Agenda

Canterbury Water Management Strategy Waimakariri Zone Committee

Monday 6 May

at 4pm

Council Chamber
215 High Street, Rangiora

Members:

Claire Aldhamland
John Cooke (Te Ngai Tūāhuriri Rūnanga)
Tim Fulton (WDC Councillor)
Ruby Gill-Clifford (Youth Representative)
Erin Harvie
Martha Jolly
Carolyne Latham
Claire McKay (ECan Councillor)
Arapata Reuben (Te Ngai Tūāhuriri Rūnanga)

WAIMAKARIRI DISTRICT COUNCIL

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Chairperson and Members
CWMS WAIMAKARIRI ZONE COMMITTEE

AGENDA FOR THE MEETING OF THE CANTERBURY WATER MANAGEMENT STRATEGY WAIMAKARIRI ZONE COMMITTEE TO BE HELD IN THE COUNCIL CHAMBER, 215 HIGH STREET, RANGIORA ON MONDAY 6 MAY 2024 COMMENCING AT 4PM.

Recommendations in reports are not to be construed as Council policy until adopted by the Council

BUSINESS

PAGES

KARAKIA

1. BUSINESS

1.1 **Apologies**

1.2 **Welcome and Introductions**

1.3 **Register of Interests**
Advice of any changes or updates. *5 - 7*

2. OPPORTUNITY FOR THE PUBLIC TO SPEAK

3. REPORTS

3.1 **CWMS Action Plan Budget 2023/24 – Murray Griffin (CWMS Facilitator-Waimakariri)**
8 - 95

RECOMMENDATION

THAT the CWMS Waimakariri Zone Committee:

(a) **Receives** the information provided on the proposed CWMS Action Plan Budget project initiatives to support for the 2023-24 financial year.

(b) **Approves** its support for the project initiatives based on the remaining $66,000 available of the $75,000 CWMS Action Plan Budget allocated for each CWMS Water Zone for the 2023/24 financial year.

1. Bittern Inanga Rushland – Air Charter Queenstown $15,000.

Page 10-19.

2. Hunters Stream – J & G Freeman $ 5,285.

Page 20-39.

3. Ketchum Cottage – A Wilson $ 7,210.

Page 40-48.

4. O'kair Lagoon – J Wakeman & M Stewart $15,000.

Page 49-59.

5. Pohio Wetland – N Auld $11,700.

Page 60-73.

6. Riparian enhancement project – Whiterock Mains $ 6.000.

Page 74-81.

7. Sefton Saltwater Creek Catchment Group Yr3 monitoring $ 2,805.

Page 82-90.

8. Waimakariri Biodiversity Working Group – Environmental Awards $ 3,000.

Page 91-95.

3.2 **Wai Connection – Update – Murray Griffin (CWMS Facilitator, ECan)** *96-98*

RECOMMENDATION

THAT the CWMS Waimakariri Zone Committee:

(a) **Receives** the update for information and with consideration to the committee's CWMS Action Plan priorities.

3.3 **Te Tiriti Training – Presentation – Murray Griffin (CWMS Facilitator, ECan)** *99*

RECOMMENDATION

THAT the CWMS Waimakariri Zone Committee:

(a) **Receives** this update for information.

4. COMMITTEE UPDATES – M GRIFFIN (CWMS FACILITATOR, ECAN)

4.1 **Zone Committee Working Groups.**

4.2 **Waimakariri CWMS 2021-2024 Action Plan Review.**

4.3 **Environment Canterbury Updates.**

4.4 **Waimakariri District Council Updates.**

4.5 **Action points from the previous Zone Committee meetings.**

RECOMMENDATION *100-106*

THAT the CWMS Waimakariri Zone Committee:

(a) **Receives** these updates for information.

5. CONFIRMATION OF MINUTES

5.1 Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee Meeting – 4 March 2024

107-115

RECOMMENDATION

THAT the CWMS Waimakariri Zone Committee:

(a) **Confirms** the Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting, held on 4 March 2024, as a true and accurate record.

6. REPORTS FOR INFORMATION FROM WAIMAKARIRI D

6.1 Avian Botulism Management – Report to Utilities and Roding Committee 15 August 2023.

6.2 Eastern District Sewer Scheme – Report to Utilities and Roading Committee 17 October 2023.

6.3 Cam River Enhancement Fund Proposed Projects and Update – Report to Utilities and Roading Committee 21 November 2023.

RECOMMENDATION *116-142*

THAT the CWMS Waimakariri Zone Committee:

(a) **Receives** these updates for information.

7. GENERAL BUSINESS

KARAKIA

NEXT MEETING

The next meeting of the CWMS Waimakariri Water Zone Committee is scheduled for Monday 1 July 2024 at 4pm.

AGENDA ITEM NO: 1.1	Register of Interests
Waimakariri Water Zone Committee	**MEETING DATE:** 6 May 2024

WAIMAKARIRI WATER ZONE COMMITTEE

Register of Interests – at 20 April 2024

Keeping a Zone Committee Members' declarations of interest register allows Zone Committees to identify and manage a conflict of interest when it arises.

The Office of the Auditor General notes a conflict of interest can arise when: "A member's or official's duties or responsibilities to a public entity could be affected by some other interest or duty that the member or official may have."[1]

If a member is in any doubt as to whether or not they have a conflict of interest, then the Member should seek guidance from General Counsel, Environment Canterbury, the Zone Facilitator, and/or refer to the following guidance: https://oag.parliament.nz/2020/lamia

Types of Interest to be documented in the register:

- Employment, trade or profession carried on by the Member or the Member's spouse for profit or gain.
- Company, trust, partnership etc for which the Member or their spouse is a director, partner or trustee, or a shareholder of more than 10% shares.
- Address of any land in which the Member has a beneficial interest and which is in the area of the Zone Committee.
- The address of any land where the landlord is Environment Canterbury, Mackenzie District Council or Waitaki District Council and:
    - The Member or their spouse is a tenant; or
    - The land is tenanted by a firm in which the Member or spouse is a partner, a company of which the Member or spouse is a director, or a Trust of which the Member or spouse is a Trustee.
- Any other matters which the public might reasonably regard as likely to influence the Member's actions during the course of their duties as a Member.
- Any contracts held between the Member or the Member's spouse and Environment Canterbury, Mackenzie District Council or Waitaki District Council. Including contracts in which the Member or their spouse is a partner, a company of which the spouse is a director and/or holds more than 10% in shares, or a Trust of which the Member or their spouse is a trustee (noting that no committee member should be a party to a contract with Environment Canterbury or the relevant TLA if that value is more than $25,000 per annum).

Zone Committee members are to ensure that the information contained in this register is accurate and complete.

[1] Office of the Auditor General Good Practice Guide – Managing Conflicts of Interest: Guidance for public entities

Name	Committee Member Interests
Claire Aldhamland	- Teacher – Rangiora High School
John Cooke	- Director/Shareholder – Executive Limousines 2015 Limited - Director/Shareholder – Express Hire Limited - Director/Shareholder – Testpro Limited - Director/Shareholder – Acropolis Wedding and Event Hire Limited - Director/Shareholder – Pines Beach Store Limited - Director/Shareholder – Coastal Dream 2005 Limited – 4Ha property, Kaiapoi - Interim Trustee – Section 6 Survey Office Plan 465273 Ahu Whenua Trust - Member – Kaiapoi Club executive - Trustee on several Māori land blocks, all located in Otago
Ruby Gill-Clifford	- Student at University of Canterbury - 2023/24 summer work at Tūhaitara Coastal Part Trust
Cr Tim Fulton	- Waimakariri District Councillor - Freelance Writer in the agricultural business sector - Contracted to write a book on Central Plains Water Scheme
Erin Harvie	- Director – Bowden Consultancy Limited, trading as Bowden Environmental - Co-ordinator – Waimakariri Landcare Trust - Member – NZ Hydrological Society - Member – NZ Institute of Primary Industry Management - Involvement with Cust River Water User Group
Martha Jolly	- Veterinary surgeon (Companion animal) - PhD Student in Water Resource Management (2nd year) - Volunteer assistant the Styx Living Laboratory Trust - Volunteer educator Vets for Compassion - Volunteer clinician SPCA NZ - Member – Forest and Bird NZ
Carolyne Latham	- Farmer – Sheep and Beef - Director – Latham Ag Ltd Consulting - Shareholder – Silver Fern Farms, Farmlands - Registered Member – New Zealand Institute of Primary Industry Management
Cr Claire McKay	- Canterbury Regional Councillor - Dairy grazing - Ihenga Holdings – Partner (with spouse)

	- McKay Family Trust – Trustee (spouse also a Trustee) - Shareholder – Waimakariri Irrigation Limited, Ravensdown Ltd, Fonterra, and Farmlands - Member – Federated Farmers, Irrigation NZ - Water take and use consents CRC: 050222.1
Arapata Reuben	- Trustee – Tuhono Trust - Member – National Kiwi Recovery Group - Rūnanga Rep – Christchurch/West Melton Water Zone Committee - Rūnanga Rep – Ashburton Water Zone Committee

AGENDA ITEM NO: 3.2	**SUBJECT:** CWMS Action Plan Budget 2023/24 – recommendations for decision
REPORT TO: Waimakariri Water Zone Committee	**DATE OF MEETING:** 6 May 2024
REPORT BY: Murray Griffin, CWMS Facilitator – Waimakariri	

1. PURPOSE

The purpose of the agenda item is to enable the Waimakariri Water Zone Committee to confirm its support of projects using the Zone Committee's Canterbury Water Management Strategy (CWMS) Action Plan Budget for the 2023/24 financial year.

The committee has received information on the project initiatives to review in advance of this meeting to assist in confirming its support of the staff recommendations. Over the last six months committee members have visited each of these projects, where possible, to gain a better understanding of the projects, their vision, and requirements.

This year's initiatives presented for the committee's consideration are provided as agenda items: 3.2 – 1 to 3.2 – 8 in the meeting papers. They are:

3.2 – 1. Bittern Inanga Rushland – Air Charter Queenstown	page x - y
3.2 – 2. Hunters Stream – J & G Freeman	page x - y
3.2 – 3. Ketchum Cottage – A Wilson	page x - y
3.2 – 4. O'kair Lagoon – J Wakeman & M Stewart	page x - y
3.2 – 5. Pohio Wetland – N Auld	page x - y
3.2 – 6 Riparian enhancement project – Whiterock Mains	page x - y
3.2 – 7. Sefton Saltwater Creek Catchment Group Yr3 monitoring	page x - y
3.2 – 8. Waimakariri Biodiversity Working Group – Environmental Awards	page x - y

Noting: The committee has previously supported the staff recommendation, at its 3 July 2023 meeting, for the following allocation of its 2023/24 CWMS Action Plan Budget:

Estuary shorebird monitoring – Ashley Rakahuri Rivercare Group	$ 9,000

2. RECOMMENDATIONS

That the Waimakariri Water Zone Committee:

2.1 Receives the information provided on the proposed CWMS Action Plan Budget project initiatives to support for the 2023-24 financial year.

2.2 Approves its support for the project initiatives based on the remaining $66,000 available of the $75,000 CWMS Action Plan Budget allocated for each CWMS Water Zone for the 2023/24 financial year.

2.2 – 1. Bittern Inanga Rushland – Air Charter Queenstown	$15,000
2.2 – 2. Hunters Stream – J & G Freeman	$ 5,285
2.2 – 3. Ketchum Cottage – A Wilson	$ 7,210
2.2 – 4. O'kair Lagoon – J Wakeman & M Stewart	$15,000

2.2 – 5. Pohio Wetland – N Auld	$11,700
2.2 – 6 Riparian enhancement project – Whiterock Mains	$ 6.000
2.2 – 7. Sefton Saltwater Creek Catchment Group Yr3 monitoring	$ 2,805
2.2 – 8. Waimakariri Biodiversity Working Group – Environmental Awards	$ 3,000

3. BACKGROUND

As part of their Long-Term Plan 2021-2031, Environment Canterbury established the Zone Committee Action Plan Budget and committed $50,000 per Water Zone for the 2021-22 financial year. Another $50,000 for each CWMS Water Zone was confirmed by Environment Canterbury through its 2022/23 Annual Plan. In the third and final year of this Action Plan Budget, $75,000 was confirmed by Environment Canterbury in its 2023/24 Annual Plan

The purpose of the budget is to support Zone Committees to focus on implementing their Action Plan and where possible, leverage other funding opportunities to achieve their Canterbury Water Management Strategy (CWMS) priorities.

CWMS Action Plan Budget Initiatives – Assessment

The Waimakariri Water Zone Committee has considered the above initiatives as options to support in this final year of their 2021-24 Action Plan. In doing so, the committee has followed a consistent approach to developing an assessment for the above and future Action Plan initiatives.

Assessment details for each initiative have been provided to the Zone Committee prior to the meeting to support its decision making. In total the committee received 12 applications for support in the 2023/24 financial year. The following projects were not proposed for support as they did not align as well with the committee's CWMS 2021-24 Action Plan priorities as the nine projects recommended to the committee for support.

The other projects received were:

- Aerial Mapping – Black Maps Ltd
- Oxford Dark Sky project – Oxford Dark Sky Group
- Tūhaitara Wetland to Sea Corridor – Te Kōhaka o Tūhaitara Trust

Application for funding – CWMS Action Plan Budget 2023/24 *(for the Waimakariri Water Zone)*

The purpose of the CWMS Action Plan Budget is:

- To allow Zone Committees to **focus on implementing their action plan and leverage other funding opportunities to achieve the CWMS priorities.**

The funding is administered, distributed, and monitored by Environment Canterbury.

Applicant details

Organisation (if applicable):	Air Charter Queenstown
Contact name:	Nicky Auld
Contact email:	
Contact phone number:	
Postal address:	
Other address:	
Are you GST registered? (if yes, please provide number)	
NZBN (NZ Business Number, if applicable)	

About your project

The amount of information and detail we would like you to provide is in proportion to the amount of funding you are requesting. If it is smaller amount, then a simple description of your project, who's involved and what you will be doing, along with a simple budget is sufficient.

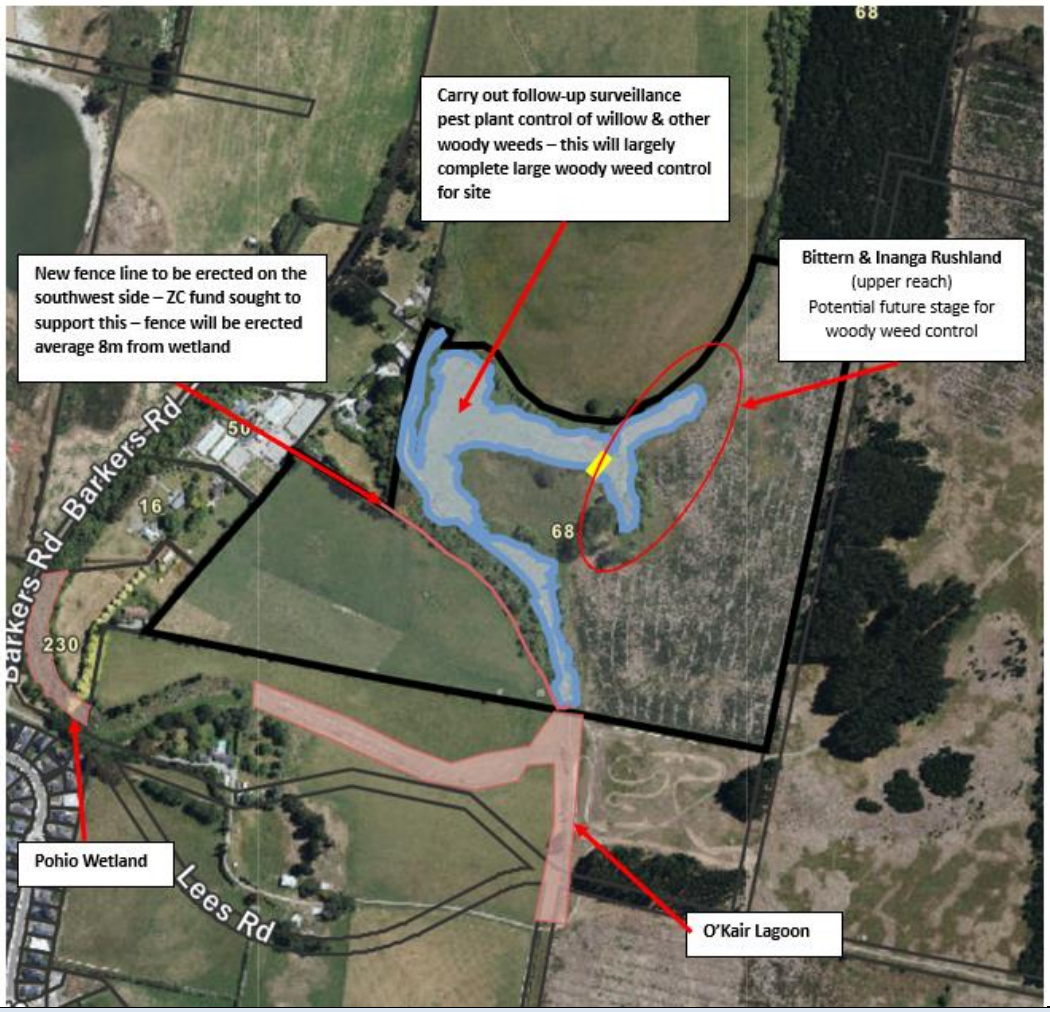
Project name:	*Bitten & Inanga Rushland* *Part of the North Kaiapoi Biodiversity Restoration Project*
CWMS zone where the activity will occur:	*Waimakariri Zone - Headwaters of the coastal MacIntosh's Drain*
Provide a brief project description (in two sentences):	

Undertake Stage 2 Ecological Restoration of the Bittern & Inanga Rushland

1. *To fence off southern side of this massive rushland – (large willows have already been poisoned (see photos in appendix) and will be cleared to enable new fence to be erected)*
2. *Carry on follow-up surveillance pest plant control of willow & other woody weeds (continuing on from earlier muti-year work undertaken using ECan IS grant, which had a great willow kill rate, however lots of young willows have since sprouted).*

Explain what the grant will be used for - what the money is mainly being spent on/what activities are involved in the project (in two sentences):

Fence off southern boundary of the rushland (North Canterbury Fencing quote $17,461) & continue willow control work in rushland itself (including smaller multi-stem willows in rushland and close to water)



Describe the problem or opportunity the project will address:

We are keen to fence a section off along the southwestern & small unfenced section of northern boundary. The line of massive Willow Trees are dying as a result of earlier ECan grant. They are falling on the proposed new fence line. Removing trees, cutting & clearing fence line is the next stage of the project. This will enable tractor access to install fence,

then hopefully can start to plant out a wee section the following year. It is critical to continue with killing the willow, poplars in this wetland before it takes hold and grows back. There are still some large trees which are still alive as well as a lot of younger saplings especially along the water's edge. These saplings grow at great speed also with the seedling grey willow needing to be controlled and killed. In the wind branches break off the trees and stab into the ground creating cuttings which then grow. It's a massive job to control them.

Describe the outcomes or impacts of this project:
Outcomes or impacts are what will change or who will benefit from this work, including enduring benefits. For example, fencing off springheads will improve biodiversity and improve stream health.

- *Protect & enhance Inanga spawning ground (tidal toe habitat) and area directly above this is where adult Inanga live they just come down to the tidal toe to spawn and die.*
- *Endangered Bitten already visit this rushland and the next door O'Kair Lagoon, Waka Wetland and eat small fish and eels*
- *Suitable Mud fish habitat (doc survey done here, & ideally suited for mudfish)*
- *Significant areas of linking waterways, wetlands and swamps with multiple keen landowners already fencing, growing plants and planting areas of the MacIntosh's Drain catchment.*

List the key outputs of the project:
An output describes what your group is proposing to do and is measurable. For example, install 250 m of fencing, or train 25 volunteers. Outputs are important and may be used as deliverables in a funding agreement.

See map sent as an attachment

Funds would go towards paying a contractor to:

1. Fence off part of this massive (over 3ha) rushland – 320 – 350m fenceline

2. Carrying on with control of willows and woody weeds, especially Grey Willow, & willow regrowth

3. Landowner to continue chopping and cleaning up and clearing large trees along the proposed fence line.

4. Then start planting preparation & planting stock-proof sections of the rushland.

Please state how the project aligns with the relevant Zone Committee's 2021-24 Action Plan:
Waimakariri – Waimakariri Water Zone Committee Action Plan 2021-2024 | Environment Canterbury (ecan.govt.nz)

Alternatively, contact the Zone Facilitator (Murray Griffin) who can email you a copy.

*Protect landscape native species values in upper catchment

*Weed control in Upper & Middle section of catchment

*Improve habitat of whole catchment (Whole North Kaiapoi Biodiversity Restoration Project Concept)

*Improve Habitat health of lowland spring fed tributaries

*Improve health of whole waterway “Ki Uta Tai”

Tell us when you can start the project and when you intend to have the project completed (timeline):

Once approved we can engage a contractor to carry out the fencing & Willow Control work. Willow control best undertaken when in leaf and when not too much water is in the rushland (easier for contractors)

Tell us why you think your project is feasible/realistic:

Fencing to be carried out in stages.

Most of the willows and woody weeds have been controlled by an earlier ECan grant. It is important to eliminate the remaining woody weeds, willows etc to ensure they don’t return and choke up this rushland again. Some willows were missed close to the water’s edge and have now grown rapidly.

Tell us about the project management, including leadership and financial oversight:

Project Manager: Nicky Auld, Dip Hort, Dip Parks & Gardens Tech. Working as a Landscape Designer, and have planned many successful Native Plant restoration projects.

List any other groups or organisations you are partnering with on this project, such as community groups, schools etc:

Part of the extended family effort to undertake restoration work in this area – x3 Kaiapoi projects are all undertaken by extended family unit.

None at this stage, there will be an opportunely later on in the project to work with volunteers for planting, weed releasing and small scale cutting and pasting of woody weed.

Keen to work with:

1. CVNZ Christchurch office in future for large mass planting days

2. Trees that Count as they have supported us through gifting trees.

3. Trees for survival if they move down to Canterbury for school planting days.

How will you engage the community on the project:

Organising future community volunteer planting days.

Do you know of any cultural values associated with this site?	Yes

If yes, what engagement has occurred or is planned (if any) with local Papatipu Rūnanga about this project?	
The site is marked on the silent files See Ecan management plan form earlier grant	
Please provide an accurate location with grid references and a map (if relevant to your project – please *contact the Zone Facilitator who can assist with this if required*):	
NZTM Grid Ref X (Easting): 1573959 **NZTM Grid Ref Y (Northing): 5199836**	
Who owns the land? *Attach evidence of permission from the landowner, or their representative (if you are undertaking a project on land that you do not own)*	
Air Charter Queentown Ltd	

Funding details

Your budget should include estimates of income and expenditure, including other funding and in-kind contributions. You should show clearly what you are planning to spend the Action Plan funds on if successful. For applications for less than $15,000 a simple budget is fine. We would like more detail if your application is for a larger amount e.g. more than $15,000 or more than $50,000. We have a budget template in the guidance document.

How much funding are you requesting?	35,000.00
If you are successful with this application, what components of your project will you spend the money on? **Please include below or attach your budget to your application.*	
Fencing &/or Willow, Poplar, Woody Weed Control. Any amount of funding would be greatly appreciated. See quote for fencing from North Canterbury Fencing - $17,461 Do not have a quote for woody weed control work at this stage but can obtain one on request.	
Have you applied to, or received funding from other organisations for this project? **If YES, please provide details below or note if it is included in your attached budget.**	No

The CWMS Action Plan Budget is seed funding or leverage for partnering and collaboration, so it is positive if you have received or are applying for other funding.	
Is the project receiving any other monetary or "in-kind" contributions (volunteer hours, resources, equipment, facilities) from your organisation or others? **If YES, please provide details below or note if it is included in your attached budget:**	Yes
In kind hours from family members helping fell large trees. Also kill a few seedling grey willows pointed out by Anna Veltman's site visit Our family (Pip Deans) has eco sourced and sown trays of flax, cabbage trees, carex secta which are ready to prick out and ready for the next years planting season. This is a massive project and will take many years to plant out.	

Working with Environment Canterbury

In the last three years have you received funding or other support from Environment Canterbury for this, or any other project? **If yes, what was the funding/support for, and when did you receive it?**	Yes
Did receive funding support from Ecan's IS Fund for $10,000 in 2020 – 22 to undertake Stage 1 - the woody weed control for the larger willows in the rushland.	
Are you intending on applying to another Environment Canterbury fund/budget this financial year for this, or any other project? **If yes, what fund are you applying to?**	Not sure
Do you give permission for your application for the CWMS Action Plan Budget to be shared with the ECan staff who coordinate the Waitaha Wai Action to Impact Fund (we prefer to share information between the two to get best use of both)	Yes

Additional information you would like to provide?

Do you have supporting information you would like to provide (optional)?

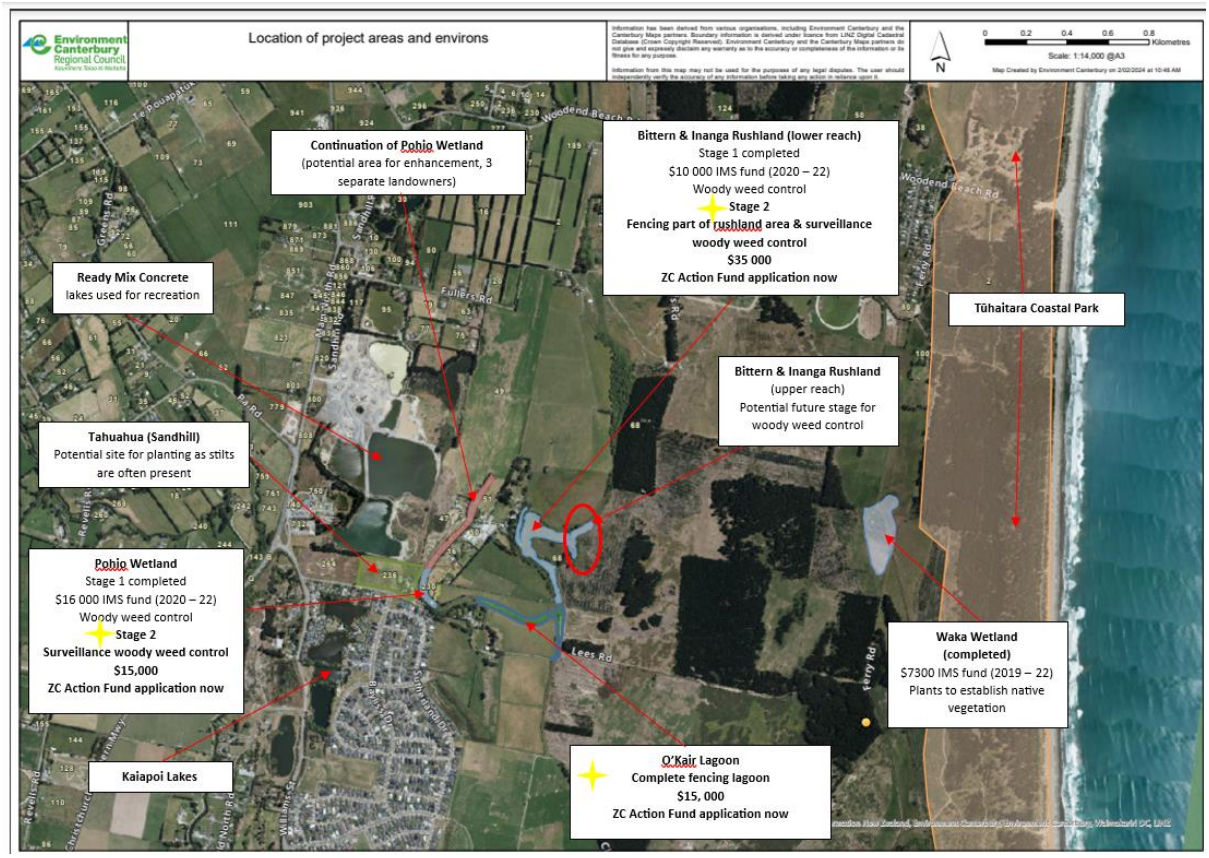
Please attach any supporting information with your application*.**

Once completed, please send this application form to Zone Facilitator, Murray Griffin, murray.griffin@ecan.govt.nz

The Zone Facilitator will keep in touch with you about timeframes, whether the Committee would like you to give them a presentation, and whether there are any questions.

Appendix

Map showing location of project area and environs for this application



Photos showing effect of Stage 1 woody weed control

FENCING QUOTE

INANGA MARSHLAND WETLAND

Date
23 Jul 2023

Quote Number
QU-1062

Reference
1062

GST Number
078-943-483

North Canterbury Fencing
142 Lees Road Kaiapoi
RD1
Christchurch New Zealand
GST No: 078-943-483

Inanga marshland wetland fencing project

Description	Quantity	Unit Price	Amount NZD
8 wire batten fence per meter swamp country Tie Downs 20x strains Some Deer posts for wet areas	1900.00	38.09	72,371.00
Stay/strainer assembly- Angle stay	114.00	155.00	17,670.00
Gateways	16.00	330.35	5,285.60
Line Clearing Labour	36.00	55.00	1,980.00
Line Clearing Machine	10.00	105.00	1,050.00
Fence line setup and markout	20.00	25.00	500.00
		Subtotal	98,856.60
		TOTAL GST 15%	14,828.49
		TOTAL NZD	**113,685.09**

Application for funding – CWMS Action Plan Budget 2023/24 *(for the Waimakariri Water Zone)*

The purpose of the CWMS Action Plan Budget is:

- To allow Zone Committees to **focus on implementing their action plan and leverage other funding opportunities to achieve the CWMS priorities.**

The funding is administered, distributed, and monitored by Environment Canterbury.

