

Mahi Tahī
Councils and the Communities of
Okawa, Rūnanga and Ohiti
Working Together

A LIVING DOCUMENT

Version: September 2023

BETWEEN
the TWO
RIVERS

Kia hiwa rā!
Kia hiwa rā!

Whakarongo mai!
Ki ngā kōrero o ngā tāngata e noho ana

Titiro mai!
Ki te whenua pakaru me te wai paru.

Kōrero mai, kōrero atu!
I waenganui i a koutou me matou kia tika, kia pono

Mai ngā pae maunga o Kaweka tai atu ki te moana o Tangaroa, i waenga o ngā awa o Ngaruroro me Tūtaekuri, ka noho tonu ngā hapū o Ngāti Hinemanu, o Ngai Te Upokoiri, o Ngāti Honomokai me Mahuika i te taha o ngā Pakeha whakatipuranga.

E mahi tahi ana mātou ki ngā mahi kaitiaki taiao, ki te whakatutuki i ngā hiringa mo ngā rā kei te heke mai, ki te whakatika i te pakarutanga o te huripari Gabrielle, me te rapu otinga e whai hua ai ngā tāngata e noho ana katoa o te rohe.

He purongo tenei te mihi aroha, he otinga mo te nuinga o ngā raruraru o naianeī, he hononga ki roto i ngā hapori ki te taha o ngā tari kawanatanga me ētahi atu tari e kaha ana ki te awhina i ngā tāngata e noho ana ki te whenua nei, o Ohiti, o Kautuku, o Rūnanga, me Okawa hoki.

Ka mutu te mihi ki tenei whakatauki: "**Mā whero, mā pango ka oti ai te mahi**"

"Ehara taku toa i te toa takitahi, he toa takitini"

The whenua and people of Okawa, Rūnanga, Ohiti

The work that has been and is being done by the many who live on, around and off the land, reflects a love for the land and waterways and a commitment, alongside mana whenua, to ensure that in its entirety, the whenua will endure and thrive for the generations to come.

Historically Okawa was named by a chieftain due to the bitterness of the water, the known reason being an iron spring found on the land. The land was acquired by a land commissioner, George Sisson Cooper when Kurupo Te Moananui sold Okawa and Te Matau-a-Maui (Cape Kidnappers) blocks in 1854 and 1855 respectively. Okawa has been in the Lowry whānau for decades, since 1846 to be precise. Founded by Thomas Lowry (1814 - 1881), extended by his son, Thomas Henry Lowry where he established the Okawa Stud, it has since been home to other Lowry members who have used the lands for other business ventures.

Historically Rūnanga - a part of Kawera - was a swamp area bounding the lake, and the local people survived off the abundant eel population. Rūnanga and Ohiti were separate lakes as well as people, that is until the 3 February 1931, the great earthquake of Napier, of Hawkes Bay where they joined. This a fact that people do not really know, as well as the fact that Raniera Te Ahiko is the tīpuna for these regions where his bloodline still holds firm their lands from him. Ria Mohi's (Raniera's grand-daughter) descendants still hold Lake Rūnanga as well as Whangaitete - the island in Lake Rūnanga including the land up to Kawera Road, which has always been leased to the Dorward whānau, starting from Selwyn's great-grandmother who signed a lease with Ria Mohi. Land from Kawera Road up to Shanley Road still belongs to the descendants of Raniera's other granddaughter, Te Rohutu Mohi, and is leased to various organisations, one of which is Rockit.

Mai ngā pae maunga o Kaimanawa, Ruahine, Kāweka ānei matou: Waitaha, Māmoe, Hotu, Hinemanu me Te Upokoiri. Ko Renata Kawepo te tangata rongonui. For the hapū associated with Lakes Rūnanga and Ohiti, survival was based on the utilisation of natural resources from the mountain ranges inland to the resources from the sea.

Ohiti (Owhiti) denotes the crossing of the Ngaruroro by Tamatea Pokai Whenua's dog - the narrowest place to cross the river, probably prior to the great flood of 1867 as well as today. The 1867 flood changed the mainstem course dramatically. The mainstem Ngaruroro drops mainly into the Heretaunga aquifer loosely at Ohiti, where Mātauranga Māori and western science inform each other today.

Among others, a significant Pa stood at Ohiti, sheltered from southerly and westerly weather, surrounded by water and providing food security afforded by a connected functioning wetland system, assuring abundant water and food sources. The Whare Tipuna Kahukuranui I (Kahukuranui III stands at Ōmahu) and Hinemanu both stood (though apart from each other) near the ford, now bridge crossing the Waitio. Hinemanu was later moved to Ōmahu.

The Native Land Court records that mana whenua amalgamated Ohiti and Waitio on 24th March 1899. The Ohiti/Waitio area continues to support ahi kā roa, intergenerational and more recent families and landholders, buying into customary/traditional lands acknowledging and living with layers of occupation guided by nature.

