Assessment Report prepared by RDL (dated November 2023) highlights the significance of this wetland feature, in that it provides habitat for the 'Nationally Critical' Australasian bittern (*Botaurus poiciloptilus*), the 'At Risk – Declining' banded rail (*Hypotaenidia philippensis*), the 'At Risk – Relict' black shag (*Phalacrocorax carbo*) and the 'At Risk – Declining' North Island fernbird (*Poodytes punctatus vealeae*). Australasian bittern have been observed on previous RDL site visits to Black Swamp Road on the immediately abounding properties, and black shag and North Island fernbirds were recorded onsite during site visits. Further, the 'At Risk – Declining' longfin eel (*Anguilla dieffenbachia*) and 'At Risk – Declining' inanga (*Galaxias maculatus*) were identified within the waterbody.

Figure 2: Showing manawa along central aspect of saltmarsh

Figure 3: Showing manawa grading into sea rush and oioi at the northern side of wetland

Figure 4: Showing the 'Regionally Significant' arrow grass within the saltmarsh area

Northern Saltmarsh Fringe Wetland

The northern side of the identified Saltmarsh-Mangrove Forest and Scrub habitat grades into what could be described as a degraded manuka fen habitat beneath a canopy of poplar (*Populus* sp.) (Figure 5). This northern saltmarsh fringe wetland is considered to be a natural inland wetland under the NPS-FM. From the saltmarsh edges, kuawa (*Schoenoplectus tabernaemontani*) and tussock swamp sedge (*Machaerina juncea*) become common grading outwards into a mixture of sparse tangle fern (*Gleichenia dicarpa*), manuka (*Leptospermum scoparium*), orange nut sedge (*Machaerina rubignosa*), (*Machaerina teretifolia*), *Netrostylis capillaris*[#], sharp spike sedge (*Eleocharis acuta*), ring fern (*Paesia scaberula*) with kiokio (*Blechnum novae-zelandiae*) common on the outer edges (Figure 6 & Figure 7). Small herbs found throughout included lobelia (*Lobelia anceps*), centella (*Centella uniflora*), fireweed (*Senecio glomeratus*) with bind weed (*Calystegia sepium* subsp. *roseata*).

Scattered giant umbrella sedge (*Cyperus ustulatus*), harakeke (*Phormium tenax*), hangehange (*Geniostoma ligustrifolium* var. *ligustrifolium*), totara (*Podocarpus totara*) and a single coastal tree daisy (*Olearia solandri*)[#] were also present. Some old scattered native plantings were observed in the upper reaches of the tidal area towards the existing stream crossing.

Figure 5: Showing wetland feature beneath poplars.

Figure 6: Showing scattered tangle fern within the wetland

Figure 7: Showing the 'Regionally Significant' Netrostylis capillaris

Natural Inland Wetlands

Two other wetlands were identified onsite which pass the MfE wetland delineation protocol to be considered natural inland wetlands under the NPS-FM. The first wetland exists to the south of the Saltmarsh-Mangrove Forest and Scrub habitat, though it is vastly different than its northern counterpart. Due to the historical modification and continued grazing, the southern side of the saltmarsh although technically wetland, is pastoral in nature. Three distinctive vegetation patterns were identified including *Juncus* rushland, *Pericaria* herbfield and *Paspalum* grassland. Generally, these areas were dominated by species such as soft rush (*Juncus effusus*), mercer grass (*Paspalum distichum*) and native willow herb (*Persicaria decipiens*) (Figure 8). It is likely that these areas, following restoration and natural succession, may revert towards a more natural saltmarsh/wetland habitat.

Another induced wetland was identified next to a stock pond in the southern aspect of the subject site, with the key vegetation type described as novel *Juncus* rushlands with a small area of *Paspalum* herbfield (Figure 9). This wetland is highly degraded and grazed – it is functionally wet pasture however it did meet the wetland delineation protocols and therefore was assessed as a natural inland wetland under the NPS-FM.

Figure 8: Showing area of Juncus rushland adjoining the southern side of saltmarsh

Figure 9: Showing the induced natural inland wetland located within the southern aspect of the subject site next to a stock pond

Wider Natural Features

The wider natural features on site consist of improved pasture used for grazing dry stock. Large areas of the site, along the waterways and wet areas, have historically been planted with poplar (*Populus* sp.) and have been maintained as part of the wider pastoral areas. Along steeper steam edges, some natural regeneration has occurred with rasp fern (*Doodia australis*), rautahi (*Carex lessoniana*), ponga (*Cyathea dealbata*), karamu (*Coprosma robusta*) and ti kouka (*Cordyline australis*) and the exotic watsonia (Figure 10).

