

FREELAND RESERVE

DRAFT CONCEPT PLAN UPDATE | FEBRUARY 2018





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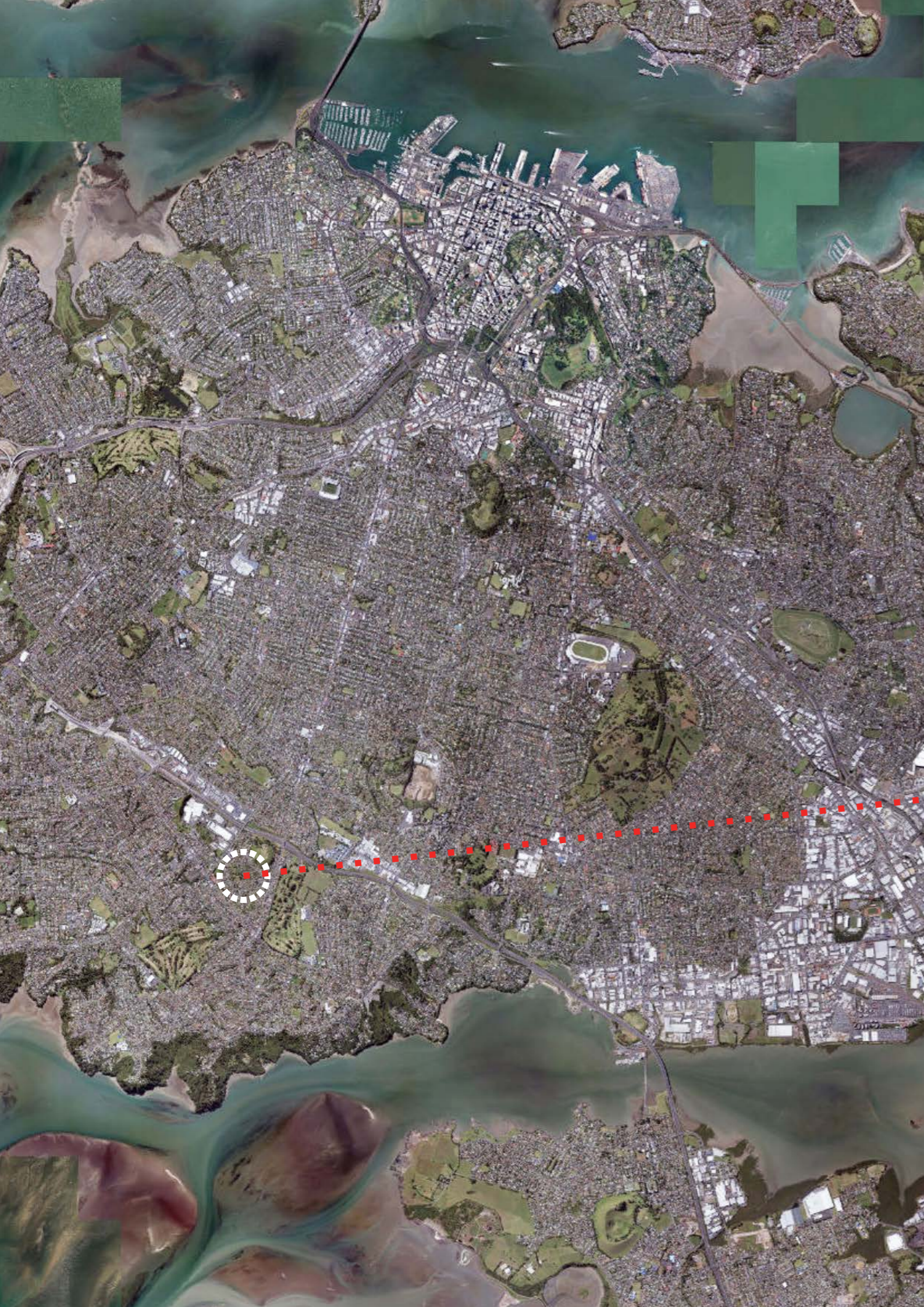
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1.0 Introduction

Freeland Reserve is a relatively large and undeveloped drainage reserve situated in the suburb of Mt Roskill, linking Balfron Avenue in the east to Freeland Avenue in the south and west. A smaller but flatter open space (Turner Reserve) is accessed directly across Freeland Avenue from Freeland Reserve.

