

# WILLIAMSON PARK POND UPGRADE



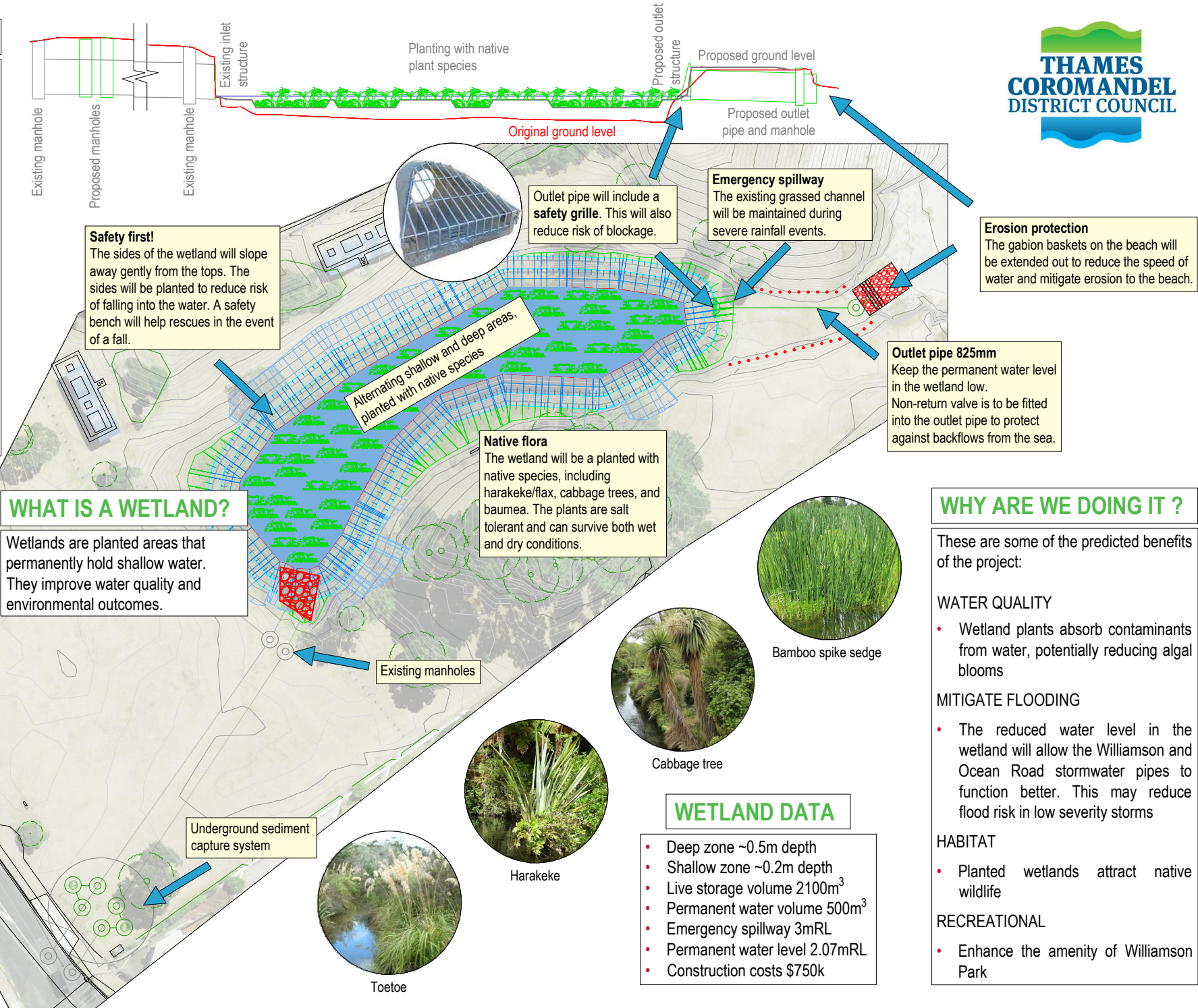
## WHAT ARE WE DOING?

We're upgrading Williamson Pond into a wetland. This is aimed to:

- Improve flows in the Williamson and Ocean Road stormwater pipe networks
- Improve quality of water reaching Whangamata Beach
- Reduce frequency algal bloom

Some new components are being added:

- **New pipe to the beach** - Get water out faster, improve use of storage, and reduce permanent ponding level
- **Planting** - Absorb contaminants present in water



**Safety first!**  
The sides of the wetland will slope away gently from the tops. The sides will be planted to reduce risk of falling into the water. A safety bench will help rescues in the event of a fall.