Small pockets of willow (*Salix* sp.), gum (*Eucalyptus* sp.), Monterey cypress (*Hesperocyparis macrocarpa*) and Monterey pine (*Pinus radiata*) can be found. The gums on site are of some historical value and likely date back to the era of the 20th century gum store referenced in the Archaeological Assessment prepared by Geometria Ltd (Figure 11).

Along the saltmarsh edge near the site's western boundary, and within the western corner of, several large Pohutukawa (*Metrosideros excelsa*) which are likely to be a combination of cultivated and natural origin, can be found with naturally regenerating karaka (*Corynocarpus laevigatus*), karo (*Pittosporum crassifolium*), ti kouka, houpara (*Pseudopanax lessonii*), nikau (*Rhopalostylis sapida*) and trip me up sedge (*Carex flagellifera*) (Figure 12). Within the western pocket of 13 Black Swamp Road exists mixed native and exotic bush, where natural regeneration has encroached upon exotic planting. A few large specimen pohutukawa, poplar and banksia (*Banksia* spp.) treestands were observed alongside common karamu, yucca (*Yucca* spp.), mapau (*Myrsine australis*), nikau, monstera (*Monstera deliciosa*), wild ginger (*Hedychium gardnerianum*), agapanthus (*Agapanthus praecox*) and woolly nightshade as well as sparce kanuka (*Kunzea ericoides*), mamaku (*Cyathea medullaris*) and bangalow palm (*Archontophoenix cunninghamiana*).

Some weedy species likely associated with the existing dwelling and farm buildings included, English ivy (*Hedera helix*), umbrella sedge (*Cyperus albostriatus*), arum lily (*Zantedeschia aethiopica*), pampas (*Cortaderia selloana*), smilax (*Asparagus asparagoides*), climbing asparagus (*Asparagus scandens*), tree privet (*Ligustrum lucidum*), glory bush (*Pleroma urvilleanum*) and bamboo (*Phyllostachys* sp).

Figure 10: Showing poplars along stream edges

Figure 11: Showing poplars and a single gum which was a part of historic shelter belt

Figure 12: Showing pockets of pohutukawa and natural regeneration.

PROTECTED NATURAL AREAS

The subject site abounds and contains a Level 1 Protected Natural Area (PNA) of the Rodney Ecological District known as the Mangawhai Harbour, Sandspit and Surrounds (ROD014) PNA (Figure 13). Level 1 PNA sites are the highest value sites and are considered to contain significant vegetation and/or significant habitats of indigenous fauna in regard to the Resource Management Act (1991) (Goldwater et al. 2012). They are defined by the presence of one or more of the following ecological characteristics:

1. *Contain or is regularly used by nationally threatened or uncommon taxa including subspecies and indeterminate taxa.*
2. *Contain or is regularly used by indigenous or endemic taxa that are threatened, rare or of local occurrence in Northland or in Rodney ED (Northland) (i.e., 'regionally significant' species).*
3. *Contain the best representative examples in Rodney ED (Northland) of a particular ecological unit or combination of ecological units.*
4. *Have a high diversity of taxa or habitat types for Rodney ED (Northland).*
5. *Form ecological buffers, linkages or corridors to other areas of significant vegetation or significant habitats of indigenous fauna.*

6. *Contain habitat types that are rare or threatened in Rodney ED (Northland) or regionally or nationally.*
7. *Support good populations of taxa which are endemic to Northland or Northland – Auckland.*
8. *Are important for indigenous migratory taxa.*
9. *Cover a large geographic area relative to other similar habitat types within Rodney ED (Northland).*

