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METLIFECARE WHENUAPAI VILLAGE FAST TRACK – PRELIMINARY ECOLOGY ASSESSMENT

Background

Metlifecare Retirement Villages Limited (“the applicant”) proposes to lodge an application for a listed project under the Fast Track Approvals Bill. The application is for a retirement village development at 99 Tōtara Road, Whenuapai (“the site”). A scheme plan is provided in Appendix A. Viridis Limited (Viridis) have been engaged to provide a high-level ecological assessment for the proposal.

Methodology

Prior to visiting the site, a desktop review was carried out which included a review of current and historic site aerial imagery, as well as available data on Auckland Council’s Geomaps regarding topography, hydrology, and mapped ecosystem types. Any clear changes in vegetation and presence of surface water were noted.

The site was visited by a suitably qualified and experienced ecologist in July 2021, July 2022, February 2023 and January 2024. Botanic and terrestrial fauna values within the site were qualitatively assessed. Fauna habitat assessments considered indigenous lizards, birds, and bats to a high level.

During the site assessment, the presence and extent of watercourses and putative wetlands were noted. Watercourses were classified as per the AUP-OP definitions to determine ephemeral, intermittent or permanent status. Where appropriate, wetland delineation protocols (MfE 2022a, Clarkson 2014) and pasture exclusion assessment methodology (MfE 2022b) were used to determine if an area met the regulatory definition of a ‘natural inland wetland’ identified in the National Policy Statement for Freshwater Management 2020 (NPS-FM). Potential wetland areas were assessed based on the prevalence of certain vegetation species and their indicator status ratings, as defined in Clarkson et al. (2021):

- Obligate wetland (OBL) vegetation, which almost always is a hydrophyte (a plant which only grows in wet environments), rarely found in uplands (non-wetland areas).
- Facultative wetland (FACW) vegetation, which usually is a hydrophyte but can occasionally be found in uplands.
- Facultative (FAC) vegetation, which is commonly either a hydrophyte or non-hydrophyte.
- Facultative upland (FACU) vegetation, which is occasionally a hydrophyte but is usually found in uplands.
- Upland (UPL) vegetation, which is rarely a hydrophyte and is almost always found in uplands.

Based on the dominance and prevalence of hydrophytic (wetland) species, natural inland wetland presence/absence was determined. Where results of the vegetation assessment remained uncertain or conditions were modified or atypical, hydric soils and hydrological assessments were undertaken in accordance with methodology outlined in MfE (2022a) and Clarkson (2014).

The ecological value of terrestrial features were determined in accordance with the methodology prescribed in the EIANZ guidelines (Roper-Lindsay et al., 2018).

Existing Environment

Background and Ecosystem Classification

The site is within the Tāmaki Ecological District of the Auckland Region. Historically (pre-human), the area would likely have comprised of pūriri forest (WF7-1) and would have supported a diverse range of invertebrates, amphibians, reptiles, birds and bats (Singers et al., 2017). The earliest available historical aerials 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 80 years (Appendix B).

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 to the southeast. The site does not support a recognised current terrestrial ecosystem type as classified under the AUP-OP's Ecosystem Extent GIS layer. The surrounding coastal area is subject to a Significant Ecological Area (SEA-M2-57b) overlay. Small sections of this SEA encroach into the site (Appendix B).

Terrestrial Ecology

The site consisted almost entirely of pasture grasses (Appendix C & D). Outside of the pasture grasses there was some limited garden amenity planting around the existing dwellings, a row of mature macrocarpa trees (*Hesperocyparis macrocarpa*) within the western section of the site which formed a shelter belt, and coastal edge vegetation. The coastal edge vegetation predominantly consisted of exotic vegetation including listed pest plants such as moth plant (*Araujia hortorum*), woolly nightshade (*Solanum mauritianum*), pampas (*Cortaderia selloana*), gorse (*Ulex europaeus*), arrow bamboo (*Pseudosasa japonica*), Sydney golden wattle (*Acacia longifolia*), Chinese privet (*Ligustrum sinense*) and wild ginger (*Hedychium* sp.). Although dominated by exotic vegetation, some areas along the coastal edge included tall kānuka (*Kunzea* sp.). Additionally, there was a single isolated pōhutukawa (*Metrosideros excelsa*) located along the north-western coastal edge. The wider environment surrounding the site was largely devoid of any significant terrestrial vegetation.

The botanical value of the vegetation within the site was assessed as low, being predominately pasture with limited exotic trees. The vegetation within the site may provide some limited habitat for indigenous birds, lizards and bats, although the lack of diversity, structure and connectivity reduces the habitat value.

Freshwater and Coastal Ecology

Overland flow paths & streams

Auckland Council's GeoMaps shows several overland flow paths within the site, predominantly draining very small catchments. The majority of the overland flow paths had ill-defined channels, no flowing water 48 hours after a rain event, 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.

Two permanent streams (western and eastern arms) were present within the south-eastern section of the site (Appendix C). These streams formed a confluence within the site before flowing north into the

neighbouring property and shortly after draining into the marine environment. Along the western arm, two culverts were located adjacent to the southern boundary of the site.

A third stream was located further to the north along the eastern boundary of the site. This stream has a small catchment and was intermittent in nature.

