

Implementation Committee Agenda - 9 June 2022



Meeting conducted in the Harvest Hotel Conference Centre
6 Barry Ave, Cromwell 9342

Members of the public may view livestream at: [Otago Regional Council YouTube Channel](#)

Members:

Cr Bryan Scott, Co-Chair
Cr Carmen Hope, Co-Chair
Cr Hilary Calvert
Cr Michael Deaker
Cr Alexa Forbes
Cr Gary Kelliher
Cr Michael Laws
Cr Kevin Malcolm
Cr Andrew Noone
Cr Gretchen Robertson
Cr Kate Wilson

Senior Officer: Dr Pim Borren, Interim Chief Executive

Meeting Support: Liz Spector, Governance Support Officer

09 June 2022 02:00 PM

| Agenda Topic | Page |
|--|-------------|
| 1. APOLOGIES No apologies were received prior to publication of the agenda. | |
| 2. PUBLIC FORUM No requests to address the Committee under Public Forum were received prior to publication of the agenda. | |
| 3. CONFIRMATION OF AGENDA Note: Any additions must be approved by resolution with an explanation as to why they cannot be delayed until a future meeting. | |
| 4. CONFLICT OF INTEREST Members are reminded of the need to stand aside from decision-making when a conflict arises between their role as an elected representative and any private or other external interest they might have. | |
| 5. CONFIRMATION OF MINUTES Minutes of previous meetings of the Implementation Committee will be adopted as true and accurate record(s), with or without changes. | 3 |
| 5.1 Minutes of the 14 April 2022 Implementation Committee meeting | 3 |
| 6. OPEN ACTIONS FROM RESOLUTIONS OF THE COMMITTEE Actions from resolutions of previous Implementation Committee meetings will be reviewed with staff. | 7 |
| 6.1 Action Register at 9 June 2022 | 7 |
| 7. PRESENTATIONS | |

| | | |
|---------|---|----|
| 7.1 | Central Otago Wildling Conifer Control Group - Annual Report | |
| | Richard Bowman of the organisation will present the Annual Report to the Committee. | |
| 8. | MATTERS FOR CONSIDERATION | 8 |
| 8.1 | ENVIRONMENTAL IMPLEMENTATION QUARTERLY UPDATE | 8 |
| | This report updates on operational implementation activities undertaken in freshwater, biosecurity, and biodiversity and complements Annual Plan reporting. | |
| 8.2 | RIVER MANAGEMENT QUARTERLY UPDATE | 34 |
| | This report provides a quarterly summary of river management operational activities including gravel extraction consents, 2022/23 work programme development, and asset management plans for riverbank plantings. | |
| 8.3 | FLOOD RECOVERY 2020 PROGRESS UPDATE | 44 |
| | This report updates on recovery from damage resulting from February 2020 flooding. | |
| 8.3.1 | Appendix 1: Location and status of flood damage repairs | 51 |
| 8.3.2 | Appendix 2: Programme of works | 54 |
| 8.3.3 | Appendix 3: Albert Town flood damage repair summary | 55 |
| 8.3.4 | Appendix 4: Riverbank Road floodbank stabilisation | 57 |
| 8.3.4.1 | Appendix 4.1: Location of Riverbank Road stabilisation sites | 64 |
| 8.3.5 | Appendix 5: Waitepeka floodbank repair summary | 65 |
| 8.3.6 | Appendix 6: Flood recovery cost details | 70 |
| 9. | CLOSURE | |



Minutes of a meeting of the
Implementation Committee held in the
Council Chamber on Thursday 14 April 2022, commencing at
9:00 AM

Membership

Cr Carmen Hope (Co-Chair)
Cr Bryan Scott (Co-Chair)
Cr Hilary Calvert
Cr Michael Deaker
Cr Alexa Forbes
Cr Gary Kelliher
Cr Michael Laws
Cr Kevin Malcolm
Cr Andrew Noone
Cr Gretchen Robertson
Cr Kate Wilson

Welcome

Co-Chair Bryan Scott welcomed Councillors, members of the public and staff to the meeting at 9:04 am. Staff present included Amanda Vercoe (GM Governance, Culture and Customer) and Liz Spector (Governance Support Officer). Present electronically were Sarah Gardner (Chief Executive), Nick Donnelly (GM Corporate Services), Anita Dawe (acting GM Policy and Science), Gavin Palmer (GM Operations), Richard Saunders (GM Regulatory and Communications), Michelle Mifflin (Manager Engineering), Andrea Howard (Manager Environmental Implementation), and Libby Caldwell (Team Leader Environmental Implementation).

1. APOLOGIES

There were no apologies.

2. PUBLIC FORUM

No public forum was held.

3. CONFIRMATION OF AGENDA

Co-Chair Scott confirmed the agenda as presented.

4. CONFLICT OF INTEREST

No conflicts of interest were advised.

5. CONFIRMATION OF MINUTES

Resolution: Cr Hope Moved, Cr Noone Seconded

That the minutes of the meeting held on 9 March 2022 be received and confirmed as a true and accurate record.

MOTION CARRIED

6. ACTIONS

Councillors reviewed the open actions from resolutions of the Committee. Cr Calvert asked that more detail be provided on status of outstanding actions in future reports. Cr Kelliher updated the meeting on the status of the pest control assets.

7. MATTERS FOR CONSIDERATION

7.1. Central Government Co-investment in Flood Protection Schemes

The report was provided to update Council on work undertaken by the regional council sector to obtain ongoing central government co-investment in flood protection and river management schemes and to present a supplementary report prepared by the sector for central government on permanent co-investment in New Zealand's flood protection schemes. Cr Scott introduced the report and thanked the team for the work. Michelle Mifflin (Manager Engineering) and Gavin Palmer (GM Operations) responded to questions from the Councillors.

Cr Laws noted much work had gone into this proposal across regional councils. He asked if they had done a prospect of success consideration. Dr Palmer said that had been done, which supported the scheme being put forward. He suggested with Central Government's increased focus around climate adaptation it was timely to seek such funding. Further questions were asked about the portion of the potential funding that the ORC would receive. Dr Palmer said the numbers in the report were based on current rather than future schemes and it was important to progress this work so the ORC will be ready to invest when any funds do become available. He also noted allocation models have not been worked through and there would be competition for funding.

Cr Noone said this is about getting Central Government to work more proactively and getting ahead of the curve with regard to flood events becoming more frequent and intense. He said Central Government investment in flood schemes would ensure they are more resilient.

Following further discussion, Cr Calvert noted it would be important to concentrate on the packaging of this request to ensure it was an attractive programme for Central Government to consider. Cr Calvert then moved the recommendation, seconded by Cr Robertson.

Resolution IMP22-106: Cr Calvert Moved, Cr Robertson Seconded

That the Implementation Committee:

- 1) **Notes** this report.
- 2) **Notes** the regional council sector work seeking to obtain ongoing central government co-investment in flood protection and river management schemes.

MOTION CARRIED

7.2. Lake Tuakitoto and Tomahawk Lagoon Restoration/Enhancement Management Plans

Cr Scott introduced the paper which was provided to obtain Council approval to proceed with implementation of restoration/enhancement management plans for the Lake Tuakitoto and Tomahawk Lagoon catchments. He noted engagement with the two communities was initiated as water quality was found to be degrading. Andrea Howard (Manager Environmental Implementation), Libby Caldwell (Team Leader Environmental Implementation) and Gavin Palmer (GM Operations) were available to respond to questions.

A discussion was held about when the work would begin. Ms Caldwell said public consultation overwhelmingly showed the community wanted the ORC to further investigate the best course of action before starting any work to ensure any actions taken are done appropriately. She noted a procurement process was underway to contract with an ecologist to undertake an assessment of the catchment and anticipated the process to be completed by 30 June. She said that work would help identify the best sites within the catchments for water quality monitoring. Ms Caldwell also noted a hydrological assessment was planned to be completed within three years.

Cr Wilson asked that the action management plans include those details as the community will want that information. Ms Caldwell noted a timeframe for the ecological assessment will be added to the management plan and that information about the second water monitoring station for the lake will also be added.

Cr Malcolm noted that Tomahawk Lagoon is managed by the Department of Conservation. He asked how DoC supported the ORC in this work. Ms Caldwell said DoC has been engaged early on through key stakeholder updates. She said the management plan may encourage them to provide more support to the water body as it was an important ecological system for wildlife management. Cr Calvert asked Ms Caldwell to determine what the technical responsibility of DoC was for the lagoon.

Cr Deaker noted the historical name for Tomahawk Lagoon was Tamahaka and asked if ORC could consider leading the way to using correct place names. After a discussion of this proposition, it was determined the issue would be taken up at the Mana to Mana level. Cr Robertson noted Kai Tahu has a mapping project underway related to historical place names.

Following further discussion, Cr Calvert moved:

Resolution IMP22-107: Cr Calvert Moved, Cr Wilson Seconded

That the Committee:

- 1) **Notes** this report.
- 2) **Approves** the initial management plan and ongoing development of management plans for Tomahawk Lagoon and Lake Tuakitoto catchments with their communities.
- 3) **Approves** commencement of project implementation.
- 4) **Notes** that project implementation will proceed this financial year, slightly accelerated for Tomahawk Lagoon, and as planned for Lake Tuakitoto.
- 5) **Notes** implementation in future years is dependent on Annual Plan decisions of Council and will be guided by the ecological assessments and priorities that arise through these.

MOTION CARRIED

8. CLOSURE

There was no further business and Chairperson Noone declared the meeting closed at 10:30 am.

Chairperson

Date

OPEN ACTIONS FROM RESOLUTIONS OF THE IMPLEMENTATION COMMITTEE AT 9 JUNE 2022

| Meeting Date | Item | Status | Action Required | Assignee/s | Action Taken | Due Date |
|--------------|---|-------------|--|--|---|------------|
| 08/12/2021 | ENV2102 Decision on Future of Rabbit Control Assets | In Progress | Report back prior to 30/06/2022 with options for the Galloway depot and oat processing equipment, to include information on values of the property, buildings and equipment. Res IMP21-119 | General Manager Operations | 19/01/2022 Executive Assistant To start 23/02/2022 Executive Assistant, Operations The working party comprising Cr Kelliher and staff met on 24 February 2022 to discuss how to develop options for the Galloway depot and oat processing equipment for Council consideration. 01/06/2022 Executive Assistant, Operations A report will be provided to the 29 June Council Meeting. | 30/06/2022 |
| 09/03/2022 | OPS2206 Environmental Implementation Quarterly Update | In Progress | Develop a credible methodology to measure effectiveness of the Pest Management Plan with regards to combatting the #1 pest in Otago (rabbits). Res IMP22-102 | General Manager Operations, Manager Environmental Implementation | 28/03/2022 Executive Assistant This is currently under investigation by the Environmental Implementation Team 22/04/2022 Executive Assistant, Operations A paper will be brought to the September 2022 meeting of the Data and Information Committee on the Regional Pest Management Plan Monitoring Framework | |

8.1. Environmental Implementation Quarterly Update

| | |
|----------------------|---|
| Prepared for: | Implementation Committee |
| Report No. | OPS2220 |
| Activity: | Environmental: Land Environmental: Water |
| Author: | Andrea Howard, Manager Environmental Implementation |
| Endorsed by: | Gavin Palmer, General Manager Operations |
| Date: | 9 June 2022 |

PURPOSE

- [1] To provide a quarterly summary of operational implementation activities undertaken in the areas of freshwater, biosecurity, and biodiversity. This report complements the Annual Plan quarterly reporting. It includes details of projects underway, the milestones achieved within these projects and wider business as usual work.

EXECUTIVE SUMMARY

- [2] ORC is leading and delivering four Jobs for Nature projects to a total value of \$22.5m:
- i. The National Wilding Conifer Control Programme to Boost Regional Economies and Employment: Otago
 - ii. Containing Wallabies to Protect Agriculture, Forestry and Native Plants, And Boost Regional Economies: Otago
 - iii. Private Land Biodiversity: Maintaining the Gains
 - iv. Te Hapakupu/Pleasant River intervention and restoration project to reduce sediment and nutrient inputs into a waterway
- [3] Otago has a total of 25 Jobs for Nature-funded projects, totalling \$53m. The projects are expected to create approximately 456 jobs over the duration of implementation.
- [4] The Council's Integrated Catchment Management (ICM) Programme is underway. This includes building a work programme based around focus areas (formerly "key work areas") of governance, catchment action plan (CAP) framework design, CAP development, CAP Implementation and monitoring and evaluation. A work programme will be provided for noting to the June Council meeting.
- [5] The \$4.0m Ministry for the Environment-funded Te Hapakupu/Pleasant River project was announced on 21 December 2021. Over the next four years a series of initiatives will be implemented by ORC, in conjunction with mana whenua and the local communities, to improve water quality in the Te Hapakupu/Pleasant River catchment and impacts on the coastal marine area. Project delivery planning is well underway, as is progress to establish a co-governance project delivery model with Kati Huirapa Rūnaka ki Puketeraki.
- [6] Staff within the Catchment Team have met with a range of Catchment Groups, industry groups and other key stakeholders to identify and pursue support opportunities. Work is

also underway to provide improved spatial data and analysis to individuals and groups to better inform their environmental management plans.

- [7] The restoration programme at Lake Hayes is continuing. A Cultural Values Assessment for the Wai Whakaata (Lake Hayes) project has been commissioned to inform the refreshed strategy and the restoration project plan. The design of the proposed culvert is nearing completion and preparation of a consent application for the culvert construction has begun. Detailed planning for completion of the augmentation project for Mill Creek has also commenced. The agreement to purchase water from Arrow Irrigation Company (AIC) is being finalised.
- [8] Management Plans for Tomahawk Lagoon and Lake Tuakitoto have been approved and are being implemented, with ecological assessments being the first action for both water bodies.
- [9] The Otago Biodiversity Forum met in April. An update on Te Mana o te Taio (Aotearoa New Zealand Biodiversity Strategy) Implementation Strategy was provided by DOC.
- [10] The ECO Fund 2022 received 42 applications. The Council assessment panel will meet on 30 and 31 May to assess them and provide recommendations to the June Council meeting for approval.
- [11] The Biosecurity Operational Plan for 2021-22 is being implemented as expected, with good progress being made across the 90 KPIs.
- [12] The Community Led Rabbit Management projects continue to be implemented in accordance with the overall project plan. There are numerous examples of collaborative, longer-term management options being implemented by landowners in Otago and, for those who have not engaged in the facilitated process, more formal compliance processes have commenced and will continue throughout winter. The first Notices of Direction have been issued in the Gibbston programme area for those occupiers who have not engaged, nor made progress to reduce rabbit numbers.
- [13] A total of 196 management plans from non-complying community project area properties was requested and 171 have been received to date. The creation and implementation of these plans represents a significant amount of control work that might otherwise not have been undertaken, and more importantly, the work has been planned in a more co-ordinated manner to ensure maximum impact. While rabbit populations will continue to be problematic, our communities are now equipped with better tools and support to respond in a way that is likely to have a positive impact on numbers.
- [14] Otago's delivery of the national wilding conifer programme continues with good progress being made against delivery plans in both the Whakatipu and Central Otago areas. Council's oversight of the new Luggate Management Unit is progressing well, with control work commencing in May 2022. Despite the good progress the programme is presenting project management and health and safety issues, partly due to the complexity of the delivery arrangement. Steps are being taken to address these.
- [15] In terms of wallaby control, operations are progressing across seven Management Units (MU) with four ground-based contractors using a range of aerial and ground-based

surveillance methods to search for wallaby, including ground hunters searching for field sign, ground hunters with dogs, ground hunters using thermally equipped UAV (drones) and aerial surveillance using thermal cameras. Two wallabies have been killed in the past quarter, in Boundary Creek, West Branch Manuherikia.

RECOMMENDATION

That the Committee:

- 1) **Notes** *this report*.
- 2) **Notes** the range of implementation activities being undertaken to maintain and improve Otago Regional Council's delivery of environmental implementation activities.

DISCUSSION

1) Environmental Implementation Summary

- [16] Figure 1 provides a snapshot of environmental focused initiatives underway across the region. Some are led by the ORC, while others are community driven, with extensive central government investment.
- [17] These initiatives include over 20 catchment groups in various stages of development. These groups are being supported by Otago Catchment Community, which has received \$225,000 this financial year from the Council. Funding will increase to \$315,000

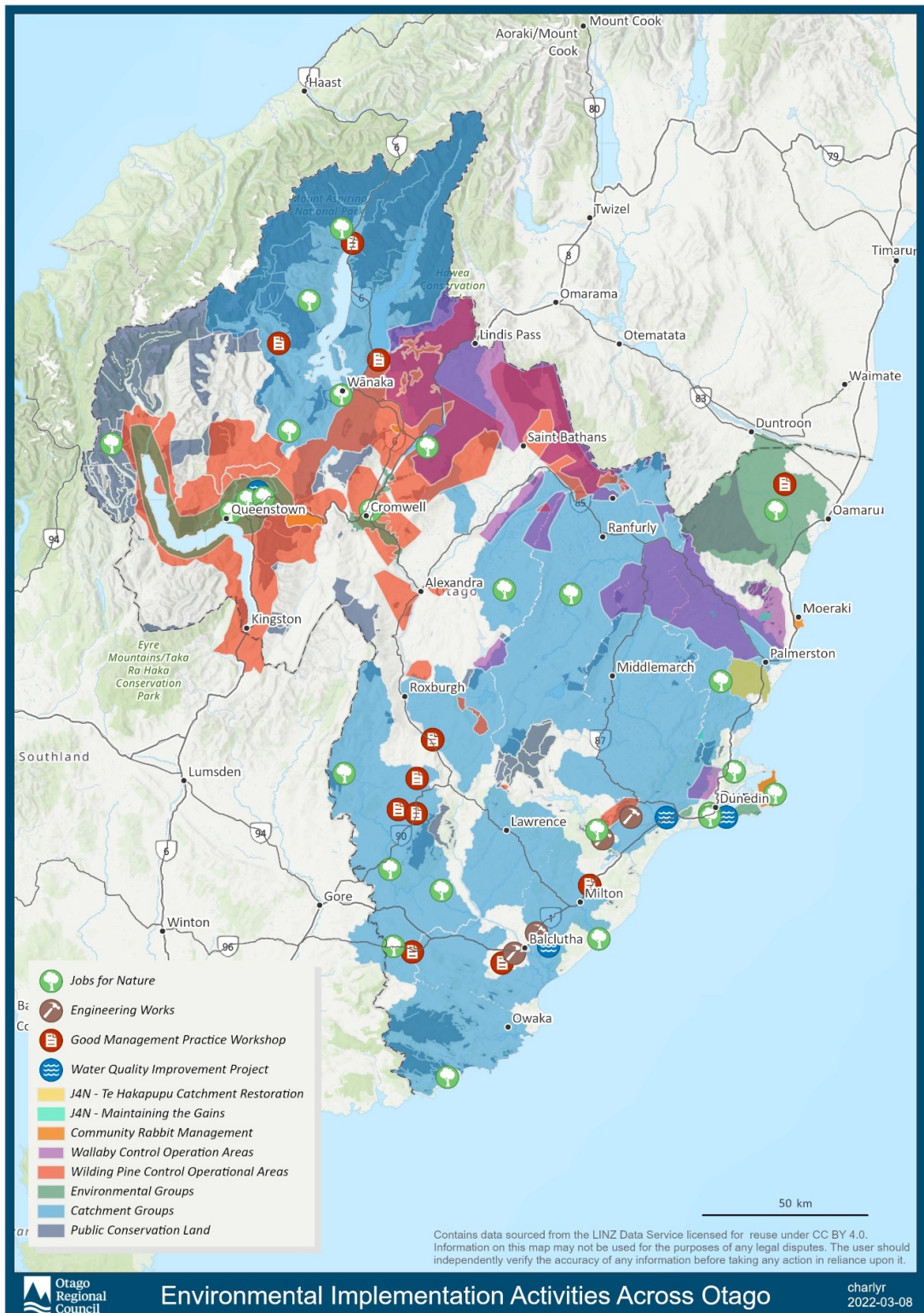


Figure 1: Environmental Implementation Regional Overview

[18] As of May 2022, 25 large projects in Otago have been funded by Jobs for Nature (J4N) (Table 1). These projects are worth \$53m to the region and will be delivered over several years. The projects are focused on ecosystem and freshwater restoration, pest control, recreational enhancement, regulatory implementation, and building capability.