The Mangawhai Harbour, Sandspit and Surrounds PNA encompasses a diverse range of vegetation cover and therefore supports a wide variety of ecosystems including but not limited to: the best coastal pohutukawa forest on hills in the ED, some of the best mangrove forests on saline wetlands in the ED, one of the best oioi sedgeland on coastal saline/freshwater wetland in the ED and the best coastal manuka shrubland on peaty, boggy alluvium in the ED. Consequently, ROD014 supports many significant avifauna including (but not limited to) the nationally important, 'Native & Nationally Critical' New Zealand (NZ) fairy tern (*Sternula nereis*), the 'Endemic & At Risk/Recovering' northern NZ dotterel (*Charadrius obscurus aquilonius*), the 'Native & Nationally Vulnerable' Caspian tern (*Hydroprogne caspia*), the 'Endemic & At Risk/Declining' North Island (NI) fernbird (*Bowdleria punctata vealeae*), the 'Endemic & Nationally Vulnerable' wrybill (*Anarhynchus frontalis*), and the 'Native & Declining' banded rail (*Gallirallus philippensis*). The Mangawhai Harbour, Sandspit and Surrounds PNA is also an important resting ground for 'Native & Declining' migratory bar-tailed godwits (*Limosa lapponica*) that migrate from Alaska to New Zealand each year. There are records of moko skink (*Oligosoma moco*) in the sandspits of the PNA, which are extremely rare and significant on the mainland. Overall, the PNA comprises of a highly significant complex of dunes, estuarine and coastal habitats that are home to many 'At Risk' and 'Threatened' flora and fauna.

Additionally, saltmarsh wetlands are considered the rarest estuarine habitat type in Northland, with its extent having been greatly reduced with less than 15% of its original extent remaining today. This is an important contextual note as saltmarsh wetlands have been identified onsite.

With the above considered, it is thought that the vast majority of portion of habitat that has been identified as a Level 1 PNA of the Rodney ED meets all 9 factors for determining Level 1 status. Thus, nearly all native habitat that falls within the Mangawhai Harbour, Sandspit and Surrounds PNA overlay fulfils all four SNA criteria and thus should be identified as SNA. Key exclusions include a very small portion of the PNA which extends over poplar and pasture, and all of 13 Black Swamp Road which is wholly composed of a large dwelling, parking lot and small, ornamental garden.

Figure 13: Showing the Mangawhai Harbour, Sandspit and Surrounds PNA in relation to the subject site

SIGNIFICANT NATURAL AREA ASSESSMENT

Generally speaking, it is considered that the subject site is largely void of any natural features that qualify as Significant Natural Areas under the NPS-IB. The wider site is in pasture and actively grazed and maintained as such. Exotic specimen trees have been planted as shelterbelts along permanent and intermittent streams banks throughout the site. These offer little in the way of habitat provisions for indigenous species and do not meet any of the SNA criteria. Some small mixed native and exotic tree stands exist onsite, however, much like the shelterbelts they too provide little in the way of habitat provisions for native fauna, and their size, shape, representativeness, diversity, pattern and general condition do not qualify them as SNAs under the NPS-IB criteria.

A few natural inland wetlands were identified within the subject site and although wetlands have been greatly diminished from their historic range, these wetlands are novel in nature and dominated by introduced, exotic hydrophytic vegetation. As such, areas labelled as natural inland wetlands are only considered wetlands based on the MfE delineation protocols; they are pastoral in nature and do not meet any of the NPS-IB criteria to be identified as SNA.

By in large a majority of the natural features identified as SNAs fall within the Level 1 PNA identified on and immediately adjacent to the subject site. SNA status has been awarded to the entirety of the Saltmarsh-Mangrove Forest and Scrub habitat type identified. It contains and provides habitat for a number of indigenous flora and fauna, some of which are at-risk, threatened and/or regionally significant to the ecological district. SNA status has also been extended to the Northern Saltmarsh Fringe Wetland habitat that is best described, in parts, as a degraded manuka fen. Similarly, it contains rare habitat types for the ecological district, as well as regionally significant plant species. It also provides important buffering to the saltmarsh and exhibits transitional ecotone sequence composed of indigenous vegetation. Both of these aforementioned wetland features also exhibit adequate diversity, representativeness, pattern, distinctiveness and generally are considered important in the Rodney ED. As such, both the onsite Saltmarsh-Mangrove Forest and Scrub and Northern Saltmarsh Fringe Wetland as identified within the natural features map and described in the body of this memo as well as the affiliated Ecological Assessment Report prepared by RDL (November 2023) are considered SNAs under the NPS-IB. An updated planning map identifying proposed SNA's is provided.