Applicant details

Organisation (if applicable):	Kapukariki / Hunters Stream
Contact name:	Jackie and Grant Freeman
Contact email:	
Contact phone number:	
Postal address:	
Other address:	
Are you GST registered? (if yes, please provide number)	**NO**
NZBN (NZ Business Number, if applicable)	**N/A**

About your project

The amount of information and detail we would like you to provide is in proportion to the amount of funding you are requesting. If it is smaller amount, then a simple description of your project, who's involved and what you will be doing, along with a simple budget is sufficient.

Project name:	Hunters Stream
CWMS zone where the activity will occur:	*Waimakariri*
Provide a brief project description (in two sentences):	
To restore the stream and embankment to a natural ecosystem, while incorporating the community, schools and land owners. We want to inspire other landholders who border the	

stream to continue this project on their own properties, so in the future Hunters Stream is fully planted, from its source until it flows into the Cust River.
Explain what the grant will be used for - what the money is mainly being spent on/what activities are involved in the project (in two sentences):
Plants for stream banks, tree guards, stakes, and fencing to exclude stock from the stream.
Describe the problem or opportunity the project will address:
This project will address the problem of a lack of indigenous flora and fauna in (our part of) Hunters Stream and address current and future water quality due to farming runoff into the stream.
Describe the outcomes or impacts of this project: *Outcomes or impacts are what will change or who will benefit from this work, including enduring benefits. For example, fencing off springheads will improve biodiversity and improve stream health.*
The planting of native plants will restore an ecosystem and improve water quality for future generations. It will also bring well-being to the community, who will be invited to help plant the area, and then can enjoy well-being workshops in this new environment. Fencing off the area will exclude stock and allow the area to thrive for future generations for well-being and education.
List the key outputs of the project: *An output describes what your group is proposing to do and is measurable. For example, install 250 m of fencing, or train 25 volunteers. Outputs are important and may be used as deliverables in a funding agreement.*
3095 native plants planted along the stream and adjacent hill. Planted area fenced off from farm animals Protect banks from further erosion
Please state how the project aligns with the relevant Zone Committee's 2021-24 Action Plan: *Waimakariri* – Waimakariri Water Zone Committee Action Plan 2021-2024 | Environment Canterbury (ecan.govt.nz) *Alternatively, contact the Zone Facilitator (Murray Griffin) who can email you a copy.*
This project increases biodiversity in the Waimakariri Water Zone. Since moving to this property 2019 years ago, we have planted at least 800 native plants on our property and have been removing pests (hare, rats, mice, feral cats & hedgehogs). We would like to plant more indigenous plants and hopefully this will result in an increase in aquatic biodiversity as well as terrestrial biodiversity. **This project improves Mahinga Kai within the Waimakariri Water Zone** There have been Tuna observed in our section of Hunters Stream we hope to improve their habitat by the planting of other mahinga kai species such a Ti kōuka/Cabbage tree, harakeke, toetoe and Pūkio/Carex Secta.

Tell us when you can start the project and when you intend to have the project completed (timeline):
Start April 2024 - Finish December 2024
Tell us why you think your project is feasible/realistic:
This is a project that we have already started by ourselves and we wish to see it through, with the help of Waimakariri Biodiversity Trust, Action Plan funding and the community, it is very feasible. Waimakariri Irrigation Limited is supplying us with 260 plants and we will be buying plants from our neighbour's nursery, as well as other local nurseries. We have researched the history of the area through the Cust Museum. We have also done a lot of our own native plantings and pest control, through trapping and weed control of gorse and broom.
Tell us about the project management, including leadership and financial oversight:
The project will be led by Grant and Jackie with support from the Waimakariri Biodiversity Trust.
List any other groups or organisations you are partnering with on this project, such as community groups, schools etc:
Waimakariri Biodiversity Trust, Enviro schools- local schools
How will you engage the community on the project:
Contact with local schools and local landholders who border Hunters Stream through planting days, workshops and an educational study of the stream.

Do you know of any cultural values associated with this site? **If yes, what engagement has occurred or is planned (if any) with local Papatipu Rūnanga about this project?**	**YES**

Lucy will talk to them and see if they can help us. Put people's details in once known.
Please provide an accurate location with grid references and a map (if relevant to your project – please *contact the Zone Facilitator who can assist with this if required***):**
NZTM Grid Ref X (Easting): 1553613 **NZTM Grid Ref Y (Northing): 5201712**
Who owns the land? *Attach evidence of permission from the landowner, or their representative (if you are undertaking a project on land that you do not own)*
Land is owned by the applicants

Funding details

Your budget should include estimates of income and expenditure, including other funding and in-kind contributions. You should show clearly what you are planning to spend the Action Plan funds on if successful. For applications for less than $15,000 a simple budget is fine. We would like more detail if your application is for a larger amount e.g. more than $15,000 or more than $50,000. We have a budget template in the guidance document.

How much funding are you requesting?	$13300
If you are successful with this application, what components of your project will you spend the money on? **Please include below or attach your budget to your application.*	
Native Plants, guards, mats, stakes and fencing	
Have you applied to, or received funding from other organisations for this project? **If YES, please provide details below or note if it is included in your attached budget.** *The CWMS Action Plan Budget is seed funding or leverage for partnering and collaboration, so it is positive if you have received or are applying for other funding.*	**NO**
Is the project receiving any other monetary or "in-kind" contributions (volunteer hours, resources, equipment, facilities) from your organisation or others? **If YES, please provide details below or note if it is included in your attached budget:**	**Yes**
Waimakariri Dictrict Council, Waimakariri Biodiversity Trust, Waimakariri Irrigation Ltd	

Working with Environment Canterbury

In the last three years have you received funding or other support from Environment Canterbury for this, or any other project? **If yes, what was the funding/support for, and when did you receive it?**	**NO**
N/A	
Are you intending on applying to another Environment Canterbury fund/budget this financial year for this, or any other project? **If yes, what fund are you applying to?**	**NO**

N/A	
Do you give permission for your application for the CWMS Action Plan Budget to be shared with the ECan staff who coordinate the Waitaha Wai Action to Impact Fund (we prefer to share information between the two to get best use of both)	**YES**

Additional information you would like to provide?

Do you have supporting information you would like to provide (optional)?

Bex Dollery - Restoration Plan is attached

Budget is attached

Once completed, please send this application form to Zone Facilitator, Murray Griffin, murray.griffin@ecan.govt.nz

The Zone Facilitator will keep in touch with you about timeframes, whether the Committee would like you to give them a presentation, and whether there are any questions.

Project budget template

INCOME		
Confirmed and 'in-kind' funding		
Source	***Project allocation***	***Amount $***
Waimakariri Irrigation Limited (WIL)	Drone Fly Over (quantity of plants, assessment of stream) Donating of 260 native plants	$0.00 $0.00
Waimakariri District Council	Plant Plan and consultation	$0.00
Waimakariri Biodiversity Trust	Aquatic study and consultation	$0.00
	Sub-Total	**$0.00**
Unconfirmed Funding*		
Source	***Project allocation***	***Amount $***
Canterbury Water Management Strategy (CWMS)		$13775
	Sub-Total	**$13775.00**
	TOTAL INCOME	**$13775.00**

*Unconfirmed funding is the shortfall amount your organisation is committing to seek from other sources

EXPENSES		
Provide detailed complete project delivery costs under the following or similar headings		
Expense item	***Unit price / quantity required***	***Amount $***
Pre-planting, weed/grass clearance	35 hours at $40/hr	$1400
Native Plants, planting year one	x 1500 at $4 each	$6000
Plant Guard, Coir mat, Stakes, Combo	x 1500 at $1.80 each	$2700
Maintenance Year One	32 hours at $40/hr	$1280
Fencing of stream, realignment of fence.	Materials, posts, wire, labour	$2395
	TOTAL EXPENSES	**$13775.00**

Bex Dollery - Restoration Plan for 409C Springbank Road, Hunters Stream

Introduction

Landowners Jackie and Grant Freeman are enthusiastic and motivated to support, enhance and maintain biodiversity in their property. They have a section of Hunters Stream which flows through the southern part of their land and would like to restore the health of the land and the stream by implementing riparian planting and providing an exemplar site to the wider community (Figure 1).

Figure 1. 409C Springbank Road land boundary shown in pink with Hunters Stream to the south and the restoration area shaded in yellow.

Currently, the land comprises some native plantings undertaken by the landowners with rank grass with some weed invasion such as willows. The landowners wish to restore their area as an incentive and example to surrounding neighbours and community and to involve community as much as they wish to be included in the project. The prime objectives for the planting scheme have been outlined as:

- Comprising **indigenous** specimens which are **local** to the area with a good chance of **survival**;
- Involvement of **community/schools** in the restoration and the biodiversity learnings at the site;
- The use of taonga plants and plants used for **mahinga kai** and **rōngoa**;
- Use of plants that promote **water quality,** particularly in regard to **sedimentation** prevention;
- Use of plants which provide habitat for **indigenous species**, both aquatic and terrestrial.

Site Details

The proposed restoration area comprises Hunters Stream whose headwaters lie further west. The waterway is a small stream and the variability in flow level can lead to variable water quality results along the length (Franklin, 2010). The site is located approx. 100 m a.s.l (-43.335511, 172.428188) and is situated within an agricultural, semi-improved grassland area with scattered trees. There is minimal indigenous vegetation apart from the plants planted by the landowners. The majority of the stream areas is dominated by exotic vegetation such as willow trees (*Salix sp*.). There are areas along the stream which are experiencing bank erosion from times of elevated flow levels (Figure 2).

The site lies within the Low Plains ecological district and at this location is described as containing less than 10% indigenous native vegetation cover and therefore, restoration efforts in the district are important and notable (Landcare Research/Manaaki Whenua, 2022; McEwan, 1987). The area is characterised by warm summer and cool winters with relatively low rainfall and strong nor westerly winds in autumn and spring (Macara, 2016). The soils of the area are mainly Pallic soils, Claremont (80%) and Timaru (20%) families. These soils are moderately deep and poorly-imperfectly drained soils comprising a stone-less silt profile texture which leads to dry conditions in summer and wet, often waterlogged, in winter. The pH is low-moderate (approx. 5.7) with the potential for runoff of surface water. Due to the physico-chemical composition, these soils have high structural vulnerability which could be one of the causes for the bank erosion in places (Landcare Research/Manaaki Whenua, 2022a).

Figure 2. Top plate showing a section of the stream with instream plants (macrophytes) and a regenerating willow on the bank. The bottom two plates show the surrounding grassland to the north (left) and farmland to the south (right).

The proposed area of the riparian restoration will include the banks of the length of the stream in the landowners' property and larger areas surrounding to the south (a total area of 0.82 ha, see Figure 3). The riparian planting on the north and south banks equate to approx. 0.1 ha respectively. A further 0.5 ha area to the south comprises an upper bank, grassed area and north of the stream is an upper bank area of 0.12 ha. It is anticipated that the upper bank on the south side will not be extensively planted. Therefore, only half of this area will have native plants intermingled with open areas for the benefit of amenity and those faunal edge dwelling species.

Figure 3. Hunters Stream riparian and lower bank planting (noted in blue, approx. 0.2 ha both north and south of stream) and upper bank planting (noted in yellow, approx. 0.5 ha south of stream and 0.12 ha north of stream, totalling 0.62 ha).

Restoration Plan

The aim of the restoration and enhancement scheme is to enhance the environment for native flora and fauna thereby creating mahinga kai and rōnga opportunities. Alongside this, it is anticipated that the planting will assist with improving water quality, both chemically and biologically, by reducing sediment runoff and creating in-stream habitat and debris for aquatic fauna.

Riparian planting is recommended on the bank margins and lower banks to assist with stabilisation and help to prevent erosion. Monocot plants which have fibrous roots can help to bind the banks and alleviate erosion whilst deeper rooting trees on the lower and upper banks will assist further in the erosion control. Having a range of heights in vegetation will create an amount of shade and organic material to ensure the aquatic invertebrate community remain healthy, and in turn, ensure healthy fish populations.

The plants chosen are suitable for the riparian planting zone (Figure 4). The marginal planting includes those plants which can tolerate being frequently inundated and occur next to the channel. For this project, it is assumed that this is the first 1 m from the waters edge. The lower bank plants are those which may occasionally be inundated and can tolerate both water logging and drier

periods. For this project this is taken to be the area adjacent to the margin and up to 4 m onto the bankside. The upper bank is the area >4 m from the waters edge and comprises plant species which prefer drier conditions.

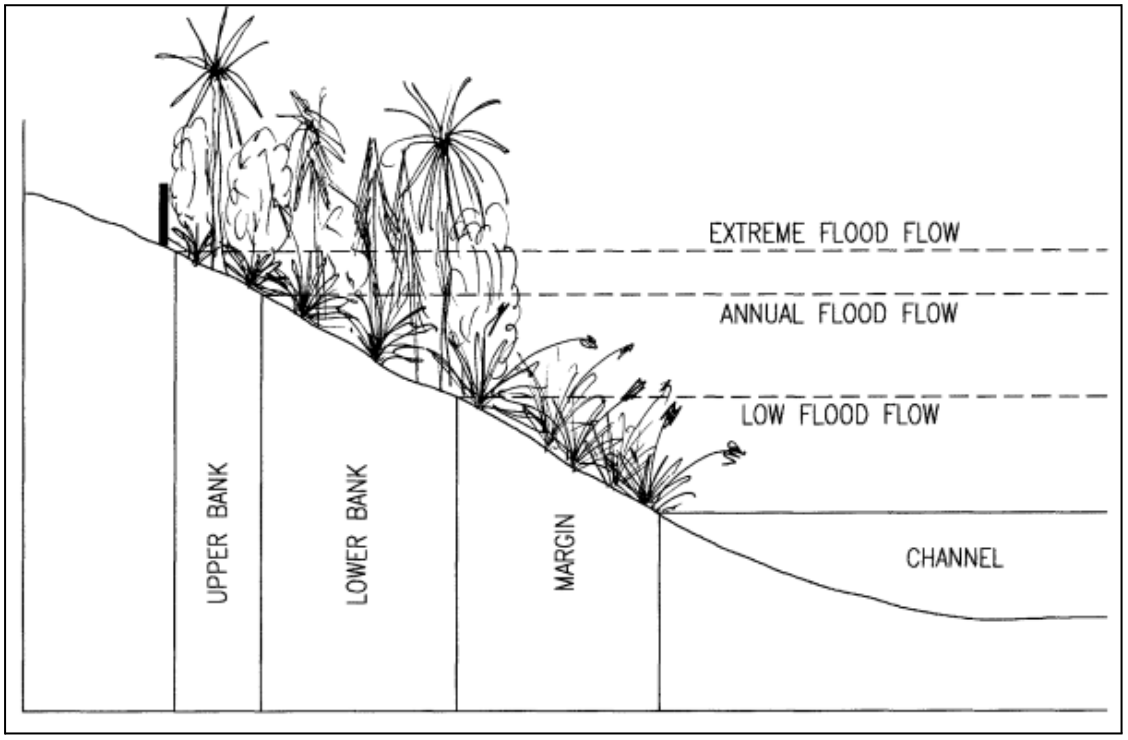


Figure 4. Diagram of riparian habitat showing marginal habitat (area which is often inundated and approx. 1 m wide), lower bank (occasionally inundated) and upper bank (sometimes inundated but rarely and normally only in floods) (Ecan, 2011).

Plant Selection

Detailed below are recommendations for each section of the site (Table 1). The plant list has been compiled taking into consideration the soil conditions, the location of the site, the objectives of the project and preferences and survival prospects of various floral species. The soils in the area are prone to both waterlogging and dry conditions and therefore require plants which can tolerate such conditions.

The Waimakariri Irrigation Limited organisation (WIL) has been working in the area with various landowners to support them in improving the health of Hunters Stream. The organisation has generously given time and resources undertaking a drone flyover of the area and donating 260 plants to the landowners. The plants are a mixture of toetoe (*Australis richardsonii*), harakeke (*Phormium tenax*) and tī kōuka (*Cordyline australis*) at RX90 grade.

Please note that due to the proximity of grazing land to the south of the stream, the use of toetoe (*Australis richardsonii*) has been limited to those plants already offered by WIL. This is because toetoe has the potential to make nitrates freely available, a nutrient which would degrade the quality of the watercourse (Franklin, 2014).

The total number of plants recommended is 3,355. However, this can exclude the amount offered by WIL to equal a total of 3,095.

Table 1. Suggested Species List based on an area of 500 m2 of marginal planting (250 m2 on either side of bank), 1,500 m2 of lower bank planting (750 m2 on either bank) plus 3, 700 m^2 of upper bank planting (2,500 m2 south of the stream and 1200 m2 on the north side).

Common Name	Latin Name	Spacing (m)	No. of plants	Comments	Ecosystem services
Margin – first 1 m strip of bank closest to the stream (250 m^2 on each bank)					
Pukio/Swamp sedge	*Carex virgata/secta*	1.5	204	80% of the site	Luxury uptake of nitrate. Erosion control, sediment trapping.
Sharp sedge	*Eleocharis acuta*	1	57	10% of the site	Erosion control, sediment trapping, filtration, grain.Cultural
Wiwi	*Juncus edgariae*	1	57	10% of the site	Erosion control, sediment trapping, filtration, grain.
		Total	**318**		
Lower Bank – Strip of 3 m above the marginal planting (750 m^2 on each bank)					
Sedge	*Carex maorica*	1.5	153	Randomly scattered throughout 20% site in wetter areas	Erosion control, Filtration, Fibre, Food, Shelter, Cultural
Harakeke	*Phormium tenax*	1.5	306	Scattered throughout 40% of site	Erosion control, filtration, fibre, mahinga kai, rōngoa, nectar.
Mikimiki	*Coprosma propinqua*	1.5	115	Scattered throughout 15% site	Erosion control, Shelter, Fruit (Bird), Fruit (Lizard)
Mānuka	*Leptospermum scoparium*	1.5	76	Scattered throughout 10% of site	Erosion control, Filtration, Timber, Fibre, Food, Shelter, and shade, Nectar (Bird), Nectar/Pollen (Lizard), Nectar (Insect), Fruit (Bird), Fruit (Lizard), mahinga kai, rōngoa
Tī kōuka, cabbage tree	*Cordyline australis*	1.5	115	Scattered throughout 15% site	Erosion control, filtration, fibre, mahinga kai, rōngoa, nectar.
Kahikatea/white pine	*Dacrycarpus dacrydioides*	2.5	10	Planted in clumps of 3/4 plants	Erosion control, Filtration, Timber, Food, Shelter, Shade, Fruit (Bird), mahinga kai, rōngoa, nectar
		Total	**775**		
Upper Bank – Areas above the lower bank (total of 3,700 m^2 for both banks)					
karamū	*Coprosma lucida*	1.5	377	Scattered throughout 20% of site	Erosion control, Shelter, Fruit (Bird), Fruit (Lizard)
Putaputaweta/ Marble leaf	*Carpodetus serratus*	1.5	377	Scattered throughout 20% of site	Erosion control, Filtration, Shelter, Shade, Nectar/Pollen (Lizard), Nectar (Insect), Fruit (Bird), Fruit (Lizard)
Tarata	*Pittosporum eugenioides*	1.5	377	Scattered throughout 20% of site	Erosion control, Shelter, Nectar (Insect, bird), fruit (bird)

Common Name	Latin Name	Spacing (m)	No. of plants	Comments	Ecosystem services
kaikōmako	*Pennantia corymbosa*	1.5	283	Scattered through 15% of site	Shown to reduce NOx gases arising from nitrogen addition to soil. Erosion control, Filtration, Timber, Fibre, Food, Shelter, Shade, Nectar (Bird), Nectar/Pollen (Lizard), Nectar (Insect), Fruit (Bird), Fruit (Lizard), Cultural
Pokaka	*Eleocarpus hookerianus*	1.5	94	Scattered throughout planted area	Erosion control, Filtration, Timber, Fibre, Food, Shelter, Shade, Nectar (Bird), Nectar/Pollen (Lizard), Nectar (Insect), Fruit (Bird), Cultural
Houhi	*Hoheria angustifolia*	1.5	377	Scattered through 20% of site	Erosion control, filtration, timber, shelter, shade, nectar (insects), cultural.
Kowhai	*Sophora microphyllum*	1.5	283	Scattered throughout 15% planted area	Erosion control, Filtration, Timber, Shelter, Shade, Fruit and nectar (Bird), Cultural
Totara	*Podocarpus totara*	1.5	94	Scattered throughout planted area	Erosion control, Timber, Food, Shelter, Shade, Fruit (Bird), Fruit (Lizard), Cultural
		Total	**2,262**		
		Total Plants	**3,355**		
		Total minus plants offered by WIL	**3,095**		

Restoration methodology

Site Preparation

Prior to planting and if weeds are present, it is recommended the site be cleared by mowing or other mechanical method. If acceptable, some form of weed suppressant would be beneficial. The usual form of chemical clearance would be at least one round of glyphosate, particularly targeting the area in which plants are to be planted (spot spraying). Two rounds would be ideal and applied by a suitably skilled and experienced person to ensure no spray drift and recognise any important native or non-native species. If not acceptable, additional manual maintenance may be required in the first 5 years.

If invasive, tall growing, woody weeds are present (such as gorse and broom), mechanical clearance can be undertaken, or goat grazing if the plants are young and the area is fenced with no other plantings within. Following manual removal, stumps could be painted with a systemic herbicide such as a high strength glyphosate.

Plant Introductions

- All plants will be sourced locally using specimens of local provenance (within Canterbury) where possible. It is recommended that the plants are small (1 year specimens and approx. 50 cm unless suggested otherwise by an appropriately qualified ecologist) to ensure maximum survival rates, allowing the plants to adapt to their new environment. For a closed canopy, it is recommended that plants are placed 1.5-2.5m apart (approximately 2500-4000 plants/ha).
- Where native plants naturally occur, these will be retained, identified and adequately protected during site preparation.
- Planting should occur in late autumn/winter (unless frosts are expected, and frost tender plants are used) to allow plants to grow roots which will enable them to survive in the dry summer period.
- Where possible, planting will take place when the weather is most suitable (avoiding hot or windy days).
- Plants should be soaked in water and left to drain immediately prior to planting.
- A hole twice the size of the plant container be dug with soil loosened at the bottom.
- Retain as much soil around the roots from the pot as possible when removing from container and gently untangle fibrous roots where necessary (not recommended for kanuka or

manuka). In general, no cutting or teasing of roots should occur as many native plants are sensitive to root disturbance.

- Place in hole and add soil, firming each layer and water thoroughly.
- Plants will benefit from having the collar buried up to 5cm below the adjacent soil surface creating a hollow which surrounding water can drain into.
- In areas where soil quality is degraded, ensure nutrient supply and water retention by adding a scoop of good quality compost. Fertiliser tablets can be used but are not recommended for dry sites as they will not be broken down under the conditions of the soil.

Protection of plants

In almost all areas of Canterbury some form of plant protection is required. Research has shown that plant guards that are flexible and can be sculpted around the base of the plant to form a complete seal are the best. Examples are those of the Combiguards® which comprise a flexible, this plastic that can be sealed with stones or mulch around the outside. However, these must be removed when the plant has outgrown them. To combat this, a cardboard tree guard can be used which does not need to be removed by hand and will naturally degrade. If this guard is used, a substantial weed mat is recommended to alleviate the trade-off for sealing the guard with the ground. If wind is allowed to enter the tree guard, soil and plant moisture will be impacted. Therefore, a good mulch or wool weed mat is recommended at the base of each planted specimen.

Due to the minimal native ground cover and rank grass invasion, if financially viable and in areas which will not be inundated by the stream high flows, it is recommended that mulch of at least 10 cm depth is spread across the upper bank planting area or around the base of each plant (making sure not to let the mulch touch the stem of the plant). The mulch will aid soil moisture retention and temperature fluctuation and also provide further buffer against weed encroachment whilst the plants get established. Further weed management will be required before the plants reach canopy closure and outcompete adventive weeds but this methodology will incur additional costs for the project.

Maintenance

The first 2-5 years are the most important whilst the plants establish a good root system and at this time, maintenance is important. Maintenance will include removing any weeds which are growing within tree guards and tall weeds outside of tree guards. Some trees may enjoy the shelter afforded by weeds but most restoration plantings begin with pioneer species which require full light.

Therefore, regular maintenance is required, especially in the growing seasons (spring and autumn for most weed species of drier habitats).

Maintenance is best undertaken manually through careful mowing and weed trimming. The tree guards afford some protection for the plants and act as indicators for where the desired plants are located. Spraying using herbicides can also be undertaken but must be done carefully. If systemic herbicides are used, be sure to only spray on calm days when spray drift would not be an issue. In many situations, the main weeds outcompeting native plants are exotic grasses such as cocksfoot (*Dactylis glomerata*). In this situation, a monocot targeted chemical such as Gallant may be appropriate but used with caution around native grasses and flax plants. Alternatively, light grazing for a short time to remove grass cuttings can be effective with careful management.

The need for maintenance should lessen as the canopy expands and closes between planted trees and shrubs. However, maintenance of the area will almost always be required to remove exotic and invasive species which threaten the survival of the native plants. In addition, there may be understory plants that are desired once the canopy has closed and created enough shade and weed exclusion.

Monitoring

It is advised that monitoring is undertaken for the first two years to identify plant survival and report any adjustments to the monitoring scheme where needed. In addition, further monitoring would be beneficial to assess the changes in both in-stream and terrestrial biodiversity as a result of the restoration. This would include floral surveys plus bird, lizard and aquatic species surveying.

References

Ecan, (2011). Riparian zones A guide to the protection of Canterbury's rivers, streams and wetlands. Ecan.

Franklin, H. M. (2010). *Understanding variation in water quality using a riverscape perspective.* (Masters dissertation, Canterbury University).

Landcare research/Manaaki Whenua (2022). Our Environment: Land Atlas of New Zealand. Accessed November 2023 at: https://ourenvironment.scinfo.org.nz/maps-and-tools/app/

Landcare research/Manaaki Whenua (2022a). S-Map Online. Accessed November 2023 at: https://smap.landcareresearch.co.nz/maps-and-tools/app/

McEwan, W.M. (1987). Ecological regions and districts of New Zealand. Department of Conservation, Wellington, New Zealand.

NZTCS (2022). New Zealand Threat Classification System. Accessed November 2022 at: https://nztcs.org.nz/

Application for funding – CWMS Action Plan Budget 2023/24 *(for the Waimakariri Water Zone)*

The purpose of the CWMS Action Plan Budget is:

- To allow Zone Committees to **focus on implementing their action plan and leverage other funding opportunities to achieve the CWMS priorities.**

The funding is administered, distributed, and monitored by Environment Canterbury.

Applicant details

Organisation (if applicable):	
Contact name:	**Annabel Wilson**
Contact email:	
Contact phone number:	
Postal address:	
Other address:	
Are you GST registered? (if yes, please provide number)	
NZBN (NZ Business Number, if applicable)	

About your project

The amount of information and detail we would like you to provide is in proportion to the amount of funding you are requesting. If it is smaller amount, then a simple description of your project, who's involved and what you will be doing, along with a simple budget is sufficient.

Project name:	***Ketchum Cottage** Wetlands, Fernside*
CWMS zone where the activity will occur:	*Waimakariri*
Provide a brief project description (in two sentences):	
• *To continue to protect and enhance the wetland habitat present at Ketchum Cottage, Fernside, by extending protective fencing, improving the water quality and*	

habitat of adjacent farm water races, and increasing appropriate wetland vegetation.

Explain what the grant will be used for - what the money is mainly being spent on/what activities are involved in the project (in two sentences):

- *To extend, and thereby protect, the presently fenced wetland which has since spread from the previously fenced area (6-10 metres from the fence along 3 boundaries totalling approx. 300m)*

- *To pay for 1000 Carex secta plants which will be planted along the around the wetland and waterway that the wetland flows into.*

FYI: ECAN has suggested a removable weir to allow the area to retain water in times of water table decline. (The removable weir is deemed a permitted activity as it would have ecological benefits). This is something that may occur in the future.

Describe the problem or opportunity the project will address:

Due to the cleaning of the water race by the neighbouring farm, the water level has dropped significantly.

Before that the wetlands had begun to spread beyond the present fencing as part of its naturalisation. But this has made it susceptible to farm activity (stock impacts).

There is an opportunity to improve the quality of the water and habitat.

Describe the outcomes or impacts of this project:

Outcomes or impacts are what will change or who will benefit from this work, including enduring benefits. For example, fencing off springheads will improve biodiversity and improve stream health.

The wetland retaining its own water level.
By installing a weir, extending the wetlands by fence relocation, and increasing vegetation the wetland will be healthier, less constricted and able to retain its own required water level.

Water quality is improved.
As the water from the springheads moves through farmland downstream to re-enter the CUST Awa or the Main Drain it is imperative that the water quality is not only maintained but improved for the biodiversity of the habitats it moves through. Aquatic fauna such as longfin tūna, freshwater mussels, and bullies have been recorded. These taxa require a healthy and appropriate habitat for them and their food sources.