The watercourse running through the reserve is an offshoot of Te Auaunga Oakley Creek and has most likely incised along the edge of the Puketāpapa | Mt Roskill lava flow, creating the valley shaped contour, although this waterbody has since been channelised, and in places piped. Puketāpapa | Mt Roskill is clearly visible from a number of locations in the reserve and surrounding streets.

The watercourse enters the reserve via a culvert at Balfron Avenue, and this runs in a steeply sided channel out to a flatter wet area in the centre of the reserve, before re-entering the stormwater system via a number of catchpits.

In 2014, a joint concept plan was prepared for Freeland and Turner Reserves, and from this, funding was allocated by the Puketāpapa Local Board to upgrade Turner Reserve - resulting in new play facilities and a learn to bike track in 2015.

Since this concept plan was adopted, Housing New Zealand (via HLC) have been progressing plans for the surrounding community, and as a result an update of the concept plan is required. This plan updates and supercedes the 2015 plan, with a view to construction being carried out in conjunction with the wider housing stock changes.



Scale: 1:50,000 @ A3

Figure 2. Freeland Reserve within the wider Auckland context.

1.1 Site Context



Scale: 1: 2000 @ A3



Figure 3. Freeland Reserve and adjacent Turner Reserve.

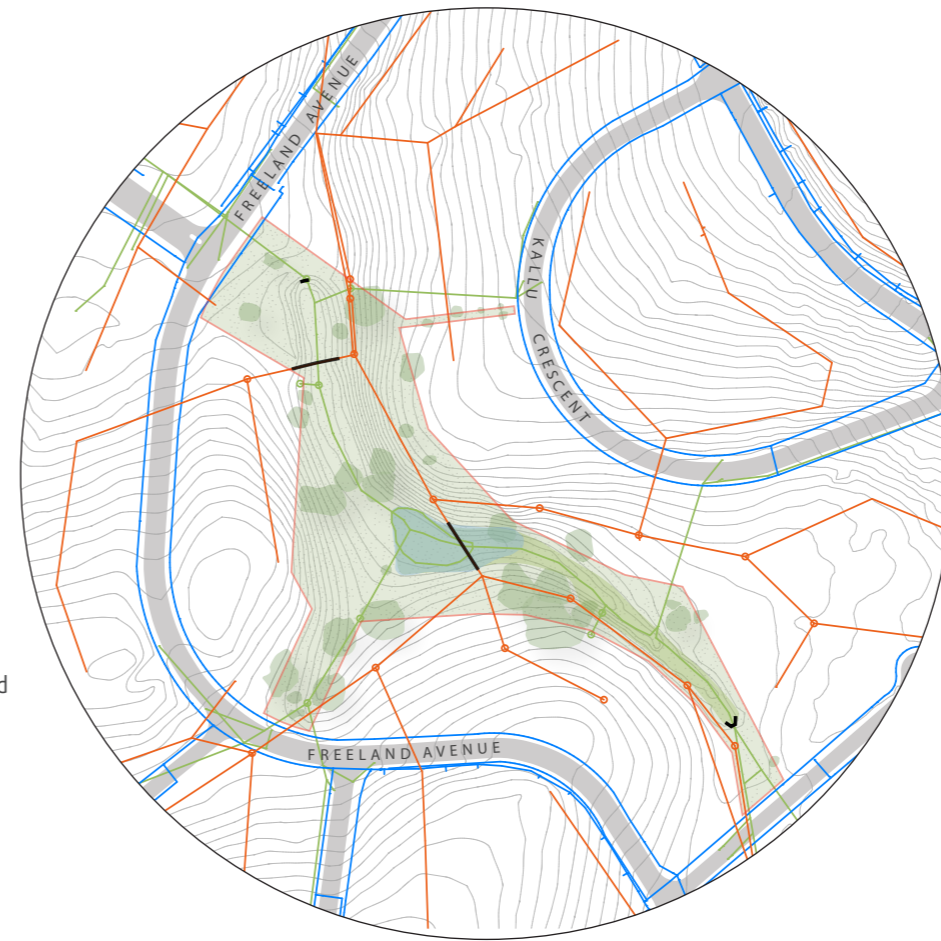
2.0 Existing Site Photos



2.1 Site Analysis Maps

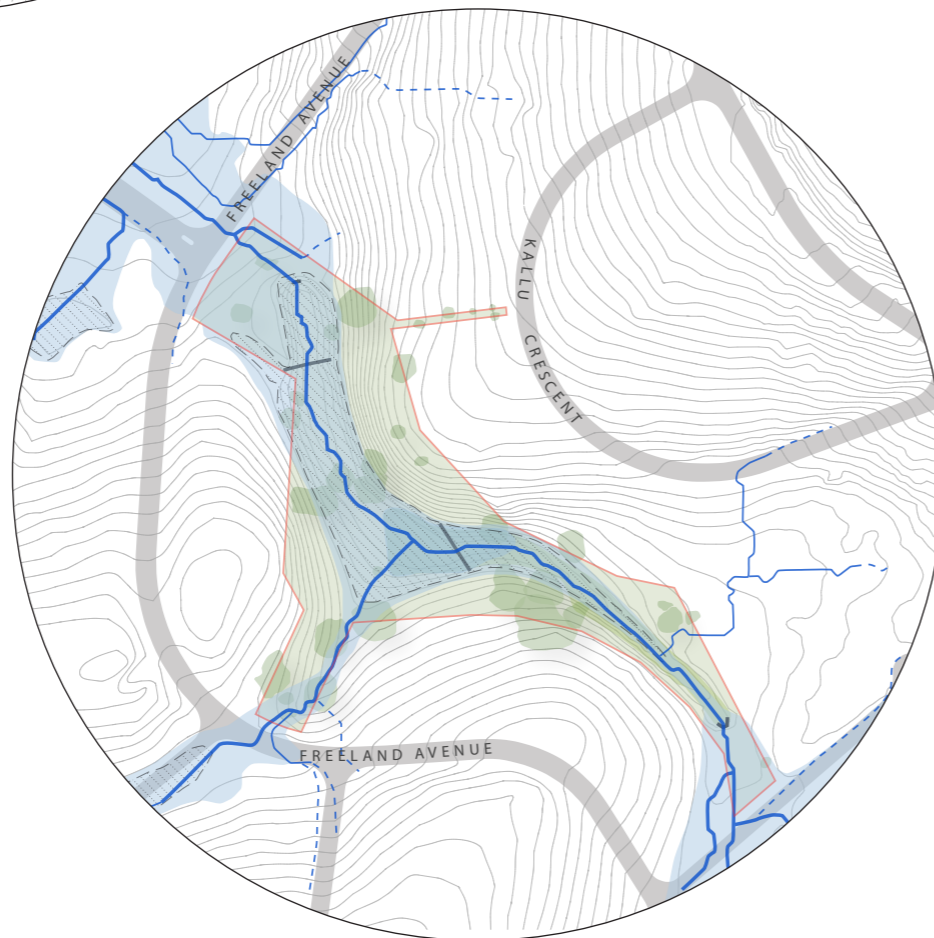


- Vegetation**
- MAP LEGEND:
- Site boundary
 - 0.5 m contours (LIDAR)
 - Grass areas
 - Grass swale ditch
 - Wetland species and ephemeral pond
 - Trees and shrubs
 - Pipe infrastructure

