April 2017 Flood Repair Project - Frequently Asked Questions

What was the scale of the April 2017 flood damage?
Two extreme weather events in early April 2017 brought prolonged torrential rain to the Bay of Plenty. The resulting record high river levels and extensive flooding caused significant damage to river and drainage networks and assets across the region, from the Kaituna River in the west through to the Waioeka and Otara Rivers in the east.

A total of 520 sites have been identified in the repair programme. The majority of damage occurred in the Eastern Bay of Plenty with damage to the Rangitāiki-Tarawera Rivers Scheme accounting for over half of the repair cost.

The entire repair project is expected to take four years, with completion programmed for 30 June 2021.

What is the cost of the repair work?
The total repair work is expected to exceed $45 million across the rivers and drainage schemes managed by the Bay of Plenty Regional Council. The single biggest repair site is the College Road, Edgecumbe, stopbank realignment and associated work (estimated at $5.6m).

How will the repair work be funded?
Existing assets - insurance recovery and central government contributions are available for existing assets damaged during the flood events to undertake 'like to like' repairs. There are also minor contributions from third party stakeholders e.g. Local Authorities, NZTA and Trustpower.

New assets or repair work more extensive than the original asset - the majority of the cost (80%) will be borne by landowners within the rivers schemes through targeted rates, and the remainder (20%) funded across the region through general rates. In the case of the Rangitāiki Drainage Scheme any additional costs are 100% funded by landowners within the scheme area.

Does all the work actually need to be done?
Each damaged site was prioritised based on the risk of the damage becoming worse, the consequence of that occurring, any impact to community assets, and the practical ability to complete the work required. High priority works are being completed first to ensure any future impact over the duration of the repair project is minimised. As work progresses the medium and low priority sites will be monitored and reassessed. It is possible that towards the end of the programme some low priority sites will have stabilised and work may not be required.

Is it just repair work or are improvements also being made?
Much of the work involves improvements to original assets. In some cases that may mean a change in materials (e.g. from willow plantings to rock) and for others an asset extension (e.g. where damage has occurred at the ends of an existing asset). There are also numerous new assets being constructed as part of the project. All the work involves best practise materials and methods for the particular river conditions and location.

Why is rock used in some repair work but not others?
Willow plantings or trench willows is the preferred 'soft' engineering solution to repair an eroded site and to reduce future erosion. However in many situations a more robust solution is required, to reduce risk to community or assets or where willows will not establish e.g. Rangitāiki River below Matahina dam. In these situations, rock lining is the preferred repair method. Over many years of practical work and experience our staff have been able to determine the most appropriate grade and sources of rock for use in our Bay of Plenty rivers.

What is meant by 'making room for the river' and how does this concept align with the repair work being undertaken?
The concept 'making room for the river' is based on a move away from higher stopbanks and more engineered flood defences to planning and providing for a sustainable approach, such as wider flood plains providing space for the river to use flood events. The concept recognises that creating higher stopbanks will not keep river waters constrained, or communities safe, under existing climate change.

The stopbank reconstruction and realignment work on College Road, Edgecumbe, and the design of the Rangitāiki Floodway are in keeping with the concept, providing wider riverside berm areas and ponding areas for overflow. This thinking is also in keeping with the approach of improving the naturalness of our rivers and river landscapes.

Why are willows used along some rivers?
A soft edged vegetation buffer along a river bank can absorb flood water, deflect strong river currents thereby reducing erosion, and strengthen the bank through the root system.
Willows are popular as they are easily established, tolerant of a wide range of conditions, grow rapidly (even in poor soils and gravels), have a fine fibrous root mat that stabilises the land, sprout and grow quickly from woody cuttings and are easy to reclaim and reuse.

While some native species can be used as a vegetation buffer they do not have the ability of the willow to support bank stability and reduce erosion.

I thought willows were a pest plant. How come Regional Council uses them?
Some species of willow are a pest plant. In New Zealand, erosion control cultivars have been carefully selected to reduce invasive spread. Willow maintenance is important and mature willows must be topped and mulched to ensure the failure of the tree root system does not undermine the river bank. Tree willows have a life span of 30-50 years.

What provision is being made for natural habitat for eel (tuna) and whitebait (inanga)?
Willows on the margins of streams and rivers are known to provide habitat for both longfin and shortfin eel (tuna). We are working alongside our land management team to maximise the opportunities for improving tuna and inanga habitat.