Tamariki can play and learn in water of a high-quality
As the water does re-enter the awa it is important that our tamariki can also play and learn in water of a high quality.

To provide a test case area of what can be achieved in an active farming area, and to encourage neighbours to become involved in lifting the quality of the water returning to the river. Water testing at the source and further downstream would provide tangible data.

List the key outputs of the project:
An output describes what your group is proposing to do and is measurable. For example, install 250 m of fencing, or train 25 volunteers. Outputs are important and may be used as deliverables in a funding agreement.

To deconstruct 3 fences, move them outwards, and then re-erect. This will involve volunteers taking the netting down and dragging it across to the new lines, as well as pulling up the posts ready for the contractor to install the new fences.

If plants for the wetland and the adjacent waterways are supplied, these can be planted to support the health and retain the water of the wetland area. These plants will reduce flow from the wetland, provide shade (reduce macrophyte growth and moderate water temperatures), decrease nutrient runoff, provide refuge for terrestrial fauna and aquatic fauna + will be a source of allochthonous input.

Please state how the project aligns with the relevant Zone Committee's 2021-24 Action Plan:
Waimakariri – Waimakariri Water Zone Committee Action Plan 2021-2024 | Environment Canterbury (ecan.govt.nz)

Alternatively, contact the Zone Facilitator (Murray Griffin) who can email you a copy.

Increasing indigenous biodiversity in the zone: *Enhancing and creating indigenous biodiversity habitat*

Improved mahinga kai within the Waimakariri water zone: *Enhancing the freshwater habitat for tūna and kākahi.*

Protection and enhancement of environmentally sustainable recreation in the zone: *Improving water quality so tamariki can enjoy the awa in safety.*

Tell us when you can start the project and when you intend to have the project completed (timeline):

Ready to start when funding is available. I would like the wetland to be extended as soon as possible, hopefully by the end of 2024.

I have just completed planting (and fenced half of the completed planting) mixed native shelterbelts along the last 260 m of the water race leaving the wetlands and moving downstream to the next property. At present, I am planting Carex secta along the water race.

Tell us why you think your project is feasible/realistic:

I have already achieved a lot in terms of protecting the wetland and adjacent waterways as well as planting 3000 native plants. ECan intends to map the wetland to ensure its protection for eternity. ECan, local organisations, whanau and friends continue to provide support and advice. My whanau are truly excited about the aroha shown to the whenua and support my projects and vision for protecting and improving the health of the aforementioned habitats.

Tell us about the project management, including leadership and financial oversight:

I am experienced and competent in running projects and events and can work to a budget. My accountant supports these ventures.
The Waimakariri Biodiversity Trust is also providing support on this project.

List any other groups or organisations you are partnering with on this project, such as community groups, schools etc:

Neighbouring farm owners, ECan, WDC, Water Zone Committee

How will you engage the community on the project:

By continuing to share the project's vision with neighbours, planting days, sharing with others wanting to do similar activities.

Do you know of any cultural values associated with this site? **If yes, what engagement has occurred or is planned (if any) with local Papatipu Rūnanga about this project?**	**YES**

Mahinga Kai - Kakahi and tūna

Onsite visitors - Arapata Reuben

Please provide an accurate location with grid references and a map (if relevant to your project – please *contact the Zone Facilitator who can assist with this if required*)**:**
NZTM Grid Ref X (Easting): 607433.04 *NZTM Grid Ref Y (Northing): 4783096.01*
Who owns the land? *Attach evidence of permission from the landowner, or their representative (if you are undertaking a project on land that you do not own)*
I am the landowner – A. C. Wilson

Funding details

Your budget should include estimates of income and expenditure, including other funding and in-kind contributions. You should show clearly what you are planning to spend the Action Plan funds on if successful. For applications for less than $15,000 a simple budget is fine. We would like more detail if your application is for a larger amount e.g. more than $15,000 or more than $50,000. We have a budget template in the guidance document.

How much funding are you requesting?	
If you are successful with this application, what components of your project will you spend the money on? **Please include below or attach your budget to your application.*	
Income: *Action Plan Funding - $7210* *Expenses:* *1000 Carex secta plants - $2530* *Fence moving and resurrecting $ 3335* *Waimakariri Biodiversity Trust - Freshwater investigations - $1000* *Water quality testing x2 $345*	
Have you applied to, or received funding from other organisations for this project? **If YES, please provide details below or note if it is included in your attached budget.**	**NO**

The CWMS Action Plan Budget is seed funding or leverage for partnering and collaboration, so it is positive if you have received or are applying for other funding.	
Is the project receiving any other monetary or "in-kind" contributions (volunteer hours, resources, equipment, facilities) from your organisation or others? **If YES, please provide details below or note if it is included in your attached budget:**	**YES**
Volunteer planting Assistance from Waimakariri Biodiversity Trust	

Working with Environment Canterbury

In the last three years have you received funding or other support from Environment Canterbury for this, or any other project? **If yes, what was the funding/support for, and when did you receive it?**	**YES**
Supply and planting of *Carex secta* along a stretch of waterways - 2022 Support and advice from Anna Veltman and Jason Butt - 2023	
Are you intending on applying to another Environment Canterbury fund/budget this financial year for this, or any other project? **If yes, what fund are you applying to?**	**NO**
Do you give permission for your application for the CWMS Action Plan Budget to be shared with the ECan staff who coordinate the Waitaha Wai Action to Impact Fund (we prefer to share information between the two to get best use of both)	**YES**

Additional information you would like to provide?

Do you have supporting information you would like to provide (optional)?

The fencing quote is attached

The plant quote is attached

Once completed, please send this application form to Zone Facilitator, Murray Griffin, murray.griffin@ecan.govt.nz

The Zone Facilitator will keep in touch with you about timeframes, whether the Committee would like you to give them a presentation, and whether there are any questions.

Sales Quote - QUO-001666

Bill to:
Wholesale Cash Sales

Riverside Horticulture
75 Boys Road
, Rangiora 7400
New Zealand
GST: 86756218

Date:	December 11, 2023
Sales Quote #:	QUO-001666
PO Number:	Annabel Wilson

SKU	Description	Unit Price	Quantity	Line Total
CARSE0.5L	Carex secta 0.5L	$2.20	1000.00	$2,200.00

Quote Valid Until
11/01/2024

Subtotal	$2,200.00
GST	$330.00
Total	**$2,530.00**

Annabel Wilson

0278628988

shuggie@xtra.co.nz

QUOTE

Annabel Wilson

Date
18 Dec 2023

Expiry
30 Apr 2024

Account Number

Quote Number
QU-0327

Reference
move fence

GST Number
83738359

1185 Marshmans Road
RD1
Amberley
NEW ZEALAND

168 O "Roakes road fernside

TO RE ERECT FENCING AROUND WET LAND AREA USING OLD EXISTING FENCE AND SOME SMALL AMOUNT OF OUR MATERIALS TO GET JOB DONE,
250 MTRS TO ERECTE

Description	Quantity	Unit Price	GST	Amount NZD
PRICE ERECTED FOR 250 MTRS	1.00	2,900.00	15%	2,900.00
			Subtotal	2,900.00
			Total GST 15%	435.00
			TOTAL NZD	**3,335.00**

Terms

All materials supplied by Duckworth Fencing ltd will remain the property of Duckworth fencing till full and final payment, materials and or goods must be kept in such a way they can be identified as the property of Duckworth fencing, if not paid for in full they will be reclaimed.
If dumping of materials is required there will be an extra charge.

Payment is requested within 7 days or agreed terms .
If you agree to this quote then you agree to our terms.

Application for funding – CWMS Action Plan Budget 2023/24 *(for the Waimakariri Water Zone)*

The purpose of the CWMS Action Plan Budget is:

- To allow Zone Committees to **focus on implementing their action plan and leverage other funding opportunities to achieve the CWMS priorities.**

The funding is administered, distributed, and monitored by Environment Canterbury.

Applicant details

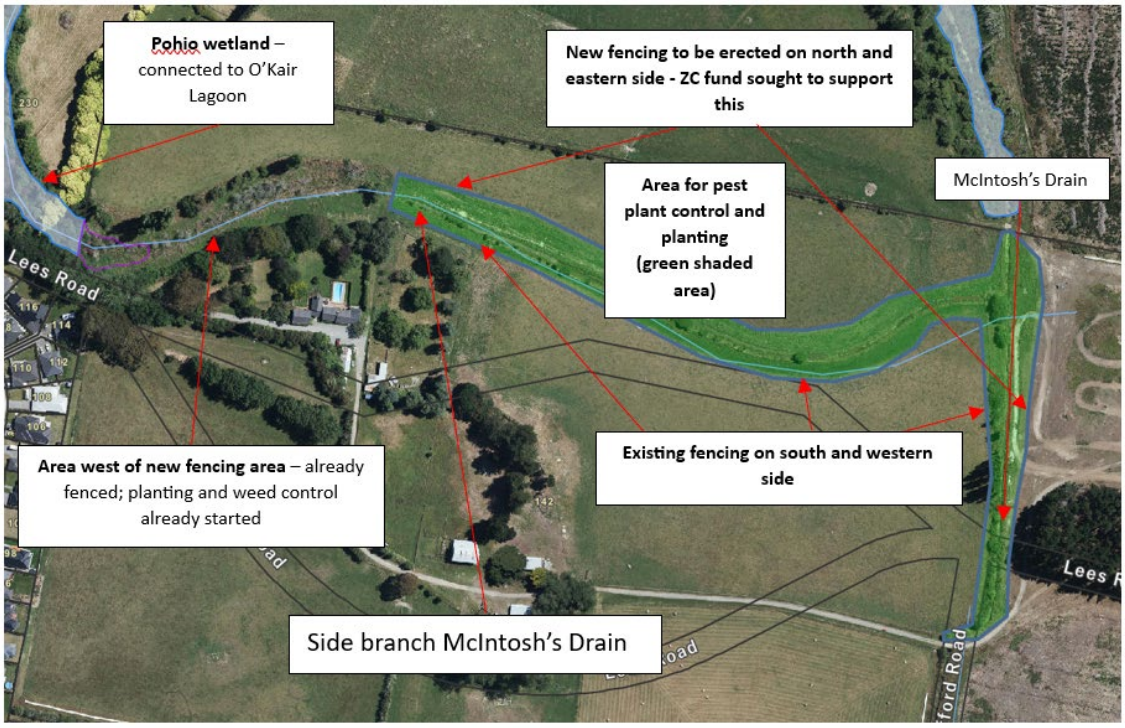
Organisation (if applicable):	**John Wakeman & Mel Stewart**
Contact name:	**John Wakeman**
Contact email:	
Contact phone number:	
Postal address:	
Other address:	
Are you GST registered? (if yes, please provide number)	**Yes**
NZBN (NZ Business Number, if applicable)	

About your project

The amount of information and detail we would like you to provide is in proportion to the amount of funding you are requesting. If it is smaller amount, then a simple description of your project, who's involved and what you will be doing, along with a simple budget is sufficient.

Project name:	*O'Kair Lagoon*
CWMS zone where the activity will occur:	*Waimakariri*
Provide a brief project description (in two sentences):	
Complete fencing off & planting the mainstem and side branch of the McIntosh's Drain waterway – that make up O'Kair Lagoon.	

Woody weed control of willows & other weeds in new proposed fencing & planting area, as well as the previously fenced and planted area of side branch of McIntosh's drain (see Map below).



Map: O'Kair Lagoon - proposed project

Explain what the grant will be used for - what the money is mainly being spent on/what activities are involved in the project (in two sentences):

Complete fencing-off a 1.4 ha of riparian buffer area around tributary to and an area of McIntosh's Drain.

Undertake pest plant control in the fenced off areas of O'Kair Lagoon.

See Appendix for:

- Diagram of O'Kair Lagoon fencing and planting area
- Black Map showing the area as it was in 1860s

Describe the problem or opportunity the project will address:

At present the area is not fully stock proof, and pest plant incursion is occurring, especially in the area of McIntosh's drain. Excluding stock by completing fencing out of the area with wide setbacks will provide an area for riparian protection and for enhancement by planting out with native plants.

This project & other neighbouring projects will link massive areas of neighbouring wetlands upstream on side branch and main stem of McIntosh's drain and wider environs (See 'Map showing location of project area and environs for this application' in Appendix).

Provide habitat for bittern which has be spotted in neighbouring wetland.

Provide spawning habitat for endangered whitebait & critical upstream of tidal toe adult whitebait habitat. This upstream habitat is where adult whitebait live, then when they spawn they go down to tidal toe. There are lots of eels present also.

Enhancement of the area will enhance habitat for many native birds, (bellbirds, ducks etc).

Describe the outcomes or impacts of this project:
Outcomes or impacts are what will change or who will benefit from this work, including enduring benefits. For example, fencing off springheads will improve biodiversity and improve stream health.

This will further improve the whole health of this important catchment especially for whitebait and bittern, as well as providing new habitat for many native birds. It will also enhance the eel habitat.

List the key outputs of the project:
An output describes what your group is proposing to do and is measurable. For example, install 250 m of fencing, or train 25 volunteers. Outputs are important and may be used as deliverables in a funding agreement.

Outputs include:

- Install 660m of fencing
- Woody weed control of 1.4 ha of fenced off area
- Commence planting out of 1.4 ha riparian area (some planting has already commenced)
- Landowner family to plant 1100 plants (Mel Stewart has grown 1,100 plants from farm nursery for this project) (Pittoporum, Griselina, Cordyline australis (Cabbage Tree) Phormium tenax (Flax), Sophora microphylla (Kowhai), Coprsoma etc

Please state how the project aligns with the relevant Zone Committee's 2021-24 Action Plan:
Waimakariri – Waimakariri Water Zone Committee Action Plan 2021-2024 | Environment Canterbury (ecan.govt.nz)

Alternatively, contact the Zone Facilitator (Murray Griffin) who can email you a copy.

*The project will help increase indigenous biodiversity in the zone through eliminating plant pest species and protect important waterways that have high value for inanga and eel.

*The project will also increase mahinga kai enhancement on the lower coastal plains by impoving habitat for mahinga kai species in the area (especially inanga and tuna habitat)

The project will also help protect and restore an area that was previously a backwater lagoon that was present when records were made back in the 1960s.

Improve health of whole waterway "Ki Uta Tai"

Tell us when you can start the project and when you intend to have the project completed (timeline):

Once the funding is approved, the fencing can be installed, then planting can take place during the winter and following years.
Tell us why you think your project is feasible/realistic:
Already fenced and planted the adjoining upstream waterway wetland area.
Tell us about the project management, including leadership and financial oversight:
John Wakeman is the project manager and Mel Stewart is the farm nursery manger
List any other groups or organisations you are partnering with on this project, such as community groups, schools etc:
No
How will you engage the community on the project:
No

Do you know of any cultural values associated with this site? **If yes, what engagement has occurred or is planned (if any) with local Papatipu Rūnanga about this project?**	**NO**

Please provide an accurate location with grid references and a map (if relevant to your project – please *contact the Zone Facilitator who can assist with this if required***):**
NZTM Grid Ref X (Easting): 1573821 **NZTM Grid Ref Y (Northing): 5199635**
Who owns the land? *Attach evidence of permission from the landowner, or their representative (if you are undertaking a project on land that you do not own)*
John Wakeman

Funding details

Your budget should include estimates of income and expenditure, including other funding and in-kind contributions. You should show clearly what you are planning to spend the Action Plan funds on if successful. For applications for less than $15,000 a simple budget is fine. We would like more detail if your application is for a larger amount e.g. more than $15,000 or more than $50,000. We have a budget template in the guidance document.

How much funding are you requesting?	**$15,000**

If you are successful with this application, what components of your project will you spend the money on? **Please include below or attach your budget to your application.*	
Partial payment for fencing of 660m – see quote attached to application. Full quote North Canterbury Fencing $21 598.98 (attached to application). Seeking $15,000 to help in paying for fencing equipment and labour. Extra cost of $6,598.98 born by me the landowner.	
Have you applied to, or received funding from other organisations for this project? **If YES, please provide details below or note if it is included in your attached budget.** *The CWMS Action Plan Budget is seed funding or leverage for partnering and collaboration, so it is positive if you have received or are applying for other funding.*	**NO**
Is the project receiving any other monetary or "in-kind" contributions (volunteer hours, resources, equipment, facilities) from your organisation or others? **If YES, please provide details below or note if it is included in your attached budget:**	**YES**
Mel Stewart has started a farm nursery and is supplying some of the plants John Wakeman is carrying out woody weed and willow control work, planting prep, managing project. Wakeman Family is helping with planting the area	

Working with Environment Canterbury

In the last three years have you received funding or other support from Environment Canterbury for this, or any other project? **If yes, what was the funding/support for, and when did you receive it?**	**YES**
• ECan gave us some native plants in 2024 which have been planted in the previously fenced and planted section of this project. • We received $7 300 of IS funding from ECan for project that ran from 2019 – 22) to help establish native vegetation at Waka Wetland. Project was completed successfully. (see 'Map showing location of project area and environs for this	

application' in Appendix for location of this project relative to this O'Kair Lagoon project)	
Are you intending on applying to another Environment Canterbury fund/budget this financial year for this, or any other project? **If yes, what fund are you applying to?**	**NO**
Do you give permission for your application for the CWMS Action Plan Budget to be shared with the ECan staff who coordinate the Waitaha Wai Action to Impact Fund (we prefer to share information between the two to get best use of both)	**YES**

Additional information you would like to provide?

Do you have supporting information you would like to provide (optional)?

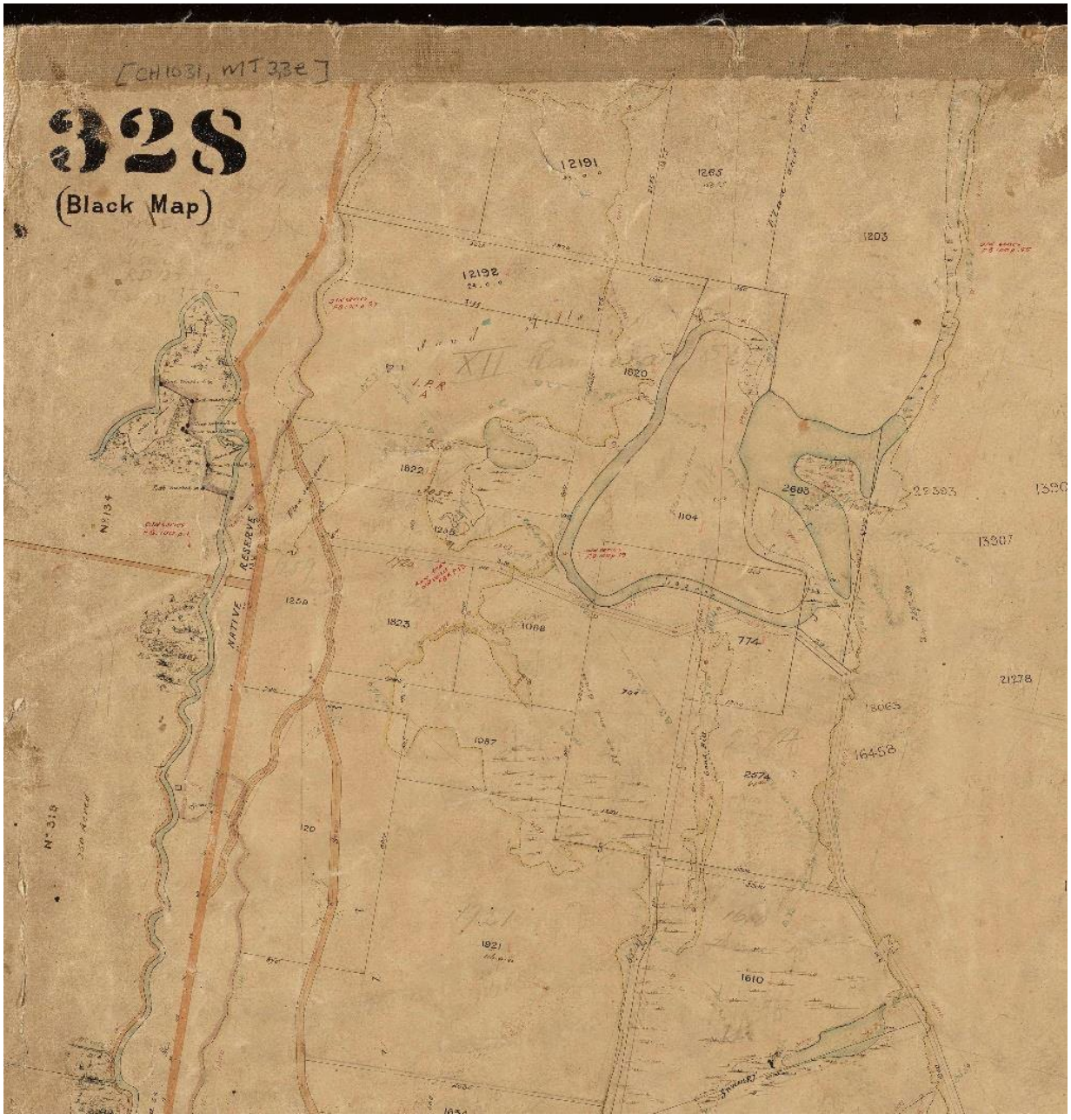
Please attach any supporting information with your application*.**

Once completed, please send this application form to Zone Facilitator, Murray Griffin, murray.griffin@ecan.govt.nz

The Zone Facilitator will keep in touch with you about timeframes, whether the Committee would like you to give them a presentation, and whether there are any questions.

Appendix

Black Map showing old lagoon area



Digitised Black Map showing old lagoon area

Diagram showing proposed fencing and planting area for O'Kair Lagoon

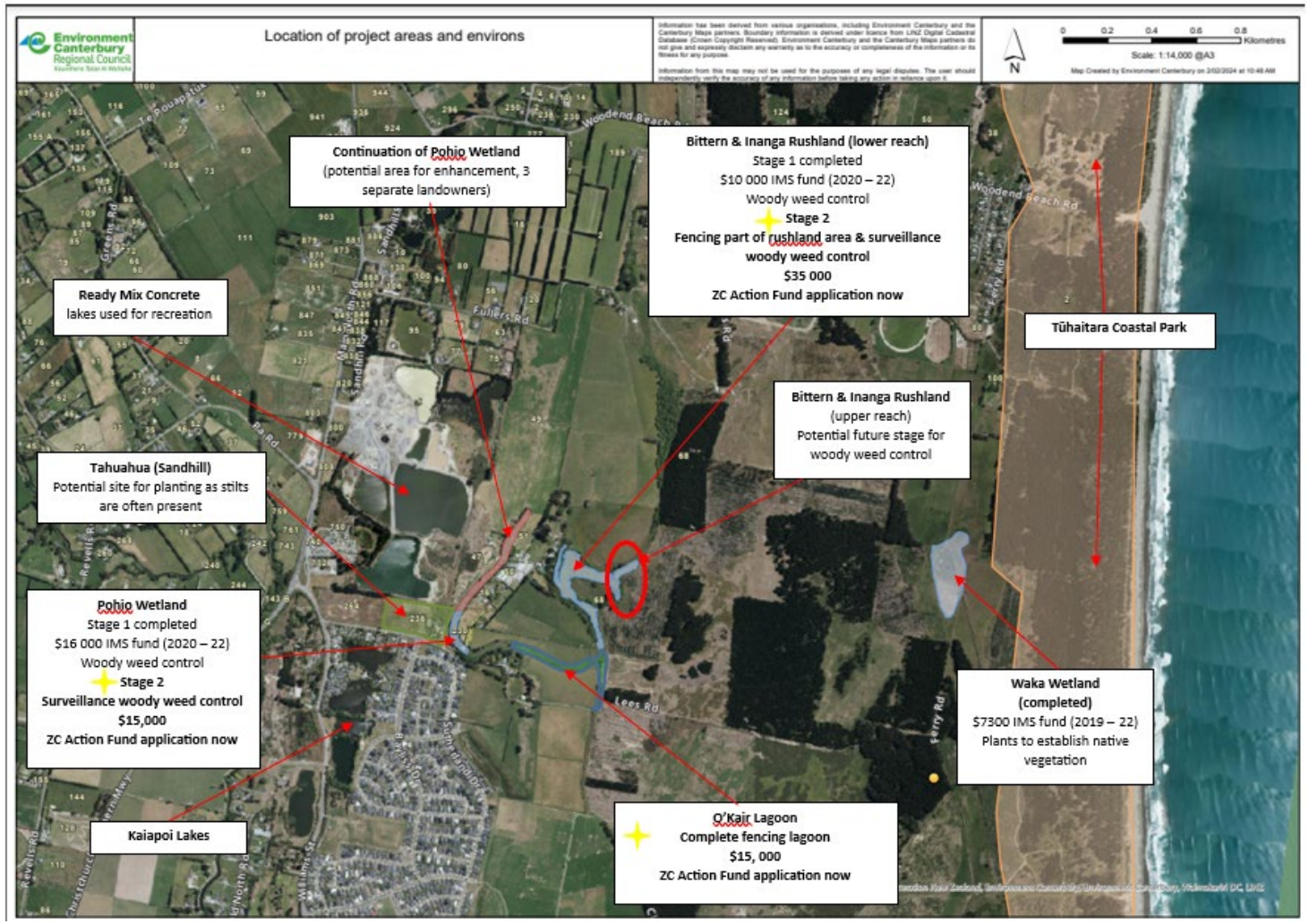
KAIAPOI BIODIVERSITY RESTORATION PROJECT
SITE NATME : O'Kair Lagoon
OWNER: John & Mel Stewart
Whitebait Tributary On or near the tidal toe (White bait spawning Area)

O'kair Lagoon Fencing Plan

O'Kair Lagoon Proposed Planting Area

Prepared by:
Nicky Auld
Dip Hort
Dip Parks & Gardens Tech

Map showing location of project area and environs for this application



FENCING QUOTE

OKAIR LAGOON FENCING

Date
23 Jul 2023

Quote Number
QU-1061

Reference
1061

GST Number
078-943-483

North Canterbury Fencing
142 Lees Road Kaiapoi
RD1
Christchurch New Zealand
GST No: 078-943-483

Okair lagoon fencing project

Description	Quantity	Unit Price	Amount NZD
sheep netting one hot wire per meter	662.00	21.06	13,941.72
Stay/strainer assembly- Angle stay	20.00	155.00	3,100.00
Gateways	3.00	330.00	990.00
Line Clearing + Machine	1.00	600.00	600.00
Fence line setup and markout	6.00	25.00	150.00
		Subtotal	18,781.72
		TOTAL GST 15%	2,817.26
		TOTAL NZD	**21,598.98**

Application for funding – CWMS Action Plan Budget 2023/24 *(for the Waimakariri Water Zone)*

The purpose of the CWMS Action Plan Budget is:

- To allow Zone Committees to **focus on implementing their action plan and leverage other funding opportunities to achieve the CWMS priorities.**

The funding is administered, distributed, and monitored by Environment Canterbury.

Applicant details

Organisation (if applicable):	
Contact name:	**Nicola Auld**
Contact email:	
Contact phone number:	
Postal address:	
Other address:	
Are you GST registered? (if yes, please provide number)	**No**
NZBN (NZ Business Number, if applicable)	

About your project

The amount of information and detail we would like you to provide is in proportion to the amount of funding you are requesting. If it is smaller amount, then a simple description of your project, who's involved and what you will be doing, along with a simple budget is sufficient.

Project name:	*Pohio Wetland Swamp (Part of the wider North Kaiapoi Biodiversity Restoration Project)*
CWMS zone where the activity will occur:	*Waimakariri Zone - Headwaters of the coastal MacIntosh's Drain*
Provide a brief project description (in two sentences):	

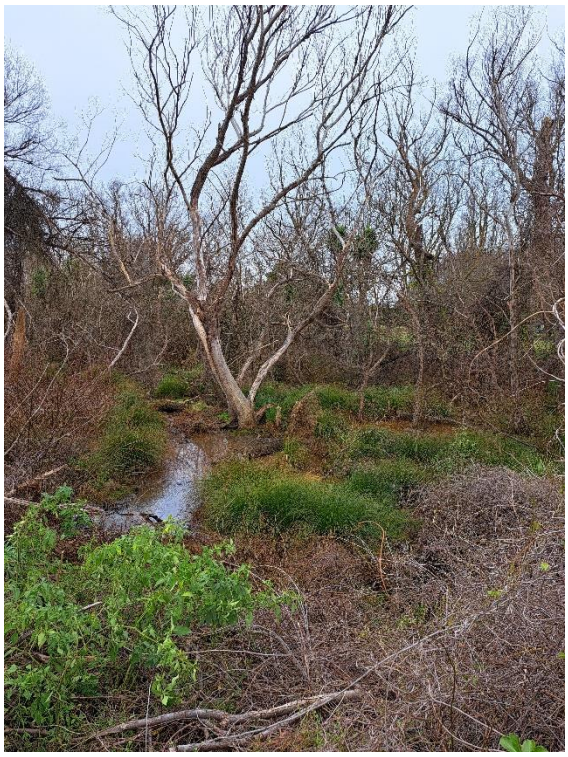
Undertake Stage 2 Ecological Restoration with follow-up surveillance pest plant control in the 1ha Pohio Wetland – as a continuation from earlier Stage 1 initial pest plant control work undertaken between 2020 - 2022 (with support from ECan's IS fund). Overall aim is to enhance the rich existing biodiversity of an extensive natural swamp.

