



Waioeka-Otara Rivers Scheme Advisory Group

**Wednesday 24 March 2021
10:30am**

Ōpōtiki Golf Club
14 Fromow Road
Opotiki

Waioeka-Otara Rivers Scheme Advisory Group

Wednesday 24 March 2021

- 1 Welcome and Introduction**
- 2 Apologies**
- 3 Notes of previous meeting held 23 September 2020**
- 4 Matters arising from previous meeting**
- 5 Engineering Update**
- 6 Gravel Management**
- 7 Operations Update**
- 8 April 2017 Flood Repair Project Update**
- 9 Finance Report**
- 10 Rivers Scheme Planning (AMP and LTP)**
- 11 Coastal Catchments Update on Alligator Weed**
- 12 General business**
 - a. Infrastructure Insurance Review**
 - b. Flood Protections and Drainage Bylaws 2020**
- 13 Public Forum**
- 14 Meeting Closure and Karakia**

Notes of the Waioeka-Otara Rivers Scheme Advisory Group Meeting held at Council Chambers, Opotiki District Council, 108 St John Street, Opotiki on Wednesday, 23 September 2020, commencing at 10am

Chair: Councillor Bill Clark

Advisory Group: Barry Hennessy, Councillor David Moore, Councillor Steve Nelson, Dave Wilson, Dean Petersen, Tania Te Whenua, Robbie Petersen

BOPRC Councillors: Councillor Bill Clark, Councillor Toi Kai Rākau Iti

BOPRC Staff: Kirsty Brown (Rivers and Drainage Assets Manager), Lynne Hind (Asset Management Coordinator), Bruce Crabbe (Rivers and Drainage Operations Manager), Chris Ingle (General Manager Integrated Catchments), Mark Townsend (Engineering Manager), Hemi Barsdell (Asset Management Specialist), Paula Chapman (Project Manager), Tony Dunlop (Flood Area Engineer), Kay Boreham (Communications Partner)

Public: Ian Connor, Tim Herewini

Apologies: Jessica Wiseman, Ari Erikson

1 **Welcome**

Councillor Clark welcomed everyone to the meeting and Councillor Iti opened the meeting with a karakia.

Kirsty Brown introduced Lynne Hind as the Acting Asset Management Coordinator who will be filling in for Jo Heath, whilst Jo is on secondment until the end of the year.

2 **Apologies**

Apologies received as recorded above.

3 **Notes of previous meeting held 25 September 2019**

Resolved

That the Waioeka-Otara Rivers Scheme Advisory Group:

- 1 **Confirm the notes of the meeting held 25 September 2019 as a true and correct record.**

**Wilson/Clark
CARRIED**

4 **Matters arising from previous meeting**

No matters arising.

5 Central Government Funded Projects

Chris Ingle presented an overview of the Central Government Funding provided to Bay of Plenty Regional Council.

Key points included:

- 75% Crown funding for the Waioeka Estuary concept.
- Kia Kaha Whakatāne – 100% funding but must be spent by 30 November 2020, \$2.1 million for region-wide projects including track clearance, pest control, coast-care enhancement work and removing problem trees alongside waterways. Over 70 jobs created short-term, focus on those unemployed due to Covid-19.
- Wallabies and Wilding Trees – four-year programme. \$1.45 million for wallaby control in current year with contributions from Waikato and Bay of Plenty Regional Councils. Funding increased in Year Two. Wilding pine control awarded \$817,000 in three management areas.

6 Engineering Update

Mark Townsend spoke to his report and presentation:

- Waioeka-Otara Capacity Review – Hydrology was peer reviewed by WSP. Hydraulic Modelling awarded to Cardno. High level of interest in the tender process which led to a cost-effective outcome. Work due to commence June 2021. They will do 103 different modelling runs.
- Otara River Stopbank, Geotechnical Investigations – work on wharf looking at floodwalls. Working on identifying the priority list to do further geotechnical work.

7 Gravel Management

Paula Chapman spoke to the Gravel Management report:

- Meetings with Whakatohea during 2019. No changes since then.
- Good progress with Waioeka River.
- Gravel extraction is for flood protection and has a river management perspective. Gravel extraction will only progress if the works have a clear river management advantage.

Discussion:

- Discussion around the difficulty that arises at times between gravel extraction for flood control / river management purposes and businesses managing their markets and maintaining business continuity. Robbie Petersen spoke on behalf of Waiotahi Contractors from a business perspective. Where possible, Council to let businesses know more in advance about gravel extraction requirements.
- Questions as to process for engaging the Engineering team and to what extent environmental scientists are involved. Code of practice sits alongside any operation. Consenting process has ecological considerations built-in.

8 Operations Update

Bruce Crabbe spoke to the report on the Waioeka-Otara Rivers Scheme works programme in the agenda pack – it was taken as read.

Tony Dunlop presented the Operations Update PowerPoint.

Key points included:

- Te Rere Pa Drainage, Aerodrome Drain – job complete.
- Riverloch Farms Rock and Planting – willows out, replanted with cabbage trees and toe toe.
- Otara River, Carters Flood Depression – opened up cut with less velocity.
- Moody Trust Rock Replenishment.
- Ruby Trust Rural, Memorial Park Urban – rock showing signs of wanting replenishment. Habitat ponds put in after 2017 still working. Want to grow / enhance these, talking to DoC.
- Waioeka River – lots of pampas grass coming down. Trench willow works at Maxwell's.
- Wilding Tree Clearing Project (Kia Kaha Whakatane) – clearing commenced at Tarawa Creek, Waioeka River. Working with DoC, Opotiki District Council, Opotiki College and iwi to enhance habitat and create environmental education for school students.
- Waioeka Estuary Restoration Proposal.
- Bruce Crabbe went through rating scheme distribution. Urban sector pays significant portion of the rates. Looking closely at where work is carried out and if it is sustainable. Two dynamic rivers and low population to pay for it means rates per head are higher. More work to come here, looking at room for the river principles and affordability.

