



# Te Awahou Foxton Climate Resilience Project

**Foxton township has historically been affected by flooding on a regular basis. Horizons Regional Council and Horowhenua District Council have been responding jointly to this issue, with funding set aside in both councils' current Long-term Plans.**

**Flooding is caused by two key issues, these are:**

1. Runoff from farmland to the east overwhelming the Foxton East Drainage Scheme network and flowing out through Foxton township. The Kings Canal drain overtops in relatively small storm events most recently in 2007, 2008, 2010, 2015 and 2017; and
2. An undersized stormwater reticulation network within Foxton township causing localised surface flooding during storm events.

This project concentrates on the first issue, diverting runoff away from Foxton township and storing it on low-lying rural land south of the township until it can gravitate or be pumped out into the Foxton Loop. Dealing with the currently

undersized Foxton East Drainage Scheme will prevent overflows from getting into the local stormwater network, leaving more capacity available for draining localised surface flooding.

**Factors contributing to issues with the Foxton East Drainage Scheme network include:**

- Run off from the large catchment to the east of Foxton;
- Kings Canal and Purcell Street Drain are undersized and overtop regularly;
- Seepage through the existing Kings Canal embankment;
- An undersized culvert running under State Highway 1 at Purcell Street;
- When water levels are high at the outlet of the Foxton East Drainage Scheme network the floodgate into the Foxton Loop closes and prevents water draining; and
- No significant water storage areas are available in the network.



**Kānoa**  
Regional Economic Development  
& Investment Unit



**horizons**  
REGIONAL COUNCIL



## Initial proposal

In Horizons' 2018-28 Long-term Plan, a new pipeline down Cook Street, linking the Kings Canal drain on the east side of the town with the Foxton Loop, was identified as the best solution to the drainage issues that affect Foxton.

However, when this was reviewed by an external consultant (E2 Environmental) in 2020 it was decided it was not practical to lay a large pipe through the Cook Street residential area. This resulted in Horizons re-evaluating options, during which time central government climate resilience funding became available and broadened possibilities.

## Project funding and social procurement

In 2020, central government's budget included \$210 million for climate resilience and flood protection projects across New Zealand. This funding formed part of government's response to the economic impacts of COVID-19. Horizons Regional Council received \$26.9 million of this funding from Kānoa, the government's Regional Economic Development & Investment Unit (REDIU) for four climate resilience projects. We estimate the total cost of these four projects to be \$38.4 million with Horizons share being \$9 million.

This collaborative funding has enabled Council to accelerate work on Te Awahou Foxton Climate Resilience Project. \$6.525 million (approximately 60%) of this project funding is coming from Kānoa - REDIU. Horizons and Horowhenua District Council will make up most of the remaining \$11.2 million cost.

This project is intended to have positive environmental and social outcomes for the Foxton township. It will not only assist in protecting people and properties, but also help boost the local economy through new employment opportunities and contracts as work on maintaining and building new infrastructure progresses.

### What is a scheme?

Horizons Regional Council carries out flood protection and drainage activities using a scheme-based management approach.

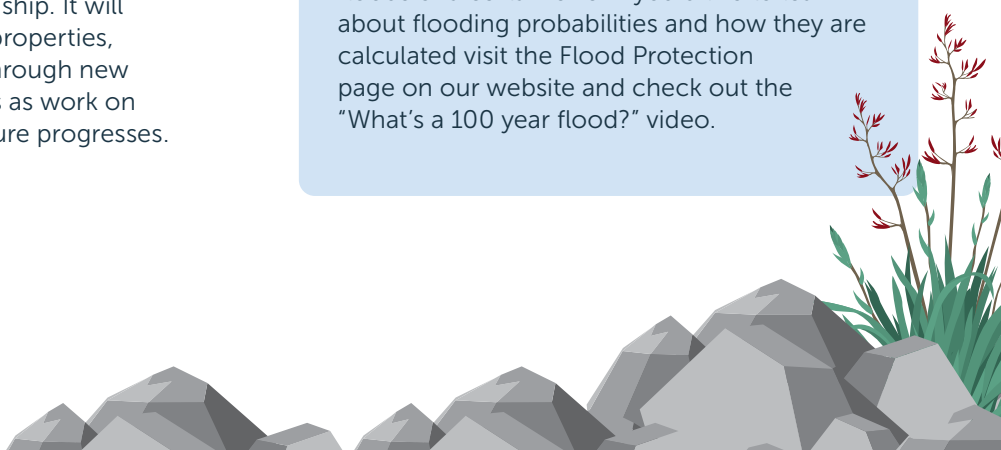
A scheme is a designated area of land that receives protection from flooding, riverbank erosion and channel movement, and can also include land drainage services.