| Funding Recipient | Project Name | J4N Funding | Estimated FTE | Project Intent |
|--|---|--------------|---------------|--|
| Aspiring Biodiversity Trust | Makarora Catchment Threatened Species Project | \$321,000 | 1.82 | Ecosystem Restoration, Pest Control Animals |
| Department of Conservation | In the Wild Queenstown & Fiordland Workforce Hub | \$250,000 | 9 | Capability Development, Pest Control Animals, Pest Control Plants |
| Friends of Tucker Beach Wildlife Management Reserve Society Incorporated | Tucker Beach Habitat Restoration | \$1,000,270 | 14.3 | Capability Development, Ecosystem Restoration, Pest Control Plants |
| Halo Project | Halo Project - Source to Sea | \$1,979,974 | 27 | Ecosystem Restoration, Freshwater Restoration |
| Hukarere Station Ltd. | Hukarere Station Indigenous Planting | \$2,335,340 | 25 | Ecosystem Restoration, Freshwater Restoration |
| Lake Dunstan Charitable Trust Board | Lake Dunstan Restoration and Community Engagement Project | \$953,000 | 4.51 | Pest Control Animals, Pest Control Plants, Recreation Enhancement |
| Landscape Connections Trust | Halo Project - Source to Sea | \$600,000 | | Freshwater Restoration |
| Lindis Catchment Group Inc | Lindis Catchment Group | \$771,724 | | Ecosystem Restoration, Freshwater Restoration, Pest Control Plants |
| Mana Tahuna Charitable Trust | The Rehabilitation of Te Wai Whakaata the Lake Hayes Catchment | \$4,450,000 | 64.1 | Capability Development, Ecosystem Restoration, Freshwater Restoration, Pest Control Animals, Pest Control Plants |
| North Otago Sustainable Land Management Group Inc | North Otago Sustainable Land Management | \$361,776 | | Ecosystem Restoration, Freshwater Restoration, Pest Control Plants |
| Otago Regional Council | Maintaining the Gains' - Protecting and restoring indigenous biodiversity on Otago's covenanted private land | \$961,234 | 10.57 | Capability Development, Pest Control Plants |
| Otago Regional Council | National Wilding Conifer Control Programme to Boost Regional Economies and Employment: Otago | \$13,463,527 | 45.81 | Pest Control Plants |
| Otago Regional Council | Containing Wallabies to Protect Agriculture, Forestry and Native Plants, And Boost Regional Economies - Otago | \$4,170,342 | 19.23 | Pest Control Animals |
| Otago Regional Council | Te Hikapupu Restoration Project | \$4,004,500 | 40 | Ecosystem Restoration, Freshwater Restoration, Pest Control Plants |
| Pomahaka Ware Care Group | Pomahaka Water Care Group | \$175,907 | | Ecosystem Restoration, Freshwater Restoration, Pest Control Plants, Regulatory Implementation |
| Pomahaka Water Care Group | Pomahaka Water Care Group | \$1,400,000 | 13.5 | Ecosystem Restoration, Freshwater Restoration |
| Pomahaka Water Care Group Incorporated | Pomahaka Corridor Planting Project | \$2,312,161 | | Freshwater Restoration |
| Royal Forest and Bird Protection | Tautuku Restoration | \$577,274 | 9 | Capability Development, Pest Control Animals |

| | | | | | |
|--|---|-------------|-------|--|--|
| Society Dunedin Branch | | | | | |
| Southern Lake Sanctuary (SLS) Trust | Southern Lakes Sanctuary (SLS) | \$3,111,000 | 38.7 | | Capability Development, Pest Control Animals |
| Te Rūnaka o Ōtākou | Te Nukuroa o Matamata | \$4,954,167 | 71.25 | | Capability Development, Ecosystem Restoration, Freshwater Restoration, Pest Control Animals, Pest Control Plants |
| The Routeburn-Dart Wildlife Charitable Trust Board | Routeburn Dart Wildlife Trust - Predator Trapping Project | \$416,000 | 8 | | Capability Development, Pest Control Animals |
| Tokomairiro | South Otago - Tokomairiro | \$83,970 | | | Ecosystem Restoration, Freshwater Restoration, Pest Control Plants |
| Upper Taieri Wai | Maniototo Tiaki - Preservation Maniototo | \$4,550,000 | 76.92 | | Capability Development, Ecosystem Restoration, Freshwater Restoration, Historical or Cultural Heritage Restoration, Pest Control Plants, Recreation Enhancement, Regulatory Implementation |
| Wai Wanaka | WAI Wanaka - Wanaka Future Reset | \$3,000,000 | | | Ecosystem Restoration, Freshwater Restoration, Pest Control Animals, Pest Control Plants |
| Wanaka Catchment Group | Wanaka Catchment Group Wai Ora Initiative | \$1,132,269 | 9.91 | | Capability Development, Ecosystem Restoration, Freshwater Restoration, Historical or Cultural Heritage Restoration, Recreation Enhancement, Regulatory Implementation |
| Yellow-eyed Penguin Trust / Te Tautiaki Hoiho (YEPT / the Trust) | Jobs Increasing Hoiho Conservation: the story of a taonga species | \$422,000 | 8 | | Capability Development, Ecosystem Restoration, Freshwater Restoration, Historical or Cultural Heritage Restoration |

Table 1: Jobs for Nature Projects in Otago by Funder

2) LTP Service Level Measures

[19] The Environmental Implementation Team is responsible for the Annual Plan level of service measures outlined in Table 2. Performance against these measures is outlined in the regular quarterly updates provided to Council, or in specific reports as outlined below.

| Level of Service | Report to Council on... | Evidence by ... |
|--|--|--|
| Provide support and funding to selected initiatives and organisations across the region which deliver biosecurity, biodiversity and environmental outcomes that align with our strategic objectives. | ...the initiatives and organisations supported, and the key deliverables achieved [LOSM 2065] | Quarterly Environment Implementation Reports. June 2022 report to Council on Ecofund and other financial incentive recommendations. |
| Collaborate with iwi, DoC and other key organisations to develop, coordinate and deliver a programme of actions to enhance indigenous biodiversity. | ...partnerships established in line with the Biodiversity Action Plan, joint projects developed, and milestones identified | Quarterly Environment Implementation Reports – |

| | | |
|---|--|---|
| | [LOSM 2074] | specifically <i>Maintaining the Gains and Te Hikapupu/Pleasant River Catchment Restoration projects.</i> |
| Support Catchment Groups in Otago to deliver their environmental outcomes and objectives. | ...Otago Catchment Communities deliverables and targets achieved [LOSM 1972] | Quarterly Environment Implementation Reports and 25 May Council report. |
| Develop and maintain an environmental planning framework that aligns with national directions and enables sustainable management of natural and physical resources. | ...progress of Integrated Catchment Planning programme [LOSM 2080] | Quarterly Environment Implementation Reports and 29 June Council report. |

Table 2: Level of Service Measures

3) Integrated Catchment Management Programme

[20] This area of work is being referred to as the Integrated Catchment Management (ICM) Programme.

[21] The ICM Programme has two interim goals:

- i. ICM is embedded in ORC policies, processes and programmes, and
- ii. ICM is implemented throughout Otago through catchment action plans (CAPs) developed and delivered in collaboration with mana whenua and community.

[22] The focus for the Environmental Implementation Team component of work is the design and development of CAPs. Embedding ICM and its principles into the ORC business is a goal we are currently working through with other areas of the ORC, in particular with the Strategy Team.

[23] A high-level work programme for ICM is being drafted based on the following focus areas (revised from the key work areas presented in the last update):

- Governance
- Catchment Action Plan (CAP) framework design
- CAP development
- CAP Implementation
- Monitoring and evaluation framework

[24] **Governance** – a draft operational governance structure is being discussed and revised to ensure it is fit for purpose. This includes ensuring:

- Mana whenua partners are represented at all appropriate levels
- The right people are involved at the right level
- Duplication of effort is avoided
- Alignment with other processes is considered

- Representatives can change depending on the stage of the programme e.g., design vs implementation
- [25] The ICM Programme is currently being progressed through a programme management team including representatives from:
- Environmental Implementation – Including the Programme Coordinator
 - Policy
 - Science
 - Strategy
 - Aukaha
 - Te Ao Marama
- [26] **CAP framework design** – this stage of the programme essential for providing a sound basis for the development and implementation of CAPs into the future. This includes:
- Community collaboration framework – recommendations due early July
 - Program logics for all themes – Land theme underway; Measuring people’s connection to place is being undertaken through an Otago Masters Student project
 - Prioritisation criteria and principles – land and some biodiversity criteria underway
- [27] **CAP development and implementation** – these stages will follow on from the framework design. It is intended that the first CAP will be for the Catlins.
- [28] **Monitoring and Evaluation** - Designing the scope for the spatial database has begun with discussion between GIS staff and the Environmental Implementation team. We are also currently designing the initial stages of what will become an ORC integrated reporting database to capture outputs from work areas across ORC, starting with the ECO Fund.
- [29] It is important to note that the development of CAPs is complementary to the LWRP process. The values and outcomes established through the LWRP will be the same values and outcomes for the CAPs for the water theme (additional values and outcomes will be developed for other themes such as biodiversity and land). The freshwater actions developed through the CAP process and informed by the LWRP consultation will provide the freshwater action plan required through the NPS-FM.
- [30] The draft work programme and proposed governance structure will be included in a paper to Council in June 2022.
- [31] The general timing for the development of CAPs will be from late 2022 and over the next several years, which means they will not be in place for catchment groups who are ready to develop management strategies now. However, interim discussions have been held with coordinators of two catchment groups regarding how they might be able to develop sub-catchment plans that are structured in a way that enable easier alignment with broader scale CAPs, when that time comes. We are aiming to trial a one day

facilitated workshop to help a group develop a catchment 'roadmap' strategy, that is, an outline of goals, values, outcomes and actions to guide the group.

4) Freshwater Implementation

Jobs for Nature – Te Hākapupu (Pleasant River Catchment) Restoration Project

- [32] The \$4.0m, Ministry for the Environment funded, Te Hākapupu/Pleasant River project was announced on 21 December 2021. Over the next four years a series of initiatives will be implemented by ORC, in conjunction with mana whenua and the local communities to improve water quality in the Te Hākapupu/Pleasant River catchment (Figures 2, 3).
- [33] Te Hākapupu is showing signs of excess sedimentation and nutrients, which impacts on ecosystem habitat and health, cultural values, as well as reducing recreation and amenity values. These signs include areas of dense algal mats, anoxic water conditions, and muddy sediment around the estuary. Changing land use in the area over time has contributed to sediment and nutrients entering the waterways. Erosion which is associated with land clearance and weather events has also exacerbated sediment issues in the catchment.
- [34] Over the next year, the project will gather baseline data on the catchment to better understand the sediment, fish habitat and water quality issues, as well as creating an overarching sub-catchment plan¹, to guide activities that will improve water quality.
- [35] Throughout the course of the project, staff will work actively with the forestry sector to ensure that best practice forestry harvesting is undertaken to reduce sediment loss and with landowners to create and implement Sediment Mitigation Plans.
- [36] By June 2025, the project will have implemented on-the-ground mitigation activities in line with the catchment plan. This is expected to include installing 60km of fencing, planting over 100,000 native trees, restoring fish passage in the catchment, and a range of other potential remediation actions – like sediment traps, bank stabilisation, wetland restoration, and riparian buffers in forestry areas.
- [37] The project is building systems and processes as well as forming co-governance with Kati Huirapa Rūnaka ki Puketeraki. This is developing well and will be a first for ORC.
- [38] Co-governance means Kati Huirapa Rūnaka ki Puketeraki will share the responsibilities of implementing project deliverables and means Puketeraki and ORC will work together to find the best solutions for delivery.
- [39] The first task will be to engage with the community to share understanding of what the project is and understand opportunities and barriers. This will begin in this quarter.
- [40] The ORC Science Team are working on a sediment source tracking project in Te Hākapupu with NIWA that will identify how sediment has moved through the catchment over time. This will assist modelling of the catchment to identify sediment source hotspots and target intervention work (fencing and planting).

- [41] The ORC Science Team are also undertaking environmental assessment work in the catchment to establish baselines towards State of the Environment reporting. This work will contribute to the setting of environmental baselines so environmental monitoring can be established.
- [42] There are fish surveys being carried out in the catchment to assist in both identifying fish passage and barriers to passage. Fish passage barrier mitigation is another deliverable for the project.



Figure 2: Te Hākapupu/Pleasant River Catchment – Taking a Mountains to the Sea approach to improving the environment

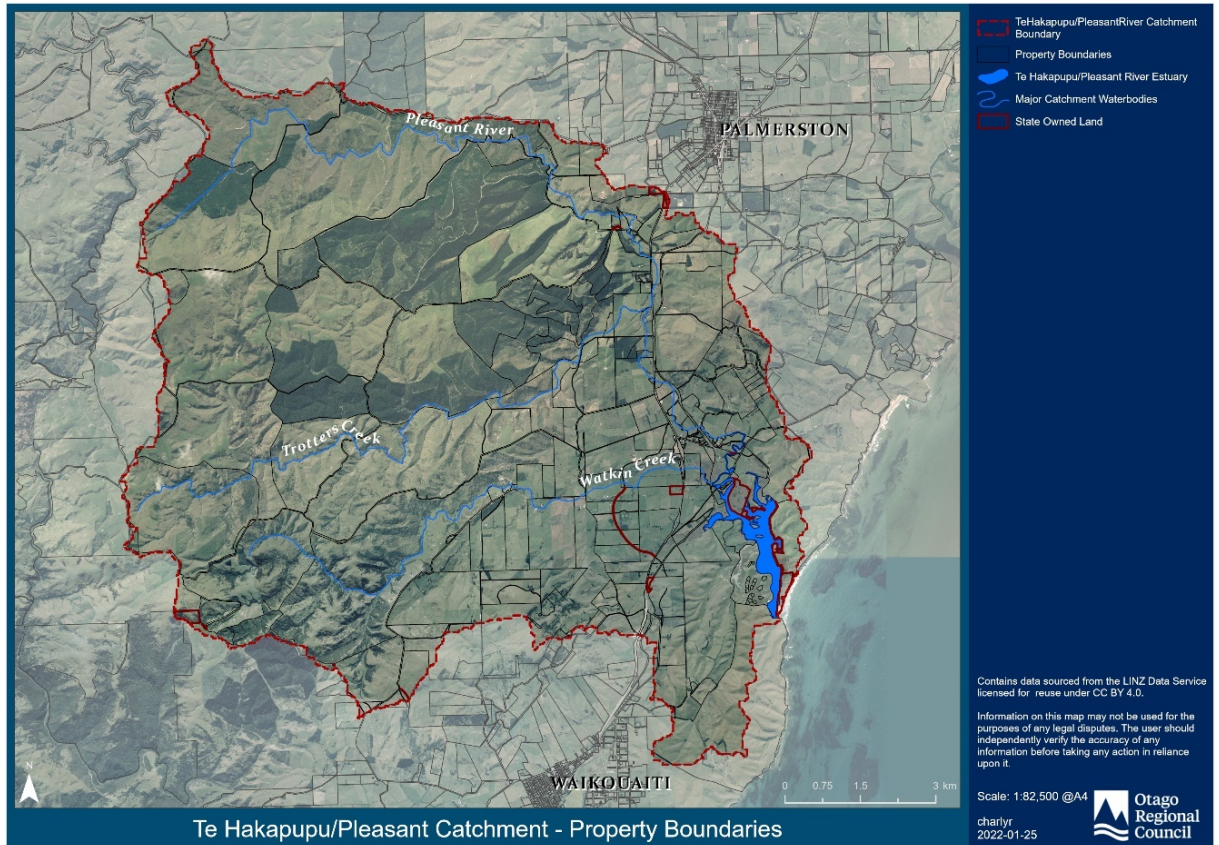


Figure 3: Te Hākapupu/Pleasant River Catchment – Taking a Mountains to the Sea approach to improving the environment

Delivering Annual Plan Programmes

Support of Catchment Groups

- [43] In the last three months, staff have met with a variety of catchment groups across the Otago region to provide advice and support including:
- i. NOSLaM
 - ii. Otago South Rivercare
 - iii. Wanaka Catchment Group
 - iv. East Otago Catchment Group
 - v. Upper Taieri Wai/Tiaki Maniototo
 - vi. Mid Taieri Wai
 - vii. Wai Wanaka
 - viii. Moeraki/ Waianakarua Catchment Group
 - ix. Otago Peninsula Catchment Group
 - x. Friends of Bullock Creek
 - xi. Lindis Catchment Group
- [44] Intensive Winter Grazing workshops have been offered to all catchment groups within the region to provide an in-field workshop for farmers to learn about best practices to employ to reduce sedimentation. We have sessions confirmed with 8 catchment groups to date. It is likely that another 2-3 sessions will be requested and held. Two catchment groups have declined our offer but have suggested other options for engagement such as through riparian planting workshops which the catchment advisors will work with the groups to support.
- [45] Work continues to provide Catchment Groups with environmental and spatial data to inform work programmes and evaluate impact. There is significant development time required to ensure the system is functional for its intended purpose.
- [46] The system will provide information directly (based on publicly available information) and supported by ORC's Catchment Advisors who will have access to a wider range of more detailed spatial information including:
- i. Environmental Monitoring Locations
 - ii. Soil Types
 - iii. Land Use and Ownership
 - iv. Regional policy areas
 - v. TLA Planning zones and associated features
 - vi. Conservation land and covenants
 - vii. Aerial and LiDAR
 - viii. ORC assets
 - ix. Ecology, habitats, threatened species
 - x. Catchment boundaries
 - xi. Freshwater and coastal features
 - xii. Geology
- [47] This information will help individuals and groups to identify issues, priorities and potential mitigation solutions. By the end of this financial year, we expect to have an internal mapping system available for our Catchment Advisors. This will allow Catchment Advisors to create informative maps to assist landholders and other stakeholders. By middle of the next financial year (i.e., end of Dec 2022), it is expected that we will have a

public-facing web-based application to allow stakeholders download information specific to their property, catchment or land area of interest.

Lake Hayes Water Quality Strategy

- [48] The Wai Whakaata /Lake Hayes Strategy Group is continuing to support the development of a refreshed strategy. The group focuses on:
- i. Coordinating actions across member organisations in order to improve water quality.
 - ii. Identifying significant existing and emerging issues affecting Wai Whakaata /Lake Hayes and responding appropriately.
 - iii. Considering agreements, policies and strategies and all other proposals to achieve integrated outcomes for Wai Whakaata /Lake Hayes.
 - iv. Identifying necessary actions by the partner organisations and other relevant organisations.
- [49] The group comprises representatives of mana whenua, ORC, Friends of Lake Hayes, Department of Conservation and Queenstown Lakes District Council.
- [50] A cultural values assessment for Wai Whakaata /Lake Hayes is underway, being led jointly by Aukaha and Te Ao Marama. The assessment will provide a comprehensive summary of mana whenua values and environmental aspirations and will be used to inform the final refreshed strategy (and other planning and strategic processes concerning the Wai Whakaata catchment). The cultural values assessment is due to be completed mid-year.
- [51] The Group continues to provide an effective mechanism to bring all parties together to discuss issues of mutual interest and to act as a liaison point between the community and government agencies. It has facilitated better communication and enabled ORC to quickly engage the views of key stakeholders to ensure acceptable progress is made to deliver the Lake Hays restoration project.

Lake Hayes Restoration

- [52] This project aims to improve water quality within Lake Hayes and reduce the risk of flooding along the perimeter of the lake. Currently there are flooding impacts to the existing recreational trail which affects public access, negatively impacts on the Crested Grebe habitat, increases runoff of nutrients from flooded land and impacts adversely on native planting, which has been established for local biodiversity restoration along the shores of Lake Hayes.
- [53] A report detailing the proposed lake levels and the target range for the lake has been completed. This report has been circulated with key stakeholders who are in agreement with the desired lake level.
- [54] The investigation work that has occurred for this project has identified that for the new culvert on Hayes Creek (SH6) to function to its full potential some further downstream works will be required. Investigations will be undertaken to determine what works might be required to improve the flow of the water downstream. This may also provide an opportunity to establish riparian planting to improve water quality.
- [55] Detailed geotechnical investigation work has been completed for the culvert on Hayes Creek (SH6) with the focus now on finalising the design of the new culvert and project

planning for completion of the Mill Creek augmentation work. The agreement to purchase water from Arrow Irrigation Company is being finalised.

