

Blue Green Networks

Working with Nature



A blue-green network is a system of waterways (blue) and parks (green) that give stormwater space to flow and help to reduce flooding where people live.

Blue green networks will help mitigate future risks and deliver benefits such as improved green spaces, enhanced amenity and biodiversity.



Greenslade Reserve (in flood)

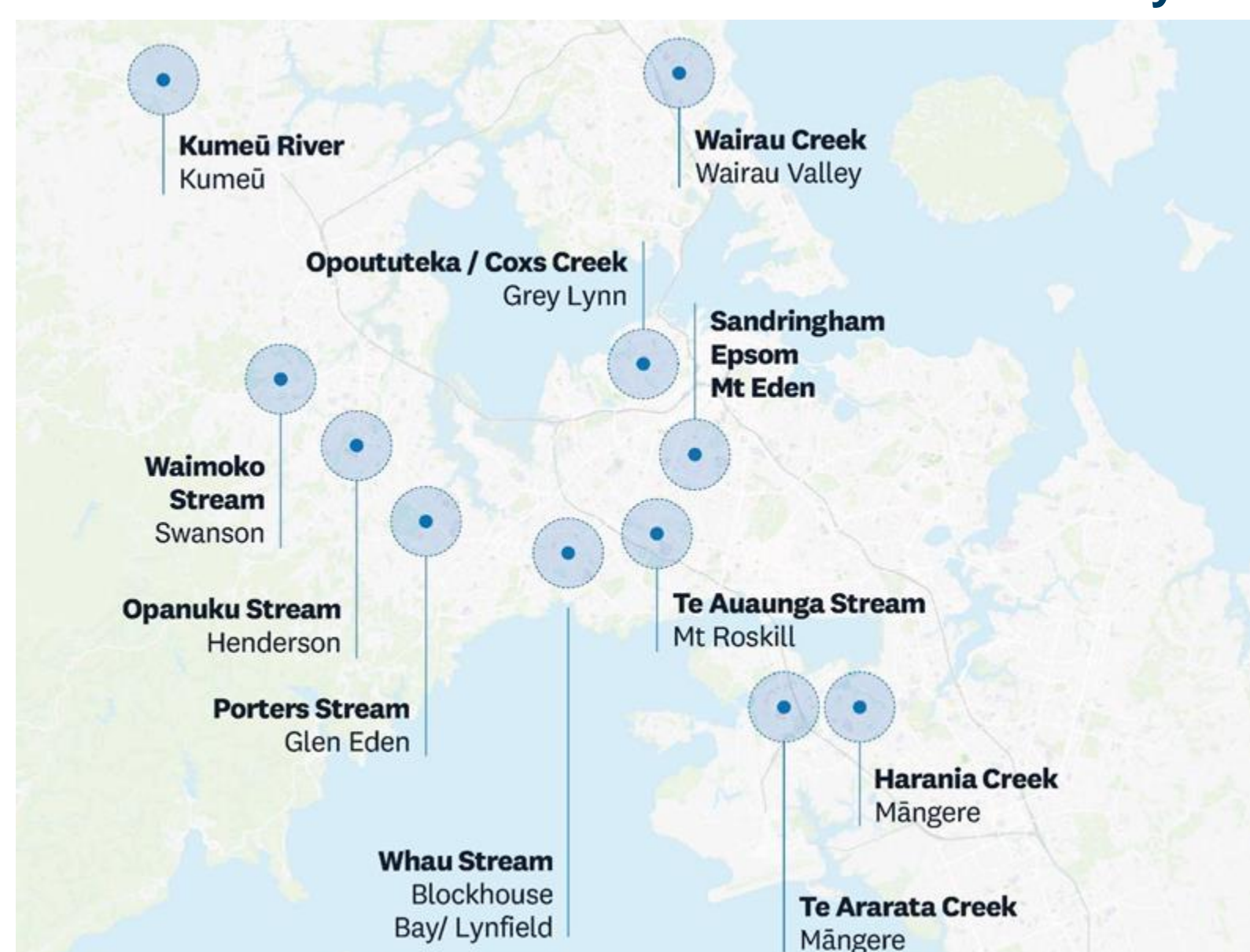
Blue-green network assets are more resilient to higher flows of water than traditional pipes and drains. They already exist across the region and are helping to manage stormwater in severe weather events.



Greenslade Reserve (day after Auckland Anniversary weekend floods)

In dry weather the community can enjoy these parks. During storms, the parks may flood, moving water away from private property and critical infrastructure.

Blue Green Network Catchments across the city



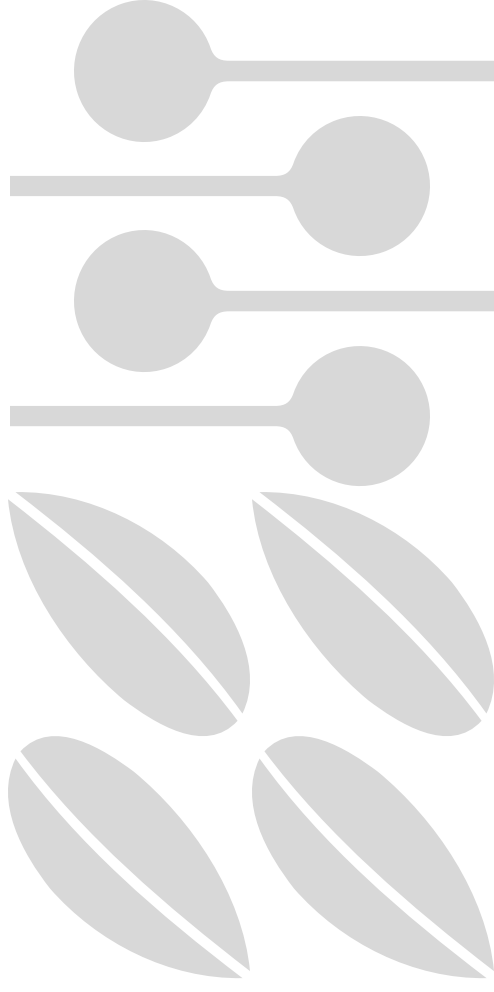
After the extreme weather events in 2023, Auckland Council established the **Making Space for Water** programme, sharing some of the cost of flood resilience projects with central government as part of a \$2 billion co-funding agreement for storm recovery. These are subject to business case approvals from both the council and the government, and projects must demonstrate a flood risk reduction for the wider community.

