

# **Canterbury Water Management Strategy Waimakariri Zone Committee**

## **Agenda**

**Monday 10 April 2017**

**4.00pm**

***Tuahiwi Marae  
219 Tuahiwi Road  
Tuahiwi***

***Members:***

David Ashby (Chair)  
Grant Edge (Deputy Chair)  
Carolyn Latham  
Judith Roper-Lindsay  
Gary Walton  
Clare Williams (Te Ngai Tūāhuriri Rūnanga)  
Cherie Williams (Te Ngai Tūāhuriri Rūnanga)  
Sandra Stewart (WDC Councillor)  
Claire McKay (ECan Councillor)

Chairperson and Members  
**CWMS WAIMAKARIRI ZONE COMMITTEE**

AGENDA FOR THE MEETING OF THE **CANTERBURY WATER MANAGEMENT STRATEGY WAIMAKARIRI ZONE COMMITTEE** TO BE HELD AT THE **TUAHIWI MARAE, 219 TUAHIWI ROAD, TUAHIWI ON MONDAY 10 APRIL 2017 AT 4.00PM.**

Adrienne Smith  
Committee Advisor

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

**BUSINESS**

PAGES

**KARAKIA**

1 **APOLOGIES AND INTRODUCTIONS**

**REGISTER OF INTEREST**

5

*Conflicts of interest (if any) to be reported for minuting.*

2 **OPPORTUNITY FOR PUBLIC TO SPEAK**

3 **COMMITTEE UPDATES** – Zone Committee Members, A Arps (Waimakariri Zone Delivery Team Leader, ECan) and M Griffin (Facilitator, ECan)

6-7

- Regional Committee Meeting – 11 April 2017
- Waimakariri Zone Delivery – Update
  - Waimakariri Good Management Practice Campaign
  - Zone Committee Engagement & Communications
  - Action List

3.1 **Response to concerns regarding Ngāi Tahu Farms and Biodiversity**

8-9

3.2 **Waimakariri GMP Campaign**

10-11

**RECOMMENDATION**

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** these updates for its information and with regard to the committee's 5 Year Outcomes and 2017 community engagement priorities.

- 4 **UPDATE ON PROGRESS WITH KAIAPOI RIVER WATER QUALITY MONITORING AND INVESTIGATIONS – UPDATE – A Meredith (Principal Surface Water Quality Scientist, ECan)** 12-13
- RECOMMENDATION*
- THAT** the CWMS Waimakariri Zone Committee:
- (a) **Receives** this update with regard to future water management options for the Kaiapoi River and the Waimakariri Land and Water Solutions Programme.
- 5 **RIVER MAPPING AND TYPOLOGY IN THE WAIMAKARIRI WATER ZONE – – A Meredith (Principal Surface Water Quality Scientist, ECan)** 14-15
- RECOMMENDATION*
- THAT** the CWMS Waimakariri Zone Committee:
- (a) **Receives** this update with regard to future water management options for the Zone and the Waimakariri Land and Water Solutions Programme.
- 6 **FEEDBACK FROM ALTERNATIVE PATHWAYS COMMUNITY MEETINGS MARCH 2017 – M Macdonald (Senior Planner, ECan)**
- 6.1 **Community Feedback – Key Issues March 2017** 16-28
- RECOMMENDATION*
- THAT** the CWMS Waimakariri Zone Committee:
- (a) **Accepts** the feedback from the community meetings held on the 15, 20 and 22 March 2017, on the Alternative Pathways Scenario.
- 7 **CONFIRMATION OF MINUTES**
- 7.1 **Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting – 13 March 2017** 29-35
- RECOMMENDATION*
- THAT** the CWMS Waimakariri Zone Committee:
- (a) **Confirms** the circulated minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting, held 13 March 2017, as a true and accurate record.
- MATTERS ARISING**
- 8 **GENERAL BUSINESS AND FUTURE MEETING PRIORITIES** – Chair and M Griffin (Facilitator, ECan)

**WORKSHOP (Held Prior To Meeting)**

- 9 **TUAHIWI VALUES - BRIEFING**
- 10 **HURUNUI/WAIAU AND WAIMAKARIRI ZONE COMMITTEES COMBINED  
WORKSHOP**

# WAIMAKARIRI ZONE COMMITTEE

## Register of Interests – at February 2017

Name	Committee Member Interests
<b>David Ashby</b>	<ul style="list-style-type: none"> <li>- Director/shareholder: Pineleigh Farm Limited</li> <li>- Director/shareholder: Dave Ashby Rural Consultants Limited</li> <li>- Shareholder: Waimakariri Irrigation Limited</li> <li>- Member: Cust Main Drain Water User Group</li> </ul>
<b>Grant Edge</b>	<ul style="list-style-type: none"> <li>- Director: Edge Landscape Projects Ltd, Edge Plants Ltd, and Edge Products Ltd</li> <li>- Member: NZ Institute of Landscape Architects</li> <li>- Member: Urban Design Forum</li> <li>- Member: QEII National Trust</li> <li>- Member: NZ Forest &amp; Bird</li> <li>- Member: Heritage NZ</li> <li>- 1ha property Fernside (shallow bore user)</li> </ul>
<b>Carolyn Latham</b>	<ul style="list-style-type: none"> <li>- Farmer: Sheep, beef and racehorse agistment</li> <li>- Director of Latham Ag Ltd Consulting</li> <li>- Shareholder: Silver Fern Farms, Farmlands</li> <li>- Registered Member: New Zealand Institute of Primary Industry Management</li> <li>- Member: Canterbury Ice Hockey Association</li> </ul>
<b>Claire McKay</b>	<ul style="list-style-type: none"> <li>- Dairy Farmer</li> <li>- Irrigator and shareholder: Waimakariri Irrigation Ltd</li> <li>- Holder of Groundwater take and use consents in Cust groundwater allocation zone</li> <li>- Holder of Effluent discharge consents</li> <li>- Member: Federated Farmers</li> <li>- Member: DairyNZ Dairy Environmental Leaders forum</li> <li>- Member: P21 Canterbury Industry Advisory Group</li> </ul>
<b>Judith Roper-Lindsay</b>	<ul style="list-style-type: none"> <li>- Director/ecologist: JR-L Consulting Ltd.</li> <li>- Land-owner/small-scale sheep farmer, Ashley downs</li> <li>- Fellow: Environment Institute of Australia and New Zealand (EIANZ)</li> </ul>
<b>Sandra Stewart</b>	<ul style="list-style-type: none"> <li>- Self-employed journalist</li> <li>- Land-owner, 4ha Springbank – sheep &amp; dogs</li> </ul>
<b>Gary Walton</b>	<ul style="list-style-type: none"> <li>- Director, Walton Farm Consulting Ltd</li> <li>- Director &amp; Shareholder, Loburn Irrigation Co</li> <li>- Trustee, Rugby World Heritage Trust</li> <li>- Ashley Rugby Football Club (Inc.)</li> <li>- Farmer, sheep &amp; cattle, Loburn</li> </ul>
<b>Cherie Williams</b>	<ul style="list-style-type: none"> <li>- Member: Mana Whenua Working Party</li> <li>- Tangatiaki / Kaitiaki</li> <li>- NZTA Northern and Southern Bypass Rūnanga Representative</li> </ul>
<b>Clare Williams</b>	<ul style="list-style-type: none"> <li>- Chair, Te Ngāi Tūāhuriri Rūnanga Inc.</li> <li>- Selwyn/Waihora Zone Committee – Te Ngāi Tūāhuriri Rūnanga representative</li> <li>- Member: Mana Whenua Working Party</li> <li>- Trustee: Central Plains Water Trust</li> </ul>

<b>AGENDA ITEM NO: 3</b>	<b>SUBJECT:</b> Committee Updates
<b>REPORT TO:</b> Waimakariri Water Zone Committee	<b>MEETING DATE:</b> 10 April 2017
<b>REPORT BY:</b> Murray Griffin, CWMS Facilitator, ECan	

## PROPOSAL

This agenda item provides the committee with an overview of updates as tabled. For this meeting, with the emphasis on the committee workshops to follow the formal meeting, all papers are presented as read-only. The committee are encouraged to note any points of follow-up or questions they may have for the facilitator.

## RECOMMENDATION

The Zone Committee are asked to receive these updates for its information and with regard to the committee's 5 Year Outcomes and 2017 community engagement priorities.

## COMMITTEE UPDATES

The following updates are tabled for the committee:

- **Regional Committee Meeting – 11 April 2017**

The next Regional Committee meeting will be held on Tuesday 11 April 2017. The link to the Regional Committee papers is provided below:

**Link:** <https://ecan.govt.nz/data/document-library/?Search=regional+water+management+committee%2C+agenda&documentTypes=-1&pageSize=12&start=1&sortDir=desc>

- **Response to concerns regarding Ngāi Tahu Farms and Biodiversity**

A letter is provided as agenda item 3-1 from Nicholas Davidson, Professor of Ecology at Lincoln University, in response to Penny Wright's presentation to the Zone Committee at the 13 March meeting.

- **Waimakariri Zone Delivery – Update**

Given the limited time available at this meeting Zone Delivery Manager, Andrew Arps, will provide a concise update for the committee on current team priorities and actions.

- **Waimakariri Good Management Practice Campaign**

Attached for the committee's information as agenda item 3-2 is an overview of the Good Management Practice campaign for the Waimakariri Water Zone. Andrew Arps will speak to this overview in his Zone Delivery update.

