



Ecological Impact Assessment

# Mason Clinic Plan Change

Final

Prepared for Waitematā District Health Board by Morphum Environmental Ltd  
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design and nature.



Engineers & Consultants

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## Executive Summary

Morphum Environmental Limited has been engaged by the Waitematā District Health Board to prepare an Ecological Impact Assessment to support their application for a Private Plan Change. The Mason Clinic Unitary Plan Private Plan Change seeks to amend and insert new provisions to the Wairaka Precinct of the Auckland Unitary Plan: Operative in Part to better provide for the existing Mason Clinic activity, its comprehensive redevelopment and its expansion onto the neighbouring land to the north and south.

The Plan Change Area is located on the border of the primarily residential suburbs of Mt Albert and Waterview within the Wairaka Precinct. The Wairaka Precinct also includes the Unitec Campus, comprising buildings and educational facilities, a Marae, and areas of greenspace and landscaping including the Sanctuary Mahi Whenua. The purpose of the Wairaka Precinct is to provide for a diverse urban community and Sub-precinct A (which applies to the Mason Clinic Site) provides for healthcare/hospital related purposes.

The Plan Change Area is relatively flat and is comprised of a series of buildings currently occupied by the Mason Clinic and carparking and landscaping. The Northern Site consists of steeply sloping unmown rank grass with mixed vegetation, including a cluster of protected trees, situated on the western boundary. The comparatively heterogenous Southern Site encompasses a mixture of open space, including a former dog exercise park, a small nursery, greenhouses and other buildings and impervious carpark area. The piped reach of the Wairaka Stream enters the site beneath Farm Road and flows northwards until it discharges through the patch of native vegetation, and then flows north-west through the Plan Change Area to Oakley Creek.

The current ecological values from within the Plan Change Area have been described based from on-site, in-field observations in conjunction with a review of the available literature and databases.

Vegetation within the Plan Change Area is sparse. There is a group of six notable trees in the vicinity of the Unitec corporate office. Elsewhere within the Wairaka Precinct, 47 trees have been identified as Protected Trees under the Wairaka Precinct provisions. Protected Trees are located in two main clusters, one along the north western boundary of the Plan Change Area includes 14 trees, and one in the centre, in the vicinity of the Unitec corporate offices, includes 15 trees. Vegetation potentially offers roosting and nesting habitat for native and exotic birds, as well as, potential habitat for other terrestrial fauna including lizards and bats.

The paucity of native or exotic vegetation is reflected in the species of birds recorded from the Plan Change Area, which are a typical assemblage of species that can inhabit or make use of landscape vegetation in an urban setting. Incidental birdlife was noted during the site visits and no threatened or 'At Risk' species were recorded within the Plan Change Area.

Suitable lizard habitat was limited to isolated areas of rank grassland, riparian vegetation (both native and exotic) and a small, isolated area of mature trees to the South. Previous lizard surveys undertaken in close proximity to the site identified populations of copper skinks and it is considered likely that these lizards may be found on site. Geckos are unlikely to have persisted within the Plan Change Area due to the site's history of habitat modification and the lack of any substantial native vegetation make it unlikely that native geckos would recolonise the site naturally.

Long-tailed bats prefer to roost in larger, older, canopy trees with cavities, epiphytes and loose bark. Such habitat is not found within the Plan Change Area, given the proximity of the SEA vegetation along Oakley Creek it is possible that long-tailed bats could forage within the Plan Change Area, although the likelihood of any roosting occurring is considered negligible given the proximity of higher quality roosting habitat along Oakley Creek.

The Wairaka Stream is a tributary of Oakley Creek and is the primary freshwater feature located within the Wairaka Precinct. The stream is fed by an underground spring (Puna O Wairaka) originating from the Mt Albert basalt aquifer. Records indicate that the Wairaka Stream supports a range of native freshwater fish, and potentially including At Risk – Declining Longfin eel.

The Private Plan Change seeks to amend the provisions of the Wairaka Precinct to better provide for the Mason Clinic facility. The changes proposed, being principally the change from one urban zone to another, does not significantly change the type of activities that can occur, or the level of physical development that is provided for. Consequently, it is considered that the plan change results in a barely distinguishable or very slight change from effects enabled by the existing provisions.

As they relate to ecological matters the most significant changes are from the re-zoning of the northern and southern land. The amendments will lead to a reduction in the riparian yard, establish a requirement for a 5 m landscaping yard to the north and south of Sub-precinct, as well as, the introduction of a specific maximum impervious surface coverage of 80%.

The existing requirement within the Wairaka Precinct for a Stormwater Management Plan to be prepared remains in effect. Provided the Stormwater Management Plan is prepared in line with current industry best practice Water Sensitive Urban Design principles, the potential for adverse water quality effects from stormwater discharges to occur can be addressed through this process.

The requirement for a 5 m landscaping yard to the north and south is primarily being proposed to provide a vegetated buffer at the boundaries of the site to address the visual amenity of the precinct. Landscaping also provides for the opportunity increase native vegetation cover and associated ecosystem services. The requirement for the landscaping yard to include mature trees no more than 5 m apart, with the balance planted with a mixture of shrubs or ground cover plants (excluding grass), within and along the full extent of the setback will provide some habitat function for native fauna.

The Special Purpose - Healthcare zone has a 5 m riparian yard standard. For the Southern Site, the current Business - Mixed Use zoning has a 10 m riparian yard control. The Plan Change seeks to rezone the Southern Site to Special Purpose - Healthcare zone, and retain this zone's 5 m riparian yard control, which would apply if the culverted reach of the Wairaka Stream was daylighted in the future. The reduction in the width riparian yard, from 10 to 5 m, is not considered to be of consequence, given that in the land effected by this change the Wairaka Stream is currently piped or otherwise vegetated through the site. In the event that the culvert is removed, and this section of the stream is 'daylighted' in the future, a 5 m riparian yard would provide a suitable riparian area which will contribute to the ecological values (including habitat provision) within the site.

No amendments are proposed to the regional or district provisions of the Auckland Unitary Plan that apply to specific activities that could potentially be undertaken in the future for the redevelopment of the site. Should any resource consent be required for such activities, including vegetation clearance and/or earthworks, consents would still be required under the existing provisions of the Auckland Unitary Plan and Auckland Council would have the ability, through the usual resource consenting process, to place conditions on the consent to mitigate any identified effects.

The plan change does not fundamentally change the level of development that could occur on the site, and therefore the level of change that could occur to ecological values. The level of effect on the site's ecological values from the proposed activities has been assessed as Low – Net Gain. The description of a Low level of effect from EIANZ (2018) is: Minor shift away from baseline conditions. Change may be discernible, but underlying character, composition, or attributes of the site will be similar to pre-development, which is considered to be an appropriate description of the effects of the Mason Clinic Private Plan Change request may have on ecological values.



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# 1. Introduction

## 1.1 Scope

Morphum Environmental Limited (Morphum) has been engaged by the Waitematā District Health Board (WDHB) to prepare an Ecological Impact Assessment (EclA) to support their application for a Private Plan Change. The Mason Clinic Unitary Plan Private Plan Change seeks to amend and insert new provisions to the Wairaka Precinct of the Auckland Unitary Plan: Operative in Part (AUP:OP) to better provide for the existing Mason Clinic activity, its comprehensive redevelopment and its expansion onto the neighbouring land to the north and south (herein the Northern and Southern Sites).