Post-Gabrielle: The Community's Concerns

On August 9, around 70 people from the Okawa, Ohiti and Rūnanga communities met at Pukehāmoama School to talk about their experiences of Cyclone Gabrielle and the aftermath, to voice concerns and to identify immediate priority actions so that the community can move forward with confidence.¹

A key reason that Between the Two Rivers Community Catchment Collective (B2R) hosted the meeting in the Okawa, Rūnanga, Ohiti, and Kautuku area is because from Ōmahu inland, the Taihape Road is the lifeline to the main centres for the community and the many land-based businesses – the only road in and out – in an area of around 100,000 ha. It is also a significant vulnerability, as Cyclone Gabrielle demonstrated, flooding a stretch of the Taihape road between Ōmahu and Pukehāmoama school, and an alternative route along Ohiti and Matapiro roads, thus cutting the community off from access to the main centres for days.

However, for people living in this area, February 14 was not the first time (or even the last in 2023) that there had been significant flooding. Pre-Gabrielle saw flooding in places that previously had not been inundated with flooding since the early 1990s. Post-Gabrielle saw a stream returning to its natural pathway not as a stream but as a torrent of water. Debris from damaged land and streams is now strewn throughout the land, tonnes of silt have made their home on numerous front doorsteps, inside homes, on front lawns - anywhere it could lay its head. Nor are the issues simply matters of roading and access, as fundamental as these are.

The community needs to have confidence that the issues that are causing anxiety and uncertainty, including damage to our changed landscapes, the real risk of further flooding and the effects of climate change, will be dealt with properly. That will allow the community to move beyond their anxieties to planning and working together for the long-term.

Mahi Tahi - A living document

This roadmap is a **starting point** to address the issues identified by the communities of Ohiti, Okawa and Rūnanga and as a platform to engage with councils to agree how we can work together. It is a living document that will evolve.

Some of the issues that are causing distress are long-standing and the Cyclone has simply amplified their importance. Some require and lend themselves to short-term fixes; others will take longer but require strategic planning now, so the community can move out of Cyclone recovery mode into long-term planning for a viable future.

These issues and the actions identified cover:

1. Kotahitanga: Relationships and communications
2. Mātauranga: Understanding our changing landscapes
3. Turangawaewae: Flooding, livelihoods, and ecosystem health
4. Turangawaewae: Okawa, Waitio and other waterways
5. Turangawaewae: Protecting Critical Access Routes from Future Flooding

¹ An earlier 'drop in' meeting organised by Hastings District Council attended by around 20 people from the community, some of whom also attended the August 9th meeting.

6. Turangawaewae: Repairing damaged roads
7. Tangata Ora: Emergency response preparedness
8. Te Mana o te Taiao: The health of waterways and land

The community seeks commitments from both district and regional councils to engage with the community and jointly identify actions and set timeframes for their delivery.

We acknowledge the communities of Ōmahu, Swamp and Korokipo Roads, Moteo and Waiohiki, who have been worst hit by the Cyclone. We also acknowledge the leadership of the Piringa Hapū Authority and its **Ūtaina 10-Year Recovery Plan**. Much of that resonates and is relevant for the communities further inland.

About Between the Two Rivers

Between the Two Rivers Community Catchment Collective (B2R) has been set up by landholders and mana whenua between the Ngaruroro and Tutaekurī rivers to work together to improve the health of the waterways and land that sustains us, to create new opportunities for our people and to futureproof our land-based businesses.

Our foundations are strong relationships, shared aspirations and a genuine partnership that is reflected in our constitution, leadership and team. We are an incorporated society with an 8-member committee chaired by Andrew Russell (Tunanui Station) and Meihana Watson (Chair of Piringa Hapū).

Our priorities are to support and empower landholders, mana whenua and the wider community to take effective actions through 7 kete (baskets) of action: Kotahitanga – Co-Design and Establishment; Tūrangawaewae – Connection to Place; Mātauranga - Deliver knowledge and Learning; Tūhono Mauri Ora - Communications and Engagement; Aro Mātai – Monitoring state and change programme; Te Mana o te Taiao – Restoration Work and Kaitiakitanga – Future Planning. An immediate priority is to build meaningful relationships and outcomes with the hapū of Waiohiki, Moteo, Wharerangi and Timi Kara, at a time that is appropriate for them given the rebuild that is before them.

The Cyclone and its continuing impact - in particular on the communities of Ōmahu, Waiohiki, Moteo, Wharerangi, Timi Kara, Okawa, Rūnanga and Ohiti, as well as on the many farmers and growers upstream - means that our immediate focus is the issues that need to be addressed so that the community can plan for the future with confidence.

Kotahitanga

1. Relationships and Communications

Good relationships are the basis of any functioning community. The challenges that the Okawa, Rūnanga and Ohiti community is facing are also ones that require strong working relationships and communications with councils, Indeed, this is a consistent unifying theme across all the issues raised by the community and a priority for the community.

The Cyclone spotlighted a range of communication issues that need to be improved. Notable are communications in emergency situations and these are addressed in 7. There is also a need to improve communications in other areas including short-term post-cyclone recovery and medium-term planning in the face of climate change. The community understands that councils are working hard to assist the community through the Cyclone. However, the main frustration the community expressed is a routine lack of communications and follow through from councils. This is particularly the case for issues that the community has had long-term concerns about and has tried repeatedly to get proper attention to. This dysfunction has allowed frustration and anxiety to fester and needs to be addressed.