Twelve parks and waterway areas around Auckland were identified as potential sites that could be used to help reduce flooding. We have been completing feasibility assessments for these areas to understand the costs and benefits.



Catchment Flood Extents

Why Wairau?



The Wairau Catchment includes the suburbs of Wairau Valley, Milford, Glenfield and Tōtara Vale and is the largest catchment in the North Shore.

During the 2023 Auckland Anniversary weekend floods this area was the worst impacted in Auckland, experiencing severe flooding and damage. Milford now has the highest number of homes of any suburb in Auckland with risk to life that can't be mitigated (Category 3).



2
fatalities

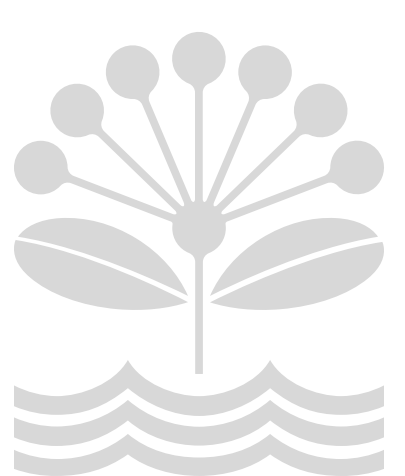
\$2.5
Billion
in insurance
claims across
Auckland

142
Category 3
properties in
Wairau*

18km
of waterways
in 1,300ha

1 of 4
blue-green
networks
currently under
development

52,000
people call
Wairau home



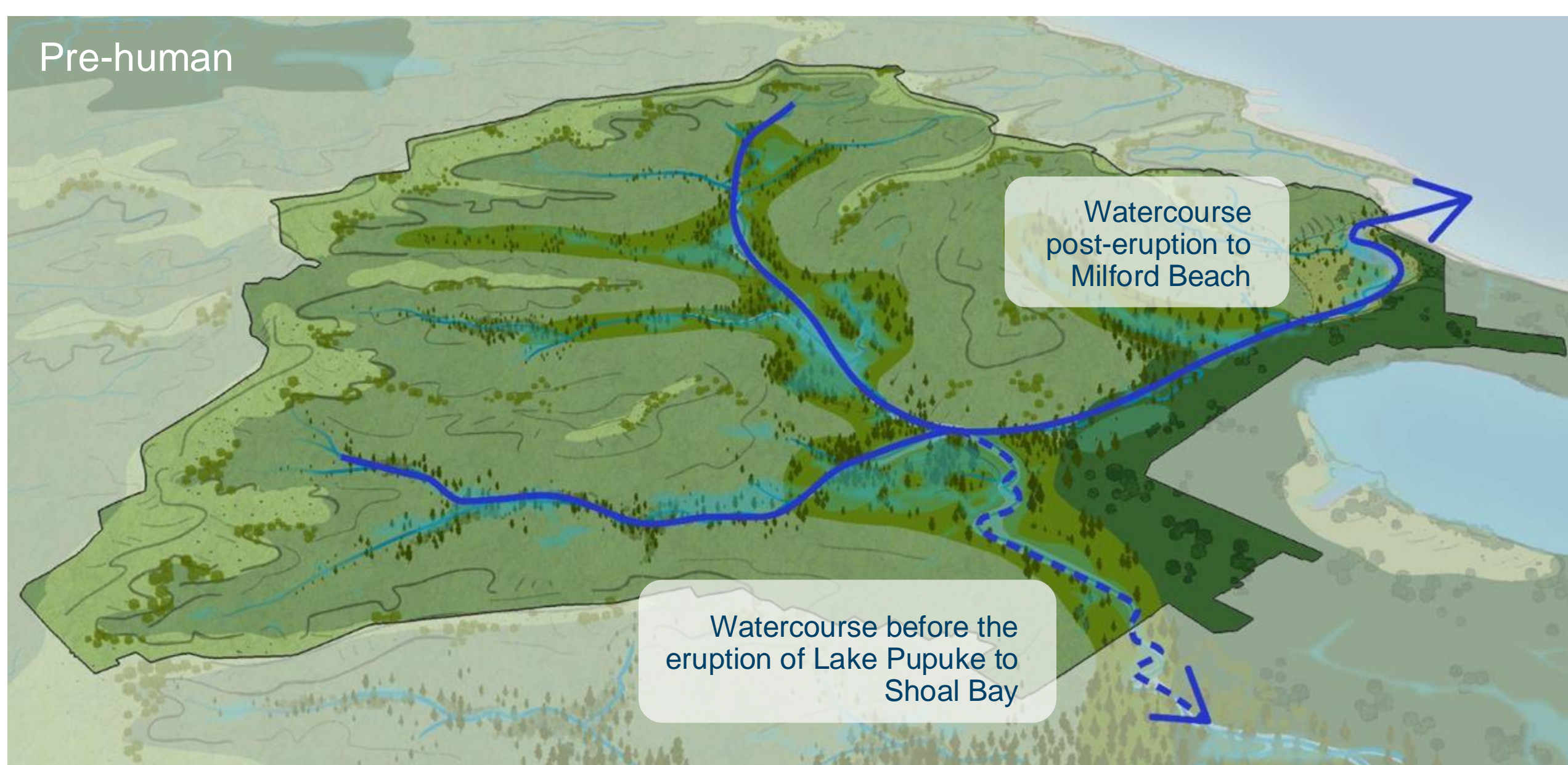
*Current estimate. Category 3 homes are properties with risk to life that can't be mitigated. There are 1008 category 3 homes across the region, 128 of these are located in Milford.

