

ASHBURTON WATER MANAGEMENT ZONE COMMITTEE AGENDA

A **Meeting** of the Ashburton Water Management Zone Committee will be held as follows:

DATE: Tuesday 22 March 2022

TIME: 1:00 pm

VENUE: via MS Teams

MEETING CALLED BY: Hamish Riach, Chief Executive, Ashburton District Council
Stefanie Rixecker, Chief Executive, Environment Canterbury

ATTENDEES: Chris Allen
Adi Avnit
Clare Buchanan
Angela Cushnie
Genevieve de Spa
Bill Thomas
Sidinei Teixeira
James Meager (Te Runanga o Arowhenua)
Arapata Reuben (Te Ngai Tuahuriri Runanga)
Les Wanhalla (Te Taumutu Runanga)
Brad Waldon-Gibbons (Tangata Whenua Facilitator)
Councillor Stuart Wilson (Ashburton District Council)
Councillor Ian Mackenzie (Environment Canterbury)
Mayor Neil Brown (Ashburton District Council)

Zone Facilitator

Dave Moore

Tel: 027 604 3908

dave.moore@ecan.govt.nz

Environment Canterbury

Committee Advisor

Carol McAtamney

Tel: 307 9645

carol.mcatamney@adc.govt.nz

Ashburton District Council

Tangata Whenua Facilitator

Brad Waldon-Gibbons

Tel: 027 313 4786

brad.waldon-gibbons@ecan.govt.nz

Environment Canterbury



4 Register of Interests

Representative's Name and Interest	
Chris Allen	Farm owner of sheep, beef, lambs, crop Water resource consents to take water from tributary of Ashburton River and shallow wells National board member Federated Farmers of New Zealand with responsibility for RMA, water and biodiversity Member of Ashburton River Liaison Group
Adi Avnit	Mid Canterbury Community Vehicle Trust - Treasurer
Clare Buchanan	Head of Environment & Innovation at Align Farm Align Farms holds an irrigation resource consent to take water from shallow wells hydraulically linked to the Ashburton river Align Farms holds MHV water and Fonterra Shares Align Farms suffered significant flood damage on their support block
Neil Brown	Mayor Acton Irrigation Limited - Director Irrigo Centre Limited - Director Acton Farmers Irrigation Co-operative Limited - Director Browns Farm Limited – Director and Shareholder
Angela Cushnie	Owner of Country Copy, a communication and promotion business based in Mid Canterbury Kanuka Mid Canterbury Regeneration Trust - Trustee Hinds Reserve Board Committee member Community Catchment Groups
Genevieve de Spa	Owner of Kakariki Camps focusing on 'Head, Hands, Heart' approach to biodiversity education Contractor and member of Staveley Campsite Committee (Previous recipient of Immediate Steps Funding) Rakaia Environmental Enhancement Trust
Ian MacKenzie	Environment Canterbury Councillor
Arapata Reuben	Trustee – Tuhono Trust Trustee – Mana Waitaha Charitable Trust Member - National Kiwi Recovery Group Rūnanga Rep – Christchurch – West Melton Water Zone Committee
Bill Thomas	Farm owner of Longbeach Estate Ltd (sheep, beef, lambs, arable, dairy) Member of Eiffelton Irrigation Scheme Hekeao/Hinds Water Enhancement Trust – Settler Director of Longbeach Estate & Longbeach Dairies
Sidinei Teixeira	Chemistry Teacher at Christ's College Master student at Lincoln University Studying Masters in Water Resource Management Intern at MHV Water (groundwater scientist) Past Head of Scient at Mt Hutt College Passionate about use of natural resources sustainability
Les Wanhalla	Returning good health and mauri O Te Waihora/Lake Ellesmere Kaitiakitanga, Whakapapa Rugby league, life member, honorary south Kiwi Trustee – Central Plains Water for Selwyn District Council
Stuart Wilson	Ashburton District Councillor A son who is a Director of Mayfield Hinds Irrigation Co and Chair of RDR

5 Confirmation of Minutes

Unconfirmed Minutes

Minutes of a meeting of the **Ashburton Water Management Zone Committee** held on Tuesday 22 February 2022, commencing at 1:00 pm in the Council Chamber, 137 Havelock Street, Ashburton.

Present

Mayor Neil Brown, Councillor Stuart Wilson, Bill Thomas (Chair), Chris Allen (via MS Teams), Adi Avnit, Clare Buchanan (via MS Teams), Angela Cushnie, Genevieve de Spa (via MS Teams), Ian Mackenzie, James Meager, Sidinei Teixeira, and Les Wanhalla.

In attendance

Environment Canterbury: Dave Moore (Facilitator) and Carol McAtamney (minutes)

5 members of the public in attendance (Councillor Lynette Lovett)

1 Welcome

Dave Moore opened the meeting with a Karakia.

A welcome was extended to James Meager who has been appointed as the Te Runanga o Arowhenua representative.

The passing of Peter Ramsden was acknowledged with a minute silence. Mr Ramsden was made a member of the New Zealand Order of Merit in 2020 for his services to conservation and he represented the Iwi on the Canterbury Aoraki Conservation Board and the Environment Canterbury Water Zone Committee.

2 Apologies

Nil.

3 Extraordinary Business

Nil.

4 Register of Interests

Angela Cushnie

- remove Freelance writer for Latitude Magazine

Sidinei Teixeira

- Chemistry Teacher at Christ's College
- Current master student at Lincoln University studying Masters in Water Resource Management
- Intern at MHV Water (Groundwater Scientist)
- Past Head of Science at Mt Hutt College
- Passionate about use of natural resources sustainability

5 Confirmation of Minutes

That the minutes of the Ashburton Water Management Zone Committee meeting held on 26 October 2021 be taken as read and confirmed.

Cushnie/Thomas

Carried

Amendment - 1 member of the public was in attendance

6.1 Matters Arising

Nil.

6 Correspondence

Inward:

Nil.

Outward:

Nil.

7 Public Contributions

Nil.

8 Committee Updates – Dave Moore

Hekeoa Hinds Water Enhancement Trust

The Hekeoa Hinds Water Enhancement Trust are currently designing and consenting two further NRR sites. As part of these developments there is significant opportunity for a new native plantings at the site. HHWET have indicated they would appreciate an opportunity at an upcoming Zone Committee meeting to discuss funding opportunities.

9 Update on work to restoring the mauri of Ōtuwharekai (Ashburton Lakes) - (Judith Earl Goulet – Ecan, via MS Teams)

Water Quality Monitoring

- Recreational season lake water quality (Dec – April)
- Monthly intensive on-lake monitoring Lake Heron & Lake Clearwater
- Continuous monitoring equipment in Lake Heron and Lake Clearwater to monitoring oxygen dynamics near lakebed
- Level loggers in Lakes Emma & Camp
- Nitrate logger installed on Gentleman Smith Stream
- Clearwater inflow monitoring (Dec – April)
- Groundwater monitoring at Clearwater settlement - piezometers installed week of 21 February
- Lake aquatic plants survey due to start

On Farm High Nutrient loss risk assessment

- Working with four stations to understand the relationship between sensitive areas prone to nutrient loss and land management activities.
- Work with landholders to identify change in land management to reduce nutrient loss

Support and take a leadership role in partnership with Rūnanga to see action taken to improve water quality of the waterbodies in Ōtuwharekai.

- Support the collective engagement and collaboration across agencies and groups who have a statutory or land management role in the catchment
- Project management support for the Ōtuwharekai working group and the Ōtuwharekai Officials group

Ōtuwharekai Working Group meets monthly and currently composed of: Rūnanga (Arowhenua, Te Taumutu and Te Ngāi Tūāhuriri), Te Rūnanga o Ngāi Tahu, CSI F&G, DoC, LINZ, ADC, ECan, Farmers, MfE and MPI.

Discussions were held on the possible appointment of a Clearwater Hut Holders Association representative onto the working group. It was also discussed as to whether this representative could be seconded onto the Zone Committee.

Zone Committee Terms of Reference state:

Point 9 – Any Committee may co-opt such other expert or advisory members as it deems necessary to ensure it's able to achieve its purpose. Any such co-option will be on a non-voting basis.

Mayor Brown suggested this be considered by Ashburton District Council before any decision is made.

10 River Rating and Environment Canterbury Annual Plan

- Consultation document for ECAN annual plan to be signed off on Thursday.
- Specific proposal for Ashburton river rating district. Plan proposes a review of classification system for river rating to ensure that those who benefit from stopbank protection are fairly contributing to the costs.
- This was as a result of a request by the River Rating Liaison Committee for Ecan staff to review the Ashburton River Rating scheme and report back with recommendations.
- Ecan collects \$15m per year to fund river protection, which pays to maintain \$650m of river protection infrastructure which in turn protects \$110b of private and public assets across the Canterbury region. This reflects a very effective investment return in river protection infrastructure.