An EclA is required to provide a description of the Plan Change Area (being the Northern and Southern Sites, as well as, the current Mason Clinic Site), the surrounding area and the current ecological values, as well as a description and evaluation of the plan change request and associated potential effects as they relate to ecological matters.

## 1.2 Site Overview

The Plan Change Area is located on the border of the primarily residential suburbs of Mt Albert and Waterview within the Wairaka Precinct.

The surrounding residential areas in Mt Albert and Waterview are predominately zoned Mixed Housing Urban and Mixed Housing Suburban. The Wairaka Precinct also includes the Unitec Campus, comprising buildings and educational facilities, a Marae, and areas of greenspace and landscaping including the Sanctuary Mahi Whenua. The North-Western motorway and the Waterview connection is located along the northern and north-western boundaries of the Precinct.

Oakley Creek borders the Mason Clinic Site on the western boundary. The riparian margins of Oakley Creek include mature areas of mixed native and exotic vegetation that have been scheduled in the AUP:OP as a Significant Ecological Area (SEA\_T\_6008). Beyond Oakley Creek the residential suburb of Waterview extends to the coastal marine area forming the upper reaches of the Waitematā Harbour. Traherne Island and the Motu Manawa (Pollen Island) Marine Reserve, which feature a complex matrix of coastal ecotypes including shell banks, saltmarshes and mangroves, lie further offshore.

The Wairaka Stream originates in front of the Marae from an underground spring (Puna O Wairaka) originating from the Mt Albert basalt aquifer and has a rich cultural significance to local Maori. Base flows are further supplemented by stormwater runoff from the site and surrounding Mt Albert catchment. The Wairaka stream flows north across the Wairaka Precinct and is partially piped and culverted (including within the Mason Clinic Site) before it meets the confluence with the Oakley Creek on the western site boundary which ultimately discharges to the upper reaches of the Waitematā Harbour south of SH16 at the Great North Rd interchange.

An overview of the Wairaka Precinct with ecological features of note are shown on the Map in Appendix 1.





Figure 1: Plan Change Area and SEA Overlay



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### 1.3 Wairaka Precinct

The purpose of the Wairaka Precinct, as described in the AUP:OP, is to provide for a diverse urban community and Sub-precinct A (which applies to the Mason Clinic Site) provides for healthcare/hospital related purposes.

The Wairaka Precinct provisions recognise particular attributes which contribute to the amenity of the precinct and the surrounding area and these are required to be retained through the development of the precinct. These include the following:

- The significant ecological area of Oakley Creek.
- An open space network linking areas within the Wairaka Precinct.
- A network of pedestrian and cycleway linkages that integrate with the area network.
- The Wairaka stream and the landscape amenity this affords.
- The Historic Heritage overlay of the former Hospital and identified trees on site.

In addition, Objective I334.2(10) (b) of the Wairaka Precinct seeks to create an integrated urban environment which recognises, protects and enhances the environmental attributes of Wairaka in planning and development of the Precinct. The general policies of the Wairaka Precinct provide for subdivision and development that is compatible with and sensitive to the ecological qualities of the Oakley Creek and the Motu Manawa Marine Reserve.

The Wairaka Precinct provisions also note that a comprehensive stormwater management plan should be prepared to accompany an application for subdivision or development within the Precinct.



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## 2. Current Ecological Values

An initial site walkover was undertaken on 19 March 2020. The site visit was undertaken by a suitably qualified and experienced environmental scientist and involved detailed site characterisation and mapping of ecological features. During these surveys all vegetation types and ecological features of note were surveyed, described and any fauna observations were also recorded. Ecological features of note are shown on the Map in Appendix 1.

### 2.1 Ecological Context

The Plan Change Area is within the Tamaki Ecological District. 6.9% of the Tamaki Ecological District remains in indigenous vegetation, that has been highly modified from early Polynesian occupation through to more recent urban development (Lindsay *et al.*, 2009).

The current extent of ecosystems located along the Oakley Creek includes treeland, exotic forest, exotic scrub, broadleaf species scrub/forest, and planted vegetation (Singers *et al.* 2017). Vegetation across the site and surrounding area is predicted to have originally comprised of pūriri (*Vitex Lucens*) and totara (*Podocarpus totara*) forest across alluvial terraces, with the inclusion of Taraire (*Beilschmiedia tarairi*) on flat to rolling land, and kahikatea (*Dacrycarpus dacrydioides*) across narrow river valleys and wide flood plains (Singers, *et al.* 2017).

### 2.2 Catchment and Receiving Environment

The Oakley stormwater catchment is approximately 1,265 ha of primarily residential land. The catchment has significant (more than 25%) impervious surface. The Landcare Research (2020) Land Cover Database version 5.0 describes the land cover as predominantly Built-Up area, intermixed with small fragments of Indigenous Forest and Urban Parkland/Open Space. Built up areas are considered as commercial, industrial or residential buildings, including associated infrastructure and amenities; having less than 10% indigenous cover and “very little native biodiversity remains in these environments.”

Oakley Creek feeds into the Oakley Creek estuary, within a Category 1 Marine SEA (SEA-M1-53) in the Waitematā Harbour. Approximately 420 m offshore, a significant wading bird habitat area designated within this SEA (SEA\_M1\_53W1-2) provides important roosting, nesting and feeding grounds for shore birds and waders. Traherne Island and the Motu Manawa (Pollen Island) Marine Reserve, lie further offshore.

### 2.3 Site Description

The Plan Change Area is relatively flat and is comprised of a series of buildings currently occupied by the Mason Clinic and carparking and landscaping. The Northern Site consists of steeply sloping unmown rank grass with mixed vegetation, including a cluster of protected trees, situated on the western boundary. The comparatively heterogenous Southern Site encompasses a mixture of open space, including a former dog exercise park, a small nursery, greenhouses and other buildings and impervious carpark area. The piped reach of the Wairaka Stream enters the site beneath Farm Road and flows northwards until it discharges through the patch of native vegetation, and then flows north-west through the Plan Change Area to Oakley Creek.

A Significant Ecological Area overlay (SEA), SEA\_T\_6008, applies to the riparian vegetation of Oakley Creek and partially extends into the western boundary of the Plan Change Area. There are no other SEA's within the Plan Change Area.

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## 2.4 Terrestrial Values

### 2.4.1 Existing Vegetation

The main vegetation types present within the Plan Change Area are identified in Table 1: Main Vegetation Community Types, Figure 2 provides representative photo of each of these community types.

The AUP:OP identifies the presence of a notable group of six trees on the site (Scheduled ID 173) in the vicinity of the Unitec corporate office. In addition, 47 trees have been identified as Protected Trees under the Wairaka Precinct provisions of the AUP:OP, Table I334.6.7.1. Protected Trees are located in two main clusters, one along the north western boundary of the site includes 14 trees, and one in the centre, in the vicinity of the Unitec corporate offices, includes 15 trees.

Vegetation on the site potentially offers roosting and nesting habitat for native and exotic birds, as well as, potential habitat for other terrestrial fauna including lizards and bats. Table 1, below provides an assessment of the vegetation communities ecological values utilising the assessment matters from the Environment Institute of Australia and New Zealand (EIANZ) 2018 Ecological Impact Assessment Guidelines, as outlined in Appendix 2.