Discussion:

- Congratulated on use of native trees. Discussion around use of willows and native trees. Tony explained some natives will not establish in some areas. Lots of natives planted behind willows.

9 April 2017 Flood Repair Project Update

Paula Chapman spoke to the report provided in the agenda pack and delivered a presentation showing progress with the April 2017 Flood Repair Project.

Key points included:

- In Year Four of the flood repair project.
- As at 31 August 2020, 60 sites have been completed or are no longer required for the Waioeka-Otara Rivers Scheme.
- Only one site left to complete in Waioeka-Otara Scheme – Gault's Outlet to do.
- Expenditure to date has been \$5.33 million with \$2.1 million in recoveries.

10 Finance Report

Kirsty Brown provided an overview of the scheme's revenue and expenditure for the 12 months ending 30 June 2020:

- Higher revenue and lower operational expenditure has resulted in a favourable operational position of \$912,000.
- Lower capital expenditure due to the modelling results showed that the Duke Street Pump Station upgrade was not required.
- Total reserve funds available of \$2.5 million.
- Internal loan balance of \$5 million.
- Annual 2020 valuation is currently underway.

Discussion:

- Councillor Clark questioned the payment of \$1.1 million from the scheme loan balance. Finance staff have since confirmed the repayment was from insurance recoveries.

11 River Scheme Planning (AMP and LTP)

Hemi Barsdell presented the River Scheme Planning update.

Key dates:

6 October 2020	Council review of draft Long Term Plan (LTP) 2021-2031 and AMP budgets
10-11 November 2020	Second Council review of draft Long Term Plan (LTP) 2021-2031 budgets and AMP documents
December 2020	AMPs and draft LTP 2021-2031 documents adopted by Council for review by Audit NZ
February – May 2021	LTP consultation, submissions, hearings
March 2021	Advisory Group meeting
June 2021	LTP approved

- More assets means more budget required for maintenance.
- Forecasts are resulting in higher budgets.
- Need to look at affordability. Options include increasing the budget or keeping the budget the same but doing less work (only high priority sites).
- Confirmed draft scheme budgets will be shared at the March 2021 Waioeka-Otara Rivers Scheme Advisory Group meeting.

12 Co-governance / community group updates

No updates to report.

13 General business

13.1 Infrastructure insurance

Kirsty presented an overview of the infrastructure insurance. Central government pays up to 60% of the repair costs for essential infrastructure to local authorities, conditional on us showing we can meet the remaining 40% through other means.

On 30 July 2020 a workshop was held between Council staff and Aon representatives. Aon will now be carrying out a frequency loss assessment for us and in turn we have created a video to show how the Bay of Plenty river and drainage area has been hit with recent disasters and what systems we have in place to prepare for this. As part of the loss assessment, Aon will identify and analyse the loss exposures for rivers and drainage assets and examine the feasibility of self-insurance as a cost-effective option. Other ways to manage risk will also be examined, e.g. capacity to borrow, to fund any loss or damage.

As our insurance is obtained in London it was noted that due to the impact of Covid-19 on this market, our insurance premiums may go up by 15 percent.

The Waioeka-Otara River Scheme's infrastructure premium for this year was \$67,000.

A video has been created by Bay of Plenty Regional Council to show what systems we have in place within Rivers and Drainage and how prepared we are for flood protection, as part of the information package for Aon. The video was shown to the Advisory Group.

13.2 Review of the Floodway and Drainage Bylaw 2008

The Floodway and Drainage Bylaw 2008 sets out regulations that safeguard flood protection and land drainage assets from third party damage or misuse. The bylaw is reviewed to ensure it is still fit-for-purpose and informed by the latest science and flood information. Due to Covid-19, deliberation and adoption timeframes were postponed until the following dates:

- Hearings – 26 August 2020
- Deliberations – 1 and 23 October 2020
- Adoption – 17 December 2020 (to be operative from 1 February 2021)

Submissions closed 28 April 2020 with a total of 43 submissions received. Fifteen organisations and individuals advised they would like to be heard at the hearing.

Further information on the proposed Flood Protection and Drainage Bylaws 2020 can be found on our website at <https://www.boprc.govt.nz/our-projects/flood-protection-and-drainage-bylaw-review>

13.3 Advisory group membership – September 2020 to September 2023

The first three-year term for Advisory Group membership was due to finish this month (September 2020). Members were approached by staff and everyone in the Waioeka-Otara Rivers Scheme Advisory Group noted they would like to continue.

Discussion:

- Discussion around insurance increase and other options, e.g. self-insurance.

Hemi ended meeting with a Karakia Whakamutunga.

Meeting closed at 1.30 pm.

Action Sheet

Waioeka-Otara Rivers Scheme Advisory Group Meeting

23 September 2020

Action	Person Responsible	Completed	Comment
No actions for this meeting			

MEMORANDUM



To: Waioeka-Otara Rivers Scheme
Advisory Group

From: Mark Townsend
Engineering Manager

Date: 24 March 2021

File Ref: A3746201

Subject: Engineering Update

1 Waioeka-Otara Capacity Review

Budget 2020-2021: Hydrology and modelling \$195,500

This work involves the 10-yearly review of the capacity of the Waioeka Otara Rivers Scheme infrastructure to determine whether the accepted levels of service are being met. Cardno were the successful tenderers for the work and the hydraulic modelling is underway and progressing well.

The capacity review is expected to be complete by June 2021.

