MEMORANDUM

Bioresearches
A Babbage Company

TO:	AW Holdings 2021 Ltd	Date:	26 August 2022
COPY TO:	RCP, James Kirkham	Job No:	65601
FROM:	Mark Delaney, Senior Ecologist		

SURF PARK FAST TRACK REFERRAL APPLICATION – PRELIMINARY ECOLOGY ASSESSMENT

Introduction

AW Holdings 2021 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 the development of approximately 43ha of pastural land within the properties of 1350 Dairy Flat Highway, Lot 15 DP 65979, and Pt Allot 189 SO 1118A in Dairy Flat, Auckland (the Site). This memorandum provides a preliminary assessment of ecological aspects of the proposal.

The proposed development comprises of a surf academy, short-stay accommodation as well as residential and light industrial development (Appendix I).

Methodology

Site assessments was undertaken by experienced ecologists during April and 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

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The Site is within the Rodney Ecological District of the Auckland Region. Historically (pre-human), the area would have comprised the forest ecosystem type of pūriri forest (WF7-3) and would have supported a diverse range of invertebrates, amphibians, reptiles, birds and bats (Singers et al., 2017). Earliest historical aerials available, indicate that the Site and much of the surrounding landscape has been devoid of native vegetation and managed as agricultural land for at least the last 80 years (Appendix IV).

Currently, the Site consist predominately of pasture with a few isolated exotic trees, stock ponds, farm drainage channels, a stream, a residential house and farm outbuildings. The Site is surrounded by a mixture of agricultural land, lifestyle blocks and an airport. The Site does not support a recognised current terrestrial ecosystem type, as classified under the AUP OP: Biodiversity current extent and is not subject to any Significant Ecological Area (SEA) overlay. The closet SEA to the Site is 1.8 km away.

Terrestrial Ecology

The Site almost entirely consists of pasture grasses. There are a group of exotic trees and shrubs associated with the existing dwelling, along the roadside and around the western stock pond. Along some fence lines, drainage channels and the stream, listed pest plant species barberry (*Berberis glaucocarpa*), arrow bamboo (*Pseudosasa japonica*), blackberry (*Rubus fruiticosus agg.*), pampas (*Cortaderia selloana*), Chinese privet (*Ligustrum sinense*) and the tree privet (*Ligustrum lucidum*) form hedgerows. A few sporadic tī kōuka (cabbage tree, *Cordyline australis*) are scattered through some of the hedgerows. Mature Monterey cypress (*Cupressus macrocarpa*) and Monterey pine (*Pinus radiata*) form old, degraded and sporadic shelterbelts between some paddocks.

The botanical value of the vegetation within the Site was assessed as negligible, being predominately pasture with a few isolated exotic trees and hedgerows consisting of listed pest plant species. Only very few sporadic common native species were identified, namely tī kōuka.

The vegetation within the Site provides very low-quality fauna habitat due to the lack of diversity, structure and connectivity. While large exotic tree can potentially provide habitat for pekapeka (bats), it is unlikely pekapeka use the Site, due to the isolated and exposed nature of the mature trees.

No native lizards were identified through opportunistic hand searches. Very little groundcover or debris were present throughout the entire Site that would provide suitable habitat native skinks. Due to the poor quality of the vegetation and the lack of connectivity to any remnant native vegetation, it is highly unlikely that any native lizards are present.

The only native avifauna identified during the site visits were pūkeko (*Porphyrio melanonotus*). Other common native birds such as tūī, tauhou (silvereye, *Zosterops lateralis*) and pīwakawaka (fantail, *Rhipidura fuliginosa*) may potentially utilise the habitat on an intermittent basis.

Freshwater Ecology

Auckland Council GeoMaps indicates a number of overland flow paths to be present within the site, predominantly draining relatively small catchments.

All the watercourses within the Site have been highly modified and degraded through current and historical land use practices.

With the exception of the stream the runs along the northern border of Pt Allot 189 SO 1118A and through the southern section of Lot 15 DP 65979, all the watercourses very straight and uniformed, representing artificial drainage channels. The formation of drainage channels is consisted with the contours of the land, which is very flat and would have required drainage channels to effectively drain the land for use as productive agriculture land. Historical aerials, as far back as possible, were reviewed to help inform whether these drainage channels were completely artificial or once were potentially natural streams. The 1940 and 1957 aerials show, in the locations of the current drainage channels, either no channelisation (natural or artificial) or show straight uniform artificial channels. As such, there is no evidence to suggest that these drainage channels were once natural and accordingly were classified as artificial drainage channels.