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**Table 1: Main Vegetation Community Types**

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<b>Vegetation Type</b>	<b>Description</b>
Mown grass	Areas of mown grass includes areas around buildings, and the Southern Site around the Sanctuary Gardens and Women’s Suffrage Gardens.
Rank Grass	An unmown section of rank grass is located within the Northern Site. In several locations, particularly in the Southern Site, areas that would appear to have been mown grass are now over-grown.
Exotic riparian vegetation	Low-lying exotic riparian vegetation, including nasturtium ( <i>Tropaeolum majus</i> ), privet ( <i>Ligustrum spp.</i> ), red hot poker ( <i>Kniphofia</i> ) and brush wattle ( <i>Paraserianthes lophantha</i> ) is present along the Wairaka Stream within the Mason Clinic Site.
Native riparian vegetation	An established section of regenerating native riparian vegetation is located in the lower reaches of the Wairaka Stream, stretching approximately 80 m from the end of the box culvert into the Mason Clinic Site.
Mature mixed canopy	A grove of mature native and exotic species can be found in the Southern Site. Species include pohutakawa ( <i>Metrosideros excelsa</i> ) and kahikatea with a regenerating understory of native karo ( <i>Pittosporum crassifolium</i> ) and karamu ( <i>Coprosma robusta</i> ).
Notable and Protected Trees	Six notable trees and 47 protected trees are spread across the Wairaka Precinct, with a cluster in the Northern Site.

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**Mown Grass**



**Rank Grass**



**Native Riparian Vegetation**



**Exotic Riparian Vegetation**



**Mature Mixed Canopy**



**Notable and Protected Trees**

**Figure 2: Indicative Site Photographs**

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**Table 2: Assessment of Current Terrestrial Values**

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<b>Assessment Matter</b>	<b>Ecological Value (EIANZ, 2018)</b>	<b>Reasoning</b>
Representativeness	<b>Low</b>	The vegetation communities within the Plan Change Area are not typical or characteristic of the structure and composition that would naturally be found at this location.  The site has been heavily modified by past vegetation clearance, as can be seen when the Plan Change Area is compared to the riparian vegetation around Oakley Creek. Limited ecological value other than as for habitat for tolerant native species. Notwithstanding that individual trees (mainly exotics) are of arboriculture merit as demonstrated by the existing protection.
Rarity/distinctiveness	<b>Low</b>	The vegetation communities within the Plan Change Area are not considered to be rare in terms of scarcity of species, communities, habitats or ecosystem types and reflect similar landscapes in urban catchments. Species, habitats, or ecological features present are not considered to be prone or at risk of local or national loss or extinction.
Diversity and pattern	<b>Low</b>	The vegetation communities within the Plan Change Area are not considered to represent a natural diversity of species or habitat types.
Ecological context	<b>Moderate</b>	The vegetation communities within the Plan Change Area are considered to potentially provide foraging, nesting habitat functions, mainly for tolerant species but the presence or use of the site by At-Risk indigenous species cannot be categorically ruled out. Value reduced due to the proximity of higher quality habitat around Oakley Creek.

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### 2.4.2 Avifauna

The paucity of native or exotic vegetation is reflected in the species of birds recorded from the Plan Change Area, which are a typical assemblage of species that can inhabit or make use of landscaping vegetation in an urban setting. Incidental birdlife noted during the site visits were limited to common garden species, refer to Table 3 below. No threatened or 'At Risk' species were recorded within the Plan Change Area.

Previous five minute bird surveys undertaken within the Oakley Creek corridor have identified 17 species of birds dominated by common introduced and native birds with no threatened or at risk species (Boffa Miskell Ltd, 2014). It is likely that these common species may be found throughout the Plan Change Area.

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**Table 3: Bird Species Observed**

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<b>Common name</b>	<b>Scientific name</b>	<b>Threat Status (Robertson et al. 2017)</b>
Australian Magpie	<i>Gymnorhina tibicen</i>	Introduced and naturalised
Common Myna	<i>Acridotheres tristis</i>	Introduced and naturalised
Eurasian Blackbird	<i>Turdus merula</i>	Introduced and naturalised
House Sparrow	<i>Paser domesticus</i>	Introduced and naturalised
New Zealand Kingfisher	<i>Todiramphus sanctus vagans</i>	Not Threatened
North Island Fantail	<i>Rhipidura fulginosa placabilis</i>	Not Threatened
Pukeko	<i>Porphyrio melanotus melanotus</i>	Not Threatened
Skylark	<i>Alauda arvensis</i>	Introduced and naturalised
Song Thrush	<i>Turdus philomelos</i>	Introduced and naturalised
Spur Wing Plover	<i>Vanellus miles</i>	Not Threatened
Welcome Swallow	<i>Hirundo neoxena neoxena</i>	Not Threatened

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### 2.4.3 Herpetofauna

Given the project scope, a detailed search for native herpetofauna was not undertaken. Suitable lizard habitat was limited to isolated areas of rank grassland, riparian vegetation (both native and exotic) and the area of Mixed Mature Canopy environments.

Details of native lizard species reported to be present elsewhere in the Tamaki Ecological District are listed in Table 4. Previous lizard surveys undertaken along the Oakley Creek walkway in association with the Waterview walking and cycling facility and Waterview Connection have identified populations of copper skinks and it is considered likely that these lizards may be found on site. Copper skink are not considered threatened or at risk by the Department of Conservation (Hitchmough *et al.* 2015).

Geckos are unlikely to have persisted within the Plan Change Area due to the site's history of habitat modification and the lack of any substantial native vegetation make it unlikely that native geckos would recolonise the site naturally. Ornate skinks are generally found within heavily forested, and protected, coastal vegetation; such cover is not found within the Plan Change Area.

The exotic plague skink (*Lampropholis delicata*) may be present, given its wide distribution in the Auckland Region.



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**Table 4: Native Lizards Found in the Wider Tamaki Ecological District**

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Species	Common Name	Threat Status (Hitchmough <i>et al.</i> 2015).
<i>Oligosoma aeneum</i>	Copper skink	Not Threatened
<i>Oligosoma ornatum</i>	Ornate skink	At Risk - Declining
<i>Mokopirirakau granulatus</i>	Forest gecko	At Risk - Declining
<i>Naultinus elegans</i>	Elegant gecko	At Risk - Declining

#### 2.4.4 Bats

Populations of the native long-tailed bat (*Chalinolobus tuberculatus*) are known in the Waitakere Ranges. Long-tailed bats feed on the wing and often feed on riparian and forest margins where invertebrate life is more abundant. Native bats often utilise streams as movement corridors and can forage over 50 km in a single night along watercourses.

Long-tailed bats prefer to roost in larger, older, canopy trees with cavities, epiphytes and loose bark. Such habitat is not found within the Plan Change Area, although such habitat can be found within the adjacent SEA vegetation. Given the proximity of the SEA vegetation along Oakley Creek it is possible that long-tailed bats could forage within the Plan Change Area, although the likelihood of any roosting occurring is considered negligible given the proximity of higher quality roosting habitat along Oakley Creek.

Short-tailed bats prefer deep-forest habitat and are associated with old growth indigenous forest. The only known population of short-tailed bats known to the Auckland region is found on Little Barrier Island. As such their presence within the Plan Change Area is considered extremely unlikely.

