

# Memorandum

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Attention: Daniel Lem

Company: PMG Funds Ltd

Date: 1 April 2025

From: Eddie Sides

Message Ref: 1206 Great South Road – Wetland Investigations

Project No: BM250277

## Introduction

PMG Funds are investigating future development options at 1205 Great South Road, Drury. The site has an area of 2.4 ha and comprises grazed pasture with specimen trees along with a residential dwelling and other buildings (Figure 1).

Boffa Miskell Undertook site investigations to confirm and delineate any wetland features, using the MfE (2022) Wetland Delineation Protocols.

The site is zoned Future Urban and does not contain Significant Ecological Areas. It is within the Manukau Ecological District (code 09.07). No existing ecosystem overlays are recorded in the Geomaps Ecosystems Current Extent layer. The north-western half of the site is within a High-Use Stream Management Area Overlay, and the entire site in a High-Use Aquifer Management Area Overlay. The site is within the Ngakoroa Stream catchment, which enters Drury Creek, Pahurehure Inlet and Manukau Harbour.

## Methods

Investigations were undertaken to confirm the presence of any wetlands meeting the definition of Wetland (RMA, 1991) or Natural Inland Wetlands (NPS-FM). A desktop review of aerial photographs, overland flowpaths and contours was undertaken using Auckland Council Geomaps, to identify potential wetland features. A site visit was then undertaken on 31 March 2025 to confirm and delineate any wetlands. Vegetation plots and soil data were collected and used to classify features and Wetland, Natural Inland Wetland or Not Wetland using the MfE Wetland Delineation Protocols (2022). The MfE assessment protocol includes a series of tests, with a wetland indicated by a pass of the Rapid Test, Dominance AND Prevalence Index tests, or Dominance OR Prevalence Index AND Hydrology and/or hydric soils (Appendix 1).

## Results

The results for the five vegetation plots are presented in Appendix 2.

The site was actively grazed. Vegetation generally comprised pasture grass cover. Areas of Obligate reeds or rushes typically associated with wetlands were absent (Photo 1 to 4). No streams or watercourses were present. The ground was seasonally dry, and all soil test pits had dry soil (Table 1). A flood-prone area was located on the northern boundary of the site and was the location of Plots 3 and 4. Hydric soil was indicated at Plot 4.

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Plots 1, 2, and 5 were dominated by exotic pasture (>50% introduced pasture species per the MfE list).

Plot 3 had dominant cover of Mercer grass (Facultative Wetland) and creeping buttercup (Facultative) and passed the dominance test but not the Prevalence Index. This plot had no hydric soil or primary hydrology indicators, so was not a wetland.

Plot 4 had dominant cover of creeping buttercup and perennial ryegrass, and failed the Rapid, Dominance and Prevalence Index tests so was not a wetland (despite some hydrology and soil indicators).



*Photo 1. Plot 2 area.*



*Photo 2. Plot 3 area*



*Photo 3. Plot 5 area, view northwards.*



*Photo 4. Plot 5 area, view east.*

**Table 1. Summary of Results for Vegetation Plots**

		<p>Plot 1                      Dominant species: paspalum (<i>Paspalum dilatatum</i>)                      Pasture cover: 90%                      Hydric soil: No</p> <p>Rapid test: Fail                      Dominance test: Fail                      Prevalence Index: 3.9. Fail                      Determination: Not wetland.</p>
		<p>Plot 2                      Dominant species: kikuyu (<i>Cenchrus clandestinus</i>)                      Pasture cover: 95%                      Hydric soil: No</p> <p>Rapid test: Fail                      Dominance test: Fail                      Prevalence Index: 3.95. Fail                      Determination: Not wetland.</p>
		<p>Plot 3                      Dominant species: Mercer grass (<i>Paspalum distichum</i>), creeping buttercup (<i>Ranunculus repens</i>).                      Pasture cover: 45%                      Hydric soil: No</p> <p>Rapid test : Fail                      Dominance test: Pass                      Prevalence Index: 3.15. Fail                      Determination: Not wetland.</p>

		<p>Plot 4  Dominant species: creeping buttercup (<i>Ranunculus repens</i>), perennial rye grass (<i>Lolium perenne</i>)  Pasture cover: 45%  Hydric soil: Yes</p> <p>Rapid test: Fail  Dominance test: Fail  Prevalence Index: 3.25. Fail  Determination: Not wetland.</p>
		<p>Plot 5  Dominant species: kikuyu (<i>Cenchrus clandestinus</i>), paspalum (<i>Paspalum dilatatum</i>), Narrow-leaved Plantain (<i>Plantago lanceolata</i>)  Pasture cover: 85%  Hydric soil: No</p> <p>Rapid test: Fail  Dominance test: Fail  Prevalence Index: 4.0. Fail  Determination: Not wetland.</p>

### Wetlands within 100 m

The desktop review indicated only one flowpath within 100 m to the southwest of the site with the potential to be classified as a wetland (80 m from the boundary and 5 m lower elevation). Hydrological connection is reduced by driveways and impermeable surfaces between the property and the feature. It is unlikely that activities within the site would result in drainage of this feature or discharges to into it or affect the water level range or hydrological function of the feature if it were confirmed as a wetland (criteria in the Nation Environmental Standards for Freshwater, Regulation 52).