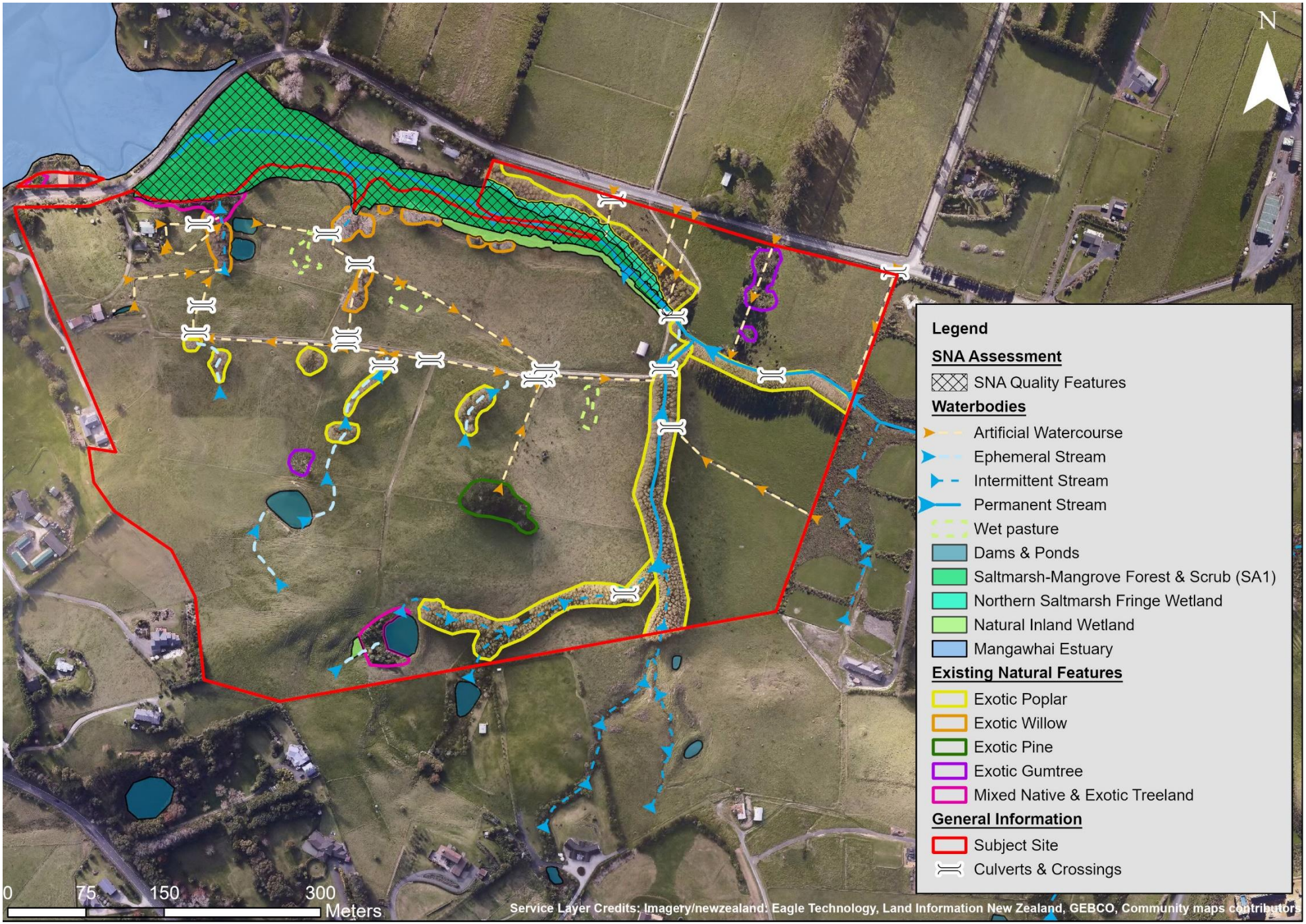


Figure 14: Showing the wider subject site and identified SNA features in relation to the natural features delineated onsite

