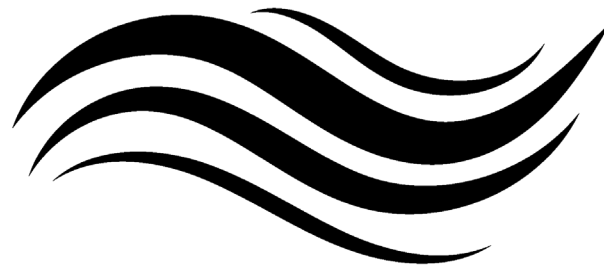


Presentation to Hawke's Bay Regional Council

The Final Report of Hawke's Bay Independent Flood Review

24 July 2024



**HAWKE'S BAY
INDEPENDENT
FLOOD REVIEW**

Pae Matawai Parawhenua

About this presentation

- Key themes underpinning our recommendations
- Review process
- Summary of key issues (47 individual recommendations)
 - Structural works 14 recommendations
 - River maintenance 6 recommendations
 - Event management 7 recommendations
 - Planning controls 8 recommendations
 - Mana whenua 6 recommendations
 - Community 3 recommendations
 - HBRC resourcing and funding 3 recommendations
- Summary
- Questions



Key themes underpinning our recommendations

- **Use all data and knowledge** available, including historical, to underpin decision-making, systems and processes
- **Upgrade and reimagine flood management infrastructure**, including new models of funding and collaboration
- **Understand the performance of flood management systems in super design events** so nothing is left to chance
- **Strengthen the Regional Policy Statement** to ensure it is clear and directive, and enforce it rigorously
- **Strengthen systems and communications** to ensure information for Civil Defence is accurate and timely
- **Address inequities** for mana whenua exposed to flood risk
- **Involve all communities** to rebuild trust and flood resilience
- **Ensure the right internal resourcing and capability**



About the review

- Commissioned by HBRC to investigate the circumstances and contributing factors that led to flooding in Hawke's Bay during Cyclone Gabrielle.
- Looked at HBRC's flood management schemes and programmes from Wairoa to Pōrangahau, how each performed, and the decisions made by HBRC during the cyclone.
- Has considered and recommended options to increase the region's long term flood resilience.
- Did not investigate district or city council roles and responsibilities, local CDEM responses, or the recovery phase of the flooding.



Review process

- Review considers/recommends options to increase long term flood resilience
- Nearly 12 months in the making
- Terms of Reference: Look at HBRC flood management schemes, how each performed and decisions made by HBRC during the cyclone; make recommendations to increase long-term flood resilience
- Extensive, and region-wide engagement: involving mana whenua, affected communities and businesses, and a range of agencies and infrastructure owners
- Wider community feedback invited via advertising and communication, gathered via HBIFR website
- We received and reviewed a huge amount of information
- Acknowledge HBRC co-operation
- Panel members – Dr Phil Mitchell, Kyle Christensen, Bernadette Roka Arapere