Experiences and issues

- It is not clear what each of the councils is responsible for. Community members report being sent back and forth between the two councils.
- Lines of communication are poor. Community members report having to deal with different staff members each time they contact council about the same issue.
- Community members report frustrations at being told staff will ring back or provide information but hearing nothing.
- Concerns being ignored. Community members report raising issues repeatedly with council but seeing little action or serious engagement.
- Council staff with a poor grasp of the issues and/or little authority to act. Community members report dealing with junior staff who, while friendly and offering to help, are unable to make things happen.
- The two councils, and staff within the same council, failing to collaborate. Community members report work being done piecemeal.
- Immediately post-cyclone the community needed clear specific information (road closures, flooding, debris etc) but a poor example was set by the regional and district councils whose responses were patchy and often late. In contrast, the community noted Unison's was an excellent communicator for many within the community, and who passed on information and provided support to those in need.

Many of the points raised at the community meetings (listed above) arose from dealing with short-term and specific, post-cyclone issues. There is, however, a clear need for good (improved) communications to address the issues raised in Section 2: Understanding our changing landscape.

Solutions

Communications from Councils:

- An overview that clarifies each council's roles and responsibilities is needed. B2R undertakes to do this, with input from councils.
- A single point of contact within each council and a commitment from councils to respond when concerns are raised. B2R may have a role here.
- The community wants better, more regular communication with Council leads: Councillors, CEOs, Heads of Department, Engineers. Junior staff are unable to provide information (e.g., priorities and timelines for repairs) that the community needs to reassure them appropriate actions are being taken.
- The community would also like to see better coordination between, and communication from, HDC and HBRC. One suggestion is that there be a 'director of communications' able to speak for both councils and who engages with the community. We suggest regular (every 4 weeks), short, focused meetings with 1-2 community representatives (including B2R). Meetings might need to call upon experts for technical advice. Meetings might need to address controversial and confidential issues, with agreement about what outcomes can be disseminated. Such meetings would help build trust between the community and councils.
- As noted in 2: Understanding our changing landscape,
- Visibility on roading issues (bridges, washouts, pot holes) is needed. We understand that the repair schedule is dependent on funding but communities want to discuss their priorities with councils. Currently the community sees some repairs proceeding (eg tarmac being relaid) while others (eg washouts) remain. The community has identified 'black spots' that they feel need prioritising (see 4: Roding). We welcome HDC's commitment to provide better visibility to the community on these issues,
- Updates on repairs can be disseminated through local channels such as local radio, newspapers and B2R, Piringa Hapū and RD9 Facebook pages.
- There is a need to dialogue between councils and the community about the long term vision for the catchment. While this may be seen as a strategic planning issue, the community wants to avoid poor decision making around cyclone repairs that is contrary to the long term vision. There is an urgent need to identify potential conflicts between short-term repairs and long-term objectives.
- better communications are needed to improve access to available reports and 'how to guides', and to collate complex, technical information into information that helps community engagement.
- B2R can play a role in disseminating information and is keen to work with councils to ensure timely and useful information gets to the community.

Issue	Action	Lead	Priority
Clarity on who is responsible for what	An overview of each council's roles and responsibilities	B2R, with input from HBRC, HDC	High
Clear lines of communication	<p>A single point of contact within each council, or a contact person for both councils</p> <p>A commitment from councils to respond in a timely manner when concerns are raised</p> <p>A commitment that senior staff with knowledge and authority will respond where appropriate</p>	HBRC, HDC, B2R	High
Progress on cyclone repairs	Regular updates on repairs	HDC, HBRC	High, Ongoing
Priorities and timelines for repairs	Council and community (including B2R) engage over 'hot spots', priorities and timelines. Outcomes disseminated to the community	HDC, HBRC, B2R	High
The future of the catchment	Meaningful forum for discussion and debate between councils, agencies and the community about issues, options, tensions, tradeoffs. Several key issues are discussed separately below	HBRC, HDC, B2R	High, Ongoing
Progress, priorities, conflicts and trade offs	<p>Identify potential conflicts between short-term repairs and long-term objectives</p> <p>Regular meetings between senior council staff and community representatives, with technical advisers</p> <p>Decide what outcomes to disseminate and what remain confidential</p>	Councils, B2R	High

Mātauranga

2. Understanding our changing landscapes

Cyclone recovery is currently the main focus for the community. The Cyclone Gabrielle **abruptly** changed the landscape (hillslopes, streams, floodplains, lakes, wetlands). The community seeks to **understand what changes have occurred** and **how councils have quantified the changes**. We are hearing that the community wants to see work being done immediately but there are conflicting views in the community about what remedial actions should be undertaken (examples are outlined below in the sections addressing roading, flood prevention and Te Mana o te Taiao). The community also wants to understand how councils are undertaking or planning restoration that **increases resilience to climate change**, rather than simply re-building what was present pre-cyclone because that risks disasters in the future. This sentiment is widely expressed but **there are concerns that 'business as usual' prevails**.