Outlet pipe will include a **safety grille**. This will also reduce risk of blockage.

**Emergency spillway**  
The existing grassed channel will be maintained during severe rainfall events.

**Erosion protection**  
The gabion baskets on the beach will be extended out to reduce the speed of water and mitigate erosion to the beach.

**Outlet pipe 825mm**  
Keep the permanent water level in the wetland low. Non-return valve is to be fitted into the outlet pipe to protect against backflows from the sea.

**Native flora**  
The wetland will be planted with native species, including harakeke/flax, cabbage trees, and baumea. The plants are salt tolerant and can survive both wet and dry conditions.

**WHAT IS A WETLAND?**  
Wetlands are planted areas that permanently hold shallow water. They improve water quality and environmental outcomes.

## WHY ARE WE DOING IT ?

These are some of the predicted benefits of the project:

**WATER QUALITY**

- Wetland plants absorb contaminants from water, potentially reducing algal blooms

**MITIGATE FLOODING**

- The reduced water level in the wetland will allow the Williamson and Ocean Road stormwater pipes to function better. This may reduce flood risk in low severity storms

**HABITAT**

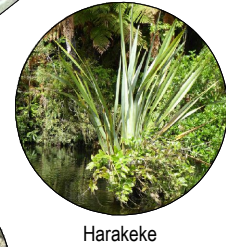
- Planted wetlands attract native wildlife

**RECREATIONAL**

- Enhance the amenity of Williamson Park



## WHAT WILL IT LOOK LIKE?



## WETLAND DATA

- Deep zone ~0.5m depth
- Shallow zone ~0.2m depth
- Live storage volume 2100m<sup>3</sup>
- Permanent water volume 500m<sup>3</sup>
- Emergency spillway 3mRL
- Permanent water level 2.07mRL
- Construction costs \$750k

## HOW WILL IT WORK?

- 1 Water flows into the wetland through sediment capture devices. These pre-treat the water to reduce sediment entering the wetland.
- 2 Water enters the wetland and flows over a rock bund to slow it down.
- 3 Water slowly flows over alternating shallow and deep-planted areas. Plants absorb any contaminants present in the runoff.
- 4 Under low flow conditions, water leaves the wetland through the outlet pipe onto Whangamata Beach.
- 5 Under high flow conditions, water flows out onto the beach via the emergency spillway (the same way as the existing pond).
- 6 Flow passes over the gabion baskets, which slow down the speed of water and reduce erosion to the beach.

## HOW WILL IT IMPACT FLOOD RISK?

The wetland is designed to:

- Improve flows in the Williamson and Ocean Road pipe networks in less severe rainfall events (1 in 5year probability event)
- Maintain flood volumes within the wetland area and minimise the risk of overtopping in more severe rainfall events (1 in 5year probability event)

All design rainfall events include an allowance for climate change-driven increases in rainfall intensity.

The wetland is designed to reduce **flood risk** to properties in Whangamata. It is unlikely to reduce localised **ponding**, such as small areas of water collecting in the road reserve.

## ENVIRONMENTAL IMPACT

The wetland is anticipated to enhance environmental outcomes. Negative effects on the environment are likely minimal.

**Water quality:** The wetland will capture contaminants commonly found in stormwater, such as sediment, nutrients, heavy metals, and oils. The quality of discharge will be higher than from the existing pond. This is good news for the sensitive marine environment of Whangamata Beach.

**Erosion:** Outflow from the wetland will pass over gabion baskets. The rocks will slow down the speed of the water, reducing erosion potential at the beach.

## WAIKATO REGIONAL COUNCIL CONSIDERATIONS

Waikato Regional Council is supportive of the proposed works. The design aligns with the following policies and guidance documents from Regional Council:

### Waikato Stormwater Management Guideline

- Encourages use of low-impact design approaches for quantity and quality management

### Waikato Regional Policy Statement

- UFD-AER14: Improve environmental outcomes through increased adoption of low-impact stormwater design.
- CE-CMA-M16: Promote and support initiatives to improve marine water quality (including stormwater discharges)

## MAINTENANCE

Maintenance on the wetland will include:

- Vegetation: Monitor for plant density. Undertake supplementary planting if required.
- Outlet grille and pipe: Check for blockages and clear as required.
- Spillway: Remove built-up debris and mow grass.
- Non-return valve - Inspect and clear of sand if required.



## CONTACT INFORMATION

Please contact Thames-Coromandel District Council with further questions.

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## ESTIMATED CONSTRUCTION TIMELINE

- Start date 4<sup>th</sup> June, 2024
- End date 12<sup>th</sup> July, 2024