11 Mid Canterbury Catchment Collective Funding (Duncan Barr/Everett/David Acland, via MS Teams)

Angela Cushnie, as the Coordinator of the Mid Canterbury Catchment Collective, declared a conflict of interest and removed herself from the table/discussion.

Mayor Neil Brown departed the meeting at 1.50pm.

An update was given on the establishment of the Mid Canterbury Catchment Collective and a request was made for the Zone Committee to consider an application for seed funding of \$45,000, across four months, broken into three specific categories:

- Catchment Coordination, Strategy, Marketing and Administration - \$30,000
- MCCC Science – What do we know and where are the gaps? - \$5,000
- Community Water Testing Case Study - \$10,000

It was agreed to listen to other funding requests and discuss all requests later in the meeting.

12 Wakanui/Whakanui Working Group Update (including funding request)

Group are undertaking weeding, planting, walkway/carved centrepiece pole to mark the significance of the historical site. Plans also include limiting vehicle access by erecting signage and blocking access for vehicles to sensitive areas.

Requesting Zone Committee to consider underwriting a total of up to \$2,000 to enable the purchase of 500 plants to plant at Matariki.

13 Hekeao Constructed Wetland – Mel Brooks Objectives:

- To increase biodiversity with appropriate plantings

- To create habitat for native fish species
- Test the DairyNZ CW guidance for use in Mid Canterbury so it can be reproduced at other sites in the catchment
- Provide access for the community to visit the Construct Wetland
- Test substrate and construction options to optimise cost and maximise denitrification
- Provide real time nitrate data available on line
- Looking to see if there was an appetite for the Zone Committee to assist going forward.

Requesting funding of \$20,000 to purchase sensors, which would enable data to be available live online.

14 Zone Committee Action Plan Budget

The Zone Committee has a budget of \$50,000 for implementing its Action Plan. These funds need to be allocated by the end of June 2022

Agreed: That the Zone Committee recommend the allocation of funding:

- Mid Canterbury Catchment Group - \$30,000 to assist with the costs associated to funding a Co-ordinator role
- Wakanui/Whakanui Working Group - \$2,000 to underwrite the purchase of 500 plants
- Hekeao Constructed Wetland - \$10,000 to purchase sensors

McKenzie/Allan

Carried

15 Other Business

Next meeting

The next meeting of the Ashburton Water Zone Committee will be held in the Ashburton District Council Chamber at 1:00pm on Tuesday 22 March 2022.

The meeting closed at 3.21pm with a Karakia by Genevieve de Spa.

Dated this 22nd day of March 2022 _____ (Chair)

HUI/MEETING: Ashburton Zone Committee	
AGENDA ITEM NO: 8	KAUPAPA/SUBJECT: HHWET Update and Next Steps
KAITUHI/AUTHOR: Brett Painter, Project Leader, CWMS	WĀ/MEETING DATE: 22 March 2022

Purpose

To update the Committee on Hekeao / Hinds Water Enhancement Trust's programme of work and future projects, including a request for the Zone Committee to consider funding towards the proposed Near River Recharge (NNNR3) / mahinga kai site at Winslow Road.

Recommendation

The Zone Committee receive the update and considers the funding request.

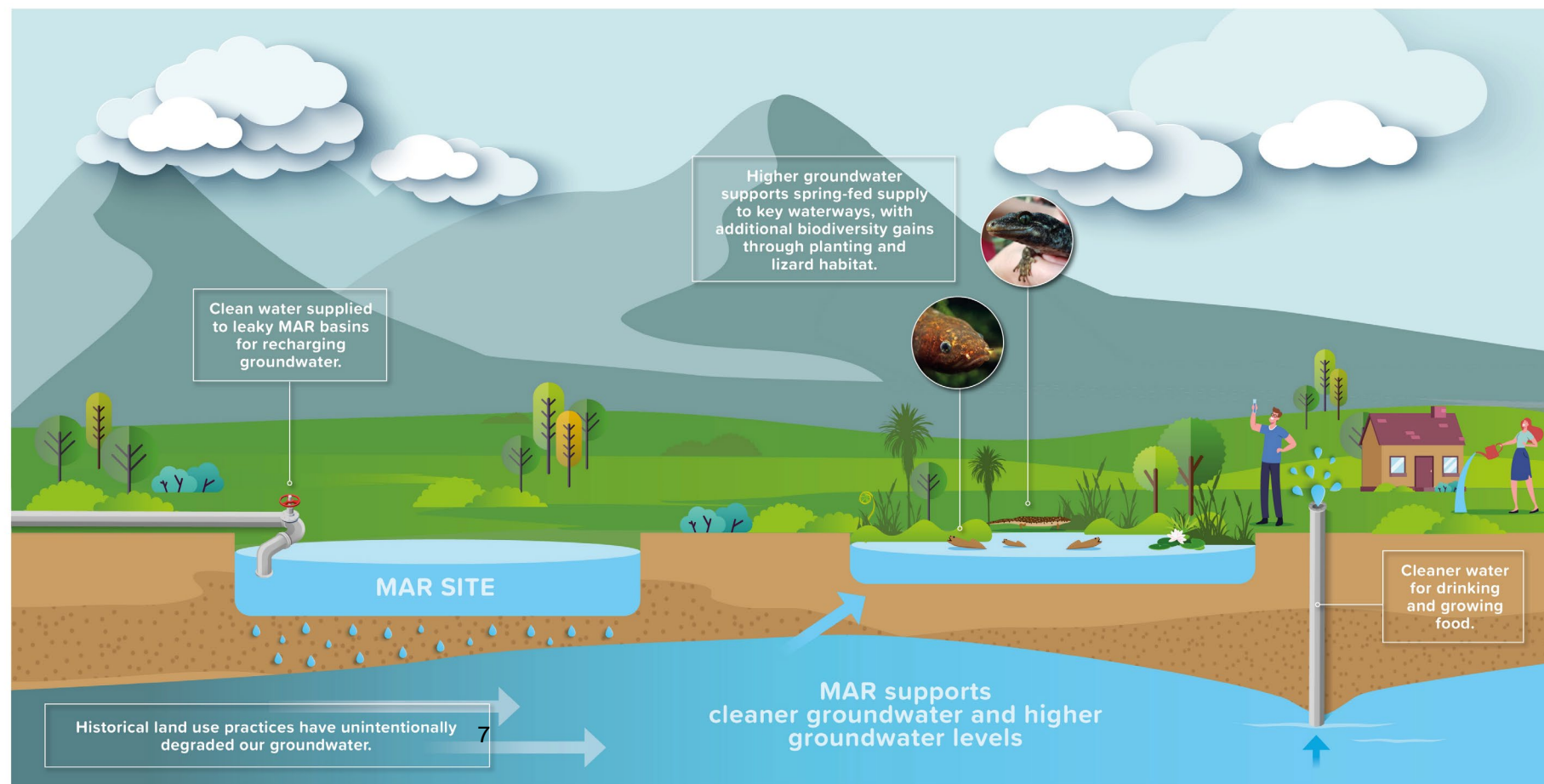
Presentation attached.

Hekeao/Hinds Water Enhancement Trust



Update and next steps (March 2022)

www.hhwet.org.nz



Key tools for improving the eco-system health of Hekeao / Hinds Plains freshwater systems

Reduce

- Intensification
- Nutrient leaching
- Water distribution system losses
- Inefficiencies in irrigation infrastructure
- Unsustainable allocation