- [56] The consent planner is progressing the consenting requirements for the culvert construction with the original timeline for this to be lodged being mid-April 2022. The timeline has needed to be extended for the consent lodgement as Waka Kotahi were unable to give their support to ORC utilising existing consents that they hold. The consenting delay as a result of this decision pushes the estimated completion date for the culvert out to March 2023.

Tomahawk Lagoon Water Quality Project

- [57] Staff have developed a Tomahawk Lagoon Management Plan in consultation with the community. This was approved by Council in April 2022².
- [58] The Management Plan identifies three priority projects to commence with first: the support and formation of a catchment group, an ecological assessment of the catchment is to be undertaken and a permanent water quality monitoring site to be installed.
- [59] The Ecological assessment for the Tomahawk Lagoon catchment is being progressed with a contract for a consultant currently being finalised which is scheduled to be complete by June 2023 with an interim report provided by October 2022 to help identify on the ground actions that can be undertaken.
- [60] Otago Catchments Communities are leading the formation of the Catchment Group for this area with a community meeting scheduled for early June 2022.

Lake Tuakitoto Water Quality Project

- [61] A Lake Tuakitoto Management Plan, based on community consultation, was approved by Council in April 2022³.
- [62] The Management Plan identified three priority projects to commence with first: an ecological assessment of the catchment, establishment of new water quality monitoring sites and a hydrological assessment.
- [63] The ecological assessment for the Lake Tuakitoto catchment is being progressed with a contract for a consultant currently being finalised to undertake this work which is scheduled to be complete by June 2023 with an interim report provided by October 2022 to help identify on the ground actions that can be undertaken.
- [64] The Robson Lagoon Flow Control Structures Upgrade project is continuing, with construction underway. This is one of the four Climate Resilience (“shovel-ready”) projects being delivered by ORC’s Engineering team.

Land Management and Freshwater

- [65] Over the past three month the Catchment Advisors have continued to build relationships and support catchment groups, community groups and industry. During this time, connections with 40 different community groups/individuals across Otago and have occurred including with:

² <https://www.orc.govt.nz/media/12022/agenda-implementation-20220414.pdf>

³ <https://www.orc.govt.nz/media/12022/agenda-implementation-20220414.pdf>

- Aroha Kaikorai Valley
- Beef and Lamb
- Catchments Otago
- Central Otago and North Otago Winegrowers Association
- Dairy NZ
- Department of Conservation
- Dunedin Environment Centre Trust
- ECOTAGO
- Enviroschools
- Federated Farmers
- Forest and Bird
- Friends of Bullock Creek
- Glenorchy Community Association
- Hawea Guardians
- Hawksbury Lagoon Inc
- Land Information NZ
- Mana Tahuna
- Ministry of Primary Industries (Otago)
- NZ Landcare Trust
- Otago Fish and Game
- Otago Polytechnic (regarding seed propagation and collection)
- Ōtākou Rūnaka
- Penguin Rescue NZ
- Predator Free Dunedin
- Seed NZ Natives
- Summer Fruit NZ
- University of Otago

[66] Work is occurring to develop a multi-year implementation programme led by Catchment Advisors. This work will capture programmes and projects which have provided positive environmental outcomes across New Zealand in both the rural and urban context. This work will assist the team to learn what has worked in other regions across New Zealand and implement a range of best practice projects and interventions using a prioritisation methodology based on factors relevant to Otago.

[67] The development of both a stormwater education and a septic tank education programme is underway. Once developed the Catchment Advisors will roll this out in areas which are high priority throughout the region. The aim of these programmes is to encourage behaviour change to improve water quality.

[68] Catchment Advisors have been leading an engagement project at All Day Bay, North Otago (Figure 4, 5). This involved meeting individually with landowners that have properties adjacent to All Day Bay to educate them about the importance of wetlands and what actions they can take on their properties to improve water quality and biodiversity of this regionally significant wetland that is owned by Fish and Game.

[69] Staff met with six landowners and provided them with information regarding the importance of wetlands. Follow up site visits will be arranged to assist landowners with

the environmental outcomes they seek and to ensure ongoing protection of the wetlands.



Figure 4: All Day Bay Lagoon



Figure 5: Google Earth Map showing the location of All Day Bay Lagoon.

- [70] Some highlights for the Catchment Advisors over the last 3 months include:
- i. Catchments 101 session with Waihola District School
 - ii. Stream Health Workshop with North East Valley School and The Valley Project.
 - iii. Mana Tahuna Planting Day at Mill Creek

- iv. Critical Source Area planting workshops with NOSLaM
- v. Intensive Winter Grazing best practice workshops have commenced for this season.

5) Biodiversity Implementation

- [71] A meeting of the Otago Biodiversity Forum was held in April 2022. At this meeting, the Te Papa Atawhai/Department of Conservation Strategy Implementation Manager provided an update on Te Mana o te Taio (Aotearoa New Zealand Biodiversity Strategy) Implementation Strategy. This document is an important guide for how ORC implements biodiversity strategies.
- [72] Staff engaged in workshops with MfE regarding the development of national level online platforms which are designed to facilitate enhancement and protection of biodiversity in support of the National Policy Statement – Indigenous Biodiversity. Pilots for two platforms are expected to be run later this year via other regional councils.
- [73] ORC has supported a project application by local rūnaka to Nga Whenua Rahui (Māori Land covenants). This involved a site visit to a parcel of land known as Taiari Block B to help with project advice and a letter of support being sent.
- [74] A native planting guide best practice online tool is being developed. This tool will incorporate existing riparian planting guides and include a species selection guide for different areas of Otago (based on the existing ecosystem mapping). It will also provide guidance on best management practices for planning, planting and maintenance. It will take account of the planting requirements of the proposed Flood Protection Bylaw.
- [75] The 2022 round for the ECO Fund closed on 1 May. A total of 42 applications were received. Further applications were received (via the Ecofund application process) for planting after wilding pine removal (3), for planting for water quality (5) and for initiatives to support sustained rabbit management (3). Staff have undertaken an initial assessment and the Council Assessment Panel will meet on 30 and 31 May to finalise the assessment. Recommendations will be provided to the June Council Meeting for approval.
- [76] Maintaining the Gain project contracts with QEII and Aukaha are nearing completion. The local QEII representative, will assess and prioritise QEII covenants for pest plant control work. The project has partnered with Aukaha who will develop a field team to carry out the pest plant control work on the selected QEII covenants.
- [77] By the end of June 2022, an app, Quick Capture, will enable assessments and pest plant work to be tracked and geo located. The result will be a dashboard showing where work has been carried out over the three-year project.
- [78] Assessment work will begin from July 2022 to prioritise sites. These sites will then be scoped throughout August to October to quantify the work. Pest plant control work should begin by the end of 2022.

6) Biosecurity Implementation

Biosecurity Operational Plan Implementation

- [79] The Biosecurity Operational Plan for 2021-22 has 90 Key Performance Indicators (KPIs). As at the end of April 2022, 30 KPIs (33%) have already met or exceeded their annual targets. These include inspections for rooks, rabbits and Old Man's Beard.
- [80] Another thirty-six KPIs (40%) are assessed as being on target; hence are expected to either be fully or substantively achieved by the end of the year. These include monitoring exclusion pests, gorse and broom and nassella tussock. Twenty-four KPIs (22%) are progressing in their delivery, however, are unlikely to meet the given target. Some of these relate to delays and limitations due to Covid lockdowns or restrictions (e.g., targets were set at 100% and therefore no tolerance to any loss of work productivity due to factors within or beyond our control). Four KPIs (4.4%), mostly related to russell lupins, will not be achieved. However, this is partly offset by a University of Otago student research project on russell lupins that will provide better direction for future management.
- [81] Staff have attended the Land Information New Zealand organised stakeholder group meetings in regard to freshwater biosecurity and biodiversity. These meetings were held in Cromwell, Wanaka and Queenstown between the 9 and 11 May with staff present at all of these meetings. Each stakeholder group had representatives from a number of agencies such as NIWA, District Councils, DoC and community trusts or interest groups present. Biosecurity staff presented to the groups the survey results from the 2021/22 Check Clean Dry campaign.
- [82] Staff also attended the terrestrial weeds meeting hosted by LINZ over the 9-11 May to work together to prioritise work programmes for the up-coming year.
- [83] Environmental Implementation staff have led the regional sector response to the Parliamentary Commissioner for the Environment's 'Space invaders: A review of how New Zealand manages weeds that threaten native ecosystems' dated November 2021. The purpose of this response was to pull together other regional and unitary Councils from across New Zealand to prepare the sector response. This will be presented to the Biomanagers Group in early June and will also provide written evidence to the NZ Parliament Environment Select Committee.
- [84] In early May, Biosecurity staff attended a Drone Technology field day that was hosted by Otago South River Care in Pukeawa, South Otago. The field day aimed to demonstrate to farmers the role that drones could play on farm and attracted interested attendees from police search and rescue, forestry groups and the Department of Conservation also. Several workshops displayed the GPS mapping, spraying capabilities and pest control opportunities that drone technology currently presented and ORC staff were there to see how we could possibly integrate this capability into our operations to improve environmental outcomes moving forward.

Rabbit Management

Inspections – Rabbit Management

- [85] From 1 July 2021 until 30 April 2022, 169 compliance-based rabbit inspections have been undertaken⁴. Analysis of inspection data shows that 58.6% of the properties inspected were compliant to the RPMP rule with a Modified McLeans Scale (MMS) of three or less (Figure 6).
- [86] Of the 169 properties inspected, 96 were re-inspections of non-compliant properties (Table 3, Figure 6).
- [87] Of those 96 re-inspected properties, 43 had become compliant (45%). Of the remaining non-compliant properties, five had an MMS rating of six, fifteen properties had an MMS rating of five, while the remaining 33 properties had an MMS rating of four.

| Inspection Type | Compliant | Non-compliant | Total |
|-----------------|-----------|---------------|-------|
| Scheduled | 35 | 5 | 40 |
| Re-Inspection | 43 | 53 | 96 |
| Complaint | 22 | 11 | 33 |
| Total | 100 | 69 | 169 |

Table 3: Rabbit Inspection by Type and Compliance (1 July 2021 – 30 April 2022)

- [88] The first Notices of Direction (NoD) for non-complying properties were issued in early March 2022. Recipients of the NoD have three months to undertake the required pest control before a re-inspection is undertaken. These re-inspections are due in July 2022 (Table 4). The number of NODs issued are expected to increase over the next few months as properties are reinspected and timeframes to comply are exceeded. A potential 206 properties (including community programmes) are eligible for re-inspection.

| NoD Status | Count | Notes |
|--------------|-------|---|
| Issued | 2 | Re-inspection due in July 2022 |
| Proceed With | 18 | NoDs in preparation (to be served in June 2022) |
| Revisit | 33 | Require further re-inspection to confirm |
| Total | 53 | |

Table 4: Summary and Status of Notice of Direction

- [89] *Notices of Direction* (and subsequent Default Work) will be issued to both private and public landowners. As per Council's Biosecurity Compliance Enforcement Policy⁵, occupiers will be given a set time to comply and if this isn't achieved, where appropriate, the *Default Work* process will be undertaken.

⁴ These inspections are rural inspections (including re-inspections) and re-inspections of community rabbit programmes.

⁵ https://www.orc.govt.nz/media/10235/orc-biosecurity-compliance-enforcement-policy_final.pdf

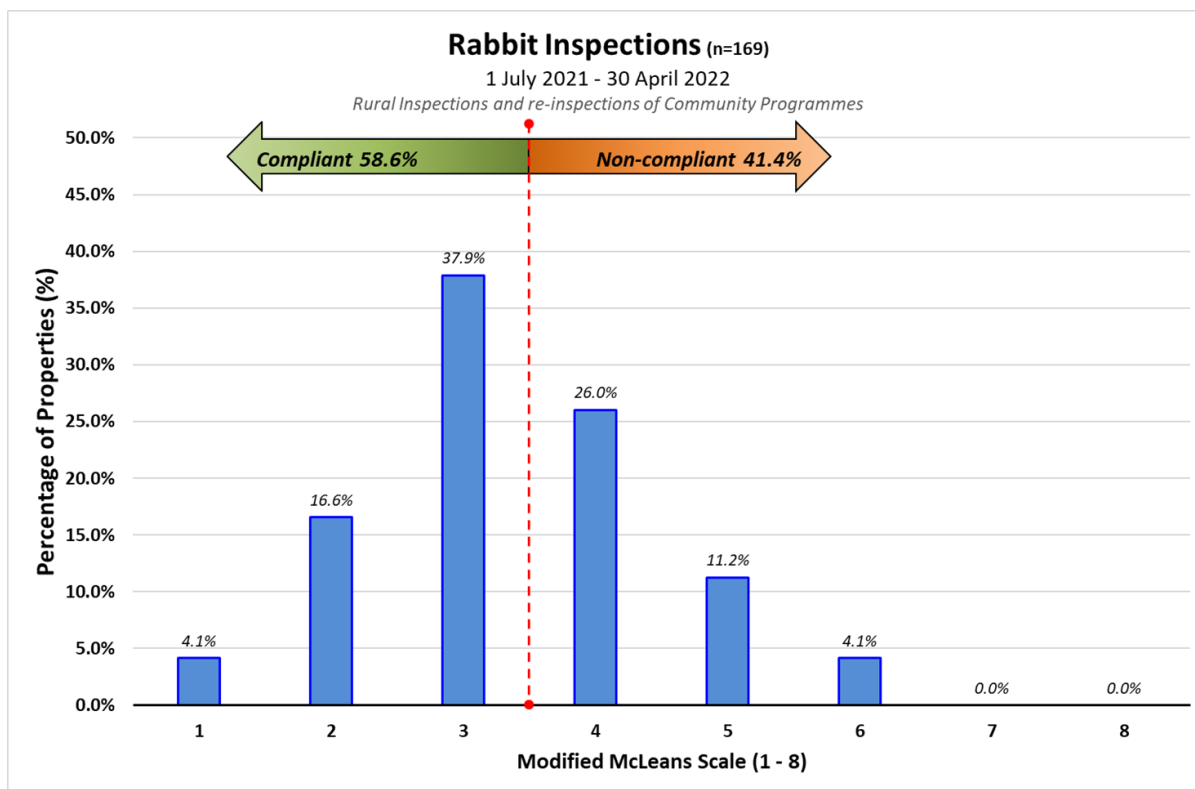


Figure 6: Distribution of Rabbit Inspections by Modified McLeans Scale

[90] In terms of area, rural rabbit inspections have covered approximately 15,254 hectares between 1 July 2021 – 30 April 2022. (An additional 10,348 ha were covered by the community programme inspections).

Community-Led Rabbit Management Programmes

[91] In addition to standard compliance work within our rabbit programme, which has increased significantly in the past year, ORC is facilitating several large-scale community responses to better rabbit management in semi-rural and peri-urban environments.

[92] Table 5/Figure 7 provides an overview of the communities that ORC is currently working with. Each approach is unique, based on the landscape, number of properties, land use activities and preferences of the community. The projects have been run simultaneously where possible but have had to be prioritised due to resourcing.

[93] The engagement, initial inspections, situation overview and management planning phases have been delivered in all project areas. The formal compliance phase is now underway, and will continue over winter, for those properties who have not voluntarily engaged in the process (e.g., not submitted plans for reducing numbers and/or shown a decrease in rabbit populations).

[94] Staff continue to provide support and guidance to many individual occupiers as well as connecting people with neighbours, with contractors and providing technical information to assist community efforts.

- [95] A total of 196 management plans from non-complying community project area properties was requested and 171 have been received to date. The creation and implementation of these plans represents a significant amount of control work that might otherwise not have been undertaken, and more importantly, the work has been planned in a more co-ordinated manner to ensure maximum impact. While rabbit populations will continue to be problematic, our communities are now equipped with better tools and support to respond in a way that is likely to have a positive impact on numbers.
- [96] Public agencies continue to be responsive as a result of ORC advocacy and are delivering new work to meet their responsibilities. Queenstown Lakes District Council have embarked on a large programme of works⁶ in and around reserves near Lake Hayes, Shotover Cemetery and Gibbston. Actions include installing new rabbit-proof fencing in locations near Lake Hayes, and conducting monitoring, night shooting and other control methods over the winter months. LINZ are also undertaking increased rabbit control, including near Bannockburn.
- [97] The perceived (and real) lack of public agency action in recent years has been source of immense frustration for private landowners, and the community programmes have provided an effective framework to ensure that all parties are working collaboratively to reduce rabbit populations. The Department of Conservation and Land Information New Zealand are also planning and implementing control works. Staff will continue to ensure that these plans are completed and that compliance expectations are met.

| | COMMUNITY ENGAGEMENT | | | | | |
|-----------------|----------------------|------------------------------|--------------------|---------------------|-------------------------------------|-------------------|
| | CONTINUOUS EFFORT | | | | | |
| | Initial Engagement | Initial Property Inspections | Situation Overview | Management Planning | Formal Compliance Inspections | Default Work* |
| Lake Hayes | | | | | Scheduled for August 2022 | |
| Albert Town | | | | | N/A | |
| Gibbston | | | | | NoDs Issued | 3 months from NoD |
| Otago Peninsula | | | | | NoDs not Required | |
| Queensberry | | | | | Scheduled for August/September 2022 | |
| Moeraki | | | | | Scheduled for August/September 2022 | |
| Hidden Hills | | | | | N/A | |

Table 5: Status of Community Led Rabbit Management Programmes as at May 2022

⁶ <https://www.qldc.govt.nz/services/environment-and-sustainability/pest-control/rabbit-management-lake-hayes-shotover-cemetery-and-gibbston-reserve>

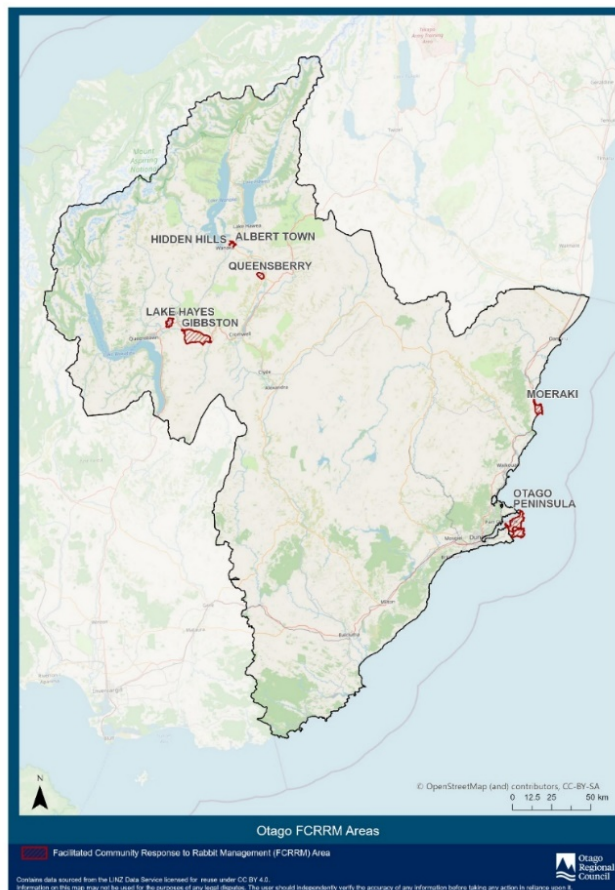


Figure 7: Community Rabbit Management Project Areas

- [98] A process for engaging landowners to ensure strategic responses and coordination of control efforts has been developed. The community-led strategic management approach will be facilitated and supported through the following means:
- i. Education and awareness – workshops, website, social media, pamphlets, and one on one meetings/discussions highlighting:
 - ii. Rules, roles and responsibilities.
 - iii. Primary and secondary control techniques; and
 - iv. Contractor selection.
 - v. Information gathering to support recommendations and compliance action, including:
 - a. Property inspections to identify properties that are at greatest risk of non-compliance, and to produce heat maps showing rabbit hotspots and to identify fences other than barriers that reduce the risk of reinvasion; and
 - b. Ongoing monitoring of control efforts.
 - c. Support with preparation of Management Plans – including technical advice on control methods.
 - d. Compliance inspections and implementation of enforcement procedures. This is critical to increase recognition of ORC’s rules and compliance functions, and to ensure that a few non-compliant properties do not cause wider community efforts to fail.

