

Three Waters Infrastructure and Environment Committee AGENDA

Notice of Meeting:

An ordinary meeting of the Three Waters Infrastructure and Environment Committee will be held on:

Date: Wednesday 8 June 2022
Time: 9.30am
Venue: Council Chambers, Civic Offices,
53 Hereford Street, Christchurch

Membership

Chairperson	Councillor Pauline Cotter
Deputy Chairperson	Councillor Phil Mauger
Members	Mayor Lianne Dalziel
	Deputy Mayor Andrew Turner
	Councillor Jimmy Chen
	Councillor Catherine Chu
	Councillor Melanie Coker
	Councillor Mike Davidson
	Councillor Celeste Donovan
	Councillor Anne Galloway
	Councillor James Gough
	Councillor Yani Johanson
	Councillor Aaron Keown
	Councillor Sam MacDonald
	Councillor Jake McLellan
	Councillor Tim Scandrett
	Councillor Sara Templeton

2 June 2022

Principal Advisor

Jane Davis
General Manager Infrastructure,
Planning & Regulatory Services
Tel: 941 8884

Andrew Campbell
Committee & Hearings Advisor
941 8340
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www.ccc.govt.nz

Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. If you require further information relating to any reports, please contact the person named on the report.

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<https://www.ccc.govt.nz/the-council/meetings-agendas-and-minutes/>



Developing Resilience in the 21st Century

Strategic Framework

Whiria ngā whenu o ngā papa,
honoa ki te maurua tāuiki

Bind together the strands of each mat and join
together with the seams of respect and reciprocity

Ōtautahi-Christchurch is a city of opportunity for all

Open to new ideas, new people and new ways of doing things – a city where anything is possible

Principles

Being open,
transparent and
democratically
accountable

Promoting
equity, valuing
diversity and
fostering inclusion

Taking an inter-generational approach
to sustainable development,
prioritising the social, economic
and cultural wellbeing of
people and communities
and the quality of the
environment, now
and into the
future

Building on the
relationship with
Te Rūnanga o Ngāi Tahu
and the Te Hononga-Council
Papatipu Rūnanga partnership,
reflecting mutual understanding
and respect

Actively collaborating and
co-operating with other
local, regional
and national
organisations

Ensuring
the diversity
and interests of
our communities
across the city and the
district are reflected in
decision-making

Community Outcomes

Resilient communities

Strong sense of community
Active participation in civic life
Safe and healthy communities
Celebration of our identity
through arts, culture, heritage,
sport and recreation
Valuing the voices of all cultures
and ages (including children)

Liveable city

Vibrant and thriving city centre
Sustainable suburban and
rural centres
A well connected and accessible
city promoting active and
public transport
Sufficient supply of, and
access to, a range of housing
21st century garden city
we are proud to live in

Healthy environment

Healthy water bodies
High quality drinking water
Unique landscapes and
indigenous biodiversity are
valued and stewardship
exercised
Sustainable use of resources
and minimising waste

Prosperous economy

Great place for people, business
and investment
An inclusive, equitable economy
with broad-based prosperity
for all
A productive, adaptive and
resilient economic base
Modern and robust city
infrastructure and community
facilities

Strategic Priorities

**Enabling active
and connected
communities
to own their future**

**Meeting the challenge
of climate change
through every means
available**

**Ensuring a high quality
drinking water supply
that is safe and
sustainable**

**Accelerating the
momentum
the city needs**

**Ensuring rates are
affordable and
sustainable**

Ensuring we get core business done while delivering on our Strategic Priorities and achieving our Community Outcomes

Engagement with
the community and
partners

Strategies, Plans and
Partnerships

Long Term Plan
and Annual Plan

Our service delivery
approach

Monitoring and
reporting on our
progress

THREE WATERS INFRASTRUCTURE AND ENVIRONMENT COMMITTEE OF THE WHOLE - TERMS OF REFERENCE NGĀ ĀRAHINA MAHINGA

Chair	Councillor Cotter
Deputy Chair	Councillor Mauger
Membership	The Mayor and All Councillors
Quorum	Half of the members if the number of members (including vacancies) is even, or a majority of members if the number of members (including vacancies) is odd.
Meeting Cycle	Monthly
Reports To	Council

Delegations

The Council delegates to the Three Waters Infrastructure and Environment Committee authority to monitor and make decisions on:

- Water supply, conservation and quality (*for the avoidance of doubt the Council retains its authority on matters relating to the Governments Water Reform*).
- Receive regular updates from the Water Management Zone Committees.
- Stormwater drainage including the Land Drainage Recovery Programme.
- Natural environment, including the waterways, aquifers, ecology and conservation of resources.
- Natural hazards protection, including flood protection and river control.
- Solid waste collection, processing and disposal including landfills.
- Sewage collection, treatment and disposal.
- Applications to the Biodiversity Fund.

Bylaws

The Council delegates to the Committee authority to:

- Oversee the development of new bylaws within the Committee's terms of reference, up to and including adopting draft bylaws for consultation.
- Oversee the review of the following bylaws, up to and including adopting draft bylaws for consultation.
 - Trade Waste Bylaw 2015
 - Waste Management Bylaw 2009
 - Water Supply, Wastewater and Stormwater Bylaw 2014

Submissions

- The Council delegates to the Committee authority:
- To consider and approve draft submissions on behalf of the Council on topics within its terms of reference. Where the timing of a consultation does not allow for consideration of a draft submission by the Council or relevant Committee, that the draft submission can be considered and approved on behalf of the Council.

Limitations

- This Committee does not have the authority to set project budgets, identify preferred suppliers or award contracts. These powers remain with the Finance and Performance Committee.
- The general delegations to this Committee exclude any specific decision-making powers that are delegated to a Community Board, another Committee of Council or Joint Committee. Delegations to staff are set out in the delegations register.
- The Council retains the authority to adopt policies, strategies and bylaws.
- The Council retains its authority on matters relating to the Government's Water Reform.
- The following matters are prohibited from being subdelegated in accordance with LGA 2002 Schedule 7 Clause 32(1) :
 - the power to make a rate; or
 - the power to make a bylaw; or
 - the power to borrow money, or purchase or dispose of assets, other than in accordance with the long-term plan; or
 - the power to adopt a long-term plan, annual plan, or annual report; or
 - the power to appoint a chief executive; or
 - the power to adopt policies required to be adopted and consulted on under this Act in association with the long-term plan or developed for the purpose of the local governance statement; or
 - the power to adopt a remuneration and employment policy.

Chairperson may refer urgent matters to the Council

As may be necessary from time to time, the Committee Chairperson is authorised to refer urgent matters to the Council for decision, where this Committee would ordinarily have considered the matter. In order to exercise this authority:

- The Committee Advisor must inform the Chairperson in writing the reasons why the referral is necessary.
- The Chairperson must then respond to the Committee Advisor in writing with their decision.
- If the Chairperson agrees to refer the report to the Council, the Council may then assume decision-making authority for that specific report.

Part A	Matters Requiring a Council Decision
Part B	Reports for Information
Part C	Decisions Under Delegation

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Karakia Whakamutunga

Karakia Tīmatanga

1. Apologies Ngā Whakapāha

At the close of the agenda no apologies had been received.

2. Declarations of Interest Ngā Whakapuaki Aronga

Members are reminded of the need to be vigilant and 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.

3. Confirmation of Previous Minutes Te Whakaāe o te hui o mua

That the minutes of the Three Waters Infrastructure and Environment Committee meeting held on [Wednesday, 6 April 2022](#) be confirmed (refer page 7).

4. Public Forum Te Huinga Whānui

A period of up to 30 minutes will be available for people to speak for up to five minutes on any issue that is not the subject of a separate hearings process.

There were no public forum requests received at the time the agenda was prepared

5. Deputations by Appointment Ngā Huinga Whakaritenga

Deputations may be heard on a matter or matters covered by a report on this agenda and approved by the Chairperson.

There were no deputations by appointment at the time the agenda was prepared.

6. Presentation of Petitions Ngā Pākikitanga

There were no petitions received at the time the agenda was prepared.

Three Waters Infrastructure and Environment Committee OPEN MINUTES

Date: Wednesday 6 April 2022
Time: 9.33am
Venue: via audio/visual link

Present

Chairperson
Deputy Chairperson
Members

Councillor Pauline Cotter
Councillor Phil Mauger
Mayor Lianne Dalziel
Deputy Mayor Andrew Turner
Councillor Jimmy Chen
Councillor Catherine Chu
Councillor Melanie Coker
Councillor Mike Davidson
Councillor Celeste Donovan
Councillor Anne Galloway
Councillor James Gough
Councillor Yani Johanson
Councillor Aaron Keown
Councillor Sam MacDonald
Councillor Jake McLellan
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Part A Matters Requiring a Council Decision

Part B Reports for Information

Part C Decisions Under Delegation

Karakia Tīmatanga: Given by Councillor Templeton.

The agenda was dealt with in the following order.

1. Apologies Ngā Whakapāha

Part C

Committee Resolved TWIA/2022/00008

That the apologies received from Councillors Galloway and Keown for lateness be accepted.

Councillor Cotter/Deputy Mayor

Carried

2. Declarations of Interest Ngā Whakapuaki Aronga

Part B

There were no declarations of interest recorded.

3. Confirmation of Previous Minutes Te Whakaāe o te hui o mua

Part C

Committee Resolved TWIA/2022/00009

That the minutes of the Three Waters Infrastructure and Environment Committee meeting held on Wednesday, 9 March 2022 be confirmed.

Councillor Scandrett/Councillor Chen

Carried

4. Public Forum Te Huinga Whānui

Part B

Vickie Walker spoke to the Committee about the effects that the odour from the Wastewater Treatment Plant is having on her health. Staff apologised regarding the odour and explained that the odour is caused by hydrogen sulphide, which while odorous is not toxic. Staff are also looking to improve communications and putting together videos to show the improvements being made at the plant.

Councillor Keown joined the meeting at 9.35am during Item 4.

5. Deputations by Appointment Ngā Huinga Whakaritenga

Part B

There were no deputations by appointment.

6. Presentation of Petitions Ngā Pākikitanga

There was no presentation of petitions.

7. Christchurch West Melton Water Management Zone Committee Minutes - 24 February 2022

Committee Resolved TWIA/2022/00010

That the Three Waters Infrastructure and Environment Committee receives the Minutes from the Christchurch West Melton Water Management Zone Committee meeting held 24 February 2022.

Councillor Keown/Deputy Mayor

Carried

8. Waimakariri Water Management Zone Committee Minutes - 1 November 2021

Committee Comment

1. The Minutes from the Waimakariri Water Management Zone Committee meeting held on 1 November 2021 were tabled during the meeting (**Attachment A**).

Committee Resolved TWIA/2022/00011

That the Three Waters Infrastructure and Environment Committee receives the Minutes from the Waimakariri Water Management Zone Committee meeting held 1 November 2021.

Councillor Keown/Deputy Mayor

Carried

Attachments

- A Waimakariri Zone Committee Minutes - 1 November 2021

9. Duvauchelle Wastewater - Options for Public Consultation

Committee Comment

1. Mike Bourke, Senior Technician Water & Waste Planning, presented the options that staff had investigated for the Duvauchelle Wastewater Treatment and Disposal Renewal Scheme (**Attachment A**).
2. During the staff presentation, Councillor Cotter tabled a letter from Rik Tainui, Chairperson of Ōnuku Rūnanga Incorporated Society, in support of the two options recommended by Staff (**Attachment B**) and a memo on the Duvauchelles Wastewater Strategic Approach (**Attachment C**).
3. Michele McDonald, Team Leader Asset Planning WWW, presented on the alternate scope proposal for Akaroa and Duvauchelles wastewater disposal to Birdlings Flat (**Attachment D**).

Committee Resolved TWIA/2022/00012

Officer Recommendation accepted without change

Part C

That the Three Waters Infrastructure and Environment Committee:

1. Confirm that the two recommended options: A4 Spray irrigate existing 18 hole golf course with drip irrigation to trees in winter (preferred option), and B3 Drip irrigate planted margins and trees on the golf course be taken forward for public consultation.
2. Appoint a hearings panel be to hear submissions.

The division was declared **carried** by 12 votes to 4 votes the voting being as follows:

For: Councillor Cotter, Mayor Dalziel, Deputy Mayor Turner, Councillor Chen, Councillor Chu, Councillor Coker, Councillor Davidson, Councillor Donovan, Councillor Johanson, Councillor McLellan, Councillor Scandrett and Councillor Templeton

Against: Councillor Mauger, Councillor Gough, Councillor Keown and Councillor MacDonald

Councillor Scandrett/Councillor Davidson

Carried

Attachments

- A Staff Presentation - Options for Public Consultation on Duvauchelle Wastewater Treatment and Disposal Renewal Scheme
- B Letter from the Chairperson of Ōnuku Rūnanga Incorporated Society
- C Memo on the Duvauchelles Wastewater Strategic Approach
- D Staff Presentation - Alternate Scope Proposal for Akaroa and Duvauchelles Wastewater Disposal to Birdlings Flat

10. Resource Recovery Bi-monthly Report January/February 2022

Committee Comment

1. Ross Trotter, Manager Resource Recovery, presented on the Resource Recovery Bi-monthly report for January/February 2022.

Committee Resolved TWIA/2022/00013

Officer recommendations accepted without change

Part C

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the Resource Recovery Bi-monthly Report January/February 2022 Report

Councillor Templeton/Councillor Chen

Carried

Councillor Galloway joined the meeting at 10.27am during Item 10.

11. Implications of the Health (Fluoridation of Drinking Water) Amendment Act 2021 for Christchurch water supplies

Committee Comment

1. Michele McDonald, Team Leader Asset Planning WWW, presented on the implications of the Health (Fluoridation of Drinking Water) Amendment Act 2021 for Christchurch water supplies (**Attachment A**).
2. The Committee requested that staff provide a detailed memo on the specific steps that the Health (Fluoridation of Drinking Water) Amendment Act 2021 requires regarding the decision to fluoridate and specific advice on the sequencing of what Council has to do and when.
3. The Committee requested that Staff provide some more detailed advice regarding consultation around budget changes if fluoridation of water supply is Central government mandated and not funded by the Crown.
4. The Mayor noted that any invite to the Director General of Health would only be made once additional advice has been received regarding the directive, but she will keep Councillors up to date. The timing of this invite was left with the Mayor.

Officer Recommendations Ngā Tūtohu

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in this Report as well as the supporting information in the Technical Memorandum entitled Fluoride Implementation – Preliminary Cost Estimate Update.

Committee Resolved TWIA/2022/00014

Part C

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in this Report as well as the supporting information in the Technical Memorandum entitled Fluoride Implementation – Preliminary Cost Estimate Update.
2. Note Council is investing in a drinking water improvement programme and has significant funds on budget in the Long Term Plan, but has no funds budgeted for fluoridation capital or operational costs.
3. Note that fluoridation is a national health issue and therefore if we are directed to fluoridate our drinking water supply, agree the Crown should fund all costs.
4. Instruct the Chief Executive to write to the Director General of Health requesting that before any decision is taken to instruct this Council to fluoridate its water supply, the Council sees all the alternative options considered to fluoridate children's teeth.
5. Request the Mayor invite the Director General of Health to meet and discuss the Christchurch situation.

Councillor Cotter/Mayor

Carried

Attachments

- A Staff Presentation - Implications of the Health (Fluoridation of Drinking Water) Amendment Act 2021 for Christchurch water supplies

Karakia Whakamutunga: Given by Councillor Templeton.

Meeting concluded at 11.24am.

CONFIRMED THIS 8th DAY OF JUNE 2022.

COUNCILLOR PAULINE COTTER
CHAIRPERSON

7. Banks Peninsula Water Management Zone Committee Minutes - 15 March 2022

Reference / Te Tohutoro: 22/615040

Report of / Te Pou
Matua:

Liz Ryley, Hearings & Committee Support – liz.ryley@ccc.govt.nz

General Manager /
Pouwhakarae:

Lynn McClelland, Assistant Chief Executive, Strategic Policy & Performance


1. Purpose of Report Te Pūtake Pūrongo

The Banks Peninsula Water Management Zone Committee held a meeting on 15 March 2022 and is circulating the Minutes recorded to the Three Waters Infrastructure and Environment Committee for its information.

2. Recommendation to Three Waters Infrastructure and Environment Committee

That the Three Waters Infrastructure and Environment Committee receives the Minutes from the Banks Peninsula Water Management Zone Committee meeting held 15 March 2022.

Attachments Ngā Tāpirihanga

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Signatories / Ngā Kaiwaitohu

Author	Liz Ryley - Committee and Hearings Advisor
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Banks Peninsula Water Management Zone Committee OPEN MINUTES

Date: Tuesday 15 March 2022
Time: 4.06pm
Venue: Via Audio-Video Link

Present

Chairperson	Gina Waibl - Community Representative
Deputy Chairperson	Aurora Smith - Te Hapū o Ngāti Wheke/Rapaki
Members	Trudi Bishop - Community Representative
	Tori Peden - Christchurch City Council Elected Representative
	Lan Pham - Councillor Environment Canterbury
	Rik Tainui - Te Rūnanga o Ōnuku
	Jalessa Panirau - Te Rūnanga o Wairewa
	Erana Riddell - ECan Youth Rōpū

In Attendance: ECan – Gill Jenkins, Martin Rutledge and Meredith MacDonald; Whaka Ora – Karen Banwell

Zone Facilitator
Shelley Washington
Tel: 027 294 5219
Environment Canterbury

Committee Advisor
Liz Ryley
Tel: 941 8153
Christchurch City Council

Principal Advisor
Marion Schoenfeld
Senior Surface Water Planner
Tel: 941 5079
Christchurch City Council

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www.ecan.govt.nz/news-and-notice/minutes/Pages/Default.aspx

**Banks Peninsula Water Management Zone
Committee
15 March 2022**



The meeting was opened with a Karakia Timatanga.

The agenda was dealt with in the following order.

1. Apologies

Committee Resolved BPZC/2022/00001

That the apologies received from George Howden, Ben Manson, Elisa Knight and Deputy Mayor Andrew Turner, be accepted.

Gina Waibl/Tori Peden

Carried

2. Declarations of Interest

There were no declarations of interest recorded.

3. Updates from Banks Peninsula Zone Committee Members

Gina noted the interesting get-together the Committee had in February 2021 at Manaaki Mai, Purau.

A round of introductions was undertaken by Committee members who outlined the length of time they had been involved with the Committee, and their areas of interest. They welcomed Jaleesa Panirau, Wairewa Rūnanga representative, onto the Zone Committee.

6. Deputations by Appointment

There were no deputations by appointment.

7. Identification of Urgent Items

No urgent items were identified.

8. Identification of General Public Contributions

There were no general public contributions.

9. 2022 Election of Chair and Deputy Chair, and Committee Meeting Dates

Aurora Smith was thanked for her work as Deputy Chair, as Aurora had indicated she would stand down from the role.

Regarding the 2022 meeting dates, the workshop that had been initially scheduled on 19 April was subsequently moved to 12 April 2022.

Committee Resolved BPZC/2022/00002

That the Banks Peninsula Water Management Zone Committee confirms:

1. The election of the Chair and Deputy Chair:

**Banks Peninsula Water Management Zone
Committee
15 March 2022**



Chair

Aurora Smith nominated Gina Waibl to the position of Chair, seconded by Trudi Bishop.

There being no other nominations, Gina Waibl was elected Chair.

Deputy Chair

Gina Waibl nominated Trudi Bishop to the position of Deputy Chair, seconded by Cr Lan Pham

There being no other nominations, Trudi Bishop was elected Deputy Chair.

2. Meet in 2022 between 4-6.45pm on the following Tuesdays:

- a. 15 March
- b. 12 April - (workshop only)
- c. 17 May
- d. 21 June - (workshop only)
- e. 16 August
- f. 20 September
- g. 18 October – (workshop only)
- h. 15 November – (workshop only).

Gina Waibl/Lan Pham

Carried

**10. Canterbury Water Management Strategy Action Plan Budget 2021-22
Allocation Recommendations**

Committee Comments

Discussion was held about the possibilities for allocation for the remaining Canterbury Water Management Strategy Action Plan Budget for 2021-22. Funding of \$5,500 is available to projects. Options suggested included; Te Ahu Pātiki, Okuti River Wetland Revitalisation and Eastern Bays fencing. Also the reallocation of \$2,500 that will not be spent at this time on Wainui wastewater engagement, due to the regional campaign not being developed by then and \$2,000 that will not be spent on climate change engagement due to not being ready to engage at this time.

Additional suggestions were noted as:

- Committee members should encourage groups and people with good projects to apply for the funding.
- Each of the recipients should receive contact by a Committee member – Zone Facilitator, Shelley Washington, will email the list of recipients to members to volunteer to be their Committee liaison person.
- Shelley will invite the landowners to provide an update to a meeting on their projects once they are well progressed.

**Banks Peninsula Water Management Zone
Committee
15 March 2022**



Committee Resolved BPZC/2022/00003

That the Banks Peninsula Water Management Zone Committee determines the budget allocation to recommend to Environment Canterbury, as:

Te Ahu Pātiki Trust - \$10,000 for the ecological and cultural assessments.

Gina Waibl/Trudi Bishop

Carried

10a Update Soil Conservation

Committee comment

Meredith MacDonald, ECan, provided an update following the Committee's February field trip, about ECan's Soil Conservation Programme that has been in place for three years. The Ministry of Primary Industries (MPI), ECan and farmers fund space planting, fencing and native plants with subsidies regarding land use capability mapping and soil conservation. This is a tool to engage in a different way with six monthly targets. The programme is currently undertaken in North Canterbury but could be considered on Banks Peninsula.

Discussion was held about erosion types on Banks Peninsula and what tools might be most effective for the area. Shelley advised she would distribute an ECan erosion report on Banks Peninsula to members.

Meredith advised that funding was not available at this time, but could be applied to from MPI in the next financial year, from June 2023.

Feedback on what would work for Banks Peninsula would be helpful. The Committee will ask George and Ben to gather information from Banks Peninsula landowners, to be combined with technical information for the funding application.

The Committee agreed it would like to support the programme and be keen to investigate further addressing soil erosion, and consider other funding sources also in this regard.

Committee Resolved BPZC/2022/00004

That the Banks Peninsula Water Management Zone Committee:

1. Receive the update by Meredith MacDonald, ECan about soil conservation funding for areas on Banks Peninsula.
2. Support Environment Canterbury's proposal regarding a potential funding application relating to the soil conservation project for the Zone Committee on Banks Peninsula.

Lan Pham/Aurora Smith

Carried

**Banks Peninsula Water Management Zone
Committee
15 March 2022**



**4. Confirmation of Previous Minutes
Committee Resolved BPZC/2022/00005**

That the minutes of the Banks Peninsula Water Management Zone Committee meeting held on Tuesday, 16 November 2021 be confirmed.

Rik Tainui/Tori Peden

Carried

5. Matters Arising from the Minutes
None noted.

11 Progress Updates on Action Plan

Stream Care Information Cards – the information cards inform people about how to care for streams that pass through their properties (rural properties mainly). The topics are: flooding, fish passage, mahinga kai, and bank care. The data outlined in the cards is required to be pulled together into one online area that is easily accessible to the public. This will continue to be worked on and an update provided when further information is available.

Funding for Eastern Bays erosion – Gill Jenkins advised that in response to this some landowners had applied to ECan for funding, e.g. regarding fencing a covenant.

Resource Consents - Jaleesa Panirau advised that last week she had met at the Christchurch City Council about wastewater resource consents and not wanting residents to be punished for their consents expiring. We will hear from the Council regarding a date for a community hui. Marion explained the need to socialise risk screening, particularly with Rūnanga. She asked for information from members who were aware of water surges on Banks Peninsula from a recent volcano eruption to provide her with that information.

Gina Waibl -

- Working with other organisations on building links, e.g. Banks Peninsula Conservation Trust
- Working with landowners about the needs of farmers
- Water quantity information continues – possibly community consultation on Banks Peninsula about how the water looks in the future.

Councillor Pham -

- Advised she would revisit her actions and liaise with Rik Tainui about them.

Aurora Smith -

- Advised that the project for Wairewa bank stabilisation may be something Jaleesa would like to be involved in.

**Banks Peninsula Water Management Zone
Committee
15 March 2022**



Rik Tainui -

- Noted that Martin Rutledge had visited Ōnuku Marae about the stream above the Marae, regarding protection of Ōnuku's water source.
- Met with Lynn McClelland, Assistant Chief Executive Strategic Policy and Performance, regarding the Long Term Plan and a connection to the Akaroa water supply.

Erana Riddell -

- Advised she would be relooking at what actions she is supporting relating to timing.
- Noted the need to keep Runaka members safe with so much happening - advise if you need anything from the Committee.

Tori Peden -

- There is Community Board support for Okains Bay and Koukourarata with a submission regarding connection to the water supply, so we will add Ōnuku to the submission.

Trudi Bishop -

- Advised she will be refocussing on the actions this year with climate change, e.g. fish passage, erosion etc to underpin everything we are doing.

The meeting was closed with a Karakia/Whakamutunga.

Meeting concluded at 6.10pm.

CONFIRMED THIS 17TH DAY OF MAY 2022

**GINA WAIBL
CHAIRPERSON**

8. Banks Peninsula Water Management Zone Committee Minutes - 17 May 2022

Reference / Te Tohutoro: 22/649327

Report of / Te Pou
Matua:

Liz Ryley, Committee & Hearings Advisor – liz.ryley@ccc.govt.nz

General Manager /
Pouwhakarae:

Lynn McClelland, Assistant Chief Executive, Strategic Policy & Performance – lynn.mcclelland@ccc.govt.nz


1. Purpose of Report Te Pūtake Pūrongo

The Banks Peninsula Water Management Zone Committee held a meeting on 17 May 2022 and is circulating the Minutes recorded to the Three Waters Infrastructure and Environment Committee for its information.

2. Recommendation to Three Waters Infrastructure and Environment Committee

That the Three Waters Infrastructure and Environment Committee receives the Minutes from the Banks Peninsula Water Management Zone Committee meeting held 17 May 2022.