### Conclusion

The site was investigated for the presence of wetlands, including a flood-prone area near the northern boundary. The vegetation consisted of grazed pasture and did not contain potential wetland features such as watercourses, saturated soils or obligate wetland vegetation. Vegetation plots were recorded in representative areas and within the flood-prone area. Wet-tolerant species such as Mercer grass and creeping buttercup were dominant at two plots, but overall the indicators did not meet the criteria for natural inland wetlands. These investigations confirmed that there are no wetlands on the site.

### Reference

Ministry for the Environment. 2022. Wetland delineation protocols. Wellington: Ministry for the Environment..

## Appendix 1. Wetland Vegetation Plot Results.

Plot Number 1											
6-letter code	% Cover	Dominant (50/20 rule) Y / N	Species Name	Common Name	Threat Status	Wetland Status	Pasture species	Dominant Species is OBL, FACW	Dominant Species is OBL, FACW, FAC	Score (Prevalence)	Points (Prevalence)
pasdl	80	y	<i>Paspalum dilatatum</i>	<i>Paspalum</i>		FACU	Y			4	320.0
rumobt	5		<i>Rumex obtusifolius</i>	<i>Broad-leaved Dock</i>		FAC				3	15.0
trirep	5		<i>Trifolium repens</i>	<i>White Clover</i>		FACU	Y			4	20.0
ranrep	5		<i>Ranunculus repens</i>	<i>Creeping Buttercup</i>		FAC				3	15.0
cencia	5		<i>Cenchrus clandestinus</i>			FACU	Y			4	20.0

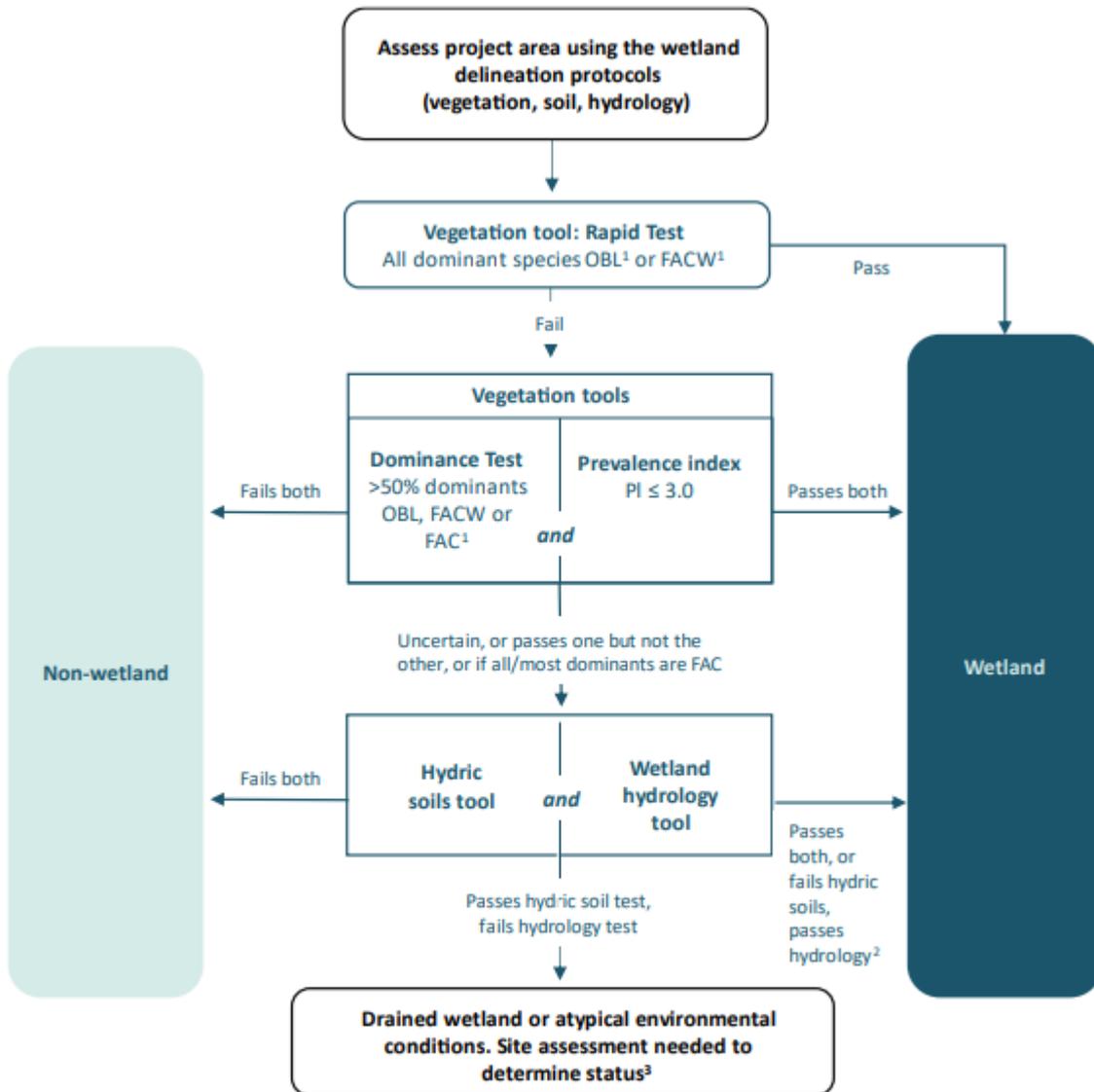
Plot Number 2											
6-letter code	% Cover	Dominant (50/20 rule) Y / N	Species Name	Common Name	Threat Status	Wetland Status	Pasture species	Dominant Species is OBL, FACW	Dominant Species is OBL, FACW, FAC	Score (Prevalence)	Points (Prevalence)
cencia	90	Y	<i>Cenchrus clandestinus</i>			FACU	Y			4	360.0
ranrep	5		<i>Ranunculus repens</i>	<i>Creeping Buttercup</i>		FAC				3	15.0
pasdl	5		<i>Paspalum dilatatum</i>	<i>Paspalum</i>		FACU	Y			4	20.0

