



Kaituna Catchment Control Scheme Advisory Group Meeting

Wednesday 2 September at 10am

The Orchard
20 MacLoughlin Street
Te Puke

Kaituna Catchment Control Scheme Advisory Group Meeting

Wednesday 2 September 2020 at 10am

Agenda

- 1 **Welcome / karakia**
- 2 **Apologies**
- 3 **Notes of previous meeting held 4 March 2020**
- 4 **Matters arising from previous meeting**
- 5 **Central government funded projects**
- 6 **Engineering update**
- 7 **Operations update**
- 8 **April 2017 Flood Repair Project update**
- 9 **Finance report**
- 10 **River scheme planning (Asset Management Plan, Long Term Plan)**
- 11 **Co-governance / community group updates**
- 12 **General business**
 - a. River Scheme rating classification review
 - b. Infrastructure insurance
 - c. Review of the Floodway and Drainage Bylaws 2008
 - d. Advisory group membership - September 2020 to September 2023
- 13 **Public forum**
- 14 **Meeting close / karakia**
- 15 **Lunch**
- 16 **Site visit – Kaituna Diversion Project**

Notes of the Kaituna Catchment Control Scheme Advisory Group meeting held at Bay of Plenty Regional Council's Rotorua office, on Wednesday, 4 March 2020, commencing at 10am

Chair: Councillor Norm Bruning

Advisory Group: Barry Roderick, Dave Hurst, Graham Thompson, Councillor John Scrimgeour (Western Bay of Plenty District Council), Nick Chater, Richard Weld, Roger Hintz

BOPRC Councillors: Councillor Matemoana McDonald

BOPRC Staff: Kirsty Brown (Rivers and Drainage Assets Manager), Jo Heath (Asset Management Coordinator), Bruce Crabbe (Rivers and Drainage Operations Manager), Kerry Smith (Area Engineer), Chris Ingle (General Manager Integrated Catchments), Mark Townsend (Engineering Manager), Hemi Barsdell (Asset Management Specialist)

Public: Kelvin O'Hara, Luther Siemelink, Kelsey Bell

Apologies: Peter Dine (Rotorua Lakes Council)

1 **Welcome**

Councillor Bruning welcomed everyone to the meeting and Hemi Barsdell opened the meeting with a karakia.

Councillor Bruning introduced Matemoana McDonald, councillor for the Mauao constituency. With a new Council elected in October 2019, Councillor Bruning and Councillor McDonald are the Regional Council representatives on the advisory group.

Kirsty Brown introduced Hemi Barsdell and explained his role as Asset Management Specialist with the Rivers and Drainage Assets team.

2 **Apologies**

Apologies received as recorded above.

3 **Notes of previous meeting held 4 September 2019**

Resolved

That the Kaituna Catchment Control Scheme Advisory Group:

- 1 **Confirm the notes of the meeting held 4 September 2019 as a true and correct record.**

**Bruning/Thompson
CARRIED**

4 Matters arising from previous meeting

Kirsty Brown provided an update on actions from the previous meeting as follows:

- The Kaituna Catchment Control Scheme 2019-2020 maintenance work programme was circulated to members after the September meeting.
- Bell Road catchment modelling findings will be presented during the Engineering update in Agenda Item 9. Design options and costs are still to be determined.
- The Finance team investigated the reserve balances provided in the end of year financial report presented at the September meeting and found that interest accruals on reserve balances had not been included. This has been fixed and on investment maturity the interest will be compounded on to the reserve balance and re-invested.

The amount of rock being used for flood repair work was questioned and whether the use of rock has resulted in habitat loss and impacts on things like whitebait spawning. Bruce Crabbe reassured members that rock is not used where it is not needed. Rock is in short supply, and is expensive, so is only used at critical sites that require a high level of erosion protection to safeguard flood protection assets. Once the repairs are completed they quickly revegetate and staff are working to speed up this process by hydro-seeding with native grass species.

5 Performance assessment of critical assets

Kirsty Brown advised that Roger Waugh (RiverSpace Ltd) had been contracted to undertake a performance assessment of Regional Council's critical flood protection assets.

Key points included:

- As part of Council's asset management improvement focus a risk-based framework developed by the New Zealand Rivers Managers Group has been implemented to assess the performance of critical flood protection assets.
- Critical assets are those that have a high consequence, but not necessarily high probability of failure e.g. stopbank networks through urban areas. For the Kaituna Scheme the framework has been used to assess scheme assets on urban streams in Rotorua.
- The performance assessment process has three stages – risk identification, risk management and risk communication. The risk identification stage is complete and now staff are working through the risk management and risk communication stages.
- The main issues identified for the Rotorua streams include geothermal vents, landowner encroachment onto stopbanks, and trees on stopbanks and in waterways.
- A full outline of the risk profile will be presented to advisory groups at the September meetings.

6 River scheme planning

Hemi Barsdell delivered a presentation on river scheme planning, and spoke to the report provided in the agenda pack. Feedback from group members was sought on the preferred level of engagement in river scheme planning (e.g Asset Management Plan review and Long Term Plan).

ACTION:

A planning workshop, involving a sub-committee of Richard Weld, Barry Roderick, Graham Thompson and Dave Hurst, to be scheduled for April/May 2020.

7 Operations update

Bruce Crabbe took the report on the Kaituna scheme's 2019-2020 maintenance works programme provided in the agenda pack as read.

Kerry Smith explained that the Rivers and Drainage Operations team has six staff working in the Kaituna catchment and this year have had 300 civil projects on the go. Kerry delivered a presentation showing a range of scheme capital, operational and maintenance works.

Key points included:

- Drain maintenance is ongoing to ensure the drainage network is operational and providing the agreed level of service. This work includes desilting, de-weeding and weed spraying to maintain a good drain cross-section and good flow.
- Rabbit holes in stopbanks have been an issue across the region and looking to landowners to notify staff if they notice any rabbit activity. To remediate damage, the rabbits are poisoned with Pindone; the holes excavated until firm ground is located then backfilled with material compacted in layers and grass cover reinstated. The example provided was a stopbank on the AFFCO farm and members sought clarification on whether the scheme had taken over management of that section of stopbank which was originally built by AFFCO.

ACTION:

Investigate whether the scheme has taken over management of the AFFCO farm stopbank.

- The three radial gates at Ōkere Falls are undergoing routine maintenance. The gates are being removed one at a time and sent to Kawerau for refurbishment. Flows through the gates are being managed accordingly.
- Upper Kaituna stream maintenance is focusing on tree removal and securing access to the streams for ongoing maintenance. Staff are working collaboratively with Rotorua Lakes Council on a number of projects.
- Waingaehe Floodway maintenance has included willow removal and channel desilting and de-weeding.
- Habitat enhancement work in the Utuhina and Ngongotahā Streams is being carried out in conjunction with the flood repair programme. This work has been recognised by the Eastern Fish and Game in a recent newsletter.
- Recently purchased a hydro-seeder to speed up revegetation of disturbed sites. Once sites have been repaired and top-soiled they are hydro-seeded with suitable vegetation seed mix, including native carex and rush species.
- Staff have been trialling eel tubes (a series of metal tubes formed into a triangular prism) placed into areas of new rock work to provide habitat for eels. They have been very successful with eels moving in soon after installation.

Discussion:

- The control of *Glyceria* (sweet reed grass) was discussed. Usually controlled by spraying from a boat. Currently investigating the purchase of an airboat for this purpose.
- Suitable grass species for planting of stopbanks was discussed and Bruce Crabbe asked for advice on drought hardy species that are deep rooted and good at holding soil together. Members suggested cocksfoot and chicory as options that are also good grazing for cattle.

Attendance: Mark Townsend joined the meeting at 10:46 am.

8 April 2017 Flood Repair Project update

Kirsty Brown spoke to the report provided in the agenda pack and Kerry Smith delivered a presentation showing progress with the April 2017 Flood Repair Project.

Key points included:

- As at end of February 2020, 61% of repair sites across the region have been completed.
- Work programmed on 19 Kaituna scheme repair sites in 2019-2020. Six sites have been completed to date.
- Some outstanding high priority sites are showing increased levels of damage compared to the initial assessments. Also finding that some low priority sites have self-healed and no longer require work.
- Rock supply continues to be an issue for the repair programme with limited supply and the price being more expensive than initial estimates. Supply is possible from further afield (e.g. Matamata and Katikati), however cartage costs make that expensive.
- A combination of limited rock supply and increased levels of damage has resulted in a revised estimated repair budget for the Kaituna scheme of \$4.6 million, compared to the original estimate of \$2.9 million (an increase of \$1.7 million).
- Total recoveries received from central government (Ministry of Civil Defence and Emergency Management) is now close to \$7 million. Have also received two insurance progress payments totalling \$3 million.

ACTION:

Provide advisory group members with the Kaituna share of Flood Repair Project recoveries.

9 Engineering update

Mark Townsend spoke to the agenda report and delivered a presentation covering the following topics:

9.1 Ford Road pump station upgrade

- A preferred option has been determined – to move the Ford Road discharge to alongside the Diagonal Drain pump station (Option1).
- Water quality was the key deciding factor, and the need to meet water quality requirements at an acceptable cost.
- Construction was planned for 2020-2021 but has been pushed out to 2021-2022 to allow time for the consenting process.

9.2 Kaituna River desilting

- Three areas have been worked on with the available budget - Bell Road, Kopuaroa and Waiari outlets.
- At the Waiari outlet there have been issues with upstream material shifting into, and filling in, the dredged area. Has been dredged to bed level twice, and within a couple of weeks was filled up again. Need to look at silt sources within the catchment.
- Dredging of the Parawhenuamea Drain outlet has proven to be impractical.
- Bank erosion, stock in waterways, run off from farmland, forestry, earthworks within the catchment, and slips within the catchment, all contribute to siltation of the outlets.
- The material being dredged is sloppy and not really useful for construction purposes. There is a group interested in getting the sediment analysed to see if it could have a use.

9.3 Ngongotahā Stream flood mitigation

- Two main flood mitigation options being considered.
- Option 1 - raise Western Road. This option focuses on containing water within the stream by raising areas of known overtopping.
- Option 4 - construct an overflow channel to the South of the stream. This option would go through the AMP showgrounds and Ngati Whakaue land. There is also a variant of this option that avoids the AMP showgrounds by working within the margins of the stream. The two variants are currently being modelled.

9.4 Bell Road Drain modelling

Mark presented modelling results for the Bell Road catchment. Various scenarios were modelled based on a five year rainfall event. The scenarios included - the existing situation, various increased pump capacities at Bell Road C and Bell Road A, without the influence of Pond H or Tara Road subdivision, and the June 2018 rainfall event. All scenarios showed an area in the lower catchment that does not meet the level of service.

A number of options and questions to be considered:

- Designated ponding areas that are temporarily flooded, with compensation provided to the landowners.
- Options for retention higher up in the catchment.
- Should the scheme spend money on increasing pump capacity that may not achieve the level of service into the future (e.g with climate change and the lowering of land (peat drying out and shrinking))? Or is it better to purchase the affected land and change the land use?
- Some hard questions and decisions required - into the future is this the best place to be farming?

Mark also advised that Council is investigating appealing the resource consent for construction of Pond G. The RMA allows for an appeal to be made if the consent application contains inaccuracies and it is felt that this is the case. Also questioning why subdivision stormwater is being pumped into an at capacity internal drainage system rather than into the river.

10 Finance report

Kirsty Brown spoke to the finance report provided in the agenda pack and gave an overview of the scheme's revenue and expenditure for the six months ending 31 December 2019.