Why Wairau Floods

The challenges in this area are complex with geological and man-made activities adding obstacles that contribute to Wairau's vulnerability to flooding.

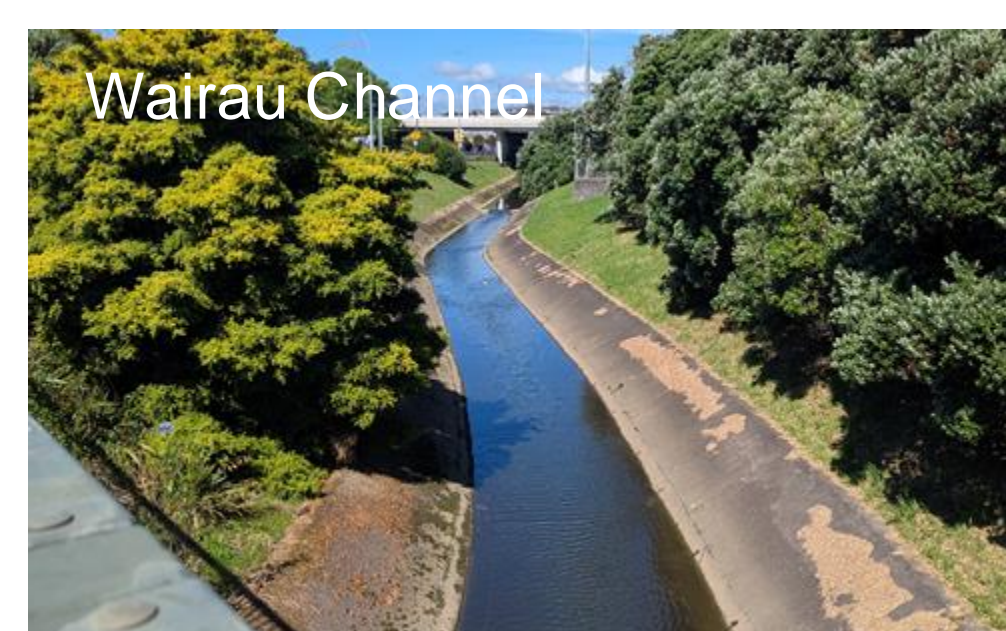
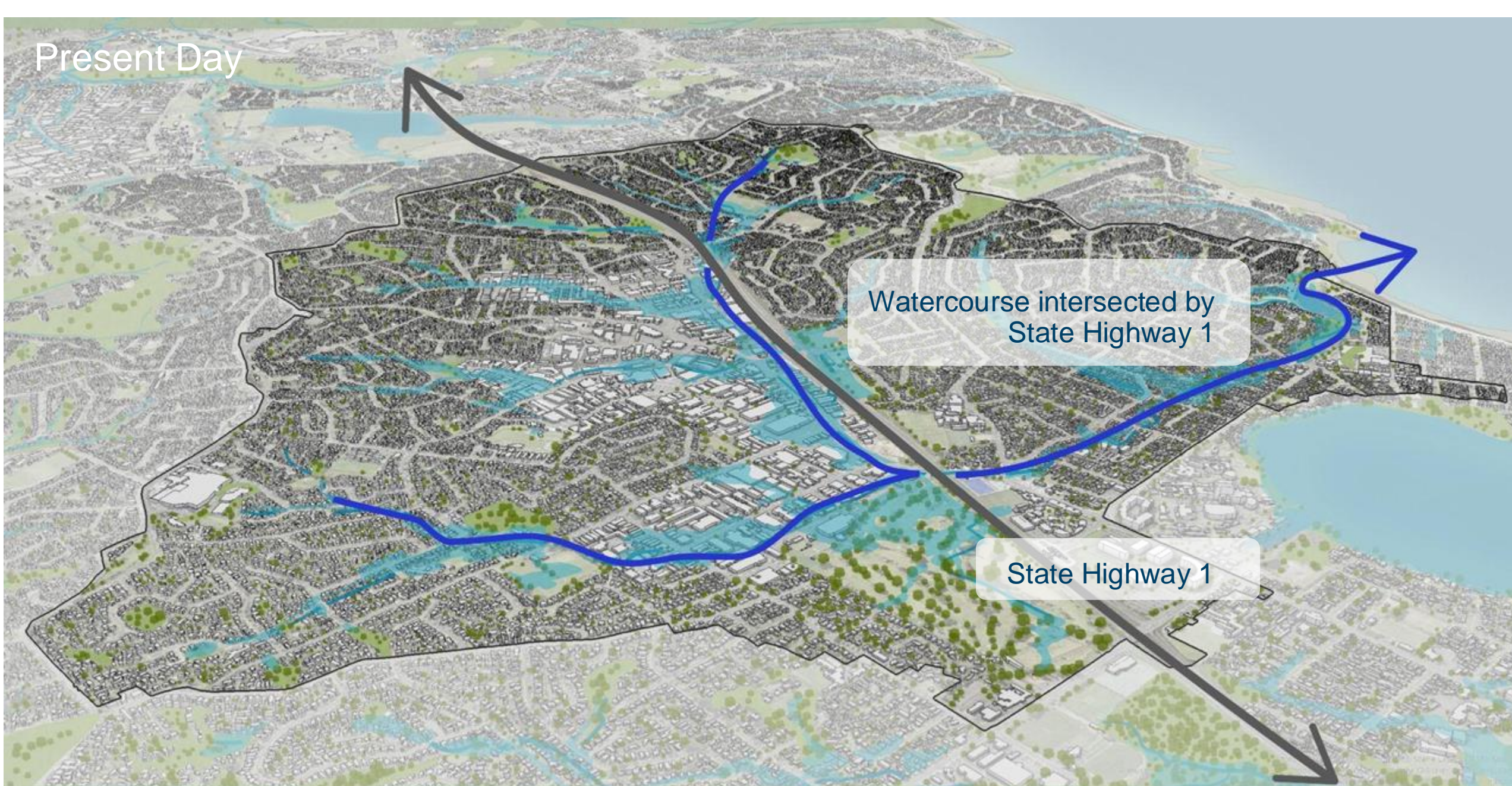
Geological Causes - Pre-human

- Water flowed South into Shoal Bay before Lake Pupuke erupted
- Land around Lake Pupuke was raised by significant rocky uplift causing a layer of basalt rock to form a natural barrier
- The Wairau Creek was forced to change direction and now flows through basalt rock alongside Lake Pupuke to Milford Beach.