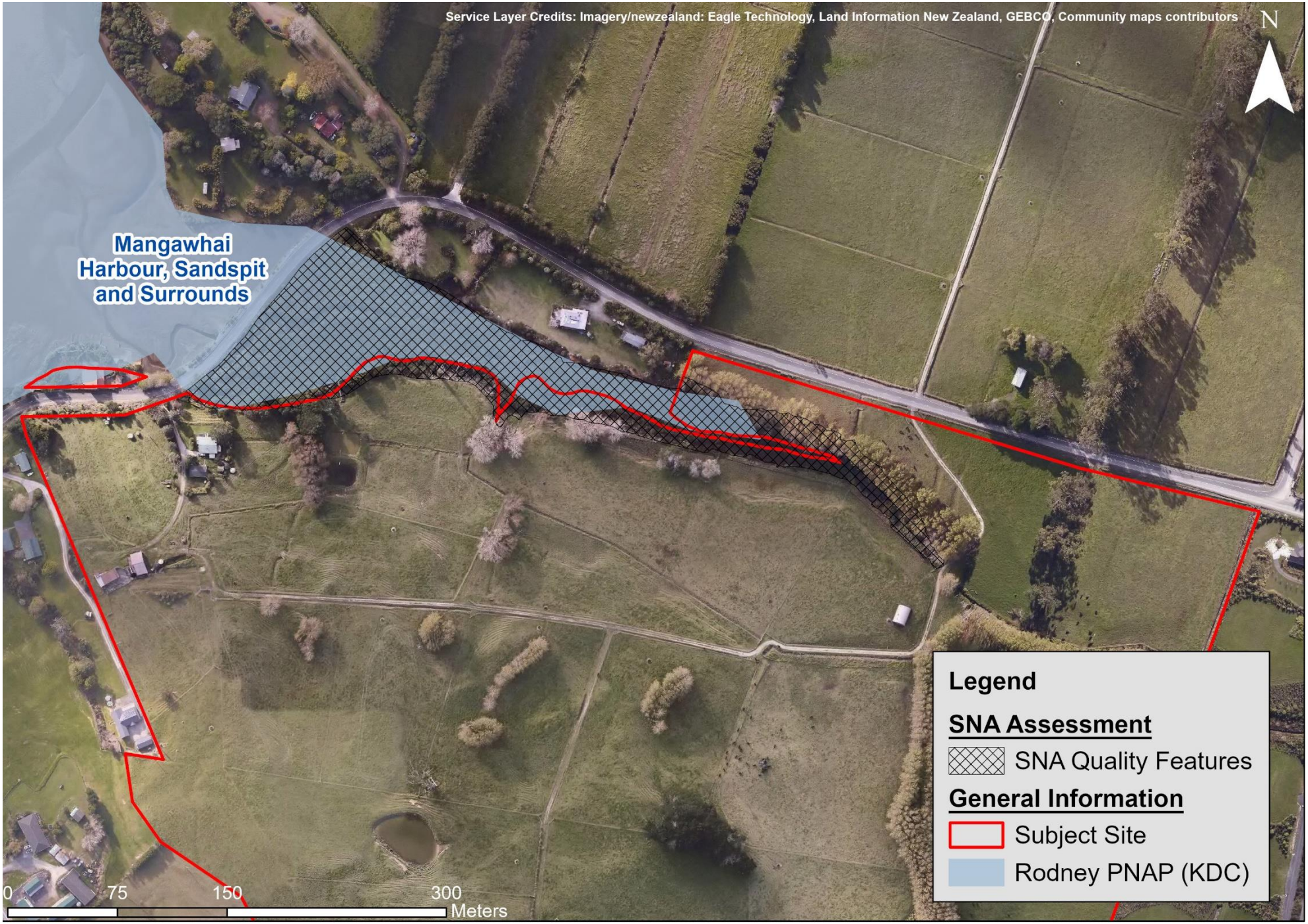


Figure 15: Showing the Level 1 PNA of the Rodney ED in relation to the subject site and SNA quality features