#### 2.5 Freshwater Values

The Wairaka Stream is a tributary of Oakley Creek and is the primary freshwater feature located within the Wairaka Precinct. The stream is fed by an underground spring (Puna O Wairaka) originating from the Mt Albert basalt aquifer. The aquifer spring provides constant base flows throughout the year, along with treated stormwater runoff from the site and part of the wider catchment which enters the stream beside Farm Road.

A watercourse assessment was undertaken of the Wairaka Stream in 2012 as part of the Oakley Creek Watercourse Management Plan (Morphum, 2012). This describes the stream channel as comprising stable volcanic substrate with some potential for erosion. Riparian vegetation along the length of Wairaka Stream comprises sections of established native vegetation, flax planting in front of the marae (Pā harakeke), mown grass, isolated mature exotic trees. Numerous freshwater fish were recorded along the length of the Wairaka Stream, including bullies, populations of adult inanga, galaxiids and eels.

The stream is piped under Farm Road and modified beyond this to form an aesthetic pond in the Women's Suffrage Garden. The stream is culverted under the main north-south road beside the Pumphouse building and then through a 70 m long concrete box culvert (approximately 1 m x 1 m), past the bee-keepers hives and Sanctuary Gardens, within the Southern Site. Within the Mason Clinic site, the stream returns to a natural channel through native riparian vegetation behind building 32 and flows through a planted wetland area at the confluence with Oakley Creek.

A Stream Ecological Valuation (SEV) was undertaken in the downstream reaches of the Wairaka Stream by Estrin and Phillips (2014) to measure the health of the stream below the piped reach. The Wairaka Stream scored an overall value of 0.58, indicating moderate ecological function. Water temperature control and dissolved oxygen levels were reported to be good over the full reach length. The primary limiting factors were the lack of habitat provision and organic matter in the stream.

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Table 5 provides a summary of the site’s current freshwater ecological values utilising the assessment matters from EIANZ (2018).

An area within the Northern Site had been identified by reporting elsewhere as a ‘wet area’. For thoroughness WDHB commissioned Morphum to assess and classify the ‘wet area’ against the relevant definitions of the Resource Management Act (RMA) and National Policy Statement for Freshwater Management 2020 (NPS:FM). A Watercourse Classification Memo is attached to this report as Appendix 3. In brief, the ‘wet area’ is dominated by facultative vegetation and indicators of hydric soils and wetland hydrology are absent. Therefore, the area does not support a natural ecosystem of plants and animals that are adapted to wet conditions.

**Table 5: Assessment of Current Freshwater Values**

<b>Assessment Matter</b>	<b>Ecological Value (EIANZ, 2018)</b>	<b>Reasoning</b>
Representativeness	<b>Low</b>	The Wairaka Stream is reasonably characteristic of a first order, permanent waterway in an urban catchment where it flows through the Plan Change Area.
Rarity/distinctiveness	<b>Low</b>	No known distinctive ecological features are known within the reach flowing through the Plan Change Area.
Diversity and pattern	<b>Low</b>	The Wairaka Stream is not considered to represent a high level of natural diversity or complexity within the reach flowing through the Plan Change Area.
Ecological context	<b>Moderate</b>	The Wairaka Stream is not considered to be notable in an ecological context. The first order stream offers little by way of riparian habitat and contributes little by way of habitat and other ecological functions to the wider catchment.  Notwithstanding the above, it has been assessed as having a Moderate ecological value using the SEV methodology and the potential for Longfin eel (At Risk – Declining) to utilise the stream as habitat.

## 2.6 Summary of Ecological Values

The current ecological values from within the Plan Change Area have been described based from on-site, in-field observations in conjunction with a review of the available literature and databases. A summary of this information is presented in Table 6 based on the Environment Institute of EIANZ (2018) guidelines.

The onsite vegetation is considered to be of low ecological value. The vegetation within the Plan Change Area, described in section 2.4 should not be confused with the SEA vegetation surrounding Oakley Creek.

Whilst onsite fauna observations were limited to common species, the use of this area by threatened species such as long-tailed bats and native herpetofauna, whilst considered unlikely, cannot categorically be ruled out. Therefore, a conservative approach has been taken where it is assumed such species may be found within the Plan Change Area. Notwithstanding that the probability of species being present within the Plan Change Area is considered unlikely. The site offers minimal foraging and roosting opportunities and there is also much higher quality habitat in the immediate area. As such, although Bats have been ascribed a Very High ecological value, the actual probability that bats would be found within the Plan Change Area is negligible. Habitat and foraging opportunities for herpetofauna are also limited, such that the probability that any threatened species would be found within the Plan Change Area is negligible.

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**Table 6: Assessment of Current Ecological Values**

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<b>Impact</b>	<b>Ecological Value (EIANZ, 2018)</b>	<b>Reasoning</b>
Vegetation	<b>Low</b>	Area rates Low or Very Low for majority of assessment matters and Moderate for one (Representativeness, Rarity/distinctiveness, Diversity and pattern, Ecological context).
Avifauna	<b>Low</b>	Indigenous species presence limited to nationally and locally common species.
Herpetofauna	<b>High</b>	Actual species presence is likely to be limited to not threatened or pest species. Although without detailed surveys the presence of other species cannot be categorically ruled out.
Bats	<b>Very High</b>	Actual species presence is unlikely, although potential intermittent use by long-tailed bats cannot be categorically ruled out; notwithstanding actual habitat and foraging values are low.
Freshwater Values	<b>Low</b>	Area rates Low or Very Low for majority of assessment matters and Moderate for one (Representativeness, Rarity/distinctiveness, Diversity and pattern, Ecological context).
Native Freshwater Fish	<b>High</b>	Records indicate that the Wairaka Stream support a range of native freshwater fish, and potentially including At Risk – Declining Longfin eel.

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### 3. Proposal

The Private Plan Change seeks to amend the provisions of the Wairaka Precinct to better provide for the Mason Clinic facility. Changes sought include amendments to objectives, policies, activity table and standards to better provide for the built form outcomes envisaged for the future development, and to assist with managing adverse effects. In summary:

- Rezone the northern and southern land from Business – Mixed Use to Special Purpose – Healthcare Facility and Hospital (SPHFH) zone.
- Adjust the boundaries of the Wairaka Sub-precinct A to include the northern and southern land.
- Remove the shared path from the northern land.
- Adjust the provisions of the Wairaka Precinct to better provide for the nature of the Mason Clinic activity (objectives, policies, activity table and standards) and to better provide for the built form outcomes envisaged for the future development.

As it relates to ecological matters the most significant changes are from the re-zoning of the northern and southern land which lead to a reduction in the riparian yard (from 10 to 5 m), and the introduction of a maximum impervious surface coverage of 80%. Previously there was no stated maximum impervious surface coverage for the Mason Clinic Site; however, a minimum 20% landscaping control exists, which allows for proportionate reduction of landscaping areas within sites by way of providing common landscaping areas elsewhere in the precinct).

The amendments will establish a requirement for a 5 m landscaping yard to the north and south of Sub-precinct A.

The changes to the matters of control, discretion and associated assessment criteria for new development with Sub-precinct A will introduce an ability for Council to consider in relation to new buildings, the location and capacity of infrastructure servicing methods and measures to avoid land instability, erosion, scour and flood risk to buildings and property.

