

To: Neil Construction Limited

Date: 4 October 2022

Subject: Tōtara Road & McKean Road Fast Track – Ecology Assessment
Ref: 65887

Introduction

Neil Construction Limited (“the applicant”) propose to lodge an application for a referred project under the Covid-19 Recovery (Fast-track Consenting) Act 2020 (the “Act”) to utilise the fast-track consenting process. This application relates to a residential development within the adjoining sites at 101 Tōtara Road, 105-107 Tōtara Road, and 9 McKean Road, Whenuapai (collectively referred to as “the site”). A scheme plan is provided in Appendix I. This memorandum provides a high-level assessment of ecological aspects of the proposal.

Methodology

Site assessments was undertaken by an experienced ecologist on 22 July 2022. Botanic and terrestrial fauna values within the site were qualitatively assessed. Fauna habitats assessed considered indigenous lizards, birds, and bats.

Overland flow paths / watercourses were classified under the Auckland Unitary Plan - Operative in Part (AUP-OP) to determine, in accordance with the definitions in this plan, the ephemeral, intermittent or permanent status of these watercourses. Assessments were undertaken to determine whether or not any natural wetlands were present within the site as per the definitions and criteria laid out in the National Policy Statement for Freshwater Management 2020 (NPS-FM). Any potential aquatic habitat was then qualitatively assessed. Identified ecological features within the site are presented in Appendix II and photos of these features are provided in Appendix III.

Existing Environment

Background and Ecosystem Classification

The site is within the Tamaki Ecological District of the Auckland Region. Historically (pre-human), the area would likely have comprised of the pūriri forest ecosystem type (WF7) and would have supported a diverse range of invertebrates, amphibians, reptiles, birds and bats (Singers et al., 2017). Earliest historical aerials available from 1940 indicate that the site and much of the surrounding landscape has been devoid of native vegetation and managed as agricultural and horticultural land for at least the last 80 years (Appendix IV).

Currently, the site consists predominately of pasture with mature exotic shelterbelts, and a small number of rural dwellings and associated sheds. The site is surrounded by a mixture of residential development and agricultural/horticultural land, with the Royal NZ Air Force Base Auckland in close proximity to the southeast. The site does not support a recognised current terrestrial ecosystem type as classified under the AUP-OP: Biodiversity current extent, however the 101 Tōtara Road site is subject to a marine Significant Ecological Area (SEA) overlay which encroaches into the western boundary (SEA-M2-57b). There is an existing esplanade reserve adjacent the western boundary of the 9 McKean Road site.

Terrestrial Ecology

The site consists almost entirely of pasture grasses. A row of mature macrocarpa trees (*Hesperocyparis macrocarpa*) runs along the northern boundary of the 9 McKean Road property and continues along the esplanade reserve (Appendix I). There is a single isolated macrocarpa tree towards the west of site on the edge of the wetland, and some limited garden amenity planting around the existing dwellings. Along the edge of the coastal area within the 101 Tōtara Road site there is a strip of predominantly exotic vegetation which included some kānuka (*Kunzea* sp.) and coast redwood trees (*Sequoia sempervirens*), along with pest plants such as bamboo (*Poaceae* sp.), Sydney golden wattle (*Acacia longifolia*), Chinese privet (*Ligustrum sinense*), wild ginger (*Hedychium* sp.) and swiss cheese plant (*Monstera deliciosa*). The wider environment surrounding the site is largely devoid of any significant terrestrial vegetation.

The botanical value of the vegetation within the site was assessed as negligible, being predominately pasture with limited exotic trees. This vegetation provides very low-quality fauna habitat due to the lack of diversity, structure and connectivity.

Freshwater/Coastal Ecology

Overland flow paths/streams

Auckland Council GeoMaps indicates a number of overland flow paths to be present within the site, predominantly draining very small catchments. The majority of the overland flow paths had ill-defined channels, no flowing water 48 hrs after a rain event (9.5-12 mm recorded daily for two days prior to the visit), no natural pools, rooted terrestrial vegetation (pasture grasses) established across their widths and no evidence of substrate sorting. As such, these overland flow paths were classified as ephemeral reaches.

A modified permanent stream was present upstream of the wetland. The channel was approximately 1 m wide and had been artificially deepened and widened with very little flow and contained scattered macrophytes. The 1940 aerial shows a row of trees in the stream's location and the stream was presumed to have been present during this time. Several artificial farm drainage channels were identified on site; these were straight, narrow and incised, and mostly running parallel to fence lines (Appendix II). A review of historical aerals showed no presence of natural streams in the locations of the current drainage channels.