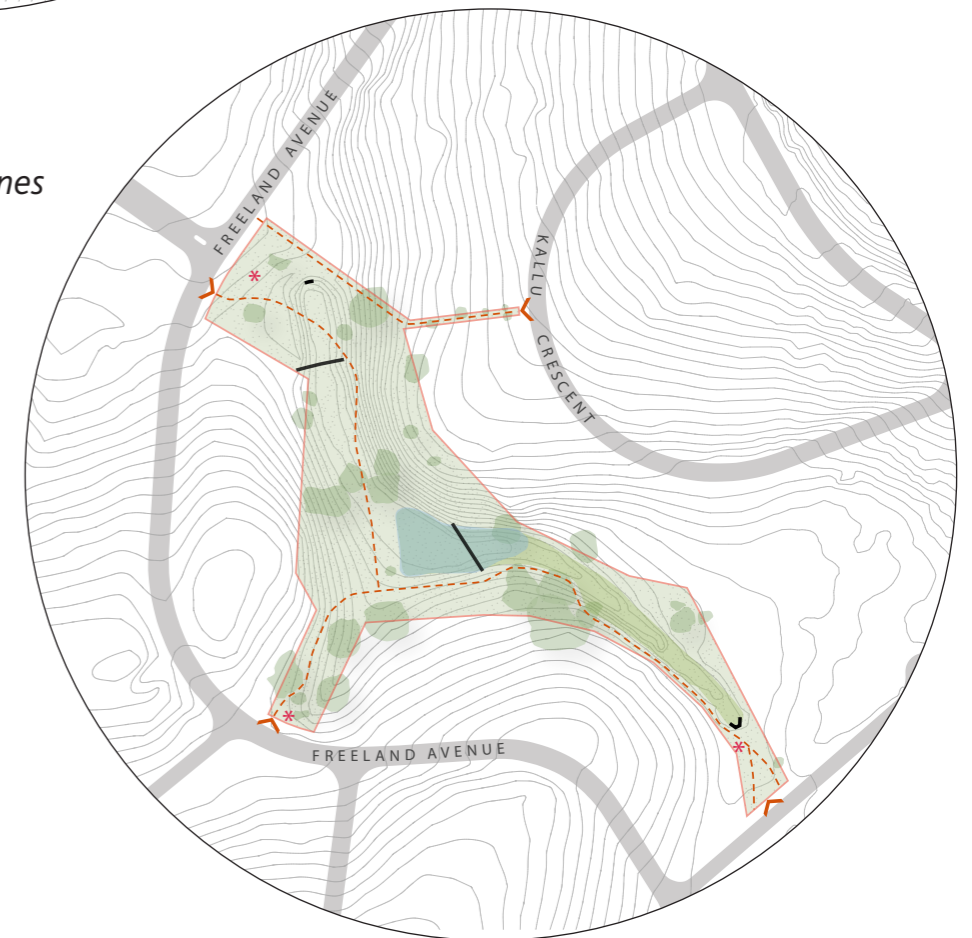


- Services**
- MAP LEGEND:
- Site boundary
 - 0.5 m contours (LIDAR)
 - Grass areas
 - Grass swale ditch
 - Wetland planting and shallow pond
 - Trees and shrubs
 - Pipe infrastructure
 - Wastewater pipe and manhole
 - Stormwater pipe and manhole
 - Water mains

- Hydrology**
- MAP LEGEND:
- Site boundary
 - 0.5 m contours (LIDAR)
 - Grass areas
 - Grass swale ditch
 - Wetland planting and shallow pond
 - Trees and shrubs
 - Pipe infrastructure
 - Flood plain
 - Flood prone areas
 - Overland flow paths



- Entrances, signage, and desire lines**
- MAP LEGEND:
- Site boundary
 - 0.5 m contours (LIDAR)
 - Grass areas
 - Grass swale ditch
 - Wetland planting and shallow pond
 - Trees and shrubs
 - Pipe infrastructure
 - Desire lines
 - Park entrances
 - Auckland Council signs



3.0 Te Aranga Design Principles

Māori culture and identity highlights Aotearoa New Zealand’s point of difference in the world and offers up significant design opportunities that can benefit us all. Te Aranga Māori Design Principles are founded on intrinsic Māori cultural values, created to provide practical guidance for enhancing outcomes for the design environment.