Key points included:

- Scheme currently has an operating deficit of \$242,000 and a total deficit of \$196,000.
- Total capital expenditure is currently lower than budget, however is forecast to be overspent at year end due to increased costs associated with the April 2017 Flood Repair Project as advised in the update provided in Agenda Item 8.
- Total reserve funds available of \$4 million.
- Internal loan balance has increased by \$835,000 to \$6.4 million.
- The scheme's assets as at 1 July 2019 are valued at \$68 million. This is an increase of \$3.6 million from the 1 July 2018 valuation.

ACTION:

Provide advisory group members with the current internal interest rate on loans and a breakdown of the 2019-2020 capital spend to date.

11 Co-governance/community group updates

Barry Roderick reported that the Freshwater Futures group had a big workshop at the end of last year focusing on ground water information. There is a lot of information for the group to take in and develop an understanding of.

Nick Chater reported that Te Maru o Kaituna River Authority have released [Te Tini a Tuna Kaituna Action Plan 2019-2020](#) outlining what will be done over the next ten years to deliver on the vision, objectives and outcomes of the Kaituna River Document. The action plan includes three priority actions, two supporting actions and 18 projects. Project 1 – Lowland drains and drainage canal improvement project is relevant to scheme management and this project is being led by Regional Council.

12 General business

12.1 Review of the Floodway and Drainage Bylaws 2008

Kirsty Brown provided an update on the Floodway and Drainage Bylaw review.

Key points included:

- Informal consultation occurred in October and November last year and feedback from these sessions has been considered, and where appropriate included, in the proposed bylaws. Staff appreciated the involvement of advisory group members in the workshop and drop-in sessions held in Te Puke.
- Statement of Proposal and proposed bylaws document being presented at a Council workshop seeking approval to commence the formal consultation phase of the review.
- Proposed consultation timeline is: formal consultation 4 April to 4 May, hearings 26-28 May, deliberations 9 June, and adoption by Council 25 June.
- Formal consultation will include a mail out to affected landowners and a series of drop-in sessions around the region.

12.2 River Scheme rating classification review

Kirsty Brown advised members that a project is underway to investigate rating contribution to the Kaituna Scheme from rural, urban and new residential developments. The project will assess whether adjustments to the rating system is required.

12.3 Infrastructure insurance

In 2009 Council moved away from the LAPP (Local Authority Protection Programme) cash pool to the BOPLASS shared service insurance programme to cover the 40% local government share of infrastructure replacement costs damaged by natural disaster. A steady increase in premiums has been observed over the ensuing years. It is predicted that this pattern of increasing premiums will raise affordability issues.

The Kaituna scheme's infrastructure premium for this year was \$130,000.

A review is proposed to look at alternative insurance options and determine the best way forward. Results from the review will be presented to Advisory Groups at the September meetings.

12.4 Advisory group membership – September 2020 to September 2023

Kirsty Brown advised that the current members three year appointment to the advisory group ends in September 2020. Council staff are pleased with how the advisory groups are working and are recommending that current members continue in their roles for a further

three years (to September 2023). Most of the members present indicated that they would like to continue for a further term. An email will be circulated seeking written confirmation from each of the members. There is currently a vacancy for a Rotorua urban representative so this will be advertised along with any other vacancies created by current members not choosing to continue.

12.5 Other general business

Pim de Monchy (Eastern Catchments Manager) joined the meeting and gave a quick update on the Kaituna Re-diversion Project. Official opening celebration held on 12 February. Project completed ahead of schedule and on budget. Protocols for operation and a flood management plan are in place. The gates are being opened three at a time and monitored to ensure operating as planned.

Meeting closed at 12:42 pm

Action Sheet

Kaituna Catchment Control Scheme Advisory Group Meeting

4 March 2020

Action	Person Responsible	Completed	Comment
1. A planning workshop, involving a sub-committee of Richard Weld, Barry Roderick, Graham Thompson and Dave Hurst, to be scheduled for April/May 2020.	Hemi Barsdell	✓	LTP workshop with sub-committee was rescheduled to August due to Covid. The workshop took place on 4 August 2020.
2. Investigate whether the scheme has taken over management of the AFFCO farm stopbank.	Kirsty Brown	✓	Information emailed 9/6/20 – refer A3551122
3. Provide advisory group members with the Kaituna share of Flood Repair Project recoveries.	Paula Chapman	✓	Information emailed 20/3/20 - refer A3511387
4. Provide advisory group members with the current internal interest rate on loans and a breakdown of the 2019-2020 capital spend to date.	Kirsty Brown	✓	Information emailed 9/6/20 – refer A3551122

MEMORANDUM



To: Kaituna Catchment Control Scheme
Advisory Group

From: Mark Townsend
Engineering Manager

Date: 18 August 2020

File Ref: A3600854

Subject: Engineering Update

1 2019/20 Capital Works Programme in Review

1.1 Kaituna River Stopbank - Upgrade

A section of stopbank near the Kaituna River Re-diversion needed upgrading to meet the scheme's required level of service. Included as a variation to the Kaituna Re-diversion Project, this approach reduced timeframes to procure a contractor, reduced time for staff involved and was more cost effective.	Construction completed on time and under budget Budget 2019/20: \$1,563,600 Actual 2019/20: \$969,419
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1.2 Kaituna River - Desilting

Sediment removal was prioritised in the following locations - Bell Road outlet into the river, Waiari Canal mouth including Parawhenuamea Drain outlet, Kopuaroa and the Raparapahoe Streams.	Consenting and dredging work completed on time and under budget Budget 2019/20: \$312,720 Actual 2019/20: \$243,158
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1.3 Utuhina Stream Stopbanks - Modelling

This project is to extend and update the existing flood model upstream. The model will be used to prepare flood hazard maps, undertake a flood risk assessment in accordance with the Regional Policy Statement and assess mitigation options.	Modelling completed on time and under budget Budget 2019/20: \$140,724 Actual 2019/20: \$114,494
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1.4 Kaituna Pump Stations Electronic - Upgrades

This project involves upgrade work to the Maketū Pump Station, electrical, telemetry and automation. The project is now complete.	Upgrade work completed on time and under budget Budget 2019/20: Upgrades \$83,392 Actual 2019/20: Upgrades \$67,799
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2 2020/21 Capital Works Programme

2.1 Utuhina Stream Mitigation

Budget 2020/21: Construction \$400,000

In 2019/20 council extended and updated the existing flood model to include upstream information. The modelling can run both present day and future climate change prediction design scenarios to determine the flood risk. The model will be used to prepare flood hazard maps, undertake a flood risk assessment in accordance with the Regional Policy Statement and assess mitigation options. Staff will work with Rotorua Lakes Council (RLC) and stakeholders on possible solutions to achieve the 1% AEP level of service.

The 2020/21 project is to undertake options assessment and start mitigation works.

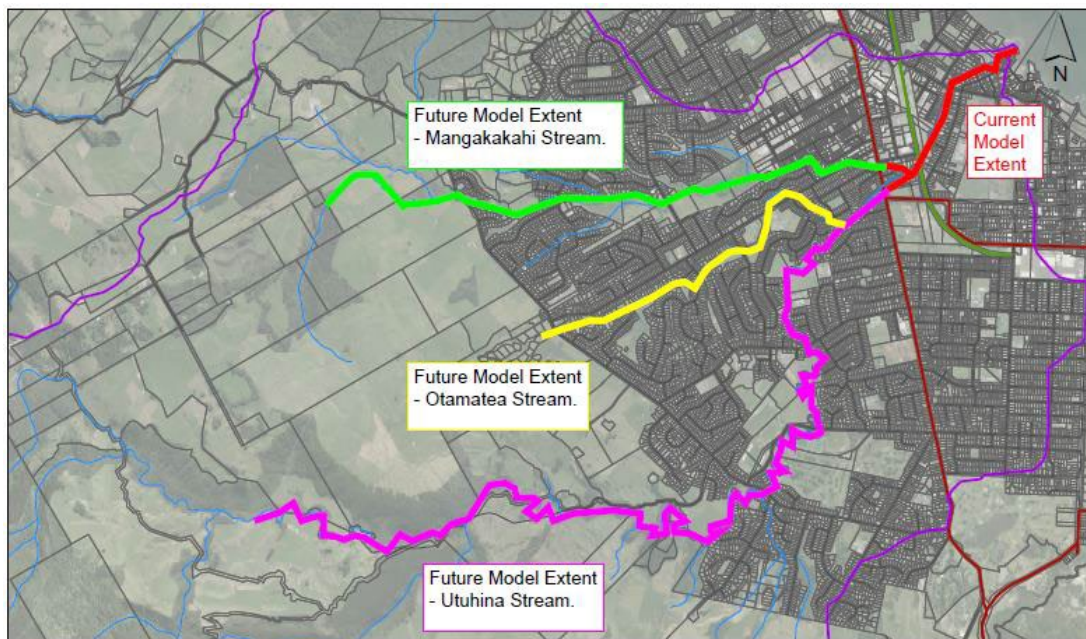


Fig 1: Survey extent on Utuhina/Mangakakahi/Otamatea Streams

2.2 Ford Road Pump Station Upgrade Project

Budget 2020/21: Consenting and detailed design \$321,000

The purpose of the Ford Road pump station upgrade is to maintain levels of service for drainage and flood mitigation, improve operational issues, discharge quality and allow for climate change. A number of options were assessed using a multi-criteria analysis and Options 1 and 6b have been identified for more detailed concept design, modelling and consultation. Work this year will be focused on consultation with iwi and stakeholders on the preferred option(s), detail design, assessment of environment effects and the resource consent application process.



Fig 2: Possible New Pump Station Locations

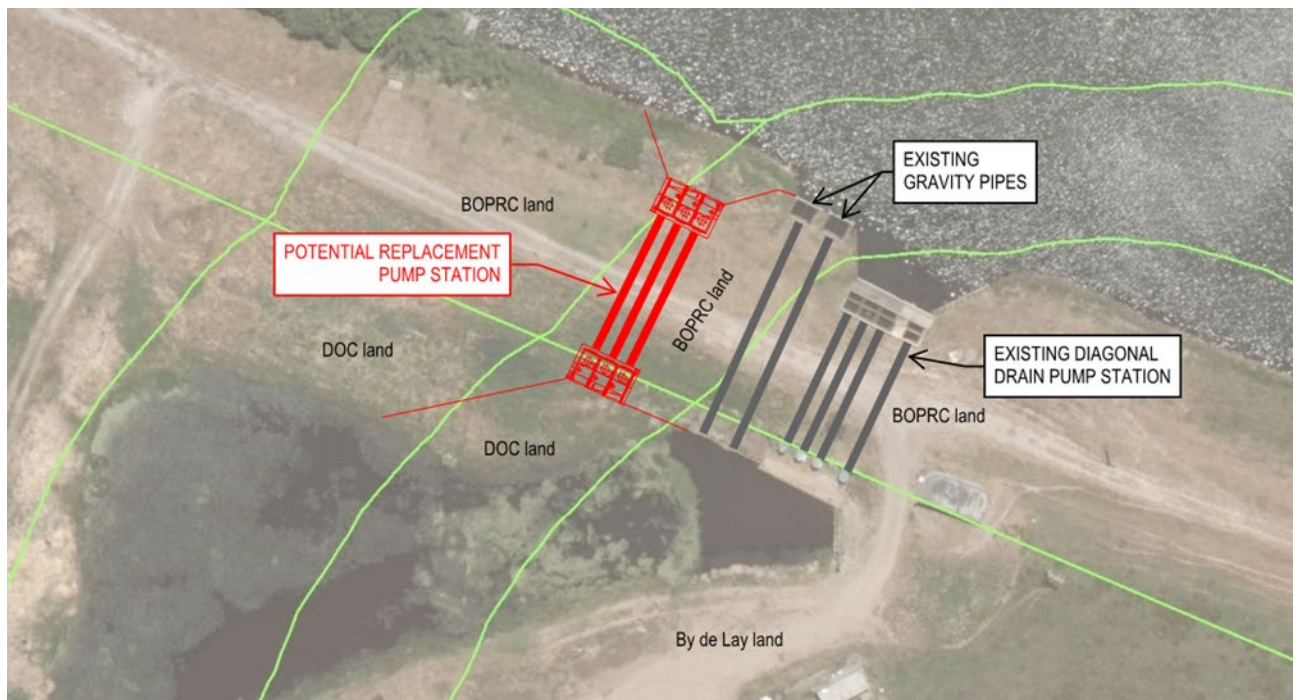


Fig 3: Ford Road Pump Station Replacement - Option 1

Option 1 involves increased pumping capacity at the Diagonal Drain pump station site, increasing the capacity of the drainage network feeding the station and moving the Ford Road discharge to alongside the Diagonal Drain pump station.