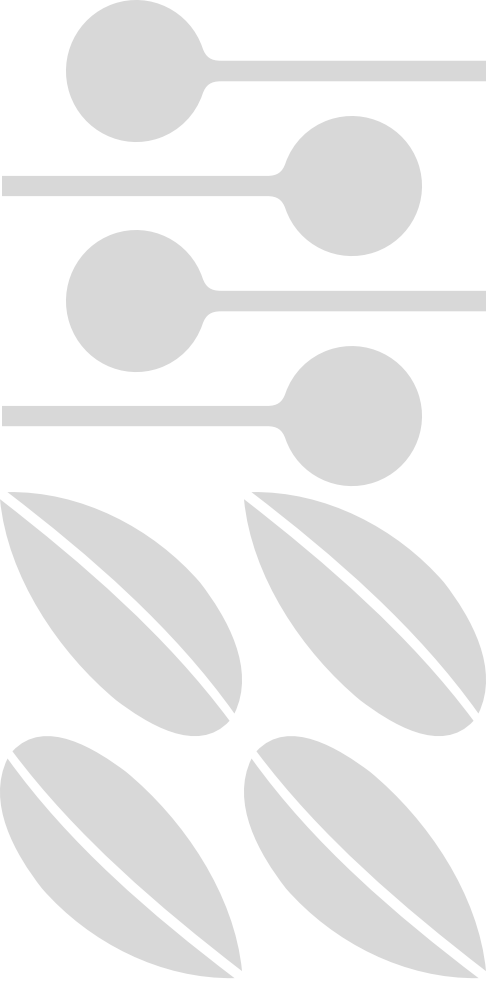


Man Made Causes

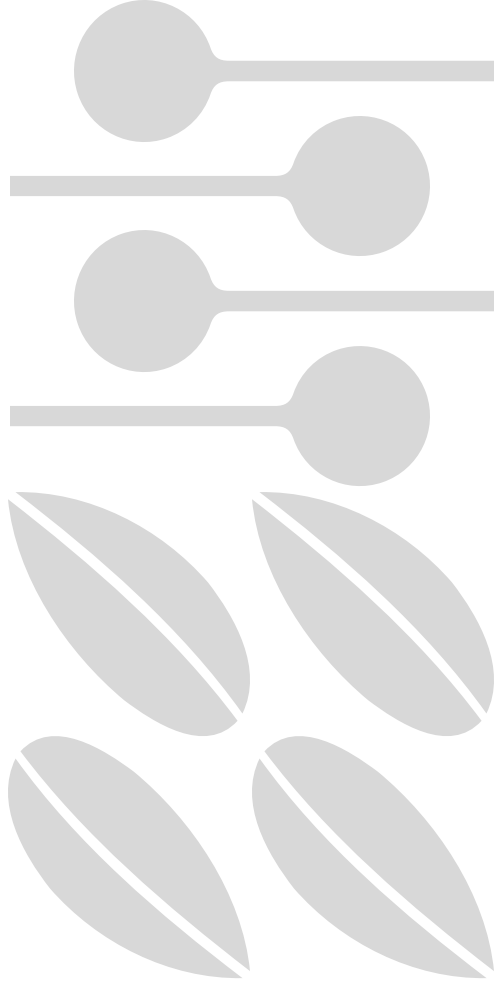
- Motorway added a physical barrier preventing the movement of water through the catchment.
- Urbanisation and impervious surfaces increase stormwater run off and flooding.



These modifications have caused the water flowing from Wairau Creek to Milford Beach to be susceptible to overflow into neighbouring residential and commercial areas.



Flood response, recovery and next steps



Developing communities that are resilient to future weather changes is something that all major cities are facing. We are looking at world-class ways of enabling water to flow better in the event of severe rainfall but to also develop spaces that can be enjoyed by community when they aren't needed for flood mitigation.



Pak'n'Save Wairau



Flood clean up



Flood intelligence engagement

January 2023

March 2023

October 2023

January 2024

March 2024

August 2024

RECOVERY RESPONSE

Auckland Anniversary Flood.

Tāmaki Makaurau Recovery Office established.

Making Space for Water programme which includes flood resilience and community outreach adopted by Council's Governing Body

Tāmaki Makaurau Recovery Plan is released.

Recovery office property categorisation and buy back process begins

STORMWATER NETWORK IMPROVEMENTS

RECOVERY OFFICE AND FLOOD INTELLIGENCE COMMUNITY ENGAGEMENT

First homes began being demolished.

Community Stream Clean ups begin.