Massive willow trees laden in ivy were killed in Stage 1, and now the regrowth of willow saplings and other weeds is intense and needs ongoing control (over several years) to ensure the protection of exiting & planted biodiversity.

Explain what the grant will be used for - what the money is mainly being spent on/what activities are involved in the project (in two sentences):

Follow-up willow and woody weed control of now mostly smaller-diameter regrowth that is occurring following the control of the larger canopy plants a few years ago – now that more light is penetrating to the undergrowth, regrowth of pest plants is accelerating.

Willow, elm and sycamore seedlings, ivy, blackberry and other woody weeds need to be controlled now, in order to continue the progress made to date – where native vegetation regrowth is noticeable as has also responded to the increase in light.



Photos of dead larger pest plants and diverse native understory regrowth

Describe the problem or opportunity the project will address:

The multi-year IS (Immediate Steps) grant provided by ECan has come to an end, where the result of the extensive willow and other woody weed control work is impressive, resulting in the natural regrowth of mainly carex secta, which has seeded and tripled in size due to more light entering the wetland as the massive willow trees die and fall over.

As part of Stage 1, my landowner contribution was felling numerous large dangerous Willow's, Pine, Sycamore Trees. This work was carried out by Tree Tech, which they turned into bark Mulch, which has been spread over some of the new planted area. The big willow trees were cut and left where they fell. (not suitable for mulch) Ben Deans then spent months cutting up the huge number of trunks, branch waste. Then he cleared them from the wetland site to enable the area to be fenced. (My Landowner contribution)

Extra work carried since completion of the grant:

1. The wetland now has been fenced & is stock proofed. The old road fence along Barkers Road has caved in. Unsure whether to replace this fence as there is no livestock, but people have been dumping rubbish to the wetland here.
2. Removed a lot of older Willow, elms, sycamore etc as well as tonnes of sprouting willow & other woody weeds & ivy etc. Arnold Pohio has spent a lot of time doing this.
3. Arnold Pohio has also planted a huge number of plants all over the wetland.
4. Arnold & I and family members have also planted a huge number of plants along the banks, plastic plant protector hats have been added over smaller plants. We spend a huge amount of time weed releasing plants & watering them. Many of these plants

have been relocated from the actual wetland seedling & from Arnold's properties flax collection & seedlings etc from his property.

5. ECan donated a large number of plants, and most of those have now been planted & watered over the summer.
6. Arnold's son Max has also been weedeating etc around young plants as regrowth of woody weeds is a major issue.
   There are massive areas of wetland banks still to plant and all these new planting areas requires a major ongoing weed control effort. (Clearing woody weeds, & then keeping on top of woody weed growth sprouting.)

Photo of new fence erected in 2021

To ensure continued progress that has been made to date with the wetland reverting back to largely indigenous vegetation, ongoing surveillance and eradication of pest plants is essential at this time. Stage 1 restoration work achieved control of the larger trees, much of the ivy and other smaller pest plants, but the funding was insufficient to control the smaller diameter pest plants. The sprouting of willow, elm and sycamore saplings is intense, along with ivy, and many other weeds which will overtake the native plants quickly if not controlled soon.

It's exciting to see the change in the wetland with the massive willows and elm trees gone. In floods the tide pushes up into this wetland making it an ideal whitebait spawning habitat (on the tidal toe with 5% salt). The area just above the tidal toe habitat is essential for the adult whitebait habitat as this is where they live for a few years until they head down stream (to the tidal tow) to breed.

Pohio Wetland is located within a wider back-dune wetland complex that stretches from the Ashley-Rakahuri to the Waimakariri and include Tutaepatu Lagoon – Waikuku Wetlands (a wetland of high ecological significance). Restoration here will also assist as it is in a known area of habitat values for Canterbury mudfish.

My idea of a North Kaiapoi Biodiversity Restoration Project Concept area (see Map 1 in Appendix) already has bellbirds, the odd tui and kereru, bitten, black stilts, pied stilts, spoonbills, ducks, egret etc. There is a lot of open water area within in a short flying distance of North End Sand, Kaiapoi Lakes, Waka Wetland, O'Kair Lagoon, Bitten and Inanga Rushland and the Woodend Beach and Tuhaitara Coastal Park areas.

Describe the outcomes or impacts of this project:
Outcomes or impacts are what will change or who will benefit from this work, including enduring benefits. For example, fencing off springheads will improve biodiversity and improve stream health.

The 1.0 ha Pohio Wetland is now starting to revert back to indigenous vegetation.

We expect to see a reduced extent and density of pest plants within the wetland, and increased condition, extent and density of native vegetation.

This is a highly visible site on the corner of Lees and Barkers Road, and the change in this wetland is noticeable, and will hopefully inspire others to take on environmental action. For example, there is an additional 2.0 ha of wetland immediately adjacent and upstream of this location, running through 4 neighbouring properties. Again, see Map 1 in appendix.

Two upstream neighbours are interested in continuing the wetland restoration along Barkers Road.

A long-term resident of the area, Arnold Pohio, has been helping me restore the wetland.

A lot of time and money has been spent on this wetland to ensure its success by the landowner. These items are listed below.

- Chopping down, cutting up & removing massive Willow, Elm, Sycamore, Harthorne etc trees to enable new fencing. (These trees would have fallen on the fence).
- Fencing
- Removing willow saplings etc, from wet areas of wetland, to allow native carex secta & other many other native seedlings to thrive.
- Preparing planting sites (Clearing dead & living willows & woody weeds)
- Planting of 2000 plants approx (800 from ECan) some with protective plastic hats.
- Plant releasing & woody weed control

As the willows and woody weeds are removed and natural reversion of more native species occurs, the biodiversity values will also increase further. With climate change this wetland will become wetter as seen in a recent flood event. Happy to put up a sign if provided with one.

If this site forms part of a wider whole “North Kaiapoi Biodiversity Restoration Project Concept” area, I think in the future the whole community could get behind the concept which could grow to nearby landowners, and huge environmental action could take place in an area already booming in biodiversity.

List the key outputs of the project:
An output describes what your group is proposing to do and is measurable. For example, install 250 m of fencing, or train 25 volunteers. Outputs are important and may be used as deliverables in a funding agreement.

For professional pest management contractors to undertake surveillance of the 1 ha Pohio Wetland site, to identify and control pest plants present.

These include willow, elms, scyamore seedings, ivy, blackberry, etc.

A quote for this work has been received from Godfreys Pest Management Ltd, that has estimated it will require 4 people to do the slow work of cut and paste for a week.

Alternatively, also have a quote from Arnold Pohio’s son Max who is also a restoration contractor who works on a lot of Maori Land. We have discovered a lot of work is required for woody weed control around creating and clearing new planting areas and maintaining new plantings, as the willow and woody weed growth is intense.

If there is any money left over, it can be used to purchase native trees which will improve biodiversity.

Please state how the project aligns with the relevant Zone Committee's 2021-24 Action Plan:
Waimakariri – Waimakariri Water Zone Committee Action Plan 2021-2024 | Environment Canterbury (ecan.govt.nz)

Alternatively, contact the Zone Facilitator (Murray Griffin) who can email you a copy.

*The project will help increase indigenous biodiversity in the zone through eliminating plant pest species and allow diverse native understory to flourish again.

*The project will also increase mahinga kai enhancement on the lower coastal plains by improving habitat for mahinga kai species in the area (especially inanga and tuna habitat)

The project will also help: -

- Protect landscape native species values in upper part of the catchment
- Weed control in Upper & Middle section of catchment
- Improve habitat of whole catchment (Whole North Kaiapoi Biodiversity Restoration Project Concept)
- New native habitat works well with neighbouring, 6 hectares of freshwater lakes of North End Sands Shingle Pit (Birds fly & live between the two different habitats. The Shingle Pit lakes providing a great feeding ground for birds (tuna, fish). Pohio Wetland & upstream habitat providing good nesting habitat etc.
- Improve Habitat health of lowland spring fed tributaries
- Improve health of whole waterway "Ki Uta Tai"

Tell us when you can start the project and when you intend to have the project completed (timeline):

This funding application is to continue work already started in the Stage 1 phase, so it is an established project and can start once further funding is in place.

Important
Given the nature of this stage of the project – requiring surveillance and plant pest control to be carried out in the middle of the wetland, it is best undertaken when water levels are at their lowest. Contractors prefer to undertake this work in the mid-late summer period (now – till late April 2024) and avoid winter and spring when water levels are significantly higher.

If the Zone Committee is able to support this funding application, a decision made soon, may allow the project to commence between now and early autumn. However, if approval is given later than this, the work would be best progressed later in summer 2024/25.

My preference is to carry out the work sooner if at all possible.

Tell us why you think your project is feasible/realistic:

We have implemented Stage 1 effectively and are demonstrating an on-going commitment to restoration work. We are very keen to undertake Stage 2 of the project, in order to ensure pest plants don't re-invade the wetland and undo the progress made to date.

Tell us about the project management, including leadership and financial oversight:
Project Manager: Nicky Auld (Landscape Designer) Dip Hort, Dip Parks & Gardens Tech, Worked for Boffa Miskell, and worked for 30 years, has designed and managed large scale restoration projects in Auck. I have also been supporting CVNZ Papakura Stream Restoration Project. I have had lots of support over the years with TFS farm plantings in Auckland & now our neighbours are also using TFS (school student planting days) planting up their wetlands and erosion prone land. I have helped the wider Wakeman family into retiring a paddock that became increasingly waterlogged after the Christchurch earthquakes, we called this "Waka Wetland" Or Wakeman Wetland & Ecan supplied a large number of plants.
List any other groups or organisations you are partnering with on this project, such as community groups, schools etc:
Part of the extended family effort to undertake restoration work in this area – x3 Kaiapoi projects are all undertaken by extended family unit. No wider community input at this stage, apart from ECAN as still planting their donated wetland and wetland fringe plants. Have applied for Trees that Count but declined as not enough trees planted to enable funding. But in future if funding allows, could work with CVNZ Christchurch office. Have mention this project and the wider North Kaiapoi Biodiversity Restoration Project to them before and have a great relationship with their Auckland office. CVNZ have been working with landowners and stakeholders with the Papakura Stream Restoration Project with amazing results. They are working with the Papakura, Manurewa and Franklin Local Board and are supported by Trees for Survival (Nationwide School planting program) as well as connecting with Forest and Bird, South East Wildlink for pest control. DoC has visited and carried out survey work at the neighbouring Bitten & Ingua Rushland site and Waka Wetland, and found a large number of eels, and provided traps to protect Black Stilt & other birds at Waka Wetland (a John Wakeman project).
How will you engage the community on the project:
Will discuss with neighbours to encourage them to think about undertaking similar projects in their part of the wider wetland area (see Map 1 in Appendix). Health & Safety are important, and this is why any volunteer work would need be through the likes of CVNZ, TFS

Do you know of any cultural values associated with this site? **If yes, what engagement has occurred or is planned (if any) with local Papatipu Rūnanga about this project?**	**YES**
The site is within a Ngai Tahu silent file area and a possible wahi tapu site. No direct contact has been made at this stage.	

Please provide an accurate location with grid references and a map (if relevant to your project – please *contact the Zone Facilitator who can assist with this if required*):
NZTM Grid Ref X (Easting): 1573400.00 **NZTM Grid Ref Y (Northing):** 5199760.00   
Who owns the land? *Attach evidence of permission from the landowner, or their representative (if you are undertaking a project on land that you do not own)*
Nicola Auld

Funding details

Your budget should include estimates of income and expenditure, including other funding and in-kind contributions. You should show clearly what you are planning to spend the Action Plan funds on if successful. For applications for less than $15,000 a simple budget is fine. We would like more detail if your application is for a larger amount e.g. more than $15,000 or more than $50,000. We have a budget template in the guidance document.

How much funding are you requesting?	15,000.00
If you are successful with this application, what components of your project will you spend the money on?	

**Please include below or attach your budget to your application.*
All the money will be spent on pest plant control. ***Pest plant surveillance and control work:*** **Godfrey Pest Management quote** Four people to do the slow work of cut and paste for a week (45 hours x 4 people = 180 hours @ $65 per hour) = $11,700.00 Or Arnold's son Max to cut & paste, clearing of wetland, Pre planting & post planting woody weed control $15,000.00 If any funds left over will be spend on purchasing native trees. It would be great if further funds were allocated for following years to ensure the weed growth is controlled.

Have you applied to, or received funding from other organisations for this project? **If YES, please provide details below or note if it is included in your attached budget.** *The CWMS Action Plan Budget is seed funding or leverage for partnering and collaboration, so it is positive if you have received or are applying for other funding.*	**NO**
Seed funding for Stage 1 was from ECan's IS Fund. Anna Veltman and James Schaap from ECan has been out and are familiar with the whole North Kaiapoi Restoration Project idea and have recommended I apply to this fund.	
Is the project receiving any other monetary or "in-kind" contributions (volunteer hours, resources, equipment, facilities) from your organisation or others? **If YES, please provide details below or note if it is included in your attached budget:**	**YES / NO**
Landowner, family, and tenant, local resident Arnold Pohio have been spending many hours on this project. We will be continuing to grow, buy plants, plant and carry out woody weed, weed releasing, watering new plantings.	

Working with Environment Canterbury

In the last three years have you received funding or other support from Environment Canterbury for this, or any other project? **If yes, what was the funding/support for, and when did you receive it?**	**YES**
Seed funding for Stage 1 was from ECan's IS Fund. This was for willow and woody weed control over three years (2020 – 2022) for this wetland. The funding ECan provided totalled $16,000, with our landowner contribution matching this - through erecting new fencing and providing in-kind labour for complementary pest plant control and some planting. This application was prepared by Zip Ploeg from ECan.	
Are you intending on applying to another Environment Canterbury fund/budget this financial year for this, or any other project? **If yes, what fund are you applying to?**	**NO**
Anna Veltman is on the look-out for other funding options for the "North Kaiapoi Restoration Project Concept".	
Do you give permission for your application for the CWMS Action Plan Budget to be shared with the ECan staff who coordinate the Waitaha Wai Action to Impact Fund (we prefer to share information between the two to get best use of both)	**YES**

Additional information you would like to provide?

Do you have supporting information you would like to provide (optional)?

Yes. There is a Wetland Action Plan for the wetland that was developed by ECan to support the restoration activities. This is attached as additional information.

I also have lots of photos of the site progress which I can send via a text if you have a mobile number.

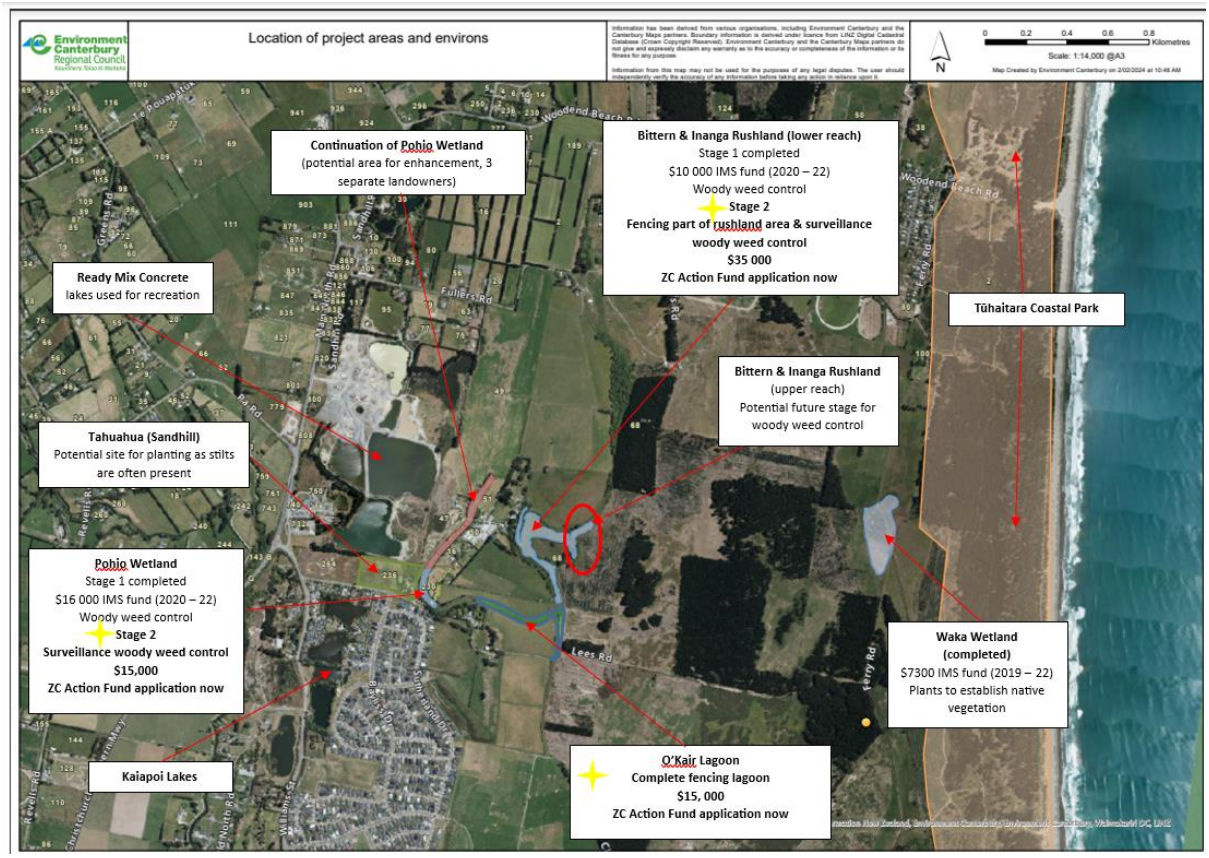
**Please attach any supporting information with your application*.

Once completed, please send this application form to Zone Facilitator, Murray Griffin, murray.griffin@ecan.govt.nz

The Zone Facilitator will keep in touch with you about timeframes, whether the Committee would like you to give them a presentation, and whether there are any questions.

Appendix

Map showing location of project area and environs for this application.



Photos from Stage 1 post-control

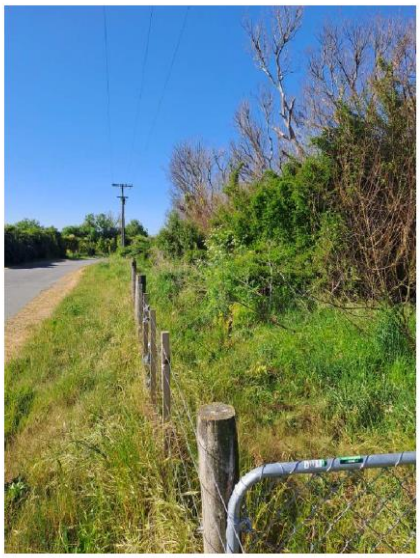


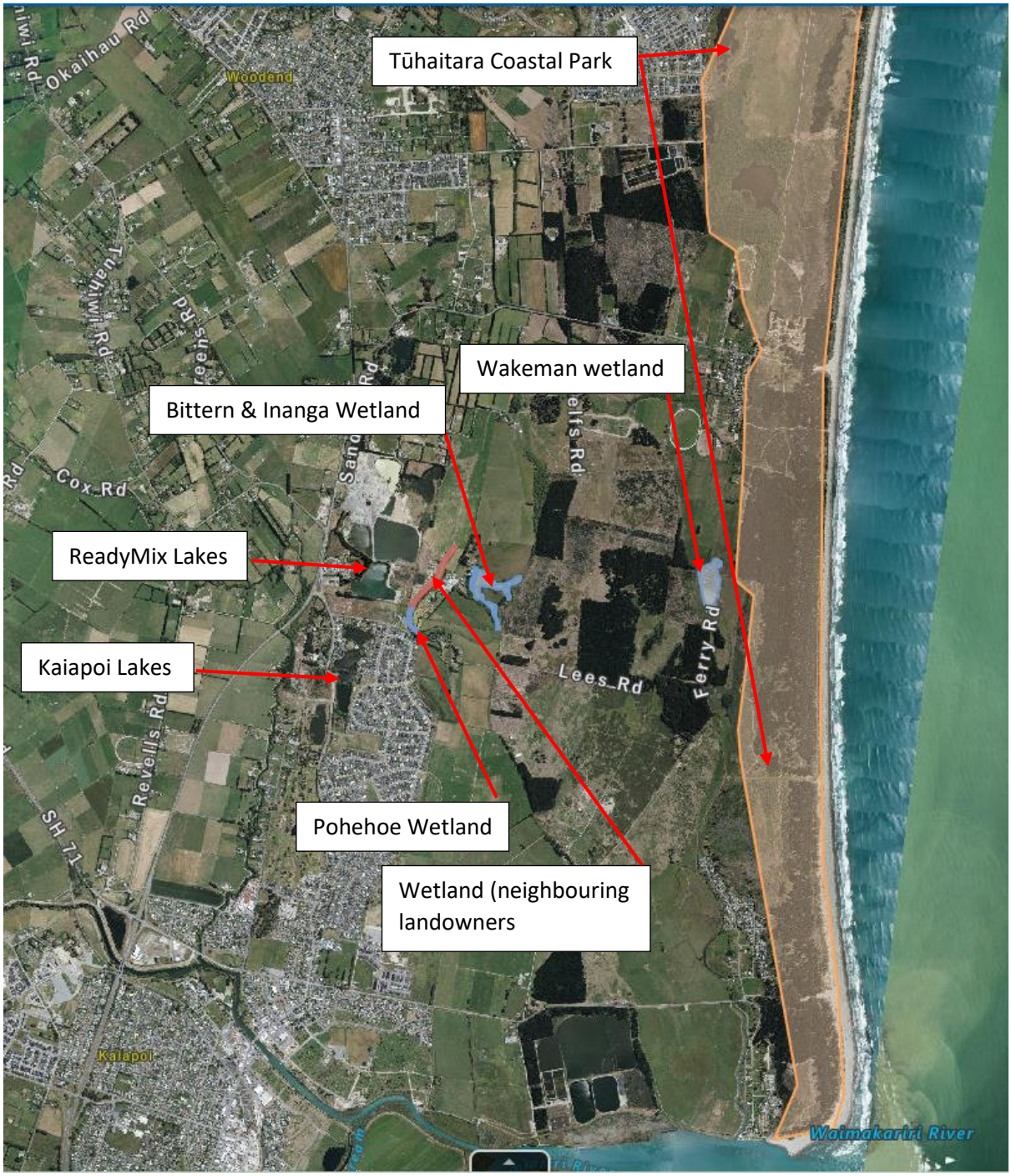
Figure 2: View of Site 1 looking north along Barkers Road.

Figure 3: View of Site 1 interior.

Figure 4: View of Site 1 from Barkers Road looking south towards Lees Road.

Figure 5: View of Site 1 from the corner of Barkers Road and Lees Road.

Figure 6: View of Site 1 from the corner of Barkers Road and Lees Road.


Tūhaitara Coastal Park
Wakeman wetland
Bittern & Inanga Wetland
ReadyMix Lakes
Kaiapoi Lakes
Pohehoe Wetland
Wetland (neighbouring landowners
Okaihau Rd
Woodend
Cox Rd
Lees Rd
Ferry Rd
Revells Rd
SH 1
Kaiapoi
Waimakariri River

Application for funding – CWMS Action Plan Budget 2023/24 *(for the Waimakariri Water Zone)*

The purpose of the CWMS Action Plan Budget is:

- To allow Zone Committees to **focus on implementing their action plan and leverage other funding opportunities to achieve the CWMS priorities.**

The funding is administered, distributed, and monitored by Environment Canterbury.

Applicant details

Organisation (if applicable):	**White Rock Mains Ltd**
Contact name:	**Duncan and Tina MacIntosh**
Contact email:	
Contact phone number:	
Postal address:	
Other address:	
Are you GST registered? (if yes, please provide number)	**Yes**
NZBN (NZ Business Number, if applicable)	

About your project

The amount of information and detail we would like you to provide is in proportion to the amount of funding you are requesting. If it is smaller amount, then a simple description of your project, who's involved and what you will be doing, along with a simple budget is sufficient.

Project name:	*Whiterock Mains Riparian Enhancement Project – Stage 1*
CWMS zone where the activity will occur:	*Waimakariri*
Provide a brief project description (in two sentences):	
To restore Stage 1 area of an ephemeral hillfed stream (a tributary of the West Branch Grey River) back to a natural indigenous riparian ecosystem. It will also be a start to	

creating a wider 'green/wildlife corridor' that can link habitats for native fauna from the foothills to the sea – especially for birds

Explain what the grant will be used for - what the money is mainly being spent on/what activities are involved in the project (in two sentences):

For purchase of native plants, plant guards and stakes

Describe the problem or opportunity the project will address:

Following strong winds late last year, there was a large amount of windthrow of an older pine shelter planting along the margins of this waterway.

This is providing us an opportunity to return the riparian margins of this ephemeral waterway to native vegetation, and create a wider buffer protection that can become a wildlife corridor.

We are refencing the full stream length, creating a wide buffer of 10 – 40m for replanting into natives.

Describe the outcomes or impacts of this project:
Outcomes or impacts are what will change or who will benefit from this work, including enduring benefits. For example, fencing off springheads will improve biodiversity and improve stream health.

This project will have two significant benefits -

- *it will help provide streambank protection, by establishing a good rooting base to hold the banks in place (not steep – up to a metre in height on average), avoiding bank collapse and reducing sedimentation into the larger river catchment. This hillfed streams can flow at high velocity at times making it vulnerable to streambank erosion if left bare*
- *providing a 'green corridor' of native vegetation that can help our native fauna especially birds by having linked areas from the foothills to the sea*

List the key outputs of the project:
An output describes what your group is proposing to do and is measurable. For example, install 250 m of fencing, or train 25 volunteers. Outputs are important and may be used as deliverables in a funding agreement.

- *Install approximately 1900m of permanent fencing along both sides of the waterway*
    - *the south side fencing has already been done*
    - *the north side will be completed once the piles of old pine material have been burnt – planned to be done as soon as it is safe to do so*

  ensuring the waterway is fully stockproof and the buffer wide enough to create the wider 'green corridor' over time
- *Plant and maintain 1000 native plants in the Stage 1 area (see attached diagram)*

Please state how the project aligns with the Canterbury Water Management Strategy 2025-30 Targets and Goals – which can be downloaded from here**:** Measuring CWMS progress | Environment Canterbury (ecan.govt.nz)

Or the ECan 2021-24 Priorities for CWMS Action Plans – as noted below:

Kaitiakitanga Wāhi Taonga and mahinga kai targets

- *Grow support and resources to achieve the goal of five mahinga kai projects.*

Ecosystem health and biodiversity targets

- *Increased riparian management to protect aquatic ecosystems.*
- *Reducing the number of fish barriers.*
- *Protection and enhancement of wetlands.*

Recreation and amenity targets

- *Achieving the 2025 target to restore priority freshwater recreation opportunities in each zone.*

The project aligns with the CWMS Ecosystem Health / Biodiversity High country and foothill streams and lakes target for 2025 to '*Maintain or improve aquatic ecosystem health of all foothill and high country rivers and high country lakes.'*

It also aligns with the Waimakariri Zone Committee Action Plan 2021 – 2024 for increased indigenous biodiversity in the zone by assisting us to integrate indigenous biodiversity management into the wider aspects of land and water (catchment) management.

We are a foothills farm with bush remnant areas (including an area that is soon to be fully vested as a QEII covenant) and this project (a small part of a longer medium-term project) starts the work we plan to undertake to create a wildlife corridor linking near.

Tell us when you can start the project and when you intend to have the project completed (timeline):

Start May 2024 – for planting, with ongoing plant maintenance for 2 years

Note: As already stated, we have already completed fencing off the south side of the full area, and will complete the remaining north side as soon as possible. An older fence still exits on the north side – so the riparian area remains stock proof still – allowing planting to commence at any time conditions are favourable (sufficient soil moisture – still too dry at present)

Tell us why you think your project is feasible/realistic:

This project is feasible as we have just spent the summer felling and clearing all the old trees (many of which were windblows); have completed half the required fencing and allowed for a 10 – 40m wide riparian buffer.

We are now able to carry out our site preparation of spot spraying where needed before undertaking planting in late winter / early spring. Funding support would assist us with commencing this immediately.

We plan to undertake planting of a smaller area first – as Stage 1. This is for a number of reasons:

- to ensure we can manage plant maintenance and not take on more than we can handle
- to observe and see which plants are best able to establish in the area (given it has come out of old pine shelter), so that subsequent plantings can include these

Tell us about the project management, including leadership and financial oversight:
We are a large 1000ha beef, sheep and dairy support operation that have an ethos of being an intergenerational family farm continuing a tradition of each generation undertaking environmental improvments for the next generation to benefit from. We are previous winners of the BEFA Farm Environment Awards and are committed to being a business that is financially viable while at all times holding to the highest environmental and community standards. We are finalising a 91ha QEII covenant on the property and this project will help develop the wildlife / green corridor to increase habitat for native fauna.
List any other groups or organisations you are partnering with on this project, such as community groups, schools etc:
We will be looking to explore if there is an opportunity to partner with a city school so provide an opportunity that otherwise students may not have to see and experience a working foothills farm.
How will you engage the community on the project:
As above

Do you know of any cultural values associated with this site? **If yes, what engagement has occurred or is planned (if any) with local Papatipu Rūnanga about this project?**	**No**
We are not aware of any specific cultural values at the site, though we are aware that Maukatere / Mount Grey (immediately above us) is a mountain which the local Ngāi Tahu hapū of Ngāi Tūāhuriri strongly identify with. There are no silent file or wahi tapu sites that we are aware of.	