34 river and drainage schemes cover a large part of the region providing a variety of services, each tailored to meet the needs of the particular community that receives the benefit of those activities.

Activities range from protecting people and property from flooding to minimising river/stream erosion of productive land and the provision of land drainage.

### What does Average Recurrence Interval actually mean?

An Average Recurrence Interval (ARI) describes the average time period between floods of a certain size. If you'd like to learn about flooding probabilities and how they are calculated visit the Flood Protection page on our website and check out the "What's a 100 year flood?" video.



## Updated proposal

The new funding arrangement has enabled Horizons to explore a more viable mitigation strategy which diverts runoff away from Foxton township during large storm events and temporarily stores it on low lying farmland at the bottom of the Whirokino Scheme. At some points this land is half a metre below sea level and with the expectation of climate change bringing more rain, flood events are likely to increase in this area.

Although this proposal means an additional volume of runoff will be stored in the Lower Whirokino in larger storm events, a new pumpstation shared with the Lower Manawatū Scheme would pump water out faster, returning most farmland to pre-flood water levels sooner than is currently possible.

The current Hokorawa Stream culvert is old and too small to cope with large flood events. To address this issue, an additional upgraded culvert will be constructed, slightly to the north from the existing culvert under State Highway 1. As well as being a more effective way of passing flows under State Highway 1, the additional upgraded culvert will give us the opportunity to remove barriers to fish passage and increase biodiversity in the drainage channel.

## The benefits for Foxton township

The proposed works are not designed to deal with runoff of rainwater within the Foxton township. However, the diversion of runoff from farmland to the east of Foxton creates capacity in the piped stormwater network as it will now only be dealing with township rainwater. This means there will be less flooding in Foxton township during large storm events.

At the completion of this project in March 2024, overtopping of Kings Canal will have an Average Recurrence Interval of 50 years (including an allowance for climate change), a major improvement over the 2-5 year Average Recurrence Interval of the current Foxton East Drainage Scheme network. Plus three new managed wetlands will provide water storage and water quality improvements. At this stage the locations of two of the three wetlands have been identified to be at the end of Cook Street and in the Moutoa spillway. Investigations are still underway to determine the best location for the third wetland in order to create sufficient water treatment.

This project will also provide new work and contracts for local businesses and iwi.

## Proposed upgrade and required works



## Project consultation

Horizons councillors and staff have begun the engagement process by meeting with local iwi to identify the impact of this work on taonga (treasure), whenua (land), and wahi tapu (sacred place). These meetings will be ongoing for the duration of the project.

The second COVID-19 lockdown in August 2021 meant consultation with affected landowners was delayed. In an effort to make up for this delay a webinar explaining the project was presented and filmed in September and is available to view on the Infrastructure Climate Resilience Projects page of our website. Horizons project engineers are in the process of scheduling one-on-one meetings with the directly impacted parties. These began at the end of October and are continuing, depending on the availability of landowners.

As works will have a rating impact on the wider community, as well as directly impacted parties, we are holding drop in sessions at Te Awahou Nieuwe Stroom on Tuesday 22nd of February from 1-7pm. Horizons staff will be available to talk about the project and answer any questions you have. Please remember your vaccine passes and in the meantime, if you'd like any further information please email [rivermanagementinfo@horizons.govt.nz](mailto:rivermanagementinfo@horizons.govt.nz).

## What you'll be seeing soon

Work includes some upgrades and improvements to current assets. In November 2021 some sheet pile test driving took place on the current stopbank near Coley Street. When the stopbank was built in the 1960s it was made from surrounding materials and consequently flood waters not only overtop it but also seep through it.

Installing these plastic sheet piles (approximately 0.5 metres wide and 4 metres high) vertically into the 430m long stop bank will help prevent seepage and overtopping in future flood events. Noise and vibration effects were assessed and it was identified that a different method for driving in the piles will be required. This will be tested at a later date.

In late November replacement of existing undersized culverts along the Kings Canal at Coley Street commenced. After construction on the Coley Street culverts have been completed, construction on the Cook Street culvert upgrade will begin. Information on dates and any potential traffic delays will be advertised closer to the time. Other upgrades and required works can be seen on the map on the previous page.

## Further communication

As works progress we will be updating our website. Please visit: [www.horizons.govt.nz](http://www.horizons.govt.nz) or scan the QR Code.



For more information visit [www.horizons.govt.nz](http://www.horizons.govt.nz) or freephone Horizons on 0508 800 800