Natural Wetlands

A freshwater wetland was present towards the east of the site (Appendix II). Species throughout the wetland included swamp willowherb (*Epilobium pallidiflorum* – OBL), swamp millet (*Isachne globosa* – OBL), soft rush (*Juncus effusus* – FACW), kikuyu (*Cenchrus clandestinus* – FACU), slender knotweed (*Persicaria decipiens* - OBL), sharp spike sedge (*Eleocharis acuta* – OBL), buttercup (*Ranunculus repens* – FAC), Yorkshire fog (*Holcus lanatus* – FAC), and lotus (*Lotus pedunculatus* – FAC). The wetland met the rapid assessment for wetland vegetation based on the dominance of FACW/OBL species. Primary hydrological indicators including saturated ground and pooling water was present underfoot where the vegetation cover was dense, and in the south of the wetland shallow water was present downstream of a culvert that was underwater. The wetland is visible in the 1940 aerial photo (Appendix IV). Due to the presence of the obligate and facultative wetland species and the permanent wetland hydrology present,

the area was classified as a natural wetland under the NPS-FM. Potential wetlands were identified on the northern neighbouring site (Appendix II). These areas were not able to be accessed during the site visit however are likely to meet the definition of a wetland under the NPS-FM and will be conservatively assessed as such.

A coastal wetland, which is identified as marine SEA, is located along the western boundary of the site (Appendix II). This wetland had a cover of established mangroves (*Avicennia marina* subsp. *australasica* – OBL) and had permanent coastal hydrology, and therefore was classified as a natural wetland under the NPS-FM.

Assessment of Ecological Effects

Direct effects of the proposed development will include vegetation removal and stream works.

Botanical values within the site were considered negligible, and the vegetation does not provide any significant value as habitat to indigenous fauna. The loss of vegetation within the site is expected to have a very low-level effect on ecological values.

In the first instance, stream reclamation should be avoided, however if a functional need is proven, adverse effects will be can be appropriately mitigated and offset under the NPS-FM and Resource Management Act 1991 (RMA).

Natural wetlands are located on site and within 100 m of the proposed development. Works within, and within 10 m of the natural wetlands identified on site have been avoided. The proposed earthworks and development can be effectively designed and/or mitigated to ensure there is no partial drainage of any natural wetland or loss of ecological value. The proposed design currently provides for the opportunity to increase the ecological value of the wetland through appropriate native buffer planting.

Indirect adverse effects, such as sedimentation and stormwater contaminants, are proposed to be adequately mitigated through appropriate controls and following best practice guidelines, to ensure adverse effects on ecological values are no more than minor.

The proposed development of the site is consistent with the outcomes expected of the NPS-FM and the Auckland Unitary Plan (Operative in Part). A more comprehensive ecological assessment will be provided to support the development application at the expert consenting panel stage, which will further assess the potential indirect adverse effects and detail any proposed ecological enhancement actions.

Regards,



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Appendix I: Development Scheme Plan



SITE ASSESSMENT

Legal description:	LOT 34 DP 15956, LOT 1 DP 170291 LOT 1 DP 52677, LOT 1 DP 72379
Address:	100-109 Totara Road
Site Area:	152 164m ²
Zone:	Future Urban

YIELD

Vacant Lots:	235 Lots	
Medium Density Lots:	9 Lots	
Total:	244 Lots	

PUBLIC

	Road
	Public Open Space
	Neighbourhood Park
	Walkway
	Vacant Lot
	Medium Density Lot
	Building



Construct Architects.

TOTARA RD RESIDENTIAL
NORTH

NEIL CONSTRUCTION LTD

CONCEPT MASTERPLAN -
WITH RESERVE

0 2 100
Scale: 1:2000 @A3



SK04

Rev:

Appendix II: Map of key ecological features



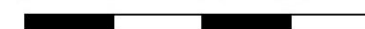
Map of freshwater features - Tōtara Road & McKean Road, Whenuapai

Project #65887
Drawn by B.P.
Date: 15/09/22

Legend

- | | |
|---|--|
|  Property boundaries |  Culvert |
|  Stream |  Natural wetland |
|  Modified natural stream |  Potential wetland |
|  Artificial drain |  Marine SEA overlay |

0 50 100 150 200 m



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Appendix III: Photos of identified features



Photo 1. Exotic macrocarpa shelterbelt along the northern 9 McKean Road site boundary.



Photo 2. Exotic vegetation with scattered kākara along the western boundary of the 101 Tōtara Road.



Photo 3. Modified natural stream amongst pasture.



Photo 4. Typical artificial drain running along fence line.



Photo 5. Southern portion of wetland in the east of the site.



Photo 6. Northern portion of wetland in east of the site.

Appendix IV: 1940 Aerial Image (Sourced from Retrolens) with orange line showing approx. property boundaries.