Please provide an accurate location with grid references and a map (if relevant to your project – please *contact the Zone Facilitator who can assist with this if required*)**:**
NZTM Grid Ref X (Easting): 1557337 **NZTM Grid Ref Y (Northing): 5218665**
Who owns the land? *Attach evidence of permission from the landowner, or their representative (if you are undertaking a project on land that you do not own)*
Land is owned by the applicants – under company name White Rock Mains Limited

Funding details

Your budget should include estimates of income and expenditure, including other funding and in-kind contributions. You should show clearly what you are planning to spend the Action Plan funds on if successful. For applications for less than $15,000 a simple budget is

fine. We would like more detail if your application is for a larger amount e.g. more than $15,000 or more than $50,000. We have a budget template in the guidance document.

How much funding are you requesting?	**$6,000**
If you are successful with this application, what components of your project will you spend the money on? **Please include below or attach your budget to your application.*	
Native plants and guards	
Have you applied to, or received funding from other organisations for this project? **If YES, please provide details below or note if it is included in your attached budget.** *The CWMS Action Plan Budget is seed funding or leverage for partnering and collaboration, so it is positive if you have received or are applying for other funding.*	**NO**
Is the project receiving any other monetary or "in-kind" contributions (volunteer hours, resources, equipment, facilities) from your organisation or others? **If YES, please provide details below or note if it is included in your attached budget:**	**YES**
The wider family associated with our farming business will help with planting; and we also plan to explore partnering with a city school.	

Working with Environment Canterbury

In the last three years have you received funding or other support from Environment Canterbury for this, or any other project? **If yes, what was the funding/support for, and when did you receive it?**	**NO**
Are you intending on applying to another Environment Canterbury fund/budget this financial year for this, or any other project? **If yes, what fund are you applying to?**	**NO**
Do you give permission for your application for the CWMS Action Plan Budget to be shared with the ECan staff who coordinate the	**YES**

Waitaha Wai Action to Impact Fund (we prefer to share information between the two to get best use of both)	

Additional information you would like to provide?

Do you have supporting information you would like to provide (optional)?

We will use the eco-sourced plants and choose a limited selection of pioneer plant species such as flax, toe toe, Carex sps, kowhai etc that we hope will establish well and allow natural regeneration of a wider mix of indigenous plants over time as birds start to spread seeds.

Diagram showing full proposed planting area and Stage 1 planting area - for which this funding application is seeking support

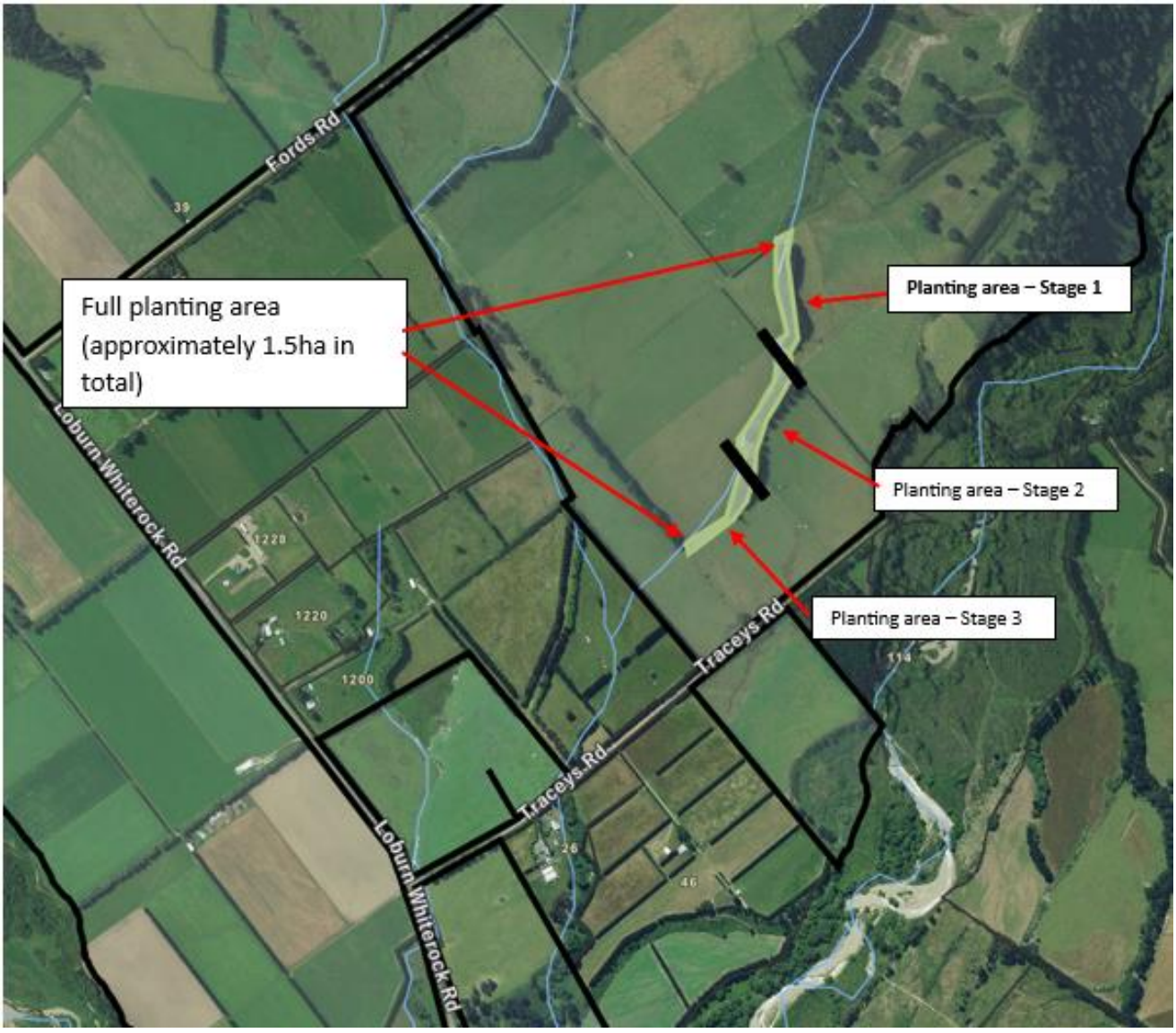
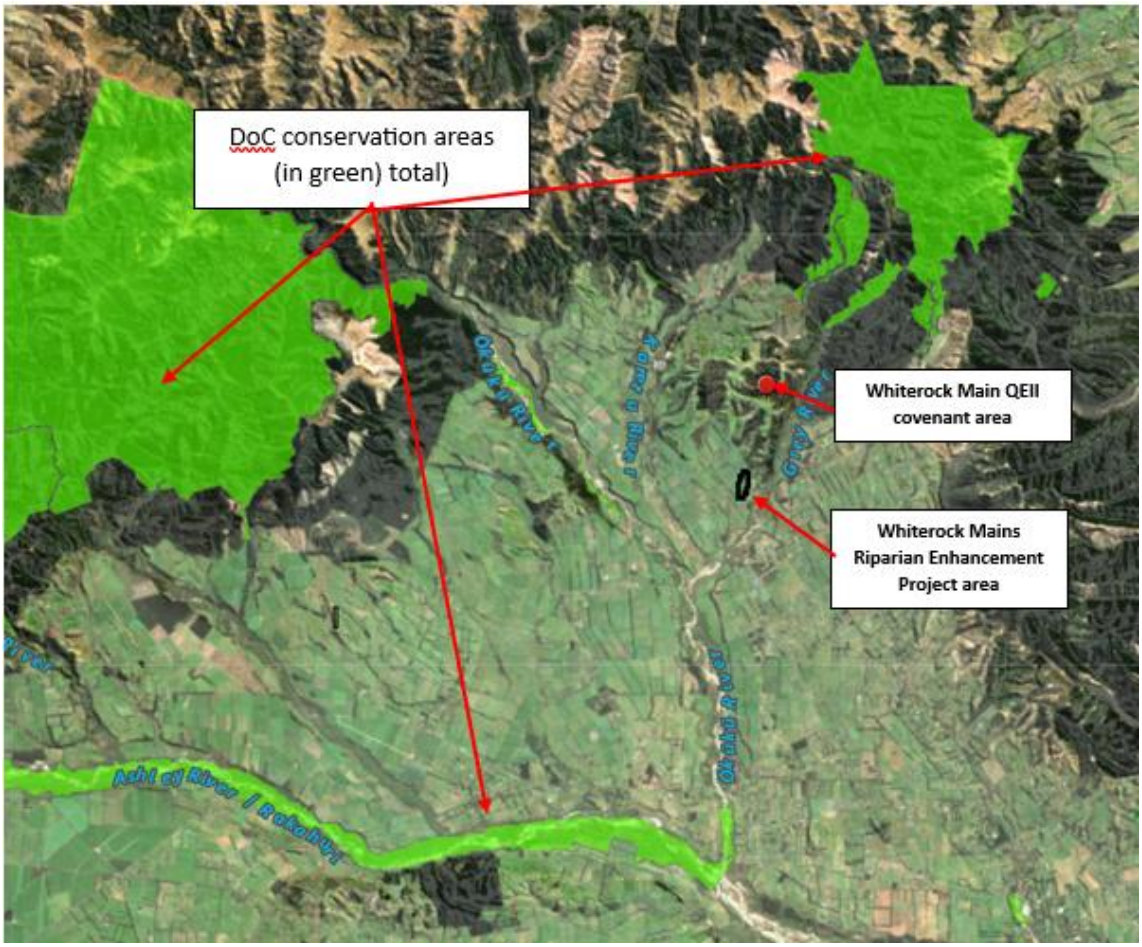


Diagram showing project area location and existing DoC land & areas with existing high biodiversity (potential links to existing wildlife corridors)



Indicative budget for Project Stage 1 (includes full fencing costs for Stages 1 – 3)

Project Costs	**Item/s**	**Cost**	**Source**
Pre-planting site prep	Spot spraying – 8 hours @ $40/hr	$320	In-kind Landowner
Eco-sourced plants & plant guards	**$6/plant (plant + guard)**	**$6,000**	**Seeking Waimakariri Zone Committee Action Fund support**
Planting	10 plants/hr = 100 hrs @ $40/hr	$4,000	In-kind land owner labour & city school students
Plant maintenance	Spray release (x2/year x 2 years @ 4 hrs/ release) = 16 hours @ $40/hr	$640	In-kind land owner
Fencing	1900m @ $20/m	$38,000	Landowner

**Please attach any supporting information with your application*.

Once completed, please send this application form to Zone Facilitator, Murray Griffin, murray.griffin@ecan.govt.nz

The Zone Facilitator will keep in touch with you about timeframes, and whether the Hurunui District Council and/or Environment Canterbury would like a presentation on this proposal, or have any questions.

Waimakariri Water Zone Committee

CWMS Action Plan Budget

Assessment of Initiatives – 31 January 2022

The Waimakariri Water Zone Committee is a community led committee supported by councils.

fb.com/canterburywater

WAIMAKARIRI DISTRICT COUNCIL

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Assessment of Initiatives – 31 January 2022

a) Taranaki Stream Inanga Spawning improvement	$ 8,600
b) Sefton/Saltwater Creek Monitoring Programme (Year 1o3)	$ 3,835
c) Northbrook Trail Project (Year 1o2)	$10,000
d) Waimakariri Biodiversity Trust Establishment Programme	$ 5,000
Total:	$27,435

b) Sefton/Saltwater Creek Monitoring Programme

b) Sefton/Saltwater Creek Monitoring Programme

• Project Description

- To establish monitoring in this catchment which has two intermittent hill-fed streams originating in Ashley Forest (Stony & Fox's Creek) and three spring-fed streams (Boyne's, Saltwater & Benzie's Creeks) originating on the easy slopes and flats south of the Amberley-Rangiora road.
- The project objectives are:
  - To develop a reliable source of long term information that tells us what the current state of our waterways is, and identifies trends.
  - To understand our waterways in a whole of catchment context.
  - To identify issues with our waterways so that mitigations can be explored.
  - To see the difference that any mitigations make over time.
  - Where our waterways are in good health, to maintain that status.

• Action Plan Alignment/Rationale

- This project aligns with the WWZC Action Plan Priorities:

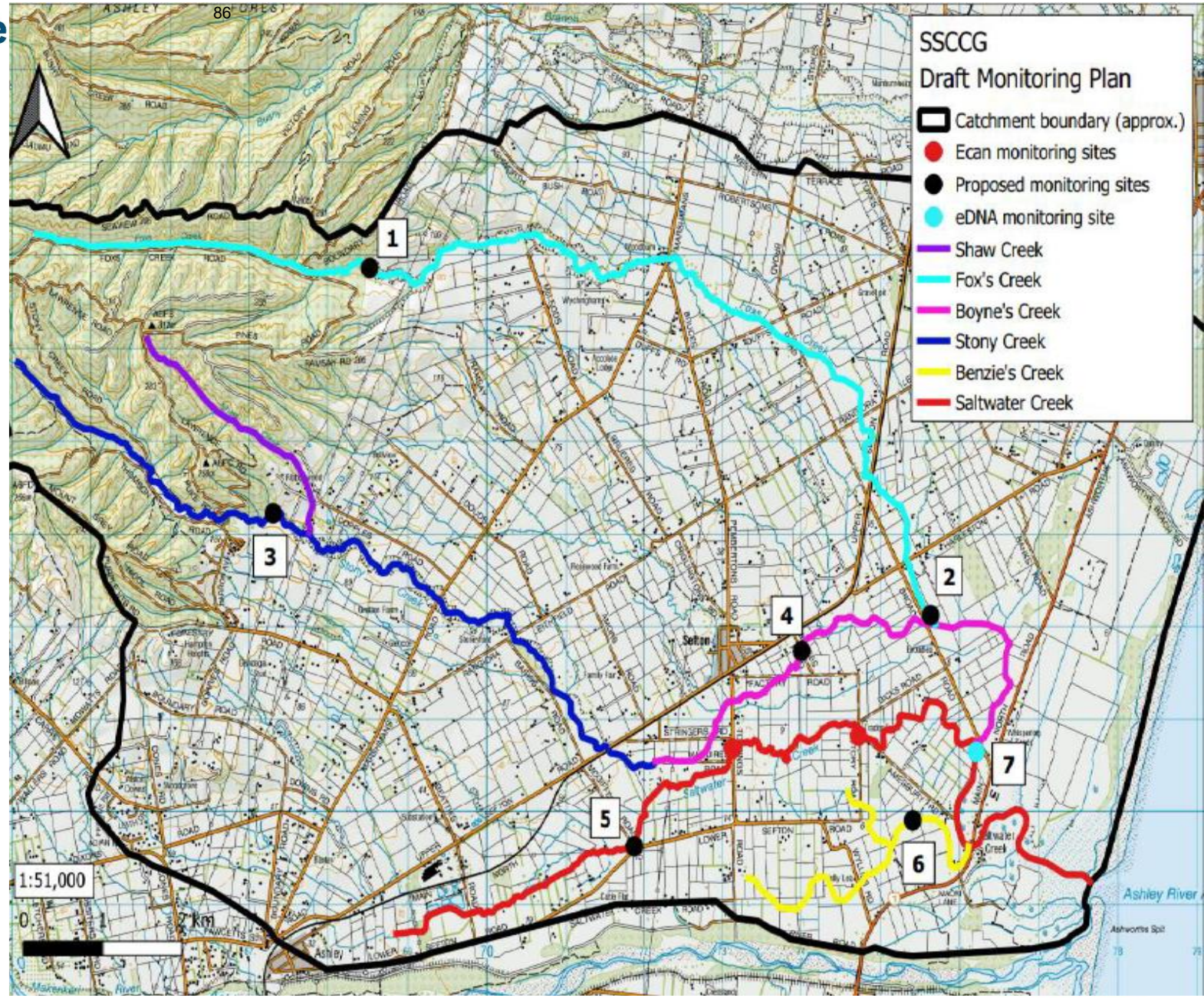
(1) Improved monitoring of groundwater and surface water in the zone, - *To encourage community understanding and awareness of monitoring and clarify future monitoring requirements in the Zone*

Waimakariri Water Zone Committee

Project Location

b) **Sefton/Saltwater Creek Monitoring Programme**

Location map:



The Waimakariri Water Zone Committee is a community led committee supported by councils.

fb.com/canterburywater

b) Sefton/Saltwater Creek Monitoring Programme

- **Project Partners & Management**

- SSCCG is an informal group of interested residents, landowners and organisations. Currently there are 42 on the email list.
- SSCCG doesn't have a legal structure to receive funding. The Waimakariri Landcare Trust (WLT) will support the SSCCG by administering any funding received. A sum of $400 has been included in the project budget for admin support by WLT.
- ECan & WDC staff are supporting SSCCG with this project.

- **Contributions & Request**

- Total one-off costs (year 1) $1,030
- Total annual costs (3 years) $2,805
- WWZC Action Plan request: $3,835
- Total cost for 3 year programme $9,445

b) Sefton/Saltwater Creek Monitoring Programme

- **Project Stages & Actions**

- Volunteer samplers from SSCCG will be required to undertake the monitoring. Sampling dates would be agreed on (subject to weather and waterway conditions) and the sampling packs distributed in advance by the Coordinator, who would then collect the samples from the samplers and take them in to Hill Laboratories for testing.

- **Project monitoring & outcomes**

Based on 7 sites:

- Sites 1, 2, 3 and 7 monitored once a year
- Sites 4, 5 and 6 monitored twice a year
- The following is proposed to be monitored:
  - Bacteria – E.coli
  - Nitrogen – Total N, total oxidized N, dissolved inorganic N, ammoniacal N, nitrate N
  - Phosphorus – Dissolved reactive P, total P
  - Freshwater environmental DNA
  - Temperature, pH and basic stream health and site information will also be recorded

b) Sefton/Saltwater Creek Monitoring Programme

- **Project Risks &/or Opportunities**
  - The project is based on volunteer time and availability.
  - It's thought that the key issue is sediment in waterways, but we don't really know because not much monitoring has been done in the catchment.
  - The SSCCG goals this project supports are:
    - Understanding and monitoring the health of our catchment
    - Being able to fish, swim and enjoy our waterways
    - More native trees and vegetation

- **Additional project information**
  - SSCCG have provided a project proposal which has been circulated to the WWZC by Carolyne Latham which is, in part, presented in this overview of the project.

b) Sefton/Saltwater Creek Monitoring Programme

- **Confirmed budget allocation – 4 April 2022 – WWZC Minutes**

"CWMS Action Plan Budget Initiatives – for decision

M Griffin highlighted the initiatives that the Committee could consider supporting using the Committee's Action Plan Budget established in the Environment Canterbury Long Term Plan 2021/31. These initiatives included:

- *Taranaki Stream Inanga Spawning improvement,*
- *Sefton/Saltwater Creek Monitoring Programme,*
- *Northbrook Trail Project,*
- *Waimakariri Biodiversity Trust Visioning Workshop,*

M Griffin explained that the proposed allocation to the Sefton/Saltwater Creek Monitoring Programme had been increased to $6,640 to ensure the largest impact on the motoring of the ground water and to cater for years one and two of the Programme."

- 2024 – Year 3 of 3 allocation

- Based on the total project cost presented in 2021/22 of $9,445, and the previous grant allocation of $6,640, this leaves a remaining allocation of **$2,805** for this monitoring programme in year three of the Action Plan.

Application for funding – Zone Committee Action Plan Budget 2023/24

Applicant details

Organisation (if applicable):	**Waimakariri Zone Committee – Biodiversity Working Group**
Contact name:	**Kate Steel (WDC Ecologist – Biodiversity)**
Contact email:	

About your project

The amount of information and detail we would like you to provide is in proportion to the amount of funding you are requesting. If it is smaller amount, then a simple description of your project, who's involved and what you will be doing, along with a simple budget is sufficient.

Project name:	*Waimakariri Zone Committee Environmental Awards*
CWMS zone where the activity will occur:	*Waimakariri*

Provide a brief project summary:

The Biodiversity Working Group, supported by the Waimakariri Water Zone Committee would like to continue our environmental awards, first rolled out in 2023, to highlight and celebrate individuals and organisations/businesses contributing to better environmental outcomes within our Zone. The 2024 awards once again will consist of three categories.

1) **Organisation or business**: can be a not-for-profit such as a catchment group or a business that has contributed significantly to environmental gains as aligned with the WZC Action Plan 2012-2024.
2) **Individual**: someone who has driven, educated, or inspired environmental outcomes in the Zone. May be a member of an organisation or a landowner/private enterprise.
3) **Youth Award:** criteria are the same award for an organisation or individual. Recipients must be under 18.

An exceptional youth group or individual may also be eligible for awards 1) and 2).

The awards are proposed to run in conjunction with WDC's annual Community Awards, as they did in 2023. A panel made up of ecologists, Working Group community members and iwi representatives will assess applications. All projects must align with at least one of the Zone Committee's Action Plan values (water monitoring, indigenous biodiversity, promotion of braided river character of the Ashley/Rakahuri, enhancement of recreation

and improving mahinga kai values). Environmental projects with community benefit and/or cultural value are encouraged.

Describe the outcomes or impacts of this project:
Outcomes or impacts are what will change or who will benefit from this work, including enduring benefits. For example, fencing off springheads will improve biodiversity and improve stream health.

The awards give us a chance as a Zone Committee to commend positive environmental action occurring within the Zone. It will allow the community to connect with their Zone Committee and share the hard mahi they have been part of and be recognised for this. We hope that the awards will also encourage communication and discussion with the Committee, particularly important in the upcoming planning framework changes.

List the key outputs of the project:
An output describes what your group is proposing to do and is measurable. For example, install 250 m of fencing, or train 25 volunteers. Outputs are important and may be used as milestones in a funding agreement.

Three framed certificates will be presented during the community awards. Each award will be accompanied by a living gift (such as native plant(s)) and remuneration to go back into the project presented (e.g. plant vouchers, trap material).

A comms campaign running from late May and throughout June will advertise the awards and allow applications to be completed either online or in hard copy. A local newspaper story may complement this outreach. In this way we hope to increase community interest in environmental success within the Zone.

Please state how the project aligns with the relevant Zone Committee's 2021-24 Action Plan:
All action plans can be found as a link at the bottom of the "What's happening in my zone" page on the Environment Canterbury website. (https://www.ecan.govt.nz/your-region/your-environment/water/whats-happening-in-my-water-zone/)

The awards will be judged primarily on alignment with Action Plan values.

- Monitoring
- Biodiversity
- Braided river character
- Recreation
- Mahinga kai

Projects assessed for awards must align with at least one of these values but those that include more than one are encouraged.

Tell us what activities you're intending to do and when you intend to have the project completed (timeline):

May 2024: Funding confirmed at the WZC public meeting (May 6th 2024).

Late May – June 2024: Comms donated by WDC and circulated by both councils and stakeholders.

June – July 2024: Applications open for 8 weeks, while comms still active.

Advertised on social media, council webpages, community groups, local paper stories. A contact list of organisations and individuals active in restoration and environmental protection has been built by the Zone Committee. These stakeholders will also be contacted. August – September 2024: Panel assesses applicants and winners notified. The top three projects in each category will be visited by at least some of the judging panel as per 2023. ? October 2024 – TBC: Awards ceremony with community awards night at WDC.
Tell us about the project management, including leadership and financial oversight:
This project will be managed by the Biodiversity Working Group and WDC. We ask that funding is paid directly to WDC for financial oversight (Contact Kate Steel, WDC ecologist).
List any other groups or organisations you are partnering with on this project, such as community groups, schools etc:
WDC as per above. Being a joint WDC and Environment Canterbury Committee we are lucky enough to have support from both local and regional councils for advertising and resources.
How will you engage the community on the project:
Through an extensive comms campaign and directly inviting to engage.

Do you know of any cultural values associated with this initiative? **If yes, what engagement has occurred or is planned (if any) with local Papatipu Rūnanga about this project?**	**YES / NO**

It is possible that applications may align with cultural values. We will invite Rūnanga participation in assessing applications.
Please provide an accurate location with grid reference and/or map (if relevant to your project):
This proposal is open to projects Zone wide within the Waimakariri Zone.
Who owns the land? *Attach evidence of permission from the landowner, or their representative.*
N/A

Funding details

Please attach a budget to your application if one has been prepared. Your budget should include estimates of income and expenditure, including other funding and in-kind contributions. You should show clearly what you are planning to spend the Action Plan funds

on if successful. We would like more detail if your application is for a larger amount e.g.$15,000. We have some example budgets for different types and sizes of projects in our resource pack. These will show you what we are expecting you to provide.

How much funding are you requesting?	**$3,000**
If you are successful with this application, what components of your project will you spend the money on?*: *If you have a project budget, please attach it to your application.*	
By giving a framed certificate, we reserve most of the capital to go back into projects that are successful. The budget is $1000 per award (minus minimal $ for certificates and frames) and maybe used for any purpose the judging panel deem appropriate for the successful projects. Comms and Advertising: donated by ECAN and WDC.	
Have you applied to or received funding from other organisations for this project? **If yes, please provide details below or note if it is included in your attached budget.**	**NO**
Is the project receiving any other monetary or "in-kind" contributions from your organisation or others e.g. volunteer time, use of resources, facilities and equipment? **If yes, please provide details below:**	**YES**
WDC are supporting this application with floor time at the community awards, comms etc. They are also providing financial oversight.	

Working with us and Environment Canterbury

In the last three years have you received funding or other support from Environment Canterbury for this, or any other project? **If yes, what was the funding/support for, and when did you receive it:**	YES
Environment Canterbury kindly funded the inaugural awards in 2023. We feel they were very successful with a broad range of passionate projects, organisations and individuals being recognised for their work protecting and restoring the environment and biodiversity in the Zone.	
Are you intending on applying to another Environment Canterbury fund this financial year for this, or any other project? **If yes, what fund are you applying to?**	**NO**

Additional information

Do you have supporting information you would like to provide (optional):

Please attach any supporting information with your application.

Once completed, please send this application form to: Facilitator, Murray Griffin, email: murray.griffin@ecan.govt.nz

AGENDA ITEM NO: 3.2	**SUBJECT MATTER:** Wai Connection – update
REPORT TO: Waimakariri Water Zone Committee	**MEETING DATE:** 6 May 2024
REPORT BY: Murray Griffin, CWMS Facilitator, ECan	

PURPOSE

This agenda item provides the Water Zone Committee with an update on the Wai Connection programme currently underway across Canterbury and in the Waimakariri specifically.

RECOMMENDATION

That the Zone Committee

> **Receive** – this update for its information and with consideration to the committee's CWMS Action Plan priorities.

BY WHO
This update will be led by:

- **Jessica Halsey – Engagement Services Manager / 'Wai Connection' Waitaha Regional Manager, EOS Ecology**
- **Erin Harvie – Co-ordinator, Waimakariri Landcare Trust**

BACKGROUND
'Wai Connection – Tatai Ki Te Wai' is a Mountains to Sea Conservation Trust (MTSCT) community catchment group engagement project, co-funded through the Essential Freshwater Fund (EFF) until June 2025. It supports the Government's Essential Freshwater (EF) package, a national initiative to protect and restore our rivers, streams, lakes, and wetlands.

The project aims to empower community catchment groups by providing knowledge, tools and expert support to help identify issues in their local catchment area. We want to connect people with their waterway and enable collaboration between local catchment groups, NGOs, iwi, hapū, regional councils, central government agencies, landowners and primary industry working in the catchment.

MTSCT has a twenty-year track record of supporting communities to achieve marine and freshwater conservation through science-based experiential programmes, tailored resources, and community engagement. We'll work with local Provider Organisations in 15 regions to ensure we are resourcing local people to understand local issues and helping to find local solutions that connect all stakeholders in a given catchment area.

For more information: Wai Connection

Wai Connection in Waitaha – progress in 2023/24
Our Tailored Package of Support (TPoS) and Regional Needs Assessment (RNA) were approved on 10th November last year. This document was guided by the great work done at our wānanga with stakeholders in September.

Since then, we've been starting conversations with those listed in our TPoS, and where possible, we've started to support groups with events and school engagement.

As expected, our TPoS would be an ever-changing document, and we've been guided by the needs of Waitaha as to where our support's been provided.

We're pleased to share the review below of our work to date and look forward to updating you on the next steps.

Kaikōura Water Zone Committee (WZC):

- Approved to support Kaikōura as a whole, by supporting the WZC with their freshwater goals, and integrating freshwater-based engagement programmes into local schools.
- We've had a few trips up in the last 4 months to engage with schools to start the delivering our 'Nature Agents' programme.
- Working with Tasman Bay Guardians to run an Experiencing Marine Reserves event.

Jed River Catchment:

- School 'Nature Agents' programme run at Cheviot Area school alongside the group.
- Planned support for planting in conjunction with the school.
- Focus Catchment Map Series (FCMS) in discussion, and next on the list to start.
- Supporting and reviewing funding application.

Waimakariri Landcare Trust (WLT):

- School engagement and 'Nature Agents' programmes starting this year.
- Developing a lower Waimakariri FCMS, to be presented in May.
- Next steps to be planned after the presentation of the FCMS.
- Planning training opportunities for those groups being supported by the WLT in freshwater.

