



Waioeka-Otara Rivers Scheme Advisory Group Meeting

**Wednesday 28 September 2022
10am**

**Ōpōtiki Golf Club
14 Fromow Road
Ōpōtiki**

Waioeka-Otara Rivers Scheme Advisory Group Meeting

Wednesday 28 September 2022 at 10am

Agenda

- 1 Welcome**
- 2 Apologies**
- 3 Notes of previous meeting held 6 April 2022**
- 4 Matters arising from previous meeting**
- 5 Scheme annual report 2021-2022**
- 6 Capital programme 2022-2023**
- 7 Maintenance programme 2022-2023**
- 8 Asset management planning**
- 9 General business**
 - a. Gravel management update
 - b. General business report
 - c. Communications update – webpages demonstration
- 10 Public forum**
- 11 Meeting closure**

Notes of the Waioeka-Otara Rivers Scheme Advisory Group meeting held at Ōpōtiki Golf Club, Opotiki, on Wednesday 6 April 2022, commencing at 10:00am

Chair: Councillor Bill Clark

Advisory Group: Barry Hennessey, Jessica Wiseman, Stace Lewer (Ōpōtiki District Council), Councillor David Moore (Ōpōtiki District Council), Dean Petersen

BOPRC Councillors: N/A

BOPRC Staff: Chris Ingle (General Manager Integrated Catchments), Kirsty Brown (Rivers and Drainage Assets Manager), Annalees Craig (Acting Asset Management Coordinator), Bruce Crabbe (Rivers and Drainage Operations Manager), Tony Dunlop (Area Engineer), Mark Townsend (Engineering Manager), Paula Chapman (Project Manager), Andy Dixon (Treasury and Tax Specialist)

Public: John Galbraith (Project Director, Ōpōtiki Harbour Development), Maude Maxwell

Apologies: Councillor Iti, Kim Douglas, Robbie Petersen, Dave Wilson, Steve Nelson, Tania Te Whenua, Laura Albrey (BOPRC Communications Partner)

1 Welcome

Councillor Clark opened the meeting. Kirsty Brown introduced Annalees Craig (Acting Asset Management Coordinator).

Kirsty Brown gave a Health and Safety briefing, including a reminder of the COVID-19 requirements for the meeting and within the venue.

2 Apologies

Apologies were received as recorded above.

3 Notes of previous meeting held 22 September 2021

RESOLVED

That the Waioeka-Otara Rivers Scheme Advisory Group:

Confirm the notes of the meeting held 22 September 2021 as a true and correct record.

**Hennessey/Petersen
CARRIED**

4 Matters arising from previous meeting

Kirsty Brown addressed the completed actions from the 22 September 2021 meeting.

5 Te Ara Moana a Toi, Ōpōtiki Harbour Development Project

John Galbraith spoke to his report and provided a presentation on the progress of the Ōpōtiki Harbour development.

Key points:

- Construction of the harbour walls commenced in May 2021 and to date over 60% of each wall's length has been completed.
- HEB Construction are confident of completing walls construction by December 2022 and are targeting completion of dredging and river closure by July 2023. Official opening of the Harbour planned for August 2023, with further work continuing, reclaiming stockpile areas and demobilisation.
- The project has provided and attracted very favourable local media attention throughout the year. HEB Construction initiated a community project for schools, supplying a 2-tonne hanbar unit to each of 19 local schools for them to paint in their own styles. The units will be placed in visible locations on the walls and in amenity areas.
- The project has been consulting with community and iwi regarding public access, amenities, and opportunities for including cultural elements in the finished design.

Questions/Discussion:

- Councillor Clark queried the use of the sheet piling which John advised was to retain the integrity of the wall.
- Councillor Clark also questioned how the project was tracking budget wise, which John answered by saying that at present they were tracking below budget.
- John commented how the ownership of the structure has not yet been determined. Currently, the structure is owned by Crown Regional Holdings Ltd but it will be passed on to an ongoing entity at some point.
- Dean Petersen asked about the dredging once the project was completed and queried whether the river flow would assist. John advised that investigation was underway regarding funding of ongoing dredging and commented there was sufficient river flow to mobilise the sediment. It is most likely ongoing dredging will be required to move sand from one side to the other to replenish the beach.

6 Engineering update

Mark Townsend spoke to his report and presentation.

Key points:

- The Waioeka-Otara stopbank capacity review is now entering the optioneering stage with phases 1 and 2 of the geotechnical investigation now complete. Phase 3 of the geotechnical investigation which involves analysis of the geology, and historical data has been delayed. Delivery of this final phase is now due mid-June 2022. Engagement on options will occur with iwi, the advisory group, Ōpōtiki District Council and the community.

Questions/Discussion:

- Councillor Clark asked how the error was picked up from the consultant. Mark advised that the staff peer review of the draft report picked up that one of the model runs had included the climate change effects twice.
Maude Maxwell asked who is coordinating the optioneering. Mark Townsend advised that Katalin Maltai will be leading this stage.

7 Operations update

Bruce Crabbe and Tony Dunlop spoke to the report in the agenda pack highlighting a range of operational and maintenance works undertaken within the scheme.

Key points:

- Numerous small to medium flood events over the period have pushed some jobs back a bit, but largely on budget at this stage.
- Ongoing cooperation with Ōpōtiki District Council in particular urgent works for the ODC bridge at the Tutaetoko Stream outlet into the Otara River.
- Collaboration with hapū groups, with Maude Maxwell and the Ngāti Ira group has been very productive.
- Working with Eastern Region Fish and Game, and the Department of Conservation (DOC), mainly to do with the fish habitats and the bird life.
- Paula Chapman and Tony Dunlop provided an update on gravel management, noting that staff have been working closely with Ngāti Ira and Otara River Mana Whenua Collective.

Questions/Discussion:

- Members had concerns over where the landowner comes into the communications noting that there is talk with the iwi/hapū but often not with the landowners. Tony advised that often we deal with farm manager on the site, and effort is made to consult with everyone.

8 BOPRC Collecting Rates

Kirsty Brown and Andy Dixon spoke to the agenda report and provided a presentation.

Key points:

- From August 2022 the BOPRC will start collecting its own rates. Priority reason for the change is to become more transparent and accountable for the work that BOPRC does.
- It has been estimated that there will be a saving of \$6 million over 10 years by moving to self-collection.
- This will also enable Council to control remission and postponements available to ratepayers, penalty schedules and payments plans/direct debits to spread payments.

Questions/Discussion:

- Councillor Clark asked the question if you can only set up quarterly payments. Andy Dixon replied that ratepayers can set up any payment plan they require.

- Members questioned whether there would be a discount for paying upfront. Andy advised that there will not be an upfront discount as this would mean that extra funding would fall on to those who struggle to pay.
- Stace Lower queried assessing rates affordability, pointing out that rates for Opotiki are amongst the highest in Bay of Plenty. Andy Dixon advised that an independent advisor has been doing assessments across the entire region, noting that level of rates is dependent on the work that is done throughout the year. Bruce Crabbe noted that Ōpōtiki has a low population, and two troublesome rivers so unfortunately a result of this, is higher rates per capita.

9 Finance Report

Kirsty Brown spoke to the Finance Report and provided an overview of the scheme's revenue and expenditure for the six months ending 31 December 2021.

Key points:

- **External interest income** \$2,000 lower than budgeted.
- **Total revenue** was \$16,000 higher than budgeted.
- **Total operating expenditure** was \$16,000 lower than budgeted.
- Total resulted in an **operating surplus** of \$241,000.
- **Capital expenditure** was \$54,000 higher.
- **Total reserves funds** available at 31 December 2021 was \$1 million.
- The **loans** closing balance was \$4.7 million.
- The scheme's **asset valuation** as at 31 December 2021 was \$52 million.

Questions/Discussion:

- Councillor Clark queried why do we have money in reserve and what is the interest on the reserve. Andy Dixon commented that Asset Replacement Reserve is overdrawn because the internal loans for capital spend are spread over a 20-year repayment schedule whereas the depreciation is a much longer timeframe. The reason the works reserve (targeted rates) hasn't been used is due to projected targeted rate increases in the next two years. The reserve will be used to lessen the burden of those increases. The reserve receives interest rate returns on average of 3.2% which is higher than the 1.2% for the borrowing.
- Councillor Clark questioned why these numbers are not reflected in the finance report? Andy responded that the reserve funds are held in Council's wider pool of investments and the interest is distributed when received. The specific investments for this reserve haven't matured yet for interest to be paid out. An accrual should have been put through, unfortunately it was not, the interest for the full year will show in the year end accounts.

ACTION:

Andy Dixon – Finance report to reflect additional information and report back to group.

10 Community Group Updates

No community group updates were made.

11 Online Survey Feedback and Current Terms of Reference Review

Kirsty Brown spoke to her report and presentation.

Key points:

- Members feedback regarding the advisory groups was recently sought via an online survey. Results are as follows:
 - 72% strongly agree groups are working well
 - 67% strongly agree they are happy with the information received
 - 66% agreement that participation by mana whenua be welcomed.
- Improvements that are being made based on these results are:
 - Information sharing e.g. website notifications
 - Looking at the barriers to meeting attendance (travel costs, time off work etc) and how these can be removed
 - A review of the Terms of Reference (TOR).
- A working group was formed for a review of the TOR. The purpose of the review of the TOR is to:
 - Confirm that the purpose of the advisory groups remains appropriate in 2022
 - Consider how the groups might assist in achieving our Long-Term Plan strategic impact areas: Partnerships with Māori, Climate Change and Community Participation
 - Address any concerns from members on how the meetings currently work.
- The next steps are to:
 - Action feedback from advisory group members
 - A final draft of the TOR circulated to the Working Group
 - Circulate draft TOR to current advisory group members for comment
 - Present draft TOR to Council for adoption.

Questions/Discussion:

- Chris Ingle raised the question that when the treaty settlement occurs, would there be a connection between the new Kaitiaki forum and this river forum? Maude Maxwell suggested that we must wait for the Kaitiaki group to be formed and then see what happens. If the settlement goes ahead there will be changes. The Kaitiaki forum may have more interest in water extraction and wider environmental and habitat matters within the river, rather than river management for flood protection.

12 General Business

12.1 Gravel management report

Update provided in Operations section of the meeting.

12.2 General business report

Items in the general business report were taken as read. No questions followed.

12.3 Communications Item – Signing up to the Webpage

- The new river scheme webpages have been activated. This includes signing up to received update notifications including weekly works notifications. Everyone is encouraged to sign up.
- Education material will soon be launched providing information on stopbanks, seepage, floodways and floodgates.

13 Public Forum

- Mark Townsend demonstrated how to access the environmental data portal to access information on the rainfall and river levels in the area.
- Councillor Clark mentioned that local body elections will be held in October. Councillor Clark will not be running so there will be a vacancy for a regional councillor if anyone is interested or knows anyone that is interested.

Meeting closed at 12:10 pm

Action Sheet

Waioeka-Otara Advisory Group Meeting

6 April 2022

Action	Person Responsible	Completed	Comment
1. Andy Dixon to review and follow up why reserve figures and interest rates are not reflected in the Advisory Group finance report	Andy Dixon	✓	Interest from the reserves was not shown in the Finance Report to 31 December 2021. This has been corrected and the interest shows in the year end reports.

Waioeka-Otara Rivers Scheme

Annual Report 2021-2022

The purpose of this report is to provide an overview of the Waioeka-Otara Rivers Scheme operational and capital programmes and finances for 2021-2022

Maintenance programme

Maintenance works comprise activities that ensure the drainage and river flood protection networks are operational and providing the agreed level of service. These activities are programmed through the Rivers and Drainage Asset Management Plan, considering asset lifecycle and maintenance and inspection schedules.

The 2021-2022 Waioeka-Otara scheme maintenance programme was delivered generally on budget and to programme:

- Repeat fresh events in the rivers created delays to some planned works and led to 14 annual flood damage sites being required through the year.
- Gravel beach maintenance and overflow depressions have been working well through gravel extraction operations.
- Collaboration with Ngāti Ngahere and Ngāti Ira has been ongoing to agree on planned works and gravel extraction operations.
- Work continues to keep pest plants (particularly pampas and Japanese Walnut) under control along the river corridor.
- The established safety rock stockpile at Aerodrome is proving very useful and has also been used for urgent works by Ōpōtiki District Council.

Capital programme

The capital programme budget was underspent with several projects delayed, on hold or involving ongoing consultation with stakeholders.

Financial overview 2021-2022

Attached is the Draft Statement of Revenue and Expense for the Waioeka-Otara Rivers Scheme for the 12 months ended 30 June 2022.

Key points:

- **Operating revenue** was \$1,734,000 (\$38,000 higher than budget of \$1,696,000)
- **Operating expenditure** was \$2,142,000 (\$7,000 higher than budget of \$2,135,000)
- None of the budgeted **capital revenue** of \$107,000 was received as the Waioeka Restoration Proposal that was to receive CIF funding was cancelled
- **Capital expenditure** was \$138,000 (\$216,000 lower than budget of \$354,000) - with one project

on hold and others underspent.