Plot Number 3											
6-letter code	% Cover	Dominant (50/20 rule) Y / N	Species Name	Common Name	Threat Status	Wetland Status	Pasture species	Dominant Species is OBL, FACW	Dominant Species is OBL, FACW, FAC	Score (Prevalence)	Points (Prevalence)
pasdis	30	y	<i>Paspalum distichum</i>	<i>Mercer Grass</i>		FACW		Yes	Yes	2	60.0
ranrep	20	y	<i>Ranunculus repens</i>	<i>Creeping Buttercup</i>		FAC			Yes	3	60.0
trirep	10		<i>Trifolium repens</i>	<i>White Clover</i>		FACU	Y			4	40.0
hollan	5		<i>Holcus lanatus</i>	<i>Yorkshire Fog</i>		FAC	Y			3	15.0
lolper	15		<i>Lolium perenne</i>	<i>Perennial Rye Grass</i>		FACU	Y			4	60.0
cencia	10		<i>Cenchrus clandestinus</i>			FACU	Y			4	40.0
pasdl	5		<i>Paspalum dilatatum</i>	<i>Paspalum</i>		FACU	Y			4	20.0
cyndac	5		<i>Cynodon dactylon</i>	<i>Bermuda Grass</i>		FACU				4	20.0

Plot Number 4											
6-letter code	% Cover	Dominant (50/20 rule) Y / N	Species Name	Common Name	Threat Status	Wetland Status	Pasture species	Dominant Species is OBL, FACW	Dominant Species is OBL, FACW, FAC	Score (Prevalence)	Points (Prevalence)
ranrep	45	y	<i>Ranunculus repens</i>	<i>Creeping Buttercup</i>		FAC			Yes	3	135.0
lolper	20	y	<i>Lolium perenne</i>	<i>Perennial Rye Grass</i>		FACU	Y			4	80.0
trirep	10		<i>Trifolium repens</i>	<i>White Clover</i>		FACU	Y			4	40.0
hollan	15		<i>Holcus lanatus</i>	<i>Yorkshire Fog</i>		FAC	Y			3	45.0
rumobt	5		<i>Rumex obtusifolius</i>	<i>Broad-leaved Dock</i>		FAC				3	15.0
pasdis	5		<i>Paspalum distichum</i>	<i>Mercer Grass</i>		FACW				2	10.0

Plot Number 5											
6-letter code	% Cover	Dominant (50/20 rule) Y / N	Species Name	Common Name	Threat Status	Wetland Status	Pasture species	Dominant Species is OBL, FACW	Dominant Species is OBL, FACW, FAC	Score (Prevalence)	Points (Prevalence)
cencia	30	y	<i>Cenchrus clandestinus</i>			FACU	Y			4	120.0
pasdl	30	y	<i>Paspalum dilatatum</i>	<i>Paspalum</i>		FACU	Y			4	120.0
plalan	20	y	<i>Plantago lanceolata</i>	<i>Narrow-leaved Plantain</i>		FACU	Y			4	80.0
pruvul	15		<i>Prunella vulgaris</i>	<i>Selfheal</i>		FACU				4	60.0
trirep	5		<i>Trifolium repens</i>	<i>White Clover</i>		FACU	Y			4	20.0

Appendix 2. Hydrophytic Wetland Determination. MfE (2022).



Footnotes:

<sup>1</sup> Wetland indicator status abbreviations: FAC = facultative, FACW = facultative wetland, OBL = obligate wetland.

<sup>2</sup> For example, recent wetland.

<sup>3</sup> The US procedures for atypical or problematic situations are recommended.