Jacob Paget

From: Andrew Braggins s 9(2)(a)
Sent: Wednesday, 30 June 2021 1:08 pm
To: Max Gander-Cooper
Cc: Nick Mattison; Alvin Jung; Tamsin Gorman; Mark Delaney
Subject: FW: 4 Scott - Ecology [BS-SAGA.FID7406]
Attachments: 63905 4 Scott Rd Wetland Memo 28-06-21.pdf

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Kia ora Max,

Further to our discussion last week, please see **attached** Mark Delany's assessment of the alleged wetland. We are also getting a peer review of this, but I'd be grateful if you could discuss with your policy team as it might be that Mark's analysis addresses the matters of concern in any event.

Thanks

Andrew

Andrew Braggins
Partner

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MEMORANDUM

Bioresearches
A Babbage Company

TO:	Aedifice Development Limited	Date:	28 June 2021
COPY TO:	Nick Mattison, Civix	Job No:	63905
FROM:	Mark Delaney, Senior Ecologist		

4 SCOTT ROAD – WETLAND ASSESSMENT

Introduction

Aedifice Development Limited (ADL) has applied to the Minister for the Environment (MfE) to have a development at 4 Scott Road, Hobsonville (Site) fast-tracked under the Covid-19 Fast Tracking legislation. Bioresearches have previously prepared a high-level assessment of ecological effects for the aforementioned development[1].

As a part of the Covid-19 Fast Tracking application process, Auckland Council has raised a query as part of their consultation feedback. The query is in regards to a particular area within the Site and whether this area should be classified as a 'natural wetland' as per the National Policy Statement for Freshwater Management 2020 definitions and criteria. The area was brought to Auckland Councils attention through the presence of standing water evident in the 2017 aerials (Appendix I, Figure 3).

This memorandum seeks to address this query by undertaking a wetland assessmnet of the area following the MfE's Wetland Delineation Protocols[2].

Wetland Assessment

An initial site visit was undertaken by an experience ecologist on October 21st, 2020 under normal hydrologic and climatic conditions. Historical aerial imagery (Appendix I) shows that the area has been cleared and subject to agricultural practices since at least 1940 (over 80 years). As such the wetland assessment was considered to be undertaken under normal circumstances with no recent disturbances or modifications having occurred.

The area in question is located within the middle of a paddock dominated by pasture species. This area forms a slight depression within the field (Figure 1) where surface water can pool intermittently following heavy or sustained rain.

[1] Bioresearches. 5 May 2021. 4 Scott Road – Ecology Assessment Memorandum. Prepared for Aedifice Development Limited.

[2] Ministry for the Environment. 2020. Wetland delineation protocols. Wellington: Ministry for the Environment.

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Figure 1. The assessed area.

The assessed area is small (<2ha), with only one major vegetation type and strata (herb). As such, only one representative 2m x 2m plot was established for the wetland assessment. Table 1 presents the vegetation data for the representative plot.

Table 1. Vegetation data for the representative plot.

Scientific Name	Common Name	Biostatus Origin	Indicator Status	% Cover
Ranunculus repens	Creeping buttercup	Exotic	FAC	60
Rumex obtusifolius	Broad-leaved dock	Exotic	FAC	20
Lolium perenne	Perennial ryegrass	Exotic	FACU	5
Cenchrus clandestinus	Kikuyu	Exotic	FACU	5
Plantago lanceolata	Narrow-leaved plantain	Exotic	FACU	5
Plantago major	Broad-leaved plantain	Exotic	FACU	5

The vegetation within area was made up completely of exotic species and was dominated by common pasture weeds (buttercup, dock and plantain). Pasture species (ryegrass and kikuyu) were the only other type of vegetation present. No 'obligate wetland' or 'facultative wetland' species were present.

Table 2 presents the Wetland Vegetation Dominance Test and Prevalence Index results.

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Table 2. Wetland Vegetation Dominance Test and Prevalence Index results for the representative plot.

Dominance Test		Prevalence Index			
		OBL	0	x 1 =	0
(A) No. of dominant sp.	2	FACW	0	x 2 =	0
		FAC	80	x 3 =	240
(B) No. of OBL, FACW, or FAC from A	2	FACU	20	x 4 =	80
		UPL	0	x 5 =	0
(A/B) %	100	Total	100		320
		Prevalence Index =			3.2

The Wetland Delineation Protocols states that:

When the Vegetation Tool is used on its own, both the Dominance Test and the Prevalence Index are required to be satisfied for the site to be categorised as a wetland. In the absence of wetland soil and hydrology tools, these two plant-based tests applied in tandem are considered to provide the on-site quantitative data necessary for delineating wetlands and their boundaries.

The representative plot fails the Rapid Test, passes the Dominance Test (100%) and does not meet the Prevalence Index threshold (>3). As such the representative plot does not satisfy both the Dominance Test and the Prevalence Index and is not considered 'wetland vegetation' or a 'natural wetland'.

