

## **Stakeholder Flood Protection notes 22.04.24**

Confirmed Gary Williams has been engaged to conduct the peer review, which is expected to take 3-4 weeks. Will look at all 18 options and investigate if any options were missed.

New roughness modelling indicating changes to the previous thinking, needs to be discussed more fully by the group.

Discussion around the urgent need to ground truth data, eg river flows, concern not happening quickly enough and that without confidence in the data and modelling, concern other models may have been discounted, which should have been further investigated.

Presentation by Andrew Newman, Strome Advisory, on why Wairoa flooded so severely in Cyclone Gabrielle. Key points:

Wairoa has a history of flooding.

Soil moisture capacity was a big part of the effect of Cyclone Gabrielle, saturated ground needs to be acknowledged moving forward.

Whole tree slopes of forestry planted in the northern area more of a risk than harvest slash. Carbon forestry is an issue for the future. Pine is not the right choice for erosion-prone areas.

Large poplars/willows on riverbanks are a risk, usually self-seeding, and need management.

Cyclone Gabrielle cleared a lot of debris from Hangaroa and Mangapoike, Waiau still has considerable debris.

Surprise more work has not been done around riverbed models, suggested last levels conducted by HBRC in 2016.

Highlighted that river mouth needs improved management, been manually opened around 20 times in the last 30 years. Opening the river mouth is not a decision that can be made remotely. Is a chance river mouth can blow itself open but likelihood of flooding before that high.

Waikaremoana lake levels very minor contributor to flooding.

After Bola, identified that due to a lack of hard flood mitigation infrastructure in Wairoa, a decent warning system needed to be in place.

No silver bullet, need more than one intervention.