Attachments Ngā Tāpirihanga

No.	Title	Page
A 	Minutes Banks Peninsula Water Management Zone Committee - 17 May 2022	22

Signatories / Ngā Kaiwaitohu

Author	Liz Ryley - Committee and Hearings Advisor
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Banks Peninsula Water Management Zone Committee OPEN MINUTES

Date: Tuesday 17 May 2022
Time: 4.08pm
Venue: Lyttelton/Mt Herbert Boardroom,
25 Canterbury Street, Lyttelton

Present

Chairperson	Gina Waibl - Community Representative
Deputy Chairperson	Trudi Bishop - Community Representative
Members	George Howden - Community Representative
	Elisa Knight - Community Representative
	Ben Manson - Community Representative
	Tori Peden - Christchurch City Council Elected Representative
	Lan Pham - Councillor Environment Canterbury
	Aurora Smith - Te Hapū o Ngāti Wheke/Rapaki

In Attendance: ECan – Gill Jenkins. Sarah Helleur and Will Todhunter; Karen Banwell – Whaka Ora; and John Benn, DOC

Zone Facilitator
Shelley Washington
Tel: 027 294 5219
Environment Canterbury

Committee Advisor
Liz Ryley
Tel: 941 8153
Christchurch City Council

Principal Advisor
Marion Schoenfeld
Senior Surface Water Planner
Tel: 941 5079
Christchurch City Council

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www.ecan.govt.nz/news-and-notice/minutes/Pages/Default.aspx

**Banks Peninsula Water Management Zone
Committee
17 May 2022**



The meeting was opened with a Karakia Tīmatanga.

The agenda was dealt with in the following order.

1. Apologies

Committee Resolved BPZC/2022/00006

That the apologies received from Erana Riddell, Rik Tainui and Deputy Mayor Andrew Turner, be accepted.

Gina Waibl/Trudi Bishop

Carried

2. Declarations of Interest

There were no declarations of interest recorded.

3. Updates from Banks Peninsula Zone Committee Members

Members highlighted events/meetings/issues relevant to the Zone Committee, including information on:

- planting at Le Bons Bay
- fencing of stock out of waterways at Pigeon Bay
- meetings regarding the consolidation of the Committee's Action Plan
- applications open to the end of May 2022 for the Zone Committee refresh process
- placing the stream care leaflets (referred to in Item 10 Facilitator's Update) onto the Zone Committee's page on ECan's website (link: <https://www.ecan.govt.nz/your-region/your-environment/water/whats-happening-in-my-water-zone/>)
- article about challenges faced on the Manuharekia River, Central Otago (link: <https://interactives.stuff.co.nz/2022/03/manuharekia-river-more-or-less/>)
- thanks to ECan staff for organising a hui about wastewater issues at Birdlings Flat.

9. Presentations to the Banks Peninsula Zone Committee

1.1 Helen Tullett – Carbon Coach, Project Lyttelton

Helen presented to the Committee about her role as a Carbon Coach for Project Lyttelton. The role is supported by the Christchurch City Council via a grant from the Sustainability Fund that was set up last year to assist community action on climate change. The role helps households, community groups and businesses in Lyttelton to reduce their carbon footprint.

This initiative by Project Lyttelton is a first of its kind in New Zealand. It is a one-year pilot programme. Helen advised she will work with households and hold workshops and events in conjunction with other organisations.

Helen looks at energy, food, transport, water and waste to help people understand how to measure and reduce usage across these areas.

**Banks Peninsula Water Management Zone
Committee
17 May 2022**



Helen is available to contact at communitycarboncoach@lyttelton.net.nz for further information, or by visiting the Lyttelton Community Carbon Coach Facebook page - <https://www.projectlyttelton.org/communitycarbonproject>

It was noted this initial role is a pilot, with the potential to be replicated across other areas. Discussion was held about Project Lyttelton working with ECan regarding bus transport to and from Lyttelton for residents.

The meeting heard the Deputation at this time relating to Item 6 about forestry harvesting, then returned to the presentation from Professor Sally Gaw

1.2 Professor Sally Gaw – Microplastics in Water

Professor Sally Gaw, Director of Environmental Science at the University of Canterbury, provided a presentation, titled Microplastics and Stormwater. The detail she covered is available in the Minutes Attachments. It included information about how much plastic is produced, its environmental and health impacts, international evidence, and current projects such as Kaiwharawhara Stream (Wellington) with NIWA and ESR.

Discussion followed the presentation and Sally responded to questions from members. Topics covered were about plastic reduction and disposal, street clean-ups, good housekeeping around building sites, and the effects of microplastics on mahinga kai.

The Committee will consider being able to provide information about microplastics and effects on mahinga kai with the stormwater trailer.

See the Minutes Attachments for meeting presentations.

Committee Resolved BPZC/2022/00007

That the Banks Peninsula Water Management Zone Committee:

1. Receive the information in the presentations from:
 - a. Helen Tullett, Carbon Coach, Project Lyttelton; and
 - b. Sally Gaw, Director of Environmental Science, School of Physical & Chemical Sciences, University of Canterbury.

Trudi Bishop/Elisa Knight

Carried

Attachments

- A Community Carbon Coach Helen Tullett
- B Microplastics & Stormwater Sally Gaw

6. Deputations by Appointment

6.1 Charteris Bay Residents' Inc Society

David Wensley and Ian Lloyd spoke on behalf of the Charteris Bay Residents' Incorporated Society regarding the Society's concerns about forest harvesting on Moepuku Peninsula, Whakaraupō/Lyttelton.

**Banks Peninsula Water Management Zone
Committee
17 May 2022**



David outlined information about the features of the area, harvest challenges with the trees being right down to the coast edge and high erosion risk soils, and his view of the positions of both ECan and Charteris Bay residents about this. Ensuring best practice is implemented and an operation plan is checked and is relevant to the area, are important elements.

Residents want to ensure that significant damage is not caused in Lyttelton Harbour, similar to that caused to Loudon Farm in a previous flooding event. David queried how the Moepuku Peninsula harvest fits with the Whaka-Ora Healthy Harbour Plan.

Ian talked about his long association with forestry and harvesting, and his past role on the Zone Committee. He provided brief background points about other events, and noted the National Environmental Standards for Plantation Forestry (NES-PF) that came into effect on 1 May 2018. He suggested obtaining a copy of a report that compared the NES-PF against the Land & Water Regional Plan regulations. Ian advised he was not against the current harvesting but held concerns about potential windthrow from harvesting only part of the forest, removal of the coastal fringe trees without sediment and debris entering the harbour, what will happen post harvest and replanting, and that there is no requirement for a resource consent for this activity.

Gill Jenkins advised these were shared concerns. ECan are partners in the Healthy Harbour Plan and are bound by legislation in this regard. Gill suggested a resource consent was being considered by the Christchurch City Council due to this being a significant coastal area. There is an obligation for this area to be replanted.

George Howden departed at 5.35pm.

Lengthy discussion followed the presentation about forestry monitoring and requesting clarification about these matters from both ECan and CCC.

See the Minutes Attachments for David and Ian's presentations.

Committee Resolved BPZC/2022/00008

Part C

That the Banks Peninsula Water Management Zone Committee agrees to:

1. Write to Environment Canterbury seeking clarification on what is required regarding forestry harvesting on erosion prone land, particularly around coastal areas and streams on Banks Peninsula. Also, to request a copy of a report that compares the National Environmental Standards for Plantation Forestry regulations to the Canterbury Land & Water Regional Plan regulations.
2. Write to the Christchurch City Council seeking clarification about what would be required/assessed under a coastal landscape consent for forestry harvesting, and planned in terms of harvesting and replanting for the paper road that borders the coastline around Moepuku.
3. Thanks Ian Lloyd and David Wensley for their deputation on behalf of the Charteris Bay Residents' Incorporated Society.

**Banks Peninsula Water Management Zone
Committee
17 May 2022**



Lan Pham/Aurora Smith

Carried

Attachments

A Moepuku Peninsula Harvest - David Wensley and Ian Lloyd

Councillor Lan Pham departed at 6pm.

7. Identification of Urgent Items

Nil.

8. Identification of General Public Contributions

Nil.

4. Confirmation of Previous Minutes

Committee Resolved BPZC/2022/00009

That the minutes of the Banks Peninsula Water Management Zone Committee meeting held on Tuesday, 15 March 2022 be confirmed with a minor amendment at page 10.

Gina Waibl/Ben Manson

Carried

5. Matters Arising from the Minutes

Will Todhunter advised he would be meeting with landowners and discussing covenants that might tie into the next financial year's Canterbury Water Management Strategy Action Plan funding.

10. Facilitator's Update

Members noted information in Shelley Washington's report. This related to the:

- Canterbury Water Management Strategy Refresh process for appointment of new Zone Committee members.
- Project Lyttelton De-plastic event, on 2 July at the Lyttelton Community Centre to be discussed further by the Committee at its next meeting.
- Stream Care Leaflets – discussion that the leaflets should be placed onto the Zone Committee page on ECan's website and sent out with a Rates Notice.

The meeting noted that World Fish Migration Day is on Saturday 21 May and information about this would be on display at Tūranga Library, Christchurch Central.

Committee Resolved BPZC/2022/00010

That the Banks Peninsula Water Management Zone Committee:

1. Receive the information in the Facilitator's Update report.

**Banks Peninsula Water Management Zone
Committee
17 May 2022**



Gina Waibl/Trudi Bishop

Carried

This was the final meeting for the Principal Advisor, Marion Schoenfeld. Marion was thanked for the contribution and knowledge she had provided to the Zone Committee.

The meeting closed with a Karakia/Whakamutunga.

Meeting concluded at 7pm.

CONFIRMED THIS 16TH DAY OF AUGUST 2022

**GINA WAIBL
CHAIRPERSON**

UNCONFIRMED

Item 8

Attachment A

9. Christchurch West Melton Water Management Zone Committee Minutes - 28 April 2022

Reference / Te Tohutoro: 22/615167

Report of / Te Pou
Matua:

Liz Ryley, Committee & Hearings Advisor – liz.ryley@ccc.govt.nz

General Manager /
Pouwhakarae:

Lynn McClelland, Assistant Chief Executive, Strategic Policy &
Performance


1. Purpose of Report Te Pūtake Pūrongo

The Christchurch West Melton Water Management Zone Committee held a meeting on 28 April 2022 and is circulating the Minutes recorded to the Three Waters Infrastructure and Environment Committee for its information.

2. Recommendation to Three Waters Infrastructure and Environment Committee

That the Three Waters Infrastructure and Environment Committee receives the Minutes from the Christchurch West Melton Water Management Zone Committee meeting held 28 April 2022.

Attachments Ngā Tāpirihanga

No.	Title	Page
A 	Minutes Christchurch West Melton Water Management Zone Committee - 28 April 2022	30

Signatories / Ngā Kaiwaitohu

Author	Liz Ryley - Committee and Hearings Advisor
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Christchurch West Melton Water Management Zone Committee OPEN MINUTES

Date: Thursday 28 April 2022
Time: 6.04pm
Venue: Via audio/visual link

Present

Chairperson
Members

Annabelle Hasselman - Community Representative
Helen Rutter - Community Representative
Brynlea Stocks - Community Representative
Emma Norrish - Christchurch City Council Elected Representative
Councillor Phil Clearwater - Councillor Environment Canterbury
Councillor Sophie McInnes - Selwyn District Council
Arapata Reuben – Te Ngāi Tūāhuriri Rūnanga
Oscar Bloom - ECan Youth Rōpū

Zone Facilitator
Shelley Washington
Tel: 027 294 5219
Environment Canterbury

Principal Advisor
Diane Shelander
Senior Policy Analyst
Tel: 941 8304
Christchurch City Council

Committee Advisor
Liz Ryley
Tel: 941 8153
Christchurch City Council

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Christchurch West Melton Water
Management Zone Committee
28 April 2022



The meeting was opened by Arapata Reuben with a Karakia/Timatanga.

The agenda was dealt with in the following order.

1. Apologies

Committee Resolved CWZC/2022/00007

That the apologies received from Mike Patchett and Shona Sluys be accepted.

Annabelle Hasselman/Sophie McInnes

Carried

2. Declarations of Interest

There were no declarations of interest recorded.

3. Confirmation of Previous Minutes

Committee Resolved CWZC/2022/00008

That the minutes of the Christchurch West Melton Water Management Zone Committee meeting held on Thursday, 24 February 2022 be confirmed.

Brynlea Stocks/Phil Clearwater

Carried

4. Matters Arising from the Minutes

Correspondence from Hon Kiri Allan, Associate Minister for the Environment addressed to the Mayor of CCC and Chair of ECan, about the management of urban contaminants in waterways, was tabled at the meeting (refer Minutes Attachment). This was a response to queries by CCC and ECan to the Minister about the development of national measures and industry standards to better manage urban contaminants, such as copper and zinc.

Following discussion agreement was reached by members about the next steps to aide their follow up on the matter.

Committee Resolved CWZC/2022/00009

That the Christchurch West Melton Water Management Zone Committee:

1. Agree to write to the ECan Chair and CCC Mayor about next steps regarding urban contaminants in waterways, including a meeting with the Ministry for the Environment and Ministry of Business, Innovation and Employment, Zone Committee members and interested water care community members, to discuss urban contaminants in Christchurch waterways, and their ecological and health impacts.
2. Seek a greater understanding of the scope and purpose of the research project, led by Waka Kotahi, and confirmation of any proposed outcomes.

Annabelle Hasselman/Helen Rutter

Carried

Christchurch West Melton Water
Management Zone Committee
28 April 2022



Correspondence from Hon Kiri Allan, Associate Minister for the Environment addressed to CCC and ECan, about the management of urban contaminants in waterways

Attachments

A Correspondence Hon Kiri Allan

5. Deputations by Appointment

There were no deputations by appointment.

6. Identification of Urgent Items

Nil.

7. Identification of General Public Contributions

John Benn, Department of Conservation, referred to the presentation at the Zone Committee's 24 February 2022 meeting, Item 10, by Paul Dickson about the Ihutai-Estuary proposal that included the Linwood paddocks. He noted that area is included in the Christchurch District Plan as a site of ecological significance.

(The link to that area of the Plan is at:

<https://districtplan.ccc.govt.nz/Images/DistrictPlanImages/Site%20of%20Ecological%20Significance/SES%20LP%2014.pdf>

8. Canterbury Water Management Strategy Action Plan Progress

The priority actions had been discussed at the Zone Committee's recent workshop, and members agreed on their areas of focus, as noted below.

Stormwater Superhero awareness campaign and Stormwater Superhero/Healthy Waterway awards

- Mike, Annabelle, Brynlea, Oscar, Phil

Community Waterways Partnership

- Mike, Annabelle, Oscar, Phil

Mahinga Kai

- Brynlea, Shona, Sophie

Groundwater

- Helen, Phil, Sophie

Other community engagement – sharing biodiversity stories, working with landowners and catchment groups, link with community boards

- Shona, Phil, Emma

Sediment, Cashmere and Port Hills working group

- Annabelle, Mike, Phil

Advocacy to councils and central government

Christchurch West Melton Water
Management Zone Committee
28 April 2022



- Annabelle, Mike, Phil

At this meeting updates were provided by members about the status of these activities, and ideas noted:

- Media and flyer documents for advertising of the Stormwater Superhero awareness campaign. Provide information on - what is lost; the effect on people. Include graphics.
- Involve schools in the advertising, to raise awareness.
- Use of the stormwater trailer, stormwater t-shirts.
- Stormwater Superhero/Healthy Waterway awards – awards template to be finalised, and an awards evening to be organised for late October 2022.
- Community Waterways Partnership – development happening of online website for information-sharing.
- Mahinga kai – gain an understanding of how much sediment was flushed from the Ōpāwaho/Heathcote River during recent heavy rain event, use of straw bales to provide spawning habitat, raupo plantings, dredging.
- Other community engagement – engage with CCC Community Boards, hold joint briefings, use of a social media page to promote for example, the awards.
- Provide plants to schools who are ready to do plantings.
- Noted two day Te Tiriti training workshops organised, that are part funded by the CWMS Action Plan Budget, as recommended by this Committee.
- Events the Zone Committee could attend with the stormwater trailer, e.g. Community volunteers day, Mother of all Cleanups.
- Sediment, Cashmere and Port Hills Working Group – waiting for a rainy day inventory following rainfall event to gather information and identify interventions – suggestions to work with Adventure Park and forestry partners.
- Zone Committee has provided its feedback to CCC on the 2022/23 Annual Plan.

Committee Resolved CWZC/2022/00010

That the Christchurch West Melton Water Management Zone Committee:

1. Receive the information in the Canterbury Water Management Strategy Action Plan Progress Report.

Oscar Bloom/Emma Norrish

Carried

Additional discussion prior to the conclusion of the meeting covered:

Canterbury Water Management Strategy Refresh – process for appointment of Zone Committee members:

- Promotion of this year's CWMS Refresh has been conducted in April 2022.
- Expressions of interest are open from Monday 2 May, and close on Monday 30 May.
- Selection workshops will be held in June 2022 with the Selection Panel recommendations of refresh appointments being presented to Councils for approval after that time.

Christchurch West Melton Water
Management Zone Committee
28 April 2022



Zone Member Resignation – the resignation of Les Wanhalla has been received. Arrangements will be made for a farewell for Les, who has been the Te Taumutu Rūnanga representative on the Committee for a number of years.

UNCONFIRMED

Christchurch West Melton Water
Management Zone Committee
28 April 2022



Arapata Reuben closed the meeting with a Karakia/Whakamutunga.

Meeting concluded at 7.36pm.

CONFIRMED THIS 30TH DAY OF JUNE 2022

ANNABELLE HASSELMAN
CHAIRPERSON

UNCONFIRMED

10. Waimakariri Zone Committee - Minutes - 31 January 2022

Reference / Te Tohutoro: 22/613714

Report of / Te Pou
Matua:

Liz Ryley, Committee & Hearings Advisor – liz.ryley@ccc.govt.nz

General Manager /
Pouwhakarae:

Jane Davis, GM Infrastructure, Planning & Regulatory Services –
jane.davis@ccc.govt.nz



1. Purpose of Report Te Pūtake Pūrongo

The Waimakariri Zone Committee held a meeting on 31 January 2022. The confirmed minutes recorded are being provided to the Three Waters Infrastructure and Environment Committee for its information.

2. Recommendation to Three Waters Infrastructure and Environment Committee

That the Three Waters Infrastructure and Environment Committee receives the Minutes from the Waimakariri Zone Committee meeting held 31 January 2022.

Attachments Ngā Tāpirihanga

No.	Title	Page
A  	Waimakariri Zone Committee - Confirmed Minutes	38

Signatories / Ngā Kaiwaitohu

Author	Liz Ryley - Committee and Hearings Advisor
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**MINUTES OF THE MEETING OF THE CANTERBURY WATER MANAGEMENT STRATEGY
WAIMAKARIRI ZONE COMMITTEE HELD IN THE COUNCIL CHAMBER AT THE RANGIORA
SERVICE CENTRE, 215 HIGH STREET, RANGIORA, ON MONDAY 31 JANUARY 2022 AT
3.30PM.**

PRESENT

Arapata Reuben (Te Ngāi Tūāhuriri Rūnanga representative and Acting Chairperson) Erin Harvie, Martha Jolly, Carolynne Latham, Wendy Main, Judith Roper-Lindsay, and Councillor Sandra Stewart (WDC Councillor).

IN ATTENDANCE

Councillor G Edge (ECan Councillor), M Bate (Kaiapoi Resident) and L Burberry (New Zealand Dairy).

G Cleary (Manager Utilities and Roding), S Allen (WDC Water Environment Advisor), A Arps (ECan Zone Manager), M Griffin (ECan CWMS Facilitation Team Leader) and T Kunkel (WDC Governance Team Leader).

KARAKIA

A Reuben provided the karakia to open the meeting.

1 BUSINESS

1.1 Apologies

Moved: A Reuben

Seconded: Councillor S Stewart

Apologies were received and sustained from Michael Blackwell, John Cooke and Councillor Megan Hands (ECan Councillor) for absence.

CARRIED

1.2 Welcome and Introductions

The Acting Chairperson welcomed all the members present.

1.3 Register of Interests

J Roper-Lindsay advised that she was no longer Director/Ecologist at JR- L Consulting Ltd. She, therefore, requested that the Register of Interests be updated accordingly.

At this time, Item 3.1 "Zone Committee Action Plan Initiatives – Recommendations" was taken. The Minutes have been recorded in the order of the Agenda.

2. OPPORTUNITY FOR THE PUBLIC TO SPEAK

2.1 M Bate – Kaiapoi Resident

M Bate showed various photos of the Kaiapoi River, noting that usually 90% of the river would be covered with aquatic life. However, it was clear from the images that there was no life in the river. He also emphasised the lack of aquatic life in Courtney Stream. M Bate remained convinced that the pesticides used in farming were poisoning the waterways.

M Bate also showed photos of the Council's Wastewater Plant in Kaiapoi, which showed rotting vegetation in the treatment ponds and the effects of chemical spraying on the edges of the ponds. He noted that the wastewater plant needed to

be better maintained to guard against the spread of avian botulism. M Bate also tabled photos of the oil that spilt in the Kaiapoi River due to the fire on 30 January 2022 at Sutton Tools NZ in Kaiapoi.

In conclusion, M Bate explained that the continued encroachment on Braded Rivers would cause problems with flooding and the spreading of toxic algae in future. He also tabled a newspaper article about climate change causing water temperatures to rise, which would trigger toxic algae blooms that was killing shellfish at Kaikoura. M Bates was requested to forward the newspaper article to M Griffin for circulation to members.

A Reuben commented that he was keen to secure funding to conduct testing on the sediment in the Cam River in a bid to understand why slick was present in the river during high tide. Until the toxins captured in the river sediment have been removed, no aquatic life would thrive in the rivers.

In response to questions, M Bate advised that he did not have information on the level of pesticides in the Kaiapoi River. C Latham commented that tests done approximately five years ago indicated that the pesticide levels in the river were non-lethal. However, this information seemed to be outdated.

J Roper-Lindsay requested that the CWMS Waimakariri Zone Committee be updated on the work Environment Canterbury (ECan) and National Institute of Water and Atmospheric Research (NIWA) was doing to ascertain why aquatic life in New Zealand waterways was declining.

J Roper-Lindsay questioned why the Council had sprayed so close to the edges of the treatment ponds at the wastewater treatment plant. S Allen explained that there were significant berm areas in the plan that the Council did not spray. She highlighted the various operational reasons for chemical spraying in other areas of the plant, such as halting the spread of avian botulism and stopping willow establishing. G Cleary noted that the Council was very aware that the wastewater treatment plant included a wetland and was therefore careful when spraying at the plant. S Allen undertook to follow up on the matter.

3. **REPORTS**

3.1 **Zone Committee Action Plan Initiatives – Recommendations – M Griffin (CWMS Facilitator)**

M Griffin introduced several initiatives that the CWMS Waimakariri Zone Committee could consider supporting using the Waimakariri Zone Committee Action Plan Budget established in the Environment Canterbury Long Term Plan 2021/31. These initiatives included:

- Taranaki Stream Inanga Spawning improvement,
- Sefton Saltwater Creek Catchment Group Monitoring Programme,
- Northbrook Stream corridor,
- Waimakariri Biodiversity Trust Establishment Programme.

M Griffin proceeded to highlight the locations and the aims of the various projects, which would be at an estimated cost of \$27,435.

C Latham expressed a concern that the CWMS Waimakariri Zone Committee was not provided with detailed budgets for the various projects. She was not comfortable recommending projects be funded with public money without members being able to ascertain what the funding would be spent on.

Subsequent to discussion, it was agreed that the CWMS Waimakariri Zone Committee would support the funding of the initiatives in principle and that

Chairperson and the Deputy Chairperson would be authorised to give final approval subject to the requested budget information being provided to their satisfaction. It was also agreed that the information would be circulated to Committee members for comment.

Moved: A Reuben

Seconded: Councillor S Stewart

THAT the CWMS Waimakariri Zone Committee:

- (a) **Supports** in principle the use of the Waimakariri Zone Committee Action Plan Budget for the initiatives listed below
- | | | |
|-------|--|-----------------|
| (i) | Taranaki Stream Inanga Spawning improvement: | \$ 8,600 |
| (ii) | Sefton Saltwater Creek Catchment Group Monitoring Programme (Year 1 of 3): | \$ 3,835 |
| (iii) | Northbrook Stream corridor (Year 1 of 2) | \$10,000 |
| (iv) | Waimakariri Biodiversity Trust Establishment Programme: | <u>\$ 5,000</u> |
| | Total: | \$27,435 |
- (b) **Requests** further budget information on the initiatives before recommending funding support using the 2021/22 Waimakariri Zone Committee Action Plan Budget.
- (c) **Agrees** that the Chairperson and the Deputy Chairperson be authorised to give final approval, subject to the requested budget information being provided to their satisfaction and after circulation of the information to members.
- (d) **Agrees** that all future requests submitted to the Committee to recommend funding from the Waimakariri Zone Committee Action Plan Budget should include detailed financial information.

CARRIED

3.2 **ESR Nitrate Sensor Field Study in Waimakariri – Update - M Griffin (CWMS Facilitator) and A Arps (Northern Zone Manager, Ecan)**

M Griffin explained that the Institute of Environmental Science and Research (ESR) was a Crown Research Institute that undertook scientific research to improve the health of freshwater and groundwater resources. The ESR had found that New Zealand's groundwater systems seemed to have reached the limit of mitigating nitrate pollution through natural dilution. Therefore, the ESR research focused on developing options to address nitrate pollution, including means to enhance denitrification of groundwater. The ESR's work in the Waimakariri District focused on the Kaiapoi catchment, particularly Silverstream.