[99] Table 6 provides a summary of recent progress to implement ORC's community led rabbit management programmes as of May 2022. This approach follows the previously outlined Community Led Rabbit Management process and compliance pathways⁷.

| COMMUNITY | ACTIONS UNDERWAY – PAST QUARTER |
|---------------------|---|
| ALBERT TOWN | Staff continue to meet with DoC, QLDC and LINZ to support the implementation of long-term, sustained control interventions. |
| LAKE HAYES | <p>Biosecurity staff inspected 230 properties, of which 82 were indicative of non-compliance.</p> <p>46⁸ Management Plans requested, 37 (80%) have been received or are imminent. Follow up occurring with those who have not submitted.</p> <p>Compliance inspections will be completed in August 2022 for properties not reducing populations.</p> |
| GIBBSTON | <p>Biosecurity staff inspected over 170 properties, of which 52 were indicative of non-compliance.</p> <p>A total of 49 management plans were requested. Of these, 43 (87%) have been received or are imminent.</p> <p>In April 2022, compliance inspections were completed on 22 properties that had not engaged with the programme or responded to correspondence. Of these, 3 were compliant at re-inspection.</p> <p>Re-inspections will be completed in August 2022 with Notices of Direction issued for properties not reducing populations.</p> <p>Application was made for the new Rabbit Incentive Funds for assistance for collective fencing for five landowners in an Estate so they can proceed with future collaborative rabbit management efforts.</p> |
| HIDDEN HILLS | Advice and connections provided to Residents Association. Application was made for the new Rabbit Incentive Funds for a rabbit management programme covering 37 properties. |
| QUEENSBURY | <p>68 property inspections took place in February 2022.</p> <p>A total of 34 management plans were requested. Of these, 30 have been received or are imminent, and there are currently 4 where communications have not been responded to. Follow-up occurring with those who have not submitted.</p> <p>Efforts underway to support community collaboration.</p> <p>A community meeting was held on 7 April to provide an overview of the inspection findings, management plan requirements and next steps.</p> <p>There has been good engagement from the Queensbury community with a lot</p> |

⁷ <https://www.orc.govt.nz/media/11902/agenda-implementation-20220309.pdf>

⁸ Note that the number of management plans requested is often lower than the number of properties inspected because there are various groups of properties managed collectively.

| | |
|------------------------|---|
| | <p>of communication for information, requests for assistance to connect property owners for collaboration, and good positive feedback about the programme overall.</p> <p>Re-inspections will be completed in August/ September 2022 with Notices of Direction issued for properties not reducing populations.</p> |
| MOERAKI | <p>Biosecurity staff inspected 56 properties, of which 39 were indicative of non-compliance.</p> <p>A total of 39 management plans were requested and plans for 34 (87%) properties have been received or are imminent (some of the plans received cover more than one property). Follow-up occurring with those who have not submitted.</p> <p>Efforts to support community collaboration ongoing.</p> <p>Re-inspections will be completed in August/ September 2022 with Notices of Direction issued for properties not reducing populations.</p> |
| OTAGO PENINSULA | <p>Initial property inspections took place in Otago Peninsula in early 2021, prior to the full community programme model being established. A rabbit management plan workshop was held with property owners in early 2021, but little progress was made by owners during the year.</p> <p>Biosecurity staff inspected 37 properties at the end of 2021 and 28 management plans were requested. A further rabbit management plan workshop was held with landowners in February 2022. A total of 27 management plans have been received and staff are working with one remaining property to finalise options.</p> <p>Re-inspections will be completed in August/ September 2022 with Notice of Direction compliance inspections for properties not reducing populations.</p> <p>Application was made for the new Rabbit Incentive Funds for administrative costs associated with initiating community engagement and consultation on the establishment of a rabbit management plan for the rest of the Peninsula area.</p> |

Table 6: Summary of Community-Led Rabbit Management Programme Progress

[100] As resourcing allows, staff will continue to assess other communities that might benefit from some extra assistance. The Millers Flat community is currently considering if they would like support and there has been some interest from rural property owners in the Waianakarua area. Support for the smaller, more rural focused communities is considered ‘business as usual’ work.

Access to Pindone Liquid Baited Carrots for Rabbit Control

[101] In order to ensure adequate supply of pindone liquid baited carrots for rabbit control in the region, Council has entered into a pilot partnership agreement with Excell Pest Control and Mainland Vector Contracting Ltd. This agreement will see Council assisting these contractors (selected from a full tender process) to make pindone liquid baited

carrots available to suitably qualified persons⁹ in both Central and Coastal Otago. The contractors will collect and distribute orders for baited carrots, provide guidance on effective usage and collate information on the demand.

- [102] The pilot project aims to ensure effective control tools are available this winter and provide information that will establish future demand and direct further initiatives that could be undertaken by Council to support reduction in rabbit numbers.

Sale of Rabbit Control Assets

- [103] ORC's rabbit control assets (excluding the Galloway oat cooking facility and land) were sold at public auction, in Alexandra, on 12 May. The sales totalled \$163,553 (including GST) with equipment bought by 11 of the bidders.

National Wilding Conifer Programme

- [104] Whakatipu Wilding Conifer Control Group (WCG) – operations are progressing in the Whakatipu basin, with control works approximately 88% through the total budget for the 2021/2022 season. So far 2,067 hectares have been controlled by ground and a further 18,030 hectares using aerial methods, including aerial basal bark application (ABBA) and aerial foliar spray application (AFSA) or boom spraying. The boom spraying programme undertaken between February and March controlled approximately 374ha of dense infestations around Queenstown Hill, Ben Lomond, Moke Lake, and Skippers.

- [105] Central Otago Wilding Conifer Control Group (CWG) – operations are progressing in the Alexandra, Rough Ridge, Dunstan, Lammermoor and Naseby Management Units, with control works approximately 93% through the total budget for 2021/2022 season. So far 967 hectares have been controlled using ground-based methods and a further 2,636 hectares using aerial basal bark application (ABBA). Work on the Community Partnership Projects located within the Maukaatua and the Kakanui Ranges has been completed.

- [106] The Central Otago Wilding Conifer Control Group (CWG) and Whakatipu Wilding Conifer Control Group (WCG) have been working closely with MPI to develop and run advertising in local papers to increase the profile of the programme and the wilding conifer issue, and to assist in gaining landowner support and the 20% contribution towards wilding control on individual properties. CWG are also looking to engage a part-time Community Engagement person to develop a communications plan and undertake engagement activities around wilding conifer control.

- [107] Luggate Control – operations are progressing in the Luggate Management Unit, with 4,386 hectares on the Pisa Range controlled using aerial basal bark application (ABBA). A further 5,465 hectares of ABBA and 1,333 hectares of ground control work is planned to be completed during June.

- [108] Despite the good progress the programme is presenting project management and health and safety issues, partly due to the complexity of the delivery arrangement. Steps are being taken to address these.

National Wallaby Programme

- [109] Operations are progressing over seven Management Units (MU) with four contractors undertaking surveillance activities, including ground hunters searching for field sign,

⁹ Purchasers must hold an Approved Use for Pindone Certificate.

ground hunters with dogs, and ground hunters using thermally equipped UAV (drones). Extensive aerial thermal surveillance work is also underway in the Hawea MU, with further work planned in the Dunstan, Hawkdun and North Otago MU during June.

[110] Surveillance efforts have detected wallaby at several locations in the past quarter, with two sites in the Dunstan MU and one site in Macraes MU. Efforts are underway to obtain permits to undertake poisoning operations to control the wallaby at these sites. Three wallabies have been killed this year, one in the North Otago MU and two in the Dunstan MU. Two of these wallabies have been killed in the past quarter.

[111] A total of 22 reports received this year have been confirmed as reliable, with 8 of those received in the past quarter. All reports have been followed up within 3 working days, and a search completed using ground hunters with dogs or ground hunters using thermally equipped UAV (drones). No live wallaby or sign has been found following surveillance.

| Total area searched (ha) | Total sightings reported | No. wallaby destroyed |
|--------------------------|--------------------------|-----------------------|
| 123,840 | 22 | 3 |

Surveillance and control results for the period 1 July 2021 to 30 April 2022

[112] All road signs prompting the public to report wallaby have now been installed, with signs located along the State Highways near Lindis Pass, Ranfurly, Omarama, Waitaki, Palmerston, Dunedin and Middlemarch. The signs direct the public to report wallaby through the ReportWallabies.nz website using an online form that records and shares sighting information with managers and staff involved in the wallaby programme.

CONSIDERATIONS

Strategic Framework and Policy Considerations

No considerations arising from this paper.

Financial Considerations

No considerations arising from this paper.

Significance and Engagement Considerations

No considerations arising from this paper.

Legislative and Risk Considerations

These are noted in the paper in relation to the consenting timeframe for the Hayes Creek (SH6) culvert and for the delivery of Otago’s part of the national wilding conifer programme.

Climate Change Considerations

No considerations arising from this paper.

Communications Considerations

No considerations arising from this paper.

ATTACHMENTS

Nil

8.2. River Management Update

| | |
|----------------------|---|
| Prepared for: | Implementation Committee |
| Report No. | OPS2210 |
| Activity: | Environmental - Central Otago Rivers & Waterway Management Environmental - Clutha Rivers & Waterway Management Environmental - Lower Waitaki Rivers & Waterway Management Environmental - Waitaki Rivers & Waterway Management Environmental - Wakatipu Rivers & Waterway Management Environmental - Wanaka Rivers & Waterway Management Environmental - Dunedin Rivers & Waterway Management |
| Author: | Brett Paterson, Acting Manager Engineering Pam Wilson, Infrastructure Engineering Lead |
| Endorsed by: | Gavin Palmer, General Manager Operations |
| Date: | 9 June 2022 |

PURPOSE

- [1] To provide a quarterly summary of river management operational activities including gravel extraction consents, development of work programmes for 2022/23 and asset management plans for plantings alongside riverbanks.

RECOMMENDATION

That the Committee:

- 1) **Notes** this report.
- 2) **Notes** the progress that is being made with the reporting, planning and progression of the framework that supports river management activities.

BACKGROUND

- [2] Otago has an extensive and diverse network of rivers, extending from the rivers to the sea. Many of the rivers are characterised by high rates of sediment supply and mobile beds. Some of the rivers are still responding to the effects of historical activities such as 19th Century alluvial gold mining, construction of hydroelectric dams, channel realignment and commercial gravel extraction.
- [3] ORC has a river management function which is based on the districts and rated accordingly within those districts across all parts of Otago (Figure 1 and Table 1).

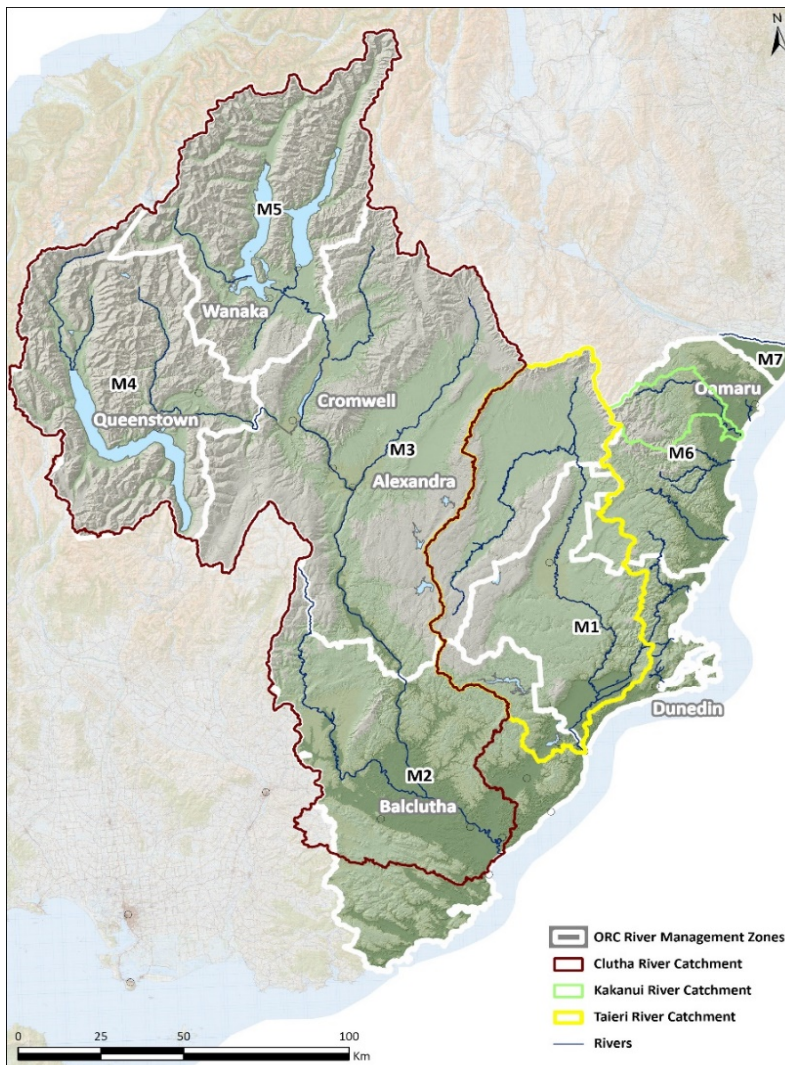


Figure 1: Map of ORC’s River Management (M) Rating Districts of some of the rivers across Otago where river management activities are undertaken.

| River Management Zone |
|---|
| M1 = Dunedin Rivers |
| M2 = Clutha |
| M3 = Central Otago |
| M4 = Wakatipu |
| M5 = Wanaka |
| M6 = Waitaki |
| M7 = Lower Waitaki River Control Scheme |

M' reflects the code used for river management with its respective numerical reference to a district

Table 1: Explanation of ORC River management rating districts

- [4] This report provides a summary of river management operational activities that have been carried out in Quarter 3 and provides an update on the three resolutions made at the Implementation Committee meeting of 8 September 2021 to do with gravel

extraction consents, river management work programmes and asset management plans for plantings along riverbanks.

- [5] Background on legislation, resource consents and strategies that guide river management activities at ORC was provided in the River Management Quarterly Update (Quarters 1 and 2) to the Implementation Committee on 9 March 2022.

DISCUSSION

River Management Level of Service Reporting

- [6] The Level of Service Statement for the River Management activity is “Maintain channel capacity and stability, while balancing environmental outcomes and recognising mana whenua values in rivers” (ORC Long-Term Plan 2021-2031). Figure 2 shows the performance measures and targets defined within this Level of Service Statement.

| PERFORMANCE MEASURES | BASELINE RESULTS | 2021/22 TARGET | 2022/23 TARGET | 2023/24 TARGET | 2024-31 TARGET |
|--|------------------|----------------|----------------|----------------|----------------|
| Percentage of identified and reported issues that have been investigated and appropriate action determined and communicated to affected landholders within 20 working days | 2019-20: 100% | 100% | 100% | 100% | 100% |
| Percentage of planned maintenance actions achieved each year | New measure | ≥90% | ≥90% | ≥90% | ≥90% |

Figure 2: Performance measures and targets as defined in the ORC Long-term Plan 2021-2031.

- [7] Performance to end of Quarter 3 for financial year 2021/22, in relation to communicating back to affected landowners on identified and reported issues within 20 working days, is summarised in Figure 3 below. 92% (65 out of 71) of identified and reported issues had been investigated and the appropriate action determined and communicated back to affected landowners within 20 working days. Of those queries responded to within 20 working days, the average response time was less than three working days.

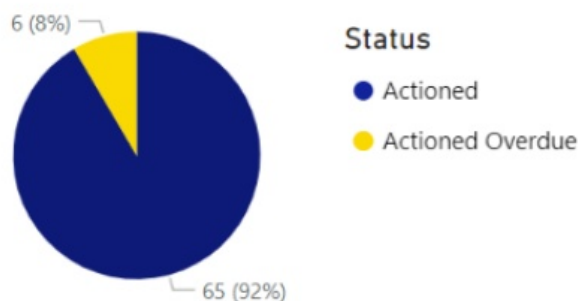


Figure 3: Status of performance to end of Quarter 3 FY 2021/22 for Performance Measure; Percentage of identified and reported issues that have been investigated and appropriate action determined and communicated back to affected landowners within 20 working days.

- [8] 48% (34 out of 71) of customer queries received in Quarters 1, 2 and 3 were in relation to concerns about sediment deposition or fallen trees blocking river channels or river mouths. 10% (7 out of 71) were received in relation to concerns about riverbank erosion. The remaining 30 enquiries were of a general nature about the functioning of rivers and coastal protection, with twelve of these directed to other ORC departments or a territorial authority to address.
- [9] Six (6) reported issues in Quarters 1 and 2 were not recorded as being investigated and appropriate action determined and communicated back to affected landowners within 20 working days. All reported issues within Quarter 3 were investigated and communicated back to landowners within 20 working days.
- [10] Some overdue responses can be attributed to the development of Engineering’s customer enquiries database and ongoing improvements in the record keeping process throughout Quarters 1 and 2. It is likely that responses were provided to affected landowners within the required 20 working day timeframe, however at the time of the quarterly reporting this was not able to be verified through records. The issues raised in these six customer queries were assessed as not being a threat to life or property. Further improvements to data accuracy and recordkeeping were made in Quarter 3 and all reported issues were responded to on time within this Quarter.
- [11] Full resolution of a customer query often takes time to implement due to a range of factors that must be considered, including consent requirements, weather, design, or contractor availability. This performance measure therefore measures the time taken to investigate any matters raised and communicate the appropriate action back to affected landowners. Full resolution of the enquiry then occurs when any required physical works have been completed.
- [12] Performance to end of Quarter 3 for financial year 2021/22, in relation to percentage of planned maintenance actions achieved, is summarised in Figure 4 below. 57% of the river engineering workplans had been completed to date.

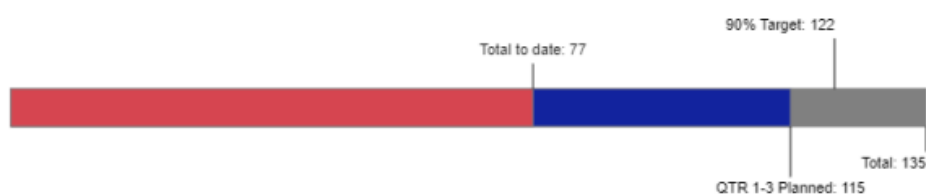


Figure 4: Status of performance to end of Quarter 2 FY 2021/22 for Performance Measure: Percentage of planned maintenance actions achieved each year.

- [13] The commencement of the nationwide Level 4 Covid-19 lockdown on 18 August 2021, and subsequent restrictions, delayed the river management work programme. Critical tasks were prioritised, and plans were put in place to catch up on any delayed works or inspections. High river levels throughout Quarter 2 also resulted in a delay in completing planned works. Programme delays have compounded such that the achievement of the 90% target will be difficult to achieve for financial year 2021/22.

Community Engagement

- [14] In the Arrowtown basin staff have been working with the following groups in relation to waterways in the area:
- a. Mana Tahuna and Friends of Lake Hayes – Mill Creek
 - b. Arrowtown Village Association and Arrowtown Business Association - Bush Creek / Arrow River
- [15] Some areas of erosion had been identified within Mill Creek. Staff discussed the issues with Mana Tahuna and agreed that some repair work would be carried out. Mana Tahuna would then replant with natives. This helped to stabilise the banks and minimise sediment runoff. Photos of the completed works are provided in Figure 5 below.



Figure 5: Photographs of work carried out in Mill Creek. Work was completed at different sites along Mill Creek in November 2021 (left) and April 2022 (right).