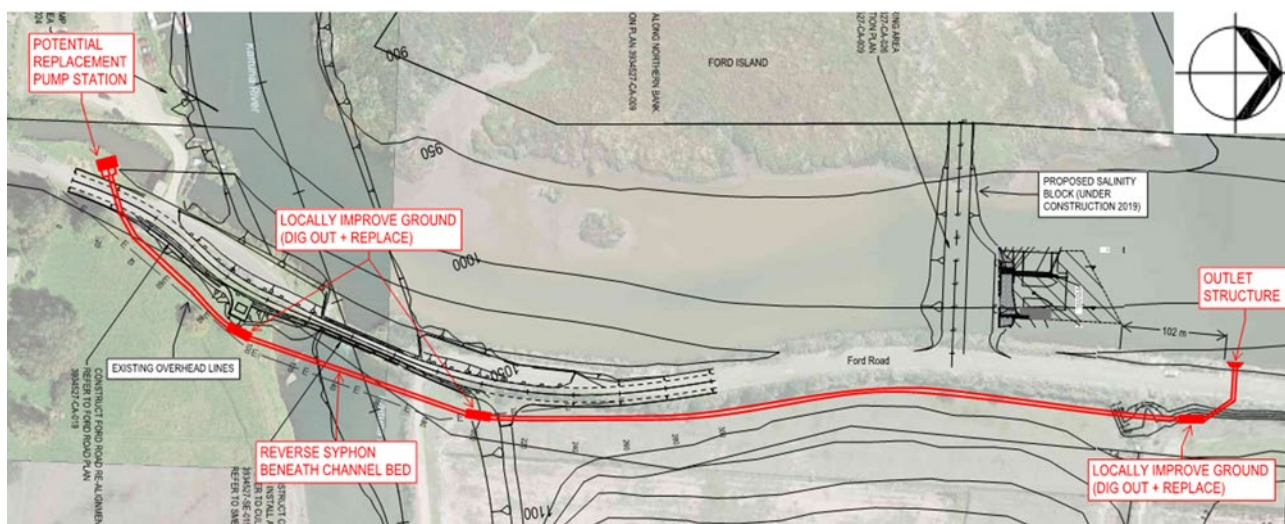


Fig 4: Ford Road Pump Station Replacement - Option 6b

Option 6b involves a new pump station at the existing Ford Road site with gravity discharges at the existing location and an additional pumped discharge located downstream of the proposed salinity block.

2.3 Te Puke Stormwater - Modelling

Budget 2020/21: Modelling \$244,000

This work continues on from 2019/20 and modelling work is currently underway. This has included undertaking a comparison between development in 1990 and 2019, generating design storm data inputs and hydrological inputs, updating the Te Puke stormwater model and running design storm scenarios. DHI have been appointed to undertake the modelling required. Western Bay of Plenty District Council (WBOPDC) are part of the project team. The modelling will quantify the extent that development in Te Puke is affecting the Kaituna Scheme.

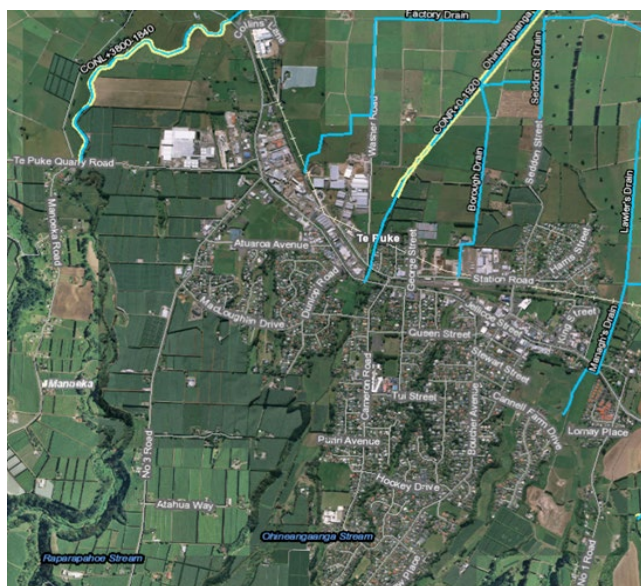


Fig 5: Te Puke Township and the drainage network

2.4 Kaituna Mole Renewal

Budget 2020/21: Construction \$1,920,000

The Kaituna Mole is a river mouth control structure located at the mouth of the Kaituna River. Various improvements have been made over the years to strengthen the structure and support its considerable use by the community as a popular fishing spot. The renewal involves a remedial design similar to the current mole design but with improved corrosion resistance and concrete capping. Council approved additional budget in the 2020/21 Annual Plan for construction and \$564,000 in 2021/22 for supporting community amenities.

The Kaituna Mole structure serves a vital role in restricting the ability of the river mouth to move eastwards. The structure is also a popular community space as a fishing spot and a viewing platform, even more so since the completion of the Kaituna Rediversion Project. The renewal work is needed to maintain the integrity of the existing structure.

Crown Infrastructure Partnership (CIP) funding has been approved for this project and could contribute up to \$1.9 million. Construction is due to commence April 2021.

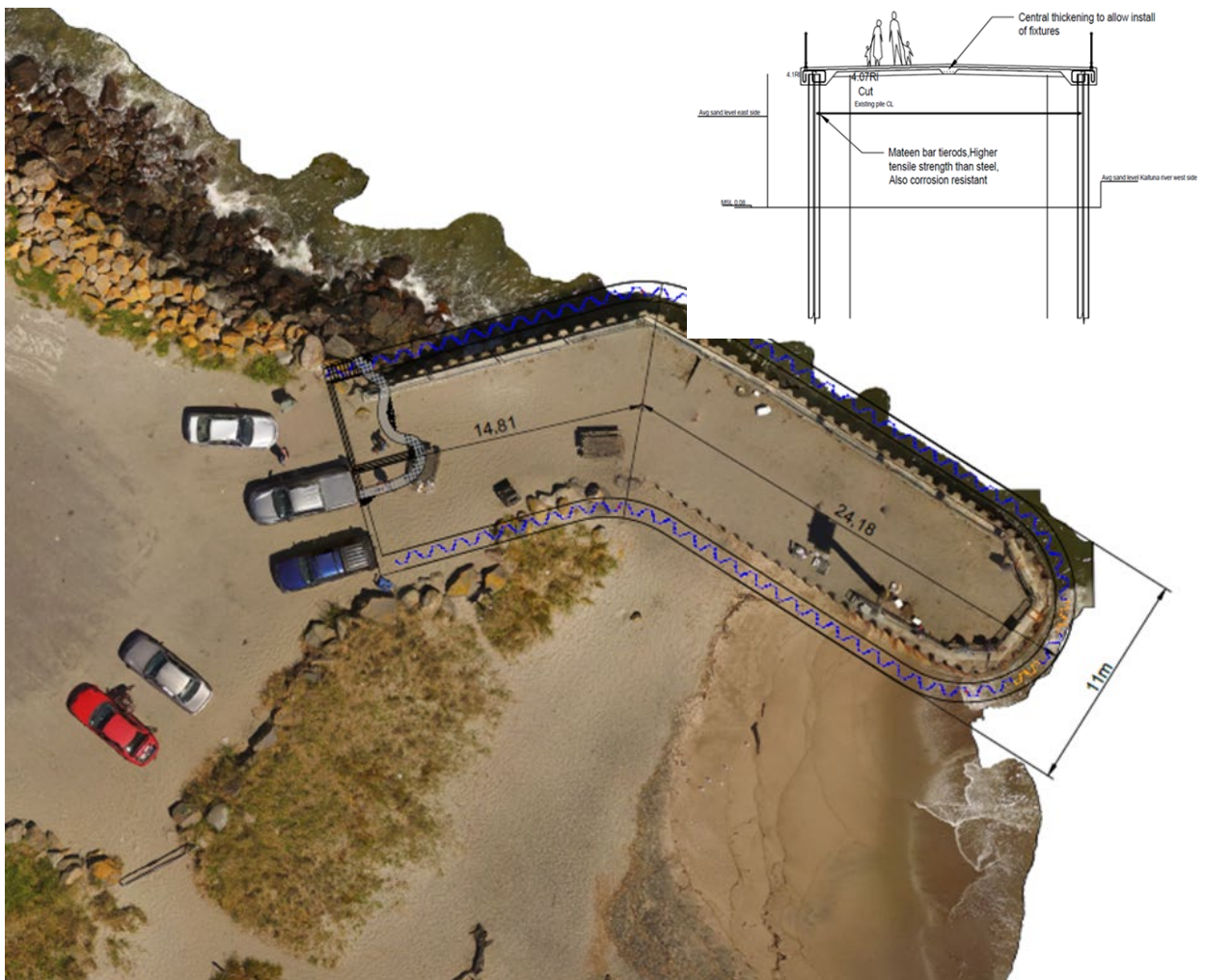


Fig 6: Kaituna Mole Renewal

2.5 Rotorua Streams Capacity Review

Budget 2020/21: Modelling \$50,000

The purpose of this project is to undertake hydrological and hydraulic modelling of minor Rotorua streams to understand stream capacities and set future design levels. The programme for this year is to undertake modelling for the Puarenga and Waiowhero Streams.