L Burbery presented the CWMS Waimakariri Zone Committee with the findings from the ESR recent surface and groundwater nitrate monitoring in the Silverstream catchment. He highlighted the following:

- Reasons for monitoring surface water nitrate in Silverstream.
- Background on the Silverstream catchment area.
- Methods used to conduct the in-stream nitrate survey.
- Results of the surface water nitrate monitoring survey.
- Methods used monitor nitrate in groundwater on a daily basis.
- Monitoring stations set-up.
- Results obtained from the various monitoring stations.
- Conclusions and scope for future studies

Councillor S Stewart requested additional information on the Eyreton septic tank study. L Burberry explained that the study aimed to investigate wastewater contaminant transport under "real-life" use conditions. The ESR had therefore installed a septic tank, which was currently just sand-filled trench on which affluent was being sprayed without any treatment. As this was a staged approach, the next stage would entail switching on the secondary treatment of nitrates and UV filtration. L Burberry noted that the CWMS Waimakariri Zone Committee had a site visit plan of the septic tank project in the next two weeks, which would also include the Woodchip Permeable Reactive Barrier.

Moved: A Reuben

Seconded: C Latham

THAT the CWMS Waimakariri Zone Committee:

- (a) **Receives** these updates for its information and with reference to the Committee's working groups, action plan, and engagement priorities in 2022.

CARRIED

4. COMMITTEE UPDATES – M GRIFFIN (ECAN)

4.1 Proposed Plan Change 7 – Canterbury Land and Water Regional Plan

M Griffin reported that ECan was working through the content of the appeals lodged to the proposed Plan Change, were after the CWMS Waimakariri Zone Committee would be briefed on this matter.

4.2 Essential Freshwater Package – ECan Update on Freshwater Farm Plans

No discussion emanated from this point.

4.3 Zone Committee Working Groups

• Landcare Working Group

Councillor S Stewart enquired if some of the Government funding that the Waimakariri Landcare Trust received could assist the ERS in further investigating the origins of the nitrates in the Kaiapoi catchment. E Harvie agreed that the research done by the ERS was necessary, however, the Government funding that the Waimakariri Landcare Trust received was contingent on specific outcomes, and the ERS study was not included.

• Biodiversity Working Group

No discussion emanated from this point.

• Coastal Catchments Working Group

No discussion emanated from this point.

• Monitoring Working Group

No discussion emanated from this point.

4.4 **ECan Biodiversity Snapshot 2020/21**

C Latham noted that the work being done at the Ashburton River/ Hakatere in collaboration with agencies and community groups. She asked if the CWMS Waimakariri Zone Committee may have more information on the project, as it may be relevant to the work that the Committee was doing at the Ashley/ Rakahuri River. M Griffin undertook to circulate a copy of the project report to Committee members.

4.5 **WDC Land and Water Committee – 16 November 2021**

In response to a question raised by J Roper-Lindsay, S Allen acknowledged that there were various options that the Council could consider, however, the Council could at present only commit to the Instream physical works programme and rural catchment component.

4.6 **Waimakariri Zone Communications Report (November 2021 to January 2022)**

No discussion emanated from this point.

4.7 **Waimakariri Water Zone Committee Schedule and Priorities for 2022**

No discussion emanated from this point.

4.8 **Action Points from previous Zone Committee Meetings – November 2021.**

No discussion emanated from this point.

Moved: A Reuben

Seconded: J Roper-Lindsay

THAT the CWMS Waimakariri Zone Committee:

- (a) **Receives** these updates for its information, and with reference to the Committee's 2021 Work Programme and Community Engagement priorities.

CARRIED

5. **REPORT FOR INFORMATION**

5.1 **Stormwater Management from Sutton Tools Ltd – S Allen (WDC, Water Environment Advisor)**

G Cleary updated the CWMS Waimakariri Zone Committee on the fire on 30 January 2022 at Sutton Tools NZ in Kaiapoi. The Sutton Tools site discharged through the Council's drainage system and ultimately into the Kaiapoi River. Hence, while the fire was being fought at the site, there was some discharge into the Kaiapoi River. ECan had taken measures to remove the discharge from the Kaiapoi River, which included flotation booms and sucker trucks. In addition, the Council had physically plugged the stormwater drain to prevent any run-off during the anticipated rain event later in the week. The Council was cleaning out the stormwater system between the Sutton Tools site and the Kaiapoi River.

G Cleary noted that there had been some concerns about asbestos in the roof of the Sutton Tools workshop. The Council was looking into the matter, however, the current concern was about immediate neighbouring properties which may be contaminated. In addition, the Council was aware that there were probably legacy chemicals (zinc, nickel and cutting oil) and other contaminants on the site that needed to be dealt with.

Councillor S Stewart questioned if the Council was aware of the fire's impact on the surrounding wildlife. A Reuben noted that ECan's Mahinga kai Facilitator, Makarini Rupene, had visited the site early on 31 January 2022 and could not detect any impact on the wildlife as yet. G Cleary confirmed that ECan would address any questions about the possible contamination of the Kaiapoi River.

Moved: A Reuben

Seconded: Councillor S Stewart

THAT the CWMS Waimakariri Zone Committee:

- (a) **Receives** the report for information from the EDC Utilities and Roding Committee.

CARRIED

6. CONFIRMATION OF MINUTES

6.1 Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting – 1 November 2021

Moved: A Reuben

Seconded: W Main

THAT the CWMS Waimakariri Zone Committee:

- (a) **Confirms** the amended Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting, held on 1 November 2021, as a true and accurate record.

CARRIED

6.2 Matters Arising

None.

7. GENERAL BUSINESS

7.1 Discussion Document on the Ashley / Rakahuri River

Following discussions in the Workshop session held on 31 January 2022, the CWMS Waimakariri Zone Committee:

- The Committee recorded its interest in the "Discussion Document" on the Ashley Rakahuri currently being prepared by ECan under the Braided River Revival programme umbrella.
- Noted its interest in developing a "Vision" for the whole river in collaboration with the community; and
- Agreed to invite Sarah Worthington (co-ordinator/author of the Discussion Document) to meet the Committee as soon as practicable, to discuss its interests and concerns."

KARAKIA

A Reuben provided the karakia to close the meeting.

NEXT MEETING

The next meeting of the CWMS Waimakariri Water Zone Committee was scheduled for the 4 April 2022 at 3:30pm.

THERE BEING NO FURTHER BUSINESS, THE MEETING CLOSED AT 5.56 PM.

CONFIRMED



Chairperson

4 April 2022

Date

11. Three Waters Bi-monthly Report Feb - April 2022

Reference / Te Tohutoro: 22/595851

Report of / Te Pou

Matua:

Helen Beaumont, Head of Three Waters

General Manager /

Pouwhakarae:

Jane Davis, General Manager Infrastructure, Planning & Regulatory

1. Brief Summary


- 1.1 The purpose of this report is to update the Three Waters Infrastructure and Environment Committee on work occurring in the Three Waters portfolio during February – April 2022.
- 1.2 Key points in this report:
 - 1.2.1 Review of our three waters bylaws completed and the hearings panel will report back to Council in June
 - 1.2.2 High priority on continued improvements to the Christchurch Wastewater Treatment Plant and the interim recovery plan following the fire
 - 1.2.3 Update on water safety plans and compliance
 - 1.2.4 Continued high demand for planning advice given high numbers of applications for building consents and resource consents
 - 1.2.5 Update on delivery of capital projects for three waters services across the district.

2. Officer Recommendations Ngā Tūtohu

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the Three Waters February to April 2022 Report

Attachments / Ngā Tāpirihanga

No.	Title	Page
A 	Three Waters Infrastructure and Environment Committee report - February - April 2022	47

In addition to the attached documents, the following background information is available:

Document Name	Location / File Link
Not applicable	Not applicable

Confirmation of Statutory Compliance / Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

Signatories / Ngā Kaiwaitohu

Author	Helen Beaumont - Head of Three Waters
Approved By	Jane Davis - General Manager Infrastructure, Planning & Regulatory Services



Aerators on the existing clarifier tanks which have been converted into aeration basins for wastewater treatment

THREE WATERS INFRASTRUCTURE AND ENVIRONMENT COMMITTEE

February – April 2022 report

Christchurch City Council | May 2022

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PLANNING AND POLICY

Central Government Water Reform

Central government's Three Waters Reform programme responds to significant challenges faced by New Zealand's three waters system. The programme will transform the legislative arrangements for and the delivery of three waters services. The government confirmed on 27 October 2021 that water services delivery will be transitioned to four water service entities which would be separate from the 67 local authorities currently delivering these services.

The timeline for the programme continues to be ambitious with the entities expected to start delivering water services on 1 July 2024.

It is separated into two key areas:

- Three Waters reform (led by Hamiora Bowkett)
 - o Policy refinement including working groups on outstanding areas of reform
 - o An ambitious legislation programme
- Transition (led by Heather Shotter)
 - o Set up for Local Establishment Entities
 - o Work with the sector to transition to the new system.

Three Waters reform programme

In late 2021, in response to challenges raised by Local Authorities at the mandated entities and governance, Government set up a Working Group on Representation, Governance and Accountability of new Water Services Entities. The group, comprising representatives from Iwi/Māori and Local Authorities, provides opportunities during the drafting of the Water Services Entity Bill to make immediate improvements to aspects of the reform design – representation, governance and accountability – keeping within the following bottom lines:

- Good governance
- Partnership with mana whenua
- Public ownership
- Balance sheet separation.

On 29 April, Ministers Robertson and Mahuta announced next steps for the Three Waters reforms, including Cabinet's decisions on local government ownership.
(Beehive press release linked [here](#))

Cabinet has accepted and is to take forward the majority of the recommendations of the Representation, Governance and Accountability Working Group, of which Mayor Dalziel was a member, including:

Ownership: Providing for a public shareholding structure that makes community ownership clear, with shares held by councils on behalf of their communities;

Co-governance: Embedding co-governance principles across the water services framework and at the Regional Representative Group level, while maintaining a merit-based approach to the Water Service Entity Board appointments;

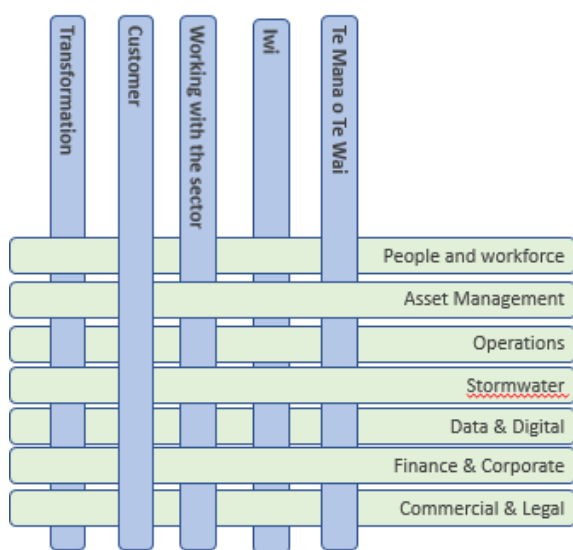
Accountability: Providing tighter accountability from each Water Services Entity board to the community, including strengthening and clarifying the role of the Regional Representative Group;

Te Mana o te Wai: Recognising and embracing Te Mana o te Wai as a korowai or principle that applies across the water services framework; and

Strengthening connections: Strengthening connections to local communities, including sub-groups feeding into the Regional Representative Group, comprised of representatives of local communities to provide community-based input into the Board's decision-making on investment prioritisation and service standards.

Transition programme

The National Transition Unit has set up a number of workstreams as outlined in the diagram below:



Requests for information have been provided to Council for the People & workforce, Data & Digital and Commercial & Legal streams.

Four Local Transition Teams will be created by June 2022 which will support the establishment of the Local Establishment Entities, which will in turn support the setup and mobilisation of the four Water Service Entities.

Department of Internal Affairs Stimulus Funds programme

All projects are underway and the sixth quarterly report to the Department of Internal Affairs (DIA) was submitted in April 2022. The deadline for completing stimulus funds work is 30 June 2022. A summary report is provided as part of monthly updates to the Finance and Performance Committee by our Programme Management Office.

Three Waters bylaw review

The Water Supply, Wastewater and Stormwater Bylaw 2014 is proposed to be replaced by two new bylaws – the Water Supply and Wastewater Bylaw 2022, and the Stormwater and Land Drainage Bylaw 2022.

The Committee adopted both draft bylaws for consultation with the community in November 2021. Consultation on the bylaw proposals was open from 29 November 2021 until 9 February 2022. Twenty-seven submissions were received. Most of the proposed changes were broadly supported by submitters, with suggestions for changes in some areas. The main areas of contention were:

- **Industrial Stormwater Discharge Licence** – half of the submitters who commented on this proposal supported it, but concerns were raised regarding the justification for fees and the lack of implementation detail.
- **Stormwater quality standards** – one-third supported this proposal as is, while others had concerns around the uncertainty of what these standards might be.

The [Council officer report](#)¹ provided a comprehensive summary of submissions accompanied by staff advice in order to support the work of the Hearings Panel.

The Hearings Panel (Cr. Mauger (chairperson), Cr. Cotter and Cr. Donovan) convened on Friday 25 March, Monday 28 March and Wednesday 6 April 2022 to consider and deliberate on all submissions received on the bylaw proposals. Ten oral submissions were heard.

The Hearings Panel will present its recommendations on the final form of both bylaws to the Council on 9 June 2022. The Panel is recommending that the Council adopt both bylaws, largely as proposed, but with some changes as a result of the consultation process to clarify and improve the bylaws. If the Council decides to adopt the bylaws as recommended, the replacement bylaws will be in force from 1 July 2022.

¹ Submissions on the Proposed Replacement Bylaws for the Council's Three Waters Services
https://christchurch.infocouncil.biz/Open/2022/03/BHPCC_20220325_AGN_7959_AT_WEB.htm

COMPLIANCE AND QUALITY ASSURANCE

Health Safety and Wellbeing

There were a total of 90,961 hours worked in April, including Transport and Waste, and Three Waters internal staff.

A total of 58 events were reported in April. The events include 49 near misses, 7 first aid injuries, 1 medical treatment injury and 1 day lost to time injury.

Please see appendix 1 for the detailed statistics and the measures of LTIFR (lost time injury frequency rate) and TRIFR (total recordable injury frequency rate) for April.

Resource consents

The Three Waters unit holds 276 resource consents from Environment Canterbury authorising a broad range of construction and operational activities.

There are no current enforcement actions or significant non-compliance against any Three Waters resource consents. We are working through the transition of key tasks and reporting from City Care to the Banks Peninsula Water & Wastewater team. We are on track to submit our monthly reports to Environment Canterbury.

No non-compliance or enforcement action has been raised against the Council for odour related issues from the Bromley Wastewater Treatment Plant. The Operations team continue to respond to residents and Environment Canterbury queries directly regarding odour complaints and planned works to reinstate the plant to full operation.

Comprehensive Stormwater Network Discharge Consent CRC214226

Council is drafting a consent variation to amend delivery dates for the Stormwater Management Plan (**SMP**) programme and Schedules 3 and 4 technical investigations. This is necessary in order to accommodate internal and external resource constraints resulting from COVID-19 delays, reduced staffing levels, and increased work responding to Environment Canterbury feedback on reports and SMPs. These issues were unforeseen when the consent programme delivery timeframe was first agreed to.

Efforts are being made to further improve monitoring and enforcement of erosion and sediment control measures around subdivision developments and construction sites, especially during major storm events. Getting on top of this issue will be challenging without additional resourcing in the building inspection unit. A memo was sent to Council earlier this month, as requested, detailing the options and costs to carry out this work (see appendix 2).

The Ihutai-Estuary and Coastal draft SMP went out for public consultation between the 28 Feb and 26 April 2022. Once public submissions have been considered and the SMP updated, it will go to the Council for adoption. The SMP will be lodged with Environment Canterbury, by the 30th June 2022, for review and certification.

A number of Community Water Partnership (CWP) online workshops have been held to discuss the development of a digital hub. A key objective of the CWP is to establish a strong collaborative partnership between community groups, businesses, researchers, and local, regional and central government. Consultation with members of the CWP favours a digital *Hub*, facilitating the sharing of information, stories, opportunities, events, and data between partners and the wider public. The development of the hub is proposed to be staged in collaboration with the Christchurch EnviroHub. With the first stage operational in the second half of this year.

The Comprehensive Consent 2022 Annual Report will be available on the 30 June, providing comprehensive progress updates on all technical investigations and the surface water quality monitoring results for the 2021 Calendar year.

Water Safety Plans

A water safety plan documents a public health risk-based assessment and management process that aims to ensure a safe and secure supply of drinking water for consumers, protecting public health.

Under the Water Service Act 2021, a Water Safety Plan is compulsory for all water supplies from November 2022, independent of the population served. Under the Health Act 1956, only the supplies with a population higher than 500 needed to prepare a Water Safety Plan. The Council has been proactive and has updated four of the seven plans: Christchurch/Lyttelton, Little River, Wainui and Akaroa/Takamatua. We are now working on the remaining three plans: Duvauchelle, Pigeon Bay and Birdlings Flat.

The Water Safety Plans need to be submitted to the regulator Taumata Arowai, however the plans do not require 'approval'. Once the Plans are lodged with Taumata Arowai, the regulator will formally review them against the requirements and monitor ongoing compliance.

Taumata Arowai started its duties on 15 November 2021 but is not yet ready to formally receive our Water Safety Plan. We will send the Christchurch/Lyttelton Water Safety Plan for informal feedback and further discussion.

We have recently agreed with the regulator that we operate our network in accordance with the updated Water Safety Plan (2021) rather than the 'approved' WSP (2018).

Progress made on updating the plans

The Council continues developing and improving the Water Safety Plans in line with the newly drafted standards and rules that Taumata Arowai released 20 December 2021. The drinking water standards and rules are under review and the Council submitted on the proposals.

The Council has drafted the Water Safety Plan Volume C: Source Water Risk Management Plan for Christchurch/ Lyttelton and has started the work on the Banks Peninsula drinking water sources. This is a new requirement from the new regulator.

The Water Services Act has some additional minor requirements that need to be confirmed as being clearly included and identified within our water safety plans. These

are: inclusion of a source risk management plan, how will we comply with the recently released draft Compliance Rules and how we ensure that a sufficient quantity of drinking water is provided at each point of supply. Council's current Water Safety Plans consider the risks and protection of the source water, however, more studies and work will be required in the future to cover this aspect.

Taumata Arowai's proposed Drinking Water Quality Assurance Rules have removed the category of secure groundwater as a compliance option. However, the proposed S3 source rules in the Draft Drinking Water Quality Assurance Rules (Dec 2021) give an option for not providing a protozoa treatment barrier. The rules apply for groundwater sources deeper than 30 metres that draw water via a sanitary bore head, from which *E. Coli* and total coliforms have not been detected over a period of three years of monthly monitoring. Source water from aquifers 2, 3, 4 and 5 should be able to meet this classification if each aquifer would be considered as a source. However the current draft rules consider the source as each abstraction point rather than each aquifer. We are having conversations with Taumata Arowai to consider this change along with other monitoring requirements.

Summary of WSPs for Council owned and operated water supplies

Water supply	Water Safety Plan status
Little River	Plan ready to be submitted once Volume C completed.
Duvauchelle	In progress
Wainui	Plan ready to be submitted. Only requires formatting work to be separated in Volume A (General) and Volume B and addition of Volume C
Akaroa / Takamātua	Plan ready to be submitted. Only requires formatting work to be separated in Volume A (General) and Volume B and additional of Volume C
Pigeon Bay	In progress
Christchurch / Lyttelton	Plan ready to be submitted. Clarify sections relating to source risk management plan and other WSA additions.
Birdlings Flat	In progress

Unacceptable risks from the Christchurch/Lyttelton water safety plan

The risk assessment undertaken for the 2020 Christchurch/Lyttelton water safety plan identified four risks as being unacceptable and requiring corrective action. The corrective action includes ongoing chlorine treatment for two of these risks until they are satisfactorily addressed. None of these unacceptable risks are associated with the groundwater source but rather with water storage tanks and the water distribution systems:

1. Major microbial contamination of storage tank serving >5,000 people due to cracks in roof or below ground walls allowing contaminated water to enter.
2. Introduction of contaminating material into the distribution system due to leaching of lead in lead jointed pipes.
3. Introduction of contamination due to no / inadequate / faulty / incorrectly installed backflow prevention device.
4. Civil emergency: earthquake or other large scale disruption.

Immediate measures were put in place to manage those risks, and longer term action plans are being developed with the ultimate goal of risk reduction and elimination. These measures are outlined below.

The Council has undertaken a review of the above risks in December 2021 given the work programme to fully characterise the risk related to leaching of lead in lead jointed pipes; and to address the risk of contamination due to inadequate backflow prevention devices. These two risks have been re-evaluated and are now deemed acceptable.

The Council continues working on further reducing both risks through the pipe renewal programme and the backflow prevention devices installation.

New drinking water standards and rules exemption processes

The new regulator will approve new standards and rules to provide drinking water, which are expected to come into force since 1 July 2022. Drinking water suppliers are able to apply for exemptions from some requirements of the Water Service Act 2021.

Council is allowed to apply for general and residual disinfection exemptions provided all requirements are met.

General exemptions

General exemptions allow drinking water suppliers to be exempt from complying with a range of legislative requirements. In some situations, it may be unreasonable or impractical to comply with legislative requirements. An exemption can only be granted if it is consistent with the main purpose of the Water Services Act 2021, which is to ensure that drinking water suppliers provide safe drinking water to consumer.

Depending on the drinking water standards and rules requirements once they are approved, the Council may apply for general exemptions to comply with, for example: supplying safe water, complying with drinking water standards, water quality monitoring (frequency, locations), online monitoring, etc.

The Council considers that it will be necessary to apply for general exemptions as there will not be enough time to undertake all the necessary works between Taumata Arowai approving the new drinking water standards/rules and 1 July 2022, when they will come into force. There are additions and changes that will require considerable work and budget to undertake them.

Minimum requirements to include in the application:

- provide a description of the supply;
- describe the reason they are applying for an exemption;
- demonstrate how they will minimise any risk to public health, whilst still being consistent with the provision of safe drinking water to consumers;
- indicate how they will ensure consumers will receive drinking water and that it's safe to consume;
- detail a list of any other options that they have considered to provide safe drinking water (this may also include consideration of Acceptable Solutions and why they are not able to be adopted);
- explain how the granting of an exemption will be consistent with the main purpose of the Act; and,
- explain how the granting of an exemption will give effect to Te Mana o te Wai, to the extent it is relevant.

Residual disinfection exemptions

Drinking water suppliers with piped supply networks may apply for exemptions from supplying drinking water without using residual disinfectants like chlorine. Chlorine is the most common form of residual disinfection for drinking water. An exemption may apply to all or a part of a supply. An exemption can only be granted if it is consistent with the main purpose of the Water Services Act 2021 and if all other legislative requirements will be complied with, including the duty to provide safe drinking water.

Taumata Arowai sets up that a drinking water supplier may apply for a residual disinfection exemption for:

Taumata Arowai requirements	Council's comments
a supply that includes reticulation	All Council's water supplies include reticulation
a part or parts of a supply that includes reticulation, including treatment plants and distribution zones, that can be distinguished from the rest of the supply	This statement allows the Council to apply for an exemption on a distribution zone by zone basis, however it will require a thorough risk assessment of the nearby connected zones, as well as ensuring high reliability of each zone border valves.
for a process, such as a requirement for contact time, that is part of a supply that includes reticulation	Majority of water treatment plants (pump stations) in Christchurch do not comply with the minimum required chlorine contact time under the new Operation Rules. This statement will allow the Council to apply for contact time requirement exemption, for example, in the distribution zones we still need to disinfect (e.g. due to reservoir conditions).

Minimum requirements to include in the application:

- the reasons why an exemption is sought;
- a history of the drinking water supply;

- a comprehensive description of the drinking water supply;
- a comprehensive assessment of the source water, risks associated with the source water and how they are managed;
- a comprehensive description of the water supply distribution system, including: how it is managed; what organisations undertake work on it; how people are authorised to work on it; operating procedures; and maintenance procedures and hygiene procedures that are relevant to it;
- details about the performance of the distribution system including matters like water loss and how it has been assessed, pipe age, materials, criticality, breakage rates etc.;
- an inventory of risks associated with the drinking water supply;
- the steps that the water supplier will take to manage the risks to contamination of the water supply in the absence of a residual disinfectant;
- details of emergency disinfection procedures for treatment and distribution and the circumstances that would require its use;
- details of communications plans for alerting consumers if poor quality water is provided;
- a current or draft drinking water safety plan;
- a history of water testing results for the supply including any results that have exceeded maximum acceptable values (MAVs), reports into those exceedances, the reasons exceedances have occurred, and the remedial actions taken in response to those; and,
- any other information that the water supplier considers relevant

The relevant attributes to be assessed for the specific water supply span the network infrastructure, the operation of the supply and the management framework, as outlined below:

Infrastructure	Operations	Management
Cross connection & backflow	Operational staff	Continuous improvement
Water storage	Pressure management	Incident response
System condition	Hygienic practices	Public communications
Seismic design	Network cleaning	Customer complaints
Sanitary sewers	On line monitoring	Organisation awareness
Water loss		Organisation commitment
Emergency chlorination		

Exemption application processes

The Council starts the process by sending the application form for an exemption to Taumata Arowai's email along with all the required information. Taumata Arowai replies to Council outlining the fee, how to pay, next steps and sends the invoice for the non-refundable application fee:

- General exemption: \$780 + GST (includes first 6 hours)

- Residual disinfection exemption: \$5,200 + GST (includes first 40 hours)

Taumata Arowai will seek independent technical advice from a panel of international experts. The role of the external advisory panel in assessing residual disinfectant applications will be proportionate to the scale, complexity, and risk of the supply to which the application relates.

Additional charges may be applied to applications, including:

- additional assessment hours at \$130 per hour, plus partial hours, after the hours included in the application fee,
- expert advice (generally for residual disinfection exemption applications only) capped at \$400 per hour,
- incidental costs (travel, accommodation or reasonable associated costs).

The charges will be invoiced after the decision has been made and notified to the applicant.

