Risk and Assurance Committee

Report Distributed Under Separate Cover

Agenda Item 7.4:

Kopeopeo Canal Remediation Project - Update 24 - Close Out

Thursday, 13 February 2020 commencing at 9.30 am.

Fiona McTavish
Chief Executive

5 February 2020

BAY OF PLENTY REGIONAL COUNCIL TOI MOANA

Receives Only – No Decisions

Report To: Risk and Assurance Committee

Meeting Date: 13 February 2020

Report From: Chris Ingle, General Manager, Integrated Catchments

Kopeopeo Canal Remediation Project - Update 24. Close Out.

Executive Summary

This paper provides a final update on the Kopeopeo Canal Remediation Project (KCRP) to close out the project.

Ongoing monitoring and reporting activities as required by the consent will continue through to 2029, however these will be undertaken under business as usual with funding for these activities to be requested in the Council 2021/2031 Long Term Plan.

This report summarises the achievements of the project and lays out ongoing requirements to be included in business as usual.

Dredging and validation of the 5.1km project section of the Kopeopeo Canal was completed in August 2019 with the Final Validation Report completed and provided to the Consent Authority in December 2019. Contaminated sediment from the canal has been safely stored in geobags within purpose-built lined cells at two containment sites, effectively mitigating any potential risks to human health associated with the dredged sediment. Ongoing site management plans are being prepared to ensure potential human health risks continue to be avoided throughout the consent term or until containment cell closure levels are reached.

The Project was recognised as the Best Regional Remediation Project by the Australasian Land and Ground Water Association (ALGA) at their awards ceremony at the end of 2019. It was also runner up in two other categories.

Capping of the containment sites with topsoil has been completed at both Containment Site 3 (Keepa Road near Coastlands) and Containment Site 1 (SH30 towards Awakeri). A small karakia will be held on Saturday 22 February to bless completion of these works and the dredging, after which public access through CS3 will be reinstated from late February 2020.

Project costs have been shared between Bay of Plenty Regional Council and the Ministry for the Environment's Contaminated Sites Remediation Fund. The total cost of the project from 2011 to 2019 has been $22 million. The contribution from MfE has been $8 million, including their last payment received January 2020. The Ministry has declined a further request for funding relating to the "Contract Reset Agreement" portion of the project (refer Appendix 1). It is proposed that a second (repeat) request for funding for 50% of the reset amount, which if successful would bring the MfE contribution up to 50% of project expenditure eligible for MfE funding.

The next phase of the project is bioremediation of the contaminated sediment as required by the Project's consent. Bioremediation has started already with all geobags inoculated with fungus prior to capping with topsoil. Approximately 400 trees have been planted at Containment Site 1 (CS1) to facilitate bioremediation. A further 1400 trees will be planted in the geobags at both CS1 and Containment Site 3 (CS3) this winter.

A separate project to investigate the level of dioxin contamination in the Kopeopeo Canal sediments to the west of SH30 has commenced. High level options will be brought to the Committee for their consideration by June 2020.

Recommendations

That the Risk and Assurance Committee:

1 Receives the report, Kopeopeo Canal Remediation Project - Update 24. Close Out;

2 Agrees that a second request for funding should be made to the Ministry for the Environment's Contaminated Sites Remediation Fund to bring their contribution up to 50% of expenditure eligible for MfE funding.

1 Background

The purpose of the project was to safely remove elevated levels of dioxin contaminated sediment from the 5.1km of Kopeopeo Canal at its eastern end (Figure 1). The project consisted of physical works to safely remove and securely contain contaminated sediment within two containment sites, followed by bioremediation for up to 15 years. The first phase to remove and safely contain the dredged contaminated sediment has been achieved with a Final Validation Report signed off by the Independent Monitor in December 2019, provided to the Consent Authority and posted on the project website.

The project cost $22 million and has been jointly funded by BOPRC (64%) and the MfE through their contaminated site remediation fund (36%).

The next phase of the project is bioremediation which has been started and is currently only funded by Bay of Plenty Regional Council.