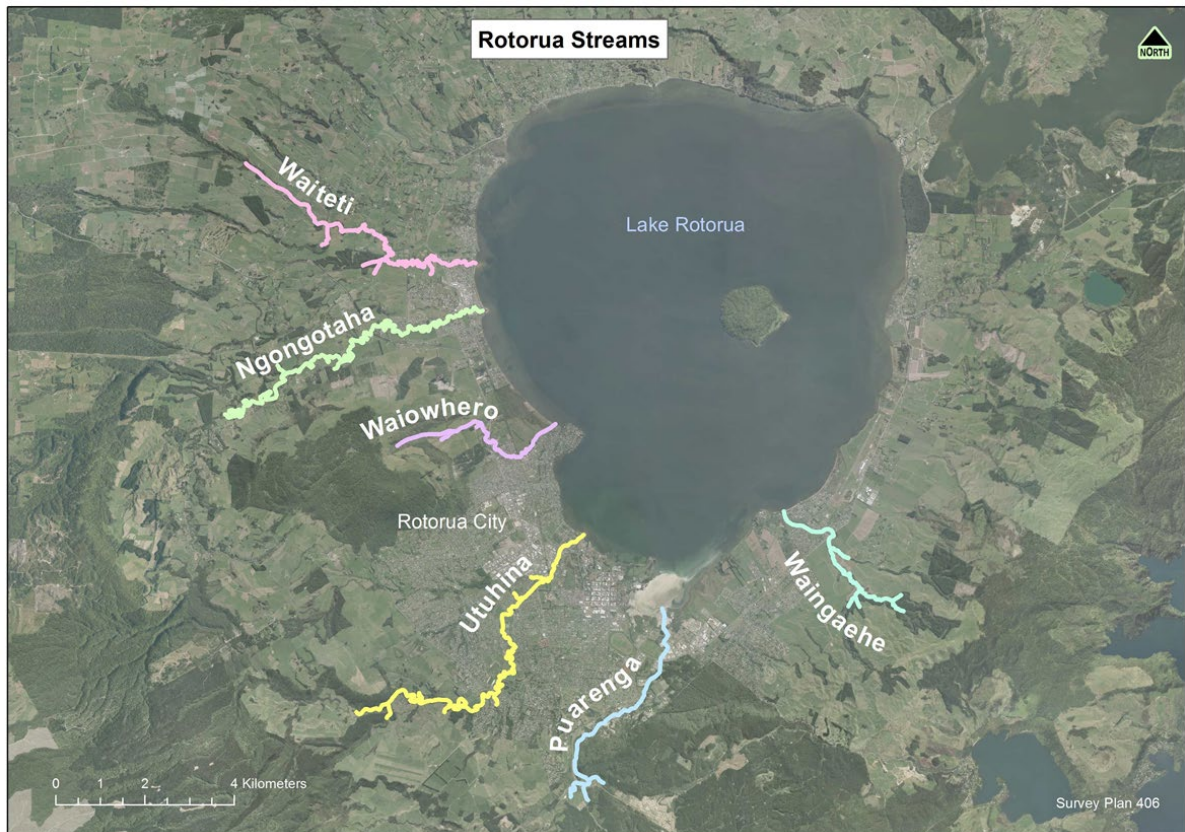


Fig 7: Rotorua Lake Streams

2.6 Bell Road Sub-catchment Drainage

Budget 2020/21: None

At the last advisory group meeting in March 2020 we reported on modelling results for the Bell Road Catchment. Maps showing the extent of ponding during design events were presented as follows:

- Scheme level of service (LOS) - 37.5mm per day over 3 days with 5 year river and tide conditions.
- Current 5 year Average Recurrence Interval (ARI) storm with high downstream river conditions.

Both showed an area, 78 ha and 294 ha respectively, in the lower end of the sub-catchment that does not meet the existing LOS of removing ponded waters within 72 hours. Given the issue with ponding is current and does not date back to when the scheme was first constructed, the focus of any mitigation options need to address today's conditions and take into consideration climate change and other changing conditions: e.g. peat shrinkage.

Various mitigation measures were proposed and the results of these are presented in the table below. Also within the table are advantages and disadvantages of the mitigation measures.

[Table 1: Current 5 year ARI storm with high downstream river conditions](#)

Mitigation Option	Area(ha) inundated > 72 hrs	Advantages	Disadvantages
Existing	294	N/A	Widespread ponding in excess of 72 hrs.
Bell Rd A +2 cumecs	184	Reduces ponding to south of Bell Rd	<p>Large portion of one farm to south of Bell Rd still has ponding > 72 hrs.</p> <p>Minor effect on ponding to north of Bell Rd.</p> <p>Drainage effect susceptible to further peat shrinkage.</p> <p>Climate change effects will increase ponding issues.</p>
Bell Rd C +2 cumecs	232	Minor reduction in ponding to north of Bell Rd	<p>Majority of one farm to north of Bell Rd still has ponding > 72 hrs.</p> <p>Minor effect on ponding to south of Bell Rd.</p> <p>Drainage effect susceptible to further peat shrinkage.</p> <p>Climate change effects will increase ponding issues.</p>
Bell Rd C +6 cumecs	149	Further reduces ponding to north of Bell Rd	<p>Larger but still minor effect on ponding to south of Bell Rd.</p> <p>Majority of one farm to north of Bell Rd still has ponding > 72 hrs.</p> <p>Reservations as to whether this increased capacity can be achieved.</p> <p>Drainage effect susceptible to further peat shrinkage.</p> <p>Climate change effects will increase ponding issues.</p>
Bell Rd A & C +2 cumecs	154	Reduces ponding to south of Bell Rd	Large portion of one farm to south of Bell Rd still has ponding > 72 hrs.

		Reduces ponding to north of Bell Rd	Majority of one farm to north of Bell Rd still has ponding > 72 hrs. Drainage effect susceptible to further peat shrinkage. Climate change effects will increase ponding issues.
No Pond H outflow & No Tara Rd input	271	Very minor reduction in ponding to north of Bell Rd	No effect on farms that have major ponding issues. Drainage effect susceptible to further peat shrinkage. Climate change effects will increase ponding issues.
No Pāpāmoa Hills flow into Bell Rd Drain	tbc	Minor reduction in ponding to north of Bell Rd	<i>No effect on farms that have major ponding issues.</i> <i>Drainage effect susceptible to further peat shrinkage.</i> <i>Climate change effects will increase ponding issues.</i>
No Pāpāmoa Hills flow into Bell Rd Drain and Bell Rd A & C +2 cumecs	tbc	Reduces ponding to south of Bell Rd Reduces ponding to north of Bell Rd	<i>Large portion of one farm to south of Bell Rd still has ponding > 72 hrs.</i> <i>Majority of one farm to north of Bell Rd still has ponding > 72 hrs.</i> <i>Drainage effect susceptible to further peat shrinkage.</i> <i>Climate change effects will increase ponding issues.</i>

Note: Comments in italics are subject to updated modelling run (results by 2 September 2020).

The March 2020 meeting also discussed future land use options considering climate change impacts and the high peat soils which can be susceptible to increased shrinkage. A reduction to levels of service and changes to future land use were suggested.

A slide presentation showing model ponding maps will be presented at the Advisory Group meeting on 2 September 2020.

2.7 Ngongotahā Stream Flood Mitigation

Budget 2020/21: \$1,600,000 (tbc)

This project involves implementing the recommendations of the independent Ngongotahā Stream Review. A suite of options were developed and presented to the Ngongotahā Flood Review - Community Reference Group, following the analysis of outcomes from flood

modelling work. The project team is currently engaging with landowners affected by the proposed solutions and developing cost estimates for those solutions.

The solutions involve civil works, upper catchment detention bunds and the removal of at-risk trees. The project was included in the CIP funding application and has now been approved. This funding is to contribute up to \$2.8million towards the total project cost.



Fig 8: Ngongotahā Stream Mitigation Proposed Earthworks

Mark Townsend
Engineering Manager

Kaituna River Scheme: 2020-2021 Maintenance Works Programme

11/08/2020		Objective ID: A3598719				
LOWER KAITUNA						
Row	Reach	Work Type & Site	Annual Budget	Location	Proposed Estimate	Status
1	General	Fly tipping and rubbish collection/disposal	\$16,000			
2		Fly tipping and rubbish collection/disposal		Fly tipping	\$7,500	
3				Erect signage	\$500	
4		Pest Control		Pindone Rabbit holes as required	\$8,000	
5						
6	Reach 1:					
7	Mouth to Te Matai (including Maketū Estuary)	Riverbank Weed spraying	\$6,200			
8		Gorse spraying		R/b 11.7-12.0 km	\$1,500	
9		Blackberry spraying		R/b 12.0-12.6 km	\$1,000	
10		Glyseria spraying various areas by boat.		Various L&R Banks.	\$1,500	
11		Mulch Gorse and spray Maketū Estuary		McKenzie's	\$1,500	
12		Bamboo Spraying 3.4km			\$1,000	
13						
14		Willow/Vegetation Maintenance	\$9,100			
15		Spray and regrowth		R/b 2.5 - 4.6 km	\$2,500	
16		Remove flax and replant		R/b 2.5 - 4.6 km	\$2,500	
17		Removing fallen and pest trees and vegetation		R/b 5.0- 6. km	\$5,000	
18		Mulching		L/b 12.0-12.6 km	\$2,500	
19		Willow/Vegetation Maintenance- WBDC reserve		R/b 12.0 - 12.5 km	\$5,000	
20		Willow/Vegetation Maintenance		L/b 12.4-12.6 km	\$2,500	
21						
22		Planting	\$4,700			
23		RB Berm 3.2-4.2km various			\$2,500	
24		Wetland planting 3.3km			\$2,500	
25						
26		Rock replenishment	\$46,400			
27		Maketū			\$15,000	
28						
29		Fencing Maintenance	\$4,200			
30		Fencing (tbc)		various	\$1,700	
31		Maketū Pump Station			\$2,500	
32						
33		River & Estuary maintenance general	\$29,800			
34		McKenzie culvert outlet		Engineering reviewing options.	\$2,000	
35		Bell Rd Drain outlet		Engineering reviewing options.	\$3,000	
36		Tree maintenance		LB 12.1-12.2	\$5,000	
37		Glyseria spraying various areas by boat.		Various L&R Banks.	\$13,500	
38						
39	Stop banks	Minor floodgates Inspection	\$700		\$1,000	
40		Stop bank miscellaneous maintenance	\$4,900		\$5,000	
41						
42	Bell Road Floodgates	Floodgate Maintenance & inspections	\$3,700		\$3,700	
43						
44	Managh's culvert	Floodgate Maintenance & inspections	\$3,400		\$3,400	
45						
46	Browns Culvert	Floodgate Maintenance & inspections	\$3,400		\$3,400	
47						
48	Wetland Culvert	Floodgate Maintenance & inspections	\$3,400		\$3,400	
49						
50	Maketū & Other Floodgates	Floodgate Maintenance & inspections	\$3,000			
51		Gravity flood gate replace & redesign			\$5,000	
52		McKenzie culvert replacement (tbc)		Under review/possible removal Engineering	\$15,000	
53						
54	Reach 2:					
55	Te Matai to Mangorewa	Riverbank Weed spraying:	\$4,100			
56		Gorse & pampas at existing rockworks		Various	\$3,000	
57		Pampas (Ex Harts) @existing rockwork		LB	\$2,000	
58						
59		Willow/Vegetation Maintenance	\$1,200			
60		Willow Maintenance		R/b 12.7-12.9 km	\$2,500	
61		Willow Maintenance		R/b 16.5-17.09 km	\$2,500	
62		Trust Block - McMeeking Road		R/b 16.8-16.9km	\$2,500	
63		Willow and bank maintenance		L/B 17.0-17.1	\$2,500	
64		Willow Maintenance/removal		L/b 17.45-17.9 km	\$2,500	
65		Willow Maintenance/removal		L/b 21.0-21.2 km	\$5,000	
66		Mulch Stop bank Welds drain to KT 13.1 km		13.1km	\$2,500	
67		Lower berm (Mc Naughtons)		R/b 18.8-18.9 km	\$5,000	
68						
69		Planting:	\$600			
70		Māori Trust - Battering and Willow/native planting.		R/b 17-17.1km	\$8,000	
71						
72		Rock replenishment	\$36,900			
73		Provisional sum (where required)			\$19,000	
74		Weld's seems to be settling, monitor		L/b 15.1-15.2km	\$1,000	
75						
76		Fencing	\$500			
77				Various	\$1,000	
78	Stop banks	Stop bank miscellaneous maintenance	\$2,000		\$2,000	
79		Floodgate Maintenance	\$600		\$600	
80						
81	Reach 3:					
82	Canals & Drains	Canal weed spraying	\$11,200			
83		Provisional sum (where required)			\$2,500	
84					\$2,500	
85		Raparapahoe/ Kopuaroa various properties			\$3,000	
86		Channel / bank spray maintenance, pampas etc.			\$2,000	
87						
88		Canal and drain repairs				
89		Provisional sum (where required)			\$2,500	
90		Slaters Drain. Install culvert			\$2,500	
91		Singletons Drain Culvert			\$10,000	
92						
93		Canal desilting	\$98,800			
94		Provisional sum (where required)			\$35,000	
95		Riddell's		R/b 0.0-1.0 km	\$2,500	
96		Factory Drain Desilting		Verway	\$17,500	
97						
98		Drain Desilting / Maintenance	\$66,300			
99		Provisional sum (where required)			\$2,500	
100		Kaituna Road		3.4-5.0km	\$7,500	
101						
102		Waiari Stream				
103		Complete minor berm cut-always		L/b 2.0-3.1km	\$1,500	
104		Desilt and complete minor erosion repairs, defer to 20-21. Estimated at \$32,000.		0.0 to 3.1km		
105						
106		Parawhenuamea				