Recycle

- Nutrient recycling

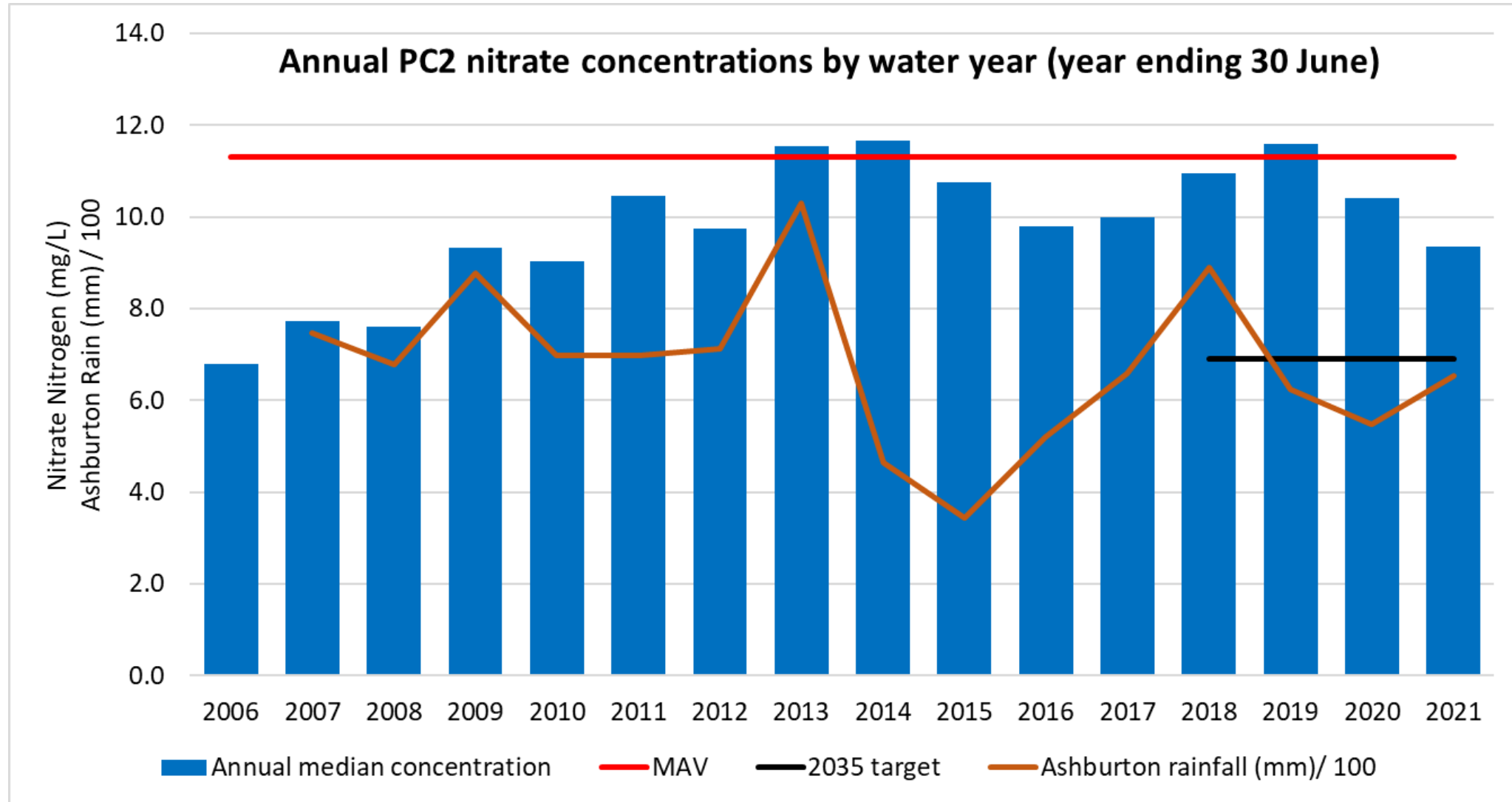
Rehabilitate

- Targeted Stream Augmentation
- Constructed wetlands and bioreactors
- Managed Aquifer Recharge
- Near River Recharge



Hekeao Hinds Nitrate-N concentration progress and PC2 target

(Key contributing change factors – rainfall, land use management, MAR)



Nutrient recycling

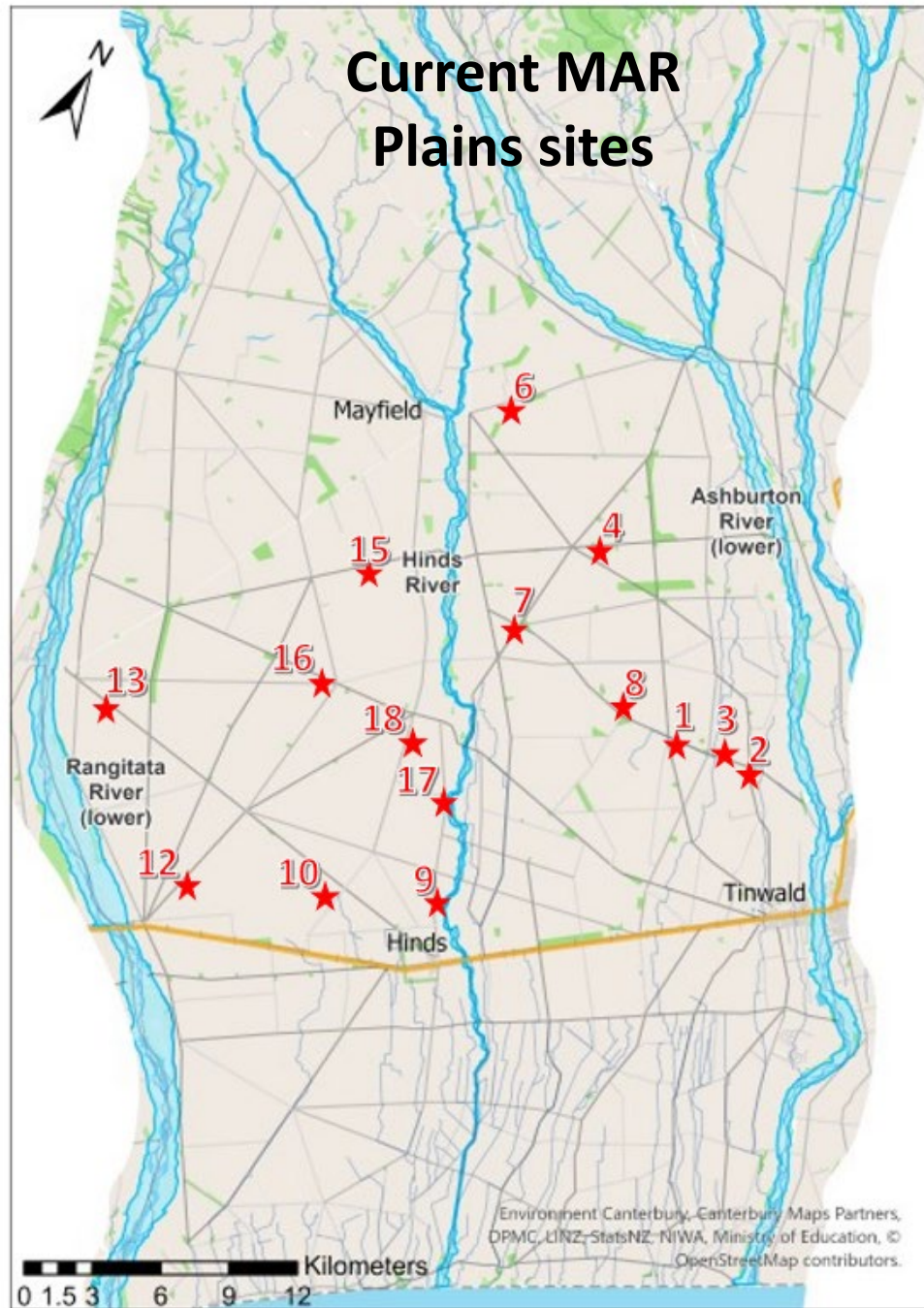
- The Nutrient recycling workstream focuses on supporting the incorporation of groundwater irrigation water nutrients in on-farm fertiliser management.
- The need for this was established in Stewart & Aitchison-Earl (2020) “Irrigation return flow causing a nitrate hotspot and denitrification imprints in groundwater at Tinwald”.
- HHWET have worked with Agribusiness consultants to develop case studies for pasture and mixed cropping situations. These will be discussed with groundwater irrigators as soon as the COVID-19 situation allows.
- **Opportunities:**
 - Lowering groundwater nutrient concentrations without new water, consents, etc
 - Lowering the amount and cost of external fertiliser
- **Challenges**
 - Increased monitoring and analysis costs (not currently required through OVERSEER™)
 - Groundwater irrigation only covers part of the Hekeao Hinds Plains
 - Large number of independent irrigators, with individual situations
 - Groundwater irrigators are likely to have an established relationship with their fertiliser representatives, who may see this concept as a challenge to their¹⁰ business

Targeted Stream Augmentation, constructed wetlands and bioreactors

- MHV Water leading O'Shaunessy's Drain constructed wetland trial. Further trials (including bioreactors where appropriate) to follow.
- Preliminary Business Case complete for Eiffelton TSA Trial (to be updated late 2022)
 - Gross Return on Capital for this system of ~11%
 - Payback period of ~9 years
 - Life of the array is expected to be 30-40 years
- Further solar powered TSA sites to follow



Eiffelton TSA1 solar panels



MAR Race



MAR plains sites

Focus areas

1. Shallow groundwater up-gradient from lowland springs
2. High nitrate groundwater in the wider catchment (based on monitoring of >150 bores)