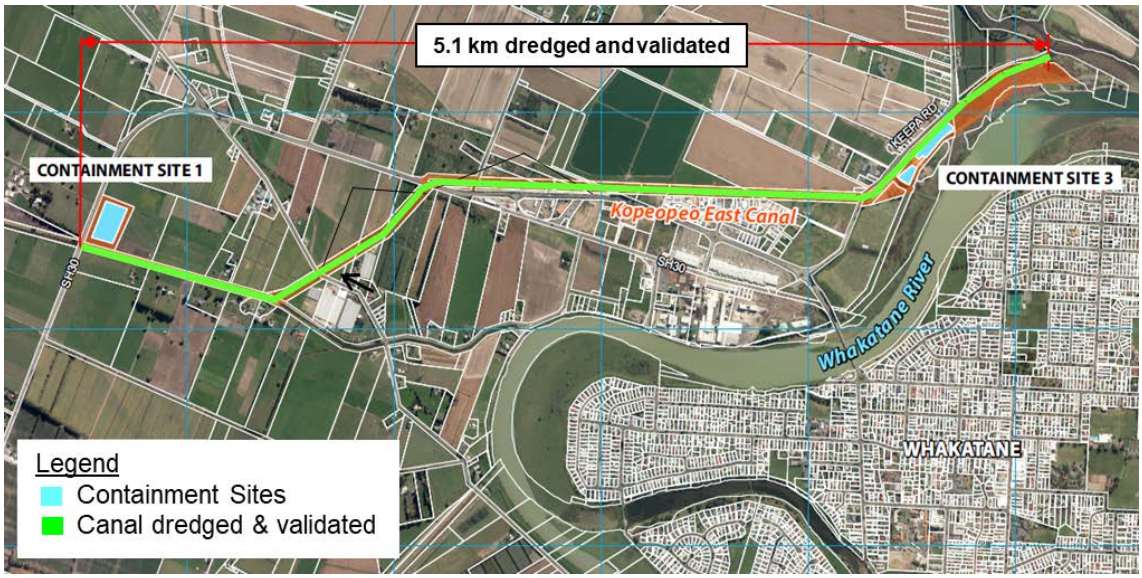

Figure 1. Kopeopeo Canal Remediation Project site with dredging completed and validated.

2 Kopeopeo Canal Remediation Project – Close out Activities

Since the previous report to the Audit and Risk Committee (12 September 2019), the following activities have been undertaken to close out the project.

2.1 Claim to Ministry for the Environment

A claim was submitted to the Minstry for the Environment (MfE) on 14 November 2019 for the remaining funds not claimed from the current funding deed. The claim was for $2.2 million, to bring the total MfE contribution to the project up to $8 million (36% of the total project expenditure of $22 million). The claimed amount was received on 24 January 2020.

A separate request for additional MfE funding was made in March 2019. This request related to the contract “Reset Agreement”. A letter from MfE was received on 19 December 2019 declining the application for additional funding for the Kopeopeo Canal Remediation Project on the grounds that the fund was oversubscribed and available funding had been directed to other high risk sites (refer to Appendix 1, 19 December 2019 Decision Letter from MfE).

Applications for the next funding round close at the end of March 2020. It is proposed that a repeat request for funding be made, seeking new MfE funding in the new financial year.

2.2 Containment site capping

Placing topsoil over the geobags and grass seeding has been completed at both CS1 and CS3. Trees will be planted through the topsoil into all the geobags at both containment sites in June/July 2020 for bioremediation.

Figure 2. Topsoil capping at CS1 nearing completion.

Figure 3. Completed topsoil capping at CS1.

Figure 4. Completed topsoil capping at CS3.

2.3 Opening public access through CS3

Public access through CS3, (around the exterior of the containment cell itself which has now been fenced off) will be reinstated to the public after the karakia on 22 February 2020. This will allow vehicle access to the Whakatāne River, downstream of CS3. There have been repeated public requests for this access through the project site, as the Whakatāne River in that area has long been a popular fishing and white-baiting area.

2.4 Project Recognition – Australasian Land and Groundwater Association

The Kopeopeo Project received three project excellence awards from the Australasian Land and Ground Water Association (ALGA) at their recent awards ceremony. The Kopeopeo Project was awarded 1st place in the Best Regional Remedial Project and runner up in two other categories – the Best Sustainable Remediation Project, and the Best Remedial Project (over $1m). The judges recognised the whole stakeholder engagement aspect of the project noting that it went from a situation where many were opposed to the project in 2014, to a situation where the community had been listened to and their concerns addressed through a change in method to deal with the concerns.

In accepting the award, on behalf of the project team, Project Manager Brendon Love recognised the contribution of the advocacy groups and passionate individuals within the community who had stepped in to volunteer time and speak out to ensure that such sites are not forgotten. The late Joe Harawira QSM, who campaigned for decades on behalf of the Whakatāne community to get dioxin related health risks recognised was singled out in the acceptance of the award.

Figure 5. The late Joe Harawira QSM, recognised for contribution to the project in acceptance of ALGA awards.

Figure 6. Kopeopeo Project Leaders, Ken Tarboton (Engineer's Representative), Brendon Love (Project Manager) and Bruce Crabbe (Project Director) receive ALGA awards.

2.5 **Communication**

The project has provided communication to the community through the regular Community Liaison Group (CLG) meetings, via the project website, regular 1XX radio announcements and project newsletters and emails. A media release was made in December 2019 celebrating recognition of the Project by ALGA (above) and the Final Validation Report was posted to the project website in December 2019 together with its endorsement by the Independent Monitor. The most recent update to the CLG was provided in December 2019.