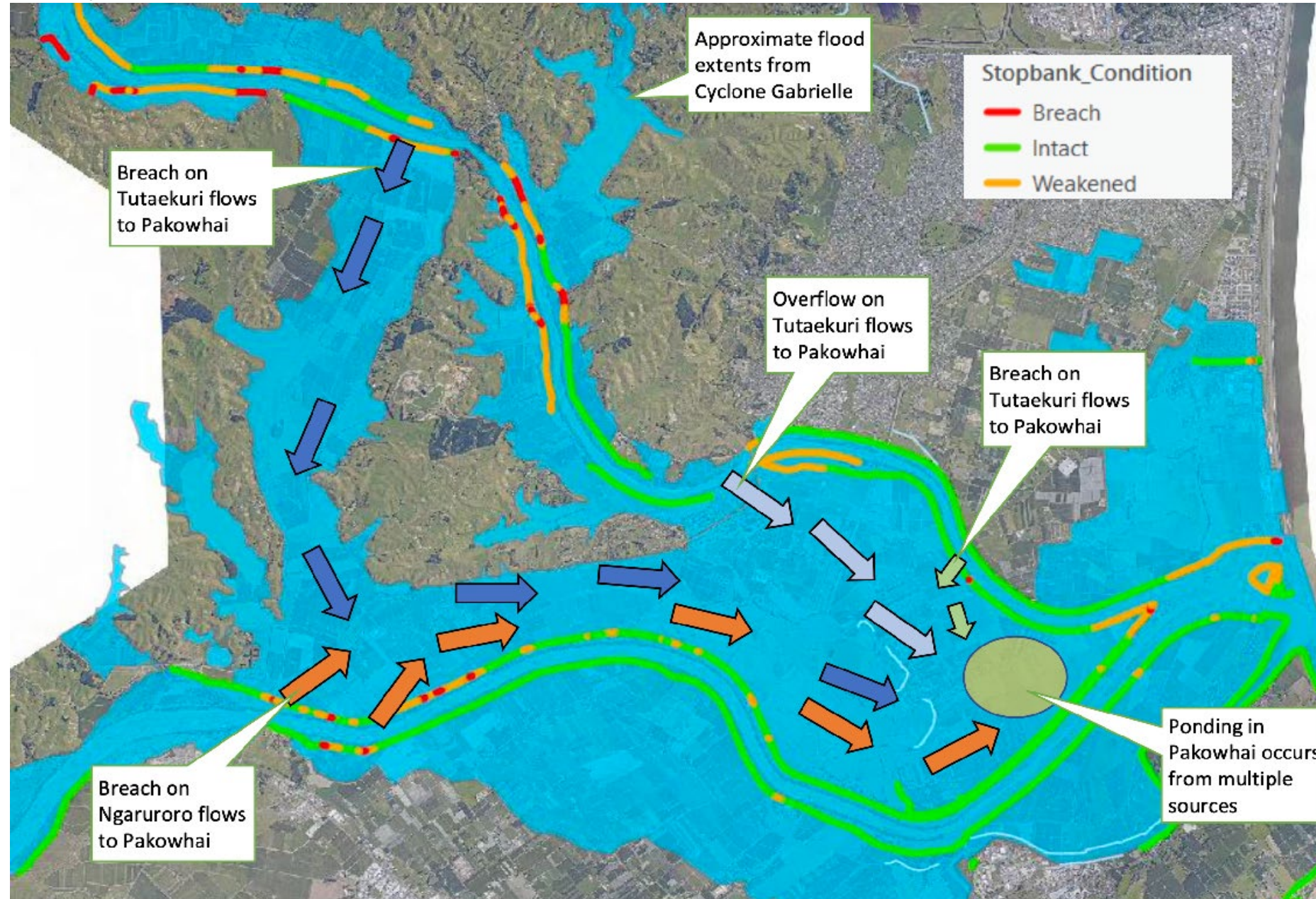


Key issues – Structural works

- Very significant 1000-year event in some rivers, completely overwhelmed stopbanks generally at 100-year design standard
- Not all rivers have stopbanks BUT many want them now
- Legacy flood management infrastructure is in many places no longer fit for purpose
- Design of systems means uncertainty during events that exceed stopbank capacity
- Modelling and design ignored large historic floods in some areas– e.g. Whirinaki stopbank failure..design did not account for 1938 Esk flood
- Stopbank alignment contributed to failures



Key issues - Structural works – an example



Key Issues – Structural works (continued)

- Little or no planning for super-design events, residual risk to entire floodplain including Taradale, Napier & Hastings. How to evacuate 100,000 people?
- No protection of Wairoa despite risk being well articulated and a scheme designed post-Bola – not developed – no funding
- Region-wide, flood management system needs a substantial upgrade/reimagination
- New designs need to provide predictable and manageable performance – not left to chance
- Need to make room for rivers, safely convey very large floods from upstream to the sea



Key Issues – River maintenance

- A lot of community feedback about gravel extraction, river mouth openings, willow maintenance
- Due to scale of this event, river maintenance played a lesser role than during smaller flood events due to floodplains being inundated rather the floodwaters confined to channels
- Some areas where gravel build noted but significant changes due to the flood
- Post-cyclone, river beds and berms need extensive survey and remedial measures to restore agreed levels of service
- Readiness / maintenance of contingency measures (e.g. pumping stations, generators/diesel supply) stretched during this event and scale completely overwhelmed drainage systems which are not designed for event of this magnitude



Key Issues – Event management

- Low understanding of flood risk amongst community & very limited access to flood forecast information
- Limited planning/processes in place for floodplains known to be subject to flood risk and underestimation of flood risk. e.g. not including 1938 event in Esk Valley
- Uncertainty in over design performance for Heretaunga Plains...precautionary evacuation scenario for 100,000 people not practical
- Event rainfall under-forecasted by MetService as well HBRC telemetry and communications failures
- Some uncertainty in language used by HBRC in advice to Civil Defence, “may be at risk”... “could be similar”
- The scale of the event overwhelmed HBRC resources



Key Issues – Planning controls

- HBRC's Regional Policy Statement (RPS) did not prevent development in known flood hazard areas – e.g. Tangoio and Esk
- Future planning must reflect scale/magnitude of historic floods and include data even if incomplete – e.g. Esk and Tangoio
- RPS needs a substantial refresh/change in emphasis – more directive, less vague
- HBRC needs to be better resourced to take an advocacy role in land use planning and consenting processes – i.e. ensure that the RPS is implemented appropriately
- Regional Plan needs more specific provisions regarding the design of structures in riverbeds e.g. bridges



Key Issues – Mana whenua

- Disproportionately impacted – remaining lands are often flood-prone
- Unique circumstances of Aotearoa New Zealand - how we apply technical principles working in partnership with mana whenua
- Kanohi ki te kanohi, rangatira ki te rangatira - partner with mana whenua
- Better engagement, partnership, and resourcing urgently required
- Mana whenua knowledge and participation is fundamental to managing future flood risk



Key Issues – Community

- Opportunity to make more and better use of community knowledge, lived experience and networks
- Treat communities as project partners
- Community and stakeholder participation is fundamental to managing flood risk
- Communities are ready, mobilised and motivated to progress improvements in flood-risk-management
- HBRC needs to harness this momentum and implement improved flood-risk-management solutions with community



Key Issues – HBRC resourcing and funding

- **Capability:** resourcing needs to be sufficient to deliver the agreed level of service for business-as-usual operations and means HBRC has sufficient back-up and contingency plans to meet its flood-event-management responsibilities
- **Partnership funding:** be proactive in working in partnership with central government to ensure sustainable funding for river management, flood resilience and event management
- **Equitable outcomes:** review the funding of current/future river management schemes so that the targeted and regional rates contributions enable affordable and equitable outcomes for all communities, including mana whenua



Summary

- **Use all data and knowledge** available, including historical, to underpin decision-making, systems and processes
- **Upgrade and reimagine flood management infrastructure**, including new models of funding and collaboration
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Questions



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