MAR¹² Test Site

MAR Basin

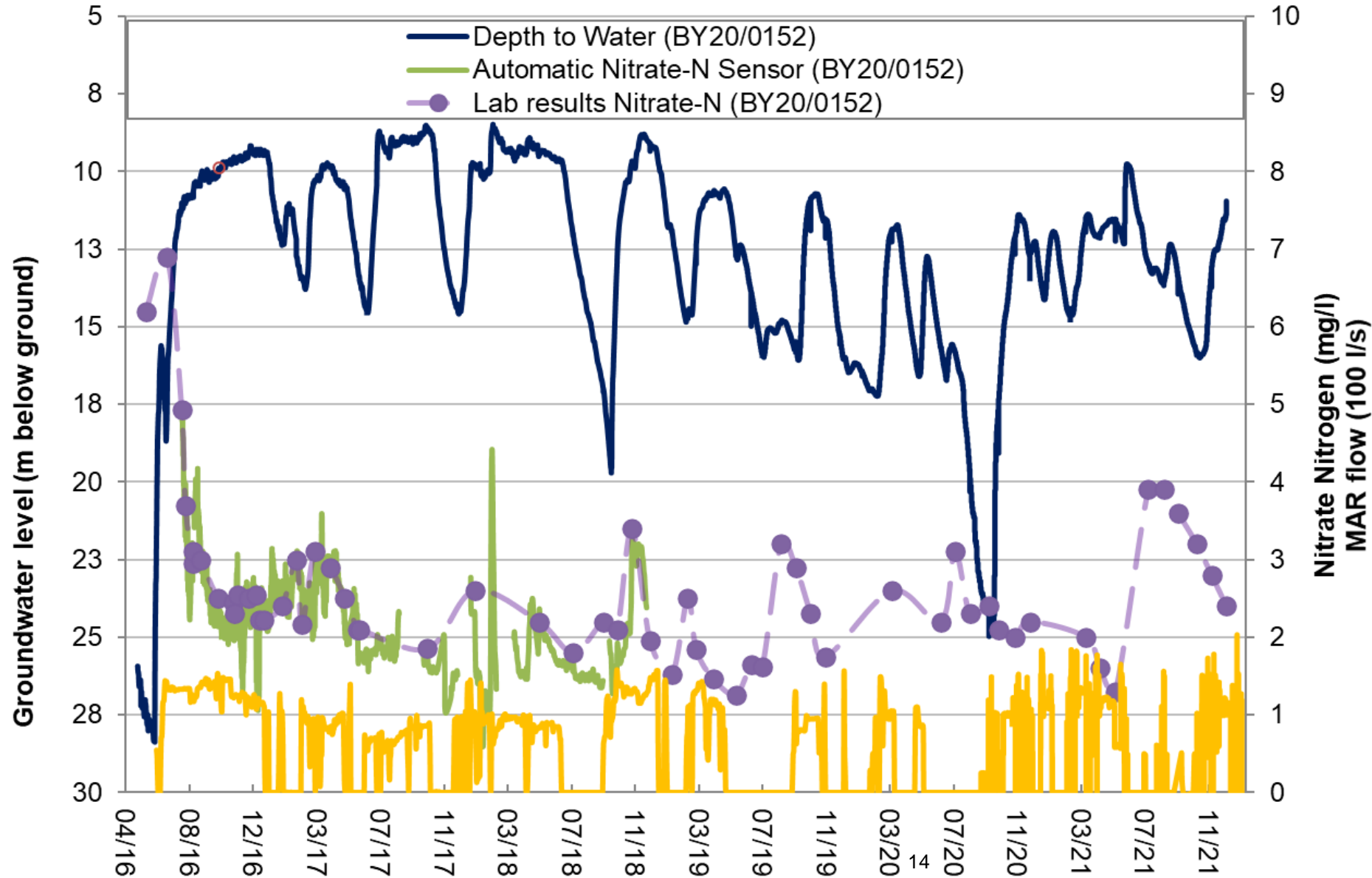


MAR & NRR Trial progress (PC2 2035 Target ~ 126 M m³ p.a.)

	Recharge Volume (M m ³)	Max total recharge flow (l/s)	Consented flow (l/s)	# tested sites	
Year 1 (June 2016 – May 2017)	2.4	100	500	1	11 week Pilot Site shutdown for maintenance and supply restrictions
Year 2 (June 2017 – May 2018)	2.2	220	500	7	11 week Pilot Site shutdown for maintenance and supply restrictions
Year 3 (June 2018 – May 2019)	5.5	485	500	12	11 week Pilot Site shutdown for construction
Year 4 (June 2019 – May 2020)	8.2	1195	500	17	13 week shutdown for Rangitata floods and COVID-19
Year 5 (June 2020 – May 2021)	13.8	1195	500	17	Winter 2021 shutdowns post-flooding and for distribution maintenance

Proof of concept – MAR01 - Lagmhor Pilot Site

(monitoring bore BY20/0152, 29 m deep and 1 km down-gradient)



PRE-MAR:

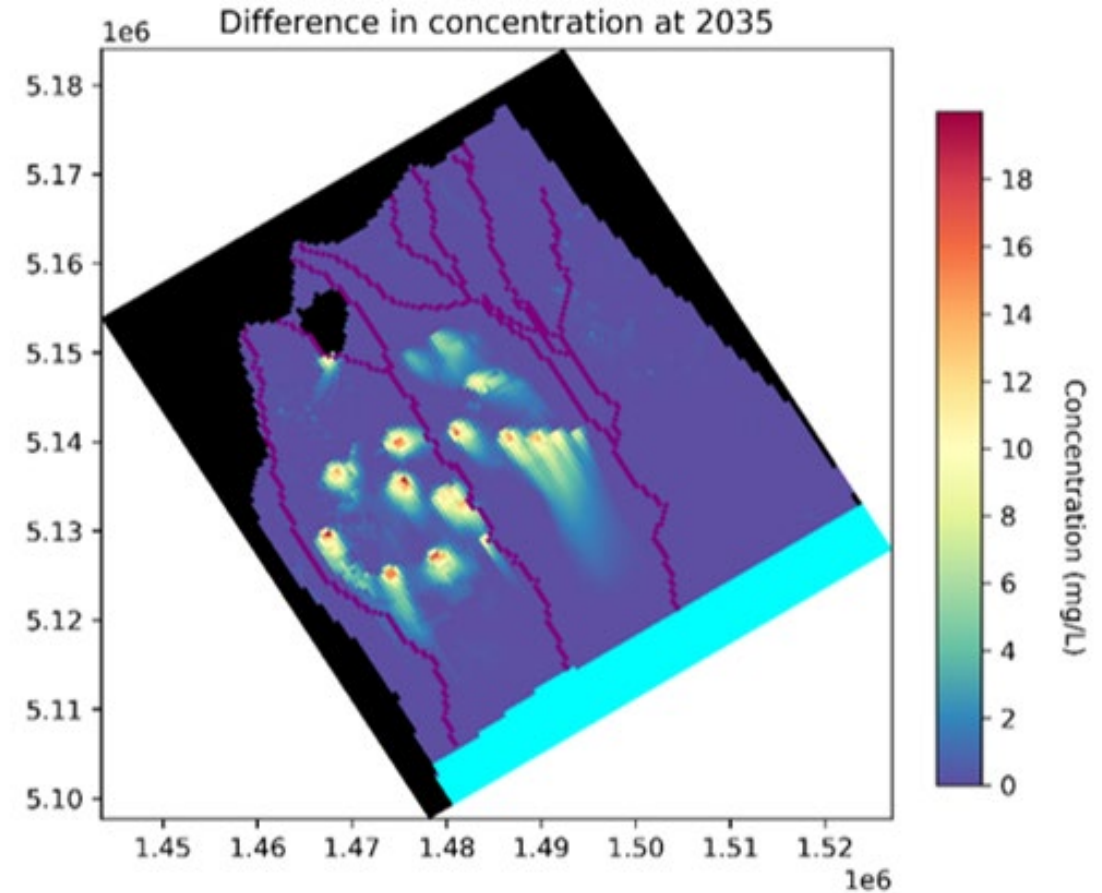
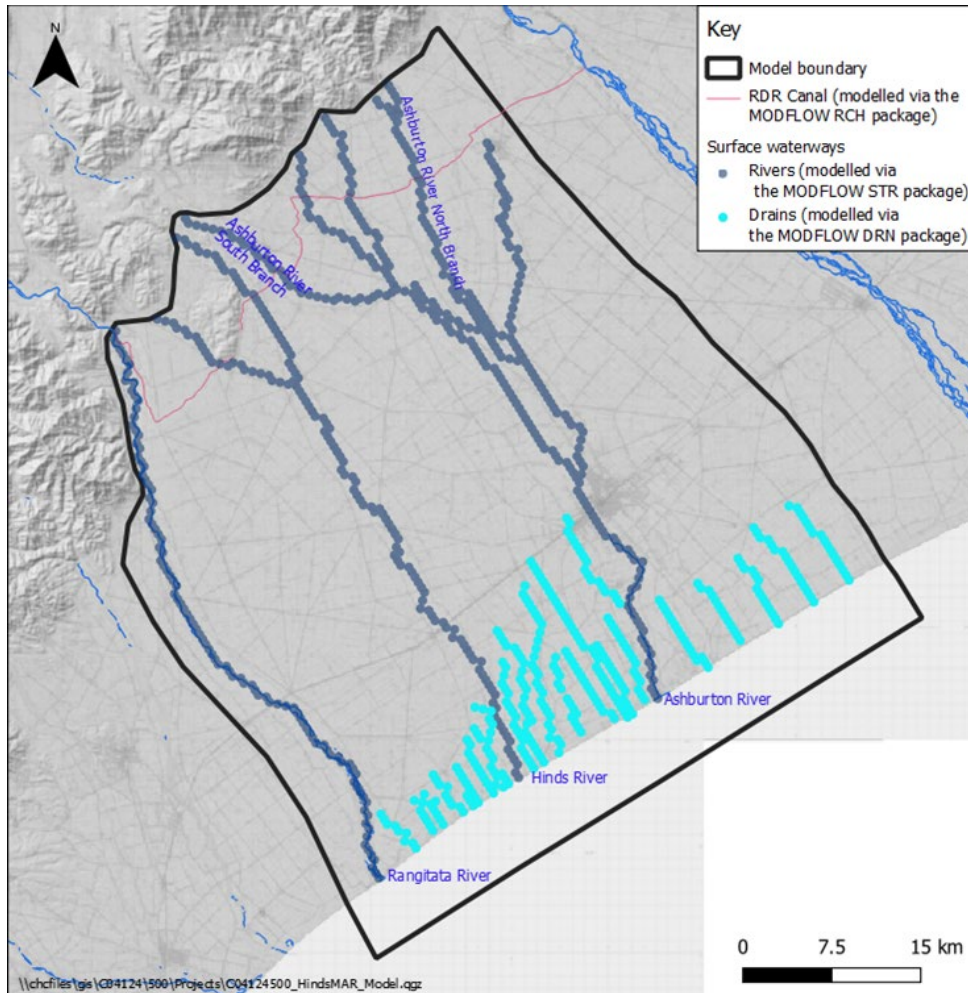
- Groundwater nitrate-N 6-7 mg/l