- **Zone Committee Engagement & Communications**

## Engagements

- A summary of the community feedback from the community meetings on the Alternative Pathways scenario for the Waimakariri is provided as agenda item 6 in the meeting agenda papers. The meetings held were:
  - Rangiora – 15 March at Rosburn Receptions, 7-9pm
  - Cust – 20 March at Cust Community Centre, 7-9pm

- Kaiapoi – 22 March at Kaiapoi High School Auditorium, 7-9pm

### **Communications – Recent media coverage and advertising campaigns**

- March 7th – Zone Committee newsletter sent out
- March 18th – Northern Outlook – article on Rangiora community meeting and zone committee
- March 24th – Kaiapoi Advocate – article on community meetings and water issues in the Waimakariri zone with photo of Dave Ashby
- March 23rd – June 22nd – Rangiora Cinema ad campaign entitled “It’s Happening in Your Backyard” – 30 second commercial regarding on the ground actions and community/zone involvement in managing/improving local waterways.

### **Action List**

- An updated list of action points from previous meetings will be tabled with the committee to confirm completed items and ongoing follow-up.

### **RECOMMENDATION**

The Zone Committee are asked to receive these updates for its information and with regard to the committee’s 5 Year Outcomes and 2017 community engagement priorities.

<b>AGENDA ITEM NO: 3–1</b>	<b>SUBJECT MATTER: Response to concerns regarding Ngāi Tahu Farms and Biodiversity</b>	
<b>REPORT TO:</b> Waimakariri Water Zone Committee		<b>MEETING DATE:</b> 10 April 2017
<b>RELATES TO DECISION AREA(S):</b> <b>5 – Improving Biodiversity</b>		<b>RELATES TO OUTCOMES:</b> <b>5 – Indigenous Biodiversity</b>
<b>REPORT BY:</b> Nicholas Dickinson, Professor of Ecology, Lincoln University		

**Sent:** Friday, 17 March 2017

## **Waimakariri Zone Committee**

Dear Committee,

Representatives from Tē Runga o Ngāi Tahu passed on a message about issues that were raised at your recent meeting by a member of the public, concerning Ngāi Tahu Farming (NTF) impacts at Te Whenua Hou (TWH). I understand that these matters related to (i) biodiversity, (ii) mention of a critically endangered beetle in the forest which she thinks may be extinct as a result of the work going on in the area, and (iii) mention that areas of forest, protected under QEII covenants had been felled. I am pleased to see this kind of public engagement, but I would be grateful for the opportunity to respond to these comments.

Lincoln University have collaborated with NTF and other partners since 2013 with respect to nitrogen management and protection and restoration of biodiversity across the site. I have led the biodiversity group that has engaged substantially with the conversion in work that is continuous and ongoing.

In relation to biodiversity, the existing plantation forest had limited but significant ecological values. In summary, these values tended to be along the fringes and in open spaces and tracts within the forest which otherwise largely consisted of exotic monoculture. Earlier ecological surveys had shown that an expected relatively small number of native plants inhabited the forest, and attention had been focused on *Pomaderris amoena* which is rare plant largely restricted to this locality on South Island. Additional attention was drawn to an earlier study of ground beetles: a previously unknown species (*Holcopsis brevicula*) found only in this location was identified in the 1960s. However only five individuals were found, with a later survey finding just five more individuals over a 5-year period (involving 57,494 trap days, carried out from 2000 - 2005). The total of 10 individual beetles that were found were dispersed across the forest and it was suggested they had probably survived the forestry operations by dispersing into clear felled areas.

Since 2013, the Ecology Department at Lincoln have worked with NTF to carefully evaluate and monitor native plants, invertebrates, lizards and birds across the entire site, and we have made progress developing new nature reserves on as much as 150 ha allocated for restoration of native ecological communities. An additional similar amount of land spread across the landscape around the edges of paddocks, farms, roadsides, under-irrigators and around farm buildings is also currently being planted with natives. We have based our work on knowledge of the original vegetation of this part of the Canterbury Plains, and this has included very detailed study of two existing nature reserves adjacent to the site. We have learned a huge amount about the plants and animals, with a



focus on establishment of the kanuka-dominant vegetation which prevailed prior to European settlement. So far we have developed plantings on five new reserves, the smallest of which is about 5 ha. We have instigated the recovery of large numbers of species on plants and invertebrates into this landscape.

Amongst the successes of the restoration have been establishment of much larger populations of Pomaderris, about which we now know much more. Kanuka remnants would probably have disappeared with continued forestry operations, but they are now driving biodiversity gains through much larger established stands that are now protected. The additional landscape planting is introducing some thousands of native totara, which have probably been missing from this landscape for many centuries. Amongst the suite of faunal monitoring work, we have installed weta motels, wooden discs and reptile refugia.

Of course the work has also met considerable challenges, and restoration takes time. We have had to source, propagate and learn how to establish and grow plants that are hard to find and about which little is known. We are learning how to provide the conditions for insects and other invertebrates (even including native earthworms) to colonize the new nature reserves, often requiring corridors of native vegetation. We are also providing the right conditions and spacing between reserves to attract birds and lizards into the landscape. Most important of all, we are already making substantial progress on the ground but these things take time and of course they are costly. These nuclei of biodiversity will become increasingly attractive to wildlife and will soon be self-sustaining. After 3 years it is impossible to provide impressive visual evidence that will be convincing to the passer-by, but the resources are in place to continue our restoration work and, when the opportunities arise, we are very pleased when the opportunity to demonstrate progress to stakeholders and visitors, including the Waimakariri Zone Committee.

The last point raised by the member of public regards QEII covenants on NTF land. Whatever the source of this information happened to be, to our knowledge this is not correct. Ngāi Tahu Farming have confirmed that there are no QEII covenants to their land in TWH; also the nature reserve on the Spencer-Bower land is still not covenanted as far as we are aware, and we suspect there may be some confusion with recent destruction of a patch of a kanuka remnant close to TWH (<http://www.stuff.co.nz/the-press/news/north-canterbury/9781362/Farmer-destroyed-protected-bush>).

I hope this rather wordy commentary helped to explain that we are certainly not on the defensive in regard to protection of biodiversity. In the future, this site will have considerable ecological value, far exceeding anything associated with the pine forest. For the record, we don't think we have yet found the rare *Holcopsis* beetle, which is hardly surprising in view of the very few previous records, but we are continuing to sort large numbers of insect samples that include many species not previously recorded in this location, including many ground beetles – and we have found so much more that is new to science through this project. Our hope from a scientific viewpoint is that the site will eventually become a showcase for ecological restoration.

If it is appropriate, I would suggest this email could be formally communicated at the next Waimakariri Zone Committee meeting.

Sincerely,

Nick Dickinson

Professor of Ecology  
Faculty of Agriculture and Life Sciences,  
Lincoln University

Zone	Waimakariri GMP Campaign
<b>GMP 5-year Outcome</b>	All farmers are operating at GMP, and more collective groups are managing within nutrient limits by 2020.
<b>Planning Status</b>	<p>Operative LWRP</p> <p>PC5 Decisions pending</p> <p>Exploring options and developing actions for the Solutions Programme</p>
<b>GMP Implementation Plan</b>	<p>The Waimakariri Zone Teams work programme has a strong focus on getting farmers to GMP.</p> <p>The <i>GMP Campaign</i> has been developed to enable regional roll-out and local delivery.</p> <p>The campaign will be a staged and targeted end-to-end call-to-action that identifies priority farms that require consent now and will continue to require consent in the future.</p> <p>Stage 1 of the campaign will target farmers with greater than 50 hectares of irrigation. This aligns with the Nutrient Management Plan Change (PC5) and prioritises the higher risk farms that have irrigation on their property. These Stage 1 farmers will be required to determine whether consent is required or not, and if so, obtain a land use consent to farm.</p> <p>There are 67 <i>GMP Campaign</i> Stage 1 priority farms within the Waimakariri Zone.</p>
<b>Campaign Stage 1 Timeline</b>	<p>15 May – Launch direct mail and Communications Strategy</p> <p>19-30 June – Follow up calls to Stage 1 target farmers</p> <p>3 July – Transfer to Land Management Advisors</p> <p>23 October – Transfer to Monitoring and Compliance Officers</p>
<b>Communication Strategy</b>	<p>The communication structure consists of:</p> <ol style="list-style-type: none"> <li>A region-wide advertising campaign for farmers providing a call-to-action,</li> <li>A zone by zone campaign providing zone specific direct farmer communications to identified target farmers with &gt;50 hectares of irrigation in Stage 1 of the campaign. This targeted campaign includes a direct mail pack, a follow up phone call, and information sessions, as well as online, planning officer, and call centre help.</li> <li>An Urban Perceptions advertising campaign focussing on raising awareness of the full story of Canterbury's water, connected visually to the rural campaign and demonstrating that farmers are on the path to GMP.</li> </ol>