There is concern in the community that without a good understanding of the catchment as a whole and a 'vision' for the future that remedial actions will focus on single issues, may have (unintended) adverse consequences, be undertaken piecemeal, and see scarce resources wasted. Many in the community do not have a good understanding of the complex interactions that occur within catchments which leads to issues being addressed in isolation.

Also there is a not a clear 'vision' for the catchment to guide decision making. This stems, in part, from the difficulty in balancing the economic, social, and environmental needs. Communication and meaningful discussion to identify people's differing 'visions' and agree trade-offs are key. The B2R group feels it has a role to play but **'buy in' is needed from the community, councils, and other agencies**, as set out in the Communications section.

The holistic view and the innate understanding of the links between healthy ecosystems and community wellbeing that mana whenua bring is vital. Mātauranga Māori is not just understanding the history of an area – its historic flow pathways, vegetation, bird and aquatic life. It is the connections between all of these things and how, together, they enhance the land, air and water, with flow-on effects on community wellbeing. If we understand this connectivity it will help us better understand the current state that the land and waterways are in and help us identify remedial actions.

In that way, Mātauranga Māori and western science fit together especially when addressing environmental health and its role in community wellbeing and **both are needed to help create a vision for the catchment** and for helping achieve it. The knowledge of mana whenua, intergenerational farming families and the more recently settled landholders and families who bring expertise and a commitment to the area will help us get our bearings and provide the solutions to the issues that the community is facing.

The regional council – in particular – has a critical role to play in providing the data and analysis that the community needs to make good landuse decisions. B2R has had an initial conversation with the Council Science Team lead and wishes to be part of identifying what science is done in the

future. We acknowledge the work that is underway (LiDAR and review of erosion control effectiveness) and urge the council to make sure that research and communication is done in a way that is relevant to landholders. With new regulations (such as Freshwater Farm Environment Plants) approaching, it is critical that Council science programmes support these plans effectively so that farmers can have confidence in them. Overall the science effort is needed is greater than council budgets, and we urge the council to work with mana whenua and catchment groups across the region to put forward science funding bids to central government that have been co-designed with the community.

Much of the information councils provides to the community helps raise awareness of issues. However, it often fails to meet the needs of those in the community seeking to engage in meaningful dialogue about issues, options, tensions and tradeoffs. The remit for establishing B2R was to work with the community, notably landholders, and help deliver better environmental, social and economic outcomes.

There is a great deal of valuable information in reports, books, pamphlets and scientific papers, generated by councils as well as other institutions. However, that information is poorly archived and difficult to pull together for analytical purposes, which undermines the investment in the science. The community seek improvements in council database, search engines and online interfaces for community access.

There is also the problem of collating information, presenting it in a suitable form and communicating it to the community. Some agencies provide 'how to' guides and/or run demonstration days but information about such resources can be hard to find.

Councils need to work more closely with the community to collate and disseminate often complex and sensitive information. B2R is ready to play a role here **but needs a commitment from councils to support this**. A pilot focussing on a particular issue or area (for example, Lake Rūnanga-Ohiti could be a good start).

Issue	Action	Lead	Priority
How has the cyclone changed the landscape?	Collate information being gathered (aerial mapping, LiDAR etc) on erosion, stream channels and floodplains, wetlands, and lakes	HBRC, CRIs etc	High
What do we want the catchment to be like in the future?	Meaningful debate between councils, agencies and the community about issues, options, tensions, economics, trade-offs	HBRC, HDC, B2R	High, Ongoing
Effective actions	Assess what erosion control and other practices worked well and what adjustments are needed to futureproof hillsides and waterways	HBRC, HDC, B2R	High, Ongoing
Understanding the past to navigate the future	Mātauranga Māori concerning historic flow paths, flora & fauna, māhinga kai, taonga species. Bring a holistic approach to debate about vision	Mana whenua	High, Ongoing
	Historic perspective from long-term residents/intergenerational families to inform debate about vision	B2R	High, Ongoing
What science does the community need?	Meaningful conversations with the councils to establish science priorities and programmes in the future	HBRC	High, Ongoing
Information systems	Better online interfaces and information platforms for the community to access data. Develop working relationships between specialists and the community (B2R has a role here) - see Communications	B2R, councils, MPI, MfE, DoC, Landcare, AgResearch, NIWA	Medium, Ongoing

Turangawaewae

3. Flooding, livelihoods, and ecosystem health

Lake Rūnanga and Ohiti areas

The whenua from Rūnanga through Kautuku down to Ohiti sits within a once vast wetland ecosystem, replete with taonga of plant, fish, bird, minerals, water, soils and its peoples. Dense forest dominated by Tōtara, Ngaio, Kōwhai, Kānuka, Mānuka, Kahikatea, Tī kōuka, Harakeke, Raupō and Pūrei provided shelter and put to many uses including rongoa medicines. Trees link Papatūānuku with Ranginui, providing invaluable spiritual interconnection. Cultivations were extensive and very visible to this day on the Waapu whenua at the Ohiti end of the now Lake Rūnanga. A prized paru pit used for dyes was visible until recent years also at the Ohiti end. Kiore, manu/birds and wai whenua/freshwater fish including eel, upokokaroro/cockabully-type, kawai/freshwater crayfish, kakahi/freshwater mussel were important food sources. Runanga lake has been described as “a stronghold for the rarely found matuku/bittern and very uncommon NZ dabchick”. Te roto/lake, ngā puna/springs me ngā manga/streams are essential for drinking, ablutions, fishing and agriculture.