107		Desilt twice yearly			\$5,000	
108		Parrots Feather spraying x4 yearly			\$2,500	
109		Deweerd		R/b 0.0-2.0 km	\$1,500	
110						
111		Kopuaroa Canal				
112		Boat spraying			\$2,500	
113		Stop bank fencing at Dovastons			\$2,500	
114		Tree removal off stop bank toe			\$5,000	
115		Mulch gorse & blackberry - Dovaston's		L/B 1.6-2.2 km	\$1,500	
116		Stop bank survey possible upgrade		LB 3.4-3.6	\$1,500	
117		Rock work Washer Ave. (250 tonne)		L/b 2.8-2.85 km	\$8,000	
118						
119		Raparapahoe Canal				
120		Willow main various properties		R/b 3.9 - 5.7 km	\$2,000	
121		Reshape LB and toe load to Landward toe.		0.0-3.4km	\$50,000	
122		Wooley night shade		L/b 2.6.2.9 km	\$1,000	
123		Drop structure maintenance		3.5km	\$10,000	
124						
125		Ohineangaanga Canal				
126		Remove spoil off berm on right bank		R/b 00.0-0.80km	\$7,500	
127		Desilt		L/b 0.0-0.5km	\$10,000	
128						
129		Aquatic Weed Spraying	\$30,100		\$15,000	
130		Weed Cutter Boat	\$1,700		\$2,000	
131		Drain dewatering	\$32,700		\$30,000	
132						
133		Minor Clearing of obstructions in tributary streams				
134		Generally upstream highway. Provisional sum 5k per stream	\$20,000		\$20,000	
135						
136		Rock maintenance	\$5,900			
137		Nuzum's Drain: rockworks		R/b 0.0- 0.050km	\$7,500	
138		Borough Drain: rockworks		L/b 0.0 -0.05 km	\$7,500	
139		Provisional sum (where required)			\$5,000	
140						
141	Stop banks	Stop bank Miscellaneous Maintenance	\$2,000			
142		Minor Flood Gates	\$1,200			
143		Slaters Drain realign stop bank fence to boundary			\$5,000	
144						
145		Pump Station Maintenance:				
146	Kopuaroa (No. 3)	Pump Maintenance	\$19,600			
147		General Maintenance			\$5,000	
148		Lift No 1 pump riser sand blast and paint			\$3,000	
149						
150	Bell Road A (No.1)	Pump maintenance	\$7,000			
151		General Maintenance			\$7,000	
152						
153	Bell Road B (No.2)	Pump maintenance	\$7,000			
154		General Maintenance			\$5,000	
155		Lift for Inspection			\$2,000	
156						
157	Bell Road C (No.5)	Pump Maintenance	\$13,600			
158		General Maintenance			\$2,000	
159		Mow compound			\$2,500	
160		Diesel			\$5,000	
161		Lift pumps for inspection			\$2,500	
162		Signage and fencing			\$1,500	
163						
164	Diagonal Drain	Pump Maintenance	\$22,600			
165		General Maintenance			\$10,000	
166		Reshape ground for lifting pad			\$4,000	
167		install pad over gravity discharge pipe			\$2,500	
168		Lift No 1 pump riser sand blast, paint and refit			\$5,000	
169						
170						
171	Ford Road (No.6)	Pump Maintenance	\$13,900			
172		General Maintenance			\$5,000	
173		Floodgate maintenance			\$2,500	
174		Lift No 1 pump riser sand blast, paint and refit			\$5,000	
175		Lift pumps for inspection			\$2,500	
176						
177	Maketū (No.7)	Pump Maintenance	\$13,600			
178		General Maintenance			\$2,000	
179		Install false roof (Existing roof cracking)			\$2,000	
180		Floodgate maintenance			\$1,000	
181		Discharge headwall repair			\$12,500	
182						
183	Pump Electricity		\$106,800		\$106,800	
184						
185			\$5,500	Diesel for Bell Rd C, Armers and Marshall	\$5,500	
186						
187	Storm water pumping		\$25,000			
188		Marshall/Armers pump; Start and stop probes		\$30,000 Funded by Capex		
189		Total Annual Maintenance Costs	\$689,300		\$687,500	

Kaituna River Scheme: 2019-2020 Maintenance Works Programme

Objective ID: A3330910

LOWER KAITUNA					
Reach	Work Type & Site	Annual Budget	Location	Proposed Estimate	Status
1	General	\$8,000			
	Fly tipping and rubbish collection/disposal			\$6,500	Ongoing
			Rubbish cleared from Bell Rd C and A. Shopping trollies in Rotorua Streams.	\$1,500	Ongoing
2		\$8,000			
	Pest Control		Pindone Rabbit holes on Kaituna LB Stop-bank 8.9-9.9km and Waiari RB 0.0-2.5. First poisoning completed in Dec, Second underway in Feb.	\$15,000	Ongoing
3					
4	Reach 1:				
5	Mouth to Te Matai (including Maketū Estuary)	\$7,000			
6	Riverbank Weed spraying				
	Gorse spraying		R/b 11.7-12.0 km	\$1,000	Completed
7					
	Blackberry spraying		R/b 12.0-12.6 km	\$1,000	Completed
8					
	Glyseria spraying various areas by boat, estimated 15-20,000m ²		Various L&R Banks.	\$15,000	Waiting on boat to complete survey to undertake work.
9					
	Mulch Gorse and spray Maketū Estuary		McKenzie's	\$2,000	Completed
10					
11	Willow/Vegetation Maintenance	\$10,000			
12	Removing fallen and pest trees and vegetation		R/b 2.5 - 4.6 km	\$2,500	Completed
13	Remove flax and replant		R/b 2.5 - 4.6 km	\$2,500	On hold
14	Removing fallen and pest trees and vegetation		R/b 5.0- 6. km	\$3,000	Deferred to 20/21
15	Mulching		L/b 12.0-12.6 km	\$1,800	Deferred to 20/21
16	Willow/Vegetation Maintenance- WBDC reserve		R/b 12.3 - 12.5 km	\$2,500	Deferred to 20/21
17	Willow/Vegetation Maintenance		L/b 12.4-12.6 km	\$2,500	Deferred to 20/21
18					
19	Planting	\$5,000			
20					
21	Rock replenishment	\$46,000			
22	Titchmarsh (ex) - BOPRC lease (KT149)		1.45-1.70 km (Completed under Flood Repair Project)	\$0	Completed
23					
24	Fencing Maintenance	\$4,000			
25	Fencing (tbc)		various	\$4,000	Ongoing
26	Maketū Pump Station materials			\$2,500	Completed
27					
28	River & Estuary maintenance general (desilting)	\$30,000			
29	McKenzie culvert outlet		Engineering reviewing options.	\$2,000	On hold
30	Bell Rd Drain outlet		Completed by Engineering	\$3,000	Completed
31	Stopbanks	\$1,000			
	Minor floodgates Inspection			\$1,000	Completed
32		\$5,000			
	Stopbank miscellaneous maintenance		Planned for Verco'es (rabbit holes) Poisoning underway	\$5,000	Completed
33					
34	Bell Road Floodgates	\$4,000			
	Floodgate Maintenance & inspections			\$4,000	Completed/Ongoing
35					
36	Managh's culvert	\$3,000			
	Floodgate Maintenance & inspections			\$3,000	Completed/Ongoing
37					
38	Browns Culvert	\$3,000			
	Floodgate Maintenance & inspections			\$3,000	Completed/Ongoing
39					
40	Wetland Culvert	\$3,500			
	Floodgate Maintenance & inspections			\$2,000	Completed/Ongoing
41					
	Due for replacement. Lift Inspect replace or repair as required			\$5,000	Completed
42					
43	Maketū & Other Floodgates	\$3,000			
	Floodgate Maintenance & inspections				Completed
44					
	Gravity flood gate replace & redesign			\$6,000	Deferred to 20/21
45					
	McKenzie culvert replacement (tbc)		Under review Engineering	\$25,000	On Hold
46					
47	Reach 2:				
48	Te Matai to Mangorewa	\$4,000			
	Riverbank Weed spraying:		Various sites		
49					
	Gorse & pampas at existing rockworks		Various	\$3,000	Partially completed
50					
	Pampas (Ex Harts) @existing rockwork		LB	\$2,000	Deferred to 20/21
51					
52	Willow/Vegetation Maintenance	\$1,500			
53	Willow Maintenance		R/b 12.7-12.9 km	\$2,000	Deferred to 20/21
54	Willow Maintenance		L/b 13.3-13.6 km	\$2,000	Completed
55	AFFCO mulch and remove willow		R/b 13.75 - 14 km	\$3,500	Completed
56	Welds remove overhanging willow		L/b14.5 - 14.7 km	\$2,000	Completed
57	Trust Block - McMeeking Road		R/b 16.8-16.9km	\$3,000	Deferred to 20/21
58	remove fallen Gum tree		RB 16.9	\$2,000	Completed
59	Willow Maintenance/removal		L/b 17.45-17.9 km	\$2,000	Deferred to 20/21
60	Willow Maintenance/removal		R/b 18.2 - 18.9 km	\$2,500	Completed
61	Willow Maintenance/removal		L/b 18.4 - 18.9 km	\$2,500	Completed
62	Willow Maintenance/removal		L/b 19.1 - 19.8 km	\$2,500	Completed
63	Willow Maintenance/removal		R/b 20.4 - 21.2 km	\$2,500	Completed
64	Willow Maintenance/removal		L/b 21.0-21.2 km	\$4,000	Deferred to 20/21
65	Mulch Stopbank Welds drain to KT 13.1 km			\$2,500	Deferred to 20/21
66	Lower berm (Mc Naughtons)		R/b 18.8-18.9 km	\$4,700	Deferred to 20/21
67					
68	Planting:	\$1,000			
69	Māori Trust - Battering and Willow/native planting.		R/b 17-17.1km	\$8,000	On Hold
70					
71	Rock replenishment (where required)	\$40,000			
72	Weld's seems to be settling, monitor		L/b 15.1-15.2km	\$1,000	Deferred to 20/21
73	Fencing	\$1,000			
			Various	\$500	Deferred to 20/21
74					
75	Stopbanks	\$2,000			
	Stopbank miscellaneous maintenance		Tomo in stopbank Affco	\$4,000	Completed
76		\$1,000			
	Floodgate Maintenance			\$1,000	Ongoing
77					
78	Reach 3:				
79	Canals & Drains	\$10,000			
	Canal weed spraying				
80					
	Raparapahoe/ Kopuaroa various properties		R/b -L/b	\$3,000	Completed /Ongoing
81					
	Channel / bank spray maintenance, pampas etc.			\$2,000	Completed /Ongoing
82					
83	Canal and drain repairs	\$5,000			
84	Slaters Drain. Replace 900mm headwall			\$5,000	Cancelled
85	Replace 900 culvert (Armer's)			\$3,500	Cancelled
	Singletons Drain Culvert (Materials only)			\$11,000	Completed
86					
87	Canal desilting	\$100,000			
88	Riddell's		R/b 0.0-1.0 km	\$2,000	Underway
89	Diagonal Drain and reshape berm		R/b 2.0-5.3 km	\$7,500	Completed
90	Internal Drain		R/b 1.1-2.2 km (de weed only)	\$2,500	Completed
91	Factory Drain Desilting		Contractor portion \$16k	\$20,000	3/4 Completed
92					
93	Drain Desilting / Maintenance	\$65,000			