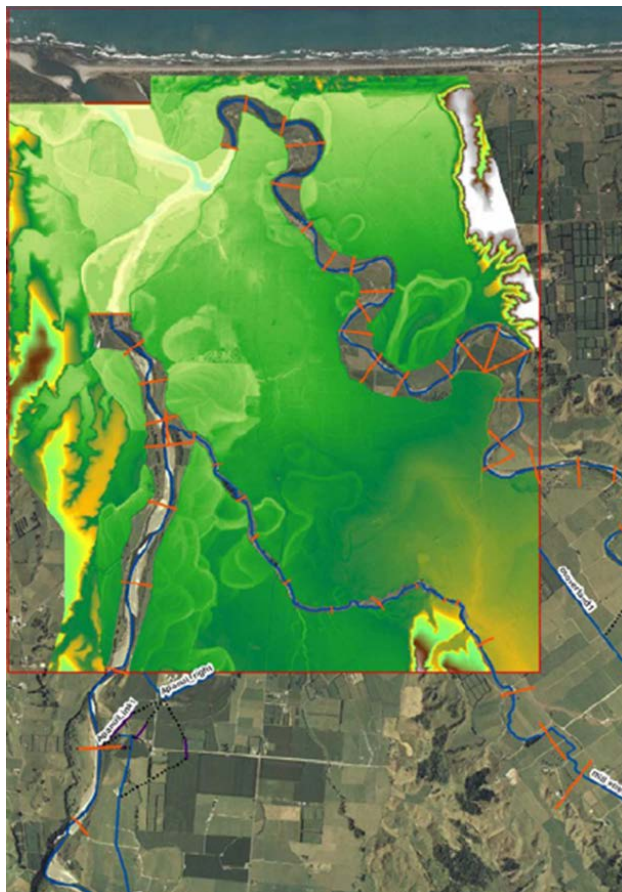


Photo 1: Waioeka Otara Rivers Scheme, Capacity Review Area

2 Otara River Stopbank/Floodwalls Geotechnical Investigations

Budget 2020-2021: \$100,000 + \$100,000

This project involves undertaking testing of stopbanks and floodwalls and the analysis of results alongside existing information to inform future upgrade works. The stopbanks have been analysed in sections based on the soil regions to allow seepage and stability assessment and two floodwalls have also been evaluated.

Geotechnical investigations for this first phase are now complete and the final report is being reviewed. The report includes design suggestions and estimated costings for physical works. The second and final phase will be scoped once the phase one final report is approved.

The sum of \$500,000 has been included in the draft Long Term Plan (LTP) for flood wall physical works (2021/22).

Additional provision has also been provided in the draft LTP for geotechnical works that may be required following the capacity review.



Photos 2 and 3: Waioeka-Otara Rivers Scheme Floodwalls

3 Waioeka Estuary Restoration and Floodway Enhancement

Budget 2020-2021: \$4,000,000

This project involves removing existing stopbanks and converting low-lying farmland to estuary/wetland habitat. Extensive revegetation and some earthworks would be needed to enhance the estuary/wetland area and to maximise habitat restoration for native fish (particularly inanga and tuna) and bird species. The project would require the acquisition of most of the existing floodway land.

The total project cost estimate is \$4 million and was approved for Crown Infrastructure Partnership (CIP) funding of up to 75% or \$3 million.

At this stage the limited Iwi, Hapū and District Council consultation has been extremely positive however the proposal has yet to be discussed widely with the community. The project is fully dependent upon a successful land acquisition process.