The principles have arisen from a widely-held desire to enhance mana whenua presence, visibility and participation in the design of the physical realm. This spread outlines the application of these principles to the Freeland Reserve project.

1 MANA

Rangatiratanga, Authority

Outcome:
The status of Iwi and Hapū as mana whenua is recognised and respected.

- Attributes:**
- Recognises Te Tiriti o Waitangi in 21st Century Aotearoa New Zealand as the basis for all relationships pertaining development
 - Provides a platform for working relationships where mana whenua values, world views, tikanga, cultural narratives and visual identity can be appropriately expressed in the design environment
 - High quality Treaty-based relationships are fundamental to the application of the other Te Aranga principles

- Application:**
- *Engagement to be carried out at a point where investigations have enabled the design to progress to a high level concept outlining constraints/ opportunities and a recommended response, but before spatial decisions are locked in.*

2 WHAKAPAPA

Names and Naming

Outcomes:
Māori names are celebrated.

- Attributes:**
- Recognises and celebrates the significance of mana whenua ancestral names
 - Recognises ancestral names as entry points for exploring and honouring tūpuna, historical narratives and customary practises associated with development sites and their ability to enhance sense of place connections

- Application:**
- *Mana whenua engagement is occurring broadly across the Puketāpapa local board area to investigate correct ancestral names, and if this results in a name change for Freeland Reserve, this will be updated on new signage.*
 - *Correct names and terminology shall be used on any interpretative signage around the wetland/ stormwater functions, and in reference to wider placenames*

3 TAIAO

The Natural Environment

Outcome:
The natural environment is protected, restored and enhanced.

- Attributes:**
- Sustains and enhances the natural environment
 - Local flora and fauna which are familiar and significant to mana whenua are key natural landscape elements within urban and / or modified areas
 - Natural environments are protected, restored or enhanced to levels where sustainable mana whenua harvesting is possible

- Application:**
- *Re-establish species that would have been found living in this environment originally, using eco-sourced material where possible.*
 - *Plant large sections of the reserve, in order to enlarge habitat areas and improve ecological corridors.*
 - *Select plant species which will attract native birds and insects.*
 - *Establish and manage traditional food and cultural resource areas allowing for active kaitiakitanga - possible options are raranga (weaving) and rongoā (medicinal) sources.*

4 MAURI TU

Environmental Health



Outcomes:

Environmental health is protected, maintained and/or enhanced.

Attributes:

- The wider development area and all elements and developments within the site are considered on the basis of protecting, maintaining or enhancing mauri
- The quality of wai, whenua, ngāhere and air are actively monitored
- Water, energy and material resources are conserved
- Community wellbeing is enhanced

Application:

- *The stormwater works proposed are considered 'second stage' which will generally receive runoff after the first flush of rain has been treated by on-site rain gardens etc as part of the Housing NZ development. The profile of the reserve is steep, meaning that it will mainly fulfil a detention purpose, but there will also be some treatment benefits, as opposed to straight piping.*
- *As part of this project, an existing pipe leading into the watercourse from the south will be daylighted, which will increase habitat, remove excess nutrients, and assist with ecological corridor creation.*
- *Hard landscape and building materials which are locally sourced and of cultural value to mana whenua are to be explored in the design*

5 MAHI TOI

Creative Expression



Outcome:

Iwi/hapū narratives are captured and expressed creatively and appropriately through engagement with mana whenua

Attributes:

- Ancestral names, local tohu and iwi narratives are creatively reinscribed into the design environment including: landscape; architecture; interior design and public art
- Iwi / hapū mandated design professionals and artists are appropriately engaged in such processes

Application:

- *There are a number of aspects to this design where further input and engagement from an iwi artist or design professional could be obtained. These include the bridge/pipe wrapping connection (tentatively proposed as a hinaki concept), entry pou at the eastern end, and inputs into interpretation signage (with regard to both local landmarks and the water restoration/detention process).*

6 TOHU

The Wider Cultural Landscape



Outcomes:

Mana whenua significant sites and cultural landmarks are acknowledged.

Attributes:

- Acknowledges a Māori world view of the wider significance of tohu / landmarks and their ability to inform the design of specific development sites
- Supports a process whereby significant sites can be identified, managed, protected and enhanced
- Celebrates local and wider unique cultural heritage and community characteristics that reinforce sense of place and identity

Application:

- *Puketāpapa Mt Roskill is readily identifiable from this reserve, and this will be referenced in the design, along with information on the underlying geological and natural processes that created the landforms seen today.*
- *Visual connections from the reserve towards Puketāpapa shall be maintained.*
- *Markers and interpretation boards are potential design responses to pick up on this thread.*

7 AHI KA

The Living Presence



Outcomes:

Iwi/hapū have a living and enduring presence and are secure and valued within their role.

Attributes:

- Mana whenua live, work and play within their own role
- Acknowledges the post Treaty of Waitangi settlement environment where iwi living presences can include customary, cultural and commercial dimensions
- Living iwi/hapū presences and associated kaitiaki roles are resumed within urban areas

Application:

- *Access to natural resources via this project is likely limited to raranga (weaving) and rongoā (medicinal) purposes. Mahinga kai is more problematic as an established group needs to be in place to maintain cropping areas, and eeling is unlikely to be viable in the watercourse.*
- *Plant supply options may be looked at, to be further discussed.*

3.1 Design Imagery



Bridge treatment eye-catching and reflective of local narrative / history



Hinaki traps were often used to catch tuna (eels) in Auckland's watercourses



Investigate soft, natural materials in paths and any fencing required



Low level boardwalks without rails may facilitate access to the water

3.1 Design Imagery



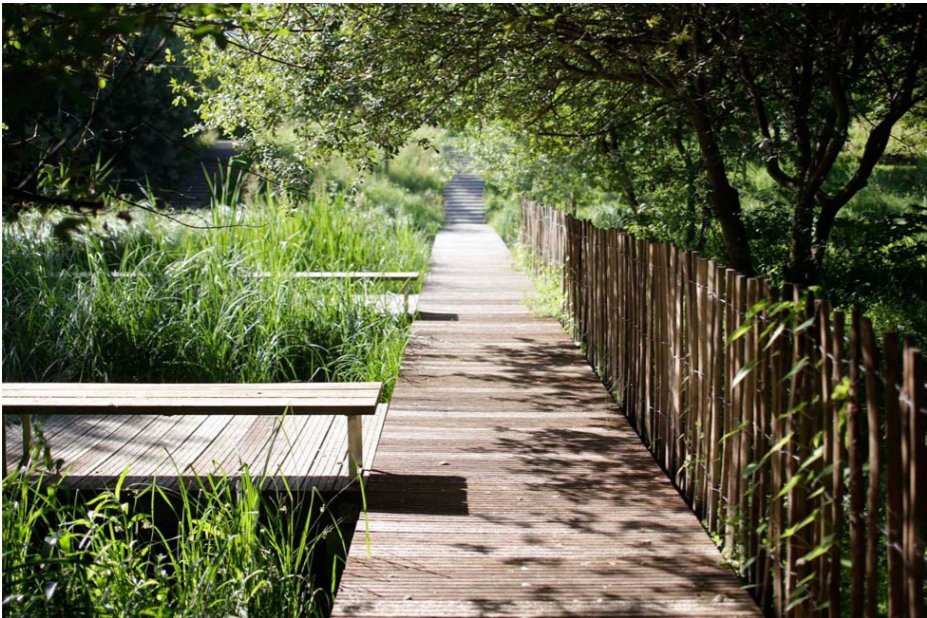
Informal crossings may be used to add a sense of adventure