- [16] Staff have also been engaging with the Arrowtown Village Association and Arrowtown Business Association who have a combined vision for Bush Creek and the Arrow River near Arrowtown. In Bush Creek there has been some vegetation cleared and the channel defined. The guide bund on the Arrow River was repaired at the same time. Before and after photos of the work in Bush Creek are provided in Figure 6 below.



Figure 6: Before and after photos of work completed in Bush Creek near Arrowtown (30 March – 4 April 2022).

- [17] In the Lower Waitaki staff have been working with Whiria te Waitaki in relation to their use of Toitū Te Whenua Land Information New Zealand Jobs for Nature funding, secured by Te Rūnanga o Moeraki in January 2021.

- [18] Whiria te Waitaki is a Te Rūnanga o Moeraki led initiative in the Lower Waitaki which aims to provide Moeraki whānau with an opportunity to be actively engaged and employed in local environmental management. Restoration of terrestrial and wetland environments, and enhancement of mahinga kai are planned through pest control, planting, monitoring, and maintenance.
- [19] Staff have been working with Whiria te Waitaki and Environment Canterbury to ensure that the proposed works do not impede on the function of existing river management assets that both Environment Canterbury and ORC manage as part of the Lower Waitaki Flood Protection Scheme. River management assets in this part of the scheme consist of groynes, cross-banks and trees/vegetation.

Gravel Extraction Consents

- [20] Gravel extraction for hazard mitigation has been included in the current consent application for ‘global consents’ and the supporting Environmental Management Plan.
- [21] Progress with the consent application is summarised in Figure 7 below:

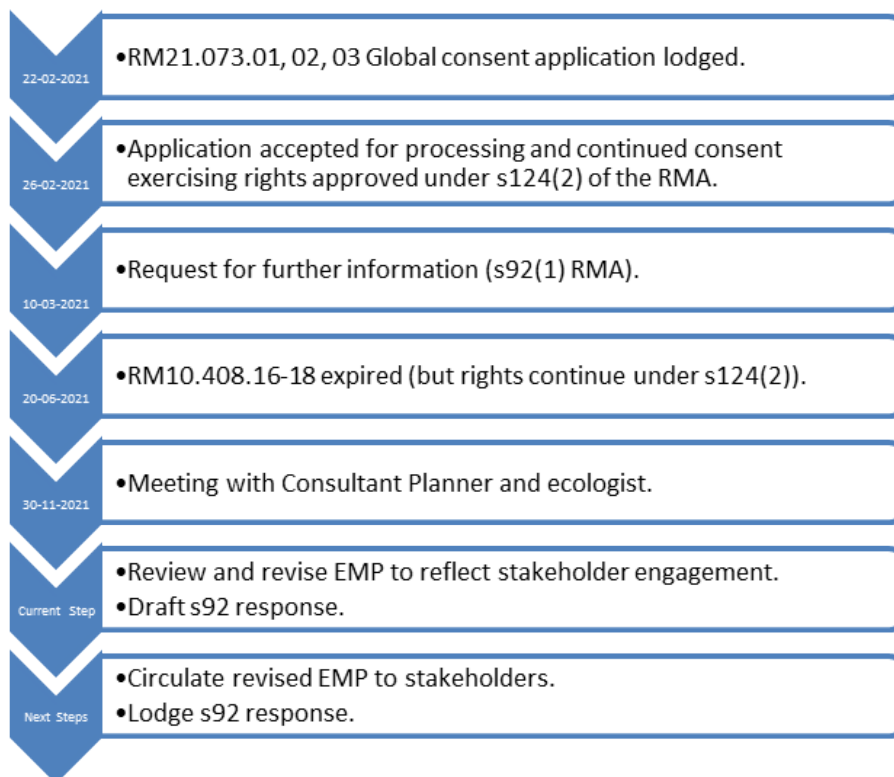


Figure 7: Summary of Global Consent renewal.

- [22] The final draft of the Environmental Management Plan (EMP) is currently under review internally. Once approved, it will be circulated to stakeholders and feedback from them will be incorporated prior to lodging a s92 response.
- [23] The process has been slightly delayed since the submission of the Quarter 2 report. This is due to the review process that is currently underway and the need to consider and incorporate the relevant feedback prior to providing the EMP to stakeholders.

- [24] It is anticipated that the s92 response and EMP will be submitted within approximately four weeks of the draft EMP being finalised in the coming weeks.
- [25] It is the intention through this long-term plan cycle to investigate a longer-term solution to gravel management previously described in the River Management Quarterly Update (Quarters 1 and 2), Implementation Committee on 9 March 2022. The timeframe to investigate this proposal will be during Year 2 of the 2021-31 Long Term Plan, as it will proceed after the completion of the renewal of the global consents.

Development of Work Programmes for 2022/23

- [26] The 2022/23 work programmes are currently under development. Any current outstanding issues have formed the foundation of the programmes. Inspections through winter and helicopter inspections in September 2022 will then add additional works to the programme for each of the river districts shown in Figure 1.
- [27] The work types that are programmed include the following.
 - a. On foot Inspections
 - b. Aerial Inspections
 - c. Asset Inspections
 - d. Mechanical cleaning
 - e. Gravel re-distribution
 - f. Bank protection
 - g. Willow removal
 - h. Willow trimming
 - i. Vegetation removal
 - j. Aerial spray
 - k. Channel spraying
 - l. Asset (i.e. groynes) repairs

- [28] The planning cycle for river management activities is shown in Figure 8.

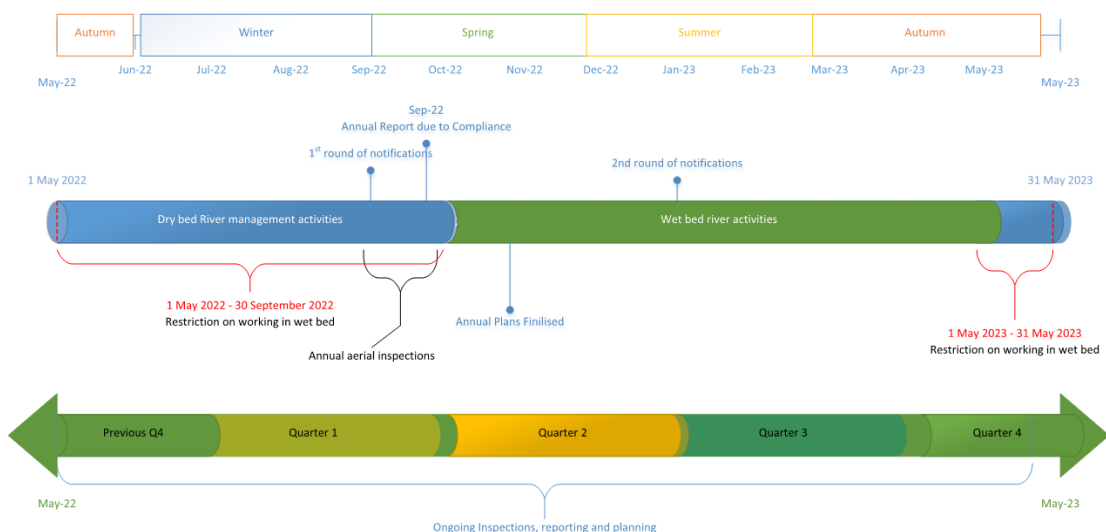


Figure 8: Summary of River Management 'Year', Planning and Reporting cycles.

- [29] The delivery of planned river management activities is dependent on factors that include:
- a. Weather/seasonal variations.
 - b. River levels.
 - c. Land access.
 - d. Stakeholder approvals.
 - e. Internal and external resources.
 - f. Unplanned activities from customer queries.
 - g. Flood events.
 - h. Other restrictions (e.g. Covid-19).
- [30] To manage the risks and constraints outlined above, the Operations, Engineering team has been adapting work programs where possible to address priority works. Priority activities are those activities that pose an imminent risk to the environment, people, or property.

Asset Management Plans (including for plantings along riverbanks)

- [31] ORC's Infrastructure Strategy 2021-2051 states that there are some tree and vegetation assets located within our flood protection schemes and river management areas that have not been fully captured in ORC's Asset Management Information System (AMIS).
- [32] Trees or vegetation are considered an asset where they have been planted by Engineering to stabilise a riverbank. These specific types of plantings assist in minimising lateral erosion and help to maintain river or channel alignment. There are two main types of edge protection that are deployed across the Otago region for this purpose:
- a. Standard edge protection – Trees that have been planted along a riverbank or channel as a buffer to help stabilise the bank or channel edge.
 - b. Anchored or tied tree protection – Trees that have been planted more densely and tied together using wire rope that has been anchored in place, providing a stronger and more continuous structure to assist in buffering flows.

Both types of edge protection may also be used in combination where standard edge protection is planted as a buffer, either in front or behind, a line of anchored or tied tree protection.

- [33] Some plantings may hinder the ability of a waterway to convey water during high flows, contributing to greater erosion or direct a river on an unintended path. These types of plantings are monitored and often removed at the appropriate time. Trees of this nature are not deemed to be assets and as such are not recorded in ORC's AMIS.
- [34] A significant programme of work is underway to capture data pertaining to trees and vegetation that have been planted, or are being maintained, as assets by Engineering for the purpose of providing edge protection. Initially this involves staff recording the location of trees and vegetation that are deemed to be assets as they work through their annual work programme. This information will then be translated into ORC's AMIS database and GIS.
- [35] Collecting and adding data to ORC's asset management database is an iterative process that, as for all ORC flood protection and drainage assets, requires ongoing work to

maintain and improve the quality of data available. Within this timeframe Engineering also expects to begin mapping the nuisance trees for the purpose of developing work programmes. Maintaining and increasing the level of confidence in this data will be an iterative process that is ongoing.

- [36] Ongoing improvements are being made in the process for the collection, addition and maintenance of asset management data for GIS and ORC's AMIS. Efficiencies in this process are highly likely to be developed as work progresses and the timeframe for collecting data may reduce as a result.
- [37] As depicted in Figure 9, Engineering is in the process of finalising the structure for a suite of asset management documentation that clearly defines the purpose of each document at a tactical and operational level for both engineering and river management activities.

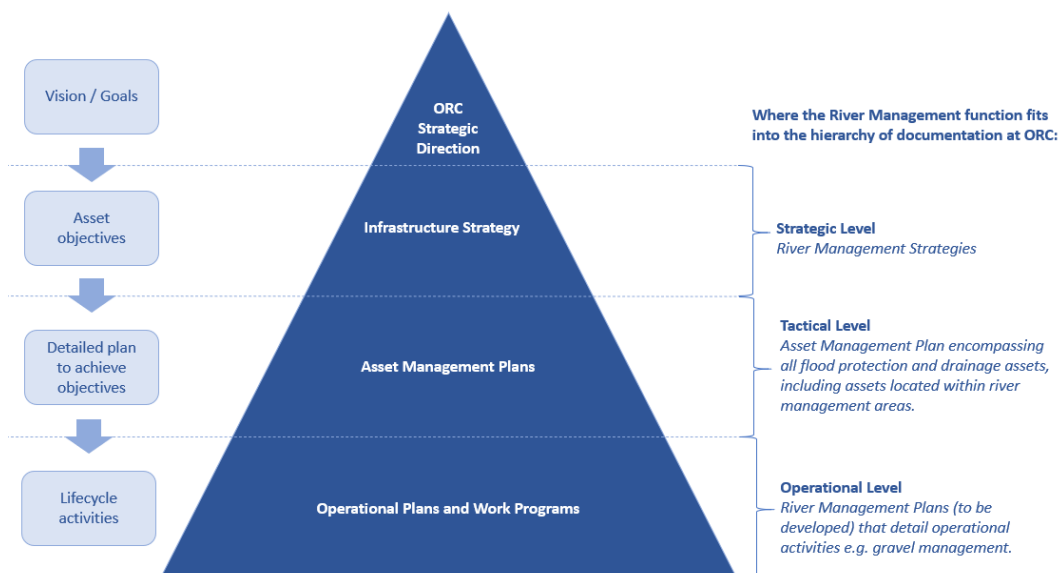


Figure 9: Extract from Infrastructure Strategy which shows the relationship between decision making and operational framework, with the addition of where the River Management function fits into the hierarchy of documentation.

- [38] At a tactical level it has been identified that the current practice of maintaining an Asset Management Plan per flood protection or drainage scheme is no longer appropriate due to the repetitive nature of the information across the existing scheme documents and the similarities in how asset management principles are applied across the same types of assets across each scheme or river.
- [39] Engineering has commenced the process of compiling one Asset Management Plan to cover all engineering assets identified within schemes and rivers across Otago. This is more in keeping with the type and scale of assets that ORC manages, as well as the size of the team that manages them. It is anticipated that the draft Asset Management Plan will be completed this financial year.
- [40] Information on assets within specific schemes or rivers will still be available by scheme or river within the Asset Management Plan despite only one document being created and maintained.

- [41] Current records of tree and vegetation assets are being used to develop the relevant section/s of the Asset Management Plan. This will identify areas where data confidence and reliability could be improved, particularly around tree and vegetation asset data where it is known that the data in ORC's AMIS needs improvement.
- [42] The review period for the Asset Management Plan will be shortened to two years to enable ORC to incorporate data from its targeted approach to collecting tree and vegetation asset data over this time period, and subsequently demonstrate a greater degree of confidence and reliability in this information moving forward. Further reviews will be carried out as part of a routine schedule alongside the broader suite of asset management documentation, including the asset management system and processes.

CONSIDERATIONS

Strategic Framework and Policy Considerations

- [43] There are no policy considerations associated with receiving this report.

Financial Considerations

- [44] There are no financial considerations associated with receiving this report.

Significance and Engagement Considerations

- [45] No considerations arising from this paper.

Legislative and Risk Considerations

- [46] No considerations arising from this paper.

Climate Change Considerations

- [47] There are no climate change considerations with receiving this report.

Communications Considerations

- [48] There are no communications considerations with receiving this report.

NEXT STEPS

- [49] Provide Quarter 4 / Annual Report to the Implementation Committee.

ATTACHMENTS

Nil

8.3. Flood Recovery 2020 Progress Update

Prepared for: Implementation Committee
Report No. OPS2217
Activity: Governance Report
Authors: Michelle Mifflin, Manager Engineering
Ken Tarboton, Flood Recovery Manager (Consultant)
Brett Paterson, Project Manager Engineering
Endorsed by: Gavin Palmer, General Manager Operations
Date: 9 June 2022

PURPOSE

- [1] To provide an update on flood recovery to address flood damage that resulted from the February 2020 Floods.

EXECUTIVE SUMMARY

- [2] The significant rainfall event of February 2020 resulted in flood damage at 35 sites across Otago, with the majority (27 areas) identified in the Lower Clutha.
- [3] Significant progress has been made on flood damage repair, since the last report to Council on 27 May 2020.
- [4] Of the 35 flood-damaged sites, 29 repairs have now been completed, 3 are underway, and 3 have been investigated and left to monitor and repair if needed under business as usual. Flood recovery is expected to be complete by April 2023.
- [5] Expenditure to date is \$3.4 million. The latest estimated cost for recovery from the February 2020 flood remains \$3.9 million as reported to Council in May 2020.
- [6] As previously advised, towards this expenditure, ORC secured Ministry of Business Innovation and Employment (MBIE), "Shovel Ready" Climate Resilience funding of \$608,000¹.
- [7] Application has been made to the National Emergency Management Agency (NEMA) for co-funding of eligible flood damage repairs. The total contribution from NEMA is expected to be approximately \$598,000 of which \$69,000 has been received to date.
- [8] The investigation of options to fund the unbudgeted work is continuing, particularly for the Lower Clutha Flood Protection and Drainage Scheme.

RECOMMENDATION

That the Implementation Committee:

- 1) **Notes** this report
- 2) **Notes** that the flood recovery programme is expected to be complete by April 2023.

¹ Government Funding (CIP) of Flood Protection, Report OPS1018, Report to 30 September 2020 meeting of the Otago Regional Council.

- 3) **Notes** that the expected overall unbudgeted flood recovery costs remain \$3.9M as estimated in May 2020.
- 4) **Notes** the contribution of \$608,000 towards flood recovery from MBIE as part of the Climate Resilience programme.
- 5) **Notes** the expected contribution of \$598,000 towards flood recovery from NEMA.

BACKGROUND

- [9] The significant rainfall event of February 2020 triggered the activation of a local flooding emergency which affected the Otago Region and the Clutha River catchment particularly, where the 9th largest flow in the Clutha River at Balclutha was recorded since 1863. This flow of 3,175 cubic metres per second is the largest flow in the Clutha River in the last 20 years. Overall, ORC's flood protection schemes performed to expected levels of service, however many flood protection assets were damaged requiring repair.
- [10] The 2020 Flood Recovery Project was initiated to assess flood damage and prioritise and coordinate flood damage repairs. An initial assessment identified 35 areas or sites requiring investigation, action (such as debris removal) or repair. Twenty-seven (27) of these sites were in the Lower Clutha, five (5) in the Queenstown Lakes area and three (3) in the Pomahaka catchment (see Appendix 1).
- [11] Flood damage repairs were prioritised as: Priority 1 which included immediate response and high priority repairs that could be implemented before the end of June 2020; Priority 2 damage requiring investigation and design with work to be undertaken during the 2020/21 financial year; Priority 3 repairs required longer investigation or repairs were constrained by consent requirements and needed to be undertaken over a longer period. All flood damage is planned to be completed by April 2023 per the programme of works (Appendix 2).
- [12] An initial assessment of the extent and prioritisation of flood damage was reported to the ORC Implementation Committee on 11 March 2020². Council was updated on 27 May 2020 with a report on flood recovery progress and the financial implications for ORC³.
- [13] This report shows the progress to date, highlighting completed works, and provides an update on costs, funding contributions and a revised programme for completion of flood damage repairs.

FLOOD RECOVERY REPAIRS UPDATE

- [14] Of the 35 flood damaged sites, 29 have now been completed, 3 are underway, and 3 have been investigated and left to monitor and repair if needed under business as usual.
- [15] Major repairs to flood damage were required at the following three locations:
- a. Albert Town on the Clutha River as it flows out of Lake Wanaka,
 - b. Floodbanks on Riverbank Road on the lower Clutha River, and

² *Update on February 2020 Flooding*, Report OPS1003, Report to 11 March 2020 meeting of the Implementation Committee.

³ *February 2020 Progress and Estimated Costs*, Report OPS1006, Report to 27 May 2020 meeting of the Implementation Committee.

- c. The embankment on the Waitepeka Stream near Balclutha.
These repairs are summarised below with more details provided in the appendices.

Albert Town rock buttress (see Appendix 3)

- [16] Flood damage included erosion and slumping of the rock buttress on the right bank of the Clutha River as it flows out of Lake Wanaka. Parts of the access track supported by the rock buttress had washed away and the slope above it had become unstable. Resilience of the buttress is important as helps protect the buffer between the edge of the river and the houses on the terrace.
- [17] The repair involved stabilising the buttress slope by removing material from the steep scarp and bringing in rock to repair and stabilise the buttress. The access track was then reinstated.
- [18] Approximately 1,400 cubic metres of material were removed from the unstable scarp slope and 3,000 cubic metres of rock used to repair the rock buttress at a total cost, (including investigation, monitoring and consents) of around \$906,000. It is noted that the nature of this site makes this work vulnerable to future floods despite being carefully engineered. This is a cost risk for ORC.
- [19] The community was kept informed during the project through community notices, an open “drop in” information session and onsite meetings. There was also close communication with Queenstown Lakes District Council (QLDC) who are owners of the road reserve in which much of the work took place.

Riverbank Road floodbank stabilisation (see Appendix 4 and 4a)

- [20] Flood damage repairs were required at several sites along Riverbank Road in the Lower Clutha Flood Protection and Drainage Scheme. Four of these sites were included as part of the Riverbank Road floodbank stabilisation project for which MBIE funding was secured as one of the ORC’s Climate Resilience “Shovel Ready” projects.
- [21] Damage at three of the sites was repaired using an environmentally friendly vegetative solution, while repair at the site adjacent to the Riverbank Road bridge at Stirling, required detailed investigation, design, and repair using approximately 3,500 cubic metres of rock to re-establish protection of 300m of floodbank.
- [22] A budget of \$1.0 million was included for floodbank stabilisation at the four sites, however when these repairs were completed under budget for approximately \$850,000 a fifth flood damage site (see Appendix 4a) on Riverbank Road was added to the project.
- [23] The overall project at the five sites was completed for approximately \$950,000 securing a 64% contribution from MBIE of \$608,000.