**GMP Toolkit**

1. Good Management Practices (GMP) have been defined by industry. They form the basis for the Farming at GMP project by clearly defining GMPs on-farm. Farmers will receive a consistent message regarding GMP from Environment Canterbury and the Industry that supports them.
2. Plans, policy and rules are in place that require measurement of progress toward GMP through an Audited Farm Environment Plan.
3. Consent application forms have been developed to make the application process as simple and cost effective as possible, and enable the farmer to fill in the form themselves.
4. Mahinga Kai Guidelines have been developed to weave cultural values into GMP. They currently have effect in Selwyn Te Waihora catchment only, but act as a guide for the region.
5. OVERSEER® is the main tool identified for use in the LWRP to calculate nitrogen losses on farm. OVERSEER budgets also allow the translation of nitrogen losses into nitrogen losses at GMP through the use of the MGM proxies in the Farm Portal.
6. NCheck is a pathway for estimating farm nitrogen losses. It has been approved for use in the Selwyn Te Waihora catchment to enable implementation of the zones farming at GMP Outcomes. Specifically, the tool allows for calculation of nitrogen losses which supports the identification of whether a consent is required or not, and can be used in limited circumstances in the land use consent to farm process until 2022.
7. FEP templates have been and continue to be approved. The templates align with planning requirements and enable farmers to write industry specific FEPs that meet the requirements for a land use consent to farm application and FEP Audit.
8. FEP Audit Programme includes auditing standard operating procedures, a certification programme, complaints and disputes resolution programme and a quality assurance programme.
9. FEP Auditors are currently going through a registration and certification process. This includes the approval of ISO programmes to allow auditors working on their behalf to be considered as certified auditors. This provides quality assurance and independence in the GMP process.
10. Collateral has been developed to help farmers navigate their way through land use consent to farm rules and the steps to get there. Industry also has volumes of information for farmers in varying sectors to help them identify specific GMPs for their farm.
11. Canterburywater.farm website has been set up to help farmers make the required steps towards farming at GMP. It includes pages on understanding why land use consents to farm are required, zone-specific information and links, helpful links to industry contacts, and guidance on applying for a land use consent to farm.
12. GMP Loss Estimator will provide the ability for farmers to calculate nitrogen losses at GMP and provide access to NCheck until the Farm Portal V2 is released when the Nutrient Management Plan Change (PC5) becomes operative.

<b>AGENDA ITEM NO: 4</b>	<b>SUBJECT MATTER: Update on progress with Kaiapoi River water quality monitoring and investigations</b>	
<b>REPORT TO:</b> Waimakariri Water Zone Committee		<b>MEETING DATE:</b> 10 April 2017
<b>RELATES TO DECISION AREA(S):</b> 2, 3, 4 & 5		<b>RELATES TO OUTCOMES:</b> 3, 5 & 7
<b>REPORT BY:</b> Adrian Meredith, Principal Surface Water Quality Scientist, ECan		

## PURPOSE

This update is to inform the Waimakariri Water Zone Committee on the recent investigations and water quality monitoring on the Kaiapoi River over the 2016/17 summer period.

## RECOMMENDATION

To receive this update with regard to future water management options for the Kaiapoi River and the Waimakariri Land and Water Solutions Programme.

## BY WHO

This update will be provided by:

Adrian Meredith, Principal Surface Water Quality Scientist, ECan

## BACKGROUND

Previously we have discussed a number of issues with management and monitoring of the tidal reaches of the Kaiapoi River through the Kaiapoi township. This memo introduces the progress made over the 2016/2017 summer.

Following our identification of intermittent salinity intrusion patterns up the Kaiapoi River we have:

- Further analysed historic seasonal patterns of Waimakariri River flows to help explain the current context of this issue
- Discussed stratified sampling programmes to determine the most appropriate timing of sampling on tidal cycles in the Kaiapoi River
- Installed water quality loggers (salinity, temperature and Dissolved oxygen) at different levels on the Mandeville Bridge to clarify the complicated relationships between river flow, Waimakariri River flow and tide heights

During this work we have also progressed the bacterial contamination and 'swimmability' of the Kaiapoi River. Four sets of samples have been taken to assess 'Faecal Source Tracking' (FST) but these samples and samples from other rivers in Canterbury are not yet available. During work on the river we have documented that the Williams Street Bridge has a large and stable population of over 300 pigeons nesting and roosting under the bridge and a large accumulation estimated to be over half a tonne of pigeon faecal material under the bridge. We anticipate that the FST methods may identify a significant 'avian' contamination source, and suggest solutions to this pigeon source.

**UPDATE**

This update will:

- Present some preliminary data to illustrate these relationships and the seasonal timing of these issues
- Discuss the significance and consequences of this data on overall perceived water quality of the Kaiapoi River, and risks of water quality becoming visibly degraded at times of the year.

<b>AGENDA ITEM NO: 5</b>	<b>SUBJECT MATTER: River Mapping and Typology in the Waimakariri Water Zone</b>	
<b>REPORT TO:</b> Waimakariri Water Zone Committee	<b>MEETING DATE:</b> 10 April 2017	
<b>RELATES TO DECISION AREA(S):</b> 1, 2, 3, 4, & 5	<b>RELATES TO OUTCOMES:</b> 1, 2, 3, 5 & 7	
<b>REPORT BY: Adrian Meredith, Principal Surface Water Quality Scientist, ECan</b>		

## PURPOSE

This update is to inform the Waimakariri Water Zone Committee on the status of waterway mapping and typology in the Waimakariri water Zone.

## RECOMMENDATION

To receive this update with regard to future water management options for the Zone and the Waimakariri Land and Water Solutions Programme.

## BY WHO

This update will be provided by:

Adrian Meredith, Principal Surface Water Quality Scientist, ECan

## BACKGROUND

River mapping in Canterbury has always been problematical in the lower elevation parts of Canterbury because of both the highly modified nature of water courses (diversions and re-alignment), confusion between natural, modified and artificial (races and canals) waterways, and the relationship of water courses with springs and groundwater emergence. Existing map layers can therefore be unreliable. For previous Canterbury regional planning such as the Natural Resources Regional Plan (NRRP) and the Land and Water Regional Plan (LWRP) this was addressed with a careful process proofing and adjusting layers to generate a more reliable map layer of waterways of Canterbury and 'typing' them into distinct river types based on their 'source of flow', elevation etc. This resulted in the 'planning maps' in the NRRP and LWRP and these waterway GIS layers that have served the region well to date.

This mapping process was however not conducted for two major catchments in Canterbury, the Waimakariri and Opihi catchments. This was because these catchments already had 'operative' plans (the Waimakariri River Regional Plan and Opihi River Regional Plan) and so they were omitted from the regional planning map layers/series. This means the process to develop useful and reliable base map of all waterways for these two catchments was not conducted, and so maps are not available for various processes from planning through to assessing solutions packages.

## UPDATE

The process for developing base maps of all waterways has commenced in the Waimakariri and Opihi catchments. This involves:

- Starting with a base waterway layer generated by NIWA (the REC (River Environment Classification) layer),
- Using a range of people familiar with the catchments to initially 'add' and 'delete' waterways (particularly on the plains) from this layer by consensus,
- Modify the classifications of river and stream types from the REC to be consistent with existing planning map criteria,
- Socialising these maps with other groups before they become confirmed as the base waterway maps.

It is however important that these maps remain as consistent as possible with both the REC philosophy (so as to be similar to 'national reporting systems') and with the previous NRRP and LWRP planning maps (so as to represent a unified regional series).

This process is important to allow all waterway planning, typology and other processes to proceed but with a uniform and coordinated appreciation of what are and aren't natural or modified waterways, and providing a consistent 'look' or understanding of waterways.



<b>AGENDA ITEM NO: 6</b>	<b>SUBJECT MATTER: Feedback from Alternative Pathways Community Meetings March 2017</b>	
<b>REPORT TO:</b> Waimakariri Water Zone Committee	<b>MEETING DATE:</b> 10 April 2017	
<b>RELATES TO DECISION AREA(S):</b> All decision areas	<b>RELATES TO OUTCOMES:</b> To all Outcomes	
<b>REPORT BY: Meredith Macdonald, Senior Planner, ECan</b>		

## PURPOSE

This briefing is to inform the Waimakariri Water Zone Committee on the feedback from the community meetings held on the Alternative Pathways Scenario

## RECOMMENDATION

To accept the feedback from the community meetings held on the 15, 20 and 22 March on the Alternative Pathways scenario

## BY WHO

This briefing will be led by Meredith Macdonald

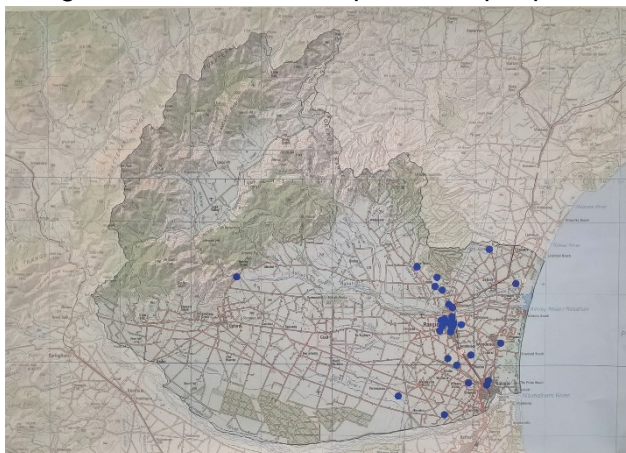
## BACKGROUND

Environment Canterbury and Waimakariri District Council staff with the support of the Waimakariri Water Management Zone Committee (Zone Committee) held three community meetings in Rangiora, Cust and Kaiapoi (15 March, 20 March and 22 March respectively). These meetings were held to discuss whether the Zone Committee had identified all of the relevant critical issues in their zone and to get feedback on the Alternative Pathways scenario.

### Community Meeting Attendance

The points on the maps below show the home addresses provided by local attendees at each public meeting.