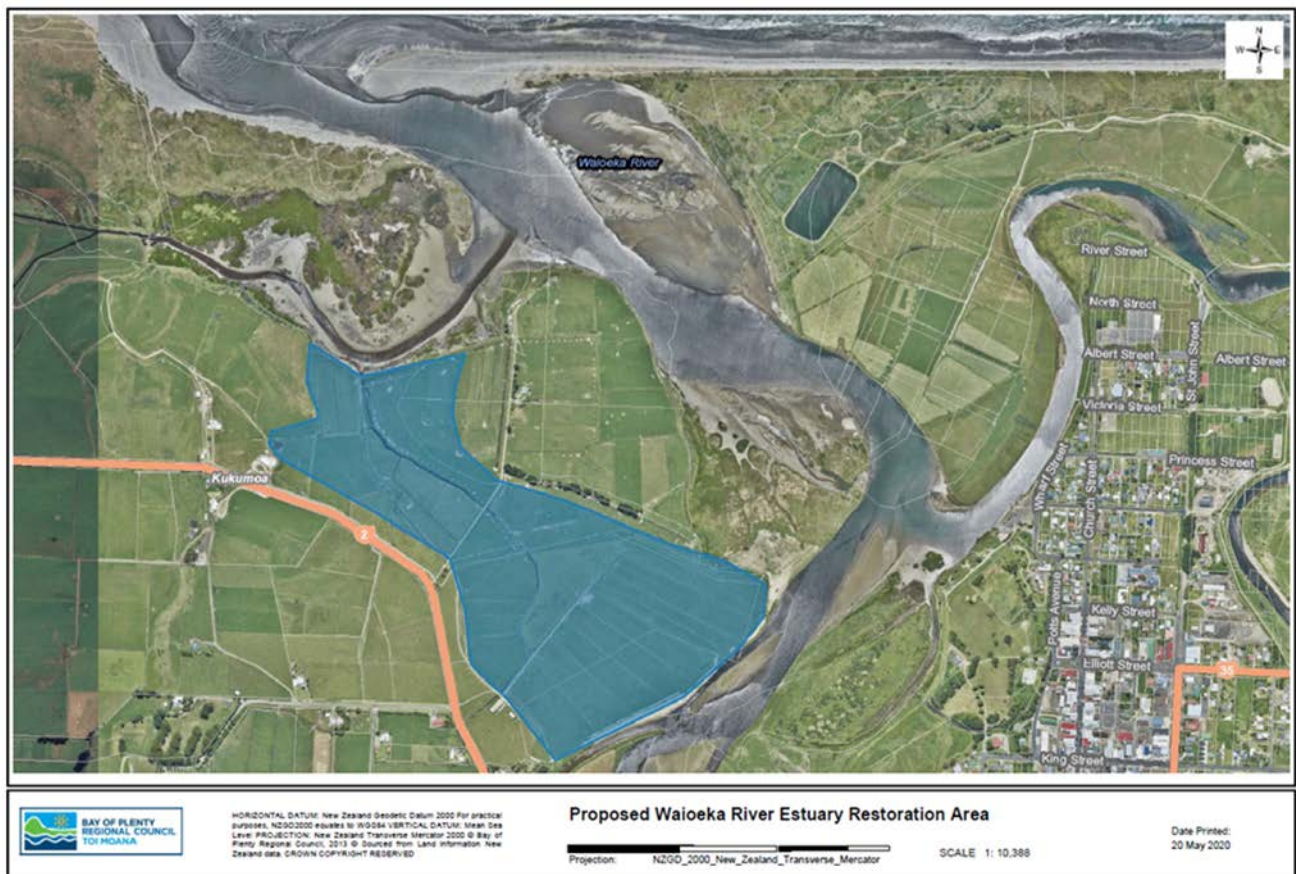


Photo 4: Indicative area of proposed Waioeka River Estuary Restoration

Mark Townsend
Engineering Manager

MEMORANDUM



To: Waioeka-Otara Rivers Scheme Advisory Group

From: Mark Townsend
Engineering Manager

Date: 24 March 2021

File Ref: A3746373

Subject: Gravel Management Update

1 **General**

Gravel extraction quantities within the Waioeka-Otara Rivers Scheme are detailed below. The floods experienced in April 2017 were a major influence on gravel river beds with significant changes observed. Cross section surveys were undertaken following the flood event to identify changes that have taken place and are planned for resurvey in 2021/22.

2 **Extraction**

Waioeka River – The quantity considered sustainable in the Waioeka is 20,000 m³ per annum (reduced from 30,000 m³ per annum). Additional to this are significant quantities in the Waioeka Gorge on high beaches which should be lowered and loosened to facilitate travel of gravel downstream to the farmland reach.

Otara River – There are variables over the length of the Otara River. Overall, within the design width, there has been a net volume gain of approximately 61,000 m³ (2013-2018). This is additional to the gains experienced in the periods 2010-2013, 2007-2010 and further back to 1996. Future extractions should be considered for river management purposes (overflow cuts), particularly where high beach armoured areas exist.

Council staff have been actively involved in talking with Whakatōhea hapū about the work of Regional Council, including work undertaken by Rivers and Drainage activity.

3 **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 in August 2019. 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 their concerns about extractions particularly on the Waioeka River. Staff have been talking with Ngāti Ira about what they would like to see in the consent renewal. Staff have also been in discussions with Otara River Hapū through the Otara River Mana Whenua Collective to ensure an improved understanding of Otara River gravel concerns. Further discussions are planned.

4 Waioeka-Otara Rivers Scheme gravel extraction summary

1 June 2019 – 30 June 2020

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

1 July 2020 – 28 February 2021

River	Site	Quantity allocated (m ³)
Otara River		0
Total		0
Waioeka River	Beaties Pit RD 6.3 – 6.8	10,170
	Maxwell's, left bank RD 10.2 – 10.7	2,559
	Maxwell's, left bank RD 10.2 – 10.7	9,388
Total		22,117

- There are currently 3 gravel allocations (totalling 14,500 m³) being processed for the Otara River. These extractions will support river management (overflow cuts and de-armouring).

Mark Townsend
Engineering Manager

Waioeka - Otara Rivers Scheme Maintenance Works Programme: Financial Year 2020/2021						
9/03/2021			Objective ID: A3510043			
Row	Work type	Reach	Location (LB=left bank, RB=right bank)	Annual Budget	Job estimate	Status/notes
1	<u>General</u>					
2	Annual Flood Damages			\$160,000		
3	Waioeka River, Connors - Rock lining 120m	R1	LB 2.5		\$100,000	Completed
4	Waioeka River, Riverloch Farms - Rock lining	R2	RB 9.3 to 9.5km		\$85,000	Completed
5	Waioeka River, Whakatōhea - Rock lining	R2	RB 5.0km		\$12,000	Completed
6	Otara River, M Gloyns - Trench willows- 80m	R4	LB 16.9km		\$15,000	Completed
7	Otara River, Thornton Orchard - 100 metres	R3	RB 2.4km		\$98,000	Completed
8	Otara River, Gault's (lower Farm) - 150m trenched willows	R3	RB 9.4km		-	\$15k, low priority
9	Otara River, Ruby Trust - 500 lineal metres of River bank deterioration	R3	RB 0.8-1.3km		-	\$360k, low priority
10	Subtotal flood repairs				\$310,000	
11						
12	Fly tipping and rubbish collection/disposal			\$8,000	\$4,000	ongoing
13	Pest control			\$8,000	\$4,000	ongoing
14						
15	<u>Drainage</u>			\$10,200	\$11,000	
16	Apanui Drain/Whakatōhea - spraying (contact G Nicol)	R1	RB 0.0-3.8 km			Completed
17	Mill Stream		L&RB various sites			Completed
18	Baird's Drain - spraying		L&RB various sites			Completed
19	Duke Street - spraying		RB 0.0-0.1 km			Completed
20	Mill Stream to Warrington's Road - spraying		L&RB 0.0-6.0 km			Completed
21	Mill Stream Otara Branch - G Young's					Completed
22	McCallion's Drain - spraying		L&RB 0.0-2.4 km			Completed
23	Te Rere Pa Drain - spraying		Various			Completed
24	Aerodrome Drains x 2- spraying		L&RB 0.0-1.2 km			Completed
25	Vanstone's Drain - spraying		L&RB 0.0-1.2 km			Completed
26	Baird's Rd Drain (Connor's)					Completed
27						
28	Drain desilting			\$8,800		
29	Apanui Drain - outlet to G Nicols.				\$8,000	Partly Completed
30	Various if required		various		\$5,000	
31						
32	<u>Rivers</u>			\$17,500	\$18,000	
33	Beach spraying	R1,2,3,4	Various beaches			In Progress
34	Nut tree eradication	R1,2,3,4	Various locations			
35	Matchett Road - Bamboo spraying	R2	RB 3.6 km			
36	Waioeka Pa outlet - spraying	R2	RB 12.0 km			Completed
37	Floodgated outlets	R1,2,3,4	Various locations			Ongoing
38	Waioeka confluence berm spraying/mulching - Connor's	R1	RB			Completed
39	Berm weed Spraying - Waioeka (Ford St - SH Bridge) - Otara (Pony Club - Thornton Orchard)	R1 & 3	Various			Completed
40						
41	Release Spraying Native plantings (both rivers)					
42	Otara River, Carters (Doc Lease) - Native shrubs	R3	RB 13.3 to 13.5km		\$500	Completed
43	Otara East Bridge - Native shrubs planted	R3	LB 9.8 to 10.1km		\$500	Ongoing
44	Riverloch Farms	R2	RB 9.5km		\$500	Ongoing
45	Anstis rockworks	R2	LB 6.9-7.1		\$200	Ongoing
46	D Wilsons	R2			\$200	Ongoing
47						
48	Planting (Willows/native shrubs - Toetoe & cabbage trees)	R2		\$22,800		
49	Anstis rockworks	R2	LB 6.9-7.1		\$1,200	Completed
50	Waikere	R2	RB 12.7 km		\$3,000	Deferred 2021-2022
51	Otara River Carters - Wetland Establishment	R4	RB 13.2km		\$3,000	Completed stage 1