Today, the area is also a place of farms, livelihoods, whānau, families and roading infrastructure.

Hapū long-term survival and manaaki manuhiri depends on maintaining the mauri ora/healthy state of such taonga, many of which are endangered and threatened, such as the two now rare plants, swamp nettle and floating liverwort (*Ricciocarpus natans*). Tikanga to provide a safe and healthy environment also provide a way to reduce the impacts of climate change. Taonga management for the survival and long term interests of the hapū is central to local hapū identity and the wider community. Overall Toro Waaka recommended returning the lake to wai matua Tuapapa/pure water (M Cracknell & T Waaka, 1992).

Over the wet summer, the lower Rūnanga lands and Kautuku were severely impacted. Then came the Cyclone, knocking these areas as well as the community of Ohiti and the farmlands and homes of Okawa sideways with extensive flooding, silt and debris. There are likely many issues at play – some of them localised, others more catchment scale - and the community is looking to the council to provide analysis that will assist in understanding these better. Some of the issues raised by the community pertain to the weir and bund. These have arisen in large part due to a lack of information and poor communication and could have been avoided through better consultation at the time of consenting and following, through ongoing maintenance and monitoring and open reporting to residents living around the lake. Wānanga hosted by Rūnanga marae and Ohiti community in October will be an opportunity for residents around and near the lake to get together and address this and other issues.

The diversion of the lower Okawa stream is another issues that has impacted on ground and surface waters, their interactions and paths. The former waterway in the Kawera-Rūnanga is one of two known water systems. Mahinga kai, resources of all kinds, have been severely affected along with

wildlife surrounding the lake. The lowering and draining of the lake and supporting water systems as well as the overall health and wellbeing of Lake Rūnanga and environs must be addressed to enable the community to plan confidently and effectively for the future.

Issue	Action	Lead	Priority
Understanding the lake and surrounding wetland/waterways	Mātauranga and elder knowledge to better understand the lake ecosystem and what has changed	Led by mana whenua and community, with support from B2R	Medium
	Analysis of the lake – including any changes to the lakebed; surrounding vegetation to identify factors that may be causing flooding and sedimentation of the lake Wider catchment-scale flow, sediment, nutrients, pest species	HBRC, Fish and Game alongside mana whenua and community HBRC, other experts	Medium
Understanding the impacts of the weir at Lake Rūnanga	Wānanga hosted by Rūnanga Marae and Ohiti with the community and Fish and Game and HBRC	B2R	October 2023
Purposing esplanade reserves for erosion control, biodiversity and to reduce flooding risk: The council has a number of streamside and lakeside reserves that could be used to reduce flooding risk, planted for erosion control and to improve water quality and enhance biodiversity	1. Actively work with the community and the Hawke’s Bay Regional Council on reducing flooding to the Rūnanga and Taihape Road community by purposing management of the Shanley Road Esplanade Reserve to reduce flooding and improve stream health	HDC	Medium
	2. Review all esplanade and lakeside reserves in the area and their potential to provide these services	HDC	Medium

Health of the lake	Compilation of historic analysis – including oral histories - and monitoring of the lake into an accessible online interface	HBRC	Medium
	Monitoring and analysis to support better land use decision-making	HBRC	Ongoing, long-term
	eDNA testing to understand presence of species in the lake	B2R	October 2023

Turangawaewae

4. Okawa, Waitio and other waterways

Issues

The community is concerned about the following issues:

- The amount of debris in the Okawa and Waitio risks making the new flow pathways permanent and people feel unsafe about the impacts of further flooding. Regional council has yet to detail remedies to the community.
- The Okawa stream is not currently part of the regional flood control scheme, yet has suffered three major breaches to stopbanks that landholders are having to deal with on their own.

Solutions

These are intimately linked with other issues identified above (flooding of critical road access and farms) A mix of engineering and nature-based approaches will be needed as the community wants flood protection actions to be consistent with the health of the streams. Repair of the stopbanks along the Okawa are an immediate priority, however as the Okawa is not part of the Regional Flood Protection Scheme, the cost and effort is currently borne by local landholders (the Lowrys, Dorwards and Cornes). Given the impact that Cyclone Gabrielle has had on these landholders and the recovery they are shouldering, the burden of repairing the stream stopbanks is significant.

Actions that the community wants to see explored and/or pursued are:

- Remove debris from the Okawa Stream where it poses a future risk to flooding and damage to infrastructure
- Widen the streambed along Shanley Road so that the river is meandering and has a wider berth in high flow
- Assess willow and poplar on Okawa above Rūnanga and where they are contributing to flooding and impede flows, remove and replace with strategically placed native plants
- Add shingle to the lowered stream beds for mahinga kai to return
- Complete the removal of silt from under the "White Bridge" on Taihape Rd
- Undertake a catchment-wide investigation of hydrology and flow to increase resilience in the face of climate change (as discussed in 5 and 8).