A video showing the story of the project from start to end is in the process of being completed for communication purposes and to show the success of the project.

The project website will continue to provide information on ongoing monitoring, bioremediation and progress with the Kopeopeo Extension West investigation.

3 Kopeopeo Issues and Risks

The majority of the key risks associated with the Kopeopeo Canal Remediation Project have been addressed or mitigated with the completion of the dredging phase and the removal of the flood control structures. Two risks that still remain are discussed below as well as one issue.

3.1 Risk. Contaminated material moving from west to the east

Dioxin contaminated sediment above the remediation target was identified in sediments in the Kopeopeo Canal to the west of SH30 during 2016. At that time, consents had already been granted and the procurement process was underway for remediation works to the east of SH30.

Options for the canal to the west of SH30 are being investigated as part of the Kopeopeo Extension West Investigation discussed below. Full removal of the flood control structure at SH30 would have exposed the cleaned part of the canal to potential migration of contaminated drain bed sediment from the west. To mitigate this risk, the structure was modified rather than removed, so that it allows the re-establishment of drainage and flood flows, without allowing any migration of potentially contaminated sediment.

The modified flood control structure includes rock armouring on the up-stream side of the structure and the canal bed immediately upstream of the base of the structure has been covered by geotextile fabric and rock armouring to contain sediment, further reducing the risk of sediment being mobilised by water flows. Water velocity measurements and sediment transfer analysis has been carried out to quantify any residual risk. These results indicate that the control structure modifications are preventing migration of sediment to the east.

3.2 Risk. Monitoring of eel flesh

The resource consent requires annual testing of eel for 5 years following the completion of the works. Baseline eel tissue sampling and analysis completed in 2018 revealed that eel tissue from samples collected to the west of SH30 had contaminant levels above safe consumption levels. There is a risk that these eels could migrate eastward from the western part of Kopeopeo Canal, and create a false impression that there may still be dioxin contaminants in the cleaned-up part of the canal.

To mitigate this risk, the investigation into options for the upstream section of canal to the west of the remediated section are underway through the KEW project. Passive in-situ sampling methods are being investigated to augment the required eel monitoring results, however a change to passive sampling would require community acceptance of the method and approval of a variation to the existing consent.

It may also be more pragmatic to sample eel flesh at a reduced frequency (2 yearly).

3.3 Issue. Ministry for the Environment funding contribution

The risk of MfE not providing further funding as requested has previously been reported as a risk. This became an issue with the receipt of the letter on 19 December 2019 from MfE, declining the application for additional funding. BOPRC is now left with the task of funding all of the additional project costs that resulted from the project “Contract Reset Agreement”, without any contribution from MfE.

To address this issue it is proposed that another (repeat) request for funding be made to MfE to meet their 50% share of the 'Contract Reset Agreement' costs. The case for retrospective funding could be strengthened through discussions with MfE at the Chief Executive and Council Chairman-Minister level.

4 Lessons Learned

A summary of lessons learned from the project was included in the previous report to the Council Audit and Risk Committee on 12 September 2019 so is not repeated here.

A lessons learnt report is being prepared and will be posted to the project web site when completed.

5 Ongoing Monitoring required by consent

The table below shows a simplified summary of the ongoing monitoring that is required by the consent for the project. Funding will need to be included in the business as usual budgets in the Long Term Plan to enable this compliance monitoring.

Table 1. Kopeopeo Canal Remediation Project - ongoing monitoring requirements.

Monitoring	**Frequency and requirement**
Containment site structural monitoring	Annual survey to ensure flood protection bund heights at CS1 and CS3 are maintained as well as general inspection and maintenance of all structures (containment sites) and to ensure that there is no erosion or sediment discharge
Containment Site discharges	Six monthly sampling of discharge from containments sites to ensure they meet water quality requirements
Bioremediation of containment sites	Ongoing bioremediation of containment sites according to Bioremediation methodology until remedial target for sediment in containment sites is met
Validation sampling	Annual sampling of eels for 5 years to ensure no bio-accumulation of dioxin in eel tissue
Groundwater monitoring	Annual sampling of water quality of the groundwater well network around containment sites and bi-monthly sampling of well water levels in the vicinity of CS1 for the remainder of consent.
Saltmarsh monitoring	Six monthly, for 2 years, then annual monitoring of saltmarsh recovery for up to 6 years to ensure saltmarsh vegetation recovery.
Reporting	Annual reporting of above monitoring with peer review of final validation report once remediation target is met for sediment in containment sites.

Some of the monitoring and closure conditions required by the resource consent are more relevant to the former containment site design (e.g. unlined containment sites). Staff are undertaking a review of the conditions and will seek minor variations to the conditions to reduce monitoring costs.