After the application payment is accredited, Taumata Arowai does an initial assessment to confirm if the fee covers the estimated assessment process. In case the fees are insufficient, Taumata Arowai will advise the estimated final charges and the process will continue in case the Council accepts it.

The assessment process will take about 50 to 65 working days, depending on the size and complexity of the supply.

The Regulations sets a cap on the charge for incidental costs. However, there is no cap for assessment and expert advice charges.

Risks of being non-compliant with Drinking Water Standards (DWS) and rules

SUPPLY	AREA OF POTENTIAL NON COMPLIANCE	REASON	ESTIMATED DURATION OF NON-COMPLIANCE	PROPOSED MITIGATION
Christchurch / Lyttelton	Water treatment plants (pump stations) will be protozoa non-compliant	Non acceptance of class 1 ² or interim class 1 ³ source water	18 months since DWS rules approved (if all analysis results are compliant).	<p>The Council submitted a change to DWS rules consultation to consider additional evidence rather than only quality analysis results.</p> <p>Provide TA additional information that can give evidence of class 1 compliance:</p> <ul style="list-style-type: none"> engage expert consultant to confirm class 1 definition and,

² DWS Rules – “Class 1: Ground water sources that draw water from a depth of more than 30 metres (measured from the top of the screen) and via a sanitary bore head in which *E. coli* and total coliforms have not been detected over a period of three years (monthly samples with a maximum of 45 days between samples), are not required to provide a protozoa barrier.”

³ DWS Rules – “Interim class 1: If a water supplier intends to demonstrate Class 1 status for a bore that draws water from a depth of more than 30 metres (measured from the top of the screen) and via a sanitary bore head but does not have the required *E. coli* or total coliforms data, they may demonstrate Interim Class 1 status by monitoring *E. coli* and total coliforms daily for a month, and then weekly until three years of data has accrued. If any sample for *E. coli* or total coliforms is positive, the process must begin again until three years of data has accrued with negative results.

If a ground water source has demonstrated Category 1 status but any result for *E. coli* or total coliforms is positive, the groundwater source must assume Interim Category 1 status.”

				<ul style="list-style-type: none"> consider Council's groundwater age model undertook by an expert. <p>The above actions does not apply for Dunbars PS as some of the contributing wells from aquifer 2 have less than one year water age. In this case, the Council should decommission the wells and drill new ones or introduce water treatment in Dunbars PS. Estimated timeframe to apply these works is 3 years after approved in the LTP.</p>
	Distribution zones will be bacterial non-compliant	Not having online water quality analyzers and monitoring (FAC and pH) across the network.	5 years after approved in the LTP	Submit a general exemption for online monitoring to Taumata Arowai.
Akaroa/ Takamatua	Water treatment plant will be bacterial non-compliant	Lack of controls/ analyzers to meet disinfection rules (turbidity on water leaving the treatment plant, pH after chlorine contact time, etc.)	24 months after approved in the LTP	
Little River	Water treatment plant will be bacterial non-compliant	Lack of residual disinfection setup at the treatment plant	24 months after approved in the LTP	
	Water treatment plant will be protozoa non-compliant	Lack of UVT continuous monitoring at the treatment plant.	24 months after approved in the LTP	The Council submitted clarification to DWS rules consultation.
Duvauchelle	On-going non-compliance	Lack of adequate treatment	Until new water treatment plant is well established.	
Pigeon Bay	Water treatment plant will be bacterial non-compliant	Lack of residual disinfection setup at the treatment plant	24 months after approved in the LTP	
Wainui	Water treatment plant may be compliant if disinfection continues until submitting a			Compliant if disinfection continues until submitting a residual disinfection exemption

	residual disinfection exemption (after reservoirs are repaired)			
Birdlings Flat	Water treatment plant will be bacterial non-compliant	Lack of residual disinfection setup at the treatment plant	24 months after approved in the LTP	
All Banks Peninsula water supplies	Distribution zones will be bacterial non-compliant	Not feasible to undertake daily water quality monitoring in each distribution zone	Ongoing	Setup continuous monitoring points across all the networks. Estimated time: 5 years after approved in the LTP.
All water supplies	Water supplies non-compliant due to inadequate water quality monitoring.	Not feasible to comply with weekly samples in each abstraction point.	Ongoing	Provide TA a plan to sample representative wells for each aquifer rather than each abstraction point.
		Not feasible to create a compliant sampling plan with such short notice, given that the rules hasn't been approved and they will come into force since 1 July 2022.	6 months after rules are approved	Engage with IT and external consultants and prepare as much information to be ready to setup a sampling plan after rules are approved.

FINANCIAL OVERVIEW

The numbers

Unit Activities		Three Waters April 2022							
Activity (\$000's)	Year to Date				Full Year				Forecast Variance after C/F
	Actual	Budget	Variance	%	Forecast	Budget	Variance	%	
Flood Protection & Control Works	2,083	2,291	208	9.1%	2,712	2,712		0.0%	
Stormwater Drainage	10,684	13,076	2,392	18.3%	13,524	15,024	1,500	10.0%	1,500
WW Collection, Treatment & Disposal	29,939	25,641	(4,298)	-16.8%	32,492	30,992	(1,500)	-4.8%	(1,500)
Water Supply	23,519	24,855	1,336	5.4%	27,900	27,899	(1)	0.0%	(1)
Eliminated Internal Activities	3	(1,517)	(1,520)	-100.2%	(1,101)	(1,101)	-	0.0%	-
Total Activities	66,228	64,346	(1,882)	-2.9%	75,526	75,525	(1)	0.0%	(1)

The operational result for April 2022 is \$1.6 million less than budget year to date.

Stormwater Drainage: Year to date spend is \$2.4m less than budget. This is mainly due to lower maintenance costs which are \$1.9m less than budget. Maintenance spend within this activity has been consistently underspent over the past few years. One of the main reasons for this is that the infrastructure across the city has been renewed rather than repaired (thereby utilising capital budgets for much of their work as opposed to operational budgets for repairs). Full year forecast is \$1.5m less than budget within maintenance.

Wastewater Collection, Treatment & Disposal: Year to date spend is \$4.3m more than budget. Revenue from trade waste charges is \$0.4m less than budget. This is a timing variance due to misalignment between billing cycle and phased budget. Fire response costs in relation to the trickling plant at the Christchurch Wastewater Treatment facility at Bromley is \$1.4m more than budget. This is a timing variance as the majority of the \$5.0m received from our insurer is phased towards the end of the year. Year to date we have spent a total of \$4.9m against phased budget of \$3.5m. Maintenance costs is \$2.1m more than budget. Maintenance costs within this activity has been consistently overspent over the years although trending down slightly due to better management and utilisation of contracts. Full Year forecast is \$1.5m more than budget within maintenance.

Water Supply: Year to date spend is \$1.3m less than budget. Revenue from excess water charges is \$0.9m less than budget. This is a timing variance due to misalignment between billing cycle and phased budget. Adding to the variance is water reform programme operational projects being less than budget which is a timing issue due to programme delays. Full year forecast is to return to budget

Eliminated Internal Activities: Year to date spend is \$1.5m more than budget. Variance is driven by water reform programme operational projects being more than budget which is a timing issue. Full year forecast is to return to budget.

Capital expenditure year to date is \$17 million less than budget. Forecast spend for the year is \$29 million less than budget.

Activity (\$'000's)	Year to Date				Full Year			
	Actual	Budget	Variance	%	Forecast	Budget	Variance	%
Flood Protection and Control Works	14,185	26,588	12,403	46.7%	26,029	36,469	10,440	28.6%
Stormwater Drainage	10,579	14,356	3,777	26.3%	16,571	22,811	6,241	27.4%
Wastewater	46,024	43,874	(2,150)	-4.9%	57,423	59,660	2,237	3.8%
Water Supply	40,536	43,269	2,733	6.3%	52,028	62,153	10,125	16.3%
Total Activities	111,324	128,088	16,763	13.1%	152,051	181,093	29,042	16.0%

WATER SUPPLY

Drinking Water Quality

This section provides drinking water compliance quality monitoring related information for the period 1 July 2021 – 30 April 2022.

Escherichia coli Water Quality Monitoring

Figures 1, 2 and 3 show the number of *E. coli* samples taken by water supply zone. The number of *E. coli* samples taken exceeded the requirements of the Drinking Water Standards for New Zealand. Figure 3 shows the number of samples taken at the Banks Peninsula water treatment plants, for the parameters required by the Drinking Water Standards for New Zealand.

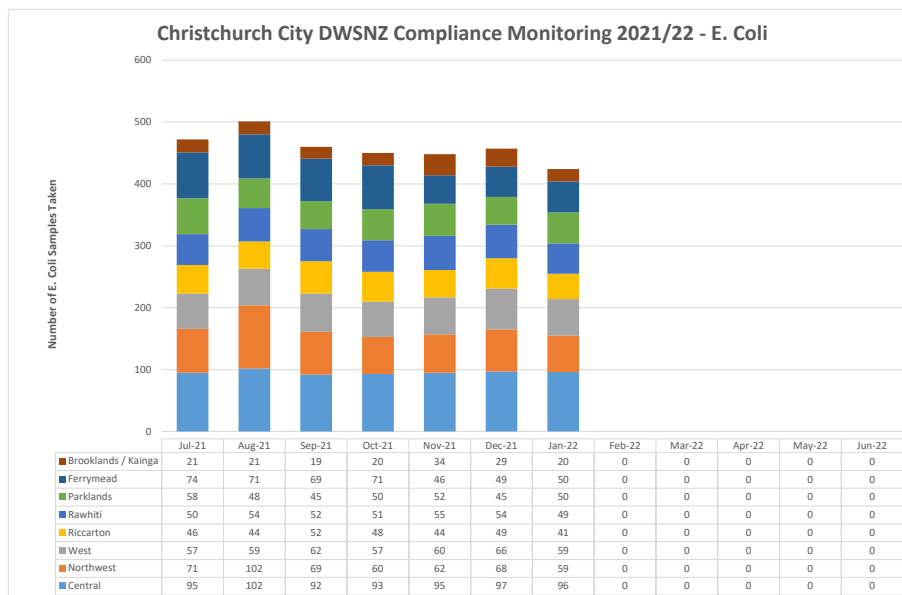


Figure 1: Number of *E. coli* samples taken for compliance monitoring purposes in Christchurch City

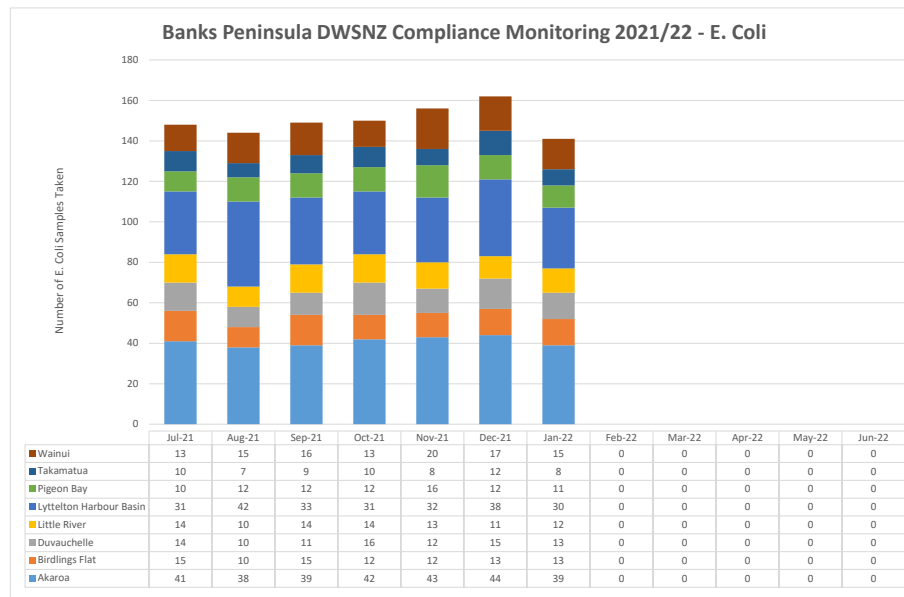


Figure 2: Number of E. coli samples taken for compliance monitoring purposes on Banks Peninsula

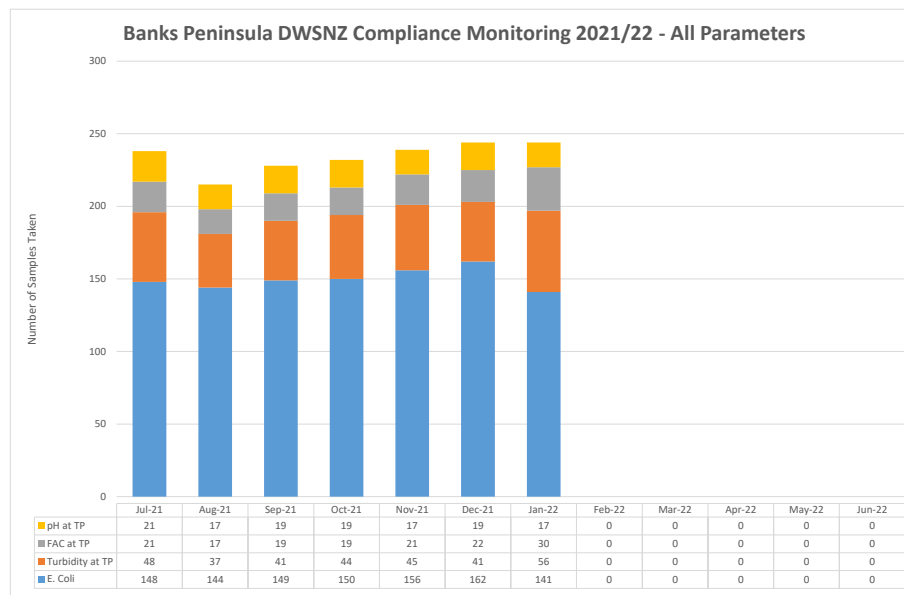


Figure 3: Number of pH, free available chlorine (FAC), turbidity and E. coli samples taken for compliance monitoring purposes at Banks Peninsula water treatment plants.

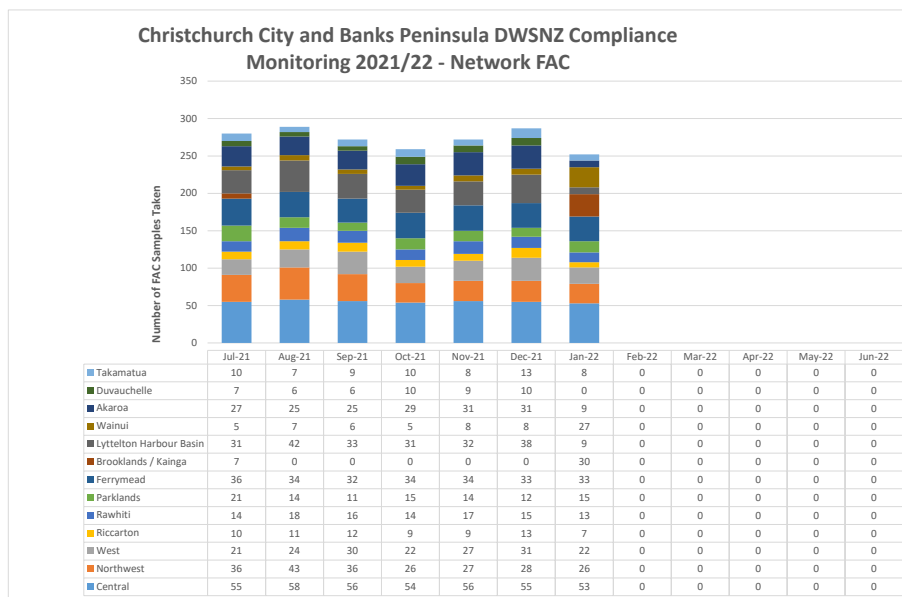


Figure 4: Number of free available chlorine (FAC) samples taken in the distribution system.

E. coli Transgressions

Figure 5 summarises the results for *E. coli* each month.

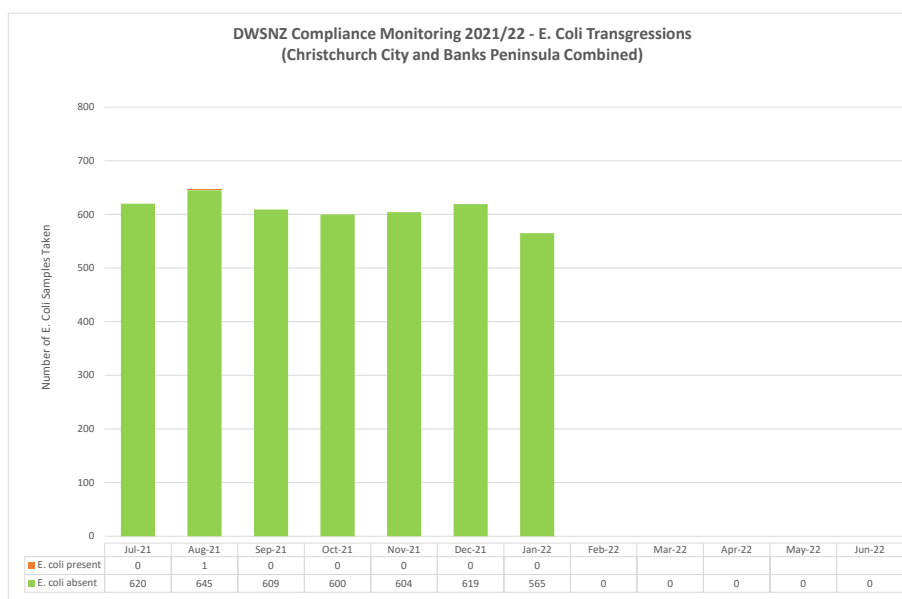


Figure 5: Number of *E. coli* negative and *E. coli* positive samples taken each month

Water supply planning

Work to support subdivision and building consents is continuing. A lower number of subdivision and building consents were received in January and is reflected in the lower number of support tasks in Quarter 3.

Description	Oct-Dec Q2 FY22	Jan-Mar Q3 FY22	Jan-Mar Q3 FY21	YTD FY22
Subdivision Consents – advice & conditions	16	↓ 9 ↓	13	44
Engineering Acceptance of new subdivisions (WS)	4	4 ↓	5	25
Infrastructure Provider Agreements	0	0 ↓	3	2
BCN Engineering Acceptance	2	↓ 0 ↓	1	2

The draft Housing and Business Choice Plan proposes the addition of a district-wide engineering provision which will require anyone wanting to develop land to check water and sewer network capacity with Council prior to planning a new development. The Water and Wastewater Planning team is already seeing an increase in the number of queries, including large developments that require detailed capacity assessments.

Fluoridation of drinking water

Work to refine the concept design for fluoridation facilities, including the assessment of alternative fluoride dosing substances is continuing.

Water services needs assessment

The final report was received in early May and is being considered by staff. The findings of the needs assessment will be presented in a future report to Council.

Water supply rezoning master plan

Work is underway to optimise the upgrade needs for different zones in order to meet future growth. The optimisation will have to be reviewed to consider alternative growth scenarios, yet to be advised in response to the Intensification Plan Change and the Ōtautahi Christchurch Plan.

Planning to support the Greater Christchurch Spatial Development Plan

Work is underway to advise the infrastructure implications for the Urban Form Scenarios proposed for the Greater Christchurch Spatial Development Plan. Additional funding will be needed to develop concept designs for each of the Urban Form Scenarios.

Water Supply Capital delivery

Many projects have impacted in some way by staff shortages due to the recent Covid wave although no projects have stopped. Project teams have proved to be quite resilient during this challenging period and there has been a major collective effort to keep the programme on track.

Eastern Terrace Water Main Renewal

Status: Construction

Budget: \$14 million

Update: The project consists of two portions – a 1.3km long 180mm diameter water supply main and a 2.5km long 600mm diameter water supply main along Eastern Terrace. All of the 600mm diameter pipes have arrived in Christchurch and are undergoing quality assurance audits and testing. Construction of the 180mm diameter water supply main along Eastern Terrace is 60% complete and on track for completion in late May 2022.

A wastewater renewal that overlaps with the 600mm diameter alignment has now been incorporated into this project to minimise disruption to local residents by not having the road dug up twice. Project on track for completion in third quarter of 2023.

Completion: September 2023

Jeffreys Pump Station Upgrade

Status: Construction

Budget: \$8.7 million

Update: Award of the construction contract took slightly longer than anticipated, due to the requirement for a budget change request and Covid restrictions in the first quarter of 2022. The construction contract has now been awarded and possession of site is on track for the first week of May 2022.

Completion date: May 2023

Ben Rarere new pump station

Status: Construction

Budget: \$6.96 million

Update: Construction is progressing well. The suction tank and pump station building are now constructed. Well heads, piping and electrical and instrumentation work are now in progress. The project has been delayed a few months as a result of Covid impacts to the supply chain (notably the pumps). Commissioning is planned for July 2022.

Completion date: July 2022



Inside the Pump station building at Ben Rarere PS.

[Sydenham suction tank replacement](#)

Status: Procurement

Budget: \$6.3 million

Update: This project involves construction of a new stainless steel suction tank and demolition of the abandoned, earthquake damaged, tank.

We have a preferred bidder and is working through tender negotiations to award the contract. The tender award has been delayed by approximately one month due to technical queries around the foundation design. Construction contract award is planned for mid-May 2022. Tender submissions have highlighted that there is a significant lead time on the stainless steel tank, the completion date is now anticipated to be August 2023.

Completion date: August 2023

[Okains Bay New Water Supply](#)

Status: Detailed design

Budget: \$2.6 million

Update: Water quality monitoring of the Opara Stream source has resulted in a requirement for a more complex treatment process than was originally envisaged. The concept design is complete, but the latest cost estimate for the project has indicated that more budget may need to be found for the Construction Phase. In order to try and reduce costs, we are testing the market with a design build delivery approach. We are negotiating the revised scope with the consultant (Beca) to facilitate the design build approach.

Completion: June 2023

Duvauchelle Membrane Filtration

Status: Detailed design

Budget: \$3.7 Million

Update: The purpose of this project is to improve the quality of the water treated in the existing Duvauchelle Water Treatment Plant by enhancing/adding treatment equipment and installing a drainage scheme for environmental protection. A concept design has been prepared by Beca and we are considering a design build approach for the project.

Completion: June 2023

PS1030 Spreydon Well 2 & Well 3 Renewals

Status: Construction

Budget: \$1.8 million

Update: Construction is due to start in May 2022 to drill a new well within the boundaries of the existing pump station site. Two existing wells are to be decommissioned due to age and the fact that they draw from shallow aquifers, one inside and one outside the pump station site. The project was put on hold for a few months due to network constraints and completion is now planned for January 2023.

Completion: January 2023

PS1007 Blighs Road pump station well 3 renewal

Status: Construction

Budget: \$1.08 million

Update: Works are recommencing this month after being on hold due to network constraints during the summer high demand period. The new well is being drilled within the boundaries of the existing pump station site, and an existing well will be decommissioned outside the pump station site. The new well has been drilled to just above aquifer level 4, and the drilling will now continue to breach this aquifer, targeting the deeper aquifer 5. The expected completion date is now October 2022.

Completion: October 2022.

PS1077 Redwood Pump Station Well 1 & Well 2 Renewal

Status: Construction

Budget: \$2.4 million

Update: Development of the first of the two new wells is now complete. The target depth of the well was extended from 100m to 124m and extensive well development was undertaken to optimise the well's performance. The yield for this well is less than anticipated, but still acceptable.

Drilling of the second well is underway and all drilling is expected to be completed by August 2022. Due to the additional development and drilling on the first well, the expected completion date is now September 2022.

Completion: September 2022

New Water Supply Well – Mays Pump Station

Status: Construction

Budget: \$2.16 million

Update: Well drilling commenced in August 2020 and the well has been drilled to 235m below ground level. Water has been encountered and the well is currently being developed. A submersible pump will be required for the new well. There have been delays during the project execution due to difficult aquifer conditions and Covid-19 lockdowns. Well works are expected to be fully completed by late June 2022 and fully operational by July.

Completion date: July 2022

Akaroa L'Aube Hill reservoir bypass

Status: Design and Construction

Budget: \$1.1 million

Update: Works began in late February 2021 to install temporary bypass piping around the old reservoir and construct a small tank farm to supply water to Akaroa. The old reservoir had a capacity of approximately 2.2 million litres (2200 m³).

A temporary set of tanks was established in 2021 to provide 950m³ of storage and allow the boil water notice to be removed. An out of service reservoir of 500m³ capacity was returned to service following minor modification works and sterilisation.

This has ensured Akaroa has sufficient capacity for a 24 hour reserve for most of the year, except in the two week summer holiday period when demand can exceed the storage volume. Typically the water supply plant in Akaroa runs continuously ensuring the reservoirs are constantly topped up meaning that this is not normally an issue. However in the event of a prolonged treatment plant breakdown and very high demand it is possible that there would not be sufficient storage in the network reservoirs.

A project has been established to construct new reservoirs at Akaroa to improve the storage capacity and replace the interim storage solution.

The final portion of works for this project is underway to install a spare generator; re-purposed from the Prestons WW vacuum station. This will reduce operational risks around the interim water storage being significantly smaller than ideal and ensure continuity of supply in a power outage of greater than 12 hours. The project will be closed out in June 2022.

Completion: June 2022.

