

Climate Resilience & Flood Protection Programme

PROGRESS REPORT

Our regions are proud to work shoulder-to-shoulder with Kānoa in adapting our communities to meet climate change challenges.

With these challenges come more extreme weather events and flooding. The impact of flooding is often devastating to our communities and our local economies, affecting critical road, rail, air and built infrastructure, productive agricultural land, as well as the lives and livelihoods of our whānau.

At this mid-way point of the Climate Resilience programme, we are pleased to reflect on the progress made thus far and to see the co-investment we have made into these 55 projects has resulted in the acceleration, or in some cases, has enabled altogether, these critical flood protection works which together provide resilience to our many river communities.

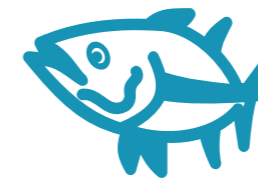
\$312M HAS BEEN CO-INVESTED BY KĀNOA AND OUR REGIONAL AND UNITARY COUNCILS INTO **55 PROJECTS** ACROSS AOTEAROA



Programme Achievements

catchments with protected fish-safe pathways created

5,297 ha*



wetlands created or enhanced

835 ha*

community resilience across

8,642 ha*

the equivalent land area of more than 10 Kaitiāia's



653*

local jobs created



\$50.0m

estimated flood damages saved in Kaitiāia alone

Kānoa distributed funds***

\$107.03m



\$90.0m

of Kānoa funds spent***

\$47.1m

council funding/co-investment spent**

local business contract value

\$117,184,773**

māori business contract value

\$8,429,984**

other business contract value

\$11,864,865**

* BASED ON PROJECTIONS ACROSS ALL PROJECTS TO COMPLETION ** AS OF AUGUST 2022 ***AS AT END-SEPT 2022.