ACHIEVEMENTS:

- Fast groundwater level response to MAR
- Post MAR nitrate-N 1.2-2.2 mg/l when operational and up to 4 mg/l otherwise

Hekeao Hinds Plains Computer Model

- First detailed computer model of Hekeao Hinds Plains ground and surface water systems
- Uses monitoring & analysis from MAR results to date. Allows results to be upscaled and projected into the future
- Currently running cumulative assessments of current and potential MAR sites for design and consenting processes



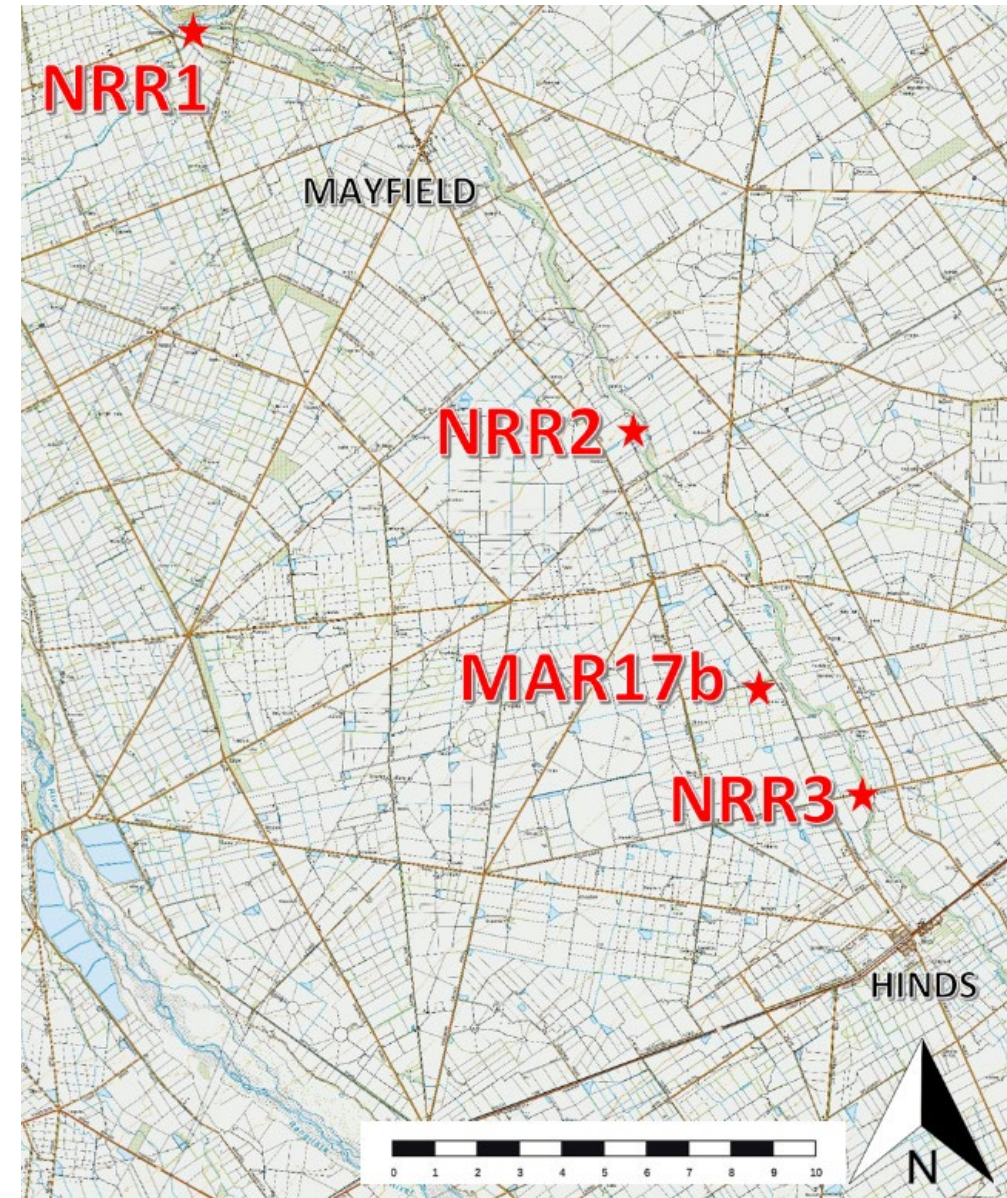
Example model output projecting current site results out to 2035

Near River Recharge (NRR)

AIM: To assist in improving the eco-system health of the whole Hekeao/Hinds River system, including assisting the PC2 2035 annual median target of 3.8 mg/l nitrate-N in the lower Hekeao Hinds River.

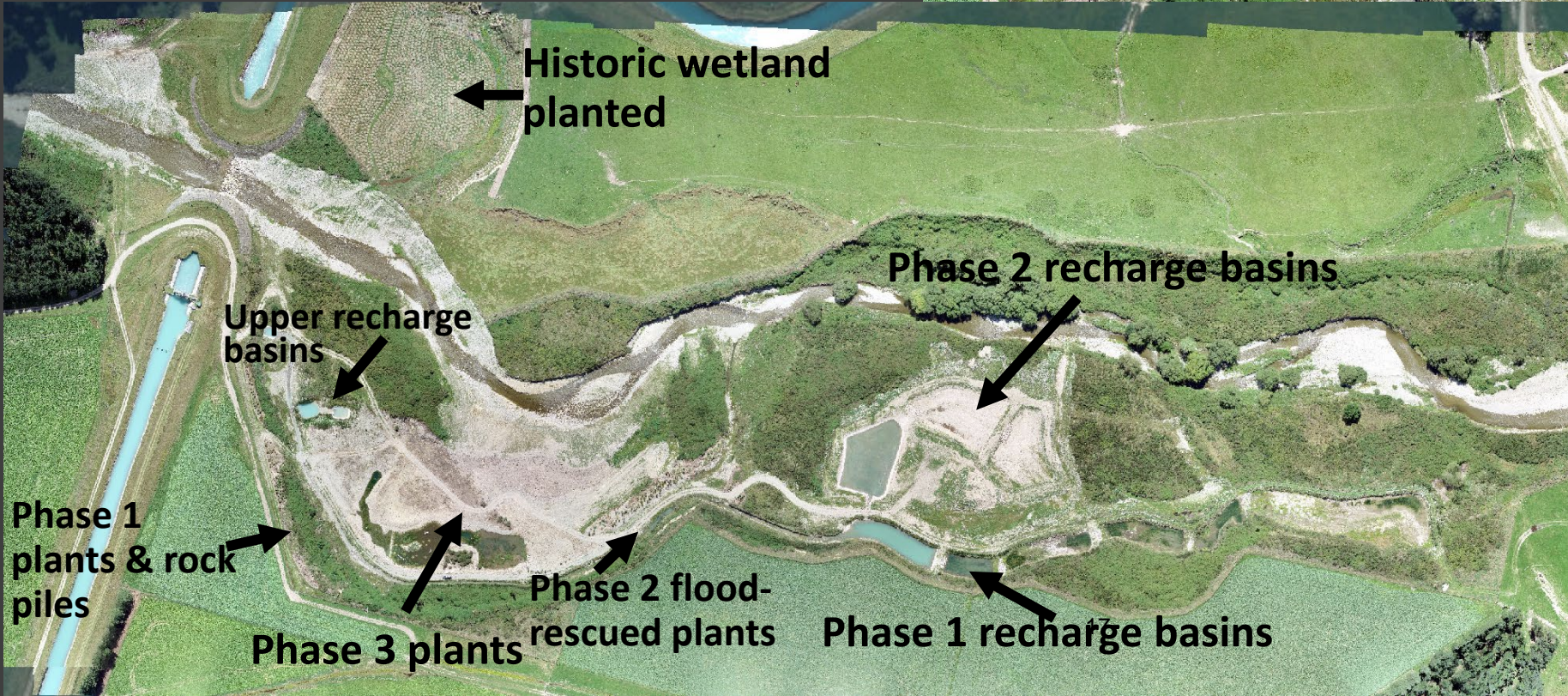
ACHIEVEMENTS:

- Two active sites and two more under development
- Increased flowing reaches with high quality water
- Increased fish populations
- DOC covenant for lizards
- DOC transfer permit for Kōwaro / Canterbury mudfish
- New native plantings



NRR1 – South Hinds

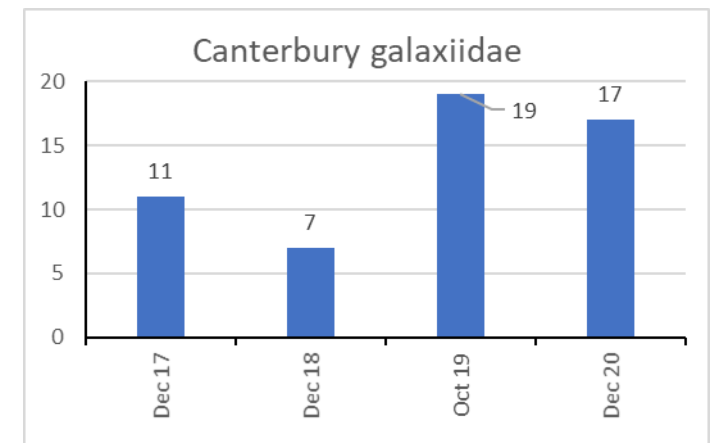
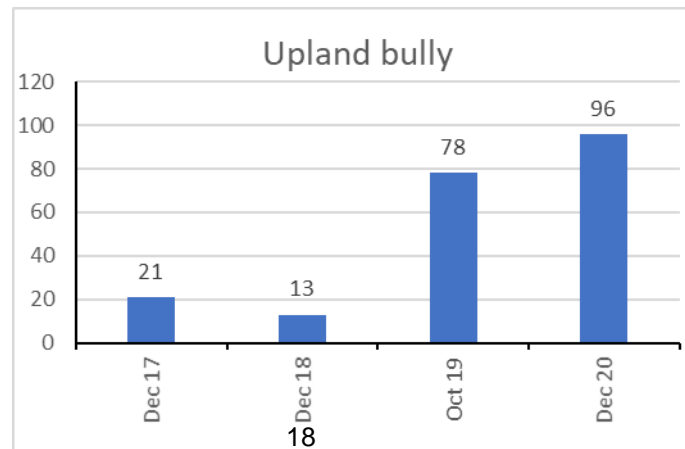
- Upgraded from 200 – 400 l/s following June 2021 floods
- 9500 native plants added over 3 phases
- Management Plan for Kōwaro wetland being implemented



NRR1 - South Branch Hekeao Hinds River

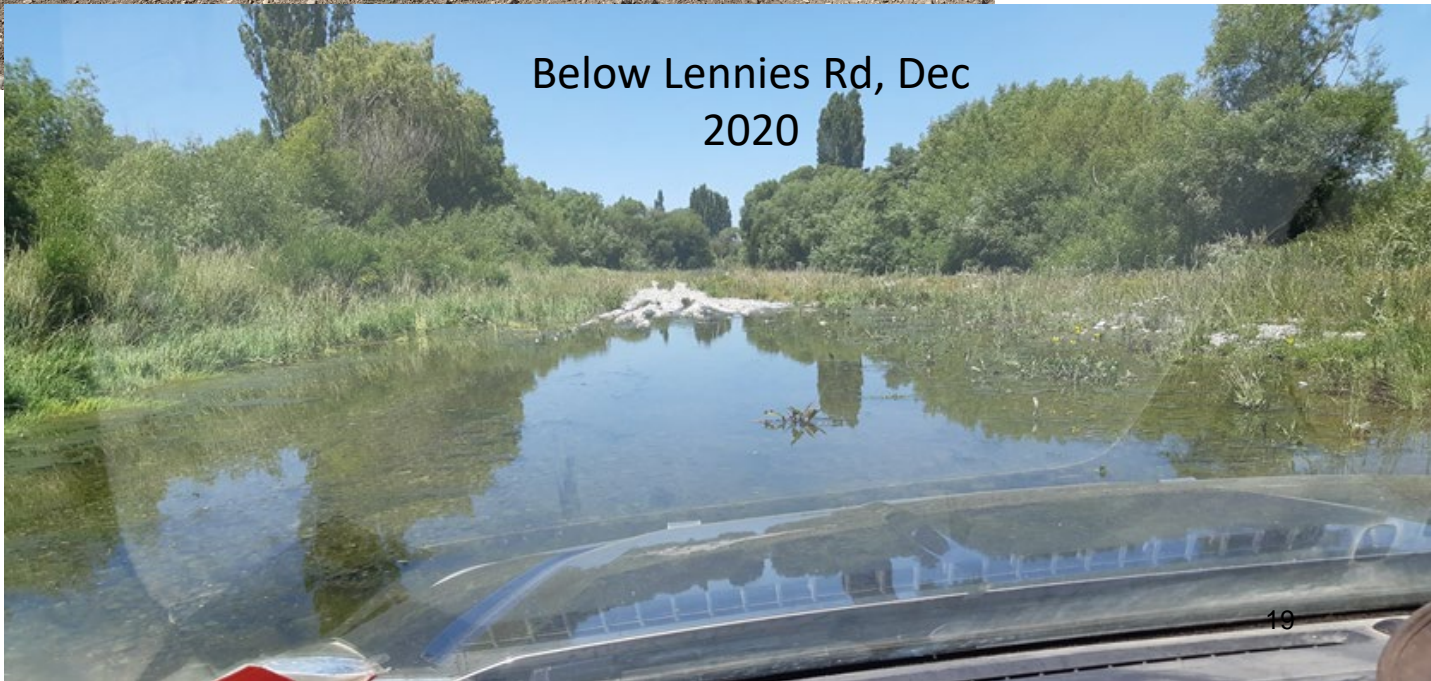
- 2018-2021: 68% increase in median flow of downstream river reach due to NRR1 recharge
- The proportion of time the reach is flowing at less than 50 l/s has also reduced from 33% to 6%
- Enhanced flows also in neighbouring Silverstream
- DOC Covenant plantings have completed their maintenance period with very high survival rates
- NRR1-supported wetland approved by DOC for Kōwaro / Canterbury mudfish when Wetland Management Plan has been completed

**Lower Downs Rd Bridge
(downstream) annual fish
population estimates per 30
lineal metres, 2017 – 2020**
(1 longfin eel also found in 2018 survey
and 2 brown trout in separate 2019
survey)