Rangiora - Rossburn Reception - 39 people

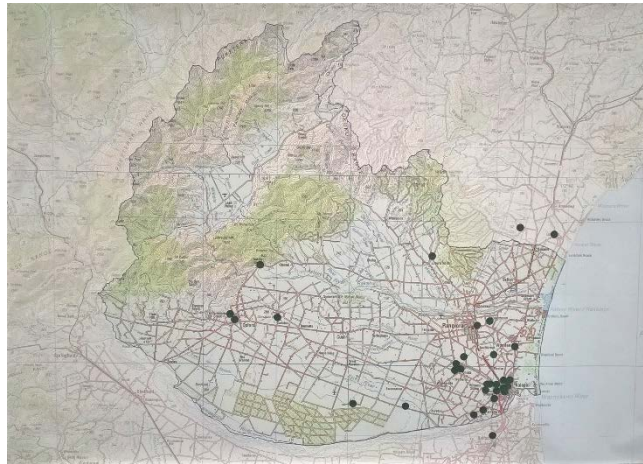


Cust Community Centre - 30 people





Kaiapoi High School Auditorium - 34 people



## SUMMARY OF FEEDBACK

### Has the Zone Committee identified all the critical issues?

Specific suggestions for additional critical issues included:

- Farming General:
- Urban/Small holdings
- Quarrying Management
- Spraying.

The technical staff will review this feedback and check whether these are critical issues in the zone. Once this has occurred staff will report back if it is recommended to make changes to the Zone Committees Critical Issues list.

### Alternative Pathways Scenario<sup>1</sup>

#### 1. Stream Depletion

There was very little feedback on this specific scenario. It is unclear as to the reason for this.

#### 2. Storage

This received the most feedback with the majority being saying it was unacceptable for the following general reasons:

- Needing more information
- Unrealistic scenario
- Flooding risk
- Cost of developing, building etc.

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<sup>1</sup> See Appendix 1 for details, bullets points are examples of some of the feedback

- Need smaller storage not a large one.

The acceptability of the hypothetical dam were as follows:

- Increase reliability
- Storage is a good option
- Provide for economic growth
- Provides flow to the Ashley/Rakahuri River

The following solutions were suggested:

- Look at smaller types of storage
- Switch users to irrigation scheme
- Look at storage from Waimakariri river
- Include hydroelectricity

### **3. Stream Augmentation/Managed Aquifer Recharge**

The feedback we received on stream augmentation/managed aquifer recharge seemed to be acceptable to the community but they have asked some questions of how it could be achieved.

The community seem interested to see whether Waimakariri Irrigation Limited could assist in this space or whether the Waimakariri River could supply it.

The feedback on what was unacceptable, considered that humans should not be changing natural processes and whether this tool would exacerbate the flooding problem in Mandeville and Swannanoa areas.

### **4. Cultural Flow Preferences**

The aspirations of the cultural flows raised questions as to why they were asking for a change in flow on some of the waterbodies, as well as how the study was conducted.

Some of community's reasons for the unacceptability of the cultural regime are as follows:

- Unachievable
- Low reliability
- Unclear what it would mean for each affected water body.

The community found the following acceptable:

- Will improve health of waterbodies and spring-fed streams
- Would be better than what is happening at the moment
- Acceptable as long as other tools were used.

Some of the suggested solutions included:

- All water takes need to be metered
- Put a price on water

- Need to include an economic assessment as well
- Decrease the amount of water being taken.

#### **ATTACHMENTS**

1. Community Feedback – Key Issues March 2017

## Community Feedback - March 2017

The following information was collected by WDC and ECan Staff at “alternative pathways” scenario meetings in Rangiora, Cust and Kaiapoi. The feedback is separated into feedback on key issues and feedback on alternative pathways. The content of the feedback is largely unaltered, reflecting what was said in the feedback sessions and written on the forms filled in by staff. However, any repeated points have been summarised. A number of questions were received during the meetings and in the feedback, these will be addressed in a question and answers document (including current state and current pathways questions) and will be available on the Waimakariri-water.nz at a later date. This collated feedback, along with the feedback on the “current state and current pathways” will be used to inform development of the solutions package.

### Feedback on Key Issues

Issues	Solutions
<b>1. Cultural Values not sustained in rivers</b>	
[refer to the Cultural Flow Preferences Table below]	
<b>2. Stream Flow Reduction</b>	
<ul style="list-style-type: none"> <li>❖ Equality between farmers – need to ensure that new land uses have reasonable allocations.</li> <li>❖ Increasing Ashley flows.</li> <li>❖ Taking water out above min flows.</li> <li>❖ Still allocating surface water.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Fell Ashley forest.</li> <li>❖ Review consents.</li> <li>❖ Put a price on water.</li> <li>❖ Potential benefits of floods.</li> <li>❖ Moratorium on new takes until sufficient data to better understand situation is provided (precautionary approach adhered to).</li> <li>❖ Ecological step.</li> <li>❖ Rangiora: All the Brooks- where is the water?</li> <li>❖ Eyreton/Mandeville area: Stockwater race runs dry in Jan/Feb.</li> </ul>
<b>3. Ground Water Reduction</b>	
<ul style="list-style-type: none"> <li>❖ Water levels in Eyre groundwater.</li> <li>❖ Still allocating groundwater.</li> <li>❖ Wells drying up.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Moratorium on new takes until sufficient data to better understand situation is provided (precautionary approach adhered to).</li> <li>❖ Should move to stop all groundwater abstraction and instead source stored alpine water.</li> <li>❖ Review Consents.</li> </ul>
<b>4. Nitrate Level Increase</b>	
<ul style="list-style-type: none"> <li>❖ Leaching Nitrogen Baseline concept.</li> <li>❖ Nitrate trend not an issue in most of the district – there are only hot spots.</li> <li>❖ Kaiapoi River - has the largest population around it in the zone -Never used to be as bad as it is now – “catch up time” – in the post. Lower flows &amp; increased pollutants.</li> <li>❖ Removing existing nitrogen from the groundwater.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Protect spring heads and lowland streams.</li> <li>❖ Protect ALL springheads.</li> <li>❖ May default to the national standards swimmable by 2040- should be aiming for higher because the new standards are too low.</li> <li>❖ Use of other techniques or fertilisers.</li> <li>❖ Treat waterways as streams.</li> <li>❖ The Institute of Environmental Science and Research project to build a nitrate wall to intercept N and taking Nitrate out of the groundwater.</li> <li>❖ Silverstream N- nitrate wall experiment? Practicality on a large scale? Wetland denitrification? Science based solution required that is multi-pronged.</li> <li>❖ Woodchip wall to filter groundwater.</li> <li>❖ Science is available to mitigate but not necessarily taken up.</li> <li>❖ Provide real time water quality monitoring data on the Environment Canterbury website.</li> <li>❖ Need to ensure there will be comprehensive monitoring system (both consents and SOE- trend changes) to indicate/demonstrate management regime is working as expected – change approach if not</li> </ul>

	<ul style="list-style-type: none"> <li>❖ Floating island in waterbodies to assist with cleansing</li> <li>❖ Nitrogen issue should be managed by farm environment plans.</li> </ul>
<b>5. Potential Drinking Water Issues</b>	
	<ul style="list-style-type: none"> <li>❖ Age of water- what's going to happen to the drinking water?</li> </ul>
<b>6. Health Risks</b>	
<ul style="list-style-type: none"> <li>❖ Drinking water- protect from nitrate contamination</li> </ul>	
<b>7. Sediment Instream</b>	
	<ul style="list-style-type: none"> <li>❖ Minimum setback- not too much reverted to jungle. Some places may benefit from wider but others don't need much. Fonterra minimum standards. Not one size fits all.</li> <li>❖ Winter management for sediment runoff. Don't want to lose topsoil.</li> <li>❖ Good weather forecasting would help stock management.</li> <li>❖ Sediment traps – can we (Environment Canterbury) develop a design/technique/spec to support local landowners putting these in without a consent requirement</li> </ul>
<b>8. Loss of Indigenous Biodiversity</b>	
<ul style="list-style-type: none"> <li>❖ Decline in fish populations in the zone.</li> <li>❖ Removal of shelter belts and the impact.</li> <li>❖ Species composition of weed invasion, last 2-3years, impact on indigenous species.</li> <li>❖ Upper Cam has Brown trout.</li> <li>❖ Canadian geese.</li> <li>❖ Woody weeds and Willows (particularly in the Ashley).</li> <li>❖ Weeds in Silverstream</li> <li>❖ Weed growth in mainbranch of Kaiapoi</li> </ul>	<ul style="list-style-type: none"> <li>❖ Change the type of shelter.</li> <li>❖ Eco sowing.</li> <li>❖ Drought resistant plants.</li> <li>❖ More native species.</li> <li>❖ Plant drought resistant plants.</li> <li>❖ Brooklands and Kaiapoi riparian planting – red zone areas –breeding habitats for Whitebait.</li> <li>❖ More education as to what can be planted.</li> <li>❖ Look at riparian planting to improve biodiversity and floating mats.</li> <li>❖ Stop poison spraying in all waterways.</li> <li>❖ More wetlands.</li> <li>❖ Turn Ohoka and Cust back into a swap.</li> <li>❖ Create wetlands wherever possible.</li> <li>❖ Weed encroachment on the banks.</li> <li>❖ Clearing parts of waterways where birds have been identified as preferring for resting and habitat.</li> <li>❖ Natural weed invasion process- needs to manage biodiversity/birds. Artificial maintenance.</li> <li>❖ Willow control.</li> <li>❖ Keeping natural processes in place.</li> <li>❖ Why dredge watercress/raupō out of rivers?</li> <li>❖ What is the impact of NOT dredging?</li> <li>❖ Fish and Game should get rid of Canadian Geese in high country.</li> <li>❖ Dredge Kaiapoi, Ashley, Silverstream for silt and weed and excess shingle also Waimakariri near SH1 bridge.</li> <li>❖ North Waimakariri (Eyrewell Forest area)- need for revegetation on the dry, stony light land.</li> </ul>
<b>9. Tidal Water Quality</b>	
<ul style="list-style-type: none"> <li>❖ Saltwater intrusion in the Kaiapoi River.</li> </ul>	
<b>10 Climate Change</b>	
<ul style="list-style-type: none"> <li>❖ Too much emphasis on Climate Change</li> </ul>	<ul style="list-style-type: none"> <li>❖ More investigation into the effects of Climate Change needs to be done.</li> </ul>