- Total **reserve fund** opening balance of \$896,000 and closing balance of \$1,047,000 (increased by \$151,000)
- **Loan** opening balance of \$4,974,000 and closing balance of \$4,700,000 (decreased by \$274,000)
- **Asset valuation** as at 1 July 2021 of \$52.4 million

Status Report to June 2022

Key Highlights				Status Key
<p>Gravel beach overflow channel clearing work has been ongoing and these have proved to be successful for relieving pressure on erosion protection assets</p> <p>Collaboration with Ngāti Ira and Ngāti Ngahere representatives has been ongoing for planning and monitoring maintenance works and gravel extractions</p> <p>The Waioeka River capacity review has been completed</p> <p>Draft Waioeka River gravel extraction consent conditions have been developed in conjunction with Ngāti Ira</p>				<p>Project is on track = Green</p> <p>Project has some issues = Amber</p> <p>Project has serious issues = Red</p>
Project	2021-2022 Milestones	Comments	Status	
Maintenance Programme	<p>River Scheme Management and Maintenance</p> <ul style="list-style-type: none"> Duke Street pump station - lift and service the three pumps and general maintenance Memorial Park (Otara River left bank) - 120 lineal metres of rock replenishment Annual flood damage repairs Repairing high priority defects identified through asset condition assessments 	<p>The 2021-2022 maintenance work programme was completed generally on track.</p> <ul style="list-style-type: none"> Duke Street Pump Station pump servicing has been completed on all three pumps. The rivers have been impacted by multiple fresh events through the year, which has delayed the start of some planned rock replenishment works. Fourteen flood damaged sites have been repaired. Memorial Park rock work deferred to 2022-2023 due to higher priority damage from fresh events in the river. River edge erosion has been occurring in some upper scheme locations where riverbed width has historically been quite confined. Stopbank defect repair work is in progress with arborist assessments required for some of the proposed tree removals. Gravel beach overflow channel clearing work has been ongoing. These have proved successful for relieving pressure on erosion protection assets. Periodic extraction of gravel from overflow channels is required to keep them operating, and this work is usually funded by the gravel extractor. Collaboration with Ngāti Ira and Ngāti Ngahere has been ongoing to agree on planned maintenance work and gravel extractions operations. 	Green ①	
Capital Programme	<p>Waioeka Stopbank Design - the model build completed in 2020-2021 is being used to produce the capacity review. Options will then be considered to meet the agreed level of service or possible alternatives.</p> <ul style="list-style-type: none"> Capacity review completed by October 2021 Options analysis Consultation with iwi, stakeholders, and the community on preferred options Option selection Preliminary design 	<p>Capacity review is complete (completion was delayed to late March 2022 which affected other project milestones)</p> <p>Consultation phase of the project has commenced.</p> <p>Revised Budget \$177,000 Actual Expenditure \$150,000</p>	Amber ①	
	<p>Peterson-Connor Stopbank Restoration</p>	<p>Project currently on hold while other higher priority stopbank remediation areas are being investigated within the urban area.</p> <p>Revised Budget \$87,000 Actual Expenditure \$0</p>	Project remains on hold	

Project		2021-2022 Milestones	Comments	Status
Capital Programme	Gravel Consent Renewals (Waioeka and Otara rivers) - renewal of gravel extraction consents on the Waioeka and Otara rivers. Renewal applications have been submitted and discussions are underway with relevant hapū on options to strengthen their involvement.		<p>Council and Ngāti Ira have agreed to an enhanced kaitiaki (a group or individual that acts as a conservor) conditions approach to the Waioeka River gravel extraction consent and draft consent conditions have been developed alongside a Memorandum of Understanding with Ngati Ira.</p> <p>Staff continue to work with the Otara River hapū through the Otara River Mana Whenua Collective to ensure an improved understanding of Otara River gravel concerns.</p> <p>Revised Budget \$90,000 Actual Expenditure \$0</p>	Amber ⓘ
	Waioeka Estuary Restoration Proposal - proposal to purchase land within the Waioeka Floodway and transform it into an estuarine wetland.		Project cancelled because land purchase was unsuccessful	Project cancelled

Bay of Plenty Regional Council Toi Moana

Statement of Revenue and Expense: Waioeka-Otara Rivers Scheme (Draft until adopted by Council)

For the 12 months ended 30 June 2022

		2021/22		Variance		Variance comments	2022/23
		Budget	Actual	\$	Variance indicator		Budget
		\$000					\$000
Line	Operating revenue by class						
1	General rates	129	129	0	-		139
2	Targeted rates	1,361	1,361	0	-		1,401
3	External interest income	5	4	(0)	Lower		12
4	Other revenue	0	42	42	Higher	Gravel extraction revenue	
5	Investment income	201	201	0	-		212
6	Total revenue	1,696	1,738	41	Higher		1,764
			1,734	38			
	Operating expenditure by class						
7	Administration expenses	1	1	(0)	Lower		1
8	Other expenses	220	226	6	Higher		248
9	Contract work	383	334	(49)	Lower	Savings from using internal staff	379
10	Finance costs	104	99	(5)	Lower		107
11	Depreciation and asset disposal	174	152	(22)	Lower		148
12	Subtotal - expenditure	882	811	(71)	Lower		884
13	Net overhead charges and recoveries	1,253	1,331	78	Higher	Higher staff time	517
14	Total operating expenditure	2,135	2,142	7	Higher		1,402
15	Total operating surplus (deficit)	(439)	(404)	35	Overspent		362

Bay of Plenty Regional Council Toi Moana

Statement of Revenue and Expense: Waioeka-Otara Rivers Scheme (Draft until adopted by Council)

For the 12 months ended 30 June 2022

		2021/22		Variance		Variance comments	2022/23
		Budget	Actual	\$	Variance indicator		Budget
		\$000					\$000
Capital revenue by class							
16	Capital funding	107	0	(107)	Lower	No CIF funding claimable	0
17	Total capital revenue	107	0	(107)	Lower		0
18	Total surplus (deficit)	(332)	(404)	(72)	Overspent		362
Capital expenditure by project							
19	Waioeka Otara Flood Damage Repairs	0	(12)	(12)	Lower		0
20	Waioeka Otara Capacity review	75	66	(9)	Lower		0
21	Connor Peterson stopbank upgrade	87	0	(87)	Lower		0
22	Gravel consent renewals	90	0	(90)	Lower		74
23	Waioeka Design	102	84	(18)	Lower		16
24	Total capital expenditure	354	138	(216)	Lower		91

		Opening Balance \$000	Movement \$000	Closing Balance \$000	
Reserves					
25	Flood Damage Reserve	76	191	267	Funds available
26	Asset Replacement Reserve	(309)	0	(309)	We have to take a long term view of this account, as it is funded/increased by depreciation on assets, which has a longer timeframe than the 20 years we have for internal loans for capital.
27	Works Reserve	1,130	(40)	1,089	Funds available
28	Total Reserves	896	151	1,047	Funds available
29	Internal Loans	4,974	(274)	4,700	

		1/07/2020 \$000	Movement \$000	1/07/2021 \$000
30	Asset Revaluation	50,402	2,036	52,438

Waioeka-Otara Catchment Control Scheme

Capital Programme 2022-2023

The following table outlines the Waioeka-Otara Rivers Scheme capital programme for 2022-2023

Waioeka-Otara Rivers Scheme Capital Budget for 2022-2023 is \$91,000

Project name and background	Budget Annual Plan 2022-2023	Milestones 2022-2023
<p>Waioeka and Otara Stopbank Design</p> <p>The Waioeka-Otara capacity review is complete and has identified that some sections of the flood protection system within the Waioeka-Otara scheme are not meeting the agreed level of service.</p> <p>Options to provide the agreed level of service, or possible alternatives, will now be considered and analysed.</p> <p><i>There is also budget in 2023-2024 for the construction phase</i></p>	\$16,000	<ul style="list-style-type: none"> • Complete option analysis November 2022 • Consultation with iwi, stakeholders, and the community on preferred options – ongoing through to March 2023 • Option selection by April 2023 • Preliminary design by June 2023
<p>Gravel Consent Renewals (Waioeka and Otara rivers)</p> <p>Resource Consents to extract gravel for river management purposes from both the Waioeka and Otara rivers expired in April 2019. Renewal consent applications were lodged, meeting Section 124 Resource Management Act requirements that provide for consent holders to continue to operate under expired consents while replacement applications are processed.</p> <p>There were opposing submissions to the consent applications and staff have been working with relevant hapū to understand and resolve their concerns about gravel extractions.</p> <p>Waioeka River gravel extraction consent conditions have been redrafted alongside a Memorandum of Understanding with Ngāti Ira. Staff continue to work with the Otara River hapū through the Otara River Mana Whenua Collective to ensure an improved understanding of Otara River gravel concerns.</p>	\$74,000	<ul style="list-style-type: none"> • Resubmit revised Waioeka River gravel extraction consent conditions • Review consent conditions for Otara River
<p>Peterson-Connor Stopbank Restoration</p> <p>Project currently on hold while other higher priority stopbank remediation areas are being investigated within the urban area.</p> <p>An underwater inspection is proposed to assess the condition of the Baird Road Drain outlet structure.</p>		Project remains on hold

Maintenance Programme 2022-2023

The purpose of this report is to provide an overview of the Waioeka-Otara Rivers Scheme maintenance work programme for 2022-2023

Maintenance programme

Maintenance works comprise activities that ensure the drainage and river flood protection networks are operational and providing the agreed level of service. These activities are programmed through the Rivers and Drainage Asset Management Plan, considering asset lifecycles, and maintenance and inspection schedules. Maintenance programme budgets are set during the Long Term Plan and Annual Plan processes.

Scheme maintenance work includes:

- Duke Street Pump Station - operation, inspections, and maintenance
- culverts and floodgates - inspections and maintenance
- stopbanks - inspections, maintenance, repairs, and pest control
- river maintenance - pest plant control, vegetation maintenance, gravel beach shaping and overflow depressions, habitat enhancement and gravel extractions
- erosion control - rock refurbishment, edge planting, trenched willows, and willow maintenance
- annual flood damage repairs
- repairs to defects identified through asset condition inspections

Key projects in 2022-2023:

- Duke Street Pump Station - electronics refurbishment.
- Memorial Park (Otara River, left bank) – 120 lineal metres of rock replenishment (deferred from 2021-2022).
- Annual flood damage repair sites identified:
 - Rewa Hill, Otara River, right bank - trenched willows and willow pole planting
 - Peterson's, Otara River, right bank - trenched willows, pole planting and two stub groynes which will enhance fish habitat
 - Brooklyn Farms, lower Otara River, left bank - pole planting to stabilise the riverbank
- Waioeka and Otara rivers beach management - identified beach de-armouring through gravel extractions.
- Repairing high priority defects identified through asset condition inspections:
 - Moody Trust (Otara River, right bank) - disused effluent pond near toe of stopbank creating a seepage risk
 - Removal of trees affecting stopbank or floodwall integrity:
 - Wharf floodwall (Otara River, left bank) - remove large trees from base of wall to prevent a seepage risk (pending on Arborist report)
 - State Highway Bridge (Otara River) – remove large unhealthy trees from landward side of stopbank that may topple and damage the stopbank (pending on Arborist report)
 - Ngāti Ngahere Trust (Otara River, left bank) - remove trees growing in the stopbank.

Winter 2022 – how wet is wet?

The Bay of Plenty has had a wet first two months of the winter season, but just how wet has it been and is it unusual?

At the start winter (June 2022) rainfall across the Bay of Plenty were near average for the year, now at the end of July rainfalls are between 10-50% above normal with both June and July showing above normal monthly rainfalls in response to the frequent bands of rain passing over the region.

July was notable for seeing more than double its normal recorded rainfall for the month across the region, with Edgcombe being notable for have nearly three times its norm. Rainfall totals for the month are July are provided in Figure 1.