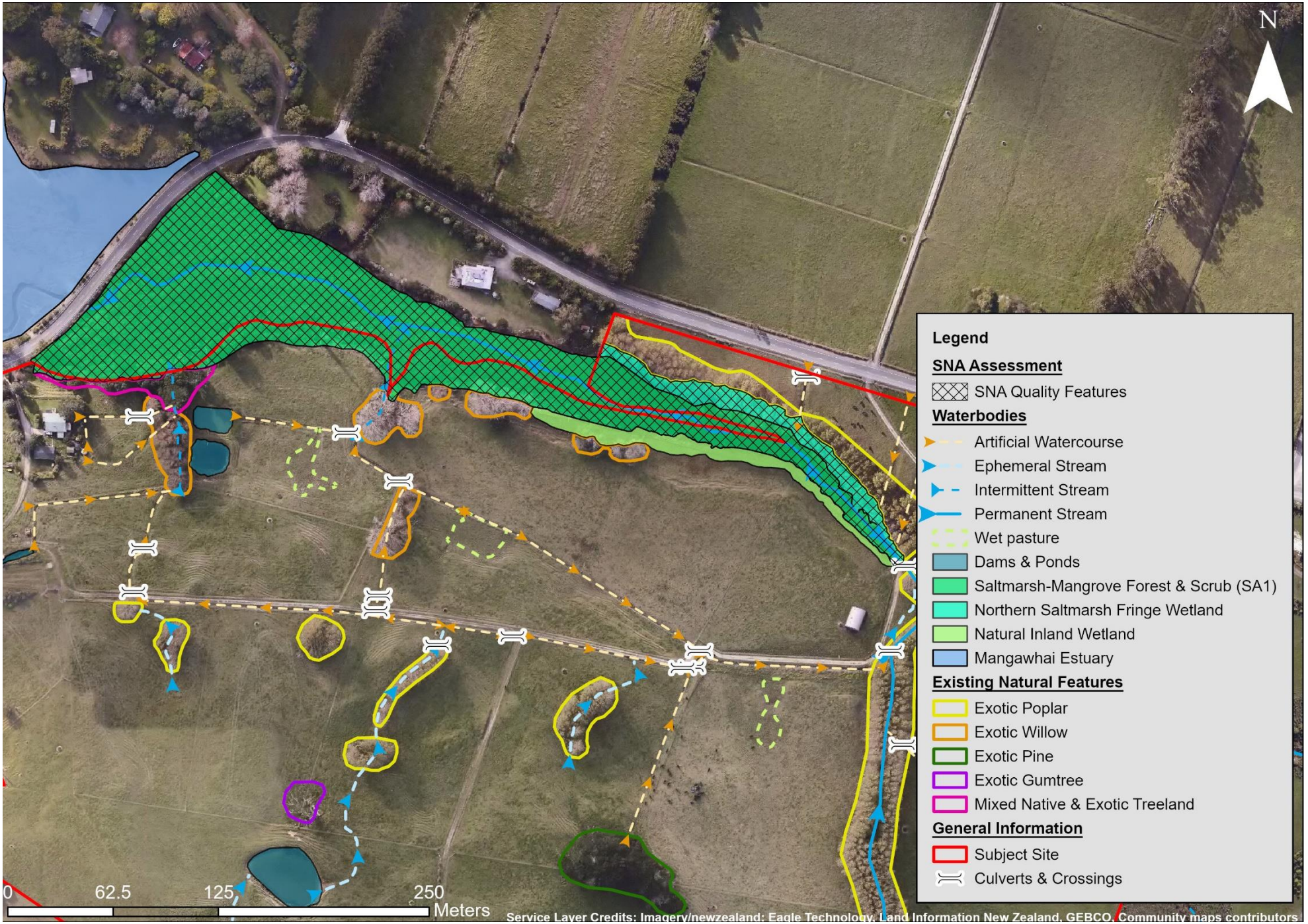


Figure 16: A zoomed in view of the habitat types with what RDL considers habitat of SNA quality overlaid

SNA Qualification			
Saltmarsh – Mangrove Forest & Scrub (PNA)			
Criteria	Subfactor (must meet one of the following)	Details	Review
Representativeness	1. Indigenous vegetation that has ecological integrity that is typical of the character of the ecological district. 2. Habitat that supports a typical suite of indigenous fauna that is characteristic of the habitat type in the ecological district and retains at least a moderate range of species expected for that habitat type in the ecological district.	Meets 1 and 2: Saltmarsh-Mangrove Forest & Scrub SA1 with subcategory sea rush and oioi ecosystem present, containing indigenous vegetation that supports a typical suite of indigenous fauna of the habitat type in the Rodney ED and a moderate range of species expected for the habitat type.	YES
Diversity & Pattern	1. At least a moderate diversity of indigenous species, vegetation, habitats of indigenous fauna or communities in the context of the ecological district. 2. Presence of indigenous ecotones, complete or partial gradients or sequences.	Meets 1 and 2: A variety of vegetation ecotone zonation's present with a moderate diversity of species, vegetation, habitats of indigenous fauna in the context of the Rodney ED.	YES
Rarity & Distinctiveness	1. Provides habitat for an indigenous species that is listed as Threatened or At Risk (declining) in the New Zealand Threat Classification System lists. 2. An indigenous vegetation type or an indigenous species that is uncommon within the region or ecological district: an indigenous	Meets 1-6: A variety of threatened and at-risk species present including north island fernbird, longfin eel, inanga, giant bully, black shag, royal spoonbill, and Australasian bittern. Indigenous saltmarsh wetland present. *Triglochin striata* present.	YES

