

To: Greg Hayhow

Date: 12 February 2022

Attention: Even Peters
Aspire Consulting Engineers Limited

Ref: 65157

Subject: 470-476 Great South Road and 2 & 8 Gatland Road, Papakura - Freshwater Constraints

Background

Bioresearches were engaged by Aspire Consulting Engineers Limited, on behalf of their client, Greg Hayhow, to provide freshwater habitats classification assessment at their site at 470 and 476 Great South Road and 2 and 8 Gatland Road, Papakura (Figure 1).

The objective of the freshwater assessments is to identify constraints (actual and potential) under the provisions of the National Environmental Standards for Freshwater (NES-F).



Figure 1. 470-476 Great South Road and 2 & 8 Gatland Road, Papakura – Auckland Council GeoMaps with Streams and Overland Flow Paths Overlay.

The site is located in Papakura, east of State Highway 1 and just south of Park Estate Road. The site is zoned Future Urban and there are no Auckland Unitary Plan (AUP) Significant Ecological Area (SEA) or notable trees overlays on the site.

The site is a pastoral site and is actively farmed (Photo 1 and Photo 2) which has been the dominant land use from before 1959, as illustrated on the Auckland Council GeoMaps historical aerial photography. The site does not have a current ecosystem classification, and the potential ecosystem of the site is designated WF7 Puriri Forest Ecosystem, although that is not what is currently present.



Photo 1. General aspect of north-western part of site from elevated point, view east towards the pond (trees in background).



Photo 2. General aspect of the western part of the site, view towards top of the central gully along Great South Road boundary fence.

Methodology

The site was assessed via a desktop review and site visit, with aquatic habitats classified in accordance with the Auckland Unitary Plan – Operative in Part (AUP OP) and the National Policy Statement for Freshwater Management 2020 (NPS-FM). The desktop assessment noted factors such as changes in vegetation and hydrology on current and historical aerial images, and a review of data such as the biodiversity, hydrology, and contours on Auckland Council’s Geomaps was undertaken.

A site assessment was undertaken on 6 October 2021, by an experienced freshwater ecologist. During the site assessment, the presence and extent of terrestrial and aquatic habitat features within the property were noted and the quality of the habitats were visually assessed. Overland flow paths were ground-truthed and classified under the definitions in the AUP OP as to their permanent, intermittent or ephemeral status. The site was assessed for potential wetland areas and the site was assessed under the definitions in the NPS-FM. A desk top and site boundary assessment was carried out to identify potential ‘natural wetlands’ within 100m of the site. Photographs taken and specific habitats were marked with a hand held GPS.

Two significant rainfall events (>15mm) occurred within the month prior to the site assessment with 89mm in the preceding fortnight and 10mm rain within the previous two days (Figure 2).

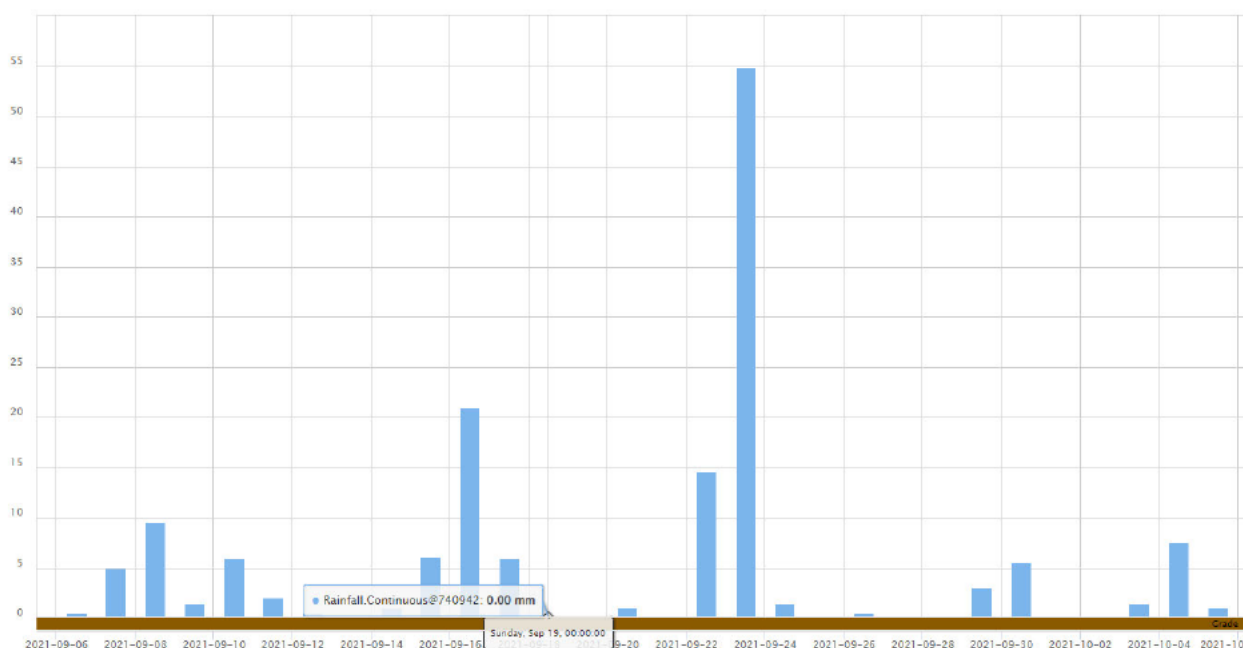


Figure 2. Rainfall data (mm) 6 September to 6 October 2021 at Longford Park. Data Source: Auckland Council Environmental Data Portal.

Freshwater Ecosystems

No streams or natural wetlands were present on site. The main flow path through the site has been piped and is clearly marked as piped in the Auckland Council GeoMaps overlays (Figure 1 and Figure 3).

The only freshwater ecosystem present on site was the large stormwater treatment pond (Figure 3, Photo 3, Photo 4) near the eastern boundary of the site.



Figure 3. Auckland Council GeoMaps Underground Services Stormwater overlay illustrating the piped network to the stormwater pond (green).



Photo 3. Stormwater treatment pond and scuffy dome outlet from pond.



Photo 4. Culvert outlet to stormwater treatment pond

The predicted flowpaths from the Auckland Council GeoMaps overlay were ground truthed. None of the predicated flow paths met the criteria for streams and no wetlands were present. (Photo 5 to Photo 7).



Photo 5. Predicted flow path from northern boundary – no stream.



Photo 6. Upper site with view along lowest gradient with no flow path present (view east towards the pond)



Photo 7. Central part of the site with no flow path present at the low point (flow path piped). View towards pond with pond trees in background.

The adjacent properties were assessed by desk-top analysis and boundary assessments. No natural wetlands were observed. The northern and western boundaries are fully urbanised with roading and housing (Figure 1). The upper eastern boundary is a lifestyle block with grassed lawn and the lower eastern boundary and south boundaries are pasture used for thoroughbred horses (a land use that is not associated with wetlands or boggy ground). (Photo 8).



Photo 8. Southern boundary properties (note horses under central trees)

Summary

The site was well maintained pasture, actively farmed. No streams were present on site and no wetlands under the definition of the RMA and/or natural wetlands under the definitions of the NPS-FM were identified on site.

A large stormwater pond is present near the southern boundary and provides the only aquatic habitats on site.

No natural wetlands were identified in the vicinity of the site from desk-top or boundary and high point checks.

Yours sincerely
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