Waitepeka floodbank repair (see Appendix 5)

- [24] The Waitepeka earthen floodbank that diverts water from the Waitepeka Stream to the Clutha River, protecting the Owaka Highway and reducing downstream flood risk, was severely damaged in the February 2020 flood. The site was visited by Councillors as part of their visit to Clutha District in 2020.

- [25] Damage included overtopping and slumping of the floodbank and piping through it, damaging its integrity.
- [26] Earthwork repairs were undertaken to repair the slumped section of embankment, reinstate the spillway and floodbank crest, and add a toe buttress to mitigate the piping. A total of 23,200 cubic metres of earthwork was undertaken at an overall cost for the repair of \$360,780.

Other flood recovery works and repairs

- [27] Other completed repairs include several minor repairs in the Lower Clutha, undertaken as packages of works. The timing of each package is shown in Appendix 2 with locations of each work indicated in Figure 2, Appendix 1.
- [28] Glenorchy flood recovery work included investigation of Rees River erosion and floodbank stability, survey of riverbed cross sections and floodbank crest levels, and implementation of a telemetered water level monitoring station for flood warning at the Glenorchy Lagoon. ORC Engineering undertook river management works including channel realignment at the Rees delta, and willow clearance alongside Lagoon Creek.
- [29] At Kinloch Road, ORC contributed to erosion protection rock armouring for a section on the Dart floodplain eroded in the February 2020 Flood that was further exacerbated by high flow events in September-October 2020.
- [30] Longer-term adaptation actions to address natural hazard issues including flooding of the Rees River at Glenorchy, and the Dart River floodplain at Kinloch Road, will continue to be developed through the adaptation pathways approach⁴.
- [31] Pomahaka River flood recovery action included debris removal and erosion repair, planting and monitoring at several sites (refer to Figure 4, Appendix 1). Following the initial vegetative repair for the Burning Plain Rd erosion site, Clutha District Council (CDC) has chosen to reinstate the road at the location of that erosion. Revegetation following the CDC works will be undertaken as part of river management work.

Outstanding work

- [32] An initial investigation, followed up by well cleaning of all 44 Balclutha pressure relief wells has been coordinated by engineering consultants Tonkin and Taylor. They have recommended the replacement of 3 wells that have failed, with 2 replacement wells for each. Initial cost estimates are around \$50,000 per replacement well, hence the contingency of \$300,000 to enable completion of these works.
- [33] The floodbank on Factory Road in the Lower Clutha was further damaged during the February 2020 flood. Consents have been applied for and detailed design completed. Work is planned to be undertaken between November 2022 and February 2023 to meet the fish spawning requirements of the consent.
- [34] The Hospital Creek embankment directly upstream of Balclutha township was compromised during the February 2020 flood with piping observed at several locations in the bank. This was one of the main reasons for the partial evacuation of Balclutha

⁴ *Natural Hazards Adaptation in the Head of Lake Wakatipu*, Report HAZ2105, Report to 27 May 2021 meeting of the Otago Regional Council.

during the flood. It has been agreed between ORC and CDC that this embankment is a CDC responsibility, however it will be included in the ORC claim to NEMA, hence the timing and estimated costs for its repair are included in the Flood Recovery Works Programme (Appendix 2). Repair works are progressing well and it is expected that works will be completed by June 2022.

COST IMPACTS

- [35] Flood recovery expenditure to 31 March 2022 is \$3.4 million as per Table 1 below with details provided in Appendix 3.
- [36] The estimated cost to complete the flood damage repairs remains at \$3.9 Million (see Table 1).
- [37] This matches what was previously reported to Council (27 May 2020), however now excludes costs for the Hospital Creek Embankment, which has been determined to be the responsibility of Clutha District Council (CDC). Its repair will be funded by CDC at an estimated cost of \$750,000.
- [38] MBIE has contributed \$608,000 towards flood recovery for flood damage repairs on floodbanks at Riverbank Road in the Lower Clutha, approved as part of the Climate Resilience "Shovel Ready" programme.
- [39] The NEMA contribution towards this expenditure is estimated to be \$598,000. Of this, \$69,000 has been received (Claim 1 to April 2021) and the remainder is yet to be claimed.
- [40] Details of flood damage costs by project are included in Appendix 3 and also shown for packages of works in the programme of works in Appendix 2.
- [41] Based on the expenditure to date and estimate of cost to complete the Flood Recovery Programme (Table 1), ORC will need to fund a total of approximately \$2.7 million with \$1.2 million coming from other sources (NEMA and MBIE).
- [42] The unbudgeted cost to ORC of \$2.7 million will require an overspend which will create a deficit to the schemes reserves which will carry through to the future unless alternative funding to reduce the deficit is found (see Funding Options below).
- [43] The greatest impact of the deficit will be in the Lower Clutha Flood Protection and Drainage Scheme which had a deficit of \$687,000 on 30 June 2021. A deficit of \$1.2 million is forecast for this Scheme for the end of FY2021/22 on 30 June 2022.

Table 1. Flood recovery programme cost estimates.

| Flood Recovery Programme Cost Summary | Cost |
|--|------------------|
| Expenditure to date to 31/3/2022 | 3,440,000 |
| Estimated future costs to end of programme | 450,000 |
| Total | 3,890,000 |

| Flood Recovery Cost Breakdown | Est. Cost |
|--|------------------|
| Flood response (Lower Clutha) | 247,000 |
| Lower Clutha flood damage recovery | 2,128,000 |
| Pomahaka damage recovery | 13,000 |
| Queenstown Lakes flood damage recovery | 1,036,000 |
| Flood recovery management, investigations, ORC staff | 466,000 |
| Total | 3,890,000 |

| Funding Sources | Est. Cost |
|-------------------------------------|------------------|
| ORC (threshold +ORC 40%+ineligible) | 2,684,000 |
| MBIE Shovel Ready | 608,000 |
| NEMA (60% of remainder) | 598,000 |
| Total | 3,890,000 |

| Lower Clutha Funding | Est. Cost |
|---|------------------|
| Lower Clutha flood damage response and recovery | 2,375,000 |
| MBIE Shovel Ready | -608,000 |
| Lower Clutha (approx. 55% of NEMA contribution) | -328,900 |
| Lower Clutha remainder to be funded * | 1,438,100 |

* Funding from targeted Lower Clutha Rates, Council Reserves or Kuriwao Fund

| Clutha District Council | Est. Cost |
|---|------------------|
| Clutha District Council - Hospital Creek Embankment | 750,000 |
| Grand Total (ORC + CDC costs) | 4,640,000 |

CONSIDERATIONS

Policy Considerations

[44] None.

Financial Considerations

[45] These are described in the paper.

Significance and Engagement Considerations

[46] None.

Legislative and Risk Considerations

- [47] The nature and setting of the assets that have been damaged, particularly the Albert Town rock buttress, are such that they are vulnerable to future damage. This is a cost risk for ORC.

Climate Change Considerations

- [48] Flood recovery has focused on reinstating like-for-like damaged infrastructure. Climate change considerations, particularly in the Lower Clutha Flood Protection Scheme are being investigated as part of a separate programme of work⁵.

NEXT STEPS

- [49] The next steps are:
- a. Complete the Flood Recovery Project by 30 April 2023.
 - b. Make final claim(s) to NEMA for their cost share of eligible flood damage repair costs.
 - c. Further investigate internal funding options and present a paper to Council for a decision to address the funding deficit, particularly in the Lower Clutha Flood Protection and Drainage Scheme.
 - d. Continue to incorporate information from flood recovery into scheme asset management plans, performance assessments and adaptation planning.

ATTACHMENTS

1. Appendix 1. Location and status of flood damage repairs [8.3.1 - 3 pages]
2. Appendix 2. Programme of works [8.3.2 - 1 page]
3. Appendix 3. Albert Town flood damage repair summary [8.3.3 - 2 pages]
4. Appendix 4. Riverbank Roadfloodbank stabilisation summary [8.3.4 - 7 pages]
5. Appendix 4.1 Location of Riverbank Road stabilisation sites [8.3.5 - 1 page]
6. Appendix 5. Waitepeka floodbank repair summary [8.3.6 - 5 pages]
7. Appendix 6. Flood recovery cost details [8.3.7 - 1 page]

⁵ *Clutha Delta and Molyneux Bay Coastal Morphology and Natural Hazards*, Report HAZ2207, Report to 8 December 2021 meeting of the Data and Information Committee.

Appendix 1. 2020 Flood Recovery Project, location and status of flood damage repairs.

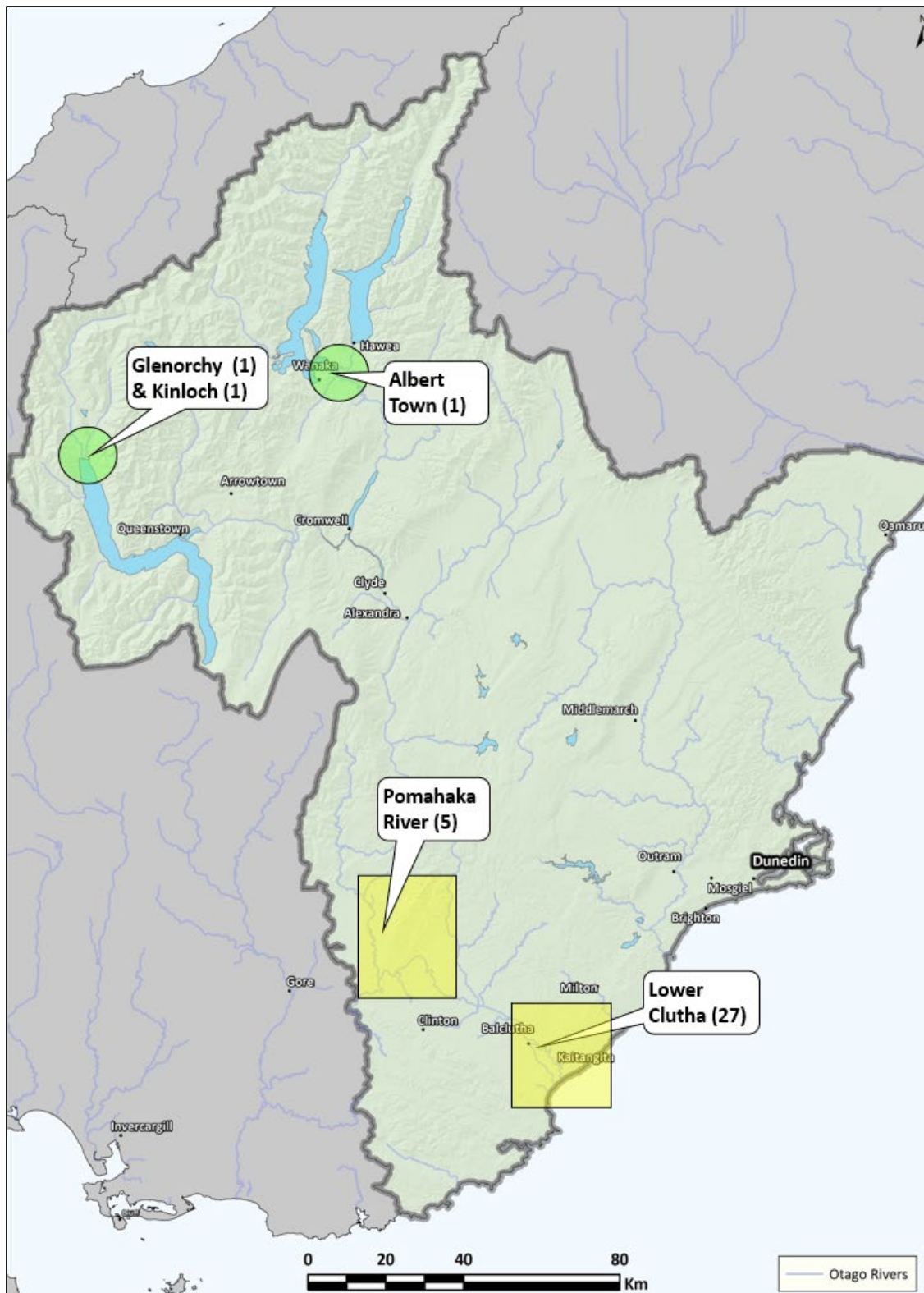


Figure 1. Location of 2020 Flood Damage sites (35) across Otago Region.

Appendix 1. 2020 Flood Recovery Project, location and status of flood damage repairs.

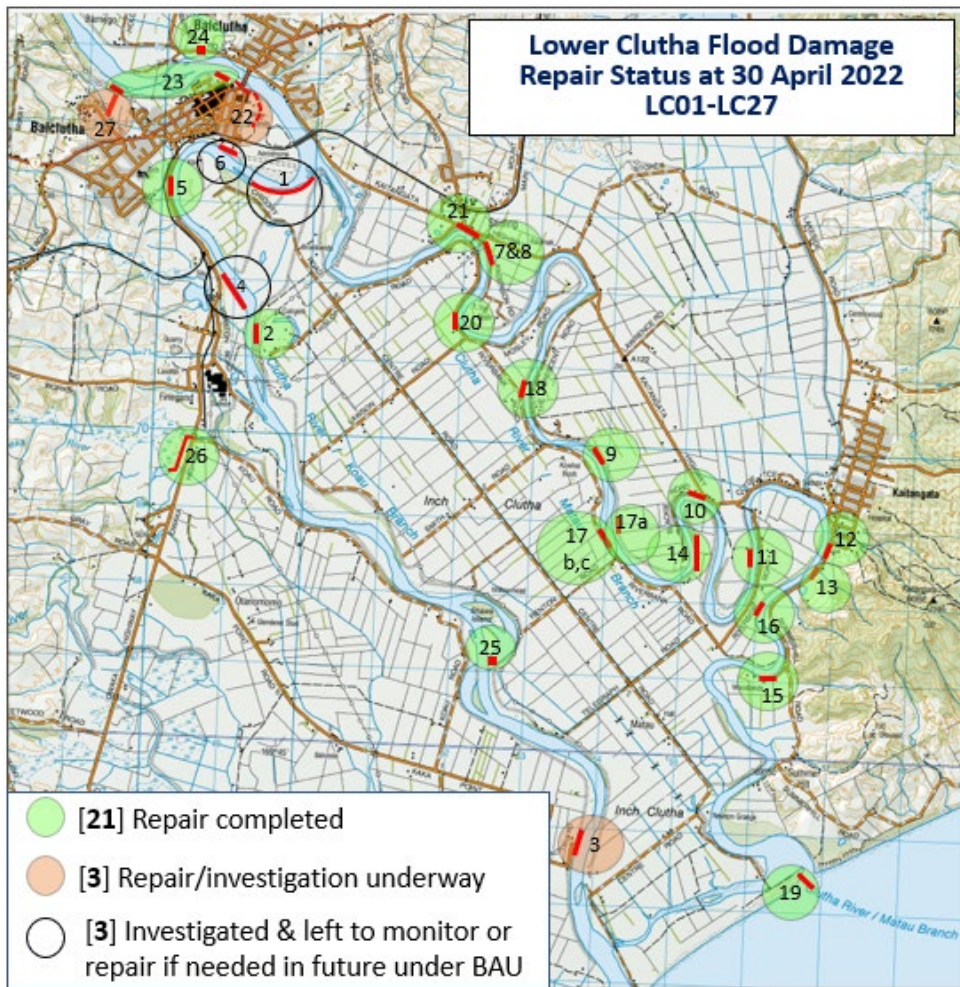


Figure 2. Lower Clutha, location and status of flood damage repairs at 30 April 2022.

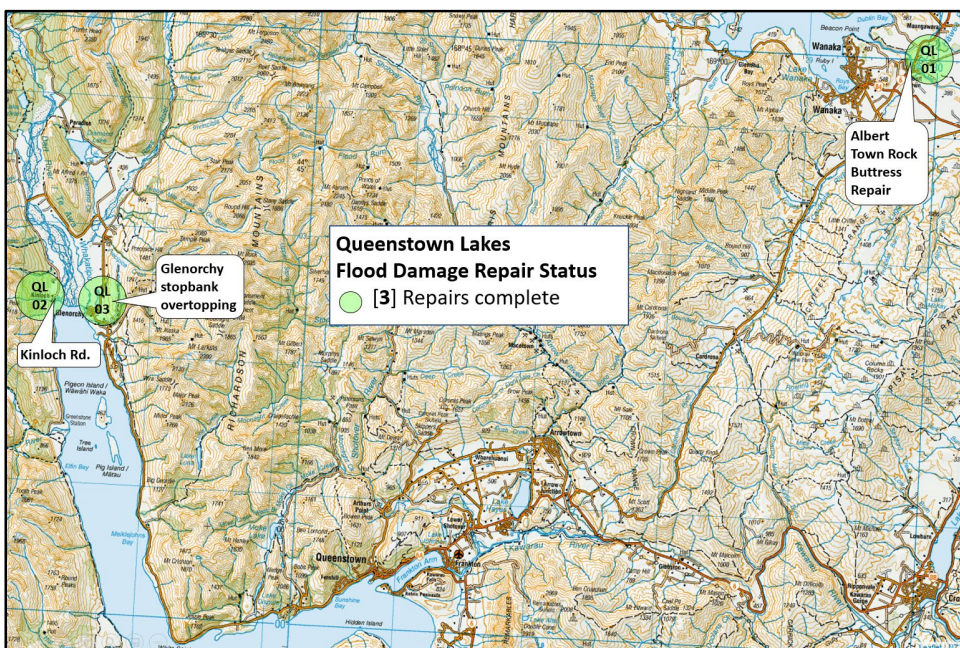


Figure 3. Queenstown Lakes, location and status of flood damage repairs.

Appendix 1. 2020 Flood Recovery Project, location and status of flood damage repairs.