Built elements are to remain generally subservient to the natural landscape



Natural materials and native plantings will dominate the reserve



Walking links will be visually open so as the ensure safe travel through the reserve



Pou may be used to denote entry points and bring to life local narratives



Raranga opportunities are to be explored within the planting scheme

3.2 Indicative Planting Palette

The watercourse in Freeland Reserve defines the border between two former forest zones which would have been found in this area prior to human modification.

North of the watercourse, on the volcanic sideslopes of Puketapapa | Mt Roskill, Puriri Forest (also known as Rock Forest) would likely have been found. This vegetation type was once common around the Auckland Isthmus, but is now considered critically endangered, with only small pockets remaining at Maungawhau | Mt Eden and around Lake Pupuke. These forests were dominated by puriri, karaka, kohekohe and taraire.

South of the watercourse, as the soils became less volcanic, the vegetation would have likely changed to Kauri Podocarp Broadleaf forest, a forest type more commonly found around Auckland today, but still considered endangered. Species in these forests were more diverse, being heavily influenced by local landforms. In gully situations such as Freeland Reserve, predominant species would have included a range of broadleaves, such as taraire, tawa, towai, northern rata, pukatea and kohekohe.

Typical species, wetland areas



Astelia grandis (Kowhara-whara)



Carex geminata (Rautahi)



Carex virgata (Kuawa)



Cordyline australis (Ti Kouka)



Dacrycarpus dacrydiodes
(Kahikatea)



Phormium tenax (Harakeke)

Typical species, puriri and broadleaf forest



Freycinetia banksii (Kiekie)



Metrosideros umbellata (N. Rata)



Phyllocladus trichomanoides
(Tanekaha)



Dysoxylum spectabile
(Kohekohe)



Vitex lucens (Puriri)



Beilschmiedia tarairi (Taraire)

3.3 Current Freeland Reserve Concept Plan (2014)



3.4 Proposed Concept Plan (Draft)



NOTES:

- 1 Existing bollards retained along Freeland Avenue, proposed shared path lines up with Turner Reserve. Removeable bollard to be installed to centre.
- 2 Proposed pou at elevated entry point to park, overlooking wetland system and at confluence of paths.
- 3 Approximate earth dam location. Nominal functional height 56m.
- 4 Step connection allows alternative method of getting down steep banked slopes from Kallu Crescent.
- 5 Existing SW pipe to be shrouded by a 'hinaki' or eel trap boardwalk/handrail. This will be constructed independently of the pipe itself, due to loading issues.
- 6 Elevated walkway traverses steep cross slope in this location.
- 7 Concrete wall required at this corner. At a dam height of 56m, this wall would be around 1.2m max, dropping away to zero in either direction. Design to minimise visual impacts on park.
- 8 Planted areas - a mix of low growing native vegetation to path edges and riparian margins, and larger canopy species to areas clear of CPTED risks.
- 9 Shared path (3m width) drops down the cross slope in this location, descending to approximately the permanent water level. For safety reasons, most footpaths and the shared path in the flood zone will go under water in events larger than (approx) an annual storm so as to avoid falls off the path into a steeply sloping body of water during flood events.
- 10 Permanent water area. This area is likely to be a mix of shallow planted shelves and deeper pools, with a 200mm, 2m width vegetated flat bench to border.
- 11 1.8m width footpaths either side of the proposed daylighted pipe from Freeland Avenue complete a walking loop.
- 12 Gently sloping grassed areas for kicking a ball, picnicking, fitness activities and other passive recreation pursuits.
- 13 Low deck platform in elevated position looking over the wetland system, incorporating seating and interpretative signage.
- 14 Existing pipe in this location to be daylighted as a natural watercourse.
- 15 Low boardwalk crossing of wetland (no handrails - kickrail only)
- 16 Flat grassed area for passive recreation.
- 17 Potential road connection as part of HNZ development - connections from shared path to be made into this.
- 18 Existing culvert retained - safety fencing and possible screens required.
- 19 Edge planting on relatively steep (1 in 2) slopes to allow for detention volumes.