Banks Peninsula Conservation Trust (BPCT):

- Working alongside BPCT to enhance, fill gaps and support the great work they're already doing.
- Joint engagement days and community-led workshops will be happening soon.
- Discussions happening about FCMS priorities and options.

Ōnuku Rūnanga:

- Supported an amazing 3-day wānanga focused on climate issues and bringing the harbour community together. Read more about this here www.onuku.nz/2024/01/31/onuku-climate-change-wananga.
- Freshwater and mātauranga monitoring at the event, in partnership with Environment Canterbury.
- FCMS being created for the whole of Akaroa Harbour in alignment with Ōnuku Rūnanga's goal for a whole-of-harbour approach to freshwater management.
- Attended their Seaweek event in Akaroa to help engage community, create further outreach, showcase their FCMS and Ōnuku's catchment-wide visions, and talk about inaka/whitebait.
- Supporting the connection of the Rūnanga with the BPCT.

Le Bons Bay:

- Held a community engagement day with presentations from NZLT, EOS Ecology's 'Wai Connection' team and BPCT. This was followed by a catchment walk focused on fish and invertebrates in their waterways. The purpose of the event was to engage community with their local freshwater environment to see if they'd like to form their own group.
- Attended by 30 people, follow-up discussions appear promising.

Community Waterway Partnership (CWP):

- Supporting CWP with its role as a waterway collective.
- 'Summer at the Styx' event – helping share their sediment-focused approach.

- Produced a large format map display to be used by the CWP at this event and into the future.
- Supported the formation of a steering group.
- Providing extensive administration and coordinator support.

Hekaeo-Hinds Hill & High Country & Ashburton Forks:

- Early discussions regarding the provision of freshwater ecology workshops.

Upper Waikirikiri Catchment Collective:

- Early discussion with NZLT about holding a mudfish experience day.

Ahuriri Catchment Community Group (ACCG)**:**

- FCMS nearly completed and ready to share with the group. We'll be running a community event to introduce and display the maps and help plan their next steps.

Burkes Pass Heritage Trust:

- Site visit completed, and learned about the wonderful work already happening here.
- Planning water monitoring training and baseline surveys.
- eDNA testing planned for the area.

Te Moana:

- Supporting their goal to bring the community together around the awa.
    - Catchment walk undertaken to learn about the goals of the group.
    - eDNA sampling planned for March.
    - Community engagement event planned for April.

Hakataramea Sustainability Collective:

- FCMS completed and the group's working alongside EOS Ecology to look at willow removal using drone footage collected by our team.

AGENDA ITEM NO: 3.3	**SUBJECT MATTER:** Te Tiriti Training – presentation
REPORT TO: Waimakariri Water Zone Committee	**MEETING DATE:** 6 May 2024
REPORT BY: Murray Griffin, CWMS Facilitator, ECan	

PURPOSE

This agenda item provides the Water Zone Committee with a presentation on the Te Tiriti training available for CWMS Water Zone Committee members.

RECOMMENDATION

That the Zone Committee

Receive – this update for its information.

BY WHO

This presentation will be provided by:

- **Ruby Gill-Clifford, Youth Representative – Waimakariri Water Zone Committee**

BACKGROUND

Ruby will provide a presentation to the committee at the 6 May meeting.

The 2024 calendar of Te Tiriti training opportunities will also be provided for the committee at this meeting.

AGENDA ITEM NO: 4	SUBJECT MATTER: Committee Updates
REPORT TO: Waimakariri Water Zone Committee	MEETING DATE: 6 May 2024
REPORT BY: Murray Griffin, CWMS Facilitator, ECan	

PURPOSE
The purpose of the agenda item is to provide the committee with an overview of updates to be tabled.

RECOMMENDATION
That the Zone Committee:

Receives these updates for its information.
Confirms any amendments to its 2021-24 CWMS Action Plan.

COMMITTEE UPDATES
The following updates will be addressed with the committee:

1. Zone Committee Working Groups

1.1 Biodiversity Working Group
Martha Jolly will provide a short update at the meeting.

1.2 Lifestyle Block Working Group
Carolyne Latham will provide a short update at the meeting.

1.3 Monitoring Working Group
Erin Harvie will provide a short update at the meeting.

2. Waimakariri CWMS 2021-2024 Action Plan – Review

Facilitator M Griffin will confirm if the committee would like to amend its 2021-2024 Action Plan, or any suggestions for the next Action Plan to coincide with the 2024-2027 Long Term Plan Cycle.

A copy of the Waimakariri Water Zone Committee's 2021-2024 Action Plan is provided as **agenda item 4 – 1**.

3. Environment Canterbury Updates

Councillor Claire McKay will lead this update to the committee.

3.1 CWMS Zone Committee Review
An update on the development of the Canterbury Regional Policy Statement is provided, for all CWMS Zone Committees, as **agenda item 4 – 2**.

3.2 Upcoming Council Meetings
Please find the link below for upcoming Environment Canterbury Council and Water and Land Committee meetings.

- Council Hearings on the draft Long Term Plan will be held on: *Wednesday 1 May to Friday 3 May* (if required).

- The next Council meeting will be on: *Tuesday 7 May*.
- The next Water and Land Committee meeting to be held on: *Wednesday 8 May*.

Council Meeting agendas can be viewed and downloaded from this link:
Council and committee meetings: Current month | Environment Canterbury (ecan.govt.nz)

4. Waimakariri District Council updates

Councillor Tim Fulton will lead this update to the committee.

4.1 Upcoming Council Meetings

Please find the link below for upcoming Environment Canterbury Council and Water and Land Committee meetings.

- The next Council meeting will be on: *Tuesday 7 May*.
- Council Hearings on the draft Long Term Plan will be held on:
- *Wednesday 8 May*

from 9:30am at the Ruataniwha Kaiapoi Civic Centre and 3pm at the Oxford Town Hall.

- *Thursday 9 May 2024 1:00pm at the Council Chambers in Rangiora.*
- Link to view: https://www.youtube.com/watch?v=T4m8nJaTUn8

Council Meeting agendas can be viewed and downloaded from this link:
Minutes & Agendas | Waimakariri District Council

4.2 Council Reports for the committee

Three Roading and Utilities committee reports are also included in the meeting papers. They are:

- Avian Botulism Management 2022/23
- Eastern Districts Sewer Scheme
- Cam River Enhancement Fund proposed projects and update, and

5. Action points from the previous zone committee meetings

Action points from the previous meetings:

- Information on the realignment of the North Brook tributary and water quality sampling at Tutaepatu Lagoon.
- An update on the Kaiapoi River salinity logger data.
- Arrange an opportunity for the Wai Connection representatives to speak to the committee.

Fin.

Waimakariri Water Zone Committee

Action Plan July 2021–June 2024

This summary highlights the key actions agreed by the zone committee for the next three years.

For more detail on the zone committee and plan, visit ecan.govt.nz/waimakariri-water-zone.

Our purpose:

To uphold the mana of the freshwater bodies within the Waimakariri Water Zone by facilitating enduring land and water management solutions that give effect to the Canterbury Water Management Strategy (CWMS) vision, principles and targets in our zone.

The CWMS aims to enable present and future generations to gain the greatest social, economic, recreational and cultural benefits from our water resources within an environmentally sustainable framework.

Our functions:

Community engagement – continuing an active programme of engaging with communities on freshwater management matters and facilitating the provision of advice to councils (relevant territorial authorities and Environment Canterbury) and others (e.g. private sector) contributing to freshwater management.

Enhancing delivery capability and coalition of the willing – working with stakeholders across all sectors to extend the resources available to implement the CWMS, including securing additional resources and seeking opportunities to promote, support, leverage and expand catchment-based initiatives that advance CWMS implementation.

Progress reporting – annual progress reporting to councils on progress towards delivery of the zone-specific priorities and CWMS target areas identified in the Zone Committee Action Plan.

Our Councils' priorities for our zone committee are:

Waimakariri District Council

Ecosystem Health and Biodiversity

- To maintain or improve existing high-quality indigenous dryland ecosystems in intermontane basins and on the plains;
- Reduction of threatened or at-risk status of indigenous fish species compared with 2020;
- All coastal lagoons, hāpua and estuaries show improvement in key ecosystem health indicators compared with 2010.

Drinking Water

- Implementation programmes in place for each zone to achieve catchment load limits;
- Achieve nutrient efficiency targets for the zone on all new irrigated land and 80% of other land in major rural land uses (pasture, major arable, and major horticulture crops, and have 100% of rural properties working towards these targets (and for properties within urban boundaries that apply nutrients over significant areas).

Recreation and Amenity Opportunities

- Cyanobacterial risk for priority contact recreation sites in Canterbury rivers and lakes is understood and managed for public health;
- Manage water demand through meeting requirements under the Land & Water Regional Plan and continue regular community education/behaviour change campaigns on water use management and conservation.

Environment Canterbury

Kaitiakitanga Wāhi Taonga and mahinga kai targets

Grow support and resources to achieve the goal of five mahinga kai projects.

Ecosystem health and biodiversity targets

- Increased riparian management to protect aquatic ecosystems;
- **Reducing the number of fish barriers;**
- **Protection and enhancement of wetlands.**

Recreation and amenity targets

Achieving the 2025 target to restore priority freshwater recreation opportunities in each zone.

This taniko (woven pattern for clothing) Pātikitiki, represents lashing or binding together. The smaller diamonds represent pātiki (flounder). The Aramoana are white chevron shaped spaces representing the ocean waves. Together they represent the sustainment of our waters and the binding organisations that protect them. Pātiki is also the symbol for abundance.

– Ariki Creative

WAIMAKARIRI DISTRICT COUNCIL

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Waimakariri Water Zone Committee

Action Plan 2021–2024

Image - Burgess Stream, near Eyreton

1. Improved monitoring of groundwater and surface water in the zone

To encourage community understanding and awareness of monitoring and clarify future monitoring requirements in the zone by:

- Facilitating collaboration to develop a wider monitoring network in the zone;
- Encouraging more monitoring by catchment and landcare groups.

We will measure this by:

- Establishing a working group to bring together relevant organisations to review existing freshwater monitoring in the zone and address future monitoring requirements across the zone;
- Promoting the benefits of monitoring and establish options for the community to be involved in monitoring;
- Working with ECan and WDC to ensure monitoring results are accessible and understandable to the community;
- Facilitate catchment and landcare groups and the wider community working together with Councils to expand the freshwater monitoring in the Waimakariri and share information.

2. Increased indigenous biodiversity in the zone

To protect and improve the indigenous biodiversity, habitat or ecosystems in the zone through:

- Managing and eliminating plant and animal pest species;
- Assisting all landowners and managers to integrate indigenous biodiversity management into the wider aspects of land and water (catchment) management.

We will measure this by:

- Facilitating the establishment of a Waimakariri Biodiversity Trust and provide ongoing support to this Trust;
- Provide ongoing support and encouragement to groups in the zone advancing indigenous biodiversity values;
- Encourage catchment and landcare groups to protect, enhance and create more indigenous biodiversity habitat on properties;
- Promoting greater community understanding about biodiversity, and wetlands, and the benefits of their protection and enhancement.

3. Promoting the natural braided character and increased flow of the Ashley River/Rakahuri

To protect the braided river values associated with the Ashley River/Rakahuri, ki uta ki tai, by:

- Promoting an improved community understanding of land and water use impacts on braided river character and the lower catchment ecosystems;
- Working to make the Ashley River/Rakahuri safe for contact recreation, with improved river habitat, fish passage and customary use, and flows that support natural coastal processes.

We will measure this by:

- Encouraging the improved understanding of landowners and wider community of climate change impacts on the Ashley River/Rakahuri;
- Encouraging landowners and agencies to protect the landscape and indigenous biodiversity values in the upper catchment;
- Supporting weed control in the upper and middle sections of the catchment;
- Supporting an investigation into existing consents and water use in the Ashley River/Rakahuri catchment;
- Encouraging landowner and agency efforts to improve the habitat health of lowland spring-fed tributaries;
- Supporting investigations focused on understanding and improving the ecosystem health of Te Aka Aka/Ashley estuary.

4. Protection and enhancement of environmentally sustainable recreation in the zone

To protect and manage the natural landscape and recreation resources in the Waimakariri Water Zone by:

- Facilitating the extension of recreation corridors and amenity space in the zone;
- Encouraging awareness of land use impacts on high value landscapes in the zone.

We will measure this by:

- Supporting the completion of the Silverstream loop;
- Supporting specific Arohatia te Awa marginal strip recreation works;
- Encouraging investigation into the causes of cyanobacteria blooms;
- Encouraging reductions in pollutants/contaminants to help reduce nuisance algal growths in waterways.

5. Improved Mahinga Kai within the Waimakariri Water Zone

To protect and enhance mahinga kai practices in waterways within the Waimakariri Water Zone, while also:

- Encouraging a wider understanding of mahinga kai practices in the community;
- Increasing Mahinga kai enhancement and access on the plains.

We will measure this by:

- Supporting the Ngāi Tūāhuriri mahinga kai enhancement projects on the plains and in lowland waterways;
- Encouraging catchment and landcare groups to protect and improve riparian habitat to support mahinga kai practices on the plains and lowland waterways;
- Supporting mahinga kai workshops across the zone.

Want to get involved?
Head to ecan.govt.nz/waimakariri-water-zone

Climate Change Impacts

The Canterbury Water Management Strategy and its effective implementation is one of the adaptation strategies Canterbury has in place to respond to climate change and support community resilience.

Image courtesy of N Ledgard & G Davey

New committee member, Martha Jolly

E21/84463

Waimakariri Zone Committee Meeting – 6 May 2024 – agenda item 4 – 2

Memo

Date	03 April 2024
To	CWMS Zone Committees
CC	
From	Andrew Parrish, Regional Planning Manager, Environment Canterbury

This memo is an update for our Zone Committees on where we are in the Regional Policy Statement drafting process and to let you know when you will have an opportunity to review a draft replacement Canterbury Regional Policy Statement, prior to its notification.

Canterbury Regional Policy Statement review

Environment Canterbury is responsible for helping support the wellbeing of our region by delivering environmental management, public transport services and helping build community resilience.

We have several plans to update, including the Canterbury Regional Policy Statement (CRPS), a powerful tool that sets the direction for all district and regional plans. The CRPS is especially important for territorial authorities, which are required by law to give effect to the relevant regional policy statement through their district plans.

The CRPS 2013 has been operative since 2013 and Environment Canterbury began working towards reviewing it in 2021. You will recall we briefed both southern and northern "superzones" in February last year and indicated that we intended to begin public engagement soon after.

In mid-2023 a public and stakeholder engagement campaign called "What's out future, Canterbury?" sought views throughout the region on the outcomes people want to see over a range of topics, under the headings Land, Water, Air, Natural Hazards, Climate Change and Urban Development. These subtopics include key concerns, such as biodiversity and coastal issues. Later in 2023, a second engagement campaign called "Pick a Path" sought community input on their relative priorities and the policy options that might achieve the outcomes we had identified previously.

Community and stakeholder feedback indicated a strong appetite for community-led actions that will improve environmental outcomes. There is also strong desire to work together to ensure everyone has access to clean, safe water and that our rivers, lakes, streams and land environments are resilient, healthy and thriving.

We also heard strong views on the importance of economic certainty and how it is key to providing for social wellbeing. There were conflicting views on how far improvements should go and the pace at which they should occur through changing land-use patterns, regulation or enforcement, or by enabling/encouraging good practice.

Reports summarising the feedback from the 2023 engagement are available here: What's our future, Canterbury? - community reflections report

Let's Pick a Path - community reflections report

Let's Pick a Path, Climate Change community reflections

Preparation of a draft CRPS is currently underway, with input derived from:

- Feedback during engagement campaigns described above;
- Existing knowledge on the current state of the Canterbury environment;
- Changes in legislation and national policy direction; and
- Feedback from Te Rōpū Tuia[1] at wānanga held in September and December 2023.

Completion of the draft CRPS is scheduled for mid-late April and endorsement to consult with key stakeholders on the draft will be sought from Te Rōpū Tuia[1] at their hui in May 2024. Assuming the draft CRPS can then be shared more widely, Environment Canterbury will then undertake consultation before preparing a **proposed CRPS 2024/25** for notification.

The third phase of consultation on a proposed Canterbury Regional Policy Statement will occur during June and July 2024 and will follow RMA Schedule 1, Clause 3, which specifies that Ministers of the Crown and local authorities are consulted during preparation of a proposed policy statement or plan – but we intend to go much and wider in canvassing input, including yours.

The draft CRPS will be entirely open for revision by key stakeholders during this consultation period and we encourage Zone Committee members to help us refine the proposed CRPS (pCRPS) prior to formal notification. This pre-notification consultation in June/July is a valuable opportunity for you to inform our drafting of the pCRPS, along with the RMA section 32 analysis of:

- policy options;
- appropriateness of achieving the purpose of the RMA; and the
- benefits, costs and risks on the community, economy and the environment.

As joint committees of Canterbury Regional Council and your respective TA, Zone Committees can influence the pCRPS through your councillor. Zone Committee members are of course also welcome to participate as individuals through the formal Schedule 1 processes after pCRPS notification, including by making submissions and being heard by an independent hearing panel.

We look forward to hearing from you in June/July. If you have questions in the meantime, please contact Sam Leonard, by phone 027 801 7849, or email Sam.Leonard@ecan.govt.nz

Yours faithfully

Andrew Parrish

[1] Te Rōpū Tuia is the governance group formed out of partnership between Ngāi Tahu and Environment Canterbury, with membership consisting of the Chairs of ngā Papatipu Rūnanga and all Environment Canterbury Councillors. Te Rōpū has agreed to work alongside Environment Canterbury staff on a new Regional Policy Statement up to its notification.

Regional Planning Manager

MINUTES OF A MEETING OF THE CANTERBURY WATER MANAGEMENT STRATEGY WAIMAKARIRI ZONE COMMITTEE HELD IN THE COUNCIL CHAMBER, 215 HIGH STREET, RANGIORA ON MONDAY 4 MARCH 2024 WHICH COMMENCED AT 4.05PM.

PRESENT

C Latham (Chairperson), J Cooke (Te Ngāi Tūāhuriri Rūnanga representative), E Harvie (via Teams), Arapata Reuben (Te Ngai Tuahuriri Runanga representative), Councillor T Fulton (WDC Councillor) and Councillor C McKay (ECan Councillor).

IN ATTENDANCE

S Allen (WDC Water Environment Advisor), N Theinhardt (ECan Zone Delivery Lead Waimakariri), M Griffin (ECan CWMS Facilitator), A Smith (WDC Governance Coordinator), L Baltrop (Waimakariri Biodiversity Trust), J Recker (WDC Stormwater and Waterways Manager), A Veltman (ECan Land Management Advisor) (via Teams) and M Bate (Kaiapoi resident).

KARAKIA

A Reuben provided a karakia to open the meeting.

1. BUSINESS

1.1 Apologies

Moved C Latham Seconded Councillor C McKay

THAT apologies for absence be received and sustained from committee members R Gill-Clifford (Youth Representative), C Aldhamland and M Jolly.

CARRIED

1.2 Welcome and Introductions

An opportunity was provided for introductions for all present.

1.3 Register of Interests

The following updates to the Register of Interest were advised by members:

Councillor Claire McKay – *Remove* –

No longer a shareholder of Balance Agri-nutrients Ltd
No longer holds Domestic Wastewater discharge consents CRC: 102594, 122318 and 144865

Although not to be included in the Register of Interests, Councillor Tim Fulton wished to declare that he had been contracted to write a book on the Central Plains Water Scheme. Although this was out of the Waimakariri district, he wanted to advise his involvement with this.

John Cooke also declared that he was now a Trustee on several Māori land blocks, but these were all located in Otago.

2. OPPORTUNITY FOR THE PUBLIC TO SPEAK

2.1 **Michael Bate**

Noted the clearing of the willow trees from the banks of the Waipara River. Councillor McKay advised that these were sprayed last autumn and had now been chipped and the slash had been removed, from the SH1 bridge down to the mouth and there was some work being done by Hurunui District Council there. It was pointed out that the Waipara River was not in Waimakariri zone. .

A Reuben commented on the tree removal along the Cam River, with any trees that were hanging over the river had been removed, which meant that any shade provided by the trees was gone and increased the water temperature. Affected watercress was already gone. It was suggested that there could have been some native plantings undertaken first, before the willow trees were removed.

Regarding the Waipara River, in response ECan Councillor C McKay noted that there was information available on the ECan website and advised that the funding that was used to clear the willows from the riverbed was resilience funding from the Shovel Ready government funding.

M Bate showed some video and photos of Kaiapoi Lakes taken late in 2023. There was algal bloom showing. Photos were also shown of the Waimakariri River, noting the low water levels. Councillor McKay noted that the irrigation takes have all been restricted for quite some time and the climate conditions and lack of rainfall have impacted water levels in rivers.

M Bate raised his concerns on botulism and deaths of birds, noting that this had been a long-standing issue, for more than seven years. Councillor Fulton agreed to bring this matter up again at the Waimakariri District Council meeting the following day, in his portfolio report.

Councillor Fulton provided an update on Avian Botulism in the district, noting that Avian Botulism had been present at the Kaiapoi Wastewater Treatment Plant wetlands over the past few weeks. The number of birds impacted was currently still low, with 171 birds retrieved by ecological contractors from this WWTP this summer, with 149 of those within the past few weeks. The birds collected were a mix of mallard, paradise, shelduck and scaup. Three sick mallards were also seen at the Kaiapoi Lakes, which were suspected to have come from the Kaiapoi WWTP, but no other sites inspected by WDC contractors have definite avian botulism cases.

The Ecological contractors' site visits have increased from two to three times per week to retrieve bird carcasses that were able to be accessed from the sides of the wetlands to contain the spread of the toxin. The Ministry for Primary Industries had been notified.

Councillor Fulton suggested inspections be undertaken of other wetland areas nearby with waterfowl for signs of any sick or dead waterfowl e.g. WDC Greenspace reserves like Kaiapoi Lakes, Tuhaitara Coastal Park, Bromley WWTP and Courtenay Lake (Aqualand). Councillor Fulton confirmed that Avian Botulism was not an infectious disease, but rather a build-up of a toxin which can be prevented by removing dead birds (that other birds could eat maggots off or eat as carrion and then get sick themselves).

The South Island Wildlife Hospital had confirmed that they have some (limited) spaces for affected birds that could recover with treatment, but not for mallards (paradise, shelducks, scaup and any rare or endangered bird species would be accepted).

It was confirmed that Sophie Allen would keep the committee updated on any developments at Kaiapoi WWTP and other Waimakariri District Council sites over the next few weeks.

3. REPORTS

The input of the public was valued by the Waimakariri Zone Committee, and to allow the public to ask questions on the reports presented, the Chairperson put the following recommendation.

Moved C Latham Seconded J Cooke

THAT the CWMS Waimakariri Zone Committee

(a) **Agrees** that Section 9.4 of the Standing orders be suspended for Items 3 and 4 to allow members of the public to ask questions prior to the item being moved.

CARRIED

3.1 Committee Appointments for 2024 – Murray Griffin (CWMS Facilitator, ECan)

C Latham stepped down from the Chair and M Griffin assumed the Chair's position at this time and called for nominations for Chairperson for the Zone Committee for 2024.

Moved J Cooke Seconded A Reuben

THAT the CWMS Waimakariri Zone Committee:

(a) **Appoint** Carolyne Latham as Chairperson for 2024.

CARRIED

C Latham was congratulated on her re-election to this role and assumed the Chair. Nominations were called for Deputy Chair for the Zone Committee for 2024.

Moved Councillor T Fulton Seconded J Cooke

THAT the CWMS Waimakariri Zone Committee:

(b) **Appoint** Erin Harvie as Deputy Chairperson for 2024.

CARRIED

E Harvie was congratulated on her re-election to this role.

Nominations were called for Youth Representative for the Zone Committee for 2024.

Moved C Latham Seconded E Harvie

THAT the CWMS Waimakariri Zone Committee:

(c) **Appoint** Ruby Gill-Clifford as the Youth Representative for 2024.

CARRIED

R Gill-Clifford was congratulated for her re-election.

3.2 **Te Tiriti Training - Presentation – Murray Griffin (CWMS Facilitator, ECan)**

As R Gill-Clifford was not able to attend the meeting, it was agreed that this item would be considered at a future meeting.

Item 3.4 was taken at this time. Note that the minutes have been recorded in accordance with the order of the agenda as circulated.

3.3 **CWMS Action Plan Budget 2023/24 – Update – Murray Griffin (CWMS Facilitator, ECan)**

M Griffin and A Veltman presented this report, noting that it was hoped to reach agreement on the applications received for funding from the CWMS Action Plan Budget 2023/24 by May 2024. Each Zone Committee had $75,000 available in their budgets and were to best utilise this funding in alignment with the committees 2021-2024 Action Plan. An overview of the applications received to date or known to be coming, was provided to members. In the future, M Griffin agreed to provide copies of the full applications, which would be distributed individually to committee members.

Lucy Baltrop (Waimakariri Biodiversity Trust) who was present at the meeting, had assisted some applicants with their applications.

Councillor McKay noted that the committee needed to be cognisant of the regulations, making reference to applications for fencing of waterways. Landowners have a legal obligation to fence waterways in some circumstances.

Councillor Fulton suggested there were several different categories of applicants, noting that they were all worthy applications. He also pointed out that some of the applications for funding may relate to work that the property owner had an obligation to undertake.

The committee discussed some of the applications and the information provided in the summaries. Staff provided further comment on some applications as required. Councillor McKay suggested that the applications may need to be prioritised and then consider how they relate to the Zone Committee's Action Plan. It was agreed that it would be beneficial for the committee members to undertake site visits for many of these applications.

M Griffin suggested having a workshop in April, with the suggested date of 15 April, 4 – 6pm, and this would be arranged and meeting invite sent to all committee members.

Moved Councillor McKay Seconded Councillor Fulton

THAT the CWMS Waimakariri Zone Committee:

(a) **Receives** this information with consideration to the allocation of CWMS Action Plan Budget available for 2023/24.

CARRIED

3.4 **Mandeville Resurgence Channel Upgrade – Update – Murray Griffin (CWMS Facilitator, ECan) and Jason Recker (Stormwater and Waterways Manager, WDC)**

Jason Recker presented an update on the consultation and options for providing additional capacity for the Mandeville Resurgence Channel upgrade. The Mandeville area had a history of flooding, including recent storms in 2014, 2017, 2022 and 2023. As noted in the report, the flooding was generally caused by heavy rain, but was also exacerbated by high groundwater levels and resurgence flow. Following the 2014

flooding, budget was allocated in outer years for this upgrade. This matter had gone out for public consultation with public drop-in sessions held in September 2023 in Mandeville and Kaiapoi, and a survey for residents to select a preference for the Stage 1 options. 107 surveys were completed and received back by the Council. Challenges were also highlighted during the drop in sessions and survey results, with significant comments suggesting the optimal approach to direct storm flows in the Eyre River, which then discharges in to the Waimakariri River. This was believed to have greater capacity and create less flooding impacts downstream. In January 2024 the Council approved the following two stages for public consultation as part of the draft LTP:

- Request Council approve the adoption of the Existing Drainage Path Upgrade Option (Option A) for Stage 1. This was spread over two years 2024/25 and 2025/26.
- Request Council authorise further assessment of an alternative Stage 2 Option that would divert stormflows into the Eyre River.

There had been initial discussions with some landowners regarding Stage 2 options and there would be challenges with Stage 2, with land acquisition, coordination with ECan and mana whenua, as well as making sure there were no adverse impacts downstream. There had been high level estimates of cost included in the draft LTP of $21m. Stage two would involve:

- 2026/27 - design and consenting
- 2028/29 - land acquisition
- 2030/2031/2032 - three years of construction

It was advised that as part of the LTP public drop in sessions, there would be one at the Ohoka Domain on Thursday 11 April from 7 – 9pm, where Council staff would be present to discuss matters or answer questions specifically on this Mandeville issue.

Questions

Councillor Fulton asked if the Council had considered engaging an external hydrologist to investigate the link between groundwater levels and resurgence channel levels. J Recker advised that this hadn't been considered at this stage, but with the scope of this project, there may be some external advice for Stage 2. The Council does not have specialist hydrologists.

With the upgrade on the Bradleys Road culvert and Ohoka Stream, Councillor Fulton asked if there would be any downstream effects as a result of this. J Recker said it was proposed to upgrade the culvert on Bradleys Road, upgrade the bunding and potentially install a weir. It was not considered it would have a big impact on Ohoka. Staff would also be working with landowners to address any concerns.

John Cooke commented on residential developments where sometimes consideration wasn't given to where water would go once it had been redirected off the properties. He asked if the downstream effect had been planned for with Stage 2. J Recker said it would first need to be determined that the Eyre River had the capacity. Modelling would need to be done, to look at what the capacity was with alignment in Stage 2. There was no recourse on the developers of residential subdivisions and John Cooke noted his concern with the impact of developments in the future. He suggested that there was still no plan in place if there was a significant rain event and how to get the water from the land into the Waimakariri River. J Recker responded that the Council had done a lot of work in recent years with flood mitigation, modified stop banks and pumps to remove water.

J Cooke asked if there was any update on the Revells Road/Tuahiwi investigation.
J Recker advised that this was still to be investigated by the Council Flood Team but agreed to provide an update on this to the Committee when this was available.

Moved J Cooke Seconded Councillor T Fulton

THAT the CWMS Waimakariri Zone Committee:

(a) **Receives** this information with consideration to the Committees 2021-2024 CWMS Action Plan and community engagement priorities.