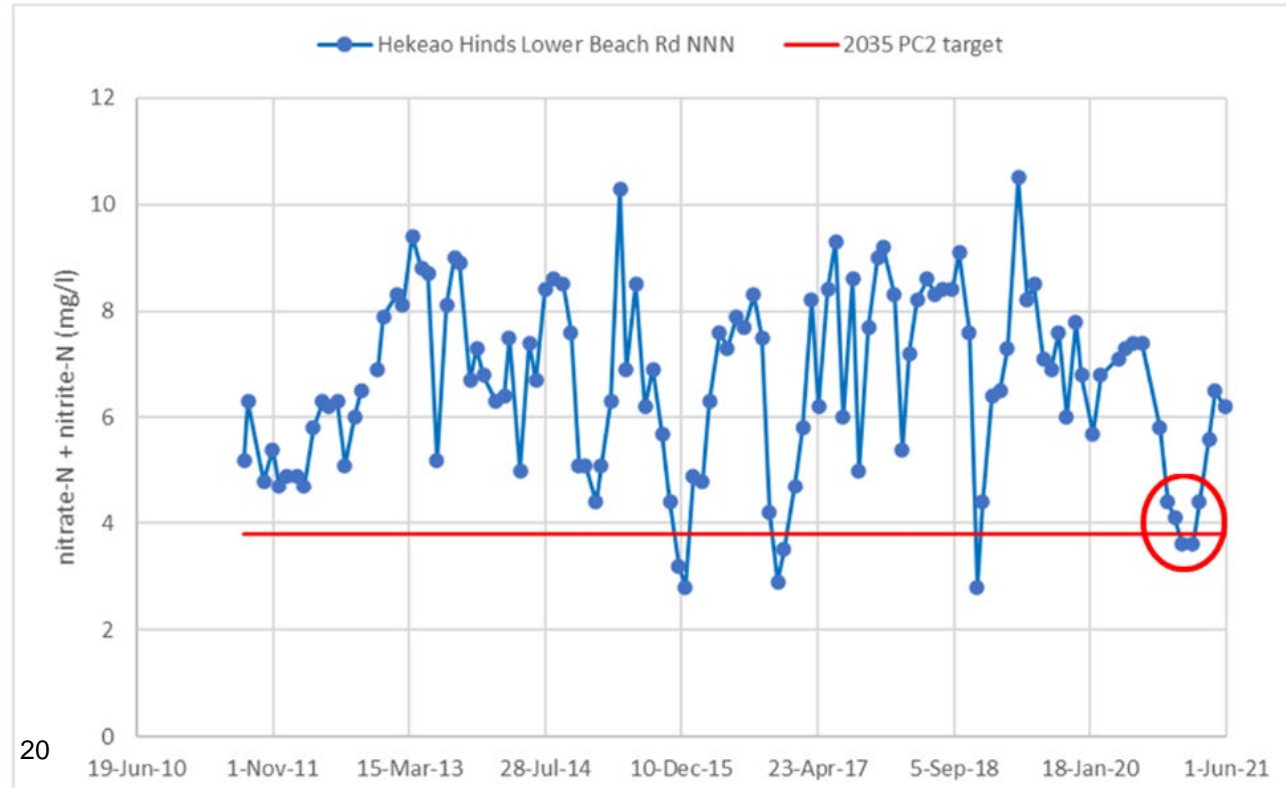
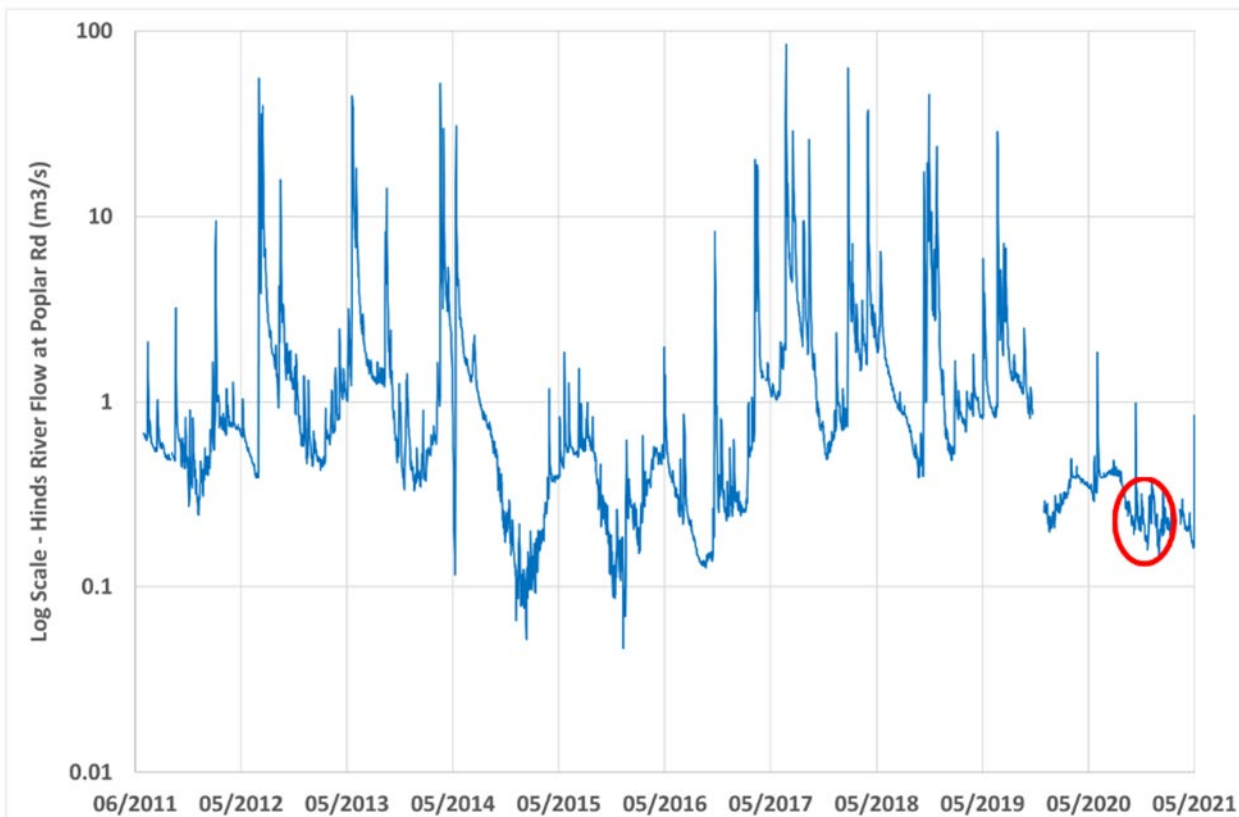
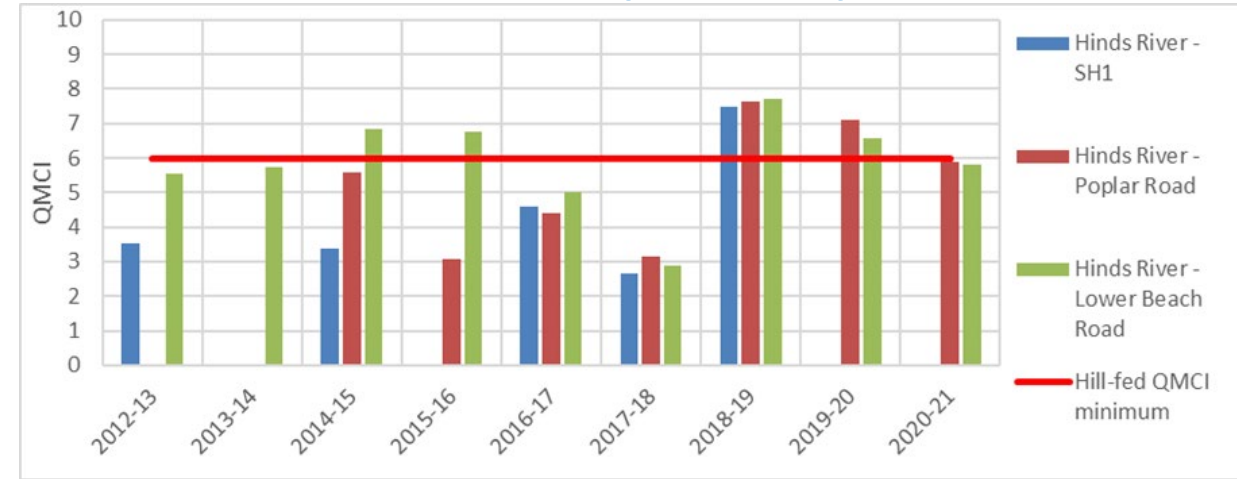
MAR17b, Lennies Rd

- Flow direction toward Hekeao Hinds River
- 1000 native plants donated by Synlait planted in Spring 2021
- December 2020 survey
 - No Hekeao Hinds River flow adjacent to Lennies Rd and low groundwater levels
 - Flow emerged down-gradient from Lennies Rd and continued for at least 6 km to below Winslow Rd