WAIMAKARIRI RIVER, CANTERBURY - McIntoshs bend Flood Protection



Resilient River Communities



Te Uru Kahika

Regional and Unitary Councils Aotearoa



Kānoa Regional Economic Development & Investment Unit

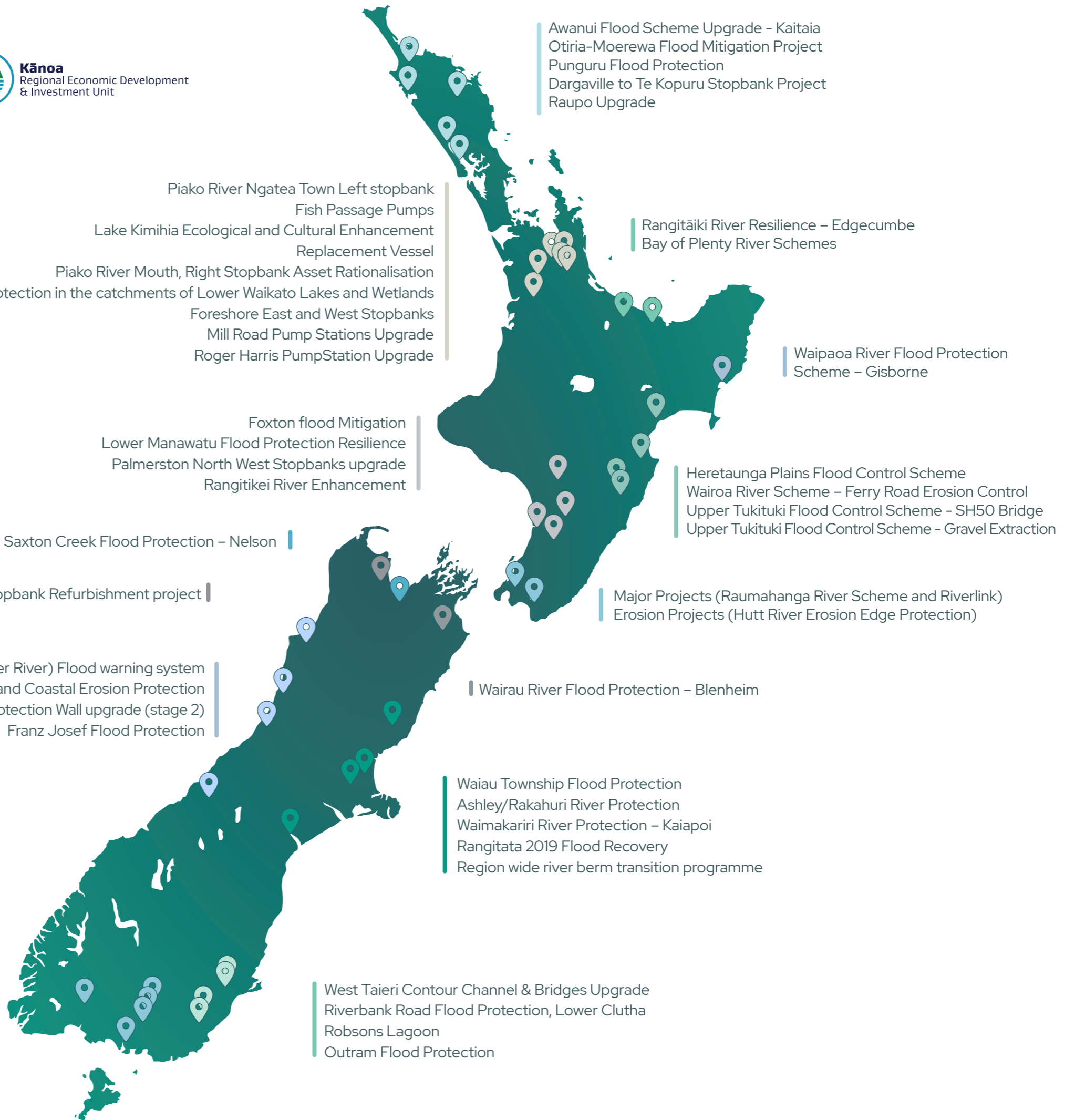
\$312M

Total Projects 55



Minister Stuart Nash and Councillor Chad Tareha officially open stopbank work with a sod turning and karakia along Tūtaekuri in Taradale Napier.

Left to right: Napier City Councillor Chad Tareha, Minister Stuart Nash, Regional Councillor and Chair Hinewai Ormsby, Te Kaha Hawaikirangi, James Palmer



COMMUNITY PROTECTION ALSO RESTORING TE MANA O TE WAI

NORTHLAND REGIONAL COUNCIL

Otiria Spillway works will reduce flooding to Otiria and Moerewa by restoring the natural river flow path previously cut off by roads and rail.

The challenge

The communities of Moerewa and Otiria have suffered three major flooding events in the last decade. Local housing, Otiria Marae and Te Rito Marae, the local Otiria Rugby Club, a retirement village and both towns have been at risk.

The programme

Lower Spillway works: \$400,000
Feb - Apr 2022

Construction of 60 metre-long bridge: \$3,900,000
Jan 2023 to Dec 2023

Upper spillway and stopbank: \$700,000
Dec 2022 to Dec 2023

Iwi partnership

- Working together - tangata whenua and local government agreeing solutions.
- Sharing kai, meeting in local venues, participating in tikanga.
- Karakia / blessing led by tangata whenua.
- Cultural induction - contractors to local whānau / hapū.

Restoring Te Mana o Te Wai

- Spillway to skim flood flow from Otiria Stream and restore the natural flow that has been blocked by roads and railroads.
- Replacing existing bridge with a new bridge to handle a 1:100 year and climate change flood event.

Local input and engagement

- Local knowledge integrated into project plan.
- 10 community roopu engaged and participating.

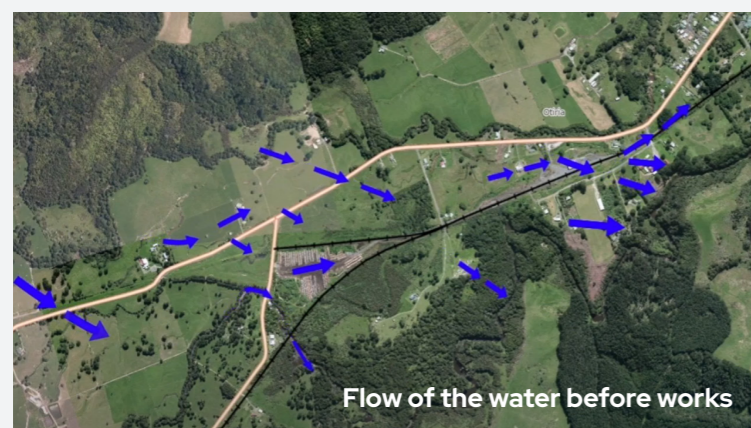
Collaboration

Successful collaboration between:

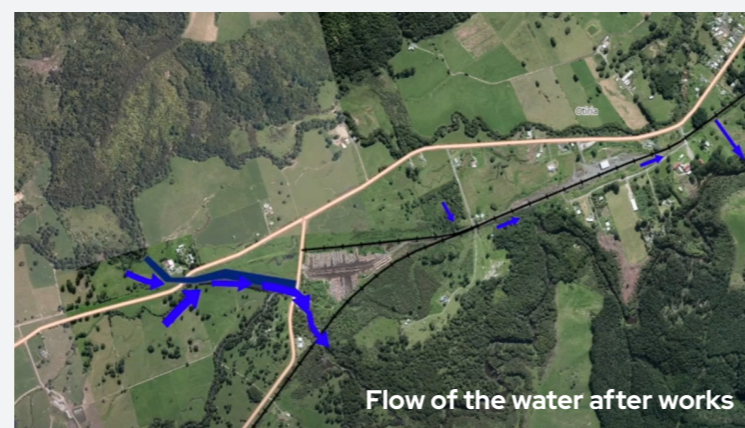
Tangata whenua, landowners, Kaitiaki, Willow Jean Prime, NRC Project Team, Councillors, Far North District Council, Haigh Workman Engineers, KiwiRail, KCL - Stage 1 contractors.

Project funding

Kānoa \$2.8m | NRC \$2.2m | Total \$5m



Flow of the water before works



Flow of the water after works

OTIRIA SPILLWAY

Location: Otiria, Moerewa, Northland

Key Benefits

- ✓ **Protection:** reducing risk to flood-prone marae, local rugby club, local housing.
- ✓ **Reducing risk:** reducing severity of a typical flood by ~75%.
- ✓ **Collaboration:** collaborative and iwi partnership approach to mahi.
- ✓ **Social benefits:** employing local rangatahi, whānau/hapū.
- ✓ **Whakawhanaungatanga:** establishing relationships - council, whānau/hapū, contractors, wider community.
- ✓ **Cultural assessment:** taonga species monitored at local event with NRC freshwater scientists and whānau/hapū.
- ✓ **Events:** rubbish day, cultural assessment, diverse attendance at cultural induction days.
- ✓ **Education:** kaitiakitanga training, learning what makes the awa thrive, monitoring.
- ✓ **Enabling affordability:** many communities cannot absorb increased cost of rates to pay for new or upgraded flood protection schemes. Contribution by central government has enabled increased resilience to climate changes and protection against flooding.



the project has... "shown us what a true partnership looks like from a hapū mana whenua point of view when referring to Te Wakaputanga 1835 & Te Tiriti o Waitangi 1840."

- Local kaitiaki

Wiremu Keretene



Resilient River
Communities



Regional and
Unitary Councils
Aotearoa



Kānoa
Regional Economic Development
& Investment Unit

FLOOD PROTECTION ACROSS ALL OF GISBORNE

GISBORNE DISTRICT COUNCIL

The challenge

Climate change is the most significant long-term issue facing the Gisborne region. In 2020 the government declared a climate change emergency, recognising the need for preparation for the impacts of a warming climate with more erosion, more flash floods and wildfires likely in the Gisborne region. Impacts include expecting sea level rise, coastal erosion and floods affecting homes and recreation.

Flood protection keeps Gisborne's people and community safe from its rivers breaking their banks in heavy rains and ensures that its important horticulture, viticulture and farming assets are protected from the effects of climate change.

Project summary

- Long term climate change resilience programme.
- Approx 64km of stopbanks being widened and heightened along the Waipaoa River.
- Work began in 2019 and is scheduled for completion in 2030/31.
- Some 10,000ha of fertile floodplain land and Gisborne City will be protected by this mahi.
- The Waipaoa Flood Control Scheme is deemed one of the council's most valuable assets.

The programme

Completed work

- **February 2019 to March 2022:** 19.6km stopbank construction.
- **March 2022:** 1km further stopbank construction and sheet piling for construction of the Spillway at Wi Pere Trust begins.
- **April 2022:** 3km further stopbank construction Whitmore Road and Kaitaratahi Hill.

Current and future work

- **September 2022 – January 2023:** complete flood mitigation work on Wi Pere Trust land at 864 – Lavenham Rd (western side) and further construction between Whitmore and Caesar Road – 1.2km (eastern side).
- **January 2023 – a significant milestone:** all stopbanks upgraded on eastern (city) side. 25km of stopbanks successfully upgraded.
- **September 2022 – June 2023:** construction between Waipaoa River mouth and Te Arai Stream (western side) and Te Arai Stream to just downstream of Matawhero SH2 Bridge (western side).
- **October 2023 onwards:** progressively upgrade the western side until complete – from Matawhero SH2 Bridge upstream.
- **2030/31:** Waipaoa Flood Control Scheme fully upgraded and operational on both sides.

Project funding 2020–2023

Kānoa \$7.5m | GDC \$6m | Total \$13.5m

Planning, investigation and design is also continuing for future stopbank upgrade areas, all of which are located on the western side of the Waipaoa River.

Funding provided by Kānoa helped to accelerate this programme of work.