Current Floodplain Extent



Engagement



Wairau Future Illustration

Sept 2024

March-April 2025

Mid 2025

Late 2025

2026

2027

RECOVERY RESPONSE

STORMWATER NETWORK IMPROVEMENTS

INTENSIVE BLUE-GREEN NETWORK COMMUNITY ENGAGEMENT

ONGOING COMMUNITY ENGAGEMENT ACTIVITIES

WAIRAU BLUE-GREEN NETWORK

Concept Design

Preliminary Design

Detailed Design

Construction

Stormwater Network Improvements ongoing

Funding approvals to proceed with design and engagement

Begin design development

Establish community working group

Anticipated completion of categorisation process

We are here

Final Recovery Office property categorisation and purchasing complete

Early concept designs for AF Thomas detention complete

Ongoing engagement activities

Assessment of wider community recreation needs begins

Complete whole of catchment strategy

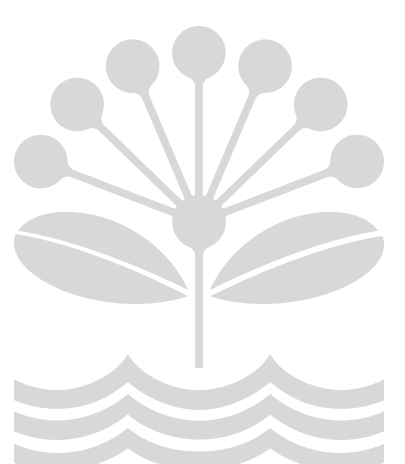
Ongoing engagement activities

Develop detailed design incorporating community input and recreation needs assessment

Apply for consent of priority projects

Staged construction begins

There will be many opportunities for you to have your say. We will engage with local community to review both the golfing and wider recreation needs, ensuring the park is vibrant and equitable into the future. Any approved changes would not commence for several years.