	❖ Sea level rise - Where will the birds go?
<b>11. Irrigation Efficiency</b>	
<ul style="list-style-type: none"> <li>❖ Irrigation on lighter vs heavier soils</li> <li>❖ Over irrigation</li> <li>❖ Irrigation efficiency to reduce leaching</li> <li>❖ Reliability of water supplies</li> </ul>	<ul style="list-style-type: none"> <li>❖ Reduce how much water is being taken, its not sustainable</li> <li>❖ Are the minimum flows taken at the right place, given more takes downstream?</li> <li>❖ Rainwater tanks</li> <li>❖ Dam middle bridge of Ashley and the Townsend of Mt Pember</li> <li>❖ Government providing funding for more storage for irrigation use</li> <li>❖ Identify categories of use for water to ensure stream flow</li> <li>❖ Provide for storage can use when needed</li> <li>❖ There's enough water in the district we just need to be smarter around how we use it</li> <li>❖ Soil moisture testing</li> <li>❖ Giving farmer's info on what the soil is like below them and groundwater etc. to help them understand how are they impacting on the GW system.</li> <li>❖ Self-contained farms –Cnr Springston/Shands. Low input farm low leaching (Keith Cameron)</li> <li>❖ Increased number of ponds has increased efficiency/reliability –further reducing recharge from irrigation</li> <li>❖ Reduce irrigation takes</li> <li>❖ Provide more irrigation to the lower catchment - WIL command area is 44000ha but only irrigate 18000ha</li> <li>❖ Putting public money into new farm practices and innovation rather than expanded irrigation</li> <li>❖ Use new technologies</li> <li>❖ How people should be using water</li> </ul>
<b>Additional Issues and Solutions</b>	
<b>Solutions</b>	
<b>Farming General</b>	
<ul style="list-style-type: none"> <li>❖ Too many cows.</li> <li>❖ Dairy farms in wrong place.</li> <li>❖ Appropriateness of land use on soil types, Intensive farming on land/soils not suited for it.</li> </ul>	<ul style="list-style-type: none"> <li>❖ No more dairy farms</li> <li>❖ Capping stocking rates</li> <li>❖ Decrease stocking rates</li> <li>❖ Acknowledge how we got to the situation we are in – high stocking rates high inputs are a lose/lose situation – use a lower intensity farm model which is just as profitable - less dairy cow numbers for same production</li> <li>❖ De-intensify- reduce stock units per hectare</li> <li>❖ Alternative land uses for the entire region e.g. forestry</li> <li>❖ Support the diversification of agriculture production</li> <li>❖ Diversification on farms may have environmental benefits</li> <li>❖ Don't irrigate on LV soils</li> <li>❖ Use less urea</li> <li>❖ Light Eyre regular topsoil not necessarily the solution as minimises grass rooting depth and increases grass dependency on regular N</li> <li>❖ Soil moisture maintaining should be compulsory</li> <li>❖ Know what is underneath the land I am farming, making people more aware of the situation beneath their property</li> </ul>
<b>Urban/Small Holdings</b>	
<ul style="list-style-type: none"> <li>❖ Dead cows on small holdings</li> <li>❖ Calculating leaching in urban areas</li> </ul>	<ul style="list-style-type: none"> <li>❖ What we want to ensure reasonable level of farming but not at the detriment of the environment</li> <li>❖ Reduce intensification of land use</li> </ul>



<ul style="list-style-type: none"> <li>❖ Lifestyle blocks also impact on the environment not just irrigation (zone is around half farms half lifestyle blocks)</li> <li>❖ Cumulative effect of 4ha lifestyle blocks.</li> <li>❖ Smaller landholders not being as controlled.</li> <li>❖ The fringe between big rural and smaller rural is not as well controlled</li> <li>❖ Subdivision of land into lifestyle blocks – if not regulated land will get subdivided and be a waste of good agricultural land (c. 2500 blocks 2-8 ha 6000 blocks overall?).</li> <li>❖ Irrigating, management of soil, old septic tanks leaking.</li> <li>❖ What is the impact of small block irrigation?</li> <li>❖ Offal and Rubbish holes on small blocks.</li> <li>❖ Watering without consent.</li> <li>❖ Urban pollution - Urban pollutants as much as issue as from farming</li> <li>❖ Expanding urbanisation into rural areas</li> <li>❖ New urban development is being focussed and planned on the floodplain</li> <li>❖ Can deal with storm-water new sub-division but difficult to retro-fit.</li> <li>❖ Storm water management is very expensive</li> <li>❖ Too much focus on rural/farmers - Not always the farmers fault, they made business decisions, invested money, took risks under the laws of the land at the time. And they bring a lot of money into this region economy – with not much profit for themselves.</li> <li>❖ Look at all users of water</li> </ul> <p><b>Quarrying Management</b></p> <ul style="list-style-type: none"> <li>❖ Quarrying management – outside of Waimakariri [feedback unclear]</li> </ul> <p><b>Spraying</b></p> <ul style="list-style-type: none"> <li>❖ Spraying on Tram road right up to water race</li> <li>❖ Glyphosate in waterways</li> </ul> <p><b>Other</b></p> <ul style="list-style-type: none"> <li>❖ Identifying other recreational values</li> <li>❖ Trout fishing in the Ohoka area, what is happening to these values?</li> <li>❖ Wade-ability of all streams</li> <li>❖ Be able to eat fish from rivers</li> <li>❖ Animals should also be able to drink</li> <li>❖ Impacts on recreation and amenity are a key issue – fishing, kayaking, swimming</li> <li>❖ River management - gravel management along entire reach</li> <li>❖ Rating areas - Adjoining landowners upstream of Okuku don't pay rates so no weed control and there is river erosion</li> <li>❖ Eroded gravel from the cliffs 1-1 1/2m stream from the gorge has built up in the bed and the flow goes under the gravel.</li> <li>❖ Rubbish in Waimakariri River</li> </ul>	<ul style="list-style-type: none"> <li>❖ Right type of farming on the right soil</li> <li>❖ Fencing on small blocks</li> <li>❖ Urban Environmental plans</li> <li>❖ Storm water could be going into big swamps before going into rivers and streams</li> <li>❖ Can WDC do roadside collections periodically to stop illegal dumping?</li> </ul> <p><b>Spraying</b></p> <ul style="list-style-type: none"> <li>❖ Riparian margins on drains and waterways to lessen spray residuals</li> </ul> <p><b>Other</b></p> <ul style="list-style-type: none"> <li>❖ Revise the river rating</li> <li>❖ Rate people upstream of Okuku</li> <li>❖ Some sort of rating approach to support weed control</li> <li>❖ Solutions need to be multi-faceted</li> <li>❖ More education</li> <li>❖ Engineering Solution – Fault, cause and rectify</li> <li>❖ Protection of recreational values in the Waimakariri River</li> </ul>
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## Alternative Pathways

### 1. Stream Depletion

Acceptable	Unacceptable	Solutions
<ul style="list-style-type: none"> <li>❖ Simple to implement.</li> <li>❖ Sustainable for going forward.</li> <li>❖ Possible to change farming practice to moderate effect on production.</li> <li>❖ Accept more stringent rules to allow more water left in stream and aquifer- but rules on takes could be more stringent.</li> <li>❖ Properly monitored stream depletion is supported.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Eyre River is considered to be over allocated.</li> </ul>	

