

Protecting Te Puru

Flood protection

Flood protection reduces the likelihood of floods impacting on our communities. It safeguards lives and property, enables use of land, and protects services such as water supply and power. However, some people have no idea that flooding was an issue in the past, or even know they are protected by schemes.

Burning a hole in a flood wall is not smart, but that's what recently happened in Te Puru (and has also happened in Coromandel town). It might just look like a wooden retaining wall, but the engineered structure actually prevents the Te Puru Stream from breaching during a flood event; and that particular section protects the school and houses along the right bank. Damaging flood infrastructure puts a whole community at risk, and it's also expensive to fix. If you see any intentional or unintentional damage to flood walls or other infrastructure, please report it as soon as possible.

So, why was the Te Puru scheme built?

The Peninsula Project is about improving the health of the environment and reducing flood risks on the Coromandel Peninsula. Te Puru was one community identified in the project as having a very high risk to life and property due to flooding. The flood infrastructure was put in after the 'weather bomb' of 2002, when water carrying trees and debris came down



Te Puru after the 'weather bomb' of 2002.

the hills and through the campground and into all the homes along the sea. The scheme was completed around 2010.

What's in the scheme?

The assets protecting Te Puru are stopbanks and floodwalls. There is a spillway (see the aerial photo) to take flows greater than the design can cope with to protect the integrity of the bridge.

The scheme is designed to handle a 1% annual exceedance probability (AEP) with 0.5m of freeboard. This means there is a 1 per cent chance of such a flood occurring in a year; it's also known as a one in 100-year flood event. This level of service is only for flooding caused by the river, and does not include various tidal and coastal conditions. It also doesn't take into account climate change, which may mean more frequent and intense weather events and rises in sea level.

Scheme review

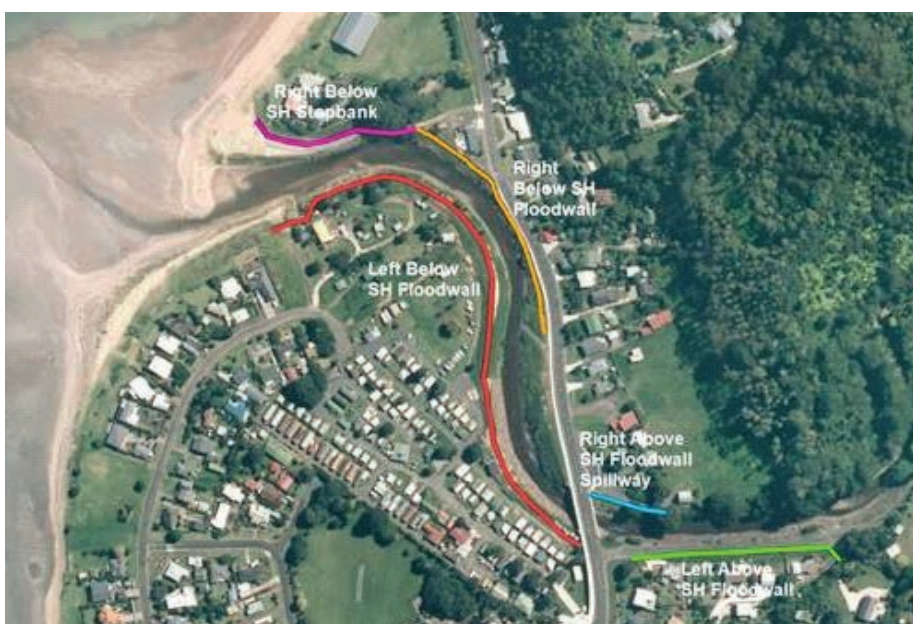
A service level review was undertaken in 2018/19. The review showed the scheme could handle a one in 100 year flood event although there was a shortfall in the freeboards towards the lower end of the scheme. This was likely due to the accumulation of aggregates in the lower stream channel near the stream mouth. Excess gravel was therefore removed from the stream mouth.

The scheme is reviewed periodically at which time the stream cross-sections are surveyed and the hydrology and hydraulics reassessed.

Residual risk

This exists when a flood event is larger than the scheme is designed to handle, or from debris within a flow or obstructions within a scheme. However, during a greater than 1% AEP, overtopping should occur at the spillway. The placement of large obstructions (including walls or buildings) in the stream or associated floodplains may result in wider, higher and faster floodwaters, and add to debris, so if you see anything you're unsure about please let us know.

We also have schemes in Tararu and Thames but they lie within the Waihou-Piako Zone.



The Te Puru scheme from above.

To find out more about flood protection in the Coromandel area visit waikatoregion.govt.nz/integrated-catchment-management/asset-management.