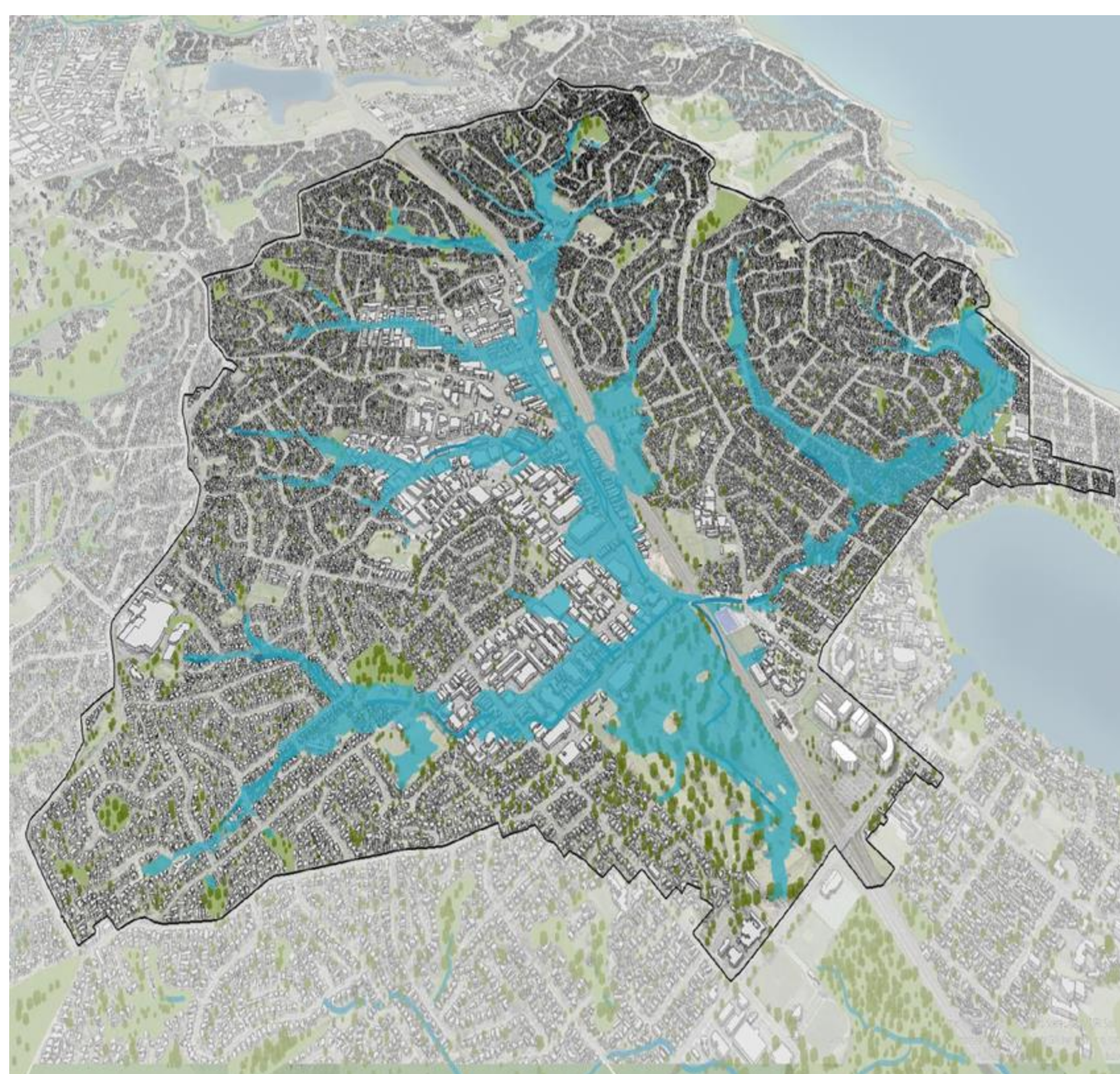


Wairau Blue Green Network

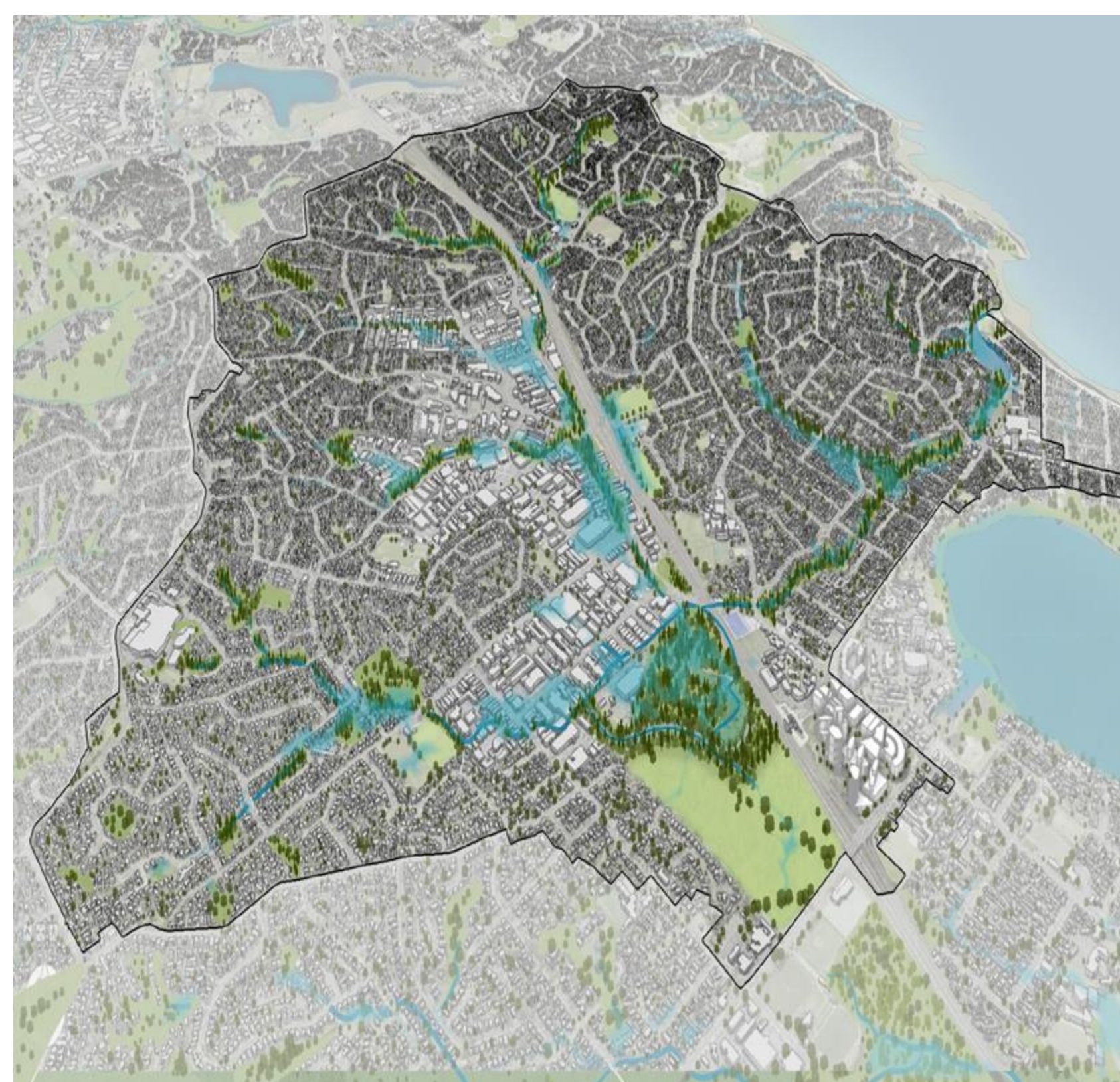
Working together for catchment-wide flood resilience



Following the Auckland Anniversary weekend floods, a comprehensive range of interventions have been considered in Wairau with the goal of delivering maximum flood reduction benefits in both the short and long-term.



Existing



Potential

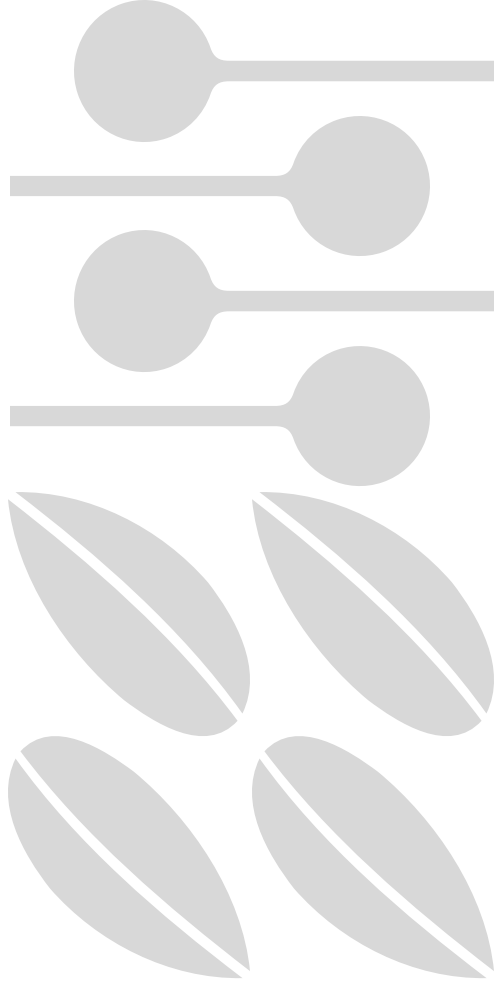


Potential flood resilience opportunities

Due to the scale of flood issues, it is not possible to solve them all in a short space of time. We will need to work collaboratively, taking a catchment-wide approach with several blue-green interventions to gradually make space for water.