Akaroa L'Aube Hill reservoir replacement

Status: Design and Construction

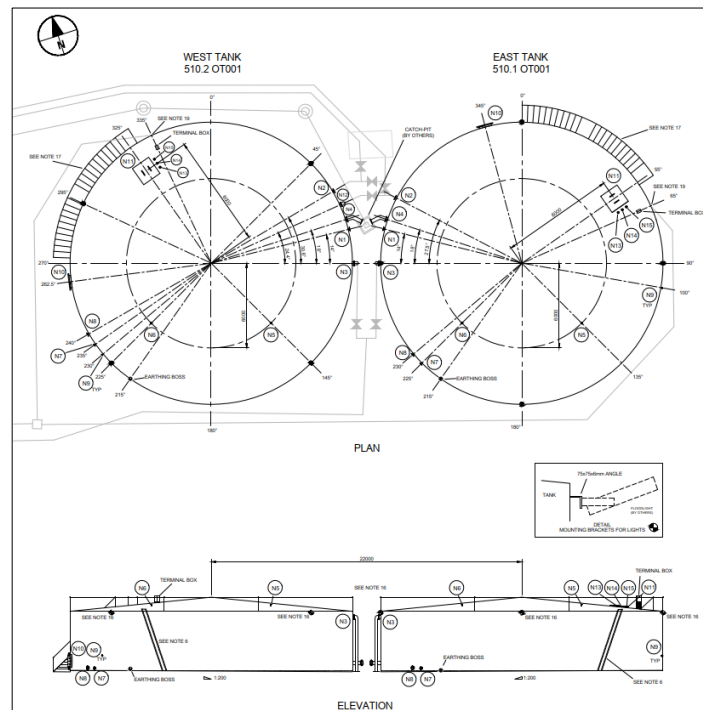
Budget: \$6.6 million

Update: A long term supply arrangement is required to ensure resilience and reliability of supply.

The project sets out to construct two new storage reservoirs of 1,000m³ each and to modify the old storage reservoir into a raw water reservoir.

The project is in the early stages of planning and design.

Completion: Expected project completion 2024.



Concept design of L'Aube Hill reservoirs.

WS suction tank and reservoir assessments/repairs

Status: Inspections /Assessments/Repairs

Budget: \$10 million

Update: An inspection and repair programme for the next five years has been developed for Christchurch City, Banks Peninsula and Akaroa areas for more than 100 reservoirs and suction tanks. The programme is to bring these tanks to a 'Demonstrably Safe' standard. The second phase for internal inspections are in progress and the team has developed, Level 1, 2 and 3 repair programme.

There are current projects in design and construction for reservoirs and suction tanks:

- Denton suction tank – nearing completion
- Sockburn suction tank – to commence in July 2022
- Quarry Reservoir – design/build contract, construction work in progress
 - Internal bladder installed
- Hackthorne Reservoir – in design with the consultants
- Mount Pleasant 3 Reservoir 1 & 2 – project awarded
- Halswell Reservoir 2 – project awarded
- Grassmere & Mays suction tanks – project awarded
- Estuary Reservoir – – awarded, contractor commenced
- Gardiners suction tank – repair requirements being developed.

Completion: The reservoir and suction tank repairs are on a five year rolling programme.

WS reticulation renewals programme

Status: varying phases

Budget: circa \$60.1 million

Scope: The programme (101 projects) is to renew existing water mains and sub mains within the reticulation network across the city.

Update: Projects are in different phases for FY22.

Concept	Initiate & Plan	Investigate	Design	Procurement	Construction	Handover / In Close or Closed	Total
7	6	8	14	11	35	20	101

Completion: Those projects in construction are likely to be completed in FY22 and FY23

Rawhiti Smart Water Network Pilot

Status: Design and Construction

Budget: \$2.7 million

Update: A pilot smart water network is being undertaken across the Rawhiti water supply zone to provide an initial focused and dedicated implementation of the smart water network to inform the city-wide implementation. The purpose of this pilot is to demonstrate that continuous monitoring of flows, consumption, leaks, water quality, and water pressure will improve water safety, asset management, operational management, and sustainability.

To meet the Smart Water objectives the following packages of work are being completed

- **Package A – Smart Water Monitoring** – Adquadvance water network platform will be configured to bring the data from package B,C,D and E as well as existing SCADA data into a single unified platform for continuous monitoring, dash-boarding, trend analysis and event detection.
Current works: Configuration has commenced. Expecting to complete Field Acceptance Testing (FAT) milestone on May 2022.
- **Package B – Water Quality Monitoring** – a multi-parameter instrument comprising 5 sensors will measure in real-time; the pH, turbidity, conductivity, dissolved organic carbon and oxidation reduction potential of water supplied at Keyes pump station. This is being tested to determine whether ongoing monitoring of these parameters could be used to detect microbial contamination and support the water safety plan.
Current works: The sensors were commissioned on December 2021. We are observing the data and investigating the root cause of false SCADA alarms.
- **Package C – Pressure transients and acoustics sensors** – 20 Inflowmatix high frequency pressure sensors will be permanently installed to identify the magnitude, scale and causes of transients within the network, to enable actions

to be taken to calm the network. The focus is on increasing asset life and establishing an additional control point for the water safety plan by maintaining a constant positive network pressure to reduce risk of water contamination.

200 HWM PermaNET+ acoustics sensors will be installed to proactively monitor noise in order to detect 'escaping water' on critical mains. Leaks can then be isolated and rectified, reducing pipe failures and water losses.

Current works: All inflowmatix transients and HWM acoustics sensors are now installed in the permanent locations. Scope of Works for the design of 4 AQS hydrophone acoustic sensors has been approved to monitor large diameter pipes (where HWM PermaNET+ are not suitable)

- **Package D - Smart Water Meter** - 1200 Itron Intelis ultrasonic smart meters will be installed onto customer connections to provide consumption data for a small dedicated DMA (district metered area). For the homeowner this means proactive and timely identification of leaks, and for the network, it will provide a daily water balance that will identify the real water losses in the DMA. The smart meters will also be able to detect backflow to further support water safety planning.

Current works: The 30 proof of concept meters have been installed. We are observing how the meters are communicating. This proof of concept will assist to verify the smart lighting network performance as a suitable meter data communication platform. The 1200 are expected to arrive in NZ early June.

- **Package E - Bulk Flowmeters** - 8 Khrone flowmeters and 8 Yokogawa pressure transducers are being installed to support the virtual separation of the Rawhiti system into smaller DMA's whilst ensuring that the water supplied into the zone can be measured under all operational conditions. This will provide the systems input volume as necessary to complete the daily water balance and will also provide more pressure data points for network control purposes.

Current works: All site works are complete. Construction walkover completed on 01 December 2021. We are experiencing delays in the commissioning of the meters due to incorrect software manipulation by the contractor. We are working with the contractor to resolve this issue and expecting to issue practical completion June 2022.

Completion: Sept 2022

Water Supply Operations

The majority of pump stations and wells continue to perform as expected.

- **Total Volume of Water Extracted** – Water usage in April was marginally above the 5 year average and below consumption in 2020 and 2021. Current forecast is to achieve target of <55Mm³/year
- **Average Consumption per Day per Resident** – YTD average is well above target.
Please note: consumption also contains industrial/Commercial take-off which is only read and charged every 6 months. Estimated Leaks are excluded.
- **Peak Hour Demand of Drinking Water per Connection per Hour** – On Target
Please note: Peak demand flows include industrial/ Commercial take-off, filling of reservoirs and includes leaks.
- **Peak Day Demand of Drinking Water per Connection per Day** – On Target
Please note: Peak demand flows include industrial/ Commercial take-off, filling of reservoirs and includes leaks.
- **Annual Average kWh** – Above Target. Pumping Efficiency was above target for April due to what may be a data error at Denton. YTD average is being impacted by several months that potentially contain data errors. In lieu of any other data being available, this data is still being used.

Annual Plan KPIs	Target	YTD	Nov	Dec	Jan	Feb	Mar	April
Total Volume of Water Extracted in Million m3 per year (Mm3/yr)*	<=55	44.52	4.95	4.78	5.59	4.1	4.7	4.1
Average Consumption in Litres per Resident per Day Excluding Leaks (l/resident/d)**	<=220	283	319	298	349	285	293	263
Peak Hour Demand of Drinking Water per Connection per Hour (L/connection/hour)	<=105	76	84	94	95	74	79	66
Peak Day Demand of Drinking Water per Connection per Day (L/connection/day)	<=1,500	1315	1,553	1,599	1,598	1,359	1,368	1,142
Annual average kWh per m3 Water (kWh/m ³)	0.35	0.41	0.52	0.50	0.33	0.34	0.34	0.45

The temporary chlorination equipment has continued to perform well. Treatment KPI's are tracking as follows:-

Annual Treatment KPIs	Target	YTD	Nov	Dec	Jan	Feb	Mar	April
Events where FAC at extremity <0.2mg/L	0	31	3	5	5	4	4	3
Events where FAC at Pump Station >2mg/L	0	0	0	0	0	0	0	0
UV Compliance (Main Pumps)	100%	100	100	100	100	100	100	100

Low pressure events in the network are tracking as follows:-

Pressure Events	Target	YTD	Nov	Dec	Jan	Feb	Mar	April
Events where Pressure Dropped Below 280kPa	0	362	46	22	24	17	21	26

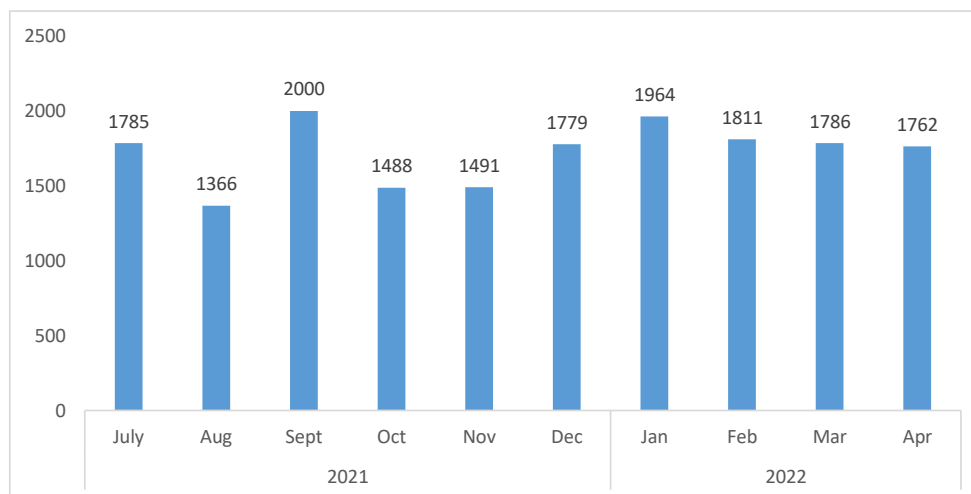
Water Supply Reticulation

Since Jan 2022 high job volumes have continued. This has coincided with the contractor's water team being hit particularly hard by Covid associated absences and a spate of burst pipes in the network. Consequently we have had some falls in levels of service however we still expect to meet our targets at year end.

Weekly job monitoring and contract interactions around the remediation plan continue.

In FY22 we responded to an average of 1723 jobs per month. The main categories of service requests continue to be for leaks on connections, sub-mains, hydrants and valves.

JOB VOLUMES



Response Times - Water & Wastewater

CATEGORY		Target	MAR 2022	YTD
Water	Urgent - on site	1 hour	41 minutes	38 minutes
	Resolved	5 hours	6 hours 46 minutes	4 hours 48 minutes
	Non-urgent - on site	72 hours	47 hours 13 minutes	35 hours 36 minutes
	Resolved	96 hours	49 hours 35 minutes	38 hours 33 minutes
Wastewater	Urgent - on site	1 hour	38 minutes	33 minutes
	Resolved Overflows	24 hours	22 hours 25 minutes	7 hours 8 minutes

WASTEWATER

Following the catastrophic fire at the Christchurch wastewater treatment plant on 1 November 2021, the wastewater treatment process upstream of the oxidation ponds was significantly affected, resulting in only partially treated wastewater being discharged to the ponds.

Oxidation pond midges

The fire and subsequent effects on treatment plant processes has reduced the water quality in the ponds, making them unsuitable for the midge life-cycle. This has resulted in a significantly reduced number of midges. With the change in season we expect to see a downwards trend in the number of midges present due to the cooler temperatures.

Christchurch Wastewater Treatment Plant operations

The response and recovery plan following the fire has enabled continuous treatment of the wastewater albeit reduced in effectiveness; the wastewater discharge continues to meet the conditions of the discharge consent. The interim operation of the plant means that partially treated wastewater is being discharged to the oxidation ponds which is resulting in a noticeable odour being produced.

Thanks to the efforts from the dedicated project team and CWTP staff, the 8 aerators are now operating well on the two converted clarifiers and work is nearing completion for the remainder of this work programme. We have already started to see an improvement in the level of dissolved oxygen in the oxidation ponds, and we expect this to rise as we continue to commission parts of this plant.

Recently two more aerators have been floated onto pond 1 with operation of these expecting to start in the coming week.

The remainder of the plant is operating in a steady state with limited changes being made while the commissioning of the temporary activated sludge plant is ongoing. The activated sludge plant and continual optimisation of the process will restore part of the wastewater treatment capacity lost in the fire, improve discharge quality and reduce the odours from the site.

Christchurch Wastewater Treatment Plant maintenance

The maintenance team have been working with the dedicated project team to assist with the implementation of the temporary activated sludge treatment plant. As a consequence of this, the attention on the planned and reactive maintenance has reduced, resulting in an increased backlog of maintenance jobs. Until the temporary activated sludge treatment plant has been installed and commissioned, this backlog could further increase. To mitigate the risks associated with the increasing backlog, an additional resource in the form of skilled and experienced contract mechanical fitter has been brought into the team.

Christchurch Wastewater Treatment plant risk

The risk profile has significantly changed as a consequence of the fire. This will be reviewed once the temporary activated sludge treatment plant has been fully commissioned.

Wastewater planning

Work to support subdivision and building consents are continuing. A lower number of subdivision and building consents were received in January and is reflected in the lower number of support tasks in Quarter 3.

Description	Oct-Dec Q2 FY22	Jan-Mar Q3 FY22	Jan-Mar Q3 FY21	YTD FY22
Subdivision Consents – advice & conditions	16	↓ 9 ↓	13	44
Engineering Acceptance of new subdivisions (WW)	3	↓ 2 ↓	2	13
Infrastructure Provider Agreements	0	0 ↓	3	1
Wastewater Capacity review and advice for BCN and RMA processes	434	↓ 338 ↑	278	1,247
BCN Engineering Acceptance				
• Gravity including build over pipe	8	↑ 10 ↑	6	39
• Local pressure sewer pumps	144	↓ 120 ↑	116	411

The draft Housing and Business Choice Plan proposes the addition of a district-wide engineering provision which will require anyone wanting to develop land to check water and sewer network capacity with Council prior to planning a new development. The Water and Wastewater Planning team is already seeing an increase in the number of queries, including large developments that require detailed capacity assessments.

Wet weather wastewater overflow consent

The consent variation application has been completed and submitted to Environment Canterbury. If approved, the variation will provide for Council's committed projects and completed improvements to be considered when determining compliance with the wet weather overflow frequency requirements.

Birdlings Flat Wastewater: Heads of Agreement and expired Septic Tank consents

A meeting between Council, Environment Canterbury and Wairewa Rūnanga in March 2022, resolved that a working group will be established to enable ongoing discussions and to ensure that common advice is given to the local community regarding new and expired septic tank consents. There is general agreement that the environmental implications of septic tank discharges in Birdlings Flat are less than envisaged at the time when the Memorandum of Agreement was signed.

There are currently 45 active consents for discharge of human effluent in Birdlings Flat, of which 18 are expiring between June and December this year (7 in less than 3 months). More than 120 properties operate septic tanks that were not subject to the requirement to obtain septic tank consents. Council and Environment Canterbury had

several follow on discussions about the compliance matters for new and expired septic tank consents.

Environment Canterbury confirmed that there is no discretion under the Resource Management Act to grant continuation rights for septic tank consents expiring in less than 3 months. A legal review of Environment Canterbury's request for Christchurch City Council to seek a global consent on behalf of Birdlings Flat residents, confirmed that it would not be appropriate for Council to be a resource consent holder for the discharge from individual sites. It is not the function of Council under either the Local Government Act, Water Services Act or Resource Management Act to take over responsibility for individual discharges from private property.

The legal advice also reiterated that in terms of s128 of the Local Government Act (inserted by s208 of the Water Services Act 2021), Council is required to assess from a public health perspective, the adequacy of wastewater services and other sanitary services available to communities within a territorial authority's district. Council will pursue a strategic planning process to inform the infrastructure needs of communities not currently provided with Council water and wastewater services. This will require careful comparative needs assessment, and decision making in the Long Term Plan arising from that, in order to decide whether, and if so when and how, to provide additional services at Birdlings Flat.

Environmental Canterbury is developing website guidance with consistent information to the public. It is proposed that a community meeting be convened in June 2022 to provide additional and specific information to the Birdlings Flat community.

[Planning to support the Greater Christchurch Spatial Development Plan](#)

Work is underway to advise the infrastructure implications for the Urban Form Scenarios proposed for the Greater Christchurch Spatial Development Plan. Additional funding will be needed to develop concept designs for each of the Urban Form Scenarios.

Capital delivery – wastewater treatment plants, pump stations and reticulation
Lyttelton Harbour wastewater scheme

Status: Construction

Budget: \$60.7 million

Update: Construction work is complete with a fully connected pipe line from Lyttelton Harbour through to PS15 Alport and onto the CWTP.

Commissioning of the Simeon Quay pump station commences 9 May 2022. If all goes to plan, we will cease discharging treated wastewater to the Lyttelton Harbour from the 1 June 2022.

Outstanding work relates to decommissioning of the existing plants, commissioning of the system as a whole, with the scheme scheduled for completion in mid July 2022.



Panoramic photograph of the Heathcote Valley pipeline behind the Waka Kotai (NZTA) Tunnel Control room

WW Akaroa Reclaimed Water Treatment & Reuse Scheme

Status: Investigation/Design

Budget: Circa \$74.5M

Update: In December 2020, the Council passed a series of resolutions supporting the irrigation of treated wastewater to sites in the Inner Bays of Akaroa Harbour.

Engineering consultants Stantec Ltd have been appointed to support the resource consent applications required for the reclaimed water treatment and reuse scheme, particularly consents required for the irrigation scheme. We are working towards lodging the application for these consents in Quarter 2, 2022. There have been a number of minor delays in completion.

We are working on a range of other elements including:

- Procurement of the final land parcel needed by the scheme.
- Reducing inflow and infiltration (I&I) into Akaroa's wastewater network
- Reducing discharges from the L'Aube Hill water treatment plant, which filters and treats stream water that is fed into the town water supply.
- Working with a Community Reference Group to address local issues.
- Finalising the contract packages and overall procurement strategy.



Figure 1. Hammond Point concept landscape plan.

Specific Resolution Updates:

Resolution 1, 2, 7, 8 and 9 were items noted by the Hearings Panel not requiring a specific staff action. These are not discussed here.

Resolutions 10 a, b, c, d, g, j, and 11 have been discussed around closed off in the previous TWIE report.

Resolution 3: Acknowledges the concerns of the community about the poor state of the wastewater network and recommends that the Council aims for less than 20% inflow and infiltration through its work on the Council network and that it also requires private property owners to repair their pipes.

Council staff are working on a range of initiatives to reduce I&I. A target reduction to 40% inflow and infiltration is expected at the end of 2021 and 30% is being targeted for the end of 2022. It is unlikely that the goal of 20% can be achieved at a reasonable cost however significant benefits will be realised at the expected level of improvement.

Resolution 4: Increases the promotion of water conservation measures in Akaroa to reduce the volume of wastewater, including the use of Smart Meters funded as part of the 3 Waters Reform funding and notes the support by the Hearings Panel and some submitters for excess water charges to assist with this.

A Smart Meter roll out to allow daily water meter information to be collected for each rating unit is being planned. Significant work needs to be done around the communications system for this network of instruments, billing processes, community education into the system before excess use charging takes place.

In the interim meter readings have been stepped up to every three months (previously they were annual). High use properties will be subject to excess water use charges. It may be that frequent meter reads remain a more cost effective approach than a fully automated system.

Resolution 5: Regularly communicates progress on the repairs and of conservation measures to the community, Community Board and the Council and that the name of the project change to the Akaroa Reclaimed Water Treatment and Reuse Scheme.

The most recent Council update was February 2022 and we will be updating the Community Board with a similar briefing.

Resolution 6: Requests Council Officers to work with the Community Board to establish a Community Reference Group including members from the local Rūnanga to ensure that community concerns about the approved Akaroa Reclaimed Water Treatment and Reuse Scheme are listened to and, where possible, addressed.

We have met with the reference group six times and have closed out the process. The group have provided a very useful summary letter to Council which is being posted on the CCC project webpage. Staff will continue to discuss the project with members of the group, though no longer in an official capacity of reference group members, rather well informed and well networked member of the local community.

Resolution 10e: Requests Council Officers to investigate and incorporate where practical the following into detailed design of the scheme; the re-use of the current UV treatment unit in the new treatment plant to enable non-potable reuse.

This resolution will be addressed during detailed design of the project once the irrigation consent conditions are established. Until then we cannot lock in the wastewater treatment plant design. The resolution of this resolution is therefore a matter to be closed off in 12 – 24 months.

Resolution 10 f: Requests Council Officers to investigate and incorporate where practical the following into detailed design of the scheme; native tree plantings in Robinsons Bay to avoid key archaeological sites as recommended in the Heritage New Zealand submission and installation of interpretation signage for visitors to the site.

These aspects are being addressed and our technical experts are finalising the need to irrigate close to areas of archaeological significance. If possible we will exclude them from the project and allow those areas to be leased to, and managed by, an interested community group.

Resolution 12: Requests Council Officers to investigate and report back to the Council on the option of a scheme for local employment for the planting and maintenance of the native trees.

Our current path is to use a local seed gathering contractor to obtain the seed stock. The Council nursery in Christchurch will strike the seedlings. Either the Council nursery or a local nursery will prick out the seedlings and pot to grow to planting size.

The next stages of planting and maintenance will be tendered to the open market with a non-priced attribute in the tender assessment for the use of local labour. We are also in discussions with the Akaroa School around arranging visits to the nursey and establishing community planting days.

Resolution 14: Supports and requests Council Officers to explore the feasibility of a non-potable reuse (purple pipe) scheme for Akaroa, so that property owners could use the water for garden watering and other non-drinking purposes.

Refer to resolution 10. The full purple pipe reticulation presents a separate project and will need to be considered in future Long Term Plans.

Resolution 15: Requests Council Officers work with the Ministry of Health, the Canterbury District Health Board, Ngāi Tahu and water suppliers that are interested in non-potable reuse to develop non-potable re-use guidelines or standards for New Zealand.

Update will be provided at a later stage.

Resolution 16: Requests Council Officers discuss options for enabling non-potable reuse of treated wastewater with the Council as soon as practicable, should the regulatory framework change.

Update will be provided at a later stage.

Wastewater pump stations

Status: Investigation, design and construction

Budget: variable

Scope/Update: A range of wastewater pump stations are undergoing renewals and/or capacity upgrades to address aging infrastructure risks, sewage overflows and increased population and loads. Works of note include:

- Minor modifications to PS31 and the rising main near McCormacks Bay. A flowmeter has been recently installed at PS31 and flow test will be carried out (after purging the trapped air on the high point at McCormacks Bay Rd) in order to review the performance of PM31.
- Pumps Options Assessment on the capacity and electrical upgrade to PS0013 in Woolston. The design requirements including the number and size of pumps are to be decided on and then the project will move into the design phase.
- PS0060 construction contract awarded to Citycare, site possession date is 9 May 2022, and programmed to be completed in Feb 2023.
- Programmed pump station electrical upgrades are continuing for the renewal of aging controllers, switchgear and automation (SCADA) that has passed its end of asset life. Decommissioning and replacing old gear with new SCADA Pack RTU's to improve the reliability of the monitoring of WW Lift station sites. The construction phase is due to be completed at the end of the year.
- Wastewater Pump & Storage Equipment Renewals 2019 (MEICA) completed for – Marshs Road, Rempstone Drive, Produce Lane, Scott Park and Claredon Terrace.
- Wastewater Pump & Storage Equipment Renewals 2020 (MEICA) covering 11 pump stations is in the defects period; to finish in first quarter of next year.

- Wastewater & Storage Equipment Renewals 2021 (MEICA) involves 9 WW pump stations – Harissons, Stapletons, Eastern Tce, Waimea, Stewarts Gully, Barnett, Balgay, Kainga and Riverlea – in the design phase.

Completion: Ongoing over the next 1-3 years

Somerfield pump station & pressure main

Status: Investigation/to be initiated

Budget: \$7,723,749

Scope: A new pump station and pressure main to deliver flow from the PS20 (Heathcote River) catchment into the Southern Relief wastewater line.

Update: WSP has provided a draft technical memo for the options based on its hydraulic assessment. A review workshop to be held soon. It is expected to have the preferred option by the end of June 2022, and to start concept design in Sep 2022.

Completion: Planned for 30 June 2025

Reticulation renewals

Status: Concept/ Plan/ Investigate/ Design/ Procurement/ Construction/ Close

Budget: \$57.9 million

Scope: The programme (93 projects) is to replace/upgrade ageing wastewater reticulation network.

Update: Projects in different phases spread out across the city for FY22.

Concept	Plan	Investigate	Design	Procurement	Construction	In Close or Closed	Total
7	4	11	13	1	35	22	93

Completion: Projects in construction are likely to be completed in FY22 and FY23

Hayton Road wastewater renewals

Status: Construction

Budget: \$ 5.3 million

Update: Pipe jacking below four Kiwirail Tracks at a depth of 4.7m is now complete. Renewal of the mains in Hayton road and Nga Mahi Road.

Completion date: June 2022



Pipe jacking under the railway lines is in progress

STORMWATER AND WATERWAYS

Stormwater and Waterways Operations

Late January and early February saw a relatively wet period with a total of 135mm of rain recorded, 70mm of which occurred during one rain event over 9-10 February. However, the overall rainfall for the first quarter of the year has been average for this time of year.

The vegetation growth from late last year has continued over into 2022, again due to periods of high air temperature and sunshine hours interspersed with enough rain to promote growth. This has meant that vegetation maintenance has taken longer and resulted in Citycare continuing to be behind in their scheduled rounds. COVID-19 also contributed to delays.

The works identified to be undertaken to the Avon River temporary stopbanks at the end of 2021 have been successfully completed. The crest level has been raised and now meets the design level.