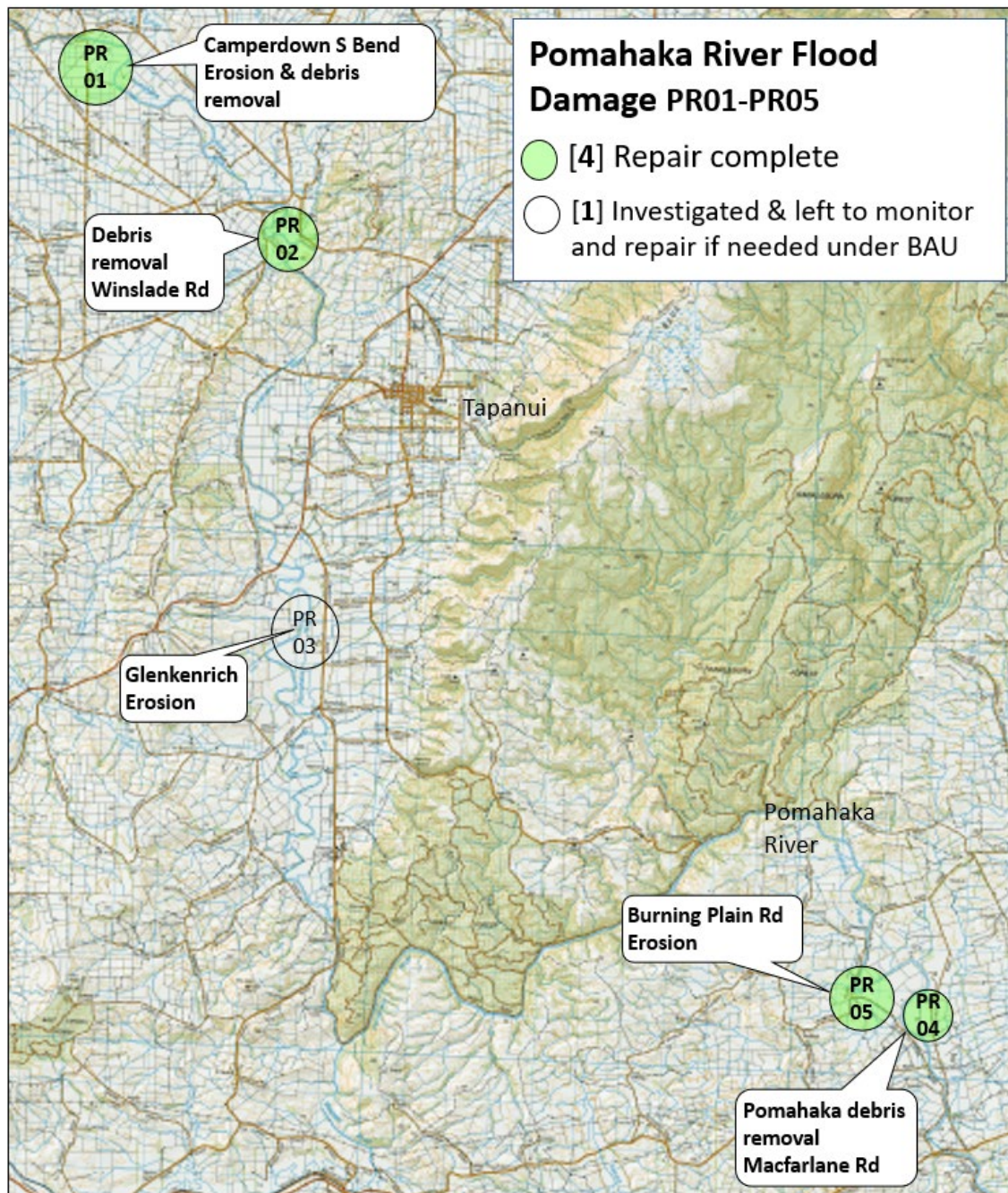
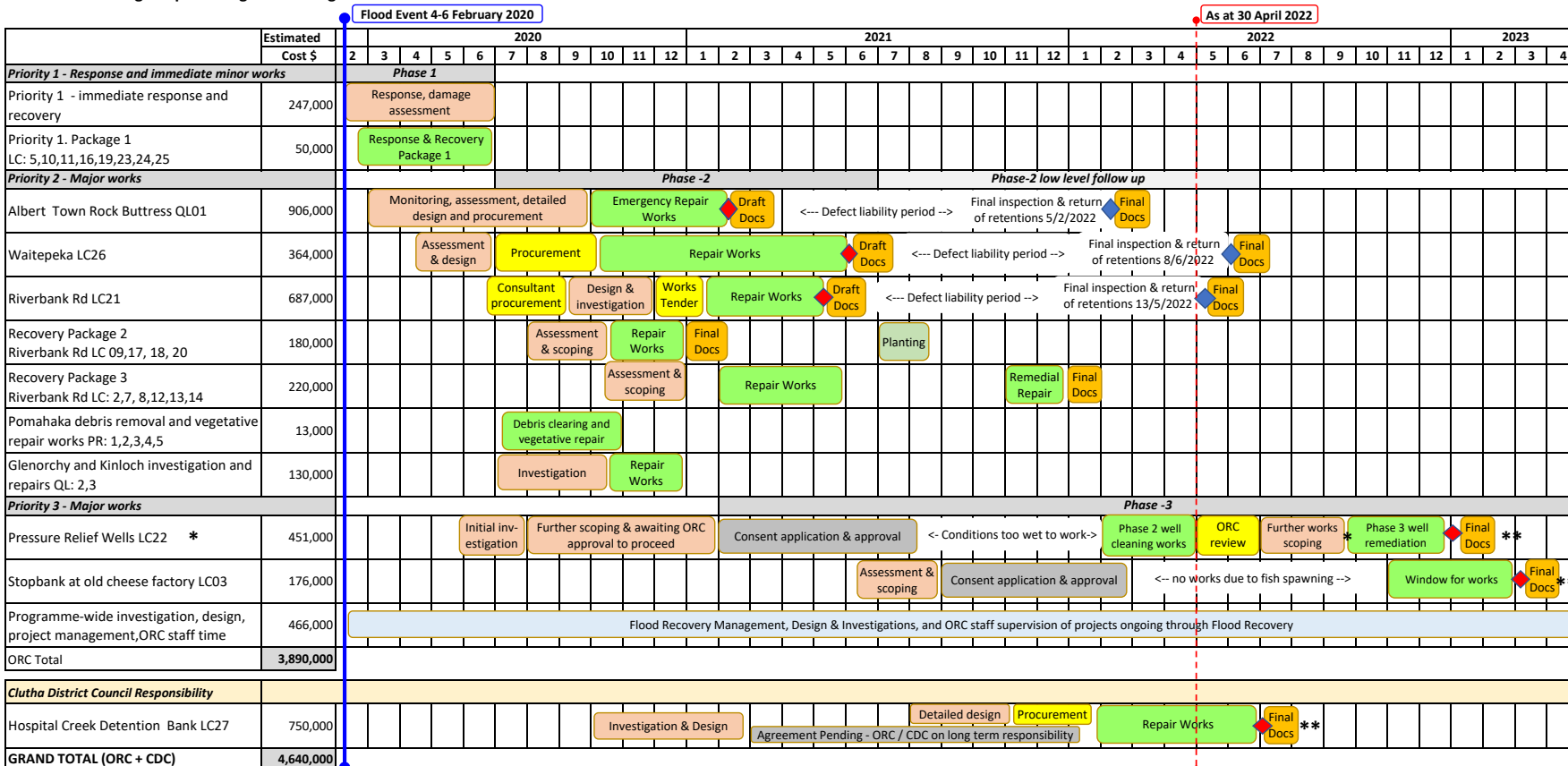


Figure 3. Pomahaka, location and status of flood damage repairs.

Implementation Committee Agenda - 9 June 2022 - MATTERS FOR CONSIDERATION

Appendix 2.2020 Flood Recovery Project, Programme of Works.

2020 Flood Damage Repairs - High Level Programme of Works



Notes: * For Balclutha Pressure Relief Well, once Phase 2 well cleaning is complete, review of recommendations could result in further scoping and possible further works well into FY2022/2023.

** Final inspections and return of retentions after defect liability period will likely be required.

Legend

- Assessment, Investigation, Design, Scoping
- Procurement
- Project management and oversight
- Agreements, permission, consent
- Works
- Documentation

- Completion certificate by Engineer
- Engineers final inspection and release of retentions

Appendix 3. Albert Town Flood Damage Repair Summary



ALBERT TOWN FLOOD DAMAGE REPAIR

Summary 15 March 2021

The Albert Town rock buttress is an existing artificial feature located on the right bank of the Clutha river as it flows out of Lake Wanaka upstream of the SH6 Bridge. In December 2019 high flows caused the rock buttress to slump into the river, trees were uprooted and parts of the river bank and its rock lining ripped out exposing it to scour. This scour was exacerbated in the February 2020 high rainfall and flow event to the extent that in April 2020, the toe of the upstream historic landslide re-activated, resulting in slumping of the shared use pathway by up to 2m into the river.

Damage to the Albert Town rock buttress was included as one of the 35 sites across the Otago region that were identified as requiring flood damage repair as a result of the February 2020 floods.

Actions to address the damage included a stability assessment, design investigation (including underwater survey and hydraulic modelling) and undertaking the physical repair works. The overall cost of the repair, including stability assessment, investigation, design and repair works was approximately \$900,000.

These works form part of the overall claim for February 2020 flood damage that will be submitted to the National Emergency Management Agency (NEMA) for recovery of 60% of eligible costs above the Otago Regional Council (ORC) threshold.

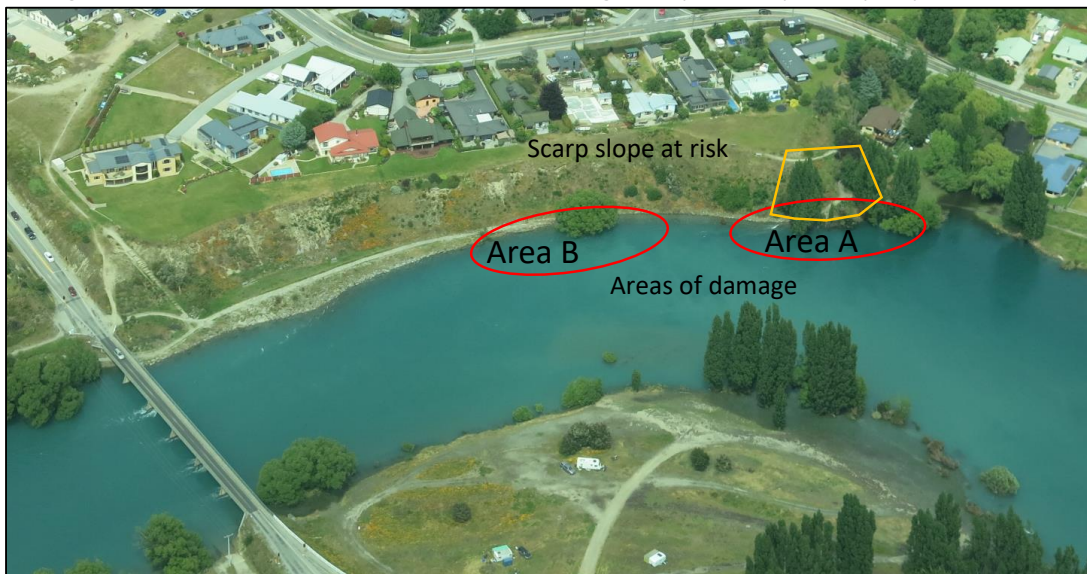
The final works involved removing approximately 1400 cubic metres of material from the unstable steep scarp slope above the rock buttress and shaping and stabilising this slope. Approximately 3000 cubic metres of rock was brought in for the repair of the rock buttress and lower access track.

Physical works were undertaken from 1 October 2020 through 4 February 2021. Some post completion follow up is underway.

Due to the ongoing slipping of the steep scarp slope and risk of further damage, the works were undertaken under the emergency works provisions of the Resource Management Act (RMA). Consents for the works were applied for in parallel with the works.

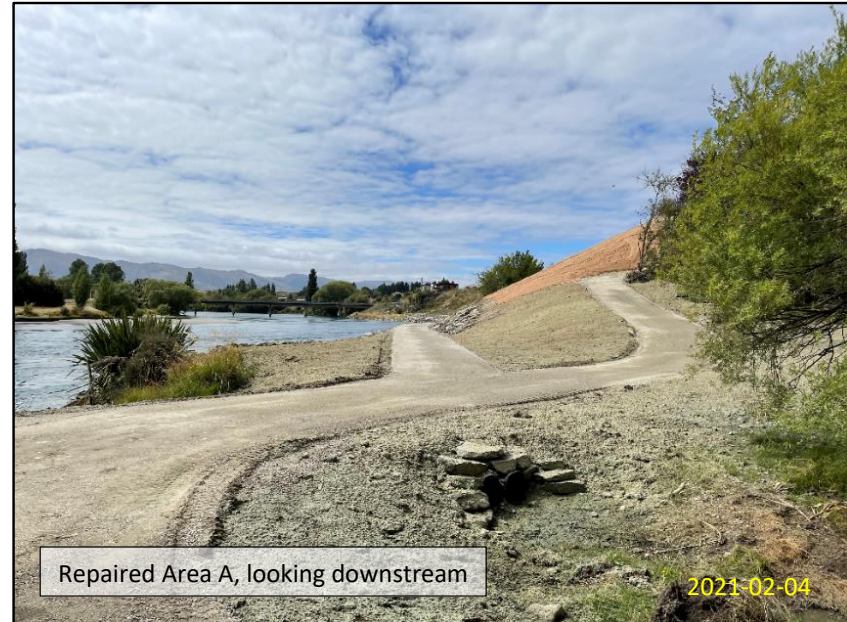
The community was kept informed during the project through community notices, an open “drop in” information session and onsite meetings. There was also close communication with Queenstown Lakes District Council (QLDC) who are owners of the road reserve in which much of the work took place.

The figures that follow show the location of the damage and pre- and post-repair photos



Albert Town Flood Damage Repair – Summary. Before and after Repair Photos

15 March 2021



Appendix 4. Riverbank Road Stabilisation Summary



RIVERBANK ROAD FLOODBANK STABILISATION

CLIMATE RESILIENCE PROJECT

Executive Summary 23 June 2021



The significant rainfall event of February 2020 resulted in flood damage to 27 areas in the Lower Clutha area of Otago, including 4 areas of significant damage on Riverbank Road (Figure 1). Stabilisation of flood damaged sites on Riverbank Road has been partially funded through the Provincial Development Unit of the Ministry for Business, Innovation and Employment (MBIE), as one of the post-Covid19 Shovel Ready Projects to stimulate economic development.

This project has been successfully completed ahead of schedule and under budget, employing a wide diversity of people on the project and achieving significant environmental flood protection benefits.

Investigation was undertaken at the four sites prior to the funding agreement with MBIE. Following conceptual design and pricing of different options, it was determined that three of the sites could be repaired through use of an environmentally friendly vegetative solution. This included battering back and reshaping the damaged and eroded area of floodbank, stabilising it with coconut matting, and planting grass and trees to stabilise the bank longer term. The three sites (designated Lower Clutha LC17, LC18 and LC20) had contracts in place and were ready for construction when ORC signed the Climate Resilience funding agreement with MBIE. Works on these sites started in November and were completed in December 2020 (see photos in Figures 2-4). Some further planting remains to be done in the winter of 2021 and ongoing monitoring will be required at these sites.

Stopbank stabilisation at the fourth Riverbank Road site, immediately upstream of the Stirling Bridge near Balclutha, was more complex. It is situated on the outside of a ninety-degree bend in the Clutha River at a pinch point between the river and the Kaitangata Highway. With very little space, the steep rock lined stopbank had scoured away and was collapsing upstream of the bridge putting it at risk. Geosolve Consulting engineers were retained to undertake the stability assessment, design and works supervision. Design was completed by mid-November 2020 and works procurement completed, following an open tender process, in January 2021. The main works contract was awarded to SouthRoads who commenced work in February 2021. The repair involved re-lining the toe of the stopbank with rock riprap and keying this into the bed of the river to prevent any further slumping. An access track was initially created at the waterline to allow for excavation into the riverbed and laying of the rock foundation. The access track was later reshaped back into the existing floodbank. Approximately 3,500 cubic metres of rock was used for these works to re-establish rock protection along 300m of floodbank.

During excavation of the riverbed, timber beams from an historic, pre-1900's bridge were uncovered. Works stopped for a week and an archaeological assessment of the beams was undertaken. The part of the river where the discovery was made, has been determined to be owned by the Crown (LINZ). They are in discussion with the South Otago Museum regarding the future of the beams. Despite the delay, works were completed in mid-May, two weeks ahead of schedule.

The overall cost of the project is approximately \$850,000, under the budget of \$1,000,000.

Environmental benefits of the project include vegetative planting of 400m of riverbank and providing direct flood protection and reducing the risk of inundation to 1,300ha and indirect benefit to the entire Lower Clutha Flood Protection and Drainage scheme that provides flood protection to approximately 9,300ha in the Clutha delta

The project provided employment benefits by employing around 20 different people at different times over a 7 month period for an average of 3 full time employees (FTE) per month. Of the people working on the project 17% were women, 5 % Maori, 8% youth (aged 15-24) and 11% apprentices. All workers were NZ resident and 25% local.

Five direct suppliers (4 local) have provided services on the project. Several of these suppliers have used their own subcontractors.

Riverbank Road Floodbank Stabilisation
ORC. Climate Resilience Project - Summary

20 May 2021

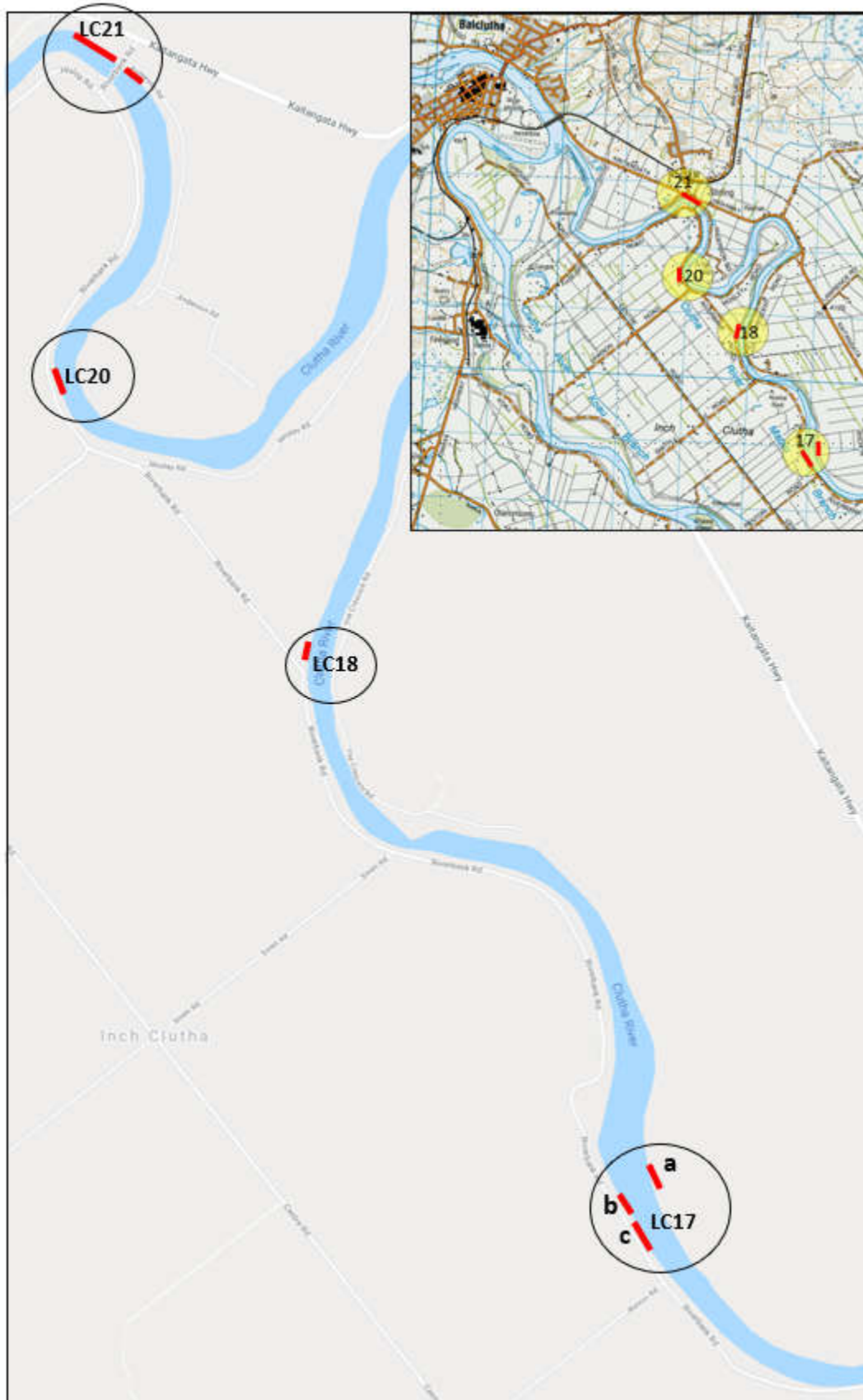


Figure 1. Location of Riverbank Road floodbank stabilisation sites.

Riverbank Road Floodbank Stabilisation
ORC. Climate Resilience Project - Summary

20 May 2021



Figure 2. Riverbank Road at Renton Road (LC17) floodbank before and after reshaping and vegetation stabilisation.

Riverbank Road Floodbank Stabilisation
ORC. Climate Resilience Project - Summary

20 May 2021



Figure 3. Riverbank Road (262 or LC18) floodbank before(above) and after (below) reshaping and vegetation stabilisation.

Riverbank Road Floodbank Stabilisation
ORC. Climate Resilience Project – Executive Summary

23 June 2021



Figure 4. Riverbank Road floodbank at Lawsons (LC20), before(left) and after (right) reshaping and vegetation stabilisation.

Riverbank Road Floodbank Stabilisation
ORC. Climate Resilience Project – Executive Summary

23 June 2021



Figure 5. Riverbank Road floodbank at bridge near Stirling (LC21), before(left) and after (right) reshaping and vegetation stabilisation.