No changes are proposed in relation to:

- The 10 m yard from the open space zone to the west (Oakley Creek).
- Any provisions relating to the identified/protected trees.
- Any provisions relating to SEA\_T\_6008 (Oakley Creek).
- Existing requirements in the Wairaka Precinct for Stormwater Management Plans (SMPs) and Integrated Transport Assessments (ITAs), both of which are being prepared under separate processes).
- Landscaping provisions elsewhere in the Precinct, including the requirement that at least 20% Precinct must be landscaped.

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## 4. Ecological Impact Assessment

The current ecological values of the areas that would be impacted by the likely future activities that are enabled by the Plan Change are summarised below. The baseline for assessing the ecological effects is taken as the current Business -Mixed Use zoning and Wairaka Precinct provisions, which are proposed to be amended as summarised in section 3. The purpose of the Wairaka Precinct remains to provide for a diverse urban community, including for healthcare/hospital related purposes within Sub-precinct A; with enhanced ecological outcomes. The change from a business zone to a Special Purpose Healthcare zone does not enable a change of any specific activities (such as heavy industry) and is not anticipated to significantly increase the level of light, noise or traffic movements within the Plan Change Area.

### 4.1 Stormwater

Stormwater discharges can be conceptually separated into two different types of potential effects: hydrological and the effects on water quality in the receiving environment.

The changes in hydrology from increased impervious surface coverage, unless managed, can have a significant adverse effect on streams within the catchment including accelerating river and stream erosion and bank instability, creating hydrological conditions that do not support healthy aquatic ecosystems.

The Wairaka Precinct has an 80% landscaping requirement for all sites, which can be offset by providing common landscaped areas in other locations. Therefore, the Northern and Southern Sites could currently be developed with 100% impervious area (while the existing site is subject to a maximum 80% control under the Special Purpose - Healthcare zone). Both zones provide for significant development, and the change of zones will not notably change the characteristics of the stormwater that could be discharged from the site into the future.

The introduction of a specific maximum impervious surface coverage of 80% is considered to be an improvement on the current provisions, which contain flexible standards specific to the Plan Change Area.

The open space that is currently identified over the Southern Site is not subject to any impervious area or landscaping standards, and therefore its contribution to stormwater discharges cannot be defined with certainty. In any case, the removal of this open space from the Southern Site land will be offset by having open space provided elsewhere in the Wairaka Precinct.

The building material used, and the type of activities undertaken can also generate a range of contaminants that can be mobilised and discharged offsite with the stormwater. Both point source and diffuse discharges from urban activities, can affect freshwater quality and ecosystem health.

The existing requirement within the Wairaka Precinct for SMP to be prepared remains in effect. Provided the SMP is prepared in line with current industry best practice Water Sensitive Urban Design (WSUD) principles as guided by Auckland Council Guideline Documents GD2015/004 and GD2017/001, the potential for adverse water quality effects from stormwater discharges to occur can be addressed through this process.

The changes to the matters of control, discretion and associated assessment criteria introduce an ability for Council to consider in relation to new buildings, the location and capacity of infrastructure servicing methods and measures to avoid land instability, erosion, scour and flood risk to buildings and property.



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## 4.2 Landscaping

The requirement for a 5 m landscaping yard to the north and south is primarily being proposed to provide a vegetated buffer at the boundaries of the site to address the visual amenity of the precinct. Landscaping also provides for the opportunity increase native vegetation cover and associated ecosystem services.

The requirement for the landscaping yard to include mature trees no more than 5 m apart, with the balance planted with a mixture of shrubs or ground cover plants (excluding grass), within and along the full extent of the setback will provide some habitat function for native fauna. Such a standard does not currently exist, and this is an improvement over the 'status quo'.

Within the existing Mason Clinic Site, the Special Purpose - Healthcare zone has a 5 m riparian yard standard. For the Southern Site, the current Business - Mixed Use zoning has a 10 m riparian yard control, which would apply if the culverted reach of the Wairaka Stream was daylighted in the future. The Plan Change seeks to rezone the Southern Site to Special Purpose - Healthcare zone, and retain this zone's 5 m riparian yard control. The reduction in the width of the riparian yard, from 10 to 5 m, is not considered to be of consequence, given that in the land effected by this change the Wairaka Stream is currently piped or otherwise vegetated through the site. In the event that the culvert is removed and this section of the stream is 'daylighted' in the future, a 5 m riparian yard will be consistent with how the riparian area of the stream is managed further north, and will allow for riparian planting to provide some contribution to ecological habitat values. Whilst a 10m control (under the current zoning) would provide greater ecological benefit, the 5m control proposed will provide sufficient width to establish suitable planting to contribute to ecological habitat values. This control is currently used on all other sites within the Special Purpose – Healthcare zone, and it is appropriate to maintain this control within this site.

## 4.3 Provisions of the AUP:OP

No amendments are proposed to the regional or district provisions of the AUP:OP that apply to activities, such as land disturbance and potentially vegetation clearance, that could potentially be undertaken in the future for the redevelopment of the site. Similarly, no changes are proposed which would affect the Auckland-wide provisions which relate to activities to streams, such as the standards which relate to the removal of existing structures, or the diversion of streams, and associated disturbance and discharges.

Should any resource consent be required for any of the activities identified, including vegetation clearance and/or earthworks, consents would still be required under the existing provisions of the AUP:OP.

Should any resource consent be required for any of the activities identified, then Auckland Council would have the ability, through the usual resource consenting process, to place conditions on the consent to mitigate any identified effects.

## 4.4 The Wildlife Act 1953

The Wildlife Act (1953) absolutely protects all native lizards, bats and birds (unless listed as a in Schedule 5). It is an offence to disturb or kill these species. Consequently, a permit under the Wildlife Act would be require for any (potential) harm to these species.

The Plan Changes does not impact upon this requirement.

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## 4.5 Ecological Impact Assessment

The changes proposed, as summarised in section 3, being principally the change from one urban zone to another, does not significantly change the type of activities that can occur, or the level of physical development that is provided for. Consequently, it is considered that the plan change results in a barely distinguishable or very slight change from effects enabled by the existing provisions, as summarised in Table 7 below. Where changes are likely, such as the limitation of the impervious area to 80% of the site (with no flexibility for moving landscaping off-site), the associated reduction in stormwater runoff, the environmental effects are likely to be positive.

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**Table 7: Magnitude and Level of Effect**

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<b>Ecological Component</b>	<b>Ecological Value (EIANZ, 2018)</b>	<b>Magnitude of Effect</b>	<b>Level of Effect</b>
Vegetation	Low	Negligible	<b>Very Low</b>
Avifauna	Low	Negligible	<b>Very Low</b>
Herpetofauna	High	Negligible	<b>Very Low</b>
Bats	Very High	Negligible	<b>Low</b>
Freshwater	Low	Positive	<b>Net Gain</b>
Native Freshwater Fish	High	Negligible	<b>Very Low</b>

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The level of effect on the site's ecological values from the proposed activities has been assessed as Low – Net Gain. The plan change does not fundamentally change the level of development that could occur on the site, and therefore the level of change that could occur to ecological values. The EIANZ guidelines provide a range for the Level of Effect from Very High – Net Gain, there is no option for 'neutral' or 'no change'. The description of a Low level of effect from EIANZ (2018) is: Minor shift away from baseline conditions. Change may be discernible, but underlying character, composition, or attributes of the site will be similar to pre-development, which is considered to be an appropriate description of the effects of the Mason Clinic Private Plan Change request may have on ecological values.