The stream that runs through the Site has been highly modified through straightening and deepening to help better drain the surrounding land. Flow is sluggish and the substrate consists of a high loading of soft sediments. Natural pools, riffles and undercut banks were largely absent which provided for minimal aquatic habitat diversity and hydrologic heterogeneity. Shading levels provided by pest plant species ranged from moderate to high. Overall, the stream was considered of low ecological value.

Four artificial ponds were located within the site. These ponds were clearly constructed for the purpose of agricultural and as such are not considered natural wetlands under the NPS-FM.

Throughout the site, and namely within overland flow paths, a few exotic soft rushes (*Juncus effusus,* FACW) were scattered amongst the pasture grasses. Additionally, the exotic creeping buttercup (*Ranunculus repens*, FAC), was also present. Both of these species are considered common pasture weeds and were present in low abundance (≤10% coverage). No standing water was present outside of the identified stream, stock ponds and drainage channels, and the soils were not saturated, indicating that wetland hydrology is not present. Due to the absence of evident wetland hydrology and the dominance (≥90%) of facultative upland and upland plant species (e.g. perennial ryegrass, kikuyu grass, dallis grass/paspalum and clover) no natural wetlands, as per the NPS-FM, were identified. It should also be noted that these areas are currently, and have historically, been used and managed as pasture.

Assessment of Ecological Effects

Direct effects of the proposal will be limited to vegetation removal and the reclamation of artificial drainage channels and artificial stock ponds. Botanical values with the site were considered negligible,

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

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.

There are no wetlands within the Site that meet the definition of a natural wetland under the NPS-FM. Natural wetlands may be present within 100 m of the site and as such, any development may trigger the relevant regulations under the NES-FW. However, any potential effects on neighbouring wetlands within 100 m can be managed/mitigated effectively through stormwater controls as well as erosion and sediment controls to ensure there is no partial drainage of any natural wetland or loss of ecological value.

The proposed development also includes over 85,000 m^2 of native restoration planting located around the stream. This proposed planting will greatly enhance the overall ecological value of the site by providing enhancement of freshwater ecological functioning (shading, filtration, bank stability and organic input), an increase in native plant diversity, an increase in abundance and quality of terrestrial habitat and potential future ecological connectivity to the wider environment.

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.

Summary

The proposed development comprises of a surf academy, short-stay accommodation as well as residential and light industrial development.

Currently the Site holds little ecological value, consisting of predominantly pasture, scattered exotic trees, pest plant species, artificial drainage channels, artificial stock ponds and one degraded stream. No natural wetlands were identified within the Site.

No stream reclamation is proposed. Conversely, over 85,000 m2 of restoration is proposed around the stream which will provide for a significant biodiversity gain and the protection and restoration n of the natural freshwater systems.

This assessment concludes there are no significant impediments to the proposed developments in regard to ecological matters.

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 direct and indirect adverse effects and detail any proposed ecological enhancement actions.

Appendix I: Master Plan (Sourced from Studiopacific Architecture)

studiopacificarchitecture

Masterplan Site Coverage Areas (Impervious)	
Zone Name	Measured Area
Collector Road	14,288.76
Data Centre	39,998.41
Local Road	8,324.75
Service Road	3,721.60
Solar Farm Area	76,462.53
Surf Lagoon Operations	2,530.85
Surf Park Amenity	10,929.29
TOTAL	156,256.19 m²

Masterplan Site Coverage Areas (Pervious)	
Zone Name	Measured Area
Car Parking	10,703.10
Ecological Planting	85,438.11
Farm to Table	71,204.48
General Landscaping	38,619.74
Lagoon	22,389.14
Retained Rural Land	45,006.38
TOTAL	273,360.95 m²
TOTAL	429,617.14 m²

C1 Building Reference Code

146 Car Parking Spaces

Appendix II: Identified Ecological Features

Appendix III: Photos of Identified Features






Photos 1 – 6: Vegetation with the Site.




Photos 7 – 10: Drainage channels within the Site.

Photos 11 – 13: Stock ponds within the Site.




Photos 7 – 10: Drainage channels within the Site.

Appendix IV: Historical Aerial Image