Bioremediation

Since the previous report to Council, fungus inoculation of all geobags at both sites CS1 and CS3 has been completed. Now that the sites have been capped with topsoil, tree planting will continue in the winter (around June/July) of 2020.

In addition to the approximately 400 trees already planted at CS1, it is planned to plant a further 800 trees at CS1 and 700 trees at CS3.

Figure 7. Tree growth at CS1.

6 Investigation of Kopeopeo Canal West of SH30

Investigation into the Kopeopeo canal sediment west of SH30 has re-commenced. A 4.4km reach of canal has been surveyed to determine the volume of sediment and a detailed site investigation is underway. High level options will be developed for presentation to Council by mid-2020.

7 Maori Implications

The project funded a Cultural Monitor who provided input to the Project Team and oversight of the dredging Contractor in relation to cultural considerations and requirements for the duration of the contract. In addition, Ngāti Awa and SWAP (Sawmill Workers Against Poisons) had representatives on the project's Community Liaison Group and its Steering Group.

Ngāti Awa has supported the remediation project from its outset and particularly the bioremediation process that will heal Papatuanuku rather than just safely storing the contaminated sediment. The resumption of eel fishing within the canal has also been highlighted by Ngāti Awa as an important step in the project.

The cultural monitor, local iwi representatives, and whanau are providing guidance and input to the most appropriate ways to celebrate completion of the project and recognise the contributions of the late Joe Harawira and the late Arch Delahunty who both contributed significantly to the project.

8 Budget Implications

The total cost of the project has been $22 million through to December 2019. A total of $8 million has been received from the MfE including their payment of the last claim of $2.2

million, received on 24 January 2020. This means that the BOPRC contribution to the project has been $14 million (64%) while the MfE contribution has been $8 million (36 %).

8.1 Current Budget Implications

The Current 2019/20 budget for the combined Kopeopeo Projects is $1.12 million as indicated in Table 2 below. To date, $912,151 has been spent. It is expected that the current year budget will be a small overspend for this activity. This will be managed as part of the normal Rivers and Drainage budget.

8.2 Future Budget Implications

Future funding is available for bioremediation as shown in Table 2 ($1.05 million from 2020/21 to 2028/29). No funding has been included for ongoing monitoring as required by the consent. Funding will need to be included in the 2020/21 and the next Long Term Plan budgets for ongoing monitoring and reporting required by the KCRP consent.

Table 2. Kopeopeo Projects current and future budget.

Kopeopeo Canal Remediation Projects	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**
	$000	**$000**	**$000**	**$000**	**$000**	**$000**	**$000**	**$000**	**$000**	**$000**
Revenue										
KCRP funding deed	1,035									
KCRP project closure	15									
KEW funding deed	358									
Total Revenue	**1,408**									
Capital Expenditure										
Kopeopeo Canal Remediation Project	300									
Kopeopeo Bioremediation	200	50	200	50	200	50	200	50	200	50
Kopeopeo Extension West	620									
Total Capital Expenditure	**1,120**	**50**	**200**	**50**	**200**	**50**	**200**	**50**	**200**	**50**

Bruce Crabbe
Rivers and Drainage Operations Manager

for General Manager, Integrated Catchments

5 February 2020

Appendix 1

Ministry for the Environment
Manatū Mō Te Taiao

PO Box 10362, Wellington 6143
Website: www.mfe.govt.nz
Freephone: 0800 499 700

19 December 2019

Bruce Crabbe
Bay of Plenty Regional Council
Bruce.crabbe@boprc.govt.nz

Tēnā koe Bruce

Contaminated Sites Remediation Fund application for additional funding towards the Kopeopeo Canal Remediation Project

Thank you for submitting your application for the Kopeopeo Canal Contamination Remediation – Stage 1 to Round 1 of the 2019/20 Te Pūtea Whakaora Wāhi Tāhawahawa - Contaminated Sites Remediation Fund (CSRF). We appreciate the amount of work involved in preparing an application and thank you for your patience in waiting for a decision.

The CSRF Assessment Panel have assessed the application for the Kopeopeo Canal Contamination Remediation and consider the project is eligible for funding. The Minister for the Environment, David Parker, shared this view however the CSRF was oversubscribed and the available funding has had to be directed to other high risk sites. I am therefore writing to you to inform you that the Minister has declined your application to the CSRF.

The Ministry for the Environment congratulates Bay of Plenty Regional Council on the successful completion of the dredging phase of the project and we sincerely look forward to the closure celebration in March 2020.

Please contact Carmel Mangan at carmel.mangan@mfe.govt.nz, or on 022 103 793, if you have any queries.

Nāku iti noa, nā,

Scott Priestley
Kaiwhakahaere - Manager, Te Pūtea Whakaora Wāhi Tāhawahawa - Contaminated Sites Remediation Fund, Resource Efficiency & Innovation