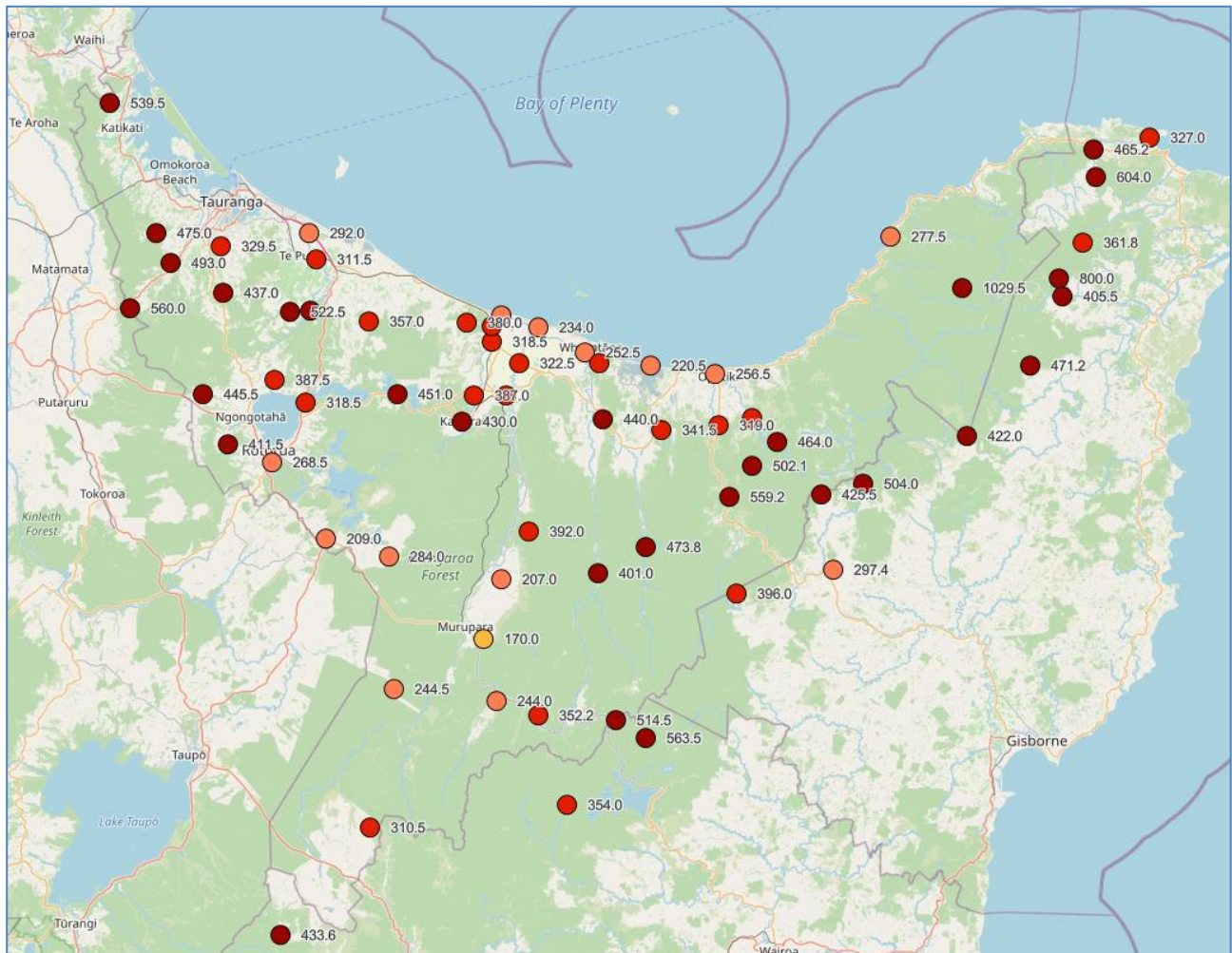


Figure 1: July 2022 rainfall totals (mm)

To provide context of how wet it has been we can compare the previous three-monthly rainfall totals against the last 30 years for the same period and measure its deviation from normal, Figure 2. The general observation is that it has been extremely wet for the region from the lower Rangitāiki Plains westward and very wet for the remainder of the region. The last time these sorts of levels were seen was in the winter of 2017, Figure 3.

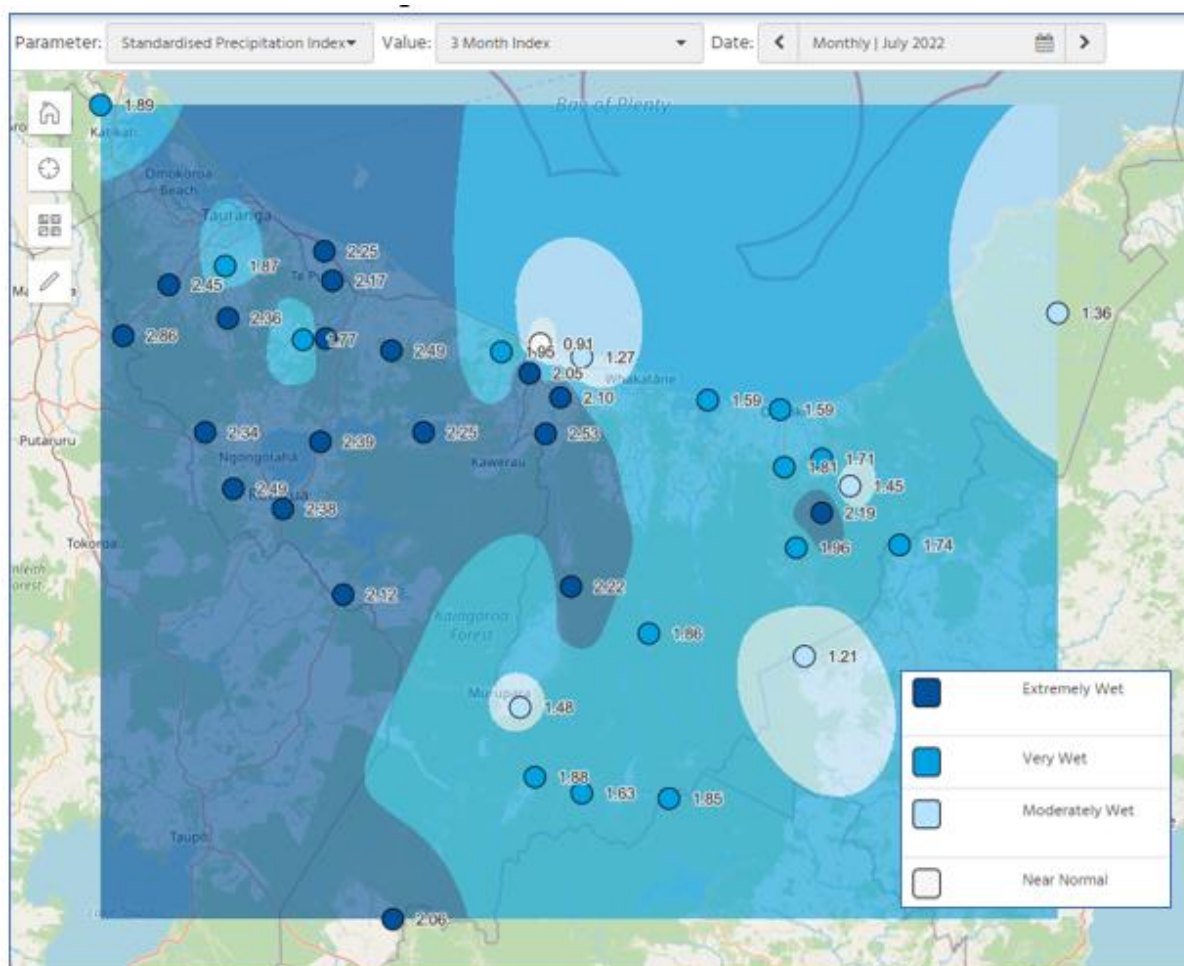


Figure 2: 3-month rainfall deviation from normal

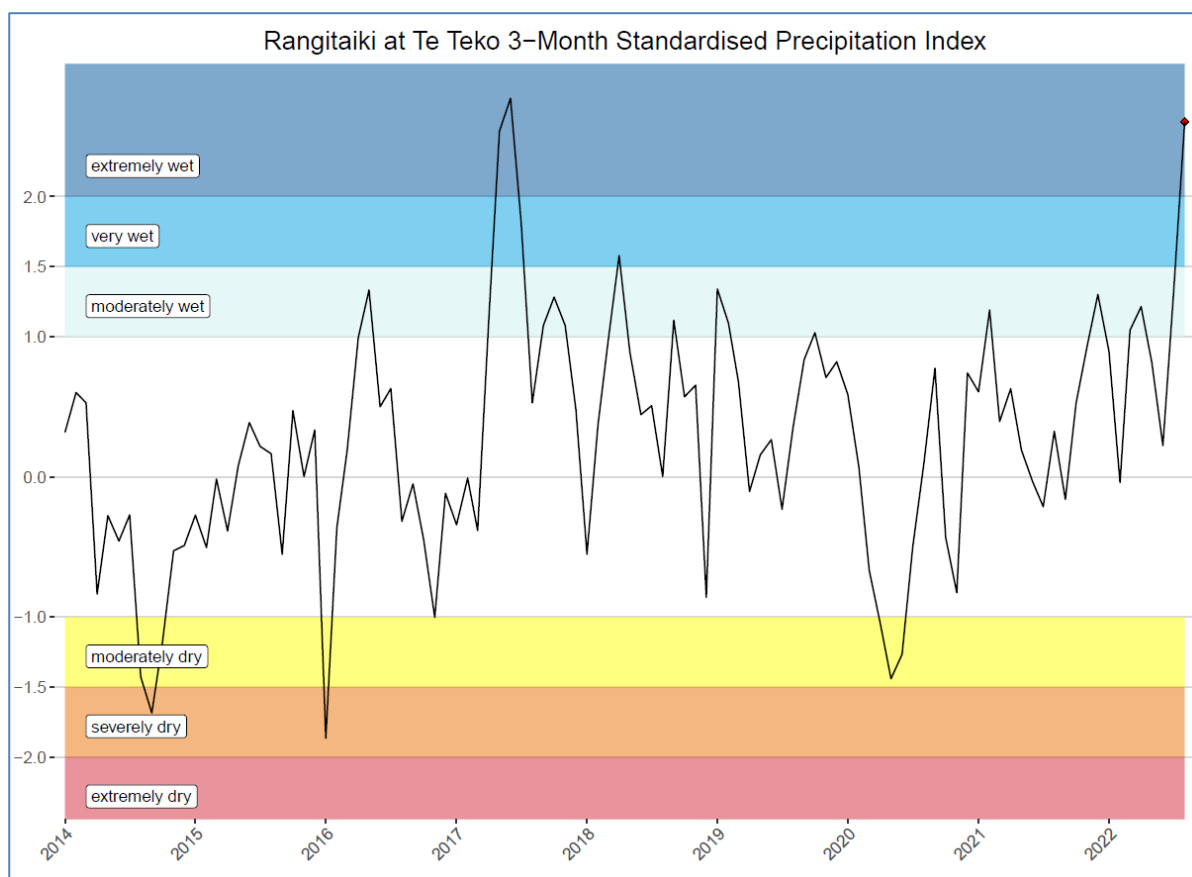


Figure 3: Rangitaiki at Te Teko historical rainfall deviations from normal

Suffice to say, teams within Bay of Plenty Regional Council have been flat out for weeks issuing flood

management alerts and attending to drainage and pumping networks including running additional mobile pumps where extra is needed. There is also a lot of riverbank erosion becoming evident in many of the rivers we manage as the river levels have been elevated for weeks. Frequently, repair works are also not possible straight away as ground conditions are usually too wet and soft for heavy machinery to access sites.

We should all be aware that soil moisture levels are high and any significant rain in the coming months may result in an increased chance of resulting flooding in surface areas and rivers.

Maintenance programme budget 2022-2023

A budget summary table for the Waioeka-Otara Rivers Scheme maintenance programme is shown below followed by a summary work programme. The annual budget figures include operational costs only and exclude non-operational costs (e.g. debt servicing and infrastructural asset insurance).

Waioeka-Otara Rivers Scheme Maintenance Works Programme Budget 2022-2023	
Annual Maintenance	\$448,900
Annual Flood Damage	\$170,400
TOTAL	\$619,300

Waioeka - Otara Rivers Scheme Maintenance Programme Summary: Financial Year 2022/2023

7/09/2022

Objective ID: A4106248

Row

	Work type	Location (LB=left bank, RB=right bank)	Annual Budget	Job estimate	Status/notes
1	General				
2	Annual Flood Damages		\$170,400		
3	Waioeka Rvr, Whakatōhea - 50m bank slumping	RB 7.5km		\$14,000	Planned October/November 2022
4	Waioeka Rvr, Whakatōhea - 50m bank slumping	RB 5.4km		\$8,000	Planned October/ November 2022
5	Otara River, Gault's (lower Farm) - 150m trenched willows/planting	RB 9.4km		-	Low priority - monitor
6	Otara East Bridge - Erosion near abutment (colab with ODC)	10.1km		\$12,000	BOPRC supply rock - Completed
7	Otara River, Gault's outlet - 10m of bank erosion	RB 10.5		\$8,000	Planned October/November 2022
8	Otara River, Brooklyn Farms - 30m trenched willows	LB 11.4		\$6,000	Planned October/November 2022
9	Otara River, Rewa Hill/Carters - Trenched willows/layering/planting (opposite Ernest's beach)	RB 13.7km		\$80,000	Planned October 2022
10	Otara River, Petersons - Batter bank/groynes/planting/trenched willows	RB 19.7km		\$55,000	Planned October 2022
11	Otara River, Peterson's - 30m bank erosion	RB 17.7km		\$6,000	Planned October 2022
12	Otara River, Brooklyn Farms - 20m trenched willows	LB13.4		\$12,000	Planned October 2022
13	Subtotal flood repairs			\$201,000	
14					
15	Condition assessment defects repairs:		Unbudgeted		
16	Otara Rvr. Ōpōtiki Wharf Flood Wall - Remove trees	LB 0.2km		\$20,000	Planned February 2023
17	Otara SH Bridge - Tree/vegetation Removal	LB 3.2km		\$15,000	Pending on Arborist report
18	Otara SH Bridge - Tree/vegetation Removal	LB 3.1km		\$15,000	Pending on Arborist report
19	Otara River, Moody Trust - Fill in rubbish hole	RB 3.3km		\$24,000	Planned February 2023
20	Otara River, Ngāti Ngahere Lands Trust - tree removal/mulch rank grass from stopbank	LB 6.5 - 8.5 km		\$15,000	Planned February 2023