CARRIED

4. COMMITTEE UPDATES – M GRIFFIN (CWMS FACILITATOR, ECAN)

4.1 Zone Committee Working Groups.

Biodiversity Working Group

No update available and the next Biodiversity Working group meeting to be set up in March.

Lifestyle Block Working Group

The Biodiversity Trust would be holding an "Unlocking Nature on Your Land Workshop" from 6 – 9pm on Wednesday 13 March, at the Fernside Hall. Carolyne would be speaking on the Top Ten Tips for Lifestylers at this workshop. Noted that there are more of these leaflets being printed and Carolyne encouraged members to share these with any appropriate groups or organisations/businesses.

Monitoring Working Group

Erin noted the report in the agenda could be taken as read.

There were no questions on these working group updates.

4.2 Environment Canterbury Updates.

Councillor McKay took this update as read.

Noted that it was mentioned that there would be a meeting or workshop set up to discuss the CWMS Zone Committee review and encouraged members to give consideration to this discussion and the future of Zone Committees.

ECan LTP consultation opens on the 13 March and closes on 14 April. The proposed rate rise was 24%.

The next ECan Water and Land Committee meeting is scheduled for 13 March.

Regarding "Our Future Canterbury" and the Regional Policy Statement, this document was currently being worked on and shortly would be going out for peer review. This document should be available by mid-year to stakeholders.

4.3 Waimakariri District Council Updates – Councillor Fulton

Cam River Enhancement Fund Works
Projects proposed for autumn 2023-24 were approved at the Utilities and Roading Committee in November. There were projects for fencing, native planting and in-stream cobble placement improvements which are located in Tuahiwi along the Tuahiwi Stream (Waituere) and a tributary into the Cam River. There was also planned maintenance to remove sediment from sediment traps on the Middle Brook, and native planting along the South Brook.

Stormwater Network Discharge Consenting

It is expected that the stormwater network discharge consents for Kaiapoi, Oxford, and Woodend would be issued in the coming month, with commencement from the 1 April 2024. The Council was engaging with Mahaanui Kurataiao Ltd on reviewing the draft Rangiora Stormwater Management Plan and scoping projects for wahi tapu protection and mahinga kai enhancement to help meet the objectives of the consent.

Stormwater, Drainage and Watercourse Protection Bylaw 2018 review
Janet Fraser (WDC Utilities Planner) had commenced work on the review of the Stormwater Drainage and Watercourse Protection Bylaw 2018 (to be amended by 1 January 2025). The Waimakariri Water Zone Committee was not able to submit on this bylaw review, as it was a committee of Council, however feedback can be received, and personal submissions can be made as part of the consultation process. The review includes staff workshops and informal stakeholder consultations being undertaken from now until May approval of the draft bylaw for consultation in May, followed by a one month consultation period in June. A hearing panel would hear submissions and then deliberate in August and the recommendation to Council to adopt the revised bylaw would go to the 1 October council meeting.

4.4 **Action points from the previous Zone Committee meetings.**

- Kaiapoi River Salinity logger data – this information is still to be sourced.
- Further update still to come back to the committee on the realignment of the Northbrook Tributary. – M Griffin and S Allen to coordinate providing this information to the committee
- The Wai Connection representatives were in agreement to come to a later meeting of the committee. M Griffin to arrange this.

Moved J Cooke Seconded A Reuben

THAT the CWMS Waimakariri Zone Committee:

(a) **Receives** these updates for information.

CARRIED

5. CONFIRMATION OF MINUTES

5.1 **Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee Meeting – 6 November 2023**

Moved Councillor McKay Seconded J Cooke

THAT the CWMS Waimakariri Zone Committee:

(a) **Confirms** the Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting, held on 6 November 2023, as a true and accurate record.

CARRIED

MATTERS ARISING

Councillor McKay advised that she was still waiting for a response from the Ecan Rivers Team regarding the spraying Willows, a matter raised by M Bate.

6. GENERAL BUSINESS

Regarding the Committee membership refresh for this year, M Griffin advised that it was planned to defer this until later in the year.

KARAKIA

A Reuben provided a karakia to close the meeting.

NEXT MEETING

The next meeting of the CWMS Waimakariri Water Zone Committee is scheduled for Monday 6 May 2024 at 4pm.

There being no further business, the meeting closed at 6.10pm.

CONFIRMED

_____
Chairperson
Carolyne Latham

_____
Date

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	230601080981
REPORT TO:	UTILITIES AND ROADING COMMITTEE
DATE OF MEETING:	15 August 2023
AUTHOR(S):	Angela Burton (Water Environment Advisor - Fixed Term) Sophie Allen (Water Environment Advisor)
SUBJECT:	Avian Botulism Management 2022/23
ENDORSED BY: (for Reports to Council, Committees or Boards)	General Manager / Chief Executive

1. SUMMARY

1.1 This report summarises the occurrence, costs and management of avian botulism during the 2022-23 season at the Waimakariri District Council Wastewater Treatment Plants (WWTP).

1.2 There were low bird death numbers (24 birds) for the 2022-23 season at coastal Waimakariri District Council wastewater treatment plants (WWTPs) collected by ecological contractors, with no avian botulism outbreak detected.

2. RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Receives** Report No. 230601080981.

(b) **Notes** the low bird death numbers (24 birds) for the 2022-23 season at coastal Waimakariri District Council Wastewater Treatment Plants (WWTPs), as collected by contractors to check for and contain any avian botulism, with no avian botulism outbreak detected.

(c) **Notes** that there were lower bird death numbers collected at the Councils WWTPs than what was collected by Christchurch City Council at the Bromley Wastewater Treatment Plant in the summer of 2022-23.

(d) **Circulates** this report to the Council, the Waimakariri Water Zone Committee, and the Community Boards for information.

3. BACKGROUND

3.1 An update on avian botulism and its management was presented to Utilities and Roading Committee on 21 June 2022 (220420060318), 24 September 2019, (190905124322[v2]), 21 August 2018 (180719080426) and December 2015 (160301016953). These reports detailed the identification and management response of the disease at the Kaiapoi, Woodend, Rangiora and Waikuku WWTPs, and surrounding waterbodies.

3.2 Avian botulism is a paralytic disease of waterfowl, caused when toxin is released by bacteria commonly found in the substrates of lake and pond beds, including wastewater oxidation ponds. This toxin accumulates in aquatic invertebrates, which are then consumed by birds. The bacterium *Clostridium botulinum* is widespread in soil and requires warm temperatures, a protein source and an anaerobic (i.e. no oxygen) environment in order to become active and produce toxin. Decomposing vegetation and invertebrates combined with warm temperatures can provide ideal conditions for the botulism bacteria to activate and produce toxin.

3.3 Botulism is an intoxication (i.e. food poisoning) rather than an infectious disease. The affected birds show several consistent symptoms including weakness, lethargy and a progressive paralysis, which initially affects the legs and neck. Walking becomes difficult and paralysis of the neck means birds cannot hold their heads erect. For birds sitting on the water this inevitably leads to death by drowning.

3.4 Carcasses of dead birds are subsequently fed on by flies and their larvae, which then concentrates the botulinum toxin within the larvae and the bird-toxic maggot cycle commences. This leads to the deaths of subsequent waves of birds as they feed on the maggots in, and around, the dead bird carcasses.

3.5 Providing mildly affected birds with fresh water, shade and protection from predators may help them recover from the intoxication. Avian botulism antitoxin is available (potentially only overseas, such as in the USA), but requires special handling and must be given early in the intoxication. Birds that survive a botulism outbreak are not immune to future exposure to botulism toxin.

3.6 Avian botulism Type C, as identified at the Kaiapoi Wastewater Treatment plant, is not thought to be a risk to human health. Avian botulism Type E, which has not been identified in the Waimakariri District, does affect humans in rare cases.

4. ISSUES AND OPTIONS

4.1. Figure 1 shows bird carcass numbers that have been collected by contractors at WWTPs and sometimes other ponds managed by WDC from 2013-23. In 2022-2023 24 birds in total were collected from four WWTPs, primarily mallards and paradise shelducks, but also species such as Grey Teal, and a Royal Spoonbill were also collected. Note that cause of death is not confirmed by autopsy. There has been no significant outbreak of avian botulism since 2018-19. However, avian botulism is thought to have caused significant number of deaths in Waimakariri District (i.e. defined as an outbreak) in 2013/14, 2014/15, 2017/18 and 2018/19.

4.2. The species of each carcass collected is recorded by Keystone Ecology Ltd, who are experienced in bird identification. No species that are listed as rare or threatened by the Department of Conservation threat classification system were collected in 2022/23 or in previous year since species records have been made. Department of Conservation classifies the Spoonbill as naturally uncommon but increasing in range.

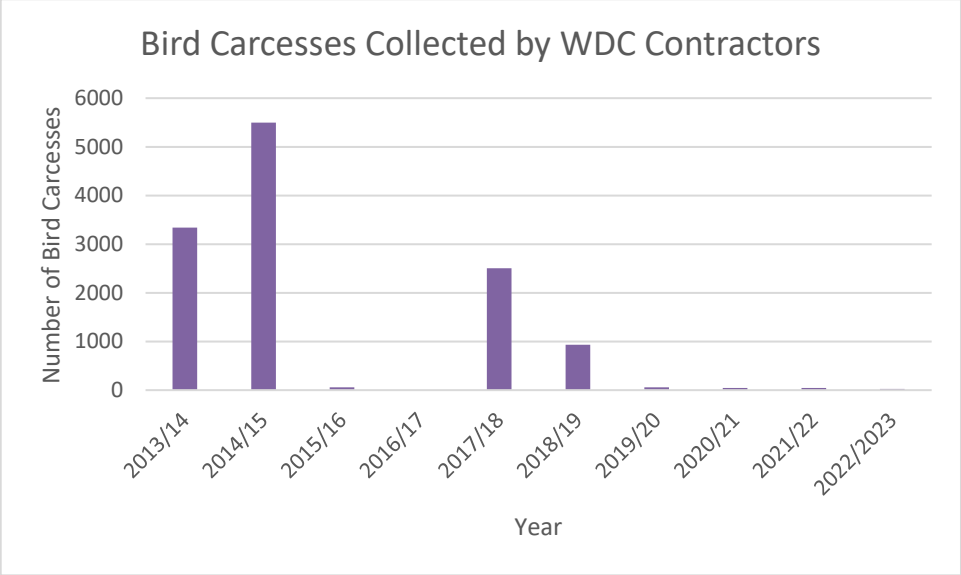


Figure 1: Bird carcasses collected 2013-23 by WDC contractors at all sites. NB data value may be slightly incorrect for the 2015-16 year, due to varying reports.

4.3. The first noted outbreak in the Waimakariri District was at the Kaiapoi Wastewater Treatment Plant (WWTP) in the summer of 2013/14. In total there were 3,336 birds that died at the Kaiapoi WWTP and 7 at Woodend WWTP. Most of the dead birds were paradise shelducks and mallards. The second outbreak in the summer of 2014/15 was more significant with a total of 5,499 dead birds over the summer period. The incidence of avian botulism was also more widespread with birds affected at the Kaiapoi, Woodend, Rangiora and Waikuku Beach treatment plants, at the Kaiapoi Lakes public area, the Pegasus wetlands and the Tūhaitara Coastal Park wetlands (Tutaepatu Lagoon). In 2017/18 there were an estimated 2505 bird carcasses collected by Council contractors. Any outbreaks in the summers of 2015/16, 2016/17, 2019/20, 2020/21, 2021/22 and 2022/23 were negligible, due to likely factors such as weather (temperature and wind direction for example) that have not be analyzed (see Figure 1).

Waterbird Survey results from Kaiapoi WWTP and Brooklands Lagoon/ Waimakariri River Mouth Coastal Wetland System).

4.4. Christchurch City Council undertake annual (late summer) bird surveys at the Brooklands Lagoon/Lower Waimakariri, including at the Kaiapoi WWTP. The 2023 annual bird survey was undertaken on 20/02/2023.

4.5. Figure 2 shows the Kaiapoi WWTP plant bird survey counts for the past four years (including the 2023 count). It is noted that since 2020 bird numbers for Paradise Shelduck have increased from 168 (2020) to 320 (2023), however were higher historically when counts commenced in 1986. Mallard-Grey hybrid ducks have increased from 715 (2020) to 1041 (2023), with some annual fluctuations in between. Royal Spoonbill numbers are low as the species is naturally uncommon, with a small spike in numbers in the 2022 count.

	Date			
Species	**23.2.2020**	**25.2.2021**	**23.2.2022**	**20.2.2023**
South Island Oystercatcher	0	0	0	0
Pied Stilt	5	5	0	5
Black-fronted Dotterel	0	0	0	0
Spur-winged Plover	2	7	0	2
Caspian Tern	0	0	0	0
Black-fronted Tern	0	0	0	1
Black-backed Gull	15	34	33	15
Black-billed Gull	62	87	314	205
Red-billed Gull	0	2	40	40
Mute Swan	0	0	0	0
Black Swan	53	29	81	125
Canada Goose	19	9	5	122
Cape Barren Goose	1	0	1	0
Paradise Shelduck	168	270	214	320
Mallard/Grey/Hybrid Ducks	715	928	550	1041
Grey Teal	514	587	815	724
NZ Scaup	73	55	276	274
Australian Shoveler	2277	2704	1544	1804
Northern Shoveler	0	0	0	0
Pukeko	4	11	8	8
Australasian Coot	0	0	4	0
Marsh Crake	0	0	0	0
Swamp Harrier	2	2	1	3
White-faced Heron	0	0	0	0
Royal Spoonbill	4	4	14	4
Black Cormorant	5	4	0	1
Pied Cormorant	0	0	0	0
Little Cormorant	0	0	0	0
Welcome Swallow	288	89	0	166

Figure 2: Kaiapoi Wastewater Treatment Plant bird survey counts between 2020 and 2023 (Credit Andrew Crossland, Christchurch City Council)

Avian Botulism monitoring at Bromley Wastewater Treatment Plant

4.6. Over the 2022-23 summer, Christchurch City Council confirmed that approximately 321 dead waterfowl were collected from Bromley WWTP wetlands as part of their annual avian botulism monitoring. It was also confirmed that 11 live waterfowl were taken from Bromley WWTP for recovery.

4.7. Since the summer of 2011/12, there have sometimes been avian botulism Type C outbreaks in the Bromley Wastewater ponds in Christchurch. In summer 2012 there was a large outbreak with 6,300 birds collected, with death attributed to avian botulism within the Bromley Oxidation ponds. The actual estimated number of bird deaths was over 7,000 due to a number unable to be recovered.

4.8. In 2013/14, two years after the Bromley WWTP outbreak, WDC experienced the first noted avian botulism outbreak for the District at Kaiapoi WWTP. It was speculated that the avian botulism outbreak at the Kaiapoi WWTP was related to the outbreak at Bromley spreading to the wider area, such as through the movement of sick waterfowl between the two locations.

4.9. The bacterium that causes avian botulism is naturally occurring and is likely always present at all WWTP wetland sites at low levels in sediments, so is not necessarily a new infection that is spread between sites. It is rather that an outbreak at one site, such as Bromley WWTP, leads to concentrated toxins being passed on via the 'carcass-maggot cycle'. This cycle is where birds eat the maggots of a carcass that has passed away from avian botulism, where the toxin has accumulated then moves to another site before dying and producing maggots with the accumulated toxin.

Implications for Community Wellbeing

4.10. There are not implications on community wellbeing by the issues and options that are the subject matter of this report. An information pamphlet on Avian Botulism has previously been prepared (refer TRIM 190204012544) to address the community's concerns regarding the disease.

4.11. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

Te Ngāi Tūāhuriri hapū are likely to be affected by or have an interest in the subject matter of this report as some waterfowl are taonga species, collected for mahinga kai.

5.2. Groups and Organisations

There are groups and organisations likely to be affected by, or to have an interest in the subject matter of this report such as Te Kōhaka o Tūhaitara Trust, North Canterbury Fish and Game, the SPCA, Community and Public Health, Department of Conservation, and Christchurch City Council.

5.3. Wider Community

5.3.1. Although there is no legislative requirement, there is a social expectation of the Council to prevent outbreaks spreading to other wetland and lake areas, such as in the Selwyn District and Hurunui District (e.g. Lake Forsyth/Wairewa, Te Waihora/ Lake Ellesmere).

5.3.2. Gamebird hunters i.e., duck shooters may have reduced opportunities for hunting, and require clear communication on the severity and locations of outbreaks.

5.3.3. Birdwatchers, bird lovers and the general public could be saddened to see sick and dead birds at public locations. Rare or threatened birds could be affected, though no rare or threatened bird deaths have been recorded to date.

5.3.4. Opportunities for mahinga kai (customary food gathering) of waterfowl and tuna (eel) may be reduced. Clear communication is needed with appointed Tangata Tiaki (customary fisheries officers).

5.3.5. The wider community is not likely to be affected by, or to have an interest in the subject matter of this report.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

6.1.1. There are no financial implications of the decisions sought by this report. This report is for information only.

6.1.2. This budget is an existing budget included in the Annual Plan for the operational cost of the wastewater treatment plants.

6.1.3. The cost of avian botulism management for 2022-23 was $11,502 excl GST, however this amount also includes a minimal cost of midge emergence trap monitoring, which is carried out by the contractor Keystone Ecology in the same visit. The cost in 2021-22 was $19,525, 2018-19 was $45,829, and 2017-18 was $41,980 excl. GST for the bird collection by a contractor. The variation in cost per year relates generally to an increased number of visits and/or hours required to retrieve bird carcasses.

6.1.4. The cost for bin rental, collection and disposal in 2022-23 was $826 excl GST. The cost in 2021-22 was $1,070, $3,081 for 2018-19, and $5,773 excl. GST for 2017-18 for the waste disposal contractor.

6.1.5. Costs to-date have come from within WDC Wastewater budgets, including for areas such as stormwater ponds and reserve areas. This may need to be re-evaluated if significant costs arise from outside of WWTP areas.

6.1.6. The cost of management is thought to be reduced by efficient monitoring, quick response and a coordinated response with other parties, such as the Christchurch City Council.

6.2. **Sustainability and Climate Change Impacts**

6.2.1. The recommendations in this report do not have sustainability and/or climate change impacts. However, climate change will have a likely effect on avian botulism outbreaks in the future if there are warmer temperatures for longer durations for example.

6.2.2. WDC staff monitor for weather predictions of warmer winters and summers, to enact management options early, and reduce risk of a larger or widely dispersed outbreak.

6.3 **Risk Management**

6.2.1. There are no risks directly arising from the adoption/implementation of the recommendations in this report.

6.3 **Health and Safety**

6.2.1. There are no specific health and safety risks directly arising from the adoption/implementation of the recommendations in this report.

6.2.2. Health and Safety documentation and practices such as a Site-Specific Safety Plan will continue to be in place and reviewed when appropriate for WDC staff and contractors.

6.2.3. Risks to human health can be minimised by clear communication of risks to staff i.e. promoting the use of gloves when in contact with bird carcasses and implementation of contractors' Health and Safety Plans.

6.2.4. In 2014/15 eels in Tutaepatu Lagoon are thought to have consumed some of the carcasses, which led to over 20 observed eels deaths. This raises a potential health and safety issue, due to the fact eels are gathered as a food source.

6.2.5. Collection of bird carcasses from wetlands is restricted to retrieval of wind-blown birds from the water's edge due to the risk for humans to enter the wetlands with treated effluent. This can reduce the efficiency and timeliness of bird carcass collection, with some areas are unable to be safely accessed for carcass removal.

6.2.6. Outbreaks should be re-confirmed to be avian botulism Type C by the Ministry of Primary Industries at regular intervals, particularly if symptoms presented are atypical.

7. CONTEXT

7.1. Consistency with Policy

7.1.1. This matter is not a matter of significance in terms of the Council's Significance and Engagement Policy.

7.2. Authorising Legislation

7.2.1. The Local Government Act 2002 sets out the power and responsibility of local authorities, including the Council's role in providing wastewater services.

7.3. Consistency with Community Outcomes

7.3.1. The Council's community outcomes are relevant to the actions arising from recommendations in this report.

- There is a healthy and sustainable environment for all.

7.4. Authorising Delegations

7.4.1. This report is for information only. No delegations apply.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	SEW-12 / 231003156382
REPORT TO:	UTILITIES AND ROADING COMMITTEE
DATE OF MEETING:	17 October 2023
AUTHOR(S):	Caroline Fahey, Water & Wastewater Asset Manager
SUBJECT:	Eastern Districts Sewer Scheme and Oxford Wastewater Treatment Plant Annual Compliance Monitoring Reports 2022 – 2023

ENDORSED BY:
(for Reports to Council, Committees or Boards)

General Manager | Chief Executive

1. SUMMARY

1.1. The purpose of this report is to update the Utilities and Roading Committee on the consent compliance performance of the Eastern District Sewer Scheme (EDSS) and Oxford Sewer Scheme for the 2022-2023 reporting year (1 July 2022 to 30 June 2023).

1.2. The Eastern District Sewer Scheme (EDSS) Ocean Outfall operates under resource consent CRC041162.2, in conjunction with various other consents that enable the wastewater schemes operation. Consent compliance for monitoring data of this nature is determined on two levels:

- Has the frequency of monitoring met the consent requirements
- Does the monitoring data comply with any numerical limits specified in the consent conditions

1.3. Full compliance was achieved for all EDSS consent conditions during the 2022-2023 monitoring period.

1.4. The Oxford Sewer Scheme is operated under three Canterbury Regional Council (CRC) resource consents being CRC961013, CRC144561 and CRC184787. These consents do not require an annual compliance report however a report has been prepared as good practice.

1.5. Full compliance was not achieved for the Oxford Sewer Scheme consent conditions during the 2022-2023 monitoring period. The main reasons for non-compliance relate to the lack of monitoring data to clearly demonstrate that the depth limit for effluent application at the irrigation field had been achieved, and exceedance of consent limit for faecal coliform level for 2 effluent samples taken.

1.6. In order to resolve these issues, staff are working to get the western irrigator (Irrigator 2) connected to SCADA and to install additional flow monitoring equipment at the Oxford Irrigator site which will improve monitoring data collection to demonstrate compliance with the depth limit for effluent application at the irrigation field. Additionally, the UV equipment at the treatment plant has been replaced and operational procedures improved to address the faecal coliform limit exceedance.

1.7. Environment Canterbury (ECan) are currently reviewing the Annual Compliance Monitoring Reports for the 2022-2023 period. A compliance report will be issued by ECan following the completion of their review.

Attachments:

i. Eastern Districts Sewer Scheme – Annual Compliance Monitoring Report 2022-2023 (TRIM 230718108139)
ii. Oxford Sewer Scheme – Annual Compliance Monitoring Report 2022-2023 (TRIM 230913142543)

2. RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Receives** Report No.

(b) **Notes** that full compliance was achieved for all of the Eastern District Sewer Scheme (EDSS) Ocean Outfall consent conditions during the 2022-2023 monitoring period.

(c) **Notes** that the Eastern Districts Sewer Scheme – Annual Compliance Monitoring Report 2022-2023 is currently being reviewed by Environment Canterbury.

(d) **Notes** that although not required, the Oxford Sewer Scheme - Annual Monitoring Report 2022-2023 was provided to Environment Canterbury as good practice.

(e) **Notes** that the Oxford Sewer Scheme did not achieve full compliance for the 2022-23 monitoring period. There were two reasons why the scheme did not achieve full compliance, one was due to lack of monitoring data to clearly demonstrate that the depth limit for effluent application at the irrigation field had been achieved, and the other was due to the exceedance of consent limit for faecal coliform level for 2 effluent samples taken.

(f) **Notes** that staff are working on getting Irrigator 2 (western irrigator) connected to SCADA and installing additional flow monitoring equipment at the Oxford Irrigator site which will improve monitoring data collection to demonstrate compliance with the depth limit for effluent application at the irrigation field. Once this work is complete, the scheme is expected to be fully compliant.

(g) **Notes** that UV equipment at the treatment plant has been replaced and operational procedures are being improved to address the faecal coliform limit exceedance.

(h) **Circulates** this report to all Community Boards for their information.

(i) **Circulates** a copy of this report to Te Ngāi Tūāhuriri Rūnanga, Te Kōhaka o Tūhaitara Trust and Waimakariri Water Zone Committee for their information.

3. BACKGROUND

3.1. The purpose of this report is to update the Utilities and Roading Committee on the consent compliance performance of the Eastern District Sewer Scheme and Oxford Sewer Scheme for the 2022-2023 reporting year.

Eastern District Sewer Scheme

3.2. The treatment facilities at the Rangiora, Kaiapoi, Woodend and Waikuku Beach Wastewater Treatment Plants (WWTP's) discharge into a pipeline (the Ocean Outfall), that discharges into Pegasus Bay between Pines/Kairaki Beach and Woodend Beach. These treatment plants and the Ocean Outfall comprise the Eastern Districts Sewer Scheme (EDSS). Figure 1 below geographically describes the scheme. The EDSS operates under a number of resource consents from the Canterbury Regional

Council. The focus of this report is CRC041162.2, the consent that authorises the discharge of treated effluent into the coastal marine environment from the Ocean Outfall.

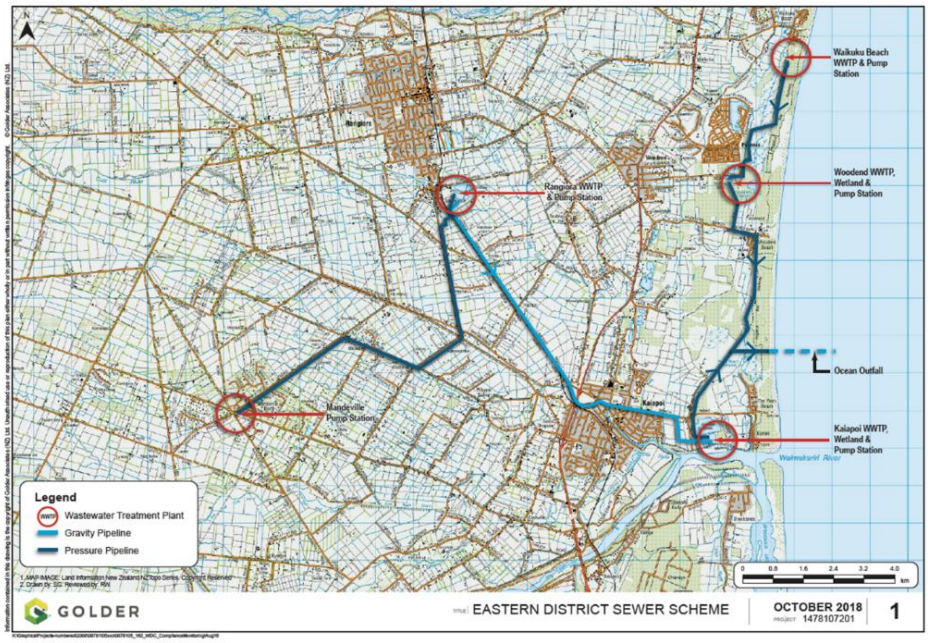


Figure 11: Eastern District Sewer Scheme Map

Oxford Sewer Scheme

3.3. The Oxford Sewer Scheme operates a wastewater treatment plant (WWTP) at Oxford, which serves approximately 900 properties. The WWTP is located on the north side of the Eyre River on High Street with an irrigation disposal field location on the south side of the Eyre River on Woodstock Road. Figure 2 below describes these locations geographically.

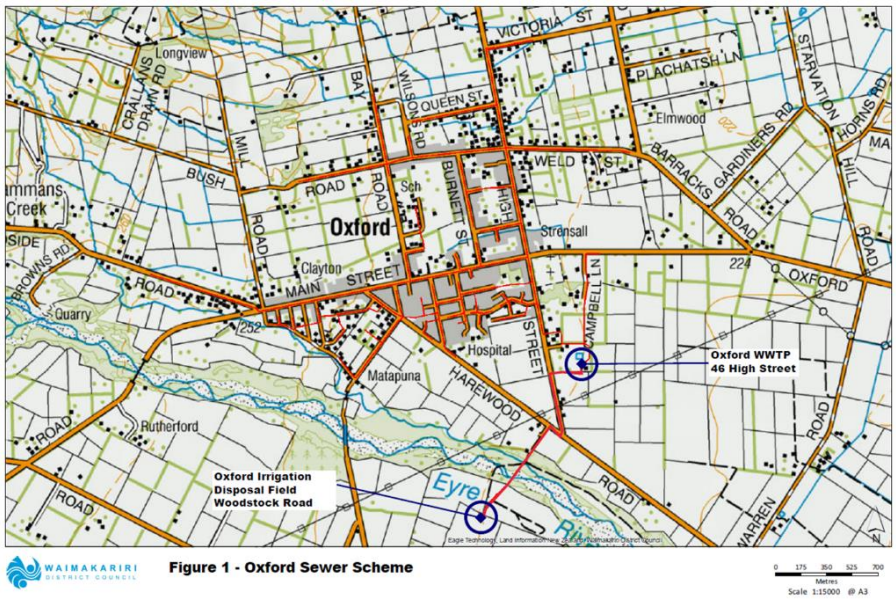


Figure 22: Oxford Sewer Scheme Map

4. ISSUES AND OPTIONS

4.1. Eastern District Ocean Outfall

4.1.1. Table 1 provides a summary of compliance for each consent utilised to operate the Eastern Districts Ocean Outfall. Full compliance was achieved for all the consents for the 2022/23 monitoring period.