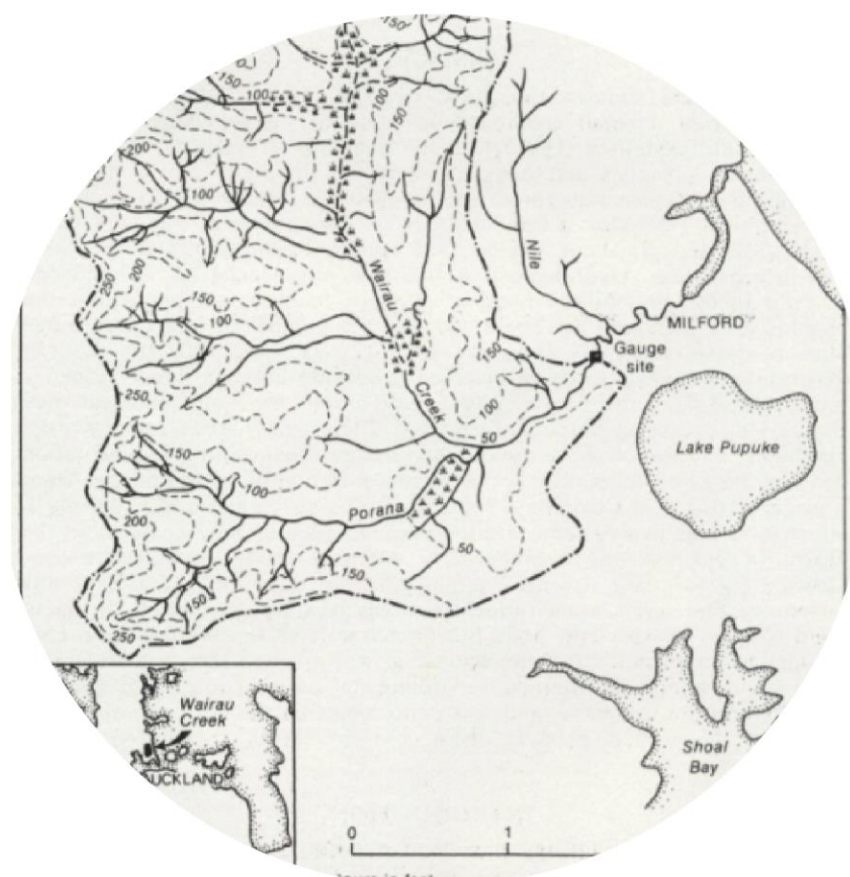


Evolution of AF Thomas Park

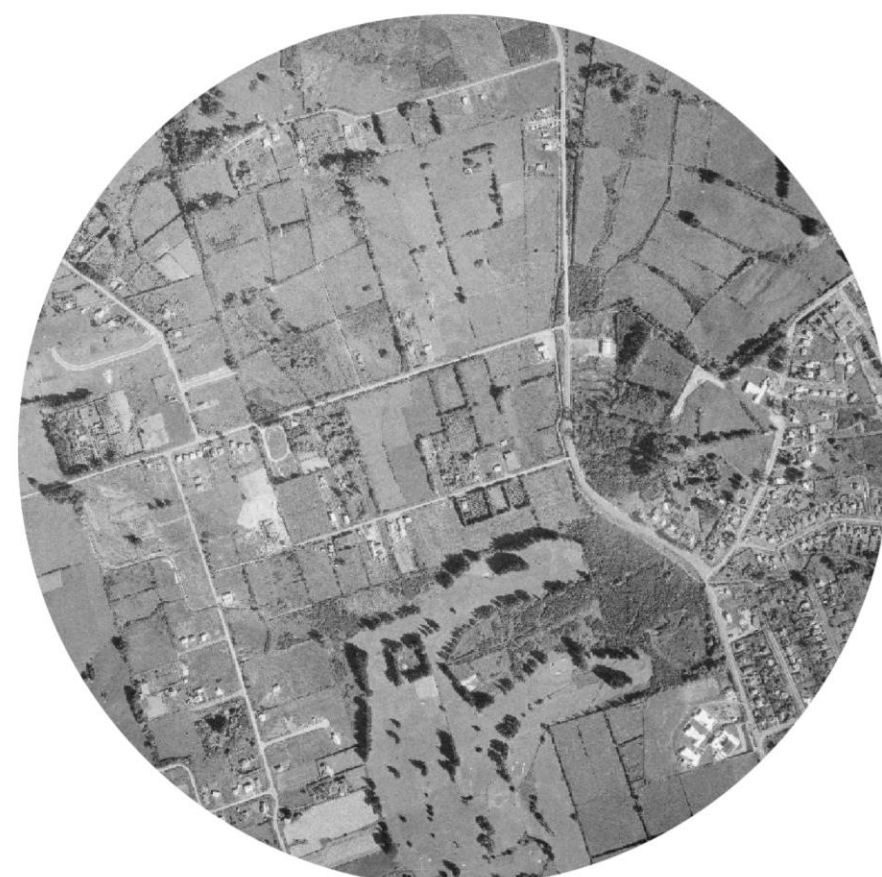


From its beginning, AF Thomas Park was envisioned as a multi-use recreational space for everyone to enjoy. Although the current use may evolve, we will engage with local residents to shape its future and ensure that it maintains its role as a cherished community space.

One of the proposed options for the Wairau Blue Green Network includes developing parts of AF Thomas Park into a flood storage wetland, overland flow path and detention basin. These could integrate passive recreation including walking and cycling networks alongside other recreational opportunities.



Wairau Creek Basin Hydrology



1957 Aerial



1963 Aerial

Late 1800s and early 1900s

1912

1931

1959

1961

1963

EVOLUTION OF AF THOMAS PARK

Originally a wetland. Became flood prone farm land.

H.G. Stringer leased Takapuna Reserve to develop an 18-hole golf course for Takapuna Golf Club.

North Shore Golf Club was established at what became known as Thomas Park Municipal Course in Takapuna.

Auckland Harbour Bridge motorway developments led to golf-course land reduction.

Crown became the equitable owner of the North Shore Golf Club land.

North Shore Golf Club relocated to Albany; Takapuna City Council accepted tenancy of the land.



1970 Aerial



1972 Aerial



AF Thomas Park during the 2023 Anniversary Floods

1964

1965

1975

1986

Present

EVOLUTION OF AF THOMAS PARK

Public meeting endorsed Council purchasing the land for public recreation.