Row

	Work type	Location (LB=left bank, RB=right bank)	Annual Budget	Job estimate	Status/notes
21	Subtotal defect repairs			\$89,000	
22					
23	Fly tipping and rubbish collection/disposal		\$8,500	\$2,000	
24	Pest control		\$8,500	\$4,000	
25					
26	Drainage Network		\$11,000		
27	Aquatic weed spraying			\$11,000	
28	Multiple drains				
29	Drain desilting		\$9,300		
30	Multiple drains			\$11,500	
31					
32	Rivers		\$18,700		
33	Channel/berm/river banks, weed spraying			\$24,000	
34	Beach spraying for pampas etc				
35					
36	River berms vegetation mulching & native plant releasing		\$16,300		
37	Multiple sites			\$17,900	
38					
39	Planting (Willows/native shrubs - Toetoe & cabbage trees)		\$23,100		
40	Multiple sites	LB 6.0-6.3		\$25,700	
41					
42	Tree maintenance: layering/mulching/clearing		\$28,300		
43	Multiple sites			\$13,000	
	Rock replenishment		\$98,900		

Row

	Work type	Location (LB=left bank, RB=right bank)	Annual Budget	Job estimate	Status/notes
44	Aerodrome stockpile maintenance			\$10,000	
45	Otara River, Memorial Park - 250 lineal metres	LB 0.5-0.65km		\$195,000	Planned Nov/December 2022
46					
47	Fencing		\$25,100		
48	Various			\$4,000	
49					
50	River Beach shaping / maintenance		\$110,700		Dotterel nesting exclusion August to February
51	Beach shaping - both rivers			\$20,000	Programme between March - July
52					
53	River Management through Gravel Extractions				Dotterel nesting exclusion August to February
54	Waioeka River - River Maintenance Gravel Extractions:				
55	Overflow depression maintenance - Robbie's Pit	LB 5.0-5.4km			March to July - 3,000m ³
56	Whakatōhea - Beach dearmouring	RB 5.6 - 6.2km			March to July - 5,000m ³
57	Overflow depression/beach shaping maint. - Nicol's/Beattie's	LB 8.3-8.8km			March to July - 4,000m ³
58	Beach dearmouring - Nicol's	RB 6.9-7.2km			March to July - 2,000m ³
59	Overflow depression maintenance - Maxwell's/Riverloch	LB 10.2-10.7km			March to July - 7,000m ³
60	Beach dearmouring - Henare Swimming Hole	RB13.7-13.9km			March to July - 2,000m ³
61	Otara River - River maintenance Gravel Extractions:				
62	Beach shaping - Otara East Bridge	RB 10.1 - 10.2km			March to July - 3,000m ³
63	Beach Shaping - Gow's Rd/Rutledge	RB 7.1-7.2 km			March to July - 3,000m ³
64	Overflow depression maintenance - Carter's lower Pit	RB 12.5 - 12.7 km			March to July - 3,000m ³
65	Beach shaping/overflow Depression - Ernest lower beach	LB 13.7-13.9 km			March to July - 7,000m ³

Row

	Work type	Location (LB=left bank, RB=right bank)	Annual Budget	Job estimate	Status/notes
66	Beach shaping/overflow Depression - Ernest upper beach	LB 14.6 - 15.0 km			March to July - 7,000m ³
67	Beach shaping - Rewa Hill beach	RB 14.2-14.5 km			March to July - 5,000m ³
68	Beach Shaping/de-armouring - Gloynes	LB 16.3 - 16.5 km			March to July - 4,000m ³
69	Beach Shaping/de-armouring - Edwardson's	RB 16.7 - 17.0 km			March to July - 4,000m ³
70	Beach Shaping/de-armouring - Blue gums	LB 17.3 - 17.7 km			March to July - 8,000m ³
71	Overflow depression maint. - Rewa Hill/Hillyard's	RB 15.2-15.5km			March to July - 3,000m ³
72	Overflow depression maint. - Croswell's	LB 16.7- 16.9 km			March to July - 3,000m ³
73					
74	<u>Stopbanks</u>	Minor floodgates inspection/repairs/ maintenance	\$12,800		
75		Floodgate outlet maintenance & desilting		\$13,000	
76		Tarawa Creek Outlet - Trash screen - Establish cleaning platform	RB 2.2km	\$5,000	
77					
78		Stopbank miscellaneous maintenance	\$59,500		
79		Stopbank weed spraying/mowing	Various locations	\$10,000	
80					
81	<u>Duke Street</u>	Pump inspections	\$2,300	\$1,500	
82	<u>Pump Station</u>	Miscellaneous repairs/maintenance	\$5,800	\$3,500	
83		Electricity	\$10,100	\$11,000	
84					
85		Annual maintenance budget	\$448,900		
86		Estimate of scheduled annual maintenance costs		\$471,100	
87		Annual flood damage budget & estimates	\$170,400	\$201,000	
88		Total Maintenance Budget & Estimated Costs	\$619,300	\$672,100	

MEETING REPORT



To: Waioeka-Otara Rivers Scheme Advisory Group - 28 September 2022 meeting

Author(s): Kirsty Brown, Rivers and Drainage Assets Manager
Bruce Crabbe, Rivers and Drainage Operations Manager

Date: 9 September 2022

Subject: Asset Management Planning – ‘Room for the River’ Approach

The purpose of this report is to highlight the changing landscaping we are facing and what that will mean for our future asset management planning and service delivery.

One of the central themes for our next Long Term Plan and Asset Management Plan reviews will be supporting our communities to be more sustainable and resilient now and into the future, not just environmentally but also socially, culturally, and economically.

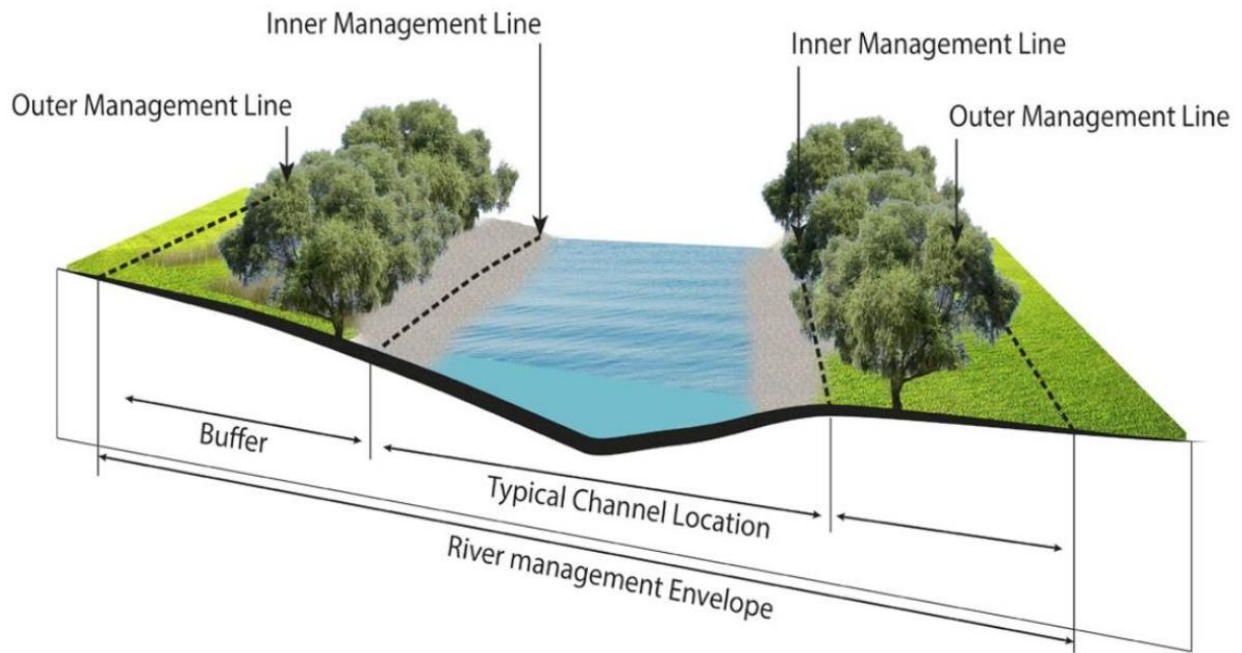
This will require a shift in our thinking, particularly for ongoing and future flood and erosion works, on both rural and urban land, to enable river catchments to behave more naturally with less frequent interventions. This will change the way river works are managed with a focus on maximising natural river processes while continuing to provide service levels e.g. providing more room for the river and using natural and nature-based flood management solutions.

We are also entering a time of change with several Central Government policy reforms, such as the National Policy Statement for Freshwater Management which will re-set how planning for our freshwater resources occurs. Regional Council is also continuing to look at how it delivers its services, particularly around working with iwi and hapū. Responding to this challenge is one of Council's priority impact areas.

Regional Council contracted a review of Waioeka and Otara rivers management by Gary Williams¹ (Waterscape) following the damaging 2017 flood event that caused 61 separate flood damaged sites on the Scheme, with an estimated repair cost of \$5.4 million. His report (appended below) was circulated to the Advisory Group for the March 2020 meeting that was subsequently cancelled due to Covid. Gary has recommended a ‘river corridor’ approach to provide more space for the river to move, and to provide guidance for staff when prioritising where erosion repair works should be carried out.

Separately, Kyle Christensen (Christensen Consulting Ltd) was contracted to review the April 2017 Flood Repair Project (summary of results presented to 6 April 2022 Advisory Group meeting) and one of his conclusions was also that the river had been too confined historically. Providing the rivers more space will assist with energy dissipation, provide for more vegetated buffer zones, and reduce erosion damages in the future in his opinion.

¹ Gary Williams is a highly experienced river engineering specialist who has analysed Bay of Plenty, and other New Zealand, rivers for many years.



Both Gary and Kyle have recommended that a 'room for the river' approach is needed for the rivers to adapt to the frequency of flooding that is currently occurring and forecast to continue with climate change predictions.

MEMORANDUM

Date: 13 January 2020

To: Bruce Crabbe

Cc: Tony Dunlop

Of: Bay of Plenty Regional Council

SUBJECT: **RIVER MANAGEMENT – RIVER SPACE**
WAIOEKA - OTARA SCHEME

PAGES 1 + 5 + 2 sets of plans of the Waioeka River and the Otara River

Introduction

A reassessment of river management methods has been undertaken in response to the changes in river conditions that have occurred with climatic changes to a period of more frequent and intense storm events. The findings of this review are given in my report of August 2019 'Bay of Plenty Rivers – Review of Flood Damage & River Responses'. As part of this review, river management guidelines were drawn up for the uppermost reach of the Whakatane River scheme, showing a management zone with example management measures, and a wider river corridor that would give the river more space in which to move. The aim is to reduce management requirements or interventions, using margin vegetation and in-channel reshaping measures that work with the pattern of river movement and migration, and hence reduce the cost of river management. At the same time this gives rise to reserve areas to accommodate the effects of rare large floods, and the potential changes in river character and hence hazards arising from changes in the climate.

Following on from this review, a river management zone and river corridor assessment has been undertaken for the scheme lengths of the Waioeka and Otara rivers. The aim is again to provide more space for the river and reduce river management costs through a different approach using softer vegetation measures and channel alterations that work with the river form and processes. These rivers have been confined by river management to the area between stopbanks, and long lengths of rock works have been undertaken, progressively, to hold river bends and protect the stopbanks.

Given the on-going costs of extending and maintaining expensive rock works, and the increasing pressures from the more intense storms and flood events of the present climatic phase, which climatic changes are likely to make more intense over the longer term, a different approach is worth considering. This will require a wider space within which the dynamics of river processes, and their variability over time, can be accommodated.

To identify the impacts of a widening of the river area, draft guidelines have been drawn up on aerial base maps with legal boundary and contour information. These guidelines have been based on the floodplain topography, the character of the river and

its flood, sediment transport and channel forming processes, past channel positions and the position of stopbanks and legal boundaries. They have not been ground checked in the field, and are general lines for evaluation and consultation.

The base maps and information have been obtained from the Bay of Plenty Regional Council [BOP] website and its Bay Explorer maps. Earlier aerial photography has also been obtained through this website, to access the archived Retrolens images from the government LINZ database.

To compare the river channels over time, aerial photography of the 1940s, 1960s and 1970s has been overlaid onto the base map aerials.

The drawing up of the draft guidelines has been based on this information and past field inspections, reviews and investigations that have been undertaken over a long period of time. No fluvial processes investigations have been undertaken for the Waioeka and Otara rivers, as has been done for the Whakatane River. Similar investigations of river processes, flood flows and sediment transport, meander patterns and channel form, would provide technical information to better define appropriate management zones and channel patterns for the proposed management with a wider river corridor.

Waioeka River

River Character

The Waioeka River is the larger of the two rivers of the floodplain at Opotiki. It flows on the western side with a relatively straight path to the sea, but as a mobile gravel-bed river it has naturally meandered across a large part of this floodplain. The cadastral (legal) plans show old courses of the river, and the aerial photographic record of the last 50+ years shows the high mobility and changeability of the river channel across the floodplain.