Scale: 1: 750 @ A3



3.5 Proposed Concept Plan (draft) with Ten Year Flood Overlaid

NOTES:

This plan shows the approximate area within the reserve that would be inundated in a ten year flood. Storm events larger than this are designed to overtop the bund, meaning that this is the maximum inundation that the reserve could be expected to receive. The shared path and footpath connections are to be designed to go under water during a flood event, so as to avoid the risk of paths abutting areas of deep water, and signage will be included to outline the flooding risk.

Also shown on this plan are the current overland flow paths (blue lines) and flood plain areas from the Unitary Plan. These are likely to be slightly modified by these works, with the result being less flooding overall for the surrounding area.



MAP LEGEND:

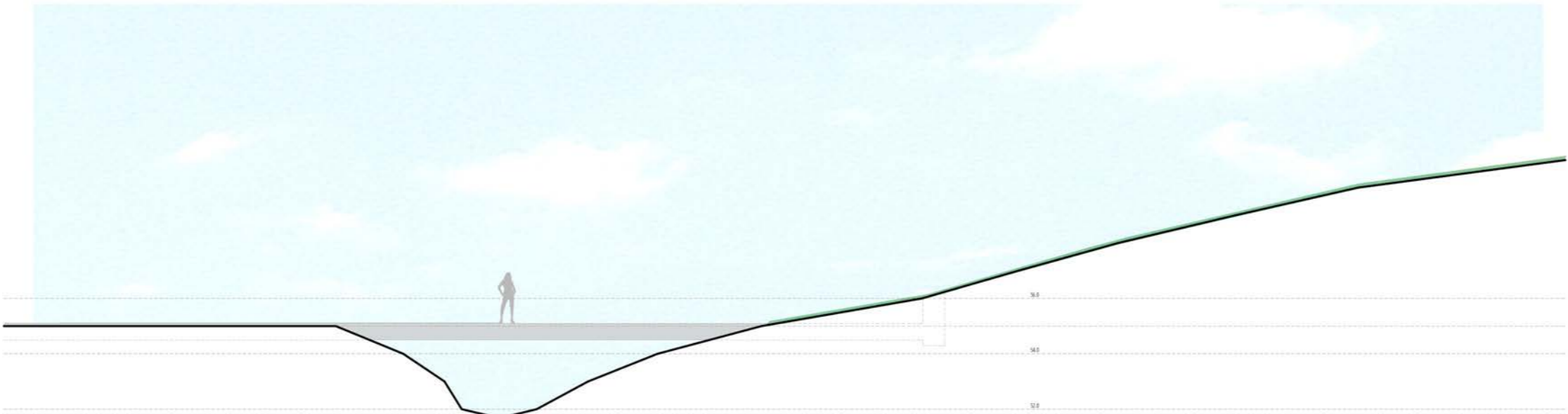
- Flood plain, from Unitary Plan
- Approx inundation within Freeland Reserve during 10 year event
- Overland flow paths, from Unitary Plan

Scale: 1: 750 @ A3



3.6 Indicative Cross Sections (A:A)

These sections show the 'before' and 'after' conditions of the existing sewer pipe noted at 5 on the draft concept plan.



CROSS SECTION THROUGH SS PIPE | BEFORE



CROSS SECTION THROUGH SS PIPE | AFTER

3.7 Indicative Sketches

These sketches show some indicative early thinking on a potential 'wrap' to the existing SS pipe noted 5 on the draft concept plan