All three streams had been highly modified through farming practices. The streams were soft-bottomed, with high loadings of fine sediments and had little to no shading. The ecological value of the streams was assessed as low. Despite poor habitat and water quality, common pollutant-tolerant species such as short fin eel (*Anguilla australis*) may be present. At-Risk species such as long fin eel (*A. dieffenbachia*) may be also present, as well as īnanga (*Galaxias maculatus*) due to the stream's close proximity to the marine environment.

Despite their low value, there is potential to enhance the ecological value of these streams through managing runoff and riparian planting.

Natural wetlands

Two natural inland wetlands were present within the south-eastern section of the site (Appendix C). These wetlands were associated with the stream margins and were almost entirely dominated by mercur grass (*Paspalum distichum* - FACW). Other less common species observed 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 wetlands met the rapid assessment for wetland vegetation based on the dominance of FACW species. Primary hydrological indicators including saturated ground and pooling water were present. Due to passing the rapid assessment and the presence of permanent wetland hydrology, these areas were classified as natural inland wetlands under the NPS-FM.

The ecological value of the wetlands was assessed as low, due to the dominance of exotic species, the lack of structural tiers and riparian vegetation and the low hydrologic variation. However, like the three streams on site, there is potential to enhance the ecological value of these wetlands through managing runoff and buffer planting.

Along the western stream arm, two culverts were present upstream of the wetland. Between the two culverts a stream section was present with no natural wetland features.

A natural wetland in the neighbouring southern property was also identified. This wetland was also dominated by FACW and OBL species.

The coastal marine area (CMA), which is identified as a SEA, surrounds most of the site and consisted of an established cover of mangroves (*Avicennia marina* subsp. *australasica* - OBL). This coastal wetland is located on the seaward side of the CMA and as such is not considered a natural inland wetland. The proposed design currently provides for the opportunity to significantly increase the ecological value of the coastal wetland and associated habitat through appropriate native buffer planting.

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 significant value as habitat to indigenous fauna. However, potential impacts on indigenous fauna will be assessed during the expert consenting panel stage, and adverse effects can be managed appropriately through the implementation of fauna management plans. The loss of vegetation within the site is expected to have a very low-level effect on ecological values.

The proposed stream works consist of extending and upgrading the southernmost culvert and removal of the eastern-most culvert. Overall, there will be less culvert length compared to the existing site and the culvert will be designed to provide appropriate fish passage. Any potential adverse effects, such as mortality of native fish during works, can be appropriately mitigated for through the implementation of fish management. On the assumption that appropriate mitigation is provided for, the proposed stream works are expected to have a very low-level effect on ecological values. Furthermore, the proposed design currently provides for the opportunity to significantly increase the ecological value of the streams through appropriate native riparian planting.

Natural wetlands were located on site and within 100 m of the proposed development. Works within natural wetlands have been avoided. Minor works, including earthworks and vegetation removal, are proposed within 10 m of the natural inland wetlands. 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. Furthermore, the proposed design currently provides for the opportunity to significantly increase the ecological value of the wetland through appropriate native buffer planting.

The proposed design also provides for the opportunity to significantly increase the ecological value of the surrounding CMA 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 low.

The proposed development of the site is consistent with the outcomes expected of the NPS-FM and the AUP-OP. A more comprehensive ecological assessment will be provided to support the development application at the expert consenting panel stage; this will further assess the potential indirect adverse effects and detail any proposed ecological enhancement actions.

Summary

The applicant proposes to lodge an application for a listed project under the Fast Track Approvals Bill for a retirement village development at 99 Tōtara Road, Whenuapai. A high-level ecological assessment was undertaken to accompany the application.

The site consisted almost entirely of pasture grasses. Outside of the pasture grasses were garden amenity plantings, a shelterbelt of exotic macrocarpa trees, and coastal edge vegetation consisting predominantly of pest plants.

Two permanent streams were present within the south-eastern section of the site. A third stream was located further to the north along the eastern boundary of the site. All three streams have been highly modified through farming practices and were considered to have a low ecological value.

Two natural inland wetlands were present within the south- eastern section of the site. These wetlands were associated with the stream margins and were almost entirely dominated by mercer grass. The ecological value of the wetlands was assessed as low.

Direct effects of the proposed development will include vegetation removal and stream works. The proposed stream works consists of extending and upgrading the southernmost culvert as well as removing the eastern most culvert. Minor works, including earthworks and vegetation removal, are proposed within 10 m of the natural wetlands.

The proposed earthworks and development can be effectively designed and/or mitigated to ensure there is no loss of ecological value or loss of freshwater habitat extent. Furthermore, the proposed design provides for the opportunity to significantly increase the ecological value of the stream, wetland and CMA through appropriate native buffer planting.

References

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Roper-Lindsay J, Fuller SA, Hooson S, Sanders MD, Ussher GT 2018. Ecological impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems. 2nd edition.

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Appendix A

Scheme plan showing the identified ecological features



Appendix B

1940's Aerial Image



Appendix C

Ecological Features Map



Appendix D

Site photographs



Figure 1. The site with predominately pastoral land

a)



b)



Figure 2. a) Exotic and pest plant dominated coastal edge and b) kānuka scrub.

a)



b)



Figure 3. a) The lower reach of the permanent stream eastern arm and b) the upper reach of the permanent stream eastern arm with wetland margins.

a)



b)



Figure 4. a) The lower reach of the permanent stream western arm with wetland margins and b) the upper reach of the permanent stream eastern arm between the two culverts.

a)



b)



Figure 5. a) The lower reach of the intermittent stream and b) the upper reach of the intermittent stream.