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## 5. Conclusions

The Mason Clinic Unitary Plan Private Plan Change would not fundamentally change the level of development that could occur, and therefore the level of change that could occur to ecological values. Consequently, the level of effect on the ecological values from the proposed activities has been assessed as Low – Net Gain.

The Private Plan Change seeks to amend the provisions of the Wairaka Precinct to better provide for the Mason Clinic facility. The changes proposed, being principally the change from one urban zone to another, does not significantly change the type of activities that can occur, or the level of physical development that is provided for. Consequently, it is considered that the plan change results in a barely distinguishable or very slight change from effects enabled by the existing provisions.

As they relate to ecological matters the most significant changes are from the re-zoning of the northern and southern land. The amendments will lead to a reduction in the riparian yard, establish a requirement for a 5 m landscaping yard to the north and south of Sub-precinct, as well as, the introduction of a specific maximum impervious surface coverage of 80%.

The existing requirement within the Wairaka Precinct for a Stormwater Management Plan to be prepared remains in effect. Provided the Stormwater Management Plan is prepared in line with current industry best practice Water Sensitive Urban Design principles, the potential for adverse water quality effects from stormwater discharges to occur can be addressed through this process.

The requirement for a 5 m landscaping yard to the north and south provides an opportunity to increase native vegetation cover and associated ecosystem services. The requirement for the landscaping yard to include mature trees no more than 5 m apart, with the balance planted with a mixture of shrubs or ground cover plants (excluding grass), within and along the full extent of the setback will provide some habitat function for native fauna.

For the Southern Site, the reduction in the riparian yard control would apply if the culverted reach of the Wairaka Stream was daylighted in the future, is not considered to be of consequence. In the event that the culvert is removed, and this section of the stream is 'daylighted' in the future, a 5 m riparian yard is consistent with the Special Purpose – Healthcare zone control.

No amendments are proposed to the regional or district provisions of the Auckland Unitary Plan that apply to specific activities that could potentially be undertaken in the future for the redevelopment of the Mason Clinic. Should any resource consent be required for such activities, including vegetation clearance and/or earthworks, consents would still be required under the existing provisions of the Auckland Unitary Plan and Auckland Council would have the ability, through the usual resource consenting process, to place conditions on the consent to mitigate any identified effects.

The level of effect on the ecological values from the proposed activities has been assessed as Low – Net Gain. The description of a Low level of effect from EIANZ (2018) is: Minor shift away from baseline conditions. Change may be discernible, but underlying character, composition, or attributes will be similar to pre-development, which is considered to be an appropriate description of the effects of the Mason Clinic Private Plan Change request may have on ecological values.

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# Appendix 1 Map



# WAIRAKA PRECINCT OVERVIEW AND ECOLOGICAL FEATURES OF NOTE



\\morphum.local\data\Morphum\Projects\Organisations\Waitemata DHB\02524 Mason PPC\GIS\ArcPro\02524 Mason PPC Site Layout: Appendix 1 Map

Sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 4.0 New Zealand licence

- ◆ Protected Trees
- Site Streams**
- Permanent Stream
- Piped
- Wairaka Precinct Boundaries

- Plan Change Area**
- Existing Clinic
- Proposed Extension
- AKC Significant Ecological Areas**
- Marine 1
- Terrestrial

Client **Waitematā District Health Board**  
 Project **MASON CLINIC PLAN CHANGE ECIA**

0 40 80 m

Project no. P02524  
 Date 15 Dec 2020  
 Drawn DB  
 Approved JS

This plan may contain errors or omissions or may not have the spatial accuracy required for some purposes. There may be other information relating to the area shown on this map which is unknown to Morphem Environmental Ltd. This map may contain Crown copyright data. Please consult Morphem Environmental Ltd if you have any queries.



## Appendix 2 EIANZ Assessment Methodology

**Table 8: Assigning Value To Species, Vegetation And Habitats (from EIANZ, 2018)**

Value	Species Values	Vegetation/Habitat Values
Very High	Nationally threatened species found in the (Zone of Influence) ZOI <sup>1</sup> either permanently or seasonally	Area rates High for 3 or four attributes (Representativeness, Rarity/distinctiveness, Diversity and pattern, Ecological context). Likely to be national important and recognised as such
High	Species listed as At Risk – Declining, found in the ZOI either permanently or seasonally	Area rates High for 2 of the attributes, Moderate and Low for the remainder, or Area rates High for 1 assessment matters, Moderate for the remainder Likely to be regionally important and recognised as such
Moderate	Species listed as any other category of At Risk, found in the ZOI either permanently or seasonally, or Locally (ED) uncommon or distinctive species	Area rates High for 1 assessment matters, Moderate and Low for the remainder, or Area rates Moderate for 2 or more of the attributes, Low or Very Low for the remainder Likely to be important at the level of the Ecological District
Low	Nationally and locally common indigenous species	Area rates Low or Very Low for majority of assessment matters and Moderate for 1 Limited ecological value other than as for habitat for tolerant native species
Negligible	Exotic species, including pest species having recreational value	Area rates Very Low for 3 matters and Moderate, Low or Very Low for remainder

<sup>1</sup> The Zone of Influence (ZOI) refers to all land, water bodies and receiving environments that could be potentially impacted by the project.

**Table 9: Criteria for Describing Magnitude of Effect (from EIANZ, 2018)**

<b>Magnitude</b>	<b>Description</b>
Very High	Total loss of or major alteration to key features of the baseline condition causing a fundamental change or complete loss of the character, composition, or attributes of the site.
High	Major loss or major alteration to key features of the baseline condition causing a fundamental change of the character, composition, or attributes of the site.
Moderate	Loss or alteration of one or more key features of the baseline condition causing a partial change to the character, composition, or attributes of the site.
Low	Minor shift away from baseline conditions. Change may be discernible but underlying character, composition, or attributes of the site will be similar to pre-development.
Negligible	Very slight change from existing baseline condition. Change barely distinguishable.

**Table 10: Criteria for Describing Level of Effects (from EIANZ, 2018)**

<b>Ecological Value Magnitude</b>	<b>Very High</b>	<b>High</b>	<b>Moderate</b>	<b>Low</b>	<b>Negligible</b>
<b>Very High</b>	Very High	Very High	High	Moderate	Low
<b>High</b>	Very High	Very High	Moderate	Low	Very Low
<b>Moderate</b>	High	High	Moderate	Very Low	Very Low
<b>Low</b>	Moderate	Low	Low	Very Low	Very Low
<b>Negligible</b>	Low	Very Low	Very Low	Very Low	Very Low
<b>Positive</b>	Net gain	Net gain	Net gain	Net gain	Net gain

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## Appendix 3 Watercourse Classification Memo



Engineers & Consultants

## Memorandum

<b>Date:</b>	29/01/2021
<b>To:</b>	Haitham Alrubayee
<b>From:</b>	Jason Smith
<b>CC:</b>	Anthony Blomfield, Craig McGarr, Rachel Abraham
<b>Project Number:</b>	2524
<b>Reviewed and release by:</b>	Mark Lowe

### Subject: 'Wet Area' Assessment

Morphum Environmental Ltd (Morphum) has been engaged by the Waitemata District Health Board to assess and classify an area of 'wet area' within the Northern Site (refer to Figure 1, below) against the wetlands definitions of the Resource Management Act (RMA) and National Policy Statement for Freshwater Management 2020 (NPS:FM).