### 2. Storage

Acceptable	Unacceptable	Solutions
<ul style="list-style-type: none"> <li>❖ Worth exploring but on the provision of in-depth information being produced.</li> <li>❖ If farmers can keep their Nitrogen levels down.</li> <li>❖ On farm storage work with scheme.</li> <li>❖ Need storage and source of water.</li> <li>❖ Get a regular flow year round, max dairy conversions and other farms.</li> <li>❖ WIL originally proposed augmentation as part of consent application but was opposed by environmental groups (look at consent history).</li> <li>❖ Support this option especially if includes increasing reliability and current irrigators do not have to reduce their nitrate loss to the point of it being uneconomic to continue.</li> <li>❖ Economic growth for the district - help reduce nutrient concentrations in groundwater.</li> <li>❖ Highly dependent on cost – right water amount/right place/right time.</li> <li>❖ Taken out of the Waimakariri at the right time.</li> <li>❖ As long as water is taken at high river flows.</li> <li>❖ Will provide for additional economic use.</li> <li>❖ If there is no other option.</li> <li>❖ Generally accepted.</li> <li>❖ Support water storage but not in the Ashley/Rakahuri.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Need more information and time to understand the effects.</li> <li>❖ Do not want to increase irrigation in the area, we have plenty.</li> <li>❖ Not enough enforcement in past and not confident ECan can adequately implement.</li> <li>❖ Storage may hinder natural river freshest “cleaning” river when flood flows (as water held back to store in flood flows).</li> <li>❖ Insufficient rain to fill Lees Valley Dam particularly with climate change in train.</li> <li>❖ Small area relative to size of valley (15,000ha).</li> <li>❖ Too risky, small scale storage more palatable.</li> <li>❖ Impossible, fault lines impact of structure.</li> <li>❖ Climate change, how will I get filled?</li> <li>❖ Flooding. Potential flooding of Cust, Rangiora etc. if Dam brakes.</li> <li>❖ Zone not short of water but is short of storage for when Waimakariri in flood.</li> <li>❖ You shouldn't put up a scenario that is unrealistic - storage and irrigation in Lees Valley is not part of landowner plans and is modifying a natural environment to address a problem generated in another place.</li> <li>❖ Having a map of hypothetical new irrigated area out in public and on the website causes social pressure and does not consider the natural environment – e.g. people may think they can have more irrigation and not understand the consequences.</li> <li>❖ Don't keep talking about storage in Lees Valley when it won't happen - it does not stack up financially and was considered and rejected in Robert Muldoon days. Also who would pay? Will it be like rates with farmers subsidising others?</li> <li>❖ Earthquake risk from dam.</li> <li>❖ Can't we reduce irrigation back to a lower level?</li> </ul>	<ul style="list-style-type: none"> <li>❖ Why don't we look at other kinds of storage (smaller and localised dams).</li> <li>❖ Technology.</li> <li>❖ Restrict lifestyle blocks – make other land uses competitive with lifestyle blocks by allowing more irrigation in lower catchment (WIL command area 44000ha but only irrigate 18000ha) - doesn't have to be cows e.g. could be growth vegetables to sell to China.</li> <li>❖ Create a new lake (like Lake Hood) in the centre of the district.</li> <li>❖ Could hydroelectricity work?</li> <li>❖ Why not look at storage from the Waimakariri River for augmentation?</li> <li>❖ Could be more attractive if groundwater users switched to scheme (save pumping cost therefore improve reliability)</li> <li>❖ Dam the Ashley at Middle bridge.</li> <li>❖ Should we go to one set of rules.</li> <li>❖ Maybe storage elsewhere.</li> <li>❖ What about smaller storage dams.</li> </ul>



	<ul style="list-style-type: none"> <li>❖ Increase bird numbers means more bird E.coli in the whole of the river not just at the bottom.</li> <li>❖ More irrigation means more cows and more N loss</li> <li>❖ Cost to rate payers for the dam? Who would pay?</li> <li>❖ Large area of mud after the drawn down has been taken in summer.</li> <li>❖ Loss of large wetland area and their ecosystem.</li> <li>❖ Large area of bird nesting area could be lost.</li> <li>❖ Change in natural environment.</li> <li>❖ Special sites need to be considered and understood.</li> <li>❖ Possible sediment in Lees valley storage</li> <li>❖ Don't rely on big chunky solutions like additional water as a band aid – use the water in the catchment more efficiently instead.</li> <li>❖ Already sufficient abstraction out of large rivers etc/ need to keep as natural as possible.</li> <li>❖ Huge resistance in the community –like the Hawkes Bay.</li> <li>❖ Not acceptable due to the nitrates in Silverstream.</li> <li>❖ Concerned about raised dams (of WIL, Wrights Road).</li> <li>❖ Not in support of providing more water for commercial benefit.</li> <li>❖ Costs are too high.</li> <li>❖ Generally not in support of providing for more irrigated land, this could make the water quality issues worse.</li> <li>❖ How justifying putting so much water on gravel soils to enable dairying?</li> <li>❖ Lee's valley not viable storage covers ¼ area.</li> </ul>	
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#### Questions

- Creating more water –more into rivers will solve issues –where does this come from- Waimakariri?
- Who would pay?
- What is the effect on the Ashley mean flow?
- Recreational benefits of storage?
- Is it practical?
- Would Loburn farmers want to irrigate?

### 3. Stream Augmentation/Managed Aquifer Recharge

Acceptable	Unacceptable	Solutions
<ul style="list-style-type: none"> <li>❖ Acceptable: worth exploring.</li> <li>❖ As long as there is enough water to do this.</li> <li>❖ Provided good management practices or better can conform so catchment is maintained.</li> <li>❖ It has merit.</li> <li>❖ In favour of augmentation (e.g. could augment at head of Silverstream to dilute N) but big question is who would pay?</li> <li>❖ Water races that leak = good augmentation over a large area.</li> <li>❖ Augmentation is very important – would help fill aquifer -flush effect.</li> <li>❖ Eyre River was previously augmented by WIL.</li> <li>❖ WIL has helped the wells, but it is not efficient.</li> <li>❖ Will help keep stream flows up and increase groundwater reliability</li> <li>❖ A group felt it was a positive option, but who pays? Need a feasibility study.</li> <li>❖ Good place to start as long as done properly.</li> <li>❖ Stock water races providing biodiversity.</li> <li>❖ Flushing flows.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Flooding - Mandeville and Swannanoa under water for months after 2014 rain.</li> <li>❖ Should not change natural cycle of things.</li> <li>❖ Messing with natural processes to much – water ways have adapted over thousand years and should be allowed to persist in such a way.</li> </ul>	<ul style="list-style-type: none"> <li>❖ WIL put water in Eyre? E.g. 2 months.</li> <li>❖ WIL shouldn't line their races.</li> <li>❖ Issue of flows in lower Eyre catchment/Kaipoi area from flows down catchment from WIL. Blockages to undercurrents in south Eyre from compaction of soils from development of motorway and move to direct drilling rather than cultivation.</li> <li>❖ Use this as part of the solution along with GMP and fixing up stream as well.</li> <li>❖ More water from the Waimakariri.</li> <li>❖ Need steps for water quality.</li> <li>❖ Need to make sure no users take the water.</li> <li>❖ Need to balance with flooding issues.</li> <li>❖ Can WIL assist with augmenting 3 Brooks/Cam?</li> <li>❖ Can Waimakariri augment the Cam?</li> <li>❖ Can Cust be augmented via the stock races?</li> <li>❖ Eyre would only benefit a narrow band re min flows.</li> <li>❖ Augmentation will be needed to raise min flows- how would this occur in the Cam? Via a wetland/land?</li> <li>❖ Everyone to pay for benefit.</li> <li>❖ Solutions lie in not augmenting water supply but in limiting water use to a range of users e.g. farming so stream flow supports aquatic life.</li> <li>❖ Augmentation could be part of the solution –good management practices, upstream needs to be sorted.</li> </ul>

#### Questions:

- What definite answers e.g. what is causing low flows?
- The impact of pumping your deep wells – 200 year old water – how long will it take to replenish?
- Where will the water come from? Have we got good information on deep groundwater in area of TSA?
- GW augmentation – Is there enough water in Waimakariri for it?
- Need to see results of existing augmentation trials before we can weigh up benefits in Waimakariri zone
- Who will pay for the augmentation? Will it be like rates and the farm subsidise the rest? How much is the augmentation set up, infrastructure etc. going to cost?
- Will we see more pollution- in the past – in the lower catchment?
- Where does the water come from?
- What would the impact be on the source?
- What would the impact be on fishing?

## 4. Cultural Flow Preferences

Acceptable	Unacceptable	Solutions
<ul style="list-style-type: none"> <li>❖ As long as there is the right management approach in the right location.</li> <li>❖ Will be better than what is happening at present.</li> <li>❖ Good idea to raise minimum flows- restrict irrigation both surface water and groundwater.</li> <li>❖ Better to be on surface water takes (less reliability) because more restriction than well &gt;50m. Drives better efficiency than from groundwater takes.</li> <li>❖ Step up approach – acceptable as long as it goes along with augmentation and storage.</li> <li>❖ The cultural flow preferences are acceptable for springfed streams.</li> <li>❖ Ecological flow is acceptable if used robust scientific methodology to determine these.</li> <li>❖ Will improve health of rivers.</li> <li>❖ Water abstraction shouldn't impact on rivers/streams at all.</li> <li>❖ Lowland stream minimum flows not to be raised.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Unachievable.</li> <li>❖ Too high.</li> <li>❖ This one group is having a lot of say.</li> <li>❖ Raising min flows in the Cam wont effect E.coli.</li> <li>❖ Raising lows in Cam would put farmers out of business.</li> <li>❖ Rainfall is the key to the flow in the Ashley. In 1902 the flow dropped significantly.</li> <li>❖ Aspiration for continuous flow in the Ashley unrealistic - the Ashley never flowed all year and this would be modifying the natural environment and would be a waste of water.</li> <li>❖ The two issues of continuous flow in the Ashley and water storage in Lees Valley are linked.</li> <li>❖ Saying that alternative pathways minimum flows would have a “neutral impact” on the regional economy is trivialising the individual pain and suffering and localised impact it would have on communities and land values.</li> <li>❖ Low reliability of surface water takes if cultural flows are implemented. Would mean some people can't farm anymore.</li> <li>❖ 7DMALF doesn't show the true impact of low flows and when they occur - no irrigation for a month will put you out of business.</li> <li>❖ Lifting minimum flows won't have an impact on flows for 50 plus years</li> <li>❖ Lots of unknowns –Historical vs modelling.</li> <li>❖ No actual measure – that why it's hard to support currently.</li> <li>❖ Unclear who this will affect (Waimakariri Mainstem).</li> <li>❖ Dramatic change from current.</li> <li>❖ Minimum flow shouldn't be raised.</li> <li>❖ When the Ashley stops at Loburn, Cam stops a week later.</li> </ul>	<ul style="list-style-type: none"> <li>❖ All water takes to be metered regardless of size.</li> <li>❖ Restrict capacity of takes.</li> <li>❖ Recommended the minimum flow at the Cam goes back to 800L/s as it was originally raised to 1000L/s to dilute the input of sewage which doesn't exist now.</li> <li>❖ Dig the Ashley deeper to get more continuous flow.</li> <li>❖ Environmental flow component should be paid for by the district as a whole.</li> <li>❖ Iwi are part of the solution.</li> <li>❖ Put a price on water.</li> <li>❖ Would prefer the talk to be about “maximum flows” - this relates to allowing maximum flows to persist, variation in flows, more stringent controls on abstraction.</li> <li>❖ Silverstream requires a min flow.</li> <li>❖ Need to include an economic assessment as well.</li> <li>❖ Need to incorporate other values such as Kayaking, trout etc.</li> <li>❖ Decrease the amount of water being taken.</li> <li>❖ Need actual flows to clarify and assist discussions.</li> </ul>