Issue	Action	Lead	Priority
Ensure Okawa and an understanding of it is factored properly into planning	Give proper recognition to the Okawa Stream in council planning documents to help provide a framework to address the issues that the community has been wrestling with for some time	HBRC	High
Flood prevention	Identify issues that are causing or compounding flooding and priority actions that can have immediate, positive impact: clearing willows and other vegetation causing issues	HBRC, with community	High
	Include the lower stretches of the Okawa-Ohiwia in the regional flood protection scheme	HBRC	Medium
	Examine the cost-effectiveness of reinstating stopbanks along the Okawa to prevent future flooding of strategically important assets (e.g., the road and the Dorwards' farm along Shanley Road from the bridge down)	HBRC	High
	Assess the potential for spillways/ conduites (e.g., along Rockit Orchard) to act as temporary ponding areas that reduce peak flows during floods	HBRC	High

Turangawaewae

5. Protecting Critical Access Routes from Future Flooding

Taihape and Ohiti roads are lifelines for the community: they are the only routes connecting Napier and Hastings with B2R communities upstream from Ōmahu. When those roads are closed, essential workers can't get to/from town and people with health issues can't access healthcare.

The community reports that the Okawa Stream has flooded roughly once every 1-2 years in the past but has flooded 5 times this year. The worst affected areas upstream from Ōmahu are the Taihape Road in the vicinity of Shanley Road and Dorwards' farm, Ohiti Road and the Matapiro Crossing. The Matapiro Road bridge was destroyed and the Crownthorpe Bridge severely damaged during the cyclone and are currently being repaired. There are concerns about the integrity of several bridges on Taihape and Ohiti roads and across the Ngaruroro River at Fernhill.

The recent RD9 Community Newsletter '2023 - Winter Preparedness' from the Hastings District Council reminds the community that rural roads, bridges and culverts in some places are '...one significant rain event away from becoming compromised...'

In the short term the community has called for better communications when roads are flooded, and advanced warning about possible flooding. Suggestions include: easily accessible and up to date electronic signage, information about alternative routes, and cell phone alerts; static road signs (e.g., 'Detour', 'Residents only' and 'Road Closed') proved inadequate immediately after the cyclone. Accurate information should be circulated through the local Facebook pages (B2R, Piringa Hapū and RD9).

The community wants to be directly involved in medium-term planning to address road closures due to flooding. It is accepted that the problem is complex involving analysis (likely involving modelling) including rainfall-runoff; stream flow routing; historic flood pathways; stopbanks, spillways and ponding areas; and lake level controls. The community feels that councils have not engaged in a meaningful way with them when road closure due to flooding has been raised with them several times in the past.

Issue	Action	Lead	Priority
Action to address roading hotspots	Action to prevent future flooding of roading hotspots (e.g., the bridge below Dorward's)	HDC	High
Analysis of: Historic flood pathways	Analysis of historic topographic information (aerial photos, newspapers, flooding reports, oral history, Mātauranga Māori)	HBRC/HDC	Medium
Flooding frequency and impact	Frequency and duration of road closures. Economic, social and medical impact	HBRC/HDC	Medium
Historic and current topography	Collate historic floodplain, stream channel wetland and lake topography, and recent LiDAR surveys. Re-fly river corridors (e.g., blue-green LiDAR) where necessary	HBRC/HDC	Medium
Modelling flood flows	Account for climate change impacts on rainfall-runoff. Investigate engineering interventions (e.g., spilling peak flows into ponding areas or relict flood pathways, lake level controls, widening floodplains)	HBRC/HDC	Medium
Social and economic analysis of options	Consider use of floodplains for flood storage (winter) and pasture (summer), flexible lake level control and environmental co-benefits for rivers and lakes	HBRC/HDC	High

Turangawaewae

6. Repairing damaged roads

The community expressed concerns that the maintenance of rural roads had been neglected pre-cyclone citing issues with roadside drains, an increased wear and tear from greater heavy traffic and potholes left unrepaired or badly repaired.

Cyclone Gabrielle damaged roads, culverts and bridges throughout Hawkes Bay. The community understands the need for, and supports, ongoing repairs to high priority bridges (e.g., Tutaekuri at EIT, Matapiro Road and Crownthorpe) and roads. However, they expressed concerned that:

- Immediately after the cyclone Council placed restrictions on community initiatives to clear minor slips, remove debris and fix potholes.
- Since the cyclone, repairs on rural roads appear to have been poorly targeted and undertaken in a piecemeal and inefficient manner.
- Contractors have been poorly supervised with examples of multiple trips to work on the same (often small) jobs; larger, more urgent jobs being by-passed.
- There has been an apparent lack of coordination between regional and district councils on repairs (including drainage work on Swamp Road).

The community identified several 'black spots' where they consider there is a high risk of serious accidents (including undermining on Crownthorpe Settlement Road), or where structural damage could result in another flood closing roads for a long period (including Taihape Road bridges at Dorwards and Pukehāmoama, and the Ngaruroro Bridge at Ōmahu-Fernhill).