52		Riverloch Farms	R2	RB 9.5km		\$2,000	Completed
53							
54		Tree maintenance: layering/mulching/clearing/replanting			\$44,200		
55		Gault's - Layering/transplanting	R3	RB 8.1 to 9.2km		\$7,000	
56		Carters/Doc land - Mulching	R4	RB13.1		\$3,000	In progress
57		Otara River, Thornton Rest Home - Berm mulching	R3	RB 2.5- 2.9km		\$5,000	Completed
58		Otara River, Richard St to Te Rere Pā Rd.	R3	LB 3.9 - 5.6km		\$5,000	Completed
59		Otara River, Pampas etc	R4	LB 11.6-18.6km		\$17,000	In progress
60		Waioeka R. SH Bridge, berm mowing maintenance	R1	RB 2.5 -3.6km		\$8,000	Ongoing
61		Waioeka River, Riverloch Farms, mulching willows	R2	RB 9.4 - 9.7km		\$12,000	In progress
62		Waioeka River Whakatōhea Willow Trenching/planting	R2	RB 6.1km		\$10,000	In progress
63		Rock replenishment			\$77,100		
64		Otara River, Memorial Park - 120 metres	R3	RB 0.6-0.75km		\$112,000	
65		Otara River, Moody Trust SH Bridge	R3	RB 3.2 km		\$90,000	In progress
66		Fencing			\$20,700		
67		Various	All	Various locations		\$4,000	Ongoing
68							
69		Beach shaping & channel maintenance			\$90,600		
70		Beach shaping	R1	Various locations		\$1,000	March - August
71		Beach shaping - ripping	R2	Various locations		\$10,000	March - August
72		Overflow channel maint. - Whakatōhea/Robbie's Pit	R2	RB		\$3,000	March - August
73		Overflow channel maint. - Nicol's/Beattie's	R2	LB		\$3,000	March - August
74		Overflow channel maintenance - Maxwell's/ Riverloch	R2	5.8-10.4km		\$3,000	March - August
75		Beach Shaping	R3	Various locations		\$12,000	March - August
76		Beach shaping - ripping	R4	Various locations		\$10,000	March - August
77		Overflow channel maint. - Rewa Hill/Hillyard's	R4	RB		\$3,000	March - August
78		Overflow channel maint. - Carter's lower & top beach	R4	RB13.2-14.3km		\$3,000	March - August
79							
80		Condition assessment defects repairs- Floodgates /stopbanks	R1,2,3,4	Various locations		\$30,000	Ongoing
81							
82	<u>Stopbanks</u>	Minor floodgates inspection/repairs/ maintenance			\$11,800		
83		Floodgate outlet inspections/maintenance	All	Various locations		\$4,000	Ongoing
84		Ford Street Outlet De silting	R1	3.0km		\$2,000	Completed
85		Floodgate Outlet desilting	all	Various locations		\$10,000	Ongoing
86							
87		Stopbank miscellaneous maintenance			\$37,000		
88		Spraying floodwalls - Urban area	R1&3			\$1,000	
89		Floodwall maintenance - sealant replacement (tbc)	R3	LB 3.4-3.6 km		\$8,000	
90		Stopbank weed spraying/mowing	all	Various locations		\$10,000	Ongoing
91		Otara R. Edwardson's Outlet replacement				\$8,000	Completed
92							
93	<u>Duke Street Pump Station</u>	Pump inspections			\$2,100	\$3,600	Ongoing
94		Pump six-month inspection			\$600	\$600	
95		2.5 year maintenance			\$800	\$800	
96		5 year maintenance			\$4,200		
97		Miscellaneous repairs/maintenance			\$2,100	\$2,100	
98		Electricity			\$9,500	\$9,500	
99							
100		Annual operational maintenance budget			\$376,000		
101		Estimate of scheduled annual maintenance				\$476,200	
102		Annual flood damage budget & estimates			\$160,000	\$310,000	
103		Total Estimated Operating Costs			\$536,000	\$786,200	
104							
105		Capital Works					
106		Factory Rd - Mill Stream Outlet Replacement	R2	Mill Stream	100,000		Under Investigation