At present the river flows along the western edge of the plains, and has been progressively confined, with the river channel having a much lesser meander curvature than in the past. The flood protection stopbanks have been constructed very close to the river channel, alongside the over-straight river meanders. Where the meanders are curving into the stopbanks there is continual pressure from the river as it attempts to re-establish the wider meander form of its natural character.

The present flood intense period is resulting in an increased supply of gravel bed material to the lower reaches, where it would naturally deposit and give rise to channel changes, with break-outs and new channels. The confinement of the gravel deposition is giving rise to an increasing asymmetry of the channel cross-section, with higher aggrading bars (or beaches) on the inner side of bends, and deeper, narrower low flow areas along the outer side.

Substantial rock linings have been constructed along the outer banks of bends, but they are being undermined and de-stabilised by the changing conditions with the more intense floods and increased supply of gravel bed material.

River Corridor

A river corridor was first drawn up based on the topography of the floodplain and the extent of the more recent channel changes and migrations. The western side boundary

generally followed the terraces at the edge of the floodplain. On the eastern side the extent of the corridor took account of the channels of the recent past, but not of older historical channels. The aim was to provide a wide corridor, but without extending across the floodplain that is potentially vulnerable to channel break-outs and new channel formation. Instead it provides a relatively consistent width corridor that relates to the character and mobility of the reach.

This corridor is shown on a set of arials notated as “WIDE RIVER CORRIDOR GUIDELINES”. The corridor has been drawn down to the S H 2 Bridge. Downstream of this bridge the river becomes estuarine and much less mobile, with different processes of river and sea activity.

This river corridor was then adjusted to be more consistent with a management zone along the river. This mostly involved reductions in width along the lower reaches, where the river would naturally be less mobile as it transitions to its mouth at the sea. In this area alternative channels would be the result of break-outs and channel formation and migration from further upstream.

Management Zone

Within the river corridor a management zone was drawn up around the existing river channel to provide buffer areas that would allow a less constraining and structurally controlling management approach. This zone has a consistent width and relates to the management of the river on its existing alignment. It is a management zone for the present river channel, accepting the past control over the river and constraint on its alignment.

This management zone and the adjusted river corridor are shown on the set of arials notated as “RIVER CORRIDOR & MANAGEMENT ZONE GUIDELINES”. The stopbanks that are within this management zone, and would potentially be set back as part of the softer management approach, are highlighted (with dashed black lines).

The management zone allows for some channel migration as well as flexibility in the management of river banks, using vegetation buffers and less rigid strengthening works. It provides for a channel management that can develop a channel pattern more able to transport the gravel bed material being supplied to the lower reaches, and spread the flood flow pressures across the channel. This would involve channel re-shaping to allow a more split channel form, which would activate more of the river bed in flood events.

Otara River

River Character

The Otara River flows along the eastern side of the floodplain, initially in a narrow valley, and then across the wider floodplain (that links across to the Waioeka River), before becoming a narrow meandering channel at a reducing grade down to the flat graded estuarine reaches. The steeper upper reaches of its floodplain length are a gravel deposition zone where the river channel naturally has a mobile semi-braided form. The aerial photographic record of the last 50+ years shows a high mobility and changeability of the river channel along this reach of the river. The cadastral (legal) plans show old historical courses of the river much further into the floodplain than the aerial photographic record.

Along the upper reaches the Otara River has been constrained and controlled, like the Waioeka River. It now has a narrower meandering form with a long shallow curvature around alternating bars. The inner bars (beaches) are much higher and longer than they would have been in the wider semi-braided form of the past, and the increasing supply of gravel bed material of the present climatic phase is exacerbating this trend. As with the Waioeka River, the channel cross-section is becoming more asymmetric, with an especially narrow flow channel around the outer side of bends.

There has been little use of rock along this upper scheme reach of the river in the past, but the increase in flood pressures has meant that more use is being made of rock linings, and the extension of linings.

The lower winding reach of the river is more stable but has a deeper channel, and the stopbanks around Opotiki township are on the edge of the river channel. Along this reach there are substantial rock linings, which require topping up or more extensive re-building and strengthening.

River Corridor

A river corridor has been drawn up first, based on the topography of the floodplain, the extent of the more recent channel changes and migrations, and the stability of the existing channel, which changes along the scheme length. The eastern side boundary follows the terraces at the edge of the floodplain in places, but some areas of floodplain have been excluded. On the western side the extent of the corridor took account of the channels of the recent past, but not of older historical channels. Along the lower reaches this corridor narrows as the river becomes more stable and takes on a narrower form with the flatter river grade.

This river corridor was drawn up to be consistent with a management zone, while providing reserve areas that relate to the river and its floodplain topography from past river activity and channel movements. There are, then, extensive areas of the floodplain that are potentially vulnerable to channel break-outs and new channel formation, beyond this river corridor. The aim is to provide a relatively consistent width corridor that relates to the character and mobility of the reach.

This corridor is shown on a set of aeriels notated as "RIVER CORRIDOR GUIDELINES". The corridor has been drawn down to the S H 35 Bridge at Opotiki. Downstream of this bridge the river becomes estuarine and much less mobile, with different processes of river and sea activity.

Management Zone

Within the river corridor a management zone was drawn up around the existing river channel for the more mobile reach down to where the grade flattens and the river has a single channel form with a much slower movement. As with the Waioeka River, this zone provides buffer areas that would allow a more flexible and softer management approach. This zone has a consistent width and relates to the management of the river on its existing alignment. It is a management zone for the present river channel, accepting the past control over the river and constraint on its alignment.

This management zone and the river corridor are shown on the set of aeriels notated as "RIVER CORRIDOR & MANAGEMENT ZONE GUIDELINES". The stopbanks along the upper reach of the scheme do not follow or relate to the present channel alignment. They have been constructed when the river had a different alignment, and the setback from the existing active channel varies greatly. Where stopbanks are within this

management zone, and would potentially be set back as part of the softer management approach, they are highlighted (with dashed black lines).

Comments

The cost of the construction and maintenance of stopbanks is a small part of the long-term cost of flood protection. Most of the cost is in protecting the stopbanks and other assets from erosion by floodwaters and channel migration. Thus setting back stopbanks to reduce river management costs can be very cost effective over the longer term. The greater setback from the active channel with wide berms also means that these flood defences are more secure and less likely to be breached or over-topped in large flood events. The residual risks of failure, above design standards, are thus lessened.

The wide berm land between the channel and set back stopbanks can still be used for farming purposes, along with the more vegetative approach to river management. Grazed pasture land has a low resistance to flood flows, and with well-aligned fences and shelter vegetation can minimise floodwater scouring while maximising flow capacity.

At the same time riparian vegetation along the channel edge and beside stopbanks can provide environmental and habitat benefits, along with its flood protection and river management functions. This riparian vegetation would also act as a debris screen and reduce sediment flows onto the farmed berm land, especially of gravel material.

The management zone with set back stopbanks provides a greater area for flood flows in large events, with a consistent width floodplain. Flood capacity along the flood defence system is then increased, with much greater flows being passed with small increases in height because of the berm width that would then be available. Given the likely increase in the intensity and frequency of storm events with a changing climate, this much greater reserve flood capacity is an important benefit.

There is a very complex pattern of legal boundaries along the rivers and adjacent floodplains. There are old natural feature boundaries from historical surveys (which technically move with the feature, in this case the river), esplanade strips and various types of public reserves, as well as private fee simple titles. As shown on the plans, these titles cross over the existing river channel, and old river boundaries bear no relationship to the present river alignment or active channel.

The stopbanks have been constructed on private land, without easements or public land purchase, although there are BOP reserves acquired under the Soil Conservation & Rivers Control Act. Any set back of stopbanks could also be constructed on private land, with the agreement of the current landowners. The setbacks, as shown on the plans or as might be adjusted, are in separate lengths, and any one length could be constructed as a separate work. The setbacks shown are on the outer bank of river bends, where the river is applying pressure and the existing stopbanks are vulnerable to breach failures. Future management measures to protect the stopbanks could then be contingent on the setting back of the stopbank. In this way a progressive retreat could be staged, and undertaken where there is landowner agreement to the re-location of the stopbank and a different, and less expensive, approach to managing the river.

In some cases stopbanks may be simply removed, as a set back stopbank would not protect much land. The floodplain area could then be farmed as floodplain land subject to periodic flooding, the frequency of which would depend on the relative levels and topography of the land. Stopbanks that are only just within the management zone

could be left, provided it was recognised that an alternative vegetative management approach would be undertaken. In places, the downstream end of a stopbank could be removed while retaining the upper length. In this case the existing bank would provide protection up until it was breached or overtopped, with floodwaters being able to return to the management zone and river channel through the lower end opening.

These specific circumstances are noted on the guideline plans.

In both rivers, the present intense flood period with its consequential increase in the supply and transport of gravel bed material, is putting pressure on the river channels, which have been straightened and controlled over a decades-long quiescent period. The rivers would naturally become wider with a more split channel form, and river management now has to respond to the change in flood and sediment transport regime.

Over the longer term, climate changes are likely to increase the intensity of the flood pattern, and this would increase the pressure for even wider braided channels.

A long-term strategy of retreat that gives the river more space and allows greater management flexibility using less costly measures, is thus likely to be well worthwhile, and is recommended.