Investigation into improvements to Ilam Stream was commenced in February with staff creating the investigation programme. Background information on Ilam Stream has been researched, site visits have been undertaken and staff have identified a number of workstreams to investigate further.

Council holds a joint consent with the Wairewa runanga to open Lake Forsyth/Wairewa. In March, an opening was completed to allow tuna (eels) out of the lake to migrate to the open sea for breeding. The tuna are known to swim to Pacific Islands such as Tonga to breed and the young tuna return to Lake Forsyth/Wairewa to repopulate the stocks in the lake.

Stormwater and Waterways Planning

Over this period, the workload of the Stormwater and Waterways Planning Team has increased significantly. The main areas of increase have been full return to the high levels of consents-related activity seen through 2021, addressing central government driven directives on “new initiatives” on the environment, climate change and housing, and having to deal with staff leaving the team temporarily or permanently.

The team has had a continued focus “business as usual” (BAU) commitments including completing project briefs and funding drawdowns for upcoming projects in Financial Years 2023 and 2024, providing planning and technical support to the Surface Water and Waterways Project Delivery Team, planning the framework for delivering the intensive and critical Surface Water Hydraulic Modelling Programme over the next three years and advancing the Otakaro Avon River Corridor (OARC) programme implementation.

Additional and increasing focus from the team was also applied to the intensive and short-turnaround responses required to support the wide range of “new initiatives” arising from central government policy and recently developed Council strategic direction. These initiatives include:

- The Three Waters Reform which is particularly challenging in the surface water and waterways space due to its “late entry” into the Reforms process and a comparative lack of definition on scope, frameworks and operational/organisational implications
- Climate change related initiatives including workshops and discussion papers on the Council’s Climate Resilience Strategy implementation and programme evaluation (including the team’s particular involvement in leading the Adapting and Greening our Infrastructure workstream under the Climate Resilience Strategy), trial application of climate resilience/sustainability practices and tools to project development, participation in the development of the Project Management Institute (PMI) Climate Change and Sustainable Development Toolkit for Project Managers, and Climate Adaptation Act submission
- Council responses to the National Policy Statement - Urban Development (NPS – UD) (housing intensification) including significant input to the District Plan change which is currently progressing and a significant increase in planning requirements due to the major accelerated new-housing programme being established and delivered by Kainga Ora
- Review of and submission on the Natural and Built Environments Act (NBA)

We are addressing issues relating to the interface between several Council projects within the OARC and Orion infrastructure which need to be resolved.

Stormwater & Waterways Capital Delivery

The Stormwater and Waterways Delivery Team are actively managing 105 projects with a current year budget total of \$55.5 million. Key project details are given below.

Cashmere Worsley flood storage

Status: Construction

Budget: \$ 27.2 Million

Update: Lower valley works complete and commissioned. Construction for upper valley works and landscaping complete. Change request for additional funding to be considered prior to procurement process for dam construction - scheduled to commence late 2022. Planting in the valley is in establishment and maintenance period with further planting being undertaken in Autumn/Winter 2022.

Completion date: June 2023

Eastmans, Sutherlands and Hoon Hay basins

Status: Detailed Design/Construction

Budget: \$29.9 Million

Update: Most of the basins and wetlands at the south end of the site are substantially complete and have begun treating stormwater and reducing flood risk. Pathways and bridges in this area are in progress and the southern area of the site will open to the public before the end of 2022.

Works are nearing completion for the Hoon Hay outlet siphon and Cashmere stream control structure. Eastman Central wetland design is on track for construction in 2022.

At the north end, Milns Wetland Cell construction works and Eastman wetland cell construction work has now started on site. There will be further bulk earthworks in summer 22/23 to complete the north end.

The final landscape plan will go to the community board for approval in June/July 2022. Due to restricted supply of eco-sourced native plants, the planting of the site will be split over the next 3 planting seasons. This will be a significant native planting project with around 100,000 native trees and 600,000 other plants and shrubs.

Completion date: December 2024 (with some planting to follow)



Cashmere Stream enhancement

Status: Investigation/scheme design/construction

Budget: \$3.1 Million

Update: The Cashmere Stream enhancement stage 1 has commenced work downstream of Sutherlands Road. Contractors will re-shape the stream's banks, place rocks and logs in the stream to create meanders and new habitats for the aquatic animals that live in the waterway, and plant the banks with natives. When all four stages are complete, two kilometres of Cashmere Stream between Sutherlands Road and Dunbars Stream near Cashmere Road will have been enhanced.

Completion date: September 2024



Wigram East Retention Basin

Status: Construction

Budget: \$10.5 Million

Update: The wetland and basin extension portion of this project is complete and flood storage and water quality treatment is available. The automated control and instrumentation works have been delayed due to supply chain issues for the actuator.

Completion date: June 2023

Pump Station 205 - Avon

Status: Construction

Budget: \$8.1 Million

Update: Project to upgrade major pump station and create additional lift. Discharge canal bund, tide gates and stop logs complete. Screw pump 1 (of 3) refurbishment completed early 2022. Screw pump 3 works are now well advanced and is expected to return to service in June/July. The condition of the pump station structure is requiring more work than originally forecast.

Completion date: August 2022



Blakes Road Stormwater Facility (Works 1)

Status: Construction

Update: Project to construct a first flush basin and wetland.

After the site was shut down for several months because of nesting black billed gulls, works recommenced and are now substantially complete with landscaping being completed this month. Operational discharge consent awaited for wetland area.

Completion date: May 2022

Budget: \$9.1 Million



Waitaki Street (Ōtākaro Avon River Corridor) – Avon Flood Management

Status: Construction

Update: This project is being developed to align with Ōtākaro Avon River Corridor Regeneration Plan. Work has recently begun on constructing the stopbank. This will be followed by work to excavate and create stormwater catchment basins. They will then undertake landscaping, and create footpaths and walkways through the regenerated wetland area.

Completion date: June 2023

Budget: \$12.2 Million



Waikākāriki - Horseshoe Lake Stormwater Treatment Facility

Status: Investigation / Scheme Design

Budget: \$13.3 Million

Update: Project to design and construct a first flush basin and stormwater treatment wetland. Challenges included dealing with contaminated land and biodiversity impacts. Options and cost reviews are being undertaken.

Completion date: June 2025

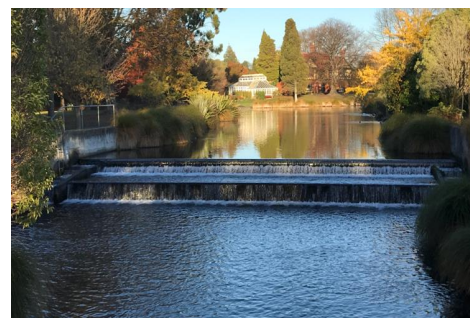
Waterway Structures Renewals/Fish Passage Barrier Remediation

Status: Detailed Design

Budget: \$1.1 Million

Update: Christchurch City Weir Report for barriers to fish passage has been completed and has prioritised four weirs in the Avon River Catchment. Top priority weir for remediation is at Mona Vale. Now progressing a detailed design.

Completion date: June 2024



Mona Vale Northern Weir

Tennyson Street Brick Barrel

Status: Construction

Budget: \$830,000

Update: Specialist brick barrel lining contractor has been appointed for construction, however, the liner is prepared in Shanghai and is being delayed by the current lockdowns there. Delivery dates are uncertain.

Completion date: June 2022 (subject to change)

Lyttelton Reticulation Renewals (Brick Barrels)

Status: Construction

Budget: \$5.2 Million

Update: Repair and renewal of Lyttelton's 100+ year old brick barrel stormwater drains (around 6km) including the installation and modification of new access manholes, with depths 2m to 8m below ground. 13 manholes installed to date under the first phase of works, phase two for 11 manholes commenced January 2022.

Completion date: June 2024

Ōtukaikino Stormwater Facility

Status: Investigation and Scheme Design

Budget: \$19.5 Million

Update: Construction of a first flush basin and wetland will serve 46 hectares of new business development and 72 hectares of existing residential area. The project will protect and enhance natural springs and enhance adjacent waterways. Demolition of buildings on the properties is nearing completion. Some early investigations including contamination and assessment of natural wetlands are being undertaken.

Completion date: Construction is budgeted for FY 26 to 28.

Mairehau Drain Timber Lining Renewal (Westminster to Crosby)

Status: Construction

Budget: \$3.2 Million

Update: Renewal of 430m of timber lined drain. Start of works delayed due to timber supply issues. Now expecting to commence in June.

Completion date: November 2022

Knights Drain Ponds

Status: Detailed Design

Budget: \$8.9 Million

Update: Design being finalised and tender documents for works being prepared. Construction planned to start August.

Completion date: June 2023

Greens Stormwater Facility

Status: Detailed Design

Budget: \$15.1 Million

Update: Detailed design underway with construction planned FY23 to FY25.

Completion date: May 2025

Manchester Street Brick Barrels Renewal (Purchas St to Bealey Ave)

Status: Investigation/Design

Budget: \$1.5 Million

Update: Options being reviewed to confirm design concept. Construction planned to start late 2022.

Completion date: FY23

APPENDIX 1 – HEALTH SAFETY AND WELLBEING STATISTICS

Health Safety and Wellbeing Statistics Three Waters Waste and Transport						
Health Safety and Wellbeing Statistics - Month of April 2022	Totals	Land Drainage	Water Waste	Resource Recovery	Transport	Intern
Near Misses	49	1	9	31	8	0
First aid injuries (FAI)	7	0	1	3	2	1
Medical Treatment Injuries (MTI)	1	0	1	0	0	0
Lost Time Injuries (LTI)	1	0	1	0	0	0
No. of days lost to LTIs	0	0	0	0	0	0
No. of hours worked	90,961	2,825	28,670	3,169	27,160	29,137
Health Safety and Wellbeing Statistics - Year to Date - June 2022	Totals	Land Drainage	Water Waste	Resource Recovery	Transport	Intern
Near Misses	421	2	198	168	43	10
First aid injuries (FAI)	66	0	9	34	14	9
Medical Treatment Injuries (MTI)	24	0	4	1	8	11
Lost Time Injuries (LTI)	10	0	5	1	1	3
No. of days lost to LTIs	68	0	52	1	5	10
No. of hours worked	875,227	16,971	190,642	107,680	283,725	276,209
LTIFR	11.4	0.0	26.2	9.3	3.5	10.9
MTIFR	38.8	0.0	47.2	18.6	31.7	50.7
TRIFR (LTI + MTI)	50.3	0.0	73.4	27.9	35.2	61.5
Year to Date July 2021 - June 2022 (as at 11-05-2022)						
Monthly Reporting URL						
www.tinyurl.com/ngk32y5						

APPENDIX 2 - MEMO OPTIONS AND COST OF ENHANCING STAFF MONITORING AND ENFORCEMENT OF SEDIMENT CONTROL REQUIREMENTS

Memo

Date: 23 March 2022

From: Clive Appleton, Healthy Waterways Programme Lead

To: Mayor, Deputy Mayor and Councillors

Cc: Chief Executive
Executive Leadership Team

Reference: 22/44571

Options and cost of enhancing staff monitoring and enforcement of sediment control requirements

1. Purpose of this Memo

- 1.1 At the Three Waters and Infrastructure and Environment Committee meeting on 10 November 2021, staff were asked to provide a memo on options and costs of enhancing staff monitoring and enforcement of sediment control requirements, and possible funding sources.
- 1.2 This memo firstly provides detail on the work that Council is currently undertaking to deal with erosion and sediment issues and then addresses this request.

2. Background

2.1 Introduction

Sediment from development and construction activity can enter waterways and cause harm to aquatic plants, invertebrates and fish, in much the same way as a dust storm might impact humans. There are many different impacts, such as:

- Poor clarity from sediment in water can reduce photosynthesis and therefore primary productivity within streams
- Sediment can make feeding more difficult by smothering the food supply of some species
- Suitable habitat for some species becomes clogged

- Fine sediment can clog the gills of some species, making respiration difficult.

Poor water quality from sediment discharges affects the mauri of waterways and coasts, reducing their ability to be a source of food, medicine and resources for Mana Whenua.

Excessive sediment can reduce the flood carrying capacity of waterways and increase the costs of removing weeds and sediment. Sediment in the stormwater network can also clog treatment devices prematurely, resulting in increased maintenance and a reduction in treatment. For these reasons it is important to reduce the amount of sediment in stormwater and the best way to do that is to stop it at source.

2.2 **Environment Canterbury Erosion and Sediment Control (ESC) training**

Environment Canterbury runs regular ESC training workshops. These two day workshops are a mixture of classroom and field training primarily for industry. Council staff from the compliance and investigation team, including building inspectors, have attended these workshops. This training has provided Council staff with the necessary knowledge to check ESC plans and enforce their proper placement and maintenance on development sites. It also enables staff to engage and educate industry contractors of their obligations and ways to prevent erosion and sediment loss on sites.

2.3 **Comprehensive Stormwater Network Discharge Consent (Consent)**

The Consent (CRC214226) was granted to Council on 20 December 2019. The Consent defines the conditions under which the Council may discharge stormwater from its network into the territory's water bodies, onto land and to the coast.

The consent details the purpose of the Council having a Sediment Discharge Management Plan (SDMP) in Condition 44, stating that it is,

“to set out reasonably practicable processes and practices to be implemented to manage the discharges of stormwater from development sites into the stormwater network to mitigate adverse effects of discharges from the stormwater network on the receiving environment's water clarity and aquatic biota. The effectiveness of the processes and practices will be measured against the fine sediment and TSS Attribute Target Levels for waterways and coastal areas within Schedules 7 and 8.”

2.3.1 **Sediment Discharge Management Plan**

The success of the SDMP, then, is defined by a reduction in fine sediment and Total Suspended Solids (TSS) levels in waterways within the consent area. The SDMP was developed by Council and submitted to Canterbury Regional Council on the 20 December 2020. As per Consent Condition 45 the SDMP sets out to achieve the following purposes:

- a) A risk assessment to determine the TSS concentration trigger levels⁴ for the discharge of stormwater into the stormwater network from development sites. The risk assessment will include factors of slope, soil type, whether the discharge will be treated downstream by a Council treatment facility prior to reaching the receiving environment, and the sensitivity of the receiving environment.
- b) In the event of a trigger level exceedance, a feedback process to identify and implement any changes to the erosion and sediment control practices in place on the development site. These may include reducing the area exposed to erosion by stabilisation or improving the efficiency of sediment laden water treatment.
- c) A description of the process for how TSS concentration trigger levels will be included in authorisations by the Christchurch City Council for discharges into the network from individual sites.
- d) A process for monitoring the erosion and sediment control management and sediment discharges from development sites.
- e) Determination of a rainfall intensity which will trigger monitoring of sediment discharges from development sites into the Council's network.
- f) Details of how records will be kept (such as site TSS concentration trigger level exceedance, compliance monitoring and enforcement action), with records made available to the Canterbury Regional Council on request.

Under Consent Condition 41 the SDMP includes practicable measures to ensure that each site has a specific Erosion and Sediment Control Plan (ESCP) that:

- a) Is prepared and implemented for development sites that discharge to the Council's network;
- b) Is prepared by a suitably qualified and experienced professional prior to commencement of stripping of vegetation or earthworks;
- c) Is prepared in accordance with the Erosion and Sediment Control Toolbox for Canterbury (or successor document); and
- d) Adopts a Best Practicable Option approach.

The SDMP sets out how conditions 41, 44 and 45 will be met. The effectiveness of the processes and practices will be measured against

⁴ Any water discharge that is cloudy, above 50 Mg/L, it is deemed to be exceeding the trigger level.

the fine sediment and TSS Attribute Target Levels for waterways and coastal areas within Schedules 7 and 8 of the consent.

3. Erosion and Sediment Control Plans (ESCP)

- 3.1 The Council requires preparation of ESCPs for new developments that include an element of earthworks. In some cases the ESCPs must be provided to and accepted by Council prior to earthworks commencing. However, there are instances, such as very low risk sites, where it is not reasonably practicable to require provision of an ESCP to Council, with associated auditing and monitoring by Council staff.

Resource consent process

- 3.2 Where a resource consent is required to authorise earthworks on a high risk site, the conditions of that resource consent will require the provision of an ESCP to Council's Compliance Team prior to works commencing. Works cannot commence until the ESCP has been audited and accepted by suitably experienced Council staff. For low and medium risk sites an ESCP only needs to be prepared, kept onsite, and made available to Council on request. Regardless of the risk, the ESCP must be implemented prior to the works commencing.

Building consent process

- 3.3 Where a building consent is required to undertake building work that includes an element of earthworks, the application for that building consent must include an ESCP. All ESCPs submitted as part of a building consent application are assessed by suitably experienced building consent authority staff. Ensuring an ESCP where the maximum TSS level will not be exceeded is equated as compliance with building code performance E1.3.1. Once approved and the building consent is issued, the ESCP will form an integral part of that building consent.

Stormwater and Land Drainage Bylaw Process

- 3.4 Council will rely on the Bylaw where a Building or Resource Consent is not required to authorise earthworks. The proposed Bylaw includes the following with regards to ESCPs:

Any person intending to undertake earthworks must, before stripping vegetation or beginning earthworks, engage a suitably qualified person to prepare an Erosion and Sediment Control Plan that sets out how erosion and sediment from the site will be managed during the earthworks.

The Erosion and Sediment Control Plan must set out how the site of the earthworks will be managed to:

- a) prevent earth or sediment from being washed off the site or otherwise carried in water onto neighbouring properties, roads, or into the stormwater network
- b) stabilise land to prevent earth slipping onto neighbouring properties, roads, or into the stormwater network

- c) stabilise entranceways and prevent earth or sediment from being spilled or tracked off the site by people or vehicles
- d) control or minimise dust.

An Erosion and Sediment Control Plan must be prepared by a suitably qualified person and in accordance with Environment Canterbury's Erosion and Sediment Control Toolbox.

Any person undertaking earthworks must make the Erosion and Sediment Control Plan available to the Council on request.

The site manager or person undertaking the earthworks must ensure the measures set out in the Erosion and Sediment Control Plan are implemented, monitored and fit for purpose.

Where a Building or Resource Consent (that incorporates the need for an ESCP) is not required to authorise earthworks on a development site, then these clauses in the Bylaw form the primary means of meeting the requirements of Conditions 41 and 42 of the Consent.

Site Risk Assessment

Development sites are categorised according to the risk of erosion and sediment discharge in stormwater arising from the works. The risk categories are Very Low, Low, Medium and High. Risk is defined in terms of:

- The area/extent of the works
- Proximity to a waterway
- Slope i.e. hill vs flat sites
- Whether or not they are Permitted Activities under the District Plan and/or Building Act

Risk level*	Criteria which must be met		
	<i>Disturbed area</i>	<i>Distance of site boundary to waterway</i>	<i>Slope</i>
Very Low	Sites which are Permitted Activities under the District Plan and/or Building Act.		
Low	<150 m ²	>20 m	<5°
Medium	<500 m ²	<20 m	Any
	<500 m ²	Any	>5°
	150-1,000 m ²	>20 m	<5°
High	501-1,000 m ²	<20 m	Any
	501-1,000 m ²	Any	>5°
	>1,001 m ²	Any	Any

*To achieve the risk rating the site must fulfil all criteria on any one row

This risk assessment is used to determine whether the level of qualification and experience of the person preparing an ESCP for a site or work area is suitable to ensure that erosion and sediment risks are identified and adequately planned for.

Council monitoring

Scheduled erosion and sediment monitoring takes place during routine inspections as a part of the Building Consent or inspections of greenfield subdivisions and if any issues are detected then these are raised with the site manager.

In addition to active monitoring of the highest risk sites, reactive inspections take place when complaints are received via the customer services team using Hybris. Hybris is starting to be used to track and audit how Council staff are responding to and resolving sediment related breaches.

The Council has recently implemented forecasting alerts and monitoring for the following rainfall events:

- Short duration events – 10 mm forecast for a period of 3 hours or less
- Longer duration events – 25 mm forecast for a period of 24 hours or less.

Due to the number of development sites active at any one time, active monitoring during a rainfall event will only take place if staff resources are available.

Trigger level exceedances and enforcement

Under any weather conditions, Council staff will meet with development site managers to discuss erosion and sediment control measures whenever water is seen to be flowing from a site, regardless of the TSS concentration in the runoff. This is to encourage a voluntary response from the site manager to undertake the necessary measures required to maintain or improve the erosion and sediment control. This requires site managers to identify and implement changes to the practices in place on the development site. These may include reducing the area exposed to erosion by stabilisation or improving the treatment efficiency of sediment laden water treatment.

For building work being undertaken under a Building Consent, if the erosion and sediment control measures are not in place as per the approved building consent documents, there is the option to issue a Notice to Fix (NTF). A NTF is a statutory notice requiring a person to remedy a breach of the Building Act 2004 or regulations under that Act. Where a NTF is not complied with, then the building consent team is notified and follow-up action taken, which will include consulting the consent holder (or their representative) to request action from the consent holder (or their representative).

For Resource Consents, where there is inadequate action from the site manager, the matter is referred to the Compliance and Investigations Team in the Regulatory Compliance Unit for follow up.

When Council staff are called out to an incident and the source of the sediment breach is verified and linked to a development site then the site operator can be charged an inspection fee. This can include fees for any follow up

inspections to ensure remediation measures have been implemented as instructed.

When sediment is tracked onto the road from development sites, site managers are requested to have the road swept. If this is not done, and Council staff can call in a sweeper truck and charge it to the developer. Dealing with sediment tracking onto the road is covered under Clause 29 of the Traffic and Parking Bylaw, which states:

- 1) No person may cause damage to the road or to any associated signage;
- 2) Any material or debris deposited on the road must be removed as soon as practicable;
- 3) The Council may give any person who has damaged, or deposited material or debris on a road notice:
 - a) to remove that material or debris from the road or to repair the damage caused to the road to Council's satisfaction, within 24 hours; and
 - b) that if the person does not comply, that person commits a further breach of this bylaw and the Council may undertake the work and recover all costs from that person.

Sediment breaches under the proposed Stormwater and Land Drainage Bylaw, enforcement will be overseen by the Land Drainage Team. Under the Local Government Act 2002, section 176, a person who has breached the Bylaw and been convicted is liable to pay to the Council the costs of remedying any damage caused in the course of committing the offence. The costs must be assessed by a District Court Judge and are recoverable as if they were a fine. These costs are in addition to any penalty.

Relying on the power in section 163 of the Local Government Act 2002 and clause 11 of the General Bylaw, the Council can remove or alter any work or thing that has been constructed in breach of the bylaw. The Council can recover the costs of removal or alteration from the person who committed the breach.

The Council can bring injunction proceedings in the District Court to stop a person from breaching a bylaw.

4. Enhancing auditing and monitoring

RMA Warranting of Council Officers

- 4.1 In 2020, Council and Environment Canterbury staff considered the merit of having a co-funded, full-time, dual warranted Enforcement Officer role for compliance monitoring of erosion and sediment control activities at small construction sites. The only difference with an existing Council warranted role is that a dual warranted role would apply the Environment Canterbury "On the Spot Infringement" program, which allows the warranted officers to address issues at the time the infringement is observed. This ensures those responsible for creating an environmental impact are held accountable and are more likely to address the issue immediately, and less likely to reoffend in the future.

Furthermore, the establishment of this role would provide opportunities to:

- Extend the series of industry workshops organised by Environment Canterbury. Feedback from industry indicates an increased awareness of the responsibilities they own at their sites; and
- Improve compliance monitoring and enforcement processes across both Councils.

4.2 Legal implications for a dual warranted Enforcement Officer role would be:

- Under section 38 of the Resource Management Act 1991 one local authority may appoint an officer in another local authority to carry out part of the functions and powers of an enforcement officer;
- Any enforcement action related to Environment Canterbury resource consents and rules under the Land and Water Regional Plan would follow existing Environment Canterbury enforcement processes; and
- A Council enforcement officer would have the functions and powers associated with District Council roles and responsibilities. Dual warranting under Environment Canterbury's RMA enforcement powers would be expected to expand the Council's ability to respond to poor erosion and sediment control management by "On the Spot Infringement" beyond that currently available to Council.

4.3 It was considered that the warranted enforcement officer role would be co-funded with Environment Canterbury. Council would provide location of work and there would be a half share of an FTE \$234,000 over three years (\$78,000/year), based on Environment Canterbury's Middle Band 5 senior remuneration for the position. Some costs would be recoverable through enforcement "On the Spot Infringement" activities.

4.4 This role was not progressed in 2020 due to several factors, such as needing further clarity and understanding on how to effectively and legally deploy what was a "novel" role within and across both Councils. At the same time the Council was faced with post Covid 19 budget constraints, which saw no new staff positions being considered or established.

Improved monitoring

4.5 Council is implementing the SDMP, with building inspectors and enforcement staff overseeing enforcement of erosion and sediment control for development sites. However incidents of unacceptable and preventable sediment discharges continue to occur across the city.

4.6 Effective monitoring of all medium to high risk sites, especially during rainfall events, will require additional staff to improve compliance through more regular reminding and educating industry operators about erosion and sediment control. It is proposed that two erosion and sediment control officer roles be created and based in the Building Consenting Unit. Placement in this unit will ensure the officers have power to impose "notice to fix" sediment control measures, and they would still need to be working for the Council when the Three Waters Unit moves across to a Water Authority in 2024.

4.7 Funding of \$550,000 per year should be allocated, \$450,000 to cover salaries and admin, \$100,000 for industry education/ field days and training

workshops. Funding should be allocated in the Annual Plans and then the next LTP.

5. Conclusion

- 5.1 In order to ensure that the Council is meeting its obligations under the Comprehensive Stormwater Network Discharge Consent, funding should be made available for two additional fulltime staff to audit medium/ high risk erosion construction sites, and to run industry focused education workshops.

1. Attachments Ngā Tāpirihanga

There are no attachments to this report.