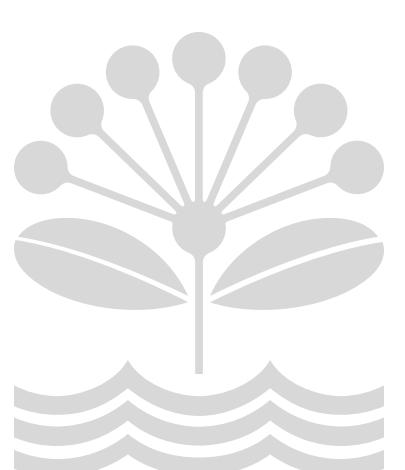
Takapuna City Council acquired most of the land; Landcorp obtained a 30-year license.

Land officially named A.F. Thomas Park.

Takapuna City Council granted Ultra Golf Enterprises a 33-year lease to manage the Municipal Golf Course, ensuring public access.

Auckland Council owns full extent of AF Thomas Park.

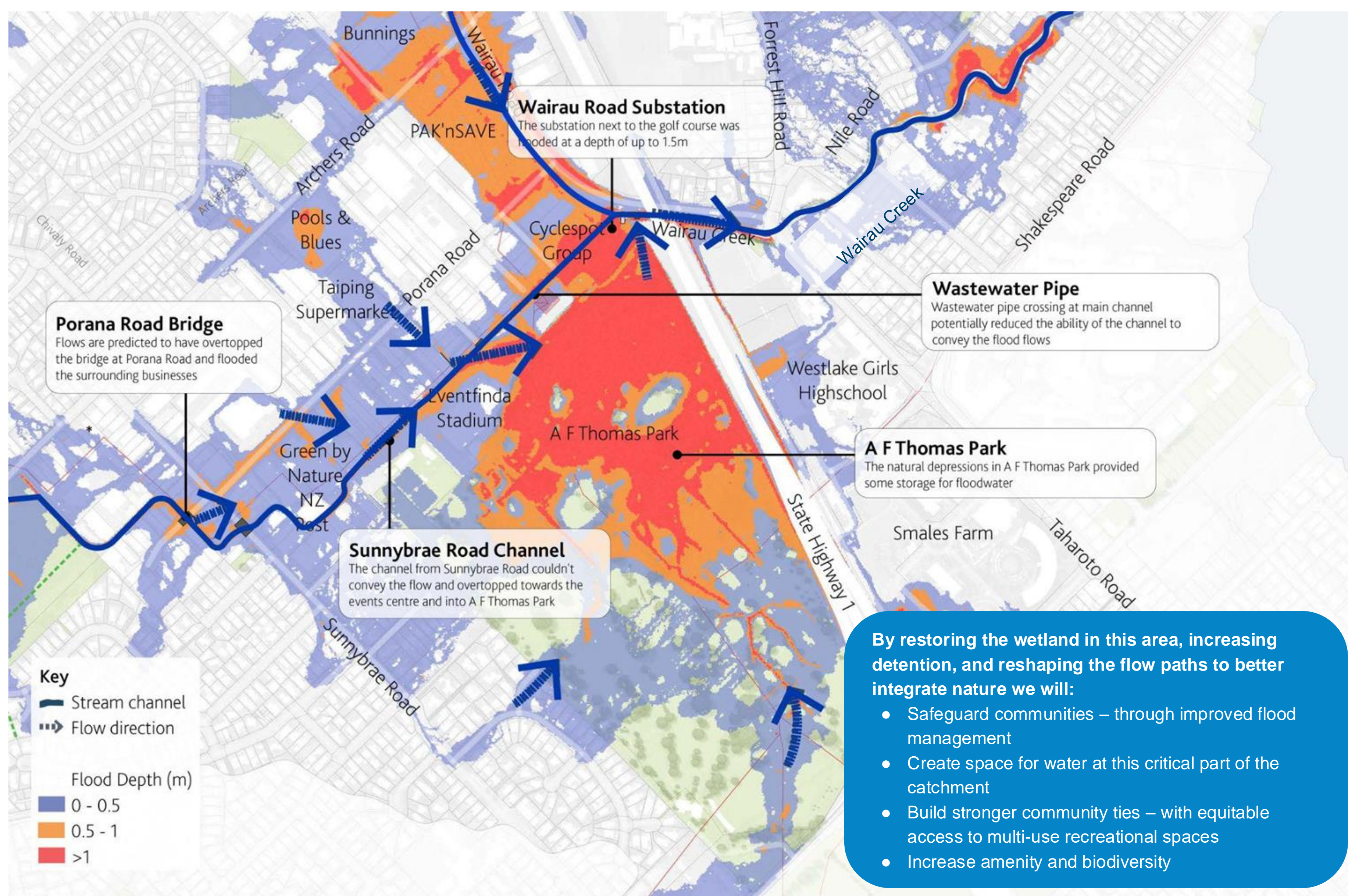
The existing 33 year Takapuna Golf Club lease expired in February 2025 and has moved to a month by month lease while consultation and design development is undertaken.



Why AF Thomas – the challenge / opportunity

Today AF Thomas Park captures approximately 60,000 cubic metres of water, roughly 24 Olympic sized swimming pools. To significantly reduce flood risks, capacity needs to increase to approximately 550 million cubic metres - equivalent to 220 Olympic swimming pools.

Flood resilience work in AF Thomas Park is a Crown / Council Partnership, with the Crown funding contribution subject to significant flood reduction outcomes.



Reducing Flood Risks: Developing parts of AF Thomas Park into a flood storage wetland and detention basin would protect:

- 10 hectares of homes
- Key roads: Nile, Waterloo and Alma roads
- Critical infrastructure: Power substations and wastewater systems
- Access to community facilities: Schools, the North Shore Hospital and medical facilities

Why this solution?

Alternative options, such as widening the stream or increasing detention in other spaces are too costly or ineffective in the short-term. These options will be further explored for future project stages and may form part of the long-term Wairau Blue-green Network.