Riverbank Road Floodbank Stabilisation
ORC. Climate Resilience Project – Executive Summary

23 June 2021

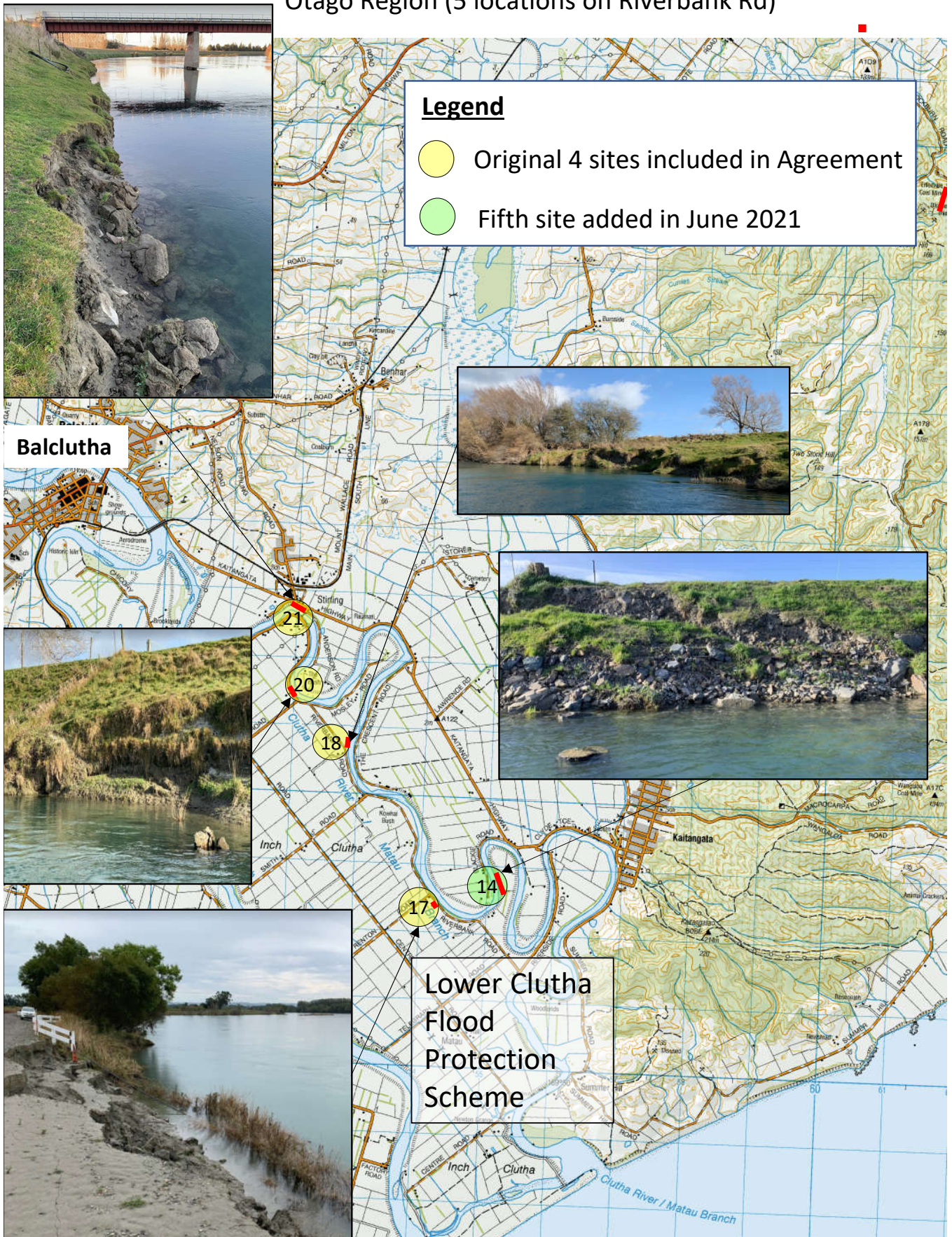


Figure 6. Discovery of historic (Pre-1900) bridge beams at Riverbank Road floodbank works at bridge near Stirling (LC21).

Appendix 4.1. Location of Riverbank Road Stopbank Stabilisation Sites

Provided to MBIE 08-07-2021 for variation to Riverbank Road Project. Addendum to Funding Agreement Appendix 2.

Location of Riverbank Road Stopbank Stabilisation Sites,
Otago Region (5 locations on Riverbank Rd)



Appendix 5. Waitepeka Floodbank Repair Summary

WAITEPEKA FLOOD DAMAGE REPAIR*Executive Summary, June 2021*

The Waitepeka floodbank is an earth embankment, originally constructed in 1906, which diverts the Waitepeka River to an outflow channel and into the Koau Branch of the Clutha River (Figure 1). Floodgates were added to this outflow channel sometime after 1956 in order to prohibit backflow from the Clutha flooding the upper catchment. Around the same time, a spillway was added over the right (south) abutment to allow excess flows to discharge down the original Waitepeka channel.

The Waitepeka floodbank sustained significant damage in the February 2020 flood event (Figures 2-5). Damage included overtopping and slumping of the floodbank with piping damage through the bank compromising its integrity. The spillway was lowered with an excavator during the event to relieve pressure on the floodbank and prevent it from breaching.

Taylor Engineering Consultants were retained in March 2020 to investigate the Waitepeka floodbank damage and develop a floodbank design and repair methodology. Much of the investigation and design was carried out during the period of the Covid-19 lockdown. As a result, several design assumptions were made with available information and a flexible repair methodology was developed so that latent defects encountered during construction could be addressed.

Open tendering was undertaken in September 2020 and the work awarded to Southroads Limited in October 2020. Construction started at the end of October 2020 and was completed by June 2021. Work comprised:

- repair of the slumped section of embankment,
- reinstatement of the crest to the original design height,
- construction of a toe buttress along the landside toe of the embankment
- reinstatement of the spillway

Most of the work was undertaken on the Telford Farm Training Institute property with some work on the Department of Conservation and Otago Fish and Game property. Access agreements were obtained from each entity. Fill material for the floodbank repair and additional toe buttress were obtained from a nearby site on the Telford Farm.

Earthwork included a total volume of 23,200 cubic metres. The final cost for the floodbank repair, including design and engineering supervision was \$360,780.

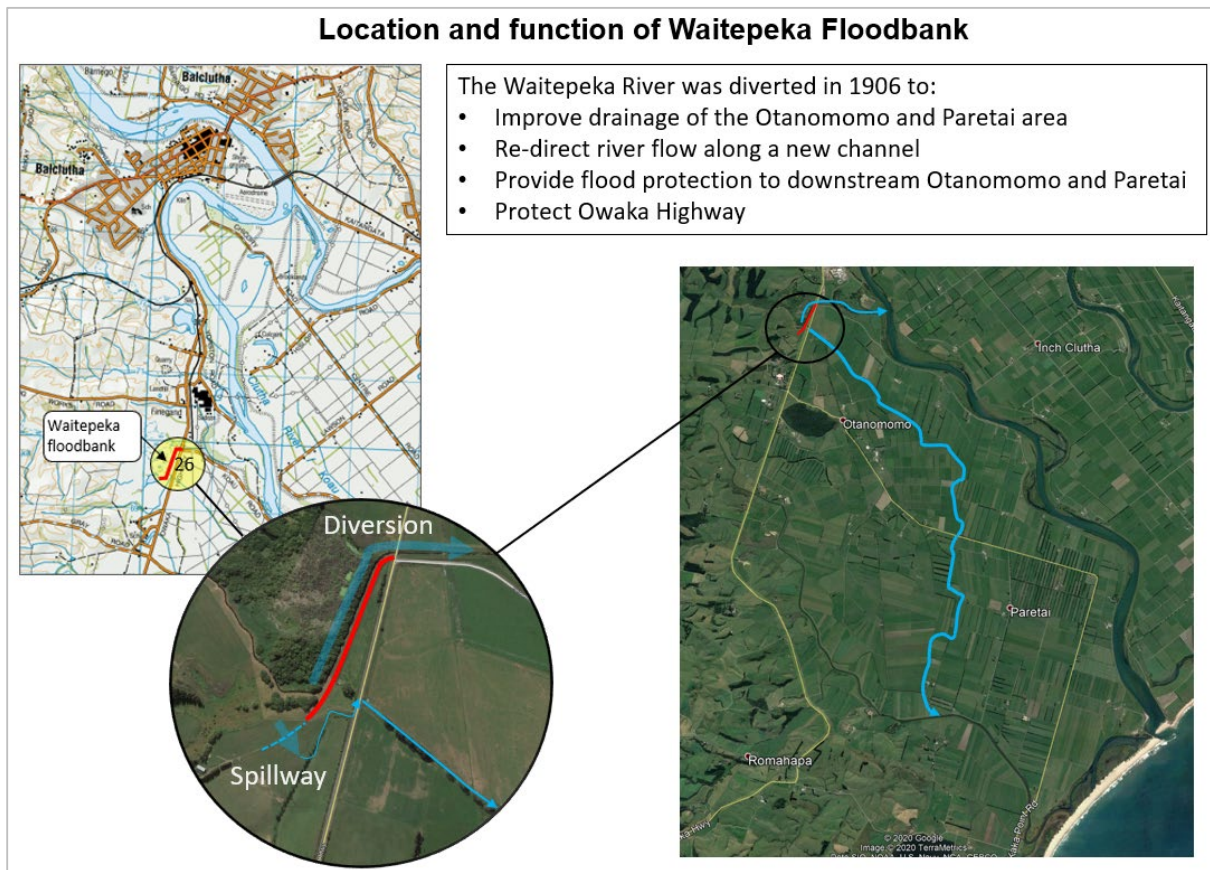


Figure 1. Location and function of Waitepeka Floodbank



Figure 2. Waitepeka Floodbank during flooding. 5 February 2020.

Waitepeka floodbank repair, Executive Summary

June 2021



Figure 3. Waitepeka Floodbank showing slumping, overtopping and piping. 5 February 2020.



Figure 4. Excavating spillway during flood (5 February 2020).



Figure 5. Slumping on floodbank (14 February 2020).



Figure 6. Repair of slumped section of embankment



Figure 7. Repair of embankment toe

Waitepeka floodbank repair, Executive Summary

June 2021



Figure 8. Completed Embankment.

Appendix 6. Flood Recovery Cost Details

| Description | Amounts | Comments |
|---------------------------------|-------------------------|------------------------------|
| Ratable Value of Otago | \$ 96,108,626,600 A | Capital Value at 01 Feb 2020 |
| NEMA Threshold Modifier | % 0.0020 B | Stipulated by NEMA |
| Calculated NEMA Claim Threshold | \$ 1,922,172.53 C (AxB) | CV x 0.00002 |
| Date of Report | 31/03/2022 | |

| Reference | Description | Cost | Complete | Comments |
|---|---|-------------------------------------|-------------------------------------|--|
| Response / Repair Projects Directly Funded by ORC | | | | |
| 2020_RESP | Feb 2020 Flood: Immediate Response Costs | \$ 247,068.32 | <input checked="" type="checkbox"/> | |
| 2020_PM | Feb 2020 Flood: Recovery Programme Management | \$ 389,343.30 | <input type="checkbox"/> | Ongoing, expenditure to date |
| 2020_LC02 | Feb 2020 Flood: Koau TLB off End of Hislop Rd | \$ 27,108.42 | <input checked="" type="checkbox"/> | |
| 2020_LC03 | Feb 2020 Flood: Koau TRB at Old Cheese Factory | \$ 26,265.74 | <input type="checkbox"/> | Investigation, design and consent underway |
| 2020_LC05 | Feb 2020 Flood: Koau TRB off Owaka Highway | \$ 1,895.00 | <input checked="" type="checkbox"/> | |
| 2020_LC0708 | Feb 2020 Flood: Matau TLB at Anderson Rd | \$ 29,055.23 | <input checked="" type="checkbox"/> | |
| 2020_LC09 | Feb 2020 Flood: Matau TLB at The Crescent Rd | \$ 32,416.15 | <input checked="" type="checkbox"/> | |
| 2020_LC10 | Feb 2020 Flood: Matau TLB at Blackie Rd | \$ 4,210.00 | <input checked="" type="checkbox"/> | |
| 2020_LC11 | Feb 2020 Flood: Matau TLB Opposite 159 Riverside Rd | \$ 2,600.00 | <input checked="" type="checkbox"/> | |
| 2020_LC1213 | Feb 2020 Flood: Matau TLB at Kaitangata | \$ 9,720.93 | <input checked="" type="checkbox"/> | |
| 2020_LC16 | Feb 2020 Flood: Matau TRB Opposite 137 Summer Hill Rd | \$ 1,175.00 | <input checked="" type="checkbox"/> | |
| 2020_LC19 | Feb 2020 Flood: Rock Groyne at Matau Outlet TRB | \$ 6,051.68 | <input checked="" type="checkbox"/> | |
| 2020_LC22 | Feb 2020 Flood: Balclutha Pressure Relief Wells | \$ 150,740.96 | <input type="checkbox"/> | Investigation complete. 6 replacement wells recommended. |
| 2020_LC23 | Feb 2020 Flood: Clutha Main Stopbank at Balclutha | \$ 3,367.50 | <input checked="" type="checkbox"/> | |
| 2020_LC24 | Feb 2020 Flood: Barnego Pump Station Gravity Outlet | \$ 14,524.00 | <input checked="" type="checkbox"/> | |
| 2020_LC25 | Feb 2020 Flood: Budgee Island Causeway, Koau TLB | \$ 1,942.50 | <input checked="" type="checkbox"/> | |
| 2020_LC26 | Feb 2020 Flood: Waitepeka Floodbank | \$ 360,780.54 | <input checked="" type="checkbox"/> | |
| 2020_LC27 | Feb 2020 Flood: Hospital Creek Embankment | \$ - | <input type="checkbox"/> | Works underway, to be completed by end June 2022 |
| 2020_QL01 | Feb 2020 Flood: Albert Town Rock Buttress | \$ 840,754.91 | <input checked="" type="checkbox"/> | |
| | Eligible Spend | \$ 2,149,020.18 D | | |
| Ringfenced Project Supported by MBIE Funding (Kānoa - REDIU) | | | | |
| 2020_LC14 | Feb 2020 Flood: Matau TRB off 625 Riverbank Rd | \$ 136,987.70 | <input checked="" type="checkbox"/> | |
| 2020_LC17BC | Feb 2020 Flood: Riverbank Rd at Renton Rd | \$ 42,576.12 | <input checked="" type="checkbox"/> | |
| 2020_LC18 | Feb 2020 Flood: Stopbank at 262 Riverbank Rd | \$ 18,478.46 | <input checked="" type="checkbox"/> | |
| 2020_LC20 | Feb 2020 Flood: Riverbank Rd at Lawson Rd | \$ 50,380.50 | <input checked="" type="checkbox"/> | |
| 2020_LC21 | Feb 2020 Flood: Riverbank Rd at Bridge, Stirling | \$ 679,732.32 | <input checked="" type="checkbox"/> | |
| | Ringfenced Spend | \$ 928,155.10 E | | |
| | Less Ringfenced MBIE Funding | \$ - 608,000.00 F | | |
| | Adjusted NEMA-Eligible Spend for Riverbank Road Sites | \$ 320,155.10 G (E-F) | | |
| | Total Eligible Spend | \$ 2,469,175.28 H (D+G) | | |
| | Less Threshold | \$ - 1,922,172.53 C | | |
| | Claimable Portion | \$ 547,002.75 I (F-C) | | |
| | NEMA Share (60%) | \$ 328,201.65 J (I x 0.6) | | |
| | ORC Share (40%) | \$ 218,801.10 K (I x 0.4) | | |
| Ineligible Costs | | | | |
| 2020_LC01 | Feb 2020 Flood: Koau TLB at Bifurcation | \$ - | <input type="checkbox"/> | Deferred to BAU |
| 2020_LC04 | Feb 2020 Flood: Koau TRB Opposite Floodway | \$ - | <input type="checkbox"/> | Deferred to BAU |
| 2020_LC06 | Feb 2020 Flood: Koau TRB at Andrew Haulage Yard | \$ - | <input type="checkbox"/> | Deferred to BAU |
| 2020_LC1213_NE | Feb 2020 Flood: Matau TLB at Kaitangata (INELIGIBLE PORTION) | \$ 17,211.44 | <input checked="" type="checkbox"/> | LC13 on riverbank, not ORC asset |
| 2020_LC15 | Feb 2020 Flood: Matau TLB at 184 Summer Hill Rd | \$ 3,420.00 | <input checked="" type="checkbox"/> | Riverbank - not ORC asset |
| 2020_LC17A | Feb 2020 Flood: Spit Opposite Riverbank Rd at Renton Rd | \$ 36,128.01 | <input checked="" type="checkbox"/> | In stream gravel works |
| 2020_LC19_NE | Feb 2020 Flood: Rock Groyne at Matau Outlet TRB (INELIGIBLE PORTION) | \$ 10,204.65 | <input checked="" type="checkbox"/> | Betterment part of works |
| 2020_LC21_NE | Feb 2020 Flood: Riverbank Rd at Bridge, Stirling (INELIGIBLE PORTION) | \$ 7,027.50 | <input checked="" type="checkbox"/> | Engineering oversite of betterment part of works |
| 2020_LC26_NE | Feb 2020 Flood: Waitepeka Floodbank (INELIGIBLE PORTION) | \$ 3,380.19 | <input checked="" type="checkbox"/> | Bylaw application to ORC |
| 2020_NE | Feb 2020 Flood: Not Eligible for NEMA Claim | \$ 76,790.61 | <input checked="" type="checkbox"/> | |
| 2020_PR01 | Feb 2020 Flood: Pomahaka Camperdown S-bends Erosion | \$ - | <input checked="" type="checkbox"/> | Erosion/debris removal |
| 2020_PR02 | Feb 2020 Flood: Pomahaka Winslade Rd Debris (NOT ELIGIBLE) | \$ 4,200.00 | <input checked="" type="checkbox"/> | Erosion/debris removal |
| 2020_PR03 | Feb 2020 Flood: Pomahaka Glenkenrich Erosion | \$ - | <input checked="" type="checkbox"/> | Erosion/debris removal |
| 2020_PR04 | Feb 2020 Flood: Macfarlane Rd Debris (NOT ELIGIBLE) | \$ 1,050.00 | <input checked="" type="checkbox"/> | Erosion/debris removal |
| 2020_PR05 | Feb 2020 Flood: Pomahaka Burning Plain Rd Erosion | \$ 7,805.00 | <input checked="" type="checkbox"/> | Erosion/debris removal |
| 2020_QL01_NE | Feb 2020 Flood: Albert Town Rock Buttress (INELIGIBLE PORTION) | \$ 64,998.94 | <input checked="" type="checkbox"/> | Betterment part of works |
| 2020_QL02 | Feb 2020 Flood: Kinloch Rd Erosion | \$ 54,347.83 | <input checked="" type="checkbox"/> | Investigations and ineligible response costs |
| 2020_QL03 | Feb 2020 Flood: Glenorchy Floodbank | \$ 76,061.00 | <input checked="" type="checkbox"/> | Investigations and ineligible response costs |
| | Total Ineligible Spend | \$ 362,625.17 L | | |
| | Total Spend to Date: to 31/3/2022 | \$ 3,439,800.45 D+E+L | | |
| Future Estimated Costs | | | | |
| 2020_LC22 | Feb 2020 Flood: Balclutha Pressure Relief Wells | \$ 300,000.00 | | Contingency for well replacement 6x\$50k |
| 2020_LC03 | Feb 2020 Flood: Koau TRB at Old Cheese Factory | \$ 150,000.00 | | Estimate to complete works |
| | Total Future Spend | \$ 450,000.00 M | | |
| | NEMA Share (60%) | \$ 270,000.00 N (M x 0.6) | | |
| | ORC Share (40%) | \$ 180,000.00 P (M x 0.4) | | |
| | Total Unadjusted Spend | \$ 3,889,800.45 Q (D+E+M) | | Does not account for any subsidies/contributions/etc. |
| | Total expected NEMA Spend | \$ 598,201.65 R (J+N) | | |
| | Total Expected ORC Spend | \$ 2,683,598.80 S (-C+K+L+P) | | |
| | MBIE Contribution | \$ 608,000.00 T (F) | | |
| | Total Unadjusted Spend | \$ 3,889,800.45 U (R+S+T) | | |