### Questions:

- Why is Ashley a lot lower than it used to be?
- The Cultural Flow testing was done after a few “drier than normal” years. What was it before the dry? Is it natural?
- How do you increase the flow in the gorge?
- Is this cultural sensitivity due to irrigation or climate change?
- Is the cumulative effect of water use from urban and small block holdings from population growth?
- Have more detail on how the COMAR study has been carried out.
- No monitoring since 2015 on the Ohoka Stream. Why aren't there more monitoring sites?
- What is the difference between cultural flows and minimum flow- How big is the gap?

## Other

### Monitoring

- ❖ We don't trust ECAN- their monitoring is pathetic

### Farm Environment Plans

- ❖ Provide time to allow low impact farmers to implement new practices in farm environment plans.
- ❖ Make farm environment plans more farmer led, allow more discussion, feedback loops and provide support and practical timeframes for farmers to make transition.
- ❖ Consultants doing farm environment plans should have farm systems knowledge and practical experience.
- ❖ What's in farm environment plans?
- ❖ Farm environment plans presentation - Are Synlait numbers accounted for? The numbers of FEPs in the presentation don't seem to add up.
- ❖ Does a farmer know you are coming to audit them? If so, waste of time if it's not a surprise.

### Need more information (Process issues)

- ❖ The details/facts need to be provided to give the community the ability to make decisions about the trade-offs to get the gifting and gaining need to reach reasonable solutions
- ❖ Would help to have actual data presented or available to understand basis of scenario assessments
- ❖ Give us the maths.
- ❖ More research is required before anything is deemed to be acceptable/unacceptable
- ❖ Needs a more sufficient, informative presentation on the tools.
- ❖ How good is the modelling?
- ❖ Need more explanation
- ❖ Confidence in assumptions
- ❖ Little conviction over the reliability of the science
- ❖ Process too rushed to make big decisions

### Other

- ❖ Can't manage district as one zone (different land types). Perhaps need for smaller zones.
- ❖ Set thresholds on WQL first
- ❖ Fix the top end of the catchment before you fix the bottom end
- ❖ It's about the next generation of farming. What comes after dairy?
- ❖ Where are the nitrates coming from? Farming 80% on light soils and recent development. Sth Eyre subdivision by farmers to make money during recession (good farming land)
- ❖ Ngai Tahu biggest farming scale in zone- But could be doing it right?
- ❖ Why if I already have 2 low Overseer #6 with a low impact – why consent?
- ❖ Does more population with concrete/paving etc. create more potential runoff into drains? (Hotspots)
- ❖ What is the negative impact of farming on waterways?
- ❖ Water balance please -Who is using the water, where is it going?
- ❖ Why have the local rivers got so bad today – can we clarify this?
- ❖ Where does groundwater flow? - 1960s report suggested drawing water from the aquifer north of the Waimakariri River had an impact [on Waimakariri flow?]
- ❖ Compare historical water vs contemporary water quality
- ❖ What quantity of urine/faeces come from 65,000 cows? How is that impacting WQL now?
- ❖ Will all of this land and water management be monitored?
- ❖ Waimakariri Mainstem – flow monitoring site should return to DHB (Old highway Bridge) not Otoranah- because in summer low loss flow down river is not taken. No confidence currently in translation
- ❖ How do we turn the clock back?
- ❖ ECan has ignored the 2010 study on contaminant transit
- ❖ Toxic Algae Cust main drain/Skewbridge - Has this disappeared yet?
- ❖ Leonardo De Caprios documentary on climate change is a must watch for this project
- ❖ Proper explanation of the concern re nitrates levels – nitrates as essential to life
- ❖ Are cockles still able to be collected in the estuary?
- ❖ Silverstream, time nitrates to move here, where is the nitrate problem come from?
- ❖ How is the flow calculated?

**MINUTES OF THE MEETING OF THE CANTERBURY WATER MANAGEMENT STRATEGY WAIMAKARIRI ZONE COMMITTEE HELD IN THE FUNCTION ROOM OF THE RANGIORA TOWN HALL, 303 HIGH STREET, RANGIORA ON MONDAY 13 MARCH 2017 AT 2.00PM.**

**PRESENT**

David Ashby (Chair), Grant Edge (Deputy Chair), Carolyn Latham, Judith Roper-Lindsay, Gary Walton, Sandra Stewart (WDC Councillor), and Claire McKay (Environment Canterbury Councillor).

**IN ATTENDANCE**

Murray Griffin (Zone Facilitator, ECan), Jill Atkinson (Strategy & Planning Director, ECan), Rachel McClung (Senior Policy Analyst, WDC), Geoff Meadows (Policy Manager, WDC), Matt Dodson (Hydrogeologist, ECan), Stephen Bragg (Tangata Whenua Facilitator, ECan), Andrew Arps (Waimakariri Zone Team Leader, ECan), Barbara Nicholas (CWMS Facilitation Team Leader, ECan), Maureen Whalen (Team Leader Groundwater Science North, ECan), Amelia Ching (Senior Planner, ECan), Gina McKenzie (Real Communications), Paul Reece (WIL Environment Manager), Ryan Hepburn (TRoNT), Treena Davidson (TRoNT), Katie McNab (Masters Student, Lincoln University), John Benn (DOC), Simon Goodall (Lees Valley), Marilyn Dalzell (Lees Valley), Steve Dalzell (Lees Valley), Penny Wright (Forest and Bird), and Louise Courtney (Governance Secretary, WDC).

**KARAKIA**

The meeting was opened with a karakia conducted by S Bragg.

**APOLOGIES AND INTRODUCTIONS**

Apologies were received and sustained from Cherie Williams and Clare Williams for absence.

**CARRIED**

**1 APPOINTMENT OF A CHAIR, DEPUTY CHAIR AND REGIONAL COMMITTEE REPRESENTATIVE FOR 2017 – M Griffin (Facilitator, ECan) and Zone Committee Members**

G Edge suggested that the Committee consider deferring the elections until Clare Williams and Cherie Williams, were present. G Edge sought advice regarding protocol from S Bragg who noted, there was no guarantee of full attendance at any meeting and supported the Committee proceeding with the election process.

The Committee agreed to proceed with the elections.

M Griffin assumed the Chair for the duration of the election process and called for nominations for the role of Chair.

D Ashby nominated by C McKay, seconded by G Walton. G Edge was nominated by S Stewart, seconded by J Roper-Lindsay. D Ashby and G Edge accepted the nominations. The Committee voted by ballot and D Ashby was announced as Chair.

M Griffin then called for nominations for Deputy Chair.

G Edge was nominated by S Stewart, seconded C Latham. G Walton was nominated by C McKay seconded by D Ashby. G Edge and G Walton accepted the nominations. The Committee voted by ballot and Grant Edge was announced as Deputy Chair.



M Griffin called for nominations for the Committee's representative to the Regional Committee. C Latham was appointed as the Committee's representative to the Regional Committee uncontested.

Moved G Edge seconded S Stewart

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Appoints** committee member D Ashby as Chair.
- (b) **Appoints** committee member G Edge as Deputy Chair.
- (c) **Appoints** committee member C Latham as the CWMS Regional Committee representative for 2017.

**CARRIED**

D Ashby assumed the Chair. He commented on nutrient issues and looked forward to continued consultation and communication with the farming community. He also acknowledged G Edge's leadership, as acting Chair since mid-2016.

## **REGISTER OF INTEREST**

The Committee noted the Register of Interest.

## **2 CONFIRMATION OF MINUTES**

### **2.1 Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting – 13 February 2017**

C McKay requested a correction; that 'Commissioner' be replaced with 'Councillor' regarding any references to her role in ECan.

Moved J Roper seconded C McKay

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Amends** the minutes as follows:
  - Replace "Commissioner" with "Councillor" for references to C McKay's role.
  - Item 3, end of paragraph 1; add "due to the absence of a number of Committee members."
  - Matters Arising; correction "Tuahiwi Stream" to "Ruataniwha".
  - Item 5, last paragraph; correction "trail" to "trial".
  - Item 8, paragraph 5; correction "50 hectares" to "95 hectares".
  - Item 8, paragraph 10; replace "big landowners" with "stake holders".

**AND** subject to (a) above,

- (b) **Confirms** the circulated minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting, held 13 February 2017, as a true and accurate record.

**CARRIED**

### **MATTERS ARISING**

Item 6: With respect Zone Committee members taking a lead role in specific projects, D Ashby believed a regular reporting mechanism, to the Committee, was required.