The RMA definition of a wetland includes *permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.*

The NPS:FM definition of a natural inland wetland includes:

**natural wetland** means a wetland (as defined in the Act) that is not:

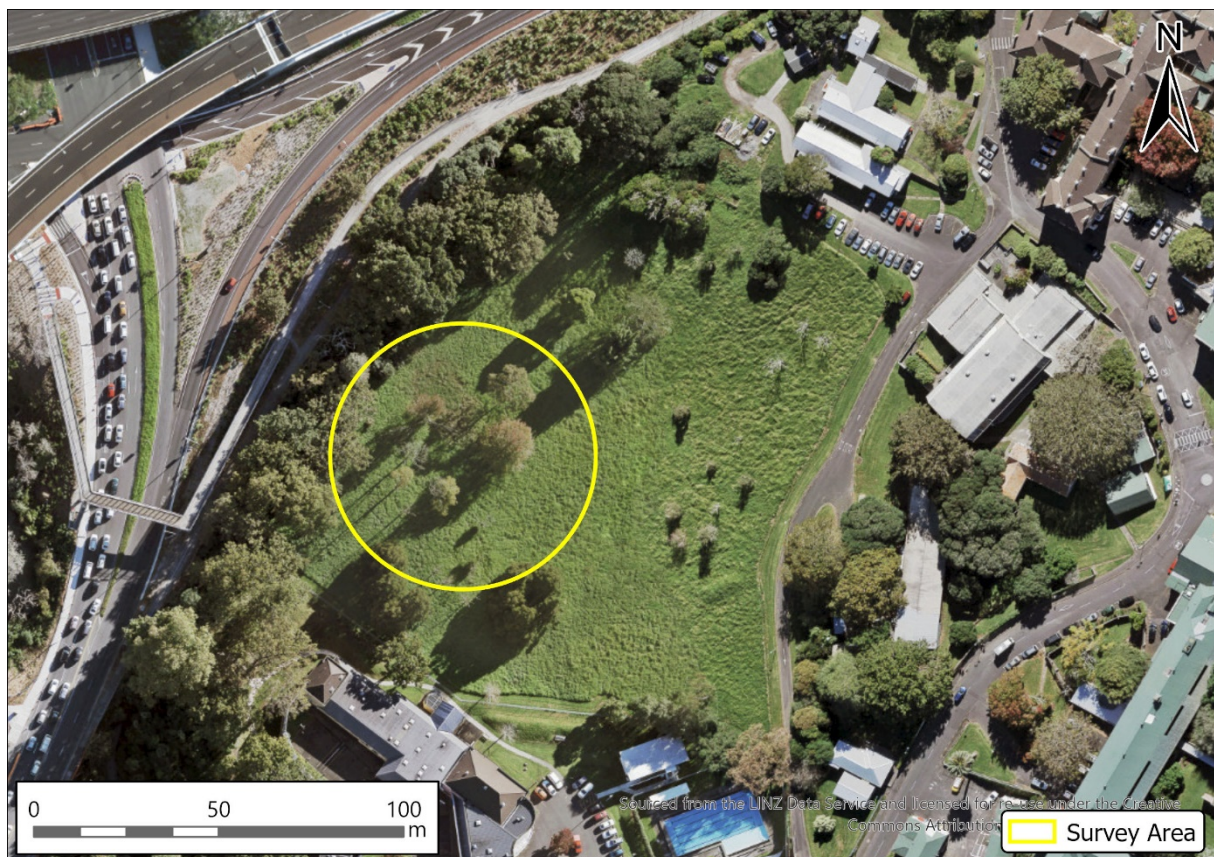
(a) a wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing or former natural wetland); or

(b) a geothermal wetland; or

(c) any area of improved pasture that, at the commencement date, is dominated by (that is more than 50% of) exotic pasture species and is subject to temporary rain-derived water pooling

The classification methodology used aligns with the Wetland Delineation Protocols as specified in the NPS:FM.





**Figure 1: Subject Site**

## Methodology

A specific site visit was undertaken on 20 January 2021 (The area was previously surveyed on 19 March 2020 and 17 May 2017). The previous rainfall recorded at the nearest Auckland Council monitoring point, Mt Albert Grammar approximately 2.1 km away, over the preceding week is outlined in Table 1, below.

**Table 1: Dates and Depth of Rainfall Over the Previous Week (Mt Albert Grammar)**

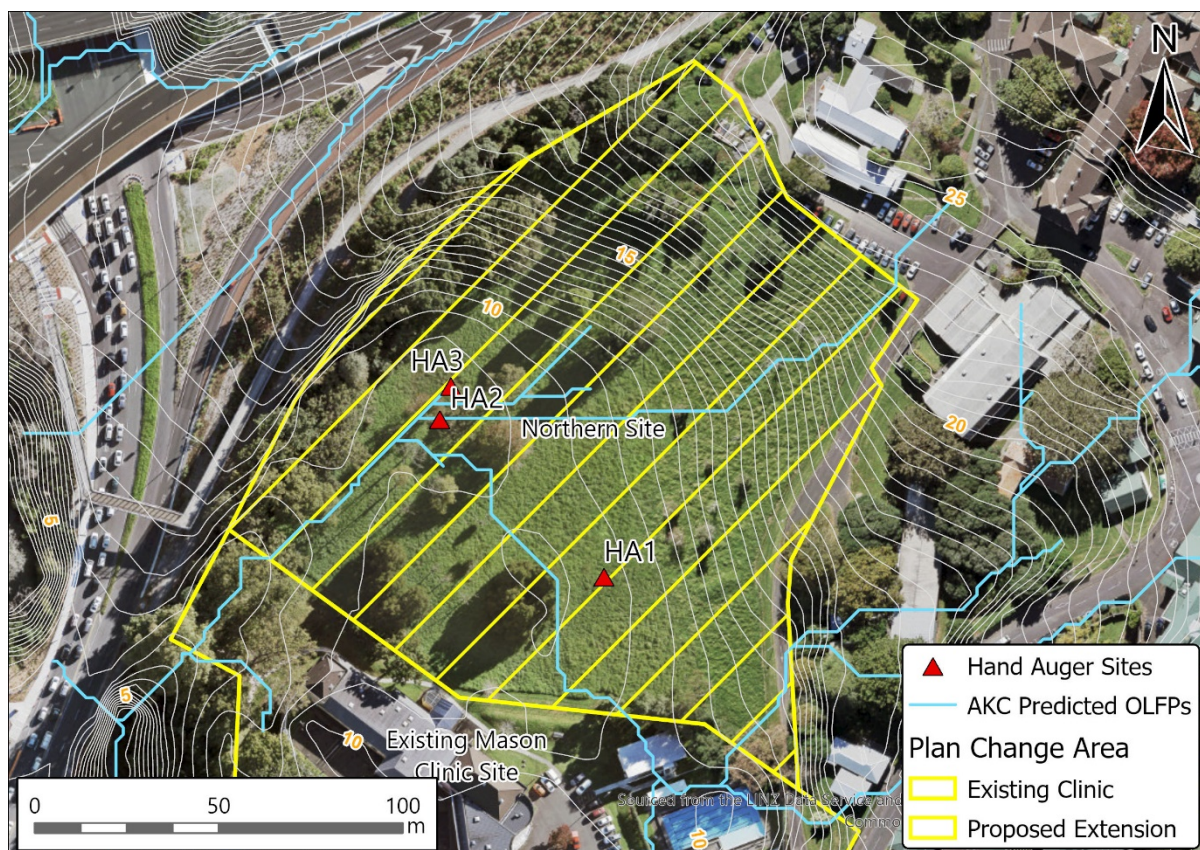
Date	Daily Rainfall (mm)
20/01/2021 (pre-site visit)	0
19/01/2021	6.5
18/01/2021	0
17/01/2021	0
16/01/2021	0.5
15/01/2021	0.0
<b>Total Rainfall (mm)</b>	<b>7.0</b>

