



Shovel Ready

# Piako River Ngātea town left stopbank



**Funded:** \$768,000 by MBIE's Kānoa – Regional Economic Development & Investment Unit

**Total project cost:** \$1.2m

**Project duration:** 2 years

**Jobs expected over project life:** 14

Waikato Regional Council received \$29 million for multiple environmental restoration, biosecurity and climate resilience projects from the Government as part of the economic response to COVID-19.

This project, which is one of them, will complete the upgrade of the final section of stopbank on the Piako Flood Protection Scheme to the agreed level of service design height.

Ngātea is reliant on flood protection infrastructure, originally built in the 1960s, for protection from both tidal surge and Piako River flooding. Without the stopbanks in place, the town would be inundated by the tide twice a day. The population of Ngātea is increasing, reflecting its desirability as a rural location with ready access to local, regional and national parklands as well as the Firth of Thames.

The flood protection infrastructure, particularly earth stopbanks, may have limited opportunities to adapt to climatic changes. The current approach of increased stopbank height and mass may have limited viability on the Hauraki Plains due to the underlying strength of the marine mud on which they are built. In 2018, a top up to the stopbank adjacent to Ngātea caused cracking and slumping in three places.

This project includes a trial upgrade section on the stopbank to give greater understanding of the upper soil weight loading limit of the marine mud to establish the long-term viability of current stopbank design as flood protection infrastructure. Alternative stopbank design approaches may need to be developed in the future if the ability to increase stopbank height is proven limited.

Physical works are planned to remove an old floodgate, install kerb and channelling along the roadside nearest the river and then increase the height of the Ngātea to Puhunga stopbank to the 100 year tidal event level, with freeboard.

## Benefits

- Upgrade of the Ngātea to Puhunga left bank section of stopbank to meet flood protection service level requirements.
- Improved understanding of the Ngātea stopbank failures in 2018.
- Advancing the understanding of failure modes associated with stopbanks founded on marine mud soils to support design and upgrade methodologies.
- Rationalisation and decommissioning of an old floodgate.

## What does this mean for me as a ratepayer?

The upgrade to the stopbank is a planned regular renewal, however, the funding allows the upgrade work to be completed sooner. The funding also helps reduce our capital works reserve debt as this work would normally have been fully paid for by the ratepayer, and the improved knowledge gained from this project will help to avoid costly stopbank failures in the future.

Minor disruption to traffic may occur as roading kerb and channel works are undertaken prior to Christmas 2021. The majority of the stopbank works are planned to be undertaken during January 2022 to minimise the impact on residents and particularly around the college. This will require temporary closure of the area for safety reasons and may impact the rowing club and dog walking areas.

## Is there a risk to the Piako River scheme?

No, the upgrade is part of regular renewal work to ensure the scheme continues to meet its required service levels. This work will also help the council to better understand the causes of the previous failures so it can reduce the likelihood of slumping and cracking of stopbanks from occurring again.

## How is the council procuring services and materials?

We are following our procurement policy to ensure procurement of services and materials meets local government's requirements for the use of public money. A requirement of the central government funding is a greater emphasis on procuring services that include local persons, local businesses, Māori/Pasifika, women and youth. To date we have procured the services of a number of specialists.

## Who is the council engaging with on this project?

We are engaging with Hauraki Plains College, Hauraki Rowing Club and Hauraki District Council, as the local roading manager, as well as Waihou-Piako Flood Protection Advisory Subcommittee.