Item 6.1: G Edge queried the process around the First 500 Springhead Protection Programme funding noting it required consultation with the Rūnanga, and sought clarification on whether the Committee had the authority to make such a decision.

S Bragg confirmed that the process was sound, adding that Immediate Steps (IMS) applications were received by the Rūnanga representatives for review/assessment before being forwarded to the appropriate Committees. The applications do not usually return to the full Rūnanga for consultation as their representatives have delegated authority. A Arps supported S Bragg's comments that Rūnanga representatives are consulted early in the process and significant sites/issues discussed/considered before it reaches the Committee.

G Edge referred members to an ECan Guide to Managing Waterways, and asked the ECan staff to see if the documents could be updated for redistribution.

Regarding Matters Arising: S Stewart provided a brief update on the Cam River (Ruātaniwha). She advised the Cam River Rehabilitation Subcommittee would reconvene when it receives the report from Dr. Hudson.

Regarding item 5: S Stewart sought an update on the request for a presentation from the CAREX group. M Griffin replied the group had not been available for the Committee's March meeting but staff would work with them on a suitable date to present any new findings to the Committee.

S Stewart enquired about a water typology report referring to the recent announcement on Fresh Water Policy by Dr. Nick Smith, Minister for the Environment. She advised that the Waimakariri District Council (WDC) was submitting on the report. S Stewart queried whether ECan would be putting in a submission. C McKay replied that ECan would submit on the draft report and were also considering applying for funding for several projects.

Regarding item 6 – Regional Committee Meeting – 13 December 2016 update: S Stewart enquired about an update on the work programme for the Recreation and Amenity Working Group. Staff would circulate an update to Committee members.

Regarding item 6.1 – Action List: S Stewart sought an update on the Waterway Care publication. G Edge clarified the documentation, soon to be updated by ECan staff, should address S Stewart's query.

### **3 OPPORTUNITY FOR PUBLIC TO SPEAK**

3.1 Penny Wright introduced herself as a resident who has lived and worked the Waimakariri for a number of years, including working as a Veterinarian. Her work is now predominantly involved with management of pest control.

P Wright presented a PowerPoint, to support her concerns that the *Holcaspis brevicula* (*H.brevicula*), a species of ground beetle endemic to the Canterbury Plains, had been misrepresented in a report to the Committee on Biodiversity. She stated there had been discussions with the Rūnanga regarding the issue and the impact development and farming has had on the beetle's native habitat. She noted that when the land was originally consented for dairy farming, submissions were received regarding the possible effect on the beetle's habitat.

P Wright referenced a map which identifies the areas where the beetle used to be found in the Eyrewell Forest. Since the farm developments, the locations of the beetles have been reduced. She expressed concern that this had occurred and at the lack of detail being reported by staff. P Wright noted there were still remnant areas of Kānuka, the beetle's natural habitat, but many of these areas were being clear felled.

She was currently working to preserve a sixteen-hectare block of Kānuka remnant in the vicinity. G Edge advised IMS funding for a protection of a dry land Kānuka block had been withdrawn by the committee due to lack of landowner engagement. Staff would follow up the matter with P Wright.

J Roper-Lindsay queried the use of satellite mapping, as opposed to engaging with those who have local knowledge of the area and where there are unique species of flora and fauna.

D Ashby enquired what support P Wright was seeking from the Committee. P Wright believed the Current State Biodiversity report from staff did not truly reflect the current state of biodiversity in the area and wanted to raise awareness with the Committee on the matter. Paul Reese, WIL Environmental Manager, clarified that Ngai Tahu Development had identified the biodiversity on the land being developed and were prepared to work with interested parties on a solution. C Latham was confident that if farmers were aware of areas of national significance, then they would be supportive of preserving it.

3.2 Paul Reese, Waimakariri Irrigation Limited (WIL), updated the Committee on the progress being made on Farm Environment Plans.

He advised the WIL consent required all farm plans be done by September 2016 with audits to be completed by September 2017. This was progressing well with the allocation of grades ranging from A-D (with A being the highest grade). Currently two thirds of the plans were audited, with the majority of the plans graded as B or C.

P Reese reiterated that if farmers were made aware of significant issues, they would be more likely to take action. He had heard anecdotally of immediate improvements on some farms. D Ashby commented that Management and Risk planning was a robust process which required farmers to provide evidence on how they were adhering to their plan. He added that ECan has led the process and set the criteria on how the properties would be audited. He highlighted that all the auditors were certified.

P Reese identified the main issues as water management, irrigation scheduling and management of irrigation systems. WIL would continue to ensure the process was being adhered to and managed appropriately.

G Edge enquired, how Good Management Practice fits into a farmer's Environmental Management plan. P Reese replied the process was thorough adding that matters relating to biodiversity, although not explicit, were already part of the discussion, including the management of animal species and how they could be protected. He added that Ngāi Tahu had been briefed on the Farm Environment Plan process.

J Roper-Lindsay queried updates on ECan publications. A Arps advised that Farm Environment Plans covered practical actions, highlighting a recent workshop for the auditors which had focused on practical applications.



C Latham questioned the auditing fee. P Reese outlined the time involved with an audit, including pre-audit research, writing up the report, travel time and costs. The focus is on specific matters of greatest risk, rather than the whole operation.

- 4 **COMMITTEE UPDATES** – Zone Committee Members, A Arps (Waimakariri Zone Delivery Team Leader, ECan) and M Griffin (Facilitator, ECan)

4.1 **Regional Committee Meeting – 14 February 2017**

It was advised that G Edge had been co-opted onto the Recreation and Amenity Working Group.

4.2 **Canterbury Land and Water Regional Plan – ‘Omnibus’ Plan Change 4**

G Edge advised that the link on ECan’s website did not work and requested a hardcopy of the plan. Staff would follow up the issue and advise members when the link operational. C McKay advised that the full plan change had been included the agenda for the Regional Council’s March meeting.

4.3 **Lees Valley Farmers Group Briefing – Initial Response from ECan**

It was noted that the response followed from the Committee’s briefing at its February meeting.

A Picken provided a brief update on the plan outlining key issues.

Regarding Issue 5: C Latham believed it had not been accurately identified or interpreted. It was not about the amalgamation of farms, moreover, whether properties should be considered case by case.

Regarding Issue 3: Matt Dodson clarified the intention was to acknowledge land use activities do have an effect on water quality. A member of the Lees Valley Farmers Group added that although they understood that regulations were in place for all to adhere to, they believed that the Lees Valley was a unique area and required specific consideration. D Ashby clarified the Committee would discuss the matter further and emphasised the Committee was only at the beginning of the process and no formal decisions had been made. The Committee was engaged with the landowners and would continue to do so.

4.4 **Waimakariri Zone Delivery – Update**

4.5 **Zone Committee 2016 Annual Report**

4.6 **Zone Committee Engagement & Communications**

4.7 **Action List**

Moved C McKay seconded J Roper-Lindsay

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** these updates for its information and with regard to the committee’s 5 Year Outcomes and 2017 community engagement priorities.

**CARRIED**

5 **GENERAL BUSINESS AND FUTURE MEETING PRIORITIES** – Chair and M Griffin  
(Facilitator, ECan)

- 5.1 Regarding the Clean Water Discussion Document (Discussion Document): G Edge would like more discussion on this, adding the maps which identify swimmable rivers in the Waimakariri are incomplete. He believed rivers in the district that the community value for contact recreation, needed to be consulted on and identified; this includes waterways of significance to the Rūnanga. G Edge would like an outline of the changes to the National Policy Statement (NPS) as it relates to the Waimakariri, so it is catered for in the sub-regional plan.
- 5.2 C McKay clarified that ECan and WDC were preparing submissions to the Discussion Document. J Roper-Lindsay reminded members that they could submit as individuals.

G Edge asked if it was possible for the Committee to see, and comment, on the draft submissions. G Meadows replied Council would be considering a draft submission to the Discussion Document at its April meeting, adding the Committee were welcome to view it and provide feedback. G Meadows advised there was nothing new proposed in the NPS, and was similar to the Next Steps for Fresh Water Consultation Document. G Edge responded that according to the RMA, there was no definition for different types of waterways, unlike the IMS. He would like to see all types of waterways given appropriate classifications.

G Edge noted an article in a local newspaper where a group had lost confidence with, and pulled out of, the Land and Water Forum. He also noticed an article in The Press regarding an Environment Court case for illegal discharge of dairy effluent by a Rangiora dairy farm. He also requested a briefing from WDC on stock water races.

- 5.3 C Latham commented on the water discharged from the Southbrook settling ponds which had been identified by the Committee. She stated it has been ongoing for a number of years and requested an update from staff. S Stewart advised the cause was Paradise Ducks and that sediment removal and planting had been recommended as a possible solution. An update on progress and the process would be reported back to the Committee at a later date.

THERE BEING NO FURTHER BUSINESS, THE MEETING WAS CLOSED AT 3.39PM.

CONFIRMED

\_\_\_\_\_  
Chairperson

\_\_\_\_\_  
Date

**WORKSHOP**

- 6 **WAIMAKARIRI KEY ISSUES SUMMARY** – B Nicholas and M Griffin (Facilitators, ECan)
- 7 **KEY DECISION AREAS AND SOLUTIONS PROGRAMME SCHEDULE - WORKSHOP** – B Nicholas and M Griffin (Facilitators, ECan)
- 8 **COMMUNITY ENGAGEMENT – WORKSHOP** – B Nicholas and M Griffin (Facilitators, ECan)

unconfirmed