94	Bell Rd No1 install 6 culverts for excavator access			\$15,000	Completed
95	Managh's Drain (defer to 20/21)		R/b 0.0-0.9 km (de weed only)		Completed
96					
97	Waiari Stream				
98	Complete minor berm cut-always		L/b 2.0-3.1km	\$1,500	Deferred to 20/21
99	Desilt and complete minor erosion repairs, defer to 20-21. Estimated at \$32,000.		0.0 to 3.1km		Deferred to 20/21
100					
101	Parawhenuamea				
102	Desilt twice yearly		Completed once	\$5,000	Completed/ongoing
103	Parrots Feather spraying x4 yearly			\$2,000	Completed
104	Deweerd		R/b 0.0-2.0 km	\$1,500	Completed
105					
106	Kopuaroa Canal				
107	Desilt and reshape canal edge		R/b-L/b 2.2- 4.2km	\$20,000	Completed
108	Mulch gorse & blackberry - Dovaston's		L/B 1.6-2.2 km	\$1,500	Deferred to 20/21
109	Rock work Washer Ave. (250 tonne)		L/b 2.8-2.85 km	\$8,000	Deferred to 20/21
110					
111	Raparapahoe Canal				
112	Willow main various properties		R/b 3.9 - 5.7 km	\$4,200	Partially completed
113	Complete minor berm cut-always		R/b-L/b 0.0-3.4 km	\$2,000	Deferred to 20/21
114	Wooley night shade		L/b 2.6.2.9 km	\$1,000	Deferred to 20/21
115	Japanese Walnut main various properties		R/b 3.9 - 5.7 km	\$4,200	Completed
116					
117	Ohineangaanga Canal				
118	Remove spoil off berm on right bank		R/b 00.0-0.80km	\$8,500	Deferred to 20/21
119	Remove spoil off berm on left bank		L/b 00.0-0.80km	\$9,500	Completed
120					
121	Aquatic Weed Spraying	\$15,000		\$15,000	Completed/Ongoing
122	Weed Cutter Boat	\$2,000	One round completed another underway in March	\$2,000	Completed/Ongoing
123	Drain dewatering	\$30,000	One round completed another underway in March	\$30,000	Completed/Ongoing
124					
125	Minor Clearing of obstructions in tributary streams (generally upstream highway)(5k per stream)				
126		\$20,000	Raparapahoe Blockage removed	\$20,000	Completed
127					
128	Rock maintenance	\$6,000			
129	Nuzum's Drain: rockworks		R/b 0.0- 0.050km	\$7,000	Deferred to 20/21
130	Borough Drain: rockworks		L/b 0.0 -0.05 km	\$7,000	Deferred to 20/21
131	Diagonal drain		R/B 3.8	\$2,500	Completed
132	Extra ordinary works following Bell Road ratepayer meeting:				
133	Bell Road culvert (WBOPDC) floodgate installation			\$10,000	Completed
134	Finish installation of Bell Rd A surge chamber			\$15,000	Completed
135					
136	Stopbanks				
137	Stopbank Miscellaneous Maintenance	\$2,000		\$2,000	Not reg
138	Minor Flood Gates	\$1,000		\$1,000	Not Req
139	Pump Station Maintenance:				
140	Kopuaroa (No. 3)				
141	Pump Maintenance	\$20,000		\$2,000	Completed
142	No 2 pump; Lift, service, replace chain and replace seals.			\$5,000	Completed
143	Lift No 1 pump riser sand blast and paint			\$3,000	Deferred
144	Lift pumps for inspection			\$1,500	Completed
145	Bell Road A (No.1)				
146	Pump maintenance	\$7,000	Remove submersible pump service and reinstall.	\$7,000	Completed
147	Shed requires main			\$1,000	Reassessed
148	Bell Road B (No.2)				
149	Lift for inspection	\$7,000	Remove submersible pump service and reinstall.	\$7,000	Completed
150	Bell Road C (No.5)				
151	Compound maintenance	\$14,000		\$2,000	Completed
152	Mow compound			\$2,000	Completed
153	Diesel	\$6,000		\$6,000	Completed
154	Lift pumps for inspection			\$2,500	Deferred to 20/21
155	Diagonal Drain				
156	Pump Maintenance	\$22,000		\$11,000	Completed
157	Reshape ground for lifting pad			\$1,500	Deferred to 20/21
158	install pad over gravity discharge pipe			\$2,000	Deferred to 20/21
159	Lift No 1 pump riser sand blast, paint and refit			\$4,500	Deferred to 20/21
160	Pumps 1 & 4 lifted and seals and impeller damage repaired.			\$20,000	Completed
161	Lift pumps for inspection			\$3,000	Completed
162	Ford Road (No.6)				
163	Pump Maintenance	\$14,000		\$2,000	Completed
164	Floodgate maintenance			\$2,000	Deferred to 20/21
165	Paint and replace Barge Boards			\$2,000	Partially completed
166	Lift No 1 pump riser sand blast, paint and refit			\$4,000	Deferred to 20/21
167	Lift pumps for inspection			\$1,500	Deferred to 20/21
168	Maketū (No.7)				
169	Pump Maintenance	\$15,000		\$2,000	Completed
170	Install false roof (Existing roof cracking)				
171	Floodgate maintenance			\$1,000	Completed
172	Discharge headwall repair		Included in below quote.		On Hold
173	Replace flood light and install security light		Pump station automation, telemetry and electrical.	\$67,000	Completed
174	Lift No 1 pump riser sand blast, paint and fit		Work to be completed in April 2020.		
175	Replace Multismart electronics			\$1,500	Completed
176	Lift pumps for inspection			\$5,000	Completed
177	Pump No1 Repairs seals			\$4,000	Completed
178	Miscellaneous Electrical inspections				
179	Pump Electricity	\$110,000		\$107,000	Completed
180	Stormwater pumping				
181	(e.g. Marshall/Armer/Bell Rd A as required)	\$25,000		\$20,000	On Hold
182	Marshall Pump; building and power supply.		Quote U/A	\$20,000	On Hold
183	Armer pump; building and power supply		Quote U/A	\$20,000	On Hold
184	Total Annual Maintenance Costs	\$687,000		\$773,900	
185					
186	Rock work 2017 (KT149 - Flood damage Marshalls .800 tonne) Ohineangaanga		L/b 2.4-2.5 km	\$20,500	Deferred to 20/21
187	Wootten (KT154 Vegetation/tree removal)		Being partially funded by flood damage insurance	\$0	Completed
188	Wootten (KT121 River bank erosion. Rock toe and rotten rock batter)		Being partially funded by flood damage insurance	\$0	Completed
189	Batter bank and plant (KT122 Tanners: River bank erosion. Rock toe and rotten rock batter)		L/b18.2-18.9 km	\$2,500	Deferred to 20/21
190	Annual Flood Damage Repair Allowance	\$170,000		\$23,000	
191	Overall Maintenance Total Expenditure	\$857,000		\$796,900	

Kaituna River Scheme: 2019-2020 Maintenance Works Programme					
UPPER KAITUNA					
Reach	Work Type & Site	Annual Budget	Location	Proposed Estimate	Status
196	Reach 4:				
197	Rotorua Scheme Area				
198	Waiteti Stream	\$10,000		\$7,500	
199	Vegetation removal and planting		Pre Christmas fall tree removal	\$2,500	Completed
200	Ngongotahā Stream	\$25,000			
201	Vegetation Maintenance		\$13,000 Spent on mature Poplar removal through Agrodome	\$15,000	Completed
202	Planting/planting maintenance			\$4,000	Completed/Ongoing
203	Vegetation Management		Remove wind fall vegetation		Completed/Ongoing
204	Pest plant spraying			\$4,000	Completed/Ongoing
205	Fencing			\$2,000	Completed
206	Waiowhiro Stream	\$7,500			
207	Vegetation removal, shrub willow erosion planting, bank battering for native planting		Vegetation removal, batter banks, reinstate.	\$4,000	Completed
208			Large gum tree	\$2,500	Completed
209	Utuhina Stream	\$15,000			
210	Vegetation removal		Various fallen tree removals	\$3,000	Completed
211	Obstruction removals			\$2,500	
212	Removing prone trees/improving access			\$8,000	Completed
213	Vegetation Management		Remove wind fall vegetation		Completed/Ongoing
214	Mangakakahi Stream	\$7,500			
215	Stabilisation planting			\$1,500	
216	Mangakakahi Stream:Erosion sites		175 TonRock stockpiled	\$9,500	Completed
217	Pest plant management/removals		Floodway clearing	\$6,000	Completed
218	Vegetation Management		Remove wind fall vegetation		Completed/Ongoing
219	Otamatea Stream	\$5,000			
220	Vegetation Maintenance/removals				Not Required
221	Puarenga Stream	\$20,000			
222	Removing prone trees/improving access		Remove wind fall vegetation		Completed/Ongoing
223	Vegetation Management		Remove wind fall vegetation		Completed/Ongoing
224	Waingaehe Floodway	\$10,000			
225	Vegetation maintenance		Vegetation/willow removal, desilt and de-weed.	\$10,000	Completed
226	Remove trees from Charles Rd Bdy		Remove wind fall vegetation	\$7,500	Deferred to 20/21
227					
228	Total Annual Maintenance Costs (UK)	\$100,000		\$89,500	
229					
230	Waiteti Stream: Slumping and erosion sites, vegetation removal		Vegetation (pest willow) and weight removed under maintenance.		Completed
231	Ngongotahā Stream; Spillway maintenance, right bank erosion, Batter and plant erosion		1100 ton Rock stockpiled	\$70,000	Completed
232	Utuhina Stream: Small erosion sites, vegetation removal				
233	Puarenga Stream: 2 culvert replacements, 2 erosion sites various vegetation, Cost Share job		Cost Share job RLC Water Treatment Plant completed.	\$30,000	Erosion site completed
234	Mangakakahi Stream: Small erosion sites, vegetation removal		Work priority and scale increase after a relatively minor	\$15,000	Completed
235	Waiowhiro: Floodwayclearing, obstruction removal.			\$6,000	Completed
236	Otamatea Stream: Small erosion sites, vegetation removal			\$15,000	
237	Capital Works: April 2018 Flood Repairs (UK)	\$285,000		\$136,000	
237	Overall Maintenance/Capital Total Expenditure (UK)	\$385,000		\$225,500	