On the site visit, 2 areas were identified for further investigations, HA1 and HA2 were identified for featuring vegetation distinct from the surrounding area and for being at the bottom of the hillslope, an area where wetlands are likely to occur. A third point HA3 was investigated due to it's peripheral location to HA2 and the obvious presence of an overland flow path; however the areas were so similar that



further discussion on HA3 is not considered necessary. HA1 and HA2 are shown on Figure 2 and representative site photos are provided in Table 4.

Neither the distinct vegetation nor the location below a hillslope are grounds in and of itself to conclude that the feature is a wetland. Wetlands have many distinguishing features, the most notable being the presence of water at or near the surface, vegetation adapted to or tolerant of saturated soils and distinctive hydromorphic soils. Assessing indicators of the presence of each of these features is widely accepted as a valid way to identify wetlands.



**Figure 2: Northern Site Hand Auger Locations**

## Surface Water

There were no signs of surface water being present in this location during any of the three site visits. The water level was not encountered at either HA1 and HA2.

## Vegetation Assessment

Past land-use management, including vegetation clearance, and potentially the sowing of pasture species has removed the natural vegetation. The remaining vegetation is comprised of typical unkept pasture species ranges from Facultative – Wetland to Facultative – Upland species.

The Vegetation Tool applies the Rapid and the Dominance Tests to a plant community to determine whether the vegetation is hydrophytic (wetland). The on-site vegetation fidelity to wetlands was taken from Clarkson (2014) *A vegetation tool for wetland delineation in New Zealand*. Representative plots were established in each, HA1 and HA2. Table 2 provides a summary of the Rapid and Dominance Tests.

The on-site vegetation did not display a fidelity to wetlands, and the Rapid Test was failed, requiring the Dominance Test be performed. Given the dominance of Facultative species present, both HA1 and HA2 passed the Dominance Test; the Wetland Delineation Protocols require the soils be assed for indicators of hydric soils.

**Table 2: Vegetation Assessment**

Location	Species Present	Fidelity to Wetlands	Coverage	Rapid Test Outcome	Dominance Test Outcome
HA1	Yorkshire Fog ( <i>Holcus lanatus</i> )	Facultative (Exotic)	30	Fail – No obligate and Facultative Wetland species present	Pass - > 50% vegetation is Facultative; requires soil and wetland hydrology assessment
	Creeping Butter Cup ( <i>Ranunculus repens</i> )	Facultative (Exotic)	35		
	Broadleaf Plantain ( <i>Plantago major</i> )	Facultative Upland (Exotic)	10		
	Kikuyu grass ( <i>Pennisetum clandestinum</i> )	Facultative (Exotic) <sup>1</sup>	20		
	Birdsfoot ( <i>Lotus pedunculatus</i> )	Facultative (Exotic)	5		
HA2	Rye Grass ( <i>Lolium perenne</i> )	Facultative Upland (Exotic)	35	Fail – No obligate and Facultative Wetland species present	Pass - > 50% vegetation is Facultative; requires soil and wetland hydrology assessment
	Field Bindweed ( <i>Convolvulus</i> )	Facultative (Exotic) <sup>1</sup>	10		
	Creeping Butter Cup ( <i>Ranunculus repens</i> )	Facultative (Exotic)	15		
	Kikuyu grass ( <i>Pennisetum clandestinum</i> )	Facultative (Exotic) <sup>1</sup>	20		
	Birdsfoot ( <i>Lotus pedunculatus</i> )	Facultative (Exotic)	10		
Mercer Grass ( <i>Paspalum distichum</i> )	Facultative Wetland (Exotic)	10			

## Soils Assessment

Wetland soils display hydromorphic characteristics resulting from prolonged and repeated saturation. These processes result in distinctive characteristics that persist in the soil during both wet and dry periods, making them particularly useful for identifying hydric soils in the field. Evidence of hydric soils is indicated by the presence of gleyed soil; the presence of iron mottles, and/or an abundant accumulation of organic carbon in the topsoil (i.e. peat).

<sup>1</sup> Species not listed in Clarkson 2014. Best professional judgement was applied conservatively to this assessment.

At HA1 there was a uniform layer of top-soil with a transition to the underlying clayey layer at approximately 200 mm. The sample depth was extended to 500 mm, due to the sample location being down-gradient of a hillslope and the potential for fill to have washed into this location. Below 200 mm the clay layer was uniform. At no stage was the presence of any mottles, signs of organic enrichment noted. Overall, the soil core did not appear gleyed as high chroma colours were still present.

At HA2 there was a uniform layer of top-soil for approximately 150 mm. The sample depth was extended to 500 mm, due to the sample location being down-gradient of a hillslope and the potential for fill to have washed into this location. Below 150 mm there was a noticeable increase in soil clay content down to a depth of approximately 400 mm. Between 400 – 500 mm there was an increasing presence of small volcanic rocks within the soil samples and it was noted in the field that the auger was scraping against a hard surface. At no stage was the presence of any mottles, signs of organic enrichment noted. Overall, the soil core did not appear gleyed as high chroma colours were still present.

The water level was not encountered at either sampling location.

**Table 3: Soil Assessment**

<b>Location</b>	<b>Gleyed</b>	<b>Mottles</b>	<b>Carbon / Organic enrichment</b>	<b>Soil Outcome</b>
HA1	No	No	No	Not a Wetland
HA2	No	No	No	Not a Wetland

Indicators of hydric soils and wetland hydrology were not present, and as such in applying the Wetland Delineation Protocols methodology the vegetation on site is assessed as 'non-wetland vegetation.'

### Overall Assessment

Based on the data collected and the Wetland Delineation Methodology the 'wet area' is not a wetland for the purposes of the RMA. The vegetation is dominated by facultative vegetation and indicators of hydric soils and wetland hydrology are absent. Having applied the Wetland Delineation Protocols methodology the vegetation on site is assessed as 'non-wetland vegetation', therefore the area does not support a natural ecosystem of plants and animals that are adapted to wet conditions.



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**Table 4: Watercourse Classification**

	<b>Landscape context</b>	<b>Vegetation</b>	<b>Soil Profile</b>
<b>HA 1</b>			
<b>HA 2</b>			