MEMORANDUM



To: Waioeka-Otara Rivers Scheme Advisory Group

For period 1 August to 28 February 2021

From: Paula Chapman

Date: 24 March 2021

Project Manager - Flood Recovery

File Ref: A3748243

Subject: Completion Report - April 2017 Flood Repair Project

April 2017 flood event - background

In early April 2017, the Eastern Bay of Plenty was hit by ex-Tropical Cyclone Debbie. The cyclone brought with it prolonged torrential rain, resulting in rising river levels across all the rivers and waterways in the region. The event resulted in significant damage to river and drainage networks and assets across the region, from the Kaituna in the west through to the Waioeka-Otara catchment in the east.

1 Programme Update

- The flood recovery project is now in its fourth year of the estimated four year programme. Favourable weather, good ground conditions along with unconstrained material supply will see the majority of the programme completed by 30 June 2021. There may be a small number of Whakatāne River sites that will remain to be completed at the end of the financial year.
- As at 28 February 2021, 471 site repair works are complete (or are no longer required) from the total programme of 520 sites. For the Waioeka-Otara Rivers Scheme all 61 sites are now complete (this includes twelve sites which have been assessed as self-healed, low priority sites and work is no longer needed).
- Central Government are contributing to essential infrastructure repairs. The total amount received from central government to date is over \$9.2 million. Three progress payments for Infrastructure Insurance have been approved totalling \$3,600,000.
- The site in the Waioeka-Otara Rivers Scheme was completed in January (WO160 Gault) this work involved the repair of slumping and erosion on both sides of the existing culvert outlet.

2 Financial - Waioeka-Otara Rivers Scheme

Original estimated cost Waioeka-Otara Rivers Scheme (March 2018)	\$5,400,000
Actual Costs for infrastructure works (Feb 2021)	\$5,490,282
Estimated betterment value	\$2,806,000
Recoveries to date Waioeka-Otara Rivers Scheme (Feb 2021)	\$2,178,582




Paula Chapman
Project Manager Flood Recovery

Bay of Plenty Regional Council - Toi Moana - Rivers Advisory Group

Statement of revenue and expense: Waioeka-Otara Rivers Scheme







For the six months ending 31 December 2020

Waioeka-Otara Rivers Scheme










Variance Indicators					
Low <10%		Medium 10% to 30%		High >30%	

		Variance			Variance comments	2020/21
Budget	Actual	\$	Variance indicator			Budget
\$000						

Line Operating revenue by class

1	General rates	75	75	0	-			150
2	Targeted rates	774	774	0	-			1,549
3	External interest income	5	0	(5)	Lower		Reserve interest adjustment to come	11
4	Other revenue	0	36	36	Higher		Gravel extraction revenue	0
5	Investment income	107	107	0	-			213
6	Total revenue	961	992	31	Higher			1,923

Operating expenditure by class




7	Administration expenses	1	1	0	-			1
8	Other expenses	66	111	(45)	Higher		Additional materials costs (works undertaken earlier than	147
9	Contract work	240	179	61	Lower			829
10	Finance costs	62	75	(13)	Higher			146
11	Depreciation and asset disposal	73	73	0	-			124
12	Subtotal - expenditure	442	439	3	Lower			1,247
13	Net overhead charges and recoveries	181	169	12	Lower			364
14	Total operating expenditure	623	608	15	Lower			1,611
15	Total operating surplus (deficit)	338	384	46	Favourable			312

Bay of Plenty Regional Council - Toi Moana - Rivers Advisory Group



Statement of revenue and expense: Waioeka-Otara Rivers Scheme

For the six months ending 31 December 2020







Waioeka-Otara Rivers Scheme

Variance Indicators					
Low <10%		Medium 10% to 30%		High >30%	

		Variance			Variance comments	2020/21
Budget	Actual	\$	Variance indicator			Budget
\$000						

Capital revenue by class									
16	Capital funding	150	51	(99)	Lower		Includes insurance recoveries		201
17	Total capital revenue	150	51	(99)	Lower				201
18	Total surplus (deficit)	488	435	(53)	Unfavourable				513

Capital expenditure by project

19	Waioeka Otara Flood Damage Repairs	0	32	(32)	Higher 		0
20	Waioeka Otara Capacity review	46	54	(8)	Higher 	Modelling work underway. The review will provide data on the flood carrying capacity of the stopbanks	195
21	Otara Floodwalls	0	46	(46)	Higher 	Foundation investigation is underway	100
22	Connor Peterson stopbank upgrade	0	0	0	- 	On hold	87
23	Gravel consent renewals	19	3	16	Lower 	Delayed	94
24	Total capital expenditure	65	135	(70)	Higher 		476

Reserves

Opening Balance \$000	Movement \$000	Closing Balance \$000
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25	Flood Damage Reserve	18	31	49	Funds available
26	Asset Replacement Reserve	309	46	(355)	Reduction in reserve for repayment of external borrowings.
27	Works Reserve	746	282	1,028	Funds available

Total Reserves




1,073	359	722	Funds available
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Bay of Plenty Regional Council - Toi Moana - Rivers Advisory Group

Statement of revenue and expense: Waioeka-Otara Rivers Scheme

For the six months ending 31 December 2020

Waioeka-Otara Rivers Scheme

Variance Indicators					
Low <10%		Medium 10% to 30%		High >30%	

		Variance			Variance comments	2020/21
Budget	Actual	\$	Variance indicator			Budget
\$000						

Opening Balance \$000	Movement \$000	Closing Balance \$000
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Internal Loans

28 Loans

5,063 (193) 4,870

1/07/2019 \$000	Movement \$000	1/07/2020 \$000
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31 Asset Revaluation

48,735	1,667	50,402
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MEMORANDUM



To: Waioeka-Otara Rivers Scheme Advisory

From: Sam Stephens
Biosecurity Officer

Date: 24 March 2021

File Ref: A1393346

Subject: Alligator weed site discovery - Snells Road, Ōpōtiki

1 Introduction

1.1 Purpose of this report

The purpose of this report is to inform members of the recent discovery of a serious pest plant, Alligator weed, at an Ōpōtiki property that connects to the Otara river.