Gary Williams
FEngNZ

Water & Soil Engineer

**BAY OF PLENTY
RIVER SCHEMES**

REVIEW

GUIDELINES
for
RIVER CORRIDOR
and
MANAGEMENT ZONE

WAIOEKA RIVER

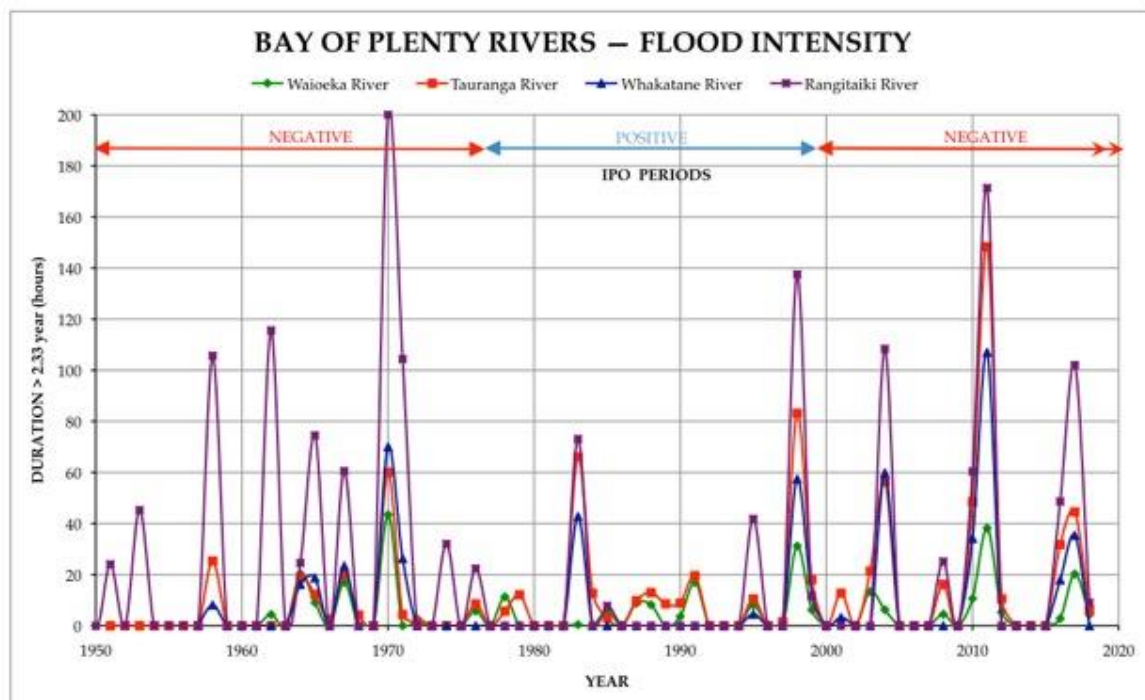
BAY OF PLENTY RIVERS – SCHEME LENGTHS

SCHEME LENGTHS

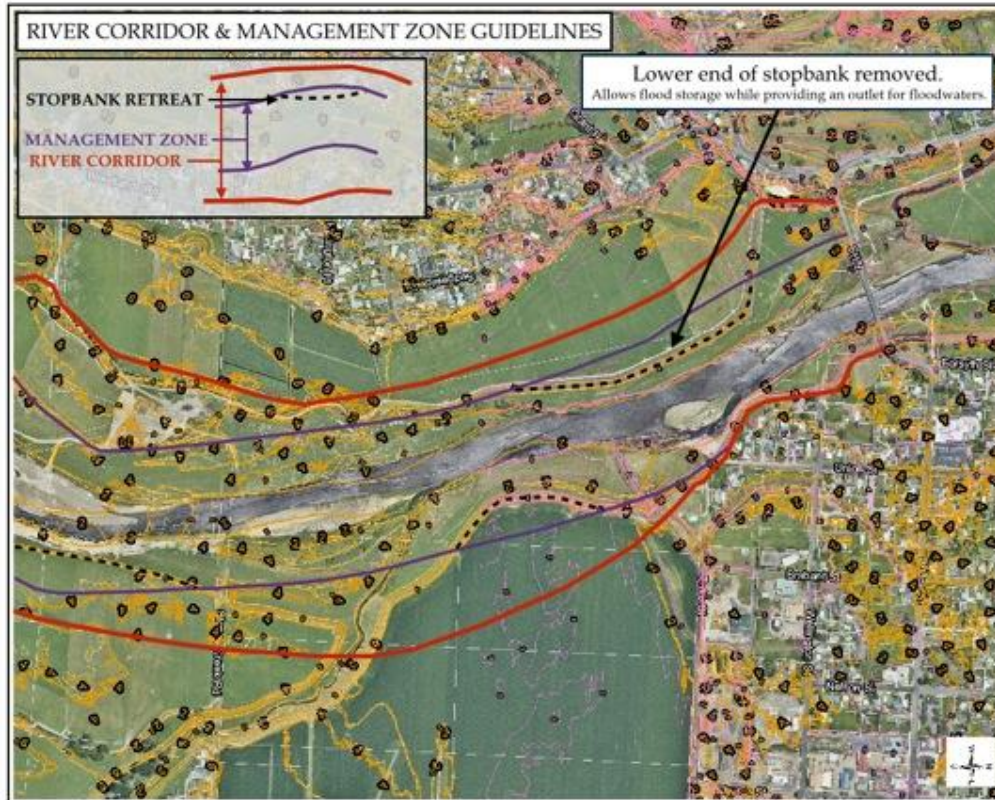
- WHAKATANE
- TAURANGA
- WAOEKA
- OTARA



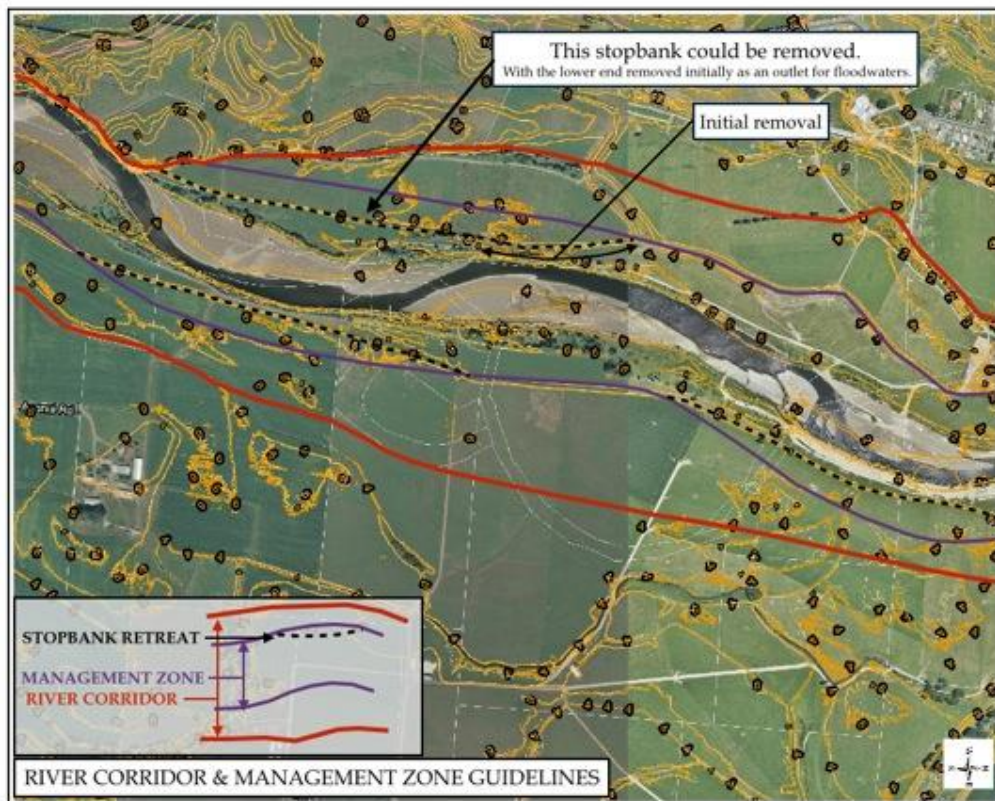
BAY OF PLENTY RIVERS – FLOOD INTENSITY



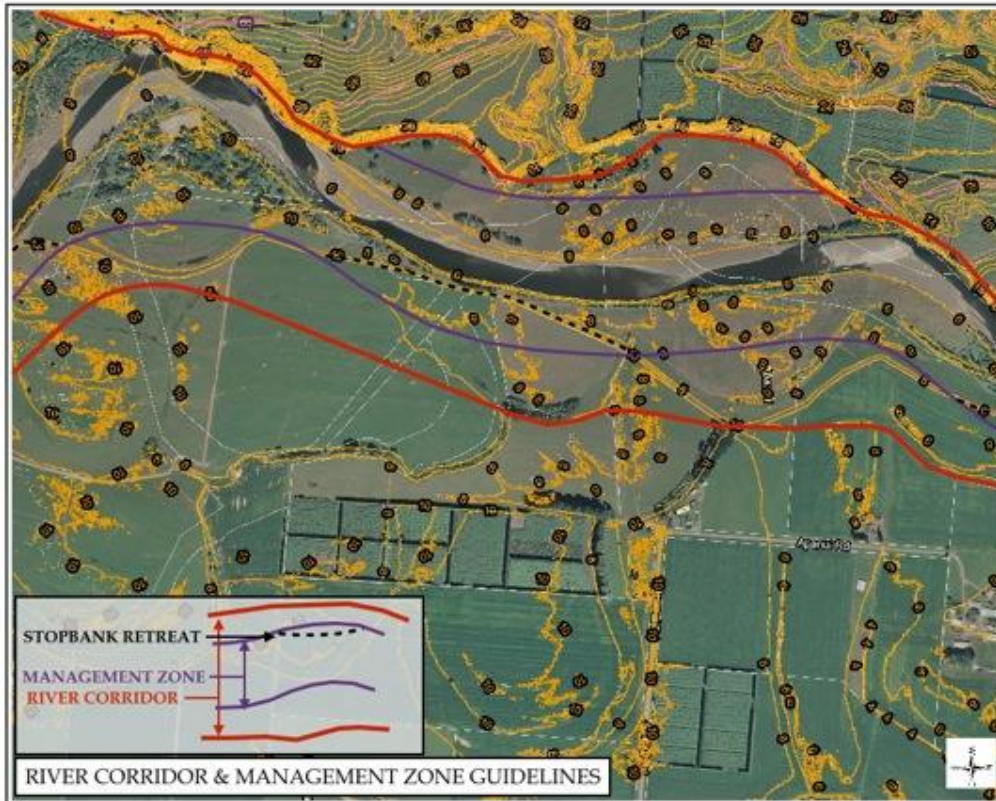
WAIOEKA RIVER – GUIDELINES



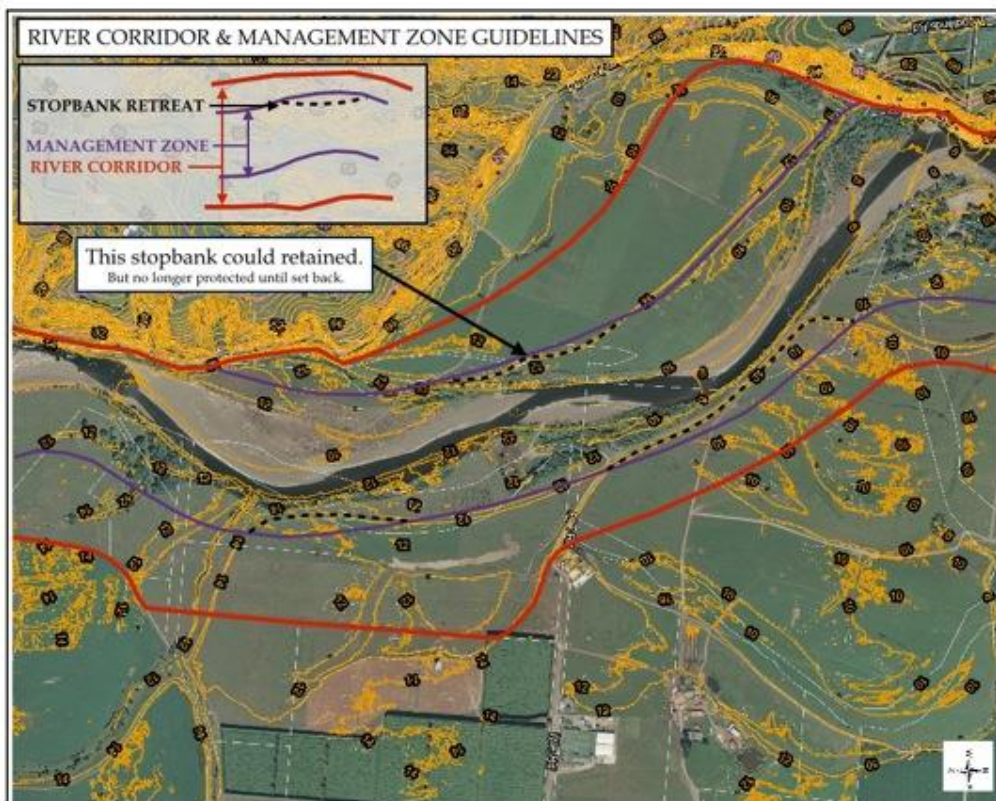
WAIOEKA RIVER – GUIDELINES



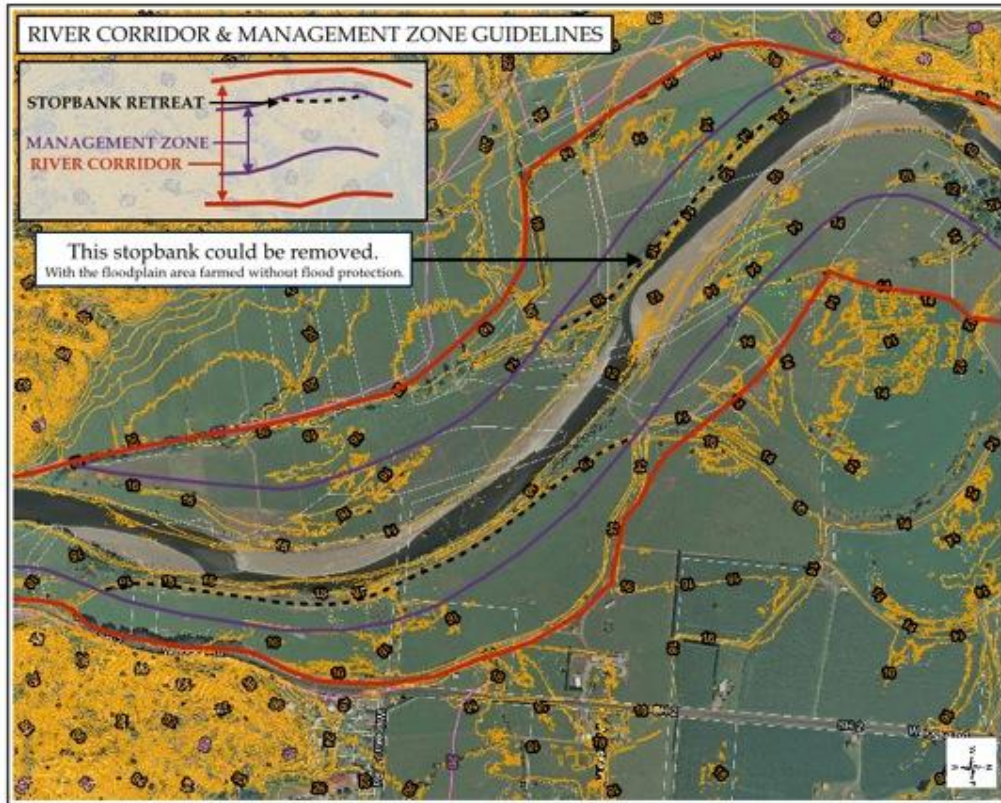
WAIOEKA RIVER – GUIDELINES



WAIOEKA RIVER – GUIDELINES



WAIOEKA RIVER – GUIDELINES



**BAY OF PLENTY
RIVER SCHEMES**

REVIEW

GUIDELINES
for
RIVER CORRIDOR
and
MANAGEMENT ZONE

OTARA RIVER

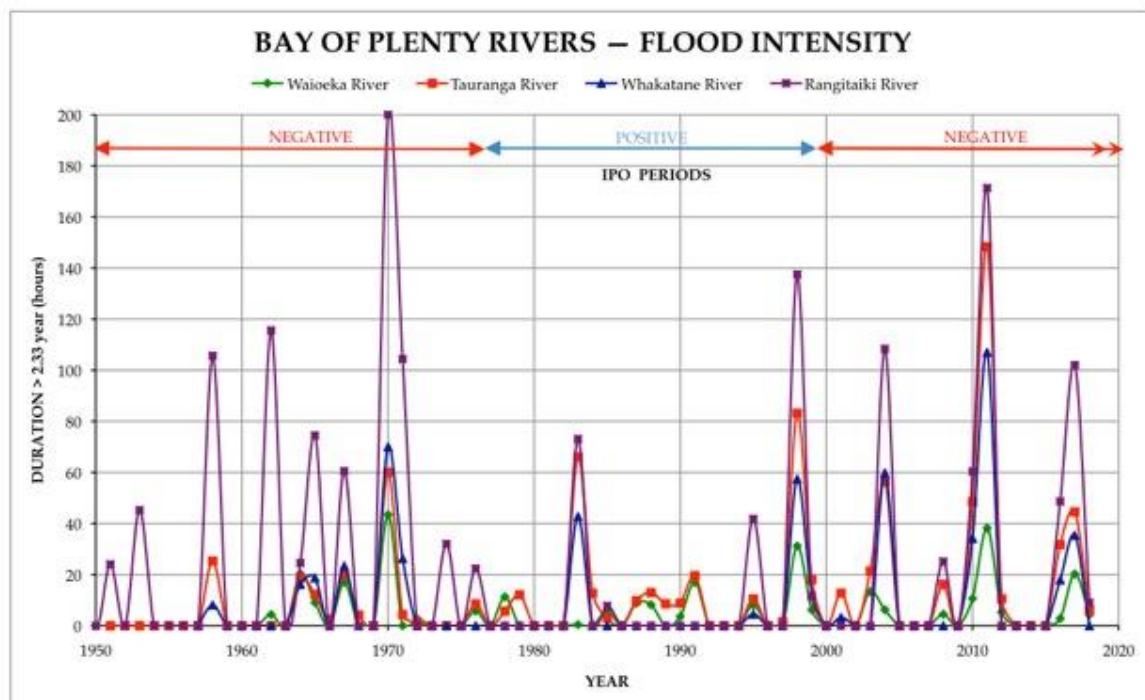
BAY OF PLENTY RIVERS – SCHEME LENGTHS

SCHEME LENGTHS

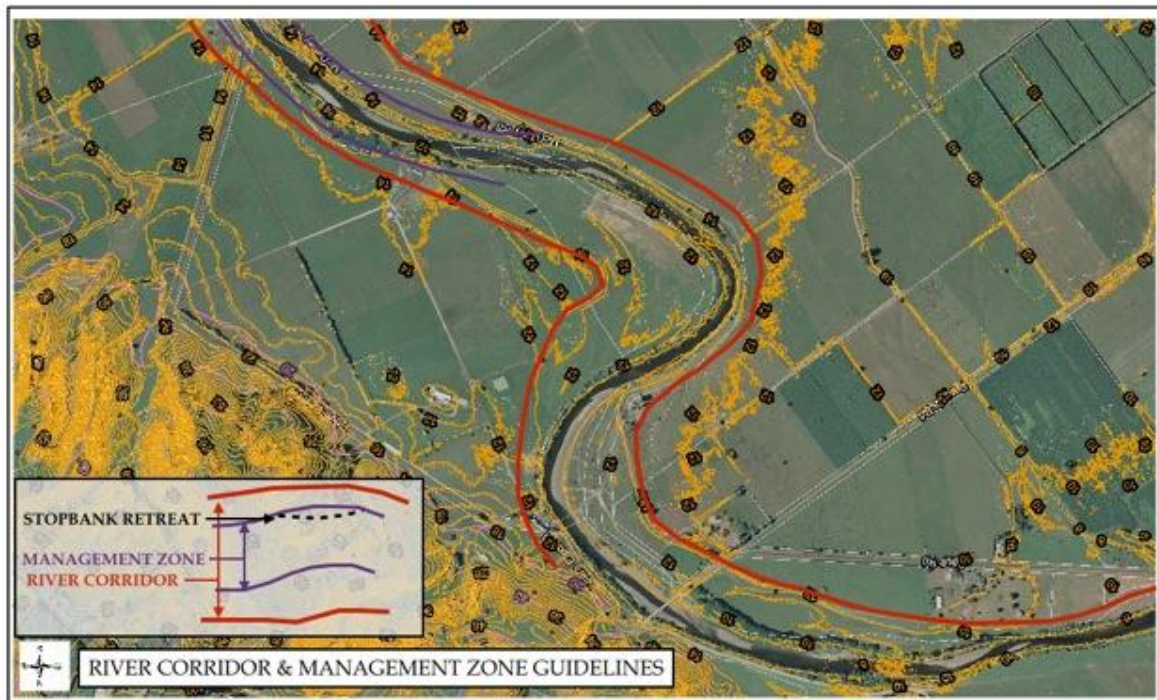
- WHAKATANE
- TAURANGA
- WAOEKA
- OTARA



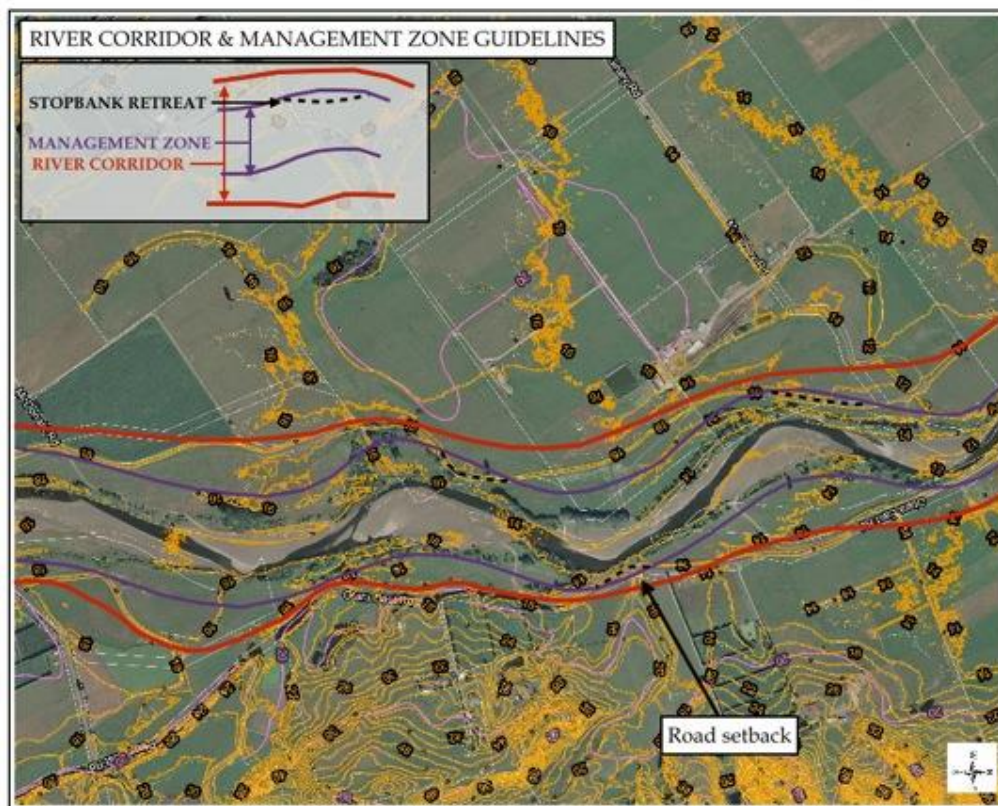
BAY OF PLENTY RIVERS – FLOOD INTENSITY



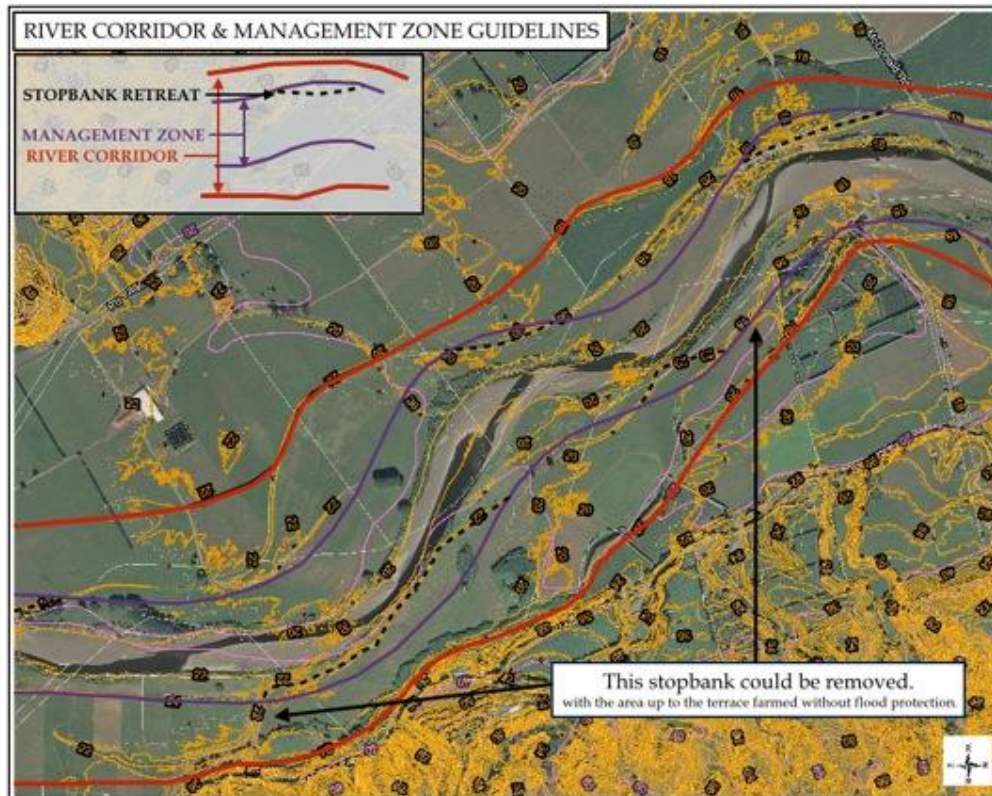
OTARA RIVER – GUIDELINES



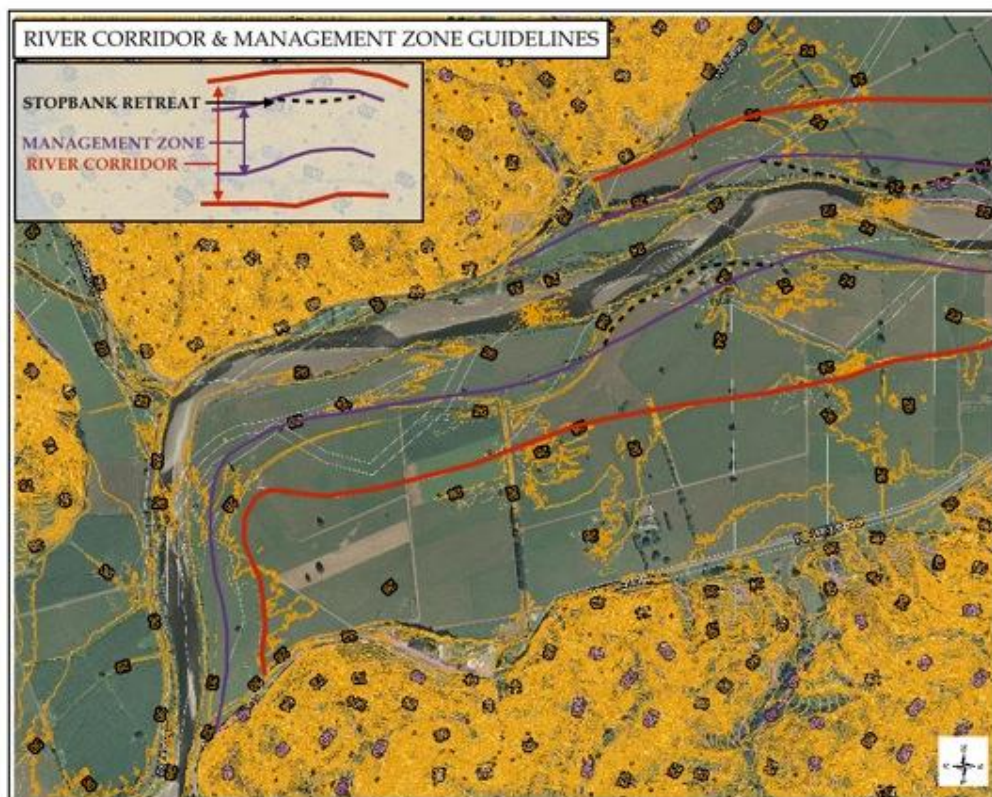
OTARA RIVER – GUIDELINES



OTARA RIVER – GUIDELINES



OTARA RIVER – GUIDELINES



MEETING REPORT



To: Waioeka-Otara Rivers Scheme Advisory Group – 28 September meeting

Author: Mark Townsend, Engineering Manager

Date: 8 September 2022

Subject: Gravel Management Update

1 General

Natural Environmental Regional Monitoring Network Report 2011 to 2018

The updated Natural Environmental Regional Monitoring Network (NERMN) Report for River and Stream Channel Monitoring is now available on Council's website.

Cross section surveys are carried out regularly on 15 rivers and streams, with occasional additional surveys. Completion of the most recent monitoring programme adds to the baseline information for comparison with future surveys and allows analysis of the surveyed rivers and streams. This helps develop an understanding of the movement of gravel in the river systems of the Bay of Plenty region.

Extraction

Extractions are undertaken to support river management by de-armouring beaches and installing overflow depressions. These allow water flows in elevated river conditions to loosen gravel and assist movement of gravel through the river system.