Kaituna River Scheme: 2020-2021 Maintenance Works Programme

UPPER KAITUNA					
Reach	Work Type & Site	Annual Budget	Location	Proposed Estimate	Status
	Rotorua Scheme Area				
General		\$16,000			
			Fly tipping	\$8,000	
			Pest Control	\$8,000	
Reach 4:					
	Waiteti Stream	\$7,500			
	Provisional sum: vegetation removal from channel.			\$2,500	
	Replenish Rock 0.9 and 0.7km			\$2,500	
	Ngongotahā Stream	\$25,400			
	Provisional sum: vegetation removal from channel.			\$5,000	
	Vegetation Maintenance			\$10,000	
	Planting/planting maintenance			\$2,500	
	Pest plant spraying			\$2,500	
	Fencing			\$2,500	
	Waiowhiro Stream	\$5,000			
	Provisional sum: vegetation removal from channel.			\$5,000	
	Utuhina Stream	\$10,000			
	Provisional sum: vegetation removal from channel.			\$2,500	
	Vegetation removal			\$2,500	
	Obstruction removals			\$2,500	
	Mangakakahi Stream	\$12,500			
	Provisional sum: vegetation removal from channel.			\$2,500	
	Vegetation removal: 0.2km arborist			\$5,000	
	Vegetation Management: cost share with RLC to increase berm flow/reduce localised flooding.			\$5,000	
	Otamatea Stream	\$5,000			
	Provisional sum: vegetation removal from channel.			\$5,000	
	Puarenga Stream	\$15,000			
	Provisional sum: vegetation removal from channel.			\$2,500	
	Replace two culverts at 1.0km			\$12,500	
	Waingaehe Floodway	\$6,500			
	Remove trees from Charles Rd Bdy			\$5,000	
Reach 5:					
	Rotorua Scheme Area	\$18,400			
	Ōhau Channel				
	Remove large fallen gum tree			\$2,500	
	Stop log structure repairs			\$12,500	
	Erosion repairs : repair / replenish gabion protection at stop log structure.			\$7,500	
	Rock armouring below SH33 bridge			\$2,500	
	Total Annual Maintenance Costs (UK)	\$105,300		\$102,500	
ANNUAL FLOOD DAMAGE ALLOWANCE UPPER AND LOWER KAITUNA					
	Provisional sum (where required)			\$100,000	
	Raparapahoe Canal Batter bank and hydroseed			\$15,000	
	Ohineangaanga Rock work: Flood damage Marshalls, 800 tonne.		L/b 2.4-2.5 km	\$20,000	
	Batter bank and plant (KT122 Tanners: River bank erosion. Rock toe and rotten rock batter)		L/b 18.2-18.9 km	\$2,500	
	Ngongotahā flood repairs/replenishment to LB 3.6km. Rock stockpiled already			\$20,000	
	Ngongotahā Rock replenishment to existing spillways. Rock stockpiled already			\$25,000	
	Mangakakahi Erosion: rock armouring. Rock stockpiled already			\$15,000	
	Annual Flood Damage Repair Allowance	\$204,000		\$197,500	
SUMMARY ; Kaituna River Scheme: 2020-2021 Maintenance Works Programme					
LOWER KAITUNA					
	GENERAL	\$16,000		\$16,000	
	REACH 1	\$122,900		\$114,100	
	REACH 2	\$45,900		\$61,600	
	REACH 3	\$269,900		\$294,000	
	PUMPSTATION MAINTENANCE	\$234,600		\$201,800	
	TOTAL LOWER KAITUNA	\$689,300		\$687,500	
UPPER KAITUNA					
	REACH 4	\$86,900		\$77,500	
	REACH 5	\$18,400		\$25,000	
	TOTAL UPPER KAITUNA	\$105,300		\$102,500	
ANNUAL FLOOD DAMAGE					
		\$204,000		\$197,500	
	KAITUNA TOTALS	\$998,600		\$987,500	

Flood Repair Project

Two extreme weather events in early April 2017 brought prolonged torrential rain to the Bay of Plenty. The resulting record high river levels and extensive flooding caused significant damage to river and drainage networks and assets across the region.



Repairing the damage



520
repair sites



Total budget
in excess of
\$45m



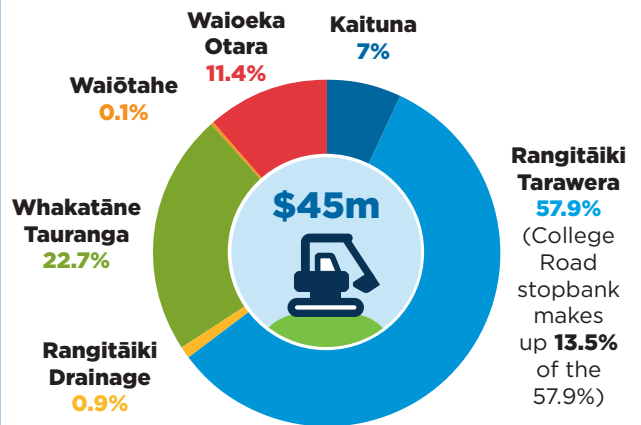
All repairs to
be completed by
30 June 2022

84% of **high priority** sites
are complete

We're repairing the
damage to protect our
**people, property
and livelihoods**

Repair costs by River Scheme

The **Rangitāiki-Tarawera Rivers Scheme**
was the worst affected, accounting for
more than half the repair budget.



Tracking our progress

Rangitāiki Tarawera 224 sites 127 complete ✓	Whakatāne Tauranga 108 sites 73 complete ✓	Waiōka Otara 59 sites 58 complete ✓	Rangitāiki Drainage 53 sites All sites complete ✓
Kaituna 45 sites 29 complete ✓	Waiōtahe 31 sites All sites complete ✓	College Road stopbank realignment Complete ✓	Rangitāiki Drainage pump station repairs Complete ✓

373 SITES 72%
completed as at **30 June 2020**

What's happening in 2020-2021



2020-2021 budget

11.3million

To complete:

93% of all sites

100% of high priority sites

110 Repairs to further sites across the region

MEMORANDUM



To: Kaituna Catchment Control Scheme
Advisory Group

From: Paula Chapman
Project Manager - Flood Recovery

Date: 17 August 2020

File Ref: A3604346

Subject: Status Report - April 2017 Flood Repair Project
(period 1 February 2020 to 31 July 2020)

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 cyclone dropped considerable rainfall over the entire Bay of Plenty area which produced record high river levels and flows. In the Rangitāiki, flows reaching the Matahina Dam were 20% higher than ever recorded. Flows in the Whakatāne River were captured as 34% higher than previously recorded.

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

1.1 Programme update summary

- The flood recovery project is in its last year of the estimated four year programme. Physical repair works have been steady across the programme as conditions and material availability have allowed.
- As at 31 July 2020, 399 site repair works are complete (or have been assessed as no longer required) from the total programme of 520 sites. This work includes many of the highest priority works. In the case of the Kaituna Catchment Control Scheme, 30 sites from a total programme of 45 sites have been completed.
- The availability of suitable rock material remains a concern and may impact the programme period particularly in the Eastern Bay of Plenty.
- The process for claiming eligible costs from central government has been established. Current claims are for essential infrastructure repairs. Claim 12 was received in June and Claim 13 is currently being drafted. The total amount received from central government to date is over \$8.5 million.
- Two progress payments for Infrastructure Insurance have been received totalling \$3,000,000.
- Communication and stakeholder engagement has been a feature of the project as there is a high level of public and stakeholder interest in the recovery from the April 2017 floods and this will continue.

1.2 Quality

- Sections of river are re-inspected prior to developing the detailed work scope for each site. Staff recently undertook a jet boat inspection of all remaining sites in the Kaituna programme.
- Due to the passage of time more often than not high priority sites are showing increased levels of damage compared to initial assessments and estimates.
- Job completion includes the capture of new or repaired assets into Council's Asset Management System.
- The team is working with Coastal Catchments (Land Management) to identify opportunities to work together to increase inanga and tuna habitat, particularly in the Kaituna Catchment.

1.3 Communications, community and stakeholder engagement

- An increase in Regional Council communications staff resource has supported the delivery of the project. Council continues to input into the regular established newsletters, such as the Edgumbe Collective Newsletter and the Regional Council website to keep the community informed on work plans and progress. The project page is now included on Council's website and interested people can follow the page to ensure they receive regular updates - <https://www.boprc.govt.nz/floodrepairs>

1.4 Procurement

- Work to date has centred on the completion of sites in priority order. The total programme is made up of multiple smaller projects and these have been delivered utilising established Rivers and Drainage Panel Supplier contract agreements. The panel approval process ensures contractors are capable of the work and hold the necessary accreditations and insurance cover. Existing panel contracts were renewed for a further three years in February 2019.
- The lack of suitable graded rock supply has constrained the programme of works in the Eastern Bay of Plenty, specifically work on the Whakatāne, Rangitāiki and Tarawera Rivers.
- Kaituna rock work is supported by the Kaitemako Quarry (Welcome Bay) and to a lesser extent Poplar Lane (Papamoa).

1.5 Programme delivery

<ul style="list-style-type: none"> • A total of 520 sites have been identified in the repair programme across the region, 45 are associated with the Kaituna Catchment Control Scheme.
<ul style="list-style-type: none"> • Across the programme 399 sites have been completed (or have been assessed as work no longer required), 30 of these are in the Kaituna Catchment Control Scheme.
<ul style="list-style-type: none"> • The programme of desilting and drainage bank repairs is 100% complete across the Rangitāiki Drainage network.
<ul style="list-style-type: none"> • 110 sites are programmed for completion in 2020/21 year, 15 of those are in the Kaituna Catchment Control Scheme.
<ul style="list-style-type: none"> • The total programme completion date for the Kaituna Catchment Control Scheme is 30 June 2021.

Key sites completed in the Kaituna Catchment Control Scheme in 2020 include:

- KT144 AFFCO site, river distance 14 km right bank - this work involved establishing new rock erosion protection alongside the existing stopbank.
- KT124,126,128 Tanner/Lane sites, river distance 18.4, 19.3, 19.9 km left bank - these works involved establishing new rock erosion protection.
- KT121 Wootten, river distance 17.3 km right bank - this work comprised 300 lineal metres of repair/replacement of an existing rock lining asset and extension of the erosion protection. Due to site constraints, 50% per cent of the rock was stockpiled at the Wrightson sale yards and the other 50% delivered direct to site.

Sites underway:

- KT122 Tanner site right bank, river distance 18.4, in progress currently 50% complete, the remainder of the work will wait until ground conditions improve.
- KT115 and KT116 right bank, river distance 14.6, 14.8km, all rock material is in stockpile at Wrightson sale yards. Work will begin in spring depending on ground conditions and weather.

1.6 Financials

Forecast costs Kaituna flood repair programme

Estimated Total Programme Cost - Kaituna	\$5,260,000
Estimated Betterment Value	\$3,572,000

The total cost of repairs in the Kaituna Catchment Control Scheme will exceed that originally estimated. The remaining work has been re-estimated based on actual costs to date and recent inspections. The total cost of the programme is estimated at \$5,260,000 compared to the original programme estimate of \$2,956,200.

The cost of materials (rock supply and cartage) has been more expensive than was provided for in the original estimates and some repair works are more extensive than first identified. Where there are existing erosion control assets the costs will be mostly offset by insurance and central government recoveries.