Signatories Ngā Kaiwaitohu

Author	Clive Appleton - Healthy Waterways Programme Lead
Approved By	Helen Beaumont – Head of Three Waters Jane Davis - General Manager Infrastructure, Planning & Regulatory Services

12. Triannual Zone Committees Update Report - June 2022

Reference / Te Tohutoro: 22/429147

Report of / Te Pou Matua:	Gina Waibl, Chair, Banks Peninsula Zone Committee Annabelle Hasselman, Chair, Christchurch-West Melton Zone Committee Les Wanhalla, Co-Chair, Selwyn-Waihora Zone Committee
General Manager / Pouwhakarae:	Lynn McClelland, Assistant Chief Executive, Strategic Policy & Performance – lynn.mcclelland@ccc.govt.nz

1. Summary

- 1.1 The purpose of this report is for the Three Waters Infrastructure and Environment Committee to receive the latest updates from the three central Water Management Zone Committees, Banks Peninsula, Christchurch West Melton, and Selwyn Waihora.
- 1.2 Zone Committee community members are appointed through a Canterbury Water Management Strategy (CWMS) “Refresh” process via a Water Management Committee Selection Working Group. The current Council representatives on the Selection Working Group, as per Sustainability and Community Resilience Committee resolution SACRC/2019/00006, are Councillors Galloway and Daniels. Each Zone Committee has four to seven members of the community on it, and a refresh of members is currently being undertaken. Detail about the Refresh process is being promoted on both Environment Canterbury and the Christchurch City Council’s websites. Selection workshops will be held in June 2022, and the Selection Working Group’s recommendations of refresh appointments will be presented to Councils for approval in July and August 2022.
- 1.3 Emma Norrish, Chair of the Waipapa Papanui-Innes Community Board was elected as the Council’s representative on the Christchurch West Melton Zone Committee, to replace former Councillor, James Daniels. Recommendation 4 below would confirm Emma Norrish’s appointment onto the Water Management Selection Working Group.



2. Officer Recommendations Ngā Tūtohu

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the Triannual Update Reports from the Central Water Management Zone Committees:
 - a. Banks Peninsula Zone Committee
 - b. Christchurch West Melton Zone Committee
 - c. Selwyn-Waihora Zone Committee.
2. Note the work of each Water Management Zone Committee.
3. Note that the Christchurch West Melton Zone Committee supports:
 - a. Building capacity of industry for erosion and sediment control;
 - b. Education courses being enhanced and continued; and
 - c. The provision of an adequate number of dedicated erosion and sediment control officers.

4. Approve the appointment of Emma Norrish to the Water Management Committee Selection Working Group.

Attachments / Ngā Tāpirihanga

No.	Title	Page
A  	Central Zone Committees - Triannual Report to Three Waters Committee- 8 June 2022	103

In addition to the attached documents, the following background information is available:

Document Name	Location / File Link
N/A	N/A

Confirmation of Statutory Compliance / Te Whakatūtutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

Signatories / Ngā Kaiwaitohu

Author	Liz Ryley - Committee and Hearings Advisor
Approved By	David Griffiths - Head of Strategic Policy & Resilience Lynn McClelland - Assistant Chief Executive Strategic Policy and Performance

**Banks Peninsula, Christchurch West Melton and Selwyn Waihora
Water Management Zone Committees
Tri-annual Report to 8 June 2022**

Report of	Gina Waibl and Trudi Bishop	Chair and Deputy Chair, Banks Peninsula Zone Committee
	Annabelle Hasselman and Mike Patchett	Chair and Deputy Chair, Christchurch West Melton Zone Committee
	Les Wanhalla and Fiona McDonald	Co-chairs, Selwyn Waihora Zone Committee
Christchurch City Council Zone Committee Elected Reps	Deputy Mayor Andrew Turner/Alternate -Tori Peden Community Board Member Emma Norrish Councillor Anne Galloway	Banks Peninsula Zone Committee Christchurch West Melton Zone Committee Selwyn Waihora Zone Committee
Christchurch City Council Senior Staff	David Griffiths (replacing Marion Schoenfeld) Diane Shelander	Banks Peninsula Christchurch West Melton
Authors/Key Contacts	Christchurch West Melton, Banks Peninsula Zone Committee Facilitator	Shelley Washington shelley.washington@ecan.govt.nz
	Selwyn Waihora Zone Committee Facilitator (Acting)	Murray Griffin murray.griffin@ecan.govt.nz

Purpose of Report

The Banks Peninsula, Christchurch West Melton and Selwyn Waihora Zone Committees (the Zone Committees) provide tri-annual reports to the Christchurch City Council Three Waters, Infrastructure and Environment Committee for 2022. This is the first of these reports for 2022.

Background: The Canterbury Water Management Zone Committees

The Zone Committees were established under the Canterbury Water Management Strategy (CWMS).

Banks Peninsula Zone Committee is a joint committee of Environment Canterbury and Christchurch City Council, while both the Christchurch West Melton and Selwyn Waihora Zone Committees are joint committees of Christchurch City Council, Environment Canterbury, and Selwyn District Council.

Each Zone Committee comprises one Environment Canterbury councillor, one elected member (and option for alternate) from each district council within the zone, one member from each Rūnanga (and option for alternate) in the zone and four to seven members of the community.

Purpose:

The Committee's purpose is to uphold the mana of the freshwater bodies within their zone by facilitating enduring land and water management solutions that give effect to the Canterbury Water Management Strategy vision, principles and targets in their zone.

Functions:

- *Facilitate community engagement and collaboration – continuing an active programme of engaging with communities on freshwater management matters; and*
- *Facilitate the provision of advice through to councils (relevant Territorial Authorities and Environment Canterbury) and others (eg. private sector) contributing to freshwater management; and*
- *Enhance delivery capability and coalition of the willing – working with stakeholders across all sectors to extend the resources available to implement the CWMS, including connecting others to additional resources and seeking opportunities to promote, support, leverage and expand catchment-based initiatives that deliver the CWMS; and*
- *Provide progress reports – annual progress reporting to Councils and on progress towards delivery of the zone-specific priorities and CWMS target areas identified in the Zone Committee Action Plan.*

Zone Committees make recommendations about how the CWMS Action Plan Budget is allocated in their zone. This is a budget provided by Environment Canterbury, \$50K for 2021/22 and the following two years to be confirmed. The final decisions are made by Environment Canterbury.

The purpose of this budget is to allow Zone Committees to focus on implementing their action plans and leverage other funding opportunities to achieve the CWMS priorities. The notable difference from the previous Immediate Steps funding is that budget can be allocated to a wider range of project types, rather than exclusively biodiversity.

Environment Canterbury has a separate new contestable fund called Waitaha Wai Impact to Action for community groups to apply to and separate operational funding for regional and zone biodiversity and water management projects. Christchurch City Council and Selwyn District Council also may have separate contestable funds and operational funds.

Zone Committees cannot commit Environment Canterbury or district council funds.

Banks Peninsula Zone Committee

CWMS Action Plan Budget

The Committee has recommended the allocation of most of this CWMS Action Plan budget to help them implement their action plan. The following projects are receiving funding:

- Le Bons Bay spring head protection
- Okuti River Project enhancement of wetland margins for birds
- Stream fencing, trapping, weed control and planting a small stream, including a wetland in Pigeon bay
- Fencing of upper Sam's Creek in Diamond Harbour
- Ecological and cultural assessment Te Ahu Pātiki.

Action Plan

The Committee is updating its action plan so that it is more concise. Once the new version is published it will be attached to the next triannual report.

February field trip in Purau Valley

The Committee visited some landowners in Purau Valley who are working with other landowners and people to protect biodiversity, create recreation opportunities and reduce sediment to waterways. The Committee discussed opportunities for a soil conservation programme on Banks Peninsula.



Community engagement

Unfortunately, the Little River Show in January 2022 was cancelled due to Covid. The Committee is getting assistance from Environment Canterbury communications staff to develop display material for future events. The Committee is going to have a stormwater superhero display at the 2 July De-plastics event in Lyttelton using the Stormwater Superhero Mobile Resource.

Chair and Deputy Elections

At their March meeting, the Committee elected their Chair and Deputy Chair for 2022, Gina Waibl and Trudi Bishop. Aurora Smith stepped down from the role of Deputy Chair, and the Committee thanked Aurora for her work.

Christchurch West Melton Zone Committee

CWMS Action Plan Budget

The Committee has recommended the allocation of this budget to help them implement their action plan. The following projects are receiving funding:

- Cashmere freshwater springs project stage 1 – Ōpāwaho Heathcote River Network
- Stormwater Superhero engagement campaign by the Zone Committee – with help from communications teams at both Councils and Cherry Red Consulting
- Contribution towards costs of coordination for the Avon Heathcote Estuary Ihutai Trust
- Contribution towards creating a virtual hub by the Community Water Partnership
- Contribution towards management and delivery of the Stormwater Superhero Mobile Resource – Christchurch Envirohub
- Planting around Albert/Victory Stream – Port Hills Park Trust Board
- Planting streams within school grounds – Ilam, West Spreydon, Knights Stream, St Albans schools
- Remote sensing of Ōtūkaikino Catchment – Water and Wildlife Habitat Trust
- Te Tiriti training for members of waterway focused community groups – two day workshop 27 May and 3 June

Action Plan

The Committee is updating its action plan so that it is more concise. Once the new version is published it will be attached to the next triannual report.

Erosion and sediment control

At the Committee's 24 February meeting, an update was received from Clive Appleton and Jess Newlands on Christchurch City Council and Environment Canterbury's regulatory responsibilities for erosion and sediment control, as this has changed since the Christchurch City Council's Comprehensive Stormwater Network Discharge Consent became operational. (The previous tri-annual report said this had occurred in November, however it was delayed until February).

The Committee made the following recommendations following that update:

That the Christchurch West Melton Water Management Zone Committee supports:

1. Building capacity of industry for erosion and sediment control;
2. Education courses being enhanced and continued; and
3. The provision of an adequate number of dedicated erosion and sediment control officers.

Stormwater engagement

Unfortunately, Estuary Fest and Summer in the Styx events had to be postponed/cancelled due to Covid19. Paul Dickson consulted the Committee on the preparation of the Estuary/Ihutai Stormwater Management Plan at their February meeting.

Community Waterways Partnership

Committee members continue to take part in the initiatives of the Community Waterways Partnership including developing key messages, a virtual hub and a brokering system. The Committee will continue to support the Partnership, assist it to effectively engage the community, and provide a conduit to councils.

Membership

Abbie Wilson stood down from the Committee at the end of 2021 and was farewelled at the Committee's November meeting. The Committee farewelled Kevin Brown who has been the Chair in recent years and has been on the Committee for many years. Kevin was acknowledged and thanked for his commitment, knowledge and expertise, his assistance with the Stormwater Superhero events, and for advocating regarding the nitrates/colorectal cancer issue. He also led the Committee on number of successful field trips.

The Committee held a minute's silence to acknowledge the recent passing of Peter Ramsden who used to be the Committee's Tangata Whenua Facilitator and dedicated to improving water management throughout Canterbury.

Les Wanhalla resigned from the Committee in April. Les been representing Taumutu Rūnanga for many years and the Committee thanks him for his commitment and contributions over the years.

Chair and Deputy Elections

At their February meeting, the Committee elected Annabelle Hasselman as Chair and Mike Patchett as Deputy Chair.

Chair and Deputy requests of Christchurch City Council by Chair and Deputy and feedback on Annual Plan

The Committee provided a letter of their requests for the CCC Annual Plan as below:

Improving Erosion and sediment control

- Continue participation on the Cashmere Catchment and Port Hills Working Group of the Zone Committee and support its recommendations, including identifying specific locations of sources of sediment on the hills and finding solutions.
- Increase the programmes for building capacity within development and building industries for erosion and sediment control and stormwater management, including the creation of at least two erosion and sediment control monitoring, education and enforcement officers.
- Promote and incentivise Water Sensitive Urban Design, including household rainwater tanks.

Enhancing waterways and catchment ecosystem health

- Reduce the frequency and mass load of sewage overflows with improved sewage infrastructure.
- Continue to plan and construct stormwater retention basins to trap stormwater contaminants before they reach waterways.
- Continue to advocate for national reforms to standards of vehicle brake pads and roofing material to reduce copper and zinc contaminants in stormwater.
- Quantify and mitigate the predicted increasing nutrient contaminants in groundwater supply springheads to wetlands and waterway.
- Collate and publicly report the projected impacts of a changing climate to wetland and waterways and develop practical advice on cost effective adaptation actions for both government and the community.

Public health and water

- Map and better control sources of faecal coliforms to our waterways to improve swimmability/water contact and reduce risks to public health.
- Continue to advocate for better research, risk assessments and remedial actions concerning the risk of Colorectal Cancer with drinking water supplies.

Supporting community action for healthy waterways

- Provide increased technical and financial support to community catchment care/waterway groups to undertake waterway and catchment restoration and projects.
- Maintain and increase support for the effective development of the Community Waterways Partnership.

Selwyn Waihora Zone Committee

CWMS Action Plan Budget

At their 9 May meeting, the Selwyn Waihora Zone Committee (SWZC) supported two further projects to utilise the remaining \$20,000 of the \$50,000 available in the CWMS Action Plan Budget for 2021/22.

Waikirikiri Selwyn River Catchment Group Establishment project

The first project supported (\$10,000) followed on from the 14 March meeting where the Committee provided feedback on options to advance on the Selwyn Waikirikiri Catchment Group Development project. Element Environmental provided a briefing at the 9 May meeting on the Committee's preferred priorities for advancing this project. The Committee supported the approach presented which will focus on the Upper Waikirikiri catchment and aim to provide support to emerging catchment group interest in the upper catchment with initial state of the environment information, with a specific focus on a 'mountains to the sea' biodiversity corridor.

Muriwai o Whata Mahinga Kai project

The second project supported (\$10,000) is a Mahinga Kai project on Muriwai / Coopers Lagoon. ECan Pou Mātai Ko, Steve Carrick, provided the Committee with a briefing on this project at the 9 May meeting. He highlighted how this project aligned with the Muriwai O Whata (2016) management plan for the lagoon.

The following excerpt is from the Muriwai o Whata – Muriwai / Coopers Lagoon Management Plan (April 2016) provides the Committee with some background on this project.

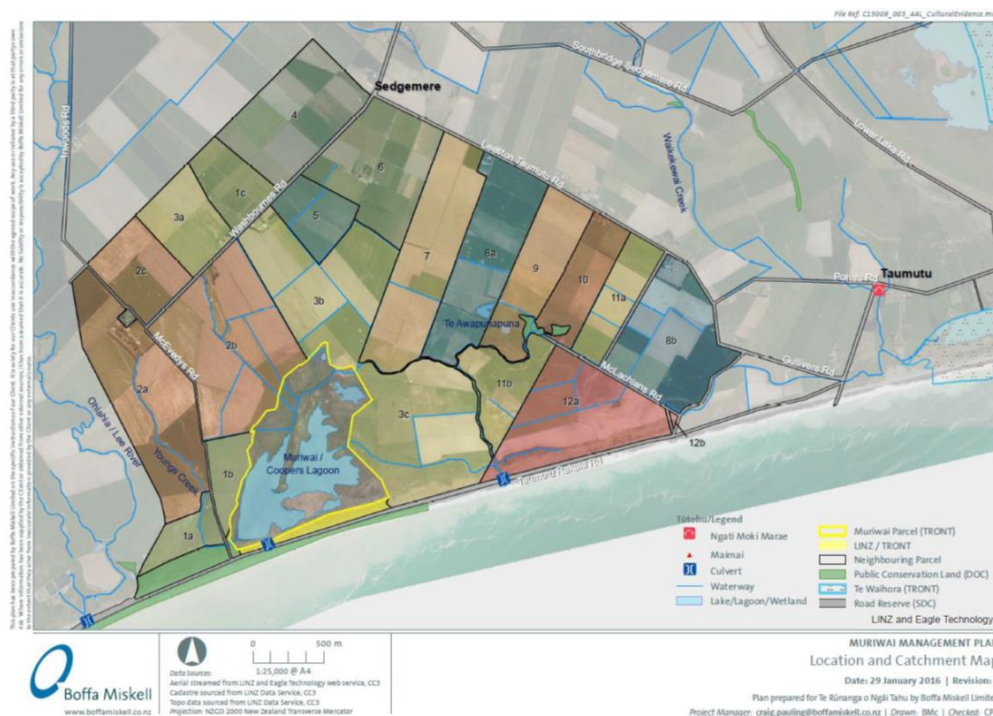
Muriwai o Whata (Coopers Lagoon) is an area of cultural, natural, historic and recreational importance located within the Selwyn District of Te Waipounamu, just South of Taumutu. To Ngāi Tahu, and in particular Ngāi Te Ruahikihiki ki Taumutu, Muriwai (as it is most commonly known) has special value as a mahinga kai and an important source of mana.

The loss and degradation of this taonga was part of the overall Ngāi Tahu claim to the Waitangi Tribunal, which resulted in the bed of Muriwai being vested in Te Rūnanga o Ngāi Tahu through the Ngāi Tahu Claims Settlement Act 1998.

The briefing highlighted this project as:

- A flagship initiative in terms of cultural values for this coastal wetland and catchment,
- Led by Taumutu Rūnanga with ECan, Ngai Tahu, SDC, Predator Free Banks Peninsula, and community in the catchment providing project support and delivery.

Area Map – from page 3 of the Management Plan, illustrates the location of Muriwai / Coopers lagoon.



The next stage of this project, which the Committee is supporting, will focus on biodiversity planting, with further investigations of fish passage and remediation options contributing the following stages in this project.

June Workshop

Will provide time for the Committee to focus on a 'soft' review of the 2021-2024 Action Plan to fine-tune the plan to support the Zone Committee's priorities over the next two years.

13. Biodiversity funding grant applications June 2022

Reference / Te Tohutoro: 22/554161

Report of / Te Pou
Matua:

Nicholas Head, Senior Ecologist, Nicholas.Head@ccc.govt.nz

General Manager /
Pouwhakarae:

Lynn McClelland, Assistant Chief Executive, Strategic Policy & Performance, Lynn.McClelland@ccc.govt.nz

1. Purpose of the Report Te Pūtake Pūrongo

- 1.1 The purpose of this report is to recommend the Council approve Biodiversity Fund (**the Fund**) support for seven projects as are outlined in the table below and attachments.
- 1.2 This is a staff generated report.
- 1.3 This decision is considered of low significance with regard to the Significance and Engagement Policy. The decision affects a small number of people (the applicants), and the impact is positive for both the applicants and the environment; the decision allocates funding already provided for in the Long Term Plan 2018-2028.

2. Officer Recommendations Ngā Tūtohu

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the report.
2. Approve full funding from the Christchurch Biodiversity Fund 2021/22 for the following 7 projects as follows:

• Feral Pig Control - Te Waihora catchments	\$60,000.00
• Covenant Protection and enhancement Port Levy	\$6,372.50
• Tūpari - Mikimiki Conservation Trust, ecological restoration	\$31,285.00
• Manaia Covenant Protection	\$5,000.00
• Te Ahu Pātiki summit protection	\$20,000.00
• Rare ecosystem protection - Summit Road reserves	\$10,021.50
• Hauroko Covenant Protection	\$11,000.00

3. Reason for Report Recommendations Ngā Take mō te Whakatau

- 3.1 All projects recommended for support meet the Fund criteria, are ready for immediate implementation, and have access to co-funding where this is required for success.

4. Alternative Options Considered Ētahi atu Kōwhiringa

- 4.1 Alternative options are not to fund, or not fully fund these projects. As the Fund is allocated specifically to assist private landowners protect and enhance indigenous biodiversity and the applications received achieve this, these options were discounted.

5. Detail Te Whakamahuki

- 5.1 The Fund supports custodians of biodiversity working to protect ecologically significant sites. Council provides up to 50% of funding (maximum of \$60,000 per individual project/property per year), for eligible projects on private land. Up to \$400,000 is available for allocation this year.
- 5.2 The Fund is an opportunity to support private landowners who are taking voluntary action, and investing their own time and money, to protect and enhance biodiversity on their properties. The projects provide real protection for biodiversity in the Christchurch District through direct action.
- 5.3 The community is very supportive of the council contributing funds to assist with conservation of private land. Several submissions were made by community groups and individuals to the Long Term Plan 2021-2031 requesting that council increase the annual allocation to the biodiversity fund. As a result the fund was increased to \$400,000 - an outcome consistent with the council declaring an ecological and climate emergency.
- 5.4 At the Three Waters, Infrastructure and Environment Committee meeting on 10 November 2021, the Committee approved funding of \$256,321 across 11 projects from the Christchurch Biodiversity Fund 2021/22. This left \$143,679 remaining in the Fund for the remainder of the 2021/22 financial year.

June 2022 Funding Applications

- 5.5 The recommendation for the June 2022 round of funding would allocate a total of **\$143,697.50** across seven projects. This contribution, together with applicant-matched funding and funding from other contributions, totals an overall investment of **\$362,346.21** in projects that protect and enhance our local biodiversity.
- 5.6 This would leave \$0 remaining in the Fund for the remainder of the 2021 - 2022 financial year.
- 5.7 Biodiversity funding bids for this round of the 2021/22 financial year are outlined in the table below:

Project Name	Owners	Work	Amount Request	Landowner contribution	Other contribution	Total Cost of Project
Feral Pig control, Te Waihora catchments	Matt Ironmonger	Establishing automated trapping network	\$60,000.00	\$90,367.72		\$150,367.72
Covenant Protection and enhancement Port Levy	Ira Schelp	Trap purchase and establishment, enhancement planting	\$6,372.50	\$6,372.50		\$12,745.99
Tūpari - Mikimiki Conservation Trust,	Megan Reynolds	Pest animal and weed control, trap purchase, fencing upgrades	\$31,285.00	\$37,109.00		\$68,394.00

ecological restoration						
Manaia Covenant Protection	Markus Puentener, Megan Gainsford	Weed control	\$5,000.00	\$5,000.00	\$2,000.00	\$12,000.00
Te Ahu Pātiki summit protection	Rod Donald Trust	Weed control	\$20,000.00	\$20,000.00		\$40,000.00
Rare ecosystem protection - Summit Road reserves	Summit Road Society	Weed control	\$10,021.50	\$10,316.50	\$4,500.00	\$24,838.50
Hauroko Covenant Protection	Banks Peninsula Conservation Trust	Weed control	\$11,000.00	\$40,000.00	\$3,000.00	\$54,000.00
Total			\$143,697.50	\$209,165.72	\$9,500.00	\$362,346.21

- 5.8 All applications recommended for funding are considered to meet the Fund criteria.
- 5.9 Descriptions and maps for projects recommended for funding are provided in attachments.
- 5.10 The decision affects the following wards/Community Board areas:
- 5.10.1 Te Pātaka o Rākaihautū/Banks Peninsula Community Board;
 - 5.10.2 Waipuna Halswell-Hornby-Riccarton Community Board;
 - 5.10.3 Waikura Linwood-Central-Heathcote Community Board; and,
 - 5.10.4 Waihora Spreydon-Cashmere Community Board.

Update on Previously-Funded Projects

- 5.11 Since the Fund was established in 2017, a total of \$1,232,214 has been allocated to 52 projects (excluding the current applications). Thirty five of these projects are complete, with the remainder in progress.
- 5.12 Most previous projects involved fencing (38 projects). Restoration planting (12 projects), pest plant control (11 projects), and pest mammal control (5 projects) are other activities that have been supported. Some projects involve multiple activities.
- 5.13 Over 1300 hectares of ecologically significant vegetation has been protected, along with the indigenous fauna that live in those habitats. Several projects have also protected streams.

6. Policy Framework Implications Ngā Hiraunga ā- Kaupapa here

Strategic Alignment Te Rautaki Tīaroaro

- 6.1 The programme aligns with the strategic framework's supporting principle of "taking an inter-generational approach to sustainable development prioritising the social, economic and cultural well-being of people and communities and the quality of the environment, now and into the future," by supporting individual landowners to protect and enhance biodiversity on private land.
- 6.2 The programme also aligns with the strategic framework's supporting principle of "actively collaborating and co-operating with other local, regional and national organisations." We work with Environment Canterbury and covenanting agencies to ensure that projects have adequate support and that our combined resources are efficiently allocated.
- 6.3 This report supports the [Council's Long Term Plan \(2021 - 2031\)](#):
 - 6.3.1 Activity: Strategic Planning, Future Development and Regeneration
 - Level of Service: 1.4.2 Effectively administer grants within this Activity (including Heritage Incentive Grants, Enliven Places, Innovation and Sustainability) - 100% compliance with agreed management and administration procedures for grants The Fund is provided for in the 2021-2031 Long Term Plan, and is aligned with the Council's strategic framework.
- 6.4 The programme broadly aligns with the Strategic Priority of "Meeting the challenge of climate change through every means available." Proposed projects will enhance indigenous forest regeneration and reduce infestations of invasive pest plants and animals. This will boost carbon sequestration and improve ecosystem resilience.
- 6.5 The programme aligns with the Healthy Environment Community Outcome. Specifically, the Fund supports the "unique landscapes and indigenous biodiversity are valued and stewardship exercised" outcome, by contributing to the protection of indigenous species and ecosystems, and by supporting landowners who are working to look after biodiversity on their own properties. Many projects also inherently protect streams, contributing to the maintenance of healthy water bodies.

Policy Consistency Te Whai Kaupapa here

- 6.6 The decision is **consistent** with Council's Plans and Policies.
- 6.7 The programme aligns with District Plan policies regarding the protection of ecologically significant sites, and the provision of advice and incentives for landowners who wish to do this on private property.
- 6.8 The programme supports the goals of the Council's Biodiversity Strategy.

Impact on Mana Whenua Ngā Whai Take Mana Whenua

- 6.9 The decision does not involve a significant decision in relation to ancestral land or a body of water, but does involve indigenous species and ecosystems that have intrinsic values. Therefore this decision does specifically impact Mana Whenua, their culture and traditions. Staff note that the intent of all projects is to have a positive impact on indigenous biodiversity.