Waioeka River – the quantity considered sustainable in the Waioeka River is approximately 20,000 m³ per annum within the floodplain reach. Additional to this are significant quantities in the Waioeka Gorge on high beaches which should be judiciously lowered and loosened to facilitate travel of gravel downstream to the farmland reach.

Otara River – analysis of data collected since 2007-2008 shows that the gravel supply rate is expected to average 20,000 to 25,000m³ per year. With a historically lower extraction rate and substantial deposition on the floodplain and in the main channel over the past years, it is recommended that extraction should be increased and encouraged in this river to keep the river at its desirable bed level. Extraction over the past 12 months has increased compared to previous years.

2 Consents

The Rivers and Drainage section currently holds resource consents to extract up to 50,000 cubic metres per annum of gravel for river management purposes from both the Waioeka (RC 61321) and Otara (RC 61322) rivers. Both consents expired in April 2019 and renewal consent applications have been lodged, meeting Section 124 Resource Management Act requirements. This provides for consent holders to continue to operate under expired consents while replacement applications are processed.

Staff had an initial meeting with the two opposing submitters. Their concern is about the extraction quantities proposed in the consent, and a perception that extraction is commercially driven. Since then staff have been working with Ngāti Ira Hapū to understand and resolve concerns about extractions particularly on the Waioeka River.

Ngāti Ira preference is to strengthen Kaitiaki conditions as part of the consent. The consent has been redrafted alongside a Memorandum of Understanding which will set out how Council and Ngāti Ira will fulfil the consent conditions and apply the consent. We are awaiting feedback from Ngāti Ira to advance the consent

Staff continue to work with the Otara River hapū through the Otara River Mana Whenua Collective to ensure an improved understanding of Otara River gravel concerns.

3 Waioeka-Otara Rivers Scheme gravel extraction summary

1 July 2019 – 30 June 2020

River	Site	Quantity extracted (m ³)
Otara River	Carter's Pit (river distance 13.2)	90
	St Johns Street (river distance 2.3)	210
	Ford Street (river distance 4.6)	200
Total		500
Waioeka River	Riverlock (river distance 8.8-9.1)	756
Total		756

1 July 2020 – 30 June 2021

River	Site	Quantity extracted (m ³)
Otara River	Reach 4 left bank Riverlock Brooklyn Farms (river distance 12.9-13.1)	3,041
	Carters Upper Beach (river distance 13.2-13.6)	3,055
Total		6,096
Waioeka River	Beatties Pit (river distance 6.3-6.8)	10,170
	Maxwell, left bank (river distance 10.2–10.7)	2,559
	Maxwell, left bank (river distance 10.2–10.7)	9,388
	Maxwell, left bank (river distance 10.1–10.8)	2,067
Total		24,184

1 July 2021 – 30 June 2022

River	Site	Quantity extracted (m ³)
Otara River	Rewa Hill Keller's Pit (river distance 14.1–14.6)	6,136
	Pakihi (river distance 19.6 – 19.9)	7,640
	Gows Road (river distance 7.1 – 7.2)	1,000
	Carters Top pit reach 4 (river distance 13.2-13.6)	3,050
	Carters Lower reach 4 (river distance 12.5-12.7)	533
	Blue Gum pit (river distance 17.2. to 17.7)	5,103
	Carters top (river distance 13.2 to 13.6)	565
	Carters Lower (river distance 12.5-12.7)	2,419
Total		26,446

River	Site	Quantity extracted (m ³)
Waioeka River within the floodplain reach	Beatties Pit (river distance 6.3-6.8)	4,008
	Robbies Pit overflow (river distance 5.0 -5.4)	1,008
	Beatties Pit overflow (river distance 6.3-6.8)	1,392
	Beatties Pit (river distance 6.3 to 6.8)	3,036
	Subtotal	9,444
Waioeka River outside of floodplain reach	Hughes Pit (river distance 20.3–21.3)	3,500
	Hinerae site (river distance 13.7 to 13.9)	2,500
	Michaels Pit (river distance 22.2 to 22.4)	2,736
	Graham's Bridge left bank (N/A)	5,305
	Subtotal	14,041
Total		23,485

1 July 2022 – year to date

River	Site	Quantity extracted (m ³)
Otara River	Rewa Hill Keller's Pit (river distance 14.1–14.5)	3,073
Total		3,073
Waioeka River		0
Total		0

MEETING REPORT



To: Waioeka-Otara Rivers Scheme Advisory Group

Author: Kirsty Brown, Rivers and Drainage Assets Manager

Date: 12 September 2022

Subject: General Business Report – 28 September 2022

1. River Scheme Advisory Groups Terms of Reference Review

As advised at our last group meeting, a review of the 2016 Terms of Reference (TOR) for our four river schemes advisory groups has been underway. The main purpose of this review is to confirm that the purpose of the advisory groups remains appropriate and to consider how the group might assist in achieving our Long Term Plan strategic impact areas: Partnerships with Māori, Climate Change and Community Participation. The review has also supported addressing concerns raised in the 2021 online survey, e.g. barriers to meeting attendance.

A copy of the draft TOR (attached) was circulated via email on 19 July 2022 with the option of providing feedback prior to the September round of group meetings. The main enhancements include:

- A clause that provides an opportunity for members to be reimbursed for time or mileage if they are required to travel or take time off work to attend meetings.
- The inclusion of the following four guiding principles to support the work of the advisory groups:

- **Adapting to our changing climate**

The Bay of Plenty's climate is changing, and these changes will continue for the foreseeable future. Adaptation is essential to ensure our River Schemes remain sustainable and resilient in the long term. The work of the Advisory Groups helps to manage the effects of changing climate.

- **Working effectively with Māori to deliver outcomes for the region**

Implementing the principles of the Te Tiriti o Waitangi (The Treaty of Waitangi) collaboration and partnership will guide the work of the Advisory Groups. The Council has an opportunity to work effectively with Māori by establishing appropriate Māori participation through Advisory Groups. Hearing Māori perspectives and the inclusion of cultural values (such as Mātauranga Māori) will ensure river management and flood protection solutions remain consistent with community expectations. Diversity within the River Advisory Groups is encouraged and supported as it reflects the diversity in our wider community.

- **Community participation**

Members will assist with the sharing of scheme information to ratepayers and residents and promote opportunities for participation and collaboration.

- **Sympathy with natural processes**

Evolving best practice in river engineering and management in New Zealand is being shaped by the “Making Room for the River” philosophy. This approach tends to a more natural and less engineered/confined river system, to improve overall river and ecological health.

2. Condition and Performance Assessments

Our Rivers and Drainage Asset Management Plan sets out a programme of condition and performance assessments for our flood protection and drainage infrastructure assets. The next round of assessments are due to commence this financial year. Asset condition is a measure of the physical state of an asset which is visually assessed by staff/contractors and graded from 1 (very good) to 5 (very poor).

The below tables summarise the condition rating results for 2020/21 for Council’s Waioeka and Otara stopbank network. For stopbanks, the ‘count’ is each 100-metre inspection point and for culverts/floodgates the ‘count’ is the actual asset. Data collected during the field assessment provides information for maintenance programmes and renewal proprieties.

Year	2020/21
Asset Condition Rating Scores	%
1 - very good	9.2
2 - good	33.6
3 - moderate	29.3
4 - poor	18.8
5 - very poor	9.1
Total	100.0

While condition assessment looks at the physical state of an asset, performance assessment is a ‘whole picture’ analysis by assessing required service levels, asset condition, intrinsic strength, capacity, geology, and the potential risks to communities.

These assessments use the performance assessment framework and tool developed for the NZ River Managers Special Interest Group and produce a risk profile for each river’s assets segmented, from 1 (very low) to 5 (very high).

3. Local Elections 2022

Local Government elections are being held this year for the Regional Council’s 14 councillor roles. Postal voting opens on 16 September and closes Saturday, 8 October 2022. For more information on the local elections, please visit: <https://www.boprc.govt.nz/your-council/council-and-region/representation-and-elections>

For your information, Councillor Clark is not seeking re-election. Bill has been a key member of the advisory groups for several years, and we would like to thank him for his invaluable service to us and our communities over the years.

A handwritten signature in black ink, appearing to read 'K Brown', with a stylized flourish at the end.

Kirsty Brown
Rivers and Drainage Assets Manager

Rivers Scheme Advisory Group Terms of Reference 2022

For Kaituna Catchment Control Scheme, Waioeka-Otara Rivers Scheme, Whakatāne-Tauranga (formerly Waimana) Rivers Scheme, and Rangitāiki-Tarawera Rivers Scheme.

1.0 Purpose of the River Scheme Advisory Groups

- To connect regularly with those communities that benefit from and contribute to the work the Regional Council delivers to maintain and improve our river schemes.
- To enable discussion on the Regional Council's rivers and drainage work programmes and levels of service; and
- To discuss how we might adjust current practices, where necessary, to support sustainable river scheme management.

2.0 Guiding Principles

The following principles will guide the work of the Advisory Groups:

• Adapting to our changing climate

The Bay of Plenty's climate is changing, and these changes will continue for the foreseeable future. Adaptation is essential to ensure our River Schemes remain sustainable in the long term. The work of the Advisory Groups helps to manage the effects of a changing climate.

• Working effectively with Māori to deliver outcomes for the region

Implementing the principles of the Te Tiriti o Waitangi (Treaty of Waitangi) collaboration and partnership will guide the work of the Advisory Groups. The Council has an opportunity to work effectively with Māori by establishing appropriate Māori participation through Advisory Groups. Hearing Māori perspectives and the inclusion of cultural values (such as Mātauranga Māori) will ensure river management and flood protection solutions remain consistent with community expectations. Diversity within the River Advisory Groups is encouraged and supported as it reflects the diversity in our wider community.

• Community Participation

Members will assist with the sharing of scheme information to ratepayers and residents and promote opportunities for participation and collaboration.

- **Sympathy with Natural processes**

Evolving best practice in river engineering and management in New Zealand is being shaped by the “Making Room for the River” philosophy. This approach tends to a more natural and less engineered/confined river system, to improve overall river and ecological health.

3.0 Scope of activity

The role of the Advisory Group is as follows:

- To be a local contact on rivers and drainage issues.
- To share information to and from river scheme communities, stakeholders and tangata whenua.
- To act as a voice for the community to inform the planning and delivery of scheme works.
- Provide community views and input into key Rivers and Drainage management plans and strategies.
- Provide a feedback forum for Council on Rivers and Drainage proposals, projects and changes.
- To make recommendations on scheme management and operations including:
 - Capital and maintenance work
 - Proposed annual work programmes and budgets
 - Floodplain Management Strategies, and
 - Integrated and collaborative management opportunities.

4.0 Status

Local input and advice from Advisory Groups is essential for effective scheme management and is highly regarded by Council. While the Advisory Group has no statutory basis or delegated functions of Council it can make recommendations on Council matters.

5.0 Membership

The number and structure of members is intended to achieve a broad representation of the community covering the geographical extent of the Scheme, tangata whenua and various rating categories. The Council may appoint additional members to best meet the needs of the scheme. *(Each scheme-specific ToR will have its Membership Schedule inserted here from the Membership Schedule below).*

6.0 Appointment and term of service

Members will be appointed for a period of three years with a maximum term of six years. If an Advisory Group does not achieve its desired number of members, existing members who have exceeded their appointment period may continue for a further three-year term(s) by appointment.

Group membership consists of tangata whenua, territorial authorities, and targeted rate payers. Ratepayer representatives must be a targeted ratepayer in the Scheme to be eligible for nomination.

Ratepayer representatives are determined by the Council following a public or consultation process.

Council may appoint members representing special interests within the Scheme.

An elected member of the Regional Council will be the Chairperson.

Members who are unable to complete their three-year term may be replaced by either Council or the authority they represented.

7.0 Meeting frequency and operation

There will generally be two meetings held per year in March and September called by the Chairperson or delegate.

Meeting agendas will be compiled by managers and staff who will also service the meeting.

Council will assist with personal expenses incurred in meeting attendance, in keeping with Council's Expenses and Allowances Policy. Claims in this regard are voluntary.

8.0 Conflict of interest

Members are required to bring to the attention of the Chairperson any conflict of interest or potential conflict they may have with any item on the agenda.

If a member is deemed to have a real or perceived conflict of interest in a matter that is being considered at a meeting, he/she will be excused from discussions and deliberations on the issue where a conflict of interest exists OR must not be present for consideration of that matter.

9.0 Confidentiality

During the course of the business of the Advisory Group, a member will, from time to time, be privy to confidential information. Any confidential information is protected and should not be disclosed until a resolution of the Advisory Group to release the information has been made.

10.0 Communication and reporting

The line of communication between Council and the Advisory Group will generally be through the Regional Council General Manager and the Advisory Group Chairperson.

Issues or recommendations arising from Advisory Group meetings will either be addressed by Scheme Managers or referred to the Council.

Information updates to Members will be circulated by email.

Information updates to scheme ratepayers will be made available via media releases, information posted on the Council web site and/or by email.

11.0 Terms of Reference review

The Council may review this Terms of Reference at any time if it considers circumstances or its community collaboration processes have changed. Prior consultation with the Advisory Group members will occur if a review is being considered.