While the community understands that the region is facing a virtually unprecedented multi-year repair schedule that is dependent on funding from outside parties, it is concerned that communication with councils has been patchy and it is difficult to get Council to respond when pressing problems arise.

We acknowledge the HDC response to a letter from B2R setting out the community's concerns about the lack of information on the rural road network and urging greater visibility so that the community knows that road damage to the roads they rely upon is noted and tagged for repair. We understand that council staff are working on a dashboard report for the community and look forward to this being released as soon as possible.

There are some issues that the community itself needs to address but needs the District Council to assist. These include a lack of awareness, and/or tolerance or respect for rural roads and rural traffic by some community members (viz., dangerous driving). This predates the Cyclone but the risks are higher where speed limits on damaged and dangerous road conditions are not respected. Many community members have expressed concern about death traps - areas where the combination of damaged roading and flouting of speed limits could see a fatality.

Need	Action	Who needs to take the lead	Timeframes
Strategic analysis of access vulnerabilities around Taihape Road and plan to address these	Community involvement in	HDC, with community	High
Better access to councils to raise and address issues	A single point of contact. Access to staff empowered to take action.	HDC	High
Fewer restrictions on community initiatives	Council staff enabled to allow community to clear minor slips, remove debris and fix potholes.	HDC	High
Visibility over priorities and schedule for road repairs	Community-facing, live dashboard of repairs	HDC	High, In train

Tangata Ora

7. Emergency response preparedness

Many communities in the area were thrown into isolation by Cyclone Gabrielle and the breakdown in access and communications made clear that we need to be prepared to be self-sufficient and should plan for at least 3 days of isolation. Poor communications and the lack of timely, relevant information during and in the immediate aftermath of the Cyclone have been consistently identified by the community. Stark examples were the breakdown in telecommunications networks and the failure of radio stations – the only source of information for some isolated communities for days – to deliver timely, relevant information to affected regions. The community’s experience was that radio stations appeared to be focussed on the human interest drama of the Cyclone at the expense of providing affected communities needed information about hazards, roads and accessibility. Maritime-radio like programming – every hour, on the hour – would be a good start.

Many people also noted the lack of local hubs – organised central points that can quickly switch to civil emergency mode if required. They also note that concepts like “1 in a 100 year event” no longer carry the same authority or reassurance; instead people are wondering when the next one is coming and expect it to be in their lifetime, even just around the corner.

It would be easy for emergency preparedness to go to the back burner indefinitely because the day-to-day demands on people of restoring their homes and businesses are heavy. However, the community wants to do the work now so as not to be taken by surprise next time.

Broadly speaking, emergency preparedness should be led by the community because it is the community that will need to take control in the event of another civil emergency. B2R can support this process but is also looking to councils, civil defence and central government to assist where they can.

However, an issue that requires councils to lead or take a significant role to get the leverage required is ensuring that national and/or local radio networks develop a civil emergency programme commitment so that isolated communities get the critical on-the-ground information they need.

Needs	Action	Who needs to take the lead	Timeframes
Local and national communications to provide timely, relevant information to people	Communication and meeting with Radio New Zealand and relevant government officials and ministers, as required) to get undertaking on civil emergency broadcastings priorities and commitments	HBRC, HDC, Civil Emergency B2R, as required	High
Community Communication, Networks Equipment	Develop plan to formalise these B2R, Piringa Hapū, RD9 Facebook and email channels	B2R and local volunteer fire brigade and schools B2R, RD9 Facebook	Before end 2023
Maintain and/or establish strategically located hubs (such as Pukehāmoamo School; Rūnanga, Matapiro Hall and Fire Station; Sherenden School; Waiwhare; Otamauri Playcentre; Forestry Camp); Ohiti / Waitio	Convene meeting with existing and potential hubs to assess current capability and what equipment and planning is needed	B2R, local volunteer fire brigades and existing hubs, with support from Civil Defence and councils	Before end 2023
Establish critical community needs and skills	Develop voluntary registers of: <ul style="list-style-type: none"> • medication needs and life threatening conditions (noting data privacy considerations) • local skillsets and equipment needed in an emergency 	B2R. Matapiro and Waiwhare Volunteer Fire Brigade, local JP or GP (for medicines)	Early 2024
Build community capacity to respond	Recruitment drive for rural fire and emergency	Matapiro and Waiwhare Volunteer Fire Brigade Supported by B2R, RD9 Piringa Hapū facebook and other comms channels	TBC

Te Mana o te Taiao

8. Health of waterbodies and the land

B2R was formally established just days before Cyclone Gabrielle hit, for the purposes of: working with landholders and mana whenua to seek ways to reduce sediment, nutrient and pathogen runoff and improve ecosystem health in the catchment including its streams, wetlands and lakes; and fostering community collaboration and communication; and economic and social wellbeing. The cyclone necessitated a change in focus to support recovery and rebuild but in ways that are consistent with healthy ecosystems, economic and social wellbeing. As one community member said '...let us not make decisions in haste now that shut the door to better actions later on...' This tension between recovery and resilience is real and the community is looking to council to support decision-making that takes us forward.