In this instance, it was considered that the area was clearly not a 'natural wetland' and no further investigations (i.e. hydric soil testing) was required. Additionally, it is considered that currently under the Wetland Delineation Protocols, hydric soil testing is superfluous. This is because; when following the prescribed flow chart within the Wetland Delineation Protocols (Appendix II), if the there are no indicators of hydric soils then the vegetation is considered 'non-wetland vegetation' and if there are indicators of hydric soils then the Prevalence Index still needs to be met for the vegetation present to be considered 'wetland vegetation'. Only if recent disturbance or abnormal environmental conditions which may result in atypical or problematic wetland situations, should further investigations be required.

Put another way; soil testing for the presence or absence of hydric soil indicators is never determinative that an area is a wetland, it can only be used to exclude an area from being a wetland (this is because a positive test takes you to the next step in the table, as opposed to a conclusion that the area is a wetland). Accordingly, it can be appropriate to adopt a conservative / worst case scenario and assume that soil testing would have identified some hydric soil indicators – in which case the next step is to undertake a prevalence index analysis, which is what we have done.

ADL's lawyers have also suggested that because the purpose of the Wetland Delineation Protocol flow chart is to reach a conclusion as to whether an area is a wetland, the necessary implication of not being taken to an end point (wetland box)– is the opposite conclusion – the area is not a wetland.

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In summary, the wetland assessment was undertaken under normal circumstances and did not satisfy both the Dominance Test and the Prevalence Index together and, as such, the vegetation was not classified as 'wetland vegetation' and the area was not classified as a 'natural wetland'.

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Appendix I: Aerial Imagery of the Assessed Area

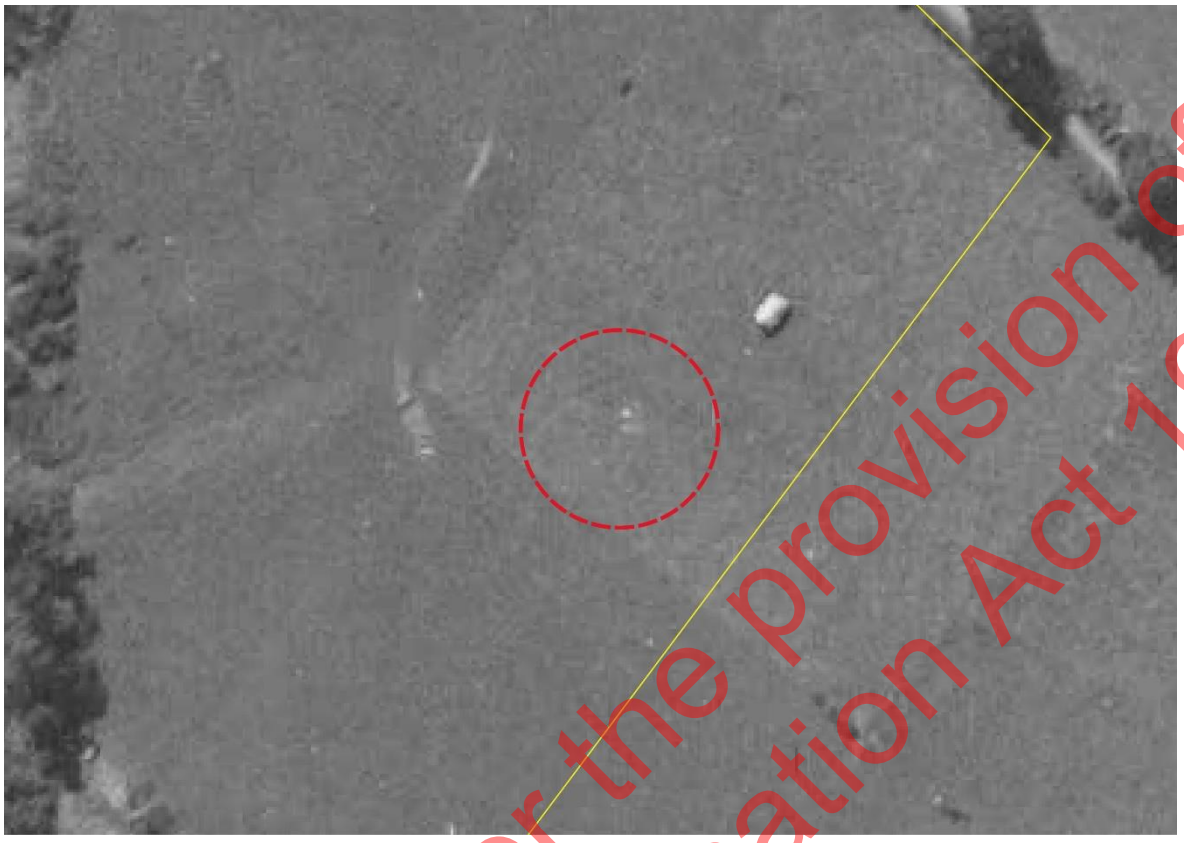

Figure 2: 1940 aerial, with the red circle indicating the assessed area (base image sourced from Retrolense)

Figure 3: 2017 aerial, with the red circle indicating the assessed area (base image sourced from LINZ).