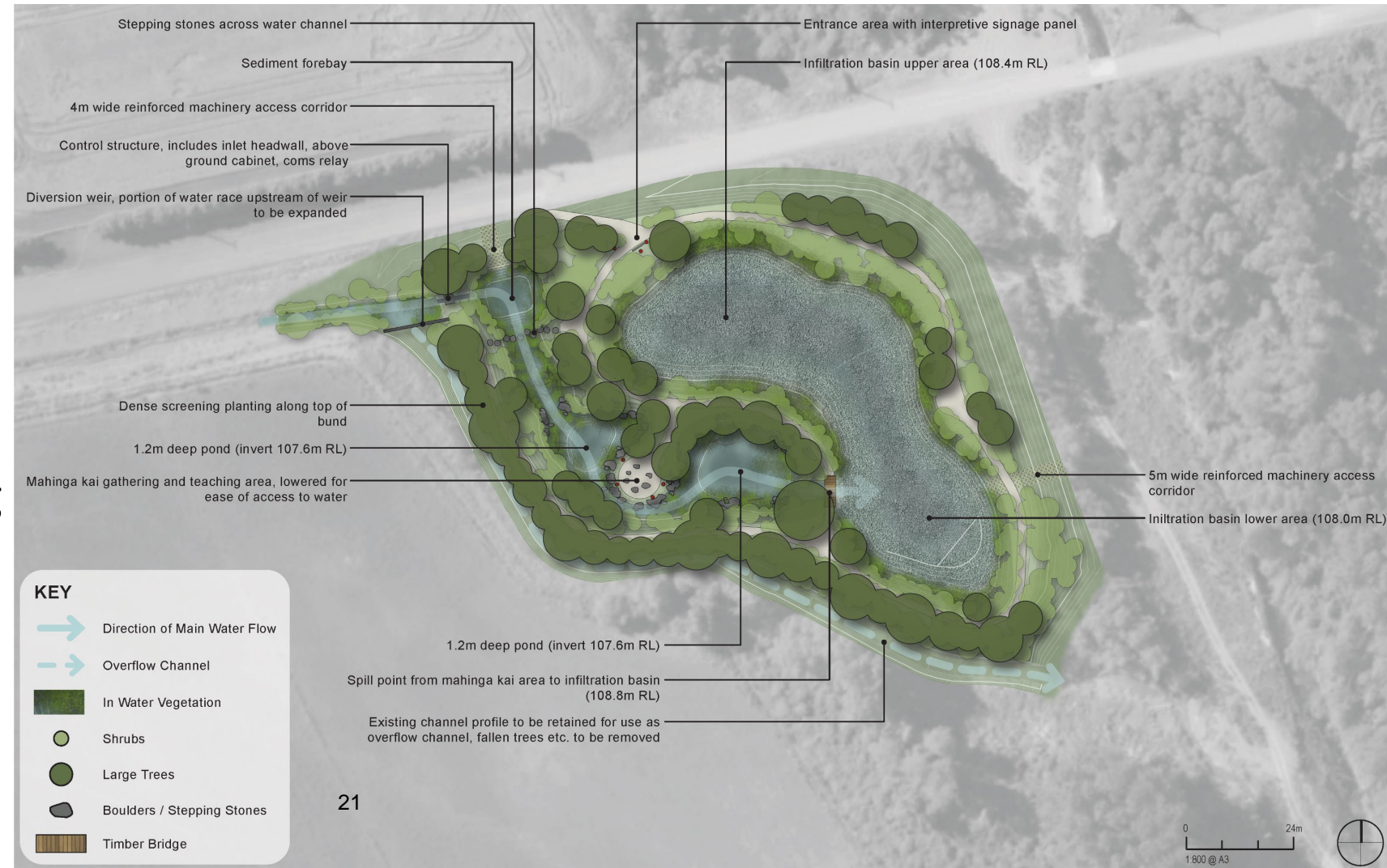
Lower Hekeao Hinds River flow and quality

- QMCI at or near PC2 2035 Target for 2018-21.
- Water quality close to 2035 target for Nov 2020 to March 2021. This follows MAR17b operations, which influenced Hekeao Hinds and Swamp Rd / Taylors Drain concentrations.



Proposed NRR3 site

- First combined Mahinga Kai / NRR site beside Fountains / Winslow Rd, Hekeao Hinds River crossing at final draft design stage, with consent application to follow
- Significant cultural, community and educational opportunities in addition to river flow and water quality enhancement
- 2022/23 funding sought to contribute to native planting programme



Next steps consenting to enable catchment scale testing

HHWET Ltd currently hold the following consents:

- CRC210832, which enables take and use of up to 500 l/s (supplementary to ADC) until December 2029
- CRC210830, which enables discharge of up to 300 l/s at MAR01 until December 2029
- CRC210704, which enables discharge of up to 210 l/s at NRR01 until September 2023
- CRC210702, which enables discharge at MAR test sites until January 2023

Proposed consent applications:

- Replacements to CRC210704 and CRC210702
- Supplementary access to RDRML take consent CRC182542
- A new short-term consent to trial further test sites

Thanks from

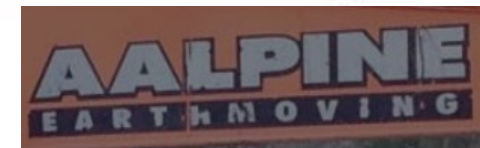


to

WATER ENHANCEMENT TRUST



ECGIS



HUI/MEETING: Ashburton Zone Committee	
AGENDA ITEM NO: 9	KAUPAPA/SUBJECT: Environment Canterbury Zone Team introductions
KAITUHI/AUTHOR: Dave Moore, Zone Facilitator	WĀ/MEETING DATE: 22 March 2022

Purpose

To introduce some local ECan staff members to the Zone Committee.

Recommendation

The Zone Committee receive the introductions.

Report

From time to time the committee will be introduced to people working in the Canterbury Water Management Strategy field to improve understanding of work done and build closer links (put a face to the name).

For this meeting three Environment Canterbury Staff will introduce themselves and talk a little about their role,

Annabel Bassett, Resource Management Officer - Compliance Monitoring

Donna Field, Land Management & Biodiversity Officer

Chris Eccleston, Zone Manager Southern

In future meetings we aim to have staff from other organisations introduce themselves to the Zone Committee.

HUI/MEETING: Ashburton Zone Committee	
AGENDA ITEM NO: 10	KAUPAPA/SUBJECT: Committee update
KAITUHI/AUTHOR: Dave Moore, Zone Facilitator	WĀ/MEETING DATE: 22 March 2022

Purpose

To update the Committee on actions from the previous meeting, relevant information, and upcoming engagement opportunities.

Recommendation

The Zone Committee receive the update.

Report

1. CWMS Regional Committee

Last year, the Co-Chairs were appointed to the CWMS Regional Committee, followed by the six community representatives at the 9 December Environment Canterbury Council Meeting. The selection process for Ngāi Tahu representatives is underway.

The six community representatives will be announced once the Ngāi Tahu representatives have been appointed. These appointments were based on the selection criteria outlined in the Committee's Terms of Reference and are considered to represent a balance of backgrounds, experience, and interests from across the region.

Once the Regional Committee has its full membership, there will be an induction session for members prior to its first meeting.

2. Environment Canterbury – Annual Plan 2022/23

Environment Canterbury is now consulting on its draft Annual Plan 2022/23, submissions close April 3, 2022.

While we Environment Canterbury are committed to delivering on the objectives set forth in Year 2 of the Long-Term Plan 2021-31, a lot has happened in our region in the past 12 months. So Environment Canterbury are asking for your input on the following topics:

- proposed changes to bus fare structure
- how we fund recovery after the regionally significant flooding in May 2021
- how ongoing flood protection costs are distributed in Ashburton River rating district
- a future rate to accelerate action in response to climate change.

To find out more: [Have your say on the draft Annual Plan 2022/23 | Environment Canterbury \(ecan.govt.nz\)](https://www.ecan.govt.nz/annualplan22)

To make a submission online go too: [ecan.govt.nz/annualplan22](https://www.ecan.govt.nz/annualplan22)

3. CWMS Action Plan budget

Below is a summary of the Action Plan budget to date.

Total budget \$50,000

Committed \$42,000

Remaining \$8,000

Project	Recipient	Amount	Status
Hekeao Community Wetland Contribution to Sensors	MHV Water	\$10,000	Recommended by Zone Committee Approved by Environment Canterbury Draft Grant agreement in process.
Mid Canterbury Catchment Collective – coordination, strategy, marketing and administration	Mid Canterbury Catchment Collective Incorporated	\$30,000	Recommended by Zone Committee Approved by Environment Canterbury Draft Grant agreement in process.
Whakanui Hāpua - underwriting the purchase of plants and Matariki Community Engagement	Wakanui Working Group	\$2,000	Recommended by Zone Committee Approved by Environment Canterbury

4. Calendar

Below is a draft meeting schedule for the next few months. There are some clashes with Environment Canterbury Council meetings and local body elections. I would like to discuss this with the committee to firm up our plans.

Meeting Dates	26 April	24 May	28 June	26 July	23 Aug	27 Sept	25 Oct
Theme	Workshop or meeting? Remaining budget allocation	Workshop Budget review	Meeting, Workshop or Field Trip? (Wakanui)	Workshop Budget 22/23 setting	Meeting	No meeting due to LG Elections 23 Sept. – 27 Oct. Field trip?	No meeting due to LG Elections 23 Sept. – 27 Oct Field trip?
Updates	Ashburton Consent Reviews Hinds Drains Working Party Recommendations	Budget ? ADC Team introductions		Budget setting	DOC or LINZ overview		
Activities and Events			Wakanui Community Event - Matariki - Planting		Election of Chair and Deputy		
Community Members Refresh (Bill, Gen)	29 April – 27 May Applications Open		Appointment Workshops	Councils ratify appointments	Induction of new members		
ECan Councillor not availability	Councillor leave 15-25 April AP Hearings 26-29	Annual Plan Deliberations		ECan recess 1-17 July		23 Sept to 27 Oct LG Elections	23 Sept to 27 Oct LG Elections

Ashburton Zone Committee Meeting

Tuesday 22 March 2022

Timetable		
Time	Item	
1:00 pm	Meeting Commences	

Order of Business

- 1 Welcome, Karakia
- 2 Apologies
- 3 Extraordinary Business
- 4 Register of Interest 1
- 5 Confirmation of Minutes 2
- 6 Correspondence
 - Outward
 - o Nil
 - Inward
 - o Nil
- 7 Public Contribution
- 8 Hekeoa Hinds Water Enhancement Trust 6
- 9 Ecan Zone Team Introductions 24
- 10 Committee Updates 25
- 11 Other Business
- 12 Close Meeting and Karakia