1.2 Alligator weed

Alligator weed (*Alternanthera philoxeroides*), is known as one of the world's worst weeds. It grows on both water and land, and is very difficult to eradicate.

It is a rhizomatous perennial herb with fibrous roots reproduced from the stem which reach down into the water or soil. Soil roots are often longer and thicker than those in water, often extending to below 500mm in depth. Nodes also produce shoots that can produce new plants.

- Alligator weed originates from South America, and was first discovered in New Zealand in 1906 in Dargaville. It is thought it entered the country from contaminated ship ballast.
- Dargaville produces a large amount of the country's kumara, and many of the kumara growing areas have Alligator weed infestations.
- Movement of kumara from Dargaville appears to be a possible pathway for the distribution of Alligator weed across New Zealand.
- Alligator weed is locally abundant in parts of Northland and Auckland regions. There is scattered distribution in Waikato, Bay of Plenty and single sites known from Manawatu, Canterbury and West Coast.



Photo 1: Close-up of Alligator weed with clover-like flowers present.

Alligator weed poses a number of threats to both waterways and agricultural land once established, including:

- Obstruction of flows in waterways.
- Restriction of light penetration in waterways leading to anaerobic conditions.
- On land it causes dense monocultures, displacing desirable pasture species.
- It is poisonous to live-stock.

It is not known to set seed in New Zealand, but spreads via stem fragments. Fragments can be spread through numerous vectors including:

- Waterways, especially during flooding events.
- Movement and disturbance of soil, e.g. drain cleaning, cultivation.
- Farm machinery movements.
- Movement of contaminated crops.
- Animal movements.

2 Management of Alligator weed in the Bay of Plenty

- Alligator weed is managed under the Bay of Plenty Regional Pest Management Plan (RPMP).
- The RPMP classifies Alligator weed as a "progressive containment" species for the Ōpōtiki area.
- It is listed as a "service delivery" species meaning that the Regional Council will maintain control and management of any infestations as part of its Biosecurity programme.
- Service delivery species have Site Management Plans written that outlines how the infestation will be managed. These are agreed with the landowner.
- Alligator weed can be suppressed using herbicide, however eradication using herbicide alone is unlikely unless the infestation is discovered within the first year of establishment.

- Eradication of an Alligator weed infestation usually requires mechanical removal of the last fragments of plant mass, usually rhizomes and roots, once the infestation has been reduced to a small enough size by herbicide control.

3 Current Distribution in the Bay of Plenty

- There are currently 22 Alligator weed sites in the Bay of Plenty region.
- 13 are the in eastern part of the region, and 9 are in the Tauranga area.
- 13 of the sites have links to past kūmara growing operations.



Photo 2: Map showing current distribution of Alligator weed sites in the Bay of Plenty region

4 Snells Road site

- Implementation of the Site Management Plans will be run by the Regional Council.

4.1 Background

- The Snells road infestation was discovered after Biosecurity staff received a photo from a colleague holidaying in Ōpōtiki who saw some potential Alligator weed growing in a drain near Snells Rd.
- The site was subsequently checked by Biosecurity contractors on January 27th 2021, and it was confirmed that it was Alligator weed.
- A delimiting survey found that Alligator weed present in approx. 3 km of drain, and it is a well-established, large infestation (approx. 2,000m² of Alligator Weed in total) that has likely been present for a number of years.
- It was traced up a farm drainage system that crossed 3 properties and ended where the drain had been filled in.
- There appears to be no Alligator weed in the Otara River which the drain eventually leads to, but further survey work will be done to confirm this.

- There is currently no obvious links to any other Alligator weed sites, but we will be meeting with landowners shortly to try to ascertain the source of the infestation.
- There are currently two possible sources of the Alligator weed:
 - An upstream property that is a kiwifruit orchard which appears to have been a market garden in the past that grew kūmara.
 - A neighbouring property that has a depot for earthmoving equipment.
- All leads are currently being investigated to ascertain the original source of this infestation.



Photo 3: Location and extent of the Alligator weed infestation found at Snells Road, Ōpōtiki. Blue dots are where the Alligator weed was located during the delimiting survey.



Photo 4: Image of Alligator weed in the farm drain at the top end of the infestation.

5 Next steps

- Site Management Plans are currently being created in conjunction with the landowners.
- Mail out to all properties within the area.
- Inspections of neighbouring properties and high risk areas.
- Herbicide control of the Alligator weed with structures in place to catch any fragments.

Sam Stephens
Biosecurity Officer

MEMORANDUM



To: Waioeka-Otara Rivers Scheme
Advisory Group Members

From: Kirsty Brown
Rivers and Drainage Assets Manager

Date: 9 March 2021

File Ref:

Subject: General Business Update

Following items are to be discussed under the General Business section:

1 Infrastructure Insurance Review

Council obtains its insurance through the Bay of Plenty Shared Services Ltd (BOPLASS) joint insurance procurement forum. This includes covering the 40% local authority share of infrastructure restoration costs resulting from a natural disaster.

Due to the steady increase in infrastructure insurance premiums over the years and the likelihood this pattern will continue, a review of how we insure our flood protection and drainage assets is currently underway. This review is being led by our insurance broker's Aon.