2017/18 - Actual Costs

Total expenditure (30 June 2018) – for infrastructure works	\$135,335
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2018/19 – Actual Costs

Expenditure budget	\$1,249,600
Total expenditure (30 June 2019) – for infrastructure works	\$1,245,475

2019/20 – Actual Costs

Expenditure budget	\$1,645,000
Total expenditure (30 June 2020) – for infrastructure works	\$2,621,440

2020/21 – Actual Costs

Expenditure budget	\$1,600,000
Total expenditure (YTD 31 July 2020) – for infrastructure works	\$0

2 Programme risks and issues

Risk/Issue	Description	Action/management	Owner
Ground conditions	Wet conditions restrict work programme	Undertake soft engineering works and rock stockpile work during winter months.	BOPRC
Weather	Future weather events will exacerbate damaged sites	Complete site works in priority order as this factors in risk and consequence.	BOPRC NEMA Insurer
Weather	Severe weather event may cause new damage	Review works programme against new works (annual flood damage).	BOPRC NEMA Insurer
Rock material availability	Suitably graded rock supply is restricted and the operating environment is variable	Working with new rock sources to supply suitable material for works in Kaituna (e.g. Ywari Quarry in Manawahe). Encourage new rock sources to enter Council's prequalified panel supplier schedule. Investigate opportunities to support new quarries in the Eastern Bay of Plenty.	BOPRC
Resource	Staff resource is limited for oversight of on-site works	Using in-house resources (Area Engineers) to supervise site works. Additional contract resource for rock grading/audits and new asset capture.	BOPRC
Programme length	Property owners want works associated with their property undertaken first	Implement communications and engagement plan. Direct communication with property owners.	BOPRC
Insurance	Claim limits for individual works are not known	Aon insurance specialist supporting claim process.	BOPRC Aon
Cost	Cost exceeds budget	Work closely with NEMA and insurers, maximise contributions from other stakeholders.	BOPRC Aon NEMA Insurer

3 Recoveries

- Loss adjustors have been assigned for the infrastructure claim and the material damage claim. Staff are working with insurance specialists Aon to progress the insurance claims process to date. Staff met with our insurance specialists recently to consider the remainder of the programme and early settlement possibilities.
- The project team are working with the central government National Emergency Management Agency (NEMA previously MCDEM) representatives and are comfortable with the process and speed of recoveries to date.
- Recoveries to date specifically related to Kaituna Catchment Control Scheme flood repair works amount to \$1,200,676.

Kaituna - Recoveries to Date	
2018/19	\$263,383
2019/20	\$937,293
Total	\$1,200,676

4 Expected progress within the next six month period

- Complete 75% of Kaituna works.
- Lodge and receive NEMA Claim 13.
- Finalise material damage claim for pumps and temporary pumping claim.

Paula Chapman
Project Manager – Flood Recovery

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

Statement of revenue and expense: Kaituna Catchment Control Scheme

For the 12 months ending 30 June 2020

Run: 12-Aug-2020

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

2019/20		Variance		2019/20 Variance comments		2020/21
Budget	Actual	\$	Variance indicator			Annual
\$000						Plan

Operating revenue by class

General rates	193	193	0	-	▶		188
Targeted rates	1,927	1,927	0	-	▶		1,844
External interest income	115	95	(19)	Lower	▶	Lower interest rates for investments	129
Other revenue	28	27	(2)	Lower	▶		29
Investment income	290	290	0	-	▶		267
Total revenue	2,553	2,532	(21)	Lower	▶		2,455

Operating expenditure by class

Administration expenses	22	10	12	Lower	▶	Insurance cost (material damage) lower than budget.	25
Other expenses	343	299	44	Lower	▶	Electricity costs and materials were both lower than budget by \$77k due to lower pumping costs. This was offset with additional fuel and equipment costs of \$30k	354
Consultancy fees	0	65	(65)	Higher	▶	Additional costs for phase 2 of Bell Road catchment modelling and critical asset performance assessments.	0
Contract work	541	552	(11)	Higher	▶		553
Finance costs	321	251	70	Lower	▶	Lower capital spend resulting in lower borrowing costs.	245
Depreciation and asset disposal	462	381	81	Lower	▶	Lower capital spend resulting in lower depreciation costs.	509
Subtotal - expenditure	1,689	1,558	131	Lower	▶		1,686
Net overhead charges and recoveries	596	736	(140)	Higher	▶	Additional staff time spent in the scheme	631
Total operating expenditure	2,285	2,294	(9)	Higher	▶		2,317
Total operating surplus (deficit)	267	237	(30)	Unfavourable	▶		139

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

Statement of revenue and expense: Kaituna Catchment Control Scheme

For the 12 months ending 30 June 2020

Run: 12-Aug-2020

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

2019/20		Variance		2019/20 Variance comments	2020/21
Budget	Actual	\$	Variance indicator		Annual
\$000					Plan

Capital revenue by class

Capital funding	313	937	625	Higher	▶	Additional recoveries for 2017 flood damage repairs due to the work programme being ahead of schedule.	410
Total capital revenue	313	937	625	Higher			410
Total surplus (deficit)	580	1,175	594	Favourable			549

Capital expenditure by project

Kaituna Flood Damage Repairs	1,645	2,611	(966)	Higher	▶	Additional works were able to be completed due to the availability of resources.	1,600
Pumpstation electronic upgrades	83	68	15	Lower	▶		21
Kaituna River desilting	313	243	70	Lower	▶		0
Kaituna River stopbank upgrade (lower)	1,564	970	594	Lower	▶	Stopbank upgrade undertaken alongside Kaituna Re- diversion works resulting in savings to the scheme.	0
Ford Road pumpstation	472	67	405	Lower	▶		321
Te Puke Stormwater Project	156	67	89	Lower	▶	Consultation delays.	244
Utuhina Stream modelling	141	115	26	Lower	▶		467
Okere Control Gates (gate maintenance)	219	72	147	Lower	▶	On hold during COVID-19 lockdown. To be completed this financial year.	0
Kaituna Mole	180	51	129	Lower	▶	package.	1,920
Total capital expenditure	4,773	4,264	509	Lower	▶		4,573

MEMORANDUM



To: Kaituna Catchment Control Advisory Group members

From: Kirsty Brown
Rivers and Drainage Assets Manager

Date: 18 August 2020

File Ref: A3605943

Subject: **General Business Report**

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

1 **Kaituna Rating Review**

All of Bay of Plenty Regional Council's managed river and drainage schemes are 80% funded by targeted rates with the remaining 20% coming from regional general funds. The rating system (for the 80% targeted rates portion) is based on a whole-of-catchment, differential, land area.

The 'differential' description means that different classes of lands are rated at different levels of rates per hectare, in proportion to the amount of benefit received and/or the negative effects contributed by the land in each different class.

Simon Harris from Land Water People Limited has been engaged to do a review on the Kaituna Catchment Control Scheme rating system, focusing on the following areas:

- Investigate the Bell Road flooding and what the rating contribution could be from Papamoa urban areas and from the Te Puke urban and peri-urban areas, toward increasing pumping costs to meet the existing levels of service in the Lower Kaituna.
- Investigate the level of rating contribution required from Pukepine and upstream landowners to contribute a fair share of funding to future drain maintenance costs.
- Look into the rating scheme differentials in the Upper Kaituna where new residential development has occurred and adjustments to the scheme rating system are needed to catch up with these rural-urban changes (e.g. Pioneer Subdivision, Western Road, Ngongotaha). Also whether the maintenance area can be extended further upstream.

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

2 Infrastructure Insurance Review

Local authorities have a unique arrangement with central government where in the event of a natural disaster, central government will pay up to 60% of repair costs for essential infrastructure. This arrangement is conditional on the local authority being able to show that the damaged assets had been properly maintained and that the local authority can meet the remaining 40% through other means e.g. by setting aside reserves or insurance.

In 2009, Council moved away from the Local Authority Protection Programme (LAPP) scheme to the Bay of Plenty Shared Services Ltd (BOPLASS) joint insurance procurement forum to cover the 40% local authority share of infrastructure restoration costs resulting from a natural disaster.

This insurance cover is obtained on the London market by the BOPLASS insurance broker's Aon via their inter-LASS initiative which includes 24 councils. It covers Council's flood protection and drainage assets for damage caused by earthquake, natural landslip, flood, tsunami, tornado, volcanic eruption, hydrothermal and geothermal activity, subterranean fire and business interruption.

At the March 2020 round of advisory group meetings, we advised that due to the steady increase in infrastructure insurance premiums over the years and the likelihood this pattern will continue, we would be doing a review of how we insure our flood protection and drainage assets.

These increases are mainly due to market conditions and the significant increase in asset value. Changes to asset value are due to:

- Increased construction costs.
- Creation of new assets and betterment to existing assets through the April 2017 Flood Repair Project.
- Significant Long Term Plan/Annual Plan capital works programme.
- Improved asset data.

Based on learnings from the April 2017 Flood event, our 2019/2020 insurance cover was increased to allow for repair costs over and above individual asset values, e.g. site preparation works, demolition, debris removal, access tracks and land reinstatement.

The below table shows the increase in Rivers and Drainage asset value and insurance premiums over the past four years for our five major rivers and drainage schemes.

	2016/2017	2017/2018	2018/2019	2019/2020
Infrastructure annual premiums	\$185,000	\$390,000	\$468,000	\$725,000
Insurance asset replacement value (rounded)	\$120,800,000	\$227,760,000	\$313,100,000	\$460,000,000

A workshop between Council staff and Aon representatives was held on 30 July 2020. As a result, Aon will be carrying out a frequency loss assessment which involves identifying and analysing the loss exposures for the rivers and drainage assets, as well as examining the feasibility of management techniques such as whether self-insurance is an appropriate and cost-effective option. Other ways to manage risk, e.g. capacity to borrow to fund any loss or damage, will also be examined.

It should be noted that Council have been advised that the impact of COVID-19 on the London market may result in a premium increase of up to 15%.

3 **Proposed Flood Protection and Drainage Bylaws 2020 update**

The Flood Protection and Drainage Bylaws are regulations that safeguard flood protection and land drainage assets from third party damage or misuse. As required by the Local Government Act 2002, the Bylaws have been under review since 2019 (last review was in 2008). This is to ensure they are still fit-for-purpose and informed by latest science and recent flood information.

Formal consultation for the proposed Flood Protection and Drainage Bylaws 2020 opened on 27 March 2020, just days prior to New Zealand entering COVID-19 Alert Level 4. At that stage, Council had no legal ability to extend the 30 June 2020 deadline where the 2008 Bylaws would automatically be revoked. This would have meant that by 30 June 2020, Council would have had no legal protection for its flood protection and drainage assets. Council had no other option but to continue the formal consultation process during lockdown.

During Alert Level 4, central government enacted the COVID-19 Response (Further Management Measures) Legislation Act 2020. This provided temporarily legislation that suspended the automatic revocation date of 30 June 2020, allowing the 2008 Bylaws to remain in force until the adoption of the Flood Protection and Drainage Bylaws 2020. The hearings, deliberations and adoption were postponed until the following dates:

- Hearings: 26 August 2020
- Deliberations: 30 September 2020
- Adoption: 29 October 2020

This extension also provided Council the opportunity to address some matters raised during the consultation period regarding the effects of the Bylaws on traditional cultural practices and waahi tapu sites. An investigation is currently underway with targeted iwi, and a report to Council will be presented during Deliberations on 30 September 2020.

Submissions closed 28 April 2020 with a total of 43 submissions received. Fifteen organisations and individuals have advised they wish to be heard at the upcoming 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>

4 **Advisory Group membership update**

As per the Terms of Reference for the advisory groups, the first three-year term for membership is due to end in September 2020. Members have been approached by staff, and everyone in the Kaituna Advisory Group have advised they are interested in continuing. However a vacancy has been available in the Rotorua Urban position since Warren Webber resigned in September 2018.

As required under the Terms of Reference, the vacancy has been advertised via public notice in The Daily Post (Rotorua) and on our website.

The deadline for applications closes on Friday, 21 August 2020. A selection panel, consisting of Councillors Bruning and MacDonald, Chris Ingle and myself will then review the applicants. The group will be advised once the successful applicant has been confirmed.



Kirsty Brown
Rivers and Drainage Assets Manager