	species or plant community at or near its natural distributional limit. 3. Indigenous vegetation that has been reduced to less than 20 per cent of its prehuman extent in the ecological district, region, or land environment. 4. Indigenous vegetation or habitat of indigenous fauna occurring on naturally uncommon ecosystems. 5. The type locality of an indigenous species. 6. The presence of a distinctive assemblage or community of indigenous species. 7. The presence of a special ecological or scientific feature.		
Ecological Context	1. At least moderate size and a compact shape, in the context of the relevant ecological district. 2. Well-buffered relative to remaining habitats in the relevant ecological district. 3. Provides an important full or partial buffer to, or link between, one or more important habitats of indigenous fauna or significant natural areas.	Meets 1-4: Provides partial buffering to the wider Mangawhai Harbour, Sandspit and Surrounds PNA. Moderate size, compact shape for the ED. Provides important linkages to PNA and important habitat for indigenous fauna.	YES

	4. Important for the natural functioning of an ecosystem relative to remaining habitats in the ecological district.		
Summary	Meets the following attributes: representativeness, diversity, pattern, rarity, distinctiveness and ecological context.		**QUALIFIES AS SNA**
Northern Saltmarsh Fringe Wetland			
Criteria	Subfactor (must meet one of the following)	Details	Review
Representativeness	1. Indigenous vegetation that has ecological integrity that is typical of the character of the ecological district. 2. Habitat that supports a typical suite of indigenous fauna that is characteristic of the habitat type in the ecological district and retains at least a moderate range of species expected for that habitat type in the ecological district.	Meets none: Degraded manuka fen wetland lacking in ecological integrity. Limited range of species expected for the habitat type, though species present are regionally significant for the district.	NO
Diversity & Pattern	1. At least a moderate diversity of indigenous species, vegetation, habitats of indigenous fauna or communities in the context of the ecological district. 2. Presence of indigenous ecotones, complete or partial gradients or sequences.	Meets none: Less than moderate diversity of indigenous species observed in the context of the ED.	NO
Rarity & Distinctiveness	1. Provides habitat for an indigenous species that is listed as Threatened or At Risk (declining) in the New Zealand Threat Classification System lists.	Meets 1-4 and 6: Manuka fen an indigenous vegetation type that is uncommon within the region and ED. Habitat type reduced to less than 20% its prehuman extent. Black shag present,	YES

	2. An indigenous vegetation type or an indigenous species that is uncommon within the region or ecological district: an indigenous species or plant community at or near its natural distributional limit. 3. Indigenous vegetation that has been reduced to less than 20 per cent of its prehuman extent in the ecological district, region, or land environment. 4. Indigenous vegetation or habitat of indigenous fauna occurring on naturally uncommon ecosystems. 5. The type locality of an indigenous species. 6. The presence of a distinctive assemblage or community of indigenous species. 7. The presence of a special ecological or scientific feature.	north island fernbird present, *Netrostylis capillaris* present, *Olearia solandri* present.	
Ecological Context	1. At least moderate size and a compact shape, in the context of the relevant ecological district. 2. Well-buffered relative to remaining habitats in the relevant ecological district.	Meets 3: Not well buffered, less than moderate size in the context of the ED. Adjacent to important habitats and areas of SEA quality, wetland is degraded though still provides partial buffering to SNA / PNA habitats that contain indigenous fauna.	YES

	3. Provides an important full or partial buffer to, or link between, one or more important habitats of indigenous fauna or significant natural areas. 4. Important for the natural functioning of an ecosystem relative to remaining habitats in the ecological district.		
Summary	Meets the following attributes: rarity, distinctiveness and ecological context.		**QUALIFIES AS SNA**
Natural Inland Wetlands			
Criteria	Subfactor (must meet one of the following)	Details	Review
Representativeness	1. Indigenous vegetation that has ecological integrity that is typical of the character of the ecological district. 2. Habitat that supports a typical suite of indigenous fauna that is characteristic of the habitat type in the ecological district and retains at least a moderate range of species expected for that habitat type in the ecological district.	Meets none: No indigenous vegetation with little to no ecological integrity, does not support typical suite of indigenous fauna.	NO
Diversity & Pattern	1. At least a moderate diversity of indigenous species, vegetation, habitats of indigenous fauna or communities in the context of the ecological district. 2. Presence of indigenous ecotones, complete or partial gradients or sequences.	Meets none: Low diversity, near no indigenous species present, no habitat for indigenous fauna. Ecotones present but not indigenous	NO