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Figure 4: May 2021 aerial, with the red circle indicating the assessed area (base image sourced from Nearmaps).

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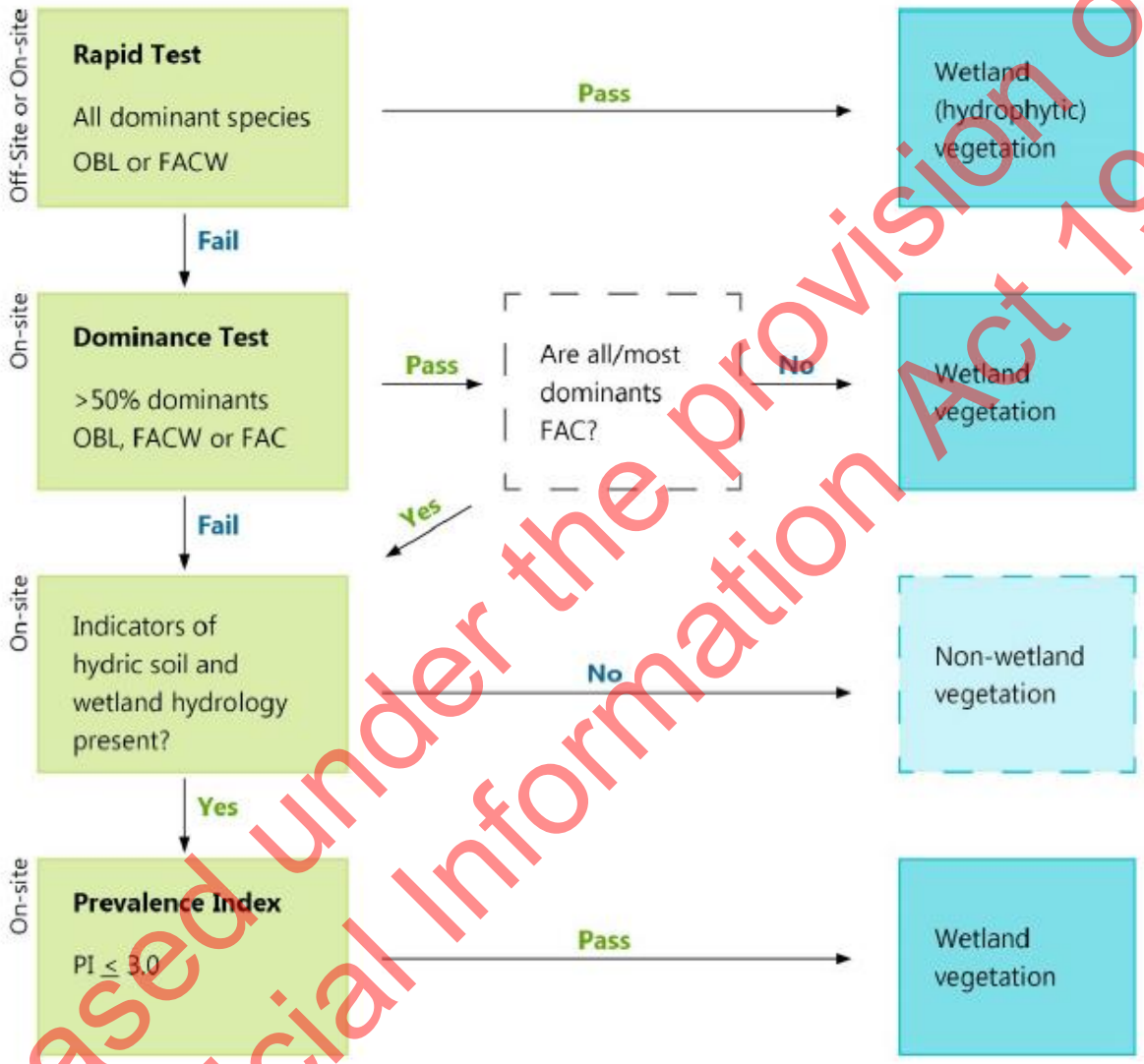
Appendix II: MfE Wetland Delineation Protocols Flowchart (Figure 1).

Figure 1: **Flow chart of steps for hydrophytic (wetland) vegetation determination. Wetland indicator status abbreviations: FAC= facultative; FACW = facultative wetland; OBL = obligate wetland.**



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