The main objectives of the review include:

- Quantifying the frequency and financial consequences of flood damage to flood protection assets and clean-up costs.
- Identifying flood protection assets most at risk of damage from flood to inform asset management, resilience strategies and risk financing.
- Ensuring cost-effective and sustainable flood risk financing by reviewing financial risk tolerance, flood risk retention and disaster reserving strategies.

In the meantime, staff have secured savings for the 2020/21 premiums by:

- Initiating a successful review of the BOPLASS allocation formula.
- Reducing the contingency sum built in for all assets.

Group members will be kept up-to-date as this project develops.

2 Flood Protection and Drainage Bylaws 2020

The Flood Protection and Drainage Bylaws are regulations that safeguards Council's flood protection and land drainage assets from damage and

misuse. The bylaws only apply to assets managed by Council as part of the region's flood protection and land drainage schemes.

Following a comprehensive review of the 2008 Bylaws, the 2020 Bylaws were formally adopted by Council on 17 December 2020 and became operative on 1 February 2021.

In summary, the key changes include:

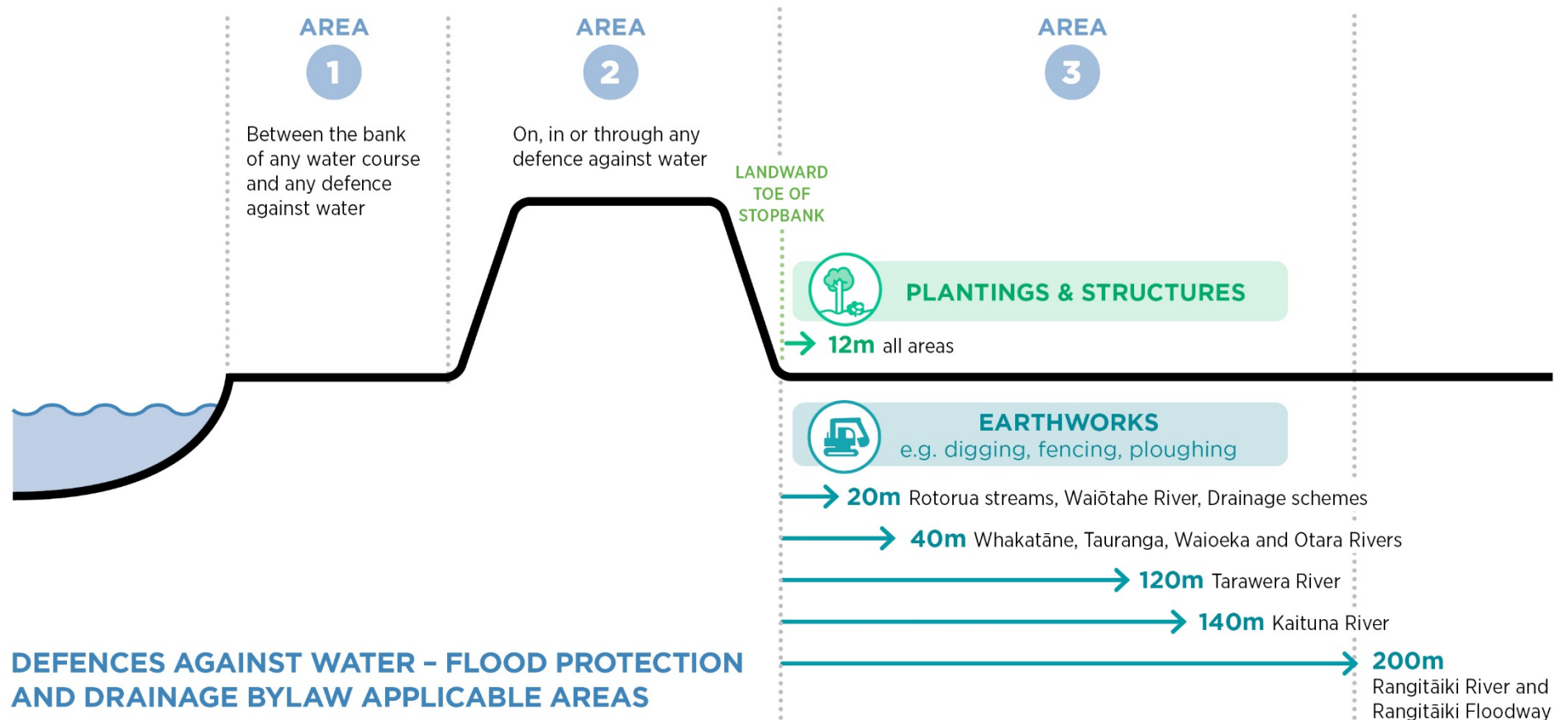
- Strengthening clauses relating to stock access to drains.
- Extending the bylaw applicable areas (where a bylaw authority may be required) for earthworks in relation to defences against water (see appendix 1 attached).
- Additional clauses related to fencing, ploughing and land use intensification in areas with pumiceous soils e.g. lower reaches of the Kaituna, Tarawera and Rangitāiki.
- Identification of additional floodways.
- Additional clauses relating to written authority management plans for multiple bylaw authority applications e.g. routine maintenance, seasonal activities and cultural practices.

More information on the Bylaws 2020 can be found on our website at <https://www.boprc.govt.nz/our-projects/flood-protection-and-drainage-bylaws>, including the online form to find out whether a property is within the bylaw applicable area.

A handwritten signature in black ink, appearing to read 'Kirsty Brown', with a stylized, looped initial 'K'.

Kirsty Brown
Rivers and Drainage Assets Manager

Appendix 1 – Bylaw applicable areas for defences against water (stopbanks, floodgates, pump station) and drains without stopbanks



Floodway and Drainage Bylaw applicable areas – drainage scheme drains without stopbanks