This will take planning with the community for the long-term, with an action plan that starts today. The following identifies some of the aspirations, concerns and priorities for the community and will form the basis of our collective planning for a resilient future where the health of Te Taiao at the centre. It is also tightly linked to other actions and priorities above (including Mātauranga – Understanding our changed landscapes).

Some in the community argue that the Okawa and Waitio streams and their issues are not given the recognition they merit in council planning and policy. For example, only one stream site within the B2R catchment (excluding the mainstems of the Ngaruroro and Tutaekurī rivers) is monitored by HBRC. This poses a challenge for B2R will be to quantify changes in the smaller streams within its takiwā as a result of natural post-cyclone recovery and remedial actions taken.

Many waterways within B2R changed during Gabrielle with stream channels often becoming deeper and wider, flood plains rising through silt and gravel deposition, banks eroding, flood plains widening, large woody debris depositing in streams and on flood plains, riparian vegetation being lost and aquatic and riparian ecosystems undergoing (largely unknown) damage.

Many in the community want to see recovery and repair that supports the health and vitality of waterways and the land.. One such approach is to allow streams to meander naturally, where possible, rather than to confine them between stop banks. Clearly stop banks are required to protect valuable assets² (e.g., Ōmahu). However, in suitable places stop banks could be moved back to provide a wider flood plain within which the river meanders naturally. In addition to reduced flood levels, environmental co-benefits are cited including for stream macroinvertebrates and fish. An associated action is to reduce the extent (but not eliminate) of gravel extraction to build up in the (wider) flood plain and is the focus of an international research project with scientists at by Lincoln Agritech and NIWA being the New Zealand science lead, integrated with Mātauranga Māori involving

² The question then arises what is a 'valuable' asset that merits protection behind flood banks. Does pasture on a floodplain merit protection or can it serve as a flood ponding area in winter with summer grazing? Do orchards merit protection from major floods (or droughts) when routinely trees are replaced periodically?

Ngāti Kahungunu Iwi and Te Taiwhenua o Heretaunga. They are currently investigating this potential along the Ngaruroro River near Ōmahu-Fernhill. The cited benefits are increased water storage in the river channel and aquifer recharge.

The lower Okawa and Waitio streams lie on flat land and are connected to lakes Rūnanga and their associated wetlands. Since European occupation land drainage, flood banks (and recently weirs) have changed flow pathways through these connected ecosystems. Mana whenua cite problems with sediment deposition, water level fluctuations, water clarity, nutrients and pathogens resulting from altered flow patterns which have had adverse effects on taonga species, mahinga kai and spiritual values.

Riparian vegetation suffered severe damage in many streams during the cyclone, as detailed in the HBRC survey of landholders (which estimates up to \$48M in lost or damaged riparian plantings for the 430 participating landholders alone). Landowners who invested time and money in planting riparian strips question whether they should be restored given the possibility of future damage, especially if climate change increases the severity of rainfall events. The counter argument is that well planned fencing and planting of riparian areas with suitable species, while not a 'silver bullet', has environmental benefits including interception of runoff, shade (cooler water and fewer aquatic plants) and improving terrestrial and aquatic habitat (macroinvertebrates, fish, adult insects, birds). A strong case can be made for restoring riparian vegetation taking into account lessons learned from cyclone damage about the 'best' designs for different streams.

Te Mana o te Wai – which is at the foundations of freshwater regulation - is about restoring and preserving the balance between the water, the wider environment, and the community. Te Mana o te Wai also protects Te Mauri of te Wai where water has mauri, a vitality or essence that supports all life. The mauri of water affects the mauri of people, reflecting the health of water. The incoming Freshwater Farm Plans are also an opportunity to build back better and enable some efficiencies for landowners. For example, the council should provide guidance to futureproof repair and recovery actions by landholders by meeting/pre-empting NPS Freshwater requirements. This is critical to: 1. avoid unnecessary economic and emotional burden for landholders and 2. build strong working relationship between the council and farmers.

Need	Action	Who needs to take the lead	Timeframes
Greater recognition by Councils of the importance to the community of waterways within the B2R catchment, in particular but not limited to the Okawa	Prepare Action Plans in conjunction with the community to address important environmental issues	HDC, HBRC	Medium
Exploring how to work better with river systems by naturalising flood protection	Benefits/disbenefits/costs of 1. wider floodplains 2. less gravel extraction 3. water storage (wetlands, ponding areas, trees) 4. riparian restoration	HBRC HDC	Medium
Restoration of lower Okawa-Waitio-Rūnanga-Hurimoana-Oingo system	Mana whenua history and vision Objectives for restoration Restorative actions	HBRC HDC	High
Explore how to build long-term supply of low cost, eco-sourced native trees to support revegetation working with local nurseries to deliver Expand HBRC scheme for providing pole seedlings		B2R with other Hawke's Bay catchment groups, councils HBRC	High
Guidance to landholders to support recovery actions that will be consistent with incoming freshwater regulations		HBRC	High, ongoing