Total project likely cost 2019 – 2030/31: \$32–35 million

WAIPAOA RIVER FLOOD CONTROL UPGRADE

Location: Waipaoa River, Gisborne

Key Benefits

- ✓ **Local employment boosted:** two local contractors have combined employed 12 new staff as a direct result of this project.
- ✓ **Climate change adaptation:** increasing the level of flood protection to the Poverty Bay floodplains and Gisborne City to a 100-year return period accounting for climate changes out to the year 2090.
- ✓ **Protection:** for housing, businesses, local and state highway roads, airport, hospital, horticulture, viticulture and farming assets.
- ✓ **Safeguarding:** economic development and wellbeing.
- ✓ **Contributing to community infrastructure:** 8km long cycle trail along Waipaoa River mouth to Matawhero SH2 Bridge. Cattle stop ramps, signage and squeeze gates installed.
- ✓ **Care for the environment:** borrow sites for stopbank fill have the least environmental impact on river ecology, fish passage and spawning. Cultural and archaeological discovery protocols in place.
- ✓ **Money flowing back into the local economy:** to businesses engaged for maintenance and mechanical work, steel work, engineering, tyres, right down to the helicopter company laying grass seed.
- ✓ **Enabling affordability:** many communities cannot absorb increased cost of rates to pay for new or upgraded flood protection schemes. Contribution by central government has enabled increased resilience to climate change and protection against flooding.

AVERTING \$50M* DAMAGE TO KAITĀIA

*estimated

NORTHLAND REGIONAL COUNCIL

The challenge

After the significant flood of 1958 (pictured below), a comprehensive upgrade to this flood protection scheme was undertaken, including the construction of stopbanks and the Whangatane Spillway enlargement. Further improvements have been required, including to meet the projected impacts of climate change.

The programme

- 8-year programme condensed to 3 years due to Kānoa funding support.
- \$15.5m (total value) of spillways, stopbanks, floodwalls.
- Extensive improvements to stabilise stopbanks allow the river to safely carry 15% more floodwater.
- Emergency spillway greatly reduces risk to life, property.
- Protecting public safety through repairs and maintenance.

- Pictured below: collaboration with FNDC project where shared cycle/walkway was installed along the river as well as a play area and community BBQ with shade sails as part of a separate Kānoa-supported project.

Project funding

Kānoa \$8.5m | NRC \$4.5m
Local Community \$2.5m

Project duration

3 years

Jobs

40

There is the potential for investment in further work to adapt to climate change in the lower reaches.

FNDC's new community BBQ area at Alan Bell Park is protected by the Awanui Scheme Upgrade. 



Quite the contrast: In 1958, Kaitiāia was inundated with floodwater and up to 1m standing waves. The August 2022 flood event which was 40% bigger than 1958 saw no flood water in Kaitiāia.



FNDC's new cycle and walk path adjacent to Awanui scheme works. 

AWANUI SCHEME UPGRADE

Location: Kaitiāia, Northland

Key Benefits

- ✓ **\$50m* in damages saved:** despite not yet being completed, works have already saved an *estimated \$50m worth of damage to Kaitiāia in a 1:100 year storm event on 18 August 2022.
- ✓ **Protection upgrade:** to urban Kaitiāia in 1:100 year flood, the surrounding area from a 1:20 year flood, to adapt to projected impacts of climate change. Before Scheme upgrade LOS 1:30 Kaitiāia and 1:10 rural.
- ✓ **Enabling affordability:** many communities cannot absorb increased cost of rates to pay for new or upgraded flood protection schemes. Contribution by central government has enabled increased resilience to climate change and protection against flooding.
- ✓ **Iwi partnership:** including planting days arranged by Oturu Marae with around 45 attendees over two days and arrangements for Oturu and Te Paatu Marae to maintain planting.
- ✓ **Council collaboration:** Northland Regional Council and Far North District Council working together, including planting collaboration and installation of community assets (part of another Kānoa-supported project). FNDC's assets include 2.2m wide shared cycle and walking loop along the awa, as well as play area and community BBQ nearby. Bench seats, outdoor exercise equipment and solar lighting also to be installed riverside, adjacent to current works - all protected by the Awanui Scheme Upgrade.
- ✓ **Community planting day:** marae-organised planting day with two local primary schools, over 45 attendees over two days and representation from Oturu, Te Paatu, Te Rarawa with NRC sponsoring trees, kai.
- ✓ **Social benefits:** employing 40 people including local rangatahi, whānau/hapū.



Resilient River Communities



Regional and Unitary Councils Aotearoa



Kānoa Regional Economic Development & Investment Unit