Climate Change Impact Considerations Ngā Whai Whakaaro mā te Āhuarangi

- 6.10 Most of the projects provide protection to regenerating shrubland and/or forest habitats, which will boost the carbon sequestration capacity of these areas. Protecting and enhancing the ecological health of the sites will improve the resilience of the habitats and species within them to the impacts of climate change.

Accessibility Considerations Ngā Whai Whakaaro mā te Hunga Hauā

- 6.11 All the applications subject to grant approval occur on private land, accessibility considerations are beyond the scope of issues to consider in this decision.
- 6.12 The decision does involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does specifically impact Mana Whenua, their culture and traditions.
- 6.13 These projects are intended to deliver positive outcomes for the environment that is consistent with the expectations of Mana Whenua, and those of local rūnanga.

7. Resource Implications Ngā Hīraunga Rauemi

Capex/Opex / Ngā Utu Whakahaere

- 7.1 Cost to Implement - none other than staff time to administer the fund.
- 7.2 Maintenance/Ongoing costs - none other than staff time to administer the fund.
- 7.3 Funding Source - the Fund is provided for in the 2021-2031 Long Term Plan.

Other / He mea anō

- 7.4 Considerable checks and balances are in place to ensure the funding granted to projects is spent in accordance with the project plan and meets expectations, this includes progress reports, proof of completions and inspections if necessary. Staff time in relation to this is an inherent part of overseeing the Fund.

8. Legal Implications Ngā Hīraunga ā-Ture

Statutory power to undertake proposals in the report / Te Manatū Whakahaere Kaupapa

- 8.1 The Three Waters Infrastructure and Environment Committee has the delegation to consider applications to the Fund.


Other Legal Implications / Ētahi atu Hīraunga-ā-Ture

- 8.2 There is no adverse legal context, issue or implication relevant to this decision.

9. Risk Management Implications Ngā Hīraunga Tūraru

- 9.1 There are no significant risks associated with allocating funds to the projects as outlined. Processes are in place to ensure funding granted is spent in accordance with the project plan and expectations.

Attachments / Ngā Tāpirihanga

No.	Title	Page
A 	Christchurch Biodiversity Fund application summaries - June 2022	117

In addition to the attached documents, the following background information is available:

Document Name	Location / File Link
Not applicable	Not applicable

Confirmation of Statutory Compliance / Te Whakatūtutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

Signatories / Ngā Kaiwaitohu

Author	Nicholas Head - Senior Ecologist
Approved By	Lynn McClelland - Assistant Chief Executive Strategic Policy and Performance

5/11/2022

Christchurch Biodiversity Fund
2021/2022 – May 2022
Project Descriptions

Head, Nicholas
CHRISTCHURCH CITY COUNCIL

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Hauroko Covenant Protection	15

Feral Pig control, Te Waihora catchments

Owner: Matt Ironmonger

Protection: Numerous covenants and reserves

Amount requested: \$60,000.00

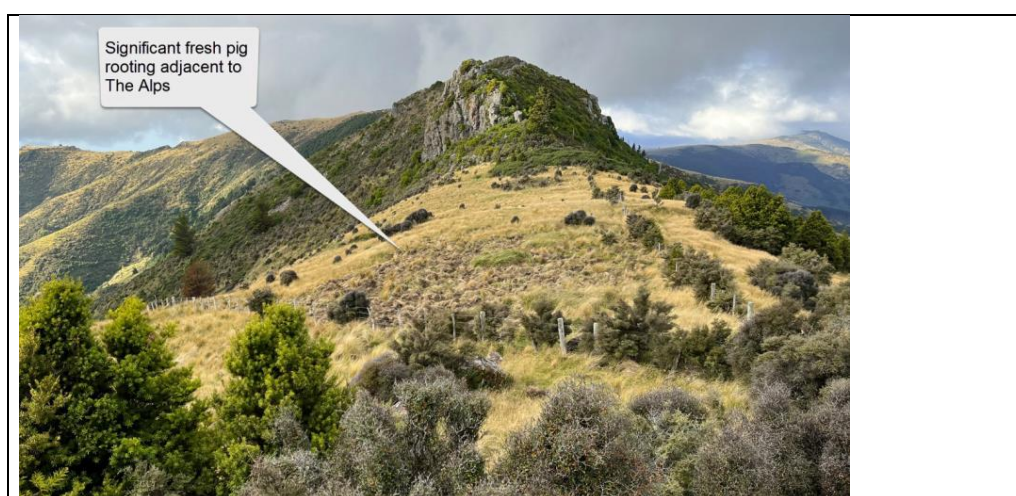
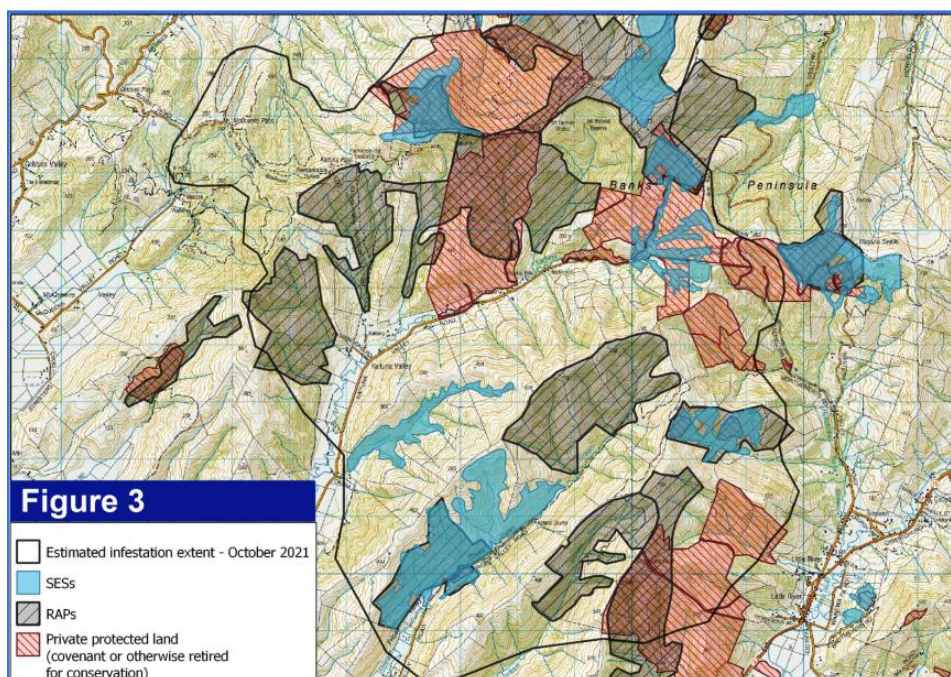
Trim reference to full application: Feral pig control June 2022: FOLDER17/3004: 22/605472

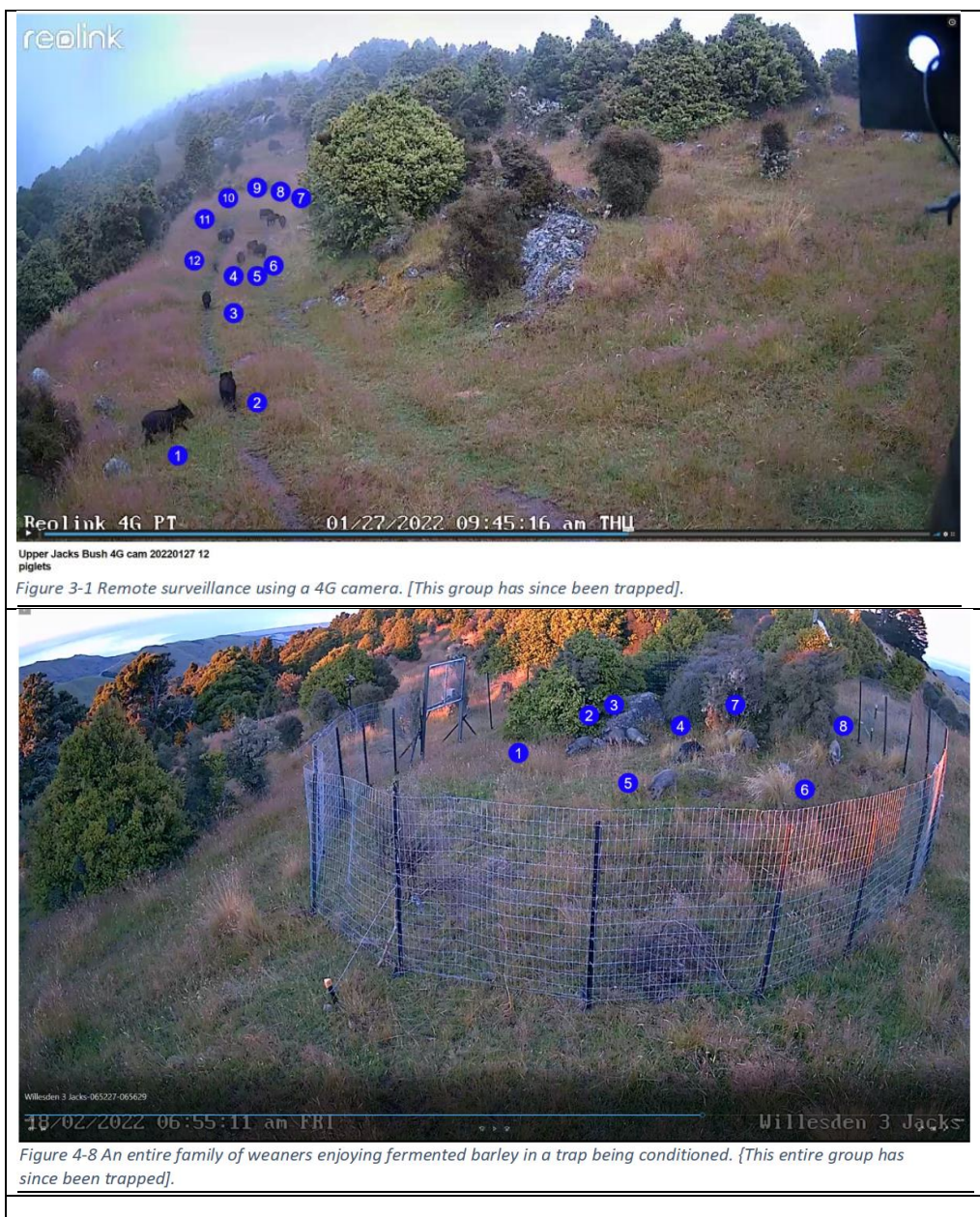
This project is for feral pig control across multiple properties and landowners. Feral pigs have recently emerged as a major threat on the Peninsula and they are rapidly spreading out from where they were illegally liberated in the Te Waihora catchment.

The spread of feral pigs is a looming disaster for Banks Peninsula's natural environment and its indigenous biodiversity. Feral pigs are considered to be one of the world's worst invasive animals for the devastating impact they have on indigenous biodiversity, eating all life forms (plants, invertebrates and vertebrates). Furthermore, ground disturbance caused by pig rooting is a major source of weed invasion and spread.

This project will set in place a systematic control plan to halt the spread, remove feral pigs from the Te Waihora catchment, and eventually the Peninsula. It comes on the back of considerable effort already undertaken by dedicated individuals to understand the extent of the problem and trial effective methods of control that will work to remove feral pigs. Outwards/Internal Document 6/05/2022 at 12:07 am

The project area is large, covering many thousands of hectares that includes numerous protected significant ecological sites and conservation reserves that will benefit directly from feral pig control. As important is preventing the further spread of feral pigs beyond where they currently roam. Feral pigs have yet to invade the Akaroa harbour catchment, nor the southern bays, that supports many habitats and species that are especially vulnerable to feral pigs, such as little blue penguin colonies that could readily be devastated by even a single pig.





Covenant Protection and enhancement - Port Levy

Owner: Dr Ira Schelp

Protection: QEII covenant

Amount requested: \$6372.50

Trim reference to full application: Biodiversity fund application Ira Schelp June 2022
FOLDER17/3004; 22/599248

This project involves expanding predator control and supplementary planting through 51ha of regenerating low-altitude second growth podocarp/hardwood forest in Purau Valley. The forest is predominately kanuka that is being encouraged to spread through open areas of exotic grassland previously grazed by stock. Impressive remnants of old growth forest remain in deep gullies that are highly representative of low altitude 'dry' forests composition that is among the rarest forest types remaining on the Peninsula. It provides an important habitat for native bush birds, and it plays an important role in buffering the local stream.

The proposed covenant meets at least two of the national priorities for the protection of indigenous biodiversity on private land, but likely more given full ecological assessment.

National Priority 1: The site falls within a chronically threatened land environment with less than 20% indigenous cover left nationally.

National Priority 4: Protection of habitats of threatened indigenous species: Threatened: Nationally Vulnerable, *Metrosideros diffusa*. At Risk-Declining: *Brachyglottis scaidiophila*, *Coprosma virescens*. At Risk-Naturally Uncommon



Photo above: Covenant area

Photos above: mixed hardwood podocarp forest in stream gully

Tūpari - Mikimiki Conservation Trust

Owner: Mark Nixon, Megan Reynolds

Protection: Formal protection I progress >400 ha

Amount requested: \$31,285.00

Trim reference to full application: Christchurch Biodiversity Fund Application Mikimiki conservation trust June 2022. FOLDER17/3004: 22/599323

Tūpari comprises 409 hectares on southern slopes of Mt Herbert and Mt Bradley. It forms a considerable proportion of the Kaituna Valley catchment to Te Waihora. The property was recently purchased by the Mikimiki Conservation Trust to formally protect and enhance conservation through animal pest and weed control and by facilitating the expansion of native forest through natural regeneration.

The protection and management for conservation of this area has high strategic importance owing to its connection with other areas of protected (public and private) conservation land that collectively comprises that largest contiguous area managed for conservation on the Peninsula. Tūpari also forms an important ecological corridor to the warmer lower altitudes of Kaituna Valley that adds considerable opportunity to provide for the full range of the Peninsula's forest biodiversity, not otherwise present in upper cooler forest ecosystems.

The area has been long recognised as a top priority for protection for its high natural values. It comprises excellent examples of remnant old growth and regenerating podocarp/hardwood forest on dry aspects that is a nationally rare forest type. It includes extensive bluff ecosystems that collectively support multiple threatened native species.

The site contains values that meets three national priorities for the protection of indigenous biodiversity on private land:

National Priority 1: contains representative plant communities that occur on threatened land environments;

National Priority 3: volcanic tallus, cliffs and bluffs are classified as naturally rare ecosystems;

National Priority 4: contains numerous nationally Threatened and At-Risk species.

Hugh Wilson, the Peninsula's most lauded ecologist, makes the following comments on its values.

"The valley, spurs, and gullies are valuable in a conservation sense on several counts. First is the altitudinal range (from 60 m to 818 m). Native vegetation persists vigorously enough to illustrate the greater part of Banks Peninsula's altitudinal sequence from lower cool temperature up to subalpine zone. Thus several of the species that reach their southern limit on Banks Peninsula occur at the lower altitudes, notably titoki, kawakawa and native passion vine/kōhia. All four of the Peninsula's podocarps (thin-bark tōtara, lowland tōtara, matai and kahikatea) are represented, and the local abundance of matai, both adults and regeneration, is outstanding.

Above 550 m several lower altitude species give way to upper cool temperate ones; lowland tōtara, matai and kahikatea give way to thin-bark tōtara; lowland fivefinger/whauwhaupaku (Pseudopanax

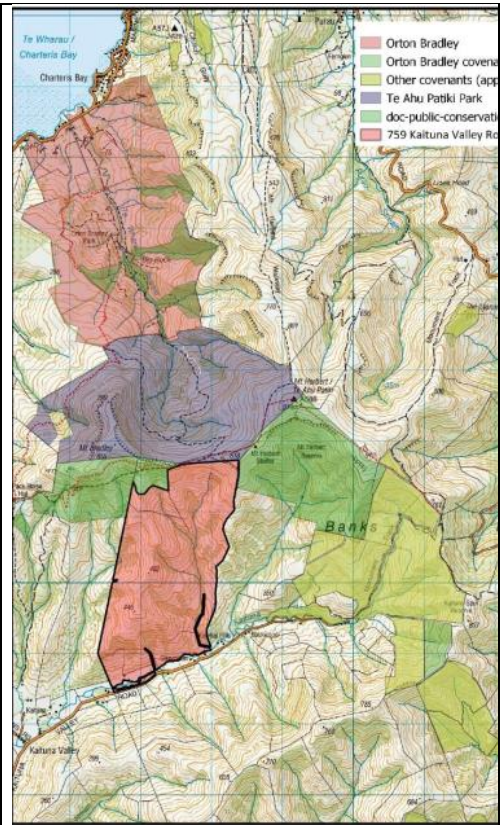
arboreus) gives way to mountain fivefinger (*P. colensoi*). Pepperwood/horopito (*Pseudowintera*) becomes increasingly abundant in the understorey with increasing altitude.

Most of the Peninsula's wide-spread tree species are well represented here, also a fine array of native climbers.

Although around 60% of the area is under one sort of grassland or another, local seed sources are abundant and the terrain is steep and complex enough to provide numerous microsites for native tree and shrub establishment even with ungrazed exotic grasses. I strongly recommend a management regime, should the land come into conservation "ownership", of natural regeneration, minimal interference, and no grazing.

The presence on or near the land of feral pigs, goats and deer poses a big challenge.

It's a wonderful prospect".



Map above: The strategic location of Tūpari



Photos above: Old growth podocarp forest (totara)

Manaia Covenant Protection, Little River

Owner: Markus Puentener and Megan Gainsford

Protection: BPCT covenant

Amount requested: \$5,000.00

Trim reference to full application: Biodiversity fund application BPCT Manaia June 2022 FOLDER17/3004: 22/605571

This project involves weed control in the 4.2 ha "Manaia" covenant that is a remnant of valley floor old growth podocarp forest. The area is contiguous with the Okuti Valley Scenic Reserve that contributes to a much larger area of protected forest.

It is considered to be the very best example of its type in the Akaroa ecological district (Hugh Wilson 1992). It supports a high diversity of native forest species in proportions that are representative of original composition - an extremely rare forest type largely cleared across the district. It provides an important habitat for native bush birds, and it plays an important role in buffering the Okana Stream.

The Manaia covenant meets at least three of the national priorities for the protection of indigenous biodiversity on private land.

National Priority 1: The site falls within a chronically threatened land environment with less than 20% indigenous cover left nationally.

National Priority 2: Includes wetlands that are classified as nationally threatened ecosystems.

National Priority 4: Protection of habitats of threatened indigenous species: Threatened: Nationally Vulnerable, *Metrosideros diffusa*. At Risk-Declining: *Brachyglottis scaidiophila*, *Coprosma virescens*. At Risk-Naturally Uncommon

The covenant is threatened by weeds that urgently need control to protect the ecological integrity of the forest.



Photos above: Location of Manaia covenant and surrounding DoC reserve



Photos above: grey willow invasion into wetland on forest edge

Te Ahu Pātiki, Mt Herbert Summit Protection

Owner: Rod Donald Trust

Protection: QEII covenant

Amount requested: \$20,000.00

Trim reference to full application: Rod Donald trust Ahu Te Pakiti: FOLDER17/3004,

This project aims to halt the invasion of weeds across the iconic summit of Mt Herbert.

The Rod Donald Trust recently purchased 500ha of land by above Lyttelton/Whakaraupo to create a conservation park (Te Ahu Pātiki/ Mt Herbert/). It includes the two highest peaks on Banks Peninsula – Mt Herbert/Te Ahu Pātiki and Mt Bradley.

The summit of Te Ahu Pātiki has high conservation values. Described by Hugh Wilson as having an *"outstanding diversity of plants of immense biological and recreational values", they support excellent examples of forest remnants, species rich fescue tussock grasslands, specialist rock plant communities, and uncommon subalpine species assemblages. Among the many values present, it includes the best fescue tussock (Festuca novaezealandiae) grassland in the Banks ER"* among many more.

The botanical values of the summit are short stature and extremely vulnerable to smothering by gorse that is rapidly occurring. It is highly desirable to maintain the native short tussock plant communities on the summit. Although gorse can be beneficial in many environments to facilitate native forest regeneration, this is not the case of the summit of Te Ahu Pātiki where forest regeneration is unlikely to occur through gorse. Unless controlled, gorse will completely cover the summit that will persist in dense gorse for the foreseeable future. Such an outcome would also have a serious adverse effect on the important amenity values of the summit..

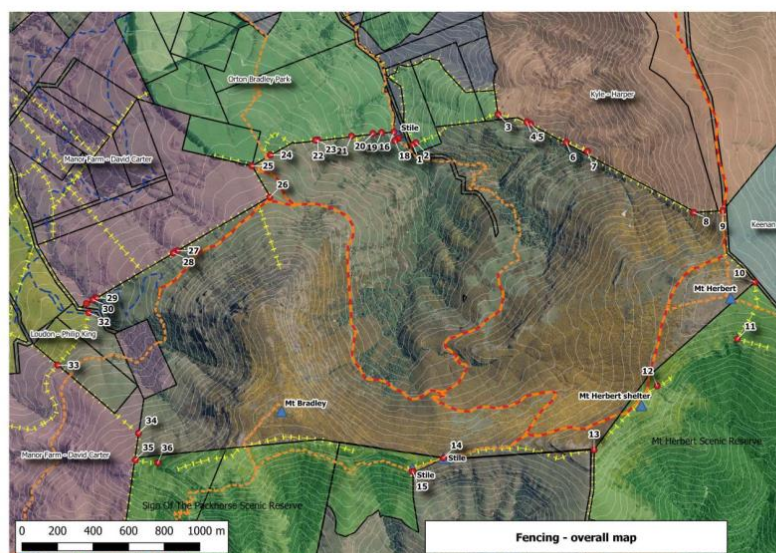


Figure 20 Boundary of Te Ahu Pātiki park, listing neighbouring landowners and the fencing sections in the costing plan given in Appendix A.

Photo above: Te Ahu Pātiki boundary



Photo above: gorse invading the summit tussock grasslands.



Photo above: gorse invading the summit tussock grasslands.

Rare Ecosystem Protection - Summit Road Society Reserves

Owner: Summit Road Society

Protection: Protected under Reserves Act

Amount requested: \$10,046.47

Trim reference to full application: SRS bio fund application June 22: FOLDER17/3004, 22/608427

Biodiversity funding applied for is to protect and enhance indigenous biodiversity through undertaking weed control on naturally rare volcanic bluff ecosystems in Summit Road Society reserves (Ohinetahi and Linda Woods). This is a continuation of an earlier biodiversity grant to control spur valerian on bluffs in Summit Road Society Reserves and is needed to cement in, and build on, the gains made from the initial grant.

Summit Road Society reserves host extensive volcanic bluff that support some of the finest examples of dry shrublands remaining in the Port Hills ecological district. They also provide habitats for several nationally threatened species and species that are uncommon nationally, ranked as At Risk by the New Zealand threat classification system.

The protection of habitats for numerous threatened indigenous species is also a national priority (4). Those present include Banks Peninsula forget-me-not (*Myosotis lytteltonensis*), Banks Peninsula sun-hebe (*Veronica lavaudiana*), grassy sedge (*Carex inopinata*), grassland Spaniard (*Aciphylla subflabellata*), *Linum monogynum*, Banks Peninsula fescue tussock (*Festuca actae*), Banks Peninsula hebe (*Veronica strictissima*), Banks Peninsula bachelor's button (*Leptinella minor*).

The invasive weed spur valerian spur valerian is one of the worst threats to volcanic bluffs and the indigenous biodiversity that occurs on them. This weed forms dense thickets that displaces much of the natural low growing vegetation and alters habitat for native fauna. The Summit Road Society is on year three on a six-year plan to contain spur valerian in the Faulkner Bluffs. This work will also help to prevent the spread of this weed onto the Peninsula. In addition to spur valerian, other weeds will also be controlled as a matter of course.

Funding is sought for specialist abseil and ground control in difficult terrain. Summit Road Society volunteers will undertake spur valerian control in accessible areas.



Photo above: volcanic bluff habitat important for rare plant species



Photo above: spur valerian invading volcanic bluffs

Hauroko Covenant Protection, Birdlings Flat

Owner: Liz and Max Manson

Protection: BPCT covenant

Amount requested: \$11,000.00

Trim reference to full application: Hauroko covenant BPCT: FOLDER17/3004, 22/608656

The Hauroko Covenant protects one of the most ecologically significant ecosystems in the Christchurch district. Being an open site of low stature shrublands that adjoins the Birdlings Flat settlement, it is seriously prone to weed invasion, in particular karo, pigs ear, spur valerian, among others.

A summary of its values as follows:

It forms an inherent, but entirely distinctive, part of Kaitorete. Kaitorete is nationally significant for its sequence of inter-connected coastal ecosystems that has no parallels elsewhere in New Zealand. The shrublands in the Hauroko covenant in their own right are nationally significant for being the finest example in the eastern South Island of a shingle beach ridge ecosystem. The only other example of a shingle beach ridge ecosystem present in the eastern South Island is at Rarangi in Marlborough, but it is a poor comparison being far more restricted and modified. There are no similar examples in the North Island that I am aware.

The shrublands present are highly representative of the original natural character. They are distinctive in their composition, being notably diverse with numerous species of native vines. No similar examples occur in the South Island, or nationally for that matter. Several rare and threatened species of flora and fauna are present.

It forms an inherent part of a notably intact ecological sequence in its connection with Wairewa and linkage to the wider Kaitorete coastal ecosystem that is a very important ecological attribute. It contains multiple values that meets all 4 of the National Priorities for the protection of indigenous biodiversity (attached):

- It occurs on an acutely threatened land environment (National Priority 1)
- Comprises coastal ecosystems (National Priority 2)
- Shingle beach ridges are classified as naturally rare ecosystems (National Priority 3)
- Supports multiple threatened taxa (National Priority 4)



Photo above: dense and diverse coastal shrublands, festooned with the rare red flowering native jasmine (*Parsonsia rosaea*)



Photo above: karo (weed) invading shrubland



Photo above: happy Little River School kids after a weeding session