Table 11: Summary of Eastern District Ocean Outfall Consent Compliance 2022/23

Consent	Activity	Compliance
CRC041162.2	To discharge treated sewerage effluent into coastal marine area from sub-aqueous ocean outfall	Full compliance
CRC041049	To discharge treated sewage effluent to the infiltration wetland and to ground water via seepage at the Kaiapoi WWTP	Full compliance
CRC168391	To discharge treated sewage effluent via seepage onto land (Woodend)	Full compliance
CRC145027	To discharge dewatered sludge removed from a wastewater pond to land (Rangiora)	Full compliance
CRC031724	To discharge groundwater from subsoil drains into the marine area of Jockey Baker Creek	Full Compliance (no discharge)
CRC168388	To discharge contaminants to air (Woodend)	Full Compliance
CRC950610	To discharge contaminants to air (Kaiapoi)	Full Compliance
CRC962560	To discharge contaminants to air (Waikuku)	Full Compliance
CRC030917	To discharge contaminants, via seepage, from Rangiora STP to land	Full Compliance
CRC041163	For the erection, placement and maintenance of an ocean outfall pipeline and temporary structures, including a trestle structure and sheet piling for the purpose of constructing an ocean outfall, within the coastal marine area	Full Compliance
CRC154176	To discharge contaminants to land (Kaiapoi)	Full Compliance
CRC168390	To use land for storing, treating and discharging human effluent (Woodend)	Full Compliance
CRC173124	To discharge contaminants (odour) to air (Rangiora)	Full Compliance

4.1. Oxford Sewer Scheme

4.1.1. Table 2 provides a summary of compliance for each consent utilised to operate the Oxford Sewer Scheme.

Table 22: Summary of Oxford Sewer Scheme Consent Compliance 2022/23

Consent	Activity	Compliance
CRC961013	To discharge contaminants to air	Fully compliant
CRC144561	Land use consent for the establishment of a sewage storage basin	Fully compliant
CRC184787	To discharge contaminant into land to water	Non-compliant, lack of SCADA data for Irrigator 2 overstates the effluent to land application depth

	through Irrigator 1; high faecal coliform spikes in July and January during the 2022/23 year likely due to issues with the UV disinfection unit (one faulty unit was however replaced on 8/9/22).

4.1. **Oxford Sewer Scheme non-compliances**

4.1.1. Irrigator Issues

4.1.2. Condition 13 – Unable to demonstrate that the depth of effluent application was not exceeded due to lack of monitoring data from Irrigator 2 (western irrigator) overstating of the depth of effluent application by Irrigator 1 (eastern irrigator).

4.1.3. Irrigator 2 was damaged in early 2021 due to a strong wind event and was only replaced in September 2022. Between the period of June 2022 and September 2022, a temporary irrigation system using k-lines was deployed to apply effluent to the western irrigation field. There was only monitoring data available for Irrigation 1 to calculate the depth of effluent application during this monitoring period. Staff had difficulty getting support from the irrigator supplier to assist with getting Irrigator 2 connected to SCADA which led to monitoring data being unavailable.

4.1.4. Staff are working on getting the western irrigator (Irrigator 2) connected to SCADA and to install additional flow monitoring equipment at the Oxford Irrigator site which will improve monitoring data collection to demonstrate compliance with the depth limit for effluent application at the irrigation field. Once this work is complete, the scheme is expected to be fully compliant.

4.1.5. Faecal Coliform Limit Exceedance

4.1.6. Condition 4 – Faecal Coliform Bacterial concentration exceeded the 500cfu/100ml limit for 2 samples taken in July 2022 and January 2023.

4.1.7. For the July sample this was due to operational issues with the UV units and the plant operators observed a poor quality of effluent at this time. One known faulty UV unit was replaced and recommissioned on 8/9/2022, therefore it is expected that higher compliance should be achieved from that date onwards. There were no clear operational issues causing the high January 2023 sample however results following the exceedance on that date were compliant. Operational improvement are being made to sample data collection by using the Infrastructure Data app which will provide better operational records going forward.

Implications for Community Wellbeing

4.2. Despite non-compliances there are no known implications on community wellbeing by the issues and options that are the subject matter of this report.

4.3. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. **Mana whenua**

5.2. Te Ngāi Tūāhuriri hapū may be interested in the findings of the Ocean Outfall Compliance Report 2022/23, due to their relationship with the coastal area used for kai moana/mahinga kai gathering. At the recent WDC-Runanga joint meeting it was mentioned that a cultural monitoring plan would be developed in conjunction with Mahaanui Kurataio Limited for our

wastewater operations. The recommendations of this report include circulation of this report and the attachments to Te Ngāi Tūāhuriri Rūnanga for their information.

5.3. **Groups and Organisations**

5.4. Council staff meet regularly with residents adjacent to the Woodend WWTP, who are interested in operations and performance of this plant. A copy of the Annual Compliance Monitoring Report can be made available to them for information purposes.

5.5. There have also been a number of members of the public who have been interested in the performance of the Kaiapoi WWTP and have raised concerns in the past with the Waimakariri Zone Committee. A copy of the Annual Compliance Monitoring Report will be made provided to Waimakariri Zone Committee for information purposes.

5.6. Te Kōhaka o Tūhaitara Trust manages the Tūhaitara Coastal Park where the ocean outfall is located.

5.7. There are no other groups and organisations likely to be affected by, or to have a direct interest in the subject matter of this report. There has been no discussions or consultation with any group as part of this compliance monitoring report.

5.8. **Wider Community**

The wider community is not likely to be affected by, or to have an interest in the subject matter of this report.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. **Financial Implications**

6.2. There are not financial implications of the decisions sought by this report. However it should be noted that on-going non-compliances can result in increased monitoring costs and action being taken against the Council (i.e. abatement notice). Such instances can result in loss of confidence from the public as well as adverse effect to Council's reputation. Approximately $100,000 is being allowed for in the budgets for monitoring of the Ocean Outfall.

6.3. Once the work to connect Irrigator 2 (western irrigator) to SCADA and additional flow monitoring equipment have been installed at the Oxford Irrigator site, the scheme is expected to be fully compliant. There is existing budget to complete this work.

6.4. **Sustainability and Climate Change Impacts**

6.5. The recommendations in this report do not have sustainability and/or climate change impacts.

6.6. **Risk Management**

6.7. There are not risks arising from the adoption/implementation of the recommendations in this report.

6.8. **Health and Safety**

6.9. There are not health and safety risks arising from the adoption/implementation of the recommendations in this report.

7. CONTEXT

7.1. **Consistency with Policy**

7.2. This matter is not a matter of significance in terms of the Council's Significance and Engagement Policy.

7.3. **Authorising Legislation**

7.4. Not applicable.

7.5. **Consistency with Community Outcomes**

7.6. The Council's community outcomes are relevant to the actions arising from recommendations in this report. Managing the Council's Eastern Districts Sewer Scheme and Oxford Wastewater Scheme in a manner that is compliant with our Canterbury Regional Consents ensures;

- There is a safe environment for all, and
- Core utility services are provided in a timely, sustainable, and affordable manner

7.7. **Authorising Delegations**

7.8. This report is for information only as the compliance reports have already been submitted to Environment Canterbury for review, therefore no actions requiring delegated authority are recommended.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR DECISION

FILE NO and TRIM NO:	DRA-19 / 220526085582
REPORT TO:	UTILITIES AND ROADING COMMITTEE
DATE OF MEETING:	21 November 2023
AUTHOR(S):	Sophie Allen – Water Environment Advisor
SUBJECT:	Cam River Enhancement Fund proposed projects and update
ENDORSED BY: (for Reports to Council, Committees or Boards)	Department Manager / Chief Executive

1. SUMMARY

1.1 This report summarises future planning and updates for Cam River Enhancement Fund projects, and provides an update on the amount remaining in the fund ($166,000 as of 1 October 2023).

1.2 Projects proposed for summer - autumn 2023-24, and presented for approval in this report include;

a. Riparian native planting, instream habitat restoration, and fencing of Critical Source Areas for three Tuahiwi properties.

b. The emptying of a sediment trap on the Middle Brook created by the University of Canterbury.

c. Partial funding of fencing for the North Brook Trail project, for the areas where moving the fenceline back will fence-off Critical Source Areas from stock.

d. Bank improvement and native planting works on the South Brook and Cam River to support tree removal works under Central Rural Drainage budgets.

1.3 Native planting projects have been designed to allow for continued access for drainage maintenance, such as only planting on one side, or planting of low grasses on one side.

1.4 In Autumn 2022, two sediment traps installed on the Tuahiwi Stream (Waituere) under the Cam River Enhancement Fund were emptied of accumulated silt. Trial use of a sucker truck for emptying of the sediment trap on Tuahiwi Stream (Waituere) at Greens Road was found that it took longer and was less cost-effective than the use of an excavator at the Church Bush Road sediment trap site. However there were some benefits such as no spoil left on the road reserve.

1.5 Argillite was trialled as a gravel road base on Marsh Road and Waikoruru Road beside the Cam River mainstem in autumn 2022 by the Roading team, partially funded by the Cam River Enhancement Fund. The argillite appeared to reduce dust and run-off of sediment fines into the waterway, however was found to have a higher maintenance cost.

1.6 Bank stabilisation works on the North Brook between Boys Road and Marsh Road and the were completed in autumn 2022.

1.7 A Cam River Enhancement Fund fencing policy was approved in January 2022 by the then Chair of the Land and Water Committee, Councillor Sandra Stewart, and the Utilities and Roading Manager, Gerard Cleary with delegated approval from the Land and Water Committee.

Attachments:

i. Cam River Enhancement Fund fencing policy January 2022 (TRIM 220124008290) – updated March 2022

2. RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Receives** Report No. 220526085582.

(b) **Approves** the funding of riparian native planting, instream habitat restoration, and fencing of Critical Source Areas located on Tuahiwi Road properties as scoped in this report ($15,000).

(c) **Approves** the funding for the emptying of the sediment trap created by the University of Canterbury on the Middle Brook ($3,000).

(d) **Approves** the bank improvements and native planting works proposed on the South Brook and Cam River, in conjunction with tree removal works under the Central Rural Drainage budget ($11,000).

(e) **Approves** the partial funding to setback an existing fence on the North Brook to fence of Critical Source Areas as part of the North Brook Trail project ($5,000).

(f) **Notes** the results of the Cam River Enhancement Fund projects of emptying existing sediment traps, bank reshaping, and road drainage/dust control improvements carried out in autumn 2022.

(g) **Notes** the Cam River Enhancement Fund fencing policy, attached to this report.

(h) **Circulates** this report to North Canterbury Fish and Game, Department of Conservation – Rangiora Office, the Waimakariri Water Zone Committee, at a Te Ngāi Tūāhuriri Rūnanga – WDC meeting, the Rangiora-Ashley and Kaiapoi-Tuahiwi Community Boards, and the Central Rural Drainage Advisory Group.

3. BACKGROUND

3.1. The Cam River Enhancement Fund was established by an Environment Court ruling in July 2001. This ruling required the consent holder (WDC) to provide an amount of $25,000 per year over a five-year period for habitat restoration in the Cam River system. Due to interest accrued on the funds over time, the initial fund amount increased. The purpose of the fund, as noted in the Environment Court decision, was to be used "for habitat restoration in the Cam River system … as agreed between North Canterbury Fish and Game Council and the consent holder in consultation with the Department of Conservation."

3.2. It was on this basis that a Cam River and Tributaries Enhancement Committee was informally set up with Council staff. Given their interest in the Cam River, representatives of Te Ngāi Tūāhuriri Rūnanga, the Cam River Working Party, and Environment Canterbury were also invited to attend.

3.3. Initially landowner applications were accepted for the fund, with some budget allocated to planting and fencing projects. A strategic catchment approach, however, was decided to be undertaken by the Committee. The Committee commissioned a scoping strategy of the

Cam River and its tributaries from Dr Henry Hudson. A final version of this report was delivered in 2017 (TRIM 170410035142[v2]).

3.4. Based on the Dr. Henry Hudson Scoping Strategy, funding was allocated to in-stream engineering projects. Detailed engineering design of elements was completed over the period 2018-20.

3.5. Due to consent conditions, landowner feedback and design concerns, a strategic update was undertaken that was presented to the Land and Water Committee meeting on the 16 November 2021. This strategic review recommended to re-incorporate catchment initiatives, such as fencing of critical source areas, in addition to in-stream works.

4. ISSUES AND OPTIONS

4.1. Proposed works for 2023-24 are shown in Table 1. Works completed in autumn 2022 are shown in Table 2.

Proposed works

Table 1: Proposed works for the Cam River Enhancement Fund 2023-24

Project description	Location (waterway)	Estimated cost (excl GST)	Project manager
Fencing of Critical Source Area (CSA) of the Cam River mainstem (453 Tuahiwi Road) – See Figure 1	Drain connected to the Cam River mainstem	$15/m (2 hot wires for cattle exclusion). 219m on Māori Land (ephemeral ponding area), = $4,000	Water Environment Advisor
Fencing and planting of Waituere / Tuahiwi Stream. (384 Tuahiwi Road) - See Figure 2 3m setback required under the RMA Stock Exclusion (2020) Regulations	Waituere / Tuahiwi Stream	$27/m sheep fence and access gate. Māori-owned land (107m – one-side) = $3,000 Planting of 300 low native plants = $3000	Water Environment Advisor
Planting and in-stream enhancements (boulder and cobble placement) 428 Tuahiwi Road. Low plants on one side for maintenance access. See Figure 3	Waituere / Tuahiwi Stream	Planting (200 plants) – 5m buffer for 26m length (both sides). Māori-owned land = $2000 Boulder and cobble placement = $3,000 estimate	Water Environment Advisor
Middle Brook sediment trap emptying (created by the University of Canterbury).	Middle Brook	Excavator services to be provided by CORDE Ltd (WDC drainage contractor) = $3,000	Land Drainage Engineer
Bank improvements – e.g. rebattering, grass seeding and native planting	South Brook below the Rangiora Wastewater Treatment Plant, Cam	Earthworks to be provided by CORDE Ltd = $5,000 Grass seeding for erosion control= $1000	Land Drainage Engineer / Water Environment Advisor

	River between Marsh Road and South Brook confluence	Native planting = $5000	
North Brook Trail funding between Boys Road and Marsh Road (Stage 1) – Fencing off of Critical Source Areas with at least a 6m setback. Meets the fencing policy - moving back of an existing functional fence.	North Brook	Contribution towards the full fencing cost of the North Brook Trail project= $5,000 estimate	Spark family/ Waimakariri Landcare Trust
		TOTAL $34,000	

4.2. Projects along the Tuahiwi Stream (Waituere) are a focus area for improvements to water quality as prioritised by the Environment Canterbury Stream Walk assessment in 2016 of the Cam River catchment. The proposed fencing projects meet the Cam River Enhancement Fund fencing policy (TRIM 220124008290).

453 Tuahiwi Road

4.3. Hotwire cattle fencing is proposed for an area with recurrent ponding during wetter weather that is likely a Critical Source Area to the Cam River via a farm drain. A power supply is available already at the site. The land is Māori-owned with multiple owners. This fencing project meets the fencing policy for funding.

Figure 1: Fencing (orange line) at property 453 Tuahiwi Road with drainage into the Cam River mainstem, with recurrent ponding on Māori-owned land (219m).

384 Tuahiwi Road

A sheep fence is proposed for a property on the corner of Okaihau Road and Tuahiwi Road used for stock grazing with a 3m setback from the waterway. This property borders the true right of the Waituere/Tuahiwi Stream. A gate is proposed to be able to access the area if required. The true left is already fenced. Low native riparian planting (i.e. such as grasses) are proposed to provide a natural buffer, stream shading and increased habitat for biodiversity. Fencing and planting will take place after drainage works planned in summer 2023-24. The land is Māori-owned. This fencing project meets the fencing policy for funding.

Figure 2: 384 Tuahiwi Road - Orange line indicates sheep fence on the true right side of the waterway The light green area indicates native planting.

428 Tuahiwi Road

4.4. The Tuahiwi Stream (Waituere) banks at this property are not grazed, so there is no requirement for fencing to provide stock exclusion. Native planting is proposed along the 26m of stream on both sides with a buffer width of 5m. The true right will have low plantings that will not exclude drain maintenance access if required. In-stream habitat is proposed to be improved through the installation of cobbles and a few boulders to create a pool-riffle structure if possible with the low stream gradient. There are neighbouring properties where the stream restoration could be extended to in the future, after scheduled drainage maintenance works have been carried out. The land is Māori-owned.

Figure 3: Restoration at 428 Tuahiwi Road. The light green indicates native planting. A few boulders and some cobbles will be added to improve in-stream habitat.

South Brook and Cam River

4.5. Tree removal works under Drainage budgets are scheduled along the South Brook below the Rangiora Wastewater Treatment Plant and on the Cam River from Marsh Road to the South Brook confluence due to tree fall from winds and flood recovery work. Associated bank stability improvements, re-grassing and native planting is proposed from the Cam River Enhancement Fund to prevent erosion, restore stream shading and provide habitat for indigenous biodiversity.

North Brook Trail

4.6. Partial funding of fencing costs for the North Brook Trail is proposed due to the benefits of fencing off critical source areas where currently stock access may be affecting water quality. A report is planned to be presented at the Community and Recreation Committee in December 2023 seeking approval to provide maintenance of an esplanade strip along part of the North Brook, as part of the North Brook Trail project. The release of this budget from the Cam River Enhancement Fund is contingent on approval by this committee for Council to maintain this esplanade strip and the establishment of a riparian strip on the property title for public access. This fencing project meets the fencing policy for funding, due to moving an existing functional fence to create a set-back from the waterway.

Completed works

Table 2: Completed works for the Cam River Enhancement Fund in autumn 2022-23

Project description	**Location (waterway)**	**Cost (excl GST)**	**Project manager**
Greens Road (STS1) and Church Bush Road (STS4) sediment trap emptying.	Waituere (Tuahiwi Stream)	$3,900 for STS1 (Hydrotech cost for a recycler truck and $200 spoil disposal fees) $1,503 for Church Bush Road (STS4). Excavator provided by CORDE	Water Environment Advisor
Argillite roading trial for sediment run-off/dust control on Marsh Road, Waikoruru Road and Camside Road intersections	Cam River main stem	$15,000 (fund contribution to full cost)	Roading Engineer
Bank stabilisation and erosion control works	North Brook between Boys Road and Marsh Road	$3,044 Excavator provided by CORDE	Land Drainage Engineer
		TOTAL $23,447	

Sediment Trap Emptying

4.7. An experimental trial of a sucker truck to suck out sediment was used for the emptying of a Greens Road sediment trap (STS1) on the Waituere (Tuahiwi Stream) in late April- early May 2022 (see Figure 4). This was partly due to the preference to not leave sediment to de-water along the road reserve, as is the case if an excavator was used.

4.8. The sucker truck technique was refined during the trial to have one person in the waterway with a wetsuit directing the suction tube, and a spotter who was operating the truck's suction and watching the person in the water (see Figure 5). The trial successfully removed the bulk of the built-up fine sediment (approximately 0.5m silt depth) from the estimated 28m^2 area of the trap within eight hours of work over two days.

4.9. Tuna (eel) trapping was kindly carried out in the stream reach prior to the works by a rūnanga representative on the Waimakariri Water Zone Committee who lives in Tuahiwi to make sure that the truck did not suck up any tuna during the trial.

Figure 4 – The sucker truck that was used for the Greens Road sediment trap emptying trial

Figure 5 – The manual-handling technique for directing the vacuum suction pipe

4.10. An excavator with a silt bucket was used to empty the Church Bush Road sediment trap in May 2022 (see Figure 6). 31 heaped buckets of silt were removed which were estimated to be about 1.5m^3 each, giving an estimated total of 46.5m^3 of silt removed (wet weight).

Figure 6: Removal of sediment from the Church Bush Road sediment trap on the Tuahiwi Stream / Waituere with a silt bucket

4.11. A contrast of the recycler truck and excavator methods for cost effectiveness and potential environmental benefits is provided in Table 3.

Table 3: Contrast of the recycler truck and excavator methods

	Recycler Truck	**Excavator with a silt bucket**
Advantages	Left the road reserve free of spoil Tuna (eel) trapping beforehand, rather than - this takes more time, but could be better handling for the tuna.	Cost effective Faster than the sucker truck to remove silt. The Church Bush Road sediment traps was cleaned out within 2.5 hours (21 or 22 bucket scoops removed)
Disadvantages	More costly Slower method- total time was 6 hours (therefore less can be removed in the 4 hour clarity window of consent CRC195065) Still can dislodge sediment (i.e. vacuum hose needs to be unblocked by running in reverse) Reliant on good weather to be able to bring the recycler truck onto the road reserve.	Eel rescue is required from the spoil afterwards, and tuna could be hurt by the excavator silt bucket. The spoil is required to be left to dewater and then the CORDE team needs to return to transport the spoil away. Some sites might need re-grassing (not needed in this case)

	The truck could get stuck in during wetter weather. Problems with spoil disposal due to being so liquid to contain to a disposal area Reliant on good weather to be able to bring the recycler truck onto the road reserve Health and safety issues to have a person in the waterway – mitigated by safety measures from Hydrotech Ltd.	

Argillite roading trial

4.12. Argillite can be a good roading base in problem areas where there is drainage run-off of sediment fines and dust issues especially. This is the case at the Marsh Road – Waikoruru Road – Lower Camside Road intersection. Argillite was trialled by the WDC Roading Team, with partial funding from the Cam River Enhancement Fund due to the potential to reduce sediment into the waterway (Figure 7). Unfortunately, due to the nature of the product, the trial was unsuccessful. This was due to faster deterioration and increased maintenance costs of repairing the road with cold mix. The road was also unable to be graded for maintenance. This section of road has been reverted mostly back to the original material while still maintaining some argillite properties.

Figure 7: A trial argillite roading section on Waikoruru Road, in the approach to the bridge over the Cam River. Note the argillite has created a hardened surface that prevents erosion of the material and dust into the waterway.

North Brook bank stabilisation

4.13. A willow was removed and the bank was stabilised on the North Brook due to scour of the true left bank (Figure 8).

Figure 8: Site of the willow removal and bank stabilisation on the North Brook before works were carried out.

Implications for Community Wellbeing

There are implications on community wellbeing by the issues and options that are the subject matter of this report. The Cam River and its tributaries will have improved water quality and habitat for indigenous biodiversity, with improved wellbeing for our community who used the waterways for amenity, recreation and mahinga kai.

4.14. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

5.1.1. Te Ngāi Tūāhuriri hapū are likely to be affected by, or have an interest in the subject matter of this report. Therefore this report will be presented and/or circulated at a Te Ngāi Tūāhuriri Rūnanga – WDC meeting.

5.2. Groups and Organisations

5.2.1. There are groups and organisations likely to be affected by, or to have an interest in the subject matter of this report, such as the North Canterbury Fish and Game Council and Department of Conservation who will be consulted about these intended works. North Canterbury Fish and Game and the Department of Conservation were consulted on the strategic review for the Fund in 2021 (TRIM211014166428).

5.2.2. The Cam River Enhancement Fund subcommittee, under which budget allocation was made, was disestablished in 2019. This subcommittee had representation from North Canterbury Fish and Game, Te Ngāi Tūāhuriri Rūnanga, the Cam River Working Party, as well as the agency representatives from the Department of Conservation and Environment Canterbury.

5.3. Wider Community

5.3.1. The wider community is not likely to be affected by, or to have an interest in the subject matter of this report. The wider community has not been specifically consulted on the Cam River Enhancement Fund.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

6.1.1. There are no financial implications of the recommendations sought by this report.

6.1.2. The current budget is $166,000 as of 1 October 2023 which composed of the initial payment from the Environment Court ruling and accrued interest. The proposed spend is $34,000, with remaining funds of $132,000.

6.1.3. This budget is included in the Annual Plan/Long Term Plan 2022-23 as an existing budget that has been is a carried over from previous annual budgets.

.

6.2. Sustainability and Climate Change Impacts

6.2.1. The recommendations in this report do have specific climate change impacts. With the implementation of the Cam River Enhancement Fund projects waterway are intended to move towards being more self-sustaining and resilient to climate change.

6.3. Risk Management

6.3.1. There are not risks arising from the adoption/implementation of the recommendations in this report.

6.4. Health and Safety

6.4.1. There are no specific health and safety risks arising from the adoption/implementation of the recommendations in this report. Suitable safety procedures will also be determined for contractors working within the Cam River main stem or its tributaries when a contractor is confirmed.

7. CONTEXT

7.1. Consistency with Policy

This matter is not matter of significance in terms of the Council's Significance and Engagement Policy.

7.2. Authorising Legislation

7.2.1. Resource Management Act (1991) - Resource consents are issued under this Act.

7.3. Consistency with Community Outcomes

7.3.1. The Council's community outcomes, particularly 'There is a healthy and sustainable environment' relevant to the actions arising from recommendations in this report.

7.4. Authorising Delegations

7.4.1. The Utilities and Roading Committee holds the delegation for the allocation of budget for the Cam River Enhancement Fund.

WAIMAKARIRI DISTRICT COUNCIL

MEMO

FILE NO AND TRIM NO:	DRA-19 / 220124008290
DATE:	24 January 2022
MEMO TO:	Sandra Stewart - Land and Water Committee Chair Gerard Cleary- Utilities and Roading Manager
FROM:	Sophie Allen – Water Environment Advisor
SUBJECT:	**Cam River Enhancement Fund policy for fencing costs**

1. Policy objective

1.1. Any fencing approved under this policy must meet the objective noted in the Environment Court decision that created the Cam River Enhancement Fund, to be used 'for habitat restoration in the Cam River system'.

2. Process and Advice

2.1. Regulations for stock exclusion under Plan Change 7 of the Canterbury Land and Water Regional Plan and the RMA Stock Exclusion Regulations (2020) shall be discussed with the landowner and/or stock controller. Cam River Enhancement Fund projects should meet or exceed stock exclusion requirements.

2.2. Land management practices shall be reviewed holistically by the landowner and/or stock controller (with the support of WDC or Environment Canterbury staff), with fencing proposed alongside other good management practices (GMP). GMP proposed could be incorporated into a farm environment plan, small block management plan, or freshwater management plan for example.

2.3. Waimakariri District Council staff shall seek advice and input from Environment Canterbury land management staff regarding proposed fencing projects.

2.4. Waimakariri District Council staff will present fencing projects to the Land and Water Committee (or delegated representatives of the Committee) for approval, detailing how the project meets the policy objective 'for habitat restoration in the Cam River system', estimated fencing cost, proportional cost to WDC, and any associated planting.

2.5. WDC shall sign a written agreement, such as a memorandum of understanding (MOU) with the landowner and/or stock controller before carrying out the fencing project. This shall state that the fencing shall be a 'permanent fence' with the minimum requirements defined by the RMA stock exclusion regulations (2020) to be:

2.5.1. a post and batten fence with driven or dug fence posts; or

2.5.2. an electric fence with at least 2 electrified wires and driven or dug fence posts; or

2.5.3. a deer fence.

3. Fencing Criteria

3.1. WDC staff request the discretion to fund up to 100% of reasonable fencing costs if:

3.1.1. Movement of an existing and 'functional' fence is required in order to achieve the required setback or stock exclusion for a Cam River Enhancement Fund project. 'Functional' is defined as meeting Canterbury Land and Water Regional Plan (LWRP) stock exclusion rules (including Plan Change 7).

3.1.1.1. An exemption (requiring individual negotiation) is if a fence is currently not on a correct property boundary.

3.2. WDC staff request the discretion to be able to fund up to 100% of reasonable fencing costs for a new fence if:

3.2.1. A fence is required for effectiveness of a Cam River Enhancement Fund project, but fencing is **not** required under Plan Change 7 of the Land and Water Regional Plan stock exclusion rules or RMA Stock Exclusion Regulations (2020). (e.g. installation of sheep fencing to prevent grazing of plants) and/or

3.2.2. A significant setback from the waterway will be created that is not required by the Land and Water Regional Plan (including Plan Change 7) or the RMA Stock Exclusion Regulations (2020).

3.3. WDC staff request the discretion to be able to fund up to 50% of reasonable fencing costs if a new fence is required that is on a shared property boundary with WDC-owned land.

3.4. WDC staff proposes to not fundthe fencing costs (i.e. 0%) if a new fence or fence upgrade is required under Plan Change 7 Land and Water Regional Plan stock exclusion rules or RMA Stock Exclusion Regulations (2020). Under Plan Change 7 fencing of artificial watercourses is required in some cases in the Waimakariri Water Zone.

3.4.1. An exemption to 3.4 above: WDC staff request the discretion to be able to fund up to 100% of reasonable fencing costs for a new fence (even if a new fence or fence upgrade is required under Plan Change 7 Land and Water Regional Plan stock exclusion rules) if:

3.4.1.1. A property has been disadvantaged from development due to current or historic discriminatory legislation and/or regulations relating to Māori-owned land since the signing of te Tiriti o Waitangi. Consideration to who the stock owner is, and whether they have the ability to fund fencing will also be taken into account by WDC staff.

3.5. WDC staff request the discretion to not move a fence to obtain the RMA Stock Exclusion Regulations (2020) setback of 3m if:

3.5.1. There is an existing permanent fence that is of good condition that was in place before 3 September 2020;

3.5.2. A landowner is not willing to move a fence line to the ideal desired setback distance.