Rarity & Distinctiveness	1. Provides habitat for an indigenous species that is listed as Threatened or At Risk (declining) in the New Zealand Threat Classification System lists. 2. An indigenous vegetation type or an indigenous species that is uncommon within the region or ecological district: an indigenous species or plant community at or near its natural distributional limit. 3. Indigenous vegetation that has been reduced to less than 20 per cent of its prehuman extent in the ecological district, region, or land environment. 4. Indigenous vegetation or habitat of indigenous fauna occurring on naturally uncommon ecosystems. 5. The type locality of an indigenous species. 6. The presence of a distinctive assemblage or community of indigenous species. 7. The presence of a special ecological or scientific feature.	Meets none: Although natural inland wetlands have been reduced by more than 20%, these wetlands are novel exotic wetlands dominated by exotic wetland species, not indigenous. In their current state, they do not support threatened or at-risk species. Indigenous vegetation types not present. Not an important ecological or scientific feature	NO
Ecological Context	1. At least moderate size and a compact shape, in the context of the relevant ecological district.	Meets none: Small, not well buffered and does not provide buffering between more important habitats. Not considered important for the	NO

	2. Well-buffered relative to remaining habitats in the relevant ecological district. 3. Provides an important full or partial buffer to, or link between, one or more important habitats of indigenous fauna or significant natural areas. 4. Important for the natural functioning of an ecosystem relative to remaining habitats in the ecological district.	natural function of an ecosystem relative to remaining habitats in the ED	
Summary	Does not meet any one of the attributes of an SNA.		**NOT SNA**
Wider Natura Features – Poplar, Pine, Willow, Gumtree and Mixed Native & Exotic Treeland			
Criteria	Subfactor (must meet one of the following)	Details	Review
Representativeness	1. Indigenous vegetation that has ecological integrity that is typical of the character of the ecological district. 2. Habitat that supports a typical suite of indigenous fauna that is characteristic of the habitat type in the ecological district and retains at least a moderate range of species expected for that habitat type in the ecological district.	Meets none: Most natural features are exotic in nature, indigenous vegetation present within mixed naïve and exotic treeland is lacking in ecological integrity and does not support a typical suite of indigenous fauna for the habitat type. None are rare within the ED	NO
Diversity & Pattern	1. At least a moderate diversity of indigenous species, vegetation, habitats of indigenous fauna or communities in the context of the ecological district.	Meets none: Low to no diversity of indigenous species present.	NO

	2. Presence of indigenous ecotones, complete or partial gradients or sequences.		
Rarity & Distinctiveness	1. Provides habitat for an indigenous species that is listed as Threatened or At Risk (declining) in the New Zealand Threat Classification System lists. 2. An indigenous vegetation type or an indigenous species that is uncommon within the region or ecological district: an indigenous species or plant community at or near its natural distributional limit. 3. Indigenous vegetation that has been reduced to less than 20 per cent of its prehuman extent in the ecological district, region, or land environment. 4. Indigenous vegetation or habitat of indigenous fauna occurring on naturally uncommon ecosystems. 5. The type locality of an indigenous species. 6. The presence of a distinctive assemblage or community of indigenous species. 7. The presence of a special ecological or scientific feature.	Meets none: Although not identified within these habitat types, these forests may provide some habitat for indigenous species that is listed as Threatened or At Risk (Declining) (e.g. possibly roosting shorebirds, unlikely but possibly shore skink), however these habitat types would not meet part 2 of the SNA qualifier concerning habitat for a single indigenous fauna species that is At Risk (declining), as 1. No species threatened species were actually observed within these areas, and the protection of potential species within these habitat types are not considered important for the persistence of the species as a whole. No indigenous vegetation types present. No uncommon indigenous species present. Not an important ecological or scientific feature	NO

Ecological Context	1. At least moderate size and a compact shape, in the context of the relevant ecological district. 2. Well-buffered relative to remaining habitats in the relevant ecological district. 3. Provides an important full or partial buffer to, or link between, one or more important habitats of indigenous fauna or significant natural areas. 4. Important for the natural functioning of an ecosystem relative to remaining habitats in the ecological district.	Meets none: Does not provide adequate buffering between one or more important habitats, not considered important for the natural function of an ecosystem relative to the remaining habitats in the ED. Not well buffered. Small.	NO
Summary	Does not meet any one of the attributes of an SNA.		**NOT SNA**

Warm regards,

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Rural Design 1984 Ltd